



# SAFE OPERATION

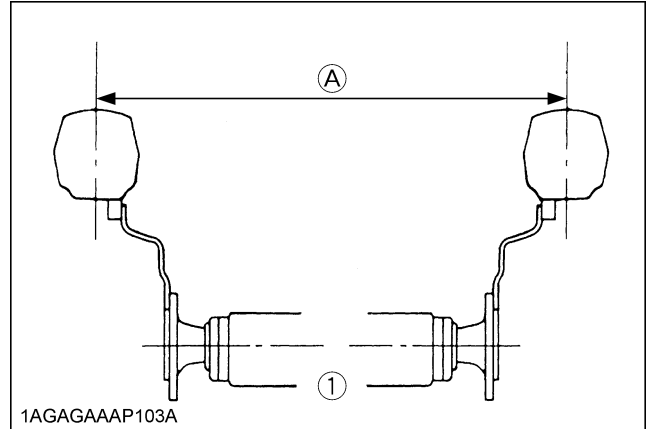
Careful operation is your best insurance against an accident.

**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.

## 1. BEFORE OPERATING THE TRACTOR

1. Know your equipment and its limitations. Read this entire manual before attempting to start and operate the tractor.
2. Pay special attention to the danger, warning and caution labels on the tractor.
3. Do not operate the tractor or any implement attached to it while under the influence of alcohol, medication, controlled substances or while fatigued.
4. Before allowing other people to use your tractor, explain how to operate and have them read this manual before operation.
5. Never wear loose, torn, or bulky clothing around tractor. It may catch on moving parts or controls, leading to the risk of an accident. Use additional safety items, e.g. hard hat, safety boots or shoes, eye and hearing protection, gloves, etc., as appropriate or required.
6. Do not allow passengers to ride on any part of the tractor at anytime. The operator must remain in the tractor seat during operation.
7. 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. (For further details, see "MAINTENANCE" section.)
8. Keep your tractor clean. Dirt, grease, and trash build up may contribute to fires and lead to personal injury.
9. Use only implements meeting the specifications listed under "IMPLEMENT LIMITATIONS" in this manual or implements approved by KUBOTA.
10. 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 improve stability. Follow the safe operating procedures specified in the implement or attachment manual.
11. 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" section.)
12. Do not modify the tractor. Unauthorized modification may affect the function of the tractor, which may result in personal injury.



(1) Rear wheels

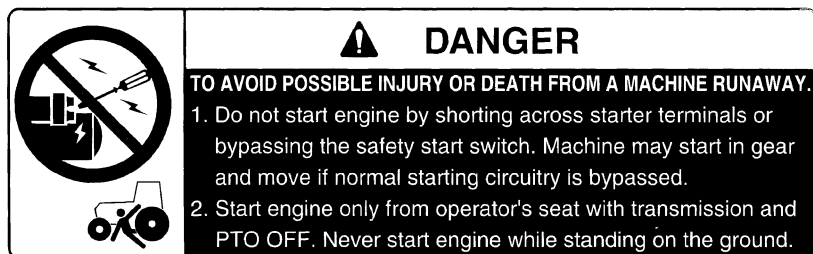
(A) Tread Width

### ◆ CAB, ROPS

1. 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.
2. If the CAB or ROPS is loosened or removed for any reason, make sure that all parts are reinstalled correctly before operating the tractor.
3. Never modify or repair any structural member of a CAB or ROPS because welding, bending, drilling, grinding, or cutting may weaken the structure.
4. A damaged CAB or ROPS structure must be replaced, not repaired or revised.
5. If any structural member of the CAB or ROPS is damaged, replace the entire structure at your local KUBOTA Dealer.
6. Always use the seat belt if the tractor has a CAB or ROPS.  
Do not use the seat belt if a foldable ROPS is down or there is no ROPS. Check the seat belt regularly and replace if frayed or damaged.

## 7. DANGER, WARNING AND CAUTION LABELS

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



1AGAIJNAP153A

(2) Part No. TC420-4956-1

Diesel fuel only.

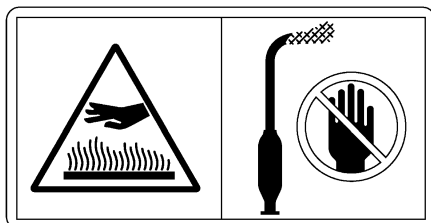
No fire.



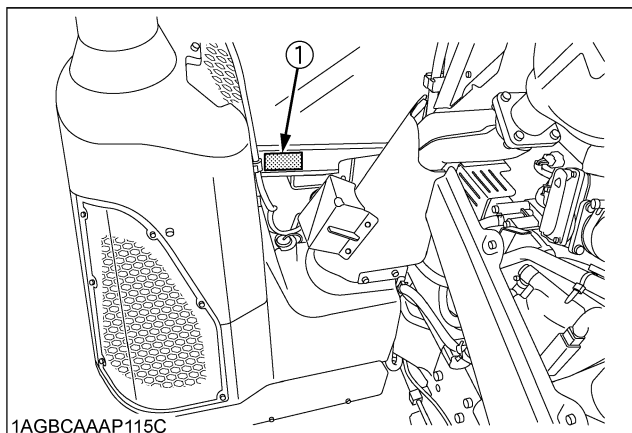
1AGAI DHAP154E

(3) Part No. TC750-4958-1

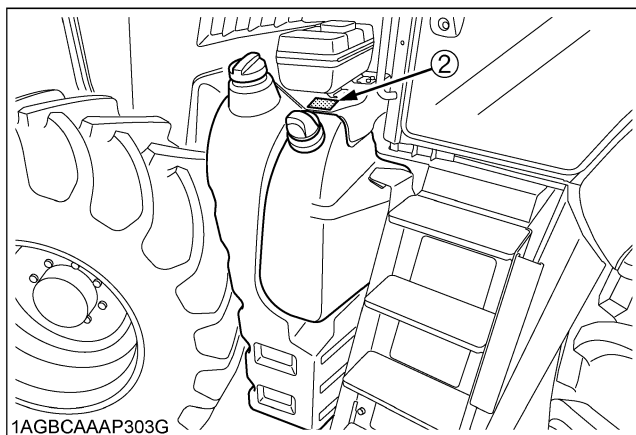
Do not touch hot surfaces.



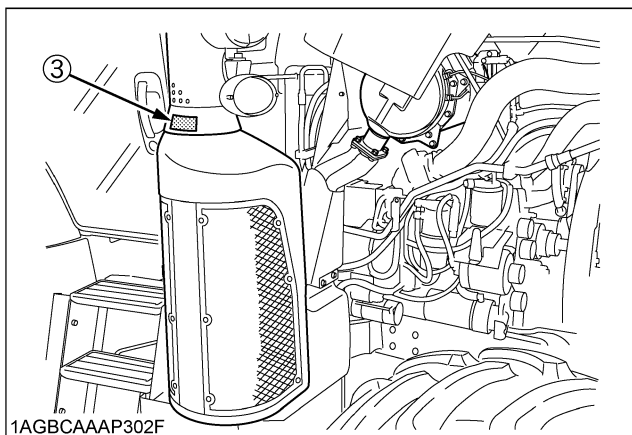
1AGBAAAP069A



1AGBCAAAP115C



1AGBCAAAP303G



1AGBCAAAP302F

1AGBCAAAP291A

# SERVICING OF TRACTOR

Your dealer is interested in your new tractor 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, be sure to see your KUBOTA Dealer.

For service, contact the KUBOTA Dealership from which you purchased your tractor or your local KUBOTA Dealer. When in need of parts, be prepared to give your dealer the tractor, CAB/ROPS and engine serial numbers. Locate the serial numbers now and record them in the space provided.

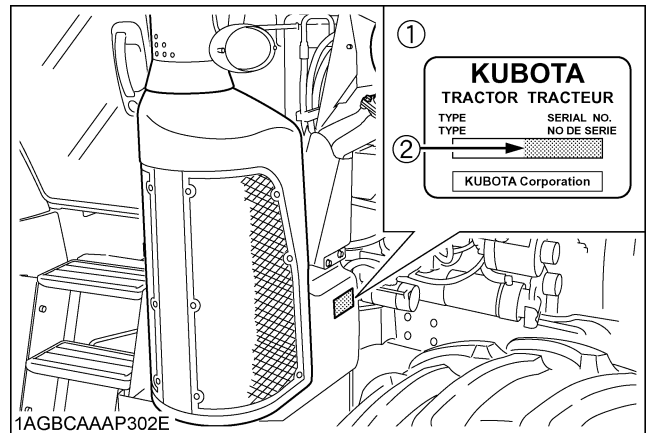
	Type	Serial No.
Tractor		
CAB / ROPS		
Engine		
Date of Purchase		
Name of Dealer		
(To be filled in by purchaser)		

## ◆ Warranty

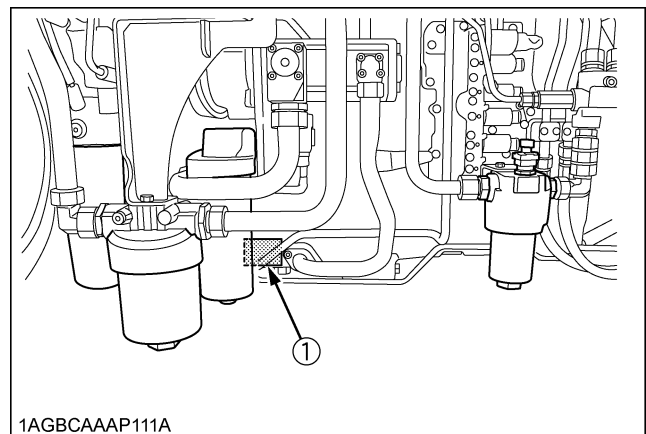
This tractor is warranted under the KUBOTA Limited Express Warranty, a copy of which may be obtained from your selling dealer. No warranty shall, however, apply if the tractor has not been handled according to the instruction given in the Operator's Manual even it is within the warranty period.

## ◆ Scrapping the tractor and its procedure

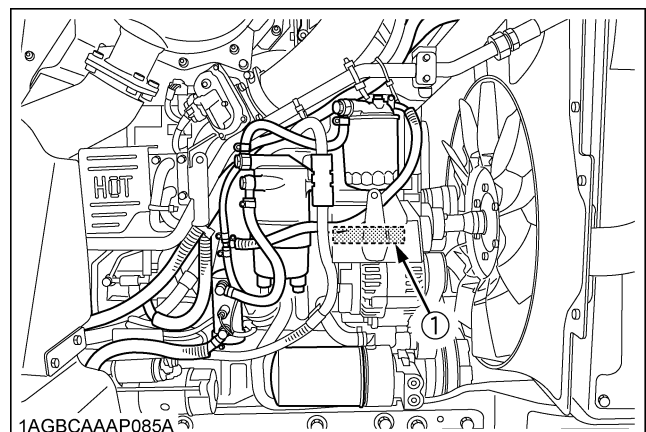
To put the tractor out of service, correctly follow the local rules and regulations of the country or territory where you scrap it. If you have questions, consult your local KUBOTA Dealer.



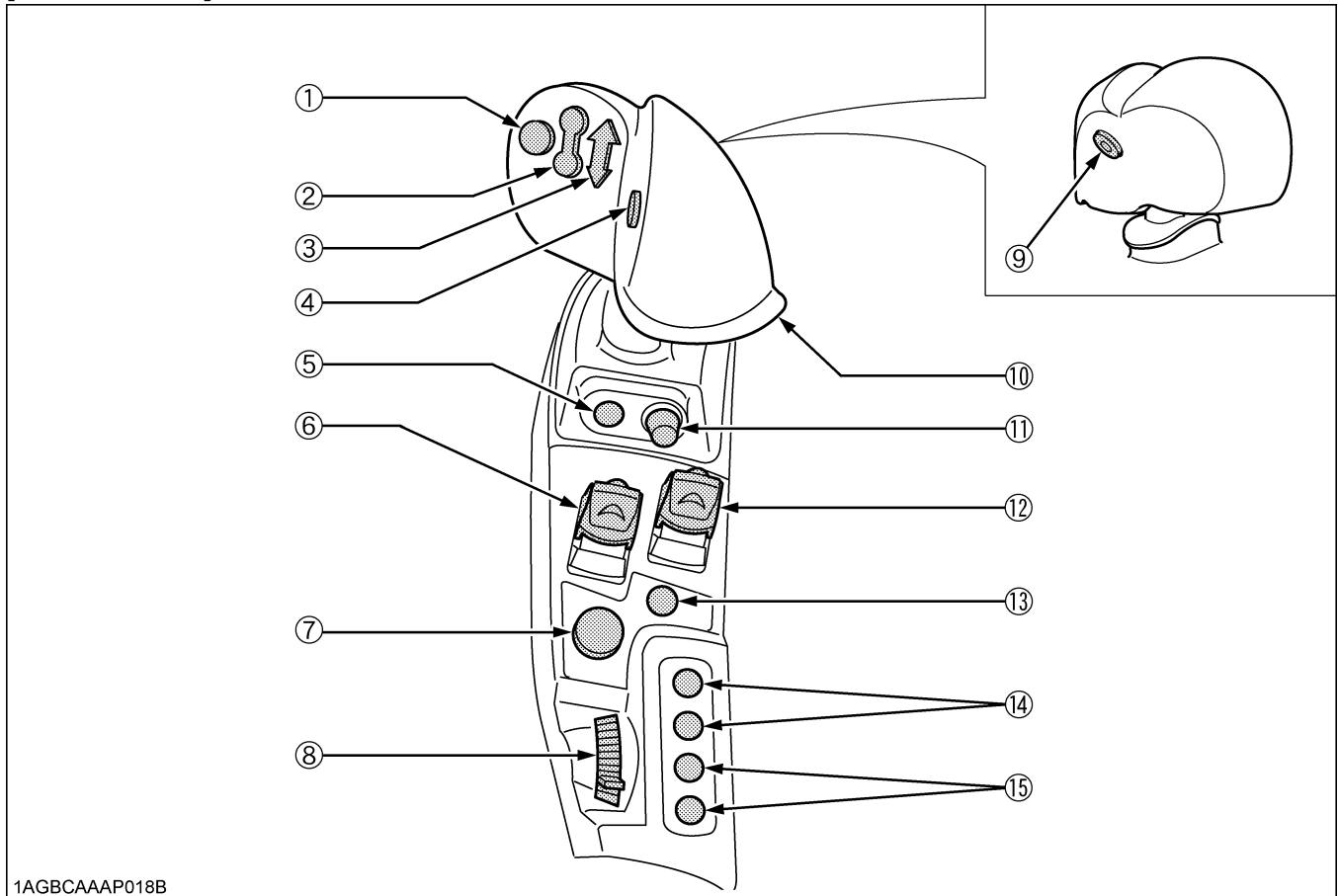
(1) Tractor identification plate  
(2) Tractor serial number



(1) Transmission identification plate



(1) Engine serial number

**[Standard model]**

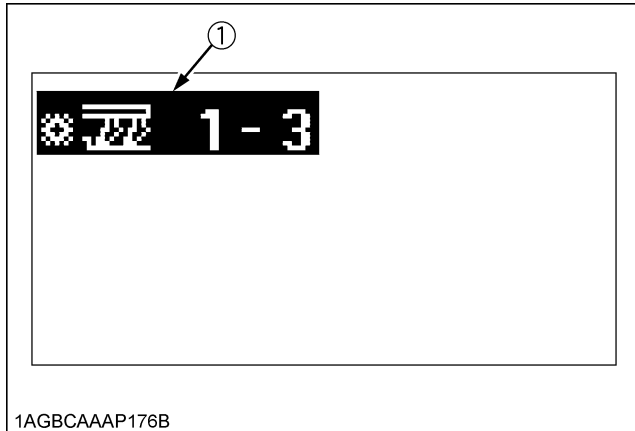
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## ILLUSTRATED CONTENTS

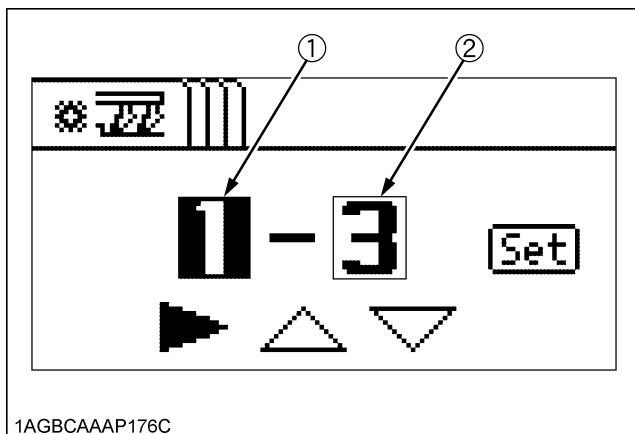
(1) Auto shift button .....	110
(2) 3-P. quick raise/lower switch .....	157
(3) Shuttle button .....	104
(4) Range gear shift button .....	110
(5) Shuttle neutral button.....	105
(6) Rear PTO clutch control switch .....	136
(7) Depth control dial (Hydraulic dial) .....	154
(8) Hand throttle .....	103

## ILLUSTRATED CONTENTS

(9) Shuttle enable button .....	104
(10) Ez-command center .....	110
(11) Auto shift sensitivity dial .....	117
(12) Front PTO clutch control switch (if equipped) ...	141
(13) 3-point hitch lock button .....	152
(14) Engine RPM memory button .....	85
(15) Engine RPM memory adjustment button .....	85



(1) Auto shift (field mode)



(1) Minimum main gear shift  
(2) Maximum main gear shift

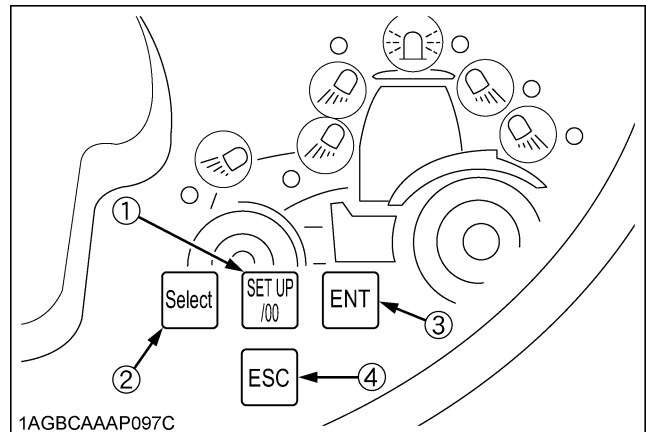
4. Select "►" with the "Select" switch and then press the "ENT" switch to choose the "main gear shift of minimum traveling speed" (highlighted).
5. Select "▼" or "▲" with the "Select" switch and then press the "ENT" switch to determine the "minimum main gear shift".
6. Select "►" with the "Select" switch and then press the "ENT" switch to choose the "main gear shift of maximum traveling speed" (highlighted).
7. Select "▼" or "▲" with the "Select" switch and then press the "ENT" switch to determine the "maximum main gear shift".
8. Select "Set" with the "Select" switch and then press the "ENT" switch. The setting is made and the setting mode screen appears again.

## Distance Measuring

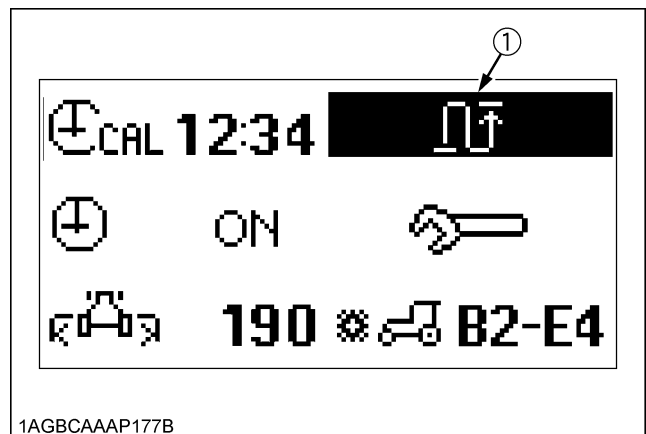
This function serves to measure the distance from your home to the field and other distances.

### Measuring the distance

1. Get the engine started.
2. Press the "SET UP/00" switch to make the various setting mode screen appear.



(1) SET UP/00 switch  
(2) Select switch  
(3) ENT switch  
(4) ESC switch



(1) Distance measuring

3. Select "Distance measuring" with the "Select" switch and then press the "ENT" switch. The distance measuring screen shows up.

## INDICATOR

Most indicators light up in the following 3 colors for identification.

Before operating the tractor, fully understand the meanings of the indicators. If anything is unclear, carefully reread the reference pages.

### ◆ Green indicator

This color indicates that the operation-related control switches and levers are enabled or disabled.

### ◆ Amber indicator

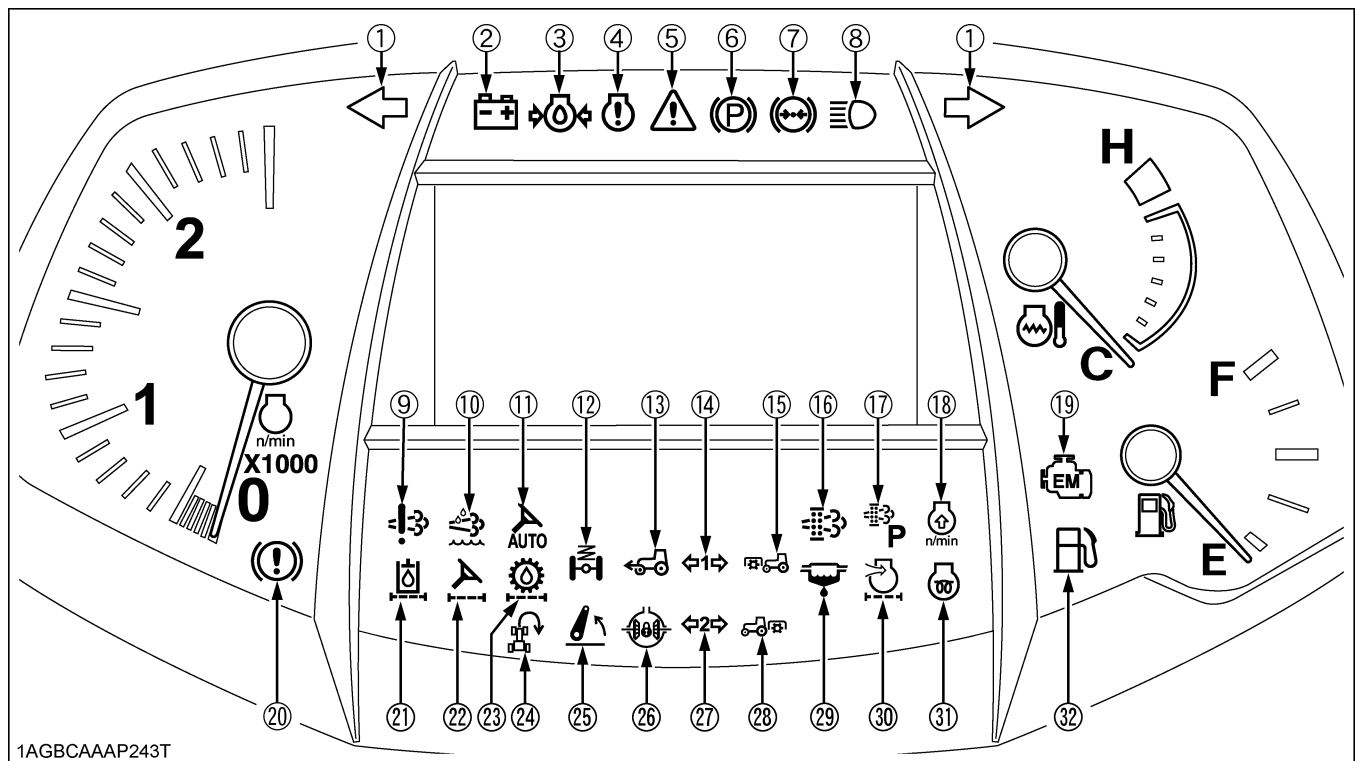
This color means that the tractor's operating condition is being monitored.

If amber indicator lights up or starts blinking, resolve the cause of the trouble as required.

### ◆ Red indicator

This color gives a warning directly linked to the possibility of injuries and/or machine troubles.

If red indicator lights up or starts blinking, immediately resolve the cause of the trouble.



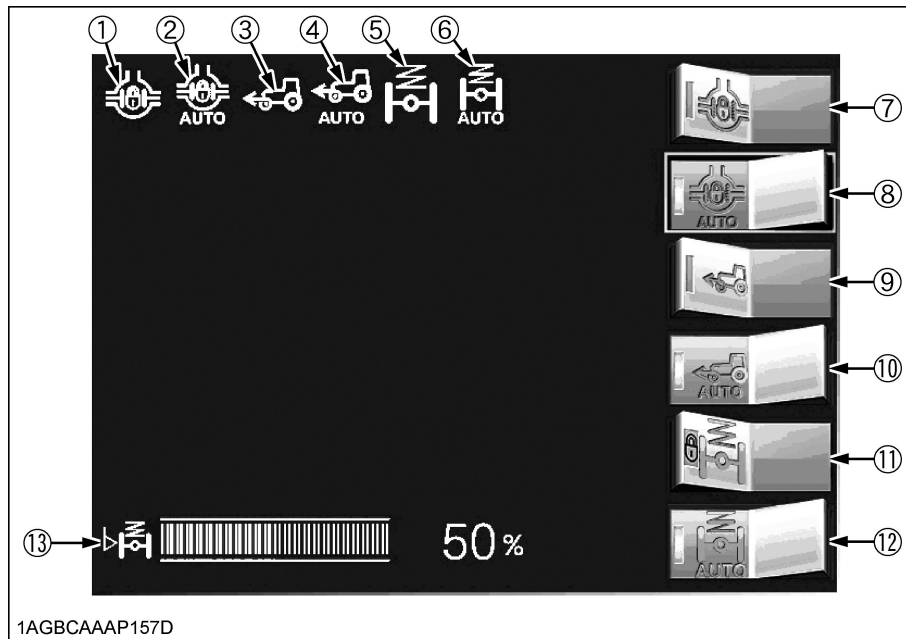
1AGBCAAAP243T

### ILLUSTRATED CONTENTS

(1) Turn signal / Hazard light indicator .....	98	(17) Parked regeneration indicator .....	78
(2) Electrical charge warning indicator .....	126	(18) Engine rpm increase indicator .....	74
(3) Engine oil pressure warning indicator .....	126	(19) Emission indicator .....	126
(4) Engine warning indicator .....	126	(20) Brake oil pressure warning indicator .....	126
(5) Master system warning indicator .....	126	(21) Hydraulic oil filter (suction) indicator .....	126
(6) Parking brake warning indicator .....	101, 126	(22) Power steering oil filter indicator .....	126
(7) Pneumatic trailer brake pressure warning indicator ..	126, 128	(23) Transmission oil filter indicator .....	126
(8) High-beam indicator .....	97, 97	(24) Headland management system indicator .....	53, 130
(9) DEF/AdBlue® system warning indicator .....	80, 126	(25) 3-point hitch lifting / lowering indicator .....	157
(10) DEF/AdBlue® warning indicator .....	80, 126	(26) Differential lock indicator .....	108
(11) Auto steer indicator .....	-	(27) Trailer indicator 2 .....	98
(12) Front suspension indicator .....	134	(28) Rear PTO indicator .....	136
(13) 4WD indicator .....	106	(29) Water separator indicator .....	126
(14) Trailer indicator 1 .....	98	(30) Air cleaner indicator .....	126
(15) Front PTO indicator .....	141	(31) Heater indicator .....	88
(16) Regeneration indicator .....	73	(32) Fuel level indicator .....	126

## Setting the Drivability

The differential lock, front wheel drive and front suspension settings can be made.



- (1) Differential lock indicator
- (2) Auto differential lock indicator
- (3) 4WD indicator
- (4) Auto 4WD indicator
- (5) Front suspension (active) indicator
- (6) Front suspension (auto) indicator
- (7) Differential lock switch
- (8) Auto differential lock switch
- (9) 4WD switch
- (10) Auto 4WD switch
- (11) Front suspension (block) switch
- (12) Front suspension (auto) switch
- (13) Front suspension level meter

### Setting the differential lock

1. Touch the left half of the differential lock switch (7), and the differential of the full-time front and rear wheels gets locked. The indicator (1) lights up and stays on.  
Turn off the switch (7), and the differential gets unlocked and the indicator (1) goes off.
2. Touch the left half of the auto differential lock switch (8), and the automatic differential, listed below, gets locked. The indicator (2) lights up and stays on.  
Turn off the switch (8), and the differential gets unlocked and the indicator (2) goes off.

### Operating conditions of the automatic differential lock:

Traveling speed	Front wheel turning angle	4-wheel differential lock
Below 10 km/h (6.2 mph)	Approx. 15° or less	ON (*1)
	Approx. 15° or more	OFF
Between 10 and 20 km/h (6.2 and 12.4 mph) or so	Approx. 10° or less	ON (*1)
	Approx. 10° or more	OFF
Above 20 km/h (12.4 mph)	---	OFF




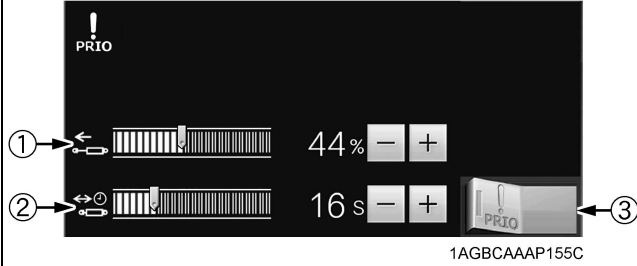







(\*1): Step on one of the brake pedals, and the differential lock is released.

### Setting the front wheel drive

1. Touch the left half of the 4WD switch (9), and the front and rear wheels are driven. The indicator (3) lights up and stays on.  
Turn off the switch (9), and the front-wheel drive is disabled and the indicator (3) goes off.
2. Touch the left half of the auto 4WD switch (10), and the automatic 4WD, listed below, gets activated. The indicator (4) lights up and stays on.  
Turn off the switch (10), and the 2WD is able and the indicator (4) goes off.

### Operating conditions of the automatic 4WD:

Traveling speed	Front wheel turning angle	Front wheel drive
Below 10 km/h (6.2 mph)	Approx. 15° or less	ON
	Approx. 15° or more	OFF
Between 10 and 20 km/h (6.2 and 12.4 mph) or so	Approx. 10° or less	ON
	Approx. 10° or more	OFF
Above 20 km/h (12.4 mph)	---	OFF

Main category	Subcategory		Remark/Detailed setting
Remote control valve 	Blocked (Neutral)	 1	The 1st segment valve is block.
	Extend	 1	The 1st segment valve is extend. <div style="text-align: right;">             (1) Flow rate (Extend)              (2) Flow timer              (3) Priority flow status           </div>  1AGBCAAAP155C
	Retract	 1	The 1st segment valve is retract. <div style="text-align: right;">             (1) Flow rate (Retract)              (2) Flow timer              (3) Priority flow status           </div>  1AGBCAAAP155D
	Float	 1	The 1st segment valve is floating. <div style="text-align: right;">             (1) Flow timer           </div>  1AGBCAAAP343A
Front PTO 	Front PTO OFF		Switch front PTO off.
	Front PTO ON		Switch front PTO on.










### ◆ PM Warning Level and Required Procedures

In the Regeneration Inhibit Mode, the buzzer starts sounding and the indicator display changes in response to the PM level in order to prompt the operator to perform the required procedure listed below.

#### IMPORTANT :

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

Regeneration Inhibit Mode		
DPF system status		Required procedure
PM warning level: <b>1</b>  Buzzer: Not sounding	 The regeneration indicator starts flashing.	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 regeneration.	
PM warning level: <b>2-1</b>  Buzzer: Sounding every 5 seconds	 The regeneration indicator starts flashing.	Move the tractor to a safe area, then follow the "Operating Procedure for Parked Regeneration".
PM warning level: <b>2-2</b>  Buzzer: Sounding every 3 seconds	 The Parked regeneration indicator starts flashing.	
PM warning level: <b>3</b>  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 flashing.	Immediately stop working the tractor, move the tractor to a safe area, then follow the "Operating Procedure for Parked Regeneration". If the tractor is operated further and the operator ignores the warning signs, then regeneration will be disabled.
	 The parked regeneration indicator starts flashing	
PM warning level: <b>4</b>  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 and place in park, turn "OFF" engine. Contact your local KUBOTA Dealer. <ul style="list-style-type: none"><li>● At this level never continue to operate the tractor, otherwise damage may result to the DPF and engine.</li></ul>

## WARMING UP



### WARNING

To avoid personal injury or death:

- Be sure to set the parking brake during warm-up.
- Be sure to set the shuttle lever to the "NEUTRAL" position and to place PTO switch in "OFF" position during warm-up.

For 5 minutes after engine start-up, allow engine to warm up without applying any load, this is to allow 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.

### ■ Warm-up and Transmission Oil at Low Temperature Range

Hydraulic oil serves as transmission fluid. In cold weather, the oil may be cold with increased viscosity. This can cause delayed oil circulation or abnormally low hydraulic pressure for some time after engine start-up. This 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 table below:

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.

### ■ Transmission Low Temperature Regulation

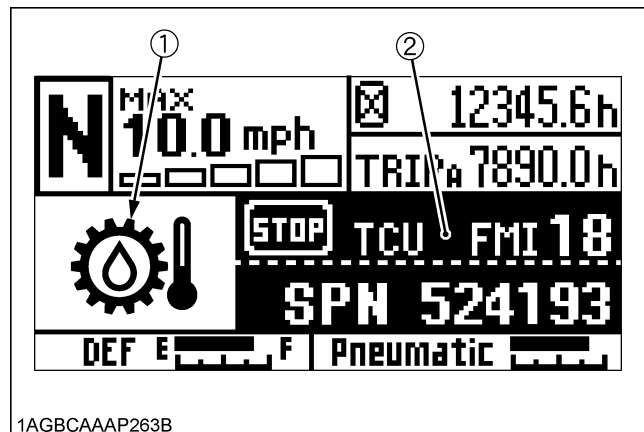
#### [Premium KVT model]

In order to prevent transmission damage due to poor lubrication, etc., when the transmission fluid temperature is approximately -7°C (19°F) or below, regulation will take place depending on the fluid temperature as in the table below. As well, the operator will be informed during regulation by indicator and message.

During regulation, perform warm-up operation without using the accelerator.

When the indicator goes off and the message disappears, gear shifting is available.

Transmission fluid temperature	Regulation time	Regulation content
-7°C to -15°C (19°F to 5°F).	Approx. 3 min	1) No start (shuttle gear neutral) 2) Engine rpm kept at approx. 1100 to 1400
-16°C to -20°C (4°F to -4°F).	Approx. 5 min	
-21°C to -30°C (-5°F to -22°F).	Approx. 7 min	



(1) Low temperature regulation indicator

(2) Message (Ex.:TCU FMI 18 SPN 524193)

#### IMPORTANT :

- When the transmission fluid temperature is below -30°C (-22°F), the regulation of warm up operation does not function, so please wait until fluid temperature becomes more than -30°C (-22°F) with engine idling speed.

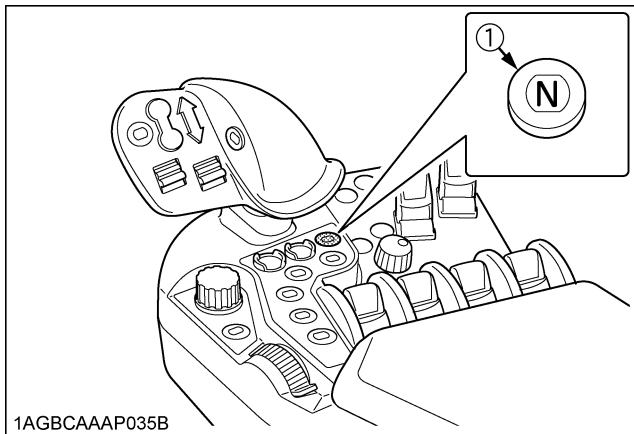
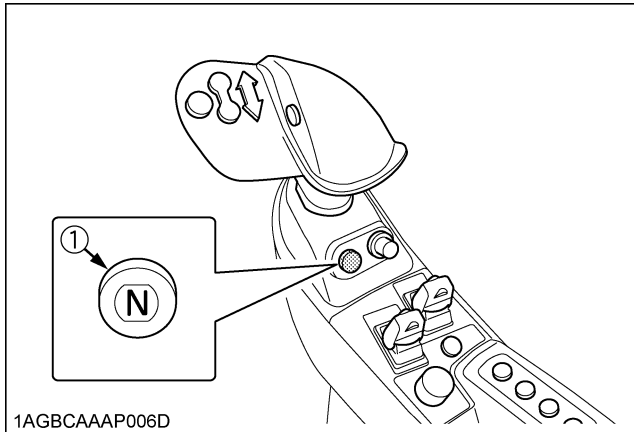
When the temperature rises above -30°C (-22°F), the regulation will start automatically.

#### NOTE :

- This indicator doubles as the engine low temperature regulation indicator.  
(For details, refer to "Engine Low Temperature Regulation" in "COLD WEATHER STARTING" in the "OPERATING THE ENGINE" section.)

## ■ Shuttle Neutral Button

Press this button to return the transmission to the neutral position.



(1) Shuttle neutral button

### NOTE :

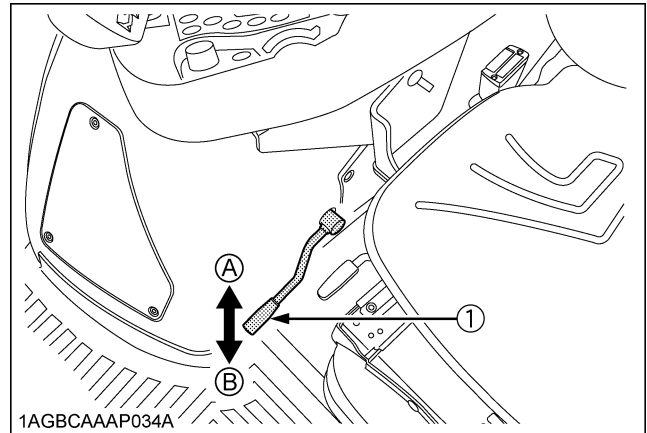
- Even when the shuttle lever is shifted to the forward or reverse position, pressing the button puts the transmission to the "neutral" position.

## ■ Creep Gear Shift Lever

(if equipped)

### ◆ Operating the creep gear shift lever

1. Stop the tractor and step on the clutch pedal.
2. Pull up the creep gear shift lever, and the creep mode turns on. Push it down to turn off the creep mode.
3. With the creep mode on, the range gear shift works in 4 stages; A, B, C and D. (The stages E and F are not in effect.)



(1) Creep gear shift Lever

(A) ...Creep ON

(B) ...Creep OFF

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

1. Deep rotary-tilling and harrowing
2. Planting
3. Turf application

### ◆ Creep speed can not be used for any of the followings:

1. Pulling a trailer
2. Front-loader operation
3. Front-blade operation
4. Earth-moving
5. Entering and leaving a field
6. Loading onto and unloading from a truck



## WARNING

To avoid personal injury or death:

- When you leave the tractor, be sure to 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. Be sure to step down on the clutch pedal completely before applying the brakes, or the torque will overcome the brakes.

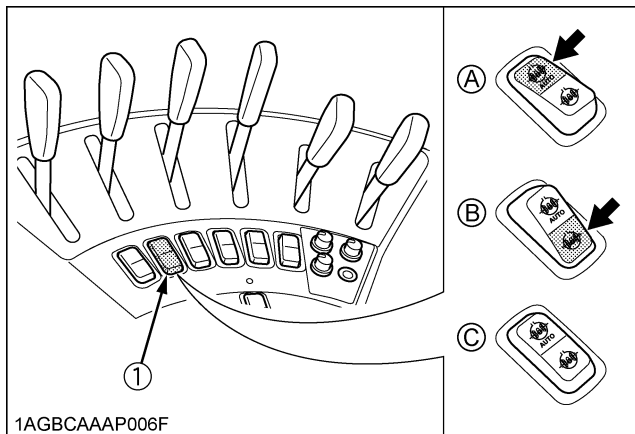
# ◆ Switching of Differential Lock modes

## [Standard model]

Press the top half of the differential lock switch, and the AUTO differential lock mode is selected and the indicator on the instrument panel lights up.

Press the bottom half of the differential lock switch, and the Manual differential lock mode is selected and the indicator on the instrument panel lights up.

Return the differential lock switch to a central position, and the differential lock mode turns off and the indicator goes off.



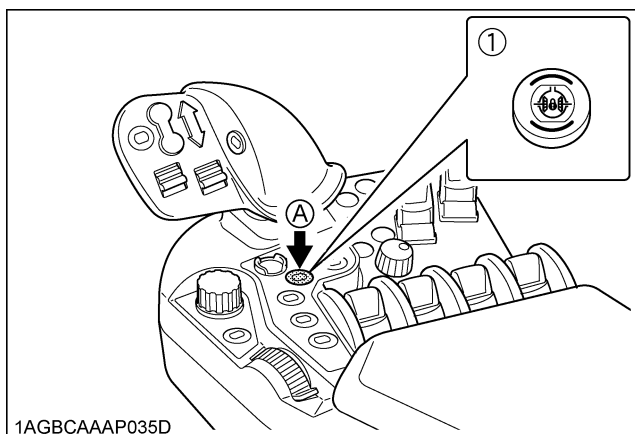
(1) Differential lock switch (A) AUTO differential lock mode  
(B) Manual differential lock mode  
(C) Differential Lock OFF mode

## [Premium, Premium KVT models]

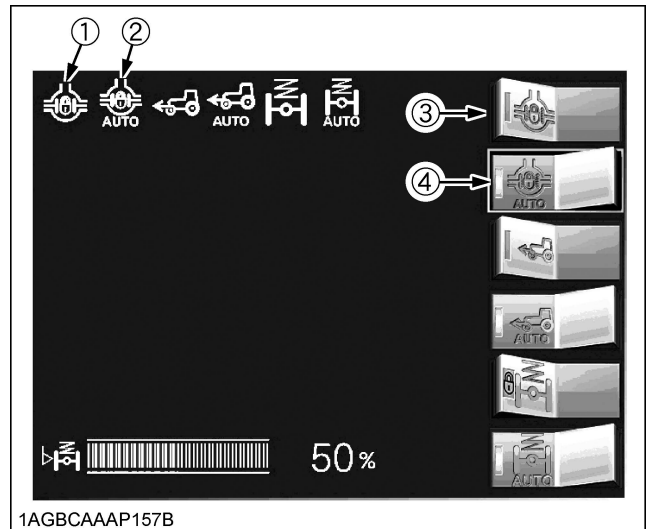
Each time the differential lock button is pressed, the Manual differential lock mode turns "ON" or "OFF". If this mode is "ON", the indicator on the instrument panel lights up.

Switching to the "AUTO differential lock" mode can be done with the K-monitor.

(See "Setting the Drivability" in "K-MONITOR (Part 1)" in "INTELLIPANEL(TM) CONTROL" section.)



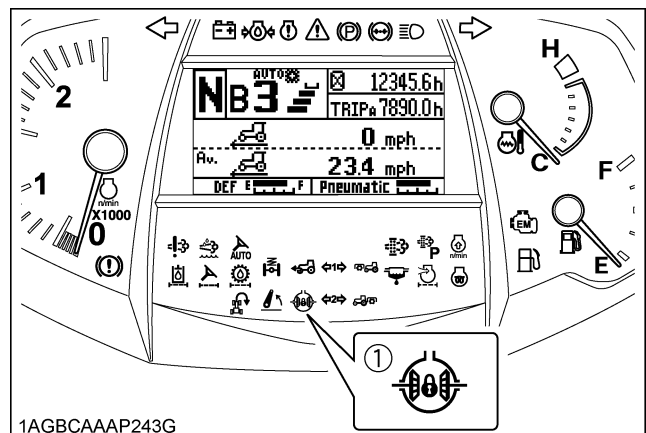
(1) Differential lock button (A) "PUSH"



(1) Differential lock indicator  
(2) Auto differential lock indicator  
(3) Differential lock switch  
(4) Auto differential lock switch

## ◆ Differential lock indicator

When the AUTO differential lock or Manual differential lock mode is selected, the indicator on the instrument panel lights up.



(1) Differential lock indicator

## IMPORTANT :

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

## HEADLAND MANAGEMENT SYSTEM



### WARNING

To avoid personal injury or death:

- Never utilize the Headland Management System, if anyone is in the work area of the tractor.

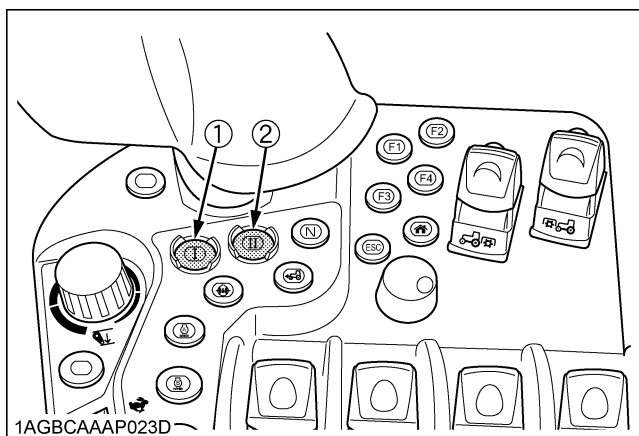
### ■ What is Headland Management System?

Depending on different types of crops and working methods, your headland may require different operation. Once such procedures are preprogrammed, the operator can run the machine on headland in a simple way for better productivity and less operator fatigue.

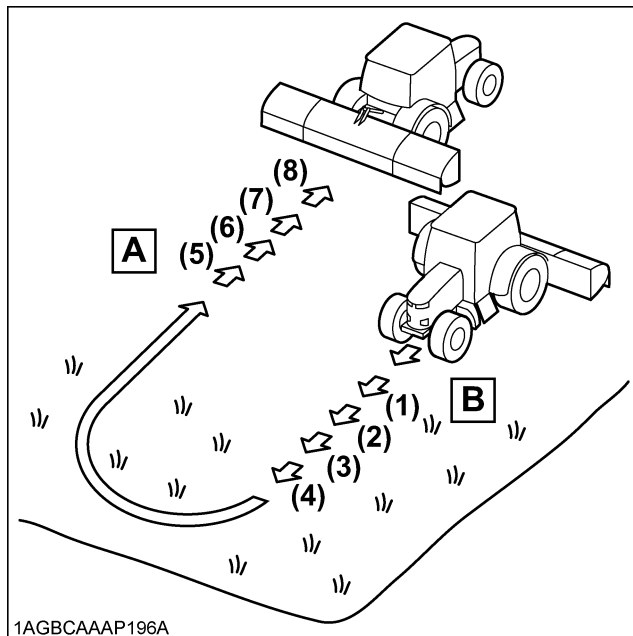
For instance, let's preprogram the operating procedure on headland as shown in the table below.

1. Press the field-out button when you reach the headland, and the steps (1) thru (4) are carried on in sequence.
2. After turning the machine, press the field-in button, and the steps (5) thru (8) are carried on in sequence.

Operating example on headland	
Field out	Field in
(1) Implement [UP]	(5) 4WD [ON]
(2) PTO [OFF]	(6) Differential lock [ON]
(3) Differential lock [OFF]	(7) PTO [ON]
(4) 4WD [OFF]	(8) Implement [DOWN]



- (1) Field out button  
(2) Field in button

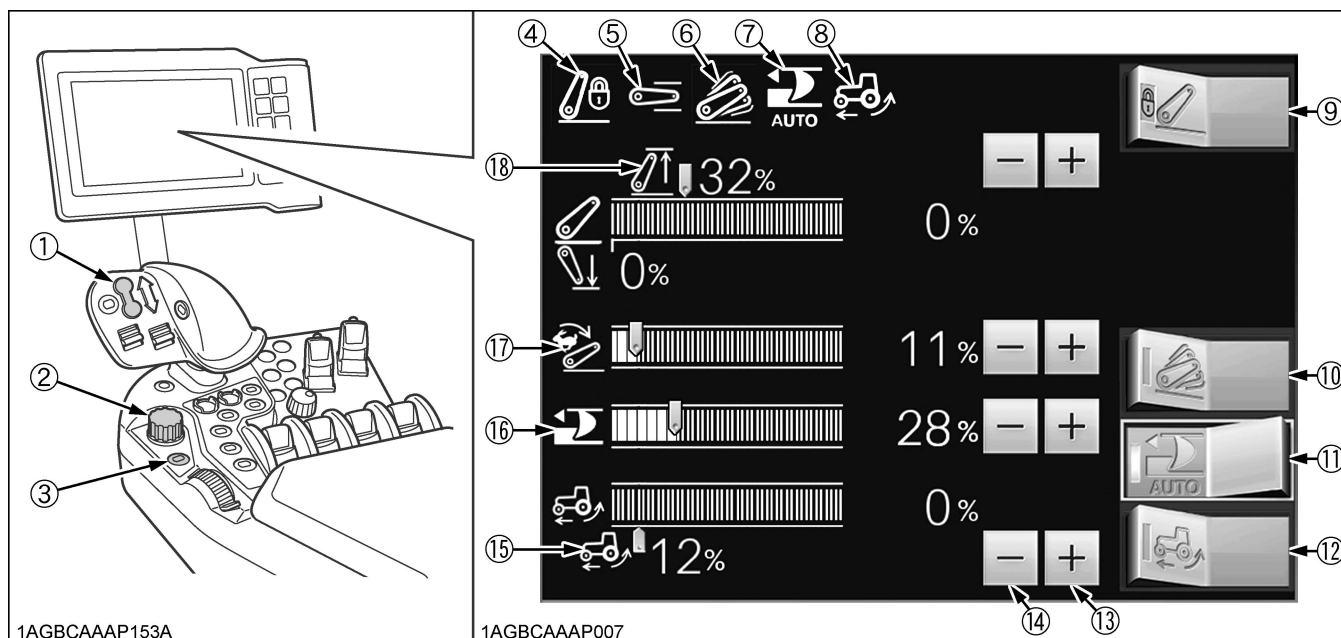


- (A) "FIELD IN"  
(B) "FIELD OUT"

### ■ Programming the Headland Management System

To utilize the Headland Management System, it must be preprogrammed.

For details on initial entries and modifications for the program, refer to "Setting the Headland Management System" in "K-MONITOR" in "INTELLIPANEL(TM) CONTROL" section.



- (1) 3-P. quick raise/lower switch  
 (2) Depth control dial (Hydraulic dial)  
 (3) 3-point hitch lock button  
 (4) 3-point hitch lock indicator  
 (5) 3-point hitch status indicator  
 (6) Ride control indicator

- (7) Draft control indicator  
 (8) Wheel slip control indicator  
 (9) 3-point hitch lock switch  
 (10) Ride control switch  
 (11) Draft control switch  
 (12) Wheel slip control switch

- (13) Plus (+) switch  
 (14) Minus (-) switch  
 (15) Wheel slip control  
 (16) Draft sensitivity control  
 (17) 3-point hitch lowering speed control  
 (18) Lift arm height control

## ■ 3-Point Hitch Lock Button



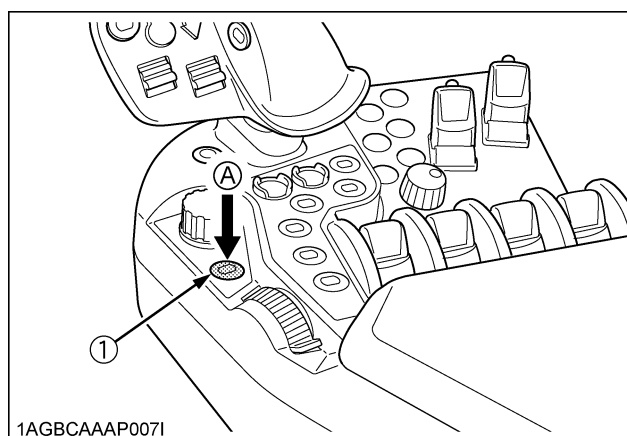
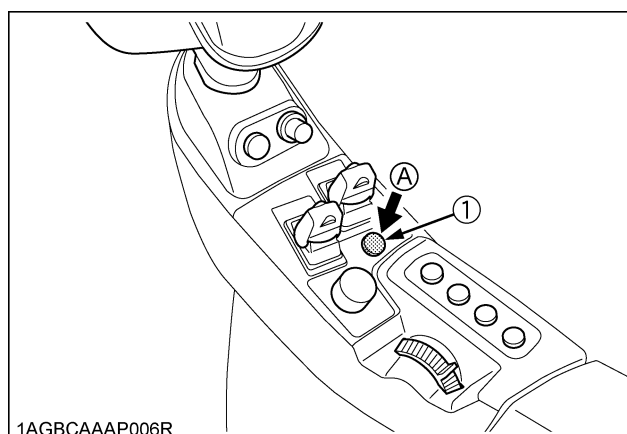
### WARNING

To avoid personal injury or death:

- Before checking 3-point mounted implement, be sure to lock the implement with the lock button. In such case, turn the depth control dial (hydraulic dial) toward down and make sure the implement does not drop.
- Before road traveling, be sure to lock the implement with the 3-point hitch lock button. If traveling with the ride control (discussed later) on, unlock the 3-point hitch lock button.

Each time you press the 3-point hitch lock button, the lock and unlock status switch, and the switch indicator goes on while the lock status is on.


Before traveling on public roads, be sure to get the 3-point hitch locked to avoid accidental drop of the implement. If traveling with the ride control (discussed later) on, unlock the 3-point hitch lock button.

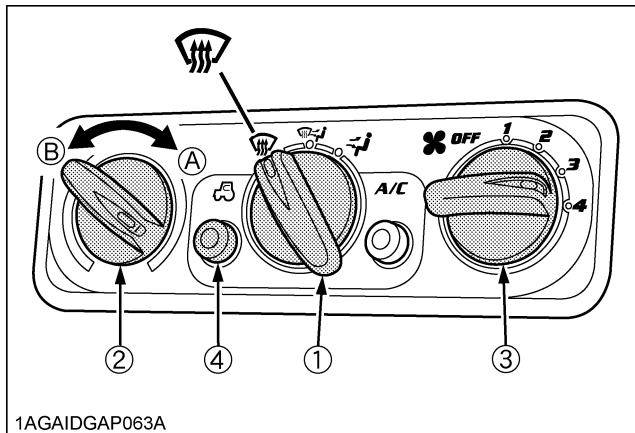


(1) 3-point hitch lock button (A) PUSH

### ◆ Defrosting or demisting

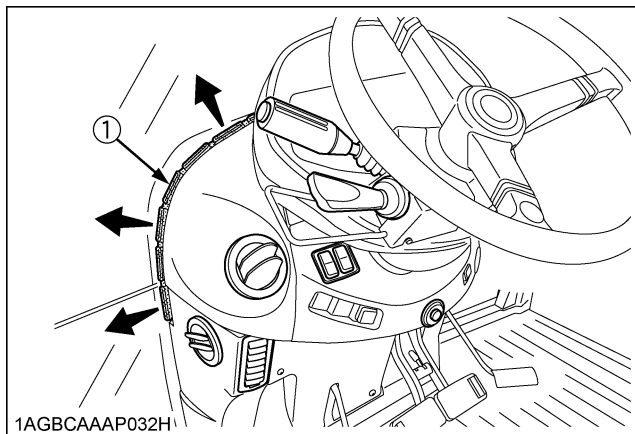
To defrost or demist the windshield, take the following steps.

1. Set the mode switch to the  position.
2. Set the recirculation / fresh air selection switch to the "FRESH AIR" position.
3. Set the blower switch and the temperature control dial to the "4" and max "WARM" (end of clockwise) positions, respectively.




- (1) Mode switch
- (2) Temperature control dial
- (3) Blower switch
- (4) Recirculation / fresh air selection switch with indicator light

(A) "WARM"  
(B) "COOL"




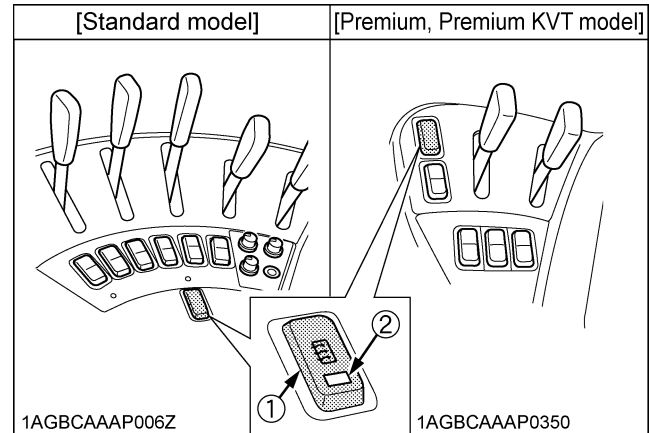
- (1) Defroster air outlet

### NOTE :

- If you set the mode switch to  position, air will not come out from the dashboard and rear 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 automatically turn off as well as the yellow light. 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" or "ACC" positions with the engine stopped.  
Always use the defogger with the engine running.