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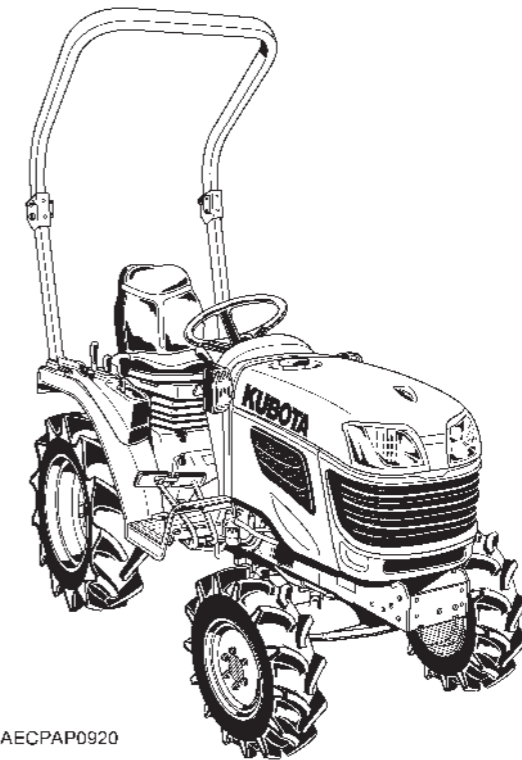
KUBOTA Corporation

English (Europe)
Code No. 6C392-9210-4

OPERATOR'S MANUAL

KUBOTA TRACTOR

MODELS B1620·B1820



1AGAEC PAP0920

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READ AND SAVE THIS MANUAL



ABBREVIATION LIST

Abbreviations	Definitions
2WD	Two Wheel Drive
4WD	Four Wheel Drive
API	American Petroleum Institute
ASABE	American Society of Agricultural and Biological Engineers, USA
ASTM	American Society for Testing and Materials, USA
DIN	Deutsches Institut für Normung, GERMANY
DT	Dual Traction (4WD)
fpm	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
SMV	Slow Moving Vehicle

KUBOTA Corporation is ...

Since its inception in 1890, KUBOTA Corporation has grown to rank as one of the major firms in Japan.

To achieve this status, the company has through the years diversified the range of its products and services to a remarkable extent. Nineteen plants and 16,000 employees produce over 1,000 different items, large and small.

All these products and all the services which accompany them, however, are unified by one central commitment. KUBOTA makes products which, taken on a national scale, are basic necessities. Products which are indispensable. Products which are intended to help individuals and nations fulfill the potential inherent in their environment. KUBOTA is the Basic Necessities Giant.

This potential includes water supply, food from the soil and from the sea, industrial development, architecture and construction, transportation.

Thousands of people depend on KUBOTA's know-how, technology, experience and customer service. You too can depend on KUBOTA.

Intended use

This machine is designed solely for use in customary agricultural or similar operations. Use in any other way is considered as contrary to the intended use. Compliance with and strict adherence to the conditions of operation, service, and repair as specified by the manufacturer, also constitute essential elements of the intended use.

This machine should be operated, serviced, and repaired only by persons who are familiar with its particular characteristics and who are acquainted with the relevant safety procedures.

































Accident prevention regulations, all other generally recognized regulations on safety and occupational medicine, and all road traffic regulations must be observed at all times.

Any arbitrary modifications carried out to this machine may relieve the manufacturer of liability for any resulting damage or injury.

manufacturer or distributor of the machine	Kubota Corporation
the model designation of the machine	B1620/B1820
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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.

	Safety Alert Symbol		Differential Lock
	Diesel Fuel		Position Control-Raised Position
	Fuel-Level		Position Control-Lowered Position
	Engine-Rotational Speed		3-Point Lowering Speed Control
	Hourmeter/Elapsed Operating Hours		Remote Cylinder-Retract
	Engine Coolant-Temperature		Remote Cylinder-Extend
	Brake		Hazard Warning Lights
	Parking Brake		Position Lamps
	Battery Charging Condition		Headlight
	Engine Oil-Pressure		Four-Wheel Drive-On
	Turn Signal		Four-Wheel Drive-Off
	Engine-Stop		Fast
	Engine-Run		Slow
	Diesel Preheat/Glow Plugs(Low Temperature Start Aid)		Read Operator's Manual
	Starter Control		Engine Speed Control
	Power Take-Off Control-Off Position (Disengaged)		
	Power Take-Off Control-On Position (Engaged)		

FOREWORD

You are now the proud owner of a KUBOTA Tractor. This tractor is a product of KUBOTA quality engineering and manufacturing. It is made of fine materials and under a rigid quality control system. It will give you long, satisfactory service. To obtain the best use of your tractor, please read this manual carefully. It will help you become familiar with the operation of the tractor and contains many helpful hints about tractor maintenance. It is KUBOTA's policy to utilize as quickly as possible every advance in our research. The immediate use of new techniques in the manufacture of products may cause some small parts of this manual to be outdated. KUBOTA distributors and dealers will have the most up-to-date information. Please do not hesitate to consult with them.



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, may result in minor or moderate injury.

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

NOTE : Gives helpful information.

CONTENTS

▲ SAFE OPERATION	▲ -1
SERVICING OF TRACTOR.....	1
SPECIFICATIONS.....	2
SPECIFICATION TABLE	2
TRAVELING SPEEDS	4
IMPLEMENT LIMITATIONS	5
INSTRUMENT PANEL AND CONTROLS.....	7
PRE-OPERATION CHECK	10
DAILY CHECK	10
OPERATING THE ENGINE.....	11
STARTING THE ENGINE	11
Block Heater (Option)	13
STOPPING THE ENGINE.....	14
WARMING UP	14
Warm-up Transmission Oil at Low Ambient Temperatures	14
JUMP STARTING	15
OPERATING THE TRACTOR.....	16
OPERATING NEW TRACTOR	16
Do not Operate the Tractor at Full Speed for the First 50 Hours.....	16
Changing Lubricating Oil for New Tractors.....	16
BOARDING AND LEAVING THE TRACTOR	16
OPERATING FOLDABLE ROPS (OPTION).....	16
To Fold the ROPS	16
To Raise the ROPS to Upright Position.....	17
STARTING	18
Operator's Seat.....	18
Seat Belt	19
Head Light Switch.....	19
Turn Signal / Hazard Light Switch	20
Horn Button.....	20
Tractor Lights.....	21
Brake Pedals (Right and Left).....	21
Clutch Pedal	22
Main Gear Shift Lever & Range Gear Shift Lever (L-H)	22
Front Wheel Drive Lever.....	23
Hand Throttle Lever	23
Foot Throttle	23
Parking Brake	23
STOPPING.....	24
Stopping.....	24
CHECK DURING DRIVING	24
Immediately Stop the Engine if:.....	24
Easy Checker (TM).....	24

Fuel Gauge.....	24
Coolant Temperature Gauge.....	25
Hourmeter / Tachometer.....	25
PARKING.....	26
Parking.....	26
OPERATING TECHNIQUES.....	26
Differential Lock.....	26
Operating the Tractor on a Road.....	26
Operating on Slopes or Rough Terrain.....	27
Transport the Tractor Safely.....	27
Directions for Use of Power Steering.....	27
Trailer Electrical Outlet.....	27
PTO.....	29
PTO OPERATION.....	29
PTO Gear Shift lever.....	29
PTO shaft Cover and Shaft Cap.....	30
Stationary PTO.....	30
THREE-POINT HITCH & DRAWBAR.....	32
3-POINT HITCH.....	33
Selecting the holes of lifting rods and lower links.....	33
Selecting the Top Link Mounting Holes.....	33
Drawbar(if equipped).....	33
Lifting Rod (Right).....	33
Top Link.....	33
Check Chains.....	34
DRAWBAR (if equipped).....	34
FRONT HITCH (if equipped).....	34
HYDRAULIC UNIT.....	35
3-POINT HITCH CONTROL SYSTEM.....	35
Hydraulic Control.....	35
Implement Lowering Limit.....	35
3-point Hitch Lowering Speed.....	36
AUXILIARY HYDRAULICS.....	36
Hydraulic Block Type Outlet.....	36
Rear outlet.....	37
Hydraulic Control Unit Use Reference Chart.....	38
TIRES, WHEELS AND BALLAST.....	39
TIRES.....	39
Inflation Pressure.....	39
Dual Tires.....	39
WHEEL ADJUSTMENT.....	39
Front Wheels.....	40
Rear Wheels.....	41
BALLAST.....	42
Front Ballast.....	42
Rear Ballast.....	43
Maximum Masses.....	43
MAINTENANCE.....	44

SERVICE INTERVALS	44
LUBRICANTS,FUEL AND COOLANT	45
PERIODIC SERVICE.....	47
HOW TO OPEN THE HOOD	47
Hood	47
Front Grille.....	47
Engine Side Cover.....	48
DAILY CHECK	48
Walk Around Inspection.....	48
Checking and Refueling.....	49
Checking Engine Oil Level.....	49
Checking Transmission Fluid Level	50
Checking Coolant Level.....	50
Cleaning Grill and Radiator Screen	51
Checking Brake Pedals and Clutch Pedal	51
Checking Parking Brake	51
Checking Gauges, Meter and Easy Checker(TM).....	51
Checking Head Light, Hazard Light etc.	51
Checking Seat Belt and ROPS (if equipped).....	51
Checking and Cleaning of Electrical Wiring and Battery Cables	52
Checking Movable Parts.....	52
EVERY 50 HOURS	52
Lubricating Grease Fittings.....	52
Checking Engine Start System.....	53
Checking Wheel Bolt Torque.....	54
EVERY 100 HOURS	54
Checking Battery Condition	54
Cleaning Air Cleaner Element [Single Element Type]	55
Cleaning Air Cleaner Primary Element [Double Element Type](if equipped)	56
Cleaning Fuel Filter.....	56
Adjusting Fan Belt Tension.....	57
Adjusting Clutch Pedal.....	58
Adjusting Brake Pedal	58
Adjusting Parking Brake	59
Checking Fuel Line.....	59
EVERY 200 HOURS	60
Replacing Engine Oil Filter	60
Changing Engine oil.....	60
Checking Radiator Hose and Clamp	60
Checking Intake Air Line.....	61
EVERY 400 HOURS	61
Changing Transmission Fluid/Replacing Hydraulic Oil Filter.....	61
Replacing Fuel Filter Element.....	62
Changing Front Axle Case Oil	62
EVERY 800 HOURS	63
Adjusting Engine Valve Clearance	63
EVERY 1500 HOURS	63
Checking Fuel Injection Nozzle Injection Pressure.....	63
EVERY 3000 HOURS	63
Checking Injection Pump.....	63
EVERY 1 YEAR	63

Replacing Air Cleaner Element.....	63
Replacing Air Cleaner Primary Element and Secondary Element.....	63
EVERY 2 YEARS.....	63
Flushing Cooling System and Changing Coolant	63
Anti-Freeze	64
Replacing Radiator Hose (Water pipes)	65
Replacing Fuel Lines	65
Replacing Intake Air Line.....	65
SERVICE AS REQUIRED.....	65
Bleeding Fuel System.....	65
Draining Clutch Housing Water	65
Replacing Fuse.....	66
Replacing Light Bulb.....	66
STORAGE	67
TRACTOR STORAGE	67
REMOVING THE TRACTOR FROM STORAGE.....	67
TROUBLESHOOTING.....	68
ENGINE TROUBLESHOOTING	68
OPTIONS.....	69
APPENDICES.....	70
MAXIMUM MASSES.....	70
Maximum Permissible Load of The Tire (Applicable Only in Running on The Public Road).....	70
Trailer Load Capacity.....	73
INDEX	74



SAFE OPERATION

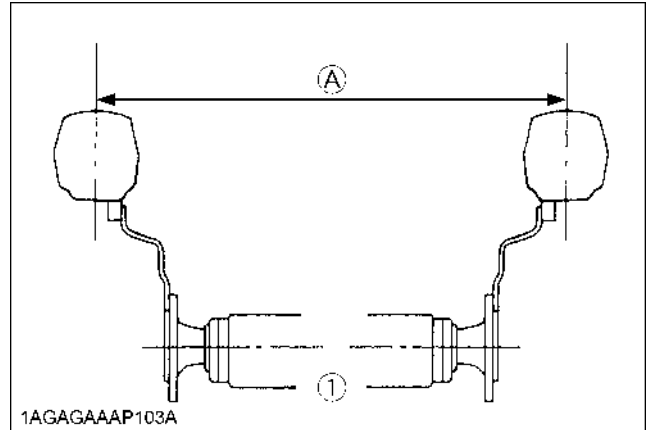
Careful operation is your best insurance against an accident.

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 pictorial safety labels on the tractor.
3. Do not operate tractor or any implement attached to it while under the influence of alcohol, medication, controlled substances or while fatigued.
4. Carefully check the vicinity before operating tractor or any implement attached to it. Check for overhead clearance which may interfere with a CAB or ROPS. Do not allow any bystanders around or near tractor during operation.
5. Before allowing other people to use your tractor, explain how to operate and have them read this manual before operation.
6. 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.
7. Do not allow passengers to ride on any part of the tractor at anytime. The operator must remain in the tractor seat during operation.
8. 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.)
9. Keep your tractor clean. Dirt, grease, and trash build up may contribute to fires and lead to personal injury.
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

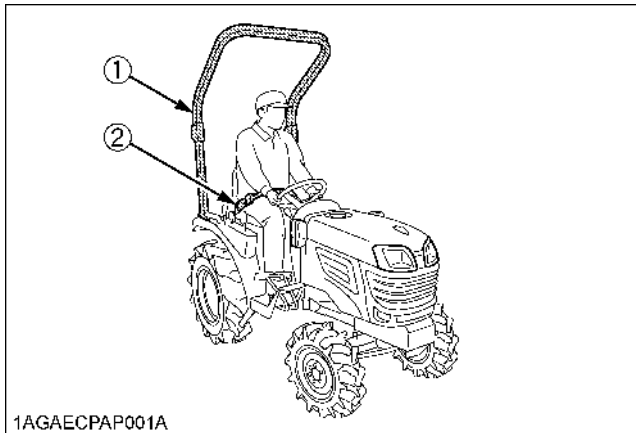
(A) Tread Width

◆ 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. Set parking brake and stop engine. Remove any obstruction that may prevent raising or folding of the ROPS. Do not allow any bystanders. Always perform function from a stable position at the rear of the tractor. Hold the top of the ROPS securely when raising or folding. Make sure all pins are installed and locked.
3. If the CAB or ROPS is loosened or removed for any reason, make sure that all parts are reinstalled correctly before operating the tractor.
4. Never modify or repair any structural member of a CAB or ROPS because welding, bending, drilling, grinding, or cutting may weaken the structure.
5. A damaged CAB or ROPS structure must be replaced, not repaired or revised.
6. If any structural member of the CAB or ROPS is damaged, replace the entire structure at your local KUBOTA Dealer.

▲-2 SAFE OPERATION

- If the tractor is equipped with a foldable ROPS it may be temporarily folded down only when absolutely necessary for areas with height constraints. (There is no operator protection provided by the ROPS in the folded position. For operator safety the ROPS should be placed in the upright and locked position and the seat belt fastened for all other operations.)
- 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.



1AGAEC PAP001A

- (1) ROPS
(2) Seat belt

2. 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 and loads carried too high etc. 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.

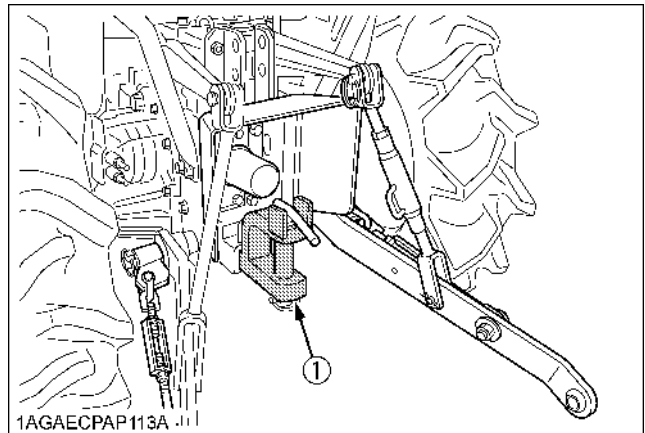
◆ Starting

- 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 engine while standing on the ground.
- Before starting the engine, make sure that all 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 engine by shorting across starter terminals or bypassing the safety start switch. Machine may start in gear and move if normal starting circuitry is bypassed.
- Do not operate or idle engine in a non-ventilated area. Carbon monoxide gas is colorless, odorless, and deadly.
- Check before each use that operator presence controls are functioning correctly. Test safety systems. (See "Checking Engine Start System" in "EVERY 50 HOURS" in "PERIODIC SERVICE" section.)
Do not operate unless they are functioning correctly.

◆ Working

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



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- (1) Drawbar
- 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 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 stand between tractor and implement or trailed vehicle unless parking brake is applied.

◆ 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.

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

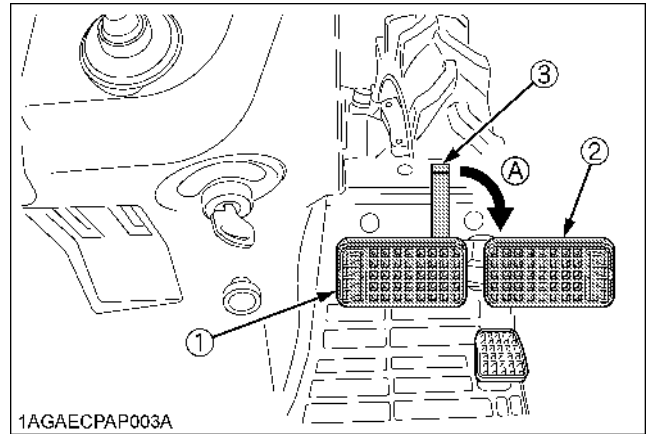
◆ Operating on slopes

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.

1. 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 it. Stay off slopes too steep for safe operation.
2. Driving forward out of a ditch, mired condition or up a steep slope increases the risk of a tractor to be upset backward. Always back out of these situations. Extra caution is required with four-wheel drive models because their increased traction can give the operator false confidence in the tractor's ability to climb slopes.
3. Keep all movement on slopes slow and gradual. Do not make sudden changes in speed, direction or apply brake and make sudden motions of the steering wheel.
4. Avoid disengaging the clutch or changing gears speed when climbing or going down a slope. If on a slope disengaging the clutch or changing gears to neutral could cause loss of control.
5. Special attention should be made to the weight and location of implements and loads as such will affect the stability of the tractor.
6. To improve stability on slope, set widest wheel tread as shown in "TIRE, WHEEL AND BALLAST" section. Follow recommendations for proper ballasting.

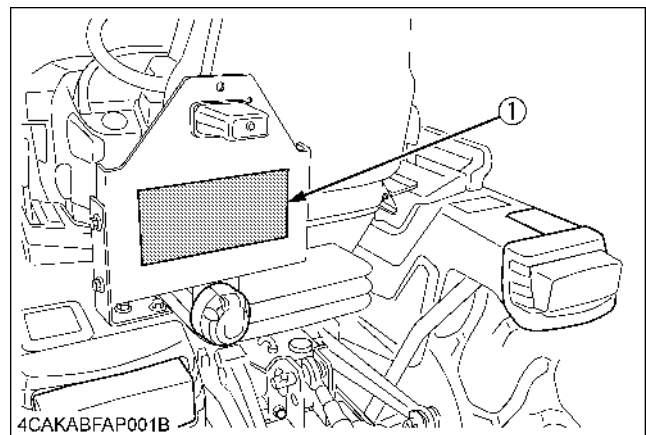
◆ Driving the tractor on the road

1. Lock the two 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 travelling on the road
 (2) Brake Pedal (RH)
 (3) Brake Pedal Lock

2. Check the front wheel engagement. The braking characteristics are different between two and four wheel drive. Be aware of the difference and use carefully.
3. Always slow the tractor down before turning. Turning at high speed may tip the tractor over.
4. Observe all local traffic and safety regulations. Use the number plate as required.



- (1) Number plate

5. Turn the headlights on. Dim them when meeting another vehicle.
6. Drive at speeds that allow you to maintain control at all times.
7. Do not apply the differential lock while traveling at road speeds. The tractor may run out of control.
8. 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.
9. Keep the ROPS in the "UP" position and wear the seat belt when driving the tractor on the road. Otherwise, you will not be protected in the event of a tractor roll-over.

▲-4 SAFE OPERATION

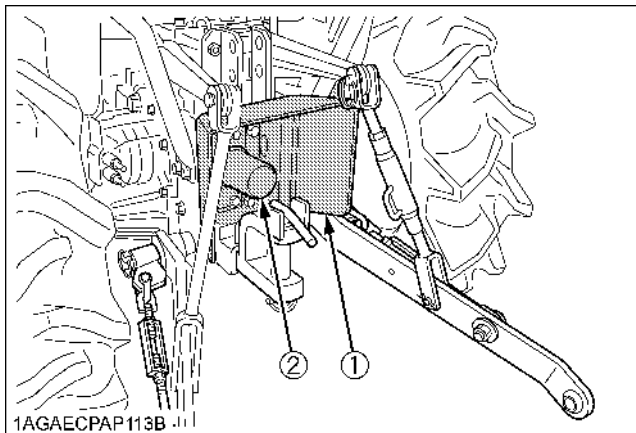
10. Do not operate an implement while the tractor is on the road. Lock the 3-point hitch in the raised position.
11. For trailing PTO-driven implements, set the hitch devices to the towing position.
12. Attach pulled or towed loads to the hitch devices only.

3. PARKING THE TRACTOR

1. 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 tractor from rolling.
2. Make sure that the tractor has come to a complete stop before dismounting.
3. Avoid parking on steep slopes, if at all possible park on a firm and level surface; if not, park across a slope with chock the wheels.
Failure to comply with this warning may allow the tractor to move and could cause injury or death.
4. When parking your machine if at all possible park on a firm, flat and level surface; if not, park across a slope. Set the parking brake(s), lower the implements to the ground, remove the key from the ignition and lock the cab door (if equipped) and chock the wheels.

4. OPERATING THE PTO

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

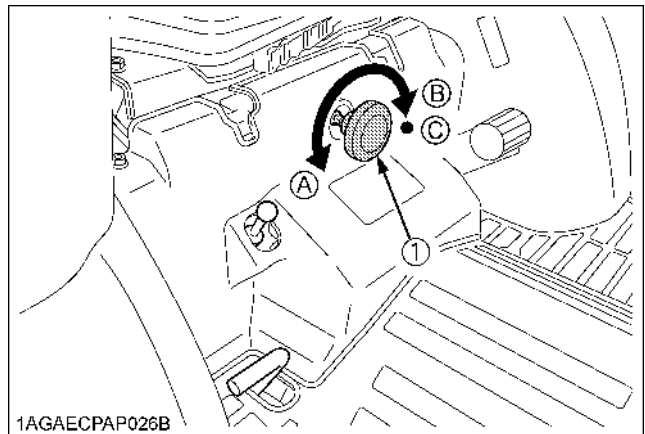


(1) PTO Shaft cover
(2) PTO Shaft cap

3. 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 (540rpm) unless the higher one is specifically recommended as safe by the equipment manufacture.
4. 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.

5. USING 3-POINT HITCH

1. Use the 3-point hitch only with equipment designed for 3-point hitch usage.
2. When using a 3-point hitch mounted implement, be sure to install the proper counterbalance weight on the front of the tractor.
3. When transporting on the road, set the implement lowering speed knob in the "LOCK" position to hold the implement in the raised position.



(1) 3-point hitch lowering speed knob

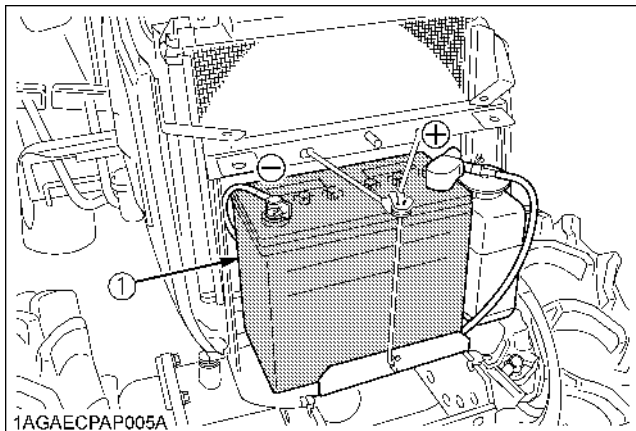
(A) "FAST"
(B) "SLOW"
(C) "LOCK"

6. 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.

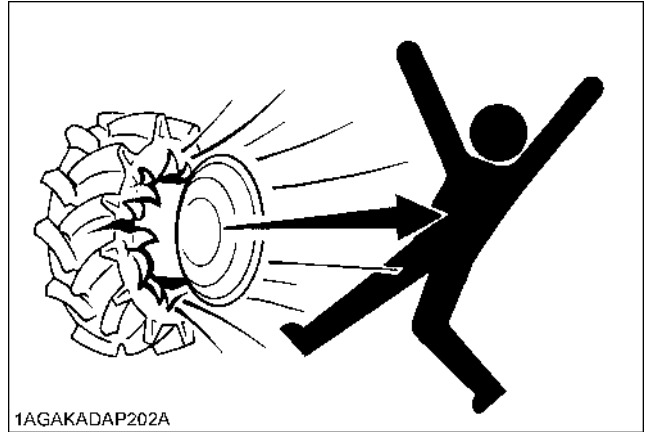
1. Allow the tractor time to cool off before working on or near the engine, muffler, radiator, etc.

2. Do not remove radiator cap while 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 tank, not the radiator. (See "Checking Coolant Level" in "DAILY CHECK" in "PERIODIC SERVICE" section.)
3. Always stop the engine before refueling. Avoid spills and overfilling.
4. Do not smoke when working around 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.
5. Before "jump starting" a dead battery, read and follow all of the instructions. (See "JUMP STARTING" in "OPERATING THE ENGINE" section.)
6. Keep first aid kit and fire extinguisher handy at all times.
7. Disconnect the battery's ground cable before working on or near electric components.
8. 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.
9. To avoid sparks from an accidental short circuit, always disconnect the battery's ground cable (-) first and reconnect it last.



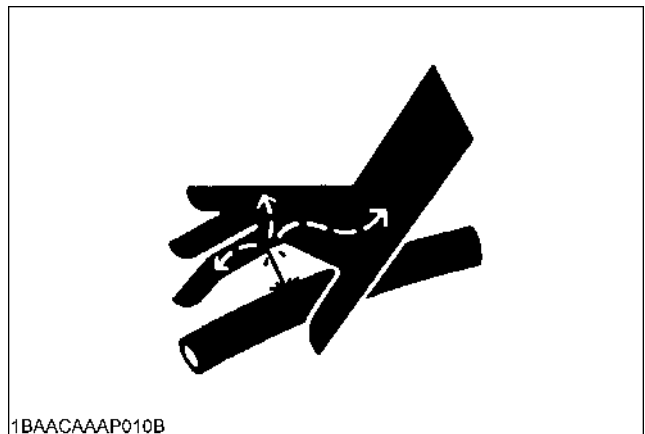
(1) Battery

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



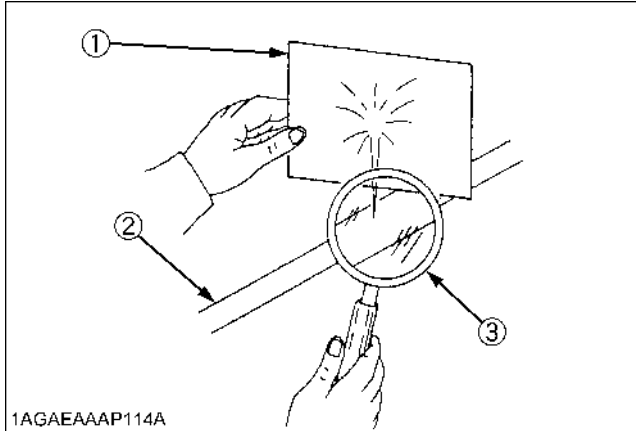
1AGAKADAP202A

12. Securely support the tractor when either changing wheels or adjusting the wheel tread width.
13. Make sure that wheel bolts have been tightened to the specified torque.
14. 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 tractor or any machine elements for servicing or adjustment, securely support them with stands or suitable blocking beforehand.
15. Escaping hydraulic fluid under pressure has sufficient force to penetrate skin, causing serious personal injury. Before disconnecting hydraulic lines, be sure to 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.



1BAACAAAP010B

16. Fluid escaping from pinholes may be invisible. Do not use hands to search for suspected leaks; 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 reaction.



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

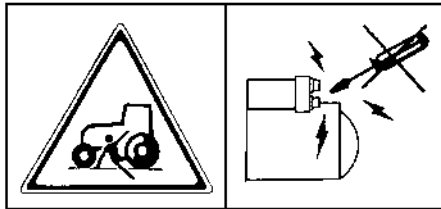
17. Waste products such as used oil, fuel, hydraulic fluid, and batteries, can harm the environment, people, pets and wildlife. Please dispose properly. See your local Recycling Center or KUBOTA Dealer to learn how to recycle or get rid of waste products.

7. PICTORIAL SAFETY LABELS

The pictorial safety labels affixed are intended to alert persons to potential hazards. The hazard is identified by a pictorial in the safety alert triangle or by the safety alert symbol alone. An adjacent pictorial provides instructions and information on how to avoid the hazard.

(1) Part No. K3512-4718-1

Start engine from operator's seat only.



1BDABANAP083B

(2) Part No. 3A481-9853-1

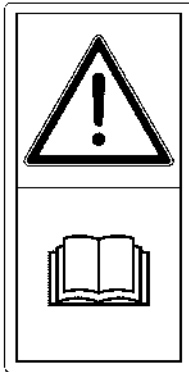
Diesel fuel only. No fire.



1AGAIAZAP118A

(3) Part No. TD179-3491-1

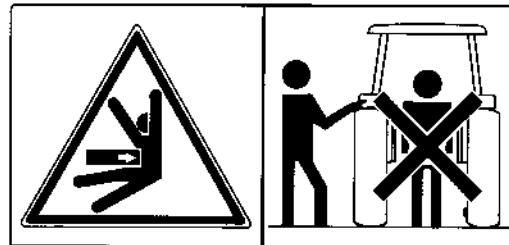
Carefully read operator's manual before handling the machine.
Observe instructions and safety rules when operating.



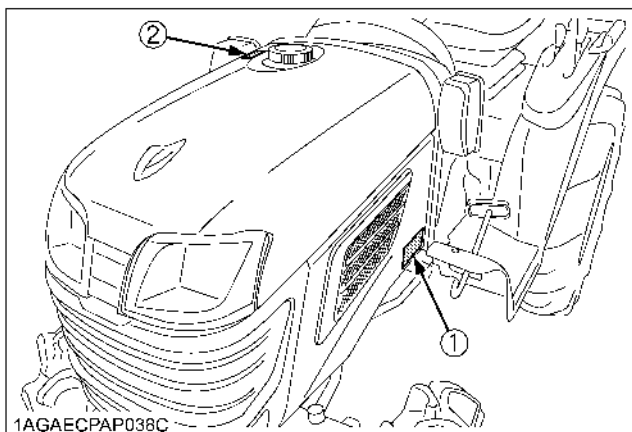
1AGAWAEP088A

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

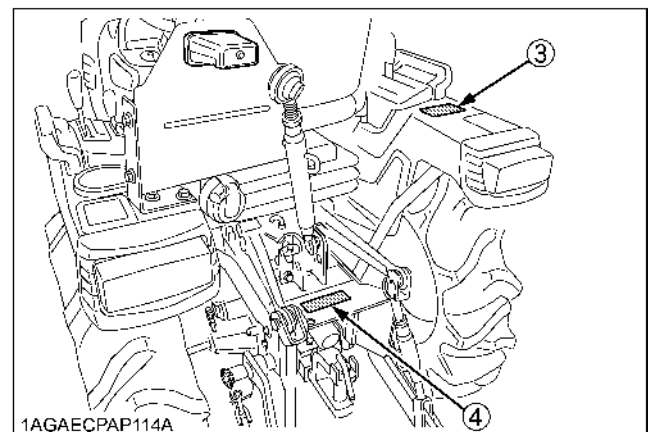
Do not stand by IMPLEMENT or between implement and tractor while operating.



1AGAIBIAP1770



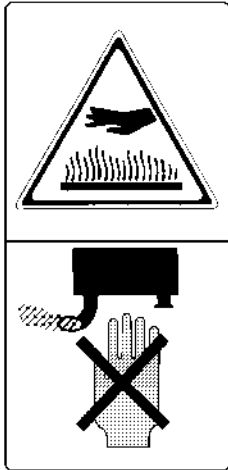
1AGAEC PAP038C



1AGAEC PAP114A

1AGAEC PAP058A

(1) Part No. 6C090-4959-1
Do not touch hot surface like muffler, etc



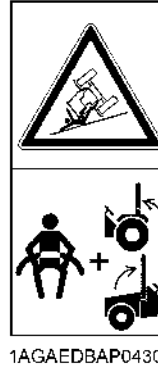
1AGAEBMAP078A

(2) Part No. 6C300-4958-1
Do not get your hands close to engine fan and fan belt.



1AGAIAZAP110A

(3) Part No. 6C392-9848-1 (if equipped)
Always lock ROPS in upright position unless it has to be folded down to allow operation underneath trees or bushes.
When ROPS is locked in upright position, seat belt should be used.

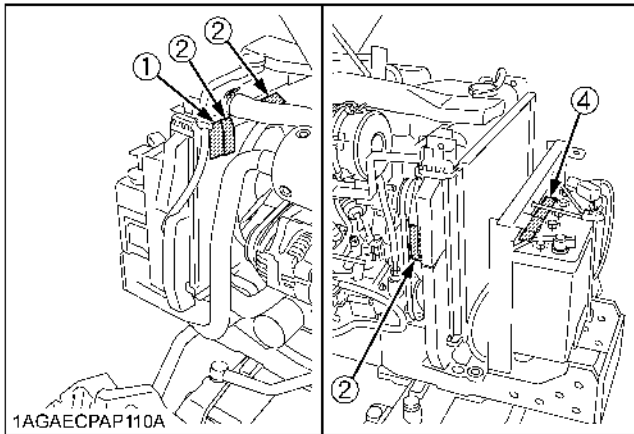


1AGAEDBAP0430

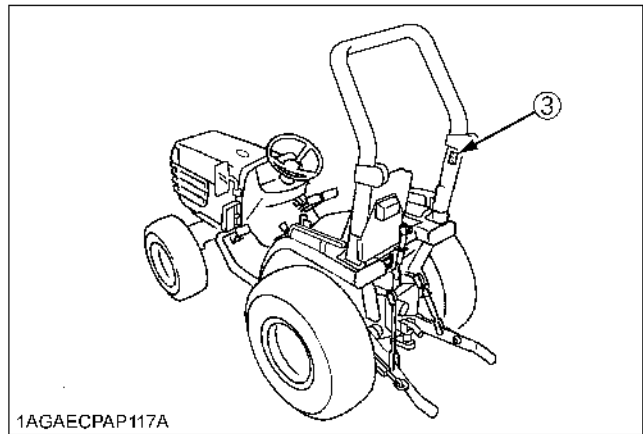
(4) Part No. 6C392-3014-1



1AGAECHAP060E



1AGAECPAP110A



1AGAECPAP117A

1AGAECPAP060A

8. CARE OF PICTORIAL SAFETY LABELS

1. Keep pictorial safety labels clean and free from obstructing material.
2. Clean pictorial safety labels with soap and water, dry with a soft cloth.
3. Replace damaged or missing pictorial safety labels with new labels from your local KUBOTA Dealer.
4. If a component with pictorial safety label(s) affixed is replaced with new part, make sure new label(s) is (are) attached in the same location(s) as the replaced component.
5. Mount new pictorial safety labels by applying on a clean dry surface and pressing any bubbles to outside edge.

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 both the tractor and engine serial numbers.

Locate the serial numbers now and record them in the space provided.

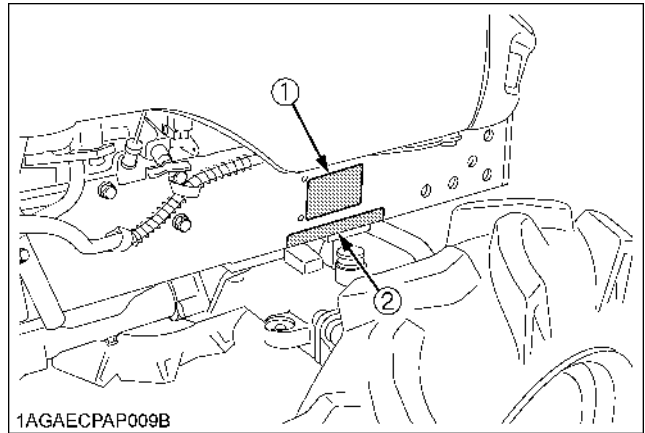
	Type	Serial No.
Tractor		
Engine		
Date of Purchase		
Name of Dealer		
(To be filled in by purchaser)		

◆ **Warranty**

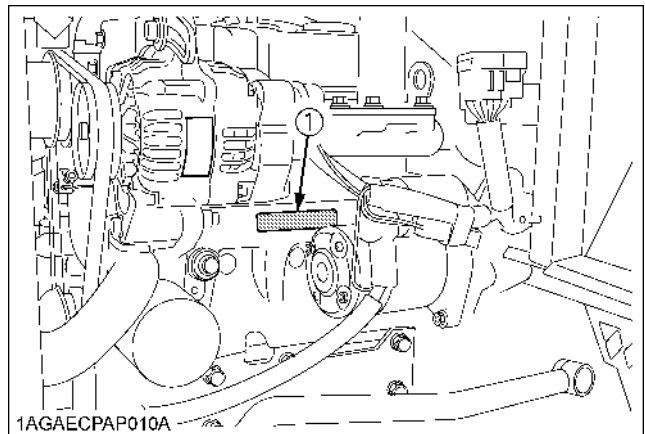
This tractor is warranted under the KUBOTA Limited Express Warranty, a copy of which may be obtained from your selling dealer. No warranty shall, however, apply if the tractor has not been handled according to the instruction given in the Operator's Manual even it is within the warranty period.

◆ **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) Engine serial number

SPECIFICATIONS

SPECIFICATION TABLE

Model			B1620D	B1820D	B1820DS
PTO power*1		kW (PS)	9.2 (12.5)	10.7 (14.5)	
Engine	Maker		KUBOTA		
	Model		D722-E3-D25	D782-E3-D25	D782-E3-D25P
	Type		Indirect Injection. Vertical, water-cooled, 4cycle diesel		
	Number of cylinders		3		
	Bore and stroke		mm	67 x 68	67 x 73.6
	Total displacement		cm ³	719	778
	Engine gross power*1		kW (PS)	11.8 (16.0)	13.2 (18.0)
	Rated revolution		rpm	2800	
	Maximum torque		N-m (kgf-m)	40.5 (4.1)	45.0 (4.6)
	Battery		12V, RC: 70 min, CCA: 400A		
Fuel		Diesel fuel No.2 [above -10 °C], Diesel fuel No.1 [below -10 °C]			
Capacities	Fuel tank		L	14	
	Engine crankcase (with filter)		L	2.4	
	Engine coolant		L	3.4	
	Transmission case		L	10.5	
Dimensions	Overall length (with 3P)		mm	2360	
	Overall width		mm	932	927
	Overall height (Top of steering wheel)		mm	1235	1255
	Wheel base		mm	1270	
	Minimum ground clearance		mm	250	270
	Tread	Front	mm	778	767
Rear		mm	707 to 1035	743 to 1035	
Weight		kg	510	520	
Clutch			Dry single plate		
Traveling system	Tires	Front	4.5 - 10	5 - 12	
		Rear	7 - 16	8 - 16	
	Steering		Manual		Power steering
	Transmission		Gear-shift, 6 forward and 2 reverse		
	Brake		Wet disk type		
Minimum turning radius (with brake)		m	1.8		

Model				B1620D	B1820D	B1820DS
Hydraulic unit	Hydraulic control system			Up and down type control valve		
	Pump capacity		L / min	3P : 14.1		3P: 14.1, Power Steering: 8.6
	Three point hitch			SAE Category 1		
	Max. lift force	At lift points	kg	540		
600 mm behind lift point		kg	410			
PTO	Rear-PTO			SAE 1-3/8, 6 splines		
		PTO / Engine speed	rpm	540 / 2773, 1000 / 2722		
	Mid-PTO			USA No.5 (KUBOTA 10-tooth) involute spline		
		PTO / Engine speed	rpm	2500 / 2750		
The level of protection against hazardous substances *2				Category 1		
Noise at the operator's ear *3	with ROPS	dB(A)	86.0			
	without ROPS	dB(A)	85.0			
Noise of the tractor in motion *4	with ROPS	dB(A)	79.0			
	without ROPS	dB(A)	78.0			
Value of the vibration level *5	COBO SC74 / M91	Light driver	m/s ²	1.13		
		Heavy driver	m/s ²	0.75		
	SEARS 607	Light driver	m/s ²	1.24		
		Heavy driver	m/s ²	1.06		
	KAB XH2 / P1	Light driver	m/s ²	1.17		
		Heavy driver	m/s ²	0.93		

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

- NOTE:** *1 Manufacturer's estimate
 *2 According to EN 15695-1:2009
 *3 Measured according to Directive 2009/76/EC
 *4 Measured according to Directive 2009/63/EC
 *5 Measured according to Directive 78/764/EEC

TRAVELING SPEEDS

(At rated engine rpm)

Model			B1620D	B1820D/B1820DS	
Tire size (Rear)			7 - 16 Farm	8 - 16 Farm	
	Range gear shift lever	Main gear shift lever	km / h	km / h	
Forward	1	Low	1	0.88	0.94
	2		2	1.59	1.70
	3		3	2.88	3.07
	4	High	1	4.90	5.24
	5		2	8.86	9.46
	6		3	16.05	17.13
	6	Max.Speed (at 2950 engine rpm)		16.91	18.05
Reverse	1	Low	R/AR	1.18	1.26
	2	High	R/AR	6.57	7.01
		Max.Speed (at 2950 engine rpm)		6.92	7.39

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

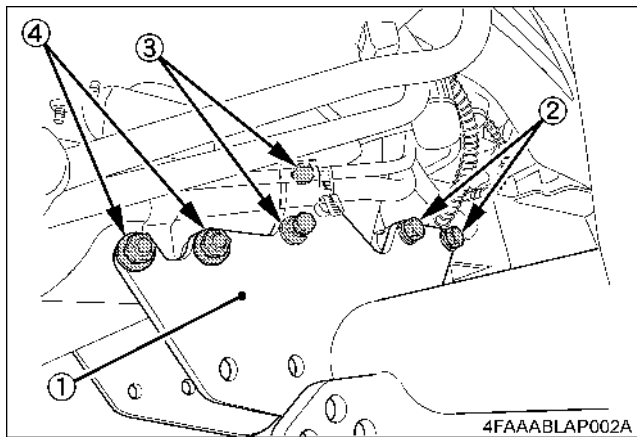
IMPLEMENT LIMITATIONS

The KUBOTA 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 below, or which are otherwise unfit for use with the KUBOTA 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.]

■ Front Loader [LA213]

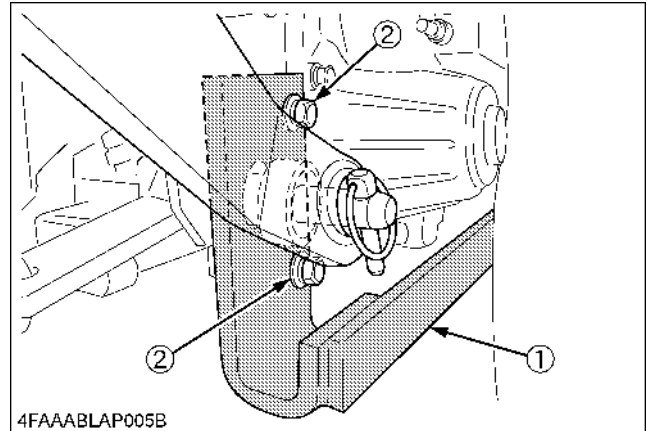
◆ **Fixation points on the body of the tractor where the front loader must be installed.**

[Attach the Main Frame]



- (1) Main frame
 - (2) 4-M14 x 60 bolts
4-M14 spring washers
4-M14 plain washers
 - (3) 4-M12 x 45 sems bolts
4-M12 plain washers
 - (4) 4-M12 x 55 bolts
4-M12 nuts
4-M12 spring washers
4-M12 plain washers
- Tightening torque: 90.1 N-m (9.2 kgf-m) (M12)
147 N-m (15.0 kgf-m) (M14)

[Attach the Sub Frame]



- (1) Sub frame
- (2) 4-M12 x 50 bolts

◆ OUTPUT CAPACITY

Max. Lifting Capacity
(bucket pivot pin, MAX. Height): 302 kg
Max. Oil Pressure 13.0 MPa (133 kgf/cm²)

NOTE :

- The value of MAX. Lifting capacity contains the weight of KUBOTA standard bucket.

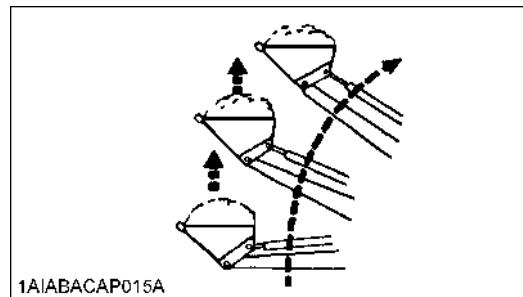
⚠ DANGER

To avoid personal injury:

- Special attention should be made when lifting the load, keep the bucket correctly positioned to prevent spillages.

NOTE :

- Not all risks are listed. Refer to front loader operator's manual.

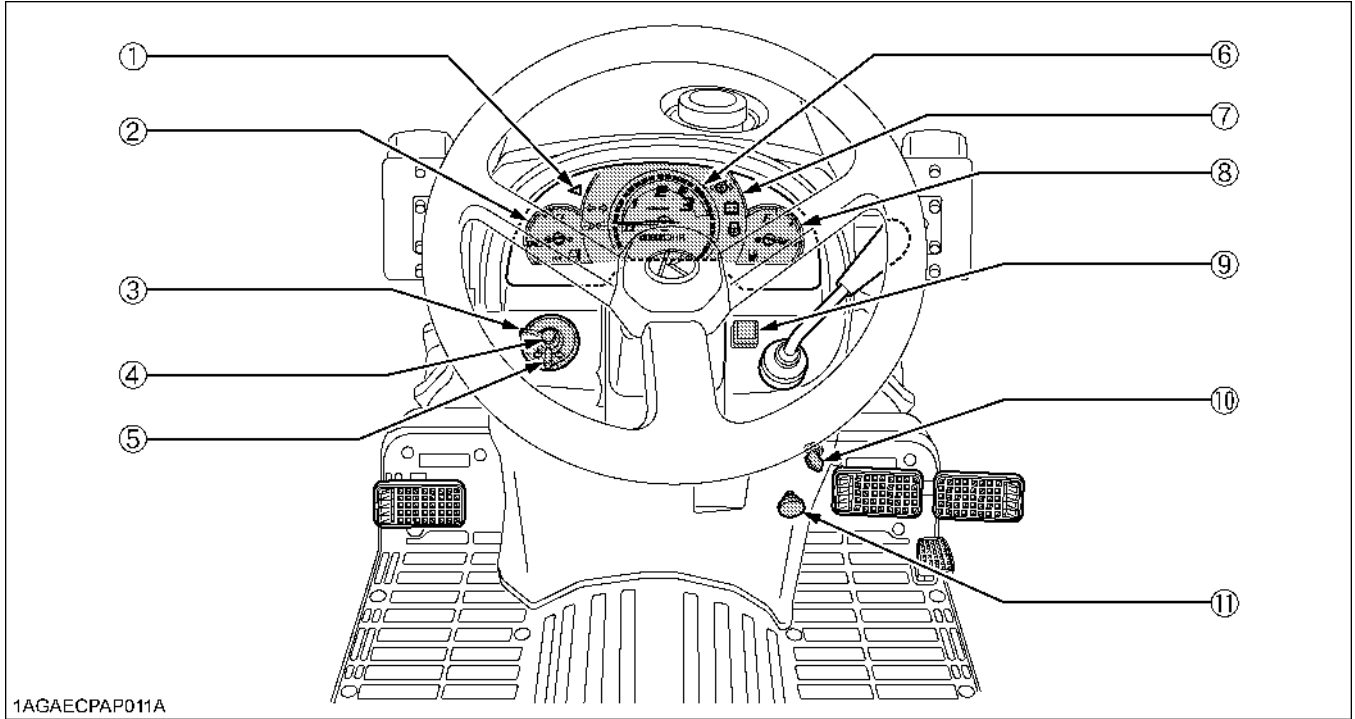


■ OTHER IMPLEMENTS

- For selecting implements, consult your local dealer.
- Strictly follow the instructions outlined in the operator's manual of the mounted or trailed machinery or trailer, and do not operate the combination tractor - machine or tractor - trailer unless all instructions have been followed.
- Forestry Application
Following hazards exist;
 - (a) toppling trees, primarily in case a rear-mounted tree grab-crane is mounted at the rear of the tractor;
 - (b) penetrating objects in the operator's enclosure, primarily in case a winch is mounted at the rear of the tractor.Optional equipments such as OPS (Operator Protective Structure), FOPS (Falling Object Protective Structure), etc. to deal with these hazards and other related hazards are not available for this tractor. Without such optional equipment use is limited to tractor specific applications like transport and stationary work.

INSTRUMENT PANEL AND CONTROLS

■ Instrument Panel, Switches and Hand Controls

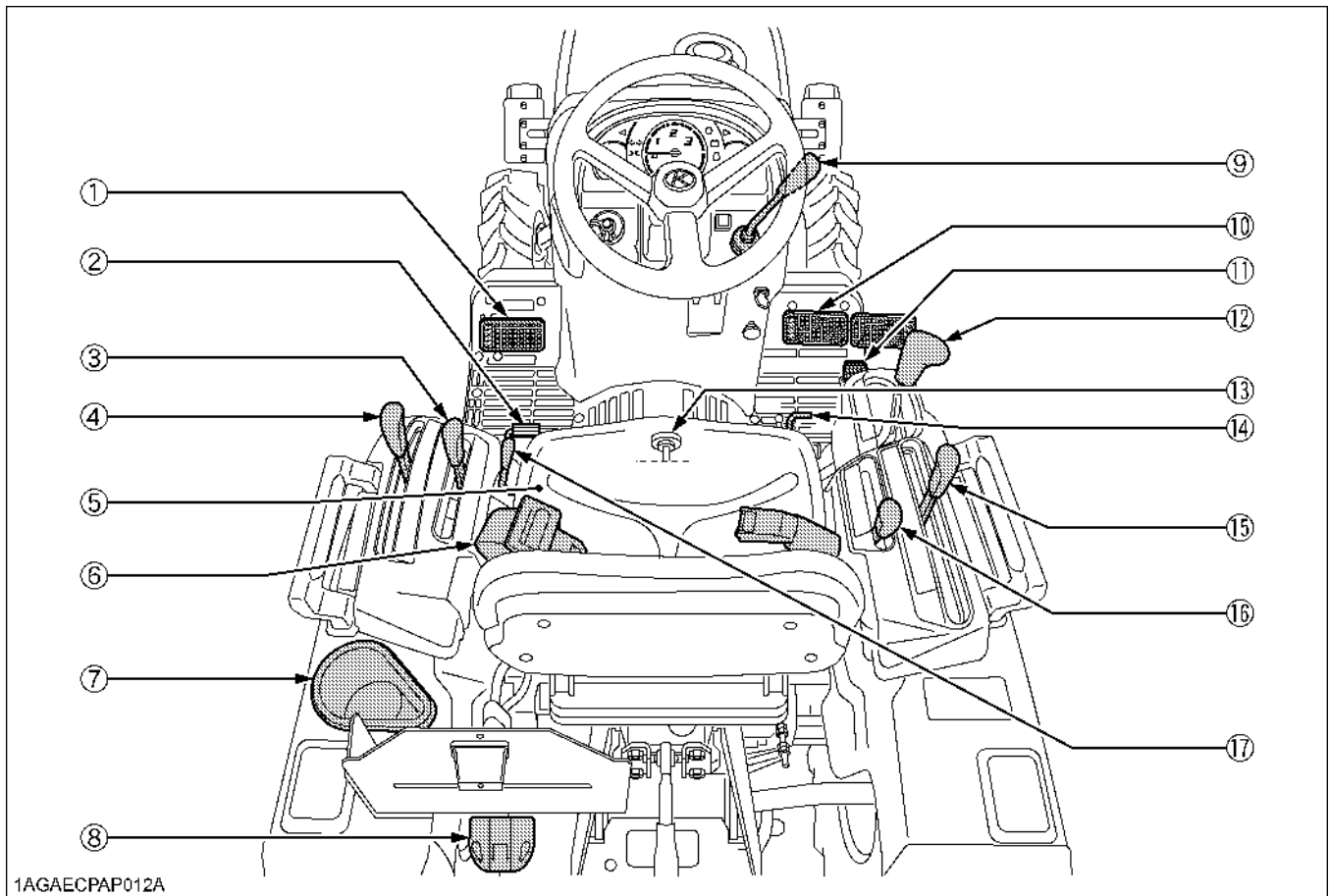


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ILLUSTRATED CONTENTS

(1) Turn signal / Hazard light indicator	20
(2) Coolant temperature gauge	25
(3) Head light switch	19
(4) Horn button	20
(5) Turn signal light switch	20
(6) Hourmeter / Tachometer	25
(7) Easy Checker (TM)	24
(8) Fuel gauge	24
(9) Hazard light switch	20
(10) Key switch	11
(11) Engine stop knob	11

■ Foot and Hand Controls



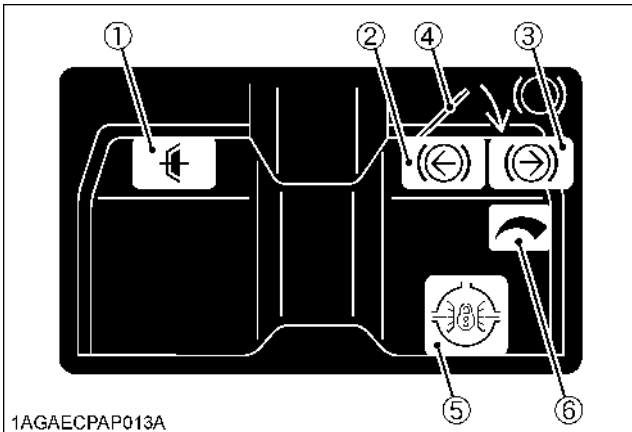
1AGAEC PAP012A

ILLUSTRATED CONTENTS

(1) Clutch pedal	22
(2) Parking brake pedal	23
(3) Range gear shift lever (Hi-Lo)	22
(4) PTO gear shift lever	29
(5) Operator's seat	18
(6) Seat belt	19
(7) Cup holder	--
(8) Trailer socket	--
(9) Hand throttle lever	23
(10) Brake pedal	21
(11) Foot throttle	23
(12) Main gear shift lever	--
(13) 3-Point hitch lowering speed knob	36
(14) Differential lock pedal	26
(15) Hydraulic control lever	35
(16) Front wheel drive lever	23
(17) Parking release lever	23

■ Pedal Location Label

The label is located on the cover under seat.



- (1) Clutch pedal
- (2) Brake pedal (left)
- (3) Brake pedal (right)
- (4) Brake pedal lock
- (5) Differential lock pedal
- (6) Foot throttle

PRE-OPERATION CHECK

DAILY CHECK

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



CAUTION

To avoid personal injury:

- **Be sure to check and service the tractor on a level surface with the engine shut off and the parking brake "ON" and implement lowered to the ground.**

Check item

- Walk around inspection
- Check engine oil level
- Check transmission oil level
- Check coolant level
- Clean grill and radiator screen
- Check air cleaner evacuator valve
(When used in a dusty place)
- Check brake and clutch pedal
- Check parking brake
- Check indicators, gauges and meter
- Check lights
- Check wire harness
- Check seat belt and ROPS (if equipped)
- Check movable parts
- Refuel
(See "DAILY CHECK" in "PERIODIC SERVICE" section.)
- Care of pictorial safety labels
(See "PICTORIAL SAFETY LABELS" in "SAFE OPERATION" section.)

OPERATING THE ENGINE



CAUTION

To avoid personal injury:

- Read "Safe Operation" in the front of this manual.
- Understand the pictorial safety labels located on the tractor.
- To avoid the danger of exhaust fume poisoning, do not operate the engine in a closed building without proper ventilation.
- Never start engine while standing on ground. Start engine only from operator's seat.
- Make it a rule to set all shift levers to the "NEUTRAL" positions and to place PTO lever in "NEUTRAL" position before starting the engine.

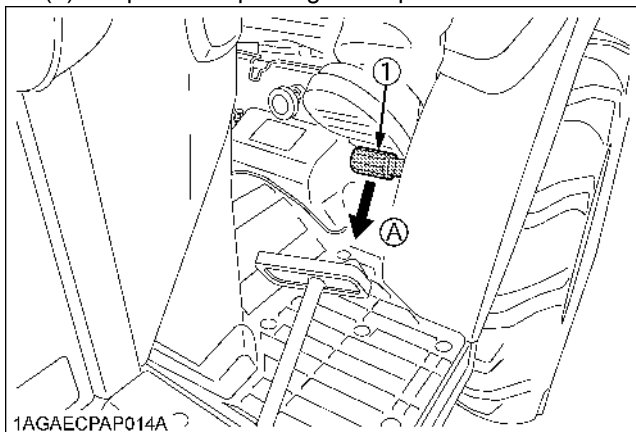
IMPORTANT :

- 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 30 seconds.

STARTING THE ENGINE

1. Make sure the parking brake is set.

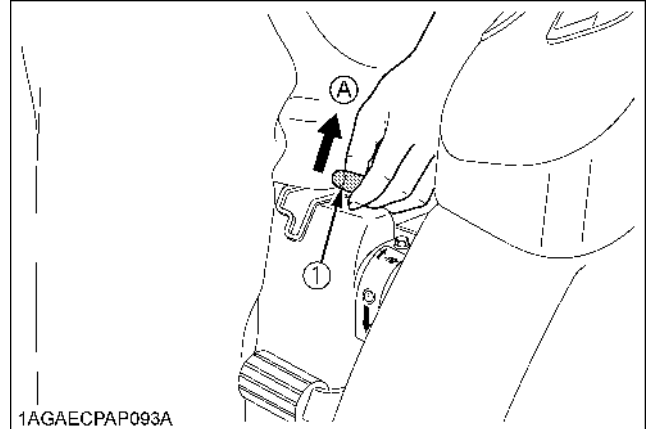
1. To set the parking brake:
 - (1) Interlock the brake pedals.
 - (2) Depress the brake pedals.
 - (3) Depress the parking brake pedal to Park.



(1) Parking brake pedal

(A) "DEPRESS"

2. To release the parking brake, pull the parking release lever.

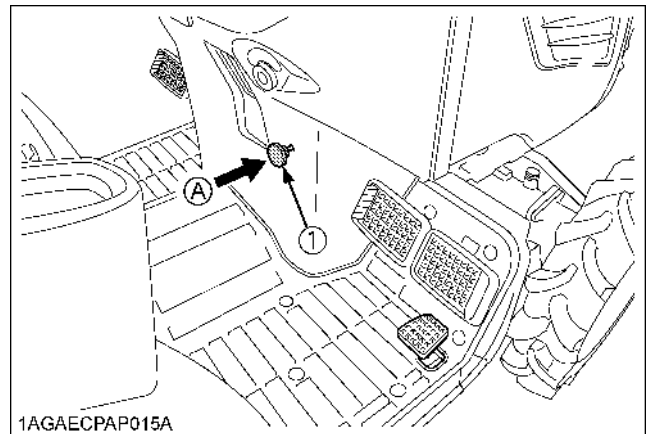


(1) Parking release lever

(A) "PULL"

2. Make sure the engine stop knob is pushed in.

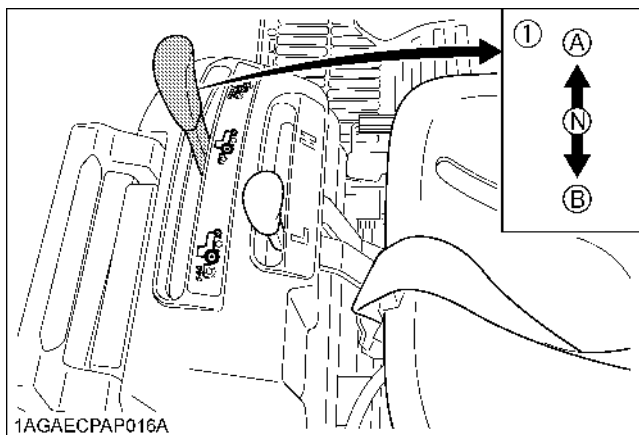
Push in the engine stop knob if it is pulled out, or the engine will not start.



(1) Engine stop knob

(A) "PUSH"

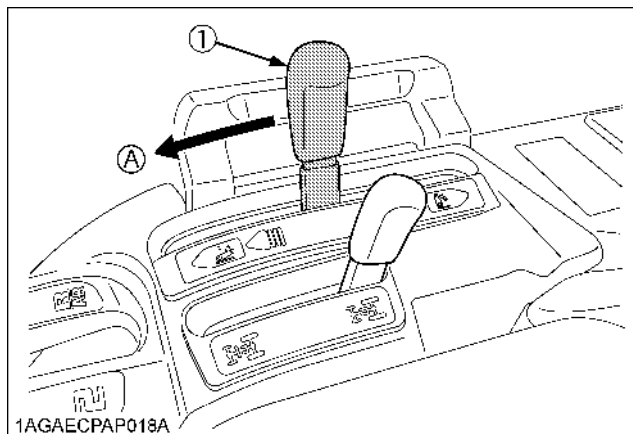
3. Place the PTO gear shift lever in "NEUTRAL" position.



(1) PTO gear shift lever

- (A) Rear PTO "2nd"
Mid PTO "ON"
- (B) Rear PTO "1st"
Mid PTO "OFF"
- (N) "NEUTRAL POSITION"

5. Place the hydraulic control lever in "DOWN" position.



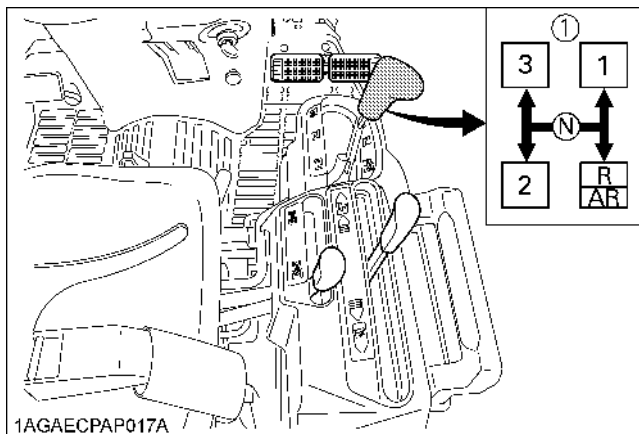
(1) Hydraulic control lever

- (A) "DOWN"

NOTE :

- The PTO gear shift lever shifts to the (A) position only when the PTO restricting plate is in "RELEASE" position.

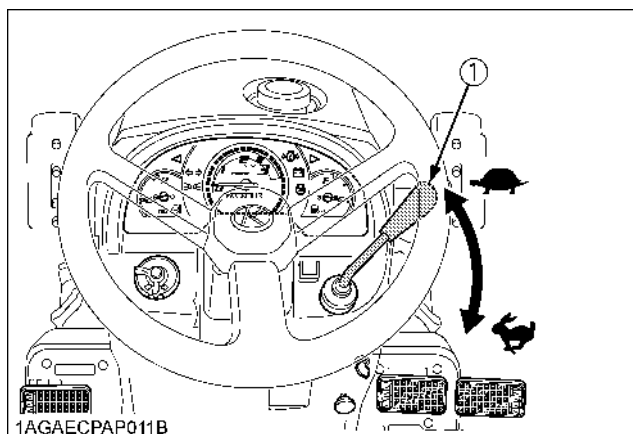
4. Place the main gear shift lever in "NEUTRAL" position.



(1) Main gear shift lever

- (N) "NEUTRAL POSITION"

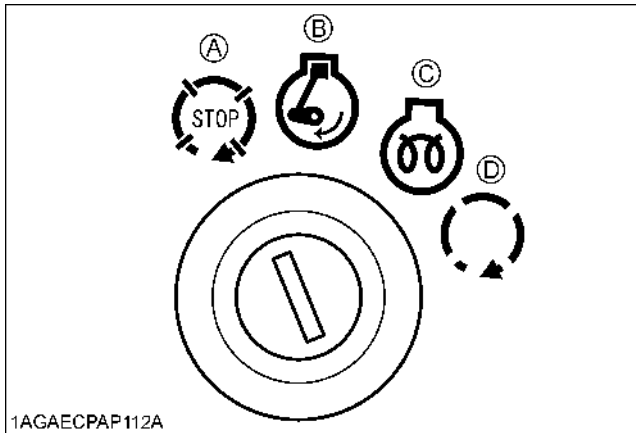
6. Set the throttle lever to about 1/2 way.



(1) Hand throttle lever

- ↗ "INCREASE"
- ↘ "DECREASE"

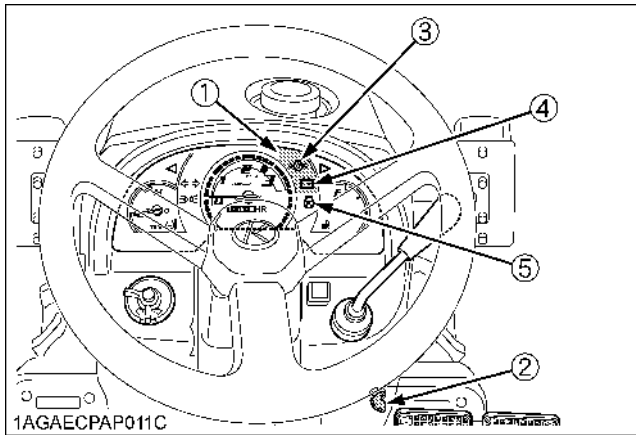
7. Insert the key into the key switch and turn it "ON".



(A) "OFF" (B) "ON"
(C) "PREHEAT" (D) "START"

◆ **Check Easy Checker(TM) lamps:**

1. When the key is turned "ON", lamps (3) (4) should come on. If trouble should occur at any location while the engine is running, the warning lamp corresponding to that location comes on.



(1) Easy checker(TM)
(2) Key switch
(3) Engine oil pressure
(4) Electrical charge
(5) Glow plug indicator

IMPORTANT :

- Daily checks with the Easy Checker(TM) only are not sufficient. Never fail to conduct physical daily checks carefully by referring to Daily Check section. (See "DAILY CHECK" in "PERIODIC SERVICE" section)

8. Fully depress the clutch pedal, turn the key to "PREHEAT" position and hold it for about 2 to 3 seconds.

Temperature	Preheating Time
Over 0 °C	2 to 3 sec.
0 to -5 °C	5 sec.
-5 to -15 °C	10 sec.

NOTE :

- Glow plug indicator (5) comes on while engine is being preheated.

9. Turn the key to "START" position and release when the engine starts.

IMPORTANT :

- Because of the safety devices, the engine will not start except when the PTO gear shift lever is placed in the "OFF" position, the main gear shift lever is placed in the "NEUTRAL" position, and the clutch pedal is disengaged.

◆ **Cold Weather Starting**

When the ambient temperature is below -5°C and the engine is very cold. If the engine fails to start, turn off the key for 30 seconds. Then repeat steps 8 and 9. To protect the battery and the starter, make sure that the starter is not continuously turned for more than 30 seconds.

■ **Block Heater (Option)**

A block heater is available as an option from your dealer. It will assist you in starting your tractor when the ambient temperature is below -15°C .

10. Check to see that all the lamps on the Easy Checker(TM) are "OFF".

If a lamp is still on, immediately stop the engine and determine the cause.

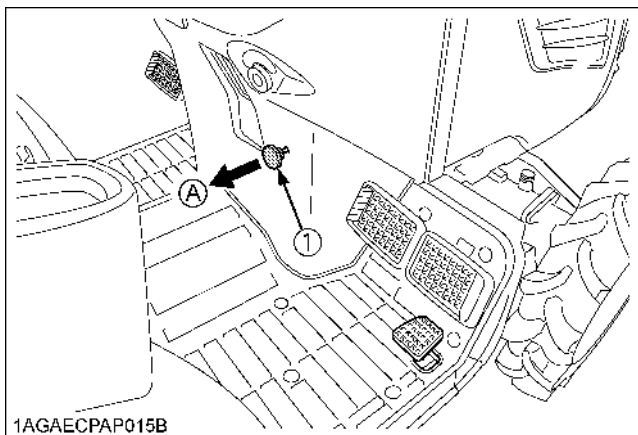
11. Release the clutch pedal

STOPPING THE ENGINE

1. After slowing the engine to idle, turn the key to "OFF".
2. Remove the key.

IMPORTANT :

- The engine stops when the key switch is turned off. If the engine does not stop, pull engine stop knob back and hold it until the engine stops. After the engine has stopped, be sure to push the stop knob back in, or the engine will not start the next time.



1AGAEC PAP015B

(1) Engine stop knob

(A) Pull to "STOP"

■ Warm-up Transmission Oil at Low Ambient Temperatures

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
Above 0 °C	At least 5 minutes
0 to -10 °C	5 to 10 minutes
-10 to -20 °C	10 to 15 minutes
Below -20 °C	More than 15 minutes

IMPORTANT :

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

WARMING UP



CAUTION

To avoid personal injury:

- Be sure to set the parking brake during warm-up.
- Be sure to set all shift levers to the "NEUTRAL" positions and to place PTO lever in "OFF" position during warm-up.

For five 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.

JUMP STARTING



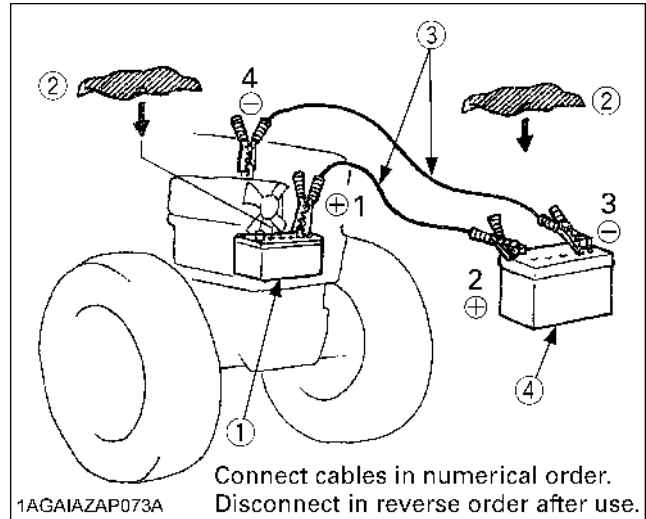
CAUTION

To avoid personal injury:

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

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

1. Bring helper vehicle with a battery of the same voltage as disabled tractor within easy cable reach. "THE VEHICLES MUST NOT TOUCH".
2. Engage the parking brakes of both vehicles and put the shift levers in neutral. Shut both engines off.
3. Put on safety goggles and rubber gloves.
4. Ensure the vent caps are securely in place. (if equipped)
5. Cover vent holes with damp rags. Do not allow the rag to touch the battery terminals.
6. Attach the red clamp to the positive (red, (+) or pos.) terminal of the dead battery and clamp the other end of the same cable to the positive (red, (+) or pos.) terminal of the helper battery.
7. Clamp the other cable to the negative (black, (-) or neg.) terminal of the helper battery.
8. Clamp the other end to the engine block or frame of the disabled tractor as far from the dead battery as possible.
9. Start the helper vehicle and let its engine run for a few moments. Start the disabled tractor.
10. Disconnect the jumper cables in the exact reverse order of attachment. (Steps 8, 7 and 6).
11. Remove and discard the damp rags.



- (1) Dead battery
 (2) Lay a damp rag over the vent caps
 (3) Jumper cables
 (4) Helper battery

IMPORTANT :

- This machine has a 12volt negative (-) ground starting system.
- Use only same voltage for jump starting.
- Use of a higher voltage source on tractors 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.

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.

■ 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 fast speed.

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

■ 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 further details of change interval hours, see "MAINTENANCE" section.

BOARDING AND LEAVING THE TRACTOR

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

OPERATING FOLDABLE ROPS (OPTION)



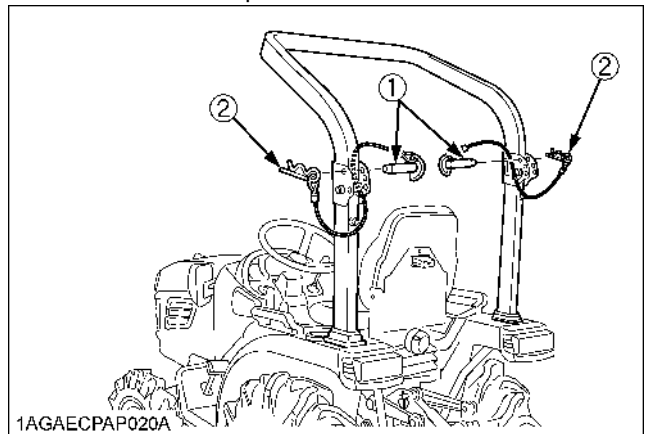
CAUTION

To avoid personal injury:

- When raising or folding the ROPS, apply parking brake, stop the engine and remove the key.
Always perform function from a stable position at the rear of tractor.
- Fold the ROPS down only when absolutely necessary and fold it up and lock it again as soon as possible.
- Before proceeding to fold ROPS, check for any possible interference with installed implements and attachments.
If interference occurs, contact your KUBOTA Dealer.

■ To Fold the ROPS

1. Remove both set pins.



- (1) Set pin
(2) Hair pin

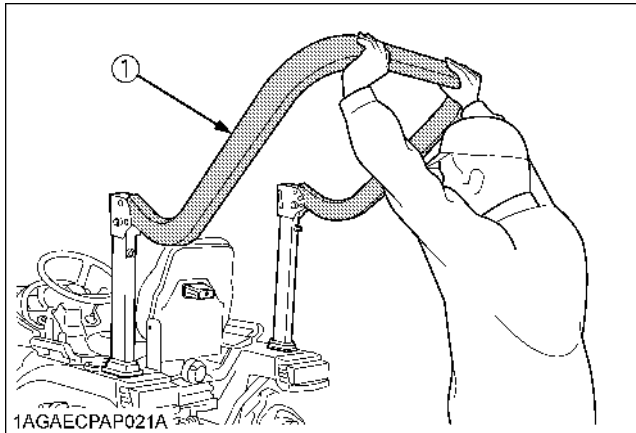
2. Fold the ROPS.



CAUTION

To avoid personal injury:

- Hold the ROPS tightly with both hands and fold the ROPS slowly and carefully.



(1) ROPS

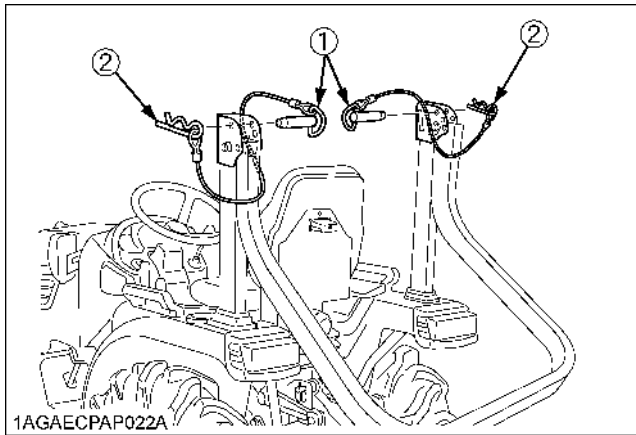
3. Insert both set pins and secure them with the hair pins.



CAUTION

To avoid personal injury:

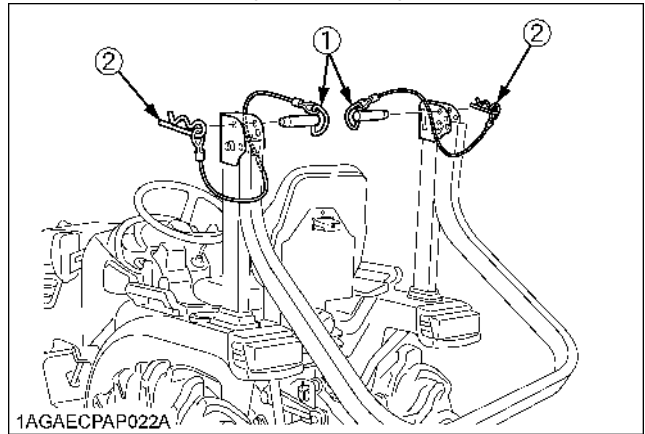
- Make sure that both set pins are properly installed and secured with the hair pins.



(1) Set pin
(2) Hair pin

To Raise the ROPS to Upright Position

1. Remove both hair pins and set pins.



(1) Set pin
(2) Hair pin

2. Raise ROPS to the upright position.



CAUTION

To avoid personal injury:

- Raise the ROPS slowly and carefully.

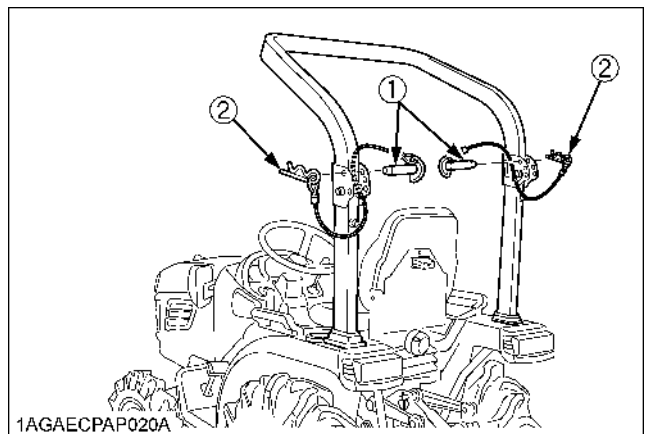
3. Insert both set pins and secure them with the hair pins.



CAUTION

To avoid personal injury:

- Make sure that both set pins are properly installed as soon as the ROPS is in the upright position and secured with the hair pins.



(1) Set pin
(2) Hair pin

STARTING

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

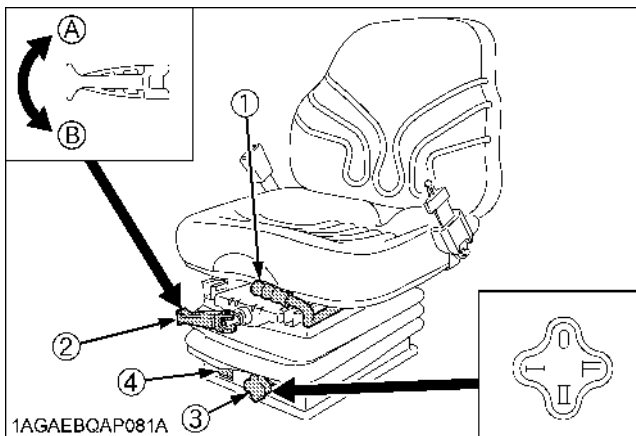


CAUTION

To avoid personal injury:

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

[Type : COBO SC74/M91]



- | | |
|-----------------------------|-------------------------|
| (1) Travel adjust lever | (A) To decrease tension |
| (2) Suspension adjust lever | (B) To increase tension |
| (3) Height adjust knob | (I) Highest position |
| (4) Indication of height | (II) Lowest position |
| | (III) Second position |

◆ Travel adjustment

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

◆ Suspension adjustment

Turn the suspension adjust lever to achieve the optimum suspension setting.

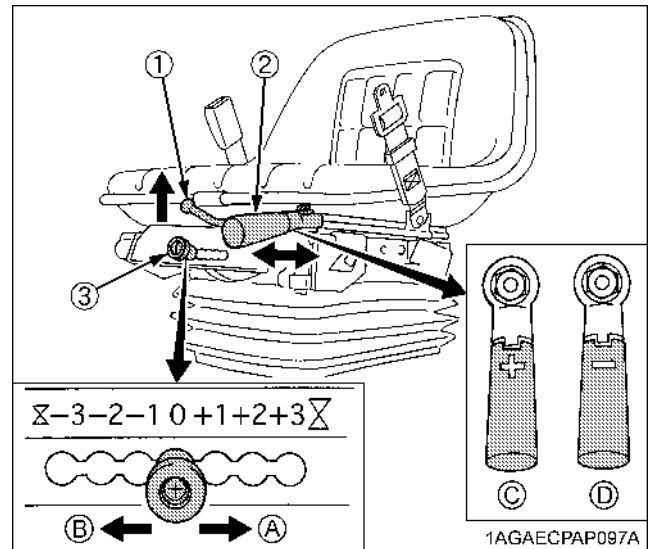
◆ Height adjustment

Pull and slide the height adjust knob to desired position while sitting in the seat.

IMPORTANT :

- After adjusting the operator's seat, be sure to check to see that the seat is properly locked.

[Type: KAB Seating XH2/P1]



- | | |
|-------------------------|----------------|
| (1) Travel adjust lever | (A) "RAISE" |
| (2) Suspension adjuster | (B) "LOWER" |
| (3) Height adjust lever | (C) "INCREASE" |
| | (D) "DECREASE" |

◆ Travel adjustment

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

◆ Suspension adjustment

To increase tension, with the "+" (plus) sign on the handle facing forward as shown, and cranking the ratchet handle. To decrease tension, pull the grip out and rotate half a turn until the "-" (minus) sign is facing forward as shown, and cranking the ratchet handle. The ratchet action is now reversed.

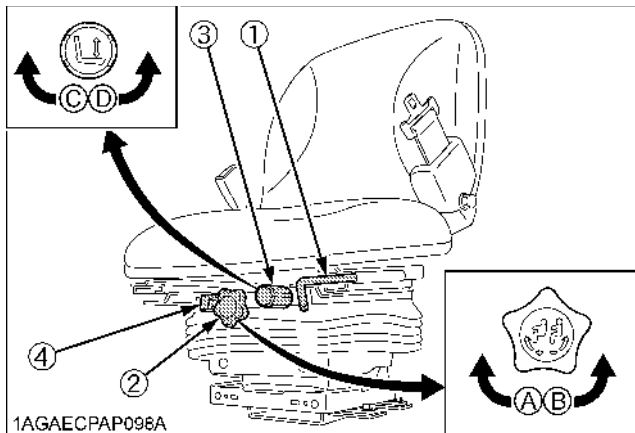
◆ Height adjustment

Pull and slide the height adjust lever to desired position while sitting in the seat.

IMPORTANT :

- After adjusting the operator's seat, be sure to check to see that the seat is properly locked.

[Type : SEARS 607]



- | | |
|------------------------------|-------------------------|
| (1) Travel adjust lever | (A) To decrease tension |
| (2) Suspension adjust knob | (B) To increase tension |
| (3) Height adjust knob | (C) "RAISE" |
| (4) Indication of suspension | (D) "LOWER" |

◆ **Travel adjustment**

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

◆ **Suspension adjustment**

Turn the suspension adjust knob to achieve the optimum suspension setting.

◆ **Height adjustment**

Turn the height adjust knob to desired position while sitting in the seat.

IMPORTANT :

- After adjusting the operator's seat, be sure to check to see that the seat is properly locked.

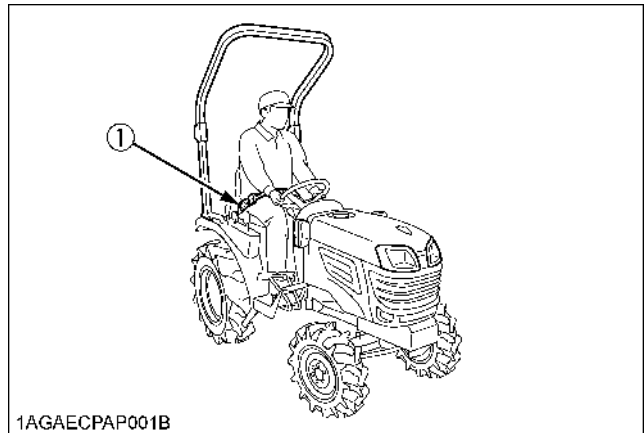
■ **Seat Belt**

CAUTION

To avoid personal injury:

- Always use the seat belt when the ROPS is installed.
- Do not use the seat belt if a foldable ROPS is down or there is no ROPS.

Adjust the seat belt for proper fit and connect to the buckle. The seat belt is auto-locking retractable type.

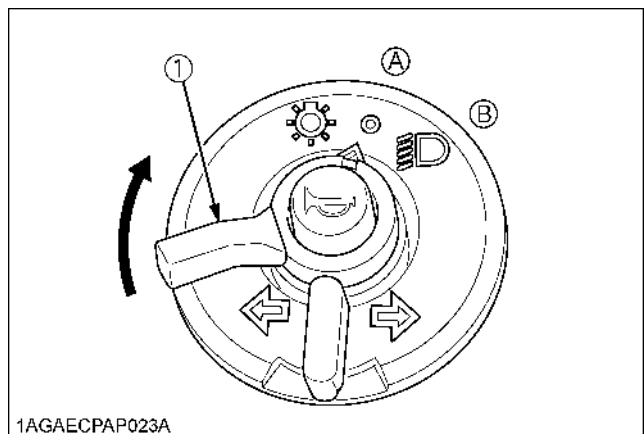


(1) Seat belt

2. Selecting light switch positions.

■ **Head Light Switch**

Turn the light switch clockwise, and the following lights are activated on the switch position.



(1) Head light switch

Light name	Switch position	
	(A)	(B)
Head light (Low beam)	OFF	ON
Tail light	OFF	ON
Number plate light	OFF	ON
Front position light	OFF	ON

NOTE :

- Position (light) indicator will be on when head light switch is in "ON" position.

Turn Signal / Hazard Light Switch

◆ Turn Signal Light Switch

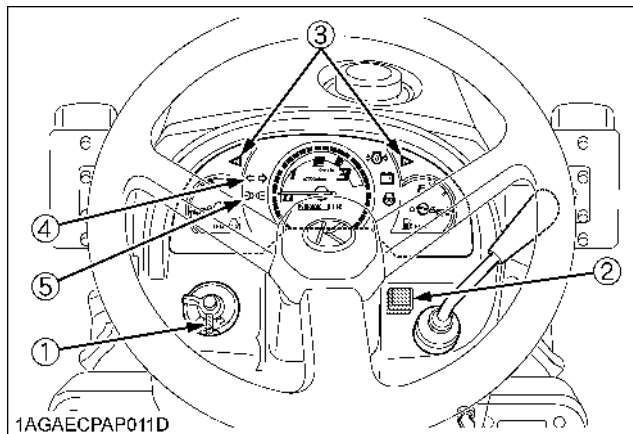
To indicate a right turn, turn the turn signal light switch clockwise. To indicate a left turn, turn the turn signal light switch counter-clockwise. The corresponding right and left turn signal lights and indicator on the instrument panel will flash. Turn signal is active when key switch is in the "ON" position.

NOTE :

- When you operate the turn signal light switch with the trailer power connector connected, trailer indicators in the instrumental panel start flashing.
- Be sure to return switch to center position after turning.
- When any one of turn signal light bulbs is burnt out, turn signal lights flash faster.

◆ Hazard Light Switch

When hazard light switch is pushed, the hazard lights flash along with the indicator on the instrument panel. Press the hazard light switch again to turn off the light. The hazard light switch is operative, even when the key switch is at "OFF" position.



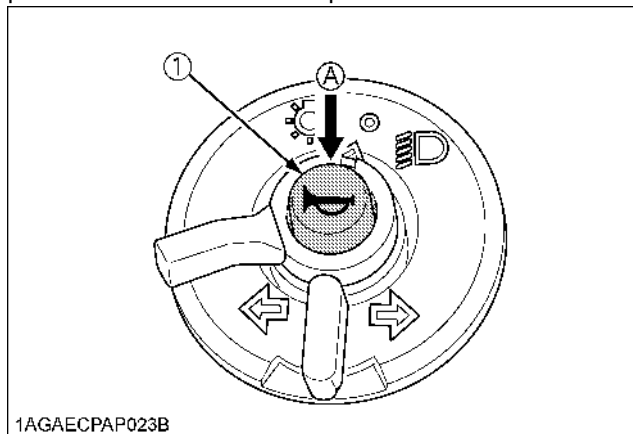
- (1) Turn signal light switch
- (2) Hazard light switch
- (3) Hazard / Turn signal indicator
- (4) Trailer indicator
- (5) Position indicator

NOTE :

- The indicator in the hazard light switch will light up when the head light switch is turned on.

Horn Button

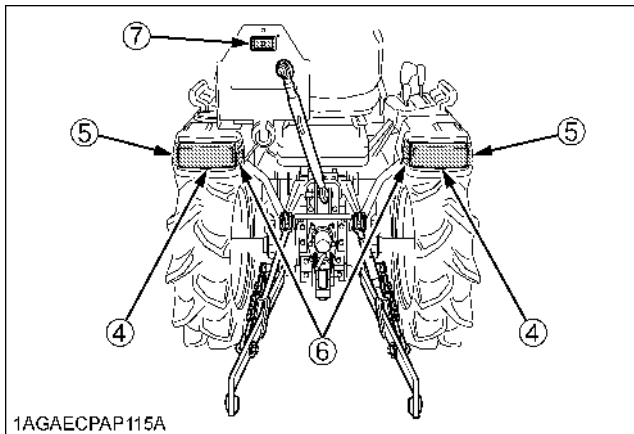
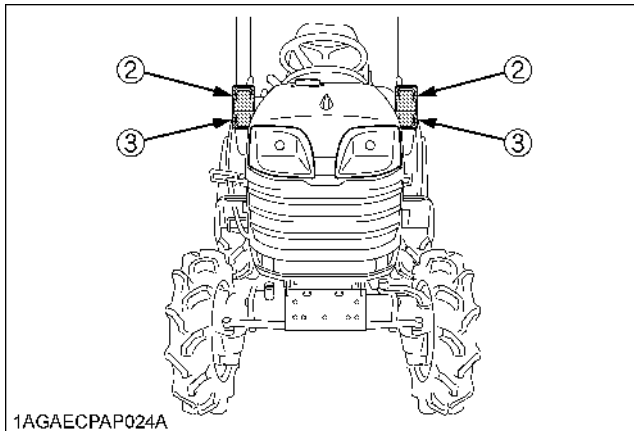
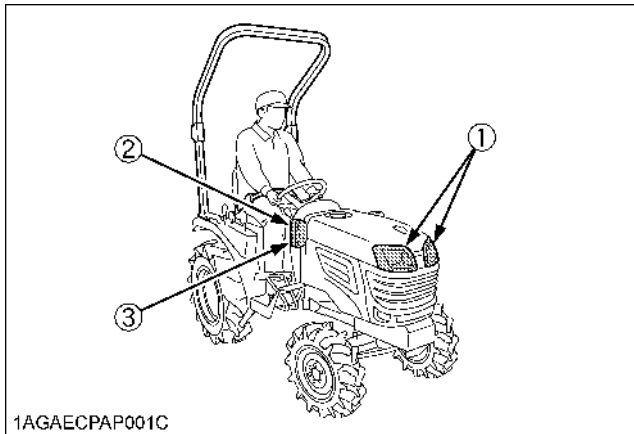
The horn will sound when the key switch is in the "ON" position and the horn button pressed.



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

■ Tractor Lights

- (1) Head light
- (2) Front turn signal / Hazard light
- (3) Front position light
- (4) Tail light
- (5) Rear turn signal / Hazard light
- (6) Brake stop light
- (7) Number plate light



3. Checking the brake pedal.

■ Brake Pedals (Right and Left)



WARNING

To avoid personal injury:

- Applying only one rear wheel brake at high speeds could cause the tractor to swerve or roll-over.

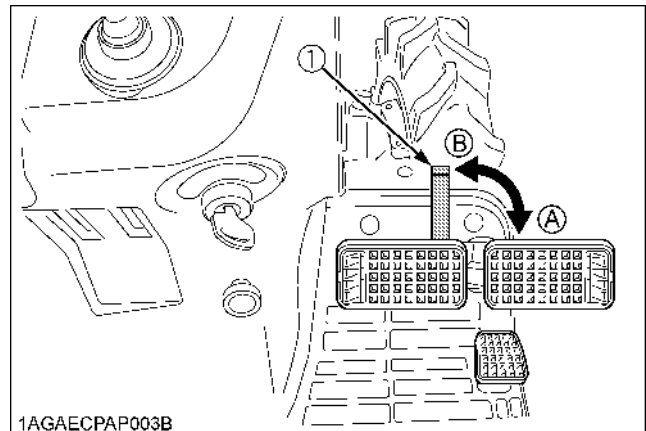


CAUTION

To avoid personal injury:

- 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 two and four wheel drive. Be aware of the difference and use carefully.
- When driving on icy, wet or loose surfaces, make sure the tractor is correctly ballasted to avoid skidding and loss of steering control. Operate at reduced speed.

1. Before operating the tractor on the road or before applying the parking brake, be sure to interlock the right and left pedals as illustrated below.
2. Use individual brakes to assist in making sharp turns at slow speeds (Field Operation Only). Disengage the brake pedal lock and depress only one brake pedal.
3. Be sure brake pedals have equal adjustment when using locked together.

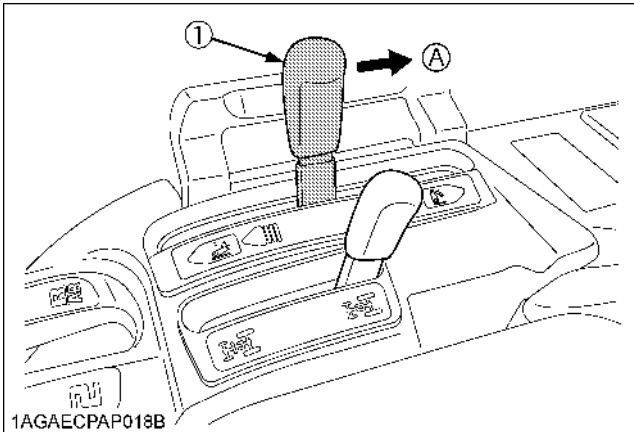


(1) Brake pedal lock

(A) "LOCK"

(B) "RELEASE"

4. Raise the implement.
(See "HYDRAULIC UNIT" section)



(1) Hydraulic control lever (A) "UP"

5. Depress the Clutch Pedal.

Clutch Pedal

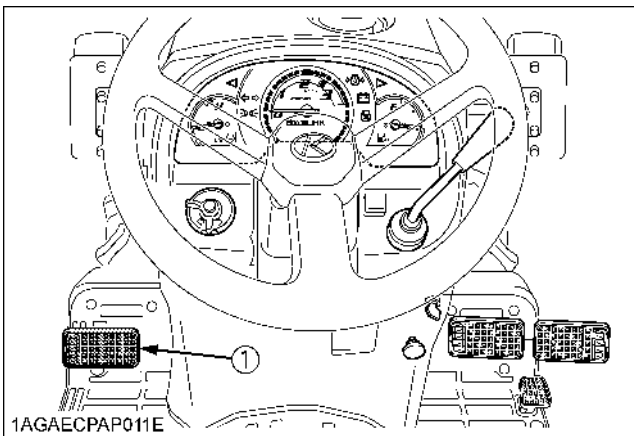


CAUTION

To avoid personal injury:

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

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



(1) Clutch pedal

IMPORTANT :

To help prevent premature clutch wear:

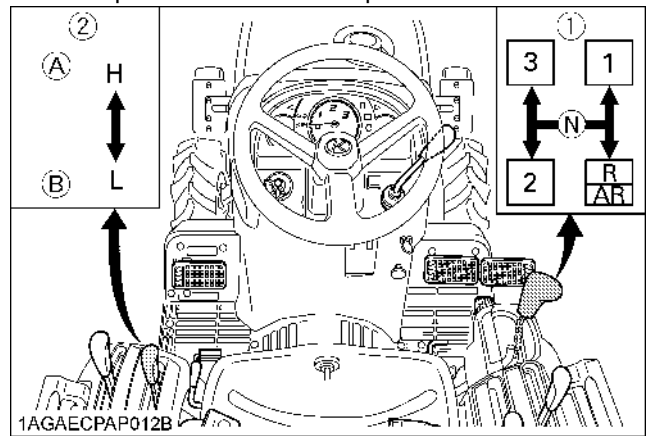
- The clutch pedal must be quickly disengaged and be slowly engaged.
- Avoid operating the tractor with your foot resting on the clutch pedal.

- Select proper gear and engine speed depending on the type of job.

6. Selecting the Travel Speed.

Main Gear Shift Lever & Range Gear Shift Lever (L-H)

The main gear shift lever pattern is in the form of an "H". The range gear shift lever moves in the form of an "I" in 2 stages, "HIGH" and "LOW". By combination of using the main gear shift lever and the range gear shift lever, 6 forward speeds and 2 reverse speeds are obtained.



(1) Main gear shift lever (A) "HIGH"
(2) Range gear shift lever (Hi-Lo) (B) "LOW"
(N) "NEUTRAL POSITION"

IMPORTANT :

- To change speeds, press the clutch pedal completely down and stop the tractor before attempting to proceed with speed change.

NOTE :

- When you stand up from the seat with the main gear shift lever at engaged, the engine will stop regardless of whether the machine is moving or not. This is because the tractor is equipped with Operator Presence Control system (OPC).

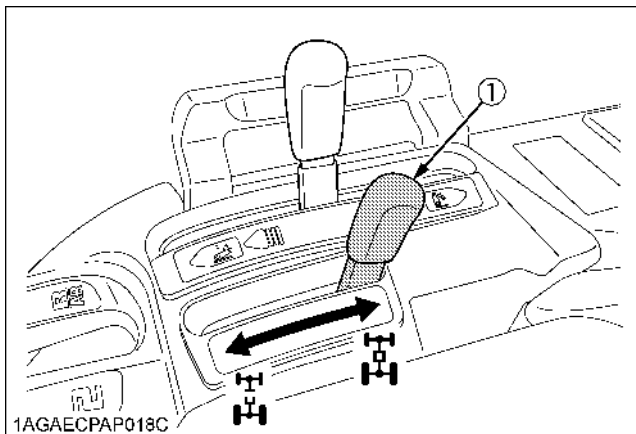
■ Front Wheel Drive Lever

CAUTION

To avoid personal injury:

- Do not engage the front wheel drive when traveling at road speed.
- When driving on icy, wet or loose surfaces, make sure the tractor is correctly ballasted to avoid skidding and loss of steering control. Operate at reduced speed and engage front wheel drive.
- 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 two and four wheel drive. Be aware of the difference and use carefully.

Use the lever to engage the front wheels with the tractor stopped. Shift the lever to "ON" to engage the front wheel drive.



(1) Front wheel drive lever "ON" "OFF"

IMPORTANT :

- Depress the clutch pedal before engaging the front wheel drive lever.
- Tires will wear quickly if front wheel drive is engaged on paved roads.

◆ Front wheel drive is effective for the following jobs:

1. 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.
2. When working in sandy soil.
3. When working on a hard soil where a rotary tiller might push the tractor forward.
4. Additional braking at reduced speeds.

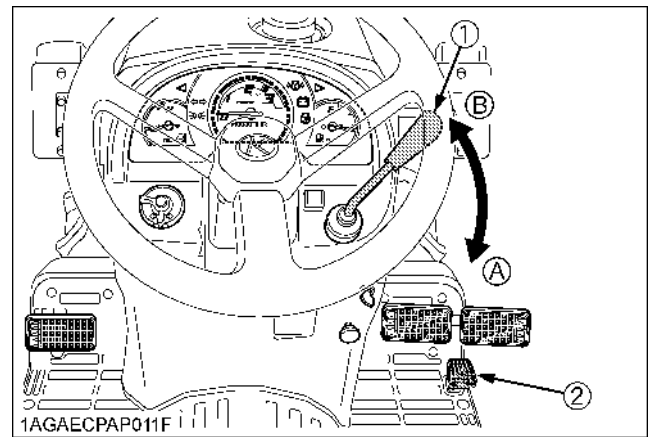
7. Accelerate the Engine.

■ Hand Throttle Lever

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

■ Foot Throttle

Use the foot throttle when traveling on the road. Press down on it 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.

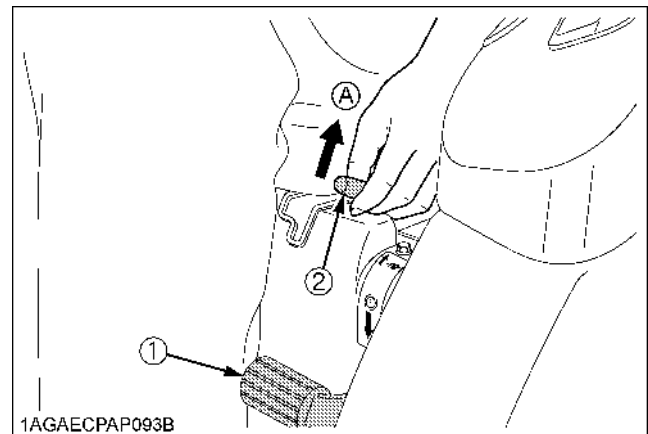


(1) Hand Throttle lever (A) "INCREASE"
(2) Foot Throttle (B) "DECREASE"

8. Unlock the parking brake and slowly release the clutch.

■ Parking Brake

To release the parking brake, pull the parking release lever.



(1) Parking brake pedal (A) "PULL"
(2) Parking release lever

STOPPING

■ Stopping

1. Slow the engine down.
2. Step on the clutch and brake pedal.
3. After the tractor has stopped, disengage the PTO, lower the implement to the ground, shift the transmission to neutral, release the clutch pedal, and set the parking brake.

CHECK DURING DRIVING

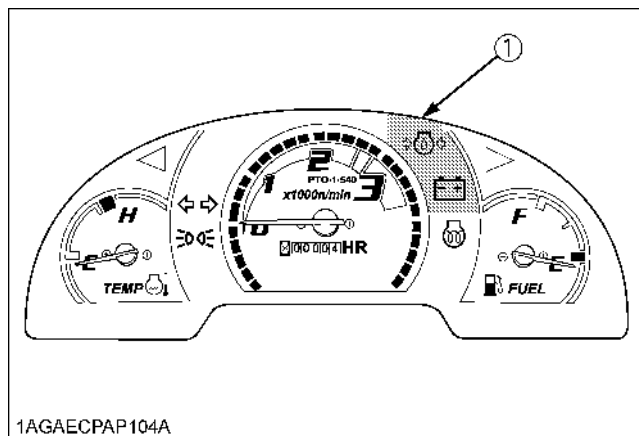
■ Immediately Stop the Engine if:

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

■ Easy Checker (TM)

If the warning lamps of the Easy Checker(TM) come on during operation, immediately stop the engine, and find the cause as shown below.

Never operate the tractor while Easy Checker(TM) lamp is on.



(1) Easy checker(TM)

⊞ Electrical charge

If the alternator is not charging the battery, the warning lamp in the Easy Checker(TM) will come on.

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

NOTE :

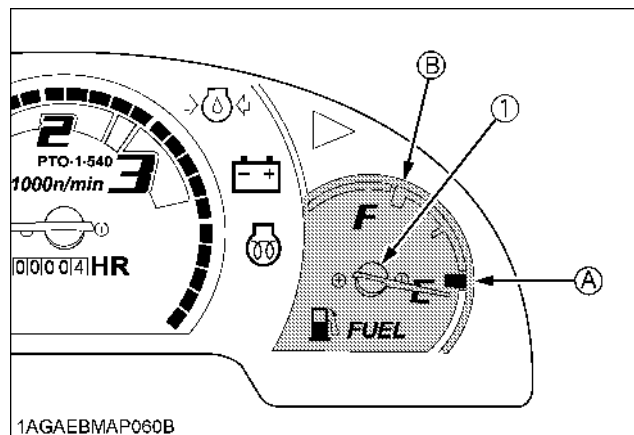
- For checking and servicing of your tractor, consult your local KUBOTA Dealer for instructions.

■ Fuel Gauge

When the key switch is on, the fuel gauge indicates the fuel level.

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" in "SERVICE AS REQUIRED" in "PERIODIC SERVICE" section)



(1) Fuel gauge

(A) "EMPTY"

(B) "FULL"

⊞ Engine oil pressure

If the oil pressure in the engine goes below the prescribed level, the warning lamp in the Easy Checker(TM) will come on.

If this should happen during operation, and it does not go off when the engine is accelerated to more than 1000 rpm, check level of engine oil.

(See "Checking Engine Oil Level" in "DAILY CHECK" in "PERIODIC SERVICE" section)

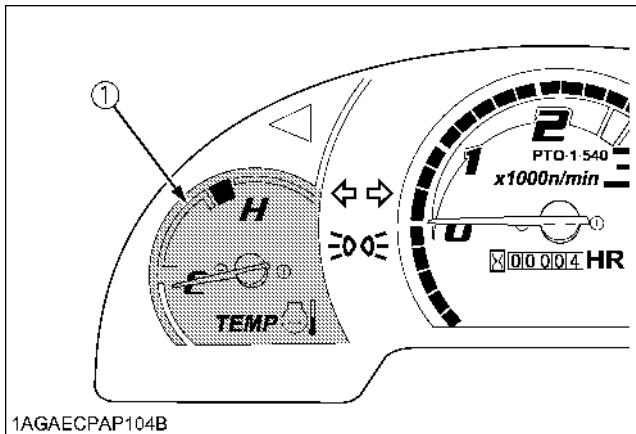
■ Coolant Temperature Gauge

! CAUTION

To avoid personal injury:

- Do not remove radiator cap until coolant temperature is well below its boiling point. Then loosen cap slightly to the stop to relieve any pressure before removing cap completely.

1. With the key switch at "ON", this gauge indicates the temperature of the coolant. "C" for "cold" and "H" for "hot".
2. If the indicator reaches the "H" position (red zone), engine coolant is overheated. Check the tractor by referring to "TROUBLESHOOTING" section.

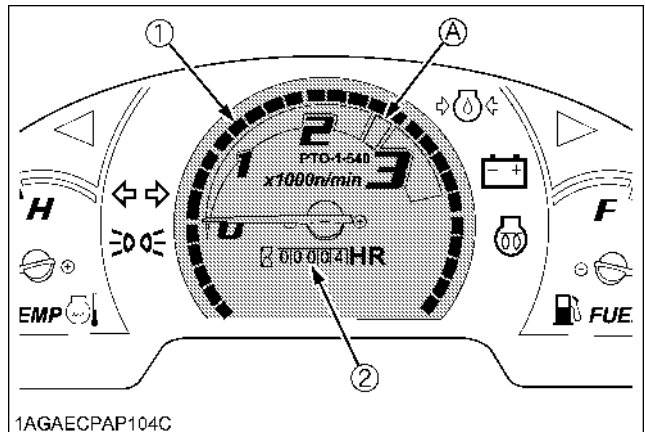


(1) Coolant temperature gauge

■ Hourmeter / Tachometer

This meter gives readings for engine speed, PTO shaft speed and the hours the tractor has been operated.

1. The tachometer indicates the engine speed and the 540 PTO shaft speed location on the dial.
2. The hourmeter indicates in five digits the hours the tractor has been used; the last digit indicates 1/10 of an hour.



(1) Engine revolution
(2) Hours used

(A) PTO: 540 rpm

PARKING

■ Parking

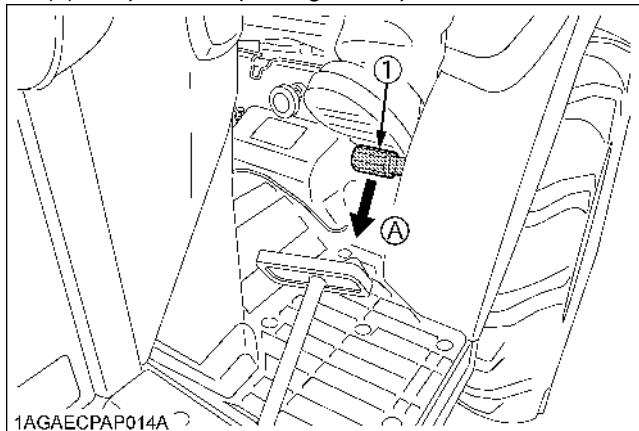


CAUTION

To avoid personal injury:
BEFORE DISMOUNTING TRACTOR

- ALWAYS SET PARKING BRAKE AND LOWER ALL IMPLEMENTS TO THE GROUND. Leaving transmission in gear with the engine stopped will not prevent the tractor from accidental rolling.
- STOP THE ENGINE AND REMOVE THE KEY.

1. When parking, be sure to set the parking brake. To set the parking brake;
 - (1) Interlock the brake pedals.
 - (2) Depress the brake pedals.
 - (3) Depress the parking brake pedal to Park.



(1) Parking brake pedal (A) "DEPRESS"

2. Before getting off 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 and remove the key.
3. If it is necessary to park on an incline, be sure to chock the wheels to prevent accidental rolling of the machine.

OPERATING TECHNIQUES

■ Differential Lock



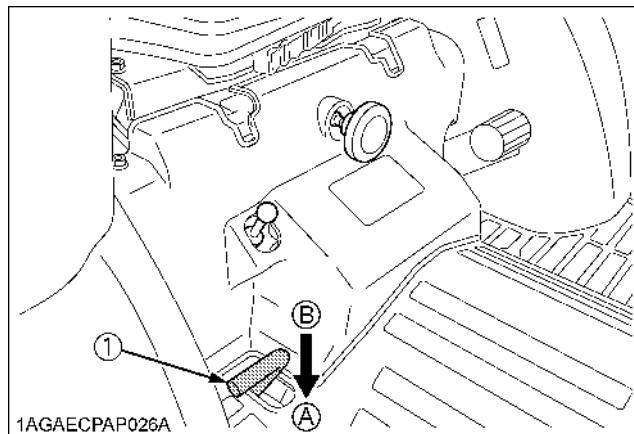
WARNING

To avoid personal injury due to loss of steering control:

- Do not operate the tractor at high speed with differential lock engaged.
- Do not attempt to turn with the differential lock engaged.
- Be sure to release the differential lock before making a turn in field conditions.

If one of the rear wheels should slip, step on the differential lock pedal. Both wheels will turn together, then reduce slippage.

Differential lock is maintained only while the pedal is depressed.



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

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 in the above manner, step lightly on the brake pedals alternately.

■ Operating the Tractor on a Road



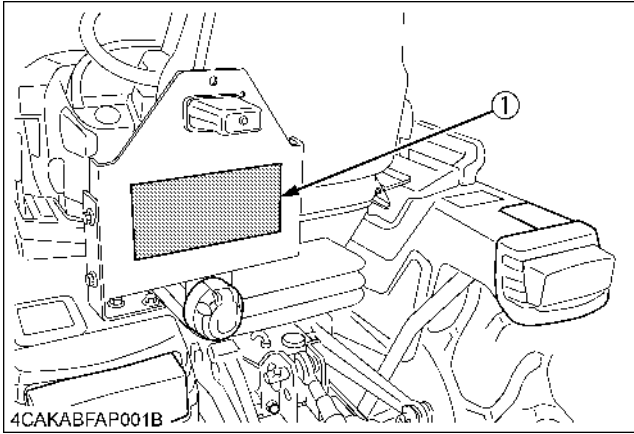
CAUTION

To avoid personal injury:

- 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 road with 3-point hitch mounted implement attached, be sure to have sufficient front weight on the tractor to maintain steering ability.

Observe all local traffic and safety regulations.
Use the Number plate.



(1) Number plate

■ Operating on Slopes or Rough Terrain



CAUTION

To avoid personal injury:

- 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 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.
1. Be sure wheel tread is adjusted to provide proper stability.
(See "WHEEL ADJUSTMENT" in "TIRES, WHEELS AND BALLAST" section.)
 2. Slow down for slopes, rough ground, or sharp turns, especially when transporting heavy, rear mounted equipment.
 3. Before descending a slope, shift to a gear low enough to control speed without using brakes.

■ Transport the Tractor Safely

1. The tractor, if damaged, must be carried on a truck. Secure the tractor tightly with ropes.
2. Follow the instruction below when towing the tractor: Otherwise, the tractor's powertrain may get damaged.
 - Set the all shift levers to "NEUTRAL" position.
 - If possible, start 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)".

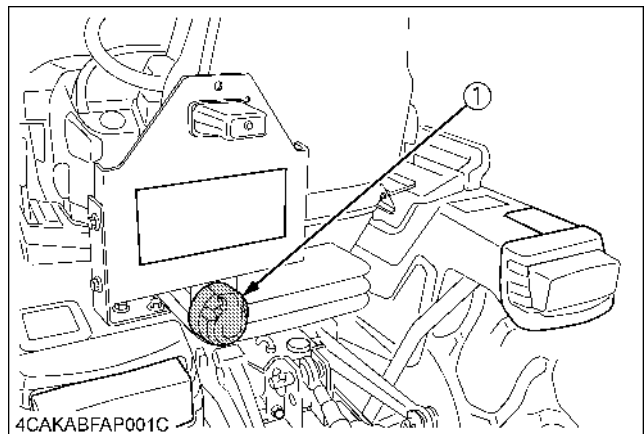
■ Directions for Use of Power Steering

[S Type]

1. Power steering is activated only while the engine is running. While the engine is stopped, the tractor functions in the same manner as tractors without power steering.
2. 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.
3. Avoid turning the steering wheel while the tractor is stopped, or tires may wear out sooner.
4. The power steering mechanism makes the steering easier. Be careful when driving on a road at high speeds.

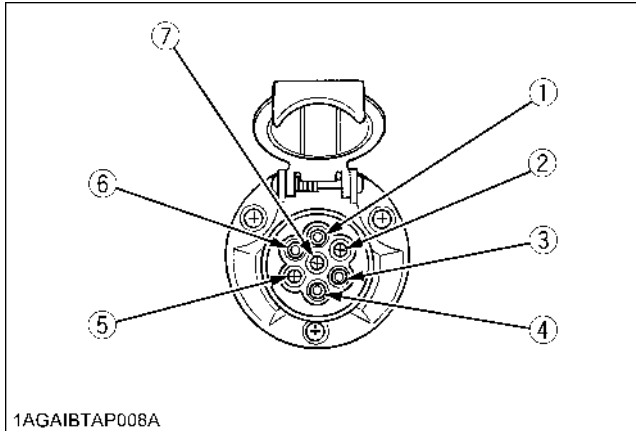
■ Trailer Electrical Outlet

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



(1) Trailer electrical outlet

◆ **Function of each terminals in trailer electrical outlet**



Terminal	Function	Color of wire harness
(1)	Turn signal (LH)	Pink
(2)	-	-
(3)	Ground	Black
(4)	Turn signal (RH)	Red / White
(5)	Tail (RH)	Yellow / Red
(6)	Brake Stop	Green
(7)	Tail (LH)	Yellow

PTO

PTO OPERATION

WARNING

To avoid personal injury:

- To prevent damage to PTO driven equipment and possibly causing personal injury, use the 2nd rear PTO speed and mid-PTO speed only when these higher rpms are specifically recommended by the implement manufacturer.

CAUTION

To avoid personal injury:

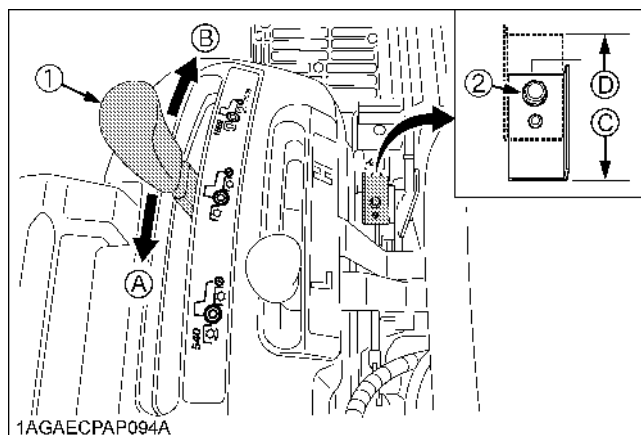
- Disengage PTO, stop engine, and allow all rotating components to come to a complete stop before connecting, disconnecting, adjusting, or cleaning any PTO driven equipment.

■ PTO Gear Shift lever

The tractor has two rear PTO speeds and one mid PTO speed.

- 1st- Rear: 540 rpm
- 2nd- Rear: 1000 rpm
- Mid: 2500 rpm

To shift into 2nd PTO speed, loosen the bolt and turn the restricting plate to (D) position. Then retighten the bolt.



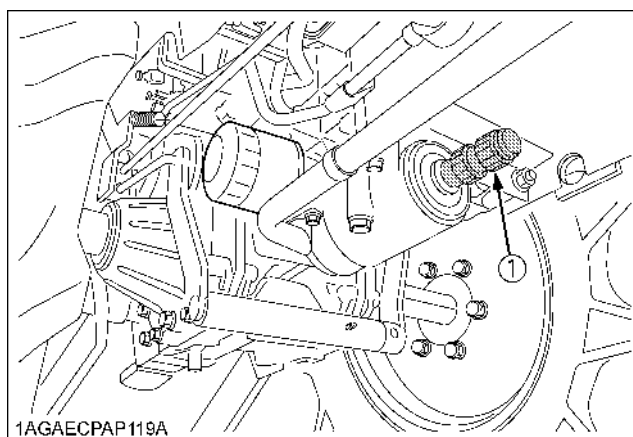
- (1) PTO gear shift lever
- (2) Restricting plate
- (3) Bolt
- (A) 1st (Rear: 540 rpm)
- (B) 2nd (Rear: 1000 rpm)
- (C) Restricted position (original position)
- (D) Released position

IMPORTANT :

- Replace restricting plate to (C) position after use of the 2nd PTO speed.
- To avoid shock loads to the PTO, reduce engine speed when engaging the PTO, then open the throttle to the recommended speed.
- To avoid damage of transmission, before shifting the PTO gear shift lever, fully disengage the main clutch.

◆ Mid PTO (if equipped)

The mid PTO is available for KUBOTA approved implements.



(1) Mid PTO

◆ Rear PTO speed

Model	Engine Speed rpm	PTO Speed rpm	Shaft
B1620D	2773	540	6-Spline
B1820D			
B1820DS	2722	1000	

◆ Mid PTO speed

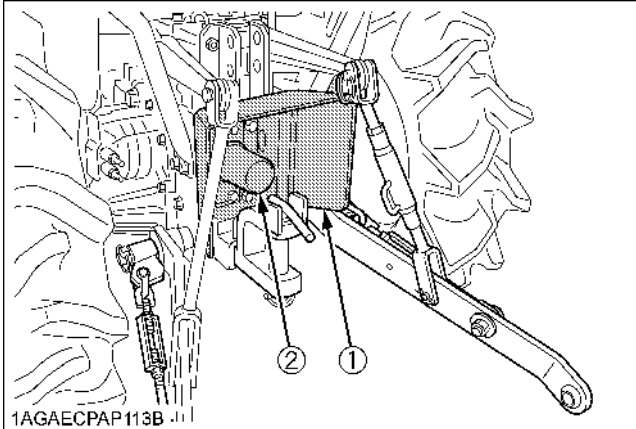
Model	Engine Speed rpm	Mid-PTO Speed rpm	Shaft
B1620D	2750	2500	10-Spline USA No.5
B1820D			
B1820DS			

NOTE :

- There is a PTO-1 (540rpm) indicator mark on the tachometer face. Be sure to check before operating.
- Tractor engine will not start if PTO gear shift lever is in the engaged ("ON") position.

■PTO shaft Cover and Shaft Cap

Keep the PTO shaft cover in place at all times. Replace the PTO shaft cap when the PTO is not in use. Before connecting or disconnecting a drive shaft to PTO shaft, be sure engine is "OFF".



(1) PTO shaft cover
(2) PTO shaft cap

IMPORTANT :

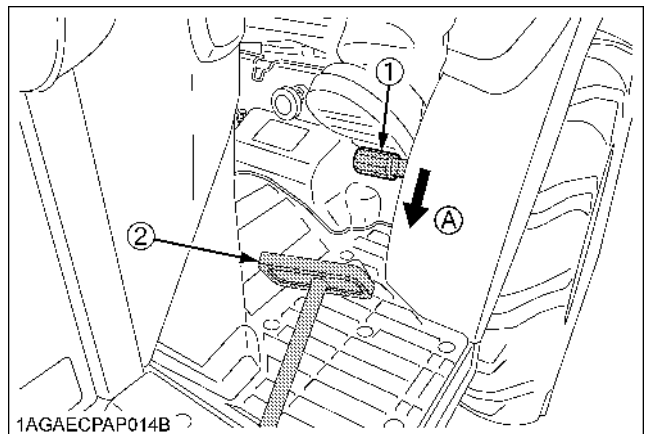
- The universal joint of the PTO drive shaft is technically limited in its moving angle. Refer to the PTO Drive Shaft Instructions for proper use.

■Stationary PTO

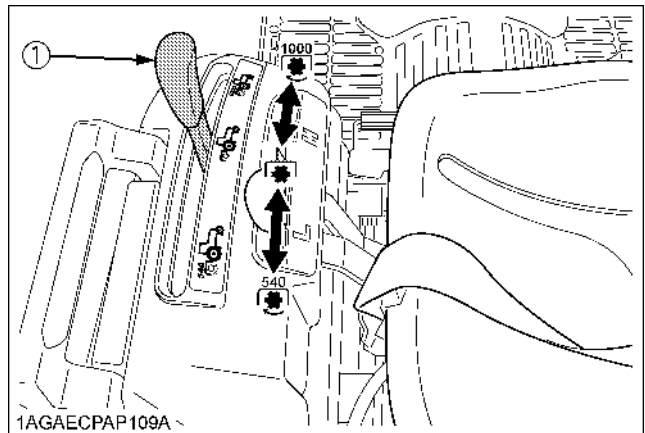
[without Mid PTO type]

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

1. Apply the parking brake and place blocks at the tires.
2. Make sure the shift levers are at NEUTRAL, and start the engine.
3. Set the PTO gear shift lever to "Rear PTO ON" position.
4. Set the engine speed to provide recommended rear PTO speed.
5. Get off the tractor.



(1) Parking brake pedal (A) "DEPRESS"
(2) Clutch pedal



(1) PTO gear shift lever
 540 "ON (540 rpm)"
 N "NEUTRAL"
 1000 "ON (1000 rpm)"

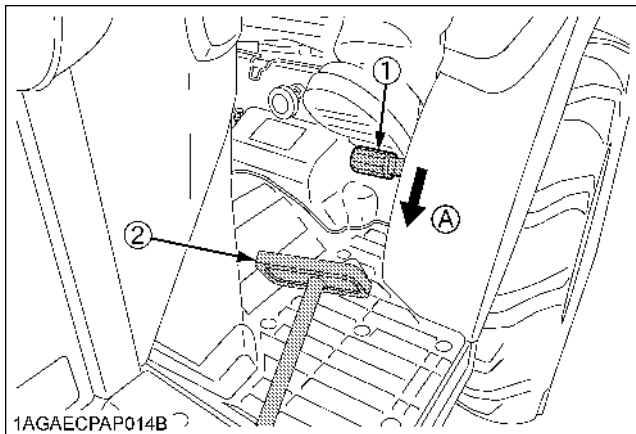
NOTE :

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

[with Mid PTO type]

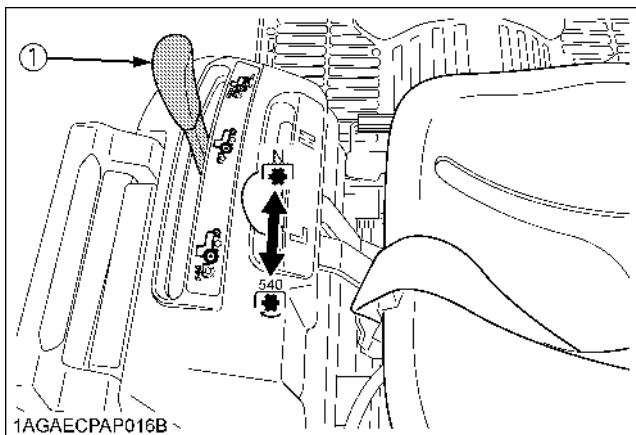
To park the tractor and use the PTO system (for chipper or pump, for example), start the PTO system in the following steps.

1. Apply the parking brake and place blocks at the tires.
2. Make sure the shift levers are at NEUTRAL, and start the engine.
3. Set the PTO gear shift lever to "Rear PTO 1st" position.
4. Set the engine speed to provide recommended rear PTO speed.
5. Get off the tractor.



(1) Parking brake pedal
(2) Clutch pedal

(A) "DEPRESS"



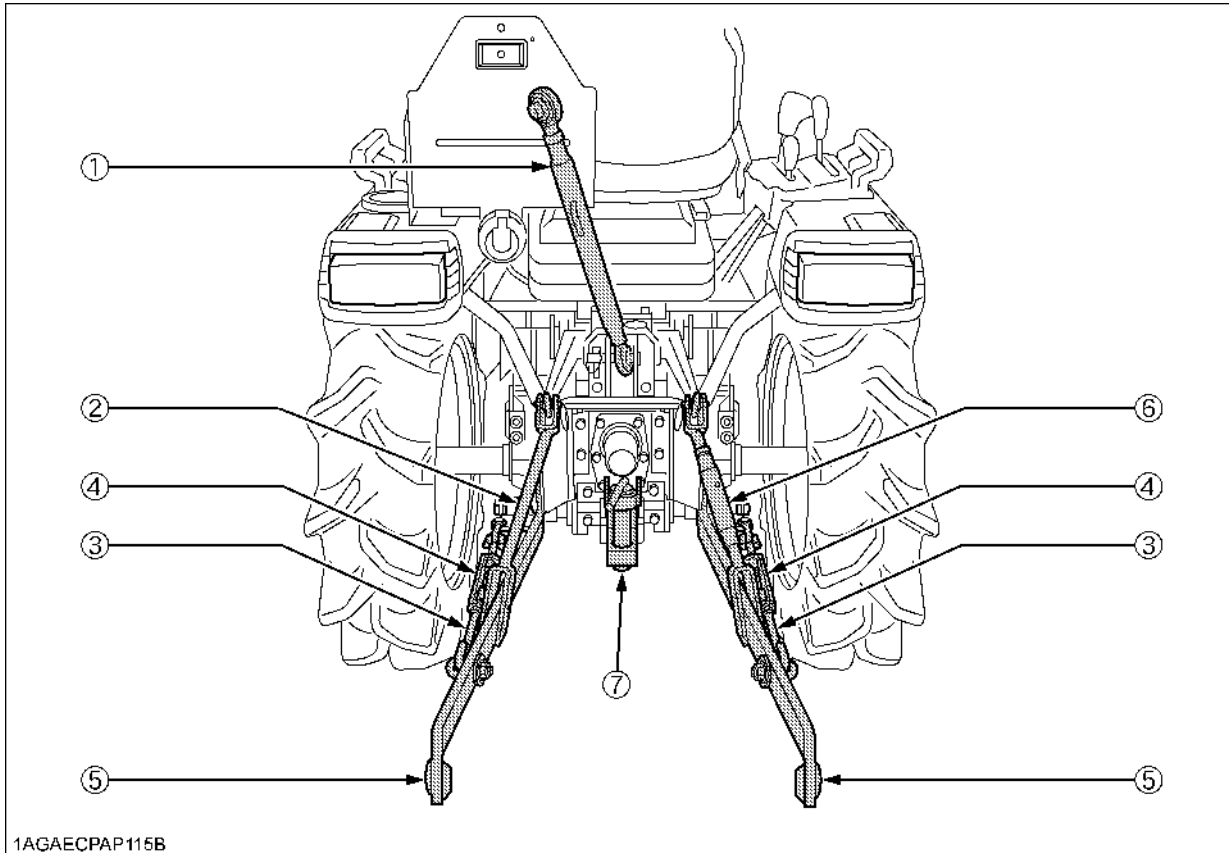
(1) PTO gear shift lever

540 Rear PTO "1st"
Mid PTO "OFF"
N "NEUTRAL"

NOTE :

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

THREE-POINT HITCH & DRAWBAR



1AGAEC PAP115B

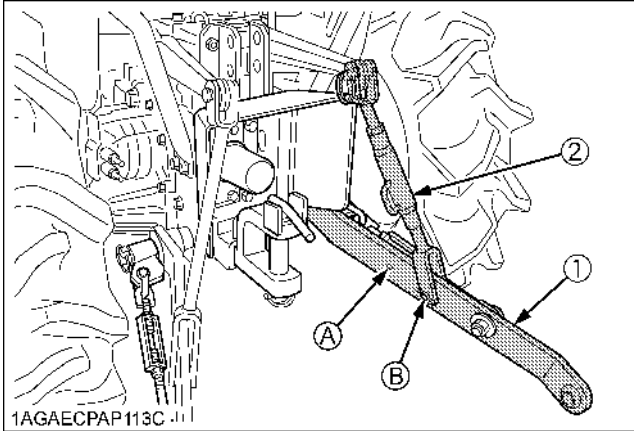
- (1) Top link
- (2) Lifting rod (Left)
- (3) Check chain
- (4) Turn buckle
- (5) Lower link
- (6) Lifting rod (Right)
- (7) Drawbar (if equipped)

3-POINT HITCH

1. Make preparations for attaching implement.

■ Selecting the holes of lifting rods and lower links

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



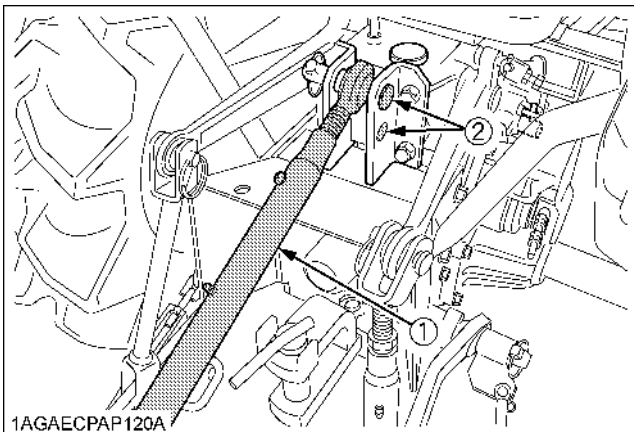
(1) Lower links
(2) Lifting rods
holes: (A), (B)

NOTE :

- The lifting rods may be attached to (A) hole for higher lifting height. (with reduced lifting force)

■ Selecting the Top Link Mounting Holes

Select the proper set of holes by referring to the "Hydraulic Control Unit Use Reference Chart" in "HYDRAULIC UNIT" section.



(1) Top link
(2) Mounting hole

■ Drawbar (if equipped)

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

2. Attaching and detaching implements



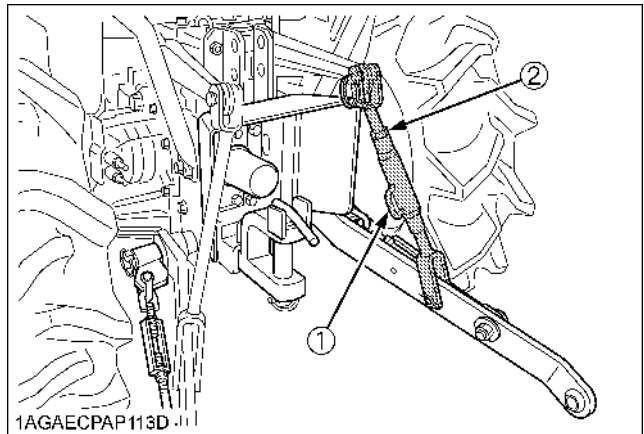
CAUTION

To avoid personal injury:

- Be sure to stop the engine and remove the key.
- Do not stand between tractor and implement unless parking brake is applied.
- Before attaching or detaching implement, locate the tractor and implement on a firm, flat and level surface.
- Whenever an implement or other attachment is connected to the tractor 3-point hitch, check full range of operation for interference, binding or PTO driveline separation.

■ Lifting Rod (Right)

Level a 3-point mounted implement from side to side by turning the adjusting handle to shorten or lengthen the adjustable lifting rod with the implement on the ground. After adjustment, tighten the lock nut securely.



(1) Adjusting handle
(2) Lock nut

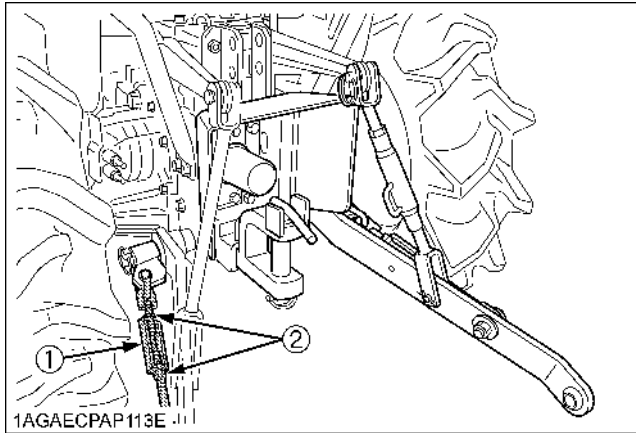
■ Top Link

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

■ Check Chains

Adjust the turnbuckle to control horizontal sway of the implement.

After adjustment, retighten the lock nut.



(1) Turnbuckle
(2) Lock nut

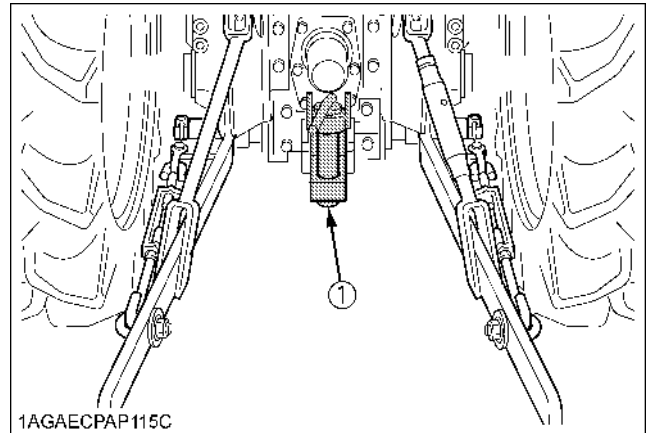
DRAWBAR (if equipped)



WARNING

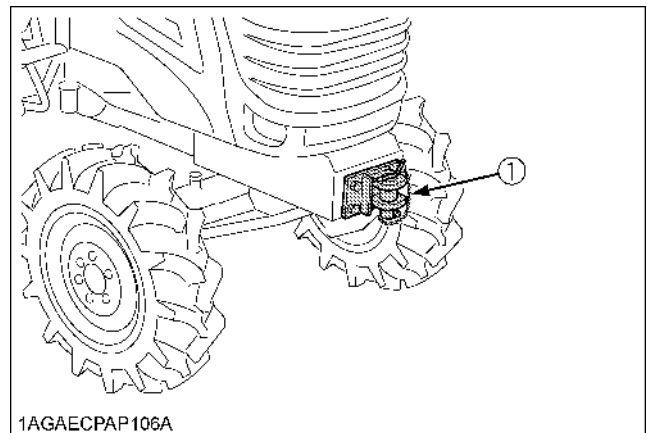
To avoid personal injury:

- 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 causing personal injury or death.



(1) Drawbar

FRONT HITCH (if equipped)



(1) Front hitch

HYDRAULIC UNIT

3-POINT HITCH CONTROL SYSTEM



CAUTION

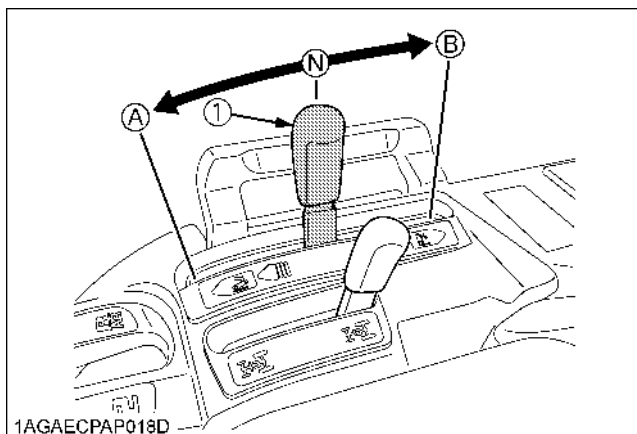
To avoid personal injury:

- Before using the 3-point hitch controls, ensure that no person or object is in the area of 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.

Hydraulic Control

Operating the hydraulic control lever actuates the hydraulic lift arm, which controls the height of 3-point hitch mounted implement.

To lower implement, push the lever forward; to raise it, pull the lever back. After setting the implement to the desired height, move the lever back to "NEUTRAL" position.



(1) Hydraulic control lever

(A) "DOWN"
(N) "NEUTRAL"
(B) "UP"

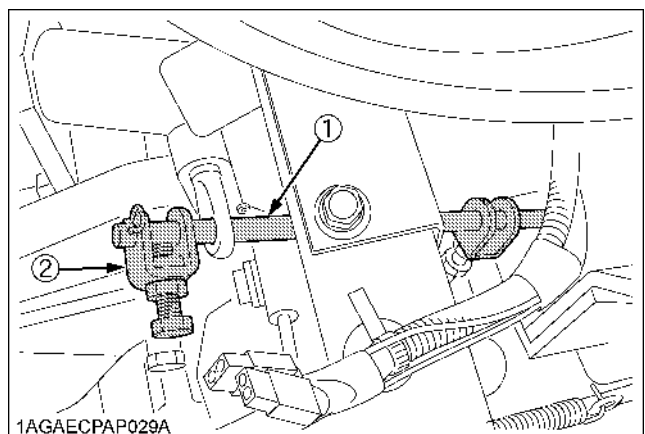
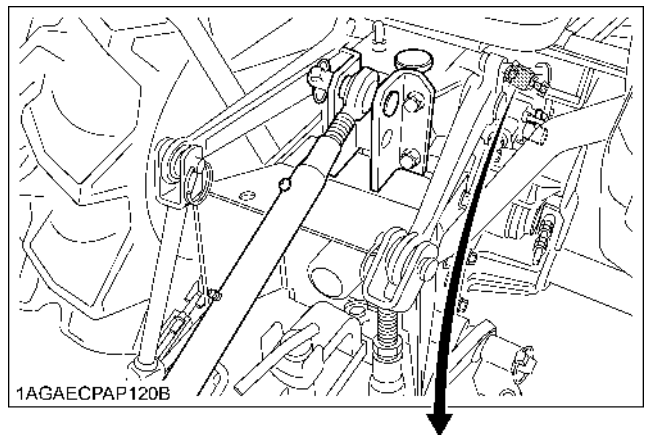
IMPORTANT :

- If the 3-point hitch can not be raised by setting the hydraulic control lever to the UP position after long term storage or when changing the transmission oil, follow these air bleeding procedures.
 1. Stop the engine.
 2. Set the hydraulic control lever to the down position, fully depress and hold the clutch pedal, start the engine.
 3. Operate the engine at low idle speed and continue to depress the clutch pedal for at least 30 seconds to bleed air from the system.

- 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 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 adjustment.

Implement Lowering Limit

The implement lowering limit can be changed by shifting the locker (A).



(1) Interlock rod
(2) Locker (A)

Lower Limit

The lower limit can be changed by adjusting the position of locker (A). Shifting the locker (A) forward raises the lower limit and shifting it backward lowers the lower limit.

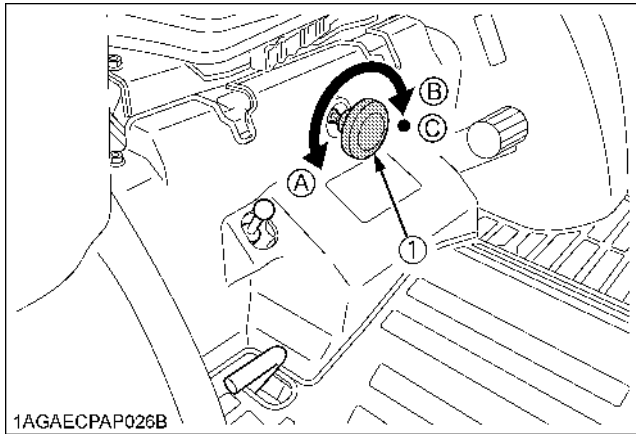
3-point Hitch Lowering Speed

CAUTION

To avoid personal injury:

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

The lowering speed of the 3-point hitch can be controlled by adjusting the 3-point hitch lowering speed knob.



(1) 3-Point hitch lowering speed knob (A) "FAST"
(B) "SLOW"
(C) "LOCK"

AUXILIARY HYDRAULICS

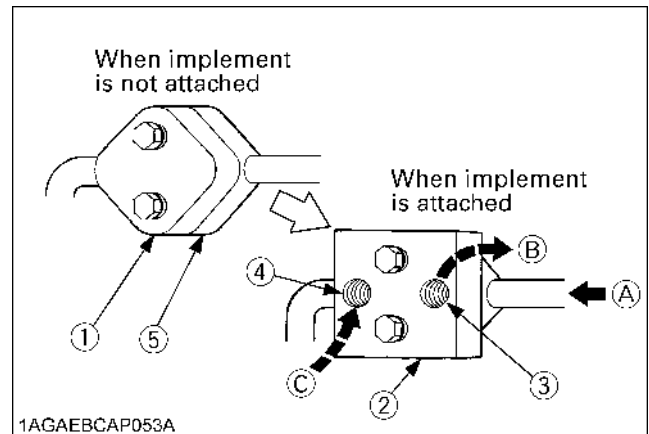
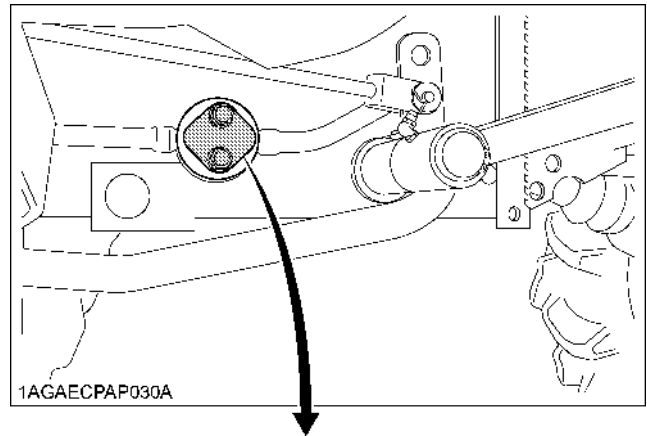
Hydraulic outlet is provided on the tractor.

Hydraulic Block Type Outlet

Hydraulic block type outlet is useful when adding hydraulically operated equipment such as front end loader, front blade, etc.

When implement is attached

1. Remove the block cover.
2. Attach the block outlet cover. (option)



(1) Block cover (A) From gear pump
(2) Block outlet cover (option) (B) To implement inlet
(3) Outlet Max. flow
(4) Inlet 15.1 L/min
(5) Hydraulic block No relief valve in the hydraulic block.
(C) From implement outlet

IMPORTANT :

- For hydraulic block type outlet, be sure to use the control valve of the "Power beyond type" with relief valve that has a third line return to tank for the operation of hydraulic block.

■Rear outlet



CAUTION

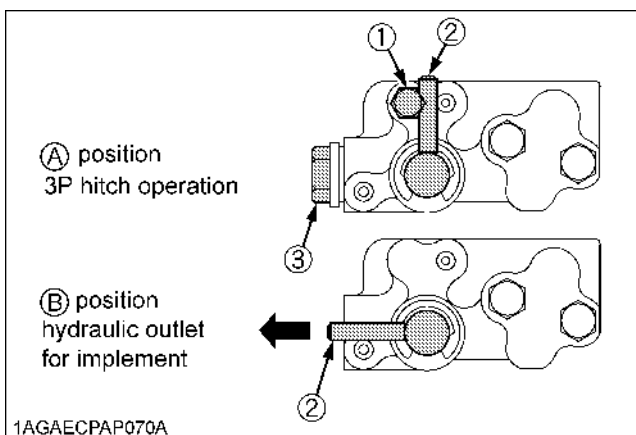
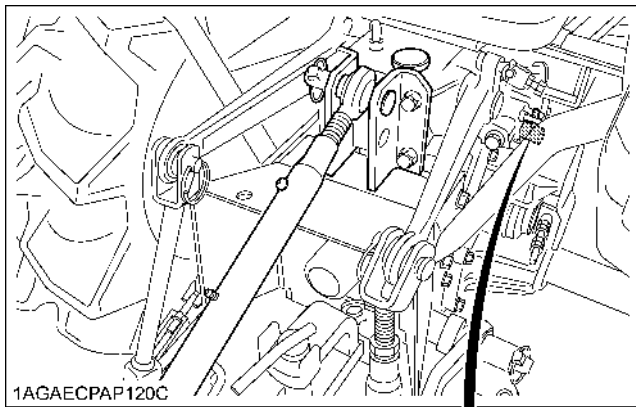
To avoid personal injury:

- Stop the engine and place the hydraulic control lever of 3-point hitch at the "neutral" position before changing the oil flow.

When a hydraulically operated implement is connected to the tractor, the oil flow to 3P hitch can be switched to the cylinder on the implement by means of the lever on the hydraulic outlet.

When implement is attached

1. Remove the plug (3) (screw: PF1/2) and restricting bolt (1).
2. When the lever is positioned at (A), the oil flows into the cylinder of tractor (3P hitch operation).
When the lever is turned to the position (B), the oil flows into the cylinder on the implement.



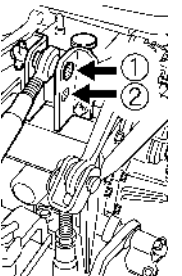
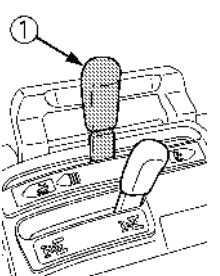
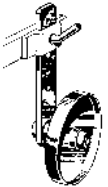
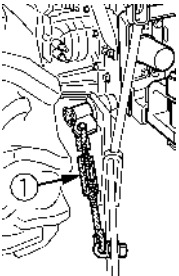
(1) Restricting bolt (2) Lever (3) Plug (PF1/2)

IMPORTANT :

- When implement is not attached, be sure the lever is turned back to (A) position and restricting bolt is installed.
- Don't place the lever at the half-way, other than (A) and (B) positions. Or it may cause the technical problem on the machine.

■Hydraulic Control Unit Use Reference Chart

In order to handle the hydraulics properly, the operator must be familiar with the following. Though this information may not be applicable to types of implements and soil conditions, it is useful for general conditions.

Implement	Soil condition	 1AGAEC PAP120D Top link mounting holes	 1AGAEC PAP018E (1)Hydraulic control lever	 1AGAEB CAP0590 Gauge Wheel	 1AGAEC PAP113F (1)Check chains	Remarks
Moldboard plow	Light soil Medium soil heavy soil	(1) is standard. (2) is used only when there is some obstacle that prevents you from using the standard.	Hydraulic control	YES/NO	Loose	Adjust the check chains so that the implement can move 5 to 6cm laterally.
Disc plow	---					For implements with gauge wheels, lower the implements to the ground.
Harrower (spike, springtooth, disc type)	---					Check chains should be tight enough to prevent excessive implement movement when implement is in raised position.
Sub-soiler....						For implements with gauge wheels, lower the implements to the ground.
Weeder ridger..						
Earthmover, digger, scraper, manure fork, rear carrier....						
Mower (mid-and rear-mount type), hayrake, tedder....	---					

TIRES, WHEELS AND BALLAST

TIRES



WARNING

To avoid personal injury:

- Do not attempt to mount a tire on a rim. This should be done 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.

IMPORTANT :

- Do not use tires other than those approved by KUBOTA.

■ Inflation Pressure

Though the tire pressure is factory-set to the prescribed level, it naturally drops slowly over the course of time. Thus, check it regularly and inflate as necessary.

	Tire sizes	Inflation Pressure
Rear	7-16, 4PR	180 kPa (1.8 kgf/cm ²)
	8-16, 4PR	160 kPa (1.6 kgf/cm ²)
	9.5-16, 4PR	140 kPa (1.4 kgf/cm ²)
	212/80D-15, 4PR	160 kPa (1.6 kgf/cm ²)
	29 x 12.00-15, 4PR	140 kPa (1.4 kgf/cm ²)
Front	4.50-10, 4PR	220 kPa (2.2 kgf/cm ²)
	5-12, 4PR	240 kPa (2.2 kgf/cm ²)
	6-12B, 4PR	200 kPa (2.0 kgf/cm ²)
	20 x 8.00-10, 4PR	160 kPa (1.6 kgf/cm ²)
	20.5 x 8.00-10, 4PR	160 kPa (1.6 kgf/cm ²)

NOTE :

- Maintain the maximum recommended pressure in the front tires, when using a front loader or equipped with a full load of front weights.

■ Dual Tires

Dual tires are not approved.

WHEEL ADJUSTMENT



CAUTION

To avoid personal injury:

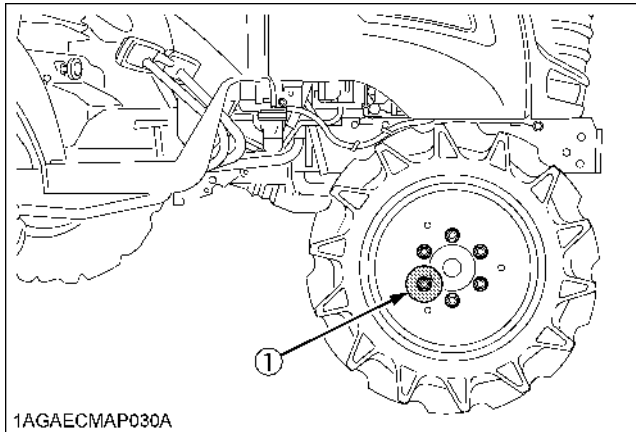
- When working on slopes or when working with trailer, set the wheel tread as wide as practical for maximum stability.
- Support tractor securely on stands before removing a wheel.
- Do not work under any hydraulically supported devices. They can settle, suddenly leak down, or be accidentally lowered. If necessary to work under tractor or any machine elements for servicing or adjustment, securely support them with stands or suitable blocking beforehand.
- Never operate tractor with a loose rim, wheel, or axle.
- Whenever an implement or other attachment is connected to the tractor 3-point hitch, check full range of operation for interference to tires.

Front Wheels

Front tread width can not be adjusted.

IMPORTANT :

- Do not turn front discs to obtain wider tread.
- 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" section.)



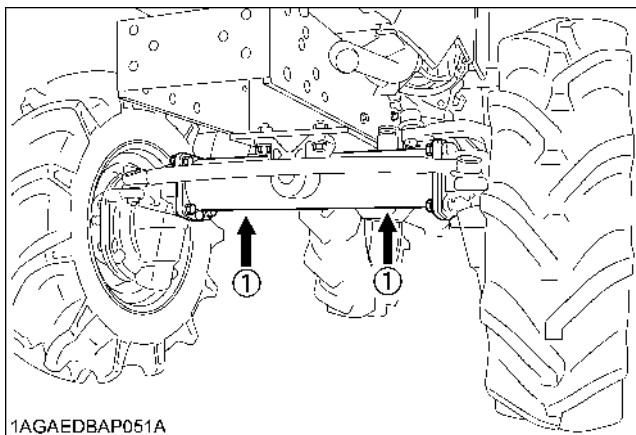
(1) 79 to 92 N-m (8.1 to 9.4 kgf-m)



CAUTION

To avoid personal injury:

- 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 swinging.
- Select jacks that withstand the machine weight and set them up as shown below.



(1) Jack point

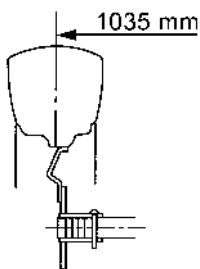
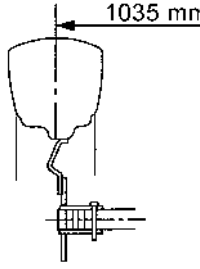
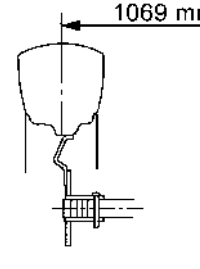
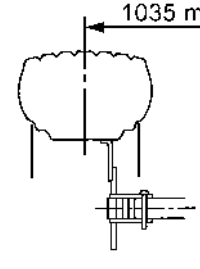
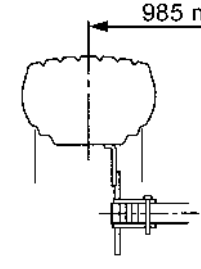
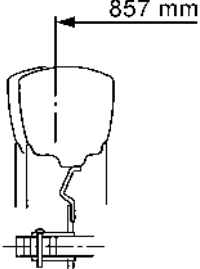
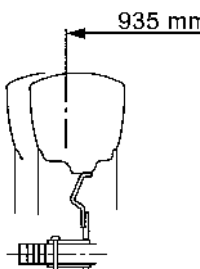
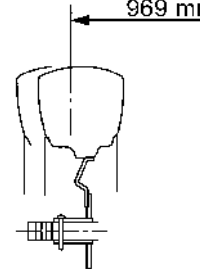
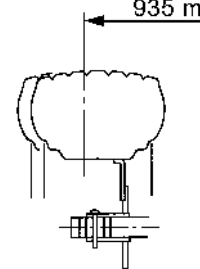
Tire	Tread
4.5 - 10 Farm	<p>778 mm 1AGAEC PAP063A</p>
5 - 12 Farm	<p>767 mm 1AGAEC PAP064A</p>
6 - 12B Farm	<p>786 mm 1AGAEC PAP064B</p>
20 x 8.00 -10 Turf 20.5 x 8.00 -10 Turf	<p>867 mm 1AGAEC PAP065A</p>

■ Rear Wheels

Rear tread width can be adjusted as shown with the standard equipped tires.

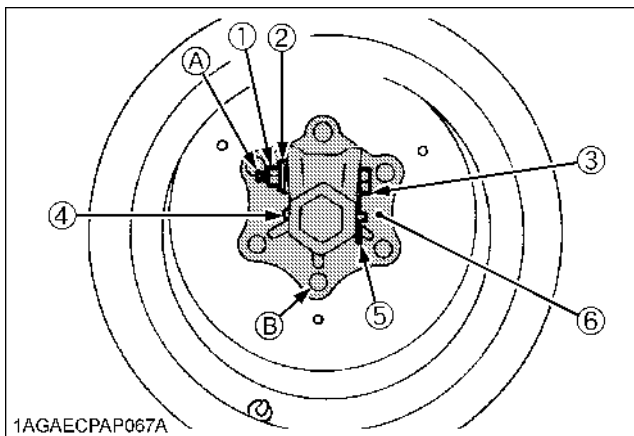
To change the tread width

1. Loosen the nut of cotter pin bolt.
2. Remove the snap pin and wheel hub pin.
3. Change the tread to the desired position.
4. Re-set the wheel hub pin, snap pin and cotter pin bolt.

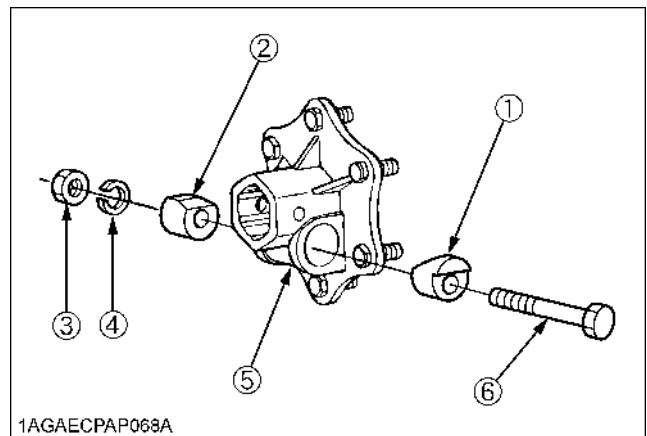
Tire	7-16 Farm	8-16 Farm	9.5-16 Farm	212/80D-15 Turf	29 x 12.00-15 Turf
	857 mm to 1035 mm	935 mm to 1035 mm	969 mm to 1069 mm	935 mm to 1035 mm	985 mm
Tread					
					
	1AGAEBQAP061E	1AGAEBQAP062E	1AGAEBQAP063E	1AGAEBQAP064D	1AGAEBQAP065D

IMPORTANT :

- Always attach tires as shown in the drawings.
- 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" section.)



- (1) Nut
- (2) Spring washer
- (3) Bolt
- (4) Wheel hub pin
- (5) Snap pin
- (6) Hub
- (A) 123 to 147N-m
(12.6 to 15.0 kgf-m)
- (B) 108 to 125 N-m
(11.0 to 12.8 kgf-m)



- (1) Cotter (A)
- (2) Cotter (B)
- (3) Nut
- (4) Spring washer
- (5) Hub
- (6) Bolt

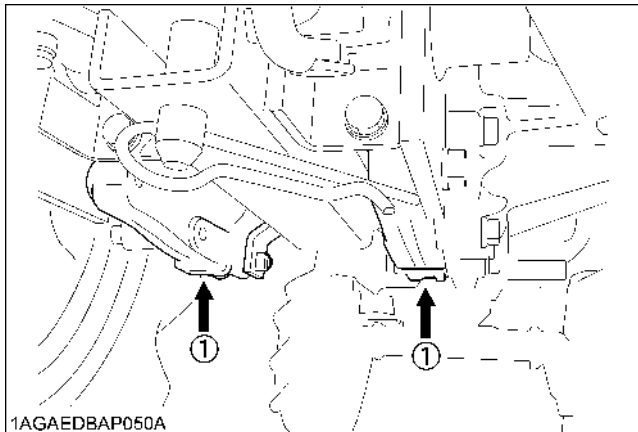
IMPORTANT :

- Insert the bolt from the indented side of the cotter (A) as shown.

**CAUTION**

To avoid personal injury:

- 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 swinging.
- Select jacks that withstand the machine weight and set them up as shown below.



1AGAEDBAP050A

(1) Jack point

BALLAST**CAUTION**

To avoid personal injury:

- 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.

■ Front Ballast

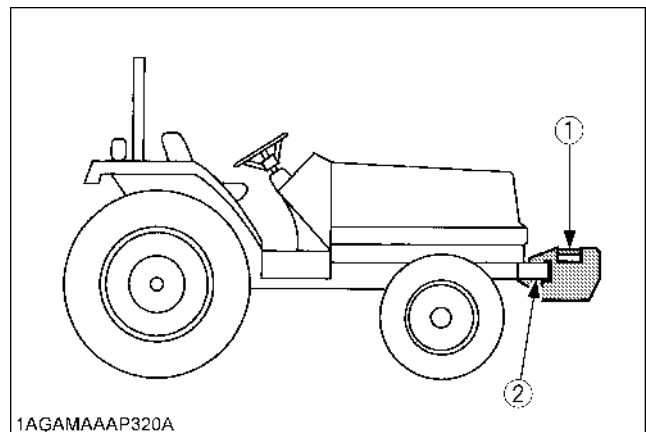
Add weights if needed for stability and improving traction. Heavy pulling and heavy rear mounted implements tend to lift front wheels. Add enough ballast to maintain steering control and prevent tip over. Remove weight when no longer needed.

◆ Front End Weights (option)

The front end weights can be attached to the bumper. See your implement operator's manual for required number of weights or consult your local KUBOTA Dealer to use.

NOTE :

- Besides the weight, a mounting kit is also required.



1AGAMAAAP320A

(1) Front end weights

(2) Bumper

IMPORTANT :

- Do not overload tires.
- Add no more weight than indicated in chart.

Maximum weight

25 kg x 3 pieces

■ 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.

◆ Liquid Ballast in Rear Tires

Water and calcium chloride solution provides safe economical ballast. Used properly, it will not damage 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.

■ Maximum Masses

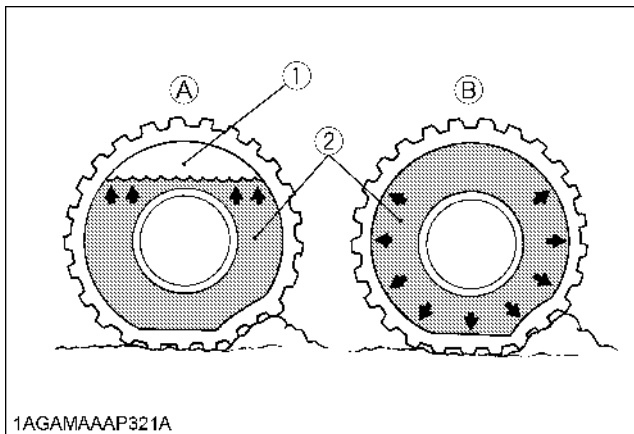
(See "APPENDICES" section.)

Liquid weight per tire (75 Percent filled)

Tire sizes	7 - 16	8 - 16	9.5 - 16
Slush free at -10 °C Solid at -30 °C [Approx. 1 kg CaCl ₂ per 4L of water]	25 kg	35 kg	54 kg
Slush free at -24 °C Solid at -47 °C [Approx. 1.5 kg CaCl ₂ per 4L of water]	27 kg	37 kg	57 kg
Slush free at -47 °C Solid at -52 °C [Approx. 2.25 kg CaCl ₂ per 4L of water]	29 kg	39 kg	60 kg

IMPORTANT :


- Do not fill tires with water or solution more than 75% of full capacity (to the level of valve stem at 12 o'clock position).



(1) Air
(2) Water

(A) Correct : 75% Full
Air compresses like a cushion
(B) Incorrect : 100% Full
Water can not be compressed

IMPORTANT :

- The jobs indicated by  must be done after the first 50 hours of operation.
- *1 Air cleaner should be cleaned more often in server dusty conditions.
- *2 Every year or after 6 cleanings.
- *3 Replace only if necessary.
- *4 Consult your local KUBOTA Dealer for this service.
- *5 When the battery is used for less than 100 hours per year, check the fluid level annually.

LUBRICANTS,FUEL AND COOLANT

No.	Locations	Capacities	Lubricants	
1	Fuel	14 L	No. 2-D diesel fuel No. 1-D diesel fuel if temperature is below -10 °C	
2	Coolant (with recovery tank)	3.4 L	Fresh clean soft water with anti-freeze	
3	Engine crankcase (with filter)	2.4 L	● Engine oil : CF or better (Refer to next page)	
			Above 25°C	SAE30, SAE10W-30 or 15W-40
			0 to 25°C	SAE20, SAE10W-30 or 15W-40
			Below 0°C	SAE10W, SAE10W-30 or 15W-40
4	Transmission case	10.5 L	● KUBOTA UDT or SUPER UDT fluid*	
5	Front axle case	3.4 L	● KUBOTA UDT or SUPER UDT fluid* or SAE 80 - SAE90 gear oil	
6	Greasing	No. of greasing points	Capacity	Type of grease
	Clutch pedal	1	Until grease overflow.	Multipurpose Grease NLGI-2 OR NLGI-1 (GC-LB)
	Brake pedal	1		
	Top link	1		
	Lifting rod (RH)	1		
	Parking brake	1		
		1	Moderate amount	
Battery terminal	2			

NOTE: *KUBOTA SUPER UDT fluid--- KUBOTA original transmission hydraulic fluid

NOTE :**◆ Engine Oil:**

- Oil used in the engine should have an American Petroleum Institute (API) service classification and Proper SAE Engine Oil according to the ambient temperatures as shown above:
- With the emission control now in effect, the CF-4 and CG-4 lubricating oils have been developed for use of a low-sulfur fuel on on-road vehicle engines. When an off-road vehicle engine runs on a high-sulfur fuel, it is advisable to employ the "CF or better" lubricating oil with a high Total Base Number (TBN of 10 minimum).
- Refer to the following table for the suitable API classification engine oil according to the engine type (with internal EGR, external EGR or non-EGR) and the fuel (low-sulfur or high-sulfur fuel).

Fuel used	Engine oil classification (API classification)	
	Oil class of engines except external EGR	Oil class of engines with external EGR
High Sulfur Fuel [\geq 0.05% (500 ppm)]	CF (If the "CF-4, CG-4, CH-4 or CI-4" lubricating oil is used with a high-sulfur fuel, change the lubricating oil at shorter intervals. (approximately half))	---
Low Sulfur Fuel [<0.05% (500 ppm)] or Ultra Low Sulfur Fuel [<0.0015% (15 ppm)]	CF, CF-4, CG-4, CH-4 or CI-4	CF or CI-4 (Class CF-4, CG-4 and CH-4 engine oils cannot be used on EGR type engines)

EGR: Exhaust Gas Re-circulation

- The CJ-4 engine oil is intended for DPF (Diesel Particulate Filter) type engines, and cannot be used on this tractor.

	without EGR	with external EGR
Model	B1620, B1820	---

◆ Fuel:

- Cetane number of 45 minimum. Cetane number greater than 50 is preferred, especially for temperatures below -20 °C or elevations above 1500 m.
- If diesel fuel with sulfur content greater than 0.5% (5000 ppm) sulfur content is used, reduce the service interval for engine oil and filter by 50%.
- NEVER use diesel fuel with sulfur content greater than 0.05% (500 ppm) for EXTERNAL EGR type engine.
- DO NOT use diesel fuel with sulfur content greater than 1.0% (10000 ppm).
- 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)
- Since this engine adopts EPA Tier 4 and Interim Tier 4 standards, the use of low sulfur fuel or ultra low sulfur fuel is mandatory in EPA regulated area (North America). Therefore, please use No.2-D S500 or S15 diesel fuel as an alternative to No.2-D, or use No.1-D S500 or S15 diesel fuel as an alternative to No.1-D if outside air temperature is below -10 °C.

◆ Transmission Oil:

The oil used to lubricate the transmission is also used as hydraulic fluid. To insure proper operation of the hydraulic system and to complete lubrication of the transmission, it is important that a multi-grade transmission fluid is used in this system. We recommend the use of **KUBOTA UDT or SUPER UDT fluid** for optimum protection and performance. (Consult your local KUBOTA Dealer for further detail.)

Do not mix different brands together.

- Indicated capacities of water and oil are manufacturer's estimate.

PERIODIC SERVICE



CAUTION

To avoid personal injury:

- Do not work under any hydraulically supported devices. They can settle, suddenly leak down, or be accidentally lowered. If necessary to work under tractor or any machine elements for servicing or adjustment, securely support them with stands or suitable blocking beforehand.

HOW TO OPEN THE HOOD



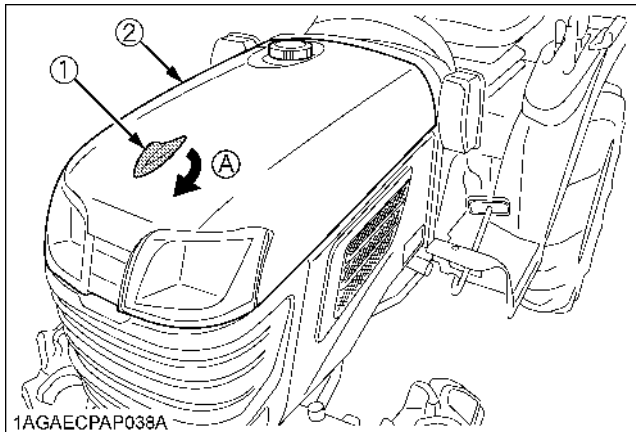
CAUTION

To avoid personal injury from contact with moving parts;

- Never open the hood or engine side cover while the engine is running.
- Do not touch muffler or exhaust pipes while they are hot; Severe burns could result.
- Support hood with other hand while unlocking support link.

■ Hood

To open the hood, twist the mascot to release the latch and open the hood.

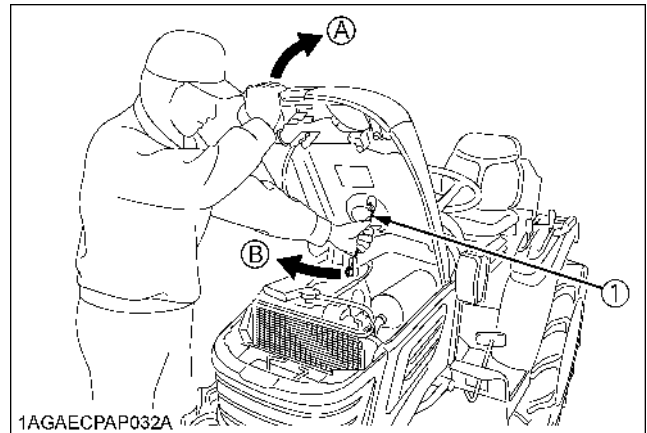


(1) Mascot
(2) Hood

(A) "OPEN"

NOTE :

- To close the hood, hold the hood and release the support rod.



(1) Support rod

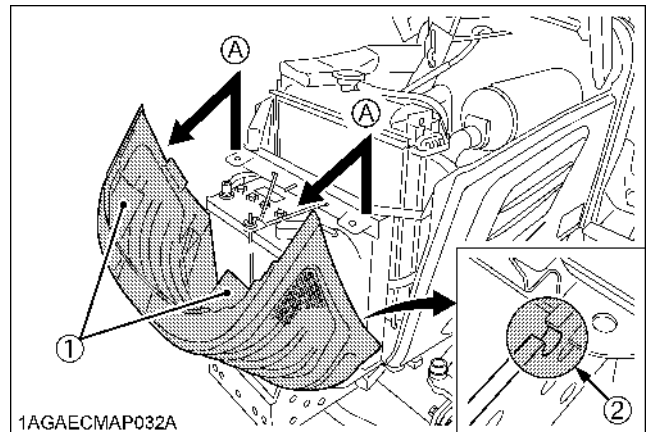
(A) "HOLD"

(B) "PULL"

■ Front Grille

To remove the front grille, pull outward as indicated by arrows, and then lift the front grill off.

1. Pulling up the cover catches (1), tilt down the front grille forward and take it away.
2. To reattach the front grille, fit it to the notches and take reverse order.



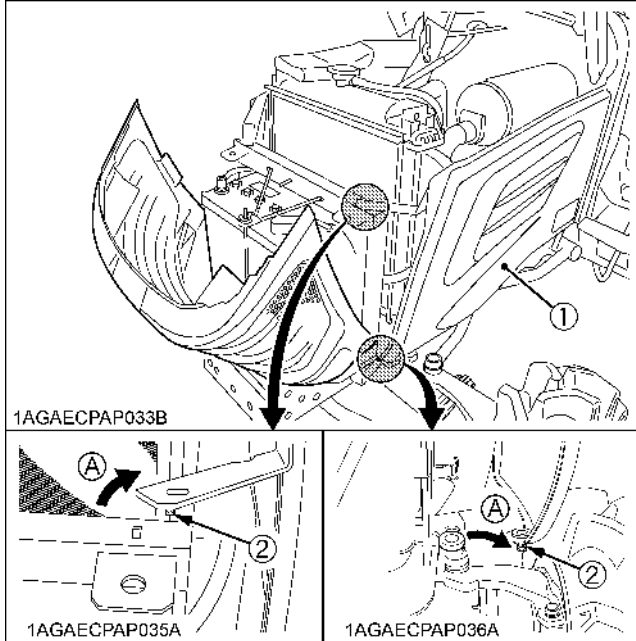
(1) Cover catch

(2) Notch

(A) "PULL UP TO REMOVE"

■ Engine Side Cover

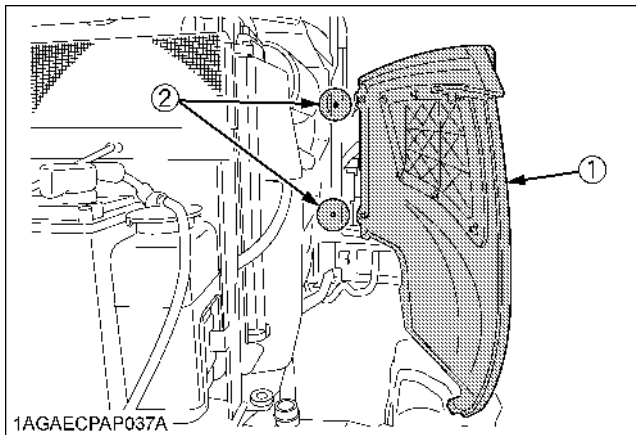
1. Tilt down the front grille forward.
2. Lift up the front of the engine side cover and free the upper and lower projections.



(1) Engine side cover
(2) Projection

(A) "LIFT UP TO REMOVE"

3. Pull the engine side cover forward and free the rear notches. Now the side cover can be detached.



(1) Engine side cover
(2) Notch

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.



CAUTION

To avoid personal injury:
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.
- All residual pressure of the hydraulic system released.
- Stop the engine and remove the key.

■ Walk Around Inspection

Look around and under the tractor for such items as loose bolts, trash build-up, oil or coolant leaks, broken or worn parts.

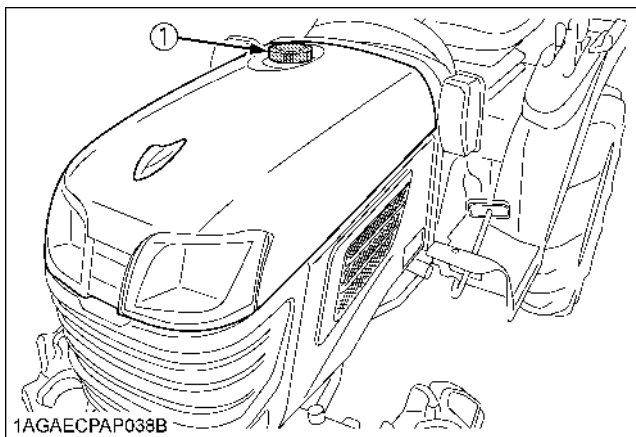
■Checking and Refueling

CAUTION

To avoid personal injury:

- Do not smoke while refueling.
- Be sure to stop the engine before refueling.

1. Turn the key switch to "ON", check the amount of fuel by fuel gauge.
2. Fill fuel tank when fuel gauge shows 1/4 or less fuel in tank.
3. Use grade No.2-Diesel fuel at temperatures above -10 °C.
Use grade No.1-Diesel fuel at temperatures below -10 °C.



(1) Fuel tank cap

Fuel tank capacity	14 L
--------------------	------

IMPORTANT :

- 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 next engine start.
- Be careful not to spill during refueling. If should spill, 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.

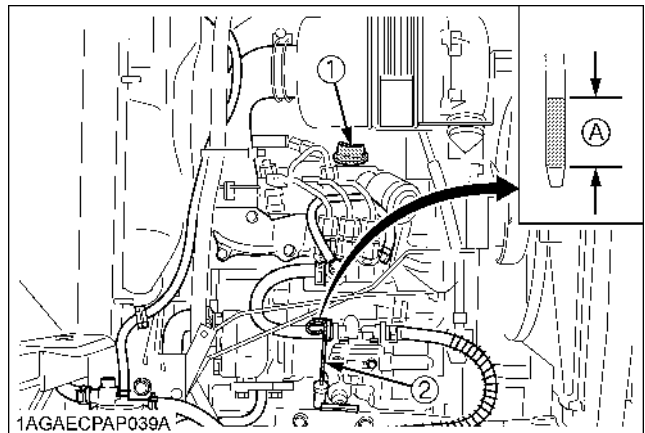
■Checking Engine Oil Level

CAUTION

To avoid personal injury:

- Be sure to stop the engine before checking the oil level.

1. Park the machine on a flat surface.
2. Check 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 two notches. If the level is too low, add new oil to the prescribed level at the oil inlet.
(See "LUBRICANTS" in "MAINTENANCE" section.)



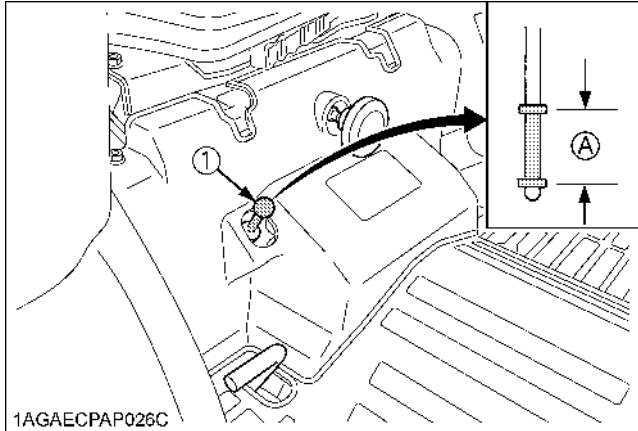
(1) Oil inlet (A) Oil level is acceptable within this range.
(2) Dipstick

IMPORTANT :

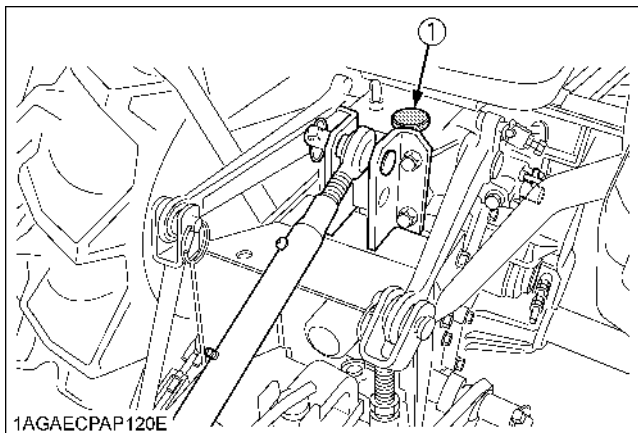
- When using an oil of different maker or viscosity from the previous one, remove all of the old oil. Never mix two different types of oil.
- If oil level is low, do not run engine.

■Checking Transmission Fluid Level

1. Park the machine on a flat surface, lower the implement and shut off 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 two notches. If the level is too low, add new oil to the prescribed level at the oil inlet.
(See "LUBRICANTS" in "MAINTENANCE" section.)



(1) Dipstick (A) Oil level is acceptable within this range.



(1) Oil inlet

IMPORTANT :

- If oil level is low, do not run engine.

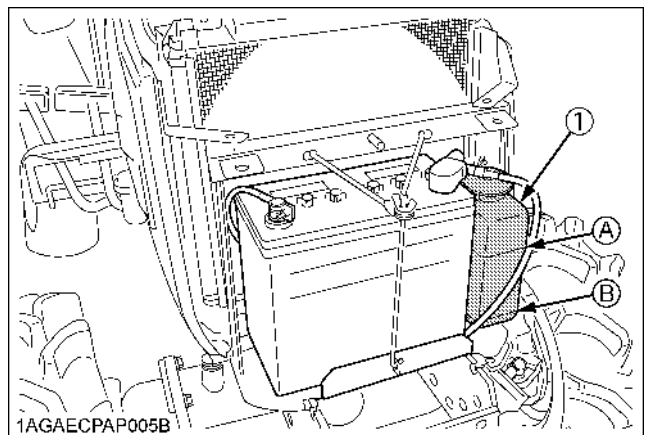
■Checking Coolant Level

CAUTION

To avoid personal injury:

- Do not remove radiator cap while 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.

1. Check to see that the coolant level is between the "FULL" and "LOW" marks of recovery tank.
2. When the coolant level drops due to evaporation, add soft water only up to the full level. In case of leakage, add anti-freeze and soft water in the specified mixing ratio up to the full level.
(See "Flushing Cooling System and Changing Coolant" in "EVERY 2 YEARS" in "PERIODIC SERVICE" section.)



(1) 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 anti-freeze to fill the recovery tank.
- If coolant should leak, consult your local KUBOTA Dealer.

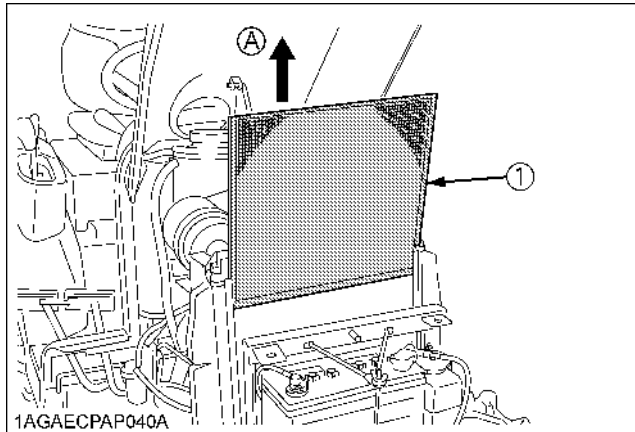
■Cleaning Grill and Radiator Screen

CAUTION

To avoid personal injury:

- Be sure to stop the engine and remove the key before removing the screen.

1. Check front grill and side screens to be sure they are clean of debris.
2. Detach the screen and remove all foreign materials and clean the front of radiator completely.



(1) Radiator screen

(A) "DETACH"

IMPORTANT :

- Grill and screen must be clean from debris to prevent engine from overheating and to allow good air intake for the air cleaner.

NOTE :

- If the dust or chaff has accumulated between the battery and radiator, open the shutter plate and clean the front of radiator completely.

■Checking Brake Pedals and Clutch Pedal

1. Inspect the brake and clutch pedals for free travel, and smooth operation.
2. Adjust if incorrect measurement is found: (See "Adjusting Clutch Pedal" and "Adjusting Brake Pedal" in "EVERY 100 HOURS" in "PERIODIC SERVICE" section.)

NOTE :

- Brake pedals should be equal when depressed.

■Checking Parking Brake

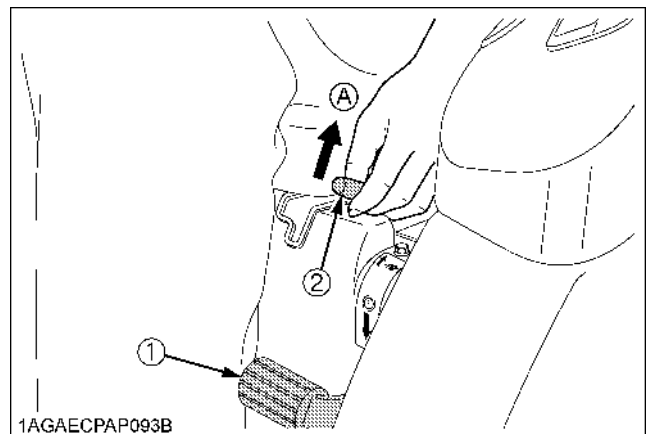
CAUTION

To avoid personal injury:

- Stop the engine and chock the wheels before checking parking brake pedal.

Proper parking brake pedal free travel	1 notch (Ratchet sound 1).
--	----------------------------

1. Check free travel of the parking brake pedal. (See "Adjusting Parking Brake" in "EVERY 100 HOURS" in "PERIODIC SERVICE" section.)



(1) Parking brake pedal

(A) "PULL"

(2) Parking release lever

■Checking Gauges, Meter and Easy Checker(TM)

1. Inspect the instrument panel for broken gauge(s), meter(s) and Easy Checker(TM).
2. Replace if broken.

■Checking Head Light, Hazard Light etc.

1. Inspect the lights for broken bulbs and lenses.
2. Replace if broken.

■Checking Seat Belt and ROPS (if equipped)

1. Always check condition of seat belt and ROPS attaching hardware before operating tractor.
2. Replace if damaged.

■ Checking and Cleaning of Electrical Wiring and Battery Cables



CAUTION

To avoid personal injury:

- A loosened terminal or connector, or damaged wire may affect the performance of electrical components or cause short circuits. Leakage of electricity could result in a fire hazard, a dead battery or damage to electrical components.
 - Replace damaged wires or connections promptly.
 - If a fuse blows soon after replacement, **DO NOT USE A LARGER THAN RECOMMENDED FUSE OR BYPASS THE FUSE SYSTEM.**
 - Many wiring connections are protected by waterproof plugs, plug and unplug these connections carefully and make sure they are sealed correctly after assembly.
 - Accumulation of dust, chaff or spilled fuel deposits around the battery, electrical wiring, engine or exhaust system are a fire hazard.
- CLEAN THESE AREAS BEFORE STARTING WORK.**

To avoid premature electrical malfunctions **DO NOT APPLY** high pressure water directly to battery, wiring, connectors, electrical components or instrument panel.

Inspect the following Regularly:

1. Check wiring for chafed or cracked insulation.
2. Check wiring harness clamps. Replace if necessary.
3. Check connectors and terminals for looseness, contamination or overheated (discolored) connections.
4. Check instrument panel for correct operation of switches and gauges.

Consult your Kubota Dealer regarding maintenance, diagnosis and repair.

■ Checking Movable Parts

If any of the movable parts, such as levers and pedals, is not smoothly moved because of rust or anything sticky, do not attempt to force it into motion.

In the above case, remove the rust or the sticky thing, and apply oil or grease on the relevant spot.

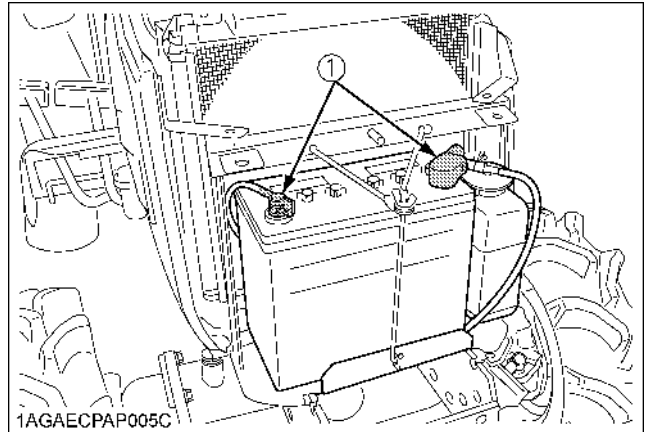
Otherwise, the machine may get damaged.

EVERY 50 HOURS

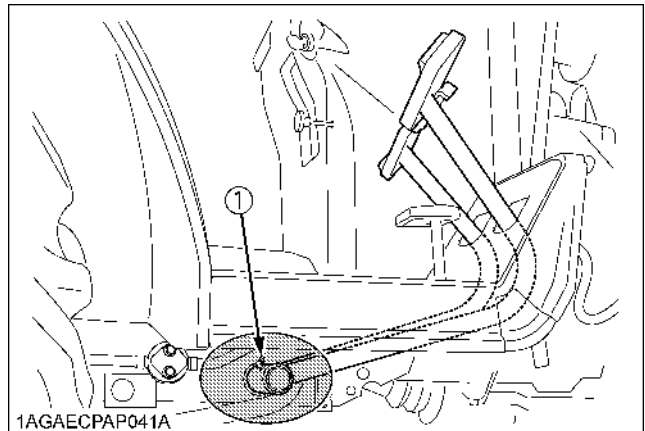
■ Lubricating Grease Fittings

Apply a small amount of multipurpose grease to the following points every 50 hours:

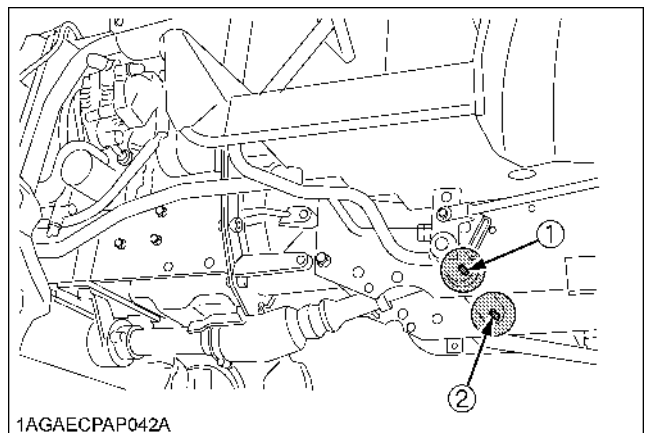
If you operated the machine in extremely wet and muddy conditions, lubricate grease fittings more often.



(1) Battery terminals

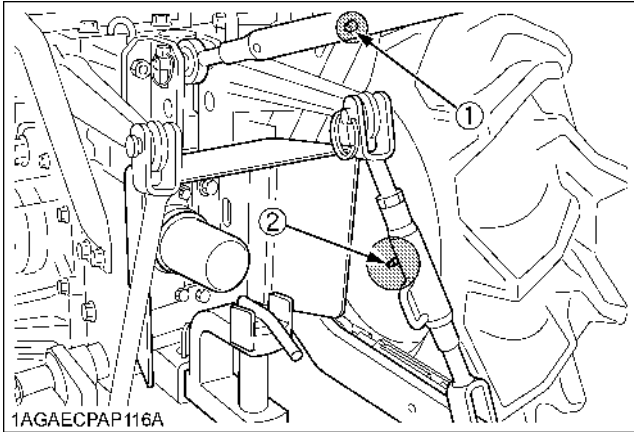


(1) Grease fitting (Brake pedal)

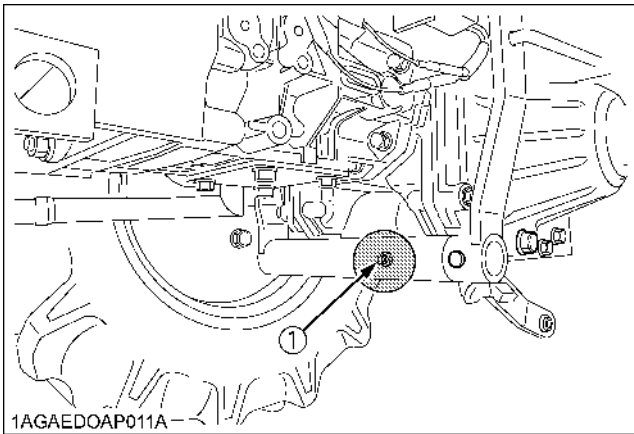


(1) Grease fitting (Clutch pedal)

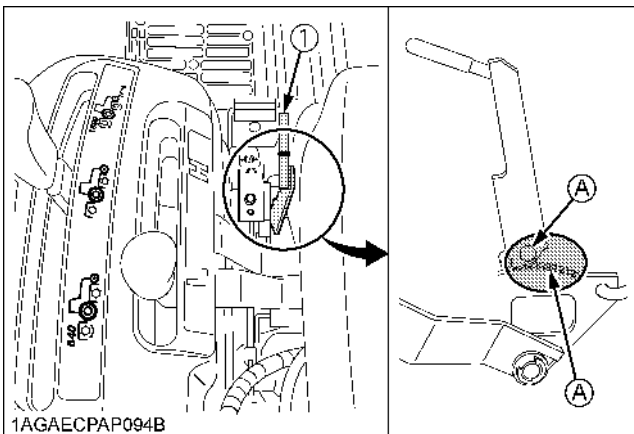
(2) Grease fitting (Pedal shaft)



(1) Grease fitting (Top link)
 (2) Grease fitting (Lifting rod, right)



(1) Grease fitting (Parking brake)



(1) Parking brake (A) Greasing

■ Checking Engine Start System

⚠ CAUTION

To avoid personal injury:

- Do not allow anyone near the tractor while testing.
- If the tractor does not pass the test do not operate the tractor.

◆ Preparation before testing.

1. Sit on operator's seat.
2. Set the parking brake and stop the engine.
3. Shift the main gear shift lever in "NEUTRAL" position.
4. Shift the PTO gear shift lever to "NEUTRAL" position.
5. Fully depress the clutch pedal.

◆ Test : Switch for the main gear shift lever.

1. Fully depress the clutch pedal.
2. Shift the main gear shift lever to "Desired" position.
3. Turn the key to "START" position.
4. The engine must not crank.

◆ Test : Switch for the PTO gear shift lever.

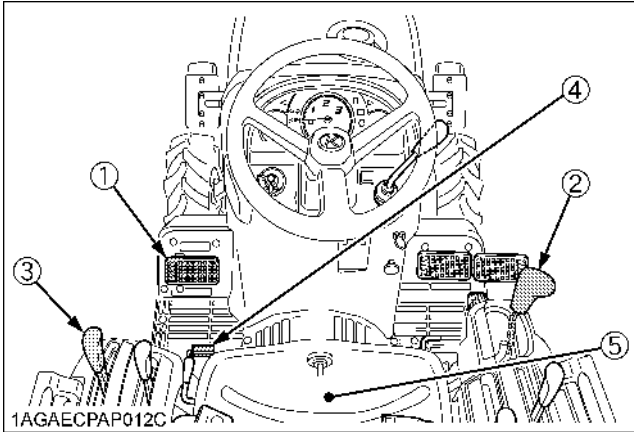
1. Fully depress the clutch pedal.
2. Shift the main gear shift lever to "NEUTRAL" position.
3. Shift the PTO gear shift lever to "ON" (Engaged) position.
4. Turn the key to "START" position.
5. The engine must not crank.

◆ Test : Switch for the Operator's seat.

1. Sit on operator's seat.
2. Start the engine.
3. Fully depress the clutch pedal.
4. Shift the PTO gear shift lever to "ON" (Engaged) position.
5. Release the parking brake.
6. Stand up. (Do not get off the tractor.)
7. The engine must shut off after approximately 1 second.
8. If it does not stop, consult your local KUBOTA Dealer for this service.

NOTE :

- If the engine cranks during any of these tests, consult your local KUBOTA Dealer to have unit checked before operating.



- (1) Clutch pedal
- (2) Main gear shift lever
- (3) PTO gear shift lever
- (4) Parking brake
- (5) Seat

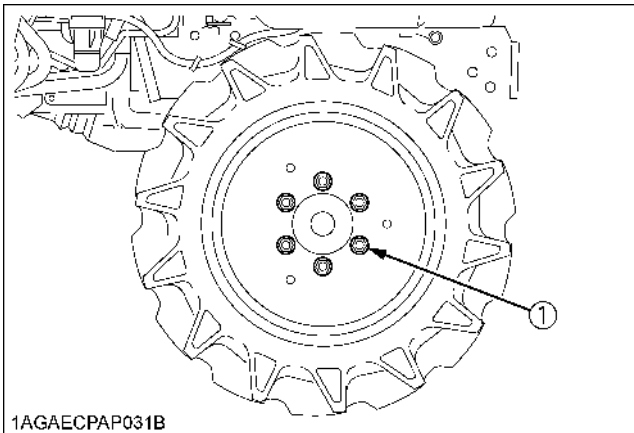
■ Checking Wheel Bolt Torque

CAUTION

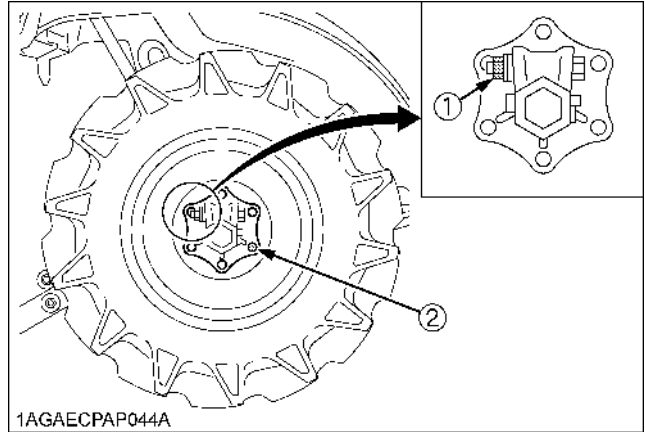
To avoid personal injury:

- Never operate tractor with a loose rim, wheel, or axle.
- Any time bolts and nuts are loosened, retighten to specified torque.
- Check all bolts and nuts frequently and keep them tight.

Check wheel bolts and nuts regularly especially when new. If they are loose, tighten them as follows.



- (1) Nut: 77 to 90 N-m (7.9 to 9.2 kgf-m)



- (1) 123 to 147 N-m (12.6 to 15.0 kgf-m)
- (2) 108 to 125 N-m (11.0 to 12.8 kgf-m)

EVERY 100 HOURS

■ 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, the 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.

CAUTION

To avoid personal injury:

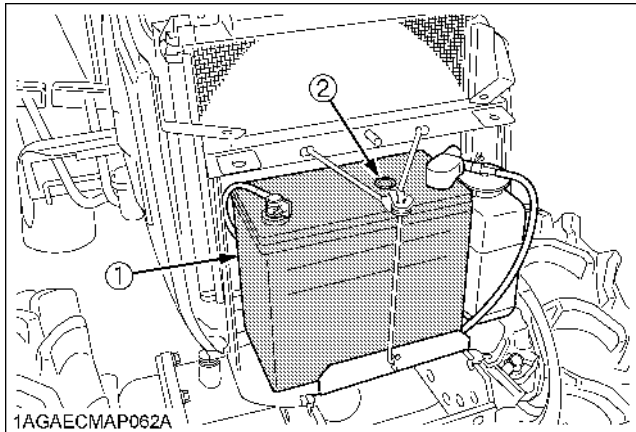
- Never remove the battery cap while the engine is running.
- Keep electrolyte away from eyes, hands and clothes. If you are splattered with it, wash it away completely with water immediately and get medical attention.
- Keep open sparks and flames away from the battery at all times. Hydrogen gas mixed with oxygen becomes very explosive.
- Wear eye protection and rubber gloves when working around battery.

The factory-installed battery is of non-refillable type. If the indicator turns white, do not charge the battery but replace it with 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.



(1) Battery
(2) Indicator

◆ **How to read the indicator**

Check the battery condition by reading the indicator.

State of indicator display	
Green	Specific gravity of electrolyte and quality of electrolyte are both in good condition.
Black	Needs charging battery.
White	Needs replacing battery.

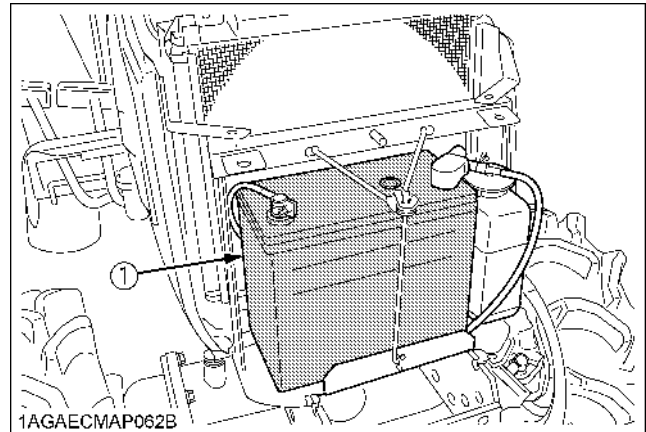
◆ **Battery Charging**



CAUTION

To avoid personal injury:

- 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.



(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. It 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 early as possible. Failure to do this will shorten the battery's service life.
3. The battery is charged if the indicator display turns green from black.
4. When exchanging an old battery for a new one, use battery of equal specification shown in **table 1**.

[TABLE 1]

Battery Type	Volts (V)	Capacity at 5H.R (A.H)	Reserve at (min)	Cold Cranking Amps	Normal Charging Rate(A)
50B24L(S)-MF	12	32	70	400	4.0

◆ **Direction for Storage**

1. When storing the tractor for a long period, remove the battery from 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 it once every three months in hot seasons and once every six months in cold seasons.

■ **Cleaning Air Cleaner Element [Single Element Type]**

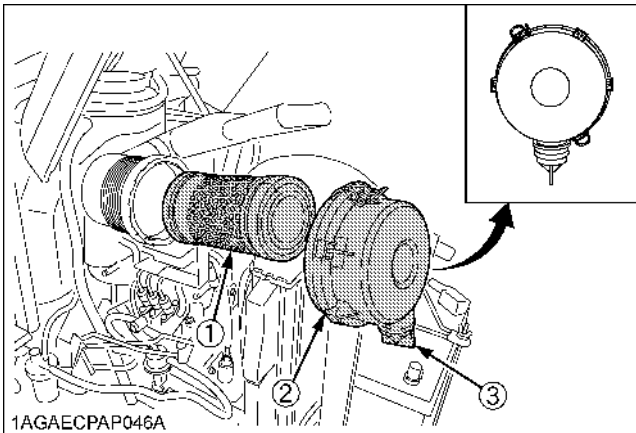
1. Remove the element.
2. Clean the element:
 - (1) When dry dust adheres to the element, blow compressed air from the inside, turning the element. Pressure of compressed air must be under 205 kPa (2.1 kgf/cm², 30 psi).

- (2) 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 element is fully dried, inspect inside of the element with a light and check if it is damaged or not. (referring to the instructions on the label attached to the case.)

3. Replace air cleaner element:
Once yearly or after every sixth cleaning, whichever comes first.

NOTE :

- Check to see if the evacuator valve is blocked with dust.



- (1) Elements
- (2) Cover
- (3) Evacuator valve

IMPORTANT :

- The air cleaner uses a dry element, never apply oil.
- Do not run the engine with filter element removed.
- Be sure to refit the cover with the arrow ↑ (on the rear) upright. If the cover is improperly fitted, dust passed by the baffle and directly adheres to the element.

◆ **Evacuator Valve**

Open the evacuator valve once a week under ordinary conditions - or daily when used in a dusty place - to get rid of large particles of dust and dirt.

■ **Cleaning Air Cleaner Primary Element [Double Element Type](if equipped)**

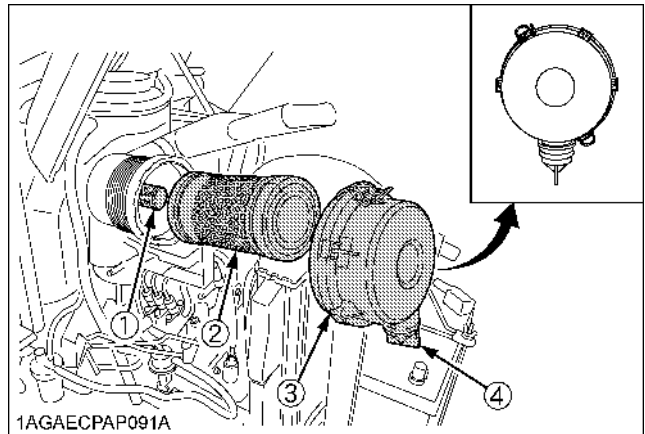
1. Remove the air cleaner cover and primary element.
2. Clean the primary element:
(1) When dry dust adheres to the element, blow compressed air from the inside, turning the element. Pressure of compressed air must be under 205kPa (2.1kgf/cm², 30 psi).

- (2) 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 element is fully dried, inspect inside of the element with a light and check if it is damaged or not.

3. Replace air cleaner primary element:
Once yearly or after every sixth cleaning, whichever comes first.

NOTE :

- Check to see if the evacuator valve is blocked with dust.



- (1) Secondary (safety) element
- (2) Primary element
- (3) Cover
- (4) Evacuator valve

IMPORTANT :

- The air cleaner uses a dry element, never apply oil.
- Do not run the engine with filter element removed.
- Be sure to refit the cover with the arrow ↑ (on the cover) upright. If the cover is improperly fitted, 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" in "EVERY 1 YEAR" in "PERIODIC SERVICE" section.)

◆ **Evacuator Valve**

Open the evacuator valve once a week under ordinary conditions - or daily when used in a dusty place - to get rid of large particles of dust and dirt.

■ **Cleaning Fuel Filter**

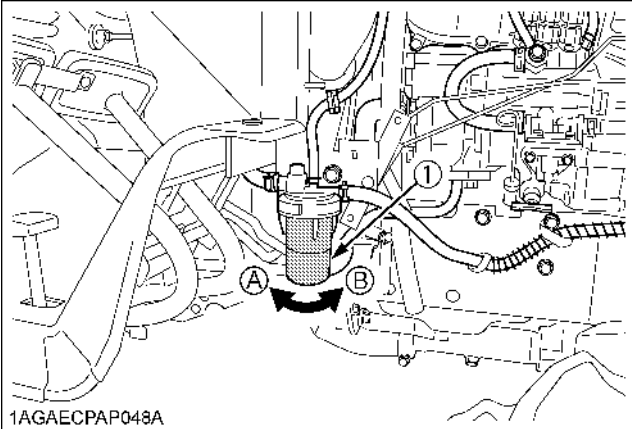
This job should not be done in the field, but in a clean place.

1. Loosen and remove the filter bowl, and rinse the inside with kerosene.
2. Take out the element and dip it in the kerosene to rinse.

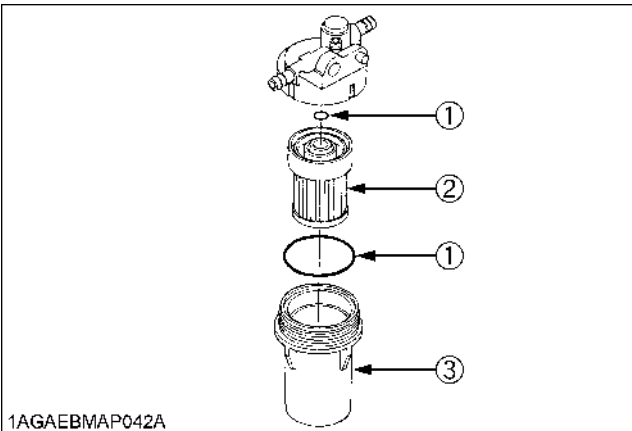
3. After cleaning, reassemble the fuel filter, keeping out dust and dirt.
4. Bleed the fuel system.
(See "SERVICE AS REQUIRED" in "PERIODIC SERVICE" section.)

IMPORTANT :

- When the fuel filter bowl has been removed, fuel stops flowing from the fuel tank. If the fuel tank is almost full, however, the fuel will flow back from the fuel return pipe to the fuel filter. Before checking, make sure the fuel tank is less than half-full.



(1) Fuel filter bowl
(A) "LOOSEN"
(B) "TIGHTEN"



(1) O ring
(2) Filter element
(3) Filter bowl

IMPORTANT :

- If dust, dirt or water enters the fuel system, the fuel pump and injection nozzles are subject to premature wear. To prevent this, be sure to clean the fuel filter bowl and element periodically.

Adjusting Fan Belt Tension

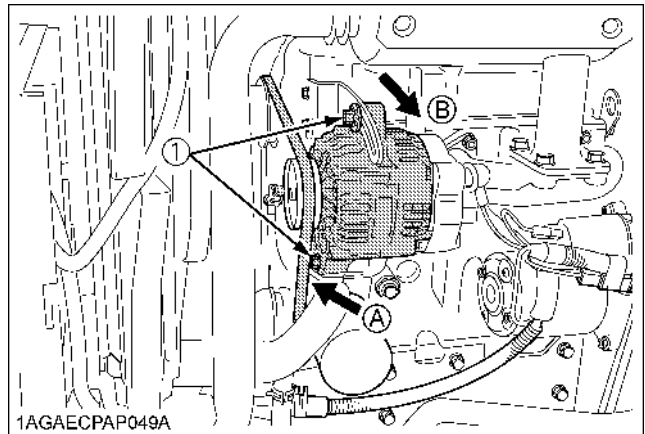
CAUTION

To avoid personal injury:

- Be sure to stop the engine before checking belt tension.

Proper fan belt tension	A deflection of between 7 to 9 mm when the belt is pressed 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 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.
4. Replace fan belt if it is damaged.

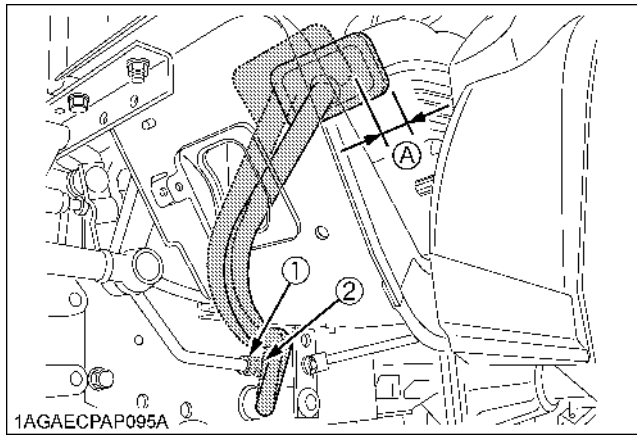


(1) Bolt
(A) Check the belt tension
(B) To tighten

■ Adjusting Clutch Pedal

Proper clutch pedal free travel	15 to 25 mm on the pedal
---------------------------------	--------------------------

1. Stop the engine and remove the key.
2. Slightly depress the clutch pedal and measure free travel at top of pedal stroke.
3. If adjustment is needed, loosen the lock nut and turn the turnbuckle to adjust the rod length within acceptable limits.
4. Retighten the lock nut.



(1) Lock nut
 (2) Turnbuckle
 (A) "FREE TRAVEL"

■ Adjusting Brake Pedal



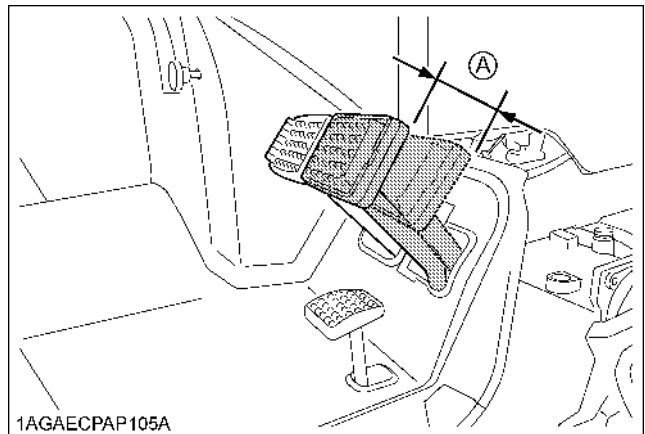
CAUTION

To avoid personal injury:

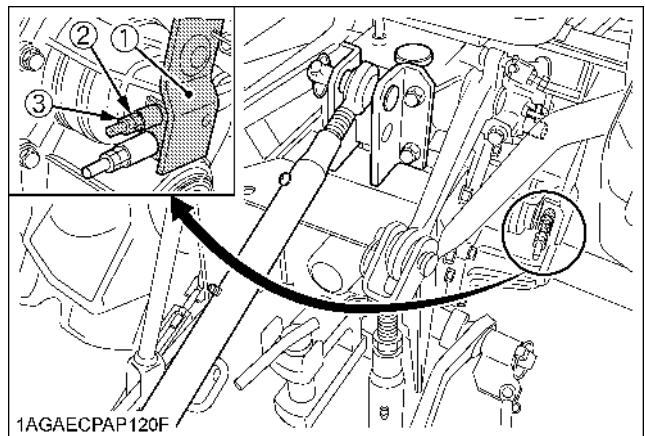
- Stop the engine and chock the wheels before checking brake pedal.

Proper brake pedal free travel	30 to 40 mm on the pedal
	Keep the free travel in the right and left brake pedals equal.

1. Slightly depress the brake pedals and measure free travel at the top of pedal stroke.
2. If adjustment is needed, loosen the lock nut and adjust the rod length.
3. Retighten the lock nut.



(A) "FREE TRAVEL"



(1) Brake lever
 (2) Adjust nut
 (3) Lock nut

■ Adjusting Parking Brake

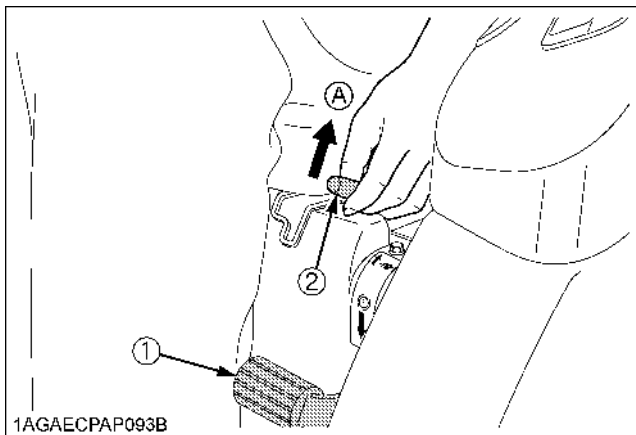
CAUTION

To avoid personal injury:

- Stop the engine and chock the wheels before checking parking brake pedal.

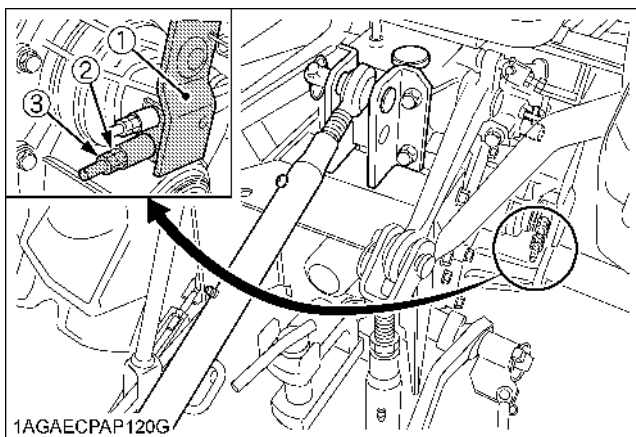
Proper parking brake pedal free travel	1 notch (Ratchet sound 1).
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1. Check free travel of the parking brake pedal.
2. If adjustment is needed, pull the parking release lever to release the parking brake, and then loosen the lock nut and the adjust nut.
3. Adjust the adjust nut to leave no space between the collar and the brake lever.
4. Retighten the lock nut.



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- (1) Parking brake pedal (A) "PULL"
 (2) Parking release lever

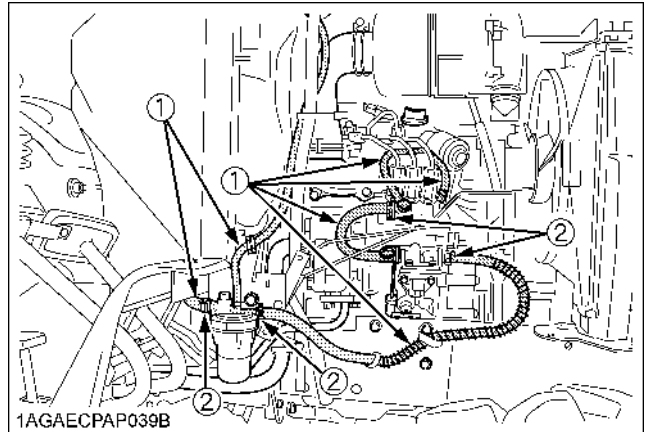


1AGAEC PAP120G

- (1) Brake lever
 (2) Adjust nut
 (3) Lock nut

■ Checking Fuel Line

1. Check to see that all lines and hose clamps are tight and not damaged.
2. If hoses and clamps are found worn or damaged, replace or repair them at once.



- (1) Fuel lines
 (2) Clamp bands

NOTE :

- If the fuel line is removed, be sure to properly bleed the fuel system.
 (See "Bleeding Fuel System" in "SERVICE AS REQUIRED" in "PERIODIC SERVICE" section.)

EVERY 200 HOURS

■ Replacing Engine Oil Filter

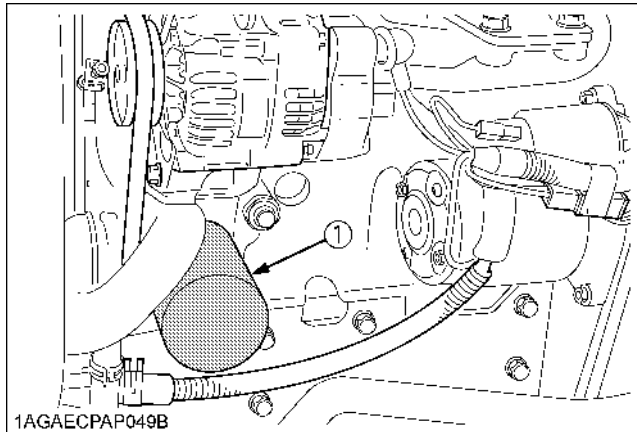


CAUTION

To avoid personal injury:

- Be sure to stop the engine before changing the oil filter cartridge.
- Allow 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 filter by hand an additional 1/2 turn only.
4. After the new filter has been replaced, the engine oil normally decreases a little. Make sure that the engine oil does not leak through the seal and be sure to check the oil level on the dipstick. Then, replenish the engine oil up to the prescribed level.
5. Properly dispose of used oil.



(1) Engine oil filter

IMPORTANT :

- To prevent serious damage to the engine, use only a KUBOTA genuine filter.

■ Changing Engine oil



CAUTION

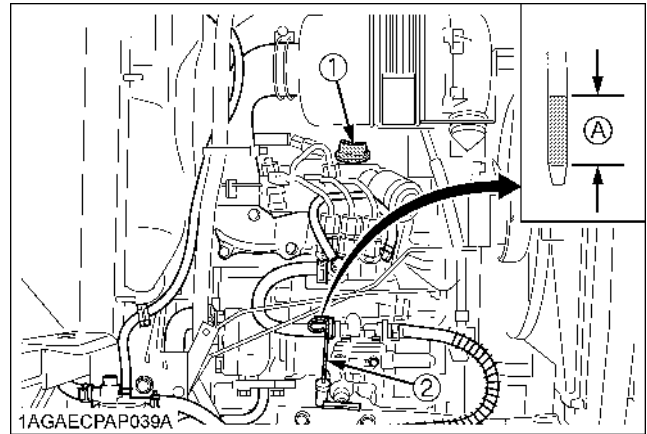
To avoid personal injury:

- Be sure to stop the engine before changing the oil.
- Allow engine to cool down sufficiently, oil can be hot and can burn.

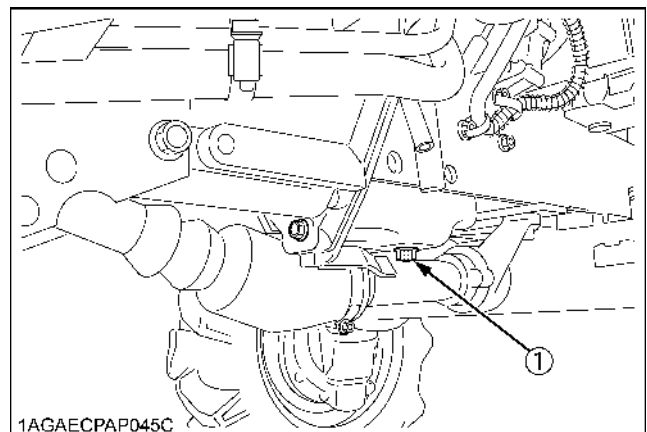
1. To drain the used oil, remove the drain plug at the bottom of the engine and drain the oil completely into the oil pan.
All the used oil can be drained out easily when the engine is still warm.

2. After draining reinstall the drain plug.
3. Fill with the new oil up to the upper notch on the dipstick.
(See "LUBRICANTS" in "MAINTENANCE" section.)

Oil capacity with filter	2.4 L
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(1) Oil inlet (A) Oil level is acceptable within this range
(2) Dipstick



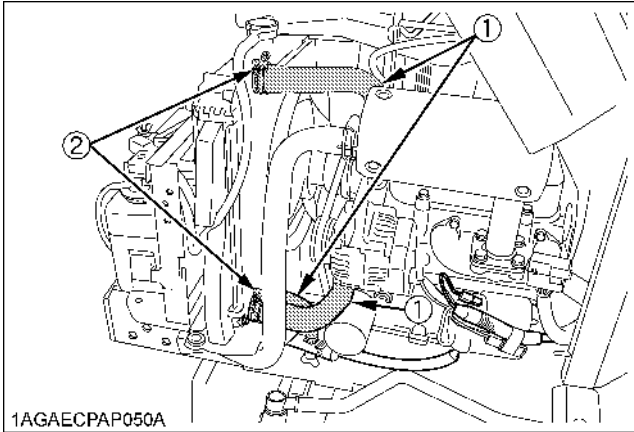
(1) Drain plug

■ Checking Radiator Hose and Clamp

Check to see if radiator hoses are properly fixed every 200 hours of operation or six months, whichever comes first.

1. If hose clamps are loose or water leaks, tighten bands securely.
2. Replace hoses and tighten hose clamps securely, if radiator hoses are swollen, hardened or cracked.

Replace hoses and hose clamps every 2 years or earlier if checked and found that hoses are swollen, hardened or cracked.



(1) Radiator hoses (3 hoses)
 (2) Clamp bands (7 clamps)

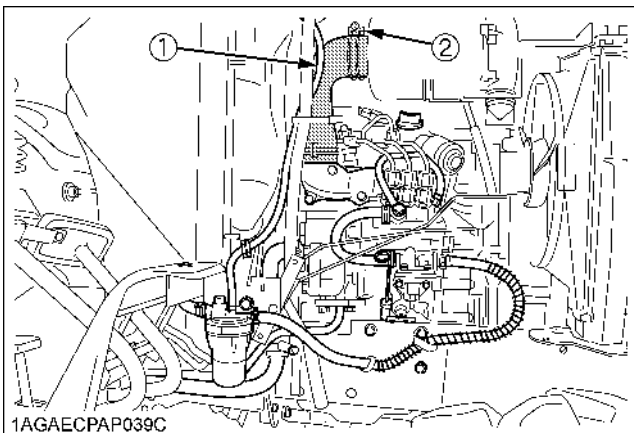
◆ **Precaution at Overheating**

Take the following actions in the event the coolant temperature is nearly or more than the boiling point, what is called "Overheating"

1. Park the tractor in a safe place and keep the engine unloaded idling.
2. Don't stop the engine suddenly, but stop it after about 5 minutes of unloaded idling.
3. Keep yourself well away from the machine for further 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 manual, see "TROUBLESHOOTING" section, and then, start again the engine.

■ **Checking Intake Air Line**

1. Check to see that hoses and hose clamps are tight and not damaged.
2. If hoses and clamps are found worn or damaged, replace or repair them at once.



(1) Hose
 (2) Hose clamps

EVERY 400 HOURS

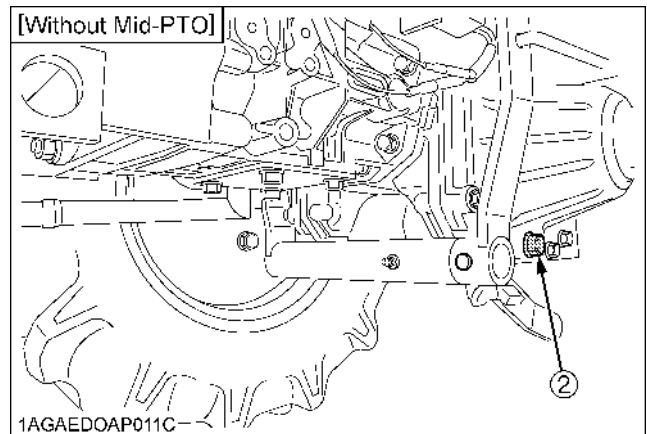
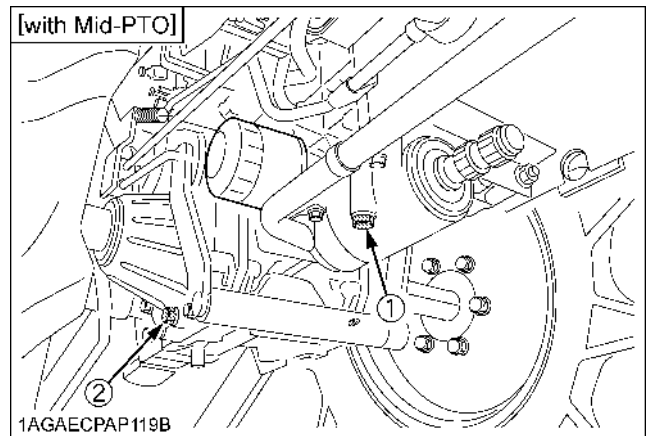
■ **Changing Transmission Fluid/Replacing Hydraulic Oil Filter**

CAUTION

To avoid personal injury:

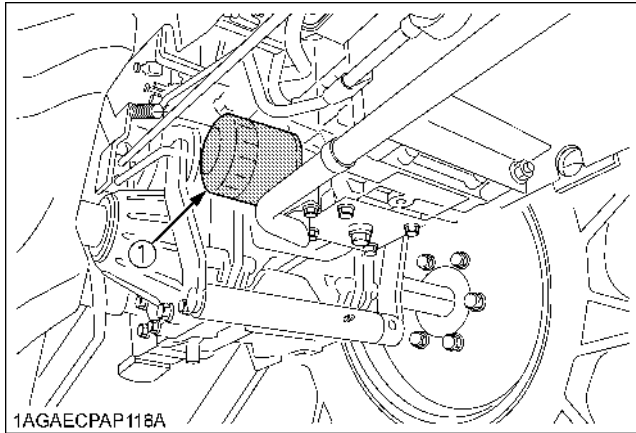
- Be sure to stop the engine before changing the oil filter cartridge.
- Allow engine to cool down sufficiently, oil can be hot and can burn.

1. To drain the used oil, remove the drain plug at the bottom of the transmission case and drain the oil completely into the oil pan.
2. After draining reinstall the drain plug.



(1) Drain plug
 (2) Drain plugs (Both sides)

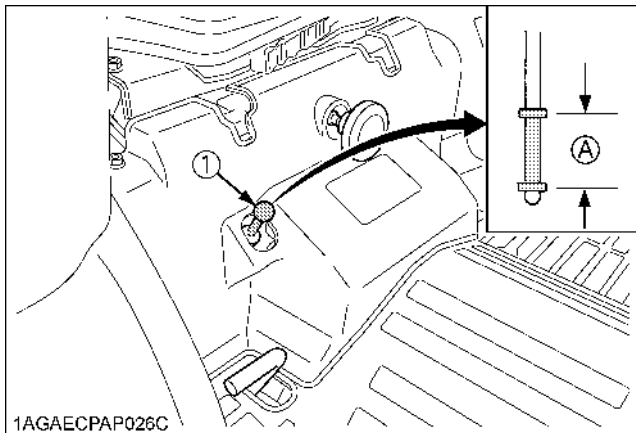
3. Remove the oil filter.



(1) Hydraulic oil filter

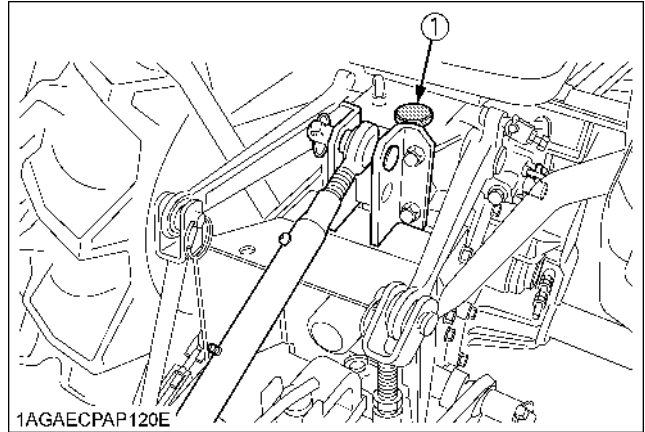
4. Put a film of clean transmission oil on rubber seal of new filter.
5. Tighten the filter quickly until it contacts the mounting surface.
Tighten filter by hand an additional 1/2 turn only.
6. Fill with new KUBOTA SUPER UDT fluid up to the upper notch on the dipstick.
(See "LUBRICANTS" in "MAINTENANCE" section and "Checking Transmission Fluid Level" in "DAILY CHECK" in "PERIODIC SERVICE" section.)

Oil capacity	10.5 L
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(1) Dipstick

(A) Oil level is acceptable within this range.



(1) Oil inlet

7. After running the engine for a few minutes, stop it and check the oil level again; add oil to prescribed level.
8. After the new filter has been replaced, the transmission fluid level will decrease a little. Make sure that the transmission fluid does not leak through the seal, and check the fluid level.
Top off if necessary.
9. Properly dispose of used oil.

IMPORTANT :

- To prevent serious damage to the hydraulic system, use only a KUBOTA genuine filter.
- If the 3-point hitch can not be raised by setting the hydraulic control lever to the UP position after long term storage or when changing the transmission oil, turn steering wheel to the right and left several times to bleed air from the system.
- 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.

■ Replacing Fuel Filter Element

(See "Cleaning Fuel Filter" in "EVERY 100 HOURS" in "PERIODIC SERVICE" section.)

■ Changing Front Axle Case Oil

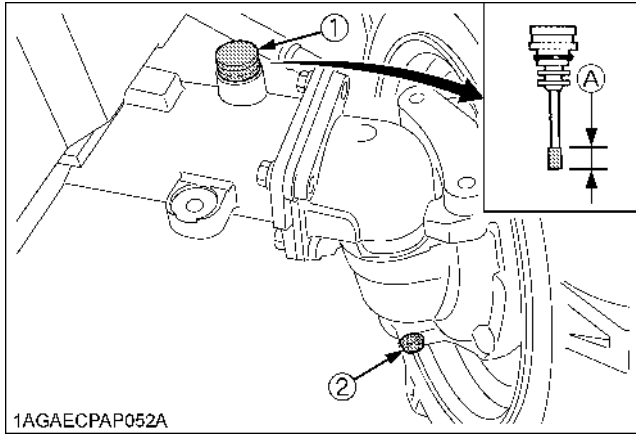
1. Park the tractor on a firm, flat and level surface.
2. To drain the used oil, remove the right and left drain plugs and filling plug at the front axle case and drain the oil completely into the oil pan.
3. After draining, reinstall the drain plugs.
4. Fill with new oil up to the upper notch on the dipstick.
(See "LUBRICANTS" in "MAINTENANCE" section.)

IMPORTANT :

- After ten minutes, check the oil level again; add oil to prescribed level.
5. After filling, reinstall the filling plug.

6. Properly dispose of used oil.

Oil capacity	3.4 L
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1AGAEC PAP052A

(1) Filling plug with dipstick
(2) Drain plug

(A) Oil level is acceptable
within this range

EVERY 800 HOURS

■ Adjusting Engine Valve Clearance

Consult your local KUBOTA Dealer for this service.

EVERY 1500 HOURS

■ Checking Fuel Injection Nozzle Injection Pressure

Consult your local KUBOTA Dealer for this service.

EVERY 3000 HOURS

■ Checking Injection Pump

Consult your local KUBOTA Dealer for this service.

EVERY 1 YEAR

■ Replacing Air Cleaner Element

(See "Cleaning Air Cleaner Element [Single Element Type]" in "EVERY 100 HOURS" in "PERIODIC SERVICE" section.)

■ Replacing Air Cleaner Primary Element and Secondary Element

(See "Cleaning Air Cleaner Primary Element" in "EVERY 100 HOURS" in "PERIODIC SERVICE" section.)

IMPORTANT :

- To prevent serious damage to the engine, use only a KUBOTA genuine filter.

EVERY 2 YEARS

■ Flushing Cooling System and Changing Coolant



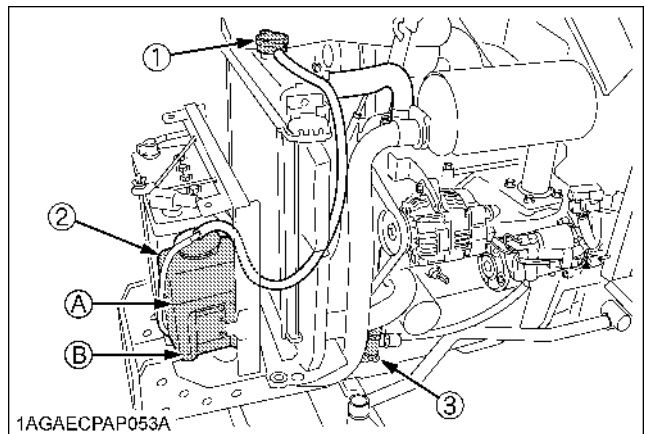
CAUTION

To avoid personal injury:

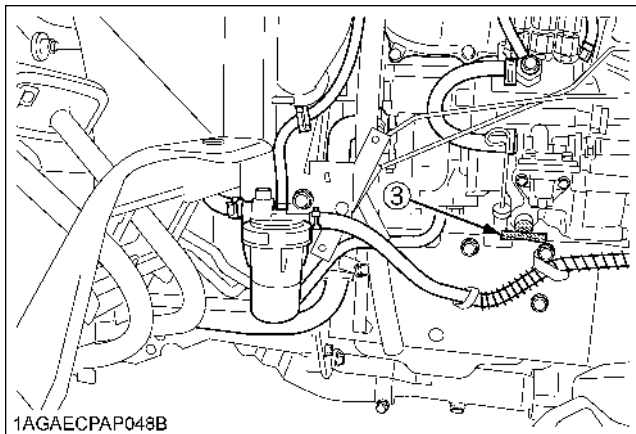
- Do not remove radiator cap while coolant is hot. When cool, slowly rotate cap to the first stop and allow sufficient time for excess pressure to escape before removing the cap completely.

1. Stop the engine, remove the key and let it cool down.
2. To drain the coolant, open the radiator drain cock, and remove radiator cap. The radiator cap must be removed to completely drain the coolant.
3. After all coolant is drained, close the drain cock.
4. Fill with clean soft water and cooling system cleaner.
5. Follow directions of the cleaner instruction.
6. After flushing, fill with clean soft water and anti-freeze until the coolant level is just below the radiator cap. Install the radiator cap securely.
7. Fill with coolant up to the "FULL" mark of recovery tank.
8. Start and operate the engine for few minutes.
9. Stop the engine, remove the key and let cool.
10. Check coolant level of recovery tank and add coolant if necessary.
11. Properly dispose of used coolant.

Coolant capacity (with recovery tank)	3.4 L
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1AGAEC PAP053A



1AGAEC PAP048B

- (1) Radiator cap (A) "FULL"
 (2) Recovery tank (B) "LOW"
 (3) Drain cock

IMPORTANT :

- Do not start engine without coolant.
- Use clean, fresh soft water and anti-freeze to fill the radiator and recovery tank.
- When mixing the anti-freeze with water, the anti-freeze mixing ratio is 50%.
- Securely tighten radiator cap. If the cap is loose or improperly fitted, water may leak out and the engine could overheat.

■Anti-Freeze**CAUTION**

To avoid personal injury:

- When using antifreeze, put on some protection such as rubber gloves (Antifreeze contains poison.).
- If should drink antifreeze, throw up at once and take medical attention.
- 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 reaction causing 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 some container underneath the engine body.
- Do not pour waste onto the grounds, down a drain, or into any water source.
- Also, observe the relevant environmental protection regulations when disposing of antifreeze.

If it freezes, coolant can damage the cylinders and radiator. If the ambient temperature falls below 0 °C or before a long-term storage, let out cooling water completely, or mix fresh water with long-life coolant and fill the radiator and recovery tank with the mixture.

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
Put the LLC in cooling water in the percentage (%) for a target temperature. When mixing, stir it up well, and then fill 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.

IMPORTANT :

- When the antifreeze is mixed with water, the antifreeze mixing ratio must be less than 50%.

Vol % Anti-freeze	Freezing Point	Boiling Point*
	°C	°C
40	-24	106
50	-37	108

* At 1.013 x 10⁵Pa (760mmHg) 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
 - (1) Add only water if the mixture reduces in amount by evaporation.
 - (2) If there is a mixture leak, add the LLC of the same manufacturer and type in the same mixture percentage.
 - * Never add any long-life coolant of 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. Be sure to change the coolant every 2 years.

NOTE :

- The above data represent industry standards that necessitate a minimum glycol content in the concentrated antifreeze.
- When the coolant level drops due to evaporation, add water only to keep the antifreeze mixing ratio less than 50%. In case of leakage, add antifreeze and water in the specified mixing ratio before filling in to the radiator.

■ Replacing Radiator Hose (Water pipes)

Replace the hoses and clamps.

(See "Checking Radiator Hose and Clamp" in "EVERY 200 HOURS" in "PERIODIC SERVICE" section.)

■ Replacing Fuel Lines

Consult your local KUBOTA Dealer for this service.

■ Replacing Intake Air Line

Consult your local KUBOTA Dealer for this service.

SERVICE AS REQUIRED

■ Bleeding Fuel System

Air must be removed:

1. When the fuel filter or lines are removed.
2. When the tank is completely empty.
3. After the tractor has not been used for a long period of time.

◆ Bleeding procedure is as follows:

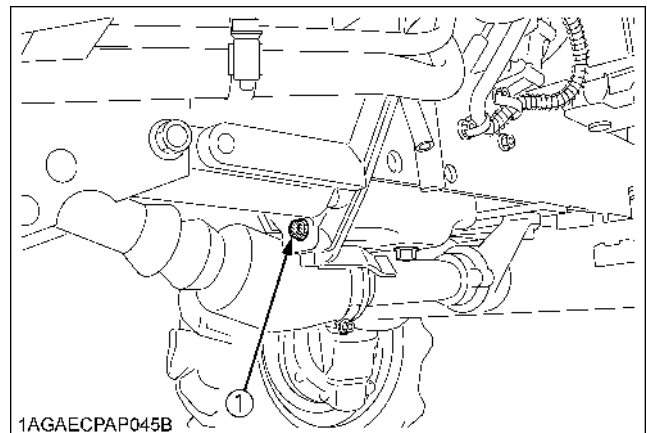
1. Fill the fuel tank with fuel.
2. Start the engine and run for about 30 seconds, and then stop the engine.

■ Draining Clutch Housing Water

The tractor is equipped with a drain plug under the clutch housing.

After operating in rain, snow or tractor has been washed, water may get into the clutch housing.

Remove the drain plug and drain the water, then install the plug again.



(1) Water drain plug

■ Replacing Fuse

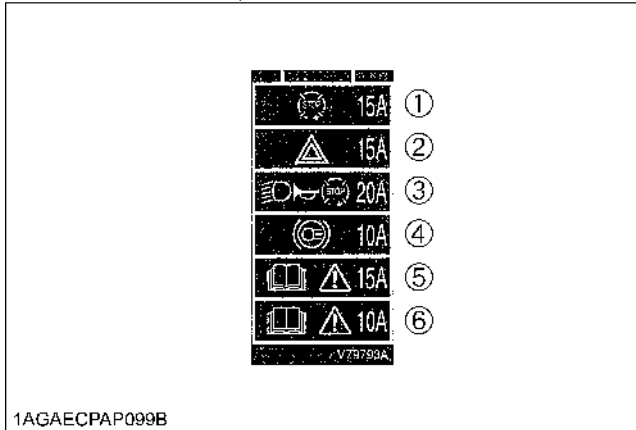
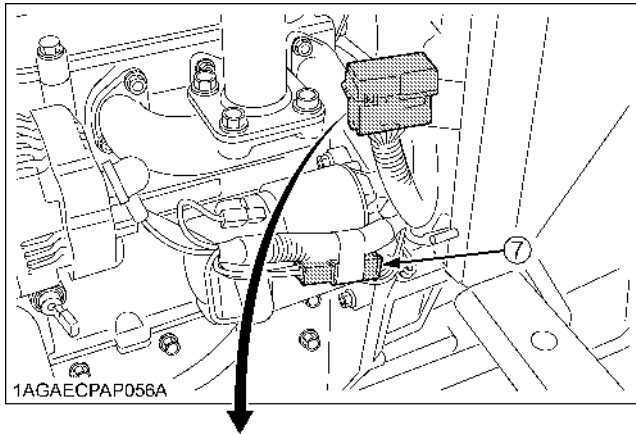
The tractor electrical system is protected from potential damage by fuses.

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. Refer to the "TROUBLESHOOTING" section of this manual or your local KUBOTA Dealer for specific information dealing with electrical problems.



◆ Protected circuit

FUSE No.	CAPACITY (A)	Protected circuit
(1)	15 A	Key stop
(2)	15 A	Hazard
(3)	20 A	Head light, Horn, Key stop
(4)	10 A	Brake
(5)	15 A	Auxiliary (Reserve)
(6)	10 A	Instrument cluster
(7)	Slow blow fuse 50 A	Check circuit against wrong battery connection

■ Replacing Light Bulb

1. Head lights.
Take the bulb out of the light body and replace with a new one.
2. Other lights
Detach the lens and replace the bulb.

Light	Capacity
Head light	H8 - 35 W
Tail light / Brake stop light	5 W / 21 W
Turn signal / hazard light	21 W
Instrument panel light	1.7 W
Hazard light switch indicator	0.6 W
Work light	---
Front position light	5 W
Number plate light	5 W

STORAGE



CAUTION

To avoid personal injury:

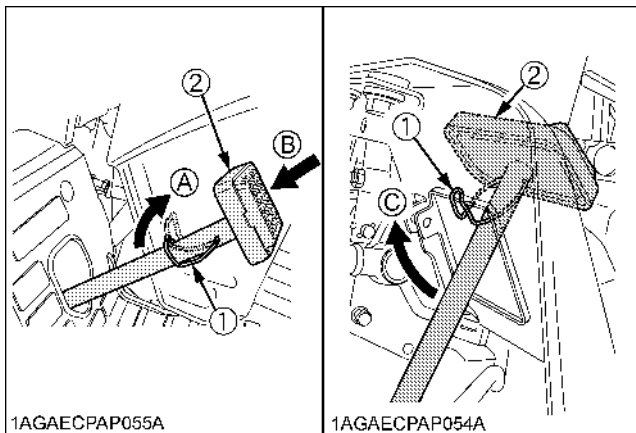
- Do not clean the machine while the engine is running.
- To avoid the danger of exhaust fume poisoning, do not operate the engine in a closed building without proper ventilation.
- When storing, remove the key from the key switch to avoid unauthorized persons from operating the tractor and getting injured.

TRACTOR STORAGE

If you intend to store your tractor for an extended period of time, follow the procedures outlined below.

These procedures will insure 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 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 five minutes.
6. Pull the engine stop knob all the way out.
7. Keep the clutch disengaged. If the clutch is left engaged for a long period of time, the clutch plate may rust, making clutch disengagement impossible at the next operation.



(1) Clutch pedal latch
(2) Clutch pedal

(A) "PULL"
(B) "DEPRESS"
(C) "LATCH"

8. With all implements lowered to the ground, coat any exposed hydraulic cylinder piston rods with grease.

9. Remove the battery from the tractor. Store the battery following the battery storage procedures. (See "Battery" in "EVERY 100 HOURS" in "PERIODIC SERVICE" section.)
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 four tires are off the ground. Keep the tires out of direct sunlight and extreme heat.

IMPORTANT :

- When washing the tractor, be sure to stop the engine. Allow sufficient time for the engine to cool 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 they are low.
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 it is fully charged.
4. Check the fan belt tension.
5. Check all fluid levels (engine oil, transmission/hydraulic oil, engine coolant and any attached implements).
6. Start the engine. Observe all gauges. If all gauges are functioning properly and reading normal, move the tractor outside. Once outside, park the tractor and let the engine idle for at least five minutes. Shut the engine off and walk around tractor and make a visual inspection looking for evidence of oil or water leaks.
7. 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.
8. Push the clutch pedal latch into the pedal shaft and fix it during travel or operation.

TROUBLESHOOTING

ENGINE TROUBLESHOOTING

If something is wrong with the engine, refer to the table below for the cause and its corrective measure.

Trouble		Cause	Countermeasure
Engine is difficult to start or won't start.		<ul style="list-style-type: none"> No fuel flow. 	<ul style="list-style-type: none"> Check the fuel tank and the fuel filter. Replace filter if necessary.
		<ul style="list-style-type: none"> Air or water is in the fuel system. 	<ul style="list-style-type: none"> Check to see if the fuel line coupler bolt and nut are tight. Bleed the fuel system (See "Bleeding Fuel System" in "SERVICE AS REQUIRED" in "PERIODIC SERVICE" section.)
		<ul style="list-style-type: none"> In winter, oil viscosity increases, and engine revolution is slow. 	<ul style="list-style-type: none"> Use oils of different viscosities, depending on ambient temperatures. Use engine block heater. (Option)
		<ul style="list-style-type: none"> Battery becomes weak and the engine does not turn over quick enough. 	<ul style="list-style-type: none"> Clean battery cables & terminals. Charge the battery. In cold weather, always remove the battery from the engine, charge and store it indoors. Install it on the tractor only when the tractor is going to be used.
Insufficient engine power.		<ul style="list-style-type: none"> Insufficient or dirty fuel. The air cleaner is clogged. 	<ul style="list-style-type: none"> Check the fuel system. Clean or replace the element.
Engine stops suddenly.		<ul style="list-style-type: none"> Insufficient fuel. 	<ul style="list-style-type: none"> Refuel. Bleed the fuel system if necessary.
Exhaust fumes are colored.	Black	<ul style="list-style-type: none"> Fuel quality is poor. Too much oil. The air cleaner is clogged. 	<ul style="list-style-type: none"> Change the fuel and fuel filter. Check the proper amount of oil. Clean or replace the element.
	Blue white	<ul style="list-style-type: none"> The inside of exhaust muffler is dumped with fuel. Injection nozzle trouble. Fuel quality is poor. 	<ul style="list-style-type: none"> Heat the muffler by applying load to the engine. Check the injection nozzle. Change the fuel and fuel filter.
Engine overheats		<ul style="list-style-type: none"> Engine overloaded 	<ul style="list-style-type: none"> Shift to lower gear or reduce load.
		<ul style="list-style-type: none"> Low coolant level 	<ul style="list-style-type: none"> Fill cooling system to the correct level; check radiator and hoses for loose connections or leaks.
		<ul style="list-style-type: none"> Loose or defective fan belt 	<ul style="list-style-type: none"> Adjust or replace fan belt.
		<ul style="list-style-type: none"> Dirty radiator core or grille screens 	<ul style="list-style-type: none"> Remove all trash.
		<ul style="list-style-type: none"> Coolant flow route corroded 	<ul style="list-style-type: none"> Flush cooling system.

If you have any questions, consult your local KUBOTA Dealer.

OPTIONS

Consult your local KUBOTA Dealer for further detail.

- Front end weights
For front ballast
- Mounting Kit (Front end weights)
To mount Front end weights
- Drawbar
- Working Light
- Front Hitch
- Beacon Switch
- Rear ROPS

APPENDICES

MAXIMUM MASSES

■ Maximum Permissible Load of The Tire (Applicable Only in Running on The Public Road) B6 (Without ROPS)

Tire combination 1.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	4.5-10	7-16	-	-
Maximum permissible load of the tire	205	485	-	-
Maximum axle load according to the tire specification	410	970	1300	736 - 750
Minimum limit percentages	25%	68%	-	-

Tire combination 2.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	5-12	8-16	-	-
Maximum permissible load of the tire	220	475	-	-
Maximum axle load according to the tire specification	440	950	1300	724 - 738
Minimum limit percentages	27%	66%	-	-

Tire combination 3.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	6-12B	9.5-16	-	-
Maximum permissible load of the tire	290	595	-	-
Maximum axle load according to the tire specification	580	1040(**)	1300	708 - 722
Minimum limit percentages	20%	55%	-	-

Tire combination 4.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	20x8.00-10	212/80D-15	-	-
Maximum permissible load of the tire	400	435	-	-
Maximum axle load according to the tire specification	700(*)	870	1300	728 - 742
Minimum limit percentages	33%	46%	-	-

Tire combination 5.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	205x8.00-10	29x12.00-15	-	-
Maximum permissible load of the tire	410	680	-	-
Maximum axle load according to the tire specification	700(*)	1040(**)	1300	722 - 736
Minimum limit percentages	20%	46%	-	-

*) Technically permissible weight of the front axle is 700kg no matter which the tire size.

**) 80% of the 1300kg which is the maximum permissible weight of the tractor.

B7 (With ROPS)

Tire combination 1.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	4.5-10	7-16	-	-
Maximum permissible load of the tire	205	485	-	-
Maximum axle load according to the tire specification	410	970	1300	696 - 710
Minimum limit percentages	25%	68%	-	-

Tire combination 2.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	5-12	8-16	-	-
Maximum permissible load of the tire	220	475	-	-
Maximum axle load according to the tire specification	440	950	1300	684 - 698
Minimum limit percentages	27%	66%	-	-

Tire combination 3.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	6-12B	9.5-16	-	-
Maximum permissible load of the tire	290	595	-	-
Maximum axle load according to the tire specification	580	1040(**)	1300	670 - 684
Minimum limit percentages	20%	55%	-	-

Tire combination 4.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	20x8.00-10	212/80D-15	-	-
Maximum permissible load of the tire	400	435	-	-
Maximum axle load according to the tire specification	700(*)	870	1300	688 - 702
Minimum limit percentages	33%	46%	-	-

Tire combination 5.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	205x8.00-10	29x12.00-15	-	-
Maximum permissible load of the tire	410	680	-	-
Maximum axle load according to the tire specification	700(*)	1040(**)	1300	684 - 698
Minimum limit percentages	20%	46%	-	-

Tire combination 6.

kg

	Front tire	Rear tire	Technically permissible maximum laden weight	Tractor payload
Tire size	23x8.50-12	270/75-16	-	-
Maximum permissible load of the tire	506	620	-	-
Maximum axle load according to the tire specification	700(*)	1040(**)	1300	644 - 658
Minimum limit percentages	20%	46%	-	-

*) Technically permissible weight of the front axle is 700kg no matter which the tire size.

**) 80% of the 1300kg which is the maximum permissible weight of the tractor.

■ Trailer Load Capacity

B6 (Without ROPS)

	Height above ground h [mm]					Distance from the vertical plane passing through the axis of the rear axle c [mm]	Maximum static vertical load / technically permissible mass on the coupling point S [daN(kg)]
	4.50-10	5-12	6-12B	20x8.00-10	20.5x8.00-10		
Front tyre	4.50-10	5-12	6-12B	20x8.00-10	20.5x8.00-10		
Rear tyre	7-16	8-16	9.5-16	212/80D-15	29x12.00-15		
Drawbar (B2400)	354	378	411	344	372	326	375
Drawbar (CUNA KB2)	354	378	411	344	372	326	375
Drawbar (AL-KO AK 303 K)	639	662	696	628	657	384	335

B7 (With ROPS)

	Height above ground h [mm]						Distance from the vertical plane passing through the axis of the rear axle c [mm]	Maximum static vertical load / technically permissible mass on the coupling point S [daN(kg)]
	4.50-10	5-12	6-12B	20x8.00-10	20.5x8.00-10	23x8.50-12		
Front tyre	4.50-10	5-12	6-12B	20x8.00-10	20.5x8.00-10	23x8.50-12		
Rear tyre	7-16	8-16	9.5-16	212/80D-15	29x12.00-15	270/75-16		
Drawbar (B2400)	354	378	411	344	372	382	326	355
Drawbar (CUNA KB2)	354	378	411	344	372	382	326	355
Drawbar (AL-KO AK 303 K)	639	662	696	628	657	667	384	140

Drawbar (B2400), Drawbar (CUNA KB2), Drawbar (AL-KO AK 303 K)

(unit : kg)

	Permissible towable masses	Total technically permissible mass of the tractor-trailer combination
Unbraked towable mass	1000	2300
Independently braked towable mass	2000	3300
Inertia-braked towable mass	2000	3300
Towable mass when fitted with hydraulic or pneumatic braking	-	-

INDEX

3-point Hitch Lowering Speed	36	Gauges, Meter and Easy Checker(TM)	51
Air Cleaner Element	63	Grease Fittings	52
Air Cleaner Element [Single Element Type] ...	55	Grill and Radiator Screen	51
Air Cleaner Primary Element		Hand Throttle Lever	23
[Double Element Type](if equipped)	56	Head Light Switch	19
Air Cleaner Primary Element		Head Light, Hazard Light etc.	51
and Secondary Element	63	Holes of lifting rods and lower links	33
Anti-Freeze	64	Hood	47
Battery Condition	54	Horn Button	20
Bleeding Fuel System	65	Hourmeter / Tachometer	25
Block Heater (Option)	13	Hydraulic Block Type Outlet	36
Brake Pedal	58	Hydraulic Control	35
Brake Pedals (Right and Left)	21	Hydraulic Control Unit Use Reference Chart.	38
Brake Pedals and Clutch Pedal	51	Immediately Stop the Engine if:	24
Check Chains	34	Implement Lowering Limit	35
Checking and Refueling	49	Inflation Pressure	39
Clutch Housing Water	65	Injection Pump	63
Clutch Pedal	22	Intake Air Line	61
Clutch Pedal	58	Intake Air Line	65
Coolant Level	50	Lifting Rod (Right)	33
Coolant Temperature Gauge	25	Light Bulb	66
Cooling System and Coolant	63	Main Gear Shift Lever	
Differential Lock	26	& Range Gear Shift Lever (L-H)	22
Directions for Use of Power Steering	27	Maximum Masses	43
Do not Operate the Tractor		Maximum Permissible Load of The Tire	
at Full Speed for the First 50 Hours	16	(Applicable Only in Running	
Drawbar(if equipped)	33	on The Public Road)	70
Dual Tires	39	Movable Parts	52
Easy Checker (TM)	24	Oil for New Tractors	16
Electrical Wiring and Battery Cables	52	Operating on Slopes or Rough Terrain	27
Engine oil	60	Operating the Tractor on a Road	26
Engine Oil Filter	60	Operator's Seat	18
Engine Oil Level	49	Parking	26
Engine Side Cover	48	Parking Brake	23
Engine Start System	53	Parking Brake	51
Engine Valve Clearance	63	Parking Brake	59
Fan Belt Tension	57	PTO Gear Shift lever	29
Foot Throttle	23	PTO shaft Cover and Shaft Cap	30
Front Axle Case Oil	62	Radiator Hose (Water pipes)	65
Front Ballast	42	Radiator Hose and Clamp	60
Front Grille	47	Rear Ballast	43
Front Wheel Drive Lever	23	Rear outlet	37
Front Wheels	40	Rear Wheels	41
Fuel Filter	56	Seat Belt	19
Fuel Filter Element	62	Seat Belt and ROPS (if equipped)	51
Fuel Gauge	24	Stationary PTO	30
Fuel Injection Nozzle Injection Pressure	63	Stopping	24
Fuel Line	59	To Fold the ROPS	16
Fuel Lines	65	To Raise the ROPS to Upright Position	17
Fuse	66	Top Link	33
		Top Link Mounting Holes	33
		Tractor Lights	21

Trailer Electrical Outlet	27
Trailer Load Capacity	73
Transmission Fluid / Hydraulic Oil Filter	61
Transmission Fluid Level.....	50
Transport the Tractor Safely.....	27
Turn Signal / Hazard Light Switch	20
Walk Around Inspection	48
Warm-up Transmission Oil at Low Ambient Temperatures	14
Wheel Bolt Torque.....	54