

Kubota

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M6-101
M6-111
M6-131
M6-141

OPERATOR'S MANUAL

KUBOTA TRACTOR

MODELS M6-101
M6-111
M6-131
M6-141



1NHSP00001A01

READ AND SAVE THIS MANUAL

Kubota

ABBREVIATION LIST

Abbreviations	Definitions
2WD	2-wheel drive
4WD	4-wheel drive
API	American Petroleum Institute
ASABE	American Society of Agricultural and Biological Engineers, USA
ASTM	American Society for Testing and Materials, USA
DEF	Diesel exhaust fluid
DIN	Deutsches Institut für Normung, Germany
DPF	Diesel particulate filter
DT	Dual traction (4WD)
ft/min	Feet per minute
GST	Glide shift transmission
Hi-Lo	High speed-low speed
HST	Hydrostatic transmission
m/s	Meters per second
PTO	Power take off
RH/LH	Right-hand and left-hand sides are determined by facing in the direction of forward travel
ROPS	Roll-over protective structures
rpm	Revolutions per minute
r/s	Revolutions per second
SAE	Society of Automotive Engineers, USA
SCR	Selective catalytic reduction
SMV	Slow moving vehicle

California proposition 65

 **WARNING** 

Engine exhaust, some of its constituents, certain vehicle components and fluids, contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Canadian Electromagnetic Compatibility (EMC):
This machine complies with Industry Canada ICES-002.

UNIVERSAL SYMBOLS

As a guide to the operation of your tractor, various universal symbols have been utilized on the instruments and controls. The symbols are shown below with an indication of their meaning.

■ General



Safety alert symbol



Master system warning



Fast



Slow



Creep



Lock



ON (engaged)



OFF (disengaged)

■ Engine-related



Diesel fuel



Empty



Full



Hour meter / elapsed operating hours



Engine coolant - temperature



Low temperature regulation



Engine intake / combustion air-filter



Engine oil - pressure



Water separator



Engine - warning



Engine - rotational speed



Engine - rev limiter



Engine - constant rpm management



Engine - rpm increase



Engine - run



Engine - start



Engine - stop



Electrical power - accessories



Diesel preheat / glow plugs (low temperature start aid)



Emission control



Regeneration



Regeneration inhibit



Regeneration (switch)



Parked regeneration



DEF (AdBlue) - level



DEF (AdBlue) - low level



DEF (AdBlue) - poor quality



SCR system warning



DEF (AdBlue) - freeze

■ Vehicle body-related

	4-wheel drive - on
 AUTO	4-wheel drive - automatic
	Bi-speed turn
	Xpress restart indicator (instrument panel)
	Shuttle sensitivity
 AUTO	Auto-transmission
	Clutch
	Brake
	Parking brake
	Front differential lock
	Rear differential lock
	Steering wheel - tilt
	Steering wheel - telescope
	Front suspension

■ PTO-related

	PTO - off (disengaged)
	PTO - on (engaged)
 540	PTO - 540 rpm
 1000	PTO - 1000 rpm
 1000E	PTO - 1000E rpm
 P	Stationary PTO

■ Hydraulic-related

	Draft control
	Position control - raised position
	Position control - lowered position
	3-point lifting / lowering
	Lift arm - height
	Remote cylinder - retract
	Remote cylinder - extend
	Remote cylinder - float

■ Electric-related

	Battery charging condition
	Headlight - low beam
	Headlight - high beam
	Turn signal
	Hazard warning lights
	Audible warning device
	Windshield wiper
	Windshield wiper - intermittent
	Windshield washer
	Rear window defroster
	Side window defroster

FOREWORD

Thank you for the purchase of a Kubota product.

Before using this product, read this manual carefully and use the product correctly. After reading, keep the manual in a safe and easy-to-access place for future reference. Note that product specifications are subject to change without prior notice. The product delivered to you may differ slightly from the product described in the manual.



SAFETY FIRST

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you attempt to assemble or use this unit.

**DANGER:**

Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING:**

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION:**

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.

IMPORTANT:

Indicates that equipment or property damage could result if instructions are not followed.

NOTE:

Gives helpful information.

OTHERS

About trademarks

Trademark	Owner
AdBlue®	AdBlue is a registered trademark of the VDA - Verband der Automobilindustrie e.V. (The German Association of the Automotive Industry).
Easy Checker™	Easy Checker is a trademark of Kubota Tractor Corporation.

Company names, product names and service names described in this manual are the trademarks or registered trademarks of their respective owners. In the text, those names are not accompanied by trademark symbols (®, ™).

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SAFE OPERATION

Careful operation is your best insurance against an accident.

Read and understand this manual carefully before operating the tractor.

All operators, no matter how much experience they may have, should read this and other related manuals before operating the tractor or any implement attached to it. It is the owner's obligation to instruct all operators in safe operation.

BEFORE OPERATING THE TRACTOR

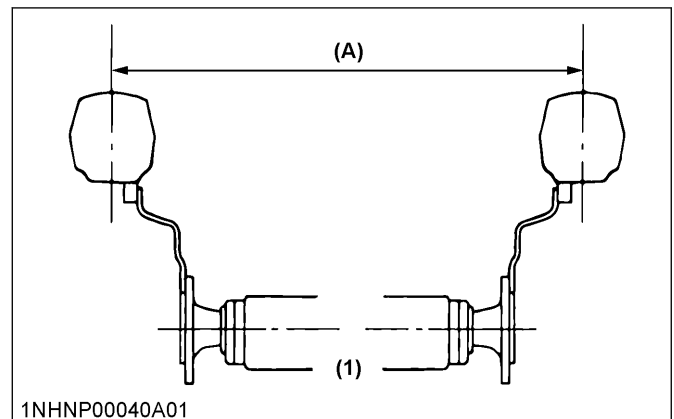
Know your equipment and its limitations. Read this entire manual before attempting to start and operate the tractor.

1. General

- Pay special attention to the safety labels on the tractor.
- Do not operate the tractor or any implement attached to it while under the influence of alcohol, medication, controlled substances or while fatigued.
- Before allowing other people to use your tractor, explain how to operate and have them read this manual before operation.
- Never wear loose, torn, or bulky clothing around the tractor. Such clothing may get caught on moving parts or controls, leading to the risk of an accident. Use additional safety items, such as a hard hat, safety boots or shoes, eye and hearing protection, gloves and so on, as appropriate or required.
- Do not allow passengers to ride on any part of the tractor at any time. The operator must remain in the tractor seat during operation.
- Check brakes, clutch, linkage pins and other mechanical parts for improper adjustment and wear. Replace worn or damaged parts promptly. Check the tightness of all nuts and bolts regularly. (See MAINTENANCE on page 145.)
- Keep your tractor clean. Dirt, grease, and trash buildup may contribute to fires and lead to personal injury.
- Use only implements meeting the specifications listed in this manual or implements approved by Kubota. (See IMPLEMENT LIMITATIONS on page 30.)
- Use proper weights on the front or rear of the tractor to reduce the risk of upsets. When using the front loader, put an implement or ballast on the 3-point hitch to maintain proper balance and braking.

Follow the safe operating procedures specified in the implement or attachment manual.

- The narrower the tread, the greater the risk of a tractor upset. For maximum stability, adjust the wheels to the widest practical tread width for your application. (See TIRES, WHEELS, AND BALLAST on page 130.)



(1) Rear wheels

(A) Tread width

- Do not modify the tractor. Unauthorized modification may affect the function of the tractor, which may result in personal injury.
- Do not make any modifications to the engine or emission components as they may result in damage and malfunctions such as:
 - Damage to the power train from excessive engine output.
 - Engine overheating caused by exceeding the engine cooling performance capabilities.
 - Malfunctions of the exhaust gas aftertreatment control devices.

Modifications to the engine and its emission components may violate emission regulations and are subject to fines and penalties.

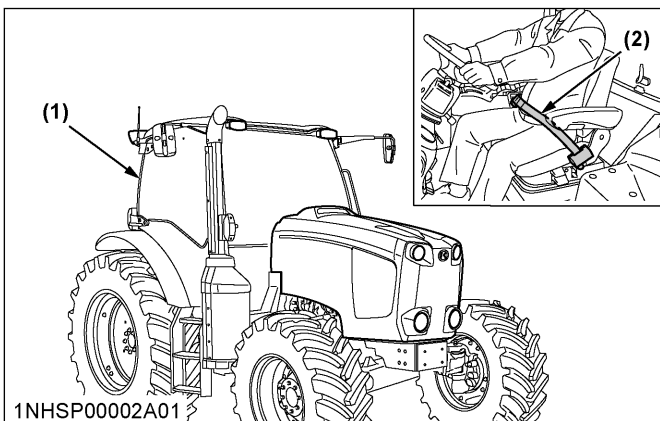
Kubota and its affiliates are not liable for any damage, malfunction or accidents caused by modifications to the engine or emission components.

2. CAB and ROPS

- Kubota recommends the use of a CAB or roll over protective structures (ROPS) and seat belt in almost all applications. This combination will reduce the risk of serious injury or death, should the tractor be upset. Check for overhead clearance which may interfere with a CAB or ROPS.

SAFE OPERATION

- If the CAB or ROPS is loosened or removed for any reason, make sure that all parts are reinstalled correctly before operating the tractor.
- Never modify or repair any structural member of a CAB or ROPS because welding, bending, drilling, grinding, or cutting may weaken the structure.
- A damaged CAB or ROPS structure must be replaced, not repaired or revised.
- If any structural member of the CAB or ROPS is damaged, replace the entire structure at your local Kubota dealer.
- Always use the seat belt if the tractor has a CAB or ROPS. Do not use the seat belt if there is no ROPS. Check the seat belt regularly and replace if frayed or damaged.



(1) CAB
(2) Seat belt

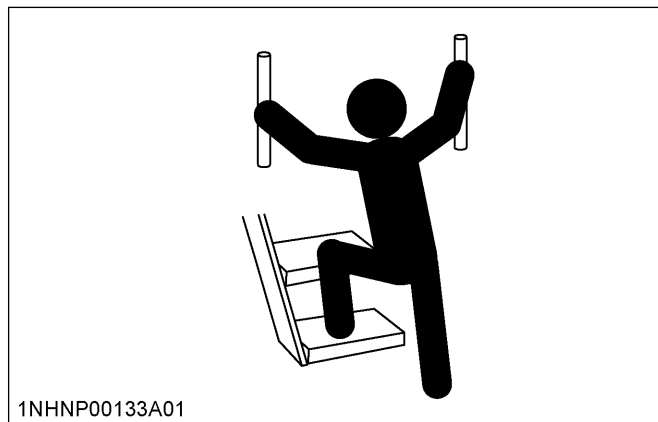
OPERATING THE TRACTOR

Operator safety is a priority. Safe operation, specifically with respect to overturning hazards, entails understanding the equipment and environmental conditions at the time of use.

Some prohibited uses which can affect overturning hazards include traveling and turning with implements, loads carried too high and so on. This manual sets forth some of the obvious risks, but the list is not, and cannot be, exhaustive. It is the operator's responsibility to be alert for any equipment or environmental condition that could compromise safe operation.

1. Starting to operate the tractor

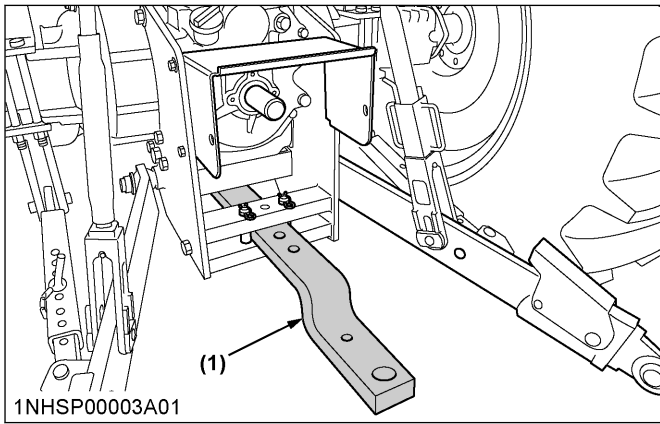
- Never try to get on or off a moving tractor or jump off the tractor to exit.
- Face the tractor when getting into or out of the tractor. Do not use the controls as hand holds to prevent inadvertent machine movements.
- Always keep the steps and floor clean to avoid slippery conditions.



- Always sit in the operator's seat when starting engine or operating levers or controls. Adjust seat per instructions in the operating the tractor section. Never start the engine while standing on the ground.
- Before starting the engine, make sure that all levers (including auxiliary control levers) are in their neutral positions, that the parking brake is engaged, and that both the clutch and the power take-off (PTO) are disengaged or "OFF". Fasten the seat belt if the tractor has a CAB, a fixed ROPS or a foldable ROPS in the upright and locked position.
- Do not start the engine by shorting across starter terminals or bypassing the safety start switch. The machine may start in gear and move if the normal starting circuitry is bypassed.
- Do not operate or idle the engine in an unventilated area. Carbon monoxide gas is colorless, odorless, and deadly.
- Check that the operator presence control (OPC) system is functioning correctly before each time you use the tractor.
Test the safety systems.
(See Checking engine start system on page 162.)
Do not operate unless they are functioning correctly.

2. Doing work with the tractor

- Pull only from the drawbar. Never hitch to axle housing or any other point except the drawbar; such arrangements will increase the risk of serious personal injury or death due to a tractor upset.



(1) Drawbar

- For trailing PTO-driven implements, set the drawbar to the towing position.
- Attach pulled or towed loads to the drawbar only.
- Keep all shields and guards in place. Replace any that are missing or damaged.
- Avoid sudden starts. To avoid upsets, slow down when turning, on uneven ground, and before stopping.
- The tractor cannot turn with the rear-wheel or 4-wheel differential locked and attempting to do so could be dangerous.
- Do not operate near ditches, holes, embankments, or other ground surface features which may collapse under the tractor's weight. The risk of tractor upset is even higher when the ground is loose or wet. Tall grass can hide obstacles. Walk the area first to be sure.
- Watch where you are going at all times. Watch for and avoid obstacles. Be alert at row ends, near trees, and other obstructions.
- When working in groups, always let the others know what you are going to do before you do it.
- Never try to get on or off a moving tractor.
- Always sit in the operator's seat when operating levers or controls.
- Do not use "Bi-speed turn" at high speed.
- "Bi-speed turn" enables short and fast turns, therefore, become familiar with its performance before operating the tractor in close or confined areas.
- Do not stand between tractor and implement or trailed vehicle unless the parking brake is applied.
- Whenever the tractor is operated in reverse, confirm visibility to the rear.

3. Instructional seat (if equipped)

- Always wear your seat belt and stabilize your body by holding the handrail on the CAB frame.
- It is not intended to carry children nor any other person for any other purpose.

- The left-hand door must be closed at all time whenever the instructional seat is occupied and the tractor is in motion.
- Do not permit others to ride, except on the designated instructional seat.
- Use caution to avoid the risks of obstructing operator's view, falling from the machine and interfering with controls.
- Do not start and stop the tractor suddenly, nor take a sharp turn.
- Do not use the instructional seat if the seat belt or the door lock fails to function.
- Do not use the instructional seat for transport.
- When opening or closing the door while being seated in the instructional seat, move the door slowly. This is to prevent his or her hand(s) from getting caught by the door or his or her body to hit against the door.

4. Safety for children

Tragedy can occur if the operator is not alert to the presence of children. Children generally are attracted to machines and the work they do.

- Never assume that children will remain where you last saw them.
- Keep children out of the work area and under the watchful eye of another responsible adult.
- Be alert and shut down your machine if children enter the work area.
- Never carry children on your machine. There is no safe place for children to ride. They may fall off and be run over or interfere with your control of the machine.
- Never allow children to operate the machine even under adult supervision.
- Never allow children to play on the machine or on the implement.
- Use extra caution when backing up. Look behind and down to make sure that the area is clear before moving.

5. Operating on slopes

Slopes are a major factor related to loss-of-control and tip-over accidents, which can result in severe injury or death. All slopes require extra caution.

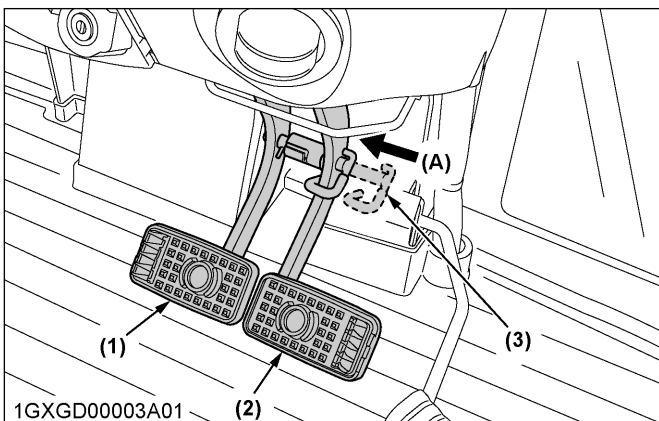
- To avoid upsets, always back up steep slopes. If you cannot back up the slope or if you feel uneasy on it, do not operate on the slope. Stay off slopes too steep for safe operation.
- Driving forward out of a ditch, mired condition or up a steep slope increases the risk of rear rollovers. Always back out of these situations. Extra caution is required with 4-wheel drive models because their increased traction can give the operator false confidence in the tractor's ability to climb slopes.

SAFE OPERATION

- Keep all movement on slopes slow and gradual. Do not make sudden changes in speed, direction or braking, nor make sudden motions with the steering wheel.
- Avoid disengaging the clutch or changing gears when climbing or going down a slope. If on a slope, disengaging the clutch or changing gears to neutral could cause the loss of control.
- Special attention should be paid to the weight and location of implements and loads as such will affect the stability of the tractor.
- To improve stability on slopes, set the widest possible wheel tread.
(See TIRES, WHEELS, AND BALLAST on page 130.)
Follow the recommendations for proper ballasting.
- To avoid free wheeling:
 - Do not shift the shuttle lever while on a slope.
 - Stop completely by using the brakes and by depressing the clutch pedal, then shift the shuttle lever.
 - Start off after selecting shuttle direction, by releasing the clutch pedal.
- When driving down a slope, ensure that 4-wheel drive (if equipped) is engaged to increase traction and braking efficacy.
- When using the Xpress restart function (if equipped) while on a slope with a laden trailer, be aware of and control for the possibility of the tractor and trailer rolling backward. In addition, when using the Xpress restart function always make sure that both brake pedals are interlocked.
- Do not use the Xpress restart function (if equipped) when starting the tractor on a slope. Use the clutch pedal instead.

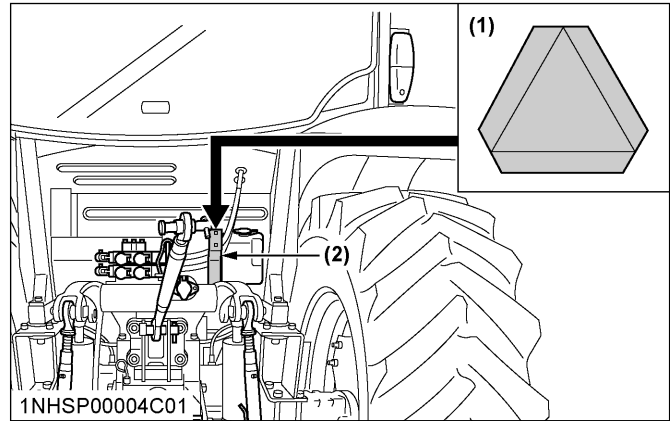
6. Driving the tractor on the road

- Lock the 2 brake pedals together to help assure straight-line stops. Uneven braking at road speeds could cause the tractor to tip over.



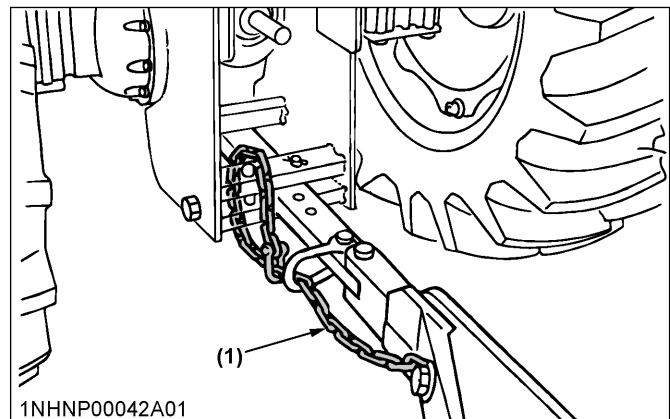
- (1) Brake pedal (LH) (A) Whenever traveling on the road
 (2) Brake pedal (RH)
 (3) Brake pedal lock

- Check the front-wheel engagement. The braking characteristics are different between 2 and 4-wheel drive. Be aware of the difference and use carefully.
- Always slow down the tractor before turning. Turning at high speed may tip over the tractor.
- Make sure that the slow moving vehicle (SMV) sign is clean and visible. Use hazard lights and turn signals as required.



- (1) SMV emblem
 (2) Bracket

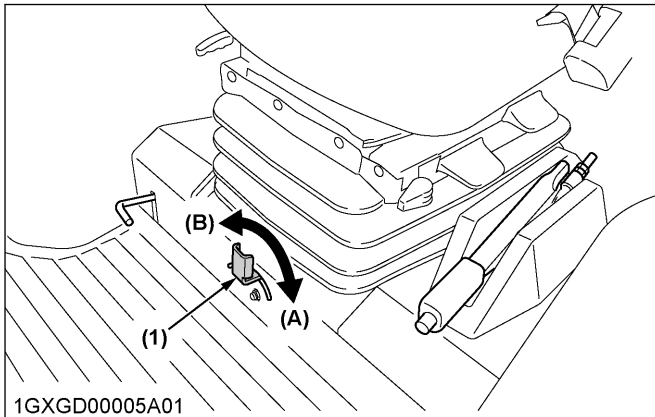
- On public roads use the SMV emblem and hazard lights, if required by local traffic and safety regulations.
- Observe all local traffic and safety regulations.
- Turn on the headlights. Dim the headlights when meeting another vehicle.
- Drive at speeds that allow you to maintain control at all times.
- Do not apply the differential lock while traveling at road speeds. The tractor may run out of control.
- Avoid sudden motions of the steering wheel as they can lead to a dangerous loss of stability. The risk is especially great when the tractor is traveling at road speeds.
- Do not operate an implement while the tractor is on the road. Lock the 3-point hitch in the raised position.
- When towing other equipment, use a safety chain and place an SMV emblem on it as well.



- (1) Safety chain

! SAFE OPERATION

- Set the 3-point hitch lowering lock lever in the "LOCK" position to hold the implement in the raised position.



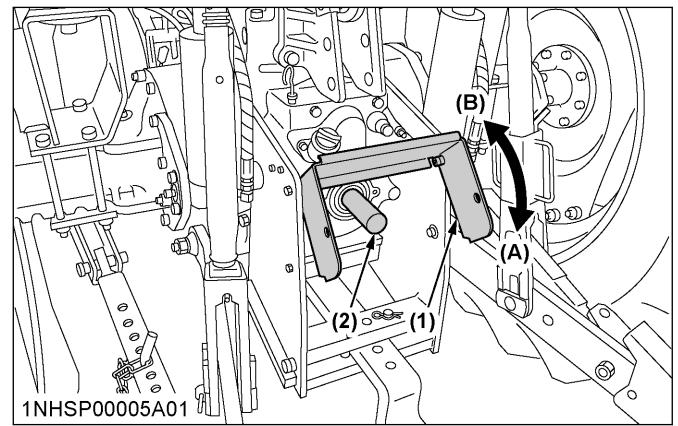
(1) 3-point hitch lowering lock lever
(A) "LOCK"
(B) "UNLOCK"

PARKING THE TRACTOR

- Disengage the PTO, lower all implements to the ground, place all control levers in their "NEUTRAL" positions, set the parking brake, stop the engine, remove the key from the ignition and lock the CAB door (if equipped).
Leaving transmission in gear with the engine stopped will not prevent the tractor from rolling.
- Make sure that the tractor has come to a complete stop before dismounting.
- Avoid parking on steep slopes. If at all possible, park on a firm and level surface. If not, park across a slope and chock the wheels.
Failure to comply with this warning may allow the tractor to move and could cause injury or death.
- Do not stop the machine on top of straw chaff or dried grass.

OPERATING THE PTO

- Wait until all moving components have completely stopped before getting off the tractor, connecting, disconnecting, adjusting, cleaning, or servicing any PTO driven equipment.
- Keep the PTO shaft cover in place at all times. Put back the PTO shaft cap when the shaft is not in use.

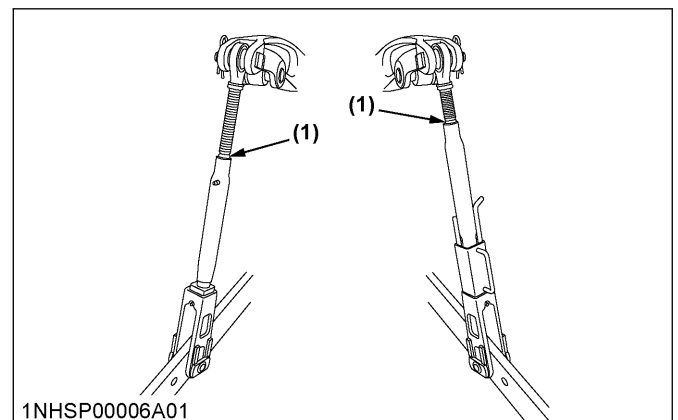


(1) PTO shaft cover
(2) PTO shaft cap
(A) "NORMAL position"
(B) "RAISED position"

- Before installing or using PTO driven equipment, read the manufacturer's manual and review the safety labels attached to the equipment.
To prevent PTO driven equipment from improper or unsafe use, select the lower speed (540 rpm) unless the higher one is specifically recommended as safe by the equipment manufacturer.
- When operating stationary PTO driven equipment, always apply the tractor parking brake and place chocks behind and in front of the rear wheels. Stay clear of all rotating parts. Never step over rotating parts.

USING 3-POINT HITCH

- Use the 3-point hitch only with equipment designed for the appropriate category of 3-point hitch usage.
- When using a 3-point hitch mounted implement, install the proper counterbalance weight on the front of the tractor.
- To avoid injury from separation:
Do not extend the lift rod beyond the groove on the threaded rod.



(1) Groove

- Use the "UP" switch and "DOWN" switch or lever only on farm fields. For all other applications, use the hydraulic lever to move the attachment.

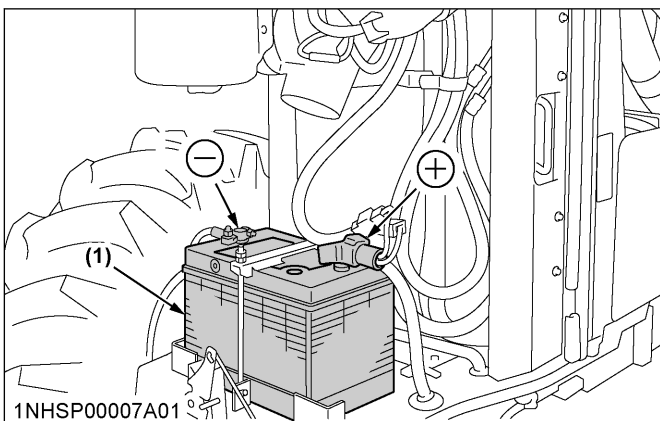
⚠ SAFE OPERATION

SERVICING THE TRACTOR

Before servicing the tractor, park it on a firm, flat and level surface, set the parking brake, lower all implements to the ground, place the gear shift lever in neutral, stop the engine and remove the key.

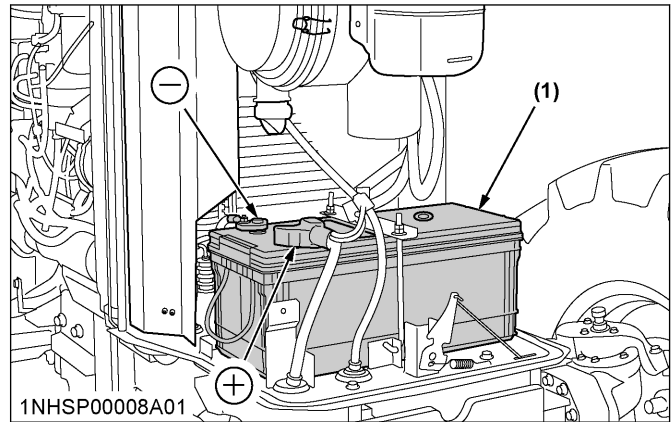
- Allow the tractor time to cool off before working on or near the engine, muffler, radiator and so on.
- Do not remove radiator cap while the coolant is hot. When cool, slowly rotate cap to the first stop and allow sufficient time for excess pressure to escape before removing the cap completely. If the tractor has a coolant recovery tank, add coolant or water to the recovery tank, not the radiator.
(See Checking coolant level on page 159.)
- Always stop the engine before refueling. Avoid spills and overfilling. Use only approved fuels.
- Always use grounded refueling facilities.
- Do not smoke when working around the battery or when refueling. Keep all sparks and flames away from battery and fuel tank. The battery presents an explosive hazard, because it gives off hydrogen and oxygen especially when recharging.
- Before “jump starting” a dead battery, read and follow all of the instructions.
(See JUMP STARTING THE ENGINE on page 61.)
- Keep first aid kit and fire extinguisher handy at all times.
- Disconnect the battery's ground cable before working on or near electric components.
- To avoid the possibility of battery explosion, do not use or charge the refillable type battery if the fluid level is below the **[LOWER]** (lower limit level) mark. Check the fluid level regularly and add distilled water as required so that the fluid level is between the **[UPPER]** and **[LOWER]** levels.
- To avoid sparks from an accidental short circuit, always disconnect the battery's ground cable (-) first and reconnect it last.

M6-101, M6-111



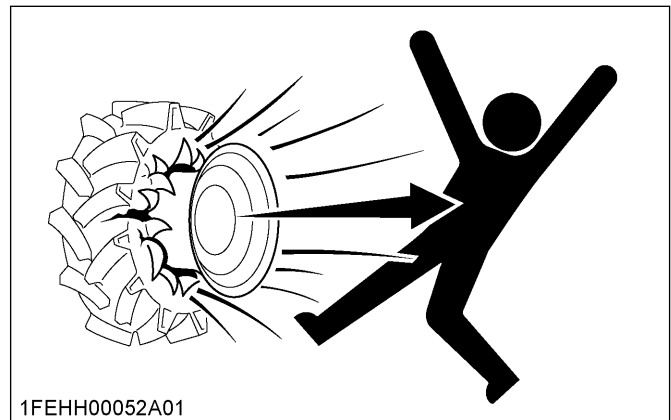
(1) Battery

M6-131, M6-141

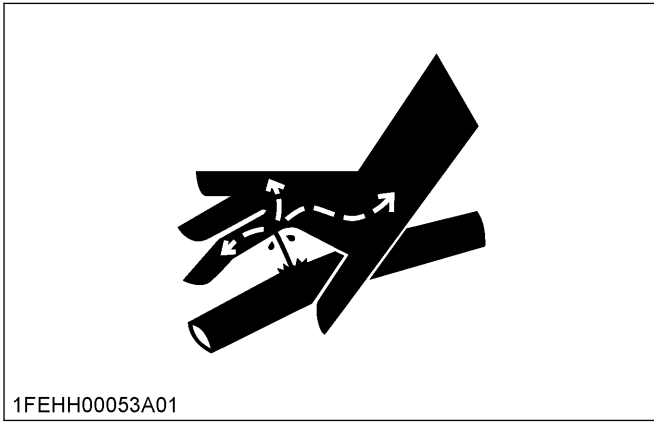


(1) Battery

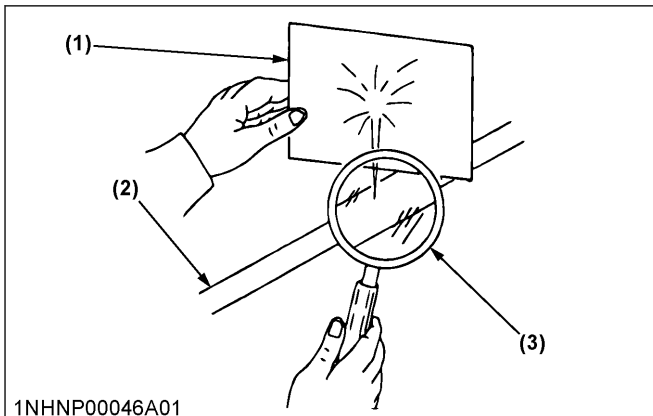
- Do not attempt to mount a tire on a rim. Tires should be mounted by a qualified person with the proper equipment.
- Always maintain the correct tire pressure. Do not inflate tires above the recommended pressure shown in the operator's manual.



- Securely support the tractor when either changing wheels or adjusting the wheel tread width.
- Make sure that the wheel bolts have been tightened to the specified torque.
- Disconnect the battery's ground cable and stop the engine to avoid the possibility of the machine runaway due to 4WD braking system during testing, service or repair with only rear wheels off the ground.
- Do not work under any hydraulically supported devices. They can settle, suddenly leak down, or be accidentally lowered. If it is necessary to work under the tractor or any machine elements for servicing or adjustment, securely support them with stands or suitable blocking beforehand.
- Escaping hydraulic fluid under pressure has sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting hydraulic lines, release all residual pressure. Before applying pressure to the hydraulic system, make sure that all connections are tight and that all lines, pipes, and hoses are free of damage.



- Fluid escaping from pinholes may be invisible. Do not use your hands to search for suspected leaks, instead use a piece of cardboard or wood. Use of safety goggles or other eye protection is also highly recommended. If injured by escaping fluid, see a medical doctor at once. This fluid will produce gangrene or severe allergic reactions.



- (1) Cardboard
- (2) Hydraulic line
- (3) Magnifying glass

- Do not open the high-pressure fuel system. High-pressure fluid remaining in fuel lines can cause serious injury. Do not disconnect or attempt to repair fuel lines, sensors, or any other components between the high-pressure fuel pump and injectors on engines with high-pressure common rail fuel system.
- To avoid hazardous high voltage, turn the key switch to the "OFF" position if it is necessary to check or repair the computer, harness or connectors.
- During diesel particulate filter (hereinafter called DPF) regenerating operations, exhaust gases and exhaust filter components reach temperatures hot enough to burn people or ignite or melt common materials.
- Keep the tractor away from people, animals or structures which may be susceptible to harm or damage from hot exhaust gases.
- To prevent fires, keep the DPF muffler / SCR device and their surroundings clear of anything flammable

and keep clean at all times (selective catalytic reduction - hereinafter called SCR).

- To avoid fire hazard:
After use and pressure-washing, make sure that there is nothing flammable near the exhaust pipe. Grass or twigs under the hood may cause fire.
- During regeneration, white exhaust gas may be visible. Do not allow regeneration to happen in an unventilated place.
- During regeneration, do not leave the tractor.
- The improper disposal or burning of waste causes environmental pollution and can be punishable by your local laws and regulations.
 - When draining fluids from the tractor, place a container underneath the drain port.
 - Do not pour waste onto the ground, down a drain, or into any water source (such as rivers, streams, lakes, marshes, seas, and oceans).
 - Waste products such as used oil, fuel, coolant, hydraulic fluid, aqueous urea solution (DEF (AdBlue)), refrigerant, solvent, filters, rubber, batteries, and harmful substances, can harm the environment, people, pets and wildlife. Please dispose of properly.See your local recycling center or Kubota dealer to learn how to recycle or get rid of waste products.
- Before servicing a tractor equipped with front suspension, lower the machine to the lowest position.
- The front suspension hydraulic circuit is still under high pressure after the engine has stopped. Do not disconnect the pipes and/or hoses because you may get injured by high-pressure oil. If pipes and/or hoses are found worn or damaged, consult your local Kubota dealer for this service.

! SAFE OPERATION

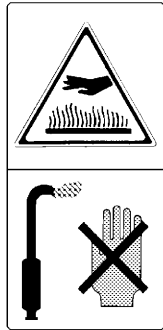
SAFETY LABELS

- (1) Part No. 3S205-4957-1
Do not get your hands close to engine fan and fan belt.



1AGAIAZAP110A

- (2) Part No. 3N300-4958-1
Do not touch hot surface like muffler, etc.



1AGAIAZAP071A

- (3) Part No. 3N600-4958-1
Do not touch hot surface like supply pump, etc.



1AGAIDXAP073A

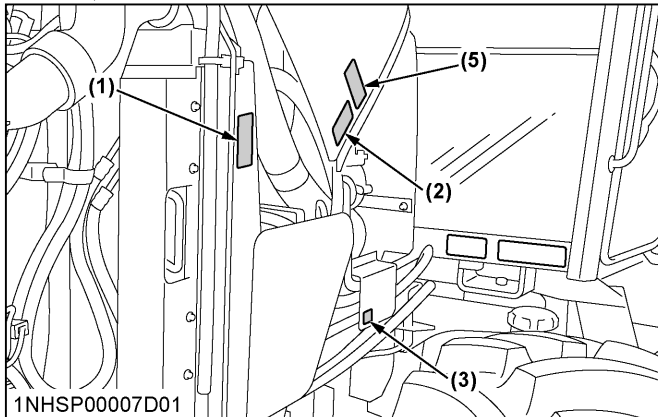
- (4) Part No. 3S205-9868-1



- (5) Part No. 3J080-3822-1

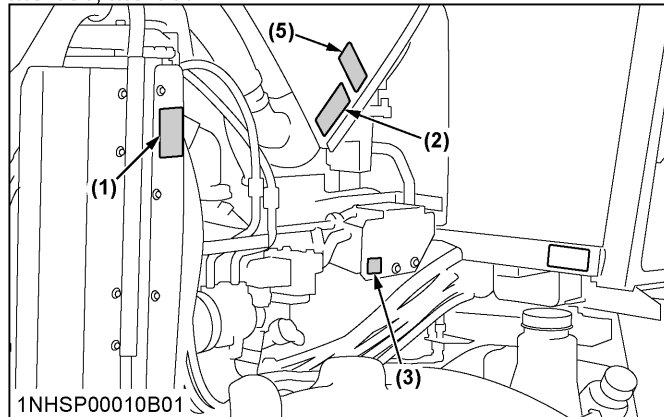


M6-101, M6-111



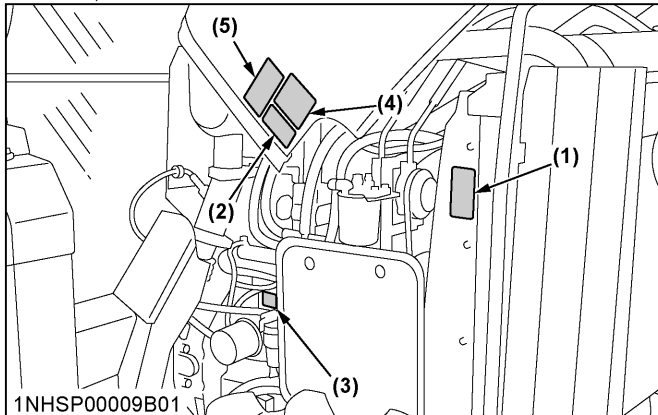
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M6-131, M6-141



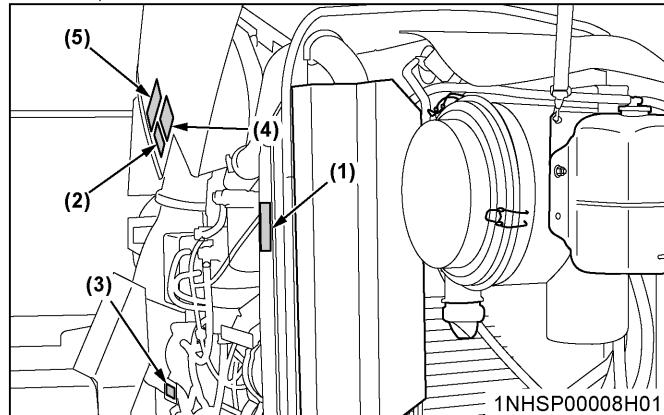
1NHSP00010B01

M6-101, M6-111



1NHSP00009B01

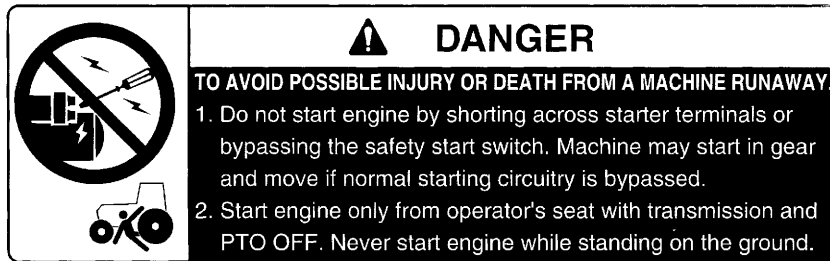
M6-131, M6-141



1NHSP00008H01

1NHSP00119A01enUS

(1) Part No. 3Y205-9835-1



1AGAIJNAP153A

(2) Part No. TC420-4956-1

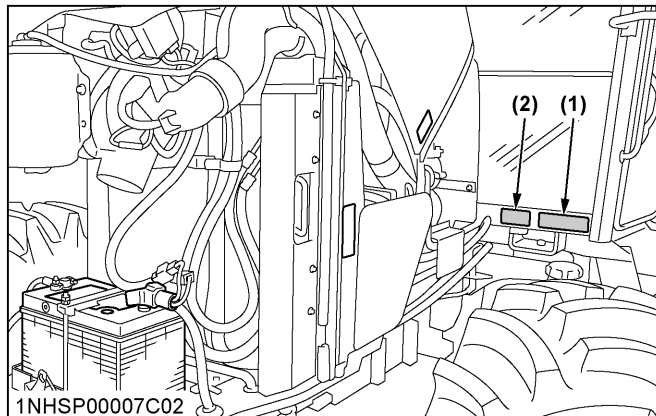
Diesel fuel only

No fire



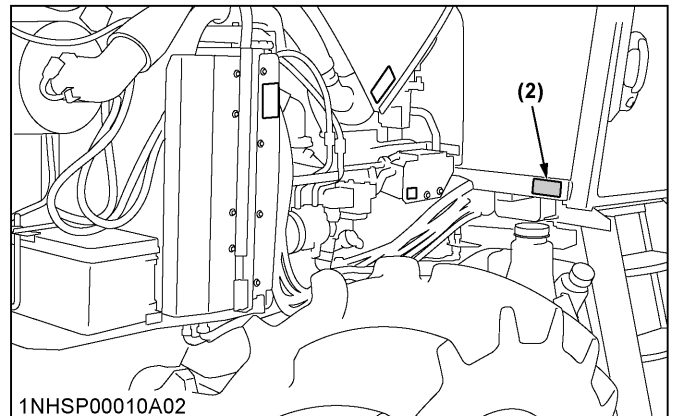
1AGAIJHAP154E

M6-101, M6-111



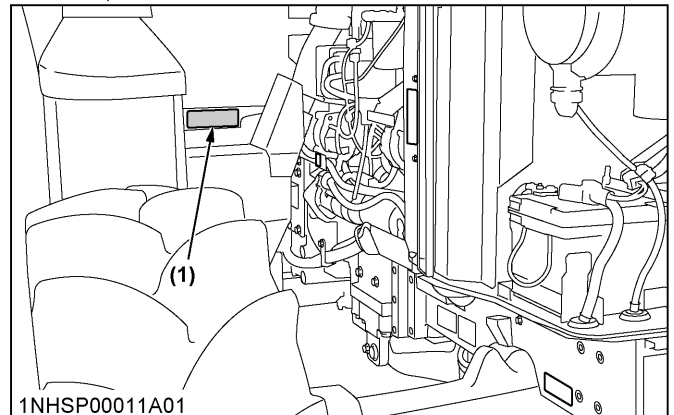
1NHSP00007C02

M6-131, M6-141



1NHSP00010A02

M6-131, M6-141



1NHSP00011A01

1NHSP00120A01enUS

SAFE OPERATION

(1) Part No. 3S205-9778-2
[If optional instructional seat is installed]

WARNING

TO AVOID PERSONAL INJURY OR DEATH WHEN USING THE INSTRUCTIONAL SEAT:

- Always wear your seat belt and stabilize your body by holding the handrail on the CAB frame.
- The instructional seat is not intended to carry children nor any other person for any other purposes.
- The left hand door must be closed at all time whenever the instructional seat is occupied and the tractor is in motion.
- Do not permit others to ride, except on the designated instructional seat.
- Use caution to avoid the risks of obstructing operator's view, falling from the machine and interfering with controls.
- Do not start and stop the tractor suddenly, nor take sharp turn.
- Do not use the instructional seat if the seat belt or the door lock fails to function.
- Do not use the instructional seat for transport.
- When opening and closing the door from the instructional-seat-sitting position, move the door slowly. This is to prevent his or her hand (s) from getting caught by the door or his or her body to hit against the door.

1AGBEAAP089A

1NHSP00121A01enUS

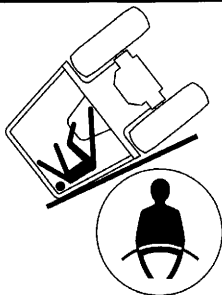
(2) Part No. 3Y205-9831-1

WARNING

TO AVOID FREE WHEELING WHEN SHIFTING THE SHUTTLE LEVER WHILE ON A SLOPE:

Stop completely by using the brake and by depressing the clutch pedal.
Start off after selecting shuttle direction by releasing the clutch pedal.

WARNING



TO AVOID INJURY OR DEATH FROM ROLL-OVER:

Always use seat belt when driving.

1AGAIJNAP150A

(3) Part No. 3Y205-9832-2

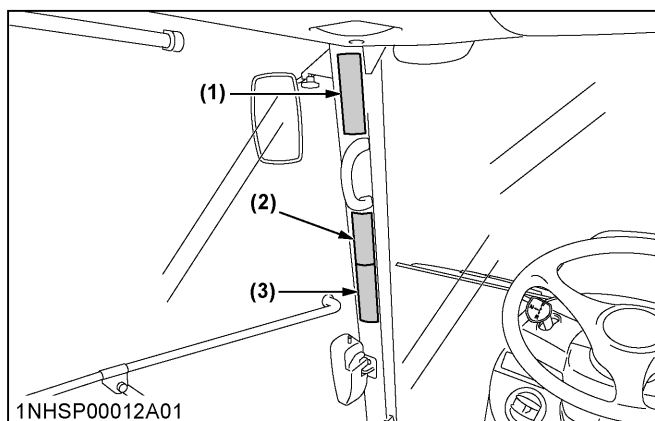
WARNING



BEFORE DISMOUNTING TRACTOR:

- 1. ALWAYS SET PARKING BRAKE.**
Leaving transmission in gear with the engine stopped will not prevent tractor from rolling.
- 2. PARK ON LEVEL GROUND WHENEVER POSSIBLE.**
If parking on a slope, position tractor across the slope.
- 3. LOWER ALL IMPLEMENTS TO THE GROUND.**
Failure to comply to this warning may allow the wheels to slip, and could cause injury or death.
- 4. STOP THE ENGINE.**

1AGAIJNAP151A



1NHSP00012A01

! SAFE OPERATION

(1) Part No. 6C430-4754-1

California Proposition 65

! WARNING !

Engine exhaust, some of its constituents, certain vehicle components and fluids, contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

1AGBEAAP045A

(2) Part No. 3S205-9836-1

! WARNING

TO AVOID PERSONAL INJURY OR DEATH:

1. Read and understand the operator's manual before operation.
2. Before starting the engine, make sure that everyone is at a safe distance from tractor and the PTO is off.
3. Do not allow passengers on the tractor at any time.
4. Before allowing other people to use the tractor, have them read the operator's manual.
5. Check the tightness of nuts and bolts regularly.
6. Keep all shields in place and stay away from all moving parts.
7. Lock the two brake pedals together before driving on the road.
8. Slow down for turns, or rough roads, or when applying individual brakes.
9. On public roads use SMV emblem and hazard lights, if required by local traffic and safety regulations.
10. Pull only from the drawbar.
11. Before dismounting, lower the implement to the ground, set the parking brake, stop the engine and remove the key.
12. Securely support tractor and implements before working underneath.

1AGBEAAP061A

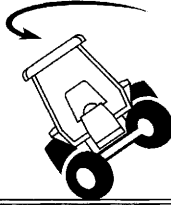
(3) Part No. 3Y205-9833-1

! WARNING

TO AVOID MACHINE RUNAWAY DUE TO 4WD BRAKING SYSTEM:

Do not run engine with only rear wheels off ground.

! WARNING



TO AVOID PERSONAL INJURY:

Use "Bi-Speed Turn" only in low gears and slow speed. Do not use "Bi-Speed Turn" in high gears or road speed.

1AGAIJNAP152A

(4) Part No. 3S565-9855-2

[Front suspension type]

! WARNING

TO AVOID PERSONAL INJURY OR DEATH.

Before operating the switches for the front suspension, make sure the area near the machine is clear of all persons and objects.

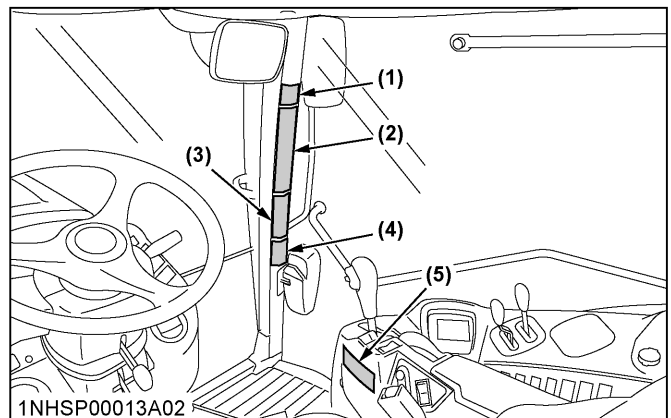
1AGBEAAP064A

(5) Part No. 3S205-4966-2

! WARNING

USE [UP-DOWN] ONLY ON FARM FIELDS. FOR ALL OTHER APPLICATIONS, USE HYDRAULIC LEVER TO MOVE ATTACHMENT.

1AGBEAAP060A

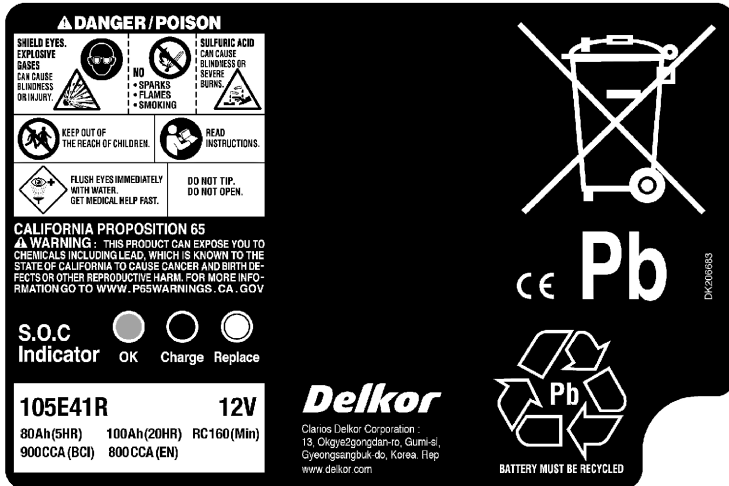


1NHSP00013A02

1NHSP00122A01enUS

⚠️ SAFE OPERATION

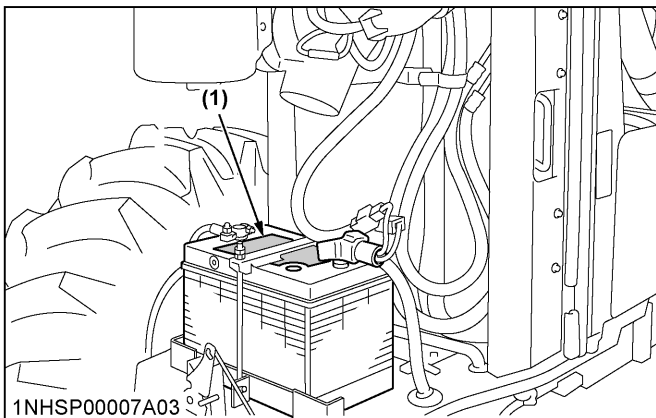
(1) Part No. 3Y205-9892-3



(2) Part No. 3P903-9892-5

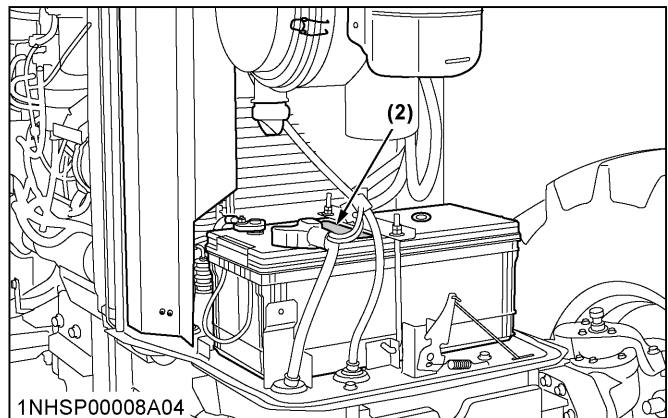


M6-101, M6-111



1NHSP00123A01enUS

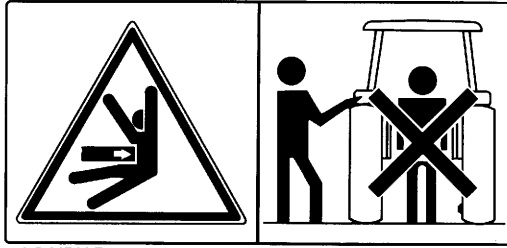
M6-131, M6-141



! SAFE OPERATION

(1) Part No. 3F240-9819-1

Do not stand by implement or between implement and tractor while operating remote hitch switch.



1AGAIBIAP1770

(3) Part No. 6C200-4959-1

! WARNING

TO AVOID PERSONAL INJURY:

1. Attach pulled or towed loads to the drawbar only.
2. Use the 3-point hitch only with equipment designed for 3-point hitch usage.



! WARNING

TO AVOID PERSONAL INJURY:

1. Keep PTO shield in place at all times.
2. Do not operate the PTO at speeds faster than the speed recommended by the implement manufacturer.
3. For trailing PTO-driven implements, set drawbar at towing position. (see operator's manual)

1AGAIHFAP067A

(2) Part No. 3S205-9856-2

! WARNING

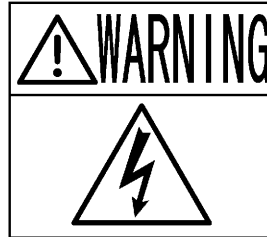
TO AVOID INJURY FROM SEPARATION :



DO NOT EXTEND LIFT ROD
BEYOND THE GROOVE
ON THE THREADED ROD.

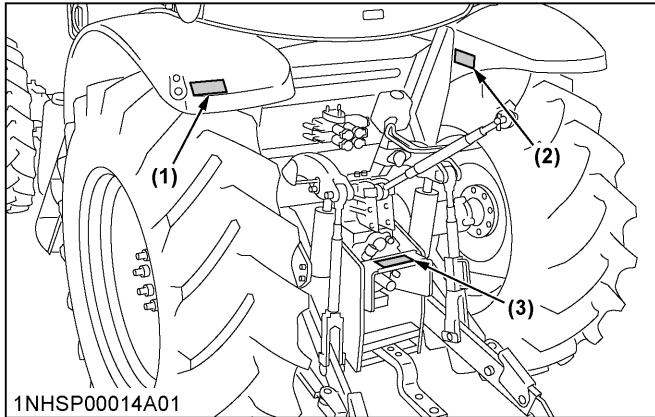


(4) Part No. 1J574-8721-1

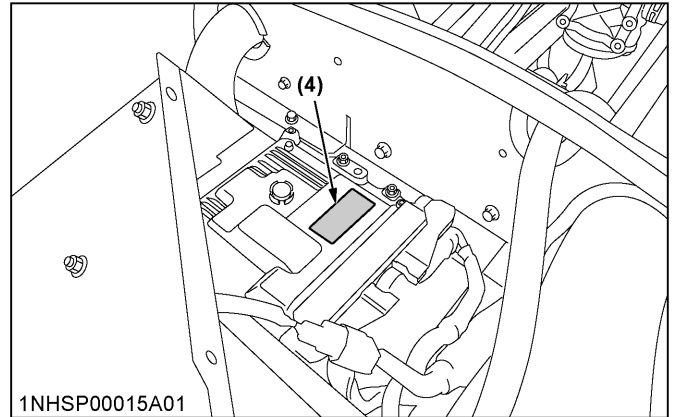


1AGAIJNAP165A

To avoid electric shock:
Set the key switch to
the "OFF" position
before checking or
repairing the computer,
wiring and/or
connectors.



1NHSP00014A01



1NHSP00015A01

1NHSP00124A01enUS

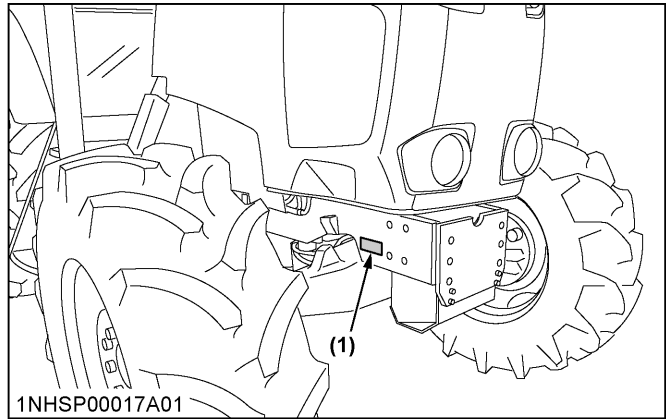
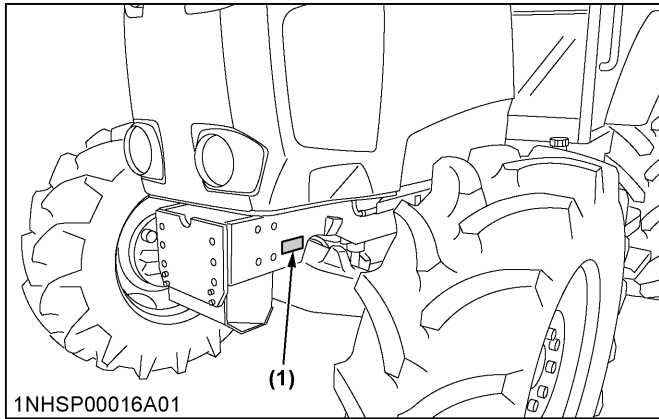
SAFE OPERATION

(1) Part No. 3S565-9859-1 [Front suspension type]

WARNING

TO AVOID PERSONAL INJURY OR DEATH:

Servicing of front suspension hydraulic system should be performed only by authorized Kubota dealer.



1NHSP00125A01enUS

CARE OF THE SAFETY LABELS

- Keep the safety labels clean and free from obstructing material.
- Clean the safety labels with soap and water, dry with a soft cloth.
- Replace damaged or missing safety labels with new labels from your local Kubota dealer.
- If a component with safety label(s) affixed is replaced with new part, make sure that the new label(s) is (are) attached in the same location(s) as the replaced component.
- Attach new safety labels by applying on a clean dry surface and pressing any bubbles to outside edge.

SERVICING OF TRACTOR

Your dealer has knowledge of your new machine and has the desire to help you get the most value from it. After reading this manual thoroughly, you will find that you can do some of the regular maintenance yourself. However, when in need of parts or major service, see your Kubota dealer.

For service, contact your local Kubota dealer.

When in need of parts, be prepared to give your dealer the product identification number (PIN), the CAB/ROPS serial number, and the engine serial number.

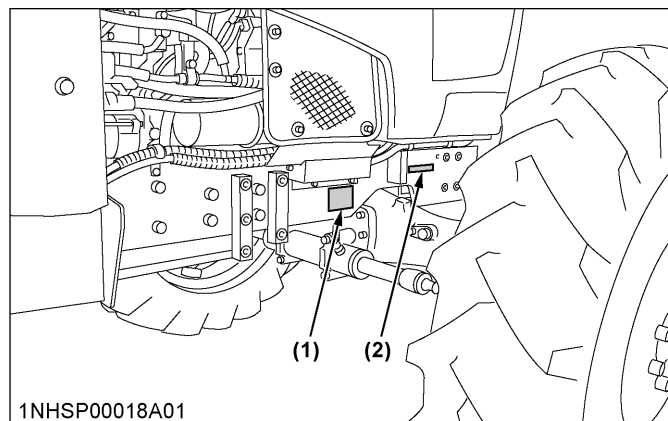
Locate the PIN and serial numbers now and fill in the following tables.

Date of purchase	
Name of dealer	

Tractor type	
PIN	

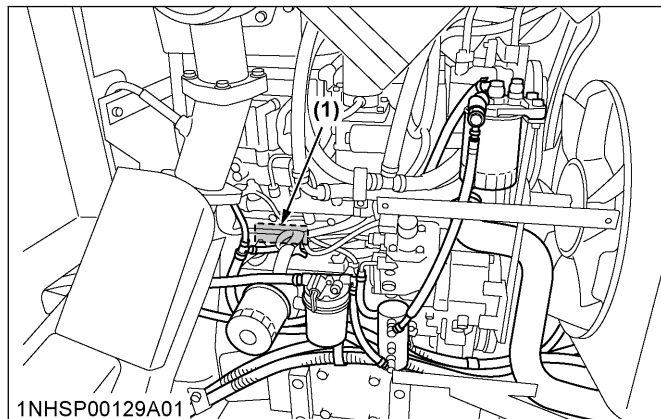
	Type	Serial No.
CAB / ROPS		
Engine		

All models



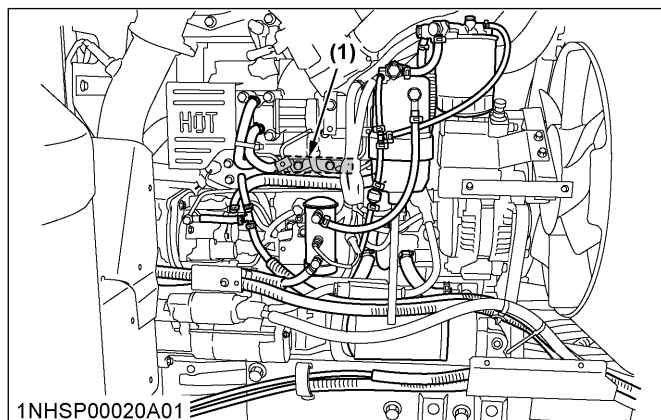
- (1) Identification plate
(2) Product identification number

M6-101, M6-111



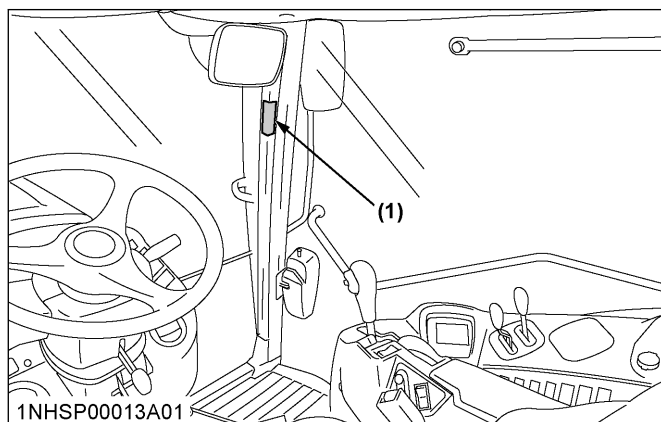
- (1) Engine serial number

M6-131, M6-141

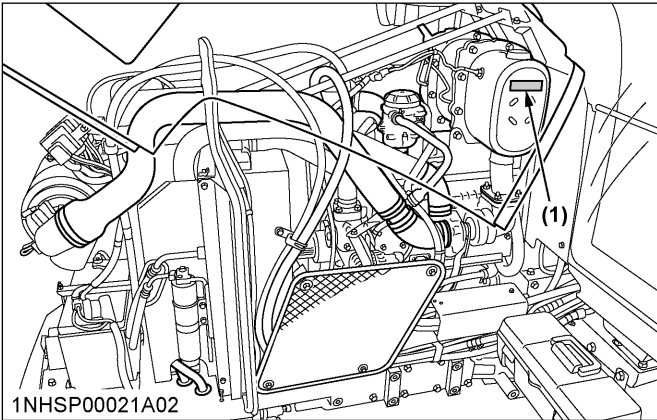


- (1) Engine serial number

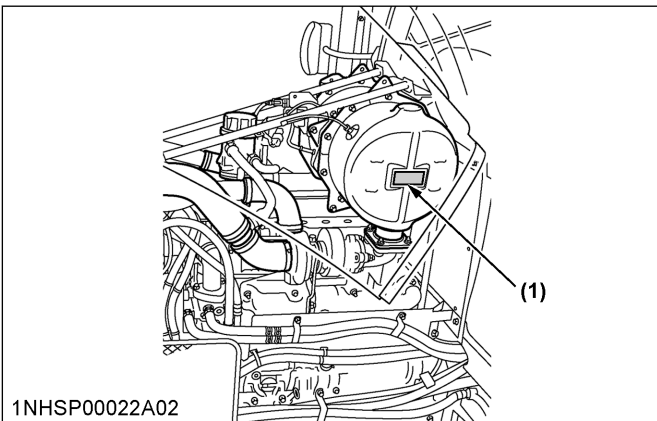
All models



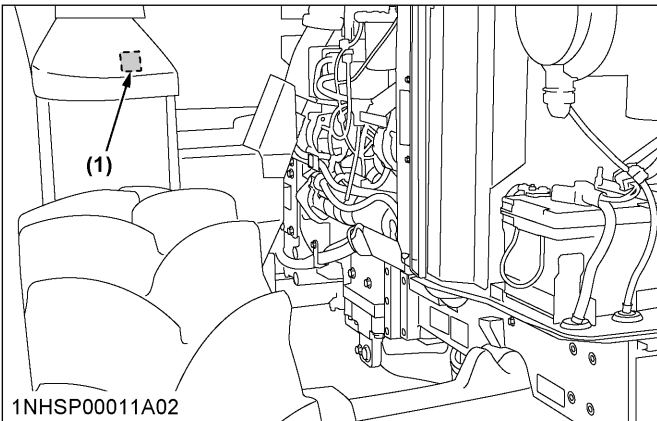
- (1) CAB identification plate (CAB serial number)

M6-101, M6-111

(1) Diesel particulate filter (DPF) serial number

M6-131, M6-141

(1) Diesel particulate filter (DPF) serial number

All models

(1) Selective Catalytic Reduction (SCR) device serial number

WARRANTY

This tractor is warranted under the **Kubota Limited Express Warranty**, a copy of which may be obtained from your selling dealer.

No warranty shall, however, apply if the tractor has not been serviced and maintained according to the instruction given in the operator's manual, even if it is within the warranty period.

SCRAPPING THE TRACTOR AND ITS PROCEDURE

To put the tractor out of service, follow the local rules and regulations of the country or territory where you scrap it.

If you have questions, consult your local Kubota dealer.

SPECIFICATIONS

SPECIFICATION TABLE

Model			M6-101	M6-111	M6-131	M6-141
			4WD			
Engine	Model		V3800-TIEF4		V6108-TIEF4	
	Type		Direct Injection, Water-cooled 4 Cycle Diesel, Common Rail System, Turbocharger, Intercooler			
	Number of cylinders		4			
	Total displacement	cm ³ (cu.in.)	3769 (230)		6124 (374)	
	Bore and stroke	mm (in.)	100 x 120 (3.94 x 4.72)		118 x 140 (4.65 x 5.51)	
	Rated revolution	rpm	2600		2200	
	Low idling revolution	rpm	800 to 850			
	Net power ^{*1}	kW (HP)	72.4 (97.1)	79.6 (106.8)	91.9 (123.2)	99.2 (133)
	PTO power ^{*1} (factory observed)	kW (HP) / rpm	61.0 (82) / 2600	68.9 (92) / 2600	77.9 (104) / 2200	85.0 (114) / 2200
	Battery capacity		12 V, 100Ah at 20 hours, 900CCA		12 V, 160Ah at 20 hours, 1090CCA	
	Fuel tank capacity	L (U.S.gals.)	190 (50.2)			
	Engine oil capacity	L (U.S.qts.)	10.5 (11.1)		14.6 (15.4)	
	Coolant capacity	L (U.S.qts.)	11.5 (12.2)		15.9 (16.8)	
	DEF tank capacity	L (U.S.gals.)	16 (4.2)			
Dimensions	Overall length		mm (in.)	4200 (165.4)		4360 (171.7) 4350 (171.3) ^{*2}
	Overall width (minimum tread)		mm (in.)	2100 (82.7)		2180 (85.8)
	Overall height		mm (in.)	2790 (109.8)	2840 (111.8)	2875 (113.2)
	Wheel base		mm (in.)	2435 (95.9)		2690 (105.9) 2680 (105.5) ^{*2}
	Tread	Front	mm (in.)	1580 (62.2), 1680 (66.1)		1775 (69.9), 1875 (73.8)
		Rear	mm (in.)	1520 (59.8) to 2060 (81.1)	1530 (60.2) to 2040 (80.3)	1590 (62.6) to 2090 (82.3)
Crop clearance		mm (in.)	370 (14.5)	425 (16.7)	450 (17.7)	
Weight		kg (lbs.)	4435 (9778)	4520 (9965)	5045 (11122) 5245 (11563) ^{*2}	
Traveling sys- tem	Standard tire size	Front tires	12.4R24	13.6R24	14.9R24	
		Rear tires	18.4R30	18.4R34	18.4R38	
	Clutch		Multiple wet disc, Electronic Hydraulically operated			
	Steering		Hydrostatic Power Steering			

(Continued)

SPECIFICATIONS

Model				M6-101	M6-111	M6-131	M6-141
				4WD			
Traveling system	Braking system			Hydraulically operated wet disk			
	Differential			Bevel gears with differential lock (Front, Rear)			
Hydraulic unit	Hydraulic control system			Electronic draft control			
	Pump capacity		L/min (gpm)	70.9 (18.7)		77.2 (20.4)	
	3-point hitch			Category 2			
	Max. lifting force	At lifting points	kg (lbs.)	3900 (8598) At lower link end with links horizontal			
		24 in. behind lifting point ^{*3}	kg (lbs.)	3100 (6834)			
	Remote hydraulic control			2 standard (3rd & 4th valve optional)			
	System pressure		MPa (kgf/cm ²)	19.6 (200)			
	Traction system			Swinging drawbar, adjustable in direction			
PTO	Live PTO (Independent)	Direction of turning		Clockwise, viewed from tractor rear			
		PTO/ Engine speed	rpm	6 spline: 540 / 2405 21 spline: 1000 / 2389		6 spline: 540 / 1994 21 spline: 1000 / 2050	

The company reserves the right to change the specifications without notice.

*1 Manufacturer's estimate.

*2 Front suspension type.

*3 Top link mounting: upper hole.

TRAVELING SPEEDS

Model		M6-101		M6-111		M6-131, M6-141	
Tire size (Rear)		18.4R30		18.4R34		18.4R38	
Range		Speed (km/h)	Speed (mph)	Speed (km/h)	Speed (mph)	Speed (km/h)	Speed (mph)
C	1	0.19	0.11	0.20	0.12	0.20	0.12
	2	0.23	0.14	0.24	0.15	0.24	0.15
	3	0.27	0.17	0.29	0.18	0.29	0.18
	4	0.33	0.20	0.35	0.22	0.36	0.22
	5	0.39	0.24	0.41	0.26	0.41	0.26
	6	0.47	0.29	0.50	0.31	0.50	0.31
	7	0.56	0.35	0.59	0.37	0.61	0.38
	8	0.68	0.42	0.72	0.45	0.74	0.46
L	1	0.78	0.49	0.83	0.52	0.84	0.52
	2	0.96	0.59	1.02	0.63	1.01	0.63
	3	1.13	0.70	1.21	0.75	1.23	0.77
	4	1.37	0.85	1.46	0.91	1.50	0.93
	5	1.62	1.01	1.73	1.08	1.74	1.08
	6	1.99	1.24	2.12	1.32	2.11	1.31
	7	2.35	1.46	2.51	1.56	2.56	1.59
	8	2.85	1.77	3.04	1.89	3.12	1.94
M	1	3.3	2.1	3.5	2.2	3.5	2.2
	2	4.1	2.5	4.3	2.7	4.3	2.7
	3	4.8	3.0	5.1	3.2	5.2	3.2
	4	5.8	3.6	6.2	3.9	6.4	4.0
	5	6.9	4.3	7.4	4.6	7.4	4.6
	6	8.4	5.2	9.0	5.6	8.9	5.6
	7	9.9	6.2	10.6	6.6	10.9	6.8
	8	12.1	7.5	12.9	8.0	13.2	8.2
H	1	9.1	5.7	9.8	6.1	9.8	6.1
	2	11.2	7.0	12.0	7.4	11.9	7.4
	3	13.2	8.2	14.1	8.8	14.4	9.0
	4	16.0	10.0	17.1	10.6	17.6	10.9
	5	19.0	11.8	20.3	12.6	20.4	12.6
	6	23.3	14.5	24.9	15.4	24.7	15.4
	7	27.5	17.1	29.3	18.2	30.0	18.6
	8*1	35.3	21.9	37.7	23.4	39.1	24.3

The company reserves the right to change the specifications without notice.

*1 At maximum engine rpm.

IMPLEMENT LIMITATIONS

The tractor has been thoroughly tested for proper performance with implements sold or approved by Kubota. Use with implements which are not sold or approved by Kubota and which exceed the maximum specifications listed in the following table, or which are otherwise unfit for use with the tractor, may result in malfunctions or failures of the tractor, damage to other property and injury to the operator or others. Any malfunctions or failures of the tractor resulting from use with improper implements are not covered by the warranty.

	Tread (max. width)			Operating condition	Lower link end max. lifting capacity: W0
	Front		Rear		
	Without spacer	With spacer			
M6-101 M6-111	1680 mm (66.1 in.)	---	2060 mm (81.1 in.)	IMPORTANT : • Tractor with front spacer option is not approved for use with front loader.	3900 kg (8598 lbs.)
M6-131 M6-141	1875 mm (73.8 in.)	2050 mm (80.7 in.)	2090 mm (82.3 in.)		

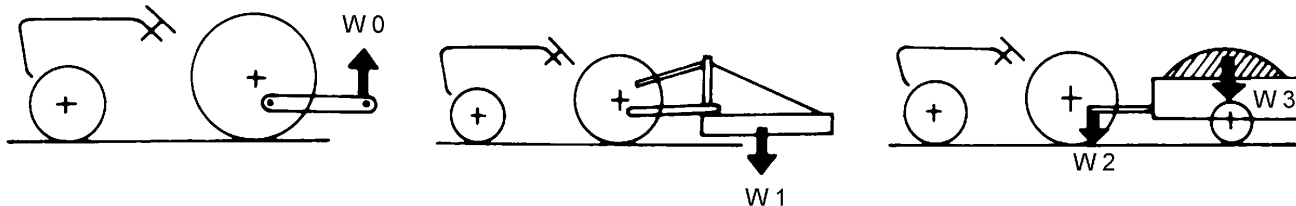
	Actual figures		
	Implement weight and / or size: W 1	Max. drawbar load: W 2	Trailer loading weight max capacity: W 3
M6-101 M6-111	As in the following list (Shown on the next page)	1500 kg (3300 lbs.)	7000 kg (15400 lbs.)
M6-131 M6-141			8000 kg (17600 lbs.)

Lower link end maximum hydraulic lifting capacity..... W 0

Implement weight..... The implement's weight which can be put on the lower link: W 1

Max. drawbar load..... W 2

Trailer loading weight..... The max. loading weight for trailer: W 3



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NOTE :

- Implement size may vary depending on soil operating conditions.
- Strictly follow the instructions outlined in the operator's manual of the mounted or trailed machinery, or of the trailer, and do not operate the combination tractor-machine or tractor-trailer unless all instructions have been followed.
- This tractor is not designed, nor intended to be used in a forestry application. Forestry applications present the following hazards:
 - Toppling trees, primarily in the case of when a rear-mounted tree-grab crane is mounted at the rear of the tractor.
 - Penetrating objects in the operator's enclosure, primarily in the case of when a winch is mounted at the rear of the tractor.

To address with these and other related hazards, the tractor requires additional and optional equipment such as an operator-protective structure (OPS) and a falling object-protective structure (FOPS). Optional equipment such as an OPS and a FOPS, however, are not available for this tractor.

Without optional equipment such as an OPS and a FOPS, the use of the tractor is limited to tractor-specific applications like transport and stationary work.

IMPLEMENT SPECIFICATION TABLE

No.	Implement		Remarks		M6-101, M6-111		M6-131, M6-141	
					4WD		4WD	
1	Slurry Tank		Max. tank capacity	L (gals.)	5000 (1320)		6000 (1585)	
			Max. load capacity	kg (lbs.)	6000 (13200)		7000 (15400)	
2	Trailer		Max. load capacity	kg (lbs.)	7000 (15400)		8000 (17600)	
			Max. drawbar load	kg (lbs.)	1500 (3300)		1500 (3300)	
3	Mower	Rotary-Cut-ter	Max. cutting width	mm (in.)	3200 (126)		3200 (126)	
			Max. weight	kg (lbs.)	800 (1764)		906 (2000)	
		Flail mower (heavy)	Max. cutting width	mm (in.)	4267 (168)		4267 (168)	
			Max. weight	kg (lbs.)	1360 (3000)		1360 (3000)	
		Sickle Bar	Max. cutting width	mm (in.)	3050 (120)		3050 (120)	
4	Sprayer		Max. tank capacity	Mid	L (gals.)	1000 (260)	1200 (320)	
				Rear 3P	L (gals.)	1200 (320)	1400 (370)	
				Drawbar	L (gals.)	5500 (1450)	6000 (1585)	
5	Rotary Tiller		Max. tilling width	mm (in.)	2700 (108)		2700 (108)	
			Max. weight	kg (lbs.)	1200 (2645)		1200 (2645)	
6	Bottom Plow		Max. size		14 in. x 5 18 in. x 4 20 in. x 3	22 in. x 2 24 in. x 1	14 in. x 6 18 in. x 5 20 in. x 4	22 in. x 2 24 in. x 1
			Max. weight	3P type	kg (lbs.)	1100 (2425)		1100 (2425)
7	Disk Har-row	3P type	Max. size		24 in. x 30		24 in. x 30	
			Max. harrowing width	mm (in.)	3600 (144)		3600 (144)	
			Max. weight	kg (lbs.)	1000 (2200)		1000 (2200)	
		Drawbar type	Max. harrowing width	mm (in.)	4570 (180)		4570 (180)	
8	Disc Plow		Max. size		30 in. x 4		30 in. x 4	
			Max. weight	kg (lbs.)	1000 (2200)		1000 (2200)	
9	Sub Soiler		Numbers of cultivating tines		3		3	
			Cultivating depth	mm (in.)	600 (24)		600 (24)	
10	Cultivator		Max. width	mm (in.)	5490 (216)		5490 (216)	
			Number of rows		6		6	
			Max. weight	kg (lbs.)	1000 (2200)		1000 (2200)	
11	Front Blade ^{*1*2}		Max. cutting width	mm (in.)	2600 (102)		2600 (102)	
			Max. oil pressure	MPa (psi.)	18.1 (2630)		18.1 (2630)	
12	Rear Blade		Max. cutting width	mm (in.)	2600 (102)		2743 (108)	
			Max. oil pressure	MPa (psi.)	18.1 (2630)		18.1 (2630)	
13	Front Loader ^{*1*2}		Max. lifting capacity (bucket pivot pin, max. height) ^{*3}	kg (lbs.)	1950 (4299)		2210 (4872)	
			Max. oil pressure	MPa (psi.)	20.5 (2975)		20.5 (2975)	
14	Box Blade		Max. cutting width	mm (in.)	2430 (96)		2430 (96)	

(Continued)

IMPLEMENT LIMITATIONS

No.	Implement	Remarks		M6-101, M6-111	M6-131, M6-141
				4WD	4WD
14	Box Blade	Max. weight	kg (lbs.)	800 (1760)	800 (1760)
15	Back Hoe ^{*2}	Max. digging depth	mm (in.)	3050 (120)	3050 (120)
		Max. weight	kg (lbs.)	1200 (2650)	1200 (2650)
16	Snow Blade	Max. width	mm (in.)	2600 (102)	2600 (102)
		Max. weight	kg (lbs.)	800 (1760)	800 (1760)

*1 Must remove front weight with this implement.

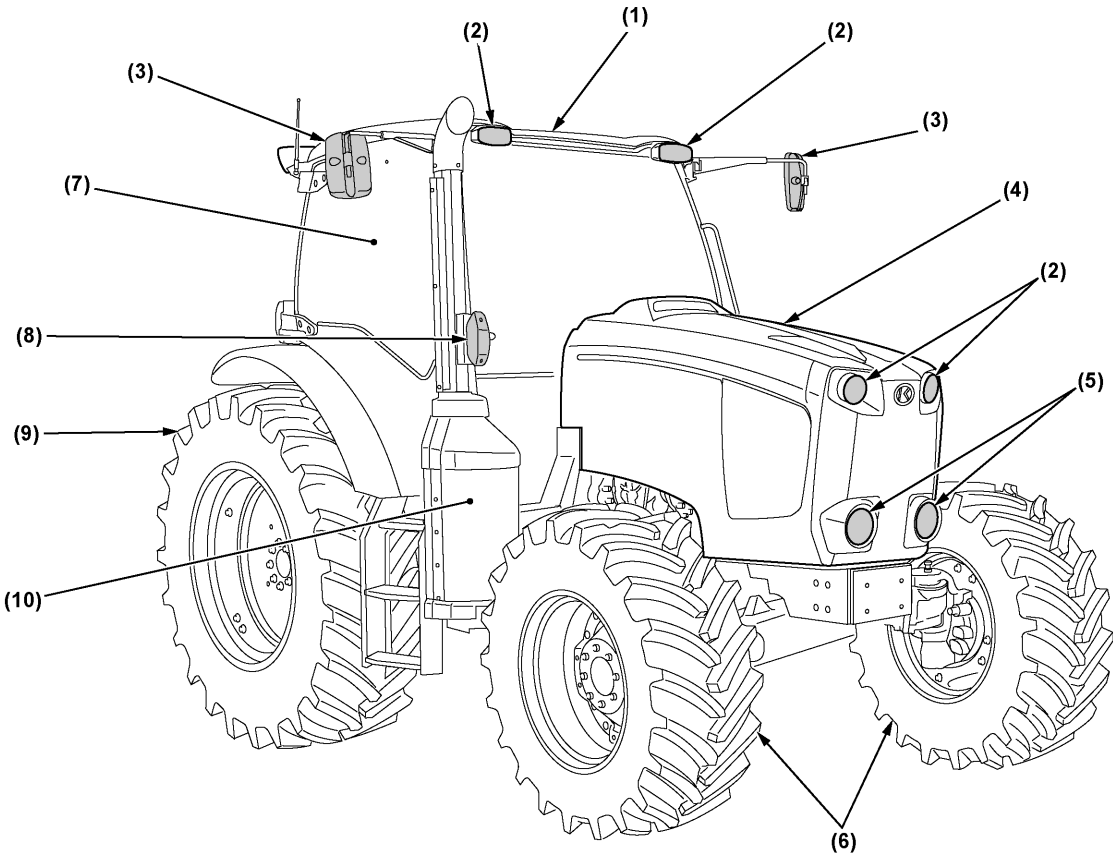
*2 Need subframe.

*3 The value contains the weight of Kubota standard bucket.

NOTE :

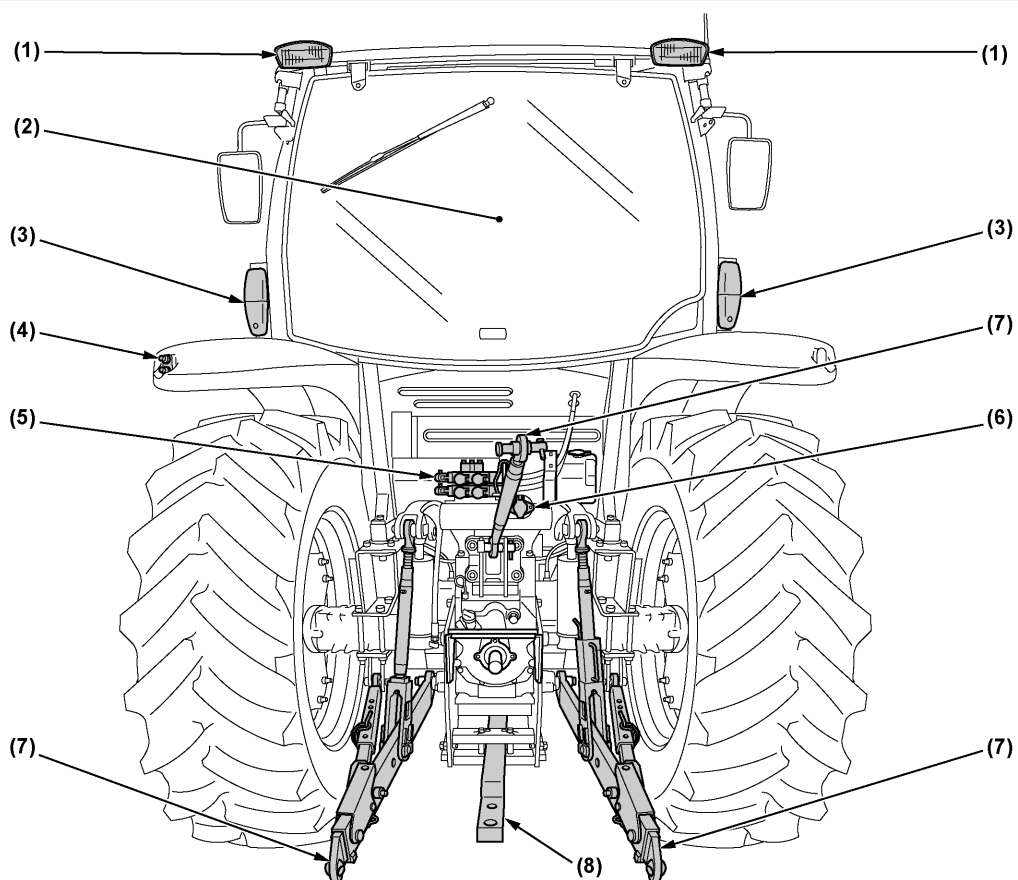
- Implement size may vary depending on soil operating conditions.

OVERVIEW OF TRACTOR PARTS



1NHSP00002D01

(1) CAB	137	(6) Front tire	130
(2) Front work light	68	(7) Door	137
(3) Rear-view mirror	67	(8) Turn signal and hazard lights	67
(4) Hood	153	(9) Rear tire	130
(5) Headlight	67	(10) Selective catalytic reduction (SCR) device	47

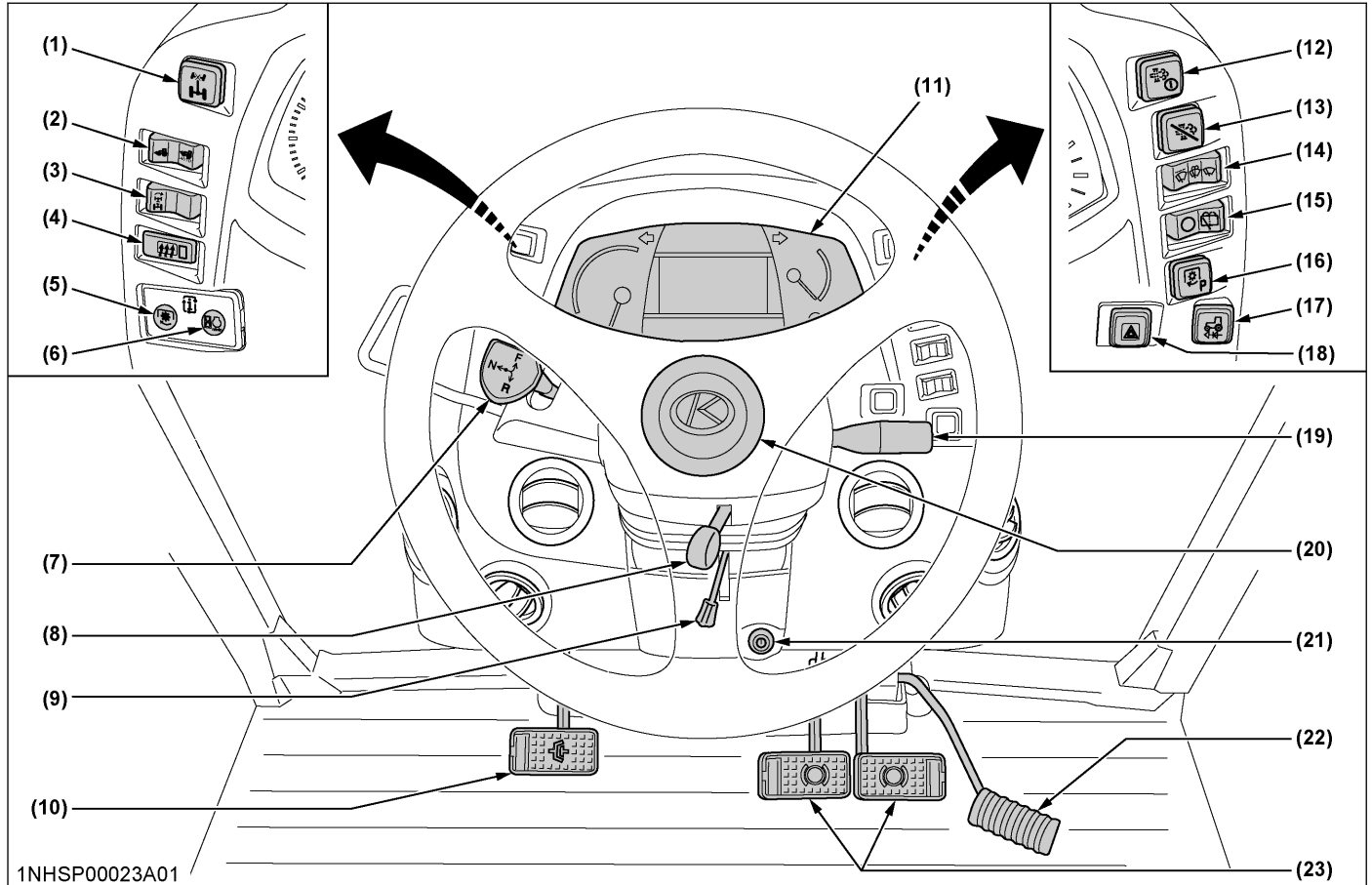


1NHSP00004E01

(1) Rear work light.....	68	(5) Remote control valve coupler	126
(2) Rear window	137	(6) Trailer electrical outlet	110
(3) Turn signal and hazard lights	67	(7) 3-point hitch	115
(4) Remote 3-point hitch up and down switch	117	(8) Drawbar	119

INSTRUMENT PANEL AND CONTROLS

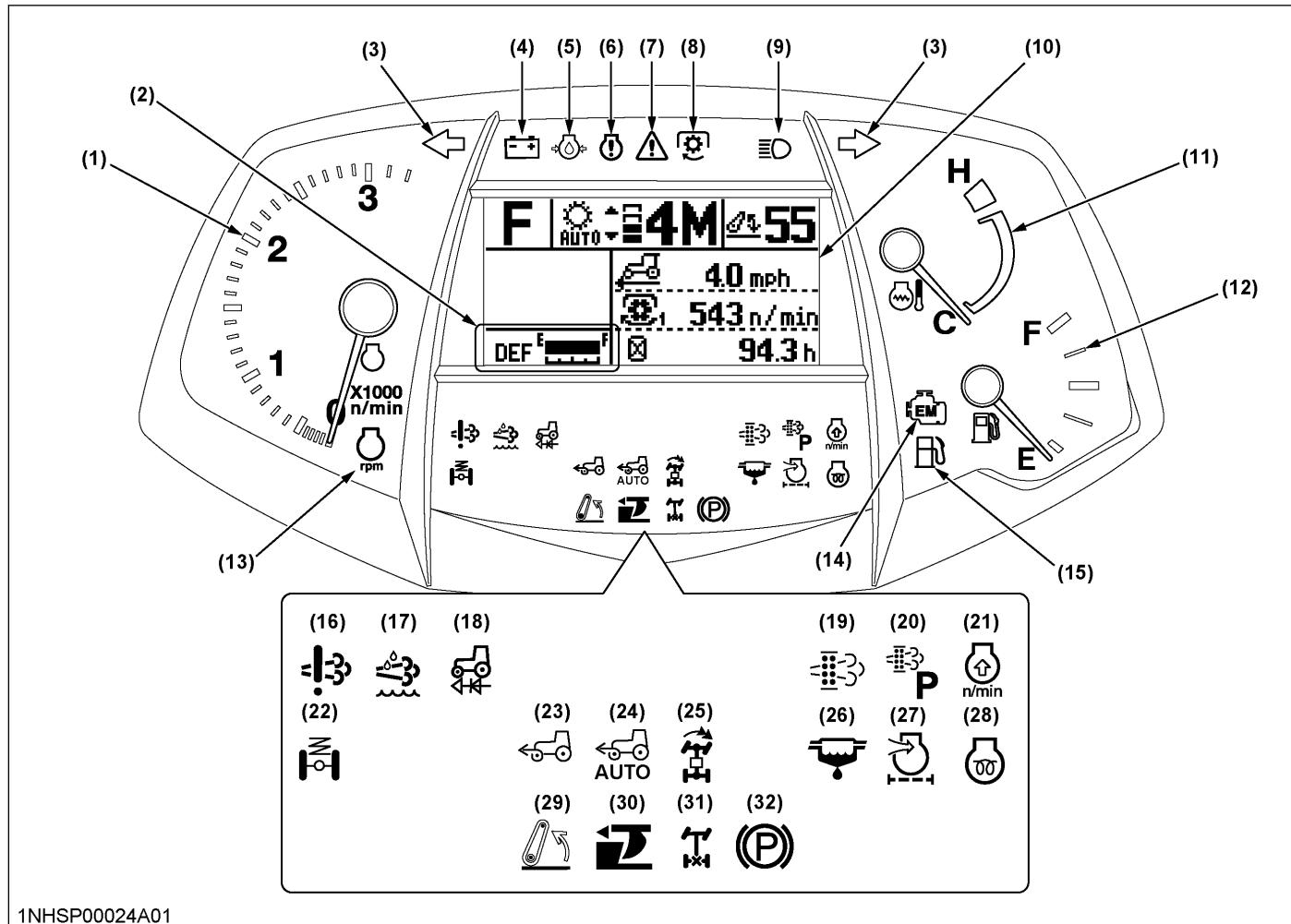
SWITCHES AND HAND CONTROLS



Illustrated contents

(1) Front wheel differential lock switch	109	(13) DPF inhibit switch	43
(2) 4WD and "AUTO 4WD" switch	74	(14) Front wiper and washer switch	138
(3) "Bi-speed turn" switch	75	(15) Rear wiper and washer switch	139
(4) Defogger switch (if equipped)	142	(16) Stationary PTO switch	113
(5) PTO indicator switch	85	(17) Xpress restart switch	77
(6) Display switch (Hour, Trip, Engine RPM dual memory A/B)	85	(18) Hazard light switch	67
(7) Shuttle lever	72	(19) Turn signal and headlight switch	67
(8) Steering wheel telescope lever	67	(20) Horn button	68
(9) Steering wheel tilt lever	67	(21) Key switch	55
(10) Clutch pedal	69	(22) Foot throttle	79
(11) Instrument panel	80	(23) Brake pedals (right and left)	68
(12) Parked regeneration switch	45		

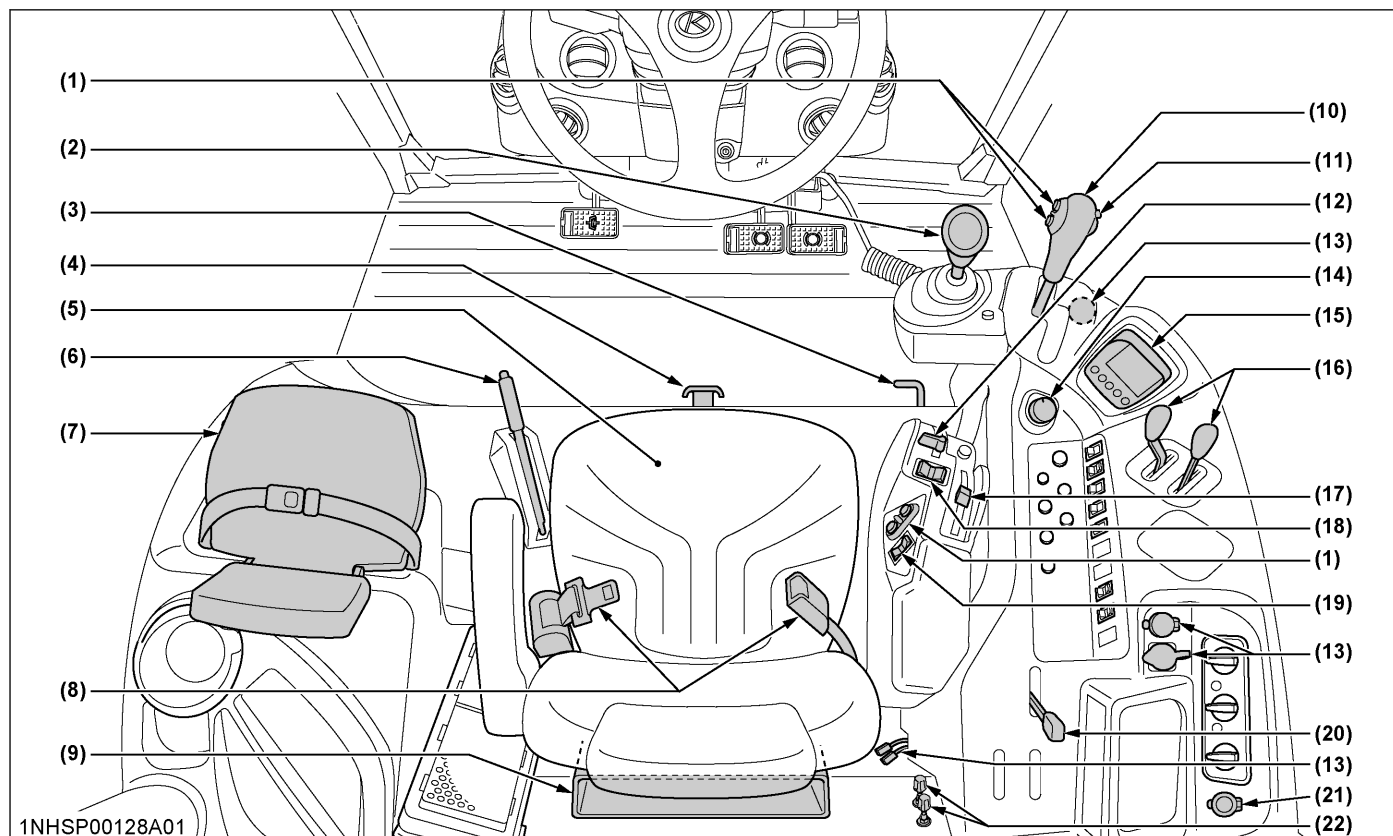
INSTRUMENT PANEL



Illustrated contents

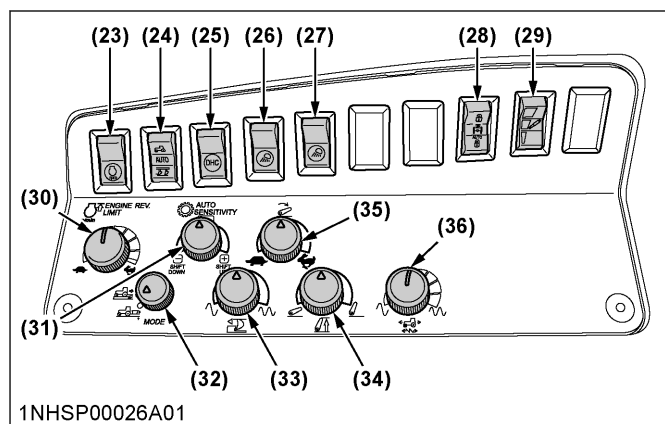
(1) Tachometer.....	82	(17) DEF (AdBlue) level and quality warning indicator.....	80
(2) DEF (AdBlue) gauge.....	81	(18) Xpress restart indicator.....	77
(3) Turn signal and hazard indicator.....	67	(19) Regeneration indicator.....	41
(4) Electrical charge warning indicator.....	80	(20) Parked regeneration indicator.....	45
(5) Engine oil pressure warning indicator.....	80	(21) Engine RPM increase indicator.....	41
(6) Engine warning indicator.....	80	(22) Front suspension indicator (front suspension type).....	106
(7) Master system warning indicator.....	80	(23) 4WD indicator.....	74
(8) PTO clutch indicator.....	112	(24) Auto 4WD indicator.....	74
(9) High-beam indicator.....	67	(25) Bi-speed turn indicator.....	75
(10) Liquid crystal display.....	83	(26) Water separator indicator.....	80
(11) Coolant temperature gauge.....	81	(27) Air cleaner indicator.....	80
(12) Fuel gauge.....	81	(28) Heater indicator.....	61
(13) Constant RPM management indicator.....	93	(29) 3-point lifting and lowering indicator.....	60
(14) Emission indicator.....	80	(30) Draft indicator.....	120
(15) Fuel level indicator.....	80	(31) Rear wheel differential lock indicator.....	109
(16) SCR system warning indicator.....	80	(32) Parking brake warning indicator.....	61

FOOT AND HAND CONTROLS



Illustrated contents

(1) Up-shift and down-shift button	97	(12) Hand throttle lever	79
(2) Multi-function joystick (if equipped)	73	(13) Electrical outlet	143
(3) Rear wheel differential lock pedal	108	(14) PTO clutch control switch	112
(4) 3-point hitch lowering lock lever	123	(15) Side digital display	86
(5) Seat	64	(16) Remote control valve lever	125
(6) Parking brake lever	79	(17) Hydraulic control lever	60
(7) Instructional seat (if equipped)	66	(18) RPM dual memory switch	90
(8) Seat belt	65	(19) 3-point quick raise and lower switch	124
(9) Operator's manual storage		(20) Creep lever (if equipped)	73
(10) Power shift and range shift lever	70	(21) USB outlet	144
(11) Clutch button	69	(22) Flow control knob	126



Illustrated contents

(23) Constant RPM management switch	93
(24) Auto-Mode switch	93
(25) DHC switch	72
(26) Front work light switch	68
(27) Rear work light switch	68
(28) Suspension switch (Front suspension type)	106
(29) Suspension firmness selection switch (Front suspension type)	107
(30) Rev-limiter control dial	79
(31) Auto-Mode sensitivity adjustment dial	101
(32) Mode selector switch	120
(33) Draft ratio adjustment dial	121
(34) Lift arm top limit adjustment dial	123
(35) 3-point hitch lowering speed adjustment dial	123
(36) Shuttle sensitivity adjustment dial	73

PRE-OPERATION CHECK

DAILY CHECK

To prevent trouble from occurring, it is important to know the condition of the tractor. Check the condition of the tractor before starting the tractor.



WARNING

To avoid personal injury or death:

- Check and service the tractor on a level surface with the engine shut off, the parking brake “ON” and the implement lowered to the ground.

Check list

- Walk around inspection
- Check engine oil level
- Check transmission oil level
- Clean remote control valve coupler
- Check coolant level
- Check water separator
- Clean grille, radiator screen, oil cooler, fuel cooler, air conditioner condenser and battery mount
- Check DPF muffler / SCR device
- Check air cleaner evacuator valve (when used in a dusty place)
- Check brake pedal
- Check parking brake lever
- Check gauges, meter and Easy Checker
- Check lights
- Check seat belt
- Check movable parts
- Check antifrost heater for oil separator (if equipped)
- Check DEF (AdBlue) level
- Refuel
(See DAILY CHECK on page 154.)
- Care of the safety labels
(See SAFETY LABELS on page 16.)

OPERATING THE ENGINE

WARNING

To avoid personal injury or death:

- Read and understand the safe operation section.
(See SAFE OPERATION on page 9.)
- Read and understand the safety labels located on the tractor.
- To avoid the danger of exhaust fume poisoning, do not operate the engine indoors without proper ventilation.
- Never start the engine while standing on the ground. Start the engine only from the operator's seat.
- Set all shift levers to their “NEUTRAL” positions and to place the PTO clutch control switch in the “OFF” position before starting the engine.
- For models with front suspension:
When the engine is started, the machine height may change unexpectedly. Before starting the tractor, make sure that the area near the machine is clear of all persons and objects.

IMPORTANT :

- Do not use starting fluid or ether.
- To protect the battery and the starter, make sure that the starter is not continuously turned for more than 10 seconds.

EXHAUST AFTERTREATMENT DEVICES

WARNING

To avoid personal injury or death:

- During diesel particulate filter (DPF) regenerating operations, exhaust gases and exhaust filter components reach temperatures hot enough to burn people or ignite or melt common materials.
- Keep tractor away from people, animals or structures which may be susceptible to harm or damage from hot exhaust gases.
- During regeneration, white exhaust gases may be visible. Do not allow regeneration in an unventilated garage or confined area.
- During regeneration, do not leave the tractor.

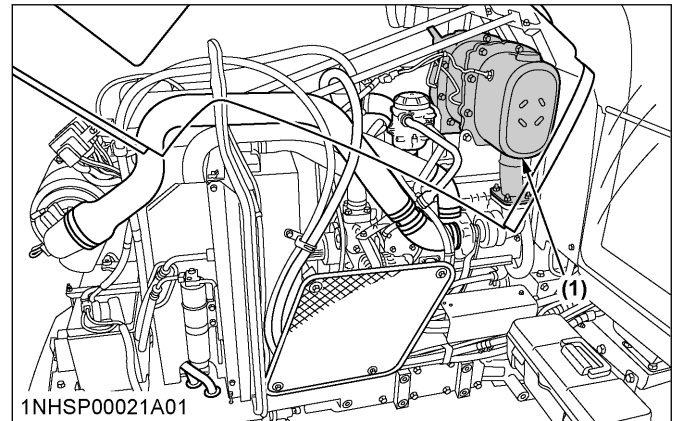
1. Dual exhaust aftertreatment devices

Particulate matter (PM) and black smoke contained in exhaust gases are trapped and removed by the diesel particulate filter (DPF) muffler.

The SCR system then decomposes residual nitrogen oxides (NO_x) into harmless nitrogen (N₂) and water (H₂O) for purification.

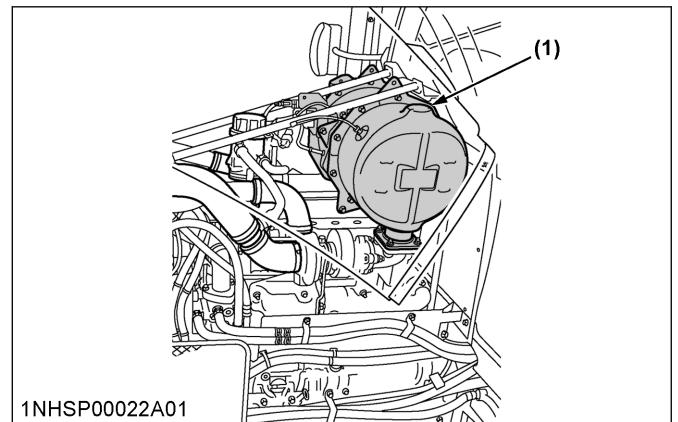
This dual exhaust gas purifying device provides for clean exhaust gas at low fuel consumption.

M6-101, M6-111

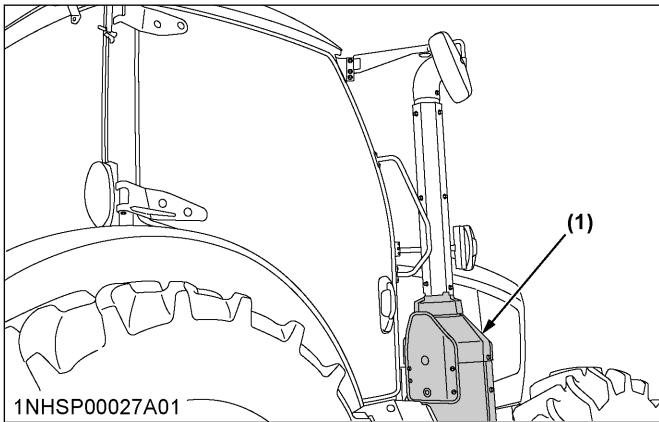


(1) Diesel particulate filter (DPF)

M6-131, M6-141



(1) Diesel particulate filter (DPF)

All models

(1) SCR device

DIESEL PARTICULATE FILTER (DPF) MUFFLER

This tractor is equipped with an engine with a diesel particulate filter (DPF) muffler which serves to reduce hydrocarbons, carbon monoxide and other toxic gases, all of which are contained in diesel engine emissions, to harmless carbon dioxide and water. The DPF also traps particulate matter (PM).

Please handle exhaust aftertreatment devices correctly and in an environmentally responsible manner.

1. Handling points

When a specific amount of particulate matter (PM) has accumulated in the DPF muffler, it is necessary to refresh the DPF muffler by burning the PM inside it.

This burning off work is called *“Regeneration”*.

To extend operating time to reach this regeneration, and to avoid DPF muffler trouble, observe the following handling matters.

Fuel

Use ultra-low sulfur fuel (S15).

IMPORTANT :

- **Use of diesel fuel other than ultra-low sulfur fuel may adversely affect the engine and DPF performance.**
Use of fuels other than ultra-low sulfur fuel (S15) may not meet regulations for your region.

Engine oil

Use DPF-compatible oil (CJ-4) for the engine.

IMPORTANT :

- **If any engine oil other than CJ-4 is used, the DPF may become clogged earlier than expected and the fuel economy may drop.**

Prohibition of unnecessary idling operation

Generally, the lower the engine speed, the lower the exhaust gas temperature is, so the PM contained in

exhaust gas will not be burned, and begins to accumulate. Therefore, do not idle unnecessarily.

Regeneration

When there is *“Regeneration”* instruction sign by lamp or buzzer, immediately perform the required procedure for regeneration.

IMPORTANT :

- **Interrupting the regeneration cycle or continuing operation while ignoring the warning signs may cause DPF and engine damage.**

2. DPF regeneration process

DPF regeneration process can be performed by choosing *“Auto regeneration”* or *“Regeneration inhibit”* mode according to your job conditions.

For jobs not affected by hot gases emitted during regeneration, *“Auto regeneration”* is advisable.

Auto regeneration mode

When starting the engine (switch operation is unnecessary), the *“Auto regeneration”* mode is automatically activated.

With the auto regeneration mode on, when a specific amount of PM has accumulated, and the regeneration conditions are satisfied, the DPF will be automatically regenerated whether the tractor is in motion or parked. (See Tips on diesel particulate filter (DPF) regeneration on page 46.)

In this way, work efficiency is improved. For more details, read the *“Auto regeneration”* section of this manual.

(See Operating procedure for auto regeneration mode on page 41.)

Regeneration inhibit mode

After starting the engine, if the *“DPF inhibit switch”* is pressed to turn on the switch lamp, the *“Regeneration inhibit”* mode will be activated.

With *“Regeneration inhibit”* mode on, the PM which has accumulated inside the DPF will not be burned, unless the operator performs the regeneration work manually. The *“Regeneration inhibit”* mode is effective for work in poorly ventilated workspaces.

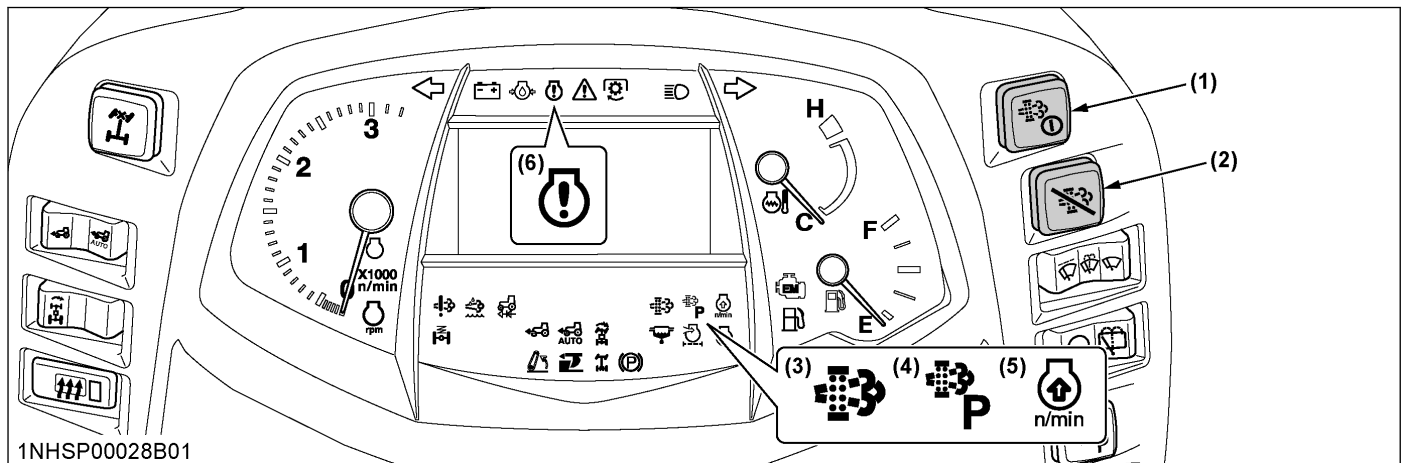
For more details, read the regeneration prohibition section of this manual.

(See Operating procedure for regeneration inhibit mode on page 43.)

NOTE :

- **If the engine is stopped once, the *“Auto regeneration”* mode will be activated.**

3. Operating procedure for auto regeneration mode



- (1) Parked regeneration switch
 (2) DPF inhibit switch
 (3) Regeneration indicator

- (4) Parked regeneration indicator
 (5) Engine rpm increase indicator
 (6) Engine warning indicator

Regeneration operating procedure

1. Start the engine.

Make sure that the DPF inhibit switch lamp  is off.

Switch lamp "OFF": Auto regeneration mode activated.

Switch lamp "ON": Regeneration inhibit mode activated.

NOTE :

- When the engine is started, the "Auto regeneration" mode is automatically activated.
- "Regeneration inhibit" mode is activated when the DPF inhibit switch is pushed after the engine is started.

2. When the regeneration indicator  starts to flash:

A specific amount of PM has built up in the DPF.

Continue to operate the tractor, and the regeneration process will begin automatically; make sure that the working place is in a safe area as DPF and exhaust temperature will rise.

3. When the engine rpm increase indicator  starts to flash:

Keep on working and increase the engine rpm until the indicator turns off.

NOTE :

- Even if the auto regeneration mode is selected, DPF regeneration may not begin because system requirements have not been satisfied.
- The engine rpm increase indicator is used as a guide to satisfy the regeneration conditions. If the engine load is too heavy, the engine rpm increase indicator may continue to flash, even though regeneration system conditions are satisfied and regeneration may begin automatically.
 (See Tips on diesel particulate filter (DPF) regeneration on page 46.)

3.1 PM warning level and required procedures

During auto regeneration mode when the PM level has built up in the DPF, the regeneration cycle will begin automatically.

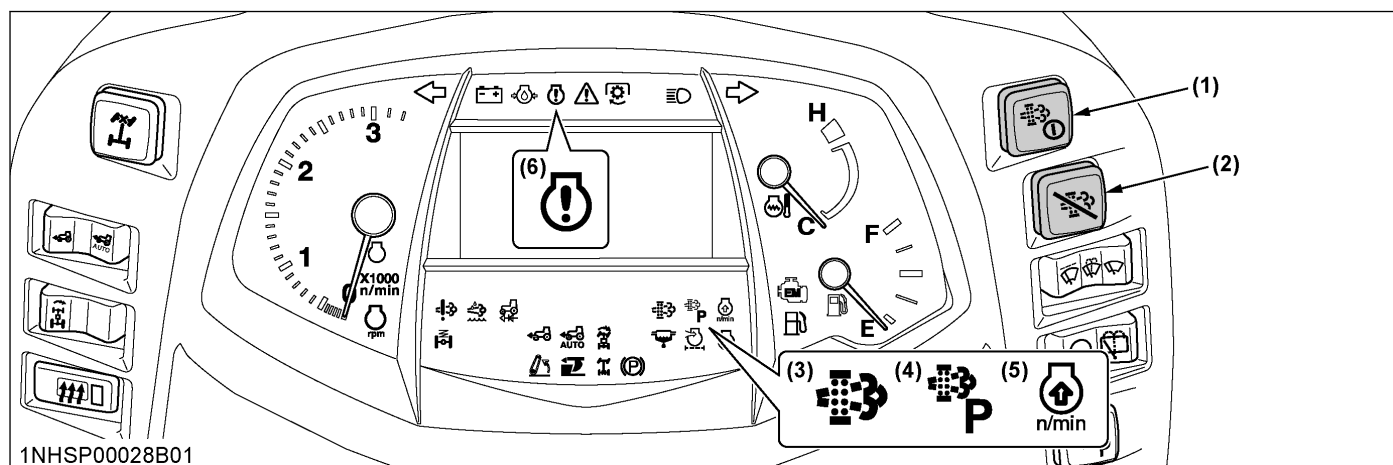
If the regeneration cycle is interrupted or the regeneration conditions are not satisfied, the buzzer starts to sound and the indicator display changes in response to the PM level in order to prompt the operator to perform the required procedure listed in the following table.

IMPORTANT :

- **Once the regeneration level has been reached, immediately perform the required procedure for regeneration.**
Interrupting the regeneration cycle or continuing operation while ignoring the warning signs may cause DPF and engine damage.

Auto mode		
	DPF system status	Required procedure
PM warning level: 1 Buzzer: Not sounding	 The regeneration indicator starts to flash.  The rpm increase indicator starts to flash.  The regeneration indicator will stop flashing and remain "ON" constantly.	A specific amount of PM has accumulated in the DPF muffler. Continue to work the tractor to raise the DPF temperature. Continue the work and increase the engine rpm until the indicator turns off. The regeneration cycle begins and continues until cycle is complete then the indicator will turn off.
PM warning level: 2-1 Buzzer: Sounding every 5 seconds	If the regeneration cycle was interrupted or conditions are not satisfied for regeneration then DPF system is now in Level 2.	
PM warning level: 2-2 Buzzer: Sounding every 3 seconds	 The regeneration indicator starts to flash.  The rpm increase indicator starts to flash.  The parked regeneration indicator starts to flash.	Start the regeneration, referring to PM warning level: 1 above. Now the parked regeneration indicator starts to flash, and the parked regeneration can also be started. If the regeneration conditions are not met, perform the parked regeneration procedure. (See Operating procedure for parked regeneration on page 45.)
PM warning level: 3 Buzzer: Sounding every 1 second Engine output: 50 %	If the regeneration fails in the warning level 2:	
	 The engine warning indicator starts to flash.  The parked regeneration indicator starts to flash.	Immediately stop working the tractor and begin the parked regeneration cycle process. (See Operating procedure for parked regeneration on page 45.) At this PM warning level, the auto regeneration mode does not function. If the tractor is operated further, the regeneration cycle will be disabled.
PM warning level: 4 Buzzer: Sounding every 1 second Engine output: 50 %	If the parked regeneration is interrupted or the tractor is continuously operated in the warning level 3:	
	 The engine warning indicator remains constantly "ON".	Immediately move the tractor to a safe place, park it there and turn off the engine. Contact your local Kubota dealer. • At this level, do not continue to operate the tractor; otherwise, damage will result to the DPF and engine.

4. Operating procedure for regeneration inhibit mode



(1) Parked regeneration switch

(2) DPF inhibit switch

(3) Regeneration indicator

(4) Parked regeneration indicator

(5) Engine rpm increase indicator

(6) Engine warning indicator

Regeneration operating procedure

1. Start the engine.

2. Press the DPF inhibit switch , and the switch lamp illuminates.

Switch lamp "ON": Regeneration inhibit mode selected.

Switch lamp "OFF": Auto regeneration mode selected.

3. When the parked regeneration indicator  starts to flash:

A specific amount of PM has accumulated in the DPF muffler.

Move the tractor to a safe place and activate the DPF muffler.

(See Operating procedure for parked regeneration on page 45.)

4.1 PM warning level and required procedures

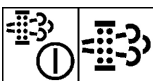
In the regeneration inhibit mode, the buzzer starts to sound and the indicator display changes in response to the PM level in order to prompt the operator to perform the required procedure listed in the following table.

IMPORTANT :

- Once the regeneration level has been reached, immediately perform the required procedure for regeneration.
Interrupting the regeneration cycle or continuing operation while ignoring the warning signs may cause DPF and engine damage.

Regeneration inhibit mode		
	DPF system status	Required procedure
PM warning level: 1 Buzzer: Not sounding	 The regeneration indicator starts to flash.	A specific level of PM has built up in the DPF muffler. Continue with the operation as it is.
	 At PM warning levels range from 1 to 2-2, it is also possible to change DPF inhibit switch to auto regeneration mode, then perform the regeneration.	
PM warning level: 2-1 Buzzer: Sounding every 5 seconds	 The regeneration indicator starts to flash.	Move the tractor to a safe area, then begin the parked regeneration cycle process. (See Operating procedure for parked regeneration on page 45.)
PM warning level: 2-2 Buzzer: Sounding every 3 seconds	 The parked regeneration indicator starts to flash.	
PM warning level: 3 Buzzer: Sounding every 1 second Engine output: 50 %	If the parked regeneration cycle is interrupted or the tractor is continuously operated in the PM warning level 2:	
	 The engine warning indicator starts to flash.	Immediately stop working the tractor, move the tractor to a safe area, then begin the parked regeneration cycle process. (See Operating procedure for parked regeneration on page 45.) If the tractor is operated further and the operator ignores the warning signs, then regeneration will be disabled.
	 The parked regeneration indicator starts to flash.	
PM warning level: 4 Buzzer: Sounding every 1 second Engine output: 50 %	If the regeneration cycle is interrupted or the tractor is continuously operated ignoring the warning signs, in the PM warning level 3:	
	 The engine warning indicator remains constantly "ON".	Immediately move the tractor to a safe place, park it there and turn off the engine. Contact your local Kubota dealer. At this level, do not continue to operate the tractor; otherwise, damage may result to the DPF and engine.

5. Operating procedure for parked regeneration

1. Park the tractor in a safe area away from buildings, people, and animals.
2. Apply the parking brake.
3. Set the shuttle lever to the "NEUTRAL" position.
4. Turn the PTO clutch control switch to the "OFF" position.
5. Return the engine rpm to the idle speed.
6. Lower the implement to the ground.
7. Press the DPF inhibit switch , and the switch lamp turns off.
8. When the regeneration conditions are satisfied (2 to 5 and 7 mentioned previously), the parked regeneration switch lamp  starts to flash.
9. Press the parked regeneration switch  to start the regeneration cycle.
The switch lamp will stop flashing and remain on constantly during the cycle.
10. The engine rpm will automatically rise, and the regeneration process will begin.
11. Both indicators  stay on while regenerating the DPF.
Both indicators turn off when the cycle is complete.
12. After the lamp turns off, normal tractor work may resume.
When driving in "Regeneration Inhibit" mode, press the DPF inhibit switch to turn on the switch lamp.

NOTE :

- During the regeneration cycle, do not touch the above levers and switches (in steps 2, 3, 4), nor change the engine rpm other than for an emergency stop. Otherwise, the regeneration will be interrupted.
- Never leave the tractor when the parked regeneration process is activated.
- If the parked regeneration cycle is interrupted, the engine rpm is fixed at the idling level for about 30 seconds. For this period, keep the hand throttle lever and foot throttle pedal at the idle position. Do not move them. They will function again in 30 seconds.
- If one of the following conditions applies to the tractor, the parked regeneration will not function. (See Warning indication and countermeasures on page 48.)
 - DEF (AdBlue) level and quality warning indicator  lights up and "Lv.1" or "Lv.2" is being displayed on the LCD (limited engine output).
 - SCR warning indicator  lights up and the DTC is being displayed on the LCD.
 - Freeze icon of DEF (AdBlue)  or limited engine output is displayed on the LCD.
- Diagnostic trouble code (DTC)
DTC can be used to diagnose the problem in the engine and SCR system.
For example, "P-208B": The code beginning with the letter "P" or "U" is the DTC.

6. Tips on diesel particulate filter (DPF) regeneration

- **Operation**

The higher in speed or load the engine operates, the higher the exhaust temperature rises. As a result, particulate matter (PM) inside the DPF is consumed and the regeneration process is required less frequently over time.

The lower in speed or load the engine operates, the lower the exhaust temperature. Accordingly, less particulate matter (PM) inside the DPF is consumed and more accumulation of PM will occur, which requires frequent regeneration. Therefore, avoid prolonged idling if possible.

- **Necessary conditions for “Regeneration”**

When the conditions below are all satisfied, regeneration will start. However, if even one condition is deviated from during the process, the regeneration will be interrupted.

- The engine coolant temperature.
- The DPF temperature.
- The engine speed is 1200 rpm or higher.

- Usually, it takes 15 to 20 minutes to complete the regeneration cycle.

Actual regeneration time may depend on ambient temperature, exhaust temperature and engine speed.

- It is recommended to do the regenerating while the engine is warm.
- Do not unnecessarily start and interrupt the regeneration process. Otherwise, a small amount of fuel becomes mixed with the engine oil, which degrades the oil quality.
- While the DPF is being regenerated, the engine air flow rate is automatically limited to maintain the high exhaust temperature. This may cause the engine to sound different, but this is normal for this engine.
- Just after the regeneration has ended, the DPF muffler remains hot. It is advisable to keep the engine running for about 5 minutes to allow cooling of the exhaust components.

SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

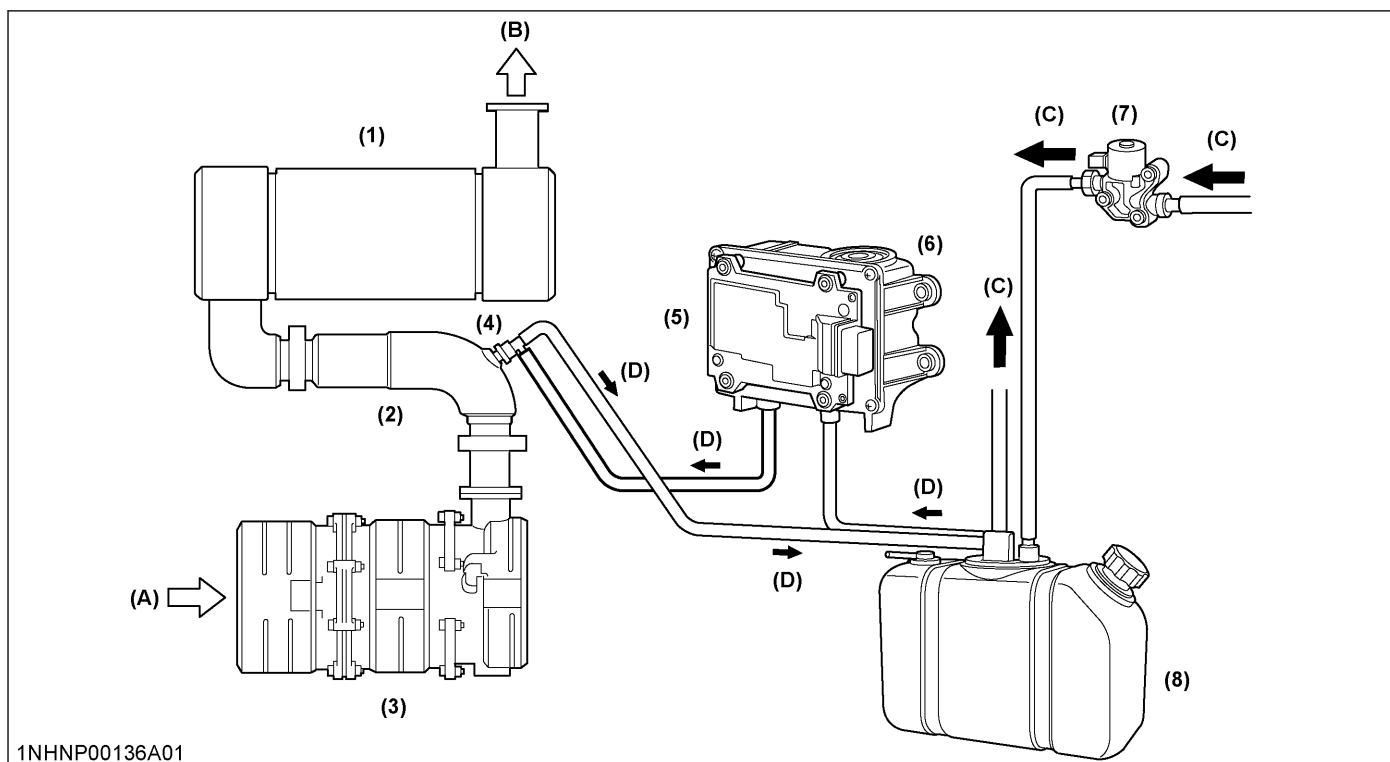
1. Outline of the SCR system

- The SCR system is intended to reduce or eliminate nitrogen oxides (NO_x) from diesel exhaust gas. The system uses Diesel Exhaust Fluid (DEF) as a reducing agent and hydrolyzes it with the heat of exhaust gas to produce ammonia (NH₃). The generated ammonia reduces NO_x and decomposes them into nitrogen and water for emissions reduction. Due to this NO_x reduction from the exhaust gas, the odor of the exhaust gas discharged from the SCR device differs from that of conventional diesel engines.
- Diesel Exhaust Fluid (DEF) is sold under many brand names, with one of the more common ones being AdBlue. In the text, DEF is described as DEF (AdBlue).
- DEF (AdBlue) freezes below -11 °C (12 °F), but this does not affect the start-up of the engine. The frozen DEF (AdBlue) is thawed by the heat of the engine coolant while the engine is running.

IMPORTANT :

- Modifying the SCR system is a violation of local laws and regulations. Do not modify the SCR system for any reason, as doing so could result in monetary sanctions and fines.**
- Do not run the engine when the DEF tank is empty.**
- If the remaining amount of DEF (AdBlue) is insufficient, the quality is poor, or if an abnormality occurs in the SCR system, the auto regeneration and parked regeneration functions of the Diesel Particulate Filter (DPF) muffler may not operate properly.**

Structural drawing



- 1NHNP00136A01
- (1) Selective catalytic reduction (SCR) device
 - (2) Mixing pipe
 - (3) Diesel particulate filter (DPF)
 - (4) DEF injector

- (5) Aftertreatment control unit (ACU)
- (6) DEF pump
- (7) Coolant valve
- (8) DEF tank

- (A) Exhaust gas before purification
- (B) Exhaust gas after purification
- (C) Coolant flow
- (D) DEF (AdBlue) flow

2. DEF (AdBlue)

- The DEF (AdBlue), used as a reducing agent for the SCR system, is a 32.5% aqueous urea solution.
- No qualification is needed for handling DEF (AdBlue). In addition, DEF (AdBlue) is not designated as a hazardous material.
- Use DEF (AdBlue) that conforms to ISO 22241.

NOTE :

- In North America, the high-grade NO_x reducing agent (aqueous urea solution) is sold under the name of DEF (Diesel Exhaust Fluid). In Europe and in Japan, aqueous urea solution is sold under the brand name AdBlue.

3. Handling DEF (AdBlue)



CAUTION
To avoid personal injury, note the following when handling DEF (AdBlue):

- If DEF (AdBlue) gets into your eyes, immediately rinse your eyes with a large amount of water for at least 15 minutes and consult a doctor.
- Do not swallow DEF (AdBlue). If you have accidentally swallowed DEF (AdBlue), seek medical attention immediately.
- If DEF (AdBlue) gets on your skin, rinse immediately with water. In rare cases, DEF (AdBlue) may irritate the skin.
- If DEF (AdBlue) gets on your clothes or shoes, wash it off immediately. Simply wiping off or leaving DEF (AdBlue) on clothes or shoes will leave a white residue.

For more details, obtain and read the Safety Data Sheet (SDS) from the DEF (AdBlue) supplier.

If you spill DEF (AdBlue), immediately rinse with clean water. If left untouched, DEF (AdBlue) may rust metal parts or corrode painted surfaces. Also, resin and rubber parts may be deformed.

4. Quality of DEF (AdBlue)

IMPORTANT :

- If the DEF (AdBlue) emits a strong ammonia odor, the quality of the fluid may have deteriorated. To check the quality of the DEF (AdBlue), check the odor of the DEF (AdBlue) in the DEF tank once every 3 months.
- If the DEF (AdBlue) in the DEF tank emits a strong ammonia odor, drain all DEF (AdBlue) from the DEF tank into a container.
(See Draining DEF (AdBlue) on page 53.)

After draining the DEF (AdBlue), flush the inside of the DEF tank with distilled water, then refill the tank with new or high-quality DEF (AdBlue).

- When you do not use the machine for more than 3 months, drain all DEF (AdBlue) from the DEF tank.

- Purchasing DEF (AdBlue) from a Kubota dealer is recommended. The product is also available at gas stations, truck stops and specialty shops. Use an ISO 22241 compliant product. Using non-compliant products may lead to engine failure.

- The appropriate environment for storing DEF (AdBlue) is between -5 °C to 30 °C (23 °F to 86 °F). See the following table for more information about the storage life of DEF (AdBlue). To prevent the shortening of the DEF (AdBlue) storage life, avoid storing the DEF (AdBlue) in environments that exceed 30 °C (86 °F).

Details regarding the storage of DEF (AdBlue) can be found in a different section.

(See Storing purchased DEF (AdBlue) on page 53 and Storing DEF (AdBlue) in the DEF tank on page 54.)

Ambient temperature	Storage life
≤10 °C (50 °F)	36 months
≤25 °C (77 °F)	18 months
≤30 °C (86 °F)	12 months
≤35 °C (95 °F)	6 months
≤40 °C (104 °F)	3 months

- Do not dilute the DEF (AdBlue) fluid.
- DEF (AdBlue) of deteriorated quality may cause a drop in engine output or an engine malfunction.

NOTE :

- If distilled water is not available for flushing the inside of the DEF tank, rinse with clean water first, then rinse thoroughly with DEF (AdBlue) again. Afterward, replenish with new or high-quality DEF (AdBlue).
- Turn the key switch to the “OFF” position when replacing the DEF (AdBlue).

5. Warning indication and countermeasures

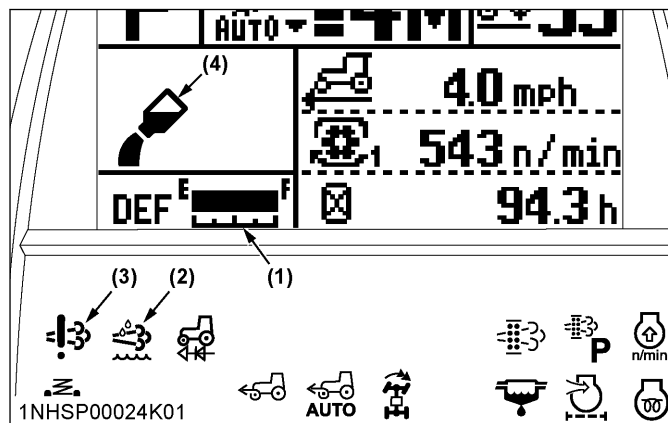
5.1 Warning display when the remaining amount of DEF (AdBlue) is low

This machine controls the engine output according to the remaining amount of DEF (AdBlue) to comply with emission regulations.

After starting the engine, check the remaining amount of DEF (AdBlue) with the DEF (AdBlue) gauge located on the instrument panel.

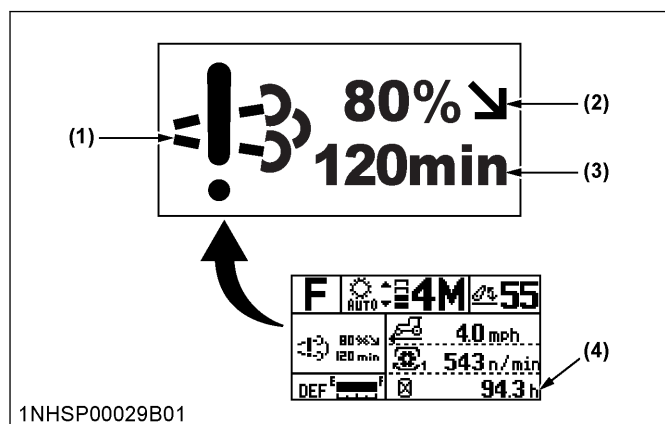
If the DEF (AdBlue) runs low, the low-level warning icon flashes and the buzzer sounds. If you continue to run the machine in its current state, the engine output will be limited to about 50 %. If operation is continued, the engine will be limited to idling.

These limitations are stipulated in conformity with the emission controls of each country and territory.



- (1) DEF (AdBlue) gauge
- (2) DEF (AdBlue) level and quality warning indicator
- (3) SCR system warning indicator
- (4) Low-level warning icon of DEF (AdBlue)

5.2 SCR system inducement display on the LCD



- (1) SCR system warning icon
- (2) Engine output level
- (3) Time limit to next level or remaining DEF (AdBlue)
- (4) Performance monitor (error code and DTC)

5.3 SCR system icon appearing on inducement display

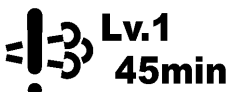
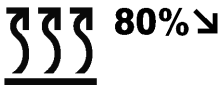
	Low-level icon of DEF (AdBlue)		SCR system warning icon
	Poor-quality icon of DEF (AdBlue)		Freeze icon of DEF (AdBlue)

5.4 SCR system inducement display and measures

On the SCR system, the remaining amount and quality of DEF (AdBlue) as well as machine troubles are monitored. If anything goes wrong during operation, the following warnings are issued. Follow the warning contents to take proper measures.

Displays	Warning indicator	Status	Measures	DPF parked re-generation
 40%		1	The amount of remaining DEF (AdBlue) has dropped below 40 % of the maximum capacity. Refill the DEF tank to reset the warning system. To maintain tractor performance, it is recommended to add DEF (AdBlue) to the specified level quickly. If operation is continued without refilling, the engine output will be limited.	permit
 Lv.1		2	The amount of remaining DEF (AdBlue) has dropped below 5 % of the maximum capacity. Refill the DEF tank. ^{*1} The engine output is limited to 50 % (limited engine output: "Lv.1"). If operation is continued without refilling, the engine output will be limited to idle status (limited engine output: "Lv.2").	inhibit
 Lv.1 30min		2	The amount of remaining DEF (AdBlue) has dropped below 5 % of the maximum capacity. Refill the DEF tank. ^{*1} The engine output is limited to 50 % (limited engine output: "Lv.1"). If operation is continued without refilling, after 30 minutes, the engine output will be limited to idle status (limited engine output: "Lv.2").	inhibit
 Lv.2		3	The amount of remaining DEF (AdBlue) has dropped below 5 % of the maximum capacity. The engine output will remain limited. Refill the DEF tank. ^{*1} The engine output is limited to idle status (limited engine output: "Lv.2").	inhibit
 195min		1	Contains poor quality DEF (AdBlue) or other non-regulated solutions. After draining the DEF tank, refill with DEF (AdBlue) to reset the warning system. If operation is continued without refilling the DEF tank, after 195 minutes, the engine output will be limited to 50 % (limited engine output: "Lv.1").	permit
 Lv.1 45min		2	Contains poor quality DEF (AdBlue) or other non-regulated solutions. After draining the DEF tank, refill with DEF (AdBlue). ^{*1} The engine output is limited to 50 % (limited engine output: "Lv.1"). If operation is continued without refilling the DEF tank, after 45 minutes, the engine output will be limited to idle status (limited engine output: "Lv.2").	inhibit
 Lv.2		3	Contains poor quality DEF (AdBlue) or other non-regulated solutions. After draining the DEF tank, refill with DEF (AdBlue). ^{*1} The engine output is limited to idle status (limited engine output: "Lv.2").	inhibit

^{*1} When DEF (AdBlue) has been added or a poor-quality solution replaced by a genuine product, the warning indicator and icons turn off. The engine output limitation will also be cleared.

Displays	Warning indicator	Status	Measures	DPF parked re-generation
 195min		1	The SCR system has experienced an abnormality. Verify the DTC displayed on the performance monitor and contact your local Kubota dealer. The engine output is unrestricted. After 195 minutes, the engine output will be limited to 50 % (limited engine output: "Lv.1").	inhibit
 80% 120min		1	The SCR system has experienced an abnormality. Verify the DTC displayed on the performance monitor and contact your local Kubota dealer. The engine output is limited to 80 %. After 120 minutes, the engine output will be limited to 50 % (limited engine output: "Lv.1").	inhibit
 Lv.1 45min		2	The SCR system has experienced an abnormality. Verify the DTC displayed on the performance monitor and contact your local Kubota dealer. The engine output is limited to 50 % (limited engine output: "Lv.1"). After 45 minutes, the engine output will be limited to idle status (limited engine output: "Lv.2").	inhibit
 Lv.2		3	The SCR system has experienced an abnormality. Verify the DTC displayed on the performance monitor and contact your local Kubota dealer. The engine output is limited to idle status (limited engine output: "Lv.2").	inhibit
	—	—	Due to low temperatures, the DEF (AdBlue) has frozen. Continue the warm-up operation and the DEF (AdBlue) will thaw.	inhibit
 80% 40h	—	—	Due to low temperatures, the DEF (AdBlue) has frozen. The engine output is limited to 80 %. Continue the warm-up operation and the DEF (AdBlue) will thaw.	inhibit

NOTE :

- **The limited engine output level:**
The text "Lv.1" and "Lv.2" displayed next to the icon represents the limited engine output level.
"Lv.1" (Level 1): Within 50 % of max torque and 60 % of engine speed.
"Lv.2" (Level 2): Within engine near idling speed.
- **After an error has occurred, it may be necessary for the engine output to become limited to "Lv.2".**
Depending on trouble spots and contents, the indicator-prompted warnings and the engine output limits and timings may vary accordingly.
The SCR warning status (from 1 to 3) represents the severity order of the engine output limitation. If the SCR system experiences abnormalities, an error code will be displayed, and it may be necessary to limit the engine output to idle status ("Lv.2").
For example, when a "P-204F" error code is displayed, the engine output changes from unrestricted to "Lv.2" limited.
- **Points after taking measures.**
After the engine has stopped and the DEF (AdBlue) has drained, if the amount that was refilled is less than the pre-drain amount, the SCR system may experience a malfunction ("P-20F5" error code is displayed).
When the error occurs, turn the key switch to the "OFF" position and wait for the SCR system to complete the purge process, which may take several minutes. Then turn the key switch to the "ON" position again in order to clear the SCR system malfunction.
- **The time displayed on the icon's lower-right represents the minimum time until the beginning of limitation.**
- **The 40 hours warning record.**
 1. Basically, warning and/or inducement reduction cancel when the fault location is repaired.

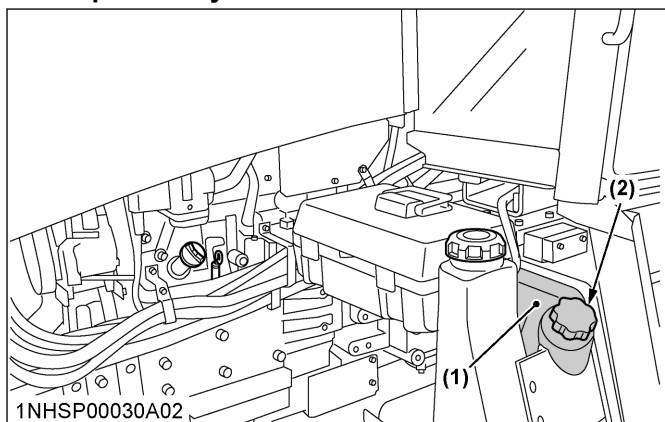
2. However, if any faults are detected within 40 hours of the restoration, the system soon returns to the previous failure and the timer restarts counting down.
3. The 40 hours warning record will be reset if any fault has not been detected over 40 hours from the repair.

If a fault is detected after the 40 hours warning record reset, then the new countdown will be stated.

6. Adding DEF (AdBlue)

IMPORTANT :

- The DEF tank cap is blue.
Do not add DEF (AdBlue) to the fuel tank. Also, do not add diesel fuel to the DEF tank.
- If anything other than DEF (AdBlue) is mixed into the DEF tank and the engine is started, the SCR system may fail. Do not start the engine if the DEF (AdBlue) is contaminated with diesel fuel. Consult your Kubota dealer immediately.
- The warranty does not cover failures caused by adding or mixing anything other than DEF (AdBlue) into the DEF tank. If that occurs, all repair costs will be the customer's responsibility.



- (1) DEF tank
(2) DEF tank cap (blue)

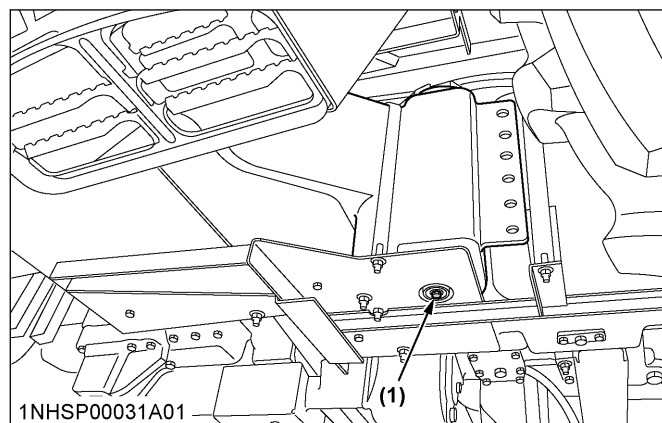
- Before adding DEF (AdBlue) to the DEF tank, clean the area around the nozzle and supply port to prevent foreign matter such as soil and dust from entering.
- Turn the key switch to the "OFF" position before adding DEF (AdBlue).
After stopping the engine, the SCR system continues to operate for up to about 15 minutes. Do not add DEF (AdBlue) before the SCR system stops. Otherwise, DEF (AdBlue) may overflow from the breather hose of the DEF tank.
- If DEF (AdBlue) is stored in a reusable container, periodically clean and refill it. If the container is dirty, wash with distilled water. If distilled water is not available for washing the container, rinse with clean water first, then rinse again with DEF (AdBlue) before refilling.
- In order to maintain the performance of the SCR system, it is recommended to refill the DEF tank with DEF (AdBlue) each time the fuel tank is refueled.

7. Draining DEF (AdBlue)

IMPORTANT :

- Do not run the engine when the DEF tank is empty.
- Remove the drain plug shown in the following illustration, then drain the DEF (AdBlue) into a container.
- Keep the rubber O-ring of the drain plug clean of oil.
- Do not use a power tool when reinstalling the drain plug. Overtightening the drain plug may cause damage.

Drain plug tightening torque	4.0 N·m to 6.0 N·m (3.0 lbf·ft to 4.4 lbf·ft) (35.4 lbf·in to 53.1 lbf·in)
------------------------------	--



- (1) Drain plug

- Turn the key switch to the "OFF" position when draining DEF (AdBlue).
- When draining and refilling the DEF (AdBlue) in the DEF tank, if the refilled amount is less than the drained amount, an SCR system error "P-20F5" will be displayed on the instrument panel. When the error code "P-20F5" is displayed, run the engine for 10 minutes in order to clear the SCR error/warning code. If the error/warning is displayed after running the engine for more than 10 minutes, consult your local Kubota dealer. In order to avoid the aforementioned error, it is recommended that you fully refill the DEF tank every time.
- For the disposal of drained DEF (AdBlue), read the following information.
(See Disposing of DEF (AdBlue) on page 54.)

8. Storing purchased DEF (AdBlue)

- Note the following when storing DEF (AdBlue):
 - Close the container firmly.
 - Avoid direct sunlight.
 - Store in a well-ventilated room.
 - Store in a place with little temperature change.

- Do not use the following DEF (AdBlue) even if it is still unused. The DEF (AdBlue) may be deteriorated, which may cause SCR system failure.
 - When the storage period is unknown.
 - When the storage environment is unknown (especially in a high-temperature environment).
 - When DEF (AdBlue) has a strong ammonia odor.
- When storing and carrying DEF (AdBlue), use the original container. Otherwise, prepare a dedicated container. For the dedicated container, use a clean polyethylene resin tank (PE) or a stainless steel container free of foreign matter such as water and dust.
- Keep containers used for storing and refilling DEF (AdBlue) free from dirt and dust. Use distilled water to clean the containers. If distilled water is not available for cleaning the containers, rinse with clean water first, then rinse again thoroughly with DEF (AdBlue) before refilling.
- The appropriate environment for storing DEF (AdBlue) is between -5 °C to 30 °C (23 °F to 86 °F). See the following table for more information about the storage life of DEF (AdBlue). To prevent the shortening of the DEF (AdBlue) storage life, avoid storing the DEF (AdBlue) in environments that exceed 30 °C (86 °F).

Ambient temperature	Storage life
≤10 °C (50 °F)	36 months
≤25 °C (77 °F)	18 months
≤30 °C (86 °F)	12 months
≤35 °C (95 °F)	6 months
≤40 °C (104 °F)	3 months

NOTE :

- The aforementioned storage life is only a guide. Depending on how DEF (AdBlue) is stored, the storage life may be shorter than indicated.
- DEF (AdBlue) freezes when the temperature drops below -11 °C (12 °F). The quality of DEF (AdBlue) will not be affected even if frozen. Thaw the DEF (AdBlue) before use.

9. Storing DEF (AdBlue) in the DEF tank

IMPORTANT :

- If the DEF (AdBlue) emits a strong ammonia odor, the quality of the fluid may have deteriorated. To check the quality of the DEF (AdBlue), check the odor of the DEF (AdBlue) in the DEF tank once every 3 months.

- If the DEF (AdBlue) in the DEF tank emits a strong ammonia odor, drain all DEF (AdBlue) from the DEF tank into a container. (See Draining DEF (AdBlue) on page 53.) After draining the DEF (AdBlue), flush the inside of the DEF tank with distilled water. Then refill the DEF tank with new or high-quality DEF (AdBlue).
- When you do not use the machine for more than 3 months, drain all DEF (AdBlue) from the DEF tank. When using the machine after 3 months of inactivity, fully refill the DEF tank with new or high-quality DEF (AdBlue).

NOTE :

- DEF (AdBlue) of deteriorated quality may cause a drop in engine output or an engine malfunction.
- If distilled water is not available for flushing the inside of the DEF tank, rinse with clean water first, then rinse thoroughly with DEF (AdBlue) again. Afterward, fill with new or high-quality DEF (AdBlue).
- Turn the key switch to the “OFF” position when replacing the DEF (AdBlue).
- When draining and refilling the DEF (AdBlue) in the DEF tank, if the refilled amount is less than the drained amount, an SCR system error is displayed on the instrument panel, but this is not a malfunction. (See Draining DEF (AdBlue) on page 53.)

10. Disposing of DEF (AdBlue)

Although not a hazardous substance, dispose of the used DEF (AdBlue) properly to avoid environmental pollution. For disposal methods, consult your supplier or an industrial waste disposal contractor.

11. Handling precautions after stopping the engine

After stopping the engine, the SCR system automatically operates for up to about 15 minutes and returns the DEF (AdBlue) in the piping to the DEF tank to prevent freezing and clogging.

The SCR system may generate operating noise after the engine has stopped, but this is not a malfunction. Note the following precautions after stopping the engine:

- Do not remove the battery terminal until the SCR system stops. This is to prevent damage to the system device.
- Do not refill with DEF (AdBlue) before the SCR system stops. Otherwise, DEF (AdBlue) may overflow from the breather hose of the DEF tank.

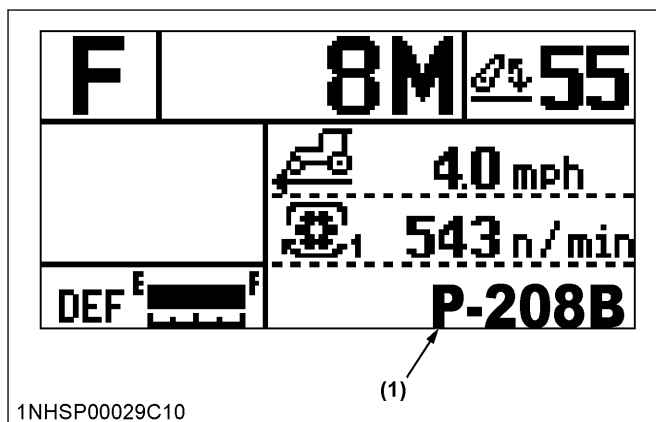
12. Precautions when using in cold regions

- DEF (AdBlue) freezes below -11 °C (12 °F), but this does not affect the start-up of the engine.
- The DEF (AdBlue) is automatically thawed while the engine is running.
- While thawing, output may be limited to protect the SCR system.
- However, in weather conditions of under -30 °C (-22 °F), the DEF (AdBlue) cannot be completely thawed and therefore, an error/warning code “P-208B” appears on the instrument panel.

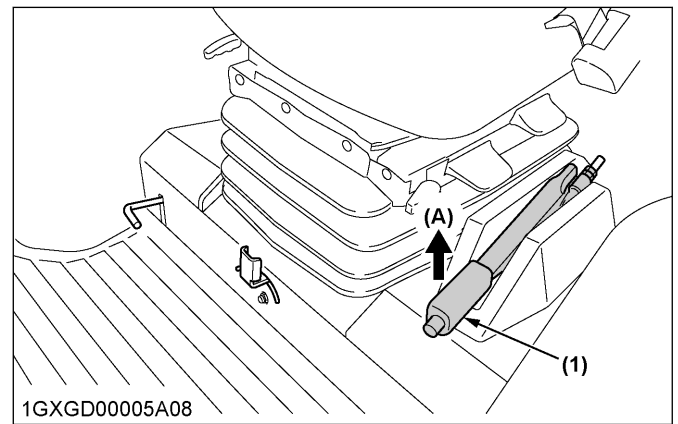
If the error/warning code “P-208B” appears on the screen, stop the engine and restart it after 10 seconds.

After restarting the engine, the error/warning code “P-208B” will disappear and the thawing of the DEF (AdBlue) will resume.

If the error/warning code “P-208B” remains on the screen even after restarting the engine several times, consult your local Kubota Dealer.

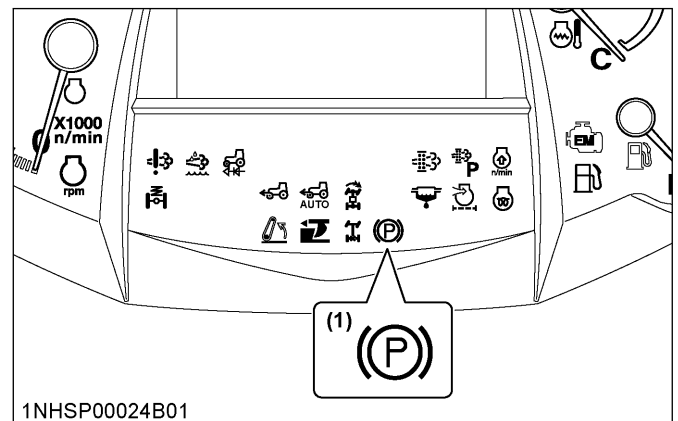


(1) Error/warning code



(1) Parking brake lever

(A) "PULL"



(1) Parking brake warning indicator

IMPORTANT :

- If the tractor is operated with the parking brake set, the parking brake will be damaged.

13. Maintenance of SCR system related parts

Regularly check, clean, and replace the SCR system related parts.

Details regarding maintenance can be found in a different section.

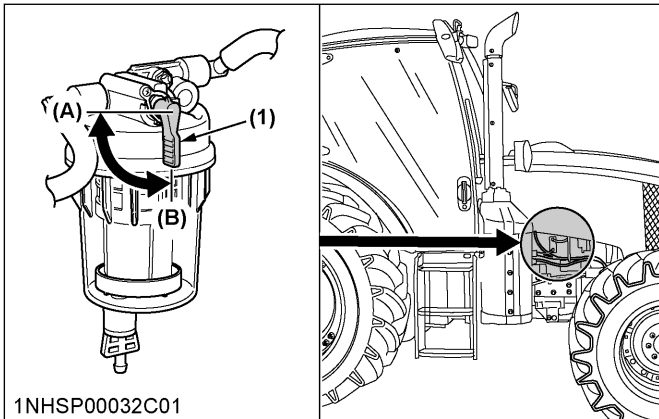
(See SERVICE INTERVALS on page 145.)

STARTING THE ENGINE

1. Make sure that the parking brake is set.
Pull the parking brake lever up to park.
The parking brake warning indicator on the Easy Checker will come on while the parking brake is set.

- Make sure that the fuel shutoff-valve is in the "OPEN" position.

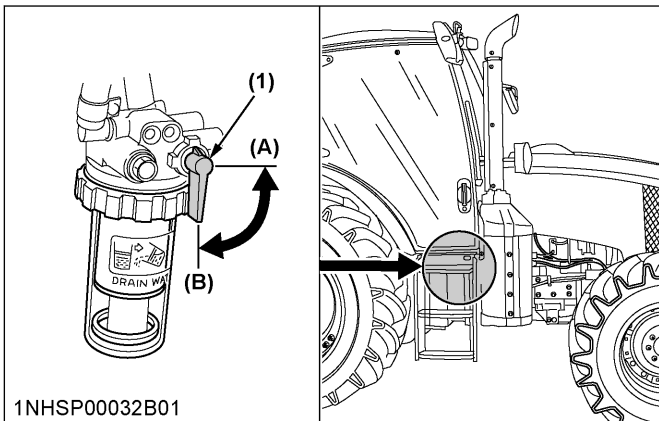
M6-101, M6-111



(1) Fuel shutoff-valve

(A) "CLOSE"
(B) "OPEN"

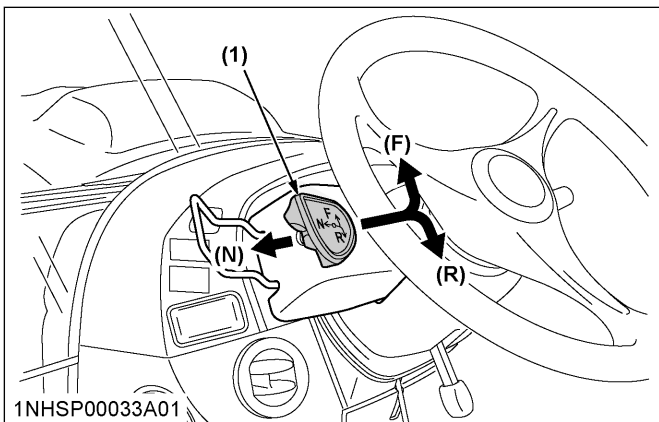
M6-131, M6-141



(1) Fuel shutoff-valve

(A) "CLOSE"
(B) "OPEN"

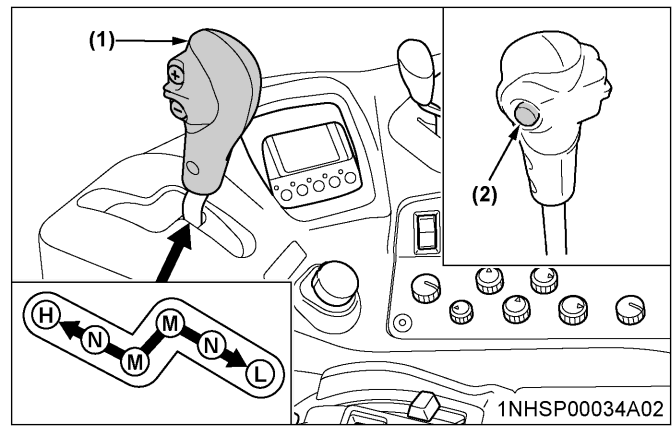
- Place the shuttle lever in the "NEUTRAL" position.



(1) Shuttle lever

(F) "FORWARD"
(N) "NEUTRAL"
(R) "REVERSE"

- Place the power shift and range shift lever in the "NEUTRAL" position.



(1) Power shift and range shift lever

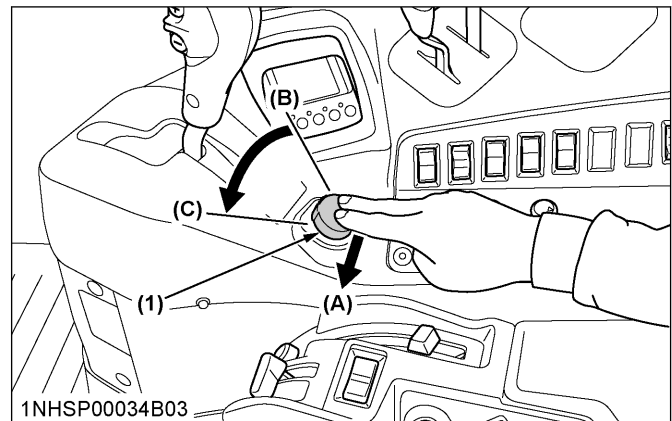
(2) Clutch button

(H) "HIGH"
(M) "MIDDLE"

(L) "LOW"

(N) "NEUTRAL"

- Push the PTO clutch control switch to place it in the "OFF" position.



(1) PTO clutch control switch

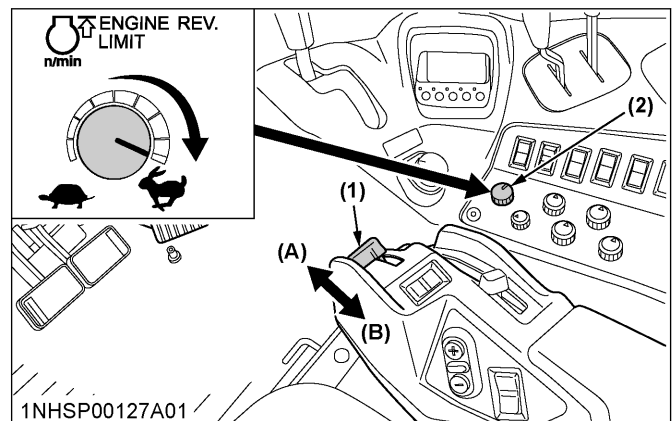
(A) "PUSH"

(B) "ON" (engaged)

(C) "OFF" (disengaged)

- Set the throttle lever at the minimum speed position.

When the rev-limiter control dial is set, the engine speed will not exceed the speed that is set. Even when the hand throttle lever is operated. Turn the dial all the way to the right to the "🐢" position.



(1) Hand throttle lever

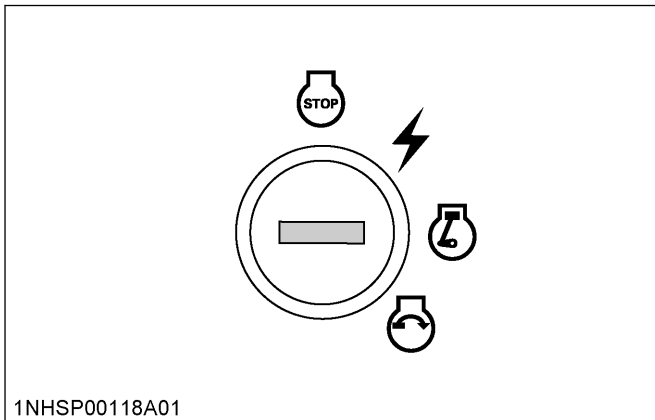
(2) Rev-limiter control dial

(A) "INCREASE"

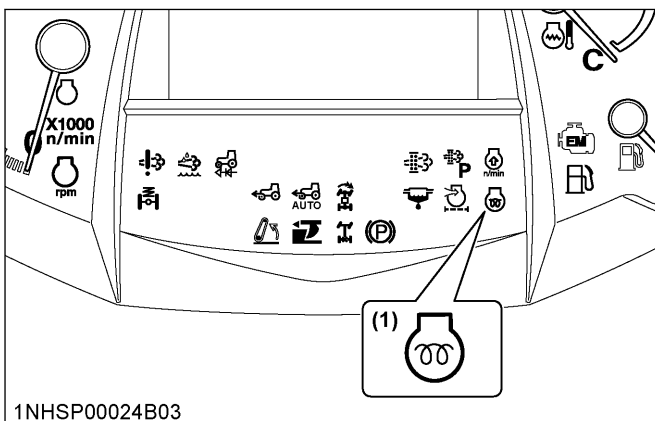
(B) "DECREASE"

7. Insert the key into the key switch and turn it to the "ON" position.

If the ambient temperature is below 0 °C and the engine is very cold, turn the key to the "ON" position and hold it until the heater indicator turns off (preheat is completed).



- "OFF" (engine-stop)
- "ACC" (electrical power-accessories)
- "ON" (engine-run)
- "START" (engine-start)

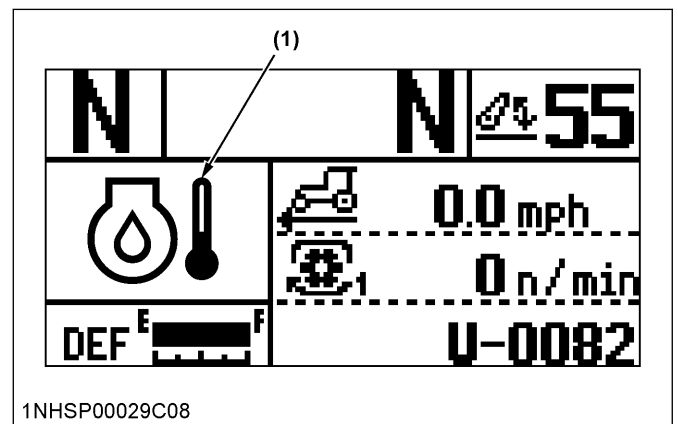


- (1) Heater indicator

NOTE :

Regarding ACC:

- All the accessories can be used while the engine is stopped.
- Do not leave the key at the "ACC" position. The battery will be quickly discharged. Turn the key back to the "OFF" position after use.
- During a cold start, the low temperature regulation indicator will appear on the LCD and the buzzer may sound once every 2 seconds. In this case, the engine speed will be limited to about 60 %. If the operation is continued, the engine speed limit will gradually and automatically increase until the rotational speed matches the foot throttle (or hand throttle) strength.



- (1) Low temperature regulation indicator

8. Check the Easy Checker indicators.
(See Checking Easy Checker indicators on page 59.)
9. Lower the implement.
(See Lowering the implement on page 60.)
10. Fully depress the clutch pedal.
11. Turn the key to "START" position and release when the engine starts.

IMPORTANT :

- Because of safety devices, the engine will not start except when the PTO clutch control switch is placed in the "OFF" position and power shift and range shift lever is placed in the "NEUTRAL" position.
- If the engine fails to start after 10 seconds, turn off the key for 30 seconds. Then repeat steps 7 through 11. To protect the battery and the starter, make sure that the starter is not continuously turned for more than 10 seconds.

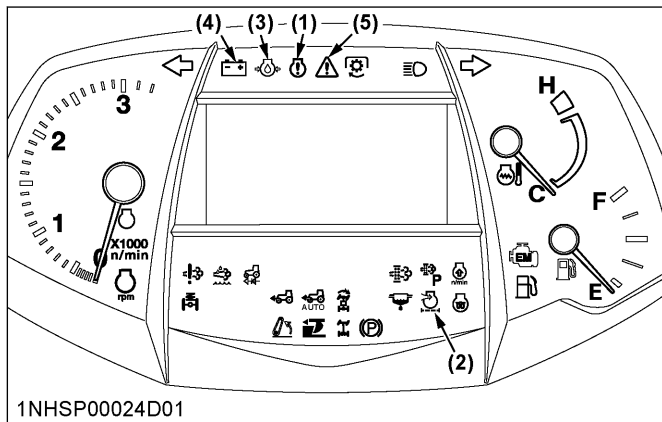
NOTE :

- DEF (AdBlue) freezes at temperatures below -11 °C (12 °F). Even if it is frozen, the engine is not affected at its start-up and running.

12. Check to see that all the indicators on the Easy Checker are "OFF".

If an indicator is still on, immediately stop the engine and determine the cause.

The following indicators will turn off after starting the engine:



- (1) Engine warning indicator
- (2) Air cleaner indicator
- (3) Engine oil pressure warning indicator
- (4) Electrical charge warning indicator
- (5) Master system warning indicator

13. Release the clutch pedal.

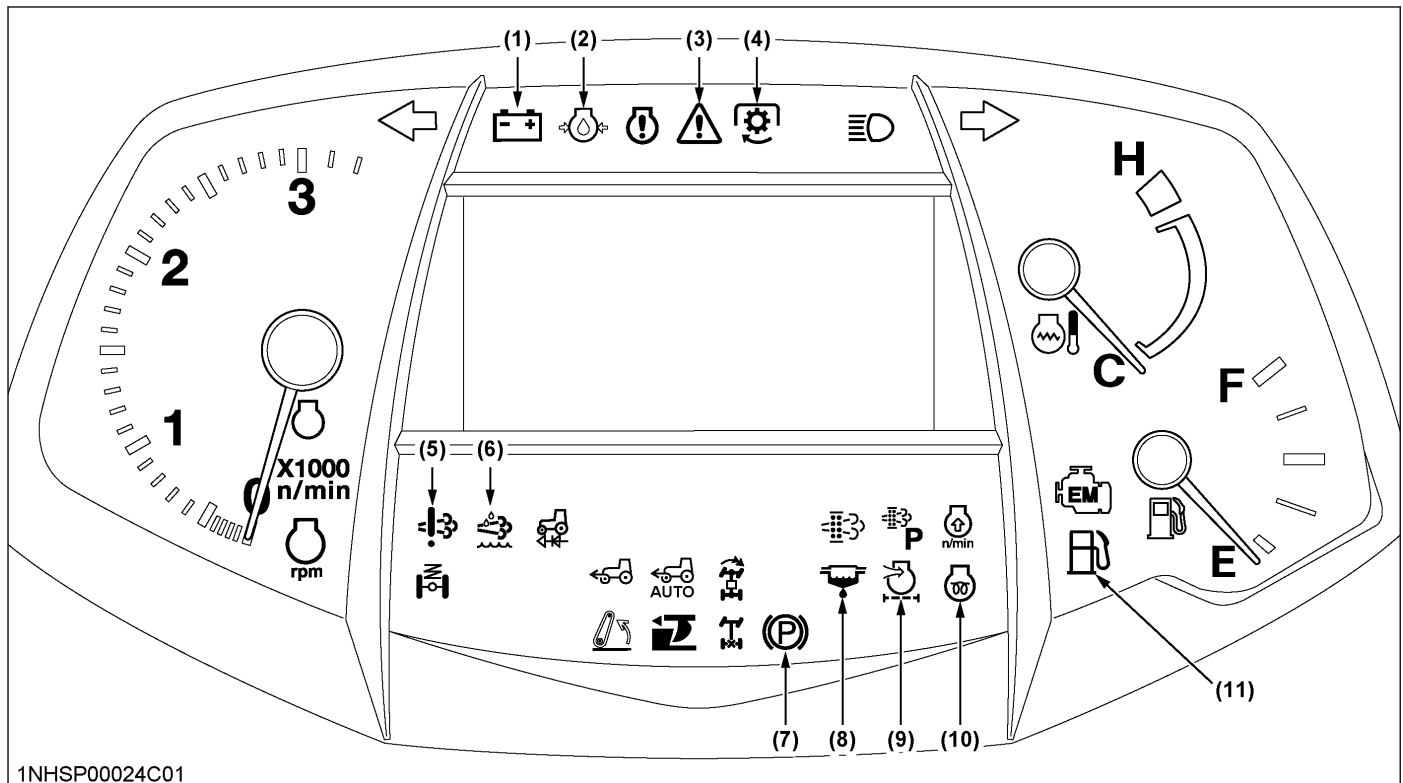
1. Checking Easy Checker indicators

NOTE :

- Some of the Easy Checker indicators may illuminate or start to flash depending on the positions of the levers and switches.

IMPORTANT :

- Daily checks performed with only the Easy Checker are insufficient. Always conduct daily checks carefully by referring to the daily check section.
(See DAILY CHECK on page 154.)
- If any of the indicators fail to light up, consult your local Kubota dealer.



- (1) Electrical charge warning indicator
(2) Engine oil pressure warning indicator
(3) Master system warning indicator
(4) PTO clutch indicator

- (5) SCR system warning indicator
(6) DEF (AdBlue) level and quality warning indicator
(7) Parking brake warning indicator

- (8) Water separator indicator
(9) Air cleaner indicator
(10) Heater indicator
(11) Fuel level indicator

Turn the key to the “ON” position and all indicators start to flash. Make sure that the following indicators light up or turn off:

Indicators that light up:

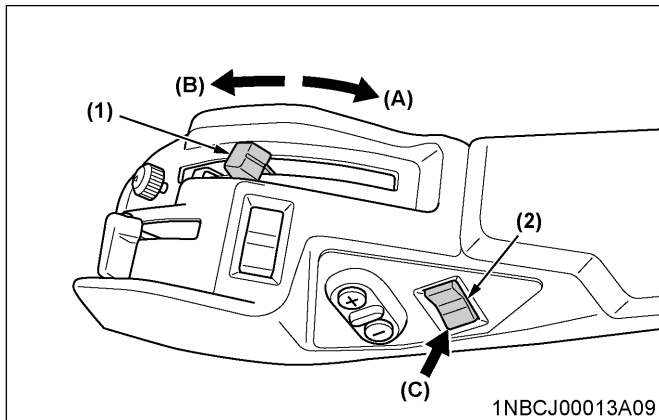
- The heater indicator does not light up when the coolant temperature is 5 °C (41 °F) or higher.
- If the parking brake warning indicator does not light up, engage the parking brake.

Indicators that turn off:

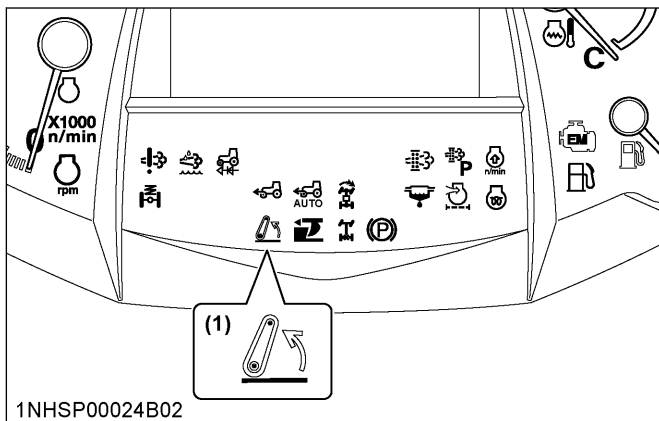
- If the PTO clutch indicator stays on, turn the PTO switch to the “OFF” position.
- If the fuel level indicator stays on, add fuel.
- If the DEF (AdBlue) level and quality warning indicator stays on, check to see icon on LCD.
(See Warning indication and countermeasures on page 48.)
- If the water separator indicator stays on, drain the water from the water separator.
- If the SCR system warning indicator stays on, consult your local Kubota dealer for this service.

2. Lowering the implement

1. Move the hydraulic control lever to the "UP" position and then move it back to the "LOWEST" position.
2. If the implement does not lower and the 3-point lifting and lowering indicator starts to flash, push the bottom half of the 3-point quick raise and lower switch and release the position lock.
The implement will lower and indicator light will turn off.
3. Then lower the implement to the ground using the hydraulic control lever.



- (1) Hydraulic control lever (A) "UP" (B) "DOWN" (C) "PUSH"
- (2) 3-point quick raise and lower switch



- (1) 3-point lifting and lowering indicator

NOTE :

- The implement does not go down if the 3-point hitch is "LOCKED" with 3-point hitch lowering lock lever.
(See 3-point hitch lowering lock lever on page 123.)

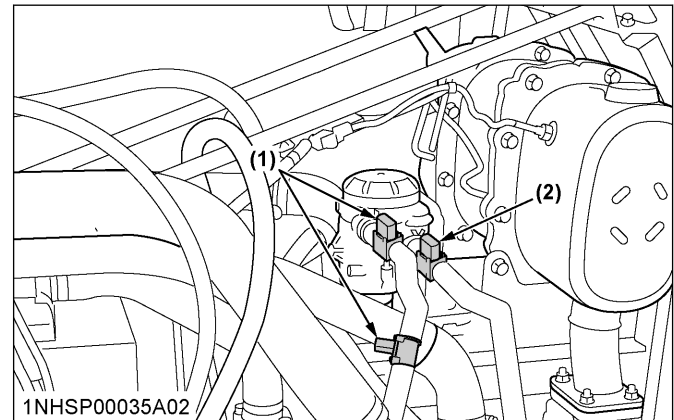
OPERATING THE ENGINE IN FREEZING CONDITIONS

1. Antifrost heater for oil separator (if equipped)

The heater element operates continuously when the key switch is in the "ON" or "START" position.

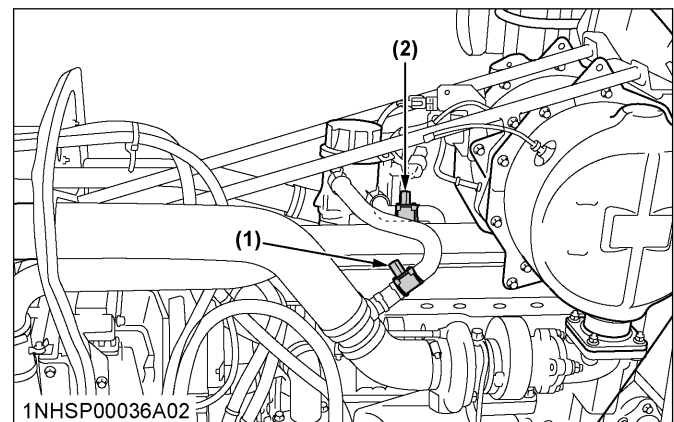
Due to high electrical draw, extended idle time or operations will drain the battery and stop the tractor.

M6-101, M6-111



- (1) Heater (oil separator, OUT)
(2) Heater (oil separator, IN)

M6-131, M6-141



- (1) Heater (oil separator, OUT)
(2) Heater (oil separator, IN)

2. Block heater (if equipped)

A block heater is available as an option from your dealer. A block heater will assist you in starting your tractor when the ambient temperature is below -20 °C (-4 °F).

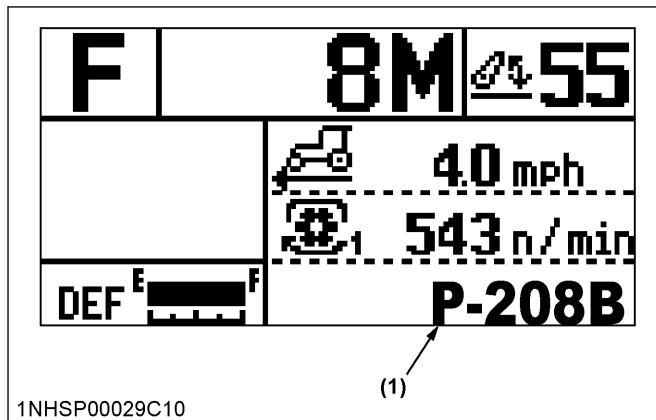
3. DEF (AdBlue) freeze warning

When operating in cold weather, the DEF (AdBlue) is automatically thawed while the engine is running. However, in weather conditions of under -30 °C (-22 °F), the DEF (AdBlue) cannot be completely thawed and

thus, an error/warning code “P-208B” appears on the instrument panel's LCD screen.

If the error/warning code “P-208B” appears on the screen, stop the engine and restart it after 10 seconds. After restarting the engine, the error/warning code “P-208B” will disappear and the thawing of the DEF (AdBlue) will resume.

In case the error/warning code “P-208B” remains on the screen even after restarting the engine several times, contact your local Kubota dealer.



(1) Error/warning code

STOPPING THE ENGINE

After stopping the engine, the SCR system automatically operates for up to about 15 minutes and returns the DEF (AdBlue) in the piping to the DEF tank to prevent freezing and clogging.

The SCR system may generate operating noise after the engine has stopped, but this is not a malfunction.

Note the following precautions after stopping the engine:

- Do not remove the battery terminal until the SCR system stops. This is to prevent damage to the system device.
 - Do not refill with DEF (AdBlue) before the SCR system stops. Otherwise, DEF (AdBlue) may overflow from the breather hose of the DEF tank.
1. After slowing the engine to idle, wait 3 to 5 minutes for turbo to slow down and then turn the key to the “OFF” position.
 2. Remove the key.

NOTE :

- If key's operation does not stop the engine, consult your local Kubota dealer.

WARMING UP THE ENGINE



WARNING

To avoid personal injury or death:

- Set the parking brake during warm-up.

- Set all shift levers to the “NEUTRAL” positions and to place the PTO switch in the “OFF” position during warm-up.

For 5 minutes after engine start-up, allow the engine to warm up without applying any load. Warming up the engine will allow the oil to reach every engine part. If load should be applied to the engine without this warm-up period, trouble such as seizure, breakage or premature wear may develop.

1. Warm-up and transmission fluid at low temperature range

Hydraulic oil serves as transmission fluid. In cold weather, the oil may be cold with increased viscosity. High oil viscosity can cause delayed oil circulation or abnormally low hydraulic pressure for some time after engine start-up. Delayed oil circulation and low hydraulic pressure, in turn, can result in trouble in the hydraulic system.

To prevent the above, observe the following instructions:

Warm up the engine at about 50 % of rated rpm according to the following table:

Ambient temperature	Warm-up time requirement
Higher than 0 °C (32 °F)	Approx. 5 minutes
0 to -10 °C (32 to 14 °F)	10 to 20 minutes
-10 to -20 °C (14 to -4 °F)	20 to 30 minutes
Below -20 °C (-4 °F)	More than 30 minutes

IMPORTANT :

- Do not operate the tractor under full load condition until it is sufficiently warmed up.

JUMP STARTING THE ENGINE



WARNING

To avoid personal injury or death:

- Battery gases can explode. Keep cigarettes, sparks, and flames away from the battery.
- If the tractor battery is frozen, do not jump start engine.
- Do not connect the other end of the negative (-) jumper cable to the negative (-) terminal of the tractor battery.

OPERATING THE ENGINE

When jump starting the engine, follow the instructions below to safely start the engine.

1. Bring the helper vehicle with a battery of the same voltage as the disabled tractor within easy cable reach.

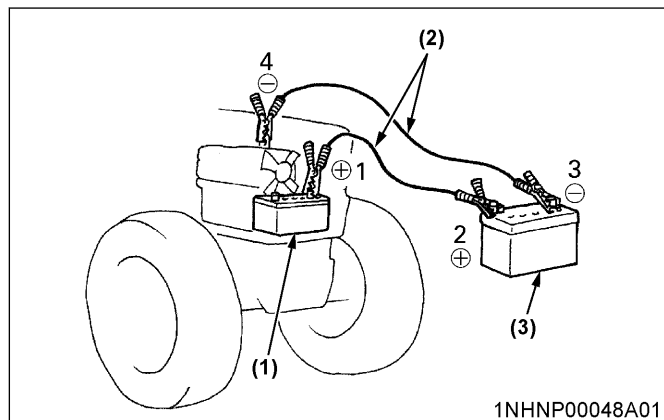
IMPORTANT :

- **The vehicles must not touch.**

2. Engage the parking brakes of both vehicles and put the shift levers in "NEUTRAL". Shut off both engines.
3. Wear eye protection and rubber gloves.
4. Attach the red clamp to the positive (red, (+) or positive) terminal of the dead battery and clamp the other end of the same cable to the positive (red, (+) or positive) terminal of the helper battery.
5. Clamp the other cable to the negative (black, (-) or negative) terminal of the helper battery.
6. Clamp the other end to the engine block or frame of the disabled tractor as far from the dead battery as possible.
7. Start the helper vehicle and let its engine run for a few moments. Start the disabled tractor.
8. Disconnect the jumper cables in the exact reverse order of attachment (steps 6, 5 and 4).

Connect cables in numerical order.

Disconnect in reverse order after use.



- (1) Dead battery
(2) Jumper cables
(3) Helper battery

IMPORTANT :

- **This tractor has a 12 volt negative (-) ground starting system.**
- **Use only the same voltage for jump starting.**
- **Use of a higher voltage source on tractor's electrical system could result in severe damage to tractor's electrical system.**
Use only matching voltage source when "Jump starting" a low or dead battery condition.
- **Do not operate the tractor with the battery cable disconnected from the battery.**

- **Do not operate the tractor without the battery mounted.**
- **Do not operate the tractor with the battery dead. Charge the battery fully before operating the tractor.**
Otherwise, the tractor might malfunction.

OPERATING THE TRACTOR

OPERATING NEW TRACTOR

How a new tractor is handled and maintained determines the life of the tractor.

A new tractor just off the factory production line has been, of course, tested, but the various parts are not accustomed to each other, so care should be taken to operate the tractor for the first 50 hours at a slower speed and avoid excessive work or operation until the various parts become "*broken-in*". The manner in which the tractor is handled during the "*breaking-in*" period greatly affects the life of your tractor.

Therefore, to obtain the maximum performance and the longest life of the tractor, it is very important to properly break-in your tractor. In handling a new tractor, the following precautions should be observed.

1. Do not operate the tractor at full speed for the first 50 hours

- Do not start quickly nor apply the brakes suddenly.
- In winter, operate the tractor after fully warming up the engine.
- Do not run the engine at speeds faster than necessary.
- On rough roads, slow down to suitable speeds. Do not operate the tractor at high speed.

The above precautions are not limited only to new tractors, but to all tractors. However, they should be especially observed in the case of new tractors.

2. Changing lubricating oil for new tractors

The lubricating oil is especially important in the case of a new tractor. The various parts are not "*broken-in*" and are not accustomed to each other. Small metal grit may develop during the operation of the tractor, and this may wear out or damage the parts. Therefore, care should be taken to change the lubricating oil a little earlier than would ordinarily be required.

For more details, read the maintenance section of this manual.

(See MAINTENANCE on page 145.)

BOARDING AND LEAVING THE TRACTOR

WARNING

To avoid personal injury or death:

- Never try to get on or off a moving tractor or jump off the tractor to exit.
- Face the tractor when getting into or out of the tractor. Do not use the controls as handholds to prevent inadvertent machine movements.
- Always keep steps and floor clean to avoid slippery conditions.



STARTING THE TRACTOR

1. Adjusting the operator's position.

NOTE :

- The seat and suspension should be adjusted to ensure that the controls are comfortably at hand for the operator, ensuring that the operator maintains a good posture and minimizes risks from whole body vibration.

- Operator's seat on page 64
- Seat belt on page 65
- Instructional seat (if equipped) on page 66
- Steering wheel adjustment on page 67
- Extendable mirror on page 67

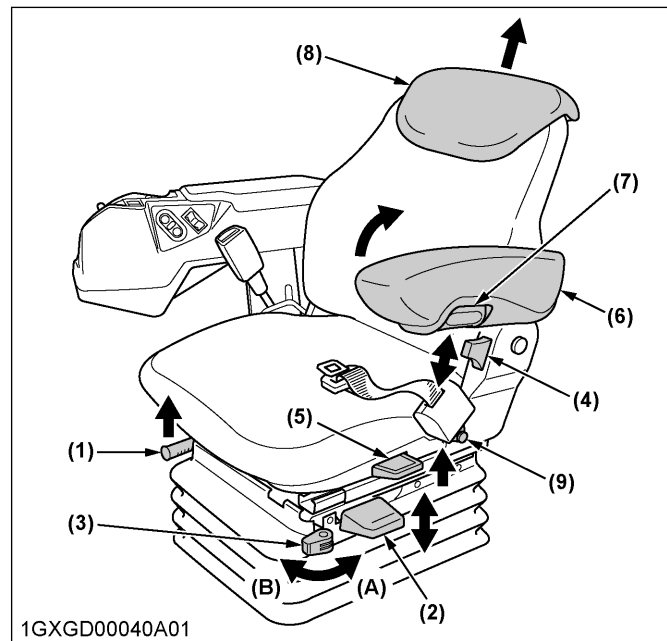
2. Starting the engine.

- STARTING THE ENGINE on page 55

3. Selecting the light switch position.

- Headlight switch on page 67
- Turn signal switch and hazard light switch on page 67
- Work light switches (front and rear) on page 68

4. Checking the brake pedal.
 - Brake pedals (right and left) on page 68
5. Pull the position control lever to raise the implement.
 - 3-POINT HITCH CONTROL SYSTEM on page 120
6. Depress the clutch pedal.
 - Clutch pedal on page 69
7. Selecting the travel speed.
 - Travel speed control on page 70
 - Power shift and range shift lever (PS lever) on page 70
 - DHC switch on page 72
 - Shuttle lever on page 72
 - Creep lever (if equipped) on page 73
 - Multi-function joystick (if equipped) on page 73
 - 4WD and "AUTO 4WD" switch on page 74
 - "Bi-speed turn" switch on page 75
 - Operation using the 4WD, "AUTO 4WD" switch and "Bi-speed turn" switch on page 78
8. Accelerate the engine.
 - Hand throttle lever on page 79
 - Foot throttle on page 79
 - Rev-limiter control dial on page 79
9. Unlock the parking brake and slowly release the clutch.
 - Parking brake lever on page 79



- 1GXGD00040A01
- | | |
|------------------------------------|-----------|
| (1) Travel adjust lever | (A) "ON" |
| (2) Weight and height adjust lever | (B) "OFF" |
| (3) Fore and aft isolator | |
| (4) Backrest tilt adjust lever | |
| (5) Swivel adjust lever | |
| (6) Armrest | |
| (7) Armrest adjustment | |
| (8) Backrest extension | |
| (9) Seat belt button | |

Travel adjustment

Pull the travel adjust lever and slide the seat backward or forward, as required. When the lever is released, the seat will lock in position.

Weight and height adjustment

Turn on the key switch. The seat should be adjusted for the operator's weight by briefly pulling up or pushing down the weight and height adjust lever with the tractor in a stationary position and the operator sitting on the seat. The seat can be adjusted in its adjustable range.

NOTE :

- If the seat is lowered below the adjustable range, it automatically comes up to the lower limit of the adjustable range just when the weight and height adjust lever is released.
- When turning on the key switch, the seat may slightly move up depending on a preset seat position (height).

IMPORTANT :

- In order to avoid damage of the seat, do not operate the weight and height adjust lever for more than 1 minute.

Fore and aft isolator

Set the isolator in the "ON" position so that shock impacts in the direction of travel can be better absorbed by the seat.

1. Operator's seat



WARNING

To avoid personal injury or death:

- Make adjustments to the seat only while the tractor is stopped.
- Make sure that the seat is completely secured after each adjustment.
- Do not allow any person other than the operator to ride on the tractor.

Tilt adjustment

Pull the backrest tilt adjust lever and tilt the backrest to the desired position.

Armrest (LH)

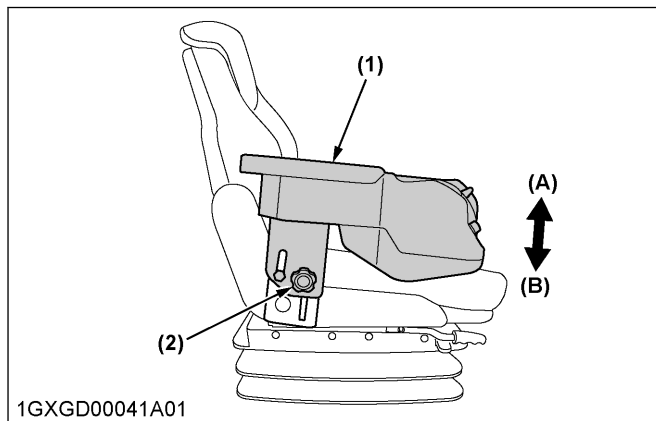
The armrest may be set at upright position if desired.

Armrest height adjustment (LH)

Turn the adjustment knob to the desired height of the armrest.

Armrest (RH)

The right armrest height is adjustable. To reposition the armrest height, loosen the knob nut and slide the armrest upward or downward, and securely tighten it by hand so that you can operate the levers and switches comfortably.



(1) Armrest (RH)

(2) Knob nut

(A) "HIGH"

(B) "LOW"

Backrest extension

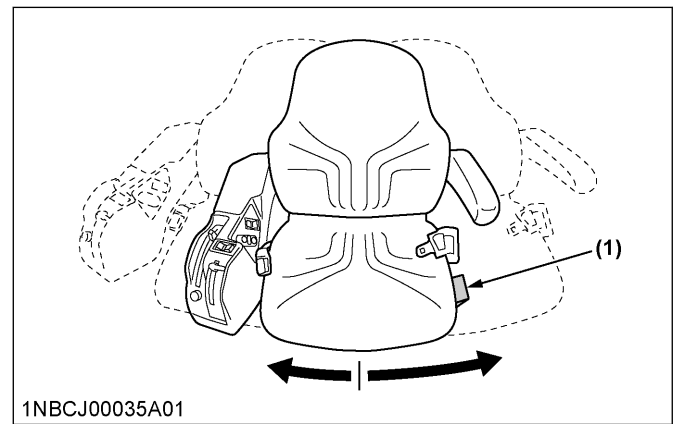
Pull the backrest extension to the desired height.

Swivel adjustment

Unlock the swivel adjust lever and rotate the seat right or left as desired.

NOTE :**Using the swivel seat:**

- Swivel the seat to the right and left to position yourself comfortably for jobs in which you need to look rearwards.
- Turn the seat to the left to facilitate getting in and out of the tractor.
- The seat can swivel in both directions.



(1) Swivel adjust lever

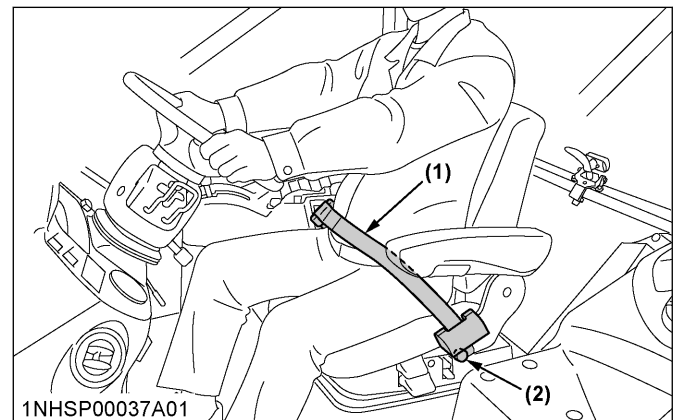
2. Seat belt**! WARNING**

To avoid personal injury or death:

- Always use the seat belt when a ROPS or CAB is installed.

Pull the seat belt with the button being pushed, and connect the buckle.

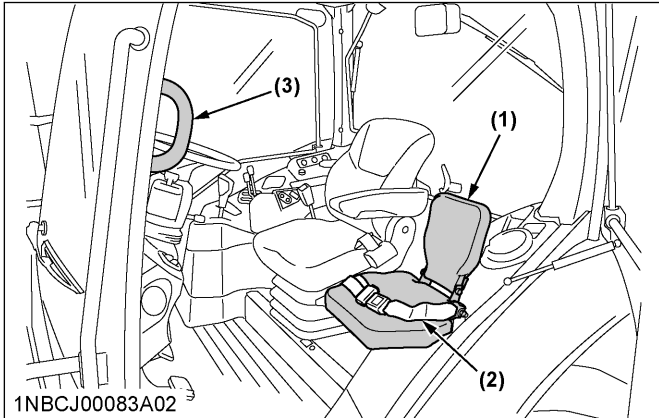
After adjusting the seat belt for proper fit, release the button so that the belt can be locked.



(1) Seat belt

(2) Button

3. Instructional seat (if equipped)



(1) Instructional seat
(2) Seat belt
(3) Handrail

Intended use

The instructional seat is intended for training purposes. A tractor instructor, a trainee or a servicing staffer is supposed to use this seat of CAB-equipped tractors on flat, safe grounds, where the potential for roll-over is practically zero. Do not drive the tractor along expressways and public ways.

Understanding the previously mentioned purposes, do not use this seat under any other conditions than specified.

The conditions which show as examples not to use this seat are as follows.

- Do not allow any other persons and animals than the instructor, the trainee or servicing staffer on this seat. Never allow children to sit down on this seat. Do not place anything on this seat for transport purpose.
- Use this seat only for training purpose, not for anything else.
- Never use this seat on any locations where the machine might turn over. Never operate the machine prone to turn over, either. Slopes, rough terrains, high-speed running, sharp turns, towing, sudden starting, stopping and so on.
- Do not use this seat whenever the operator's view is affected by bad weather (such as rain and fog) or in the late afternoon.

WARNING

To avoid personal injury or death:

- Always wear your seat belt and stabilize your body by holding the handrail on the CAB frame.
- It is not intended to carry children nor any other person for any other purposes.
- The left-hand door must be closed at all time whenever the instructional seat is occupied and the tractor is in motion.
- Do not permit others to ride, except on the designated instructional seat.

- Use caution to avoid the risks of obstructing operator's view, falling from the machine and interfering with controls.
- Do not start and stop the tractor suddenly, nor take a sharp turn.
- Do not use the instructional seat if the seat belt or the door lock fails to function.
- Do not use the instructional seat for transport.
- When opening or closing the door while being seated in the instructional seat, move the door slowly. This is to prevent his or her hand(s) from getting caught by the door or his or her body to hit against the door.

3.1 Precautions in using the instructional seat

When getting on the tractor

1. The operator is supposed to move the tractor onto a flat surface and to apply the parking brake for a complete stop.
2. An instructor, a trainee or a servicing staffer is supposed to stand on the ground and to set up the seat. Before use, make sure that the seat is securely fixed. And get on the tractor. In getting on the tractor, stabilize yourself by holding the specified handrail with attention not to get in contact with any control levers.
3. Fasten the seat belt and close the door. Then get the door locked.

While the machine is in motion

1. The person on the instructional seat should take due care not to interfere with the operator's actions.
2. While sitting, keep the seat belt fastened. The person on the instructional seat is supposed to grip the handrail to prevent him or her from getting out of balance due to violent machine movements.
3. Run the tractor at low speed.

When getting off the tractor

1. The operator is supposed to move the tractor onto a flat surface and to apply the parking brake for a complete stop.
2. The person on the instructional seat is supposed to open the door, unfasten the seat belt and get out of the tractor.
3. Recouple the left and right halves of the seat belt.
4. Finally, close the door.

NOTE :

- The instructional seat can be used only when permitted by your local laws. Consult your local Kubota dealer for further details.

4. Steering wheel adjustment

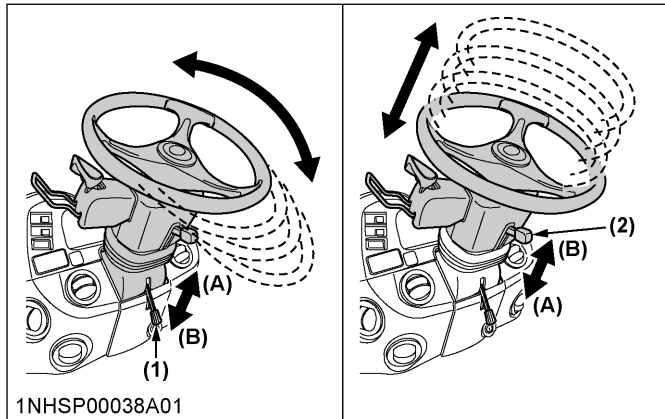


CAUTION

To avoid personal injury:

- Do not adjust the steering wheel while the tractor is in motion.

Adjust the steering wheel to the best driving position using tilt and telescope levers.



1NHSP00038A01

(1) Tilt lever

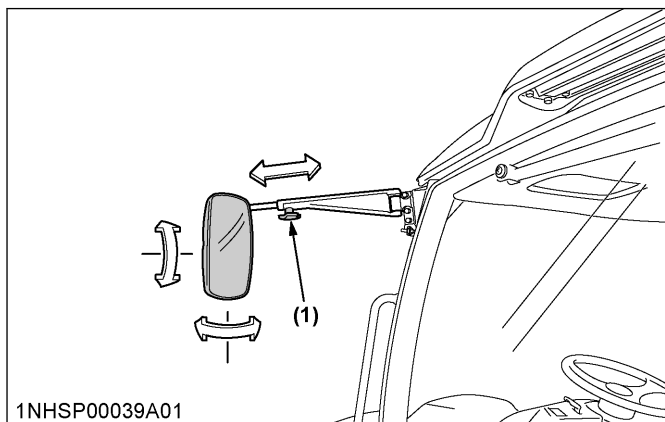
(2) Telescope lever

(A) "UNLOCK"

(B) "LOCK"

5. Extendable mirror

1. To alter the length, loosen the knob bolt and move the mirror to the required position, then tighten the knob bolt.
2. To adjust mirror head, hold firmly, tilt horizontally and vertically as required.

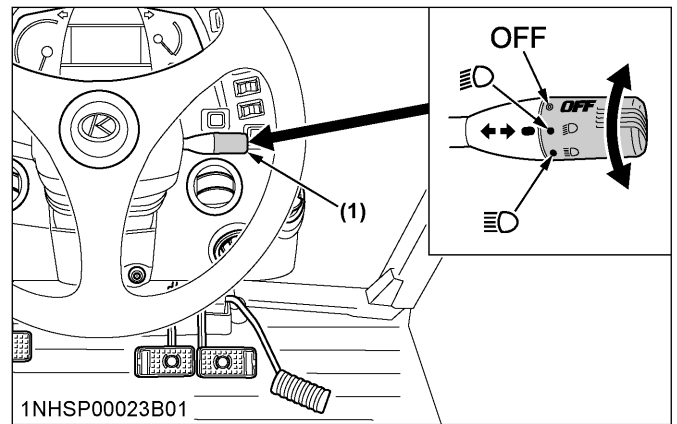


1NHSP00039A01

(1) Knob bolt

6. Light switch

1. Turn the key to the "ON" position.
2. Turn the switch clockwise, and the following lights are activated on the switch position.



(1) Headlight switch

OFF Headlights OFF

Headlights dimmed, low beam

Tail lights ON

Headlights ON, high beam
Tail lights ON

NOTE :

- High beam indicator will be on when the headlight switch is in the "high beam" position.

7. Turn signal switch and hazard light switch

Hazard light

1. When the hazard light switch is pushed, the hazard lights flash, along with the LH and RH indicators on the instrument panel.
2. Push the hazard light switch again to turn off the hazard lights.

Turn signal with hazard light

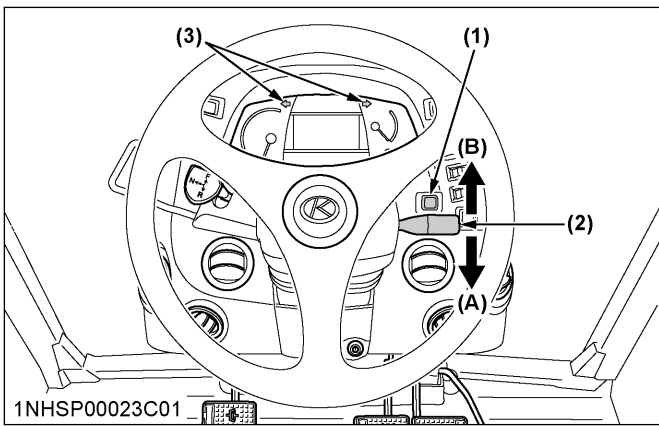
1. To indicate a right turn with the hazard lights already flashing, turn the switch clockwise.
2. To indicate a left turn with the hazard lights already flashing, turn the switch counterclockwise.
3. When the left or right turn signal is activated in combination with the hazard lights, the indicated turning light will flash and the other will stay on.

Turn signal without hazard light

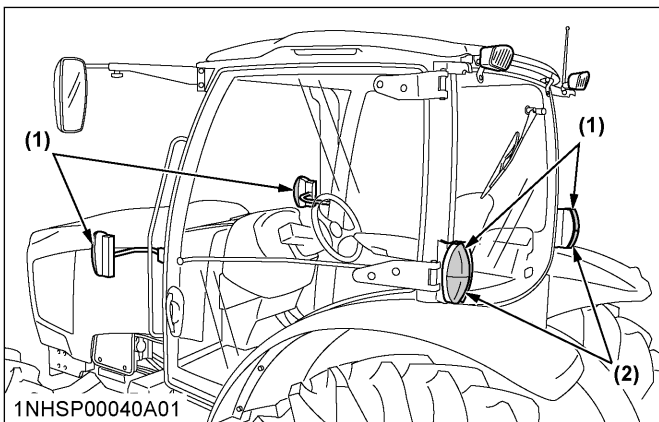
1. To indicate a right turn without hazard lights, turn the switch clockwise.
2. To indicate a left turn without hazard lights, turn the switch counterclockwise.
3. When the left or right turn signal is activated without the hazard lights, the indicated turning light will flash and the other will stay on.

NOTE :

- The hazard light switch is operative when the key switch is in the "ON" or "OFF" position.
- The turn signal light switch is operative only when the key switch is in the "ON" position.
- Return the turn signal switch to the center position after turning.



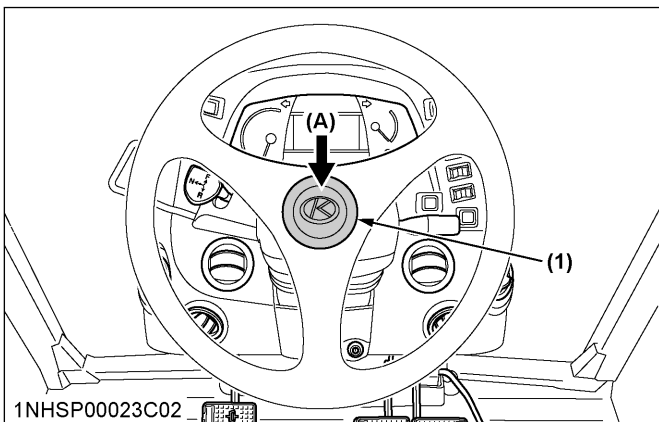
- (1) Hazard light switch
(2) Turn signal light switch
(3) Hazard and turn signal indicator
- (A) "RIGHT TURN"
(B) "LEFT TURN"



- (1) Hazard light and turn signal light
(2) Tail light and turn signal light

8. Horn button

The horn will sound when the key switch is in the "ON" position and horn button is pushed.



- (1) Horn button
(A) "PUSH"

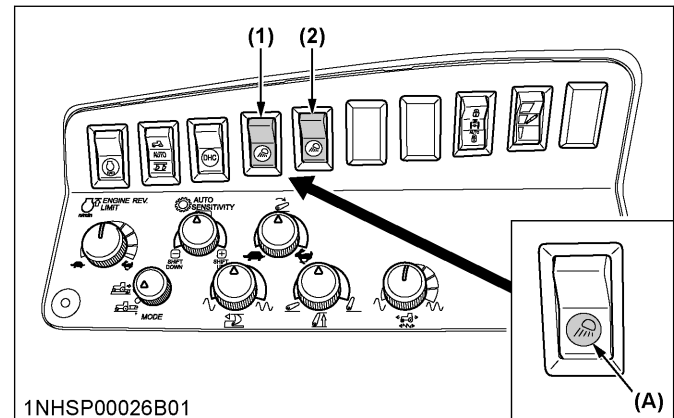
9. Work light switches (front and rear)

! WARNING

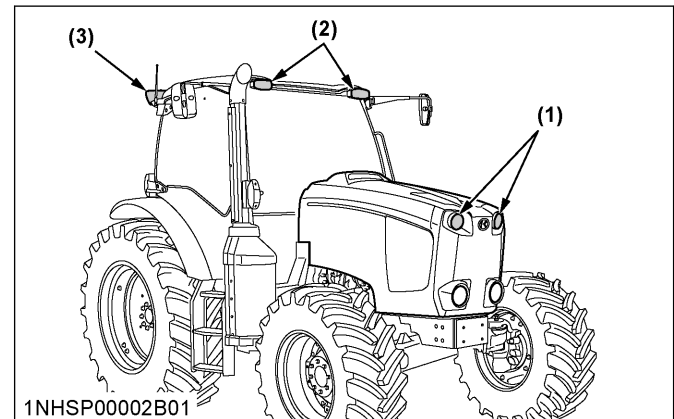
To avoid personal injury or death:

- Do not operate on roads with work lights on. Work lights may blind or confuse the drivers of oncoming vehicles.

Turn on the key switch and press the bottom half of the work light switch. The work light and the switch's indicator light up. Press the top half of the work light switch to turn off the light and indicator.



- (1) Front work light switch
(2) Rear work light switch
(A) "PUSH"



- (1) Front work light (hood)
(2) Front work light
(3) Rear work light

10. Brake pedals (right and left)

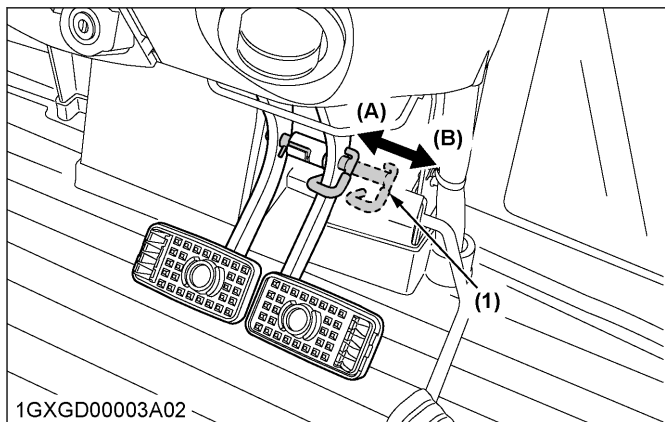
! WARNING

To avoid personal injury or death:

- Interlock the right and left pedals. Applying only one rear wheel brake at high speeds could cause the tractor to swerve or roll-over.
- Be sure that the brake pedals have equal adjustment when using locked together. Incorrect or unequal brake pedal adjustment can cause the tractor to swerve or roll-over.

- Be aware of the enhanced braking characteristics of 4-wheel braking system. Appropriate care should be taken during hard braking and/or when pulling towed loads.
- Do not brake suddenly. An accident may occur as a result of a heavy towed load shifting forward or loss of control.
- To avoid skidding and the loss of steering control when driving on icy, wet, or loose surfaces, make sure that the tractor is correctly ballasted, operated at reduced speed, and operated with the front-wheel drive engaged (if equipped).
- The braking characteristics are different between 2 and 4-wheel drive. Be aware of the difference and use carefully.
- Engage 4-wheel drive for 4-wheel braking when traveling down a slope.

1. Before operating the tractor on the road, interlock the right and left pedals as in the following illustration.
2. Use individual brakes to assist in making sharp turns at low speeds (field operation only). Disengage the brake pedal lock and depress only one brake pedal.
3. Be sure that the brake pedals have equal adjustment when being used locked together.



(1) Brake pedal lock

(A) "LOCK"
(B) "RELEASE"

10.1 4WD braking system (4WD model)

The 4WD model tractor is equipped with 4WD braking system.

! WARNING

To avoid the possibility of personal injury, death or property damage from machine runaway during testing, service or repair with the rear wheels off the ground, make sure that:

- The battery is disconnected and engine is not started.

If it is necessary to run the engine, make sure that:

- Both front and rear wheels are off the ground and secured with stands before starting engine.

When both brake pedals are applied together, the front axle is engaged for 4-wheel braking regardless of the mode selected at the 4WD/"AUTO 4WD" switch. The 4WD indicator light is not illuminated unless the front axle is engaged with the selector switch.

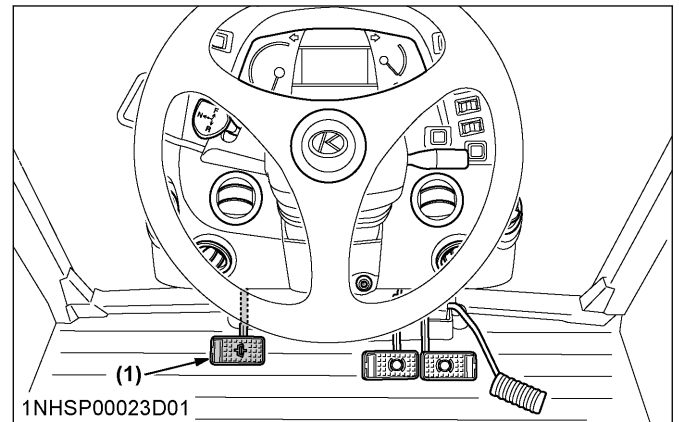
11. Clutch pedal

! WARNING

To avoid personal injury or death:

- Sudden release of the clutch may cause the tractor to lunge in an unexpected manner.
- Always use the clutch pedal to start the tractor.

The clutch is disengaged when the clutch pedal is fully pressed down.



(1) Clutch pedal

IMPORTANT :

To help prevent premature clutch wear:

- The clutch pedal must be quickly disengaged and be slowly engaged.
- Avoid operating the tractor with your foot resting on the clutch pedal.
- Select proper gear and engine speed depending on the type of job.
- If the warning buzzer sounds too often during usual job, the tractor may require reprogramming. Consult your local Kubota dealer for this service.

NOTE :

- If the clutch is operated in a partially engaged condition, the clutch will disengage automatically and the warning buzzer will sound to protect the clutch.

Take one of the following steps to stop the buzzer. Do not let the buzzer sound continuously.

- Fully depress the clutch pedal.

- Press the clutch button on the power shift and range shift lever.
- Shift the shuttle lever to “NEUTRAL”.

12. Travel speed control

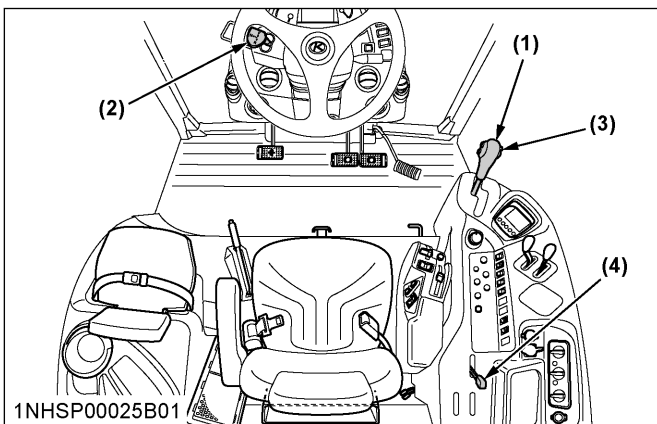
WARNING

To avoid personal injury or death:

- Use the clutch when making an emergency stop or working in confined areas, such as getting the tractor in position to attach an implement.
- An accident may occur with an erratic shifting operation.

For safe operation, push up-shift or down-shift buttons only one gear at a time.

- Avoid changing gears when climbing or descending a slope.
- Before ascending or descending a slope, shift to a gear low enough to control the tractor speed without using brakes.
If you shift gears while ascending or descending a slope, be prepared to use the brakes to maintain control.
- Operate in reverse at slow speeds to maintain control.



- (1) Power shift and range shift lever (PS lever)
 (2) Shuttle lever
 (3) Clutch button
 (4) Creep lever (if equipped)

By using the power shift and range shift lever, the shuttle lever, and the creep lever (if equipped) combination, the forward speeds and reverse speeds shown in the following table are obtained.

Without creep	24 forward speeds 24 reverse speeds
With creep (option)	32 forward speeds 32 reverse speeds

NOTE :

The power shift operation and shuttle operation can also be done with the multi-function joystick (if equipped).

(See Multi-function joystick (if equipped) on page 73.)

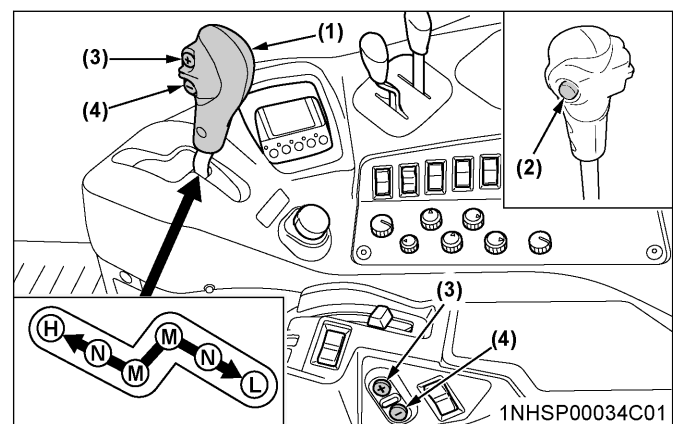
13. Power shift and range shift lever (PS lever)

WARNING

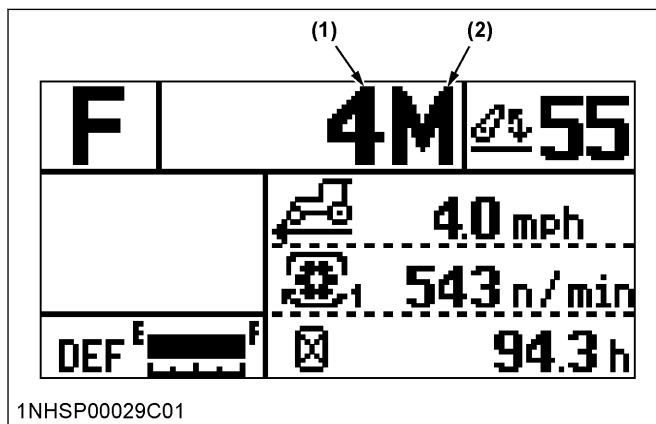
To avoid personal injury or death:

- If you release the clutch button when the power shift and range shift lever is at the position [L] [M] or [H], the clutch becomes engaged and the tractor will begin to move.
- Always use the clutch pedal to start the tractor.

- When changing speeds, there is no need to use the clutch.
Press the up-shift or down-shift buttons, and the speeds [1] through [8] can be selected. A beep tone is heard at each speed change.
- To select a speed range ([H], [M] or [L]), stop the machine by depressing the clutch pedal.
Then hold down the clutch button on the PS lever and shift the PS lever to the desired position. By utilizing the combination of PS lever and 8 shift button positions, 24 speeds can be obtained.
- The selected speed ([1] to [8]) and speed range ([H], [M], [L] or [N]) are displayed on the instrument panel.



- (1) Power shift and range shift lever (PS lever)
 (2) Clutch button
 (3) Up-shift button
 (4) Down-shift button
- (H) “HIGH”
 (M) “MIDDLE”
 (L) “LOWER”
 (N) “NEUTRAL”



(1) Selected-speed ([1] to [8])

(2) Selected-speed range ([H], [M], [L] or [N])

NOTE :

- If the hydraulic shuttle lever is at “**FORWARD**” or “**REVERSE**”, when you move the PS lever to [H], [M] or [L] without pressing the clutch button, the alarm buzzer sounds, the tractor does not move and [E] appears in the selected speed display.
To stop the buzzer and restart the tractor:
 1. Move the PS lever back to [N].
 2. Holding down the PS lever's clutch button, move the lever to [H], [M] or [L].
 3. Release the clutch button, and the tractor will move.
- The power shift operation can also be done with the multi-function joystick (if equipped). (See Multi-function joystick (if equipped) on page 73.)

13.1 Basic operation

1. Start the engine, select a speed range [L], [M] or [H] with the PS lever, and the tractor is set at low speed [1], middle speed [1] (9th) or high speed [1] (17th) ([1] appears on the display).
2. With the PS lever at “**NEUTRAL**”, select a speed ([1] to [8]) first using the button and then a speed range, the selected speed with button is obtained.
3. With the PS lever at “**NEUTRAL**” and while holding down the button, the speeds change themselves continuously ([1] to [8] or [8] to [1]).
4. With a speed range [L], [M] or [H] selected, depressing the button changes the speeds. If the shuttle lever is set at “**NEUTRAL**” or the clutch pedal stays “**DISENGAGED**”, however, the speeds change themselves continuously ([1] to [8] or [8] to [1]).
5. Main gear shift speed memory function:
Suppose that a job was done at a travel speed, the speed range ([L], [M], [H]) was changed and then the original speed range was returned. The memory

function serves to automatically pick up the previously selected main gear number.

Only when the speed range is [H] and the main gear shift is somewhere between speed [4] (20th) and speed [8] (24th), however, the “H-3” speed (19th) is automatically selected.

Memorized speed

Power shift and range shift lever				
L1~8 (1st to 8th)	⇨ Shift up	H1~8 (17th to 24th) M1~8 (9th to 16th)	⇨ Shift down	L1~8 (1st to 8th)
M1~8 (9th to 16th)	⇨ Shift up	H1~8 (17th to 24th)	⇨ Shift down	M1~8 (9th to 16th)
M1~8 (9th to 16th)	⇨ Shift down	L1~8 (1st to 8th)	⇨ Shift up	M1~8 (9th to 16th)
H1~3 (17th to 19th)	⇨ Shift down	L1~8 (1st to 8th)	⇨ Shift up	H1~3 (17th to 19th)
H4~8 (20th to 24th)				H3 (19th)
H1~3 (17th to 19th)	⇨ Shift down	M1~8 (9th to 16th)	⇨ Shift up	H1~3 (17th to 19th)
H4~8 (20th to 24th)				H3 (19th)

NOTE :

- Turn off the key switch, and the memory will be cleared.

IMPORTANT :

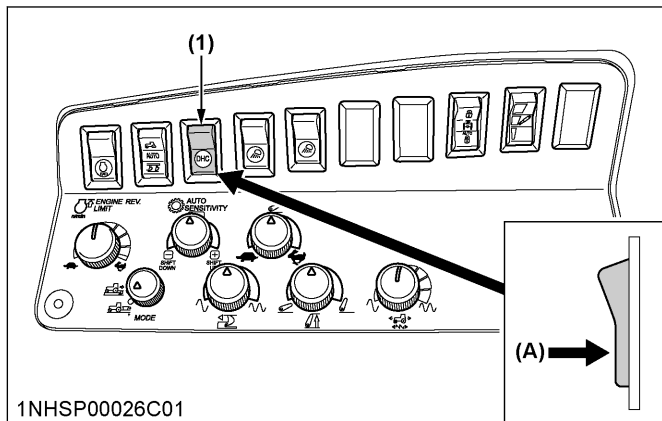
- Before selecting a speed range, stop the tractor. Depress the brake pedal and shift the PS lever slowly.
- When you have shifted the PS lever to [L], [M] or [H] range, look at the indicator for the power shift position. Then release the clutch button or the clutch pedal.
- Start in lower gears and shift one gear at a time until desired gear is obtained.
- To prolong clutch life, avoid slipping the hydraulic clutch. Pay attention to the following points:
 - Select the proper gear and engine speed depending on the type of job.
 - Avoid lugging the engine, especially in higher gears. If the rpm drops excessively, shift to a lower gear.

- In cold climate, it may take longer for the tractor to move after the PS lever is moved. This is because the transmission oil must warm up.
 - Properly warm up the machine. If there is not enough time to do so, start the machine with the clutch pedal slowly.
 - There is no problem with a delay in starting. The machine will start as the oil temperature increases.

14. DHC switch

On this tractor, the engine load and other fluctuations are sensed and the speed is well controlled in response to the loads.

Turn the DHC switch to the “ON” position when using a traction PTO attachment (such as a baler) on a slope. A responsive speed control can be expected. In other applications, turn this switch to the “OFF” position. Smooth speed change is available for comfortable ride.



(1) DHC switch

(A) “PRESS” to turn on

NOTE :

- While the DHC switch is at the “ON” position, the hydraulic clutch behaves quicker at a speed change. Even working on a slope, therefore, the push-out of an attachment can be minimized. Do not change speeds when doing heavy-duty traction on a steep slope.

15. Shuttle lever

⚠ WARNING

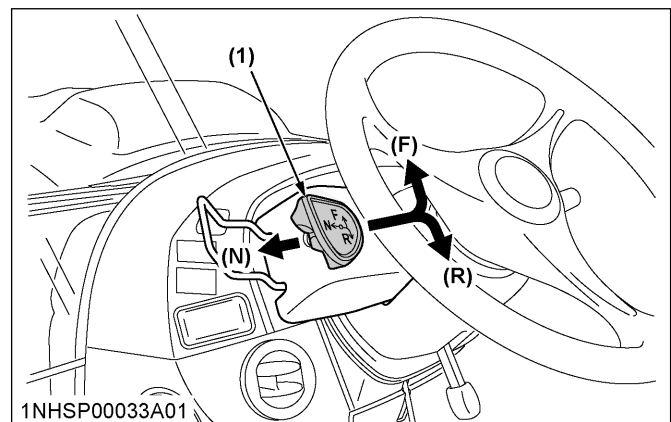
To avoid personal injury or death:

- When attempting to shift the shuttle lever on a slope, completely stop the tractor.
- Slow down the engine speed before shifting the shuttle lever.
- Use the shuttle lever when the machine speed is below 11 km/h (6.8 mph).

NOTE :

- Otherwise the clutch gets disengaged and the buzzer starts sounding. To get the clutch reengaged and clear the buzzer, take either of the following steps:
 - Place the shuttle lever to the “NEUTRAL” position. Decrease the machine speed lower than 11 km/h (6.8 mph) and use the shuttle lever.
 - Stop the tractor first and place the shuttle lever to the “NEUTRAL” position.
- When shifting the shuttle lever, the machine speed at which the clutch is disengaged will change depending on the tires installed.
- The shuttle operation can also be done with the multifunction loader lever (if equipped). (See Multi-function joystick (if equipped) on page 73.)

1. Raise up and shift the shuttle lever forward to obtain forward speeds and shift it backward to obtain reverse speeds without using the clutch pedal.
2. With the shuttle lever at neutral, press the up-shift and downshift buttons of the power shift and range shift lever, select the main speed and then switch the sub-speed range. Now the selected main speed is kept on whether at [L], [M] or [H].



(1) Shuttle lever

(F) “FORWARD”

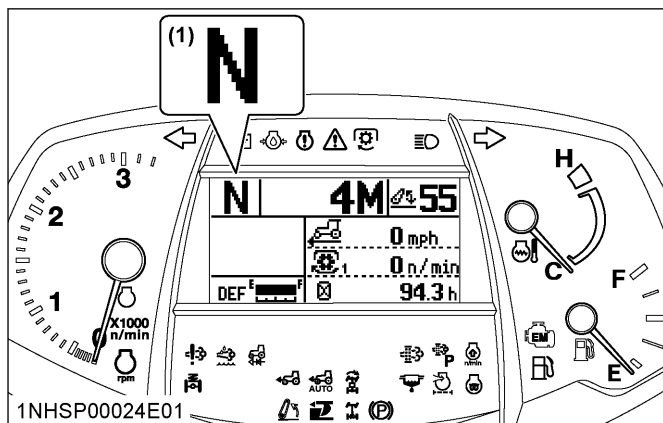
(N) “NEUTRAL”

(R) “REVERSE”

NOTE :

- While the shuttle lever is at the “NEUTRAL” position, the [N] character appears on the LCD monitor.
- When you release the shuttle lever after shifting to the [F], [R], or [N] position, the shuttle lever will always return to its original position (see the previous figure).
- If the shuttle lever is held at the [F], [R], or [N] positions for approximately 5 to 10 seconds, gear shifting will be canceled and a message will be displayed on the LCD monitor. If the message is displayed, turn the key switch to the

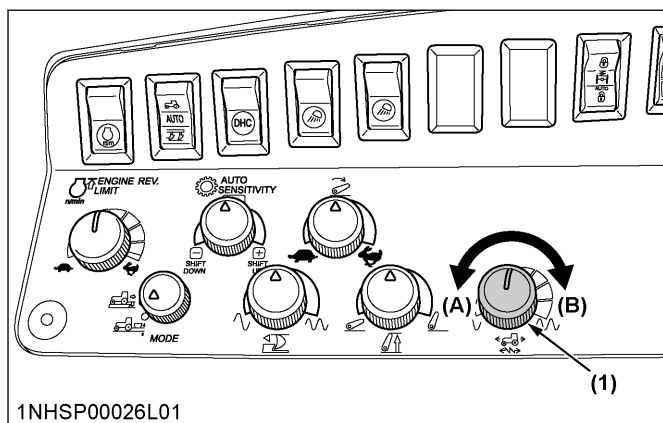
"OFF" position and then operate the shuttle lever again.



(1) "NEUTRAL"

16. Shuttle sensitivity adjustment dial

The quickness and smoothness of switching between forward travel and reverse travel can be adjusted by using the shuttle sensitivity adjustment dial.



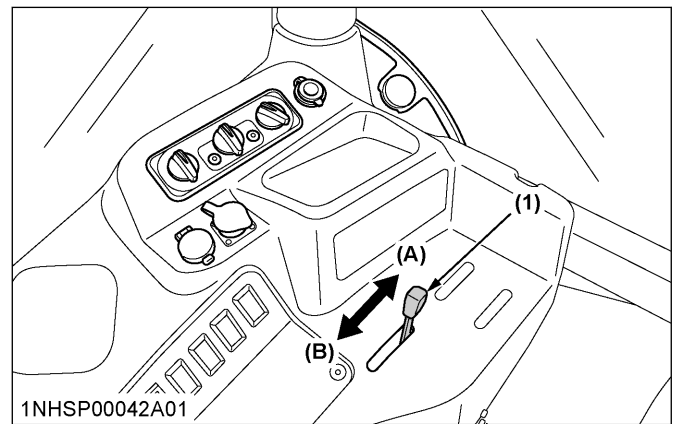
(1) Shuttle sensitivity adjustment dial (A) Low sensitivity (B) High sensitivity

Turn the dial counter-clockwise toward (A)	Slower and smoother shuttle switching
Turn the dial clockwise toward (B)	Quicker shuttle switching

17. Creep lever (if equipped)

Shift the creep lever at  to obtain low speeds with the [L] range of the power shift and range shift lever being selected.

With the creep lever engaged (ON), the speed range cannot shift to [M] and [H]. The creep mode does not operate in the middle-speed and high-speed ranges. The shifting requires clutch operation.



(1) Creep lever

(A) Creep "ON"
(B) Creep "OFF"

Creep speed should be used only when doing one of the following jobs:

- Deep rotary-tilling and harrowing
- Planting
- Turf application

Creep speed can not be used for any of the following:

- Pulling a trailer
- Front-loader operation
- Front-blade operation
- Earth-moving
- Entering and leaving a field
- Loading onto and unloading from a truck

! WARNING

To avoid personal injury or death:

- When you leave the tractor, apply the parking brake and stop the engine.
 - In applying the brakes:
 - The torque of the wheel axle is extremely high while creep speed is being used. Depress the clutch pedal completely before applying the brakes, or the torque will overcome the brakes.
 - When starting to operate the tractor, release the parking brake.
- Misuse of the brakes may cause damage to the transmission and is therefore not acceptable to Kubota for coverage under the warranty.

NOTE :

- Press the clutch pedal completely down and stop the tractor's motion before shifting the range gear shift lever.

18. Multi-function joystick (if equipped)

The multi-function joystick can be used as follows:

- To perform power-shift operations (changing gear speeds within the selected range gear)
- To perform shuttle-shift operations (changing direction of travel)

! WARNING

To avoid personal injury or death:

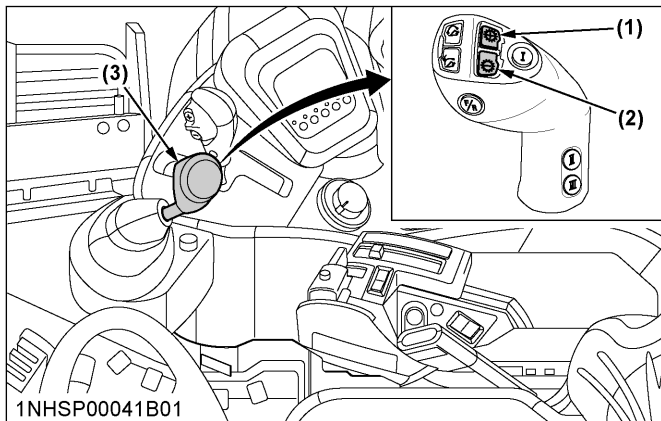
- The multi-function joystick has no neutral position. To bring the tractor to a complete stop, perform one of the following operations:
 - Depress the clutch pedal and then depress the brake pedal.
 - Set the shuttle lever to the “**NEUTRAL**” position and then depress the brake pedal.
- When attempting to shift the shuttle lever on a slope, completely stop the tractor.
- Slow down the engine speed before shifting the shuttle lever.
- Use the shuttle lever when the machine speed is below 11 km/h (6.8 mph).

Power shift operation

When changing speeds, there is no need to use the clutch.

Press the up-shift button or the down-shift button, and the speeds [1] through [8] can be selected. A beep tone is heard at each speed change.

The selected speed ([1] to [8]) is displayed on the instrument panel.

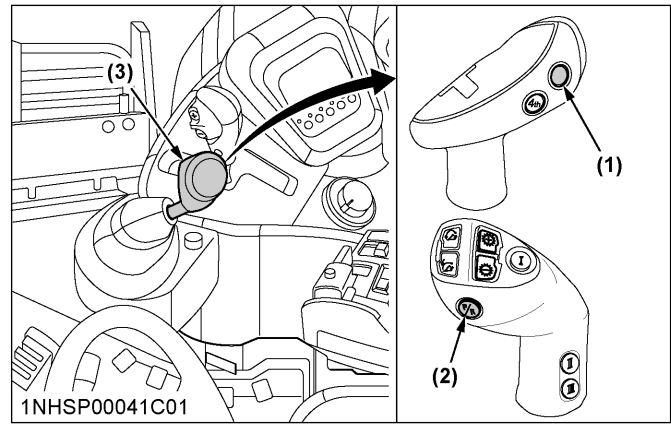


- (1) Up-shift button
- (2) Down-shift button
- (3) Multi-function joystick

Shuttle operation

While pressing the shuttle enable button, press the shuttle button to change the direction of travel.

Do not continually hold down the shuttle button and the shuttle enable button. If you hold the shuttle button and the shuttle enable button down for 30 seconds, the shuttle will change to “**NEUTRAL**”.



- (1) Shuttle enable button
- (2) Shuttle button
- (3) Multi-function joystick

NOTE :

- Shuttle operation using the multi-function joystick can only be performed when the shuttle is already in the “**FORWARD**” status or “**REVERSE**” status.
- When performing power-shift operations or shuttle-shift operations (using the multi-function joystick buttons, the PS lever or the shuttle lever), the operations will be completed in the order they were performed. For example, if the shuttle button is pressed to change from “**FORWARD**” to “**REVERSE**”, and immediately afterward the shuttle lever is shifted to “**FORWARD**” position, then the shuttle will change to the “**FORWARD**” status.
- If the shuttle lever is used when the machine speed is below 11 km/h (6.8 mph), the clutch gets disengaged and the buzzer starts sounding. To get the clutch reengaged and to clear the buzzer, take either of the following steps:
 - Place the shuttle lever to the “**NEUTRAL**” position. Decrease the machine speed to under 11 km/h (6.8 mph) and use the shuttle lever.
 - Stop the tractor first and place the shuttle lever to the “**NEUTRAL**” position.
- When shifting the shuttle lever, the machine speed at which the clutch disengages will change depending on the tires that are installed.

19. 4WD and “**AUTO 4WD**” switch

! WARNING

To avoid personal injury or death:

- Do not engage the front-wheel drive when traveling at road speed.
- When driving on icy, wet, or loose surfaces, make sure that the tractor is correctly ballasted to avoid skidding and loss of steering control.

Operate at reduced speed and engage front-wheel drive.

- 4WD model tractor is equipped with 4-wheel braking and appropriate care should be taken during hard braking.
- An accident may occur if the tractor is suddenly braked, such as by heavy towed loads shifting forward or loss of control.
- The braking characteristics are different between 2 and 4-wheel drive tractor models. Be aware of the difference and use carefully.

Press the left half of the switch:

- The 4WD mode activates.
- The 4WD indicator comes on.

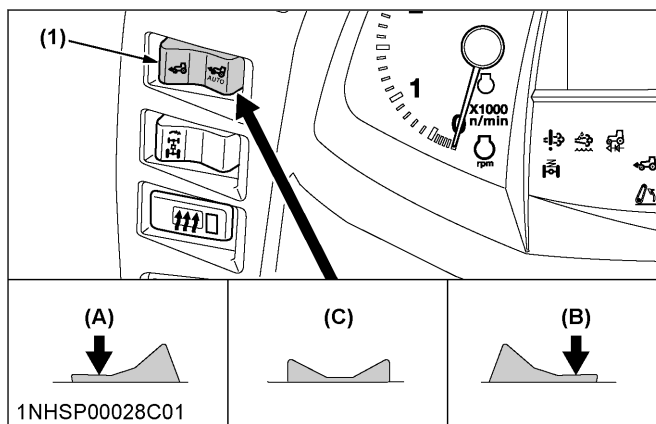
Press the right half of the switch:

- The “*AUTO 4WD*” mode activates.
- The “*AUTO 4WD*” mode will automatically switch between 2WD mode and 4WD mode depending on the travel speed.
- The display indicators are as follows:

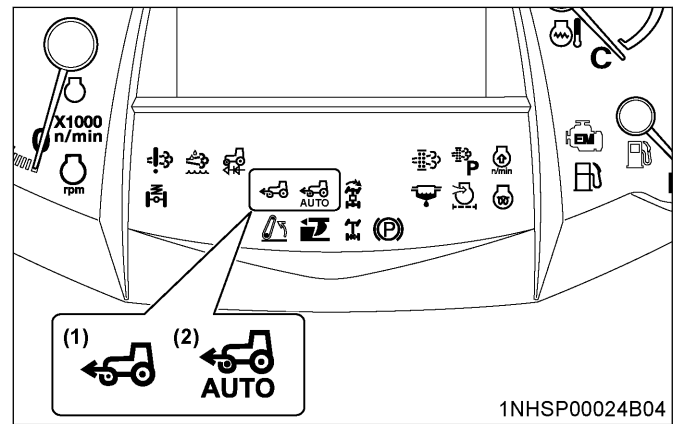
	“ <i>AUTO 4WD</i> ” indicator	4WD indicator
Less than 20 km/h (12.4 mph)	ON	ON
More than 20 km/h (12.4 mph)	ON	OFF

The switch returns to its central position:

- The drive system returns to 2WD mode.
- All the indicators go off when the system is in 2WD mode.



(1) 4WD/“*AUTO 4WD*” switch
 (A) 4WD mode
 (B) “*AUTO 4WD*” mode
 (C) 2WD mode



(1) 4WD indicator
 (2) “*AUTO 4WD*” indicator

NOTE :

- This switch can be operated when the tractor is on the go or at rest without depressing the clutch.

19.1 Front-wheel drive (4WD) usage

Front-wheel drive is effective for the following jobs:

- When greater pulling force is needed, such as working in a wet field, when pulling a trailer, or when working with a front-end loader.
- When working in sandy soil.
- When working on a hard soil where a rotary tiller might push the tractor forward.
- For increased braking at reduced speed.

IMPORTANT :

- Tires will wear quickly if the front-wheel drive is engaged on paved roads.

19.2 “*AUTO 4WD*” mode usage and effectiveness

- There is no hassle of switching between 2WD and 4WD.
- In regards to rolling resistance, it is possible to reduce tire wear and to save fuel.
- Taking corners at high speeds can be done effortlessly.

IMPORTANT :

- Tires will wear quickly if the front-wheel drive is engaged on paved roads.

20. “*Bi-speed turn*” switch

⚠ WARNING

To avoid personal injury or death:

- Do not use the “*Bi-speed turn*” mode at high speed or when going up a slope.

- The **“Bi-speed turn”** mode enables short and fast turns, therefore, become familiar with its performance before operating in close or confined areas.

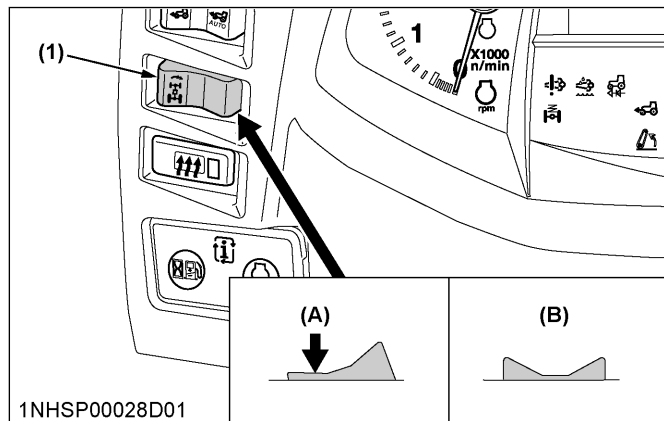
When the 4WD indicator or **“AUTO 4WD”** indicator lights up, the **“Bi-speed turn”** mode can be enabled.

Press the left half of the switch:

- The **“Bi-speed turn”** mode activates.
- The **“Bi-speed turn”** indicator comes on.

Press the left half of the switch again, and it returns to its central position:

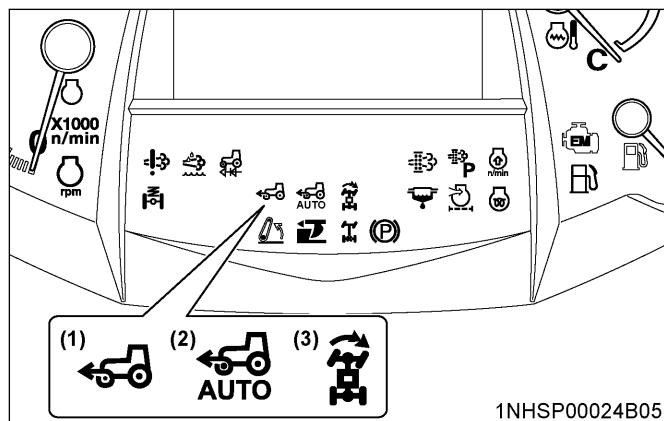
- The **“Bi-speed turn”** mode deactivates.
- The **“Bi-speed turn”** indicator goes off.



(1) **“Bi-speed turn”** switch

(A) **“Bi-speed turn”** **“ON”**

(B) **“Bi-speed turn”** **“OFF”**



(1) 4WD indicator

(2) **“AUTO 4WD”** indicator

(3) **“Bi-speed turn”** indicator

NOTE :

- This switch can be operated when the tractor is on the go or at rest without depressing the clutch.
- The **“Bi-speed turn”** mode works when you press the **“Bi-speed turn”** switch and the front tire (inside of the turn) exceeds 35 degrees.
- **“Bi-speed turn”** makes the front tire speed 1.6 times faster than the standard 4WD front tire speed.

- **“Bi-speed turn”** operates only when the travel speed is **“H-3 (19th)”** or lower and the tractor travel speed is 10 km/h (6.2 mph) or less at the start of the turn.
- If the **“Bi-speed turn”** indicator is flashing, then **“Bi-speed turn”** will not operate.

20.1 **“Bi-speed turn”** usage

The **“Bi-speed turn”** mode is effective for the following jobs:

- Turning at the end of rows (planting, cultivating, harrowing).
- Increasing maneuverability when working in tight spaces.

IMPORTANT :

- Tires will wear quickly if the **“Bi-speed turn”** mode is engaged on paved roads.

21. Xpress restart function

The Xpress restart is a function that increases the operator's comfort, improves productivity and reduces fatigue when using a front loader.

WARNING

To avoid personal injury or death:

- Before using the Xpress restart function for the first time, do a test run in a safe location. Take the time to understand the Xpress restart function and how to use it.
- Always anticipate how the tractor will move when using the Xpress restart function.
- Test the Xpress restart function before using it when towing a trailer on public roads.
- When using the Xpress restart function while on a slope, especially with a laden trailer, be aware of the possibility of the tractor and trailer rolling backward and control for this possibility. The tractor and trailer can roll backward on a steep slope when the trailer load is at its technically permissible towable mass.
- Using the Xpress restart function during downhill driving under heavy load traction may cause the clutch to disengage before the hydraulic brake is fully applied, causing the vehicle to run out of power and to slip down. In this case, depress the brake pedal firmly to the position where the braking force of the hydraulic brake is applied to adjust the speed.
- The engine may stall due to extremely sudden braking.
- Do not use the Xpress restart function when starting the tractor on a slope. Use the clutch pedal instead.

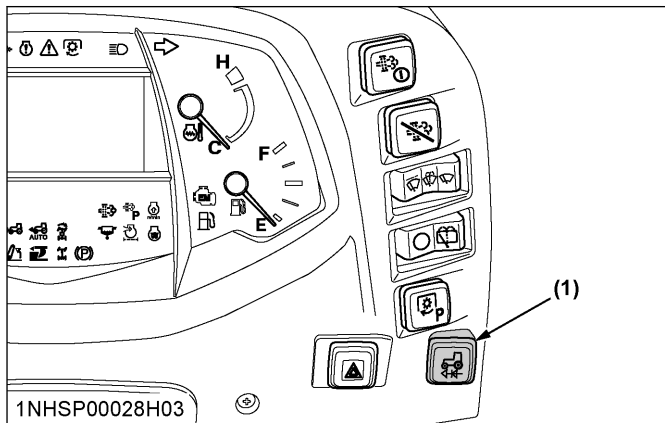
- When using the Xpress restart function always make sure that both brake pedals are interlocked.

21.1 Activating the Xpress restart function

The Xpress restart function allows the operator to reduce the number of movements on the control commands by using the force applied on the brake pedals as a separate set of commands.

To activate the Xpress restart function:

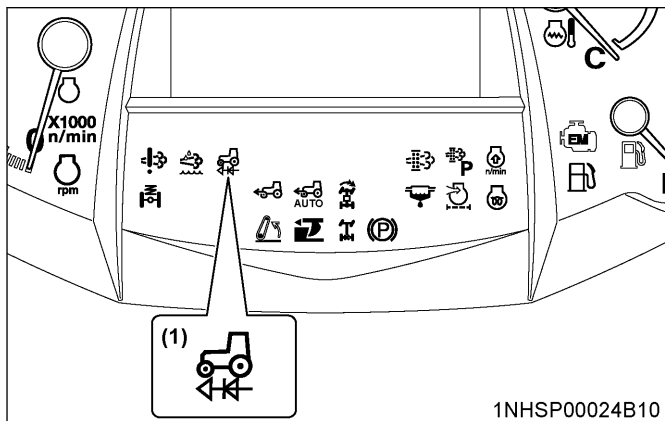
1. Set the shuttle lever to neutral.
2. Press the Xpress restart switch to activate the function.



(1) Xpress restart switch

NOTE :

- When the Xpress restart function is activated, the Xpress restart indicator on the instrument panel turns on. Likewise, when the [OFF] mode is selected, the Xpress restart indicator on the instrument panel turns off.



(1) Xpress restart indicator

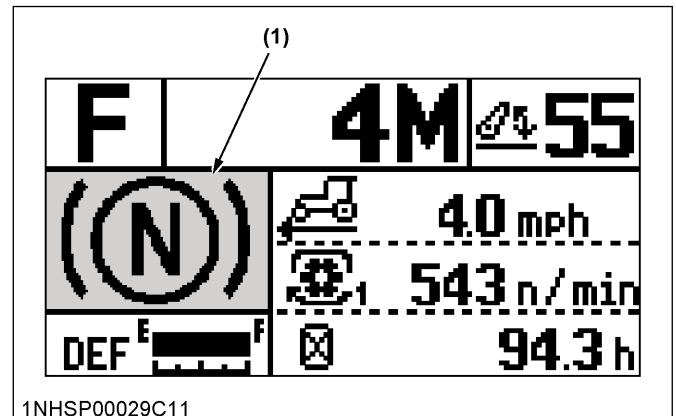
21.2 Using the Xpress restart function

1. Place the tractor in the forward direction of travel by using the shuttle lever.

2. Depress the brake pedals lightly to slow down the tractor gradually or depress the brake pedals strongly to stop the tractor completely and quickly.
3. Release the brake pedals to immediately restart the tractor in the selected gear and travel direction.

NOTE :

- To use the Xpress restart function, the traveling speed must be lower than 15 km/h when depressing the brake pedals. Note that the speed limit of 15 km/h can differ depending on the tires that are installed on the tractor.
- Whenever depressing the brake pedals, the Xpress restart icon appears on the LCD screen. Likewise, after releasing the brake pedals, the Xpress restart icon disappears from the LCD screen.
- Whenever the Xpress restart icon is displayed on the LCD screen, the direction of travel can be changed by using the shuttle lever.
- Even with the Xpress restart function activated, if the Xpress restart icon does not appear on the LCD screen, operate the tractor using the clutch pedal as usual.



1NHSP00029C11

(1) Xpress restart icon

IMPORTANT :

- When using the hand throttle lever to increase the traveling speed to over 15 km/h, operating the brakes with the Xpress restart function activated will lead to early wear of the brakes. Therefore, limit the travel speed to under 15 km/h when using the hand throttle lever with Xpress restart function activated.

21.3 Deactivating the Xpress restart function

1. Depress the clutch pedal.
2. Press the Xpress restart switch to deactivate the function.

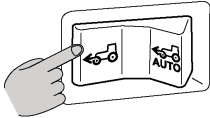
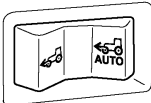
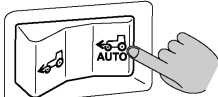
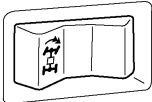
22. Operation using the 4WD, “AUTO 4WD” and “Bi-speed turn” switches

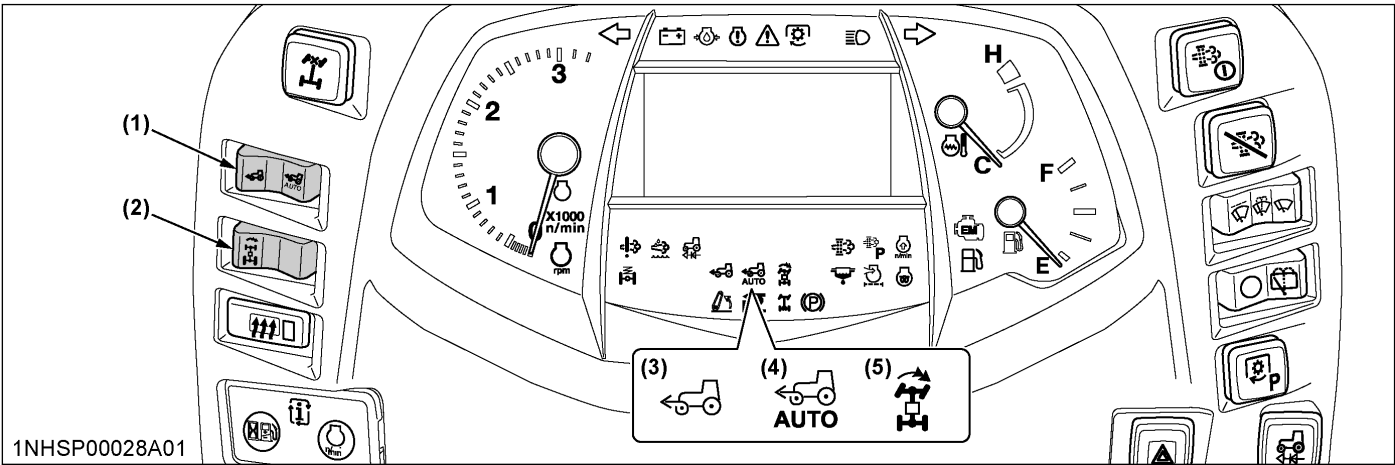
With the use of the 4WD, “AUTO 4WD” and “Bi-speed turn” switches, it is possible to choose between 5 different driving modes, as shown in the following table.

Select the optimal driving mode to fit the type of job being performed.

The switch can be used regardless of whether the clutch is in operation, the tractor has stopped or is being driven.

The meter panel indicator lights up depending on the driving mode.

	4WD and “AUTO 4WD” switch  1GXGD00046A01 4WD position	4WD and “AUTO 4WD” switch  1GXGD00046A02 2WD position	4WD and “AUTO 4WD” switch  1GXGD00046A03 “AUTO 4WD” position
“Bi-speed turn” switch  1NHSP00043A01 Engaged	Driving mode 1 4WD + “Bi-speed turn” 	Driving mode 3: 2WD	Driving mode 4 “AUTO 4WD” + “Bi-speed turn” 
“Bi-speed turn” switch  1NHSP00043A02 Disengaged	Driving mode 2 4WD 		Driving mode 5 “AUTO 4WD” 



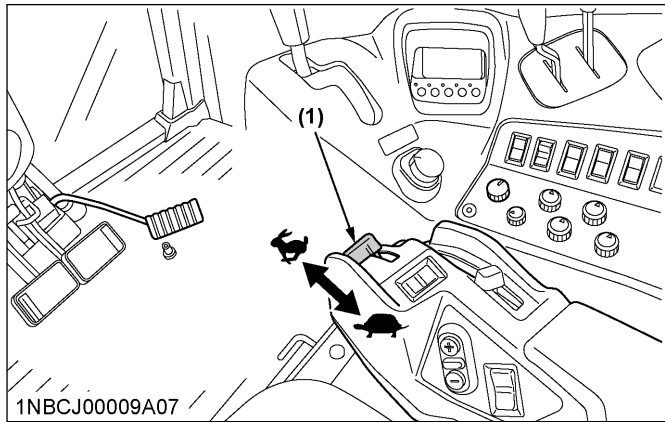
- (1) 4WD and “AUTO 4WD” switch

(2) “Bi-speed turn” switch
- (3) 4WD indicator

(4) “AUTO 4WD” indicator
- (5) “Bi-speed turn” indicator

23. Hand throttle lever

Pulling the throttle lever back decreases engine speed, and pushing the throttle lever forward increases engine speed.

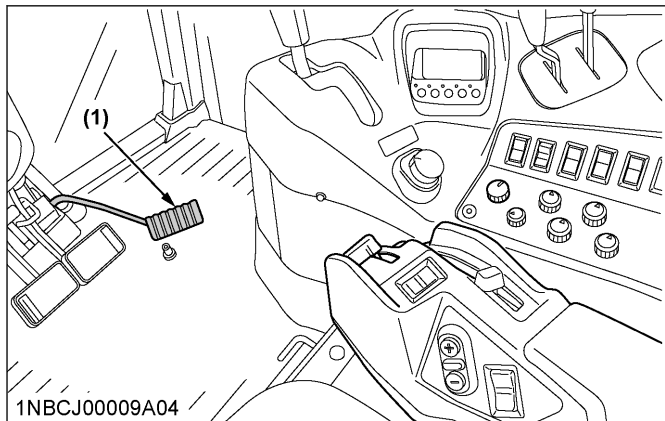


(1) Hand throttle lever

→ "INCREASE"
← "DECREASE"

24. Foot throttle

Use the foot throttle when traveling on the road. Press down on the foot throttle for higher speed. The foot throttle is interlocked with the hand throttle lever; when using the foot throttle, keep the hand throttle lever in low idling position.

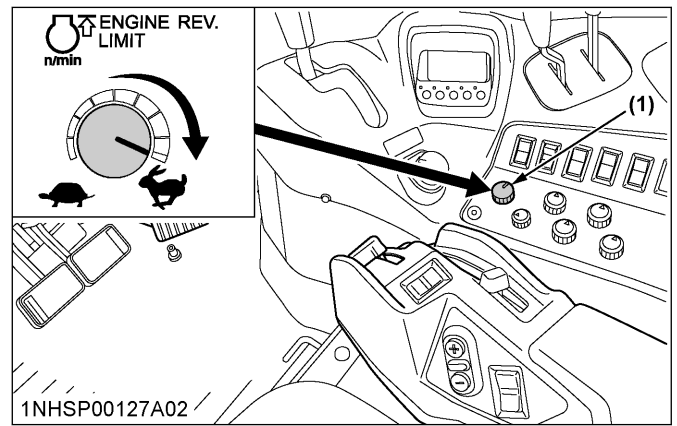


(1) Foot throttle

25. Rev-limiter control dial

This dial can be used to set the desired maximum engine speed.

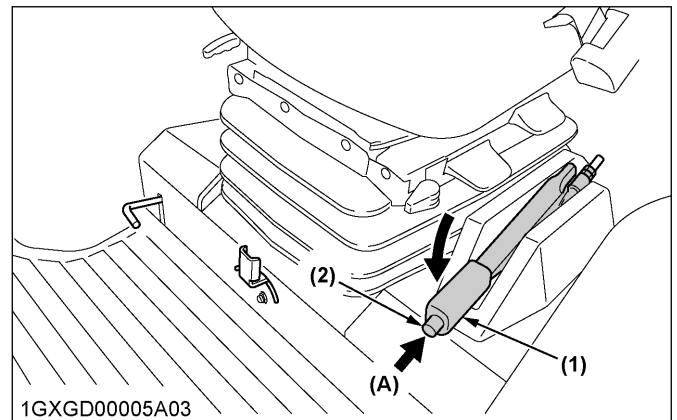
(See Rev-limiter control setting on page 90.)



(1) Rev-limiter control dial

26. Parking brake lever

To release the parking brake, depress the brake pedals, push the release button and push the parking brake lever down.



(1) Parking brake lever

(2) Release button

(A) "RELEASE"

NOTE :

- The parking brake indicator light on the Easy Checker will turn off when the parking brake is released.
- If the tractor starts to move when the parking brake is engaged, the alarm buzzer sounds and the parking brake indicator flashes.

IMPORTANT :

- Do not attempt to put the tractor in motion before the parking brake indicator light turns off.
If the tractor is operated with the parking brake set, the parking brake might be damaged.

STOPPING THE TRACTOR

1. Slow down the engine.
2. Depress the clutch and brake pedal.
3. Wait for the tractor to stop.

4. Disengage the PTO.
5. Lower the implement to the ground.
6. Shift the transmission to "NEUTRAL".
7. Release the clutch pedal.
8. Set the parking brake.

CHECK DURING DRIVING

IMPORTANT :

Immediately stop the engine if:

- The engine suddenly slows down or accelerates.
- Unusual noises are suddenly heard.
- Exhaust fumes suddenly become very dark.

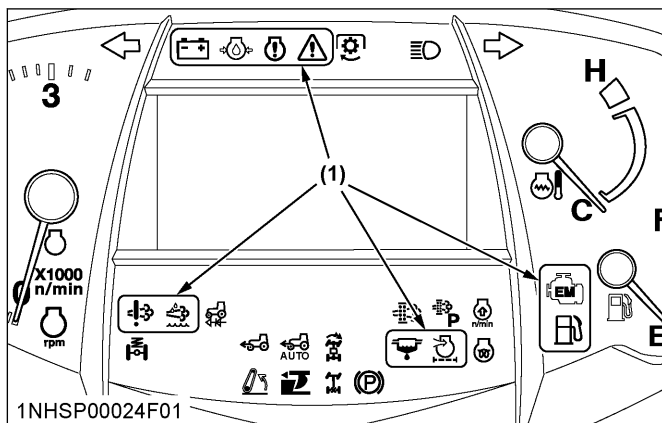
While driving, check the following items to see that all the parts are functioning normally:

- Easy Checker on page 80
- Fuel gauge on page 81
- DEF (AdBlue) gauge on page 81
- Coolant temperature gauge on page 81
- Tachometer on page 82

1. Easy Checker

If the indicators on the Easy Checker come on during operation, immediately stop the engine and find the cause as follows.

Never operate the tractor while an Easy Checker indicator is on.



(1) Easy Checker

Engine warning

This indicator serves the following 2 functions. If the indicator lights up, pinpoint the cause and take proper measures.

1. Error with the engine control system

If during operation the water temperature gauge reads an acceptable level but the indicator on the Easy Checker comes on, stop the engine and then restart it. If the error happens again, consult your local Kubota dealer.

IMPORTANT :

- If the warning indicator lights up, the following phenomena may appear depending on the engine's trouble spot.
 - The engine stops unexpectedly.
 - The engine fails to start or gets interrupted just after starting.
 - The engine output is not enough.
 - The engine output is enough, but the warning indicator stays on.

If the engine output is not enough, immediately interrupt the operation and move the tractor to a safe place and stop the engine.

2. Engine overheat

If the water temperature gauge reads an unusual level and the indicator on the Easy Checker comes on, the engine may have overheated. Check the tractor by reading the troubleshooting section of this manual.

(See TROUBLESHOOTING on page 199.)

Engine oil pressure

If the oil pressure in the engine drops below the prescribed level, the indicator on the Easy Checker will come on.

If the indicator on the Easy Checker lights up during operation, and it does not go off when the engine is accelerated to more than 1000 rpm, check the engine oil level.

(See Checking engine oil level on page 157.)

SCR system warning

If trouble should occur in the SCR system, the indicator on the Easy Checker will light up.

If this should happen during operation, check the SCR system or consult your local Kubota dealer.

Fuel level

If the fuel in the tank drops below the prescribed level (less than 35 L (9.2 gals.)), the indicator on the Easy Checker will come on.

If this should happen during operation, refuel as soon as possible.

(See Checking and refueling on page 154.)

IMPORTANT :

- When the fuel indicator lights up, refuel the tank as soon as possible. If the tractor runs out of fuel and stalls, the engine and its components may be damaged.

Water separator

If water or impurities collect in the water separator, the indicator on the Easy Checker will light up and the buzzer will sound.

If this should happen during operation, drain the water from the water separator as soon as possible.

(See Checking water separator on page 157.)

DEF (AdBlue) level and quality

If the DEF (AdBlue) in the DEF tank drops below the prescribed level, or if a poor-quality product is added, the indicator on the Easy Checker will light up.

If this should happen during operation, refill or replace with DEF (AdBlue) as soon as possible. (See SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM on page 47.)

Air cleaner

If the air cleaner is clogged, the indicator on the Easy Checker will light up.

If this should happen during operation, clean the air cleaner element.

(See Cleaning air cleaner primary element on page 165.)

Emission indicator

If this indicator lights up, take steps to lower the water temperature. This helps keep the emission clean.

Electrical charge

If the alternator is not charging the battery, the indicator on the Easy Checker will come on.

If this should happen during operation, check the electrical charging system or consult your local Kubota dealer.

Master system warning

If trouble should occur at the engine, transmission or other control parts, the indicator flashes as a warning.

If the trouble is not corrected by restarting the tractor, consult your local Kubota dealer.

NOTE :

- For checking and servicing of your tractor, consult your local Kubota dealer for instructions.

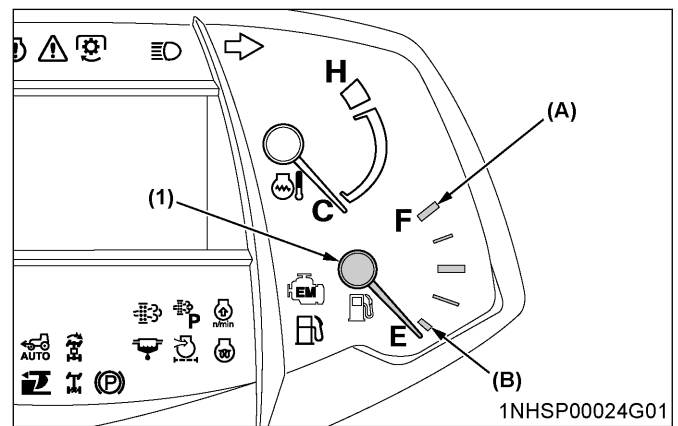
2. Fuel gauge

A needle indicates the amount of fuel left regardless of the key position.

Be careful not to empty the fuel tank. Otherwise, air may enter the fuel system.

Should this happen, the system should be bled.

(See Bleeding fuel system on page 189.)



(1) Fuel gauge

(A) "FULL"

(B) "EMPTY"

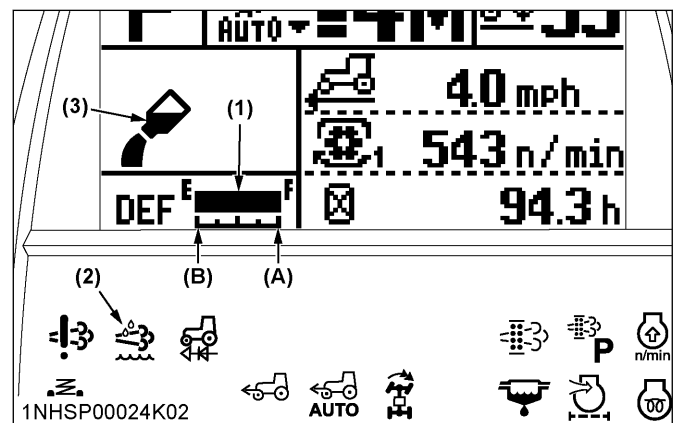
3. DEF (AdBlue) gauge

The DEF (AdBlue) level in the DEF tank is indicated with LCD blocks.

If DEF (AdBlue) level drops too low, the engine output is restricted. With this in mind, be careful not to empty the DEF tank.

When the fluid level in the DEF tank has dropped below 40%, the DEF (AdBlue) level and quality warning indicator and the low-level icon of DEF (AdBlue) on the instrument panel light up and stay on, and the buzzer sounds.

To maintain tractor performance, it is recommended to add DEF (AdBlue) to the specified level quickly.



(1) DEF (AdBlue) gauge

(A) "FULL"

(2) DEF (AdBlue) level and quality warning indicator

(B) "EMPTY"

(3) Low-level warning indicator of DEF (AdBlue)

4. Coolant temperature gauge

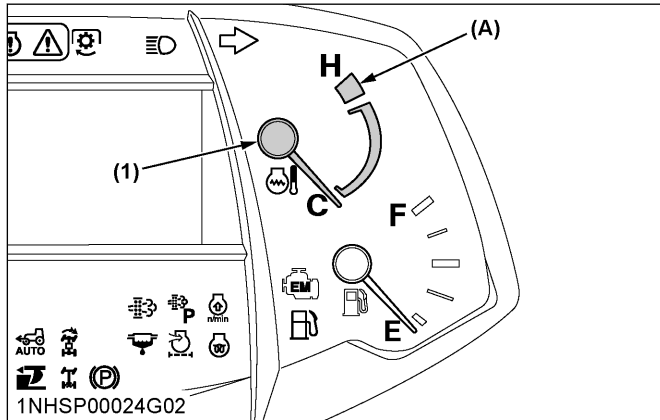
WARNING

To avoid personal injury or death:

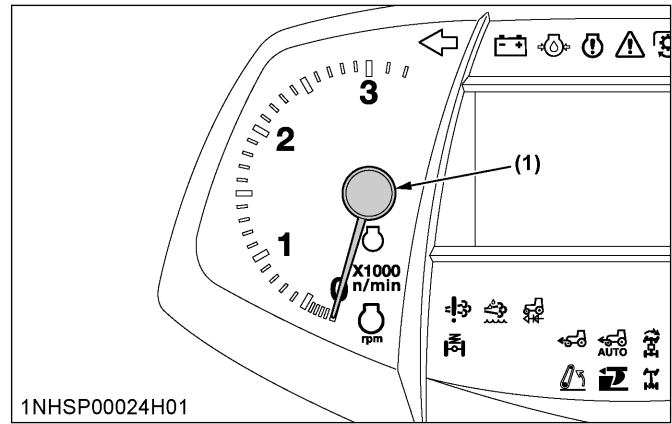
- Do not remove the radiator cap until coolant temperature is well below its boiling point. Then, loosen the cap slightly to the first stop to

relieve any pressure before removing the cap completely.

1. With the key switch at "ON", this gauge indicates the temperature of the coolant. [C] is for cold and [H] is for hot.
2. If the indicator reaches the red zone position, the engine coolant is overheated. Check the tractor by reading the troubleshooting section of this manual. (See TROUBLESHOOTING on page 199.)



(1) Coolant temperature gauge (A) "RED ZONE"



(1) Engine revolution

4.1 Overheating countermeasures

Take the following actions in the event the coolant temperature is nearly at or over the boiling point, also called "overheating".

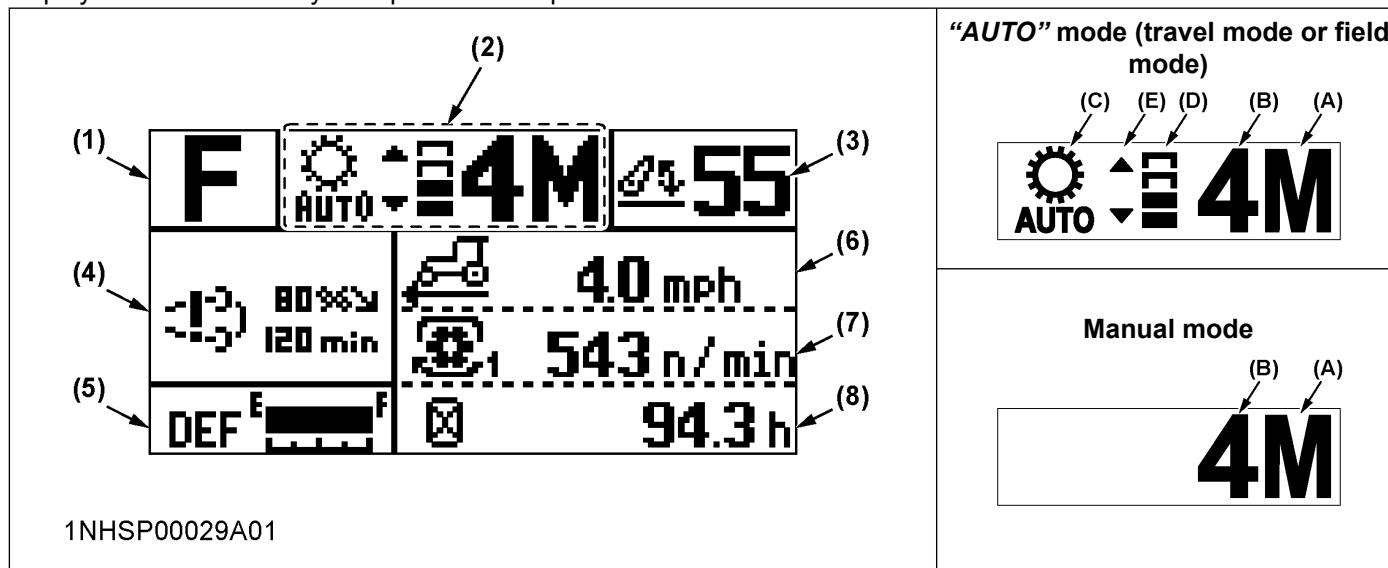
1. Park the tractor in a safe place and keep the engine idling unloaded.
2. Allow the engine to idle unloaded for about 5 minutes before stopping it, rather than stopping it suddenly.
3. Keep away from the machine for another 10 minutes or while the steam blows out.
4. Check that there are no dangers such as burns. Get rid of the causes of overheating according to the troubleshooting section of this manual. (See TROUBLESHOOTING on page 199.) Afterwards, restart the engine.

5. Tachometer

The tachometer indicates the engine speed on the dial.

LCD MONITOR

This display provides the operator with a variety of information necessary to operate the tractor. Further, part of the display can be modified by the operator as required.



No.	Description		Reference page
(1)	Displays [F], [R] or [N] [F] is displayed when forward operation is selected with the shuttle lever. [R] is displayed when reverse operation is selected with the shuttle lever. [N] is displayed when the lever is in the neutral position.		72
(2)	(A) Displays [H], [M], [L] or [N] Displays the position of the range gear shift that was selected with the power shift and range shift lever.		70
	(B) Displays [1], [2], [3], [4], [5], [6], [7] or [8] Displays the position of the power shift ratios that was selected with the power shift and range shift lever.		70
	(C) "AUTO" mode indicator Lights up when the "AUTO" mode is selected. Stays off while in the manual mode.		97
	(D) Auto-shift bar display Displays the automatic shift-down possible speed range (factory setting: 2 shifts) that was preset to the highest position of the set speed with the power shift and range shift lever in the "AUTO" mode, as well as the current gear ratio. Lights up when the "AUTO" mode is selected. Stays off while in the manual mode.		98
	(E) Shift-up and shift-down indicator While in the "AUTO" mode, the shift-up indicator flashes before shift-up occurs, and the shift-down indicator flashes before shift-down occurs. Stays off while in the manual mode.		98
(3)	3 point hitch position		---
(4)		DEF (AdBlue) low level icon indicator	48
		DEF (AdBlue) poor quality icon indicator	

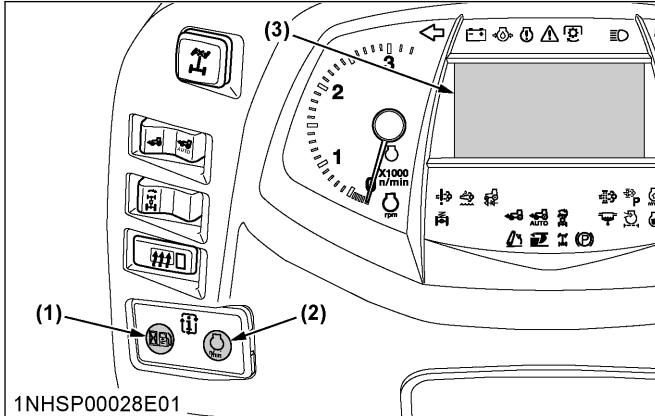
(Continued)

No.	Description		Reference page
(4)		DEF (AdBlue) freeze icon indicator	48
		SCR system warning	
		Low temperature regulation indicator	55
(5)	DEF (AdBlue) gauge Displays the fluid level in the DEF tank.		81
(6)	Travel speed		---
(7)	PTO speed		85
(8)	Performance monitor 5 types of information can be selected by the operator: • Elapsed time (hour meter) • Trip time • Engine rpm dual memory A/B • Rev-limiter control setting speed • A trouble-spot-pinpointing error code and the related control unit or DPF parked regeneration remaining time.		85 85 90 90 199

1. Performance monitor

Display change

When the rpm dual memory setting is "OFF" and the rev-limiter control setting is , the instrument panel LCD changes to "hour meter mode", "trip meter mode", "engine rpm dual memory A", "engine rpm dual memory B" each time the display switch is pressed. Select the appropriate display for the work being performed. If the "rpm dual memory setting" or "rev-limiter control setting" is engaged, the set speed takes priority on the display.

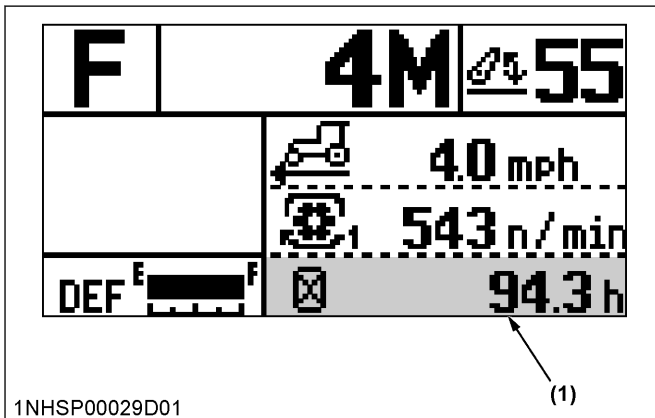


1NHSP00028E01

- (1) PTO indicator switch
- (2) Display switch
(hour, trip, engine rpm dual memory A/B)
- (3) LCD monitor

Hour meter mode

The tractor's total operating hours are displayed.



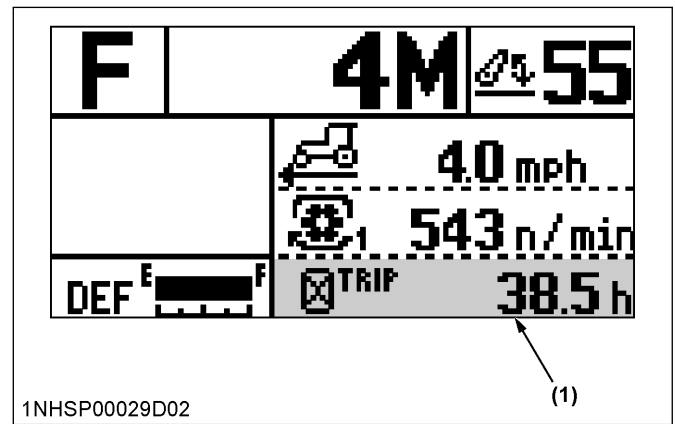
1NHSP00029D01

- (1) Hour meter

Trip meter mode

The total operating hours counted from the previous resetting is displayed.

Hold down the display switch for 2 seconds or longer to reset the trip meter to [0.0].



1NHSP00029D02

- (1) Trip meter

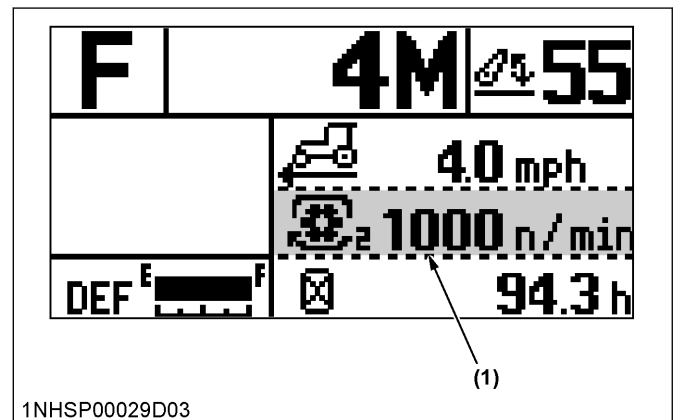
PTO rpm indicator

Each time the PTO indicator switch is pressed, the PTO rpm "shift 1" and "shift 2" are displayed alternately.

"shift 1" is used to select 540 rpm.

"shift 2" is used to select 1000 rpm.

The following illustration shows an example of the display when the PTO rpm "shift 2" is displayed

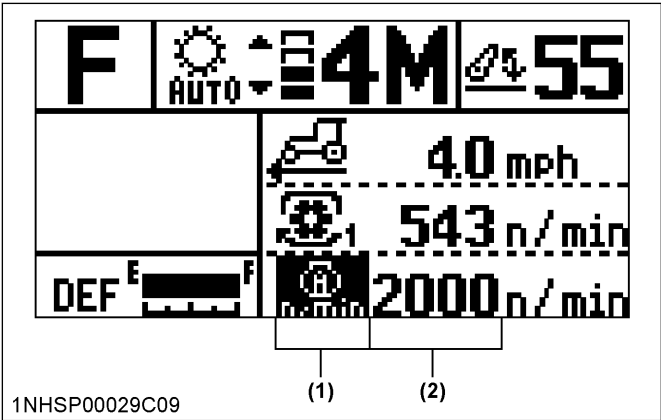


1NHSP00029D03

- (1) PTO rpm indicator

Priority display (engine rpm dual memory A/B, rev-limiter control setting)

If the "rpm dual memory setting" or "rev-limiter control setting" is engaged, the set speed takes priority on the display. The following illustration shows an example of the display when the engine speed has been set for the switch "A" side.



- (1) Switch "A"
- (2) Set engine speed

SIDE DIGITAL DISPLAY

This section covers the viewing and selection methods of the 4 rows of information.

The side digital display shows the following information:

- 4 rows with 30 types of tractor information, such as travel speed, PTO rpm and mileage can be selected by the operator.
- Operating history for the past 4 months can be displayed.

Details regarding the meaning and selection procedures of other data, as well as changing the display settings can be found in a different section. (See SIDE DIGITAL DISPLAY on page 204.)

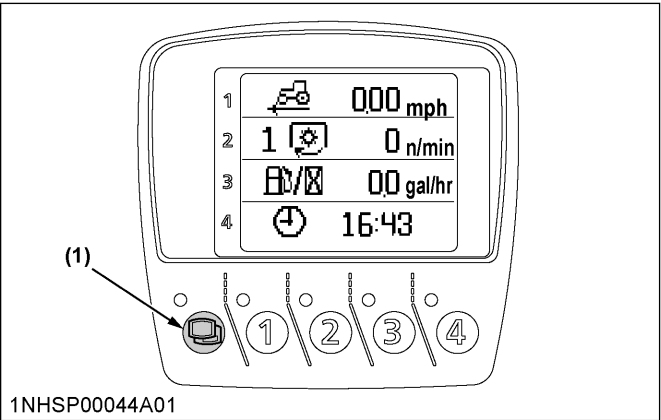
1. Initial setting

Before use, make sure that the installed tire circumference, the clock and the working range of implement are set.

Otherwise, the travel speed, work area, work distance and other data will not be correctly displayed.

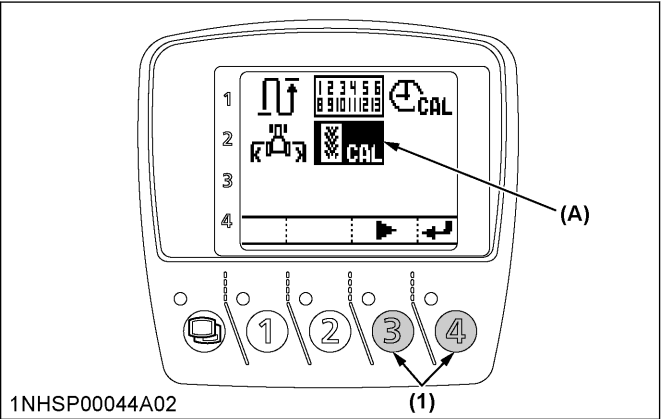
Setting procedure

1. Turn on the key switch. With the following data on the screen, hold down the mode selector switch. Various screens can be selected.



- (1) Mode selector switch

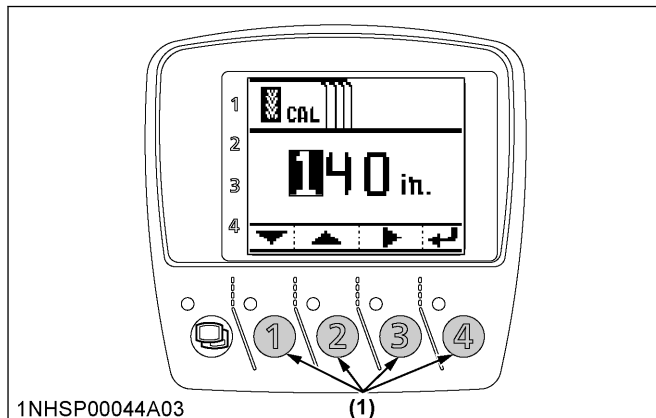
2. Select the tire circumference setting mode with switch [3] and press switch [4] to go to the tire circumference setting screen.



- (1) Switch

- (A) "Tire circumference setting mode"

3. Check to see if the tire circumference is correctly preset. If not, correct the numerical settings with switches **[1]**, **[2]** and **[3]**, referring to the following table. Press switch **[4]** to save the new setting.

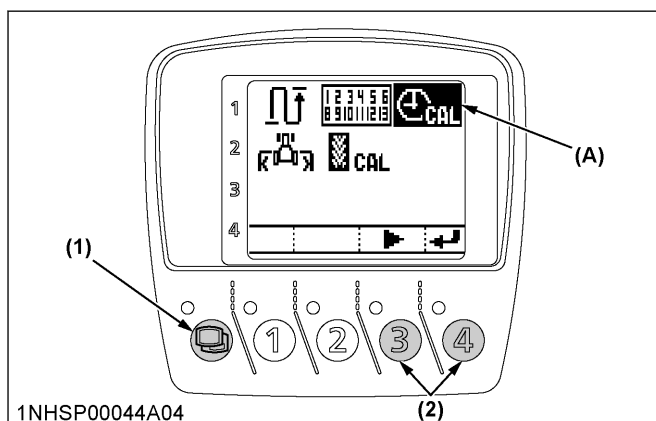


(1) Switch

Tire circumference chart

Tractor type	Tire specification	Rear tire size	Entry (in.)
M6-101	Standard	18.4R30	193
		18.4-30	193
		16.9-34	197
		18.4R34	206
		18.4-34	206
M6-111	Standard	18.4R34	206
		18.4-34	206
		16.9-34	197
M6-131 M6-141	Standard	18.4R38	204
		16.9-38	198
		520/70R38	205

4. Go back to any of various setting mode screen. Select the clock setting mode with switch **[3]**. Press switch **[4]**, and the clock setting screen appears.

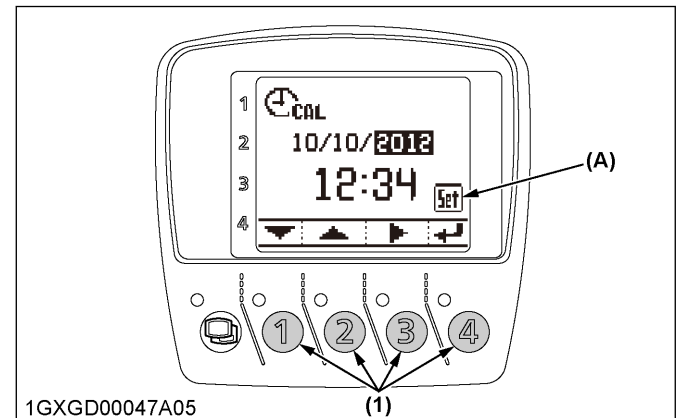


(1) Mode selector switch

(2) Switch

(A) "Clock setting mode"

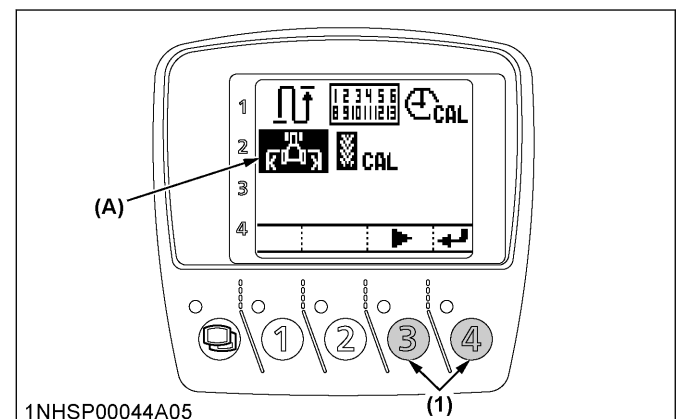
5. Check to see if the clock is correctly set. If not, set the correct date and time with switches **[1]**, **[2]** and **[3]**. Select **[Set]** and press switch **[4]** to save the new setting.



(1) Switch

(A) [Set]

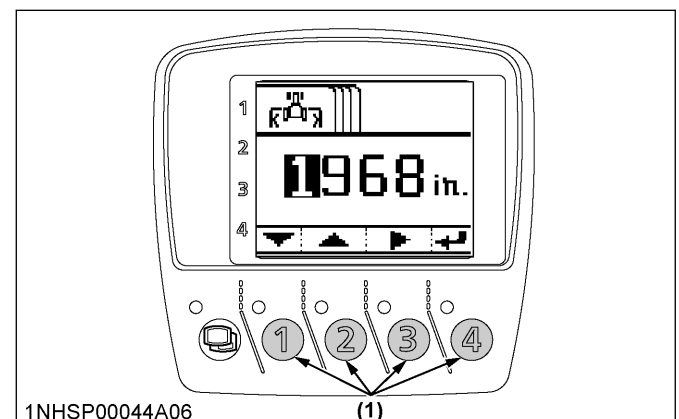
6. Go back to any of various setting mode screen. Select the working range of implement setting mode with switch **[3]**. Press switch **[4]**, and the working range of implement setting screen appears.



(1) Switch

(A) "Working range of implement setting mode"

7. Using switches **[1]**, **[2]** and **[3]**, enter the working range of implement. Press switch **[4]** to save the setting.

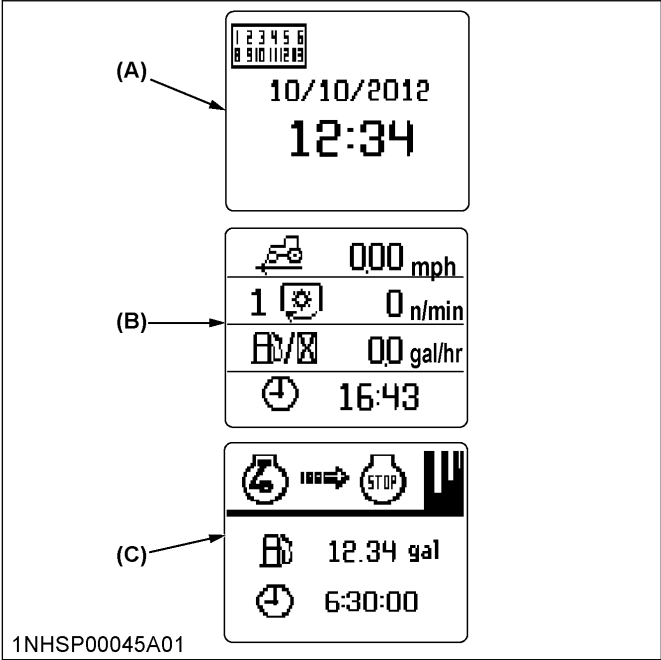


(1) Switch

2. Factory-set screen display

2.1 Displaying when the key switch is turned on and off

1. Turn on the key switch, and the current time is displayed. In a couple of seconds, the default screen appears.
2. Turn off the key switch, and the “fuel consumption” and “operating hours” appear for a few seconds.



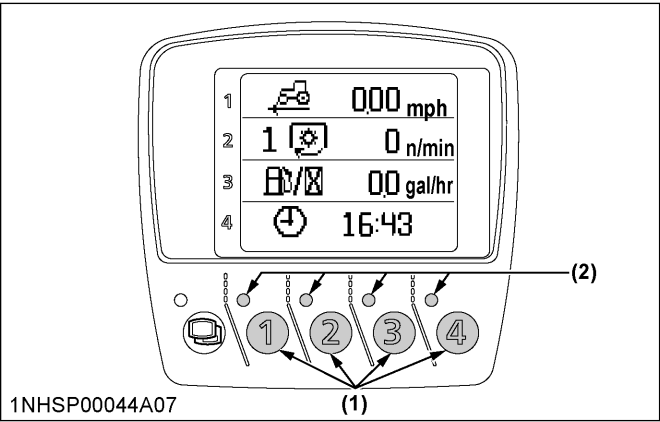
- (A) “Current time”
(B) “Default screen”
(C) “With key switch turned off”

NOTE :

- The “current time” appears when the work history is on.
Details regarding the setting of the display can be found in a different section.
(See SIDE DIGITAL DISPLAY on page 204.)

2.2 Displaying operating procedures

The display has been factory-set for the following 4 settings. They are interlocked from top to bottom with switches [1] through [4].
Details regarding how to view and modify the information can be found in a different section.
(See Standard factory settings and display changes on page 89.)



- (1) Switch
(2) Indicator

Indicator

“ON”	Press the switch to change the display.
“OFF”	The display does not change even by pressing the switch.
“FLASHING”	The data are reset by holding down the switch.

2.3 Standard factory settings and display changes

Info	Display	Remarks	Ref. page
Travel speed	Travel speed  0.00 mph 9Y1210684ELM009A	- Each time switch [1] is pressed, the “<i>travel speed</i>” and “<i>average travel speed</i>” are displayed alternately. - The “<i>average travel speed</i>” is based on the speed since the last reset action was performed. - With the “<i>average travel speed</i>” displayed, hold down switch [1]. The setting goes back to [0.0].	70
	Average travel speed  0.00 mph 9Y1210684ELM010A		70
PTO	PTO rpm (shift 1) 1  540 %/min 9Y1210684ELM011A	- Each time switch [2] on the side display or the PTO indicator switch on the left side of the instrument panel is pressed, the “<i>shift 1</i>” and “<i>shift 2</i>” are displayed alternately. [1] is used to select 540 rpm. [2] is used to select 1000 rpm.	113
	PTO rpm (shift 2) 2  1000 %/min 9Y1210684ELM012A		113
Mileage	Instantaneous fuel consumption  39 gal/hr 9Y1210684ELM018A	- Each time switch [3] is pressed, the “<i>instantaneous fuel consumption</i>”, “<i>average fuel consumption</i>” and “<i>mileage graph</i>” are displayed alternately. - The “<i>instantaneous fuel consumption</i>” is measured per hour. - The “<i>average fuel consumption</i>” is measured per hour from the previous resetting. - With the “<i>average fuel consumption</i>” displayed, hold down switch [3]. The setting goes back to [0.0]. - The “<i>mileage graph</i>” graphically shows the mileage in real time. The more the bar is extended to the right, the worse the mileage becomes.	-
	Average fuel consumption  2.6 gal/hr 9Y1210684ELM019A		-
	Mileage graph   9Y1210684ELM020A		-
Clock	Time  15:14 9Y1210684ELM032A	- Each time switch [4] is pressed, the “<i>time</i>” and “<i>date</i>” are displayed alternately. - With the “<i>time</i>” displayed, hold down switch [4]. The 24-hour system and 12-hour system are displayed alternately.	86
	Date  7/ 4/2012 9Y1210684ELM033A		210

Details regarding other data than the factory settings and the modification of the displayed data can be found in a different section.

(See SIDE DIGITAL DISPLAY on page 204.)

ELECTRONIC ENGINE CONTROL

The electronically controlled engine which is installed in this tractor performs the following 3 types of control.

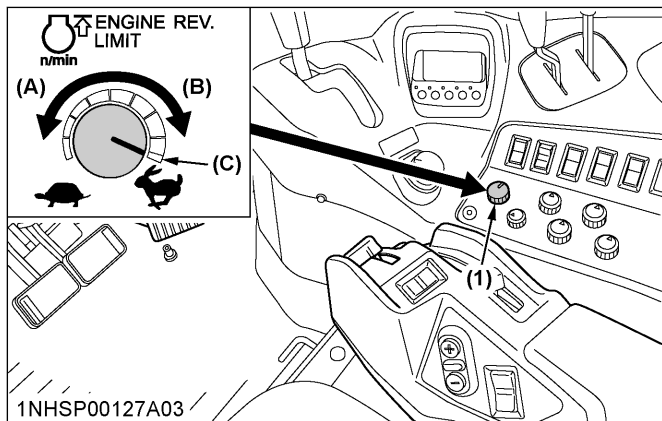
1. Rev-limiter control setting
2. RPM dual memory setting
3. *Constant RPM Management* control

1. Rev-limiter control setting

When the Rev-limiter control dial is used to restrict the maximum engine speed, the engine speed will not exceed the set speed even when the hand throttle lever or foot throttle is operated. The Rev-limiter control function can prevent machine trouble caused by incorrect operation.

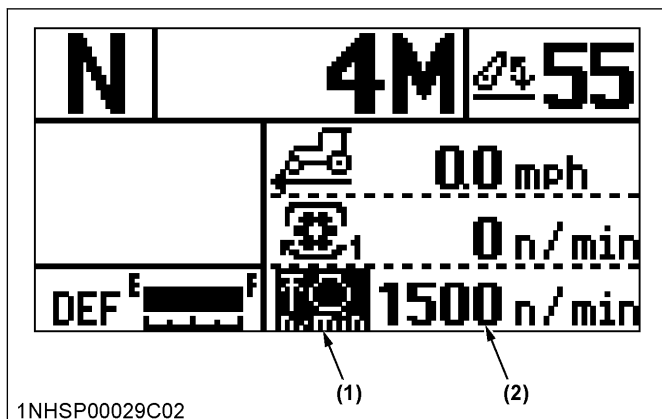
Setting the speed

1. The setting can be made both when the engine is running and when it is stopped.
2. Set the speed by turning the dial to the left or right while watching the engine speed that is displayed on the LCD.
3. When the dial is turned all the way to the right, to the  position, the restriction is canceled.



(1) Rev-limiter control dial

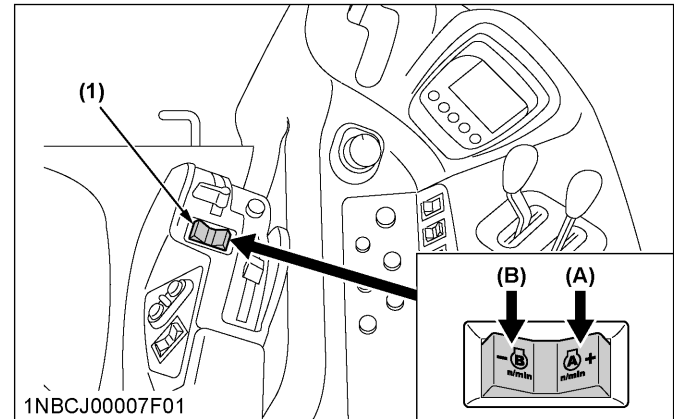
- (A) "LOW-SPEED SIDE"
(B) "HIGH-SPEED SIDE"
(C) "CANCELED"



- (1) Display when rev-limiter control is set
(2) Maximum engine speed that is set

2. RPM dual memory setting

Two different engine speeds can each be set with a single touch by pressing the *RPM dual memory* switch to the (A) or (B) side. This can be used to eliminate troublesome acceleration operations.

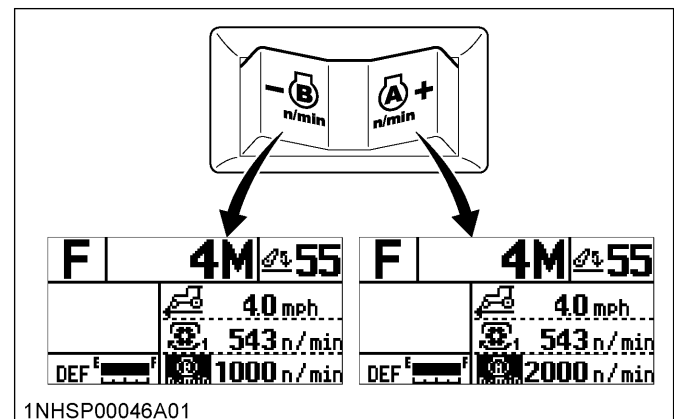


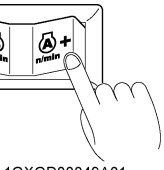
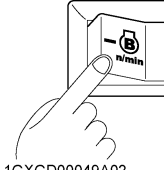
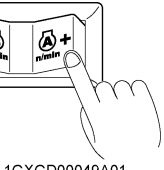
(1) RPM dual memory switch

- (A) Switch A
(B) Switch B

Example of use

Consider an example in which an engine speed of 2000 rpm is set for the switch (A) side and a speed of 1000 rpm is set for the switch (B) side.

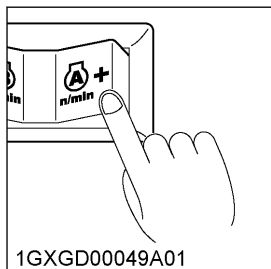


Work ↓	 1GXGD00049A01	During work, simply press the switch to the (A) side to automatically set an engine speed of 2000 rpm.
Turning ↓	 1GXGD00049A02	When turning, press the switch to the (B) side to lower the speed to 1000 rpm, allowing turning at low speed.
Work	 1GXGD00049A01	After turning, press the switch again to the (A) side to resume a speed of 2000 rpm.

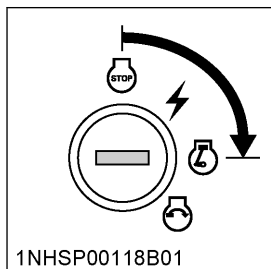
- Keep the hand throttle lever above the minimum speed. At the minimum speed, a memory setup cannot be performed.
- You can also depress the foot throttle to increase the engine speed above the set speed.

2.1 Setting the speeds or changing the speed settings

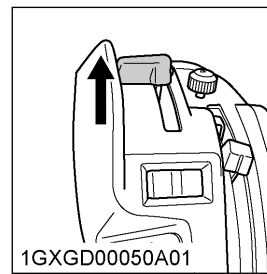
Setting RPM dual memory switch (A)



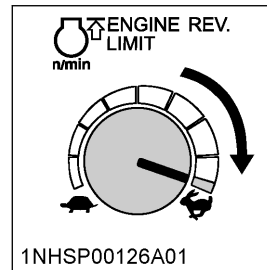
1. Turn the key switch to the "ON" position.
The speed setting can be made both when the engine is running and when it is stopped.



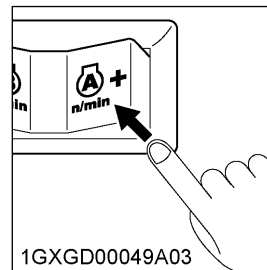
2. Set the hand throttle lever slightly toward the higher-speed side.



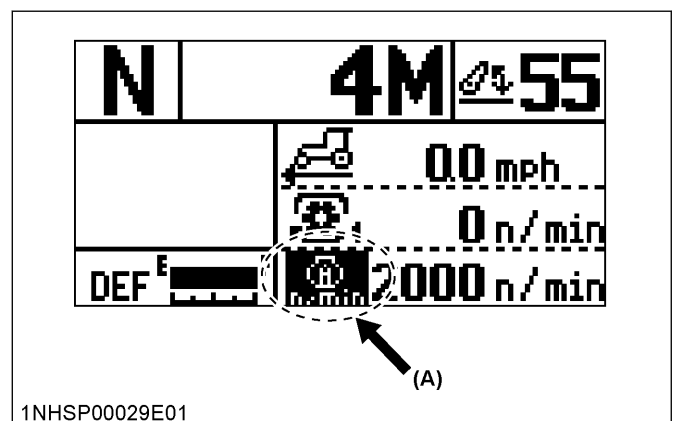
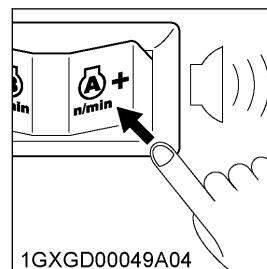
3. Turn the rev-limiter control dial to the  position.



4. Press the switch (A) side and then release the switch.

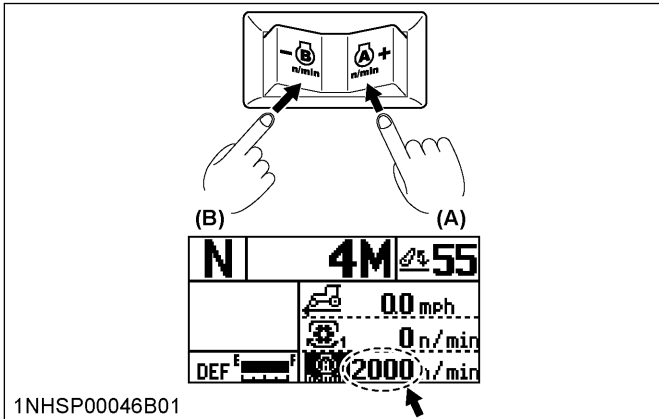


5. Press again and hold down the switch (A) side (2.5 seconds) until the buzzer sounds and then release the switch.



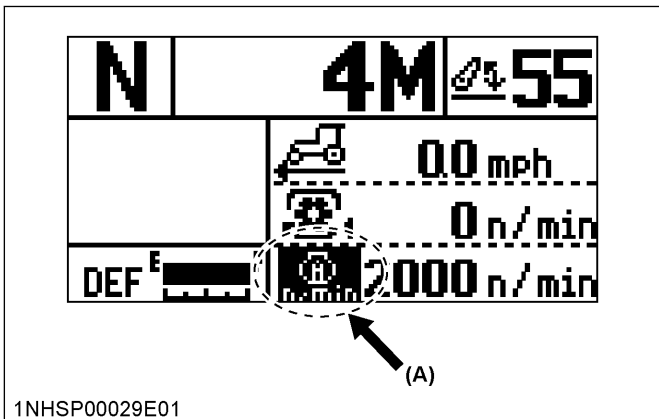
- Press the switch to the (A) or (B) side and set the speed.

Pressing and holding down the switch will cause the speed to change continuously. Pressing and releasing the switch changes the speed by 10 rpm each time. Set the desired engine speed while watching the speed display.



- (A) Increase speed
(B) Decrease speed

- If the switch is released and not operated for 4 seconds, a continuous buzzer sounds and the setting is completed.



- (A) Stays on

- Follow the same procedure as for the (A) side to set the speed for the switch (B) side.

NOTE :

- The set speeds will be stored even after the engine is stopped.

2.2 Canceling the setting

Any of the following actions will cancel the *RPM dual memory* settings.

- For the switch (A) side, when the memory speed is engaged, press the switch (A) again to cancel.
For the switch (B) side, when the memory speed is engaged, press the switch (B) again to cancel.

- When the memory speed is canceled, the speed will return to the speed that is determined by the hand throttle lever (foot throttle).

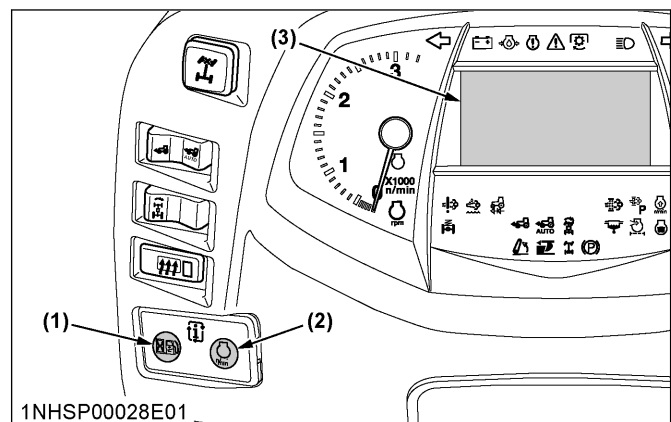
When the switch is pressed, the LCD will display the engine speed that is in effect after memory speed is canceled.

- Return the hand throttle lever to the lowest speed position.
- Turn the key switch to the "OFF" position.

2.3 Checking the speeds set in the memory

You can check the speed which is set for switch (A) and (B) on the LCD by pressing the engine RPM dual memory A/B indicator switch each time.

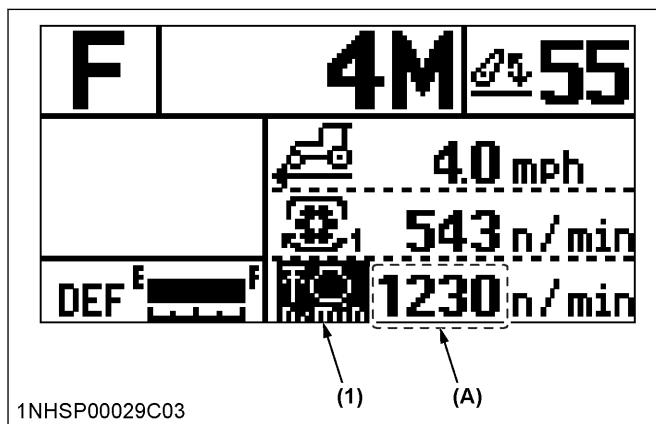
The display automatically disappears after 1.5 seconds.



- (1) PTO indicator switch
(2) Display switch
(hour, trip, engine rpm dual memory A/B)
(3) LCD monitor

NOTE :

- If the memory speed setting is set higher than the value that was set with the rev-limiter control dial, the mark shown in the following illustration will appear on the LCD, the corresponding number will flash, and the speed will not increase to the set speed (the rev-limiter control dial takes priority).
- For example, if the speed set in the memory is 2000 rpm, and the rev-limiter control dial is set to 1230 rpm, then the mark shown in the following illustration will appear on the LCD, the corresponding number will flash, and the engine speed will not increase above 1230 rpm.



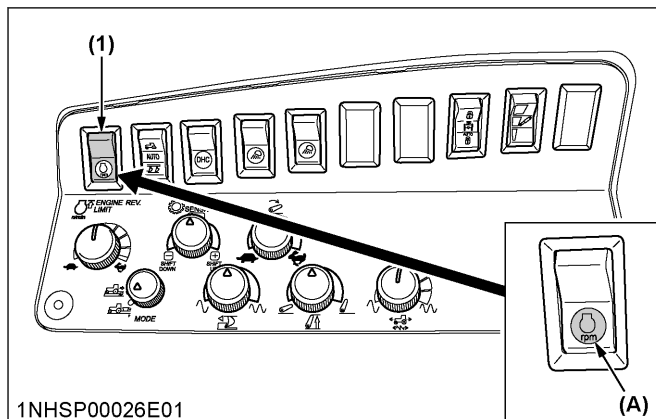
(1) Mark

(A) Flashing

3. Constant RPM Management control

Constant RPM Management can be turned on or off by operating the switch.

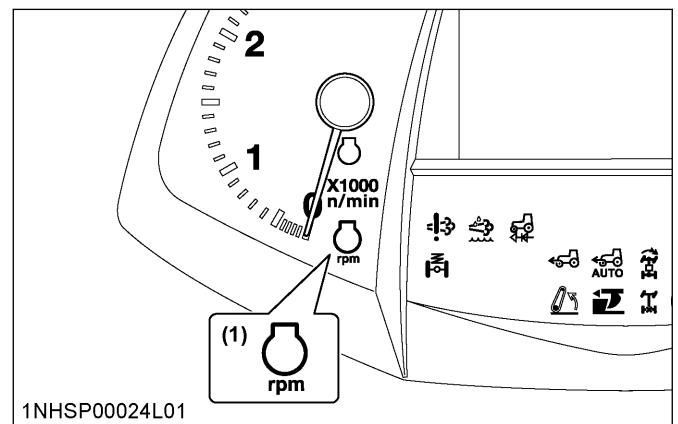
Pressing the switch to the lower side turns on the control and pressing the switch to the upper side turns it off.



(1) Constant RPM Management (A) "PRESS" to turn on switch

When Constant RPM Management is "ON"

Fluctuations in the engine speed due to load fluctuations are reduced and the travel speed and PTO speed are kept nearly constant, allowing stable work. When *Constant RPM Management* is "ON", the switch's indicator and the instrument panel indicator light up.



(1) Constant RPM Management indicator

When Constant RPM Management is "OFF"

As in a conventional engine, the engine speed increases or decreases according to changes in the load. The operator judges the size of the load from the engine speed and engine sound, and can adjust the travel speed or plowing depth to prevent overload on the tractor.

NOTE :

- In a mechanically-controlled engine, the engine speed changes according to increases and decreases in the load.

For example, when working in a hilly area, the load increases and engine speed drops while ascending a slope, and conversely the load drops when descending. These changes in engine speed affect the travel speed and PTO-driven implements. In order to minimize these effects, the operator must make fine adjustments to the travel speed and hand throttle lever.

When the *Constant RPM Management* switch in this tractor with its electronically controlled engine is turned on, the engine speed will be kept nearly constant in response to a certain level of load fluctuations. This function improves the accuracy of work without the need for troublesome manipulation of the travel speed and hand throttle lever.

- It is recommended that a combination of light-load PTO-driven implements and "AUTO" mode (automatic speed change) be used.
- There is a limit to the range within which a constant speed can be maintained. If a load exceeding the engine performance is applied, the engine speed will drop.
- The purpose of *Constant RPM Management* is not to increase the engine power.

"AUTO" MODE

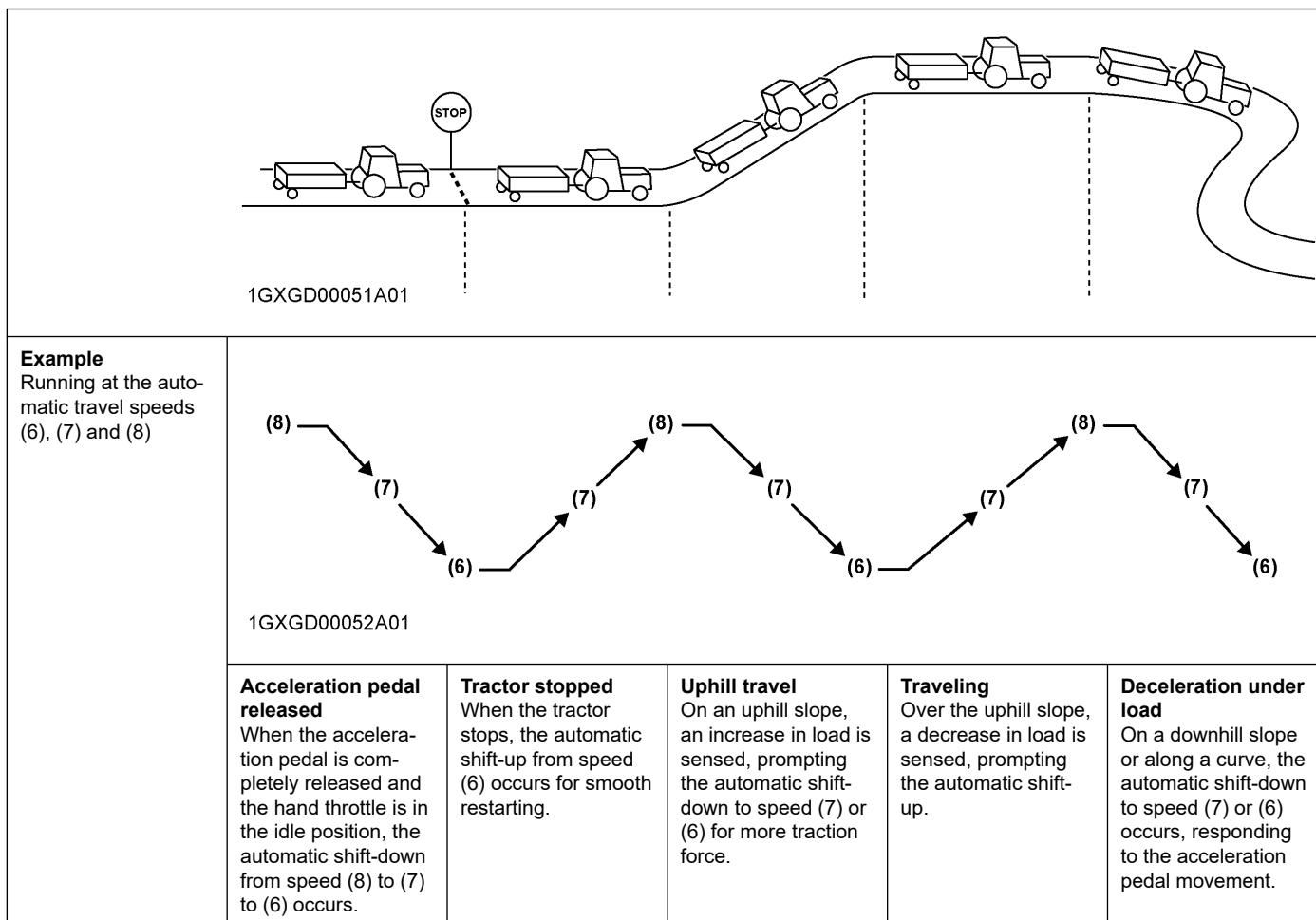
The "AUTO" mode is an automatic speed change function that is designed to shift up and down the travel

speed in response to the load-dependent engine rpm fluctuations, attachment maneuvering, acceleration pedal movement and other factors.

The “AUTO” mode comes in 2 ways, “*travel mode*” and “*field mode*”, according to the applications.

1. Travel mode

In trailing operation, the automatic shift-up and shift-down is carried out within a predetermined range (factory-set for 2 shifts), responding to the acceleration pedal movement and rpm changes from load. This function helps you avoid troublesome gear shifting.



NOTE :

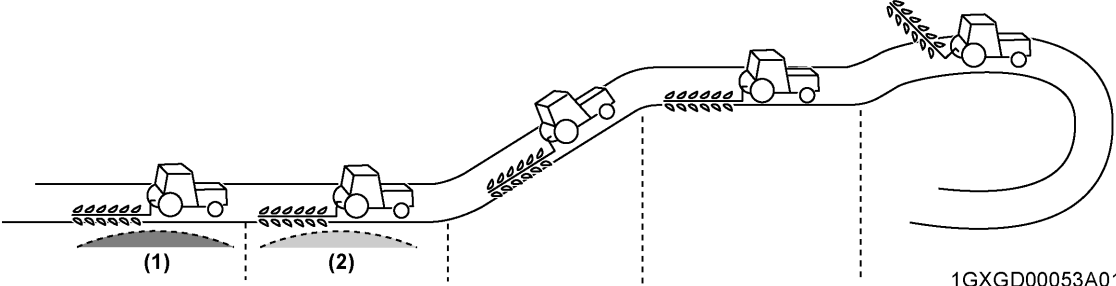
- The tractor has been factory-set for the automatic range (2 shifts) discussed above. This gear shift range can be modified to meet your applications.
(See "AUTO" mode settings changes on page 101.)
- The "AUTO" mode does not function if the clutch is disengaged or halfway or in turning (over the "Bi-speed" turning angle) and if the shuttle lever is in the reverse position.
- The "AUTO" mode functions when the engine rpm is above the middle speed.

2. Field mode

In plowing operation, the automatic shift-up and shift-down is carried out within a predetermined range (factory-set for 2 shifts), responding to the field condition, soil condition and other factors.

When lifting the attachment using 3 pt, the automatic shift-down is made for easier turning.

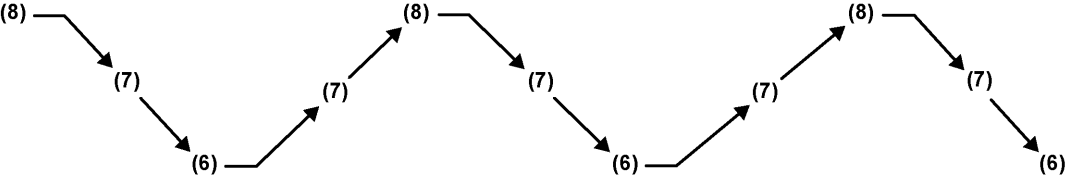
With implement that require PTO rotation, automatic shift-up and shift-down occurs repeatedly. This is because the system is sensitive to the load from the plow or other towed implements. As a result, the PTO speed is kept nearly constant, improving the accuracy of work.



(1) Hard ground
(2) Soft ground

1GXGD00053A01

Example
Running at the auto-
matic travel speeds
(6), (7) and (8)



1GXGD00052A01

Hard farm ground An increase in load is sensed due to a soil change, prompting the automatic shift-down from speed (8) to (7) to (6).	Soft farm ground A decrease in load is sensed due to a soil change, prompting the automatic shift-up	Uphill plowing On an uphill slope, an increase in load is sensed, prompting the automatic shift-down to speed (7) or (6) for more traction force.	Flat farm ground Over the uphill slope, a decrease in load is sensed, prompting the automatic shift-up.	Attachment lifted When lifting the at- tachment with the 3- point quick raise and lower switch or the hydraulic control lev- er, the automatic shift-down occurs for easier turning.
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- NOTE :
- The tractor has been factory-set for the automatic range (2 shifts) discussed above. This gear shift range can be modified to meet your applications.
(See "AUTO" mode settings changes on page 101.)
 - The "AUTO" mode does not function if the clutch is disengaged or halfway or in turning (over the "Bi-speed" turning angle) and if the shuttle lever is in the reverse position.
 - The "AUTO" mode functions when the engine rpm is above the middle speed.

3. Operating the "AUTO" mode

1. Press the "AUTO" mode switch to select "travel mode" or "field mode" according to your applications.

- **Travel mode:**

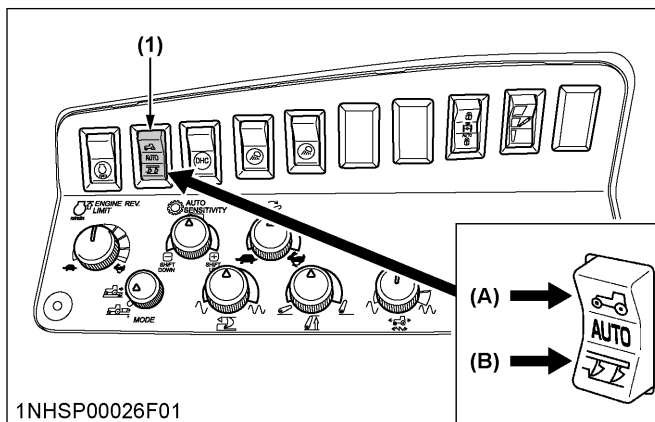
For pulling trailers and other hauling operations.

- **Field mode:**

For plowing, subsoiling and other tillage operations, or for harvesters and other PTO-driven implements.

Once selected, the "AUTO" mode indicator on the meter panel lights up.

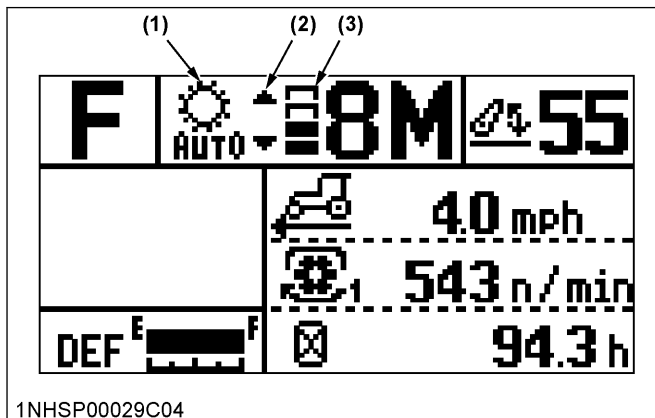
When the switch is moved to the middle position "OFF", the mode indicator goes out.



(1) "AUTO" mode switch

(A) "Travel mode"

(B) "Field mode"



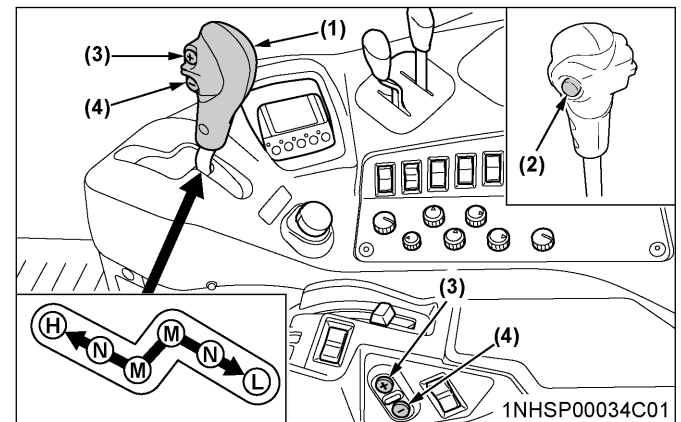
(1) "AUTO" mode indicator

(2) Shift-up and shift-down indicator

(3) Auto-shift bar indicator

2. Use the up-shift and down-shift button on the power shift and range shift lever or on the armrest to select a field speed.

The selected speed can be checked in the selected-speed display of the meter panel.



(1) Power shift and range shift lever

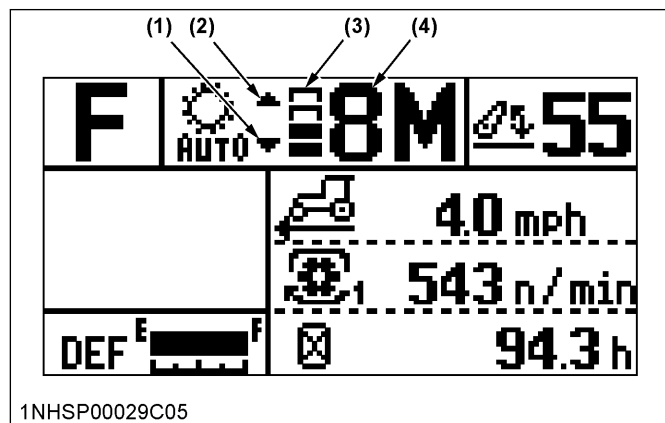
(2) Clutch button

(3) Up-shift button (+)

(4) Down-shift button (-)

4. Work speed display

The LCD displays both the selected speed and auto-shift bars.



- (1) Shift-down indicator
- (2) Shift-up indicator
- (3) Auto-shift bar display
- (4) Selected speed ([1] to [8])

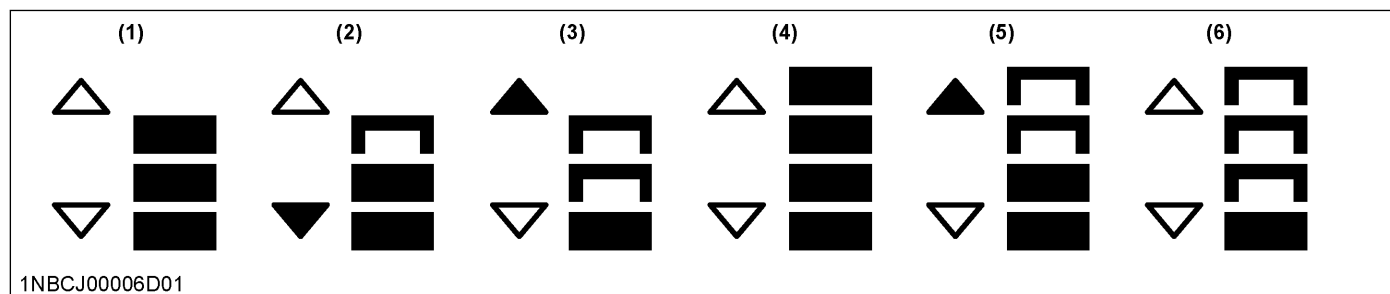
Selected speed display

The auto-shift range is set to 2 shifts as standard. If [8] is displayed at start, then the tractor starts in 8th speed and then automatic shift-up/shift-down occurs in the range of [8], [7], and [6]. The selected speed display remains lit when driving in 8th speed, and flashes when driving in 7th or 6th.

Auto-shift bar display

The auto-shift bars display the set “automatic shift-down possible speed range” and the “current speed stage”. The shift-up indicator flashes immediately before shift-up occurs, and the shift-down indicator flashes immediately before shift-down occurs.

Example of auto-shift bar display



No.	Set shift-down range	Actual speed position
(1)	2 shifts (factory setting)	The current speed is the highest position of the set speeds. The load and the set speed are in balance.
(2)		The current speed is shifted 1 speed down from the highest position. The load is large and the machine is about to shift down by 1 more speed.
(3)		The current speed is shifted 2 speeds down from the highest position. The load is light and the machine is about to shift up by 1 speed.
(4)	3 shifts (when setting is changed)	The current speed is the highest position of the set speeds. The load and the set speed are in balance.
(5)		The current speed is shifted 2 speeds down from the highest position. The load is light and the machine is about to shift up by 1 speed.
(6)		The current speed is shifted 3 speeds down from the highest position.

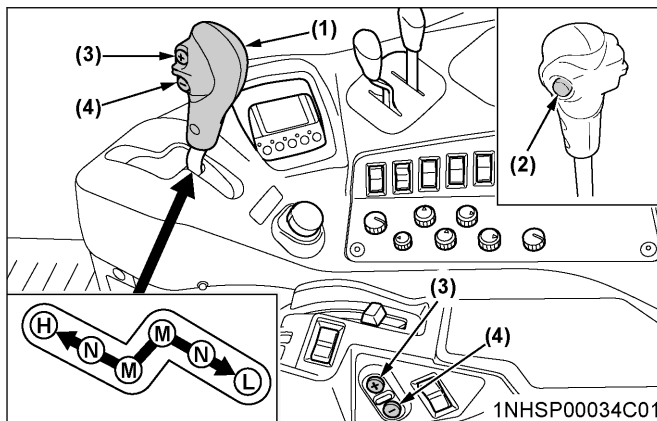
5. Changing the field speed

Using the up-shift and down-shift button on the armrest or on the power shift and range shift lever, the field speed can be readily changed.

To put the speed into memory, use the following procedure.

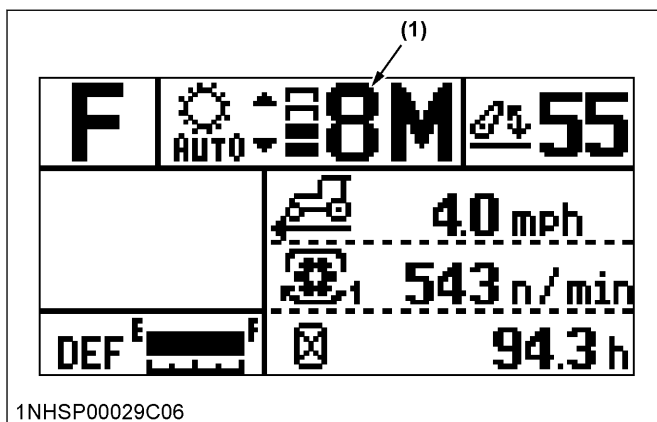
5.1 Changing the speed while the tractor is stopped

1. Place the power shift and range shift lever to [N], press the up-shift button or down-shift button, and change the field speed.



- (1) Power shift and range shift lever
- (2) Clutch button
- (3) Up-shift button (+)
- (4) Down-shift button (-)

2. The speed that appears in the selected-speed display will be the new upper speed level.



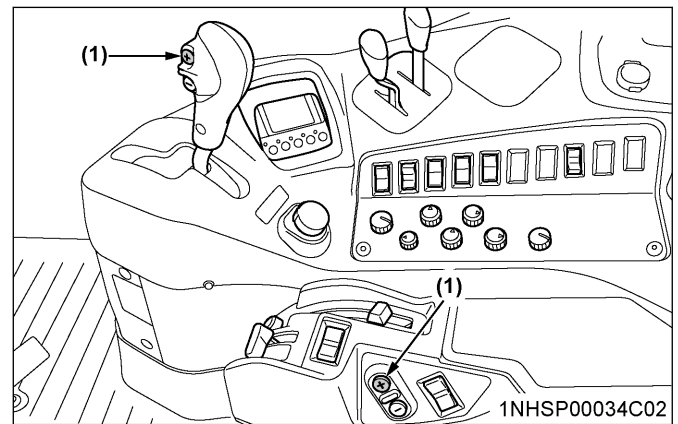
- (1) Selected-speed display

5.2 Increasing the speed while running the tractor

Check the speed that appears in the selected-speed display.

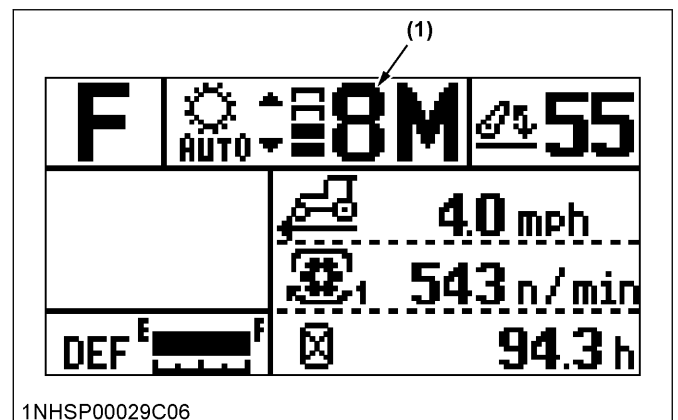
When the speed display stays on (not flashing)

1. Press the up-shift button (+) to raise the speed.



- (1) Up-shift button (+)

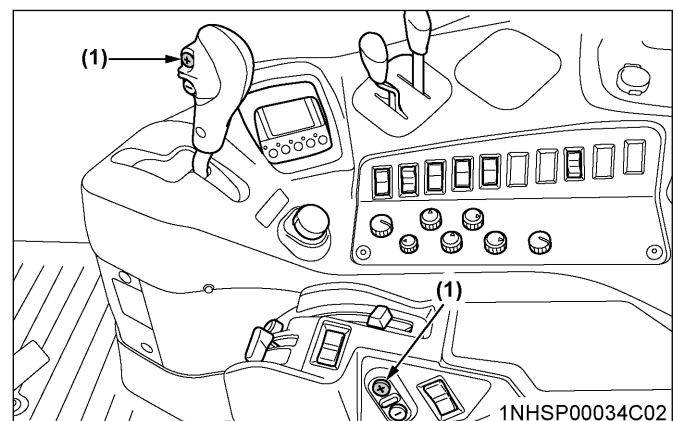
2. The speed that appears in the selected-speed display is the new upper speed level.



- (1) Selected-speed display

When the speed display is flashing

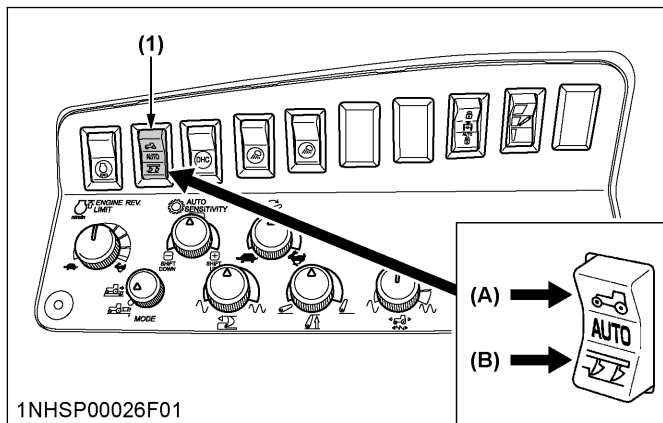
1. Press the up-shift button (+) to raise the speed.



- (1) Up-shift button (+)

- For travel mode (trailing and other hauling operations):
Press the top (travel mode) of the "AUTO" mode switch to the 2nd stage.
- For field mode (plowing, subsoiling and other tillage operations, or for harvesters and other PTO-driven implements):

Press the bottom (field mode) of the "AUTO" mode switch to the 2nd stage.

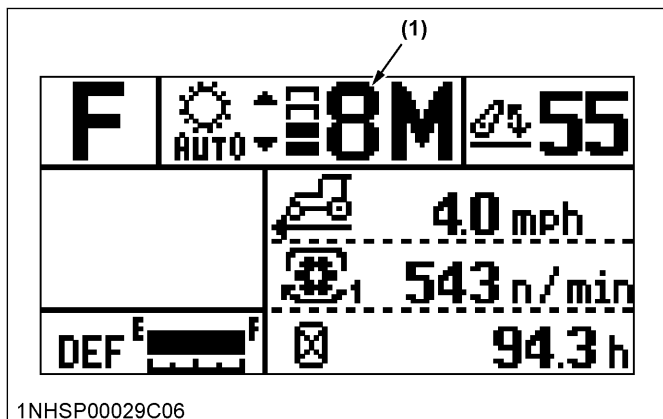


(1) "AUTO" mode switch

(A) "Travel mode"

(B) "Field mode"

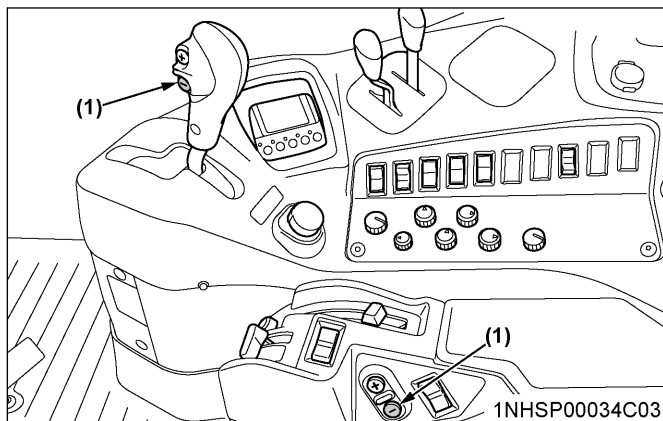
- The speed that appears in the selected-speed display is now the new upper speed level.



(1) Selected-speed display

5.3 Decreasing the speed while running the tractor

- Press the down-shift button (-) to lower the speed.

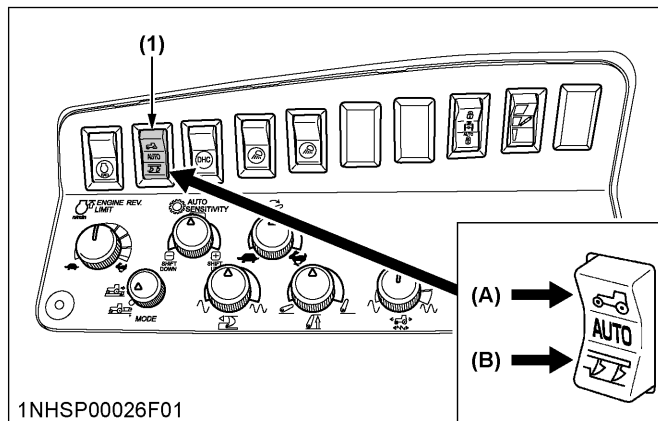


(1) Down-shift button (-)

- For travel mode (trailing and other hauling operations):

Press the top (travel mode) of the "AUTO" mode switch to the 2nd stage.

- For field mode (plowing, subsoiling and other tillage operations, or for harvesters and other PTO-driven implements):
Press the bottom (field mode) of the "AUTO" mode switch to the 2nd stage.

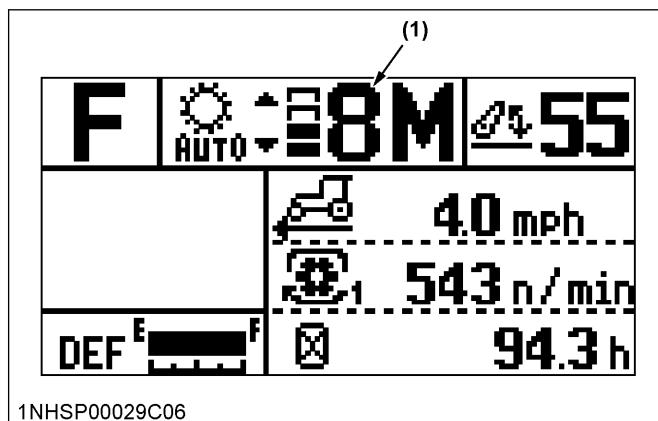


(1) "AUTO" mode switch

(A) "Travel mode"

(B) "Field mode"

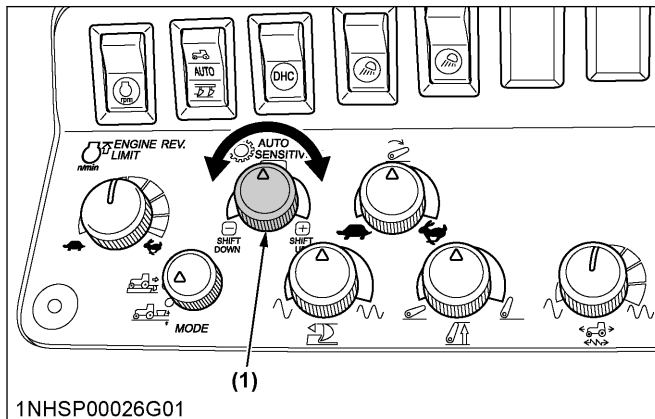
- The flashing number stays on. The speed that appears in the selected-speed display is now the new upper speed level.



(1) Selected-speed display

6. Sensitivity adjustment

The automatic shift-up and shift-down sensitivity can be adjusted to meet engine load fluctuations.



(1) "AUTO" mode sensitivity adjustment dial

Turn the dial to the negative side.	Higher sensitivity for shift-down and lower sensitivity for shift-up.
Turn the dial to the positive side.	Higher sensitivity for shift-up but the same sensitivity for shift-down.

7. "AUTO" mode settings changes

The "AUTO" mode has been factory-set.

Details regarding the factory settings can be found in the different section.

(See Changing the "AUTO" mode settings on page 103.)

The setting can be modified as required.

7.1 Changing the travel mode setting

The automatic speed range and the shift-down speed at acceleration pedal release can be modified.

1. Place the power shift and range shift lever to **[N]**, and start the engine.
2. Push and hold down the top (travel mode) of the "AUTO" mode switch to the 2nd stage for more than 3 seconds. The buzzer sounds beeping and the setting mode is called.
3. Now each time the top (travel mode) of the "AUTO" mode switch is pressed, **[r]** (automatic speed) and **[A]** (acceleration pedal release shift-down speed) appear flashing alternately.

Changing the automatic speed at engine load detection (rpm)

1. Using the "AUTO" mode switch, make **[r]** appear in the display. Hold down the top (travel mode) of the "AUTO" mode switch, and the current speed setting starts to flash.
2. Each time the top (travel mode) of the "AUTO" mode switch is pressed, **[2]**, **[3]** and **[4]** appear flashing one after another. When a desired speed setting comes up, hold down the switch again for

more than 3 seconds. The flashing number stays on and the setting is completed.

3. This setting refers to how many gears the auto-shift will use up or down, when the engine rpm changes (without using the throttle).

For example:

2 gears = 1 shift

3 gears = 2 shifts

4 gears = 3 shifts

Changing the automatic shift-down speed at acceleration pedal release (throttle operation)

1. Using the "AUTO" mode switch, make **[A]** appear in the display. Hold down the top (travel mode) of the "AUTO" mode switch, and the current speed setting starts to flash.
2. Each time the top (travel mode) of the "AUTO" mode switch is pressed, **[0]**, **[1]**, **[2]** and **[3]** appear flashing one after another. When a desired speed setting comes up, hold down the switch again for more than 3 seconds. The flashing number stays on and the setting is completed.
3. This setting refers to how many shifts the tractor will auto-shift up or down when the operator uses the throttle.

For example:

0 = No shift

1 = 1 shifts

2 = 2 shifts

3 = 3 shifts

7.2 Changing the field mode setting

The automatic speed range and the shift-down speed at attachment lift can be modified.

1. Place the power shift and range shift lever to **[N]**, and start the engine.
2. Hold down the bottom (field mode) of the "AUTO" mode switch to the 2nd stage for more than 3 seconds. The buzzer sounds beeping and the setting mode is called.
3. Each time the bottom (field mode) of the "AUTO" mode switch is pressed, **[r]** (automatic speed) and **[P]** (attachment lift shift-down speed) appear flashing alternately.

Changing the automatic speed at engine load detection (rpm)

1. Using the "AUTO" mode switch, make **[r]** appear in the display. Hold down the bottom (field mode) of the "AUTO" mode switch, and the current speed setting starts to flash.
2. Each time the bottom (field mode) of the "AUTO" mode switch is pressed, **[2]**, **[3]** and **[4]** appear flashing one after another. When a desired speed setting comes up, hold down the switch again for more than 3 seconds. The flashing number stays on and the setting is completed.

3. This setting refers to how many gears the auto-shift will use up or down, when the engine rpm changes (without using the throttle).

For example:

2 gears = 1 shift

3 gears = 2 shifts

4 gears = 3 shifts

Changing the automatic shift-down speed at 3-point hitch lift

1. Using the "AUTO" mode switch, make **[P]** appear in the display. Hold down the bottom (plow marking) of the "AUTO" mode switch, and the current speed setting starts to flash.
2. Each time the bottom (plow marking) of the "AUTO" mode switch is pressed, **[0]**, **[1]**, **[2]** and **[3]** appear flashing one after another. When a desired speed setting comes up, hold down the switch again for more than 3 seconds. The flashing number stays on and the setting is completed.
3. This setting refers to how many shifts the tractor will auto-shift down when the operator raises the 3-point hitch.

For example:

0 = No shift down

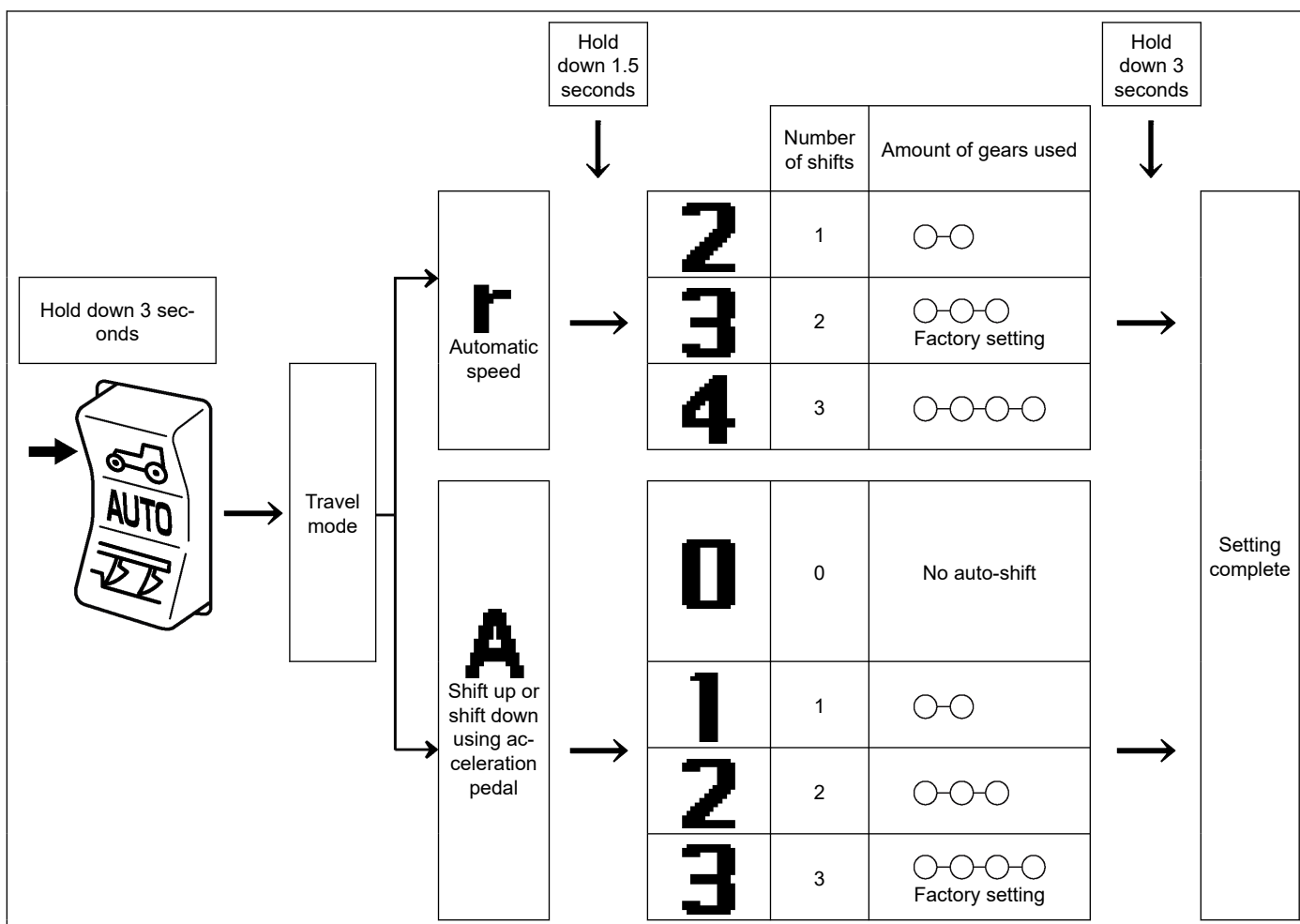
1 = 1 shift

2 = 2 shifts

3 = 3 shifts

7.3 Changing the "AUTO" mode settings

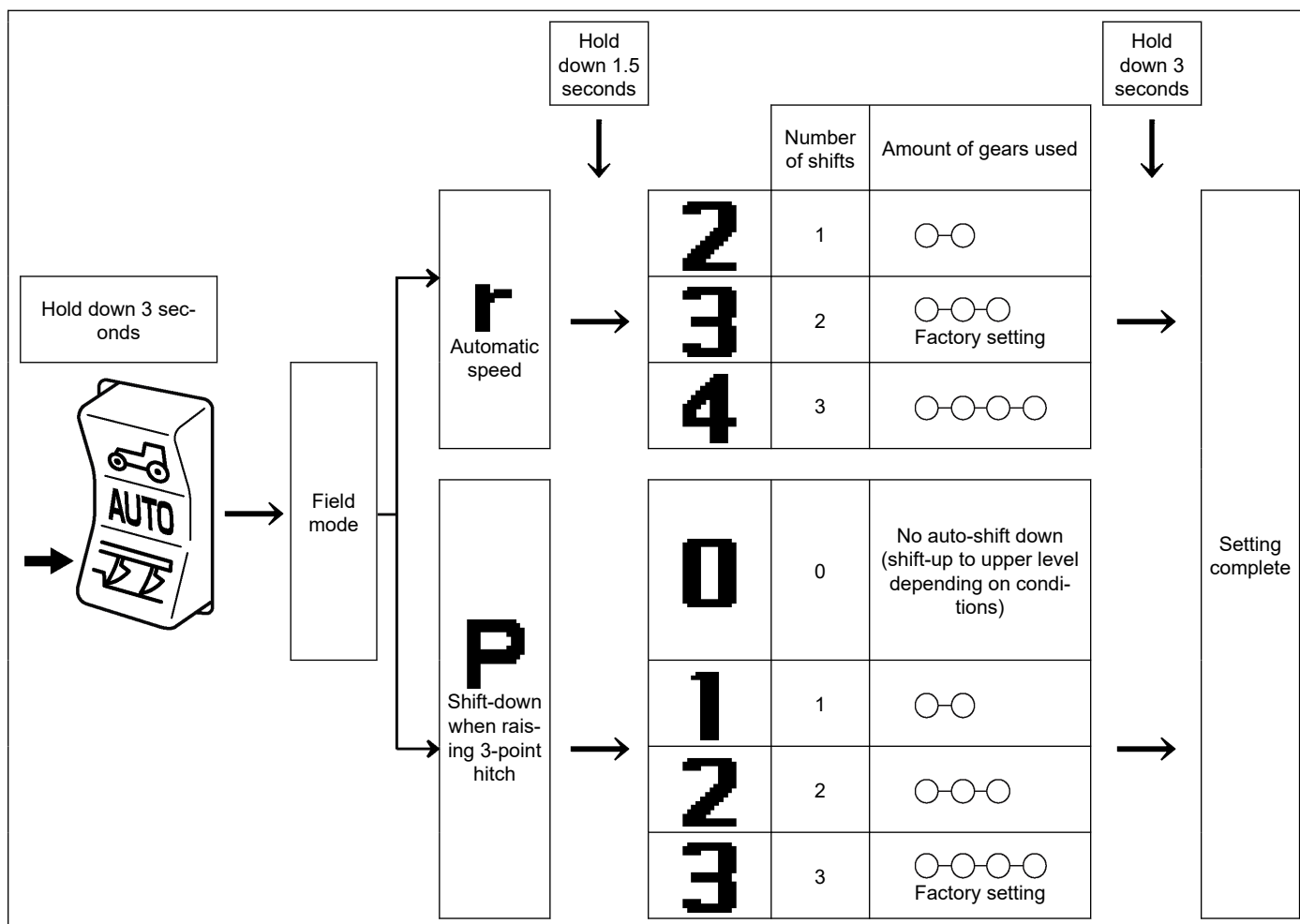
For travel mode:



NOTE :

- It is impossible to preset a greater number of shift-down speeds than the number of automatic speeds.
- If the key switch is moved to the "OFF" position or the "AUTO" mode switch is turned to the "OFF" position halfway, the setting is canceled.

For field mode:



NOTE :

- It is impossible to preset a greater number of shift-down speeds than the number of automatic speeds.
- If the key switch is moved to the "OFF" position or the "AUTO" mode switch is turned to the "OFF" position halfway, the setting is canceled.

FRONT SUSPENSION

The front suspension system works to absorb shocks and vibrations that can be caused by field surface conditions, road surface conditions, and changes in weight caused by implements.

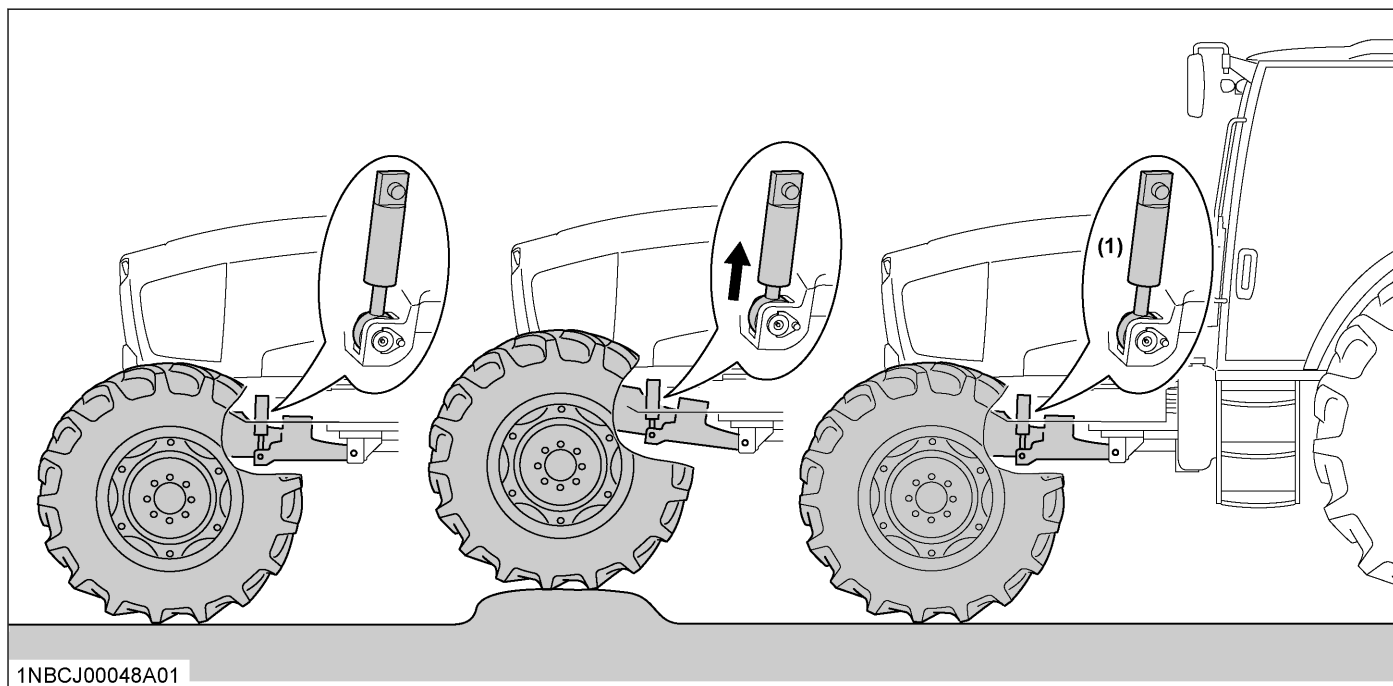


WARNING

To avoid serious injury or death:

- The front suspension control system is working when the engine is running. In the “ON” mode, the “LOCK” mode or the “AUTO LOCK” mode, the control system will subtly change the machine's height at startup or as weight changes when implements are attached. These subtle movements can be unexpected. Before using the front suspension system, make sure that the area near the machine is clear of all persons and objects.

Different implements can change the way a tractor carries weight and that weight is also changed when driving in the field or driving on the road. The front suspension system provides the operator with a smoother ride, improved tractor stability, and higher productivity. The front suspension control system has 2 control switches that allow the operator to adjust the suspension system to operating conditions. Those switches are the suspension switch and the suspension firmness selection switch. The operator can quickly adjust the suspension system to changing conditions with the touch of buttons.



(1) Suspension cylinder

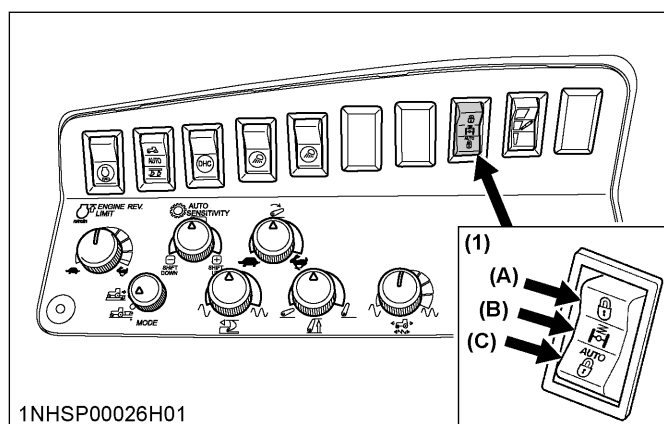
1. Suspension switch

WARNING

To avoid personal injury or death:

- Before using the suspension switch, make sure that the area near the machine is clear of all persons and objects. The hydraulic pressure in the suspension cylinders, accumulators or a valve can cause the tractor and the attached implement to move unexpectedly.

Using the front suspension switch, the following 3 modes can be selected: “ON”, “LOCK”, and “AUTO LOCK”. While the “ON” or “AUTO LOCK” is selected, the suspension indicator is illuminated. In the “LOCK” mode, the indicator is not illuminated.

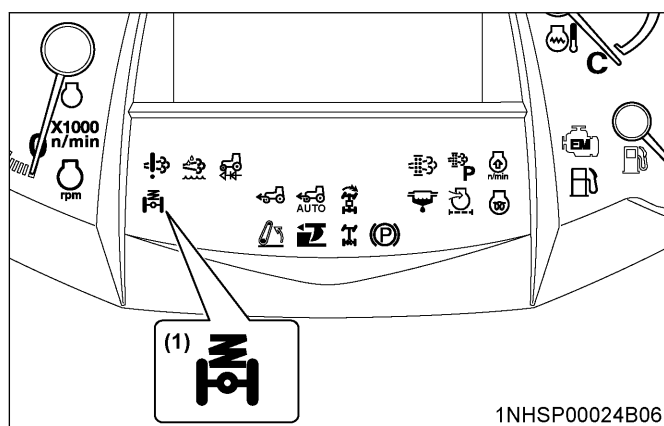


(1) Suspension switch

(A) Suspension “LOCK”

(B) Suspension “ON”

(C) Suspension “AUTO LOCK”



(1) Suspension indicator

1.1 Suspension “ON” mode

Whether driving on roads or working in the field, the “ON” mode reacts to changing surface conditions and the changing weight of the tractor as implements are used. The “ON” mode is usually selected. When the “ON” mode is selected, the suspension indicator is illuminated.

1.2 Suspension “LOCK (OFF)” mode

The suspension system is locked out, and no suspension action takes place. The “LOCK” mode should be selected when the operator needs to prevent the tractor and the attached implements from overcompensating the front suspension system. The suspension indicator does not illuminate when the “LOCK” mode is selected.

1.3 Suspension “AUTO LOCK” mode

In this mode, the suspension is automatically selected “LOCK” or “ON” as listed in the table below.

The suspension indicator is illuminated when the “AUTO LOCK” mode is selected.

3-point hitch control mode	Suspension	
	“LOCK”	“ON”
Position selected	• At low-speed travel • At lower 3-point hitch	• While traveling • At higher 3-point hitch
Draft selected	• With heavy draft load (at lower 3-point hitch) • At lower travel speed • While the bottom half of the 3-point quick raise and lower switch is pressed	• With light draft load (at lower 3-point hitch) • At higher 3-point hitch

Example: front end loader operation (position mode)

In order to efficiently perform front end loader work, the suspension stays locked at lower speeds. This setting helps hold the tractor in a stable condition. While traveling, the suspension is turned on for comfortable ride.

Example: plowing (draft mode)

When a drafted load becomes heavy, the suspension gets locked. When the load becomes lighter, the suspension is turned on. When moving with the plow raised, the suspension is kept on.

NOTE :

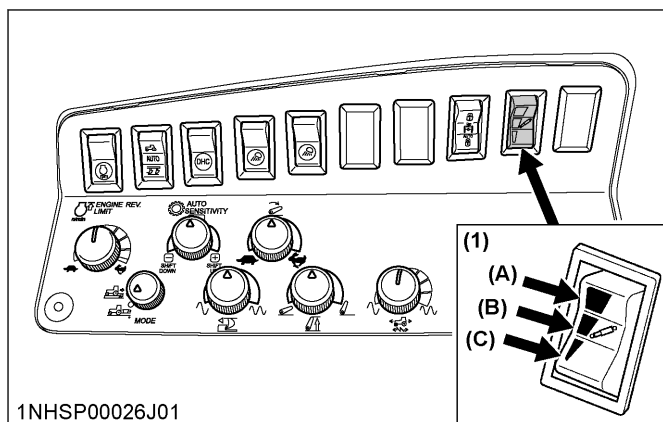
- In the “AUTO LOCK” mode, the hydraulic pressure in the suspension cylinders, accumulators or a valve may cause the machine height to change, when the suspension system switches automatically from “LOCK” to “ON” status.
- The suspension cylinder adjustment control does not work in the operating conditions below.
 - The front wheels are overloaded.
 - The engine runs at low speeds and the oil temperature is high.
 - Both brake pedals are depressed.

- The manual control mode is selected.
- The machine speed in the suspension “**AUTO LOCK**” mode has been factory-set at below 3 km/h (1.9 mph). To change this setting, contact your local Kubota dealer.

2. Suspension firmness selection switch

The suspension dampening can be adjusted by using the suspension firmness selection switch.

To adjust the suspension dampening you must have the suspension switch set to the “ON” mode or the “**AUTO LOCK**” mode. Set the suspension firmness selection switch to match implement, ground conditions, and the type of work you are doing.



(1) Suspension firmness selection switch
 (A) “FIRM MODE”
 (B) “NORMAL MODE”
 (C) “SOFT MODE”

Normal mode

In normal mode, the tractor will automatically select the optimum dampening force between soft, medium, and firm to insure the best ride. The suspension dampening should be selected based on the tractors gross weight with implements. Of the three modes (normal mode, firm mode, soft mode), normal mode is generally recommended for most tractor work.

Firm Mode

In firm mode, the suspension damping is set one level higher than normal mode. As an example, the operator would use firm mode when working with heavy implements to prevent “rocking” or excessive bouncing, for example a heavy round bale on the loader.

Soft Mode

In soft mode, the suspension system is set one level lower than normal mode. As an example, the operator would use soft mode when traveling on uneven or rough road surfaces to obtain a more comfortable ride.

NOTE :

- Depending on the tractor gross weight, the firm and soft modes may work at nearly the same as the normal mode.

3. Manual control mode

The tractor front end height can be raised or lowered by moving the suspension cylinder in the manual control. This mode is useful in attaching and detaching a front implement or front weight.

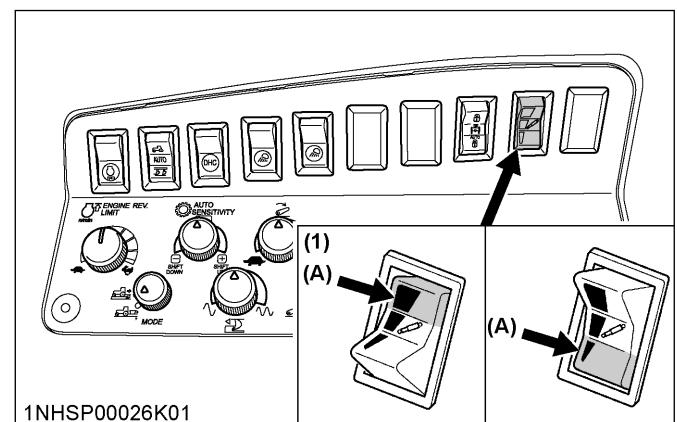
! WARNING

To avoid personal injury or death:

- Before releasing the manual control mode, make sure that the area near the machine is clear of all persons and objects. Because of the hydraulic pressure in the cylinder, the machine height may change unexpectedly or the suspension cylinder adjustment control may get activated, which affects the height and/or posture of the tractor or the implement.

Height adjusting procedure

1. Hold down the top (firm mode) or the bottom (soft mode) of the suspension firmness selection switch to the second stage for more than 3 seconds, and the buzzer starts to beep and the suspension indicator starts to flash (2 or so flashes every second). Now the machine is in manual control mode.
2. Hold down the top (firm mode) of the suspension firmness selection switch to the second stage, and the height is raised.
3. Hold down the bottom (soft mode) of the suspension firmness selection switch to the second stage, and the height is lowered.



(1) Suspension firmness selection switch
 (A) “Press down to the second stage”

Releasing the manual control mode

Reposition the suspension switch (to "ON", "LOCK" or "AUTO LOCK") to release the manual control mode. When released, the modes pre-selected with the suspension switch and the suspension firmness selection switch are resumed.

IMPORTANT :

- Do not run or operate the machine with its height raised or lowered (while the manual control mode is selected). Otherwise, trouble may occur.

NOTE :

- The manual control mode is cleared in any of the following cases:
 - Stopping the engine (turning the key switch to the "OFF" position).
 - Running the machine at higher than 5 km/h (3.1 mph).
- Even in the manual control mode, the suspension works according to the mode selected with the suspension switch.
- With the "LOCK" mode selected, the machine height becomes stable and an implement may be easily attached and detached.
- The manual-mode raising and lowering speed varies depending on the mode selected with the suspension switch.

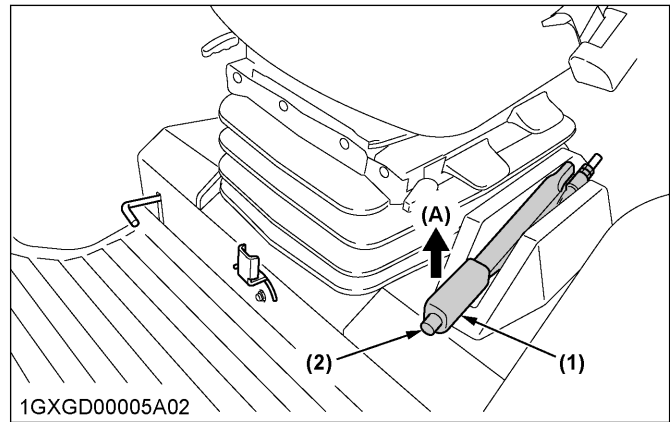
PARKING THE TRACTOR**WARNING**

To avoid personal injury or death:
Before dismounting tractor

- Always set parking brake and lower all implements to the ground.
Leaving the transmission in gear with the engine stopped will not prevent the tractor from accidental rolling.
- Stop the engine and remove the key.

IMPORTANT :

- Do not leave your tractor in the rain. If the situation cannot be avoided, cover the muffler pipe to prevent water from entering.
1. Before getting off the tractor, disengage the PTO, lower all implements, place all control levers in their neutral positions, pull the parking brake lever to parking position, stop the engine and remove the key.
 2. If it is necessary to park on an incline, chock the wheels to prevent accidental rolling of the tractor.



(1) Parking brake lever
(2) Release button

(A) "PULL"

NOTE :

- On tractors equipped with front suspension, the machine height may change depending on the hydraulic oil temperature or other factors.

OPERATING TECHNIQUES**1. Differential lock****WARNING**

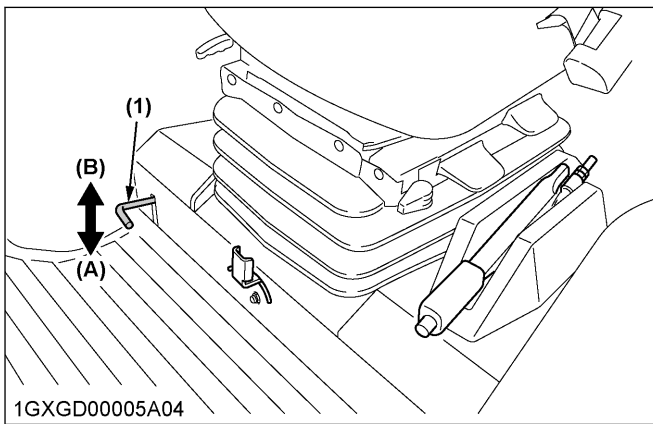
To avoid personal injury or death due to loss of steering control:

- Do not operate the tractor at high speed with any differential lock engaged.
- Do not attempt to turn with the rear wheel differential lock engaged.
- Release the rear wheel differential lock before making a turn in field conditions.

1.1 Rear wheel differential lock pedal

If one of the rear wheels should slip, depress the differential lock pedal. Both wheels will turn together, thus reducing slippage.

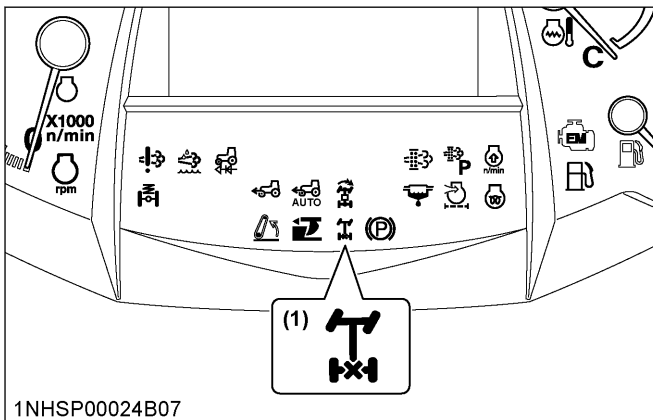
The differential lock is maintained only while the pedal is depressed.



(1) Differential lock pedal
(A) Press to "ENGAGE"
(B) Release to "DISENGAGE"

1.2 Rear wheel differential lock indicator

While the differential lock pedal is depressed, rear wheel differential lock indicator will come on. The indicator will turn off when the pedal is released.



(1) Rear wheel differential lock indicator

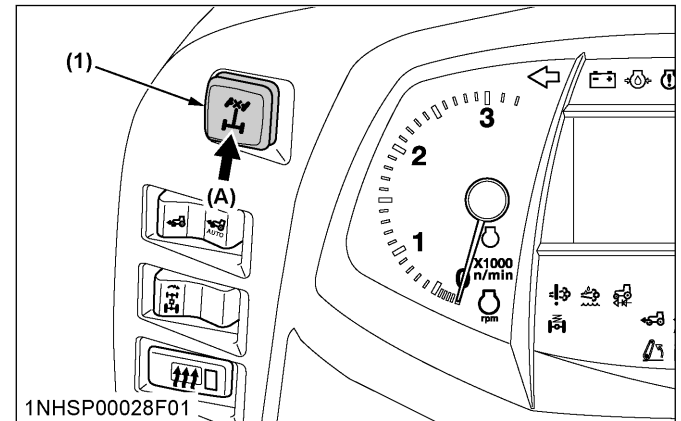
IMPORTANT :

- When using the differential lock, always slow the engine down.
- To prevent damage to the power train, do not engage the differential lock when one wheel is spinning and the other is completely stopped.
- If the differential lock cannot be released, lightly depress the brake pedals alternately.

1.3 Front wheel differential lock switch

1. If the front and/or rear wheels should slip while driving straight in field conditions, press the front wheel differential lock switch and depress the rear wheel differential lock pedal. The 4 wheels will then turn together, reducing slippage.
2. If the front and/or rear wheels slip while in a turn in field conditions, push only on the front wheel differential lock switch. The front wheels alone will rotate together for easy turning.

3. To release the front wheel differential lock, press the switch again.



(1) Front wheel differential lock switch with indicator
(A) "PUSH"

IMPORTANT :

- Always slow down the engine before pushing on the differential lock switch.
- To prevent damage to the power train, do not engage the differential lock when one wheel is spinning and the other is completely stopped.

NOTE :

- The front wheel differential lock mechanism works only when the 4WD or "AUTO 4WD" switch is at the "ON" position.
- The front wheel differential lock switch's indicator turns on while the front differential lock is engaged.

2. Operating the tractor on a road

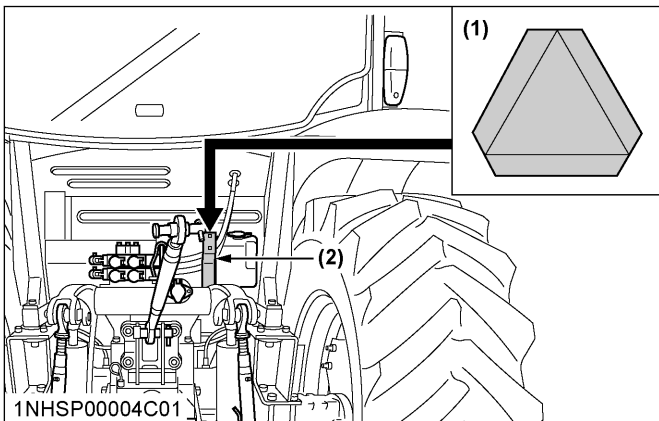
⚠ WARNING

To avoid personal injury or death:

- To help assure straight line stops when driving at transport speeds, lock the brake pedals together. Uneven braking at road speeds could cause the tractor to roll-over.
- When traveling on the road with a 3-point hitch mounted implement attached, make sure that there is sufficient front weight on the tractor to maintain steering ability.
- When traveling on the road with or without a trailer, you must comply with local regulations at all time.
The maximum traveling speed with trailer is determined by each country, and regulated speeds may vary according to the size of the trailer and the type of trailer brake system.

Make sure that the SMV emblem and warning lamps are clean and visible. If towed or rear-mounted

equipment obstructs these safety devices, install the SMV emblem and warning lamps on the equipment. Consult your local Kubota dealer for further details.



(1) SMV emblem
(2) Bracket

3. Operating on slopes and rough terrain

WARNING

To avoid personal injury or death:

- Always back up when going up a steep slope. Driving forward could cause the tractor to tip over backward. Stay off hills and slopes too steep for safe operation.
- Avoid changing gears when climbing or descending a slope.
- If operating on a slope, never disengage the clutch or shift levers to “NEUTRAL”. Doing so could cause loss of control.
- Do not drive the tractor close to the edges of ditches or banks which may collapse under the weight of the tractor, especially when the ground is loose or wet.
- Do not use the Xpress restart function when starting the tractor on a slope. Use the clutch pedal instead.

1. Be sure that the wheel tread is adjusted to provide maximum stability.
(See WHEEL ADJUSTMENT on page 130.)
2. Slow down for slopes, rough ground, and sharp turns, especially when transporting heavy, rear-mounted equipment.
3. Before descending a slope, shift to a gear low enough to control the speed without using brakes.

4. Transporting the tractor safely

1. The tractor, if damaged, must be carried on a truck.
2. Secure the tractor with chains or straps sized appropriately. Make sure that all loading ramps are

properly sized. Make sure that all local tie-down requirements are met.

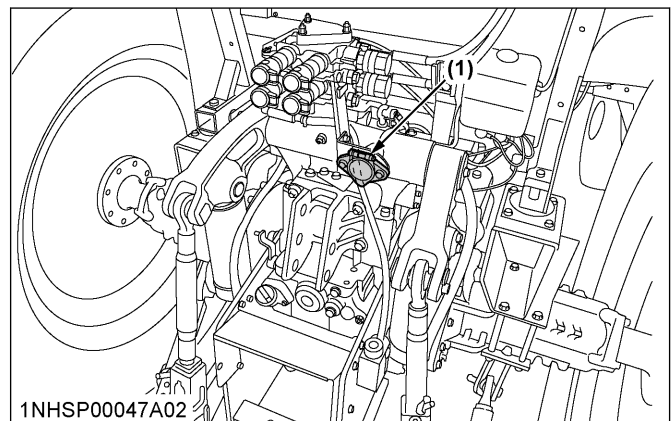
3. Follow the instructions below when towing the tractor. Otherwise, the tractor's power train may be damaged.
 - Set all the shift levers to the “NEUTRAL” position.
 - If possible, start the engine and select 2WD. If creep speed is fitted, ensure that it is disengaged.
 - Tow the tractor using its front hitch or drawbar.
 - Never tow faster than 10 km/h (6.2 mph).

5. Directions for the use of power steering

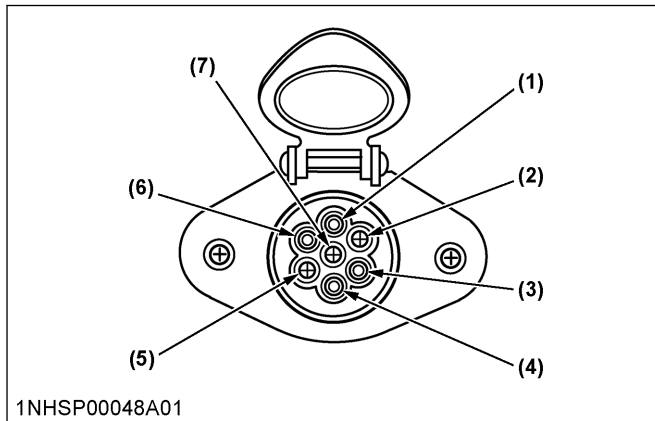
- Power steering is activated only while the engine is running. Slow engine speeds make the steering a little heavier. While the engine is stopped, tractors with power steering function in the same manner as tractors without power steering.
- When the steering wheel is turned all the way to the stop, the relief valve is activated. Do not hold the steering wheel in this position for a long period of time.
- Avoid turning the steering wheel while the tractor is stopped, or tires may wear out sooner.
- The power steering mechanism makes the steering easier. Be careful when driving on the road at high speeds.

6. Trailer electrical outlet

A trailer electrical outlet is supplied for use with a trailer or implement.



(1) Trailer electrical outlet

Function of each terminal in trailer electrical outlet

Terminal	Function
(1)	Ground
(2)	Tail light Side marker light Parking light
(3)	Turn signal light (LH)
(4)	Brake stop light
(5)	Turn signal light (RH)
(6)	Registration plate light
(7)	---

PTO

PTO OPERATION

WARNING

To avoid personal injury or death:

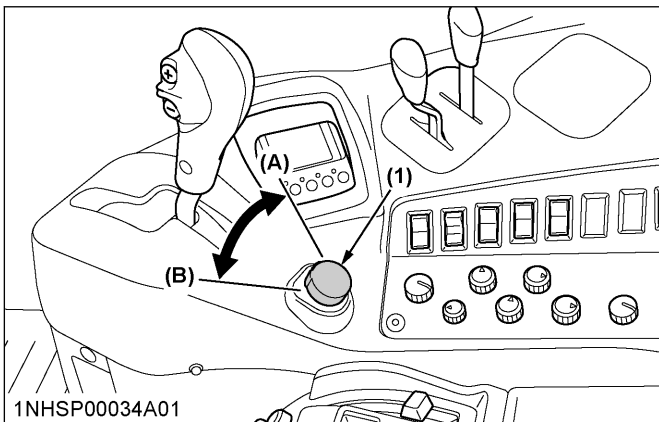
- Disengage the PTO, stop the engine, and allow all rotating components to come to a complete stop before connecting, disconnecting, adjusting, or cleaning any PTO driven equipment.

1. PTO clutch control switch

The PTO clutch control switch engages or disengages the PTO clutch which gives the PTO independent control.

The tractor has a 540 rpm speed position and 6-spline shaft.

Turn the switch to the "ON" position to engage the PTO clutch. Turn the switch to the "OFF" position to disengage the PTO clutch.



(1) PTO clutch control switch (A) "ON" (B) "OFF"

IMPORTANT :

- To avoid shock loads to the PTO, reduce engine speed when engaging the PTO, then open the throttle to the recommended speed.

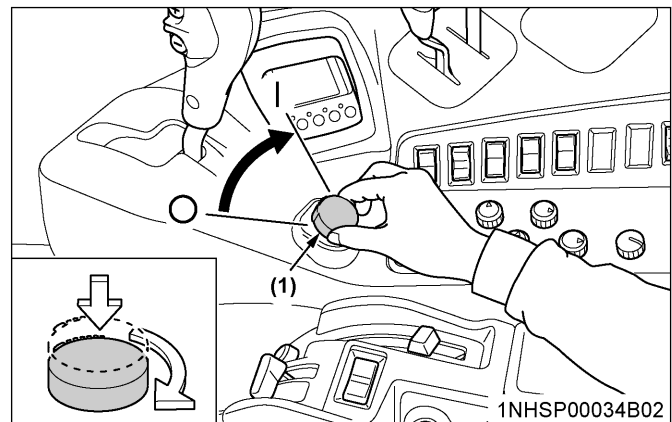
NOTE :

- Tractor engine will not start if PTO clutch control switch is in the engaged "ON" position.
- When the tractor is stopped and the stationary PTO is turned off, if you stand up from the seat while the PTO clutch control switch is in the "ON" position, the warning buzzer will sound for 1 second and the PTO will stop rotating.

- When the tractor is running and the stationary PTO is turned off, if you stand up from the seat while the PTO clutch control switch is in the "ON" position, the warning buzzer will sound for 10 seconds and the PTO will continue rotating.

To turn on

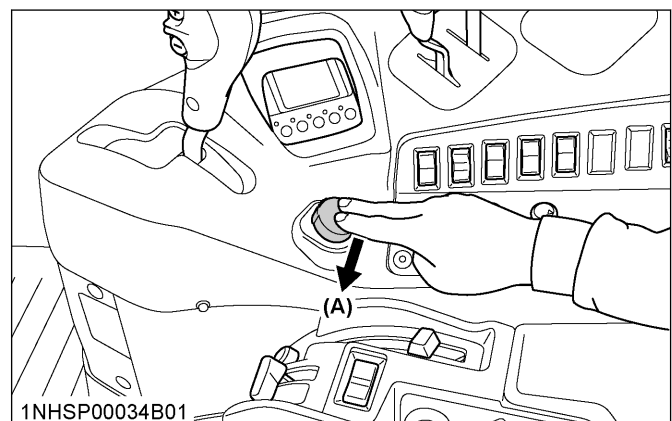
- While pushing the switch, turn clockwise to the "ON" position and release your hand. (In the "ON" position, switch slightly rises itself.)



(1) PTO clutch control switch
! "ON"
○ "OFF"

To turn off

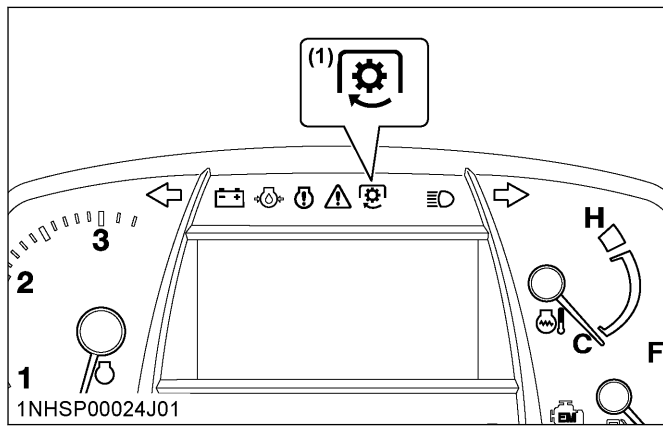
- Tap on top of the switch, and the switch will return to the "OFF" position.



(A) "PUSH"

PTO clutch indicator

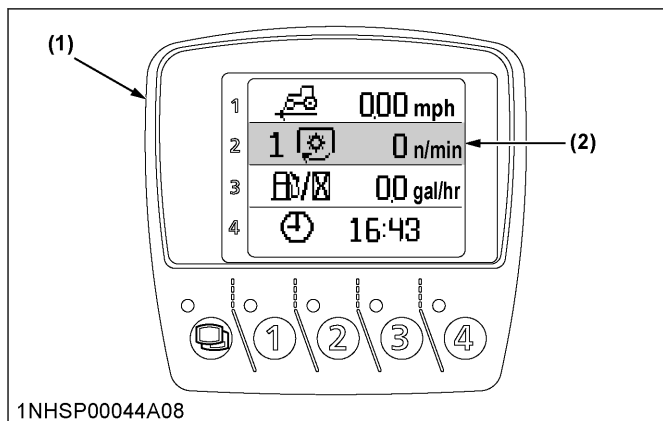
The PTO clutch indicator turns on while PTO clutch control switch is in the "ON" (engage) position.



(1) PTO clutch indicator

2. PTO rpm display

The PTO rpm can be checked on the side digital display.



(1) Side digital display

(2) "PTO SPEED"

NOTE :

- When the PTO speed is changed from 540 rpm to 1000 rpm, it is necessary to switch the PTO speed display mode of the side digital display. Otherwise, the PTO speed will not be correctly displayed on the side digital display. Such mode switching is also needed when returning to the 540 rpm PTO speed.
(See Performance monitor on page 85.)

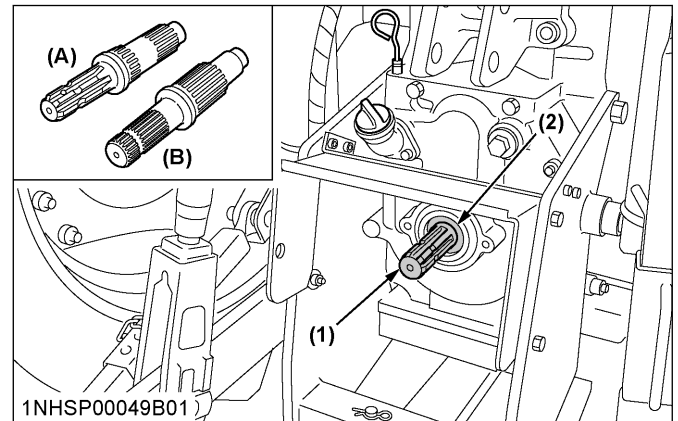
3. 1000 rpm PTO shaft (if equipped)

! WARNING

To avoid personal injury or death:

- Observe the PTO shaft speed prescribed for the individual implements. It is extremely dangerous to run an implement at high speed that is meant to be operated at low speed. Use only when this higher rpm is specifically recommended by the implement manufacturer.

By interchanging the PTO shafts, 2 different PTO shaft speeds can be obtained.



(1) PTO shaft

(2) Snap ring

(A) 540 rpm PTO shaft

(B) 1000 rpm PTO shaft

PTO shaft interchanging procedure

- The 6-spline 540 rpm PTO shaft is standard equipment.
- Place an oil pan under the PTO shaft to catch oil spillage. Remove the snap ring, and then the PTO shaft.
- Install the 21-spline PTO shaft (1000 rpm). To ensure that the PTO shaft is tight, push it in by turning.
- Reinsert the snap ring.

IMPORTANT :

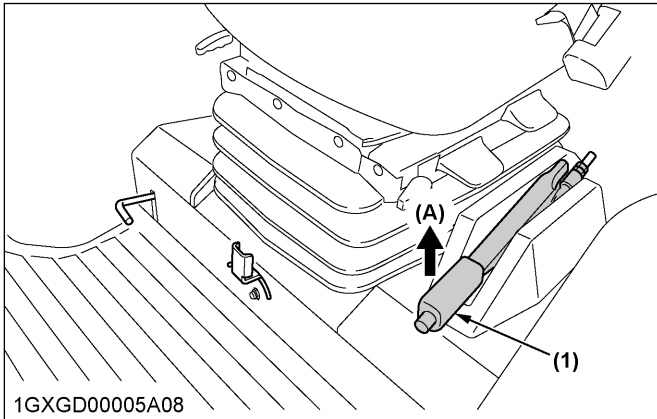
- For maximum PTO shaft speeds of various implements, see the implement operator's manual.

4. Stationary PTO

To park the tractor and use the PTO system (for chipper or pump, for example), start the PTO system in the following steps:

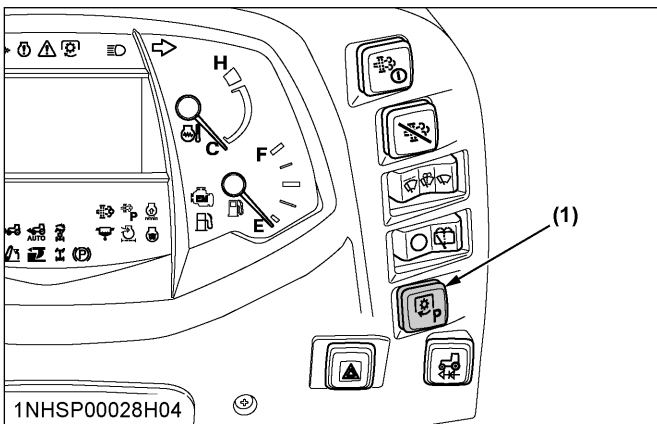
- Apply the parking brake and place blocks at the tires.
- Make sure the shift levers are at neutral, and start the engine.
- Push and hold down the stationary PTO switch for more than 3 seconds (turn on the switch lamp).
- Set the PTO clutch control switch to engage "ON".
- Set the engine speed to provide recommended rear PTO speed.

6. Get off the tractor.

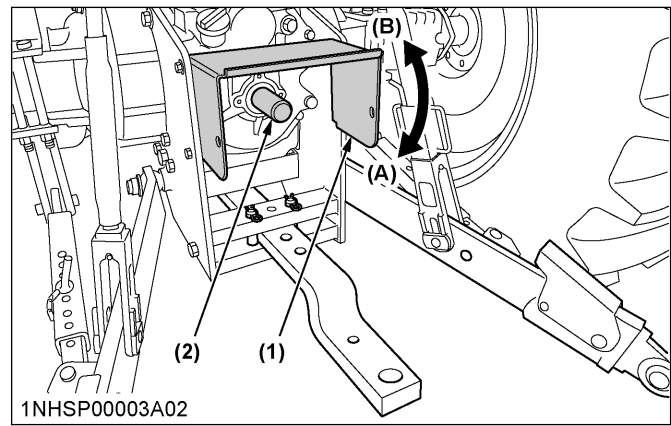


(1) Parking brake lever

(A) Parking position



(1) Stationary PTO switch



(1) PTO shaft cover

(2) PTO shaft cap

(A) "NORMAL POSITION"

(B) "RAISED POSITION"

IMPORTANT :

- The universal joint of the PTO drive shaft is technically limited in its moving angle. Refer to the PTO drive shaft instructions for proper use.

NOTE :

- If the PTO system is engaged and you stand up from the seat and release the parking brake, the PTO stops automatically.

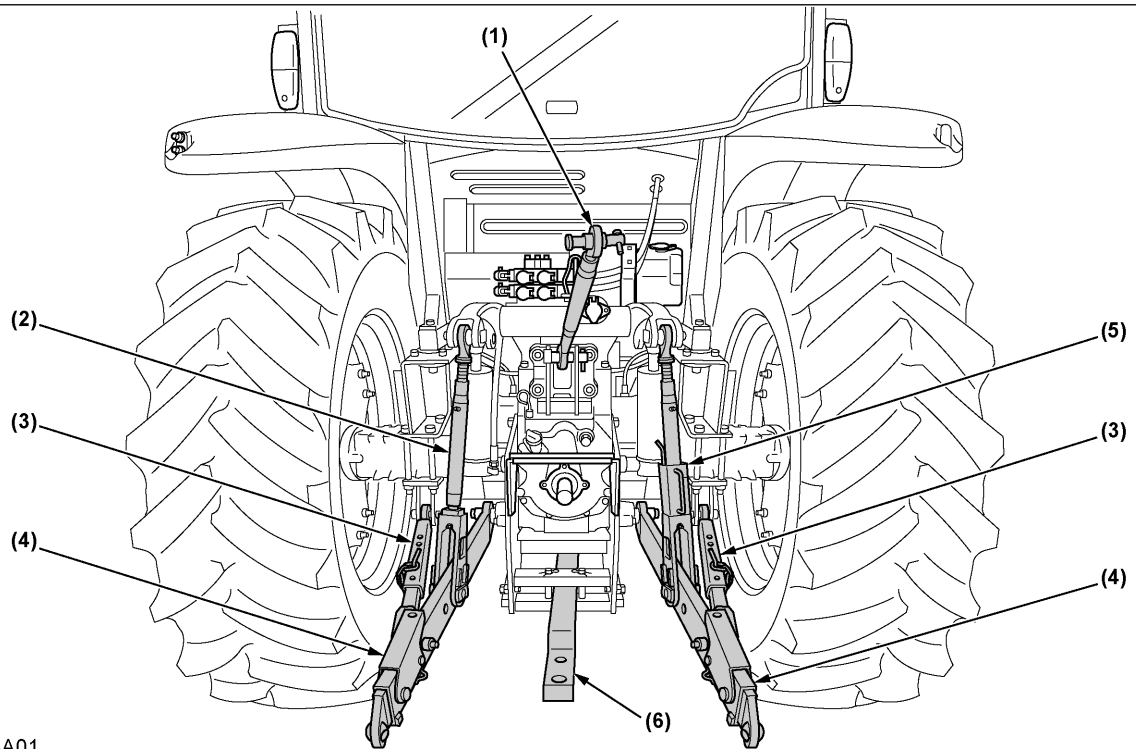
5. PTO shaft cover and shaft cap

⚠ WARNING

To avoid personal injury or death:

- Keep the PTO shaft cover in place at all times. Put back the PTO shaft cap when the PTO is not in use.
- Before connecting or disconnecting the drive shaft to the PTO shaft, make sure that the engine is turned off and the PTO shaft cover is in the "RAISED" position. Afterward, return the PTO shaft cover to the "NORMAL" position.

3-POINT HITCH AND DRAWBAR



1NHSP00004A01

- (1) Top link
- (2) Lifting rod (left)
- (3) Telescopic stabilizers
- (4) Lower link
- (5) Lifting rod (right)
- (6) Drawbar

3-POINT HITCH SETUP

1. Make preparations for attaching implement.
 - Selecting the holes of lower links on page 116
 - Lifting rod (left) on page 117
 - Selecting the top link mounting holes on page 116
 - Drawbar on page 117
2. Attaching and detaching implements



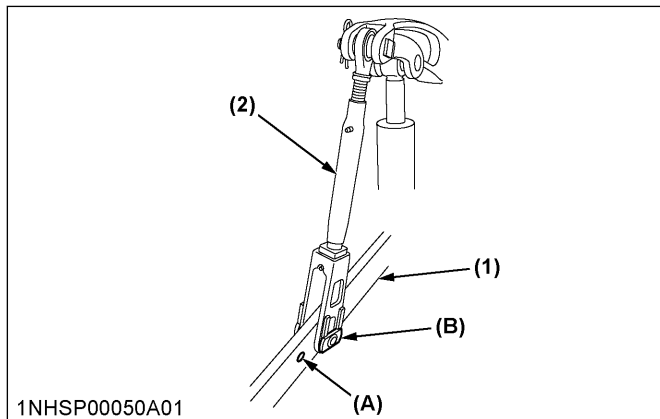
WARNING

To avoid personal injury or death:

- Stop the engine.
 - Do not stand between the tractor and implement unless the parking brake is applied.
 - Before attaching or detaching the implement, locate the tractor and implement on a firm level surface.
 - Whenever an implement or other attachment is connected to the tractor 3-point hitch, check the full range of operation for interference, binding or PTO separation.
 - Do not exceed the maximum allowable length of either lifting rod, or the lifting rod will come apart and the 3-point equipment may fall.
- Remote hitch "UP" switch and "DOWN" switch on page 117
 - Lifting rod (right) on page 117
 - Top link on page 118
 - Telescopic stabilizers on page 118
 - Telescopic lower links on page 118

1. Selecting the holes of lower links

There are 2 holes in the lower links. For most operations, the lifting rods should be attached to the (B) hole.



- 1NHSP00050A01
- (1) Lower link
(2) Lifting rod
(A) Hole
(B) Hole

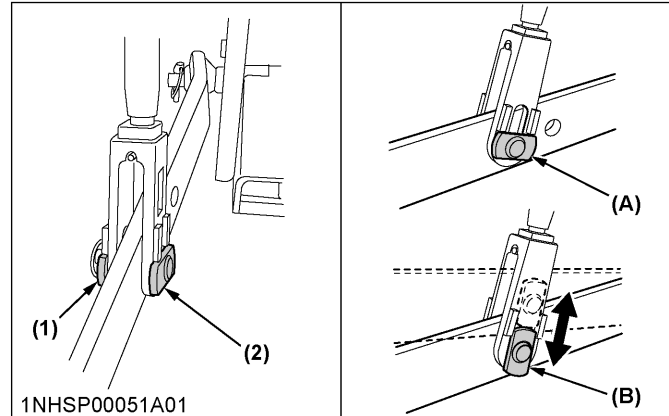
NOTE :

- The lifting rods may be attached to (A) hole for greater lifting height.

2. Adjusting lateral float

To allow the implement to follow the shape of the ground, attach the rectangular washers and pin heads in the vertical position.

To hold the implement, reset the rectangular washers and pin heads in the horizontal position.



- 1NHSP00051A01
- (1) Rectangular washer
(2) Pin head

- (A) Horizontal position
(B) Vertical position

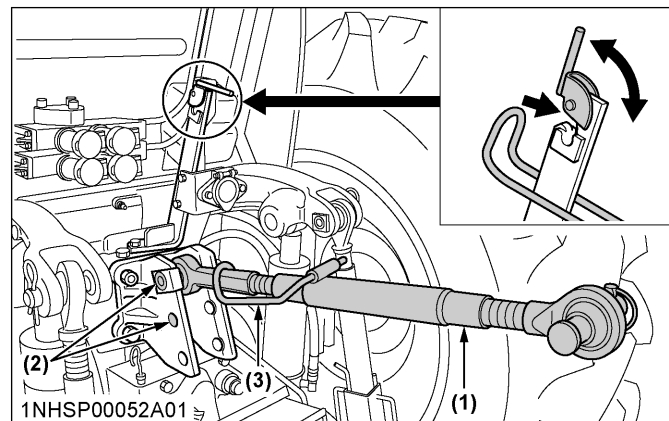
Floating mechanism

When the floating mechanism is used, the implement is able to follow the tractor freely in response to the soil and ground conditions. The floating mechanism is suited for operation with implements wider than the tractor.

3. Selecting the top link mounting holes

Select the proper set of holes.

(See Hydraulic control unit use-reference chart on page 129.)



- 1NHSP00052A01
- (1) Top link
(2) Mounting hole
(3) Handle

4. Drawbar

Remove the drawbar if a close-mounted implement is attached.

5. Remote hitch “UP” switch and “DOWN” switch

These switches are only used to raise and lower the 3-point hitch for aligning the arm with the implement.

WARNING

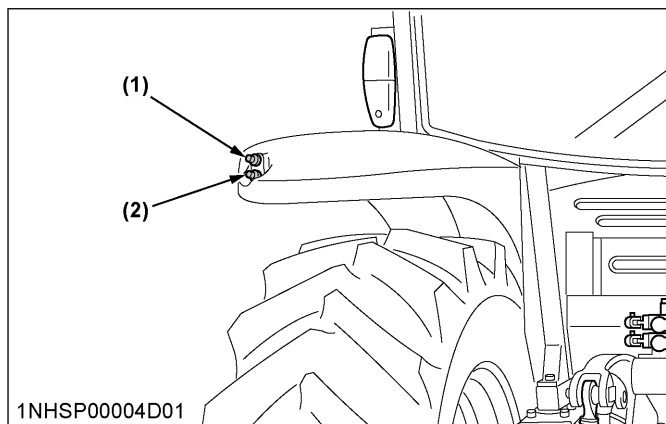
To avoid personal injury or death:

- Do not use the remote hitch “UP” switch and “DOWN” switch when the implement is attached on the 3-point hitch.

Press the “UP” switch and 3-point hitch goes up.

Press the “DOWN” switch and the 3-point hitch comes down.

Movement of the 3-point hitch stops when the switch is released.



- (1) “UP” switch
(2) “DOWN” switch

NOTE :

- If these switches are pushed, the 3-point hitch's position lock is activated and 3-point lifting and lowering indicator starts to flash (2 or so flashes every second). If the indicator is flashing, press the 3-point quick raise and lower switch to release the position lock (the indicator goes off or turns on).

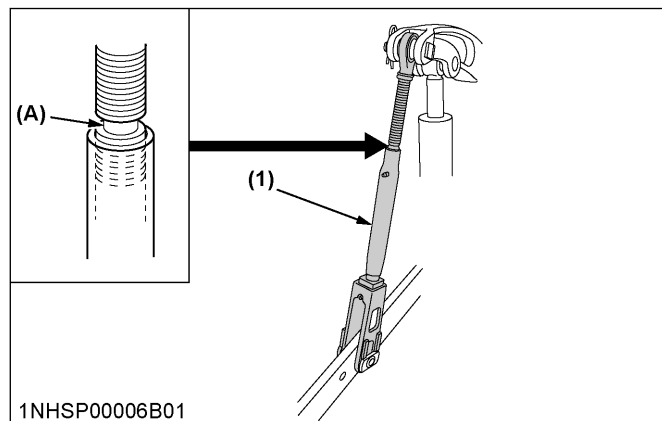
6. Lifting rod (left)

WARNING

To avoid personal injury or death:

- Do not extend the lifting rod beyond the groove on the threaded rod.

By turning the rod itself, the lifting rod changes its length. When extending the rod, do not exceed the groove on the rod thread.



(1) Lifting rod

(A) “GROOVE”

7. Lifting rod (right)

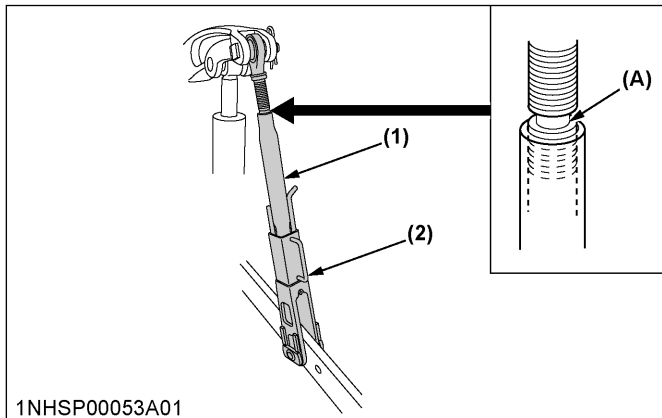
WARNING

To avoid personal injury or death:

- Do not extend lifting rod beyond the groove on the threaded rod.

1. To adjust the length of the lifting rod, lift the adjusting handle and turn to desired length.
2. After adjusting, lower the lifting rod adjusting handle to the lock position.

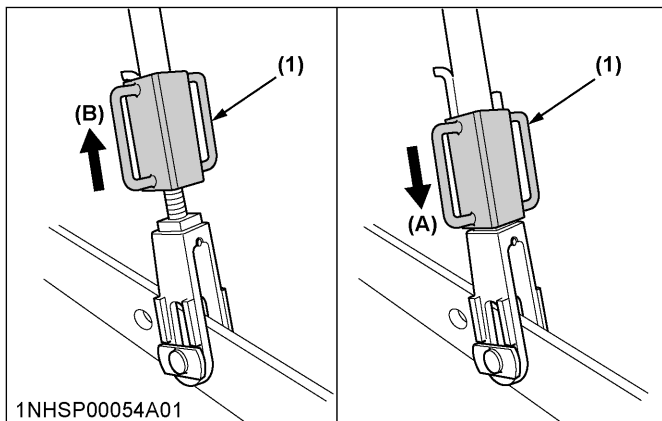
- When extending the rod using the adjusting handle, do not exceed the groove on the rod thread.



1NHSP00053A01

- (1) Lifting rod
(2) Adjusting handle

(A) "GROOVE"



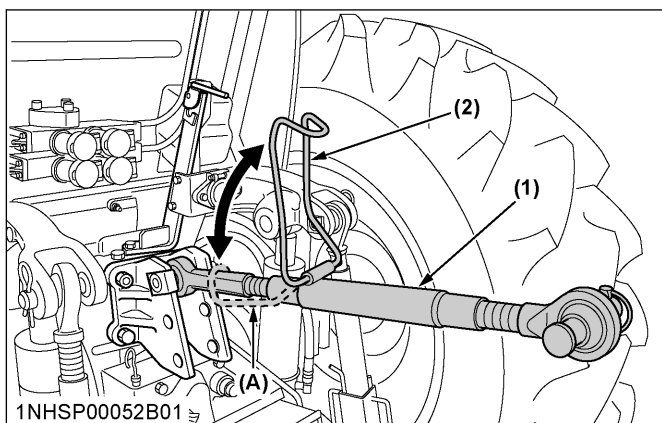
1NHSP00054A01

- (1) Adjusting handle

- (A) "LOCK POSITION"
(B) "UNLOCK POSITION"

8. Top link

- Adjust the angle of the implement to the desired position by shortening or lengthening the top link.
- The proper length of the top link varies according to the type of implement being used.



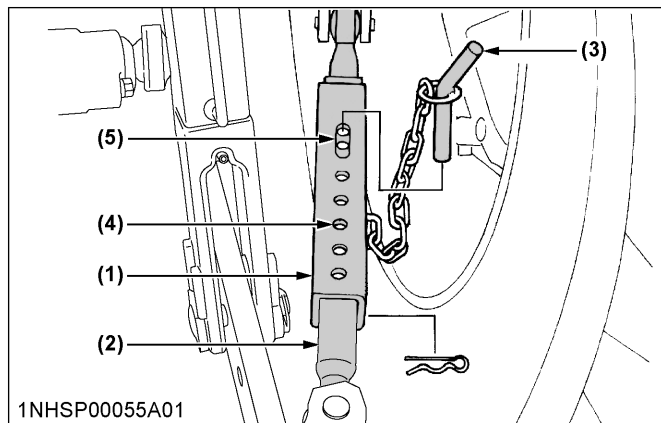
1NHSP00052B01

- (1) Top link
(2) Handle

(A) "LOCK POSITION"

9. Telescopic stabilizers

- Adjust the telescopic stabilizers to control horizontal sway of the implement.
Select the proper set of holes.
(See Hydraulic control unit use-reference chart on page 129.)
- After aligning satisfactorily, insert the set-pin through any one of the 5 holes on the outer tube that align with one of the holes on the inner bar and both stabilizers will be locked.
If the set-pin is inserted through the slot to engage one of the holes on the inner bar, a limited degree of sway will be permitted.



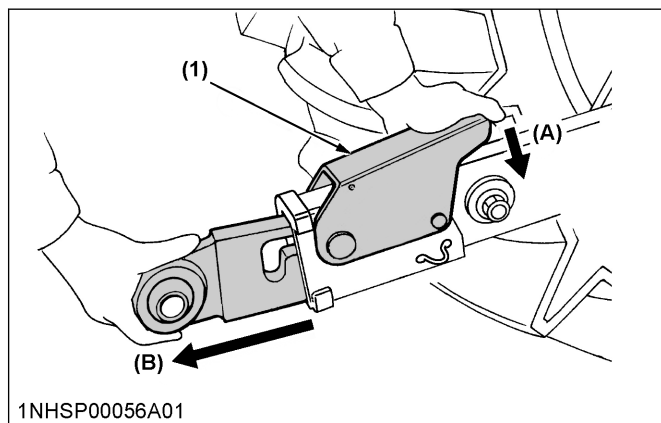
1NHSP00055A01

- (1) Outer tube
(2) Inner bar
(3) Set-pin
(4) Hole
(5) Slot

10. Telescopic lower links

To attach an implement, follow the instructions below:

- Push the levers, pull out the lower link ends, and attach to the implement.
- Back up the tractor slightly to make sure that the lower links are pushed in securely.



1NHSP00056A01

- (1) Lever

- (A) "PUSH"
(B) "PULL OUT"

DRAWBAR



WARNING

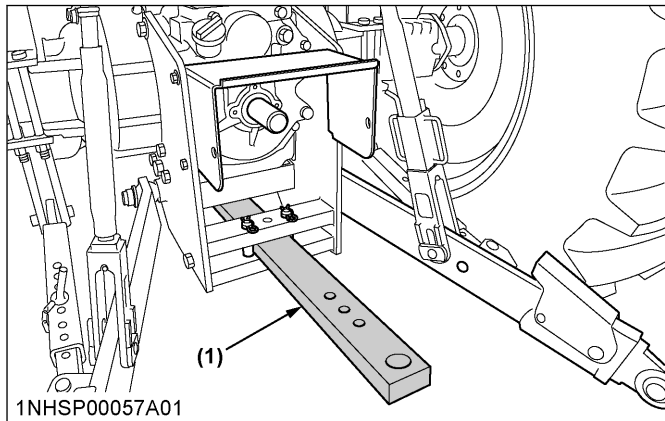
To avoid personal injury or death:

- Never pull from the top link, the rear axle or any point above the drawbar. Doing so could cause the tractor to tip over rearward.

1. Adjusting drawbar length

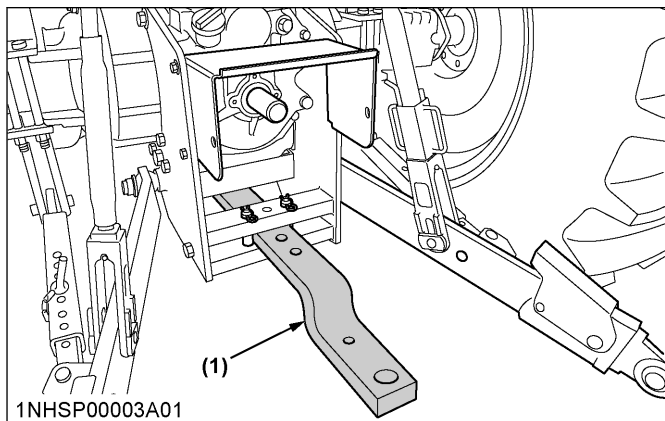
1. When towing an implement, it is recommended that hole (A) in drawbar be utilized.
2. For information about the drawbar load, read the implement limitations section of this manual. (See IMPLEMENT LIMITATIONS on page 30.)

M6-101, M6-111



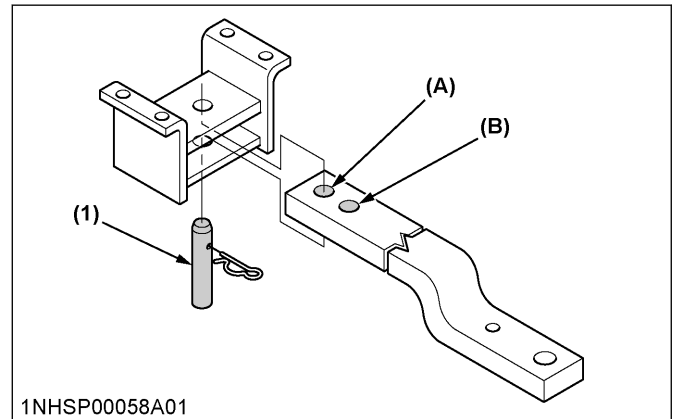
(1) Drawbar

M6-131, M6-141



(1) Drawbar

All models



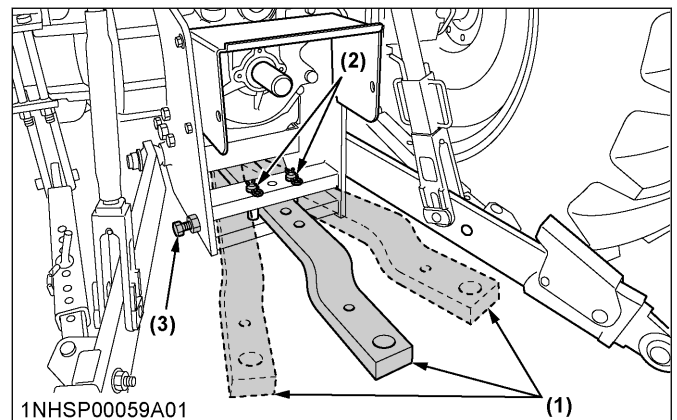
(1) Pivot pin

(A) Hole

(B) Hole

2. Swing drawbar

The drawbar can be used in 3 different ways as shown in the following illustration. Assemble the drawbar correctly with the locating pins.



(1) Drawbar

(2) Locating pin

(3) Locking bolt

HYDRAULIC UNIT

IMPORTANT :

- Do not operate until the engine is warmed up. If operation is attempted when the engine is still cold, the hydraulic system may be damaged.
- If noises are heard when the implement is lifting after the hydraulic control lever has been activated, the hydraulic mechanism is not adjusted properly. Unless corrected, the unit will be damaged. Contact your Kubota dealer for adjustments.

A standard tractor has the following hydraulic control systems. Choose the most appropriate system for the implement you are using.

3-point hitch control system

- Position control
- Mixed draft control

Remote hydraulic control system

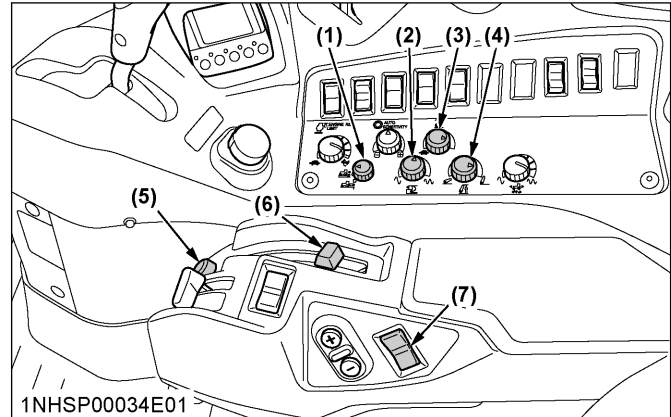
3-POINT HITCH CONTROL SYSTEM

WARNING

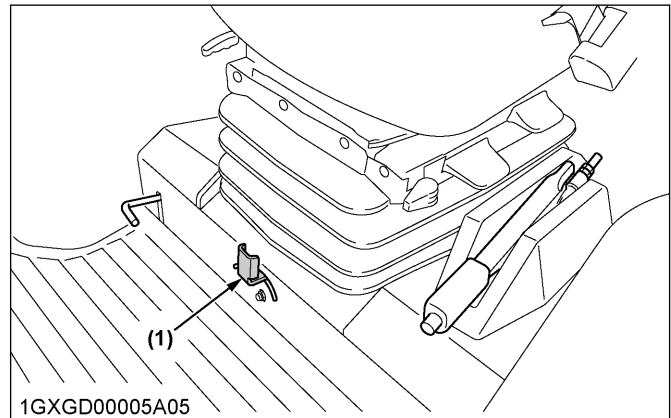
To avoid personal injury or death:

- Before using the 3-point hitch controls, ensure that no person or object is in the area surrounding the implement or 3-point hitch. Do not stand on or near the implement or between the implement and tractor when operating the 3-point hitch controls.

1. Terminology



- | | |
|--|--|
| (1) Mode selector switch | (5) Bottom limit control dial |
| (2) Draft ratio adjustment dial | (6) Hydraulic control lever |
| (3) 3-point hitch lowering speed adjustment dial | (7) 3-point quick raise and lower switch |
| (4) Lift arm top limit adjustment dial | |



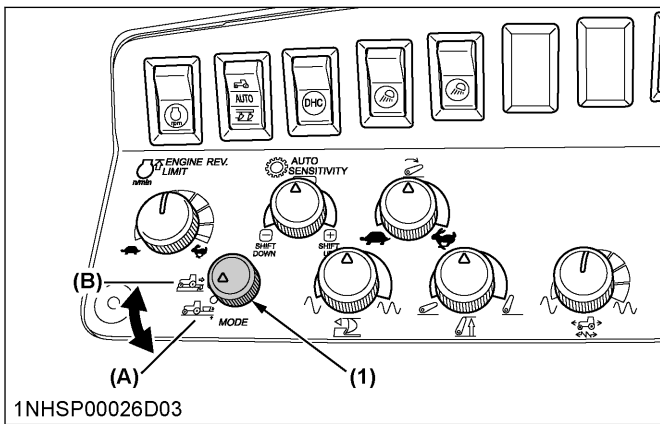
- (1) 3-point hitch lowering lock lever

2. Mode selector switch

Select the position control or the draft control depending on the type of work.

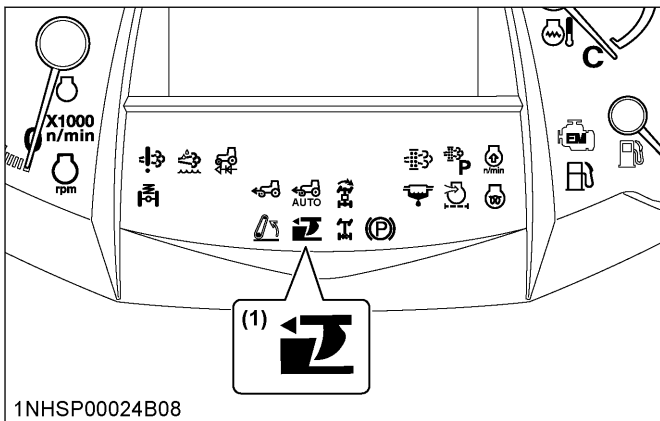
Choose the draft control for jobs requiring traction such as plowing and sub-soiling.

- Draft control mode selected: the draft indicator lights up.
- Position control mode selected: the draft indicator goes off.



(1) Mode selector switch

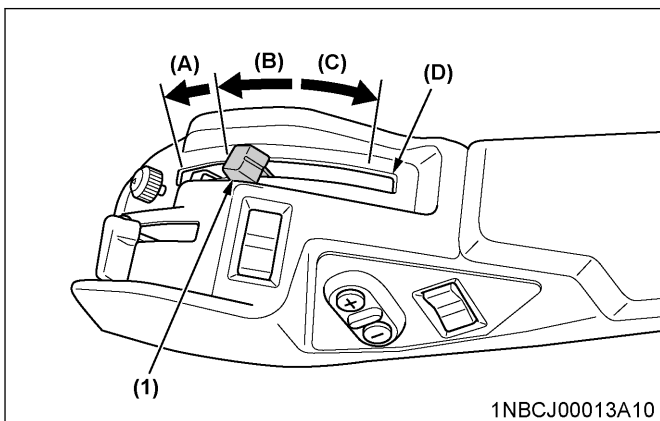
(A) "POSITION CONTROL"
(B) "DRAFT CONTROL"



(1) Draft indicator

3. Position control mode

The position control mode will control the working depth of the 3-point hitch mounted implement regardless of the amount of pull required.



(1) Hydraulic control lever

(A) "FLOAT"
(B) "DOWN"
(C) "UP"
(D) "TRAVEL LOCK POSITION"

NOTE :

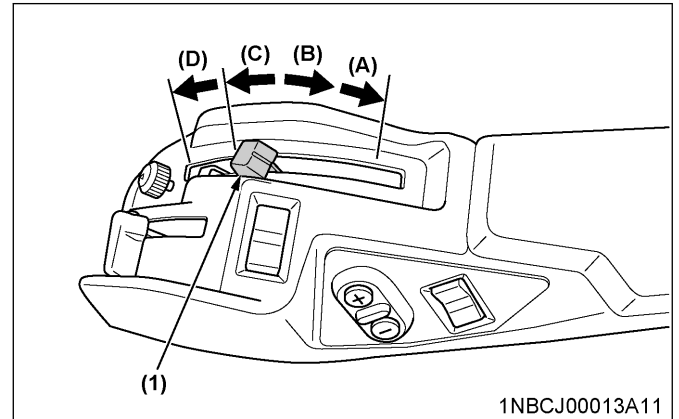
- While traveling, set the hydraulic control lever to the travel lock position to prevent an unexpected drop of the implement.

4. Mixed draft control mode

The mixed draft control mode will control the pull of the 3-point implement.

As the load on the 3-point hitch changes due to various soil conditions, the draft control system automatically responds to these changes by either raising or lowering the implement slightly to maintain a constant pull.

Set the implement pull with the hydraulic control lever.

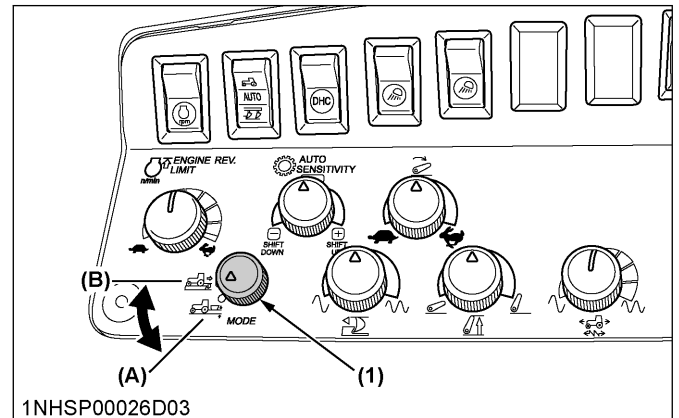


(1) Hydraulic control lever

(A) "UP"
(B) "SHALLOW"
(C) "DEEP"
(D) "FLOAT"

4.1 Draft ratio adjustment dial

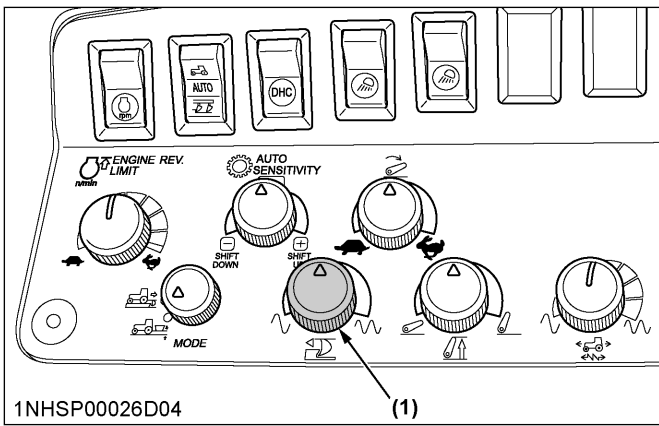
1. Set the mode selector switch to the "DRAFT" position.



(1) Mode selector switch

(A) "POSITION CONTROL"
(B) "DRAFT CONTROL"

2. Turn the draft ratio adjustment dial to adjust to specific application requirements.



(1) Draft ratio adjustment dial

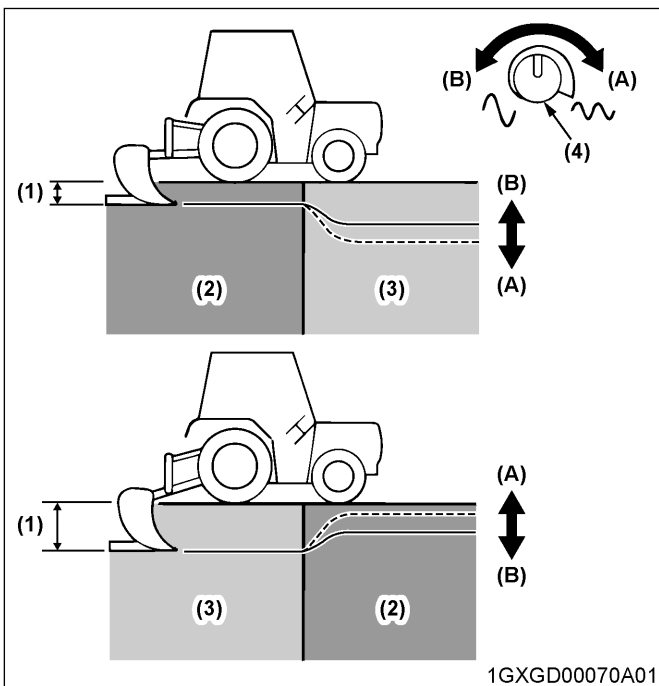
3. Make settings according to the following guidelines.

Draft ratio adjustment dial

	Counterclockwise	Clockwise
Plowing depth	Shallow	Deep
Type of soil	Light	Heavy
Field ruggedness	Little	Much
Sensitivity	Low	High

NOTE :

- The plowing depth may be affected when the draft ratio adjustment dial is used. Finally, use the hydraulic control lever to readjust the plowing depth.

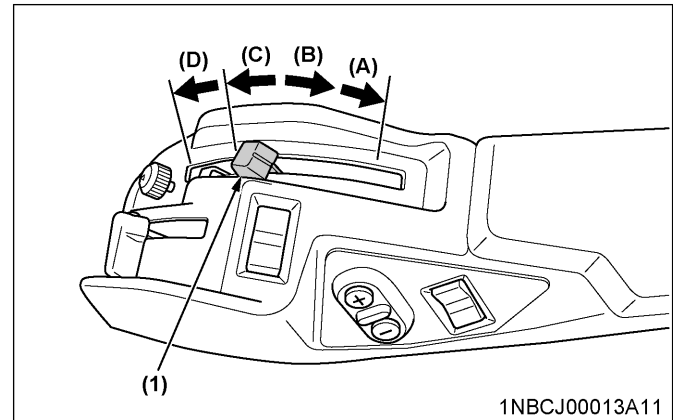


(1) Plowing depth setting
 (2) Heavy soil
 (3) Light soil
 (4) Draft ratio adjustment dial

(A) "CLOCKWISE"
 (B) "COUNTERCLOCKWISE"

5. Float control

Place the hydraulic control lever in the float position to make the lower links move freely along with the ground conditions.



(1) Hydraulic control lever

(A) "UP"
 (B) "SHALLOW"
 (C) "DEEP"
 (D) "FLOAT"

NOTE :

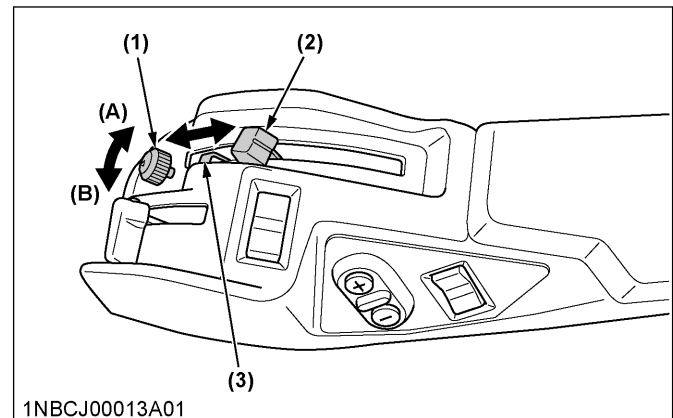
Handling the hydraulic control lever

- After the engine has stopped, set the key switch to the "ON" position and lower the hydraulic control lever. Now the implement goes down. The implement does not go down if the position lock is activated. (See 3-point hitch's position lock on page 124.)

6. Bottom limit control dial

This dial is used to change the bottom limit of the 3-point hitch.

- Turn the dial in the "UP" direction, and the bottom limit of the hydraulic control lever will raise.
- Turn the dial in the "DOWN" direction, and the bottom limit of the hydraulic control lever will lower.



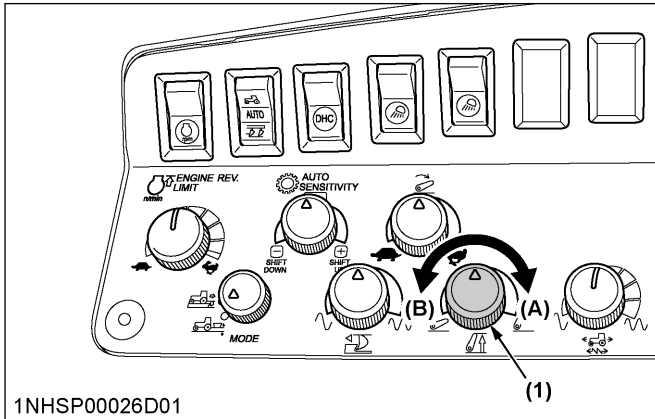
(1) Bottom limit control dial
 (2) Hydraulic control lever
 (3) Bottom limit

(A) "UP"
 (B) "DOWN"

7. Lift arm top limit adjustment dial

This dial is used to change the top limit of the 3-point hitch.

1. Turn the dial in the "HIGH" direction, and the top limit of the 3-point hitch will raise.
2. Turn the dial in the "LOW" direction, and the top limit of the 3-point hitch will lower.



(1) Lift arm top limit adjustment dial (A) "HIGH" (B) "LOW"

NOTE :

- Utilizing the lift arm top limit adjustment dial, the 3-point lifting and lowering switch and the hydraulic control lever can be used to adjust the top limit to any level.

8. 3-point hitch lowering speed adjustment dial

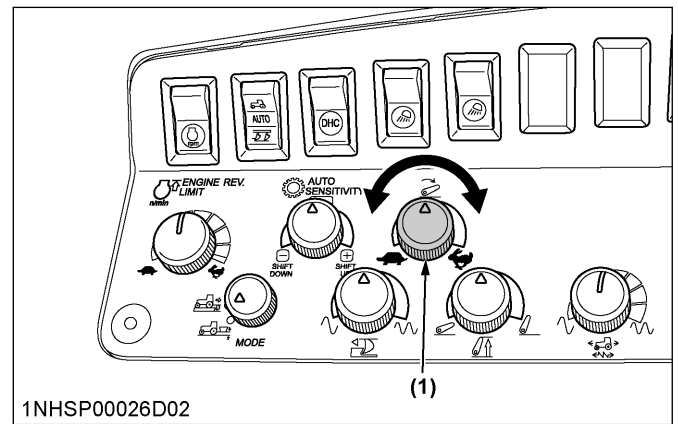
This dial is used to change the 3-point hitch's lowering speed.

! WARNING

To avoid personal injury or death:

- Fast lowering speed may cause damage or injury. Lowering speed of implement should be adjusted to 2 or more seconds.

1. Turn the dial in the "FAST" direction, and the 3-point hitch's lowering speed will increase.
2. Turn the dial in the "SLOW" direction, and the 3-point hitch's lowering speed will decrease.



(1) 3-point hitch lowering speed adjustment dial (1) "FAST" (2) "SLOW"

NOTE :

- This dial is not operative for complete hydraulic lock. For traveling or for checking an implement, set the 3-point hitch lowering lock lever in the "LOCK" position.

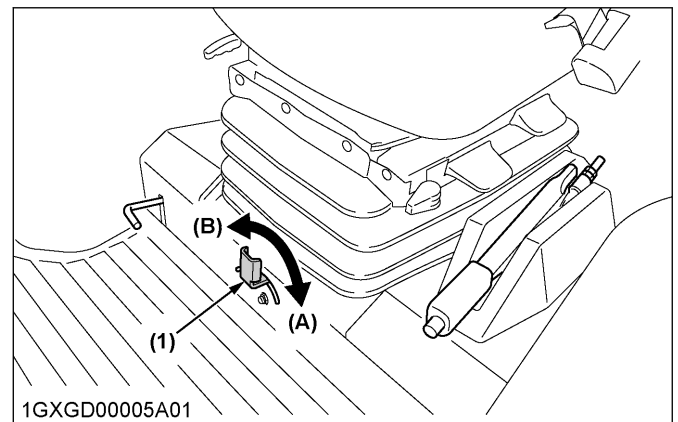
9. 3-point hitch lowering lock lever

! WARNING

To avoid personal injury or death:

- Before checking the 3-point mounted implement, lock the implement with the lock lever. In such case, move the hydraulic control lever to the "DOWN" position and make sure that the implement does not drop.

This lever has 2 positions "LOCK" and "UNLOCK". Do not hold the halfway position. When traveling or checking with the implement raised, set the lever to the "LOCK" position.



(1) 3-point hitch lowering lock lever (A) "LOCK" (B) "UNLOCK"

NOTE :

- To adjust the implement lowering speed, use the 3-point hitch lowering speed adjustment dial.

10. 3-point quick raise and lower switch

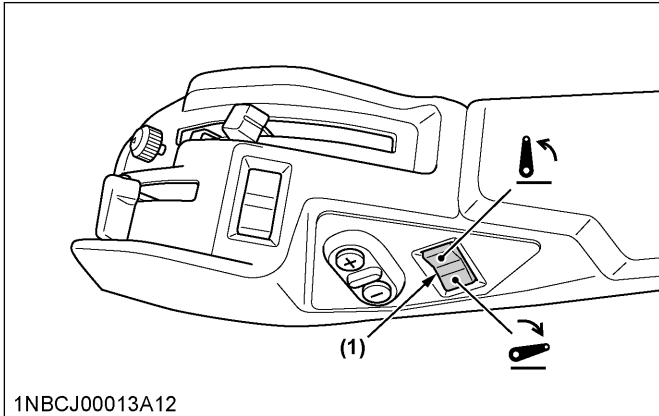
This switch is used to raise and lower the implement. This facilitates turning in the field.

WARNING

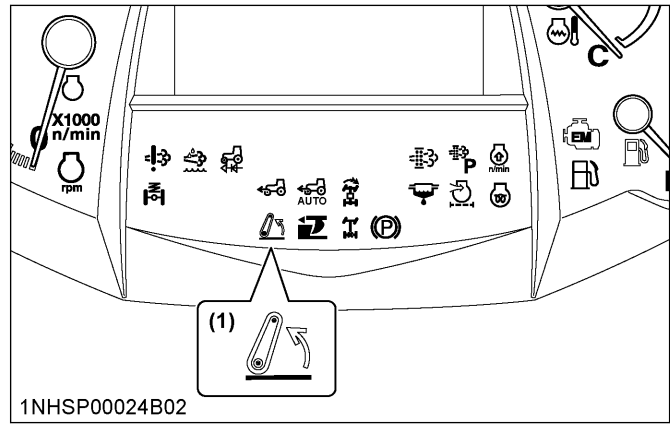
To avoid personal injury or death:

- Before road traveling, set the hydraulic control lever and the 3-point hitch lowering lock lever to the “TRAVEL LOCK” and “LOCK” positions, respectively.
- Do not use the 3-point quick raise and lower switch on road traveling.
- When an implement is changed, do not use the 3-point quick raise and lower switch before checking the full range of operation for interference using the hydraulic control lever.

1. Press the top half of the switch, and the 3-point lifting and lowering indicator lights up and the implement goes up.
When the top half of the switch has been pressed to raise the implement, the hydraulic control lever does not work. To use the hydraulic control lever, first pull it up to the top position.
2. Press the bottom half of the switch, and the indicator goes off and the implement comes down.



(1) 3-point quick raise and lower switch
 "PUSH" to raise
 "PUSH" to lower



(1) 3-point lifting and lowering indicator

NOTE :

- **3-point hitch working range**
Set the hydraulic control lever for a bottom limit and the lift arm top limit adjustment dial for a top limit. The 3-point quick raise and lower switch is used for raising and lowering within the limits set by the hydraulic control lever and the lift arm top limit adjustment dial.
- **One-touch floating function**
Set the mode selector switch to the “DRAFT” position. Hold down the bottom half of the switch to keep the 3-point hitch floating. This function is helpful in plowing, for example. Release the switch and the 3-point hitch returns to the draft control position.
- **Operating the 3-point quick raise and lower switch with the 3-point hitch going halfway**
 - When the bottom half of the switch is pressed with the 3-point hitch going up halfway, the 3-point hitch stops at this position (the indicator turns on). Re-push the 3-point quick raise and lower switch, and the 3-point hitch will go up or down respectively.
 - To lower the 3-point hitch with the 3-point hitch going up halfway, hold down the bottom half of the switch for 2 seconds or push it twice.
 - When the top half of the switch is pressed with the 3-point hitch going down halfway, the 3-point hitch goes up.

11. 3-point hitch's position lock

Position Lock

If any of the following actions are made with the hydraulic control lever and the lower links at different heights, the position lock is activated. The 3-point hitch control is interrupted and the 3-point lifting and lowering indicator starts to flash (2 or so flashes every second).

- Starting the engine.

- Activating the 3-point remote hitch “UP” switch and “DOWN” switch.
- Changing the mode selector switch.

Releasing the position lock

When the position lock is applied, use one of the following operations to release it.

After releasing, check whether the 3-point lifting and lowering indicator lights up or goes off.

- Operate the position lever until it matches the height of the lower link. The 3-point lifting and lowering indicator goes off.
- Press the top half of the 3-point quick raise and lower switch. The 3-point lifting and lowering indicator lights up.

NOTE :

- When the position lock is released with the position lever, the 3-point hitch goes up or down.
- When releasing the position lock by pressing the top half of the 3-point quick raise and lower switch, the 3-point hitch will rise to the position set by the lift arm top limit adjustment dial.

REMOTE HYDRAULIC CONTROL SYSTEM

The hydraulic auxiliary control valves can be installed with up to 4 segments.

1. Remote control valve

There are 2 types of remote valves available for these models.

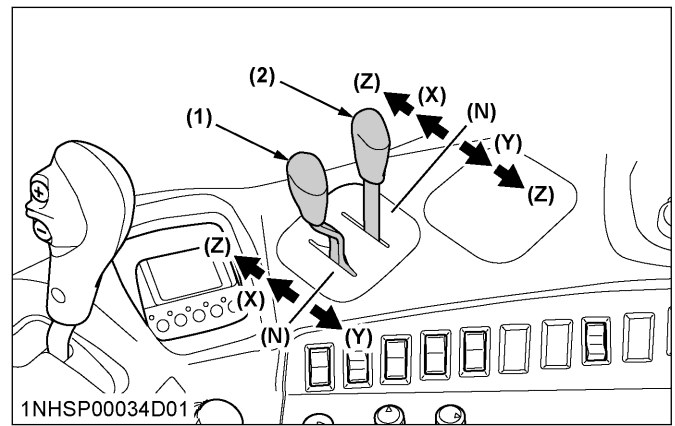
- Double acting valve with detents and self canceling:
This valve may be placed in the detent mode. The lever will stay in this position until the pressure reaches a predetermined level or a cylinder reaches the end of its stroke. Then the lever will automatically return to neutral.
- Double acting valve with float position:
This valve may be placed in the float mode with the control lever all the way forward. The cylinder is free to extend or retract, letting an implement such as a loader bucket follow the ground.

2. Remote control valve lever

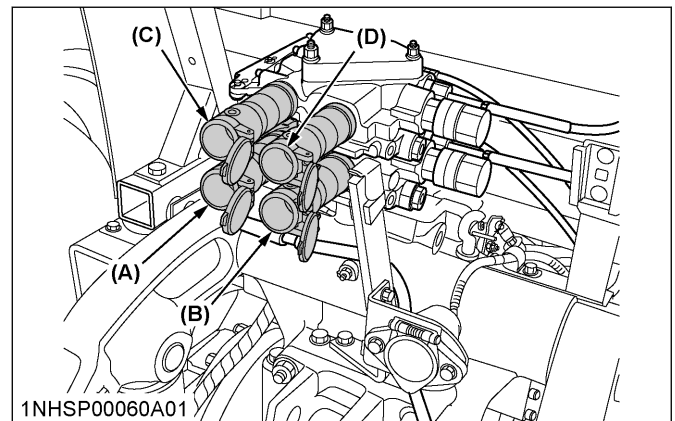
The remote control valve lever directs pressurized oil flow to the implement hydraulic system.

Example: Installing double segment valves

1st	Double acting valve with float position (standard)
2nd	Double acting valve with detents and self canceling (standard)



(1) Remote control valve lever 1
(2) Remote control valve lever 2



Pressure →
Returning ←

Lever (1)		Lever position		
		Z (detent)	X	Y
Port	(A)	in	in ←	out →
	(B)	out	out →	in ←

Lever (2)		Lever position			
		Z (detent)	X	Y	Z (detent)
Port	(C)	In ←		Out →	
	(D)	Out →		In ←	

IMPORTANT :

- Do not hold the lever in the “Pull” or “Push” position once the remote cylinder has reached the end of the stroke, as this will cause oil to flow through the relief valve. Forcing oil through the relief valve for extended periods will overheat the oil.
- When using the tractor hydraulic system to power the front loader, do not operate the boom and bucket cylinders simultaneously.

NOTE :

- Connect the pressure of load side of implement cylinders to ports (A) or (C) which have built-in load check valves to prevent leakage.
- To use the single-acting cylinder with the float valve, connect this cylinder to the (A) port.
To extend a single-acting cylinder, pull the remote control valve lever downward. To retract a cylinder, push the remote control valve lever fully upward to the "FLOAT" position. Do not hold the remote control valve lever in the push position or the transmission fluid may overheat.

3. Remote control valve coupler**! WARNING**

To avoid personal injury or death:

- Stop the engine and relieve pressure before connecting or disconnecting lines.
- Do not use your hands to check for leaks.

Connecting

1. Clean both couplers.
2. Remove dust plugs.
3. Insert the implement coupler into the tractor hydraulic coupler.
4. Pull the implement coupler slightly to make sure that the couplers are firmly connected.

Disconnecting

1. Lower the implement to the ground to release hydraulic pressure from the hoses.
2. Clean the couplers.
3. Relieve pressure by moving the hydraulic control levers with the engine shut off. To release the hose, pull it straight from the hydraulic coupler.
4. Clean oil and dust from the coupler, then replace the dust plugs.

NOTE :

- Your local Kubota dealer can supply parts for adapting couplers to hydraulic hoses.

4. Controlling and adjusting the flow rate**! WARNING**

To avoid the possibility of personal injury or death be aware of the following when making adjustments:

- The 3-point hitch operation is influenced by the combination of the adjustment of the flow control valve and the engine speed.

- The 3-point hitch may rise slowly or not at all at low engine rpm.
- The 3-point hitch may rise suddenly if engine rpm is increased, or, flow control adjustment is changed.

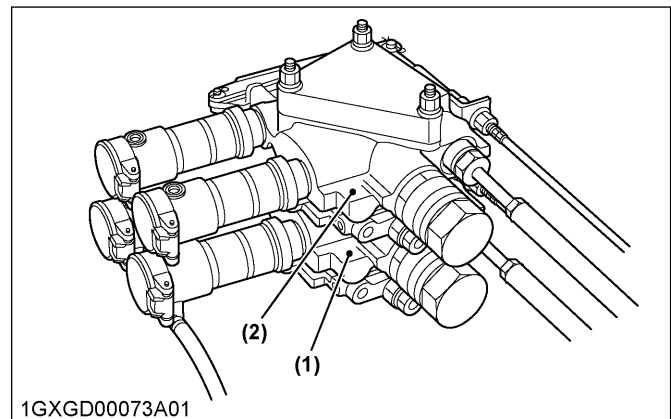
Flow control

The remote control valve with flow control may be added for the following purposes.

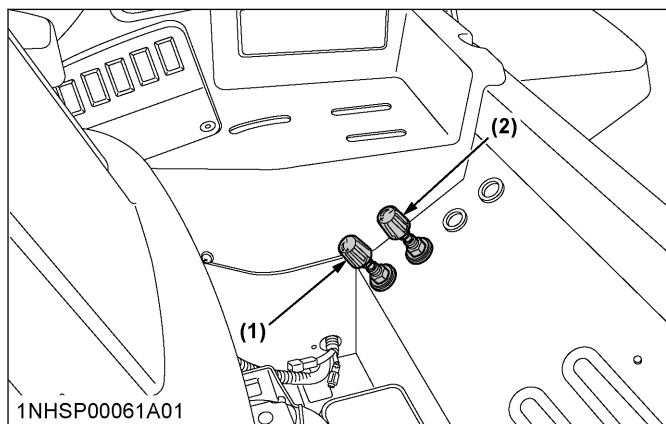
1. The attachments that are connected with the auxiliary control valve can be independently adjusted for flow rate.
2. To operate within limits, the remote control valves (1) and/or (2) and the 3-point hitch at the same time without one affecting the other.
3. To maintain within limits, the constant speed of an attachment (hydraulic motor RPM, for example) when connected to the remote control valves (1) and/or (2).

NOTE :

- At slower engine speeds the total hydraulic flow rate may be inadequate for simultaneous operation of the remote control valve (1) and/or (2) and the 3-point hitch, or operation of an attachment connected to the remote control valves (1) (2). Under these conditions, the engine speed must be increased to provide additional hydraulic flow.



- (1) Remote control valve with flow control
(2) Remote control valve with flow control



- (1) Flow control knob for valve (1)
(2) Flow control knob for valve (2)

Adjusting the flow rate

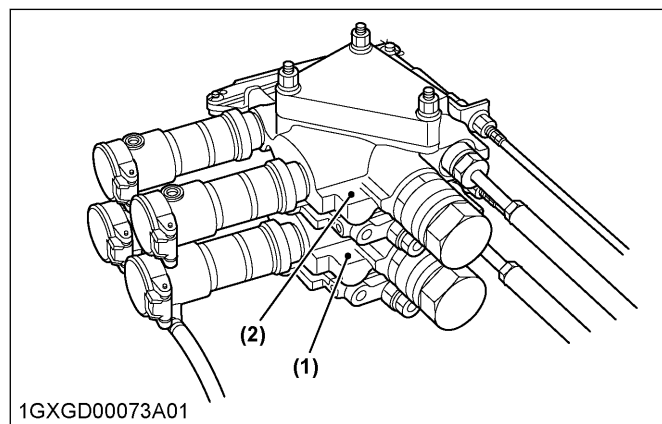
1. The flow rate for the remote control valves (1) and (2) can be adjusted.
2. Turn the flow control knobs (3) and/or (4) counterclockwise (A), and the flow rate for the remote control valves (1) and/or (2) increases. A clockwise turn (B) of the knob causes the flow to decrease. If the knob is turned all the way (C), there will be no flow.
3. To adjust the flow rate, set the engine speed to the operating RPM, turn the flow control knob once all the way clockwise (C), and then turn it gradually counterclockwise until a required flow rate is reached.

NOTE :

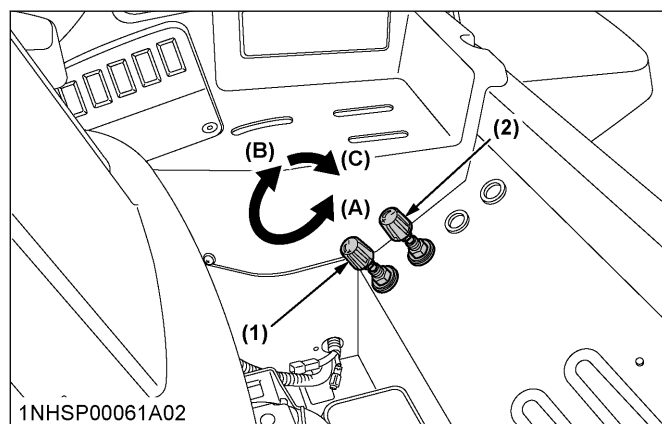
- Oil from the pump flows by priority to the auxiliary control valve. Surplus oil is fed to the 3-point hitch. With the auxiliary control valve at neutral, the total flow from the pump is fed to the 3-point hitch.

IMPORTANT :

- When there is no need to adjust the flow rate, turn the flow control knob all the way counterclockwise and keep it in this position.



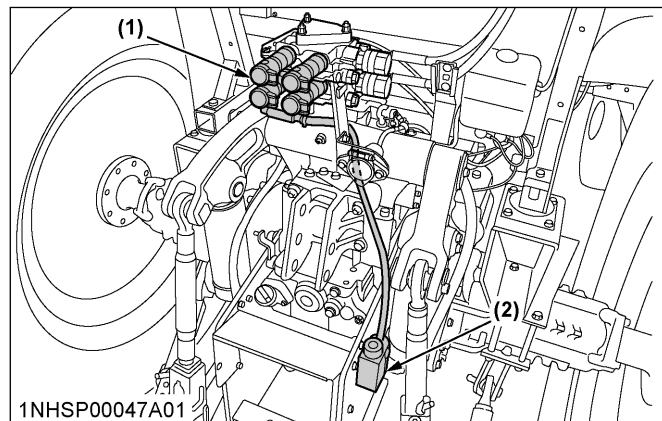
- (1) Remote control valve with flow control
(2) Remote control valve with flow control



- (1) Flow control knob for valve (1)
(2) Flow control knob for valve (2)
(A) "INCREASE"
(B) "DECREASE"
(C) "STOP"

5. Remote couplers spillage collector

With the remote control valve coupler in place, a slight amount of oil leaking from the coupler is recovered. In this way, no oil is splashed around the tractor body.



- (1) Collector cap
(2) Oil tank

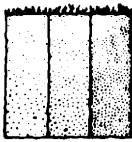
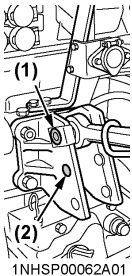
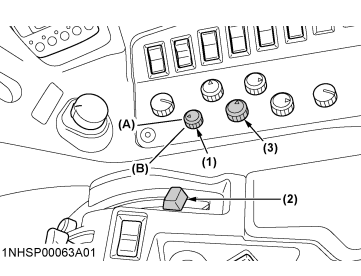
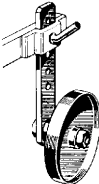
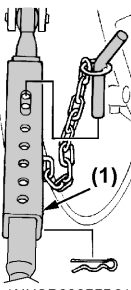
IMPORTANT :

- Oil recovered contains dust and water. Do not pour such oil back into the transmission case.

6. Hydraulic control unit use-reference chart

In order to handle the hydraulics properly, the operator must be familiar with the following.

Although this information may not be applicable to all types of implements and soil conditions, it is useful for general conditions.

Implement	 1AGAIAZAP122A	 1NHSP00062A01	 1NHSP00063A01			 1AGAIAZAP070A	 1NHSP00055B01	Remarks
	Soil condition	Top link mounting holes (1) and (2)	(1) Mode selector switch	(2) Hydraulic control lever	(3) Draft ratio adjustment dial	Gauge wheel	(1) Telescopic stabilizer	
Moldboard plow	Light soil Medium soil Heavy soil	Hole set (2)	Draft control (A)	Mixed draft control Place the hydraulic control lever to the suitable position.	Turn the dial to the suitable position.	Yes/No	Loose	Insert the telescopic stabilizer set-pin through the slot on the outer tube that aligns with one of the holes on the inner bar.
Disc plow	---							
Harrow (spike, spring-tooth, disc type)	---							
Subsoiler, and so on.	---							
Weeder, ridger, and so on.	---	Hole set (1)	Position control (B)	Position control Place the hydraulic control lever to the suitable position.	---	Yes	Tighten	Telescopic stabilizer should be tight enough to prevent excessive implement movement when implement is in the raised position. For implements with gauge wheels, lower the position control lever fully.
Earth mover, digger, scraper, manure fork, rear carrier, and so on.						Yes/No		
Mower (mid-and rear-mount type) Hay rake, tedder, and so on.						No		

NOTE :

- With an implement mounted, use the top hole of the top link holder to keep the implement as horizontal as possible, and use its center hole to keep the implement tilted forward. Only if the implement is not well matched, then the lower hole may be used.

TIRES, WHEELS, AND BALLAST

TIRES



WARNING

To avoid personal injury or death:

- Do not attempt to mount a tire on a rim. Only a qualified person with the proper equipment should mount a tire on a rim.
- Always maintain the correct tire pressure. Do not inflate the tires above the recommended pressure shown in the inflation pressure section.

IMPORTANT :

- Do not use tires other than those approved by Kubota.

NOTE :

- When optional different-diameter tires are fitted on the machine, the travel speed display mode must be changed. Otherwise, the travel speed will not get correctly displayed. Such mode switching is also needed when the original tires are back on the machine.
(See Initial setting on page 86.)

	Tire sizes	Inflation pressure
Front	12.4-24, 6PR	170 k Pa (1.7 kgf/cm ² , 24 psi.)
	12.4R24	160 k Pa (1.6 kgf/cm ² , 23 psi.)
	13.6R24, 6PR	160 k Pa (1.6 kgf/cm ² , 23 psi.)
	13.6-24, 6PR	150 kPa (1.5 kgf/cm ² , 22 psi.)
	14.9R24, 6PR	140 kPa (1.4 kgf/cm ² , 20 psi.)
	340/70R28	210 kPa (2.1 kgf/cm ² , 30 psi.)
	380/85R24	160 kPa (1.6 kgf/cm ² , 23 psi.)
Rear	420/70R24	140 kPa (1.4 kgf/cm ² , 20 psi.)
	18.4R30	140 kPa (1.4 kgf/cm ² , 20 psi.)
	16.9-34, 6PR	120 kPa (1.2 kgf/cm ² , 18 psi.)
	18.4-34, 8PR	140 kPa (1.4 kgf/cm ² , 20 psi.)
	18.4R34	120 kPa (1.2 kgf/cm ² , 18 psi.)
	16.9-38, 6PR	120 kPa (1.2 kgf/cm ² , 18 psi.)
	18.4R38	120 kPa (1.2 kgf/cm ² , 18 psi.)
	460/75R38	175 kPa (1.8 kgf/cm ² , 25 psi.)
	460/85R38	160 kPa (1.6 kgf/cm ² , 23 psi.)
	520/70R38	120 kPa (1.2 kgf/cm ² , 18 psi.)

1. Inflation pressure

Although the tire pressure is factory-set to the prescribed level, it naturally drops slowly in the course of time. Thus, check the tire pressure every day and inflate as necessary.

NOTE :

- Maintain the maximum pressure in front tires if using a front loader or when equipped with a full load of front weights.

2. Dual tires

Dual tires are not approved.

WHEEL ADJUSTMENT



WARNING

To avoid personal injury or death:

- When working on slopes or when working with a trailer, set the wheel tread as wide as practical for maximum stability.
- Support the tractor securely on stands before removing a wheel.
- Do not work under any hydraulically supported devices. They can settle, suddenly leak or be accidentally lowered. If necessary to work under the tractor or any machine elements for servicing or adjustments, securely support them with stands or suitable blocking beforehand.
- Never operate the tractor with a loose rim, wheel or axle.

1. Front wheels-4WD

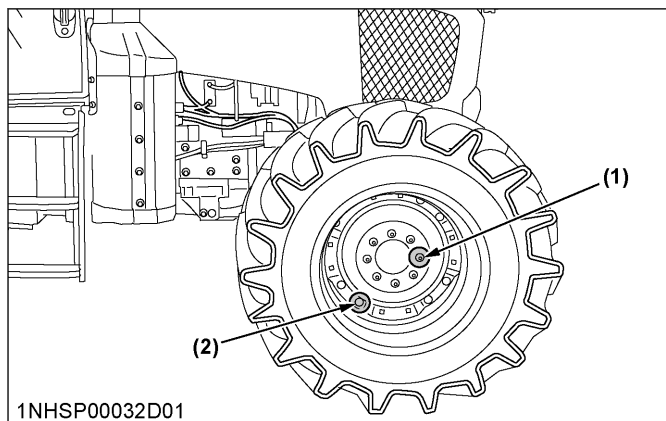
Front tread width can be adjusted, as shown, with the standard equipped tires.

To change the tread width:

1. Remove the wheel rim and disc mounting bolts.
2. Change the position of the rim and tire to the desired position, and tighten the bolts.
3. Adjust the toe-in as 2 to 8 mm (0.1 to 0.3 in.).
(See Adjusting toe-in on page 170.)

IMPORTANT :

- Always attach wheels as shown in the drawing.
- If not attached as illustrated, transmission parts may be damaged.
- When re-fitting or adjusting a wheel, tighten the bolts to the following torques then recheck after driving the tractor 200 m (200 yards) and 10 times of shuttle movement by 5 m (5 yards), and thereafter according to service interval.
(See MAINTENANCE on page 145.)



- (1) 260 to 304 N·m / 26.5 to 31 kgf·m / 192 to 224 lbf·ft
(2) Waffle wheel
298 to 366 N·m / 30.4 to 37.3 kgf·m / 220 to 270 lbf·ft

NOTE :

- Wheels with beveled or tapered holes: Use the tapered side of lug nut.

M6-101 M6-111	12.4-24 12.4R24 13.6-24 13.6R24	 (1) → 1NHNP00110A01 1580 mm (62.2 in.)*1	 (1) → 1NHNP00110A02 1680 mm (66.1 in.)*2
		 (1) → 1NHSP00064A01 1775 mm (69.9 in.)	 (1) → 1NHSP00065A01 1875 mm (73.8 in.)*2

(1) Tread

*1 Need to limit turning angle at 1580 mm (62.2 in.) width setting to 42 degrees. Refer to the chart provided for additional instructions.

*2 Recommended tread for use with a loader. Setting the tread wider than recommended may cause premature failure of the front axle components due to excessive stress.

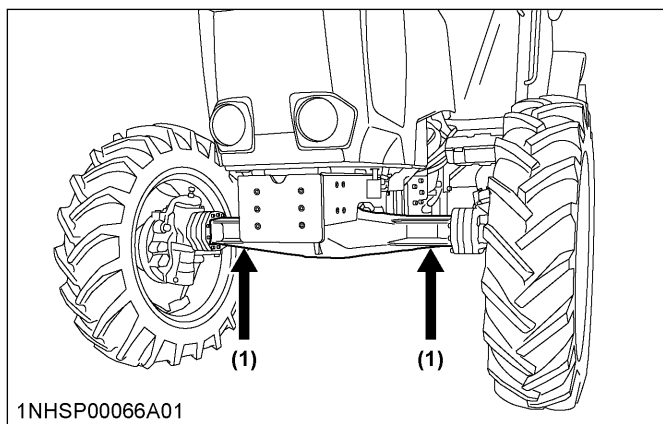
1.1 Front jack point



WARNING

To avoid personal injury or death:

- Before jacking up the tractor, park it on a firm and level ground and chock the rear wheels.
- Fix the front axle to keep it from pivoting.
- Select jacks that withstand the machine weight and set them up as follows.



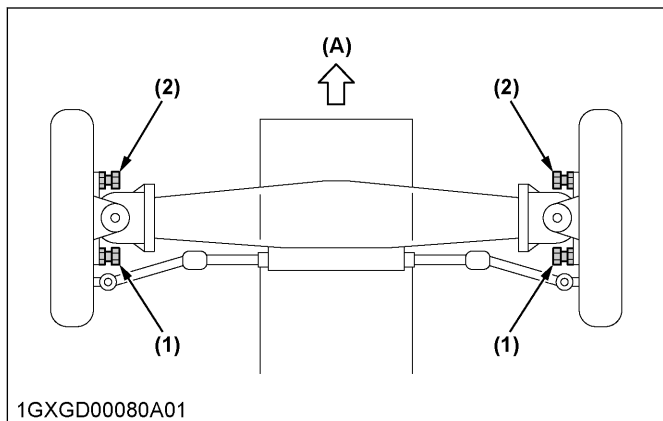
(1) Jack point

1.2 Adjusting front wheel turning stopper bolt

- Adjust the right and left rear stoppers according to the front wheel turning angle.
- Adjusting the front stoppers:
 - Turn the steering wheel fully clockwise until the right rear stopper comes into the case.
 - Adjust the front stopper so that there is a clearance of about 1 mm (0.04 in.) between the left front stopper and the case.
 - Turn the steering wheel counterclockwise to readjust the right front stopper.

IMPORTANT :

- Always check if tires contact with tractor or loader frame assemblies.
- Adjust turning angle with provided stoppers if necessary.
- "Bi-speed" will not activate if turning angle is less than 34 degrees.



(1) Rear stopper bolts
(2) Front stopper bolts

(A) "FRONT"

M6-101 and M6-111

	Rear stopper bolts (example: LH stopper bolt)		
Angle	50°	45°	42°
Stopper			
Angle	37°	33°	30°
Stopper			

(A) 9 mm (0.4 in.)

(B) 5 mm (0.2 in.) collar

M6-131 and M6-141

	Rear stopper bolts (example: LH stopper bolt)		
Angle	50°	48°	45°
Stopper			
Angle	40°	37°	Factory setting, front suspension type
Stopper			

(A) 7 mm (0.3 in.) collar

(B) 12.5 mm (0.5 in.) collar

(C) 1 mm (0.04 in.) shim

2. Rear wheels

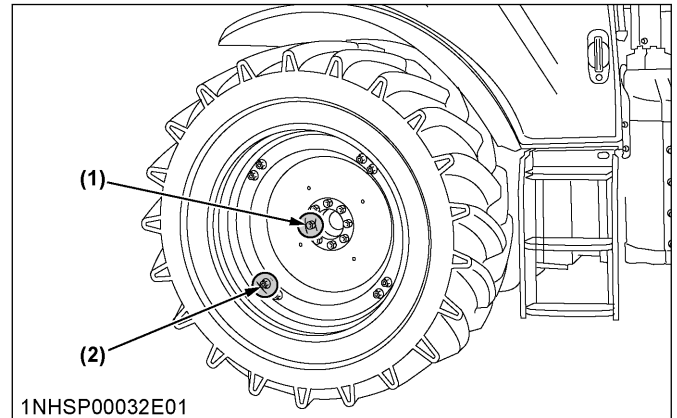
Rear tread width can be adjusted, as shown, with the standard equipped tires.

To change the tread width:

1. Remove the wheel rim and/or disc mounting bolts.
2. Change the position of the rim and/or disc (right and left) to the desired position, and tighten the bolts.

IMPORTANT :

- Always attach wheels as shown in the drawing.
- If not attached as illustrated, transmission parts may be damaged.
- When re-fitting or adjusting a wheel, tighten the bolts to the following torques then recheck after driving the tractor 200 m (200 yards) and 10 times of shuttle movement by 5 m (5 yards), and thereafter according to service interval.
(See MAINTENANCE on page 145.)



1NHSP00032E01

(1) 343 to 401 N·m / 35.0 to 41.0 kgf·m / 254 to 297 lbf·ft

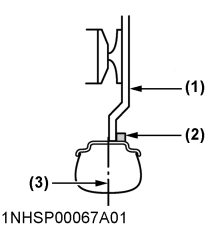
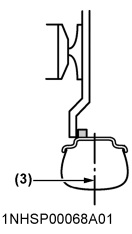
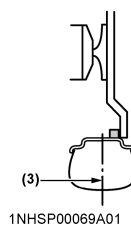
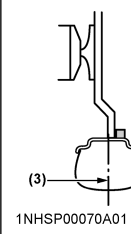
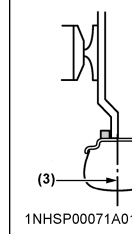
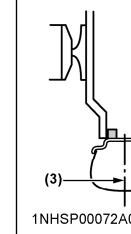
(2) Steel disc

244 N·m / 24.9 kgf·m / 180 lbf·ft

Cast iron disc

305 to 325 N·m / 31.1 to 33.2 kgf·m / 225 to 240 lbf·ft

Width for steel disc

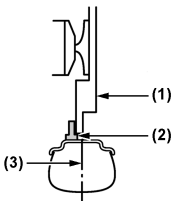
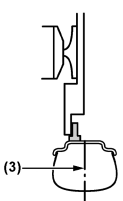
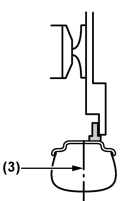
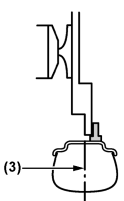
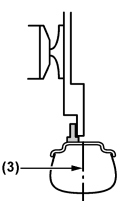
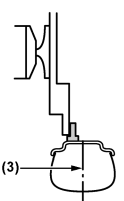
		Tread type 1	Tread type 2	Tread type 3	Tread type 4	Tread type 5	Tread type 6
							
M6-101 M6-101	16.9-34 18.4-34 18.4R34	1500 mm (59.0 in.)	1600 mm (63.0 in.)	1710 mm (67.3 in.)	1900 mm (74.8 in.)	1810 mm (71.3 in.)	2010 mm (79.1 in.)

(1) Rear wheel disc

(2) Rear wheel rim

(3) Tread

Width for cast iron disc

		Tread type 1	Tread type 2	Tread type 3	Tread type 4	Tread type 5	Tread type 6
		 1NHSP00073A01	 1NHSP00074A01	 1NHSP00075A01	 1NHSP00076A01	 1NHSP00077A01	 1NHSP00078A01
M6-101 M6-101	18.4R30	1520 mm (59.8 in.)	1630 mm (64.2 in.)	1710 mm (67.3 in.)	1810 mm (71.3 in.)	1960 mm (77.2 in.)	2060 mm (81.1 in.)
	16.9-34 18.4-34 18.4R34 460/75R38	1530 mm (60.2 in.)	1630 mm (64.2 in.)	1730 mm (68.1 in.)	1840 mm (72.4 in.)	1930 mm (76.0 in.)	2040 mm (80.3 in.) ^{*1}
	16.9-38	1590 mm (62.6 in.)	1690 mm (66.5 in.)	1780 mm (70.1 in.)	1880 mm (74.0 in.)	1980 mm (80.0 in.)	2090 mm (82.3 in.)
	18.4R38 460/85R38	1590 mm (62.6 in.)	1710 mm (67.3 in.)	1760 mm (69.3 in.)	1880 mm (74.0 in.)	1970 mm (77.6 in.)	2090 mm (82.3 in.) ^{*1}
M6-131 M6-141	520/70R38	---					

(1) Rear wheel disc

(2) Rear wheel rim

(3) Tread

*1 Recommended tread for use with a loader. Use the recommended tread for better stability depending on the requirements of the work being done.

Full width by tire size and tread type

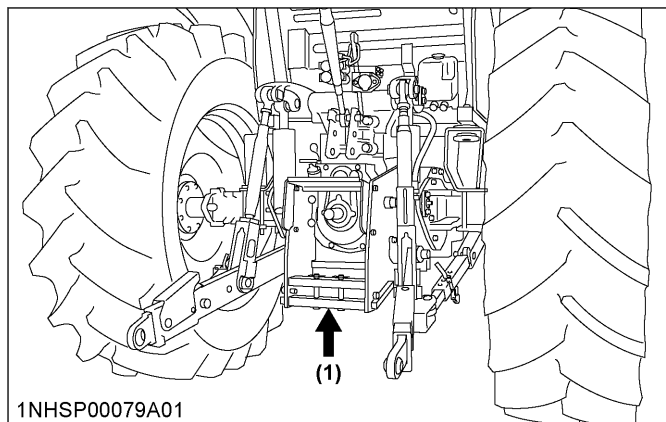
Rear tire size	Tread type 1	Tread type 2	Tread type 3	Tread type 4	Tread type 5	Tread type 6
16.9-34	1930 mm (76.0 in.)	2030 mm (79.9 in.)	2140 mm (84.3 in.)	2330 mm (91.7 in.)	2240 mm (88.2 in.)	2440 mm (96.1 in.)
18.4-34	1990 mm (78.3 in.)	2090 mm (82.3 in.)	2200 mm (86.6 in.)	2390 mm (94.1 in.)	2300 mm (90.6 in.)	2500 mm (98.4 in.)
18.4R34	2005 mm (78.9 in.)	2105 mm (82.9 in.)	2215 mm (87.2 in.)	2405 mm (94.7 in.)	2315 mm (91.1 in.)	2515 mm (99.0 in.)
18.4R30	2010 mm (79.1 in.)	2120 mm (83.5 in.)	2200 mm (86.6 in.)	2300 mm (90.6 in.)	2450 mm (96.5 in.)	2550 mm (100.4 in.)
16.9-34	1960 mm (77.2 in.)	2060 mm (81.1 in.)	2160 mm (85.0 in.)	2270 mm (89.4 in.)	2360 mm (92.9 in.)	2470 mm (97.2 in.)
18.4-34	2020 mm (79.5 in.)	2120 mm (83.5 in.)	2220 mm (87.4 in.)	2330 mm (91.7 in.)	2420 mm (95.3 in.)	2530 mm (99.6 in.)
18.4R34	2035 mm (80.1 in.)	2135 mm (84.1 in.)	2235 mm (88.0 in.)	2345 mm (92.3 in.)	2435 mm (95.9 in.)	2545 mm (100.2 in.)
460/75R38	2000 mm (78.7 in.)	2100 mm (82.7 in.)	2200 mm (86.6 in.)	2310 mm (90.9 in.)	2400 mm (94.5 in.)	2510 mm (98.8 in.)
16.9-38	2040 mm (80.3 in.)	2140 mm (84.3 in.)	2230 mm (87.8 in.)	2330 mm (91.7 in.)	2430 mm (95.7 in.)	2540 mm (100.0 in.)
18.4R38	2085 mm (82.1 in.)	2205 mm (86.8 in.)	2255 mm (88.8 in.)	2375 mm (93.5 in.)	2465 mm (97.1 in.)	2585 mm (101.8 in.)
460/85R38	2080 mm (81.9 in.)	2200 mm (86.6 in.)	2250 mm (88.6 in.)	2370 mm (93.3 in.)	2460 mm (96.9 in.)	2580 mm (101.6 in.)
520/70R38	—	2235 mm (88.0 in.)	2285 mm (90.0 in.)	2405 mm (94.7 in.)	2495 mm (98.2 in.)	2615 mm (103.0 in.)

2.1 Rear jack point

WARNING

To avoid personal injury or death:

- Before jacking up the tractor, park it on a firm and level ground and chock the front wheels.
- Fix the front axle to keep it from pivoting.
- Select a jack that withstands the machine weight and set it up as follows.



(1) Jack point

BALLAST

WARNING

To avoid personal injury or death:

- Additional ballast will be needed for transporting heavy implements. When the implement is raised, drive slowly over rough ground, regardless of how much ballast is used.
- Do not fill the front wheels with liquid to maintain steering control.

1. Front ballast

Add weights if needed for stability and improved traction.

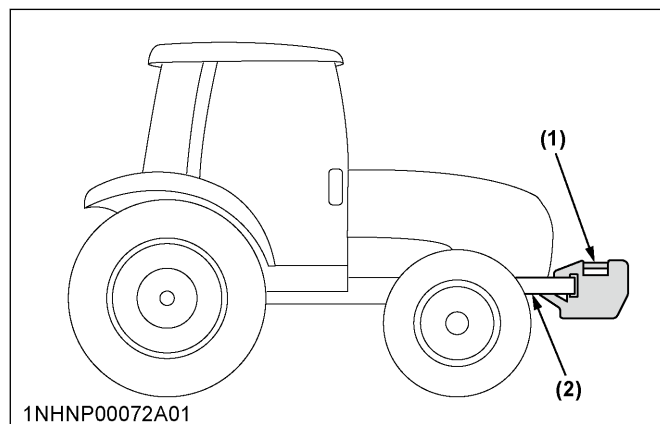
Heavy pulling and heavy rear mounted implements tend to lift up the front wheels.

Add enough ballast to maintain steering control and to prevent tipping over. Remove the weight when it is no longer needed.

1.1 Front end weights (option)

Front end weights can be attached to the bumper.

See your implement operator's manual for the required number of weights or consult your local Kubota dealer about how to use the weights.



(1) Front end weights
(2) Bumper

IMPORTANT :

- Do not overload tires.
- Add no more weight than indicated in the following table.

Maximum weight	47 kg x 12 pieces (1240 lbs.)
----------------	----------------------------------

2. Rear ballast

Add weight to rear wheels if needed to improve traction or for stability.

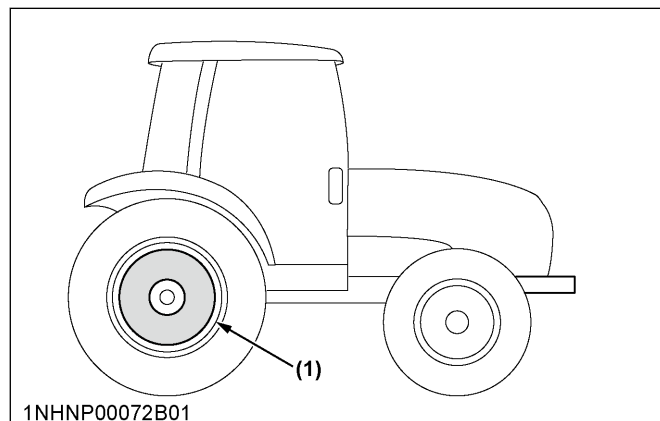
The amount of rear ballast should be matched to job and the ballast should be removed when it is not needed.

The weight should be added to the tractor in the form of liquid ballast, rear wheel weights or a combination of both.

2.1 Rear wheel weights (option)

Rear wheel weights can be attached to the rear wheel.

See your implement operator's manual for the required number of weights or consult your local Kubota dealer about how to use the weights.



(1) Rear wheel weights

IMPORTANT :

- Do not overload the tires.

- Add no more weight than indicated in the the following table.

	Cast iron disc	Steel disc
Maximum weight per wheel	72.5 kg x 2 pieces (160 lbs. x 2 pieces)	72.5 kg x 3 pieces (160 lbs. x 3 pieces)

2.2 Liquid ballast in rear tires

A water and calcium chloride solution provides safe and economical ballast. Used properly, the solution will not damage the tires, tubes or rims. The addition of calcium chloride is recommended to prevent the water from freezing.

Use of this method of weighting the wheels has the full approval of the tire companies.

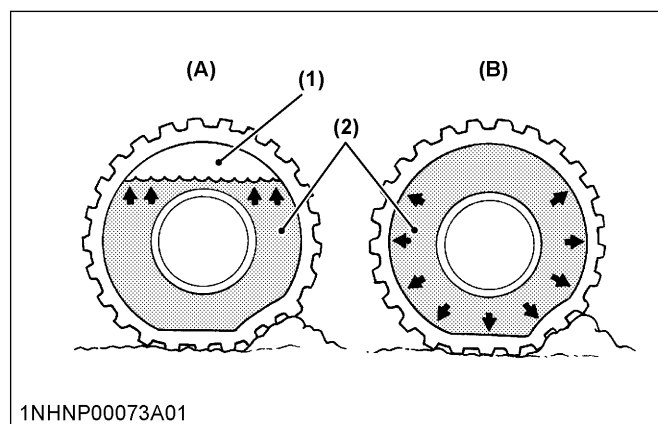
See your tire dealer for this service.

Liquid weight per tire (75 % filled)

Tire sizes	16.9-34	18.4R30 18.4-30	18.4R34	18.4R38 520/70R38
Slush free at -10 °C (14 °F) Solid at -30 °C (-22 °F) Approx. 1 kg (2 lbs.) CaCl ₂ per 4 L (1 gal.) of water	342 kg (755 lbs.)	385 kg (848 lbs.)	417 kg (920 lbs.)	460 kg (1013 lbs.)
Slush free at -24 °C (-11 °F) Solid at -47 °C (-53 °F) Approx. 1.5 kg (3.5 lbs.) CaCl ₂ per 4 L (1 gal.) of water	376 kg (829 lbs.)	414 kg (912 lbs.)	457 kg (1007 lbs.)	505 kg (1113 lbs.)
Slush free at -47 °C (-53 °F) Solid at -52 °C (-62 °F) Approx. 2.25 kg (5 lbs.) CaCl ₂ per 4 L (1 gal.) of water	399 kg (880 lbs.)	436 kg (960 lbs.)	490 kg (1081 lbs.)	538 kg (1187 lbs.)

IMPORTANT :

- Do not fill tires with water or solution to more than 75 % of full capacity (to the valve stem level).



- (1) Air
(2) Water

- (A) Correct - 75 % full, air compresses like a cushion
(B) Incorrect - 100 % full, water cannot be compressed

CAB OPERATION

DOORS AND WINDOWS

1. Locking and unlocking the door

From the outside:

Insert the key into the door lock. Turn the key clockwise to unlock the door. To lock the door, turn the key in the opposite direction.

The key can be removed when it is in the vertical position.

From the inside:

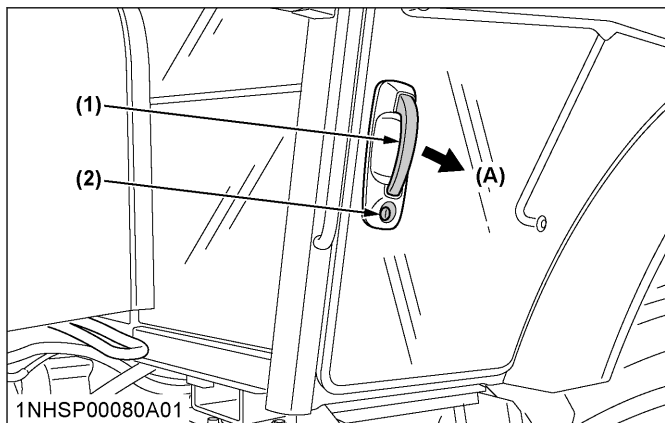
Push down the lock knob to lock the door.

Pull up the lock knob to unlock the door.

2. Opening the door

From the outside:

Unlock the door, and pull the outer door handle.

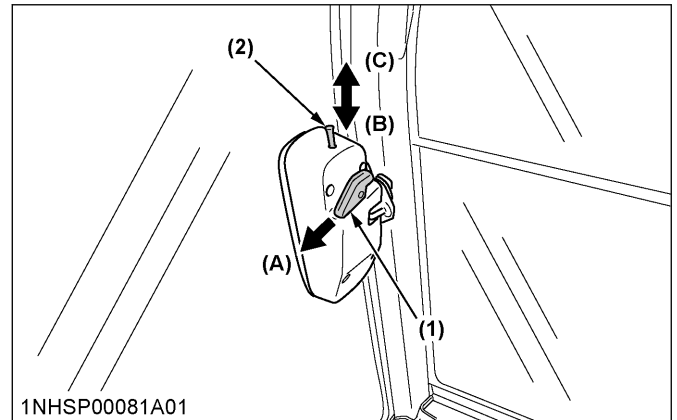


(1) Outer door handle
(2) Door lock

(A) "PULL"

From the inside:

Unlock the door and pull the inner door handle.

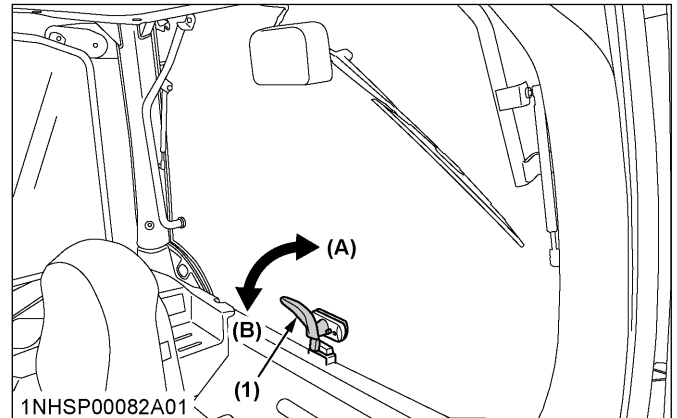


(1) Inner door handle
(2) Lock knob

(A) "PULL"
(B) "PUSH" (lock)
(C) "PULL" (unlock)

3. Rear window

Turn the rear window handle clockwise to the vertical position and push the handle. The rear window is opened by the gas spring cylinder.



(1) Rear window handle

(A) "OPEN"
(B) "CLOSE"

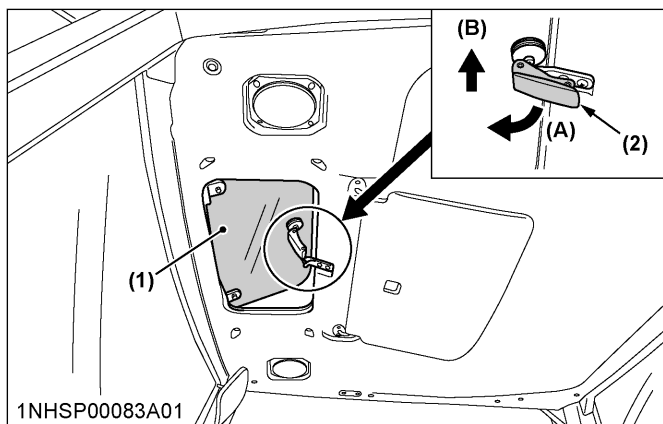
4. Sun roof

⚠ WARNING

To avoid personal injury or death:

- Front loader must be used with the sun roof closed.

Raise the front loader, and visually check to see if the tip of an attachment (bucket and fork, for example) is visible in its position or angle from the operator's seat.



- (1) Sun roof
(2) Sun roof handle

- (A) "PULL"
(B) "PUSH"

NOTE :

- Open the sun roof, to allow outside air in.

5. Emergency exit

1. In an emergency situation, open the right door of the CAB if the left door is blocked and vice versa.
2. Exit through the rear window if the CAB doors are blocked.

DOME LIGHT

Sliding the dome light switch will give the following light condition:

[OFF]

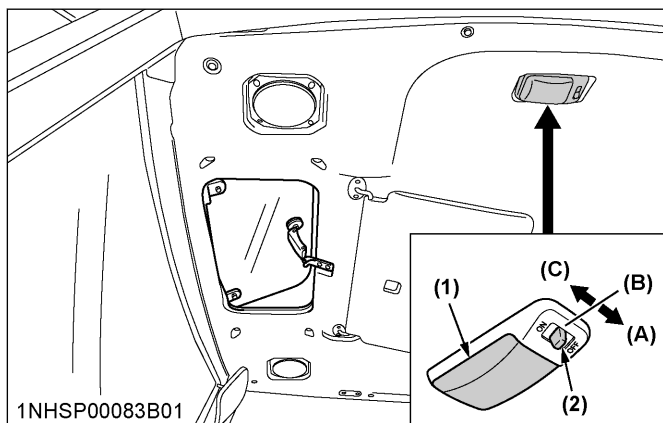
The light does not turn on when the door is opened.

"DOOR"

The light turns on when the door (LH) is opened.
The light turns off when the door (LH) is closed.

[ON]

The light remains on regardless of the door position.



- (1) Dome light
(2) Dome light switch

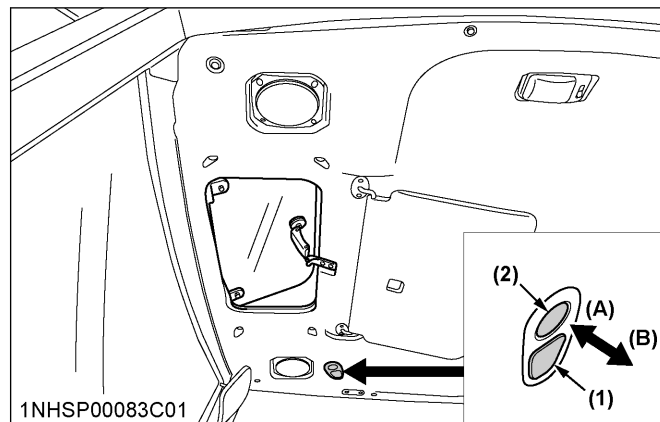
- (A) [OFF]
(B) "DOOR"
(C) [ON]

IMPORTANT :

- The battery will discharge if the dome light remains on. Check the dome light switch position and/or door closure.

SPOTLIGHT

The spotlight is directed on the armrest and right-hand console.



- (1) Spotlight
(2) Switch

- (A) "ON"
(B) "OFF"

NOTE :

- The spotlight cannot be turned on unless one of the lights (headlights low beam or headlights high beam) are turned on.

WIPER

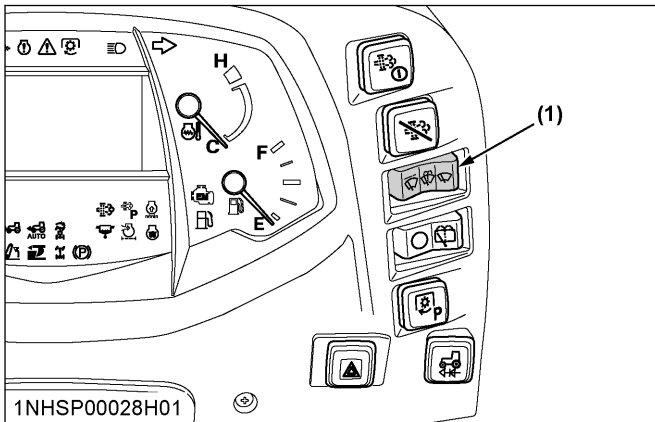
1. Front wiper and washer switch

1. Turn on the key switch and press the right half of the wiper switch to the first step to activate the continuous wiper.

When the switch is pressed further to the second step, washer liquid jets out.

The jetting continues while the switch is pressed and the continuous wiper is activated.

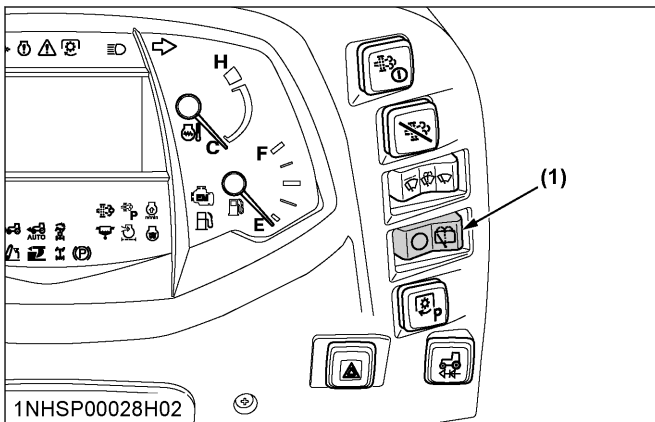
- Press the left half of the wiper switch to the first step to activate the intermittent wiper.
When the switch is pressed further to the second step, washer liquid jets out and the intermittent wiper is activated.



(1) Front wiper and washer switch

2. Rear wiper and washer switch

- Turn on the key switch and press the right half of the wiper switch to the first step, to activate the wiper.
When the switch is pressed further to the second step, washer liquid jets out.
The jetting continues while the switch is pressed and the wiper is activated continuously.
- Press the left half of the wiper and washer switch, and only washer liquid jets out.



(1) Rear wiper and washer switch

IMPORTANT :

- Do not activate the wipers when the windows are dry, as they may be scratched.
Jet washer liquid first and then activate the wipers.

3. Using the wipers in cold season

- While not used in cold season, keep the wiper blades off the windshield to prevent them from being frozen to the windshield.
- If the windshield is covered with snow, scrape it off the windshield before using the wipers.
- If the wiper blades are frozen to the windshield and fail to move, turn the main key switch to the "OFF" position and remove the ice from the blades. Then place the main key switch back to the "ON" position.
- When commercially available cold-season wiper blades are used, make sure that their size is the same as or smaller than that of the standard ones.

IMPORTANT :

- In the cold season, the wiper blades and the wiper motor may become overloaded, and cause damage. To avoid this problem, take the previously mentioned precautions.

AIR CONDITIONER

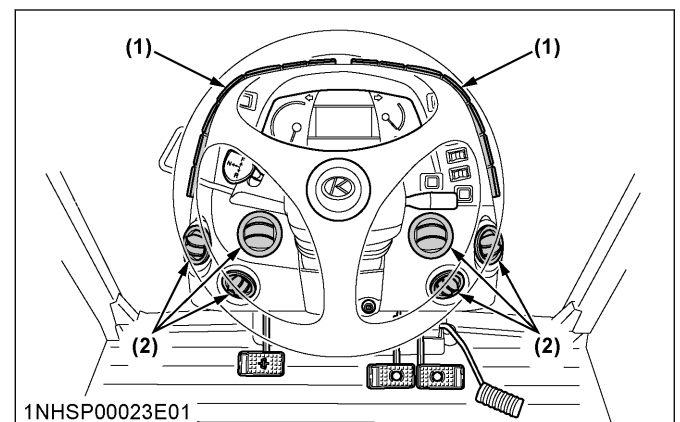
! CAUTION

To avoid personal injury:

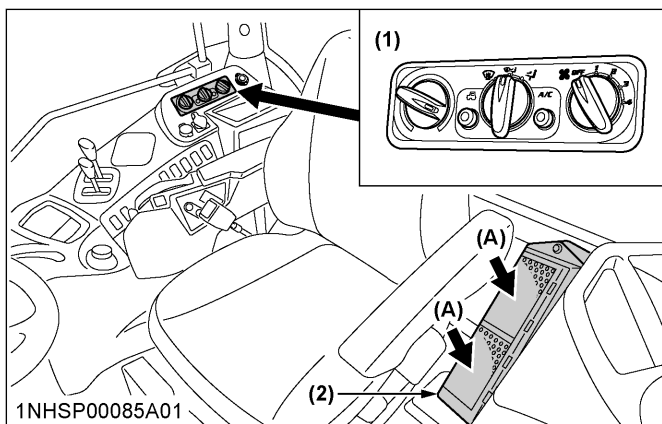
- If the window fails to defrost in extreme conditions or becomes cloudy when dehumidifying the CAB, wipe off moisture with a soft cloth.
- Do not block all the air outlets of the air conditioner. A problem could occur.

1. Airflow

Air in the CAB and fresh air introduced into the CAB flows as follows. Adjust the air ports to obtain the desired condition.

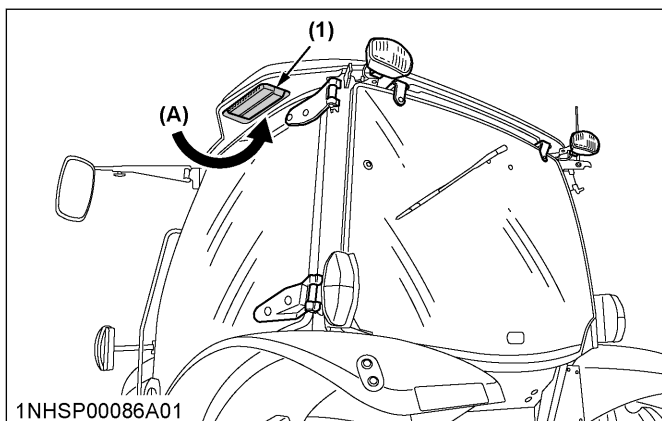


(1) Defroster air outlets
(2) Dashboard air outlets



1NHSP00085A01
(1) Control panel
(2) Inner air filter

(A) "INNER AIR RECIRCULATION"
(B) "COOL"



1NHSP00086A01
(1) Fresh air filter

(A) "FRESH AIR INLET"

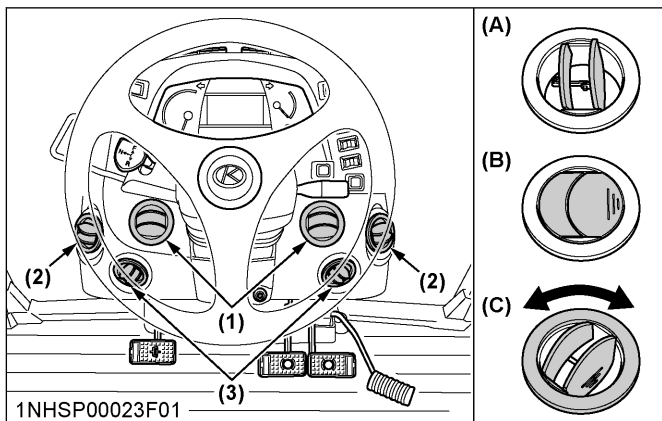
IMPORTANT :

- Do not pour water directly into the fresh air port while washing the tractor.

2. Air control vent

2.1 Dashboard air outlet

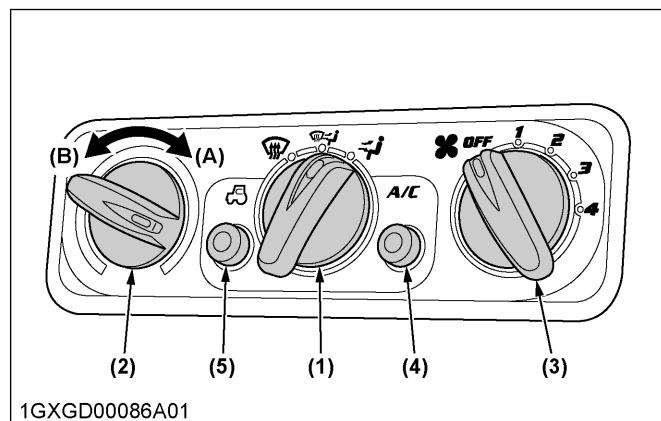
The dashboard air outlets can be independently adjusted as required.



1NHSP00023F01
(1) Face area air outlets
(2) Back area air outlets
(3) Feet area air outlets

(A) "OPEN"
(B) "SHUT"
(C) "TURN"

3. Control panel



1GXGD00086A01
(1) Mode switch (A) "WARM"
(2) Temperature control dial (B) "COOL"
(3) Blower switch
(4) Air conditioner switch with indicator light
(5) Recirculation or fresh air selection switch with indicator light

3.1 Mode switch

Set the mode switch to the desired position.

Air is blown from only the dashboard air outlets.

Air is blown from the dashboard and defroster air outlets.

Air is blown from only the defroster air outlet.

3.2 Temperature control dial

Set this dial at the desired position to obtain the optimum air temperature. Turn the dial in the "WARM" direction to obtain warmer air. Turn the dial in the "COOL" direction to obtain cooler air.

3.3 Blower switch

Air volume can be changed in 4 steps. At the [4] position, the largest air volume is obtained.

3.4 Air conditioner switch

Push this switch to activate the air conditioner. An indicator light will light up when the switch is set to "ON".

Push the switch again to turn off the air conditioner, in which case the indicator light will turn off.

3.5 Recirculation and fresh air selection switch

Each time the switch is pressed, the air flow position changes for "RECIRCULATION" or "FRESH AIR". An

indicator light will light up when the switch is set to “**RECIRCULATION**”. And the indicator light will be off when the switch is set to “**FRESH AIR**”.

FRESH AIR:

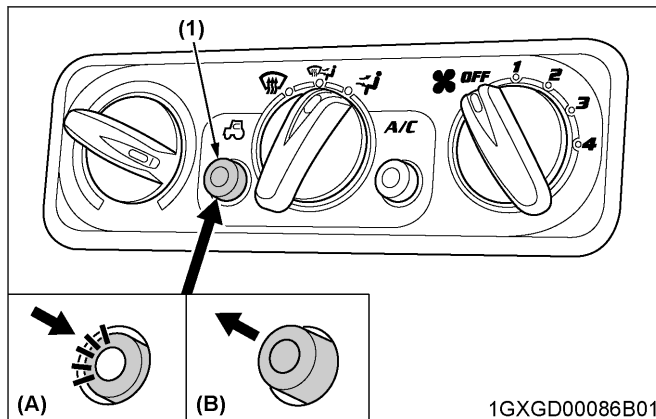
Indicator: “OFF”

Fresh air will flow into the CAB. This setting is helpful when you work in dusty conditions or if the glass windows get foggy.

RECIRCULATION:

Indicator: “ON”

In-CAB air will be recirculated. This setting is useful for cooling or heating the CAB quickly or keeping it extra cool or warm.



- (1) Recirculation or fresh air selection switch with indicator light
- (A) “**RECIRCULATION**”
(B) “**FRESH AIR**”

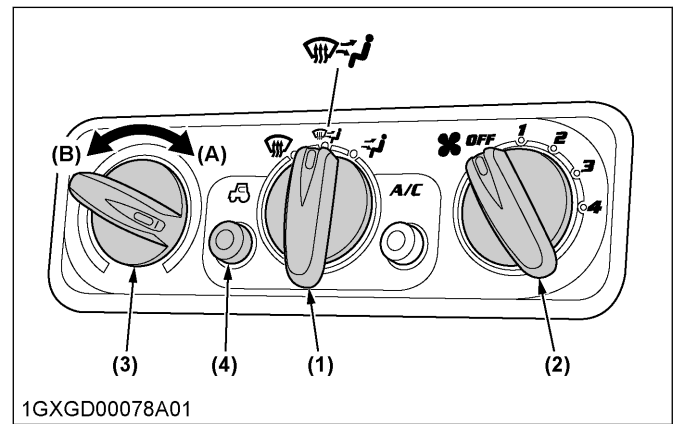
NOTE :

- When heating, do not keep the switch at the “**RECIRCULATION**” position for a long time. The windshield easily gets foggy.
- While working in dusty conditions, keep the switch at the “**FRESH AIR**” position. This setting increases the pressure in the CAB, which helps prevent dust from coming into the CAB.

4. Operation

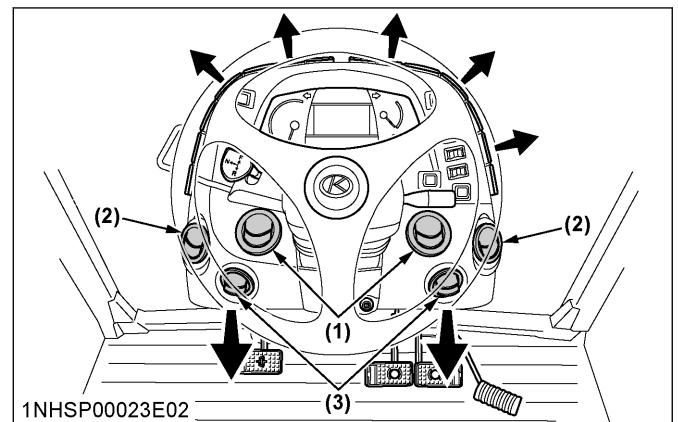
4.1 Heating

1. Set the mode switch to the  position.
2. Set the recirculation or fresh air selection switch to the “**FRESH AIR**” position. To raise the temperature in the CAB quickly, set this switch to the “**RECIRCULATION**” position.
3. Adjust the blower ([1/2/3/4]) switch and the temperature control dial to achieve a comfortable temperature level.



- (1) Mode switch
(2) Blower switch
(3) Temperature control dial
(4) Recirculation or fresh air selection switch with indicator light
- (A) “**WARM**”
(B) “**COOL**”

4. Adjust the air volume and air direction from the dashboard air outlets. In general, open feet area air outlets, and shut face and back area air outlets.



- (1) Face area air outlets
(2) Back area air outlets
(3) Feet area air outlets

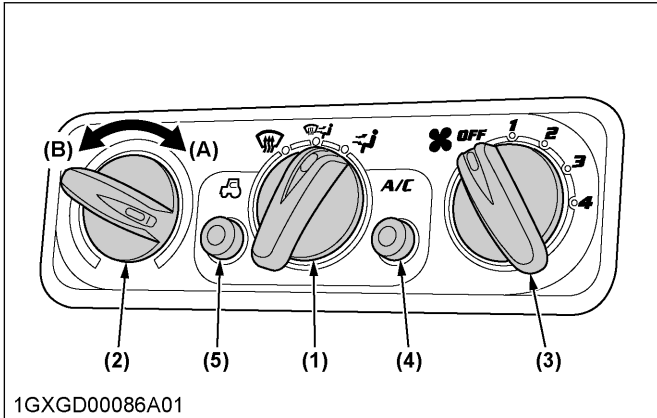
4.2 Cooling or dehumidifying-heating

1. Set the mode switch to the  position.
2. Set the recirculation or fresh air selection switch to the “**FRESH AIR**” position. To lower the temperature in the CAB quickly, set this switch to the “**RECIRCULATION**” position.
3. Press and turn on the air conditioner switch with indicator.
4. Turn on the blower ([1/2/3/4]) switch.

- Adjust the temperature control dial to “COOL” or the intermediate position to achieve a comfortable temperature level.

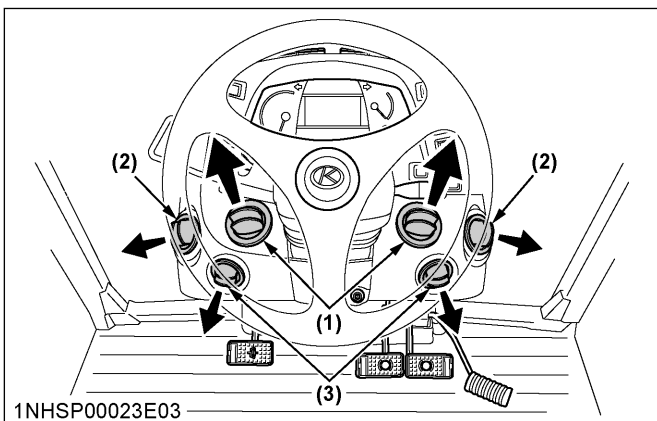
NOTE :

- In summer when the heater is not used, keep the temperature control dial at the max “COOL” (end of counterclockwise) position. Otherwise, hot air will raise the temperature in the CAB.



- 1GXGD00086A01
- | | |
|--|------------|
| (1) Mode switch | (A) “WARM” |
| (2) Temperature control dial | (B) “COOL” |
| (3) Blower switch | |
| (4) Air conditioner switch with indicator light | |
| (5) Recirculation or fresh air selection switch with indicator light | |

- Adjust the air volume and air direction from the dashboard air outlets. In general, the air volume from face area air outlets is adjusted to increase, and the air volume from feet and back area air outlets is adjusted to decrease.

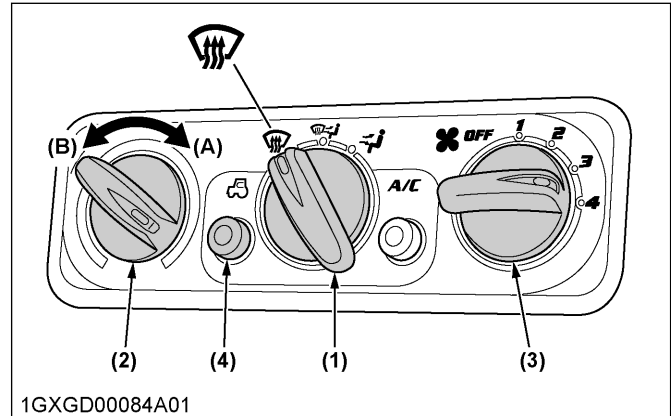


- 1NHSP00023E03
- | |
|---------------------------|
| (1) Face area air outlets |
| (2) Back area air outlets |
| (3) Feet area air outlets |

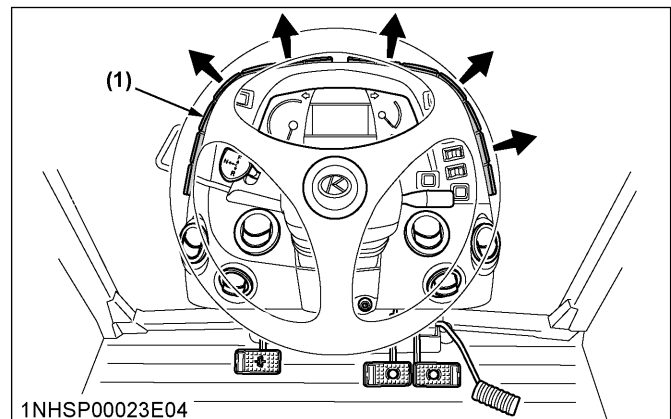
4.3 Defrosting or demisting

To defrost or demist the windshield, take the following steps.

- Set the mode switch to the position.
- Set the recirculation or fresh air selection switch to the “FRESH AIR” position.
- Set the blower switch and the temperature control dial to the [4] and max “WARM” (end of clockwise) positions, respectively.



- 1GXGD00084A01
- | | |
|--|------------|
| (1) Mode switch | (A) “WARM” |
| (2) Temperature control dial | (B) “COOL” |
| (3) Blower switch | |
| (4) Recirculation or fresh air selection switch with indicator light | |



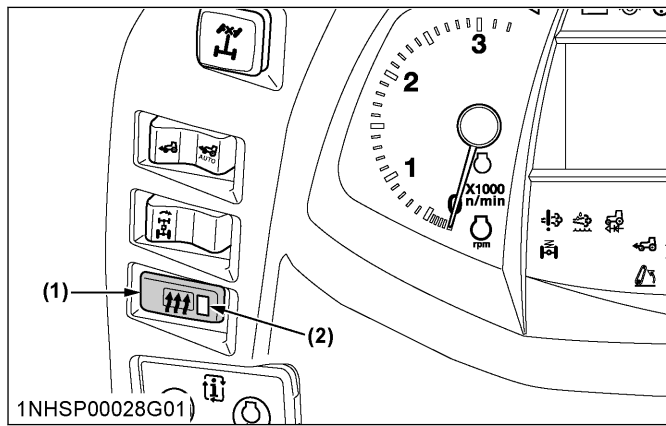
- 1NHSP00023E04
- | |
|--------------------------|
| (1) Defroster air outlet |
|--------------------------|

NOTE :

- If you set the mode switch to the position, air will not come out from the dashboard air outlets.

REAR DEFOGGER WITH TIMER (IF EQUIPPED)

To activate the rear window defogger, press the switch marked while the key switch is in the “ON” position. Then, the yellow light on the switch turns on. After about 15 minutes, the defogger and the yellow light turn off automatically. To turn the defogger off, press the switch once more.



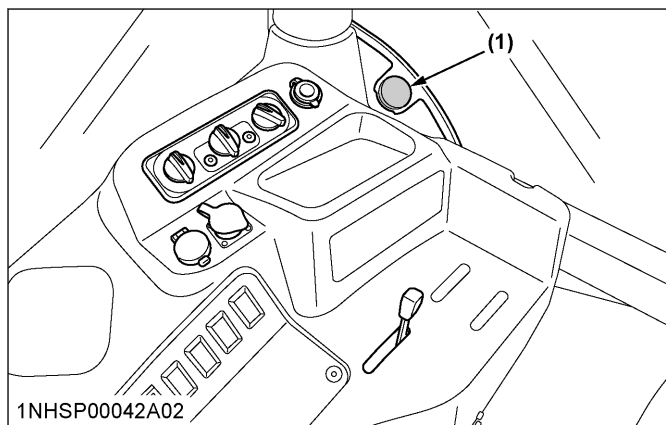
- (1) Defogger switch
(2) Yellow light

IMPORTANT :

- The battery will discharge if the defogger and the key switch remain in the “ON” position with the engine stopped.
Always use the defogger with the engine running.

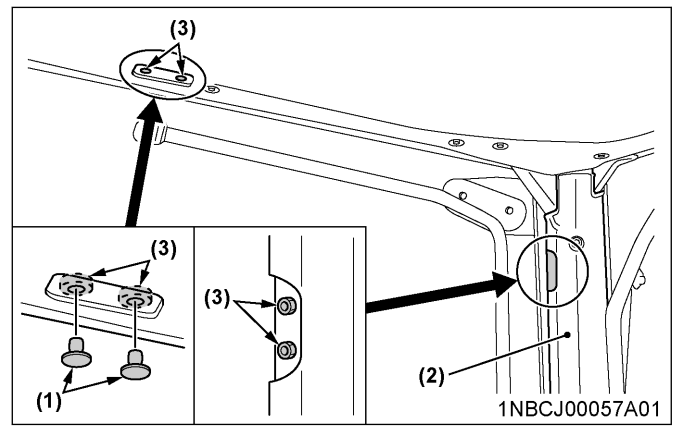
INSTALLING THE IMPLEMENT CONTROL BOX

- Make a slit into the corner cover. Introduce the implement control cable and hydraulic hose through this slit into the CAB.



- (1) Corner cover

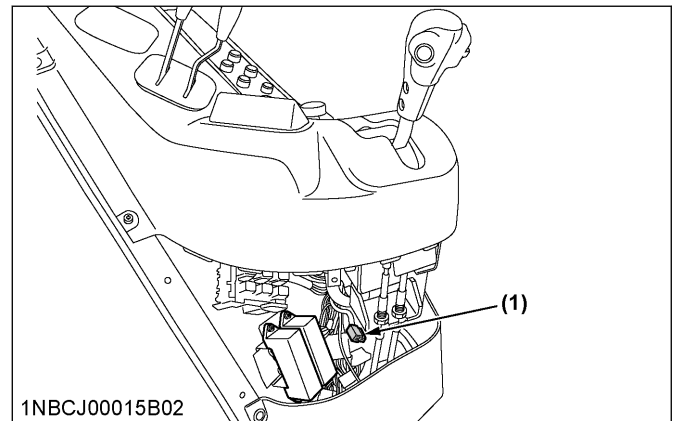
- Remove the plugs in inner roof, and cut off the hatched zone of the rear pillar cover with a utility knife. Attach the control box stay with internal nuts.



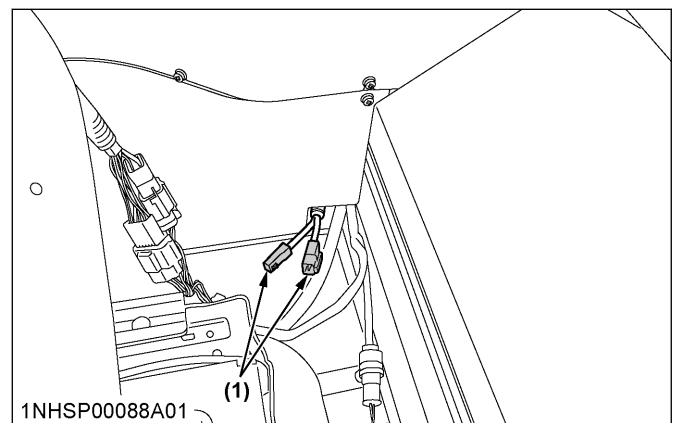
- (1) Plug
(2) Pillar cover
(3) M6 nuts

ELECTRICAL OUTLET

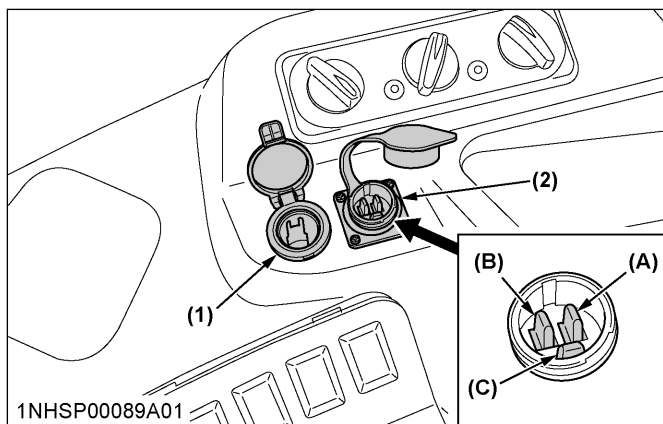
An electrical outlet is supplied for use with implement.



- (1) Connector for loader electrical outlet (15 A)



- (1) Accessory electrical outlet (20 A)



(1) Accessory electrical outlet
(15 A)

(2) Accessory electrical outlet

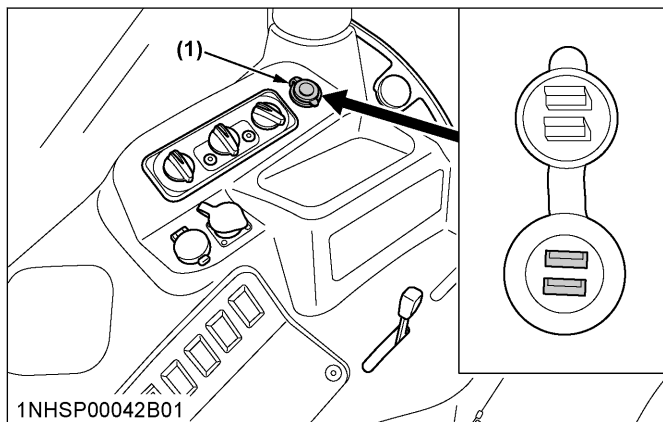
(A) Terminal: Through the ACC position of the key switch (20 A, but combined current of (A) terminal and (B) terminal must not exceed 30 A)

(B) Terminal: Through the battery direct (30 A, but combined current of (A) terminal and (B) terminal must not exceed 30 A)

(C) Terminal: Ground

USB OUTLET

The tractor is equipped with a USB outlet.



(1) USB outlet (2.1 A, 2 ports, 5V DC output)

NOTE :

- The USB outlet is not waterproof or dustproof. Be careful not to expose the USB outlet to water or dust.

MAINTENANCE

SERVICE INTERVALS

Maintenance parts		Maintenance timing													Ref. page					
		Indication on hour meter											Months or years	Interval						
		50	100	150	200	250	300	350	400	450	500	...								
Engine oil	Change	○												Initial 50 hrs	162	*1				
Engine oil filter	Replace	○													162	*1				
Fan/Air-conditioner belt (M6-131, M6-141 only)	Adjust	○													162	*1				
Engine start system	Check	○	○	○	○	○	○	○	○	○	○			Every 50 hrs	162					
Wheel bolt torque	Check	○	○	○	○	○	○	○	○	○	○				163					
Tie-rod dust cover	Check	○	○	○	○	○	○	○	○	○	○				163	*2				
Greasing	Lubricate		○		○		○		○		○			Every 100 hrs	164					
Air cleaner primary element	Clean		○		○		○		○		○				165	*3				
Fan belt (M6-101, M6-111 only)	Adjust		○		○		○		○		○				166					
Brake pedal	Adjust		○		○		○		○		○				166					
Parking brake lever	Adjust		○		○		○		○		○				167	*2				
Battery condition	Check		○		○		○		○		○				167	*4				
Air conditioner belt (M6-101, M6-111 only)	Adjust		○		○		○		○		○				169					
Toe-in	Adjust				○				○					Every 200 hrs	170					
Fuel tank water	Drain				○				○						170					
Inner air filter	Clean				○				○						171					
Fresh air filter	Clean				○				○						171					
Fan/Air-conditioner belt (M6-131, M6-141 only)	Check								○					Every 400 hrs	172					
Water separator	Clean								○						173					
Fuel solenoid pump	Clean								○						174					
Engine oil	Change										○		1 year	Every 500 hrs or 1 year	175	*5				
Engine oil filter	Replace										○						Every 500 hrs	175		
Pre-fuel filter (M6-131, M6-141 only)	Clean										○							176		
Fuel filter	Replace										○	176								
Hydraulic oil filter	Replace										○	177								
Power steering oil line	Check										○	178	*6							
Radiator hose and clamp	Check										○	179	*6							
Fuel line	Check										○	180	*6							
Intake air line	Check										○	180	*6							
Oil cooler line	Check										○	181	*6							
Power shift	Adjust										○	181	*2							

(Continued)

MAINTENANCE

Maintenance parts		Maintenance timing												Ref. page			
		Indication on hour meter											Months or years				Interval
		50	100	150	200	250	300	350	400	450	500	...					
Air conditioner pipes and hoses	Check										○			Every 500 hrs	181	*6	
Front axle pivot	Adjust											600 hrs		Every 600 hrs	182		
King-pin pivot	Adjust														182		
Transmission fluid	Change											1000 hrs		Every 1000 hrs	162		
Front differential case oil	Change														183		
Front axle gear case oil	Change														183		
Engine valve clearance	Adjust														184	*2	
Air cleaner primary element and secondary element	Replace											1 year	Every 1000 hrs or 1 year	184	*7		
Exhaust manifold	Check													184	*2 *7		
Fuel injector nozzle tip	Clean											1500 hrs		Every 1500 hrs	184	*2	@
DEF injector tip	Check														184	*2	
DEF (AdBlue) line	Check														184		
Oil separator element	Replace														184		@
PCV (Positive crankcase ventilation) valve (oil separator)	Check														185	*2	@
EGR cooler	Check Clean														185	*2	@
Accumulator (front suspension type)	Check														185	*2	
Cooling system	Flush											2000 hrs	2 years	Every 2000 hrs or 2 years	185	*8	
Coolant	Change													185	*8		
Turbo charger	Check											3000 hrs		Every 3000 hrs	187	*2	@
Supply pump	Check														187	*2	
Intake air heater (M6-101, M6-111 only)	Check														187	*2	
EGR system	Check Clean														187	*2	@
DPF muffler (M6-101, M6-111 only)	Clean														187	*2	@
DEF injector	Check														187	*2	
DEF pump filter	Replace														188		
DPF muffler (M6-131, M6-141 only)	Clean											8000 hrs		Every 8000 hrs	169	*2	@
DEF tank suction filter	Replace													188	*2		
DEF (AdBlue) quality	Check												3 months	Every 3 months	188		
Rustproofing operation	Perform												3 to 4 months	Every 3 to 4 months	188		
Antifrost heater for oil separator (if equipped)	Check												1 year	Every 1 year	189	*2	
CAB isolation cushion	Check														189		
DPF differential pressure sensor pipe	Check														189	*2	
EGR pipe	Check														189	*2	

(Continued)

Maintenance parts		Maintenance timing													Ref. page		
		Indication on hour meter											Months or years	Interval			
		50	100	150	200	250	300	350	400	450	500	...					
PCV valve hose	Replace												2 years	Every 2 years	189	*2	
DPF differential pressure sensor hose	Replace														189	*2	
Boost sensor hose	Replace														189	*2	
Brake hose	Check														189	*2	
Clutch hose	Check														189	*2	
Differential lock hose	Check														189	*2	
Radiator hose and clamp	Check														189	*2	
Fuel line	Check														189	*2	
Intake air line	Check														189	*2	
Oil cooler line	Check														189	*2	
Power steering oil line	Check														189	*2	
Lift cylinder hose	Check														189	*2	
Front suspension hose (Front suspension type)	Check														189	*2	
Air conditioner pipes and hoses	Check														189	*2	
Parking brake cable	Replace												3 years	Every 3 years	189	*2	
Master cylinder kit	Replace												4 years	Every 4 years	189	*2	
Equalizer kit	Replace														189	*2	
Brake seal 1 and 2	Replace														189	*2	
DEF (AdBlue)	Add													Every fuel refilling in-terval	155		@
Fuel system	Bleed													Service as required	189		
Brake system	Bleed														191		
Clutch housing water	Drain														191		
Fuse	Replace														191		
Light bulb	Replace														194		
Head lamp	Replace														195		
Lubricating point	Lubricate														195		
Washer liquid	Add														195		
Refrigerant (gas)	Check														195		

*1 The job must be done after the first 50 hours of operation.

*2 Consult your local Kubota dealer for this service.

*3 Air cleaner should be cleaned more often in dusty conditions than in normal conditions.

*4 When the battery is used for less than 100 hours per year, check the battery condition by reading the indicator annually.

*5 Every 500 hours or every 1 year, whichever comes first.

*6 Replace if any deterioration (crack, hardening, scar, or deformation) or damage occurred.

*7 Every 1000 hours or every 1 year, whichever comes first.

*8 Every 2000 hours or every 2 years, whichever comes first.

IMPORTANT :

- The items marked with @ are registered as emission related critical parts by Kubota in the U.S.EPA nonroad emission regulation. As the engine owner, you are responsible for the performance of the required maintenance on the engine according to the above instructions. Please see the Warranty Statement for detail.

MAINTENANCE

- When using biodiesel, check the maintenance requirements of biodiesel fuel as the intervals will change in some of the items.

LUBRICANTS, FUEL AND COOLANT

No.	Locations	Capacities				Lubricants	
		M6-101	M6-111	M6-131	M6-141		
1	Fuel	190 L (50.2 U.S.gals.)				No.2-D S15 diesel fuel No.1-D S15 diesel fuel if temperature is below -10 °C (14 °F)	
2	DEF (AdBlue)	16 L (4.2 U.S.gals.)					
3	Coolant	11.5 L (12.2 U.S.qts.) (coolant recovery tank: 1.5 L / 1.6 U.S.qts.)		15.9 L (16.8 U.S.qts.) (coolant recovery tank: 1.5 L / 1.6 U.S.qts.)		Fresh clean soft water with antifreeze	
4	Washer liquid	2 L (2.1 U.S.qts.)				Automobile washer liquid	
5	Engine crankcase (with filter)	10.5 L (11.1 U.S.qts.)		14.6 L (15.4 U.S.qts.)		• Engine oil: API service classification	CJ-4 (DPF type engine oil)
						Above 25 °C (77 °F)	SAE30, SAE10W-30 or 15W-40
						-10 °C to 25 °C (14 to 77 °F)	SAE10W-30 or 15W-40
						Below -10 °C (14 °F)	SAE10W-30
6	Transmission case	65 L (68.7 U.S.qts.)				• Kubota SUPER UDT2 fluid	
7	Front differential case	7 L (7.4 U.S.qts.)		13 L (13.7 U.S.qts.)		• Kubota SUPER UDT2 fluid or SAE 80 - SAE 90 gear oil	
8	Front axle gear case	3.5 L (3.7 U.S.qts.)		4.5 L (4.8 U.S.qts.)			
9	Greasing	No. of greasing points				Capacity	Type of grease
	Top link	2				Until grease overflows.	Multipurpose grease NLGI-2 or NLGI-1 (GC-LB)
	Lift rod	2					
	Front axle gear case support	2					
	Front axle support	2					
	Hydraulic lift cylinder pin	4					
	Hydraulic arm axle	1					
	Battery terminal	2				A small amount	

Front suspension type

8	Greasing	No. of greasing points	Capacity	Type of grease
	Suspension cylinder	2	Until grease overflows.	Multipurpose grease NLGI-2 or NLGI-1 (GC-LB)
	Suspension arm	2		
	Universal joint	4		

NOTE :

- The product name of Kubota genuine UDT fluid may be different from that in the operator's manual depending on countries or territories. Consult your local Kubota dealer for further details.

Engine oil

- The oil used in the engine should have an American Petroleum Institute (API) service classification and proper SAE engine oil according to the ambient temperatures shown in the previous table.
- Refer to the following table for the suitable API classification engine oil according to the diesel particulate filter (DPF) type engines and the fuel.

Fuel used	Engine oil classification (API classification)
	Oil class for engines with DPF
Ultra low sulfur fuel <0.0015 % (15 ppm)	CJ-4

Fuel

- Use the ultra low sulfur diesel fuel only (below 0.0015 % or 15 ppm) for these engines.
- Cetane number of 45 minimum. Cetane number greater than 50 is preferred, especially for temperatures below -20 °C (-4 °F) or elevations above 1500 m (5000 ft).
- Diesel fuels specified to EN 590 or ASTM D975 are recommended.
- No.2-D is a distillate fuel of lower volatility for engines in industrial and heavy mobile service (SAE J313 JUN87).

DEF (AdBlue):

The DEF (AdBlue), used as reducing agent of SCR, is a 32.5 % aqueous urea solution.

The product is available at gas stations, truck stops and specialty shops. Use the genuine product only.

- Use exclusively DEF (AdBlue) that complies with the requirements of ISO 22241-1.

Transmission oil

***Kubota SUPER UDT2:** For an enhanced ownership experience, we highly recommend **SUPER UDT2** to be used instead of standard hydraulic and transmission fluid.

SUPER UDT2 is a proprietary Kubota formulation that delivers superior performance and protection in all operating conditions.

Regular UDT is also permitted for use in this machine.

Indicated capacities of water and oil are manufacturer's estimate.

1. Biodiesel fuel (BDF) B0-B20

B0-B20 Biodiesel fuels (BDF): mixed diesel fuels containing 20 % or less biodiesel can be utilized under the following conditions.

IMPORTANT :

- **Refueling and handling fuel should be done with caution in order to avoid contact with the fuel and spillage that could create a potential environmental or fire hazard. Wear appropriate protective equipment when refueling.**

Applicable BDF:

1. Blended diesel fuels containing 6 % through 20 % BDF (B6 - B20) which comply with American Society for Testing and Materials (ASTM) D7467 Standard, as revised, can be used without adversely affecting the performance and durability of the engine and fuel system components.
2. Any mineral oil diesel fuel, if used, must conform to ASTM D975 (or the European EN590) Standard, as revised. B100 fuel used to make Biodiesel blended fuels must meet ASTM D6751 (or EN14214) Standard, as revised. The final blended fuel B20 must conform to ASTM D7467 Standard, as revised. Straight vegetable oil is not allowed in any blended fuel.
3. Allowable blended fuel is mineral oil diesel fuel blended with B100 (meaning, 100 % BDF). The blended fuel ratio shall be less than 20 % B100 and 80 % or more diesel fuel. The B100 source used for Biodiesel blends must be purchased from an accredited BQ-9000 marketer or producer. More information about qualified marketer(s) and producer(s) can be found at <http://www.bq-9000.org>.

Preparation:

1. Before using BDF concentrations greater than B5, you are advised to replace the engine oil, engine oil filter and fuel filter with new oil and filters. Details regarding the replacement procedures can be found in a different section. (See Changing engine oil on page 175, Replacing engine oil filter on page 175, and Replacing fuel filter on page 176.)

Product warranty, emission and other precautions:

1. The engine emission control system was certified according to current regulations based on the use of non-BDF. When using BDF, the owner is advised to check applicable local and federal emission regulations and comply with all of them.
2. BDF may cause restricted or clogged fuel filters during cold weather conditions, resulting in the engine not operating properly.
3. BDF encourages the growth of microorganisms which may cause degradation of the fuel. This in turn may cause fuel line corrosion or reduce fuel filter flow earlier than expected.
4. BDF inherently absorbs moisture which may cause degradation of the fuel earlier than expected. To avoid this, drain the water separator and fuel filter port often.
5. Do not use Biodiesel concentrations higher than 20 % (namely, greater than B20). Engine performance and fuel consumption will be affected, and degradation of the fuel system components may occur.
6. Do not readjust the engine fuel control system as this will violate emission control levels for which the equipment was approved.
7. Compared with soybean-based and rapeseed-based feedstock, palm oil-based feedstock has a thicker consistency (that is, higher viscosity) at lower temperatures. Consequently, fuel filter performance may be reduced, particularly during cold weather conditions.
8. The Kubota Warranty, as specified in the owner's warranty information guide, only covers defects in product materials and workmanship. Accordingly, any problems that may arise due to the use of poor quality fuels that fail to meet the above requirements, whether biodiesel or mineral oil based, are not covered by the Kubota Warranty.

Routine handling:

1. Avoid spilling BDF onto painted surfaces as this may damage the finish. If fuel is spilled immediately wipe clean and flush with soapy water to avoid permanent damage.
2. When using BDF, you are advised to maintain a full tank of fuel, especially overnight and during short term storage, to reduce condensation within the tank. Tighten the fuel cap after refueling to prevent moisture build up within the tank. Water in the biodiesel mixture will damage fuel filters and may damage engine components.

Maintenance requirements when using BDF B0 through B5:

Follow the recommended oil change intervals. (See MAINTENANCE on page 145.)

Extended oil change intervals may result in premature wear or engine damage.

Maintenance requirements when using BDF B6 through B20:

The maintenance intervals for fuel related parts changes.

See the following table for the new maintenance intervals.

Items		Interval	Remarks
Pre-fuel filter	Clean	Every 250 hrs	
Fuel filter	Replace	Every 250 hrs	
Fuel line	Check	Every 250 hrs	Replace if any deterioration (crack, hardening, scar or deformation) or damage occurred.
	Replace	Every 2 years	Consult your local Kubota dealer for this service.

Long term storage:

1. BDF easily deteriorates due to oxygen, water, heat and foreign substances.
Do not store B6 through B20 longer than 1 month and B5 longer than 3 months.
2. When using B6 through B20 and storing the machine longer than 1 month, drain the fuel from the tanks and replace with light mineral oil diesel fuel.
Subsequently, run the engine at least 30 minutes to remove all of the Biodiesel from the fuel lines.
3. When using B5 fuel and storing machine longer than 3 months, drain the fuel from the tanks and replace with light mineral oil diesel fuel.
Subsequently, run the engine at least 30 minutes to remove all of the Biodiesel from the fuel lines.

PERIODIC SERVICE

WARNING

To avoid personal injury or death:

- Do not work under any hydraulically supported devices. They can settle, suddenly leak, or be accidentally lowered. If necessary to work under the tractor or any machine elements for servicing or adjustments, securely support them with stands or suitable blocking beforehand.

WASTE DISPOSAL

- The improper disposal or burning of waste causes environmental pollution and can be punishable by your local laws and regulations.
 - When draining fluids from the tractor, place a container underneath the drain port.
 - Do not pour waste onto the ground, down a drain, or into any water source (such as rivers, streams, lakes, marshes, seas and oceans).
 - Waste products such as used oil, fuel, coolant, hydraulic fluid, aqueous urea solution (DEF (AdBlue)), refrigerant, solvent, filters, rubber, batteries and harmful substances can harm the environment, people, pets and wildlife. Please dispose properly. See your local recycling center or Kubota dealer to learn how to recycle or get rid of waste products.

HOW TO OPEN THE HOOD

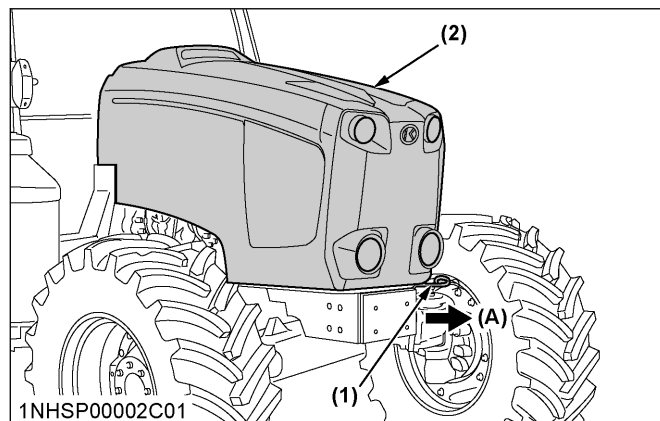
WARNING

To avoid personal injury or death from contact with moving parts:

- Never open the hood or engine side cover while the engine is running.
- Do not touch the muffler or exhaust pipes while they are hot. Severe burns could result.
- Hold the hood with the other hand while unlocking the release lever.

1. Hood

1. To open the hood, hold the hood, pull the release lever and then open the hood.

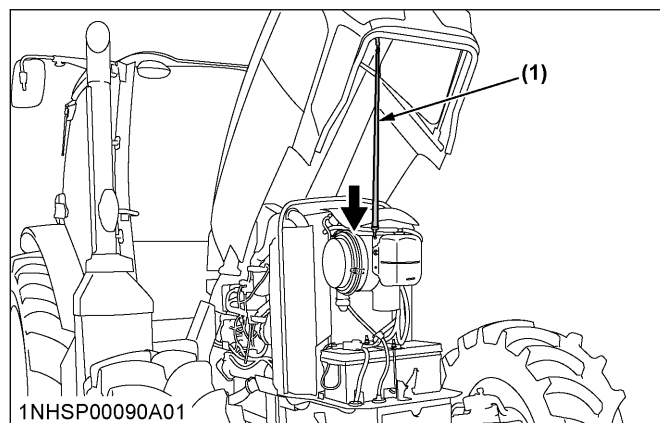


(1) Release lever
(2) Hood

(A) "PULL"

NOTE :

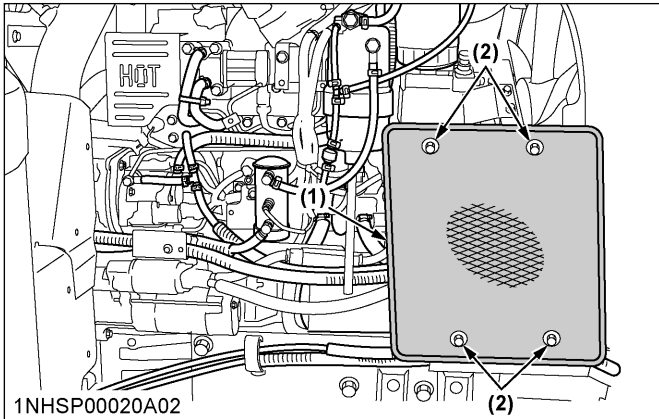
- To close the hood, pull down on the strap and push the hood into position using both hands.



(1) Strap

2. Side cover

1. Remove the bolts as shown below.



- (1) Side cover 1
(2) Bolt

DAILY CHECK

For your own safety and maximum service life of the machine, make a thorough daily inspection before operating the machine to start the engine.

WARNING

To avoid personal injury or death:
Take the following precautions when checking the tractor.

- Park the machine on firm and level ground.
- Set the parking brake.
- Lower the implement to the ground.
- Release all residual pressure of the hydraulic system.
- Stop the engine and remove the key.
- Lower the front suspension to the lowest position (front suspension type only).

IMPORTANT :

- When cleaning the inside of the door glass, use a mild detergent. The inner layer of the door glass contains IR film (infrared rejection film). The use of acidic or alkaline detergents can result in discoloration or peeling of the film, therefore reducing performance.

1. Walk around inspection

Look around and under the tractor for items such as loose bolts, trash build-up, oil or coolant leaks, broken or worn parts.

2. Checking and refueling

WARNING

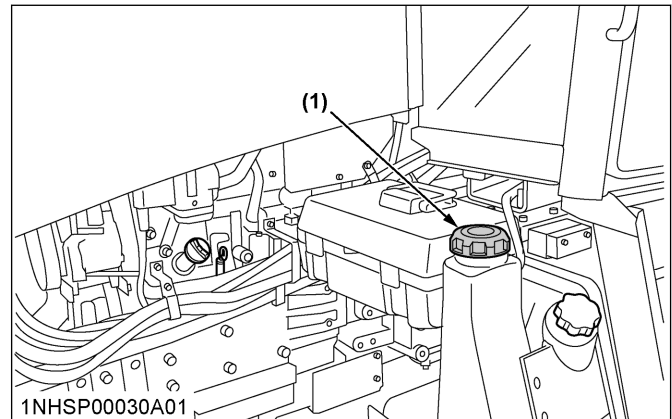
To avoid personal injury or death:

- Never refuel near an open flame.
- Do not smoke while refueling.
- Stop the engine and remove the key before refueling.
- Use properly grounded fueling systems. Make sure that there is no static discharge while refueling.
- Close the fuel tank cap after refueling.

To avoid allergic skin reaction:

- Wash hands immediately after contact with diesel fuel.

1. Check the amount of fuel by looking at the fuel gauge.
2. When the fuel warning indicator lights up, it is time to add fuel.



- (1) Fuel tank cap

Fuel tank capacity	190 L (50.2 U.S.gals.)
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IMPORTANT :

- Use ultra-low sulfur fuel (S15).
- Do not permit dirt or trash to get into the fuel system.
- Be careful not to let the fuel tank become empty. Otherwise, air will enter the fuel system, necessitating bleeding before the next engine start.
- If the engine runs out of fuel and stalls, engine components may become damaged.
- Be careful not to spill during refueling. If a spill occurs wipe it off at once or it may cause a fire.
- To prevent condensation (water) accumulation in the fuel tank, fill the tank before parking overnight.

NOTE :

- The DEF tank cap is blue.

Do not add DEF (AdBlue) to the fuel tank. Also, do not add diesel fuel to the DEF tank.

3. Checking antifrost heater for oil separator (if equipped)

WARNING

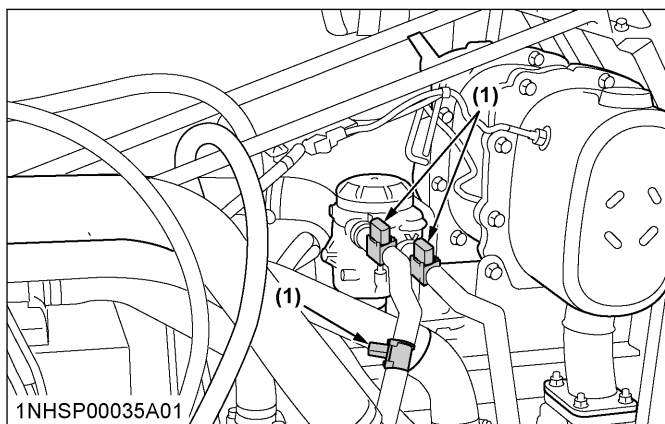
To avoid personal injury or death:

- Because there are rotating parts like the fan, and so on, near the inspection position, keep the engine off during inspection.

When operating tractors with antifrost heaters for oil separator in cold regions (below the freezing point: 0 °C / 32 °F), carry out inspection by using the following procedure before starting work:

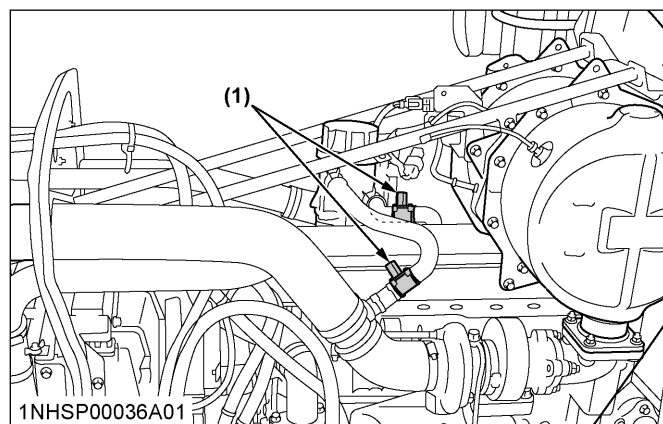
1. Turn the key switch to the "ON" position.
2. After 1 minute, inspect by touch whether the heater is working. If the heater is working, its temperature will rise to roughly 70 °C (158 °F), so you will be able to feel its warmth.
3. If the heater is not warm, it is not working. In this case, contact your local Kubota dealer without starting the engine.

M6-101, M6-111



(1) Heater

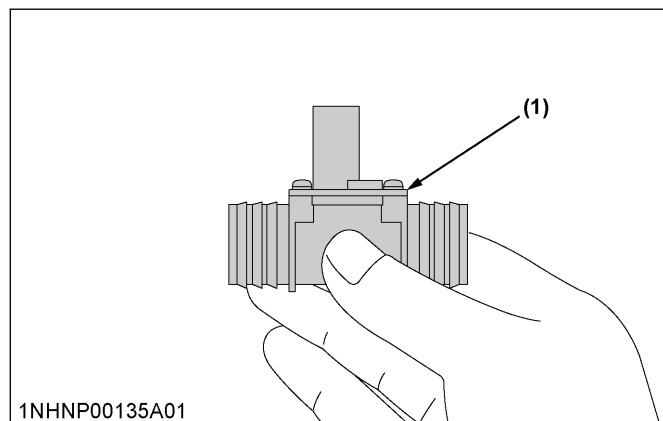
M6-131, M6-141



(1) Heater

NOTE :

- Refer to the following figure for the heater inspection position.



(1) Heater

4. Checking the DEF (AdBlue) level and adding fluid

WARNING

To avoid personal injury or death:

- Before adding DEF (AdBlue), stop the engine. When adding the fluid, preferably wear protective goggles and rubber gloves.

CAUTION

To avoid personal injury, note the following when handling DEF (AdBlue):

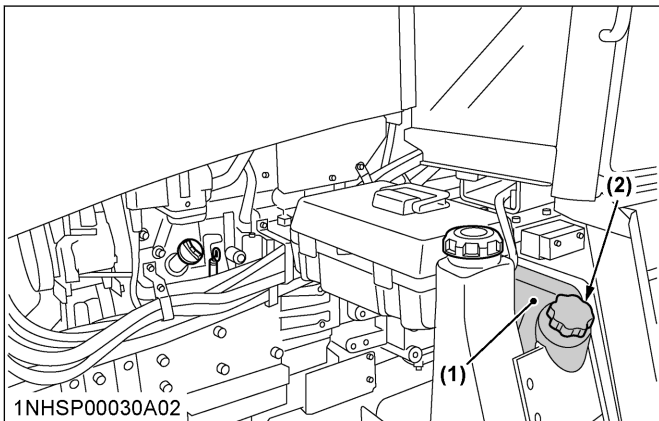
- If DEF (AdBlue) gets into your eyes, immediately rinse your eyes with a large amount of water for at least 15 minutes and consult a doctor.
- Do not swallow DEF (AdBlue). If you have accidentally swallowed DEF (AdBlue), seek medical attention immediately.

- If DEF (AdBlue) gets on your skin, rinse immediately with water. In rare cases, DEF (AdBlue) may irritate the skin.
- If DEF (AdBlue) gets on your clothes or shoes, wash it off immediately. Simply wiping off or leaving DEF (AdBlue) on clothes or shoes will leave a white residue.

For more details, obtain and read the Safety Data Sheet (SDS) from the DEF (AdBlue) supplier.

NOTE :

- The DEF tank cap is blue. Do not add DEF (AdBlue) to the fuel tank. Also, do not add diesel fuel to the DEF tank.
- If you spill DEF (AdBlue), immediately rinse with clean water. If left untouched, DEF (AdBlue) may rust metal parts or corrode painted surfaces. Also, resin and rubber parts may be deformed.



- (1) DEF tank
(2) DEF tank cap (blue)

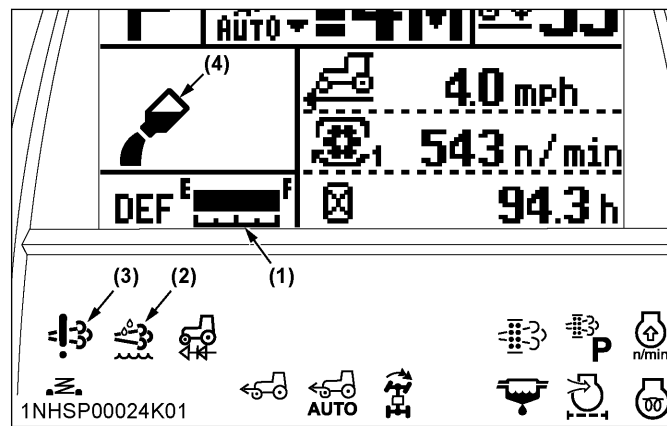
Look at the DEF (AdBlue) gauge on the instrument panel to see how much fluid remains. If the level is too low, add DEF (AdBlue) as required.

Before removing the DEF tank cap, clean dirt away from the cap and the cap's surroundings.

If the DEF (AdBlue) runs low, the low-level warning icon flashes and the buzzer sounds. If you continue to run the machine in its current state, the engine output will be limited to about 50 %. If operation is continued, the engine will be limited to idling.

(For details, refer to Warning indication and countermeasures on page 48.)

In order to maintain the performance of the SCR system, it is recommended to fully refill the DEF tank with DEF (AdBlue) each time the fuel tank is refueled.



- (1) DEF (AdBlue) gauge
(2) DEF (AdBlue) level and quality warning indicator
(3) SCR system warning indicator
(4) Low-level warning icon of DEF (AdBlue)

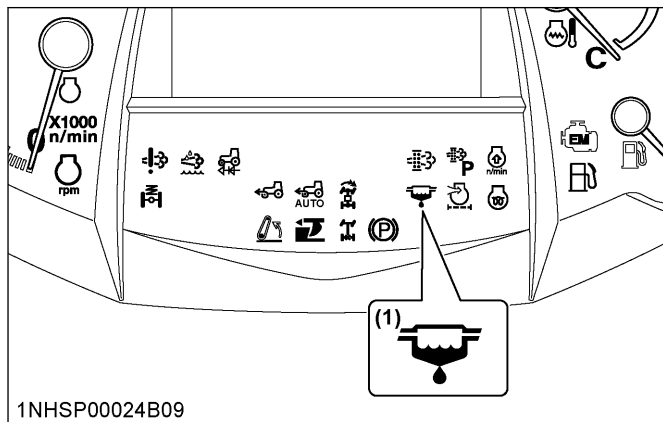
DEF tank capacity	16 L (4.2 U.S.gals.)
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IMPORTANT :

- Use exclusively DEF (AdBlue) that complies with the requirements of ISO 22241-1.
- If anything other than DEF (AdBlue) is mixed into the DEF tank and the engine is started, the SCR system may fail. Do not start the engine if the DEF (AdBlue) is contaminated with diesel fuel. Consult your Kubota dealer immediately.
- The warranty does not cover failures caused by adding or mixing anything other than DEF (AdBlue) into the DEF tank. If that occurs, all repair costs will be the customer's responsibility.
- When removing the DEF tank cap, be careful not to allow mud or any debris into the DEF tank. Otherwise, the DEF filter may become clogged or the DEF (AdBlue) quality degraded, possibly resulting in a SCR system failure.
- If contamination such as above has occurred, inspection of the SCR system by your local dealer is necessary. Repair or overhaul as needed.
- Do not stand on or place anything on the DEF tank as the tank, piping and sensor damage may result.
- Do not tamper with the exhaust pipe and muffler. Do not relocate the DEF tank, either. Such action may adversely affect the exhaust gas purifying performance.
- When DEF (AdBlue) stuck on the filler port has dried up, white powder may be found. This is nothing unusual. Wipe off the white powder carefully so as not to allow it into the DEF tank.

5. Checking water separator

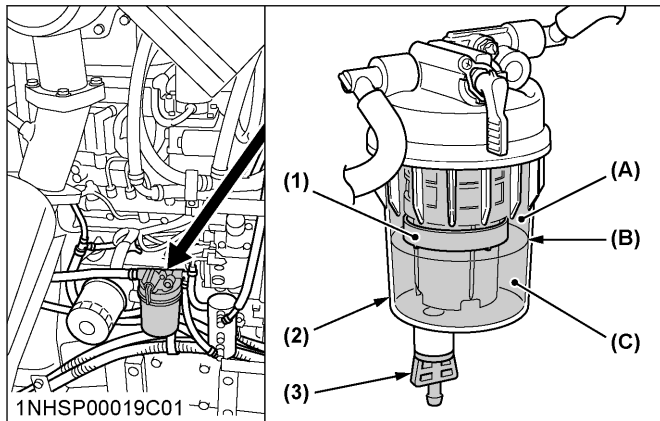
1. When the water has collected up to the upper limit in the water separator, the water separator indicator on the instrument panel lights up and a warning buzzer sounds.



(1) Water separator indicator

2. In this case, close the fuel shutoff-valve and loosen the air plug and drain plug by several turns.
3. Allow the water to drain. When no more water comes out and fuel starts to flow out, retighten the air plug and drain plug.
4. Bleed the fuel system.
(See SERVICE AS REQUIRED on page 189.)

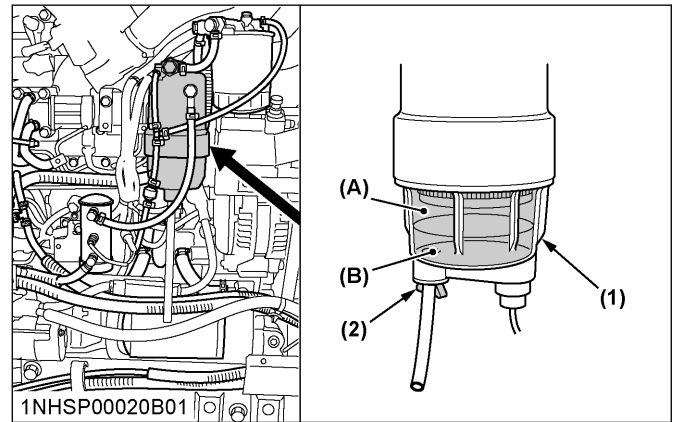
M6-101, M6-111



(1) Red float
(2) Cup
(3) Drain plug

(A) "FUEL"
(B) "UPPER LIMIT"
(C) "WATER"

M6-131, M6-141



(1) Cup
(2) Drain plug

(A) "FUEL"
(B) "WATER"

IMPORTANT :

- If water is drawn through to the fuel pump, extensive damage will occur.

NOTE :

- For M6-101 and M6-111
When the red float reaches near the upper limit level, start from step 2 in the above procedure to drain water from the water separator.

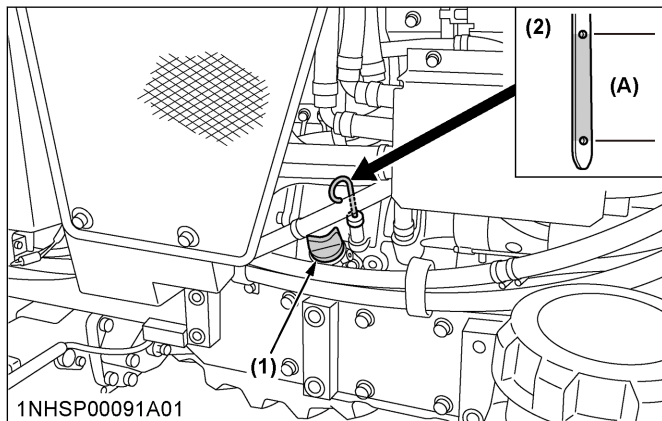
6. Checking engine oil level

! WARNING

To avoid personal injury or death:

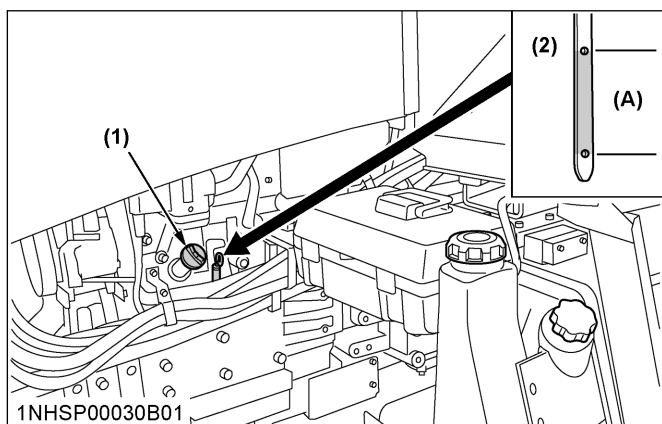
- Stop the engine before checking the oil level.

1. Park the machine on a flat surface.
2. Check the engine oil before starting the engine or 5 minutes or more after the engine has stopped.
3. To check the oil level, draw out the dipstick, wipe it clean, replace it, and draw it out again. Check to see that the oil level lies between the 2 notches.
If the level is too low, add new oil to the prescribed level at the oil inlet.
(See LUBRICANTS, FUEL AND COOLANT on page 149.)

M6-101, M6-111

- (1) Oil inlet
(2) Dipstick

(A) Oil level is acceptable within this range.

M6-131, M6-141

- (1) Oil inlet
(2) Dipstick

(A) Oil level is acceptable within this range.

IMPORTANT :

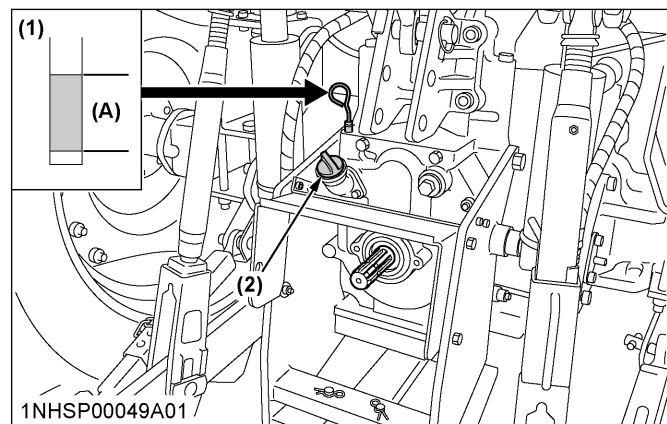
- When using an oil of different manufacturer or viscosity from the previous one, remove all of the old oil.
Never mix 2 different types of oil.
- If the oil level is low, do not run the engine.

NOTE :

- At times, a small amount of fuel, which is used to regenerate the DPF, may get mixed with the engine oil and the engine oil may increase in volume.

7. Checking transmission fluid level

1. Park the machine on a flat surface, lower the implement and shut off the engine.
2. To check the oil level, draw out the dipstick, wipe it clean, replace it, and draw it out again. Check to see that the oil level lies between the 2 notches.
If the level is too low, add new oil to the prescribed level at the oil inlet.
(See LUBRICANTS, FUEL AND COOLANT on page 149.)



- (1) Dipstick
(2) Oil inlet

(A) Oil level is acceptable within this range.

IMPORTANT :

- If the oil level is low, do not run the engine.

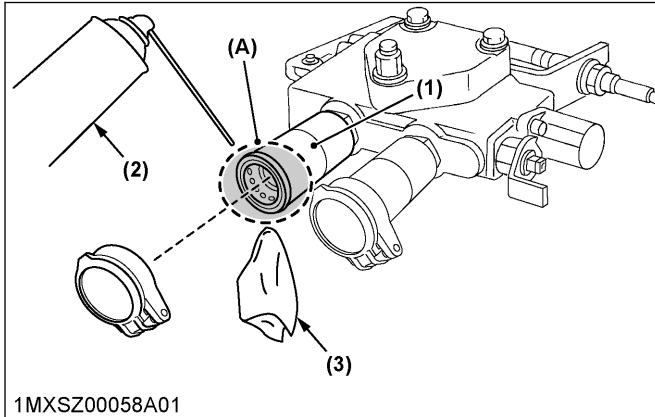
8. Cleaning remote control valve coupler**! WARNING**

To avoid personal injury or death:

- Stop the engine before cleaning the coupler.
- The remote control valve coupler becomes hot after use. Allow sufficient time for the coupler to cool down before checking and cleaning it.

1. During use, mud and other debris that adheres to the remote control valve coupler may enter the inner part of the coupler. Check and clean the coupler (both tractor side and implement side) frequently in order to prevent malfunctions such as oil leakage.

- If any dirt or debris remains stuck to the coupler, use a general lubricant spray to clean the parts (both tractor side and implement side). Remove any residue with a clean cloth or paper.



- (1) Remote control valve coupler
 (2) General lubricant spray
 (3) Clean cloth or paper
- (A) "Clean the coupler on both the tractor side and the implement side"

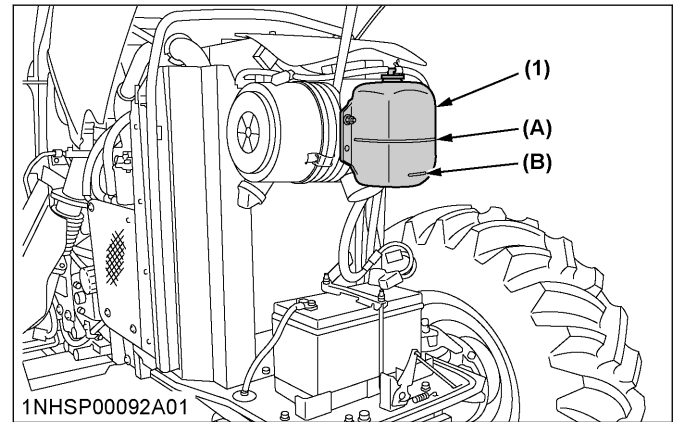
9. Checking coolant level

WARNING

To avoid personal injury or death:

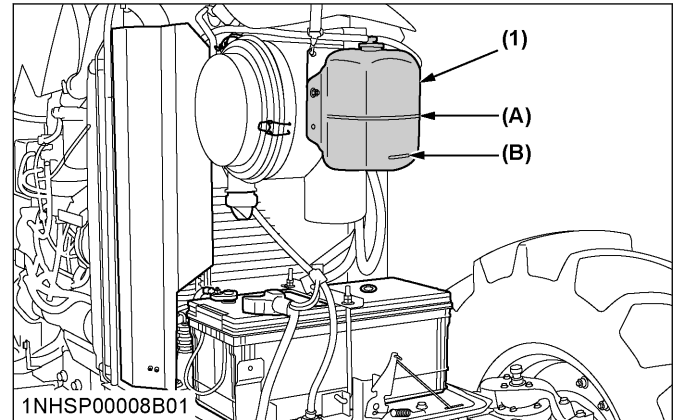
- Do not remove the radiator cap while the coolant is hot. When cool, slowly rotate the cap to the first stop and allow sufficient time for excess pressure to escape before removing the cap completely.
- Check to see that the coolant level is between the **[FULL]** and **[LOW]** marks of the coolant recovery tank.
 - When the coolant level drops due to evaporation, add soft water only up to the full level. In case of leakage, add antifreeze and soft water in the specified mixing ratio up to the full level. (See Flushing cooling system and changing coolant on page 185.)
 - When the coolant level is lower than the **[LOW]** mark of the coolant recovery tank, remove the radiator cap and check to see that the coolant level is just below the port. If the level is low, add coolant.

M6-101, M6-111



- (1) Coolant recovery tank
 (A) "FULL"
 (B) "LOW"

M6-131, M6-141



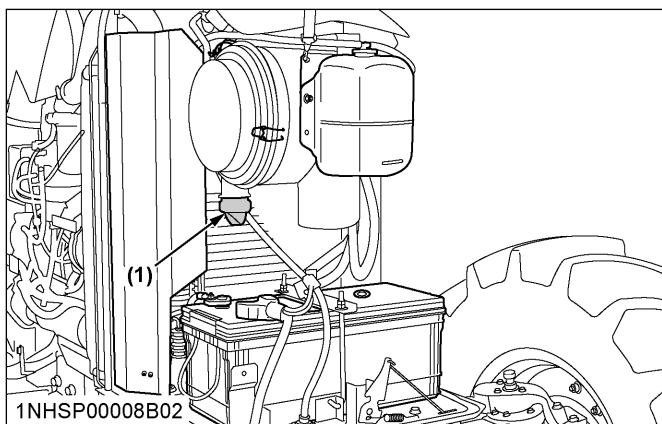
- (1) Coolant recovery tank
 (A) "FULL"
 (B) "LOW"

IMPORTANT :

- If the radiator cap has to be removed, follow the caution above and securely retighten the cap.
- Use clean, fresh soft water and antifreeze to fill the radiator.
- If coolant should leak, consult your local Kubota dealer.

10. Cleaning evacuator valve

Open the evacuator valve to get rid of large particles of dust and dirt.



(1) Evaporator valve

11. Cleaning grille, radiator screen, oil cooler, fuel cooler, air conditioner condenser and battery mount

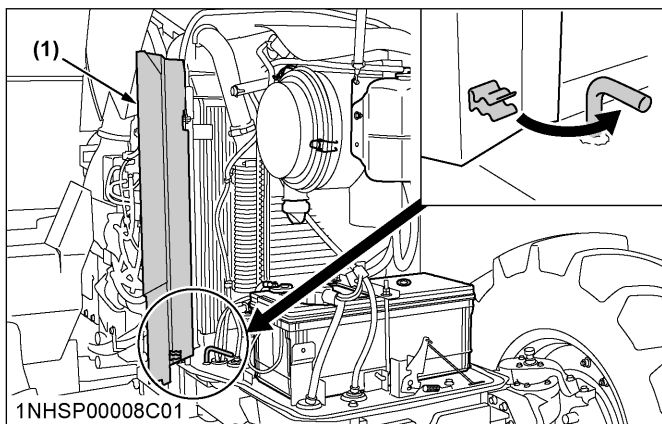
WARNING

To avoid personal injury or death:

- Stop the engine before removing the screen.
- The condenser and receiver become hot while the air conditioner is running. Before checking or cleaning the condenser and the receiver, wait until they cool down enough.

11.1 Opening the panel (RH)

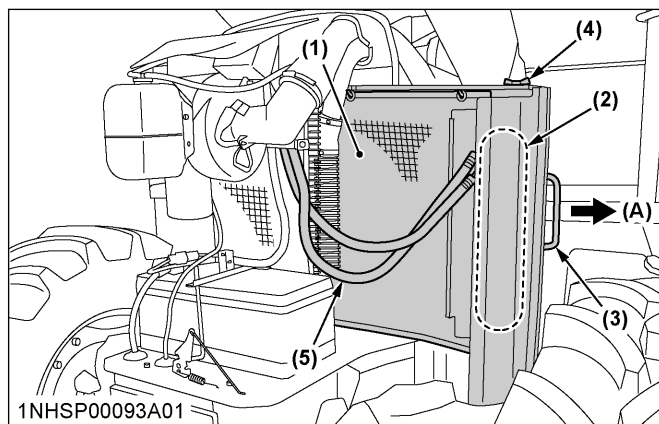
1. To open the panel, pull its front outward.
2. To close the panel, push it inward to get it locked.



(1) Panel (RH)

11.2 Sliding the air conditioner condenser

1. Loosen the wing nut.
2. Hold the handle, slide the air conditioner condenser assembly toward yourself.



- (1) Condenser
(2) Receiver
(3) Handle
(4) Wing nut
(5) Air conditioner hose

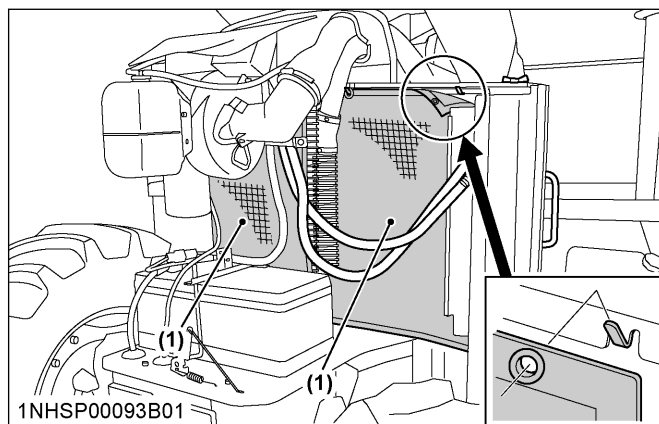
(A) "PULL"

IMPORTANT :

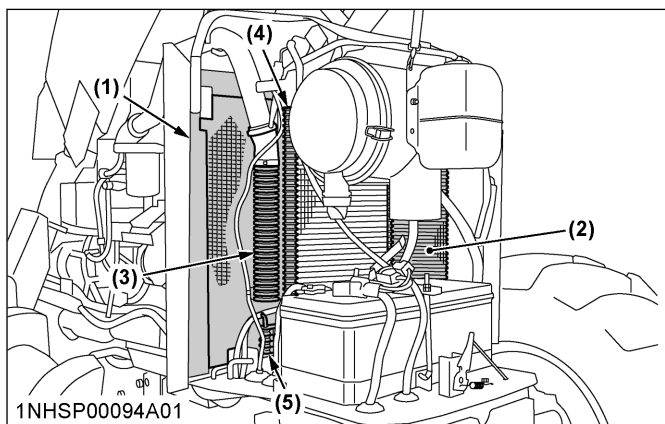
- Do not hold the air conditioner receiver or the air conditioner pipes when sliding out the condenser for cleaning.

11.3 Cleaning

1. Check the front grille to make sure that it is clean from debris.
2. Detach the radiator and air conditioner screens and remove all foreign materials.
3. Check radiator, intercooler, oil cooler, fuel cooler, air conditioner condenser and battery mount to be sure that they are clean from debris.



(1) Screen



- (1) Radiator
- (2) Air conditioner condenser
- (3) Intercooler
- (4) Oil cooler
- (5) Fuel cooler

IMPORTANT :

- The grille and screen must be clean from debris to prevent engine from overheating and to allow good air intake for air cleaner.

12. Checking DPF muffler / SCR device

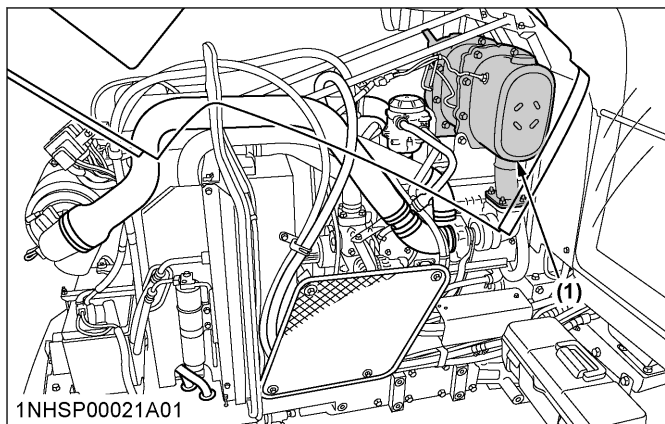
WARNING

To avoid personal injury or death:

- Before checking or cleaning the DPF muffler / SCR device, stop the engine and wait until it cools down enough.

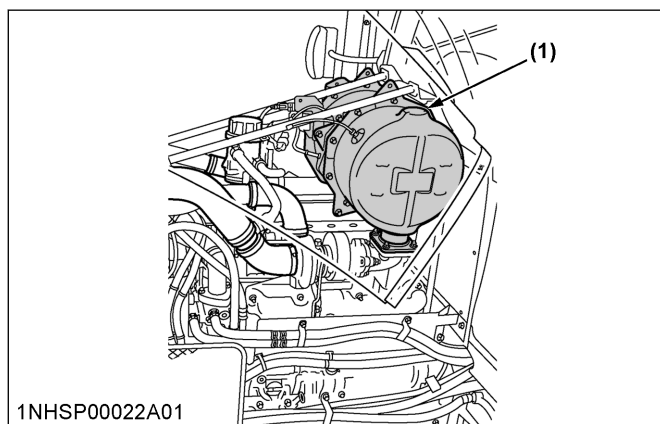
Check the DPF muffler / SCR device and their surroundings for accumulation of anything flammable. Otherwise a fire may result.

M6-101, M6-111



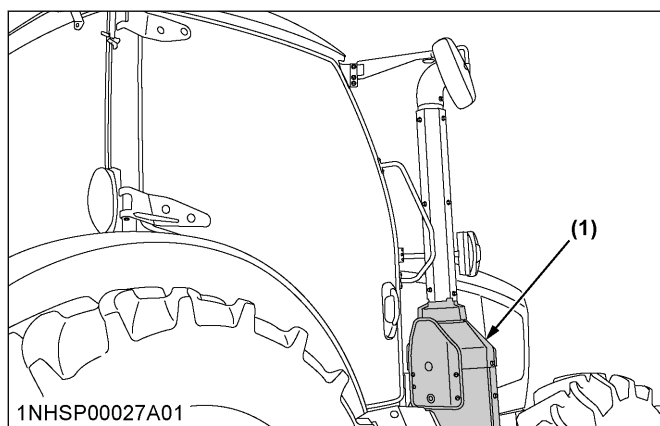
- (1) DPF muffler

M6-131, M6-141



- (1) DPF muffler

All models



- (1) SCR device

13. Checking brake pedal

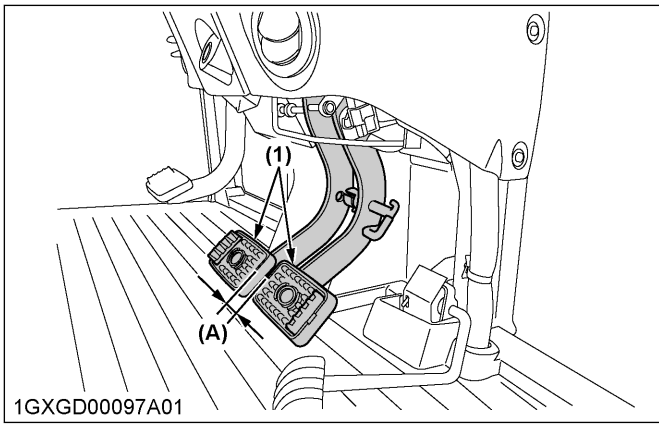
WARNING

To avoid personal injury or death:

- Make sure that the brake pedals have equal adjustments when being locked together. Incorrect or unequal brake pedal adjustments can cause the tractor to swerve or roll-over.

1. Inspect the brake pedals for free travel and smooth operation.
2. Adjust if incorrect measurement is found.
(See Adjusting brake pedal on page 166.)

Proper brake pedal free travel	3 to 7 mm (0.1 to 0.3 in.) on the pedal
	Keep the free travel in the right and left brake pedals equal.



(1) Brake pedals

(A) "FREE TRAVEL"

NOTE :

- Brake pedals should be equal when depressed.

14. Checking gauges, meter and Easy Checker

1. Inspect the instrument panel for broken gauge(s), meter(s) and Easy Checker indicators.
2. Replace if broken.

15. Checking headlight, turn signal light, hazard light, and so on

1. Inspect the lights for broken bulbs and lenses.
2. Replace if broken.

16. Checking seat belt

1. Always check the condition of the seat belt attaching hardware before operating the tractor.
2. Replace if damaged.

17. Checking movable parts

If any of the movable parts, such as levers and pedals, are not moving smoothly because of rust or sticky material, do not attempt to force them into motion. In the above case, remove the rust or the sticky material and apply oil or grease to the relevant spot. Otherwise, the machine may be damaged.

INITIAL 50 HOURS

With a new machine, do the following servicing after the first 50 operating hours.

1. Changing engine oil

(See Changing engine oil on page 175.)

2. Replacing engine oil filter

(See Replacing engine oil filter on page 175.)

3. Checking fan and air conditioner belt tension (M6-131, M6-141)

(See Checking fan and air-conditioner belt tension (M6-131, M6-141) on page 172.)

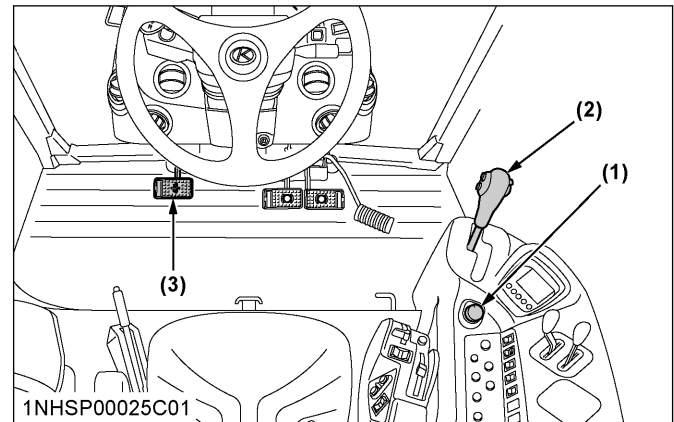
EVERY 50 HOURS

1. Checking engine start system

**WARNING**

To avoid personal injury or death:

- Do not allow anyone near the tractor while testing.
- If the tractor does not pass the test, do not operate the tractor.



(1) PTO clutch control switch

(2) Power shift and range shift lever

(3) Clutch pedal

1.1 Preparation before testing

1. Place all control levers in the "NEUTRAL" position.
2. Set the parking brake, stop the engine and lower all implements.

1.2 Testing switch for the power shift and range shift lever

1. Follow the "PARKING THE TRACTOR" instructions. (See PARKING THE TRACTOR on page 13.)
2. Sit on the operator's seat.
3. Shift the power shift and range shift lever to the desired position.
4. Depress the clutch pedal fully.
5. Disengage the PTO clutch control switch.
6. Turn the key to the "START" position.

7. The engine must not crank.
8. If the engine cranks, consult your local Kubota dealer for this service.

1.3 Testing switch for PTO clutch control switch or lever

1. Follow the “*PARKING THE TRACTOR*” instructions. (See PARKING THE TRACTOR on page 13.)
2. Sit on the operator's seat.
3. Engage the PTO clutch control switch or lever.
4. Depress the clutch pedal fully.
5. Shift the power shift and range shift lever to the “*NEUTRAL*” position.
6. Turn the key to the “*START*” position.
7. The engine must not crank.
8. If the engine cranks, consult your local Kubota dealer for this service.

1.4 Checking operator presence control (OPC) system

WARNING

To avoid personal injury or death:

- Before checking the PTO OPC, make sure that the PTO drive shaft is disconnected from the tractor.
- If the buzzer does not sound during the PTO OPC check procedure, shut off the engine and consult your local Kubota dealer for immediate servicing of the PTO OPC.
- The unit should not be operated until servicing is completed.

1. Follow the “*PARKING THE TRACTOR*” instructions. (See PARKING THE TRACTOR on page 13.)
2. Make sure that the PTO drive shaft is disconnected from the tractor.
3. Sit on the operator's seat.
4. Start the engine.
5. Engage the PTO clutch control switch or lever. The PTO should begin to rotate. Disengage the PTO clutch control switch or lever.
6. While getting up from the operator's seat, engage the PTO clutch control switch or lever.
 - a. The PTO should begin to rotate and a buzzer should sound.
 - b. Disengage the PTO clutch control switch or lever.
 - c. If the buzzer does not sound, shut off the engine and consult your local Kubota dealer for immediate servicing of the PTO OPC.
7. If the PTO OPC is operating properly, shut off the engine and reconnect the implement drive shaft to

the PTO. Restart the engine per the available instructions.

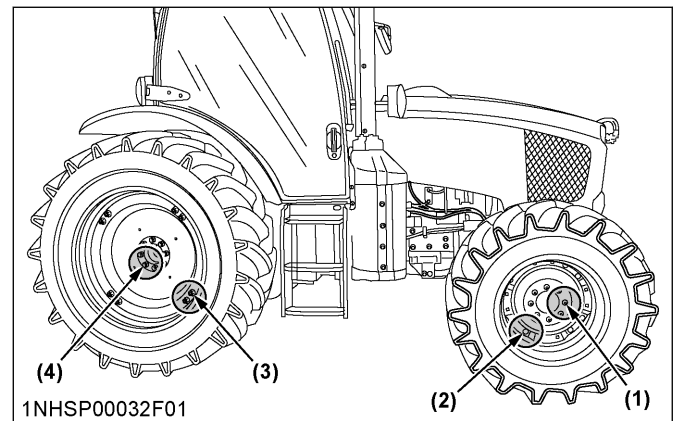
2. Checking wheel bolt torque

WARNING

To avoid personal injury or death:

- Never operate the tractor with a loose rim, wheel or axle.
- Any time bolts and nuts are loosened, retighten to the specified torque.
- Check all bolts and nuts frequently and keep them tight.

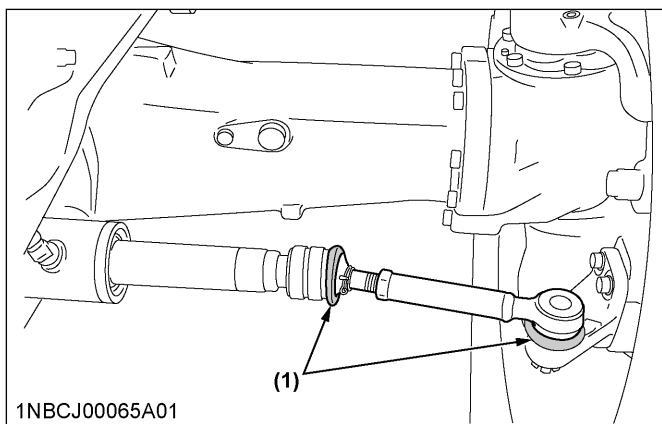
Check wheel bolts and nuts regularly, especially when new. If the wheel bolts and the nuts are loose, tighten them as follows.



(1)	260 to 304 N·m / 26.5 to 31.0 kgf·m / 192 to 224 lbf·ft
(2)	Waffle wheel 298 to 366 N·m / 30.4 to 37.3 kgf·m / 220 to 270 lbf·ft
(3)	Steel disc 244 N·m / 24.9 kgf·m / 180 lbf·ft Cast iron disc 305 to 325 N·m / 31.1 to 33.2 kgf·m / 225 to 240 lbf·ft
(4)	343 to 401 N·m / 35.0 to 41.0 kgf·m / 254 to 297 lbf·ft

3. Checking tie-rod dust cover

Check to see that dust covers are not damaged. If dust covers are damaged, consult your local Kubota dealer for this service.



(1) Dust cover

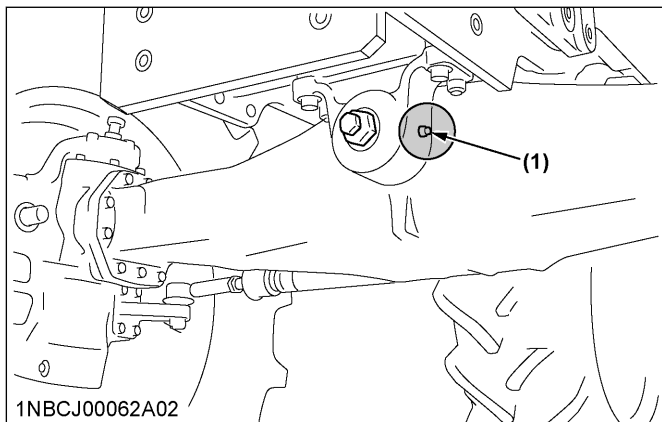
IMPORTANT :

- If dust covers are cracked, water and dust can cause premature wear of the tie-rod.

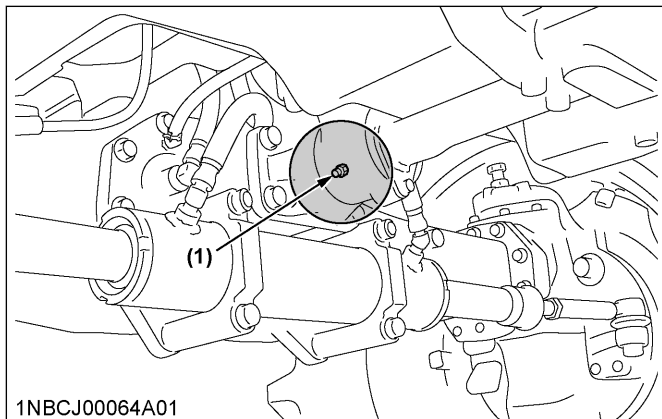
EVERY 100 HOURS**1. Lubricating grease fittings**

Apply a small amount of multipurpose grease to the following points every 100 hours.

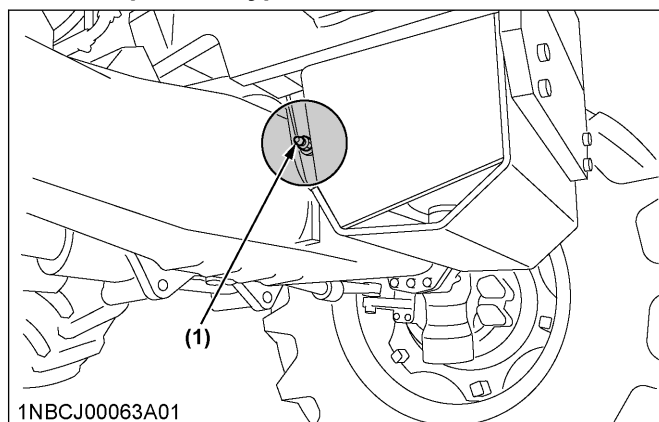
If you have been operating the machine in extremely wet and muddy conditions, lubricate the grease fittings more often.



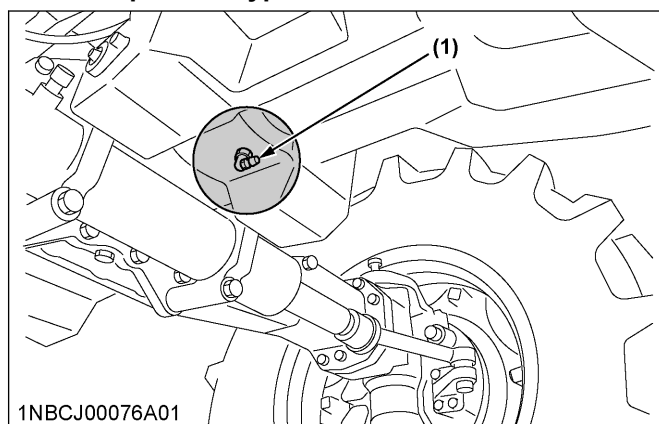
(1) Grease fitting (front axle support)



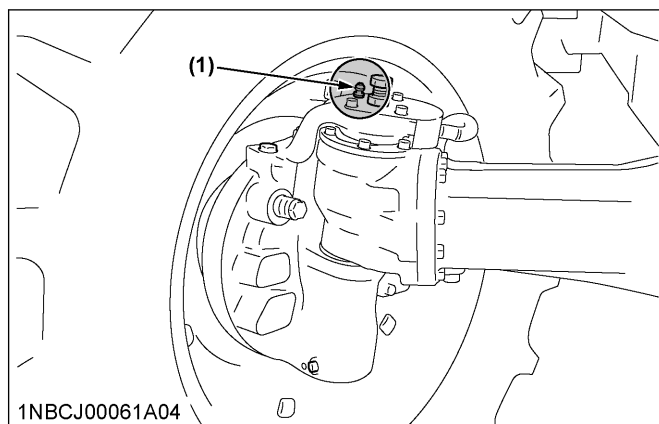
(1) Grease fitting (front axle support)

Front suspension type

(1) Grease fitting (front axle support)

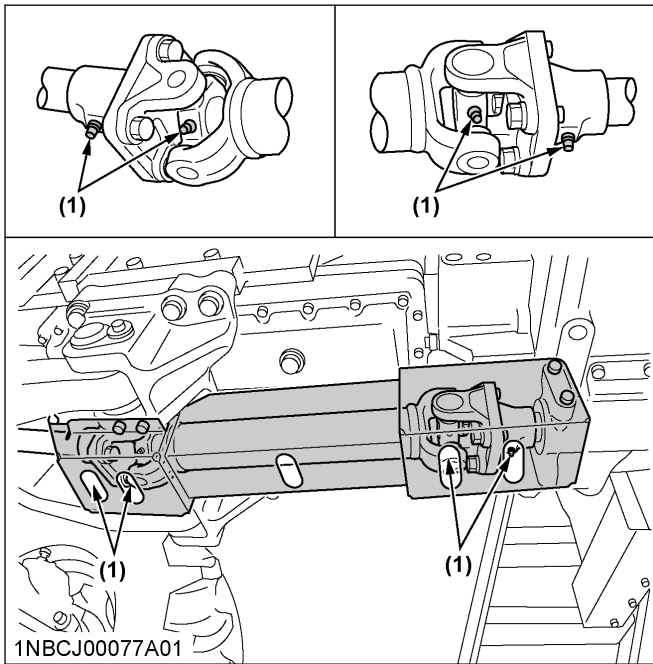
Front suspension type

(1) Grease fitting (front axle support)

All models

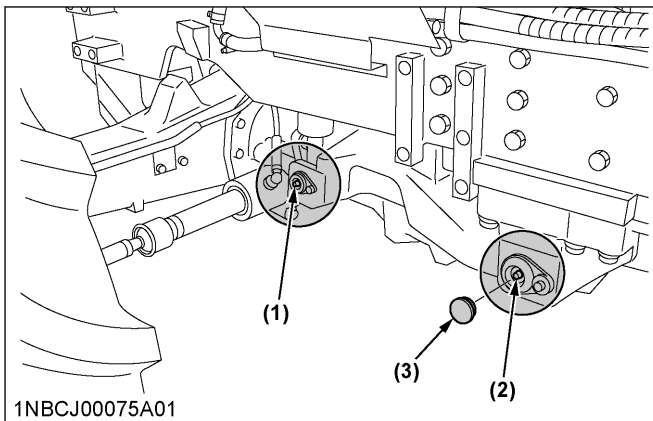
(1) Grease fitting (front axle gear case support) - RH, LH

Front suspension type



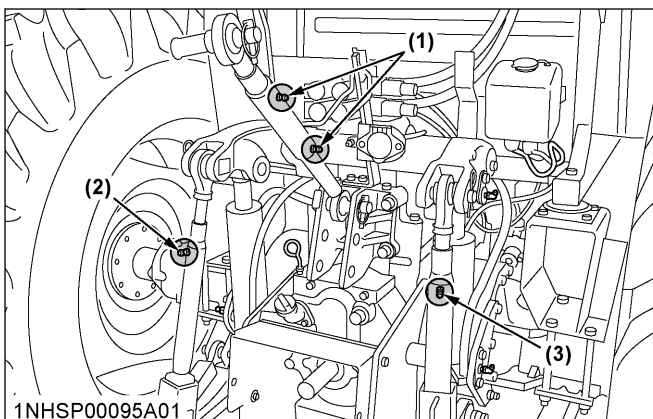
(1) Grease fitting (universal joint)

Front suspension type



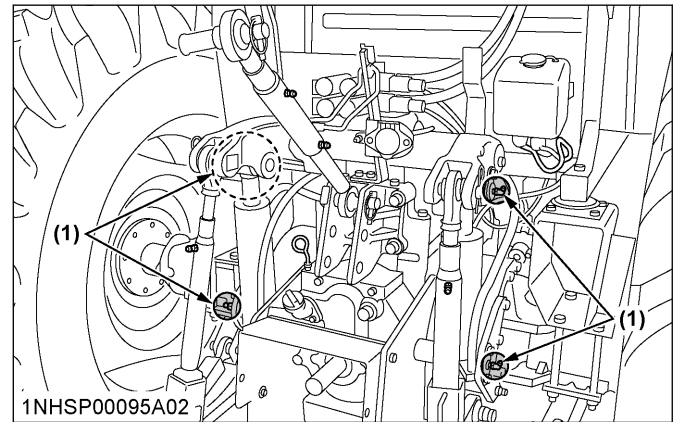
- (1) Grease fitting (suspension cylinder) - RH, LH
- (2) Grease fitting (suspension arm) - RH, LH
- (3) Rubber cap - RH, LH

All models



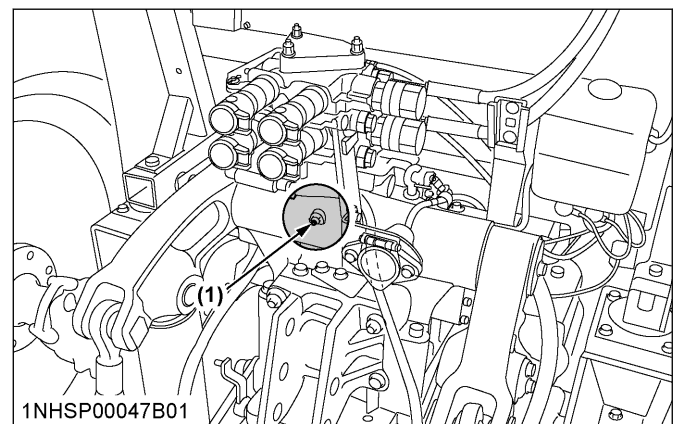
- (1) Grease fitting (top link)
- (2) Grease fitting (lifting rod) LH
- (3) Grease fitting (lifting rod) RH

All models



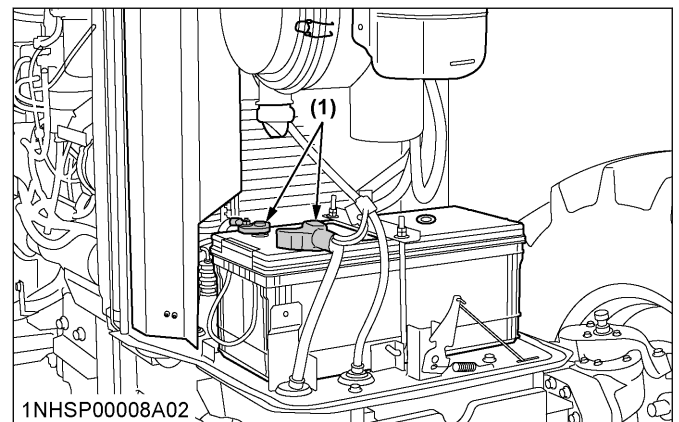
(1) Grease fitting (hydraulic lift cylinders pin)

All models



(1) Grease fitting (hydraulic arm axle)

All models



(1) Battery terminals

2. Cleaning air cleaner primary element

1. Remove the air cleaner cover and primary element.
2. Clean the primary element:
 - When dry dust adheres to the element, blow compressed air from the inside, turning the element. Pressure of compressed air must be under 205 kPa (2.1 kgf/cm², 30 psi).

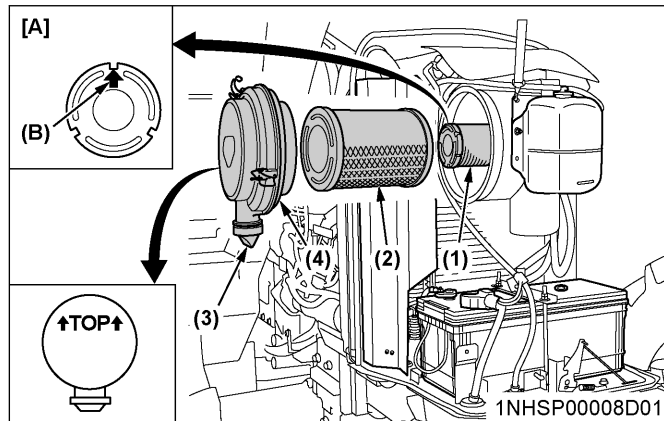
- When carbon or oil adheres to the element, soak the element in detergent for 15 minutes, then wash it several times in water, rinse with clean water and dry it naturally. After the element has fully dried, inspect inside the element with a light and check for damage.

3. Replace the air cleaner primary element:

Once every 1000 hours or yearly, whichever comes first.

NOTE :

- Check to see if the evacuator valve is blocked with dust.



- (1) Secondary (safety) element [A] M6-131, M6-141
 (2) Primary element (B) "ARROW"
 (3) Evacuator valve
 (4) Cover

IMPORTANT :

- The air cleaner uses a dry element; never apply oil.
- Do not run the engine with the filter element removed.
- Refit the cover with the arrow ↑ (on the rear of the cover) upright. If the cover is improperly fitted, the evacuator valve will not function and dust will adhere to the element.
- Do not touch the secondary element except in cases where replacing is required. (See Replacing air cleaner primary element and secondary element on page 184.)
- For M6-131 and M6-141 models only:
 Refit the secondary element with the arrow ↑ upright.

Evacuator valve

Open and clean the evacuator valve to get rid of large particles of dust and dirt (once a week under ordinary conditions, or daily when used in a dusty place).

3. Adjusting fan belt tension (M6-101, M6-111)



WARNING

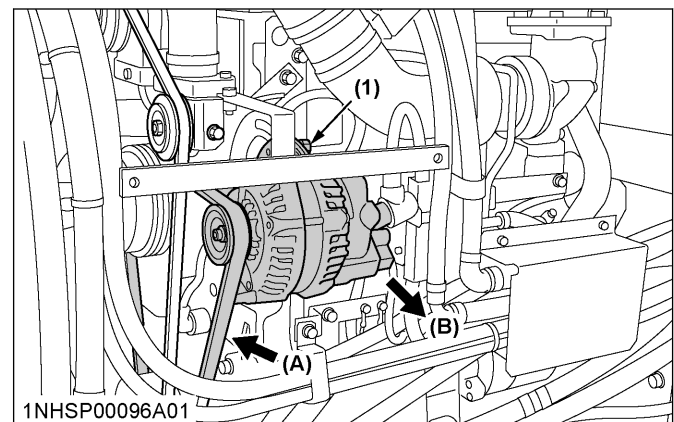
To avoid personal injury or death:

- Stop the engine before checking the belt tension.

Proper fan belt tension

A deflection of between 10 to 12 mm (0.39 to 0.47 in.) when the belt is pressed in the middle of the span.

- Stop the engine and remove the key.
- Apply moderate thumb pressure to the belt between pulleys.
- If the tension is incorrect, loosen the alternator mounting bolts and, using a lever placed between the alternator and the engine block, pull the alternator out until the deflection of the belt falls within acceptable limits.
- Replace the fan belt if it is damaged.



(1) Bolt

(A) Check the belt tension
 (B) To tighten

IMPORTANT :

- Make sure that the V-belt tension is as specified in the previous table after tightening the tension pulley mounting nut.

4. Adjusting brake pedal



WARNING

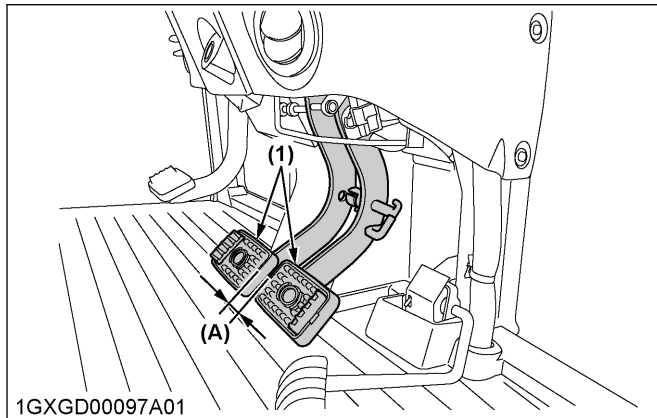
To avoid personal injury or death:

- Park on flat ground, stop the engine and chock the wheels before checking the brake pedal.
- To prevent uneven braking, the specification must be within the recommended limit. If found to be beyond the specification range, contact your local Kubota dealer for adjusting the brakes.

4.1 Checking brake pedal free travel

Proper brake pedal free travel	3 to 7 mm (0.1 to 0.3 in.) on the pedal
	Keep the free travel in the right and left brake pedals equal.

1. Set the parking brake.
2. Slightly depress the brake pedals and measure free travel at the top of pedal stroke.



(1) Brake pedals

(A) "FREE TRAVEL"

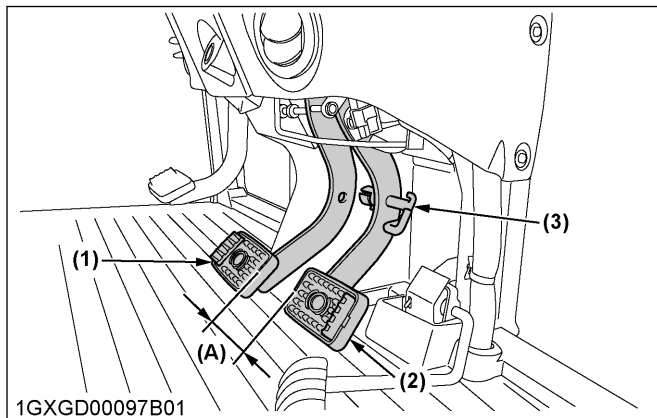
NOTE :

- Brake pedals should be equal when depressed.

4.2 Checking brake pedal stroke

Pedal stroke	Less than 100 mm (3.9 in.) at each pedal
--------------	--

1. Disengage the brake pedal lock.
2. Depress the brake pedal several times.
3. Depress the right-hand pedal and measure the level difference (pedal stroke) between this pedal and the left-hand pedal.
4. Do the same for the left-hand pedal.



(1) Brake pedal (LH)
 (2) Brake pedal (RH)
 (3) Brake pedal lock

(A) "PEDAL STROKE"

4.3 Checking equalizer working level (anti-imbalance device)

Equalizer working level	Minimum level difference of 10 mm (0.4 in.) between both pedals
-------------------------	---

1. Gently depress both brake pedals at once.
2. Further depress the right-hand pedal (the left-hand pedal slightly raises itself) and measure the level difference between the pedals.
3. Do the same for the left-hand pedal.

5. Adjusting parking brake lever

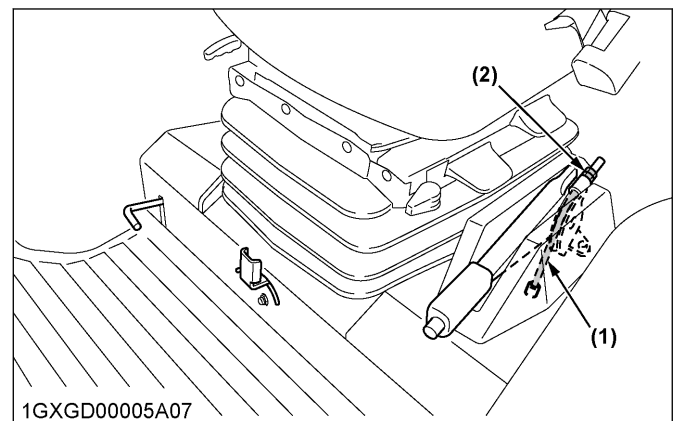
! WARNING

To avoid personal injury or death:

- Park on flat ground, stop the engine, and chock the wheels before checking the parking brake.

Proper parking brake lever free travel	2 notches (ratchet sound 2)
--	-----------------------------

1. Raise the parking brake lever to the parking position while counting the ratchet sound made by the parking brake lever.
2. If adjustment is needed, loosen the lock nut and adjust the parking brake cable length within acceptable limits.
3. Retighten the lock nut.



(1) Parking brake cable
 (2) Lock nut

6. Checking battery condition

! DANGER

To avoid the possibility of battery explosion:

For the refillable type battery, follow the instructions below.

- Do not use or charge the refillable type battery if the fluid level is below the [LOWER] (lower limit level) mark. Otherwise, battery component parts may prematurely deteriorate, which may

shorten the battery's service life or cause an explosion. Check the fluid level regularly and add distilled water as required so that the fluid level is between the [UPPER] and [LOWER] levels.

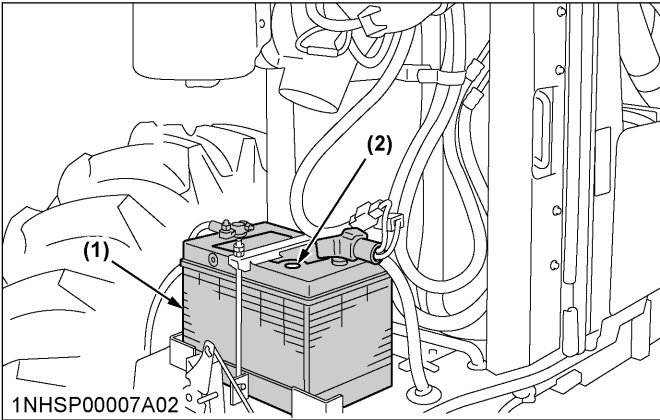
! WARNING

- To avoid personal injury or death:
- Never remove the battery cap while the engine is running.
 - Keep electrolyte away from eyes, hands, and clothes. If you are spattered with electrolyte, wash it away completely with water immediately and get medical attention.
 - Keep open sparks and flames away from the battery at all times. Hydrogen gas mixed with oxygen becomes very explosive.
 - Wear eye protection and rubber gloves when working around the battery.

- NOTE :**
- The factory-installed battery is a non-refillable type. If the indicator turns white, do not charge the battery but replace it with a new one.

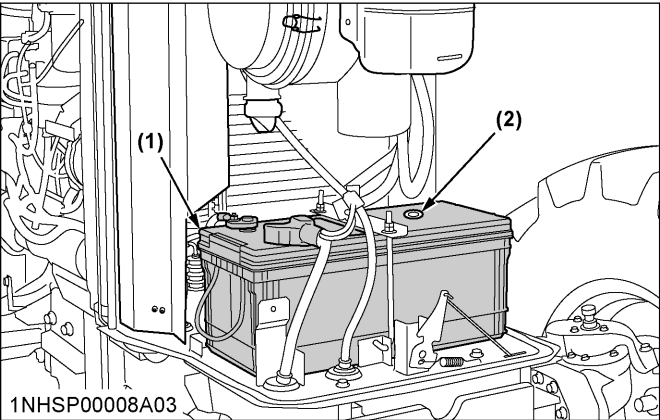
Mishandling the battery shortens the service life and adds to maintenance costs.
The original battery is maintenance-free, but needs some servicing.
If the battery is weak, the engine will be difficult to start, and the lights will be dim. It is important to check the battery periodically.

M6-101, M6-111



(1) Battery
(2) Indicator

M6-131, M6-141



(1) Battery
(2) Indicator

6.1 How to read indicator

Check the battery condition by reading the indicator.

Green	Specific gravity of electrolyte and quality of electrolyte are both in good condition.
Black	Battery needs charging.
White	Battery needs replacing.

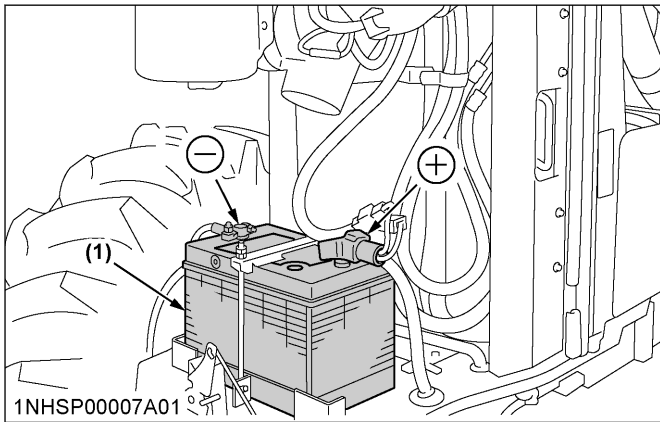
- NOTE :**
- When viewing the indicator, check from directly above by removing the air cleaner cover or using a mirror.

6.2 Charging the battery

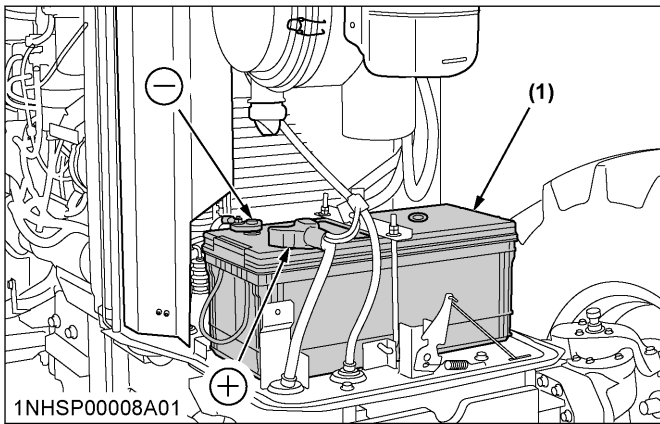
! WARNING

- To avoid personal injury or death:
- When the battery is being activated, hydrogen and oxygen gases in the battery are extremely explosive. Keep open sparks and flames away from the battery at all times, especially when charging the battery.
 - When charging the battery, ensure the vent caps are securely in place (if equipped).
 - When disconnecting the cable from the battery, start with the negative terminal first.
When connecting the cable to the battery, start with the positive terminal first.
 - Never check battery charge by placing a metal object across the posts.
Use a voltmeter or hydrometer.

- NOTE :**
- After stopping the engine, wait at least 15 minutes before disconnecting the battery cable. This is to prevent damage to the system device.

M6-101, M6-111

(1) Battery

M6-131, M6-141

(1) Battery

1. To slow charge the battery, connect the battery positive terminal to the charger positive terminal and the negative to the negative, then recharge in the standard fashion.
2. A boost charge is only for emergencies. Using a boost charge will partially charge the battery at a high rate and in a short time. When using a boost-charged battery, it is necessary to recharge the battery as soon as possible. Failure to recharge the battery as soon as possible will shorten the battery's service life.
3. The battery is charged when the indicator display turns from black to green.
4. When exchanging an old battery for a new one, use a battery of equivalent specification to those shown in the following table.

Battery type	Volts (V)	Capacity
GP31 (105E41R)	12	80 (at 5H.R (A.H)) 100 (at 20H.R (A.H))
180G51	12	160 (at 20H.R (A.H))

Battery Type	Reserve capacity (min)	Cold crank- ing amps	Normal charging rate (A)
GP31 (105E41R)	160	900	11
180G51	300	1090	16

6.3 Directions for battery storage

1. When storing the tractor for long periods of time, remove the battery from the tractor, adjust the electrolyte to the proper level and store in a dry place out of direct sunlight.
2. The battery self-discharges while it is stored. Recharge the battery once every 3 months in hot seasons and once every 6 months in cold seasons.

NOTE :

- After stopping the engine, wait at least 15 minutes before disconnecting the battery cable. This is to prevent damage to the system device.

7. Adjusting air conditioner belt tension (M6-101, M6-111)**⚠ WARNING**

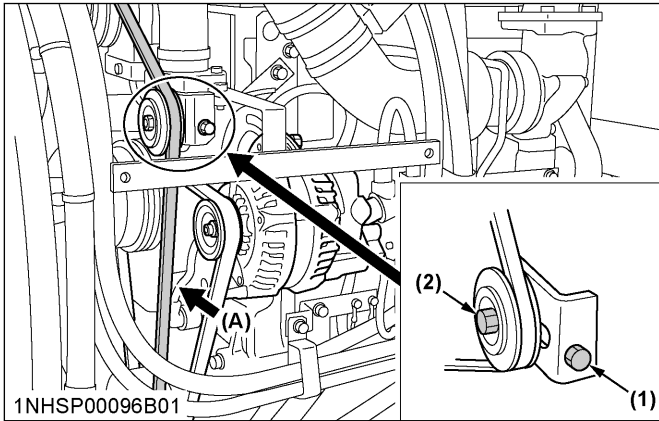
To avoid personal injury or death:

- Stop the engine before checking the belt tension.

Proper air conditioner belt tension	A deflection of between 10 to 12 mm (0.4 to 0.48 in.) in when the belt is pressed (98 N / 10 kgf / 22.1 lbf) in the middle of the span.
-------------------------------------	---

1. Stop the engine and remove the key.
2. Apply moderate thumb pressure to belt between pulleys.
3. If tension is incorrect, loosen the tension pulley mounting nut and turn the adjusting bolt to adjust the belt tension within acceptable limits.

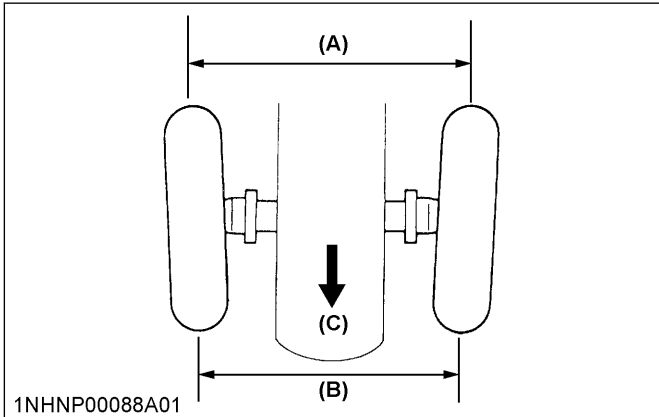
- Replace air conditioner belt if it is damaged.



- (1) Adjusting bolt (A) Check the belt tension
(2) Tension pulley mounting nut

EVERY 200 HOURS

1. Adjusting toe-in



- (A) Wheel-to-wheel distance at the rear
(B) Wheel-to-wheel distance at the front
(C) "FRONT"

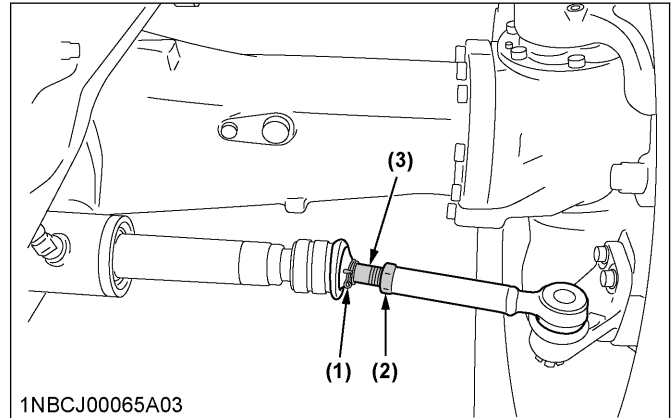
Proper toe-in	2 to 8 mm (0.08 to 0.31 in.)
---------------	------------------------------

- Park the tractor on a flat surface.
- Turn the steering wheel so that the front wheels are in the straight ahead position.
- Lower the implement, apply the parking brake and stop the engine.
- Measure the distance between the tire beads at the front of the tire, at hub height.
- Measure the distance between the tire beads at the rear of the tire, at hub height.
- The front distance should be shorter than the rear distance. If not, adjust the tie rod length.

1.1 Adjusting toe-in procedure

- Detach the snap ring.
- Loosen the tie-rod nut.

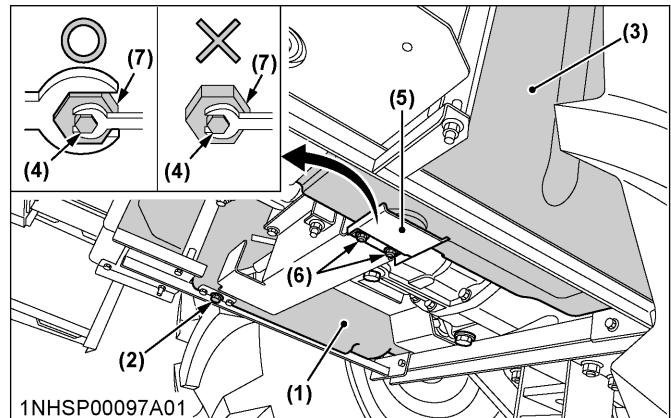
- Turn the tie-rod joint to adjust the rod length until the proper toe-in measurement is obtained.
- Retighten the tie-rod nut.
- Attach the snap ring of the tie-rod joint.



- (1) Snap ring
(2) Tie-rod nut
(3) Tie-rod joint

2. Draining fuel tank water

- Loosen the drain plug at the bottom of the right side fuel tank to let sediments, impurities and water out of the tank. Finally, tighten up the plug.
- Loosen 2 bolts and remove plate (left). Do the same for the left side fuel tank to drain it. Finally tighten up the plug and attach the plate (left).



- (1) Fuel Tank (RH) (5) Plate (LH)
(2) Drain plug (RH) (6) Bolt
(3) Fuel Tank (LH) (7) Flange (hex part)
(4) Drain plug with seal washer (LH)

IMPORTANT :

- If the fuel contains impurities, such as water, drain the fuel tank at shorter intervals.
- Drain the fuel tank before operating the tractor after a long period of storage.

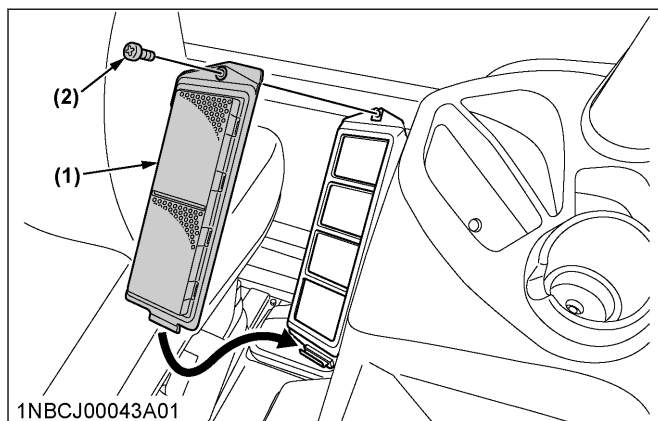
Detaching and reattaching the drain plug (Left)

In detaching and reattaching the drain plug, apply a wrench at the hex part of the flange to keep it in place. And detach or reattach the drain plug (bolt).

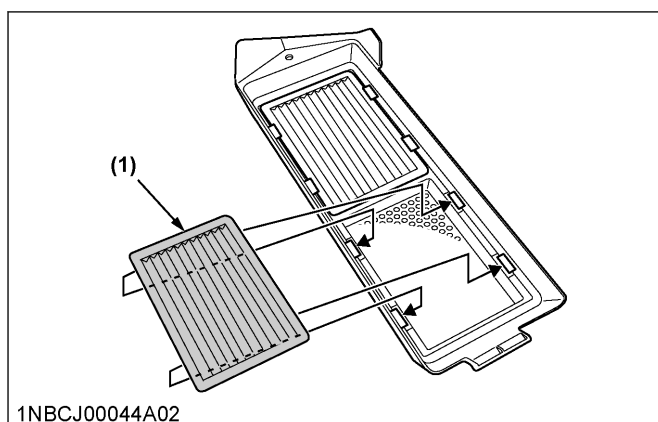
	Tightening torque
Drain plug (M10)	22.8 to 26.2 N·m (2.3 to 2.7 kgf·m, 16.8 to 19.3 lbf·ft)
Tank cover lock bolt (M8)	23.5 to 27.5 N·m (2.4 to 2.8 kgf·m, 17.3 to 20.3 lbf·ft)

3. Cleaning inner air filter

Remove the inner filter, and blow air from the direction opposite to the filter's normal air flow. Pressure of compressed air must be under 205 kPa (2.1 kgf/cm² / 30 psi).



(1) Inner air filter
(2) Push-rivet



(1) Inner air filter

4. Cleaning fresh air filter

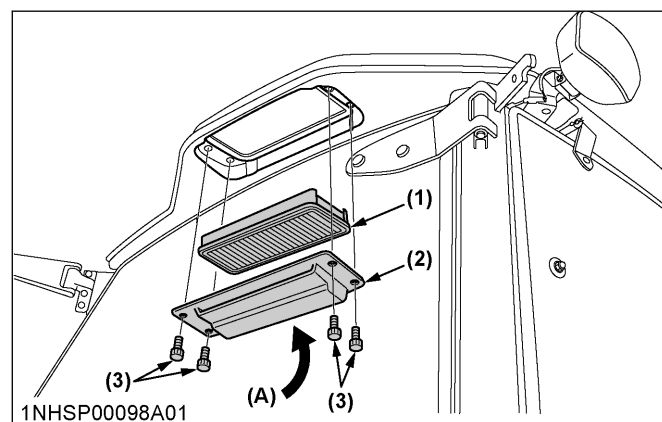
⚠ WARNING

To avoid personal injury or death:

- When removing and attaching the filter, apply the parking brake, stop the engine and remove the key.

- Check the filter using the strong and stable ladder to stand on. Never check the filter while standing on a tire or a fender.

Remove the knob bolts and pull out the filter.



(1) Fresh air filter
(2) Cover
(3) Knob bolt
(A) Air inlet port

NOTE :

- After cleaning, attach the filter and cover as in the previous illustration.

4.1 Cleaning the filter

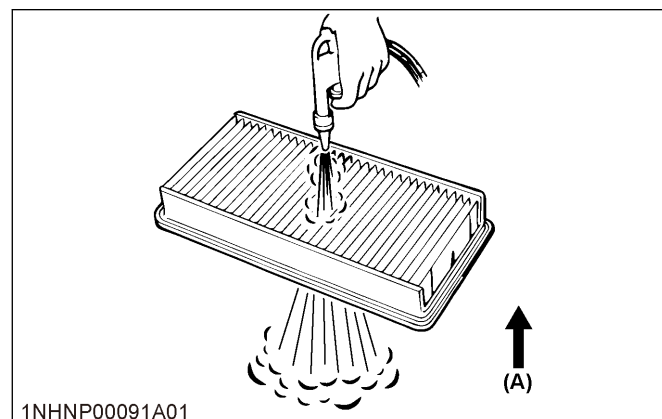
Normal use

Blow air from the opposite direction to the filter's normal air flow.

Pressure of compressed air must be under 205 kPa (2.1 kgf/cm², 30 psi).

IMPORTANT :

- Do not hit the filter. If the filter becomes deformed, dust may enter into the air-conditioner, which may cause damage and malfunction.



(A) "AIR CONDITIONER AIRFLOW"

NOTE :

- If the filter is very dirty:

Dip the filter in lukewarm water with mild dishwashing detergent.

Move the filter up and down as well as left and right to loosen dirt. Rinse the filter with clean water and let it air-dry.

IMPORTANT :

- Do not use gasoline, thinner or similar chemicals to clean the filter as damage to the filter may occur. Cleaning the filter with such chemicals may also cause an unpleasant odor in the CAB next time the system is used.

EVERY 400 HOURS

1. Checking fan and air-conditioner belt tension (M6-131, M6-141)

WARNING

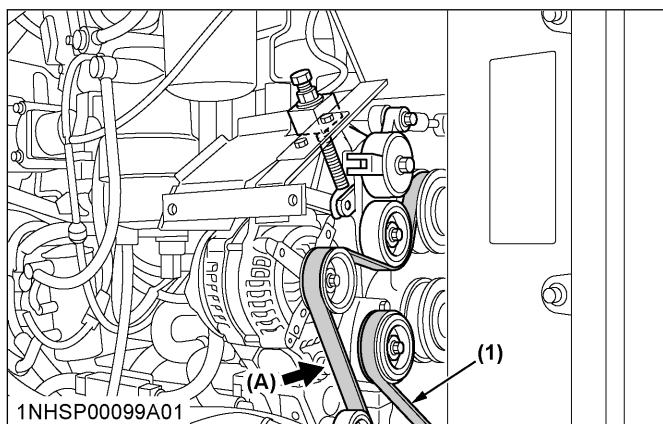
To avoid personal injury or death:

- Stop the engine before checking the belt tension.

Proper belt tension	A belt deflection of 3 to 5 mm (0.12 to 0.19 in.) when the middle part (A) of the belt is pressed by a fingertip using a force of 98 N (10 kgf / 22 lbf). See the following illustration for the location of the middle part (A) of the belt.
---------------------	---

The belt is of self-tension type and needs no readjustment. Check the belt tension in the following procedure. If the deflection is out of the specified values or if the belt itself is found damaged, replace it with a new one.

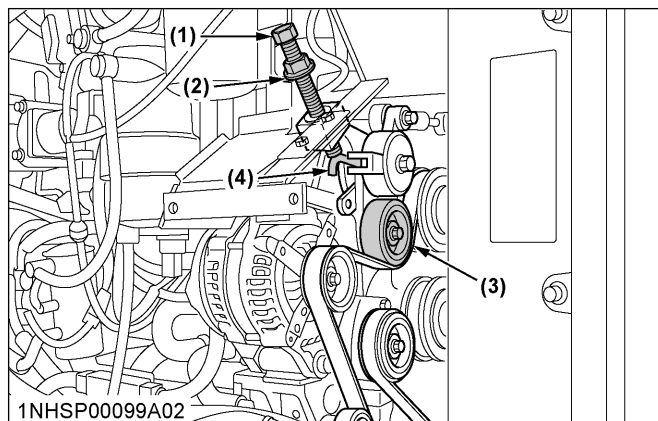
1. Stop the engine and remove the key.
2. Press on the spot indicated in the figure below to measure the deflection.



- (1) Fan and air-conditioner belt (A) Press the middle part of the belt to measure the belt deflection

1.1 Replacing the belt

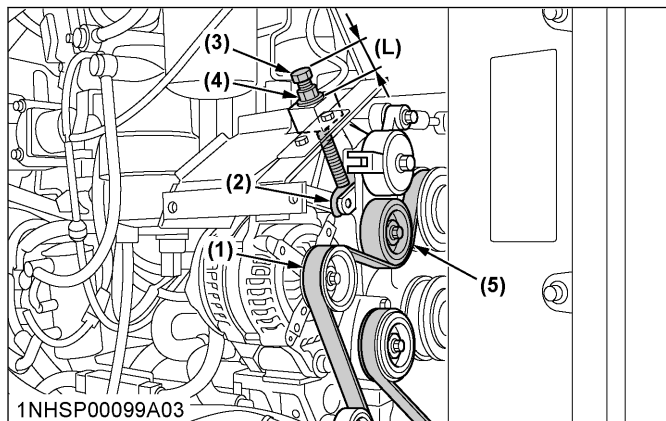
1. Loosen the lock nut first and then fully loosen the tension bolt.



- (1) Tension bolt
(2) Lock nut
(3) Self-tension pulley
(4) Self-tension spring

2. Lift the tension pulley and remove the belt.
3. Fit the new belt as follows.
4. Tighten the tension bolt until the proper tension is obtained, and then lock the tension bolt securely with the lock nut. When tightening, make sure that the tension bolt length (L) is longer than 35 mm (1.4 in.).

5. Finally, tighten up the lock nut.



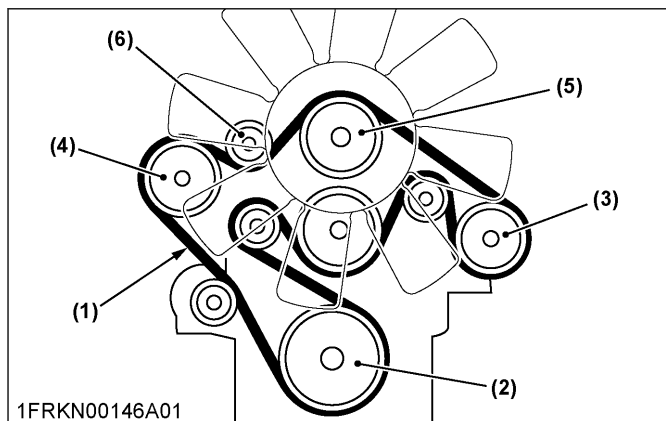
- (1) Belt
(2) Tension spring end
(3) Tension bolt
(4) Lock nut
(5) Self-tension pulley
(L) Tension bolt length

Tension bolt length (L)	Longer than 35 mm (1.4 in.)
Lock nut tightening torque	60 to 80 N·m (44.3 to 59.0 lbf·ft)

IMPORTANT :

- If the proper belt tension cannot be obtained even after increasing the tension bolt length (L) to more than 35 mm (1.4 in.), the pulley may be abnormally worn out. In this case, contact your local Kubota dealer.
- Overtightening the tension bolt may damage the engine.

Fan and air conditioner belt routing



- (1) Belt
(2) Drive pulley
(3) Air-conditioner compressor
(4) Alternator
(5) Fan pulley
(6) Self-tension pulley

2. Cleaning water separator

IMPORTANT :

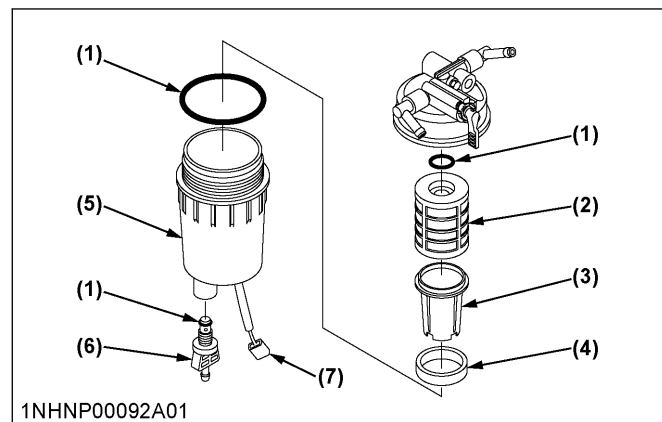
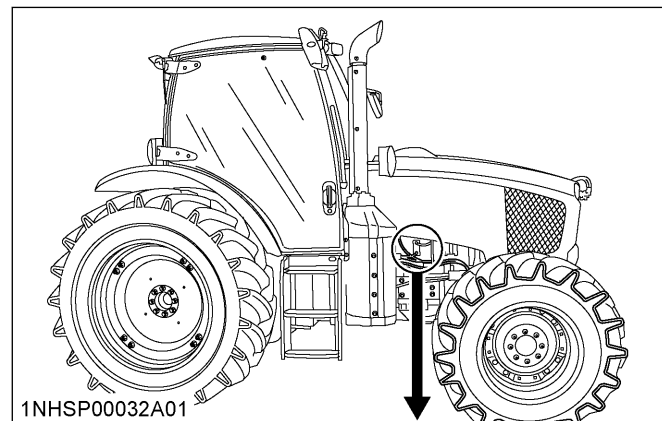
- If a fuel element is broken, replace it with a new one.
- If the water separator and/or fuel filter is not well maintained, the supply pump and injector may be damaged earlier than expected.

For M6-101, M6-111:

This job should not be done in the field, but in a clean place.

1. Disconnect the water sensor connector.
2. Close the fuel shutoff-valve.
3. Unscrew the cup and remove it, then rinse the inside with kerosene.
4. Take out the element and dip it in the kerosene to rinse.
5. After cleaning, reassemble the water separator, keeping out dust and dirt.
6. Connect the water sensor connector.
7. Bleed the fuel system.
(See Bleeding fuel system on page 189.)

M6-101, M6-111



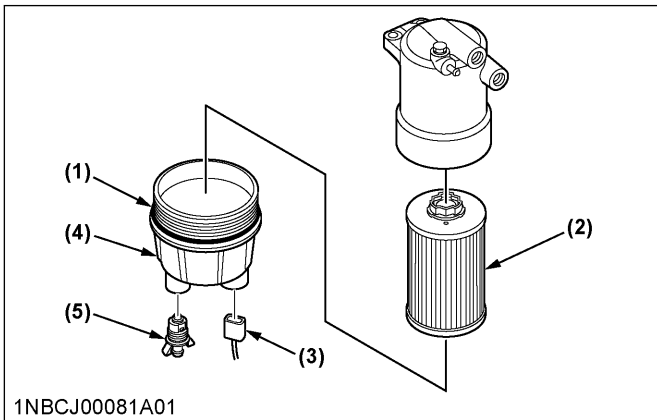
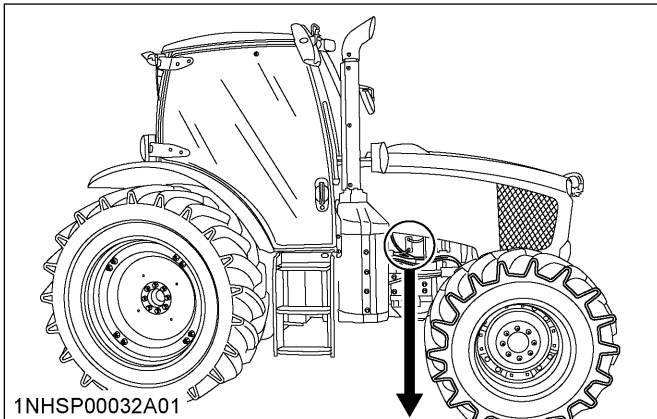
- (1) O ring
(2) Element
(3) Element cup
(4) Red float
(5) Cup
(6) Drain plug
(7) Water sensor connector

For M6-131, M6-141:

This job should not be done in the field, but in a clean place.

1. Disconnect the water sensor connector.
2. Unscrew the cup and remove it, then rinse the inside with kerosene.
3. Take out the element and replace it with a new one.
4. After cleaning, reassemble the water separator, keeping out dust and dirt.
5. Connect the water sensor connector.
6. Bleed the fuel system.
(See Bleeding fuel system on page 189.)

M6-131, M6-141

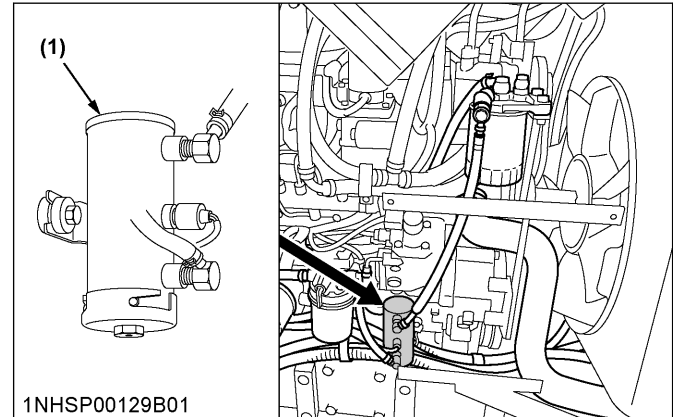


- (1) O ring
- (2) Element
- (3) Water sensor connector
- (4) Cup
- (5) Drain plug

IMPORTANT :

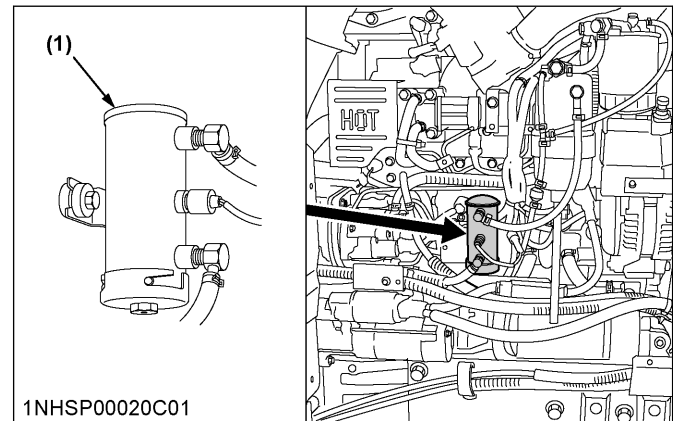
- When assembling the parts, be careful that no dirt or dust contacts them.
- Install the cover securely.
- After assembly, bleed the air from the fuel system.
(See Bleeding fuel system on page 189.)

M6-101, M6-111



(1) Fuel solenoid pump

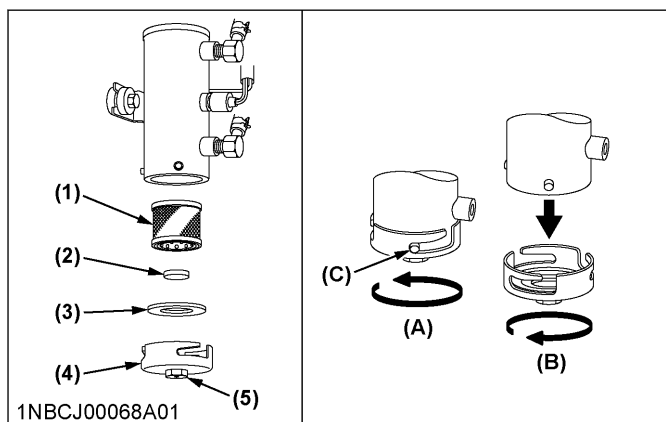
M6-131, M6-141



(1) Fuel solenoid pump

3. Cleaning fuel solenoid pump element

1. Close the fuel shut-off valve.
2. Unscrew the cover's nut and remove the cover from the fuel solenoid pump.
3. Remove the cover, magnet, and element and clean with kerosene.
4. Refer to the following diagram and reassemble the parts as they were before.
5. Open the fuel shut-off valve.

All models

- (1) Element
(2) Magnet
(3) Gasket
(4) Cover
(5) Nut

- (A) "TIGHTEN"
(B) "LOOSEN"
(C) Pin
"Tighten the cover until the end of the slot contacts the pin."

EVERY 500 HOURS OR 1 YEAR

Perform the following servicing once every 500 hours or yearly, whichever comes first.

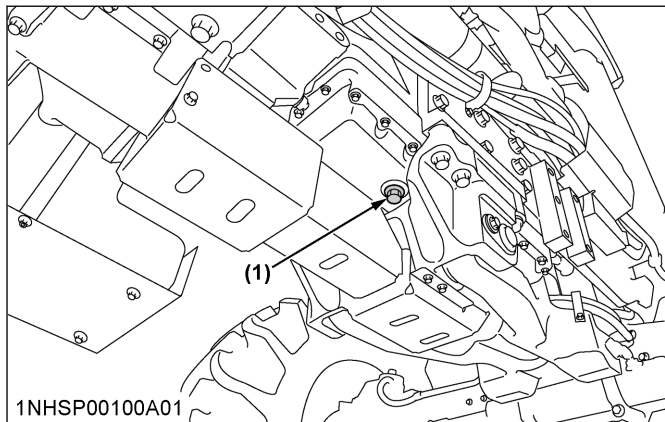
1. Changing engine oil**WARNING**

To avoid personal injury or death:

- Stop the engine before changing the oil.
- Allow the engine to cool down sufficiently; oil can be hot and can burn.

1. To drain the used oil, remove the drain plug at the bottom of the engine and drain the oil completely into the oil pan.

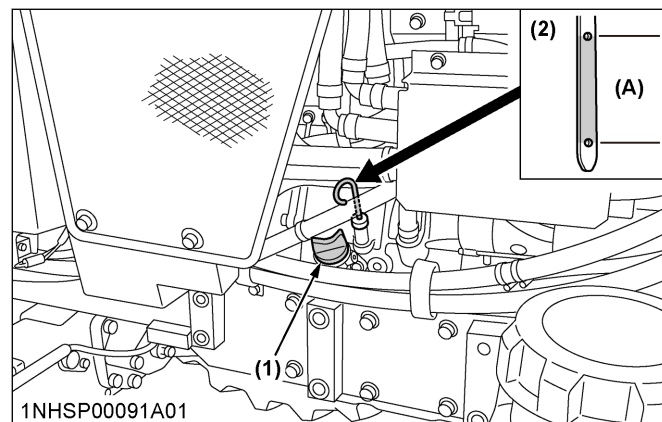
Model	Oil capacity with filter
M6-101, M6-111	10.5 L (11.1 U.S. qts.)
M6-131, M6-141	14.6 L (15.4 U.S. qts.)



- (1) Drain plug

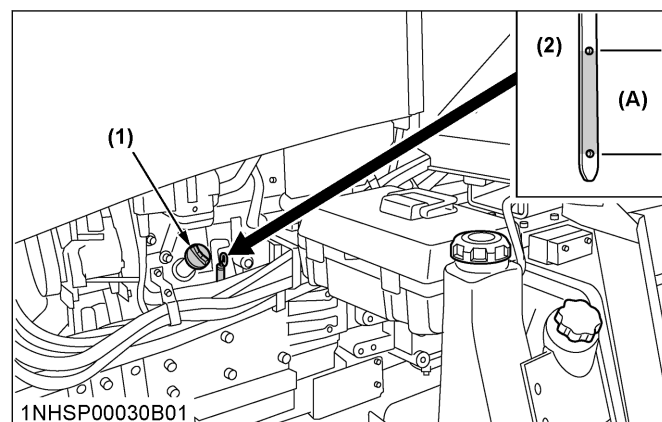
2. After draining, reinstall the drain plug.
3. Fill with new oil up to the upper notch on the dipstick.

(See LUBRICANTS, FUEL AND COOLANT on page 149.)

M6-101, M6-111

- (1) Oil inlet
(2) Dipstick

- (A) Oil level is acceptable within this range

M6-131, M6-141

- (1) Oil inlet
(2) Dipstick

- (A) Oil level is acceptable within this range

EVERY 500 HOURS**1. Replacing engine oil filter****WARNING**

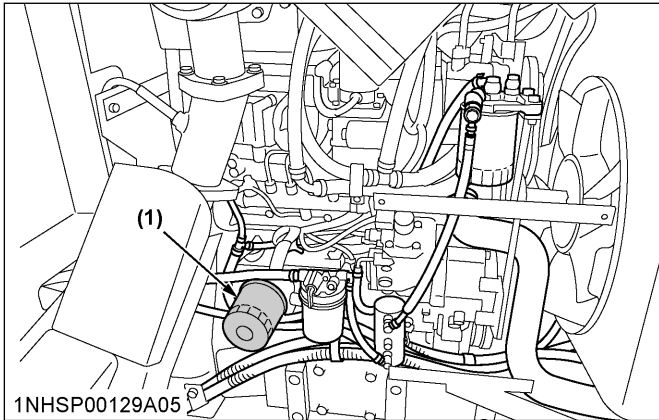
To avoid personal injury or death:

- Stop the engine before replacing the oil filter cartridge.
- Allow the engine to cool down sufficiently. Oil can be hot and can burn.

1. Remove the oil filter.
2. Put a film of clean engine oil on the rubber seal of the new filter.
3. Tighten the filter quickly until it contacts the mounting surface.
Tighten the filter by hand only an additional half a turn.

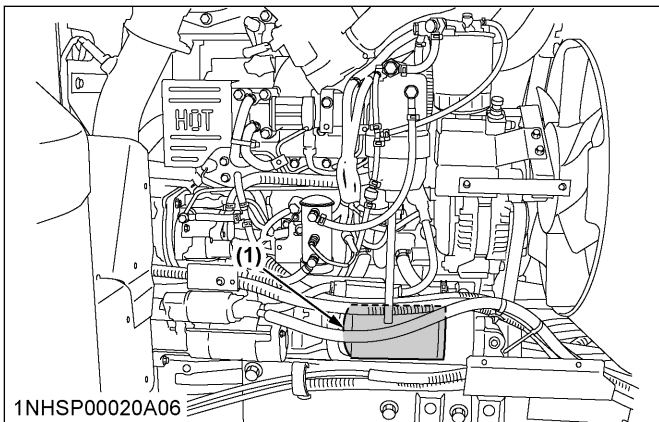
4. After the new filter has been replaced, the engine oil normally decreases by a small amount. Make sure that the engine oil does not leak through the seal and check the oil level on the dipstick. Then fill the engine oil up to the prescribed level.

M6-101, M6-111



(1) Engine oil filter

M6-131, M6-141



(1) Engine oil filter

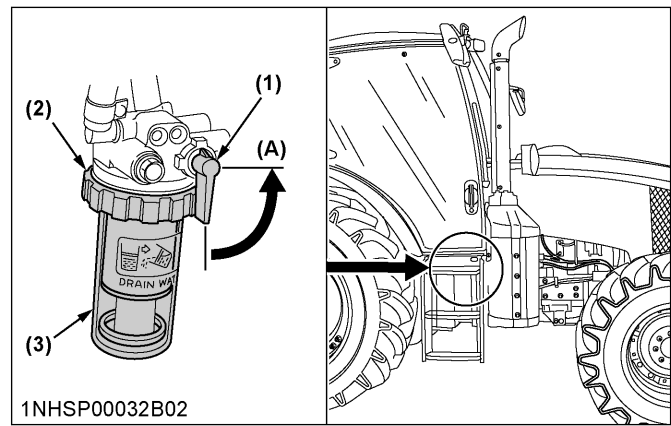
IMPORTANT :

- To prevent serious damage to the engine, use only a genuine Kubota filter.

2. Cleaning pre-fuel filter (M6-131, M6-141)

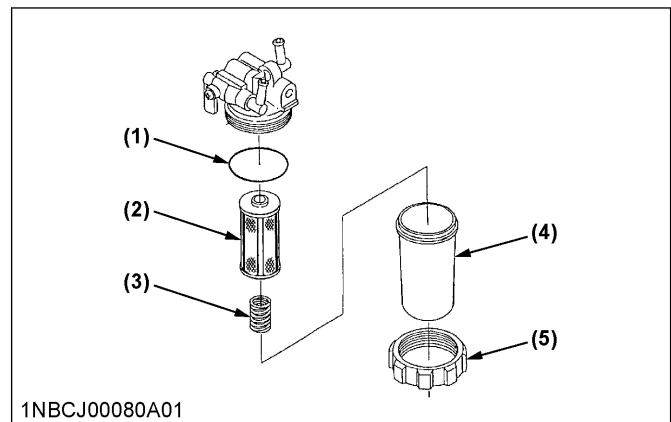
This job should not be done in the field, but in a clean place.

1. Close the fuel shut-off valve.
2. Unscrew the retainer ring and remove the cup, and rinse the inside with kerosene.
3. Take out the element and dip it in the kerosene to rinse.
4. After cleaning, reassemble the pre-fuel filter, keeping out dust and dirt.
5. Bleed the fuel system.
(See Bleeding fuel system on page 189.)



- (1) Fuel shut-off valve
(2) Retainer ring
(3) Cup

(A) "CLOSE"

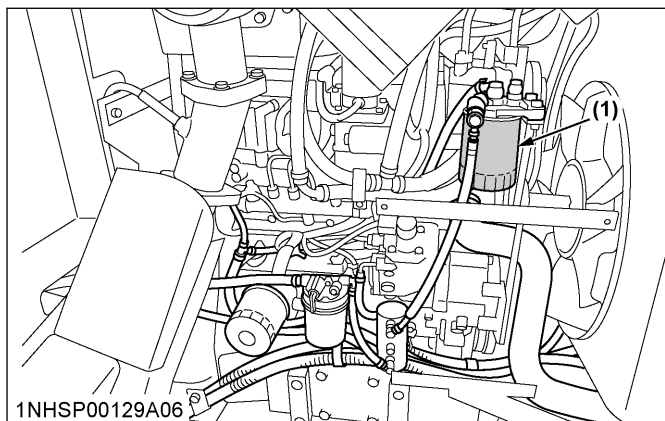


- (1) O ring
(2) Element
(3) Spring
(4) Cup
(5) Retainer ring

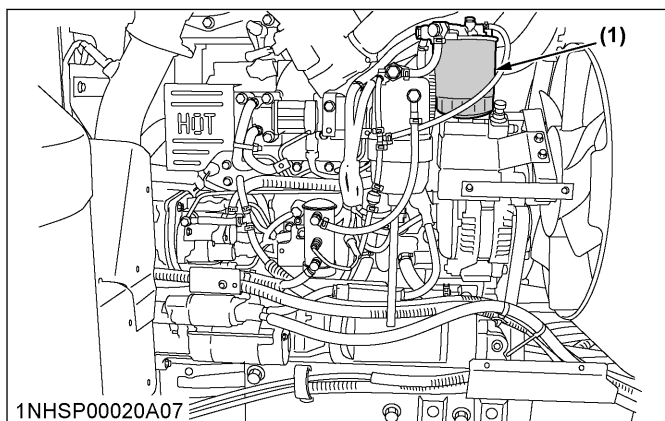
3. Replacing fuel filter

1. Remove the fuel filter.
2. Put a film of clean fuel on the rubber seal of the new filter.
3. Tighten the filter quickly until it contacts the mounting surface.
4. The filter needs to be tightened additionally by hand. Refer to the diagram displayed on the filter to know how much additional tightening is required.

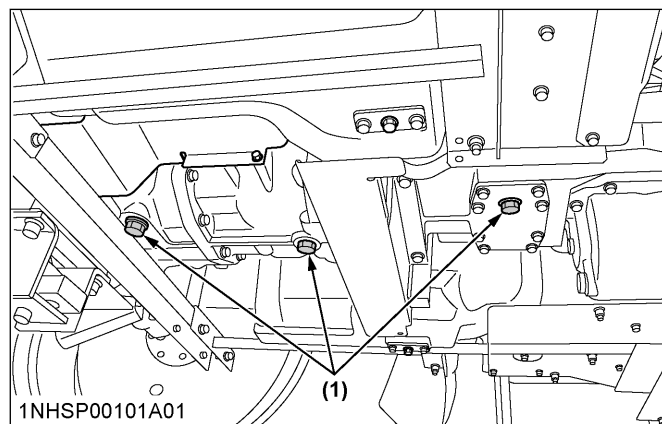
5. Bleed the fuel system.
(See Bleeding fuel system on page 189.)

M6-101, M6-111

(1) Fuel filter

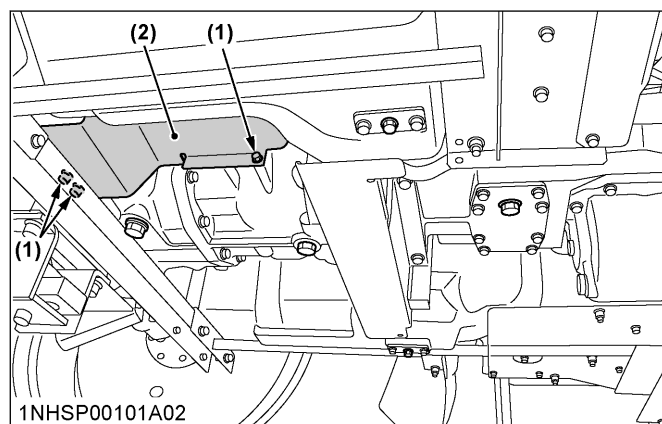
M6-131, M6-141

(1) Fuel filter



(1) Drain plug

3. Loosen the 3 bolts and remove the cover.



(1) Bolt
(2) Cover

4. Remove the oil filter.

4. Replacing hydraulic oil filter

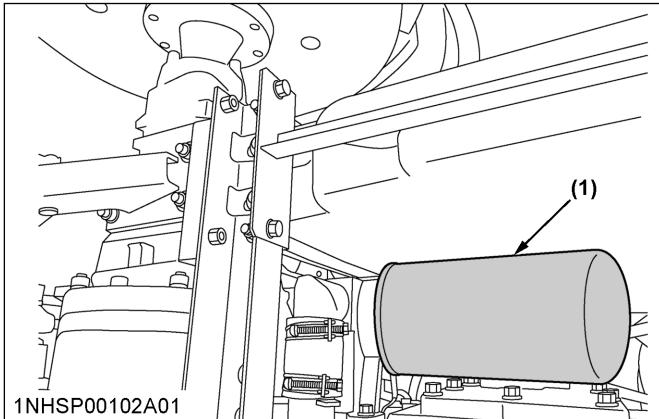
⚠ WARNING

To avoid personal injury or death:

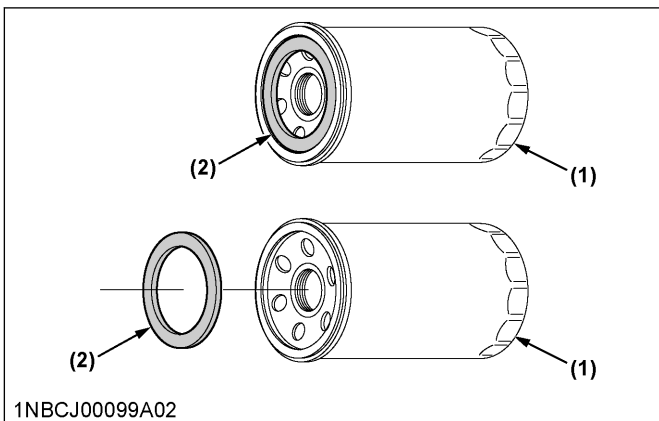
- Stop the engine before changing the oil filter cartridge.
- Allow the engine to cool down sufficiently. Oil can be hot and can burn.

1. Remove the drain plug at the bottom of the transmission case and drain the oil completely into an oil pan.
2. After draining reinstall the drain plug.

5. Wipe off metal filings from the magnetic filter with a clean rag.

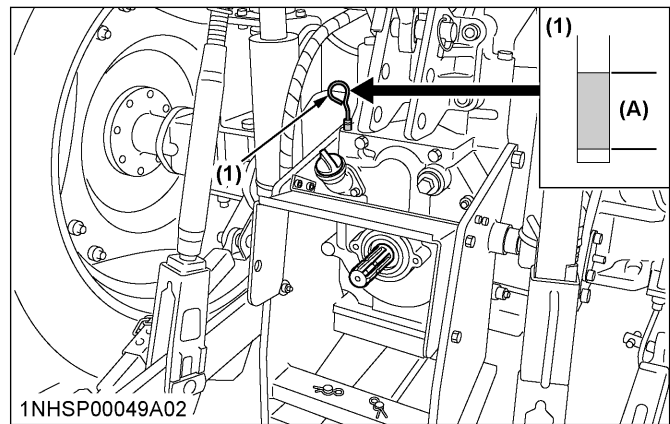


(1) Hydraulic oil filter



(1) Hydraulic oil filter
(2) Magnetic filter (wipe off metal filings)

6. Put a film of clean transmission oil on the rubber seal of the new filter.
7. Tighten the filter quickly until it contacts the mounting surface. Tighten the filter by hand only an additional half a turn.
8. After the new filter has been replaced, fill the transmission oil up to the upper notch on the dipstick.



(1) Dipstick

(A) Oil level is acceptable within this range.

9. After running the engine for a few minutes, stop the engine and check the oil level again, add oil to the prescribed level.
10. Make sure that the transmission fluid does not leak past the seal on the filter.

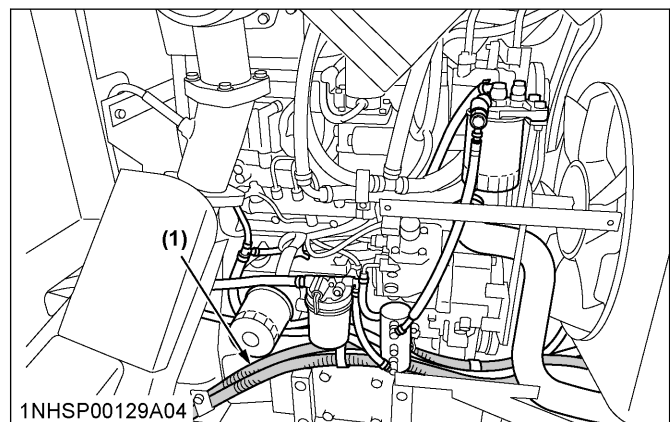
IMPORTANT :

- To prevent serious damage to the hydraulic system, use only a genuine Kubota filter.

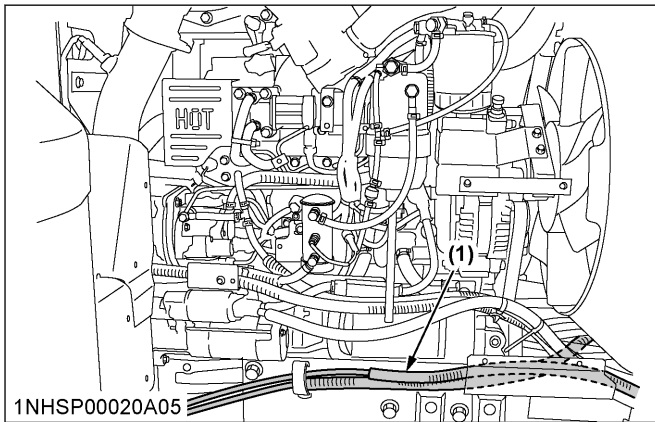
5. Checking power steering line

1. Check to see that all lines and hose clamps are tight and not damaged.
2. If the hoses and the clamps are found to be worn or damaged, replace or repair them at once.

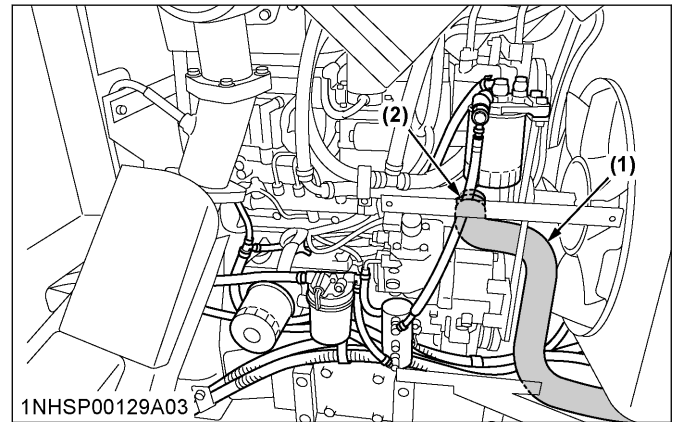
M6-101, M6-111



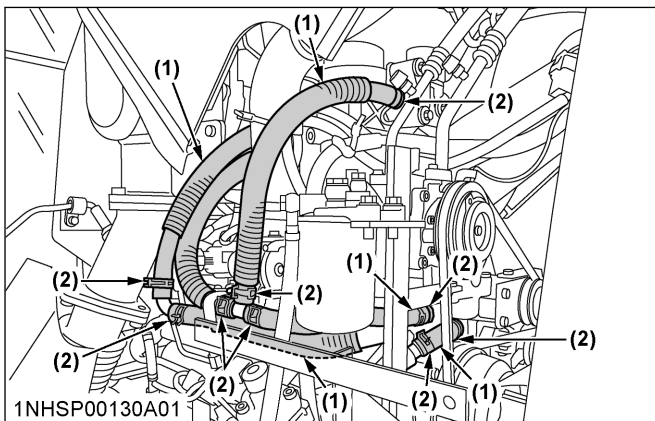
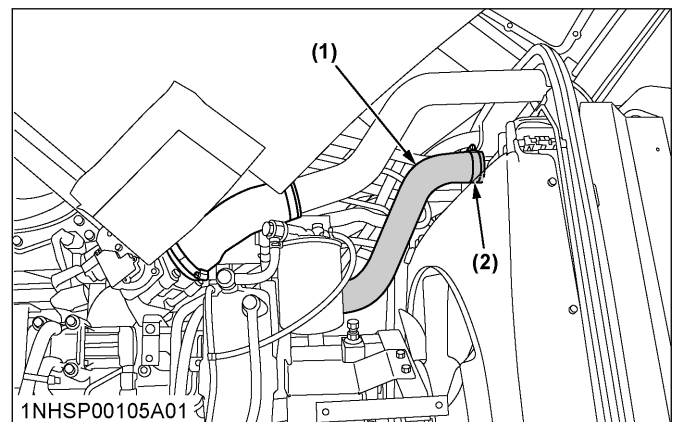
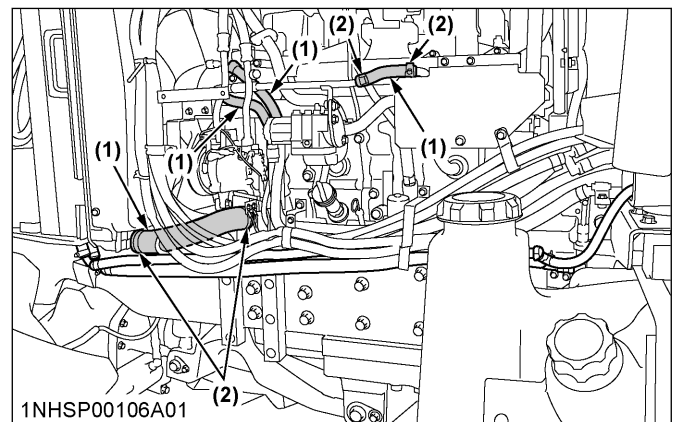
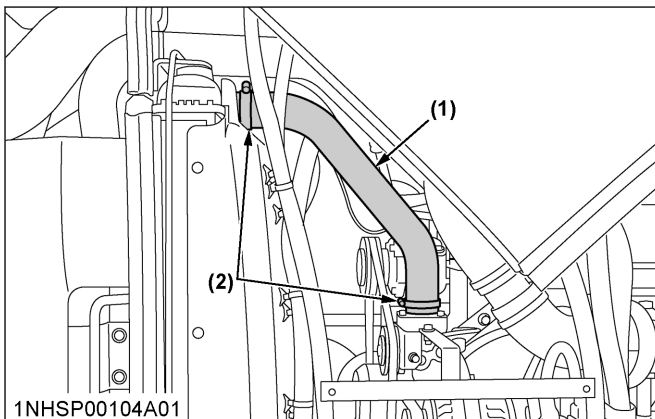
(1) Power steering pressure hoses

M6-131, M6-141

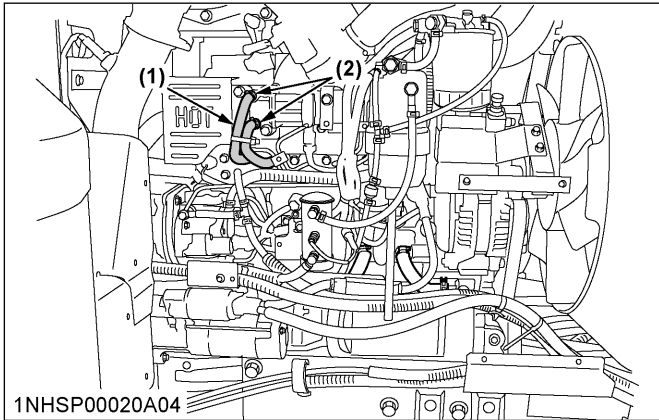
(1) Power steering pressure hoses

M6-101, M6-111(1) Radiator hoses
(2) Hose clamps**6. Checking radiator hose and clamp**

1. If the hose clamps are loose or water leaks, tighten the bands securely.
2. If the hoses are found to be swollen, hardened or cracked, replace the hoses and tighten the hose clamps securely.

M6-101, M6-111(1) Radiator hoses
(2) Hose clamps**M6-131, M6-141**(1) Radiator hoses
(2) Hose clamps**M6-131, M6-141**(1) Radiator hoses
(2) Hose clamps**M6-101, M6-111**(1) Radiator hoses
(2) Hose clamps

M6-131, M6-141

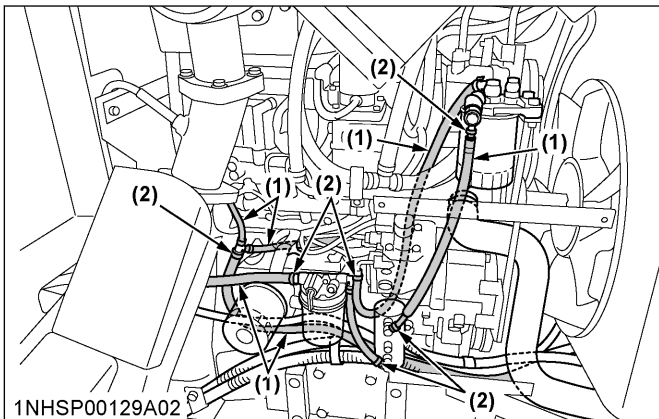


- (1) Radiator hoses
- (2) Hose clamps

7. Checking fuel line

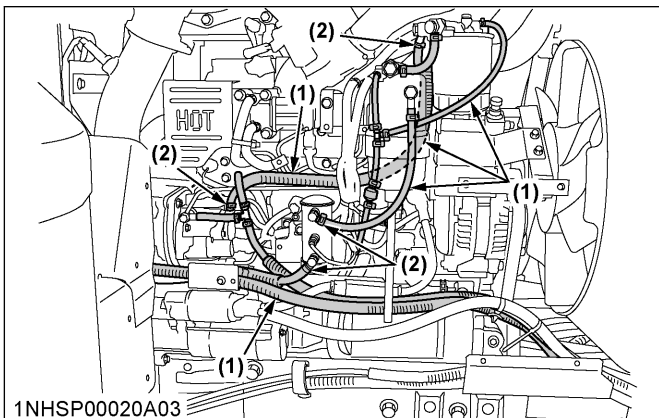
1. Check to see that all lines and hose clamps are tight and not damaged.
2. If the hoses and the clamps are found to be worn or damaged, replace or repair them at once.

M6-101, M6-111



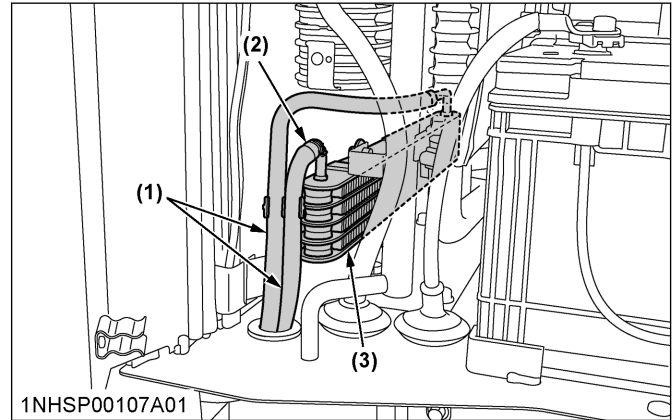
- (1) Fuel lines
- (2) Clamp bands

M6-131, M6-141



- (1) Fuel lines
- (2) Clamp bands

All models



- (1) Fuel lines
- (2) Clamp bands
- (3) Fuel cooler

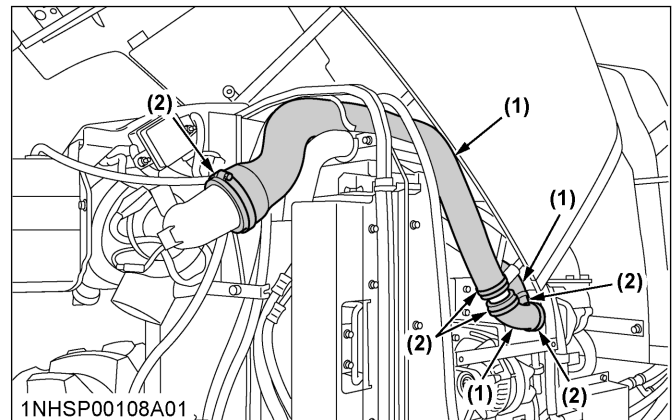
NOTE :

- If the fuel line has been replaced, properly bleed the fuel system.
(See Bleeding fuel system on page 189.)

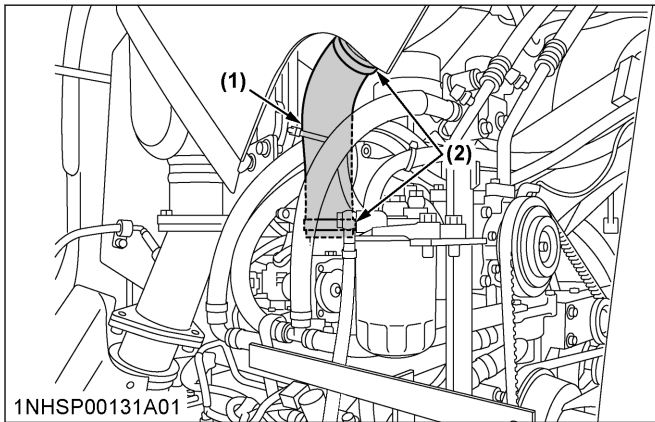
8. Checking intake air line

1. Check to see that the hoses and the hose clamps are tight and not damaged.
2. If the hoses and the clamps are found to be worn or damaged, replace or repair them at once.

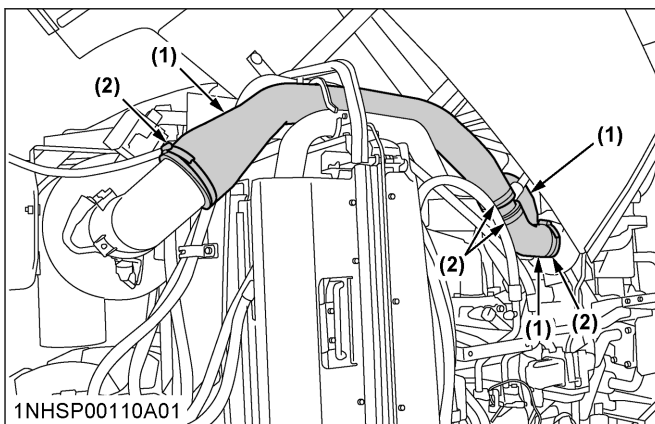
M6-101, M6-111



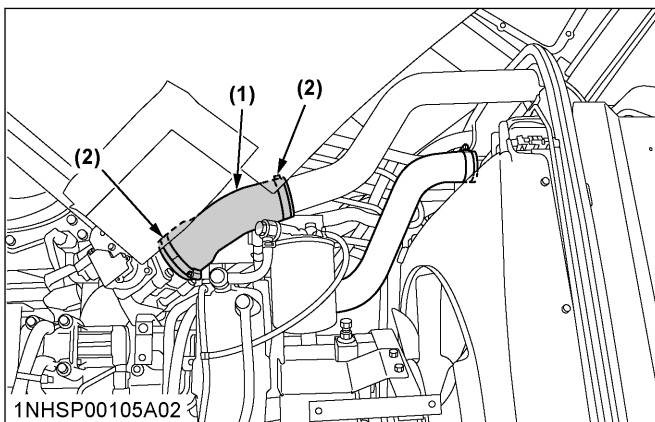
- (1) Hose
- (2) Hose clamps

M6-101, M6-111

- (1) Hose
(2) Hose clamps

M6-131, M6-141

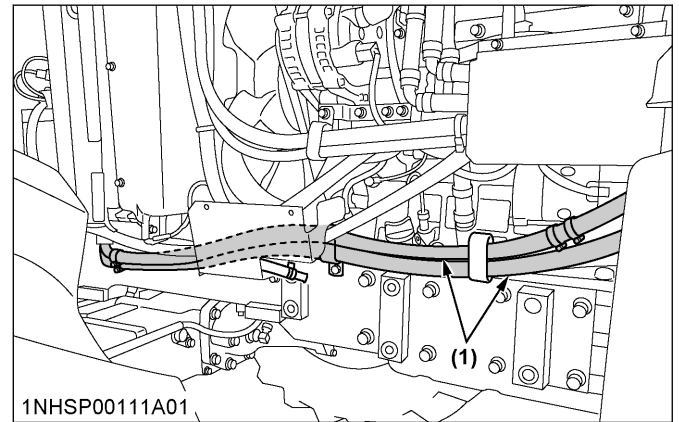
- (1) Hose
(2) Hose clamps

M6-131, M6-141

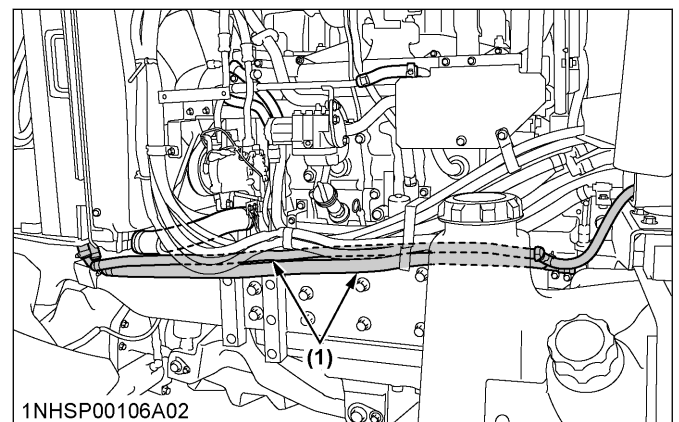
- (1) Hose
(2) Hose clamps

9. Checking oil cooler line

1. Check to see that all lines and hose clamps are tight and not damaged.
2. If the hoses and the clamps are found to be worn or damaged, replace or repair them at once.

M6-101, M6-111

- (1) Oil cooler line

M6-131, M6-141

- (1) Oil cooler line

10. Adjusting power shift

If the power shift is not calibrated, driving will be uncomfortable.

Consult your local Kubota dealer for this service.

Have the following 5 items calibrated.

- Main shift clutch (mode "2")
- Master clutch (mode "3")
- Solenoid proportional pressure reducing valve (master) (mode "5")
- Solenoid proportional pressure reducing valve (main shift L) (mode "6")
- Solenoid proportional pressure reducing valve (main shift H) (mode "7")

11. Checking air conditioner pipe and hose

1. Check to see that all lines and hose clamps are tight and not damaged.
2. If the hoses and the clamps are found to be worn or damaged, consult your local Kubota dealer for this service.

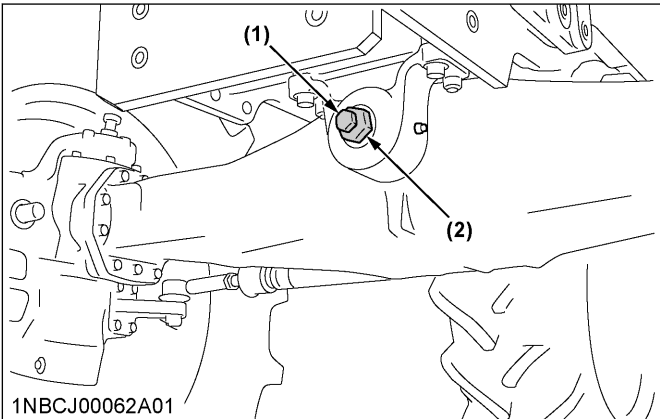
EVERY 600 HOURS

1. Adjusting front axle pivot

If the front axle pivot pin adjustment is incorrect, front wheel vibration can occur, causing vibration in the steering wheel.

Adjusting procedure

- Loosen the lock nut and screw-in the adjusting screw until seated.
- Tighten the screw by an additional 1/6 turn.
- Re-tighten the lock nut.

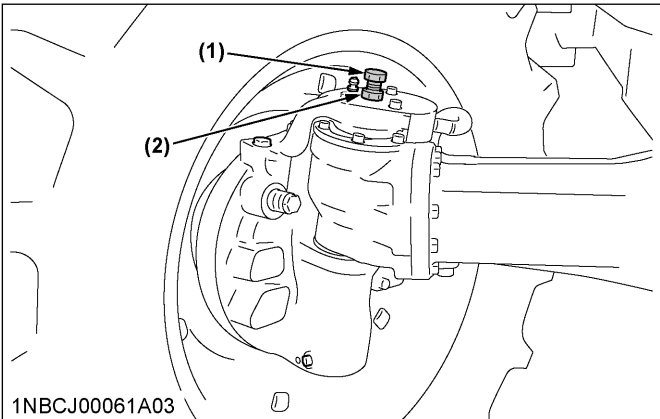


(1) Adjusting screw
(2) Lock nut

2. Adjusting king-pin pivot

Loosen the lock nut and tighten the adjusting screw with following torque:

Adjusting screw	4.9 to 9.8 N·m (0.5 to 1.0 kgf·m)
Lock nut	98.1 to 147 N·m (10 to 15 kgf·m)



(1) Adjusting screw
(2) Lock nut

EVERY 1000 HOURS

1. Changing transmission fluid

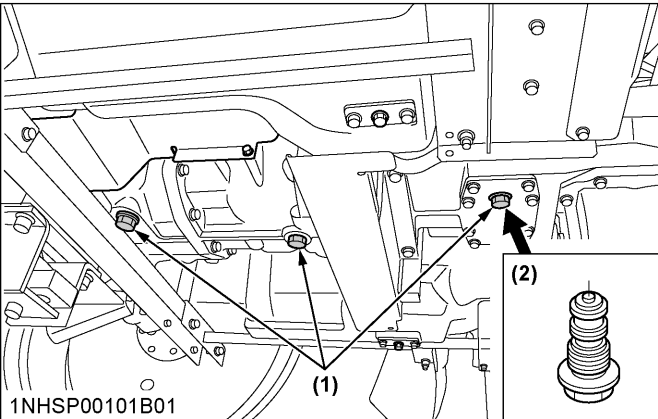


To avoid personal injury or death:

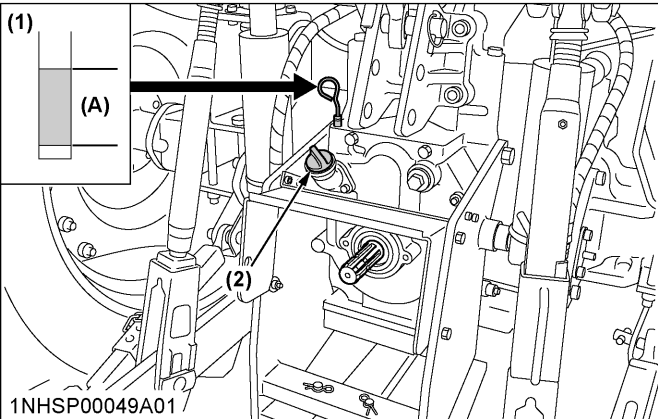
- Allow the engine to cool down sufficiently; oil can be hot and can burn.

- To drain the used oil, remove the drain plug at the bottom of the transmission case and drain the oil completely into the oil pan. Clean the magnetic plug with rags.
- After draining, reinstall the drain plug.
- Fill with new **Kubota SUPER UDT2** fluid up to the upper notch on the dipstick.
(See LUBRICANTS, FUEL AND COOLANT on page 149.)
- After running the engine for a few minutes, stop the engine, check the oil level again, and add oil to the prescribed level, if necessary.

Oil capacity	65 L (68.7 U.S.qts)
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(1) Drain plug
(2) Magnetic plug (wipe off metal filings)



(1) Dipstick
(2) Oil inlet
(A) Oil level is acceptable within this range.

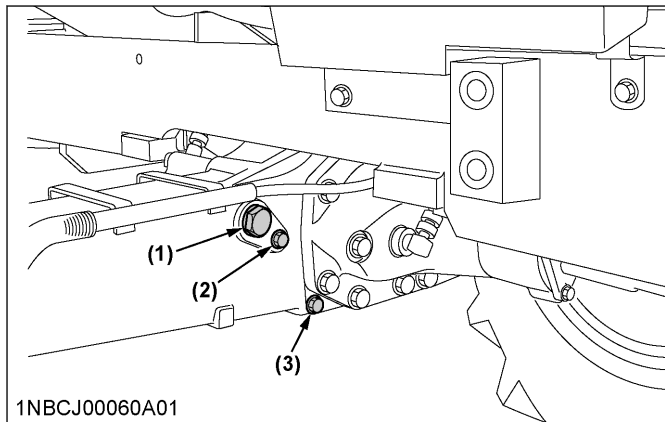
IMPORTANT :

- Do not operate the tractor immediately after changing the transmission fluid. Run the engine at medium speed for a few minutes to prevent damage to the transmission.

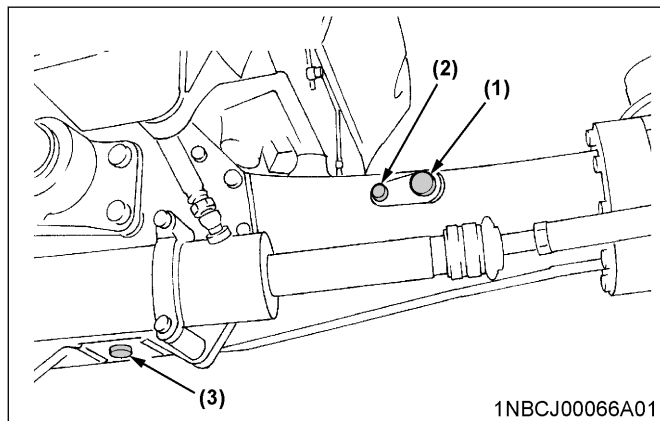
2. Changing front differential case oil

1. To drain the used oil, remove the drain and filling plug at the front differential case and drain the oil completely into the oil pan.
2. After draining, reinstall the drain plug.
3. Remove the oil level check plug.
4. Fill with the new oil up to the lower rim of check plug port.
(See LUBRICANTS, FUEL AND COOLANT on page 149.)
5. After filling, reinstall the filling plug and check plug.

Model	Oil capacity
M6-101, M6-111	7 L (7.4 U.S. qts.)
M6-131, M6-141	13 L (13.7 U.S. qts.)

M6-101, M6-111

- (1) Filling plug
(2) Check plug
(3) Drain plug

M6-131, M6-141

- (1) Filling plug
(2) Check plug
(3) Drain plug

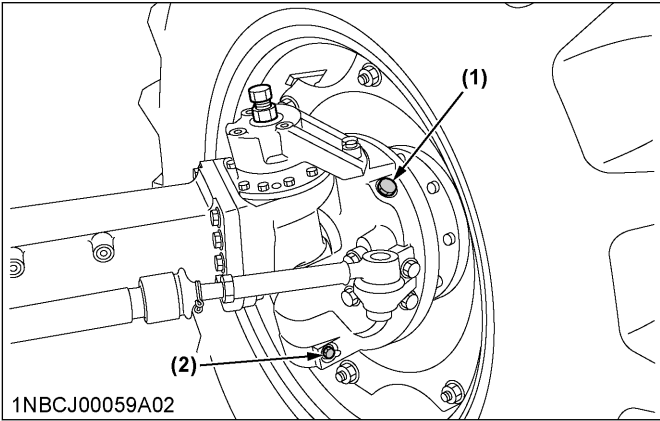
3. Changing front axle gear case oil

1. To drain the used oil, remove the right and left drain plugs and filling plugs at the front axle gear case and drain the oil completely into the oil pan.
2. After draining, reinstall the drain plugs.
3. Fill with the new oil up to the filling plug port.
(See LUBRICANTS, FUEL AND COOLANT on page 149.)

4. After filling, reinstall the filling plugs.

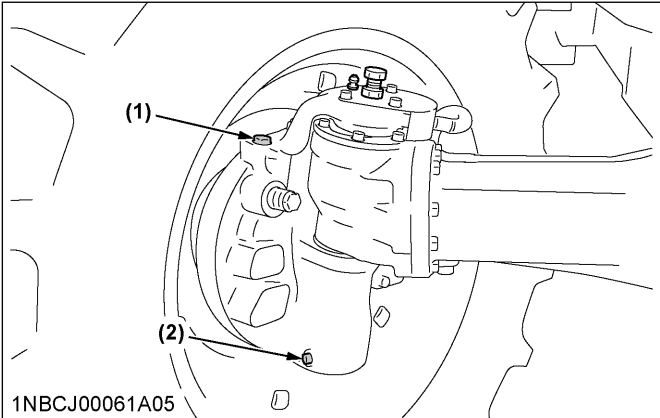
Model	Oil capacity
M6-101, M6-111	3.5 L (3.7 U.S. qts.)
M6-131, M6-141	4.5 L (4.8 U.S. qts.)

M6-101, M6-111



- (1) Filling plug
- (2) Drain plug

M6-131, M6-141



- (1) Filling plug
- (2) Drain plug

4. Adjusting engine valve clearance

Consult your local Kubota dealer for this service.

EVERY 1000 HOURS OR 1 YEAR

Perform the following servicing once every 1000 hours or yearly, whichever comes first.

1. Replacing air cleaner primary element and secondary element

(See Cleaning air cleaner primary element on page 165.)

2. Checking exhaust manifold

Consult your local Kubota dealer for this service.

EVERY 1500 HOURS

1. Cleaning fuel injector nozzle tip

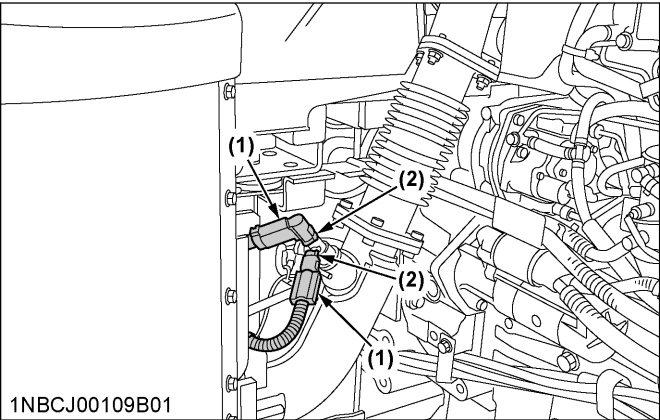
Consult your local Kubota dealer for this service.

2. Checking DEF injector tip

Consult your local Kubota dealer for this service.

3. Checking DEF (AdBlue) line

- 1. Check to see that all lines from the DEF injector to the DEF tank are securely connected and not damaged.
- 2. If hoses and clamps are found worn or damaged, replace or repair them at once.



- (1) DEF (AdBlue) lines
- (2) Clamp bands

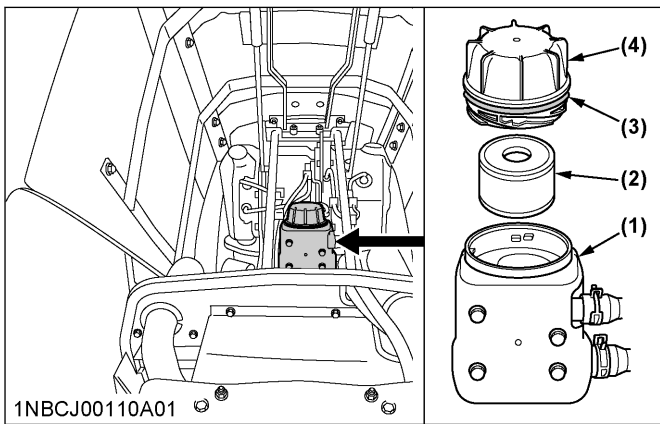
4. Replacing oil separator element

! WARNING

To avoid personal injury or death:

- Stop the engine before replacing the oil separator element.

- 1. Remove the cover and take out the element. Wipe off the oil and the carbon from inside the case with a clean rag.
- 2. Fit in a new oil separator element.
- 3. Tighten the cover.



- (1) Body
(2) Oil separator element
(3) Gasket
(4) Cover

3. After all the coolant has drained, reinstall the drain plug securely.
4. Fill with clean soft water and cooling system cleaner.
5. Follow the cleaner instructions.
6. After flushing, fill with clean soft water and antifreeze until the coolant level is just below the port.
7. Fill with clean water and antifreeze up to the upper line of the coolant recovery tank.
8. Reinstall the radiator cap securely.
9. Start and operate the engine for a few minutes.
10. Stop the engine, check the coolant level and add coolant if necessary.

5. Checking positive crankcase ventilation (PCV) valve

Consult your local Kubota dealer for this service.

6. Checking and cleaning EGR cooler

Consult your local Kubota dealer for this service.

7. Checking accumulator (front suspension type)

Consult your local Kubota dealer for this service.

EVERY 2000 HOURS OR 2 YEARS

Perform the following servicing once every 2000 hours or biennially, whichever comes first.

1. Flushing cooling system and changing coolant

WARNING

To avoid personal injury or death:

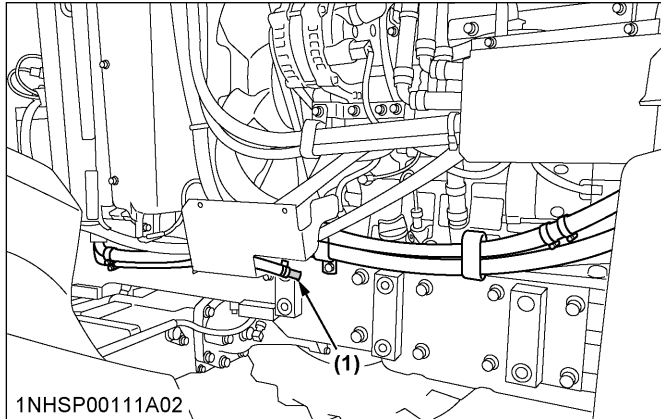
- Do not remove the radiator cap while the coolant is hot. When cool, slowly rotate the cap to the first stop and allow sufficient time for excess pressure to escape before removing the cap completely.

1. Stop the engine, and let it cool down.
2. To drain the coolant, remove the radiator drain plug and remove the radiator cap. The radiator cap must be removed to completely drain the coolant.

11. Properly dispose of the used coolant.

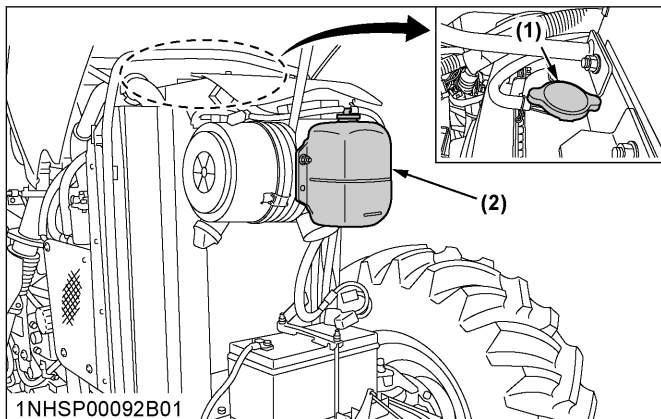
Model	Coolant capacity
M6-101, M6-111	11.5 L (12.2 U.S. qts.)
M6-131, M6-141	15.9 L (16.8 U.S. qts.)

M6-101, M6-111



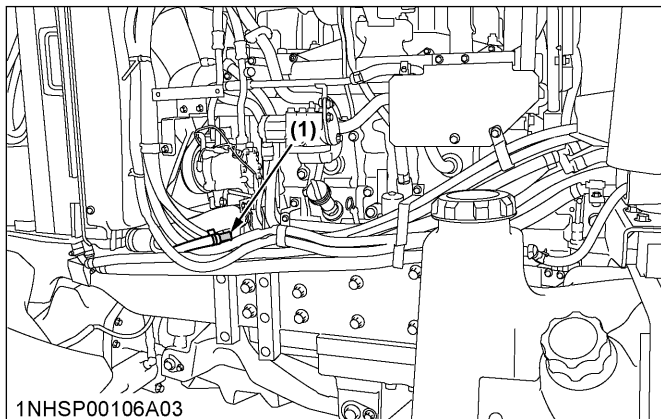
(1) Drain plug

M6-101, M6-111



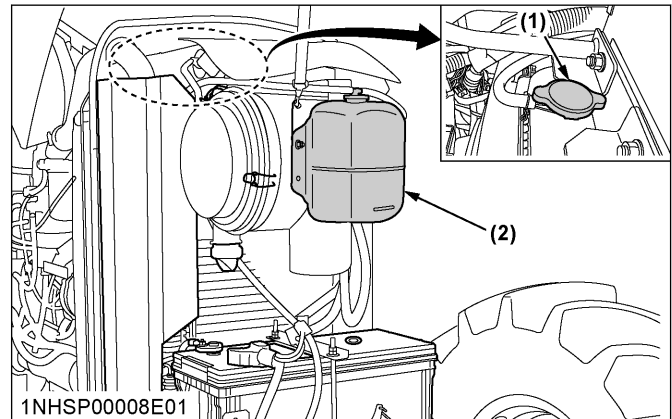
(1) Radiator cap
(2) Coolant recovery tank

M6-131, M6-141



(1) Drain plug

M6-131, M6-141



(1) Radiator cap
(2) Coolant recovery tank

IMPORTANT :

- Do not start the engine without any coolant.
- Use clean, fresh soft water and antifreeze to fill the radiator and coolant recovery tank.
- When mixing the antifreeze with water, the antifreeze mixing ratio is 50 %.
- Securely tighten the radiator cap. If the cap is loose or improperly fitted, water may leak out and the engine could overheat.

NOTE :

- On CAB type machines, coolant circulates through the heater. This means that approximately one more liter of coolant is required.
In changing coolant, pour coolant up to the filler port of the coolant recovery tank. Turn on the heater (shift the temperature control dial toward [WARM]), and run the engine for a while in order to warm coolant. Then stop the engine.
When the coolant has cooled down, some of the coolant in the coolant recovery tank is drawn into the pipes. Now the coolant recovery tank is appropriately filled with coolant.

2. Antifreeze

WARNING

To avoid personal injury or death:

- When using antifreeze, put on some protection such as rubber gloves (antifreeze contains poison).
- If you swallow the antifreeze, seek immediate medical help. Do not make a person throw up unless told to do so by a poison control or a healthcare professional. Use standard first aid and CPR for signs of shock or cardiac arrest. Call your local poison control center or your local emergency number for further assistance.

- When antifreeze comes in contact with the skin or clothing, wash it off immediately.
- Do not mix different types of antifreeze. The mixture can produce chemical reactions resulting in harmful substances.
- Antifreeze is extremely flammable and explosive under certain conditions. Keep fire and children away from antifreeze.
- When draining fluids from the engine, place a container underneath the engine body.
- Do not pour waste onto the ground, down a drain, or into any water source.
- Also, observe the relevant environmental protection regulations when disposing of antifreeze.

Always use a 50/50 mix of long-life coolant and clean soft water in Kubota engines.

Consult your local Kubota dealer concerning coolant for extreme conditions.

1. Long-life coolant (hereafter LLC) comes in several types. Use ethylene glycol (EG) type for this engine.
2. Before employing LLC-mixed cooling water, fill the radiator with fresh water and empty it again. Repeat this procedure 2 or 3 times to clean up the inside.
3. Mixing the LLC
Premix 50 % LLC with 50 % clean soft water. When mixing, stir it up well, and then pour it into the radiator.
4. The procedure for the mixing of water and antifreeze differs according to the make of the antifreeze and the ambient temperature. Refer to SAE J1034 standard, more specifically also to SAE J814c.

Vol % antifreeze	Freezing point		Boiling point*1	
	℃	℉	℃	℉
50	-37	-34	108	226

*1 At 1.013 x 10⁵ Pa (760 mmHg) pressure (atmospheric). A higher boiling point is obtained by using a radiator pressure cap which permits the development of pressure within the cooling system.

5. Adding the LLC
 - a. Add only water if the mixture level is reduced by evaporation.
 - b. If there is a mixture leak, add LLC of the same manufacturer and type in the same mixture percentage.

IMPORTANT :

- Never add any long-life coolant from a different manufacturer. Different brands may have different additive components, and the engine may fail to perform as specified.

6. When the LLC is mixed, do not employ any radiator cleaning agent. The LLC contains anticorrosive agent. If mixed with the cleaning agent, sludge may build up, adversely affecting the engine parts.
7. Kubota's genuine long-life coolant has a service life of 2 years. Change the coolant every 2000 hours or every 2 years, whichever comes first.

NOTE :

- The above data represents industry standards that necessitate a minimum glycol content in the concentrated antifreeze.

EVERY 3000 HOURS

1. Checking turbocharger

Consult your local Kubota dealer for this service.

2. Checking supply pump

Consult your local Kubota dealer for this service.

3. Checking intake air heater (M6-101, M6-111)

Consult your local Kubota dealer for this service.

4. Checking and cleaning EGR system

Consult your local Kubota dealer for this service.

5. Cleaning DPF muffler (M6-101, M6-111)

1. Remove the ash.
The longer the DPF operates, the more ash (burnt residue) is collected in the filter. Too much ash build-up adversely affects the DPF performance. Consult your local Kubota dealer to clean the filter.

IMPORTANT :

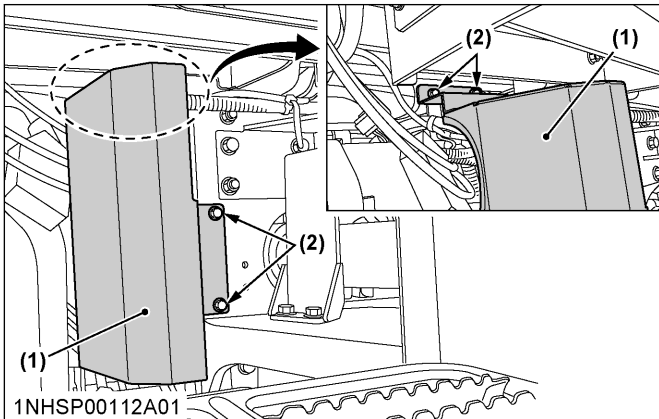
- The DPF needs to be cleaned with a specific cleaning device. Do not disassemble the DPF for cleaning or attempt to clean it yourself. Consult your local Kubota dealer.

6. Checking DEF injector

Consult your local Kubota dealer for this service.

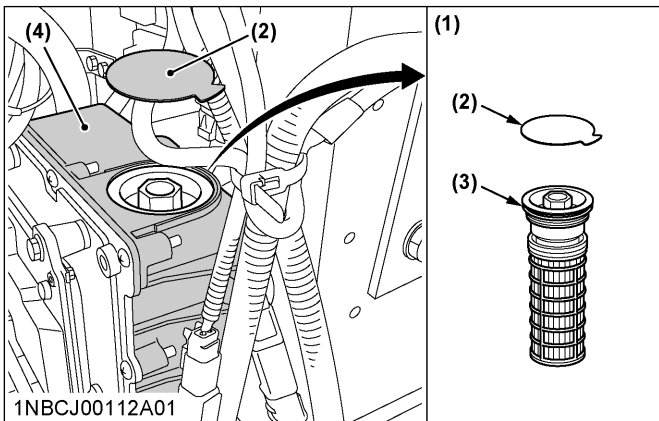
7. Replacing DEF pump filter

1. Loosen the 4 bolts and then remove the pump cover.



- (1) Pump cover
(2) Bolt

2. Clean around the plug and remove the plug.
3. Loosen the top of the filter assembly and remove it from the pump.
4. Replace the filter assembly with a new one.



- (1) Filter assembly
(2) Plug
(3) O-ring
(4) DEF pump

NOTE :

- Even after stopping the engine, the injector cooling DEF (AdBlue) fluid continues to circulate through the circuit for a couple of minutes. When this circulation has ended, the filter can be replaced. During cooling, the fluid's circulating noise is heard.
- Do not apply oil to the o-ring of the filter.

EVERY 8000 HOURS

1. Cleaning DPF muffler (M6-131, M6-141)

1. Remove the ash.

The longer the DPF operates, the more ash (burnt residue) is collected in the filter. Too much ash build-up adversely affects the DPF performance. Consult your local Kubota dealer to clean the filter.

IMPORTANT :

- The DPF needs to be cleaned with a specific cleaning device. Do not disassemble the DPF for cleaning or attempt to clean it yourself. Consult your local Kubota dealer.

2. Replacing DEF tank suction filter

Consult your local Kubota dealer for this service.

EVERY 3 MONTHS

1. Checking the quality of DEF (AdBlue)

Check the odor of the DEF (AdBlue) in the DEF tank.

IMPORTANT :

- If the DEF (AdBlue) emits a strong ammonia odor, the quality of the fluid may have deteriorated. To check the quality of the DEF (AdBlue), check the odor of the DEF (AdBlue) in the DEF tank once every 3 months.
- If the DEF (AdBlue) in the DEF tank emits a strong ammonia odor, drain all DEF (AdBlue) from the DEF tank into a container. (See Draining DEF (AdBlue) on page 53.) After draining the DEF (AdBlue), flush the inside of the DEF tank with distilled water. Then refill the DEF tank with new or high-quality DEF (AdBlue).

- Do not use a power tool when reinstalling the drain plug. Overtightening the drain plug may cause damage.

(See Storing DEF (AdBlue) in the DEF tank on page 54 for details.)

EVERY 3 TO 4 MONTHS

1. Rustproofing when in storage

While the tractor is in storage, run the engine at idle as a rustproofing operation for 5 to 10 minutes every 3 to 4 months.

When performing the rustproofing operation, a warning about low DEF (AdBlue) level may appear, however the operation can be performed without any problems.

EVERY 1 YEAR

1. Checking antifrost heater for oil separator (if equipped)

Consult your local Kubota dealer for this service.

2. Checking CAB isolation cushion

Check the cushion for any breakage or fatigue.
Replace the cushion if it has deteriorated.

3. Checking DPF differential pressure sensor pipe

Consult your local Kubota dealer for this service.

4. Checking EGR pipe

Consult your local Kubota dealer for this service.

EVERY 2 YEARS

1. Replacing positive crankcase ventilation (PCV) valve hose

Consult your local Kubota dealer for this service.

2. Replacing DPF differential pressure sensor hose

Consult your local Kubota dealer for this service.

3. Replacing boost sensor hose

Consult your local Kubota dealer for this service.

4. Checking brake hose

Consult your local Kubota dealer for this service.

5. Checking clutch hose

Consult your local Kubota dealer for this service.

6. Checking differential lock hose

Consult your local Kubota dealer for this service.

7. Checking radiator hose (water pipes)

Consult your local Kubota dealer for this service.

8. Checking fuel line

Consult your local Kubota dealer for this service.

9. Checking intake air line

Consult your local Kubota dealer for this service.

10. Checking oil cooler line

Consult your local Kubota dealer for this service.

11. Checking power steering line

Consult your local Kubota dealer for this service.

12. Checking lift cylinder hose

Consult your local Kubota dealer for this service.

13. Checking suspension hose (front suspension type)

Consult your local Kubota dealer for this service.

14. Checking air conditioner hose

Consult your local Kubota dealer for this service.

EVERY 3 YEARS

1. Replacing parking brake cable

Consult your local Kubota dealer for this service.

EVERY 4 YEARS

1. Replacing master cylinder kit

Consult your local Kubota dealer for this service.

2. Replacing equalizer kit

Consult your local Kubota dealer for this service.

3. Replacing brake seal 1 and 2

Consult your local Kubota dealer for this service.

SERVICE AS REQUIRED

1. Bleeding fuel system

Air must be removed:

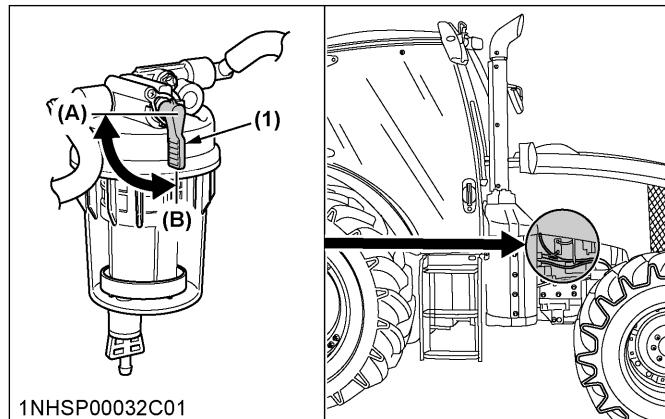
- When the fuel filter or lines are removed.
- When the water is drained from the water separator.

- When the tank is completely empty.
- After the tractor has not been used for a long period of time.

Bleeding procedure is as follows:

1. Fill the fuel tank with fuel, and open the fuel shut-off valve.

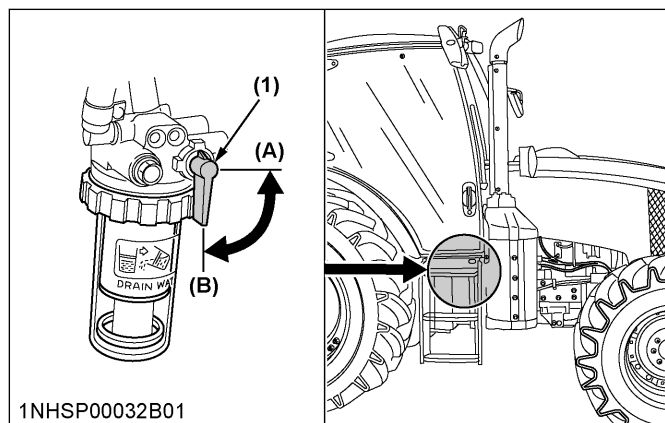
M6-101, M6-111



(1) Fuel shut-off valve

(A) "CLOSE"
(B) "OPEN"

M6-131, M6-141

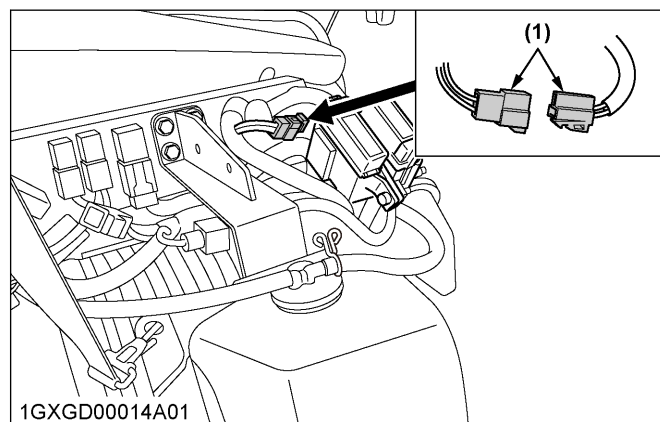


(1) Fuel shut-off valve

(A) "CLOSE"
(B) "OPEN"

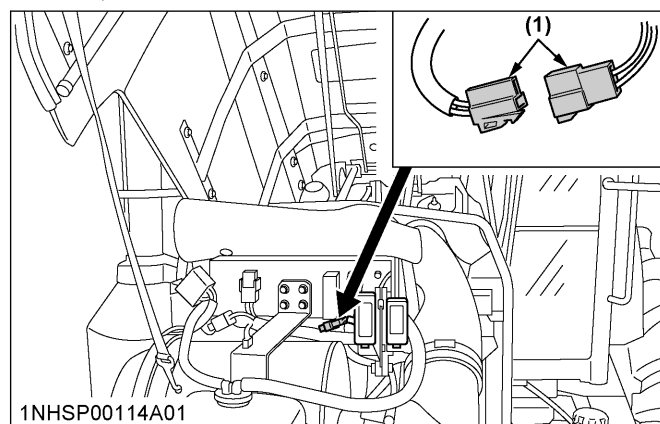
2. Disconnect the heater connector.

M6-101, M6-111



(1) Connector

M6-131, M6-141

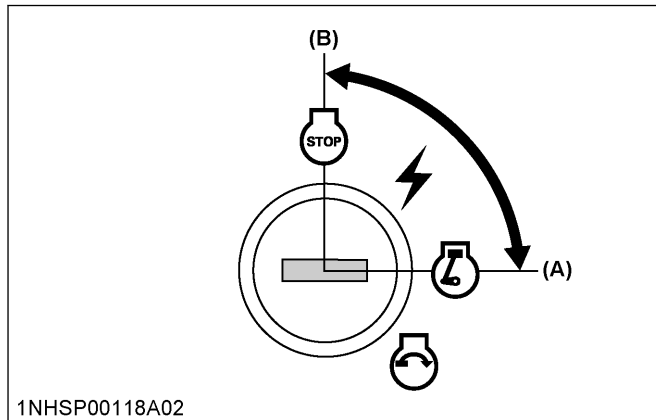


(1) Connector

IMPORTANT :

- Do not try air-bleeding with the heater in operation. Otherwise the battery may be damaged.

3. Turn the key switch to the "ON" position and the "OFF" position repeatedly 10 times or so at the following intervals. This procedure lets the air out of the fuel line.
 - a. Key switch "ON" time: 30 seconds
 - b. Key switch "OFF" time: 15 seconds



(1) Key switch

(A) "ON"
(B) "OFF"

4. Connect the heater connector.
5. Set both the hand and the foot throttles to the minimum speed position, turn the key switch to start the engine and then reset the throttle lever at the mid speed (around 1500 rpm) position. If the engine does not start, try it several times at 30 second intervals.

IMPORTANT :

- Do not hold the key switch at the engine start position for more than 10 seconds continuously. If more engine cranking is needed, try again after 30 seconds.

6. Accelerate the engine to remove the small portion of air left in the fuel system.
7. If air still remains and the engine stops, repeat the previous steps.

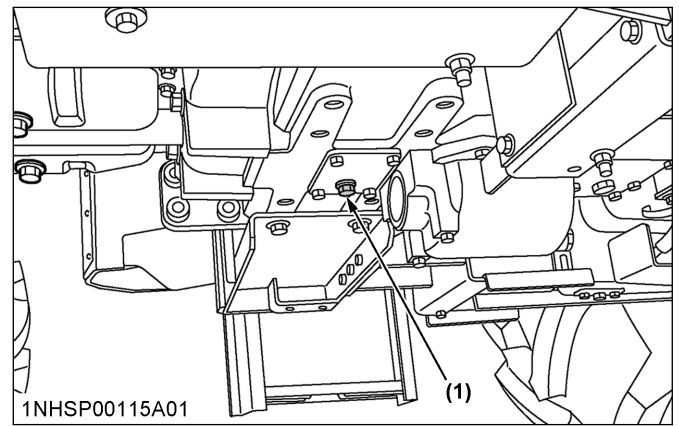
2. Bleeding brake system

Consult your local Kubota dealer for this service.

3. Draining clutch housing water

The tractor is equipped with a drain plug under the clutch housing.

After operating in the rain or snow, or if the tractor has been washed, water may get into the clutch housing. Remove the drain plug, drain the water and then reinstall the plug.



(1) Water drain plug

4. Replacing fuses

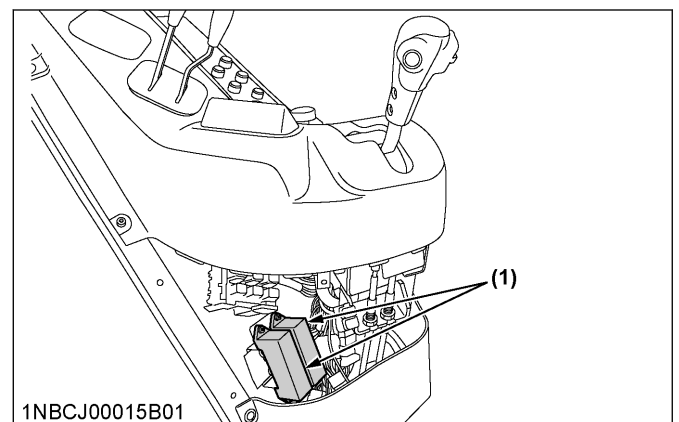
The tractor electrical system is protected from potential damage by fuses.

A blown fuse indicates that there is an overload or short somewhere in the electrical system.

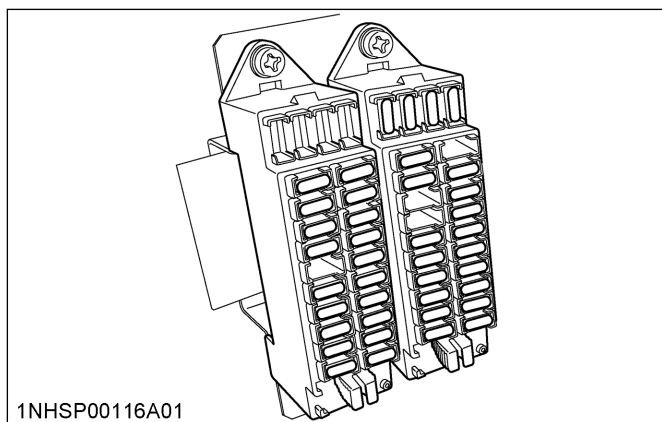
If any of the fuses should blow, replace with a new one of the same capacity.

IMPORTANT :

- Before replacing a blown fuse, determine why the fuse blew and make any necessary repairs. Failure to follow this procedure may result in serious damage to the tractor electrical system. For specific information dealing with electrical problems, read the troubleshooting section of this manual or contact your local Kubota dealer. (See TROUBLESHOOTING on page 199.)

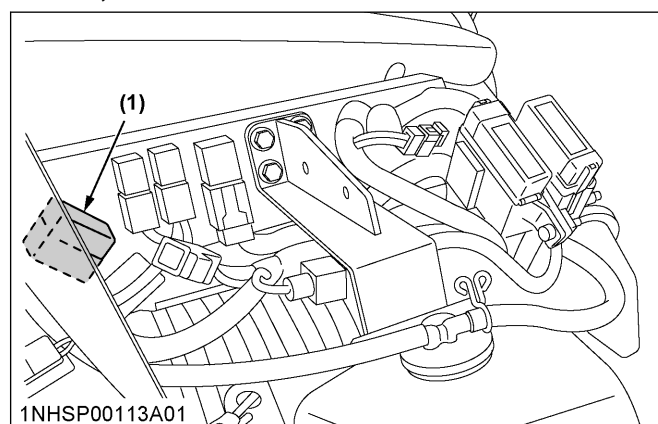


(1) Fuse box 1

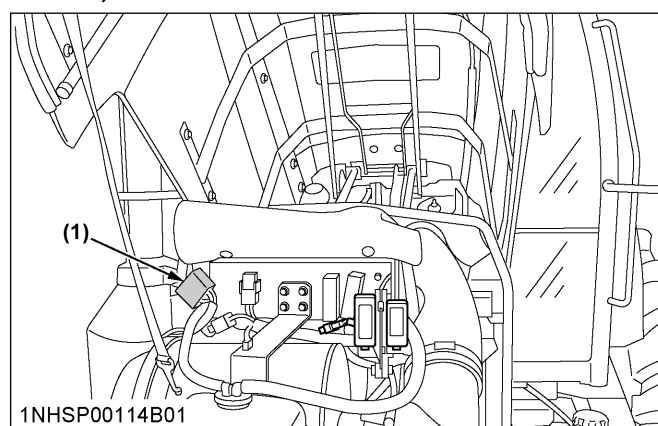
**Protected circuit****Fuse box 1**

				[5A] Spare	[10A] Spare	[15A] Spare	[20A] Spare
[10A] Back buzzer	[10A] Brake light	[15A] Work light (cabin side)					
[10A] ECU (suspension)*1	[5A] Switch (transmission control)	[15A] Work light (front upper)		[15A] Head lamp			
[5A] ECU (switch)	[5A] Switch (hitch control)			[30A] Air conditioner fan motor			
[30A] Defogger	[10A] ECU (main)			[10A] Air conditioner compressor			
	[7.5A] Main meter	[10A] Option light		[15A] Tail light			
[10A] 4WD brake	[5A] 4WD, bi-speed, differential lock	[15A] Work light (rear)		[15A] Hazard light			
[5A] Radio	[5A] Engine control, PTO valve	[10A] Work light (hood)		[10A] Dome light, ra- dio			
[5A] Air conditioner (fan control)	[10A] Turn signal	[15A] Seat compres- sor		[10A] Horn			
[15A] Wiper	[15A] Loader power aux socket	[15A] Cigarette sock- et		[15A] Loader plug			
[5A] Starter relay	[5A] Seat switch	[15A] Work light (op- tion)		[5A] Back up (ECU, meter)			

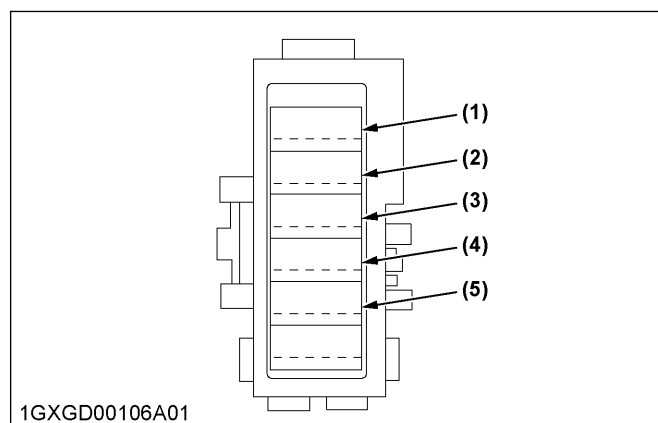
*1 Depending on the specification, this fuse is not equipped.

M6-101, M6-111

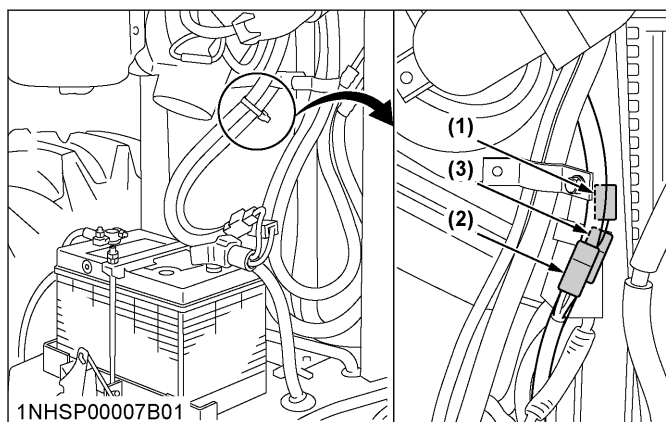
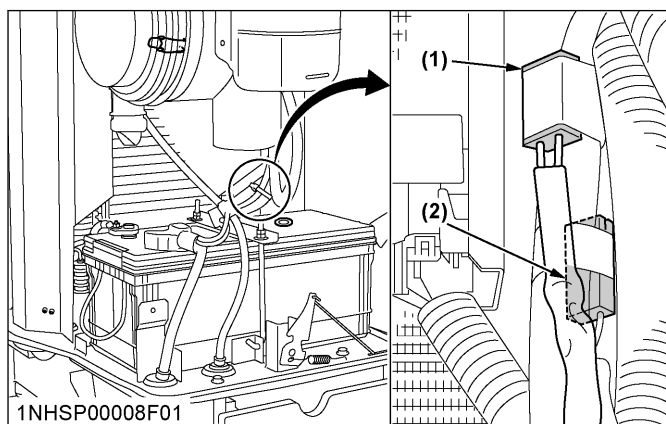
(1) Fuse box 2

M6-131, M6-141

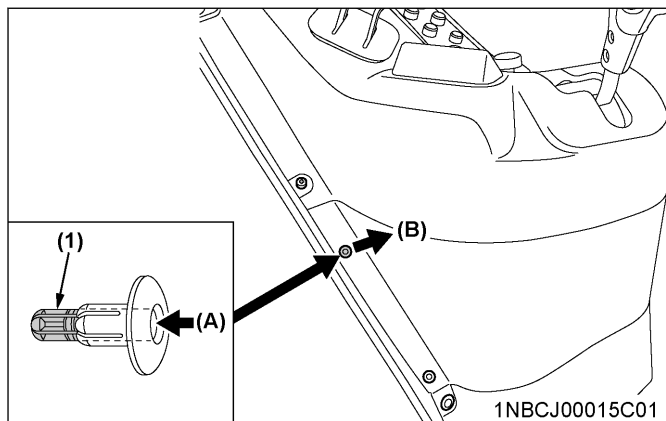
(1) Fuse box 2

**Fuse box 2**

Fuse No.	Capacity	Protected circuit
(1)	20 A	ECU (comp)
(2)	30 A	ECU (heater)
(3)	10 A	Sensor
(4)	10 A	EGR valve
(5)	20 A	Pump

M6-101, M6-111**M6-131, M6-141****Oil separator fuse**

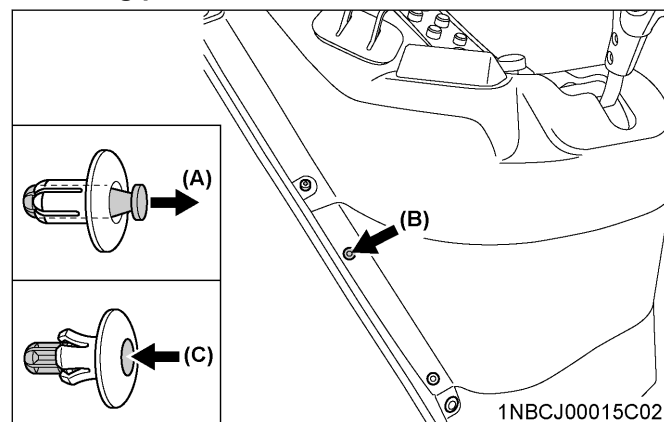
Fuse No.	Capacity	Protected circuit
(1)	15 A	Heater (Oil separator, IN)
(2)	15 A	Heater (Oil separator, OUT 1)
(3)	15 A	Heater (Oil separator, OUT 2)

Attaching and detaching the push-rivet assy**Detaching procedure**

(1) Center-rivet

(A) Push in the center-rivet.

(B) Pull out the push-rivet assy.

Attaching procedure

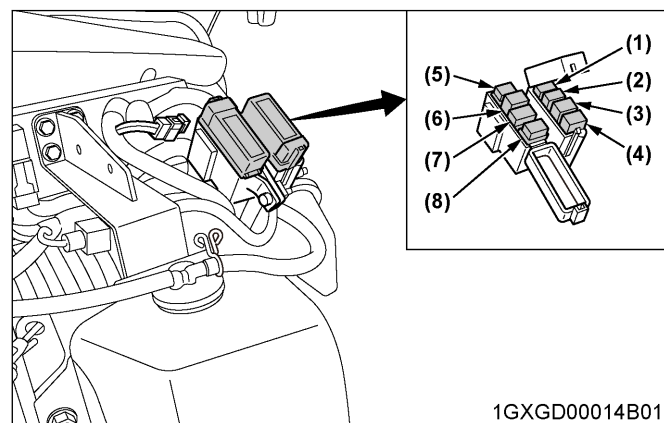
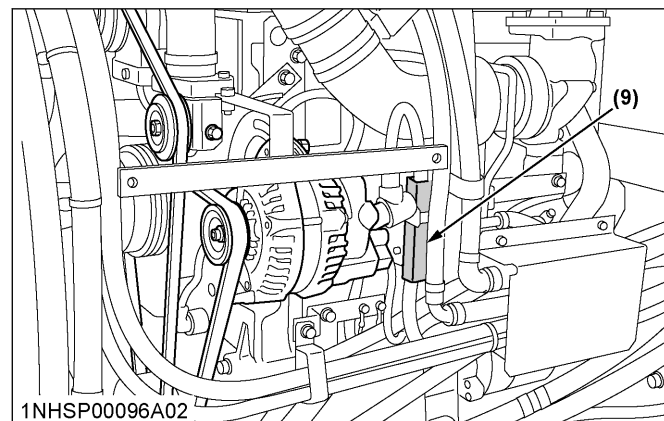
(A) Pull out the center-rivet.

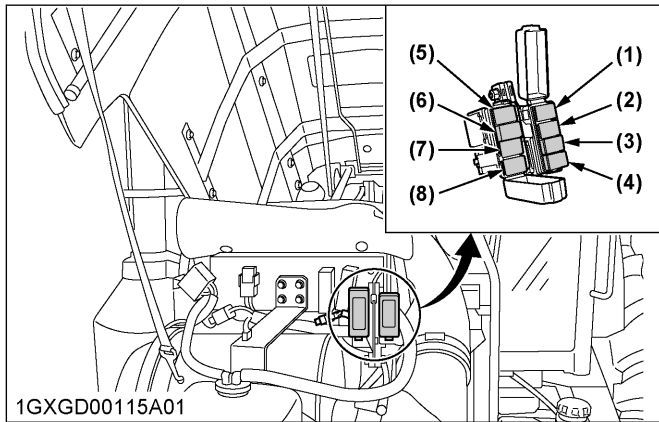
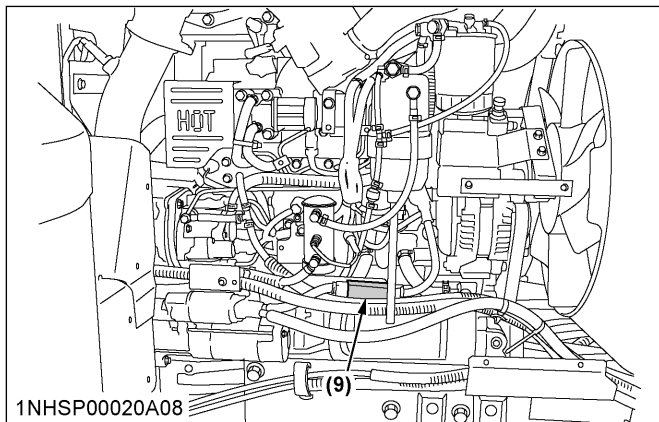
(B) Attach the push-rivet assy.

(C) Push the center-rivet.

5. Replacing slow-blow fuses

The slow-blow fuses are intended to protect the electrical cabling. If any of the slow-blow fuses have blown, pinpoint the cause. Never use any substitute, use only a Kubota genuine part.

M6-101, M6-111**M6-101, M6-111**

M6-131, M6-141**M6-131, M6-141**

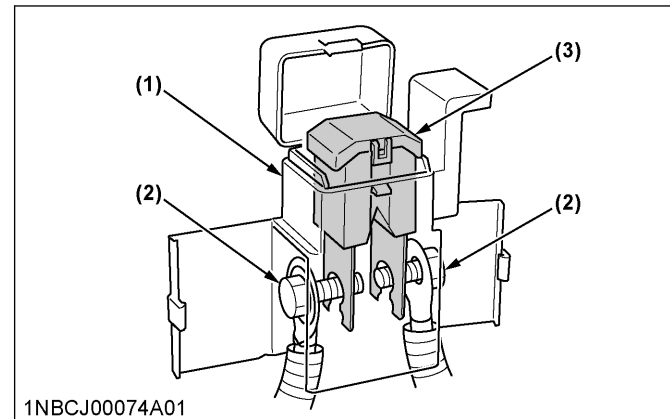
Fuse No.	Capacity	Protected circuit	Type
1	40 A	Defogger	Non bolt fixed
2	30 A	Electrical outlet	
3	40 A	Work light (Rear)	Bolt fixed
4	120 A (M6-101, M6-111)	Engine preheat	
	40 A (M6-131, M6-141)	Work light (Hood) Head lamp	
5	40 A (M6-101, M6-111)	Work light (Hood) Head lamp	
	60 A (M6-131, M6-141)	Engine preheat	
6	40 A	Compressor	Non bolt fixed
7	30 A	Hazard	
8	30 A	Main key switch	
9	150 A	Alternator	Non bolt fixed

5.1 Replacement procedure**Non-bolt-fixed slow-blow fuse:**

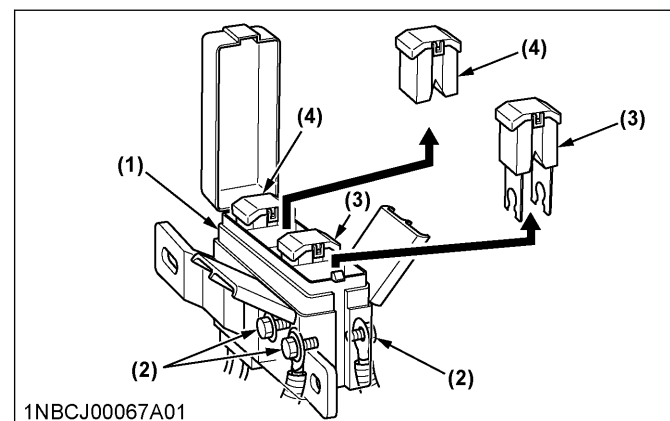
1. Disconnect the negative cord of the battery.
2. Pull out the fuse from the fuse box.
3. Replace with a new one of the same capacity.

Bolt fixed slow-blow fuse:

Consult your local Kubota dealer for this service.



- (1) Fuse box
(2) Bolt
(3) Bolt fixed slow-blow fuse



- (1) Fuse box
(2) Bolt
(3) Bolt fixed slow-blow fuse
(4) Non bolt fixed slow-blow fuse

6. Replacing light bulb**Headlight**

- Take the bulb out of the light body and replace with a new one.

Other lights

- Detach the lens and replace the bulb.

Light	Capacity
Head light	60 / 55 W
Turn signal light (Front & Rear)	21 W
Stop light / Tail light	21 / 5 W
Work light (CAB)	35 W
Work light (Hood)	35 W
Dome light (Room lamp)	5 W
Spotlight	7.5 W

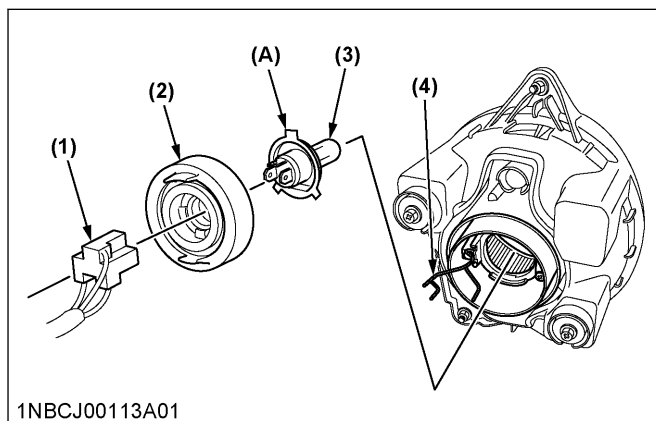
7. Replacing headlight bulb

⚠ CAUTION

To avoid personal injury:

- Be careful not to drop the bulb, hit anything against the lamp, apply excess force, or get the lamp scratched. If broken, the glass may cause injury. Pay more attention to halogen bulbs in particular, which have high pressure inside.
- Before replacing the bulbs, turn off the light and wait until the bulb cools down. Otherwise, you may get burned.

1. While pushing the right and left lock buttons, pull and remove the electrical connector.
2. Remove the rubber boot.
3. Remove the clamping fixture and then remove the bulb.
4. Replace the old bulb with a new one and reinstall the headlight assembly in the reverse order.



- (1) Electrical connector
 (2) Rubber boot
 (3) Bulb
 (4) Clamping fixture
 (A) "Base's wider projection to face upward"

IMPORTANT :

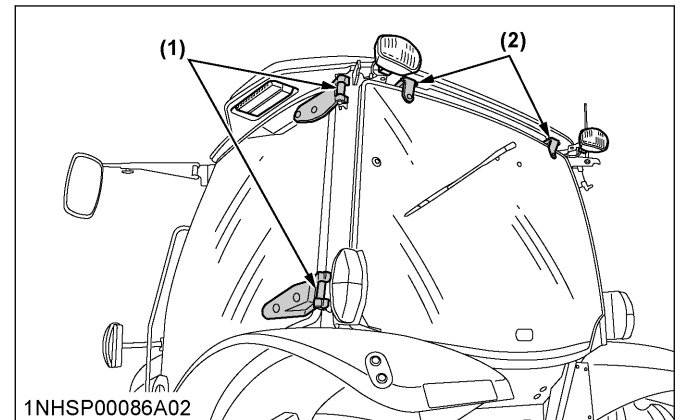
- Use a new bulb of the specified wattage.
- Never touch the bulb surface (glass) with bare hands. Fingerprints, for example, may break the bulb.

8. Lubricating points for door and window

⚠ WARNING

To avoid personal injury or death:

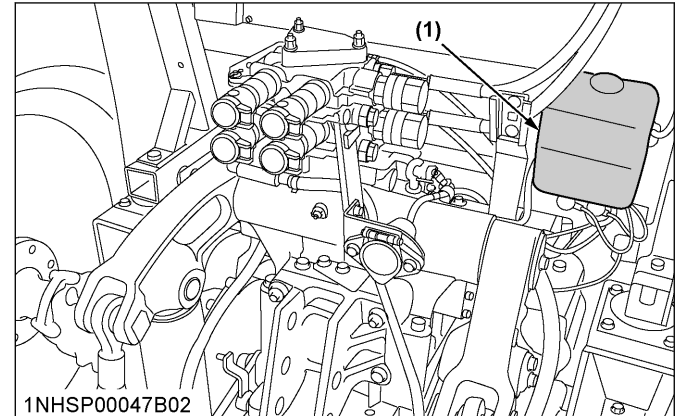
- Do servicing and maintenance work in a safe position, especially when working at height.



- (1) Door hinge
 (2) Rear window hinge

9. Adding washer liquid

Add a proper amount of automobile washer liquid.



- (1) Washer liquid tank

Washer tank capacity	2.0 L (2.1 U.S. qts.)
----------------------	-----------------------

10. Checking amount of refrigerant (gas)

⚠ WARNING

To avoid personal injury or death:

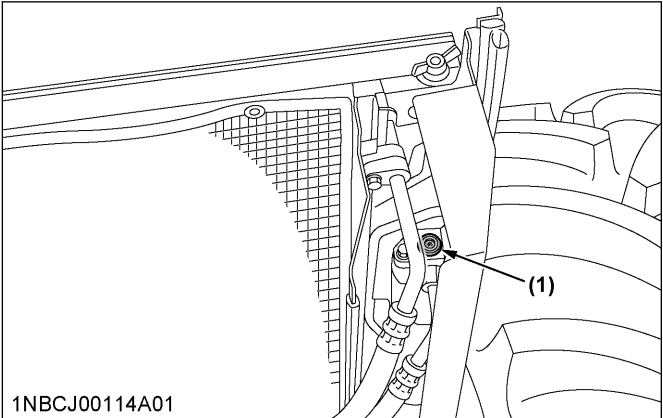
- Liquid contact with eyes or skin may cause frostbite.
- In the event of a leakage, wear safety goggles. Escaping refrigerant can cause severe injuries to eyes.

- In contact with a flame, R134a refrigerant produces a toxic gas.
- Do not disconnect any part of the refrigeration circuit of the air conditioning system. Consult your local Kubota dealer for assistance and service.

A shortage of refrigerant impairs the air conditioner performance. Check the following points. If it is indicated that the amount of refrigerant is extremely low, ask your dealer to inspect and refill.

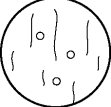
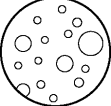
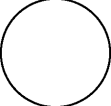
Checking procedure

1. Run the air conditioner in the following conditions.
 - Engine speed - About 1500 rpm
 - Temperature control dial - Maximum cooling position
 - Fan switch - Highest blow
 - Air conditioner switch - "ON"
2. Look into the sight glass to see if and how the refrigerant is flowing through its circuit.



1NBCJ00114A01

(1) Sight glass

	Proper	Little or no air bubbles in the refrigerant flow.
	Low	Lots of air bubbles in the refrigerant flow (air bubbles or foam passing continuously).
	Overfull or no refrigerant:	Colorless and transparent.

IMPORTANT :

- Charge only with R134a not R12 refrigerant.

STORAGE



WARNING

To avoid personal injury or death:

- Do not clean the machine while the engine is running.
- To avoid the danger of exhaust fume poisoning, do not operate the engine indoors without proper ventilation.
- When storing the tractor, remove the key from the key switch to prevent unauthorized persons from operating the tractor and getting injured.

TRACTOR STORAGE

If you intend to store your tractor for an extended period of time, follow the procedures outlined below.

These procedures will ensure that the tractor is ready to operate with minimum preparation when it is removed from storage.

1. Check the bolts and nuts for looseness and tighten if necessary.
2. Apply grease to tractor areas where bare metal will rust, and also to pivot areas.
3. Detach the weights from the tractor body.
4. Inflate the tires to a pressure a little higher than usual.
5. Change the engine oil and run the engine to circulate oil throughout the engine block and internal moving parts for about 5 minutes.
While the tractor is in storage, run the engine at idle as a rustproofing operation for 5 to 10 minutes every 3 to 4 months.
When performing the rustproofing operation, a warning about low DEF (AdBlue) level may appear, however the operation can be performed without any problems.
6. Keep the PTO clutch control switch or lever at the "DISENGAGE" position while tractor is stored for a long period of time.
7. With all implements lowered to the ground, coat any exposed hydraulic cylinder piston rods with grease.
8. Remove the battery from the tractor, while noting that after stopping the engine, wait at least 15 minutes before disconnecting the battery cable. Store the battery following the battery storage procedures.
(See Checking battery condition on page 167.)
9. Drain all DEF (AdBlue) from the DEF tank.
Overtightening the drain plug may cause damage.

Do not use a power tool when reinstalling the drain plug.

(See SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM on page 47.)

10. Keep the tractor in a dry place where the tractor is sheltered from the elements. Cover the tractor.
11. Store the tractor indoors in a dry area that is protected from sunlight and excessive heat.
If the tractor must be stored outdoors, cover it with a waterproof tarpaulin.
Jack the tractor up and place blocks under the front and rear axles so that all 4 tires are off the ground. Keep the tires out of direct sunlight and extreme heat.
12. Keep the fuel tank full. Otherwise, water droplets may form and will cause a fuel system failure.

IMPORTANT :

- When washing the tractor, stop the engine. Allow sufficient time for the engine to cool down before washing.
- Cover the tractor after the muffler and the engine have cooled down.

REMOVING THE TRACTOR FROM STORAGE

1. Check the tire air pressure and inflate the tires if needed.
2. Jack the tractor up and remove the support blocks from under the front and rear axles.
3. Install the battery. Before installing the battery, be sure that it is fully charged.
4. Check the fan belt tension.
5. Add new or high-quality DEF (AdBlue) to the DEF tank.
(See Adding DEF (AdBlue) on page 53.)
6. Check all fluid levels (engine oil, transmission and hydraulic oil, engine coolant, DEF (AdBlue) and any attached implements).
7. Start the engine. Observe all gauges.
If all the gauges are functioning properly and have normal readings, move the tractor outside.
Once outside, park the tractor and let the engine idle for at least 5 minutes. Shut off the engine and walk around tractor and make a visual inspection looking for evidence of oil or water leaks.

8. With the engine fully warmed up, release the parking brake and test the brakes for proper adjustment as you move forward. Adjust the brakes as necessary.

TROUBLESHOOTING

ENGINE TROUBLESHOOTING

If something is wrong with the engine, refer to the following table for the cause and its corrective measure.

Trouble		Cause	Countermeasure
Engine is difficult to start or will not start.		No fuel flow.	- Check the fuel tank and the fuel filter. - Replace filter if necessary.
		Air or water is in the fuel system.	- Check to see if the fuel line coupler bolt and nut are tight. - Bleed the fuel system. (See Bleeding fuel system on page 189.)
		In winter, oil viscosity increases, and engine revolution is slow.	- Use oils of different viscosities, depending on ambient temperatures. - Use engine block heater (optional).
		Battery is low and the engine does not turn over quickly enough.	- Clean battery cables and terminals. - Charge the battery. - In cold weather, always remove the battery from the engine, charge, and store it indoors. Install the battery on the tractor only when the tractor is going to be used.
		(M6-101, M6-111) Intake air heater system trouble.	- Check to see if the slow blow fuse of the intake air heater is blown. - Check to see if the intake air heater functions in cold weather.
		(M6-131, M6-141) Preheat (glow plug) system trouble.	- Check to see if the slow-blow fuse of the preheat (glow plug) is blown. - Check to see if the preheat (glow plug) functions in cold weather.
Insufficient engine power.		- Insufficient or dirty fuel. - The air cleaner is clogged.	- Check the fuel system. - Clean or replace the element.
		DEF (AdBlue) is low	Add DEF (AdBlue).
Engine stops suddenly.		Insufficient fuel.	- Refuel. - Bleed the fuel system if necessary.
		DEF (AdBlue) is low	Add DEF (AdBlue).
Exhaust fumes are colored.	Black	- Fuel quality is poor. - Too much oil. - The air cleaner is clogged.	- Change the fuel and fuel filter. - Drain excess oil if necessary. - Clean or replace the element.
	Blue white	- The inside of the exhaust muffler is damp with fuel. - Injection nozzle trouble. - Fuel quality is poor.	- Check to see if the intake air heater functions in cold weather. - Heat the muffler by applying load to the engine. - Check the injection nozzle. - Change the fuel and fuel filter.
Engine overheats.		Engine overloaded.	Shift to lower gear or reduce load.
		Low coolant level.	Fill cooling system to the correct level; check radiator and hoses for loose connections or leaks.
		Loose or damaged fan belt.	Adjust or replace fan belt.
		Dirty radiator core or grille screens.	Remove all trash.
		Coolant flow route corroded.	- Flush cooling system. - Check to see if the fan drive is on. (if equipped)

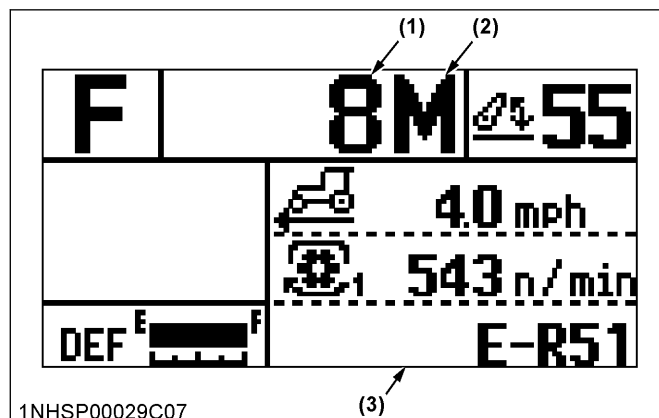
If you have any questions, contact your local Kubota dealer.

Trouble	Operator's action
Engine not overheated, but engine warning indicator is on.	Stop the engine and then restart it. If the engine fails to restart or the indicator stays on, immediately contact your local Kubota dealer. If the warning indicator lights up, the following phenomena may appear depending on the engine's trouble spot. - The engine stops unexpectedly. - The engine fails to start or is interrupted just after starting. - The engine output is insufficient. - The engine output is sufficient but the warning indicator stays on.

If you have any questions, contact your local Kubota dealer.

POWER SHIFT AND RANGE SHIFT TROUBLESHOOTING

If something is wrong with the power shift and range shift, an alarm sounds or the following error code is displayed on the liquid crystal display, indicating the location of the trouble. If an error code appears, immediately contact your local Kubota dealer for repairs. Depending on the parts of the trouble, tractor can be used with some restriction as emergency measure. For details, check the error code and operator's action columns.



(1) Power shift number display area

(2) Range shift position display area

(3) Performance monitor area

Displayed error code		Alarm buzzer	Condition	Operator's action
Power shift number display area	Performance monitor area			
and	[E-R51]	3 consecutive tones	- Clutch is operated. - Hydraulic switch (master) trouble. - Proportional solenoid valve (master) trouble.	Contact your local Kubota dealer. If necessary, move the range shift lever to [L]. The machine can travel at any of 1st to 8th gears.
and	[E-R20]	3 consecutive tones	- Trouble with the output voltage of the clutch pedal sensor. - Clutch pedal sensor trouble.	Contact your local Kubota dealer. If necessary, move the range shift lever to [N] (in the [L] side) first and then to [L]. The machine can travel at any of 1st to 8th gears.
	[E-R9] [E-R10] [E-R37]	3 consecutive tones	Proportional solenoid valve (master) trouble.	Contact your local Kubota dealer. The machine cannot travel.
---	[E-R81] to [86]	---	Shuttle switch [F]/[R] trouble.	Contact your local Kubota dealer. The machine cannot travel.
	[E-R31] to [36]	3 consecutive tones	- Trouble with the relevant solenoid valve. - Proportional solenoid valve (range shift [L]/[H]) trouble.	Contact your local Kubota dealer. If necessary, move the range shift lever to [N]. The machine can travel at any gear which is not flashing.
	[E-R45] to [50] [E-R52] to [55]	---	- Trouble with a hydraulic switch that is not related to the flashing gear speed. - Hydraulic switch trouble. - Main spool trouble.	Contact your local Kubota dealer. If necessary, move the range shift lever to [N] first and then to [L], [H] or [M] again. The machine can travel.
	[E-R38] to [44]	3 consecutive tones	- Shifting is performed using the shift buttons. - Hydraulic switch trouble. - Main spool trouble.	Contact your local Kubota dealer. If necessary, move the range shift lever to [N] first and then to [L], [H] or [M] again. The machine can travel. Machine gear position return to the position before shifting.

(Continued)

TROUBLESHOOTING

Displayed error code		Alarm buzzer	Condition	Operator's action
Power shift number display area	Performance monitor area			
 flashing	[E-R44]	3 consecutive tones	- Started by operation of the shift buttons, shuttle lever, and clutch pedal. - Trouble with master clutch hydraulic switch. - Low system hydraulic pressure.	Contact your local Kubota dealer. The machine cannot travel.
 lighting up	---	Consecutive tones	Power shift lever is operated with the shuttle lever in the [F] or [R] position, the clutch pedal is released and the shift lock is not turning on.	Move the range shift lever to [N].
 and  flashing alternately	[E-R51]	3 consecutive tones	([L] and [1] to [8]) and shift lock switch trouble occur at the same time.	Contact your local Kubota dealer. If necessary, move the range shift lever to [L]. The machine can travel at any of 1st to 8th gears.
 and  flashing alternately	[E-R20]	3 consecutive tones	([C] and [1] to [8]) and shift lock switch trouble occur at the same time.	Contact your local Kubota dealer. If necessary, move the range shift lever to [L]. The machine can travel at any of 1st to 8th gears.
 flashing	---	---	Trouble with the output voltage of the power shift lever sensor.	Contact your local Kubota dealer. Flashes while driving. The machine can travel.

NOTE :

- If the hydraulic clutch gets in trouble, the gears may get shifted from the 1st to 2nd or slower speed automatically. This mechanism has the role of preventing the tractor from free-wheeling. In this case, carefully move the tractor to a safe place, contact your local Kubota dealer for repairs.

OPTIONS

LIST OF OPTIONS

Consult your local Kubota dealer for further details.

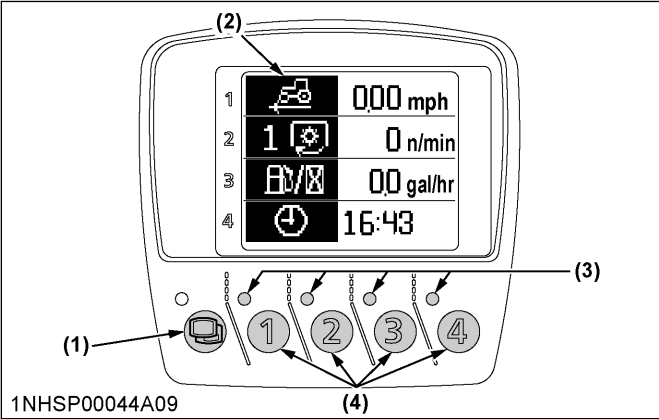
- Heavy duty fuel tank guard
- Front end weights for front ballast
- Front weight bumper
- Rear wheel weights for rear ballast
- Creep speed kit
- 80" wide axle
- Instructional seat
- Front fender
- Double acting remote hydraulic control valve with detents, self-canceling and flow control functions
- Double acting remote hydraulic control valve with flow position and flow control functions
- Hydraulic high capacity lift cylinder
- Remote hitch up and down switch (RH)
- Clevis type swinging drawbar
- Front work light
High visibility for night work
- Rear defogger
- Radio cassette player with weatherband
- Radio CD player with weatherband
- CCV heater kit

APPENDICES

SIDE DIGITAL DISPLAY

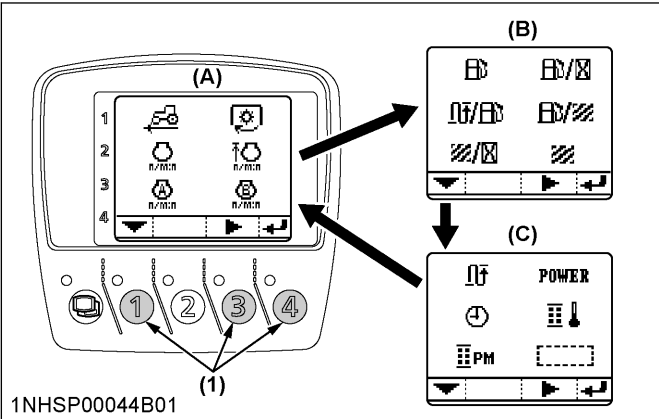
1. Changing the information displayed

1. Just touch the mode selector switch on the usual screen, and the symbols are highlighted and the 4 indicators start to flash.
Press the switch ([1] to [4]) of a setting to change, and the relevant select screen shows up.



- (1) Mode selector switch
(2) Symbol
(3) Indicator
(4) Switch

2. Each time switch [1] is pressed, the select screens (A), (B) and (C) change alternately in this order.
Press switch [3] to select the symbol of a setting to display.
Press switch [4] to enter this mode and the other symbols appear.



- (1) Switch
(A) "Select screen A"
(B) "Select screen B"
(C) "Select screen C"

2. Information displayed and its handling

Selected screen	Info	Display	Remarks	Ref. page
A	Travel speed	Travel speed  0.00 mph 9Y1210684ELM009A	Shows the standard factory settings. (See Information displayed and its handling on page 205.)	70
		Average travel speed  0.00 mph 9Y1210684ELM010A		70
	Rear PTO	PTO rpm 1 1  540 %/min 9Y1210684ELM011A	Shows the standard factory settings. (See Information displayed and its handling on page 205.)	112
		PTO rpm 2 2  1000 %/min 9Y1210684ELM012A		112
	Engine rpm	 2200 %/min 9Y1210684ELM013A		-
	Upper-limit rpm setting	 1230 %/min 9Y1210684ELM014A		90
	Memory A rpm	 2000 %/min 9Y1210684ELM015A		90
	Memory B rpm	 1000 %/min 9Y1210684ELM016A		90
B	Total fuel consumption	Total fuel consumption  800 gal 9Y1210684ELM017A	- Displays the total fuel consumption measured from the previous resetting. - The maximum value which can be displayed is [999.9] gallons or [999.9] liters. - Hold down the corresponding switch, and the setting goes back to [0.0].	-
	Mileage	Mileage  39 gal/hr 9Y1210684ELM018A	Shows the standard factory settings. (See Information displayed and its handling on page 205.)	-
		Average fuel consumption  26 gal/hr 9Y1210684ELM019A		-

(Continued)

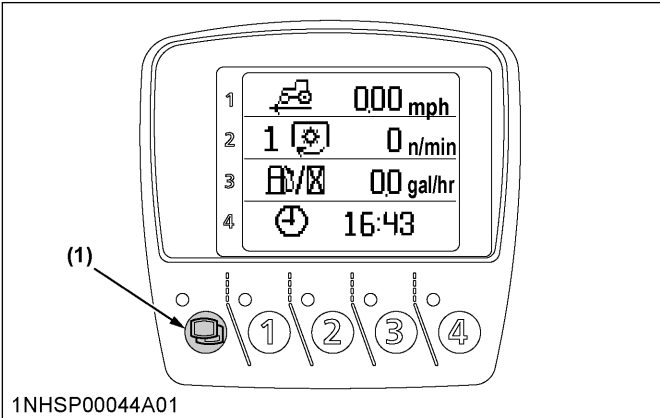
Selected screen	Info	Display	Remarks	Ref. page
B	Mileage	Mileage graph   9Y1210684ELM020A	Shows the standard factory settings. (See Information displayed and its handling on page 205.)	-
	Work distance mileage (based on fuel consumption)	Instantaneous work distance fuel consumption  235 mpg 9Y1210684ELM021A	- Each time the corresponding switch is pressed, the “instantaneous” and “average” are displayed alternately. - The “average” is measured based on the fuel consumption from the previous resetting. - With the “average” displayed, hold down the corresponding switch. The setting goes back to [0.0].	-
		Average work distance fuel consumption  289 mpg 9Y1210684ELM022A		-
	Work area mileage (based on fuel consumption)	Instantaneous work area fuel consumption  05 gal/ac 9Y1210684ELM023A	- Each time the corresponding switch is pressed, the “instantaneous” and “average” are displayed alternately. - The “average” is measured based on the fuel consumption from the previous resetting. - With the “average” displayed, hold down the corresponding switch. The setting goes back to [0.0]. - In the various setting mode, preset the “working range of implement”. (See Initial setting on page 86.) If not preset correctly, incorrect data will be displayed.	-
		Average work area fuel consumption  05 gal/ac 9Y1210684ELM024A		-
	Work area operating efficiency (based on hourly coverage)	Instantaneous work area operating efficiency  741 ac/hr 9Y1210684ELM025A	- Each time the corresponding switch is pressed, the “instantaneous” and “average” are displayed alternately. - The “average” is measured based on the fuel consumption from the previous resetting. - With the “average” displayed, hold down the corresponding switch. The setting goes back to [0.0]. - In the various setting mode, preset the “working range of implement”. (See Initial setting on page 86.) If not preset correctly, incorrect data will be displayed.	-
		Average work area operating efficiency  852 ac/hr 9Y1210684ELM026A		-
	Work area	 5000 acres 9Y1210684ELM027A	- Displays the work area measured from the previous resetting. - Hold down the corresponding switch. The setting goes back to [0.0]. - In the various setting mode, preset the “working range of implement”. (See Initial setting on page 86.) If not preset correctly, incorrect data will be displayed.	-
C	Travel distance	 3000 mi 9Y1210684ELM028A	- Displays the travel distance measured from the previous resetting. - Hold down the corresponding switch, and the setting goes back to [0].	-

(Continued)

Selected screen	Info	Display	Remarks	Ref. page
C	Loading factor	Instantaneous loading factor 9Y1210684ELM029A	- Each time the corresponding switch is pressed, the “<i>instantaneous</i>”, “<i>average</i>” and “<i>graph</i>” are displayed alternately in this order. - The “<i>average</i>” is measured based on the loading factor from the previous resetting. - With the “<i>average</i>” displayed, hold down the corresponding switch. The setting goes back to [0]. - The “<i>instantaneous loading factor graph</i>” graphically displays the instantaneous loading factor in real time. The more the bar is extended to the right, the higher the load becomes.	-
		Average loading factor 9Y1210684ELM030A		-
		Instantaneous loading factor graph 9Y1210684ELM031A		-
	Clock	Time 15:14 9Y1210684ELM032A	Shows the standard factory settings. (See Standard factory settings and display changes on page 89.)	86
		Date 7/ 4/2012 9Y1210684ELM033A		210
	DPF temperature	1000 °F 9Y1210684ELM034A	Displays the DPF muffler temperature.	39
	PM build-up	PM build-up 70% 9Y1210684ELM035A	- Displays the PM build-up inside the DPF muffler. - Regeneration is needed when the 100% level has been reached. - Each time the corresponding switch is pressed, the “<i>numerical value</i>” and “<i>graph</i>” are displayed alternately. - The more the bar is extended to the right, the more PM builds up.	39
		PM build-up graph 9Y1210684ELM036A		39
	Blank	 9Y1210684ELM037A	Used to delete the information displayed.	-

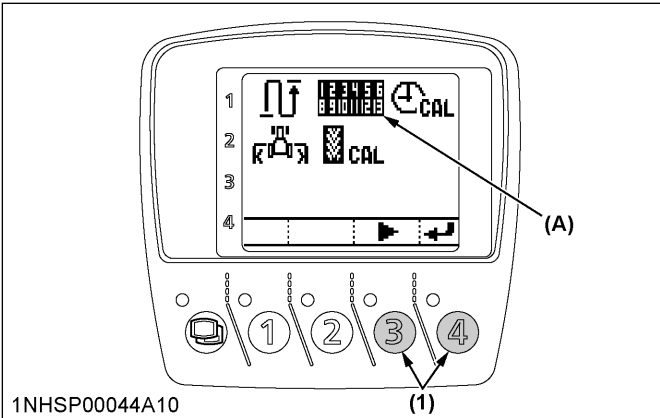
3. Displaying and using the work history

1. Turn on the key switch. Hold down the mode selector switch on the following screen, and various setting mode select screen appears.



(1) Mode selector switch

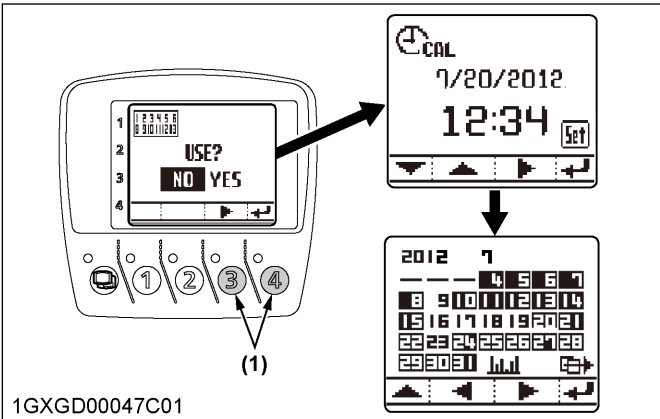
2. Press switch [3] to select the work history mode. Press switch [4], and the work history mode screen shows up.



(1) Switch

(A) "Work history mode"

3. Using switch [3], select [YES]. Press switch [4], and the clock setting screen shows up. Set the clock, and the calendar screen appears instead.

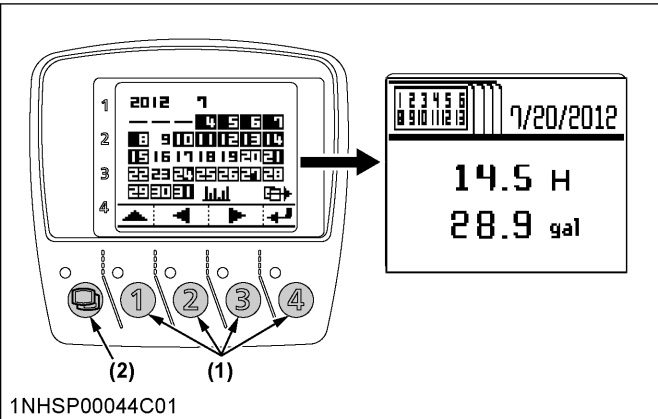


(1) Switch

Viewing the calendar

White-numbered dates on black background	Operating days
Black-numbered dates on white background	Non-operating days
-	Non-recording days

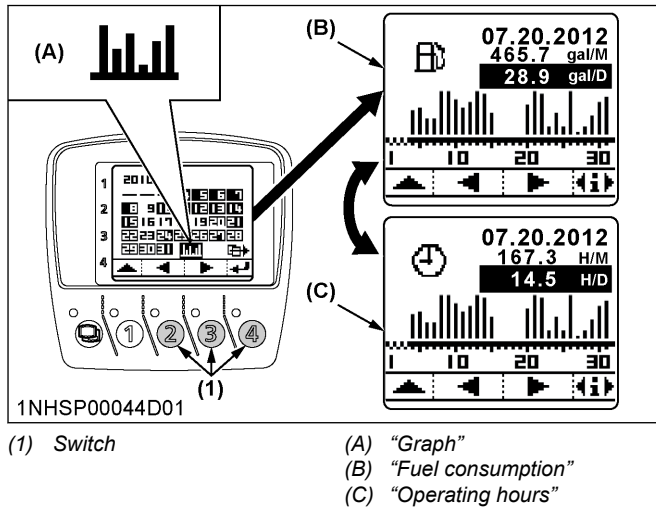
4. Using switches [2] and [3], select a date. Press switch [4], and the day's operating hours and fuel consumption are displayed. Press the mode selector switch to go back to the calendar screen. Press switch [1] on the calendar screen, and the previous month shows up. The data are recorded for the past 4 months.



(1) Switch

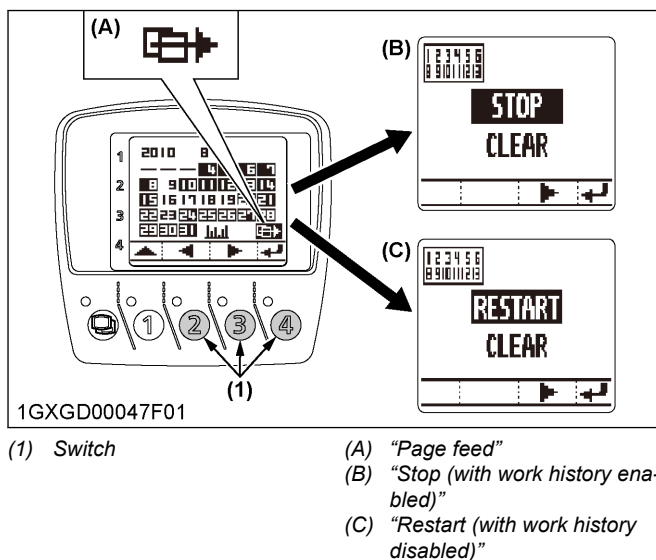
(2) Mode selector switch

5. Using switches [2] and [3], select the "graph". Press switch [4], and the graph is displayed.



Viewing the graph

- Press switch [4], and the fuel consumption and the operating hours are alternately displayed.
 - Fuel consumption:
The bar graph shows the day's fuel consumption. When a date is selected with switches [2] and [3], the fuel consumption of the day and that of the month are digitally displayed.
 - Operating hours:
The bar graph shows the day's operating hour. When a date is selected with switches [2] and [3], the operating hours of the day and that of the month are digitally displayed.
6. Using switches [2] and [3], select the "page feed". Press switch [4], and the work history's [STOP] or [RESTART] screens appear.

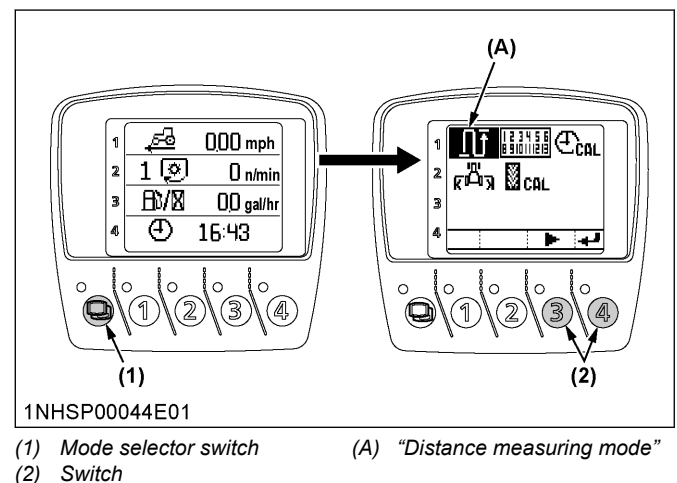


[STOP]	Press switch [3] to select [STOP]. Press switch [4], and the following confirmation screen appears. Select [YES] and press switch [4], and the work history will stop and various setting mode screen shows up instead.
[RESTART]	Press switch [3] to select [RESTART]. Press switch [4], and the clock setting screen shows up. Set the clock, and the work history will get restarted.
[CLEAR]	Press switch [3] to select [CLEAR]. Press switch [4], and the following confirmation screen appears. Select [YES] and press switch [4], and the work history will be cleared and get in initial state. Then various setting mode screen shows up instead.

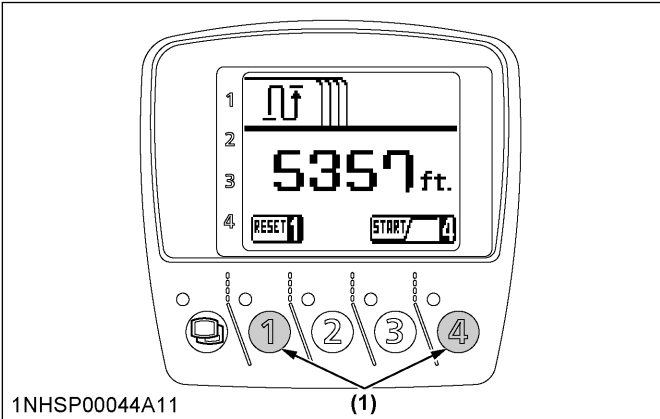
7. When the mode selector switch is pressed on the calendar screen, various setting mode screen shows up again. Press the same switch once more, and the usual mode screen is resumed.

4. Measuring the distance

1. Hold down the mode selector switch on the usual screen, and various setting mode screen shows up. Press switch [3] to select the distance measuring mode. Press switch [4], and the distance measuring mode screen appears.

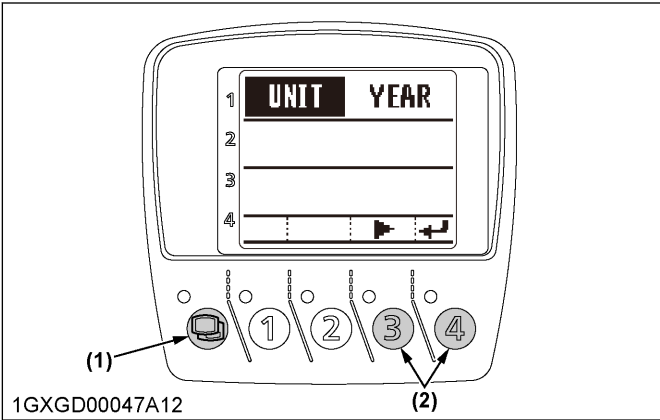


2. Press switch [1], and the distance data goes back to [0]. Press switch [4], and measuring the distance starts. Press this switch again to stop the measurement.



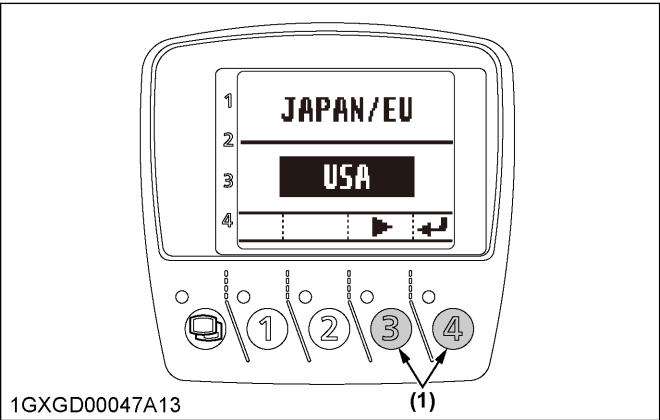
5. Changing the units and dates

1. While holding down the mode selector switch, turn on the key switch. The following screen appears.
2. Using switch [3], select [UNIT] or [YEAR]. Press switch [4], and the setting screen shows up.



Setting the units

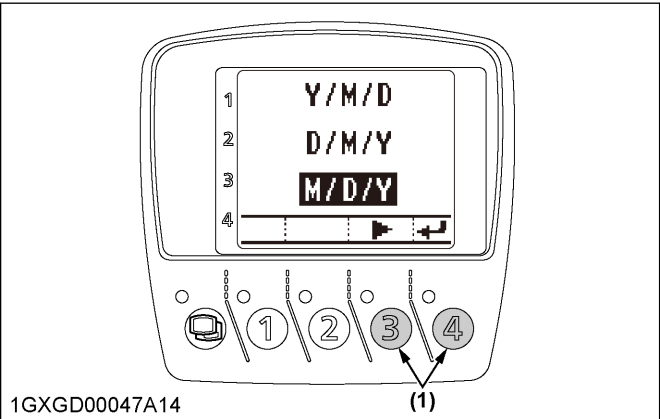
Using switch [3], select the units of [JAPAN/EU] or [USA]. Press switch [4] to save this setting.



	Unit
[JAPAN/EU]	km, L, °C
[USA]	ft, gal, °F

Setting the year

Using switch [3], select the date to display. Press switch [4] to enter this year.



[Y/M/D]	Year / Month / Day
[D/M/Y]	Day / Month / Year
[M/D/Y]	Month / Day / Year

1. Press the mode selector switch, and the item select screen reappears.
2. Finally, turn off the key switch.

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