

Product: Kubota M6800 M8200 M9000 Service Manual

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**WORKSHOP MANUAL
TRACTOR**

M6800, M8200, M9000

Kubota

KiSC issued 10, 2018 A

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TO THE READER

This Workshop Manual has been prepared to provide servicing personnel with information on the mechanism, service and maintenance of KUBOTA Tractors M6800, M8200 and M9000. It is divided into two parts, "Mechanism" and "Servicing" for each section.

■ Mechanism

Information on the construction and function are included. This part should be understood before proceeding with troubleshooting, disassembling and servicing.

■ Servicing

Under the heading "General" section comes general precautions, check and maintenance and special tools. Other section, there are troubleshooting, servicing specification lists, checking and adjusting, disassembling and assembling, and servicing which cover procedures, precautions, factory specifications and allowable limits.

All information, illustrations and specifications contained in this manual are based on the latest production information available at the time of publication.

The right is reserved to make changes in all information at any time without notice.

January 2000

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SAFETY FIRST

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and decals 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 repair or use this unit.

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

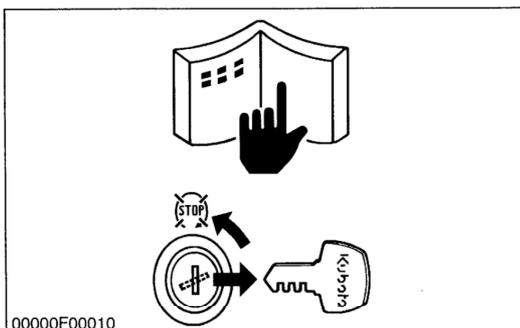
 **WARNING** : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **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.

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BEFORE SERVICING AND REPAIRING

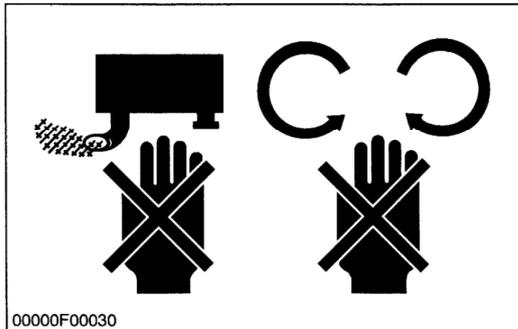
- (1) Read all instructions and safety instructions in this manual and on your machine safety decals.
- (2) Clean the work area and machine.
- (3) Park the machine on a firm and level ground, and set the parking brake.
- (4) Lower the implement to the ground.
- (5) Stop the engine, and remove the key.
- (6) Disconnect the battery negative cable.
- (7) Hang a "DO NOT OPERATE" tag in operator station.

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**SAFETY STARTING**

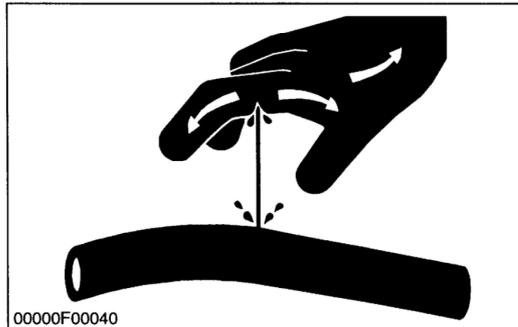
- (1) Do not start the engine by shorting across starter terminals or bypassing the safety start switch.
- (2) Do not alter or remove any part of machine safety system.
- (3) Before starting the engine, make sure that all shift levers are in neutral positions or in disengaged positions.
- (4) Never start the engine while standing on ground. Start the engine only from operator's seat.

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**SAFETY WORKING**

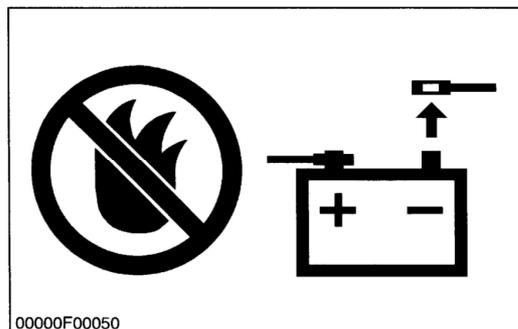
- (1) Do not work on the machine while under the influence of alcohol, medication, or other substances or while fatigued.
- (2) Wear close fitting clothing and safety equipment appropriate to the job.
- (3) Use tools appropriate to the work. Makeshift tools, parts, and procedures are not recommended.
- (4) When servicing is performed together by two or more persons, take care to perform all work safely.
- (5) Do not work under the machine that is supported solely by a jack. Always support the machine by safety stands.
- (6) Do not touch the rotating or hot parts while the engine is running.
- (7) Never remove the radiator cap while the engine is running, or immediately after stopping. Otherwise, hot water will spout out from radiator. Only remove radiator cap when cool enough to touch with bare hands. Slowly loosen the cap to first stop to relieve pressure before removing completely.
- (8) Escaping fluid (fuel or hydraulic oil) under pressure can penetrate the skin causing serious injury. Relieve pressure before disconnecting hydraulic or fuel lines. Tighten all connections before applying pressure.

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**AVOID FIRES**

- (1) Fuel is extremely flammable and explosive under certain conditions. Do not smoke or allow flames or sparks in your working area.
- (2) To avoid sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.
- (3) Battery gas can explode. Keep sparks and open flame away from the top of battery, especially when charging the battery.
- (4) Make sure that no fuel has been spilled on the engine.

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SAFETY DECALS

- The following safety decals are installed on the machine. If a decal becomes damaged, illegible or is not on the machine, replace it. The decal part number is listed in the parts list.

① Part No. TA040-4965-2



⚠ DANGER

TO AVOID POSSIBLE INJURY OR DEATH FROM A MACHINE RUNAWAY.

1. 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.
2. Start engine only from operator's seat with transmission and PTO OFF. Never start engine while standing on the ground.

⑤ Part No. 3A111-9554-1

⚠ WARNING

Never modify or repair a ROPS because welding, grinding, drilling or cutting any portion may weaken the structure.

⚠ CAUTION

TO AVOID INJURY WHEN RAISING OR FOLDING ROPS:

- 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.

② Part No. 3A111-9848-1



⚠ WARNING

TO AVOID INJURY OR DEATH FROM ROLL-OVER:

- Keep Roll-Over Protective Structures (ROPS) in the upright and locked position.
- Fasten SEAT BELT before operating.

THERE IS NO OPERATOR PROTECTION WHEN THE ROPS IS IN THE FOLDED POSITION.

- Check the operating area and fold the ROPS only when absolutely necessary.
- Do not wear SEAT BELT if ROPS is folded.
- Raise and lock ROPS as soon as vertical clearance allows.
- Read ROPS related instructions and warnings.

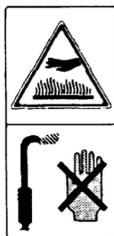
③ Part No. TA040-4935-1

⚠ WARNING

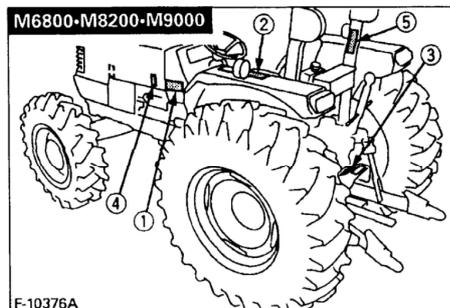
TO AVOID PERSONAL INJURY:

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

④ Part No. 32310-4958-1
Do not touch hot surface like muffler, etc.



⑥ Part No. 6C040-4741-2



① Part No. 35260-3491-3

CAUTION

TO AVOID PERSONAL INJURY:

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

② Part No. 32751-4958-1
Stay clear of engine fan and fanbelt.



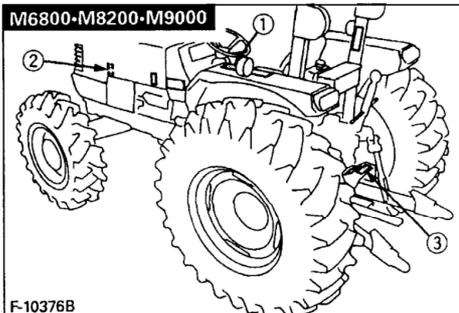
③ Part No. TA040-4959-3



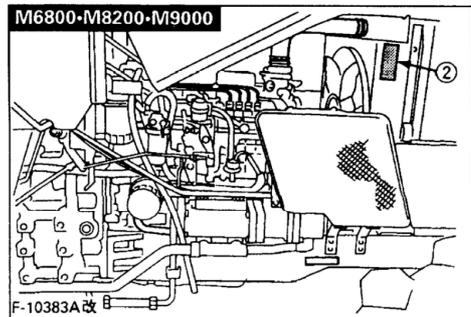
WARNING

TO AVOID PERSONAL INJURY:

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

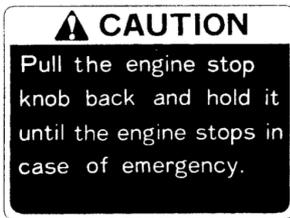


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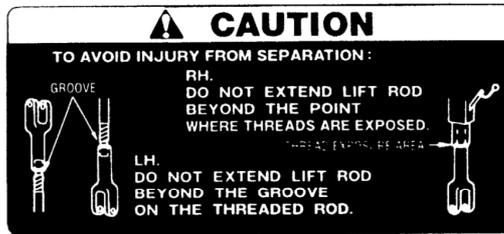


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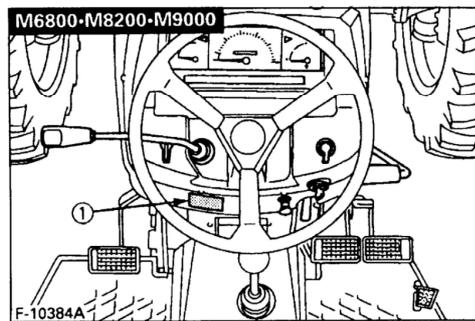
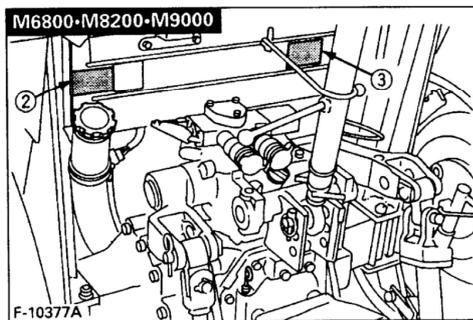
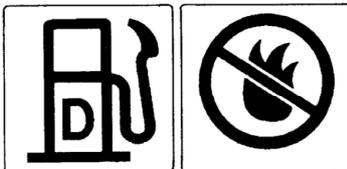
① Part No. 35080-6528-2



③ Part No. 3A111-9856-3



② Part No. TA040-4956-2



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CARE OF DANGER, WARNING AND CAUTION LABELS

1. Keep danger, warning and caution labels clean and free from obstructing material.
2. Clean danger, warning and caution labels with soap and water, dry with a soft cloth.
3. Replace damaged or missing danger, warning and caution labels with new labels from your local KUBOTA Dealer.
4. If a component with danger, warning and caution labels as the replaced component.
5. Mount new danger, warning and caution labels by applying on a clean dry surface and pressing any bubbles to outside edge.

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SPECIFICATIONS

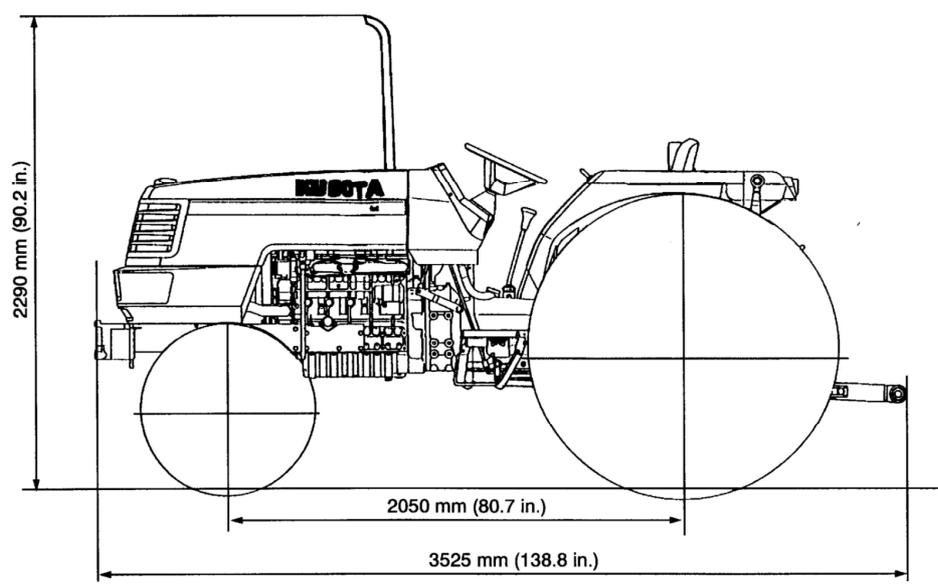
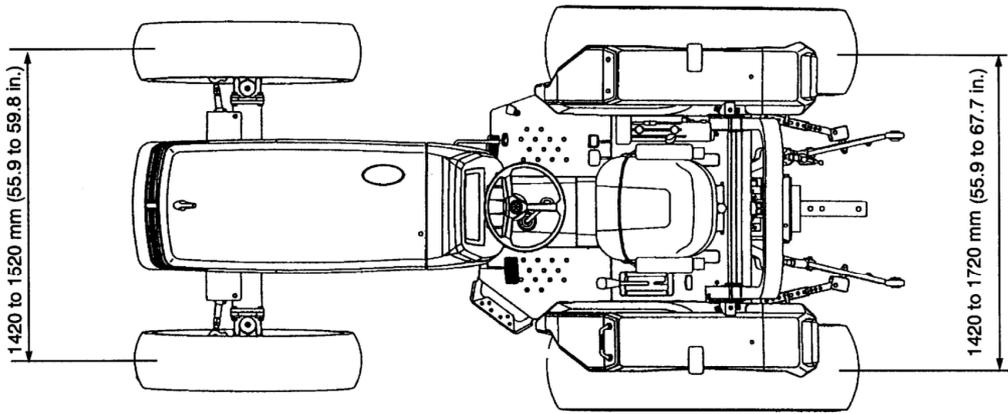
Model		M6800	M8200	M9000	
		4WD	4WD	4WD	
Engine	Model	V3300-E	V3300-TE	V3300-TIE	
	Type	Vertical, water-cooled, 4-cycle diesel engine			
	Number of cylinders	4			
	Total displacement	3318 cm ³ (202.5 cu.in.)			
	Bore and stroke	98 × 110 mm (3.9 × 4.3 in.)			
	Net power	50.8 kW (68 HP)*	61.2 kW (82 HP)*	67.2 kW (90 HP)*	
	PTO power (factory observed)	46.3 kW (62 HP)* /2600 min ⁻¹ (rpm)	54.5 kW (73 HP)* /2600 min ⁻¹ (rpm)	59.7 kW (80 HP)* /2600 min ⁻¹ (rpm)	
	Maximum torque	235 N·m (173.3 ft-lbs) /1300 to 1500 min ⁻¹ (rpm)	285 N·m (210.2 ft-lbs) /1300 to 1500 min ⁻¹ (rpm)	311 N·m (229.4 ft-lbs) /1400 to 1600 min ⁻¹ (rpm)	
	Battery capacity	12 V, CCA1000A			
	Fuel	Diesel fuel No. 1 [below -10 °C (14 °F)], Diesel fuel No. 2 [above -10 °C (14 °F)]			
	Fuel tank capacity	65 L (17.2 U.S.gal.)	90 L (23.8 U.S.gal.)		
	Engine oil capacity	10.7 L (11.3 U.S.qts.)			
	Coolant capacity	8.5 L (9.0 U.S.qts.)	9.0 L (9.5 U.S.qts.)		
	Dimensions	Overall length	3525 mm (138.8 in.)	3805 mm (149.8 in.)	3845 mm (151.4 in.)
Overall width (Minimum tread)		1860 mm (73.2 in.)	1980 mm (78.0 in.)		
Overall height		2290 mm (90.2 in.)	2330 mm (91.7 in.)	2350 mm (92.5 in.)	
Wheel base		2050 mm (80.7 in.)	2250 mm (88.6 in.)		
Tread		Front	1420 to 1520 mm (55.9 to 59.8 in.)	1420 to 1520 mm (55.9 to 59.8 in.)	1520 to 1620 mm (59.8 to 63.8 in.)
		Rear	1420 to 1720 mm (55.9 to 67.7 in.)	1520 to 1920 mm (59.8 to 75.6 in.)	
Minimum ground clearance	430 mm (16.9 in.) (COVER TANK)	430 mm (16.9 in.) (BRACKET DRAWBAR)	450 mm (17.7 in.) (BRACKET DRAWBAR)		
Weight		2345 kg (5171 lbs)	2725 kg (6009 lbs)	2785 kg (6141 lbs)	
Travelling system	Standard tire size	Front	9.5-24	11.2-24	
		Rear	16.9-30	18.4-30	
	Clutch	Dry, Single plate			
	Steering	Hydrostatic power steering			
	Braking system	Multiple Wet disc mechanical			
Differential	Bevel gears with differential lock (Front, Rear)				
Hydraulic system	Hydraulic control system	Position, draft and mix control			
	Pump capacity	41.3 L (43.6 U.S.qts.)/min.			
	Three point hitch	Category I & II	Category II		
	Maximum lifting force	At lifting points	2050 kg (4550 lbs.)	2500 kg (5560 lbs.)	
		24.in. behind lifting point	1500 kg (3307 lbs.)	2100 kg (4630 lbs.)	
Remote hydraulic control	One remote valve				
System pressure	19.1 MPa (195 kgf/cm ²)	19.6 MPa (200 kgf/cm ²)			
PTO	Live PTO (Indipendent)	Direction of turning	Clockwise, viewed from tractor rear		
	Standard PTO	540 min ⁻¹ (rpm) at 2295 engine min ⁻¹ (rpm)	540 min ⁻¹ (rpm) at 2205 engine min ⁻¹ (rpm)		

NOTE : * Manufacturer's estimate The company reserves the right to change the specifications without notice.

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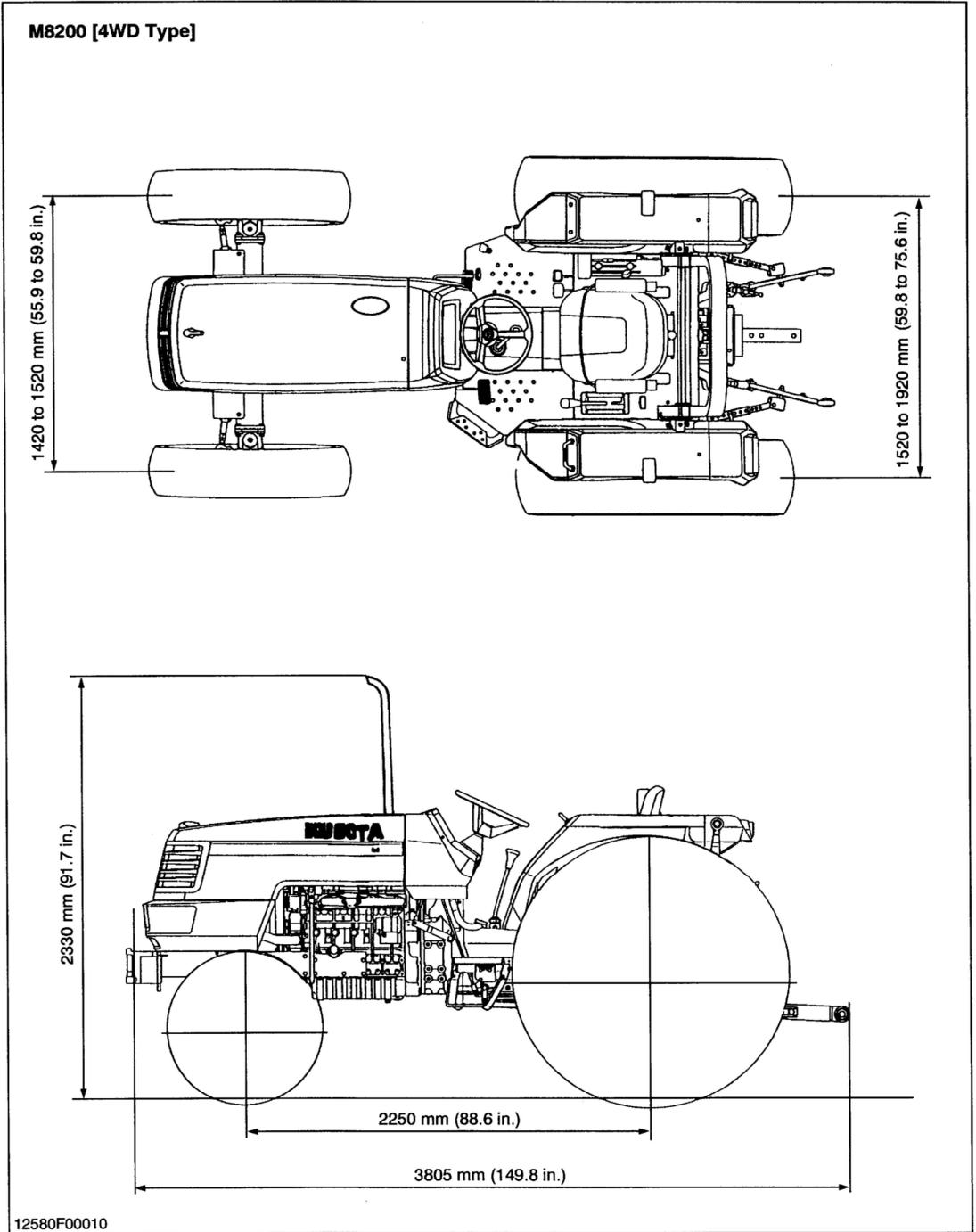
DIMENSIONS

M6800 [4WD Type]

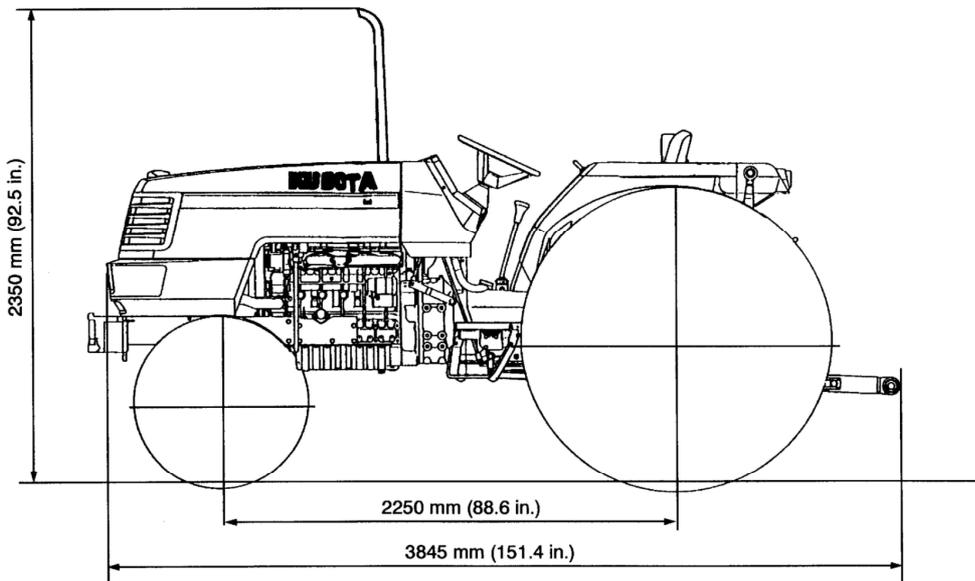
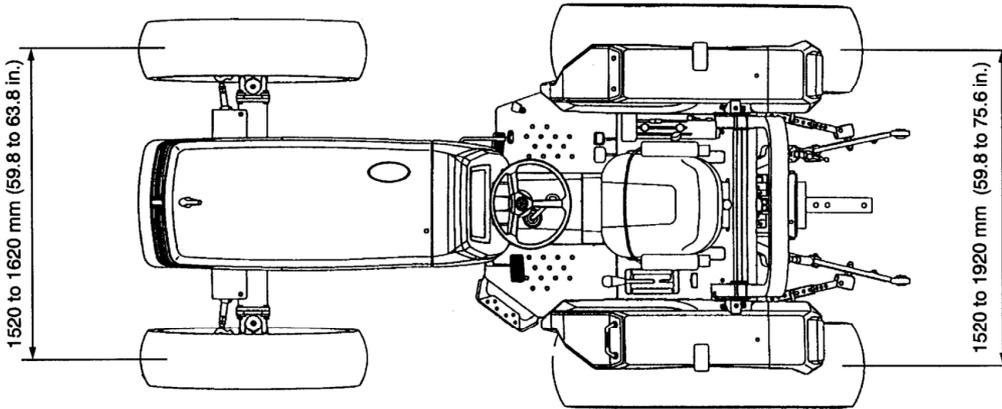


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M9000 [4WD Type]



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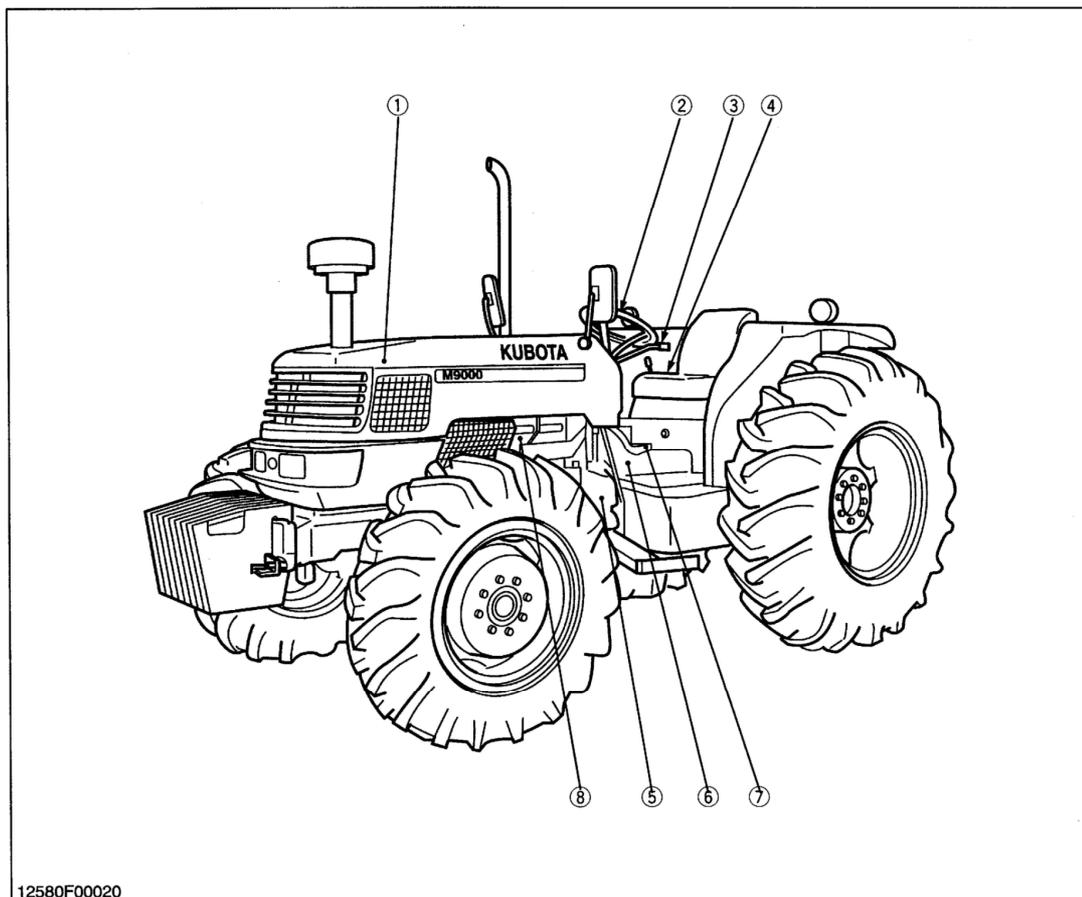
G GENERAL

G GENERAL

GENERAL

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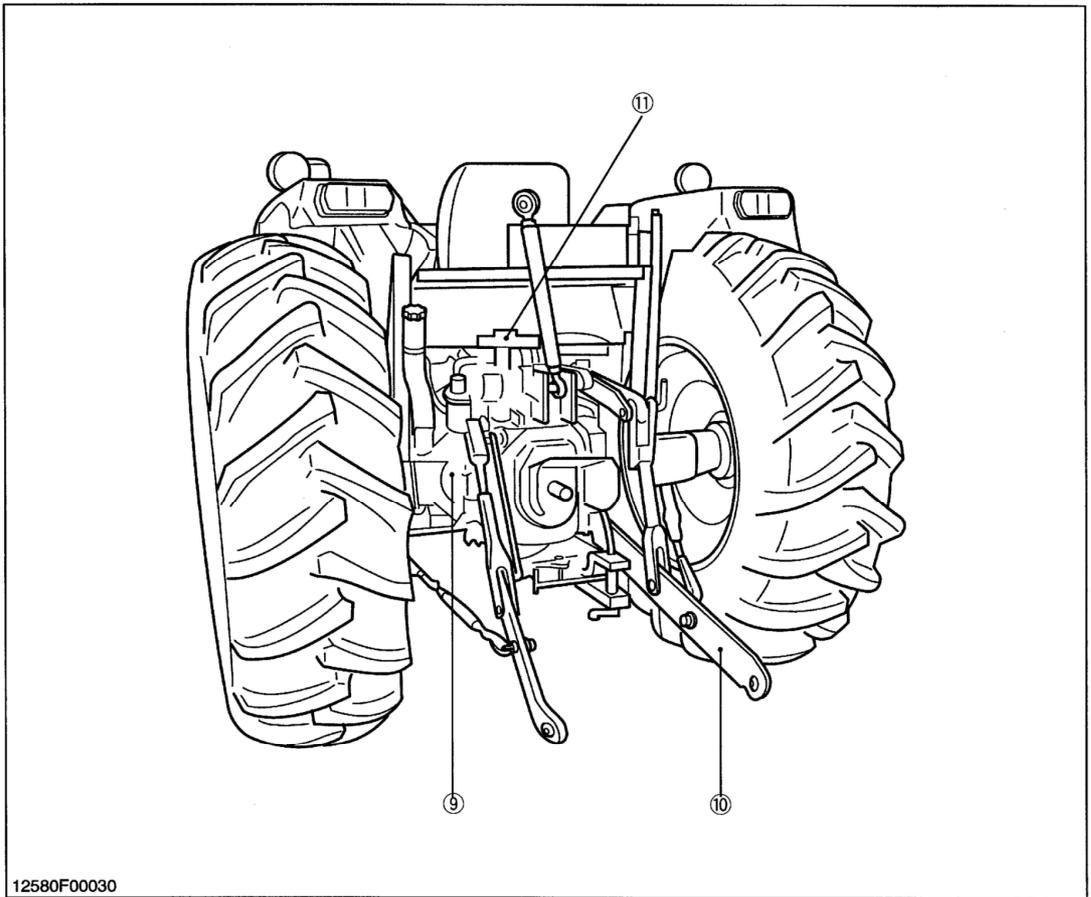
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[1] FEATURES

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- | | |
|--|---|
| <p>(1) New Design
Full-open Hood and Flat Top Fender</p> <p>(2) Hydrostatic Power Steering</p> <p>(3) Synchro-Shuttle
Forward-Reverse [M8200 · M9000]
Lo-Reverse [M6800]</p> <p>(4) Hydraulic Independent PTO</p> <p>(5) New Transmission
[M8200 · M9000]
Main Shift : Full Synchronized
Forward 8 / Reverse 8 Speeds
Forward 12 / Reverse 12 Speeds (with Creep, if equipped)</p> | <p>[M6800]
Main Shift : Partially Synchronized
Forward 8 / Reverse 4 Speeds
Forward 12 / Reverse 4 Speeds (with Creep, if equipped)</p> <p>(6) Semi-Flat Deck and Rubber Mounted Deck</p> <p>(7) Hanging Pedal</p> <p>(8) New E-TVCS Diesel Engine
Low Noise and Vibration
High Torque Rise</p> |
|--|---|

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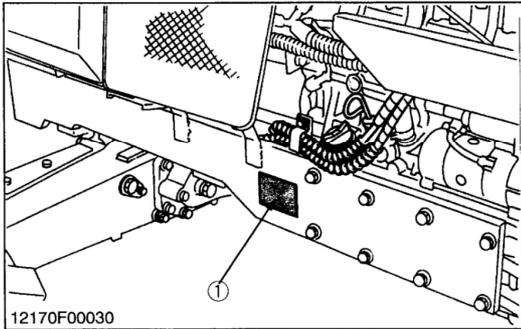
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- (9) Wet Disc Brake
- (10) Three Point Hitch with Big Lift Power
- (11) Remote Valve

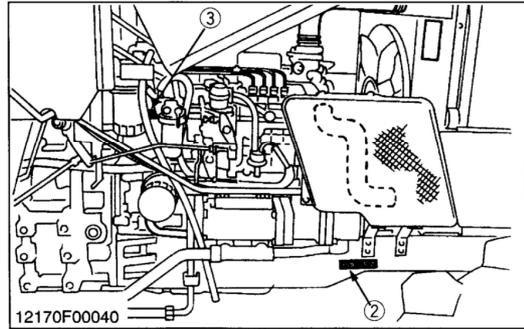
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[2] TRACTOR IDENTIFICATION

When contacting your local KUBOTA distributor, always specify engine serial number, tractor serial number and hourmeter reading.



(1) Tractor Identification Plate

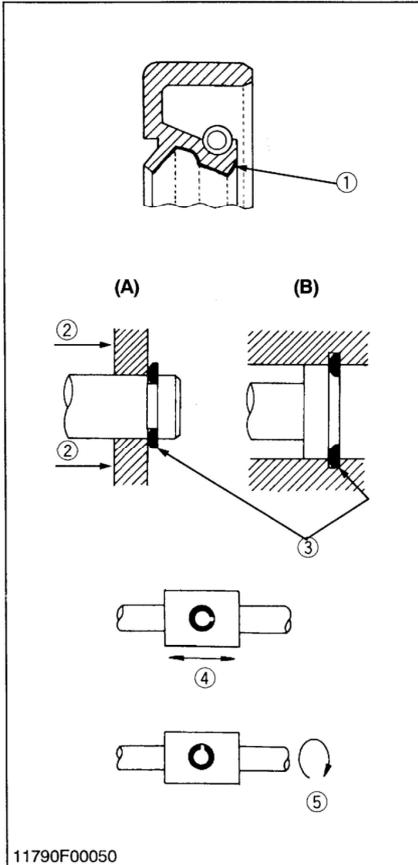


(2) Tractor Serial Number

(3) Engine Serial Number

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[3] GENERAL PRECAUTIONS



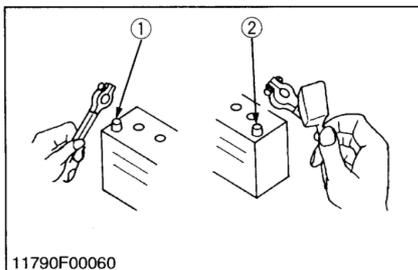
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- During disassembly, carefully arrange removed parts in a clean area to prevent confusion later. Bolts and nuts should be installed in their original position to prevent reassembly errors.
- When special tools are required, use KUBOTA genuine special tools. Special tools which are not frequently used should be made according to the drawings provided.
- Before disassembling or servicing electrical wires, always disconnect the ground cable from the battery first.
- Remove oil and dirt from parts before measuring.
- Use only KUBOTA genuine parts for parts replacement to maintain tractor performance and to assure safety.
- Gaskets and O-rings must be replaced during reassembly. Apply grease to new O-rings or oil seals before assembling. See the figure left side.
- When reassembling external snap rings or internal snap rings, they must be positioned so that sharp edge faces against the direction from which a force is applied. See the figure left side.
- When inserting spring pins, their splits must face the direction from which a force is applied. See the figure left side.
- To prevent damage to the hydraulic system, use only specified fluid or equivalent.

- (1) Grease
- (2) Force
- (3) Sharp Edge
- (4) Axial Force
- (5) Rotating Movement
- (A) External Snap Ring
- (B) Internal Snap Ring

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[4] HANDLING PRECAUTIONS FOR ELECTRICAL PARTS AND WIRING



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To ensure safety and prevent damage to the machine and surrounding equipment, heed the following precautions in handling electrical parts and wiring.

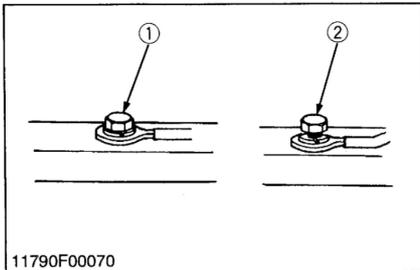
■ IMPORTANT

- **Check electrical wiring for damage and loosened connection every year. To this end, educate the customer to do his or her own check and at the same time recommend the dealer to perform periodic check for a fee.**
- **Do not attempt to modify or remodel any electrical parts and wiring.**
- **When removing the battery cord, disconnect the negative wire first. When installing the battery cord, connect the positive wire first.**

- (1) Negative Terminal
- (2) Positive Terminal

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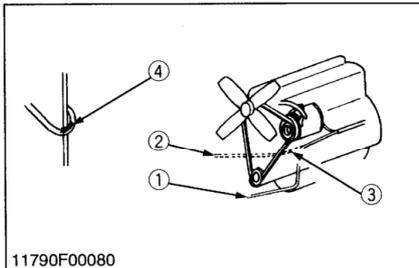
(1) Wiring



• Securely tighten wiring terminals.

- (1) Correct (Securely Tighten)
- (2) Incorrect (Loosening Leads to Faulty Contact)

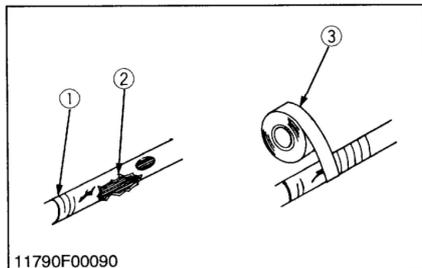
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• Do not let wiring contact dangerous part.

- (1) Wiring (Correct)
- (2) Wiring (Incorrect)
- (3) Dangerous Part
- (4) Dangerous Part

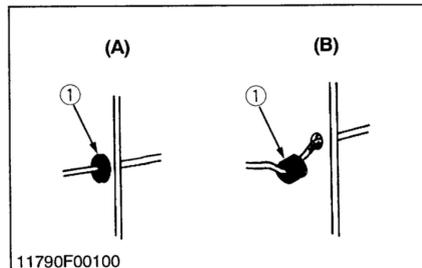
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• Repair or change torn or aged wiring immediately.

- (1) Aged
- (2) Torn
- (3) Insulating Vinyl Tape

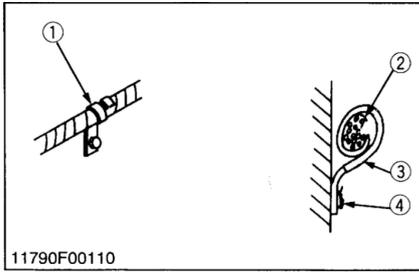
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• Securely insert grommet.

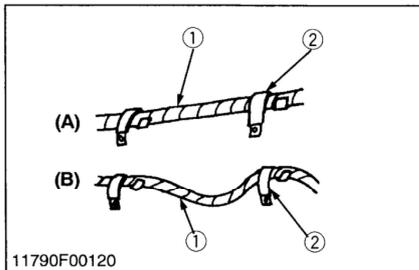
- (1) Grommet
- (A) Correct
- (B) Incorrect

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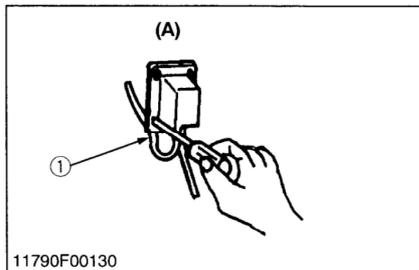
- Securely clamp, being careful not to damage wiring.
- | | |
|-----------------------|------------------|
| (1) Clamp | (3) Clamp |
| • Wind Clamp Spirally | (4) Welding Dent |
| (2) Wire Harness | |

11790G00090



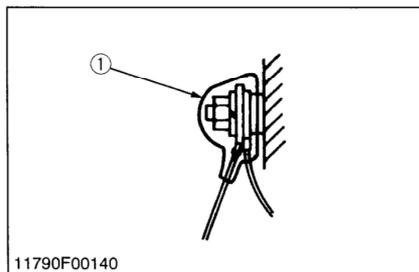
- Clamp wiring so that there is no twist, unnecessary sag, or excessive tension, except for movable part, where sag be required.
- | | |
|------------|---------------|
| (1) Wiring | (A) Correct |
| (2) Clamp | (B) Incorrect |

11790G00100



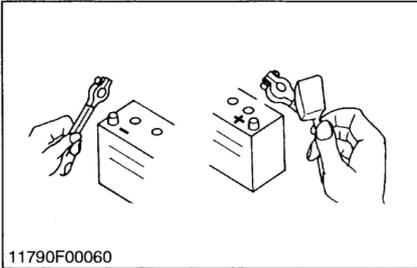
- In installing a part, take care not to get wiring caught by it.
- | | |
|------------|---------------|
| (1) Wiring | (A) Incorrect |
|------------|---------------|

11790G00110



- After installing wiring, check protection of terminals and clamped condition of wiring, only then connect battery.
- | |
|--------------------------|
| (1) Cover |
| • Securely Install Cover |

11790G00120

(2) Battery

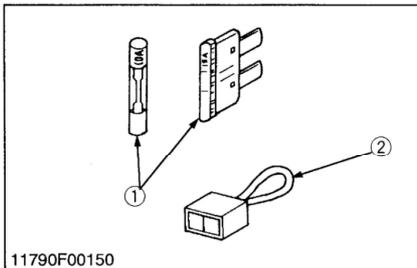
11790F00060

- Take care not to confuse positive and negative terminals.
- When removing battery cord, disconnect negative wire first. When installing battery cord, check for polarity and connect positive wire first.
- Do not install any battery with capacity other than is specified (Ah).
- After connecting cord to battery terminals, apply grease to them and securely install terminal covers on them.
- Do not allow dirt and dust to collect on battery.

**CAUTION**

- **Take care not to let battery liquid spill on your skin and clothes. If contaminated, wash it off with water immediately.**
- **Before recharging the battery, remove it from the machine.**
- **Before recharging, remove cell caps.**
- **Do recharging in a well-ventilated place where there is no open flame nearby, as hydrogen gas and oxygen are formed.**

11790G00130

(3) Fuse

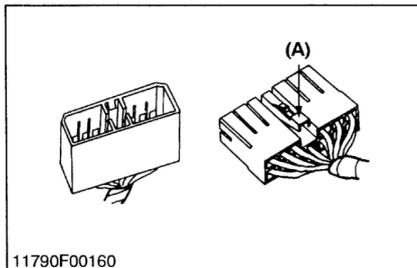
11790F00150

- Use fuses with specified capacity. Neither too large or small capacity fuse is acceptable.
- Never use steel or copper wire in place of fuse.
- Do not install working light, radio set, etc. on machine which is not provided with reserve power supply.
- Do not install accessories if fuse capacity of reserve power supply is exceeded.

(1) Fuse

(2) Fusible Link

11790G00140

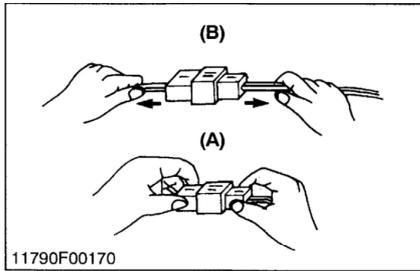
(4) Connector

11790F00160

- For connector with lock, push lock to separate.

(A) Push

11790G00150



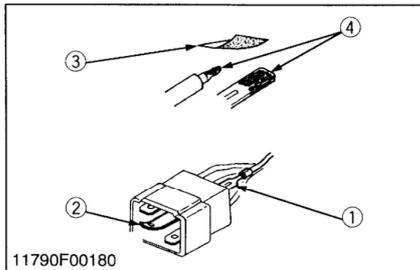
11790F00170

- In separating connectors, do not pull wire harnesses.
- Hold connector bodies to separate.

(A) Correct

(B) Incorrect

11790G00160



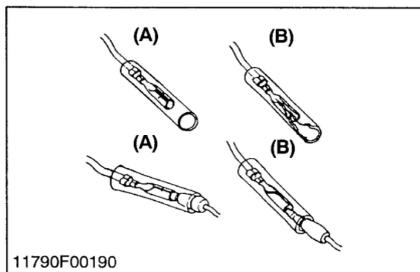
11790F00180

- Use sandpaper to remove rust from terminals.
- Repair deformed terminal. Make certain there is no terminal being exposed or displaced.

(1) Exposed Terminal
(2) Bend Terminal

(3) Sandpaper
(4) Rust

11790G00170



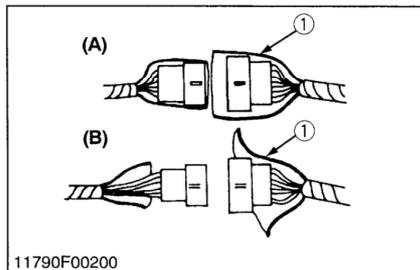
11790F00190

- Make certain that there is no female connector being too open.

(A) Correct

(B) Incorrect

11790G00180



11790F00200

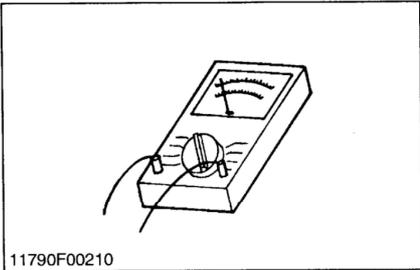
- Make certain plastic cover is large enough to cover whole connector.

(1) Cover

(A) Correct
(B) Incorrect

11790G00190

(5) Handling of Circuit Tester



11790F00210

- Use tester correctly following manual provided with tester.
- Check for polarity and range.

11790G00200

[5] LUBRICANTS, FUEL AND COOLING WATER

	Place	Capacity			Lubricants, fuel and cooling water	
		M6800	M8200	M9000		
1	Fuel	65 L 17.2 U.S.gals. 14.3 Imp.gals.	90 L 23.8 U.S.gals. 19.8 Imp.gals.		No. 2-D diesel fuel No. 1-D diesel fuel if temperature is below - 10 °C (14 °F)	
2	Coolant	8.5 L 9.0 U.S.qts. 7.5 Imp.qts.	9.0 L 9.5 U.S.qts. 7.9 Imp.qts.		Fresh clean water with anti-freeze	
3	Engine crankcase	10.7 L 11.3 U.S.qts. 9.4 Imp.qts			<ul style="list-style-type: none"> Engine oil : [M6800] API Service Classification CC or CD [M8200 · M9000] API Service Classification CD Below 0 °C (32 °F) SAE10W, 10W-30 or 10W-40 0 to 25 °C (32 to 77 °F) ... SAE20, 10W-30 or 10W-40 Above 25 °C (77 °F) SAE30, 10W-30 or 10W-40 	
4	Transmission case	40 L 42.3 U.S.qts. 35.2 Imp.qts.	52 L 54.9 U.S.qts. 45.8 Imp.qts.		<ul style="list-style-type: none"> KUBOTA UDT or SUPER UDT fluid * 	
5	Front differential case oil	5.0 L 5.3 U.S.qts. 4.4 Imp.qts.		6.0 L 6.3 U.S.qts. 5.3 Imp.qts.	<ul style="list-style-type: none"> KUBOTA SUPER UDT fluid or SAE80, SAE90 gear oil 	
6	Front axle gear case oil	3.5 L 3.7 U.S.qts. 3.1 Imp.qts				
7	Air cleaner (Oil bath type)	2.0 L 2.1 U.S.qts. 1.8 Imp.qts			<ul style="list-style-type: none"> Engine oil 	
Greasing						
	Place	No. of greasing point			Capacity	Type of grease
8	Front wheel hub [2WD]	2			Until grease overflows	Multipurpose type grease
	Knuckle shaft [2WD]	2				
	Front wheel case support [4WD]	2				
	Front axle support [4WD]	2				
	Top link	2				
	Top link bracket	2				
	Lift rod	3				
	Battery terminal	2			Moderate amount	

* KUBOTA original transmission hydraulic fluid.

12580G00030

■ 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:
- **Transmission Oil :** The oil used to lubricate the transmission is also used as hydraulic fluid. To insure proper operation of the hydraulic system and complete lubrication of the transmission, it is important that a multi-grade transmission fluid be used in this system. We recommend the use of KUBOTA SUPER UDT fluid for optimum protection and performance.
(Consult your local KUBOTA Dealer for further detail.)
Do not mix different brands together.
- **Indicated capacity of water and oil are manufacture's estimate.**

12170G00050

[6] TIGHTENING TORQUES (GENERAL USE SCREWS, BOLTS AND NUTS)

Screws, bolts and nuts whose tightening torques are not specified in this Workshop Manual should be tightened according to the table below.

Indication on top of bolt	4 No-grade or 4T						7 7T						9 9T		
	Material of bolt														
Material of opponent part	Ordinariness			Aluminum			Ordinariness			Aluminum			Ordinariness		
	Material of opponent part														
Diameter	N-m	kgf-m	ft-lbs	N-m	kgf-m	ft-lbs	N-m	kgf-m	ft-lbs	N-m	kgf-m	ft-lbs	N-m	kgf-m	ft-lbs
	M6 (6 mm, 0.24 in.)	7.84 to 9.31	0.80 to 0.95	5.79 to 6.87	7.84 to 8.83	0.80 to 0.90	5.79 to 6.51	9.80 to 11.2	1.00 to 1.15	7.24 to 8.32	7.84 to 8.83	0.80 to 0.90	5.79 to 6.51	12.3 to 14.2	1.25 to 1.45
M8 (8 mm, 0.31 in.)	17.7 to 20.5	1.8 to 2.1	13.0 to 15.2	16.7 to 19.6	1.7 to 2.0	12.3 to 14.5	23.6 to 27.4	2.4 to 2.8	17.4 to 20.2	17.7 to 20.6	1.8 to 2.1	13.0 to 15.2	29.4 to 34.3	3.0 to 3.5	21.7 to 25.3
M10 (10 mm, 0.39 in.)	39.2 to 45.0	4.0 to 4.6	29.0 to 33.2	31.4 to 34.3	3.2 to 3.5	23.1 to 25.3	48.1 to 55.8	4.9 to 5.7	35.5 to 41.2	39.2 to 44.1	4.0 to 4.5	28.9 to 32.5	60.8 to 70.5	6.2 to 7.2	44.9 to 52.1
M12 (12 mm, 0.47 in.)	62.8 to 72.5	6.4 to 7.4	46.3 to 53.5				77.5 to 90.1	7.9 to 9.2	57.2 to 66.5	62.8 to 72.5	6.4 to 7.4	46.3 to 53.5	103 to 117	10.5 to 12.0	76.0 to 86.8
M14 (14 mm, 0.55 in.)	108 to 125	11.0 to 12.8	79.6 to 92.5				124 to 147	12.6 to 15.0	91.2 to 108				167 to 196	17.0 to 20.0	123 to 144
M16 (16 mm, 0.63 in.)	167 to 191	17.0 to 19.5	123 to 141				196 to 225	20.0 to 23.0	145 to 166				260 to 303	26.5 to 31.0	192 to 224
M18 (18 mm, 0.71 in.)	245 to 284	25.0 to 29.0	181 to 210				275 to 318	28.0 to 32.5	203 to 235				343 to 401	35.0 to 41.0	254 to 297
M20 (20 mm, 0.79 in.)	334 to 392	34.0 to 40.0	246 to 289				368 to 431	37.5 to 44.0	272 to 318				490 to 568	50.0 to 58.0	362 to 420

11790G00760

[7] MAINTENANCE

No.	Item		Period	Indication on hour meter																Since then	Reference page	
				50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800			
1	Engine oil		Change	★			☆				☆						☆			☆	every 200 Hr	G-13
2	Engine oil filter		Replace	★							☆									☆	every 400 Hr	G-14
3	Fuel filter		Replace								☆									☆	every 400 Hr	G-23
4	Water separator		Clean	★							☆									☆	every 400 Hr	G-23
5	Hydraulic oil filter		Replace	★					☆											☆	every 300 Hr *	G-14
6	Front differential case oil		Change																	☆	every 600 Hr	G-25
7	Front axle gear case oil		Change																	☆	every 600 Hr	G-25
8	Engine start system		Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr	G-16
9	Wheel bolt torque		Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr	G-17
10	Battery condition		Check		☆		☆		☆		☆		☆		☆		☆		☆	☆	every 100 Hr	G-17
11	Greasing				☆		☆		☆		☆		☆		☆		☆		☆	☆	every 100 Hr	G-20
12	Fan belt		Adjust		☆		☆		☆		☆		☆		☆		☆		☆	☆	every 100 Hr	G-19
13	Clutch		Adjust	★	☆		☆		☆		☆		☆		☆		☆		☆	☆	every 100 Hr	G-15
14	Brake		Adjust		☆		☆		☆		☆		☆		☆		☆		☆	☆	every 100 Hr	G-19
15	Air cleaner (Oil bath type)	Oil	Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr *	G-17
		Element	Clean									☆								☆	every 400 Hr *	G-24
16	Radiator hose and clamp		Check				☆				☆									☆	every 200 Hr	G-21
			Replace																			every 2 years
17	Power steering oil line		Check				☆				☆									☆	every 200 Hr	G-21
			Replace																			every 2 years
18	Fuel line		Check				☆				☆									☆	every 200 Hr	G-21
			Replace																			every 2 years
19	Toe-in		Adjust				☆				☆									☆	every 200 Hr	G-22
20	Greasing (2WD front wheel hub)										☆									☆	every 400 Hr	G-24
21	Transmission fluid		Change	★																☆	every 600 Hr	G-15
22	Front axle pivot		Adjust																	☆	every 600 Hr	G-25
23	Engine valve clearance		Adjust																	☆	every 800 Hr **	G-25
24	Cooling system		Flush																		every 2 years	G-26, 27
25	Coolant		Change																		every 2 years	G-26, 27
26	Fuel system		Bleed																			G-28
27	Clutch housing water		Drain																		Service as required	G-28
28	Fuse		Replace																			G-29
29	Light bulb		Replace																			G-29

IMPORTANT :

The jobs indicated by ★ must be done after the first 50 hours of operation.

* Air cleaner and hydraulic oil filter should be cleaned more often in dusty conditions than in normal conditions.

** Consult your local KUBOTA dealer for this service.

12580G00040

[8] CHECK AND MAINTENANCE

CAUTION

- Be sure to check and service the tractor on a flat place with engine shut off, the parking brake on and chock the wheels.

11790G00210

(1) Daily Check

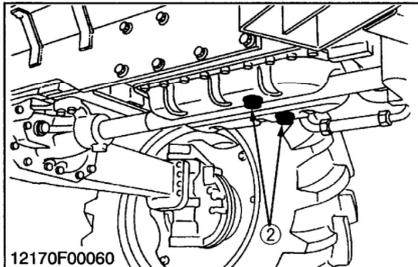
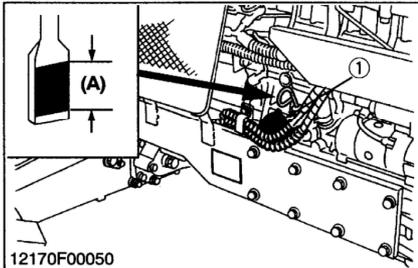
To prevent trouble from occurring, it is important to know the condition of the tractor. Check the following items before starting.

Checking

- Check areas where previous trouble was experienced.
- Walk around the tractor.
 - 1) Check the tire pressure, and check for wear and damage.
 - 2) Check for oil and water leaks.
 - 3) Check the engine oil level.
 - 4) Check the transmission fluid level.
 - 5) Check the coolant level.
 - 6) Cleaning of Pre-Cleaner
 - 7) Check the Air Cleaner Oil Level. (Oil bath type)
 - 8) Check and clean the radiator screen and grill.
 - 9) Check the bolts and nuts of the tires are tight.
 - 10) Check the number plate or SMV emblem for damage and cleaner replace as necessary if equipped.
 - 11) Care of danger, warning and caution labels.
 - 12) Clean around the exhaust manifold and the muffler
- While sitting in the operator's seat.
 - 1) Check the throttle pedal, brake pedals and clutch pedal.
 - 2) Check the parking brake.
 - 3) Check the steering wheel.
 - Turning the key switch.
 - 1) Check the performance of the Easy Checker lights.
 - 2) Check head lights, tail lights and turn signal lights.
 - 3) Check the performance of the meters and gauges.
 - Starting the engine.
 - 1) Check to see that the lights on the Easy Checker go off.
 - 2) Check the color of the exhaust.
 - 3) Check the brakes for proper operation.

12580G00050

(2) Check Points of Initial 50 Hours



Changing Engine Oil

CAUTION

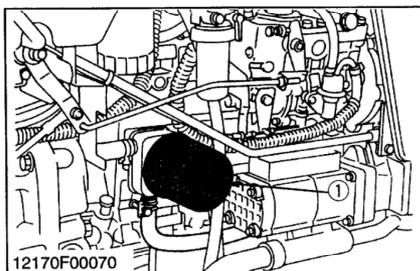
- Before changing oil, be sure to stop the engine.
 - Allow engine to cool down sufficiently, oil can be hot and can burn.
1. To drain the used oil, remove the drain plug at the bottom of the engine and drain the oil completely into the oil pan.
All the used oil can be drained out easily when the engine 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 "LUBRICANTA" in Maintenance Section.)

Oil capacity with filter	10.7 L 11.3 U.S.qts. 9.4 Imp.qts.
--------------------------	---

- (1) Oil Inlet
(2) Drain Plugs

(A) Oil level is acceptable within this range.

12170G00070



Replacing Engine Oil Filter

⚠ CAUTION

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

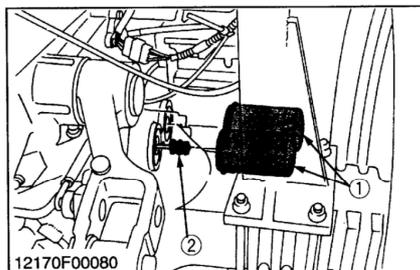
1. Remove the oil filter.
2. Put a film of clean engine oil on rubber seal of new filter.
3. Tighten the filter quickly until it contacts the mounting surface. Tighten filter by hand an additional 1/2 turn only.
4. After the new filter has been replaced, the engine oil normally decreases a little. Make 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.

■ IMPORTANT

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

(1) Engine Oil Filter

12170G00080



Replacing Hydraulic Oil Filter

⚠ CAUTION

- Allow engine to cool down sufficiently, oil can be hot and can burn.

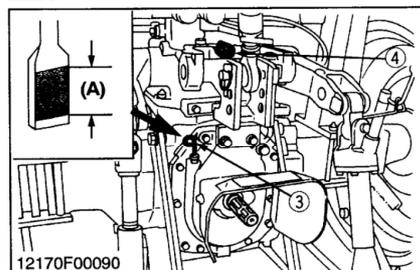
1. Remove the drain plug at the bottom of the transmission case and drain the oil completely into the oil pan.
2. After draining reinstall the drain plug.
3. Remove the two oil filters.
4. Clean off metal filings with clean rags at the magnetic filters.
5. Put a film of clean transmission fluid on rubber seal of new filters.
6. Tighten the filter quickly until it contacts the mounting surface. Tighten filter by hand and additional 1/2 turn only.
7. After the new filter has been replaced, fill with the oil up to the upper notch on the dipstick.
8. After running the engine for a few minutes, stop it and check the oil level again, add oil to the prescribed level.
9. Make sure that the transmission fluid doesn't leak through the seal.

■ IMPORTANT

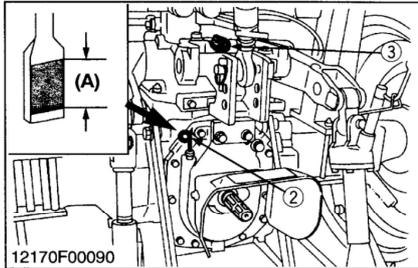
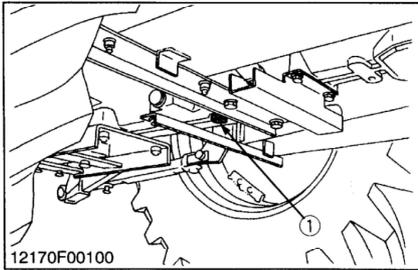
- To prevent serious damage to the hydraulic system, use only a KUBOTA genuine filter.

- (1) Hydraulic Oil Filter
 (2) Magnetic Filter (Clean off Metal Filings)
 (3) Gauge
 (4) Oil Filling Plug

(A) Oil level is acceptable within this range.



12170G00090



Changing Transmission Fluid

CAUTION

• Allow engine to cool down sufficiently, oil can be hot and can burn.

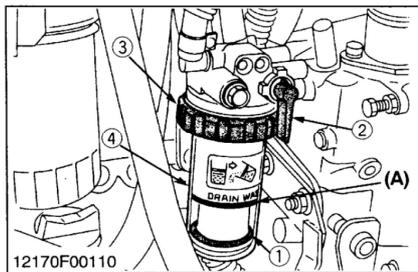
1. To drain the used oil, remove the drain plug at the bottom of the transmission case and drain the oil completely into the oil pan.
2. After draining reinstall the drain plug.
3. Fill with the new **KUBOTA SUPER UDT** fluid up to the upper notch on the dipstick.
4. (See “**LUBRICANTA**” in **Maintenance Section**.)
5. After running the engine for a few minutes, stop it and check the oil level again; add oil to prescribed level.

Oil capacity	M6800	40 L 42.3 U.S.qts. 35.2 Imp.qts.
	M8200 M9000	52 L 54.9 U.S.qts. 45.8 Imp.qts.

- (1) Drain Plug
- (2) Gauge
- (3) Oil Inlet

(A) Oil level is acceptable within the range.

12170G00100



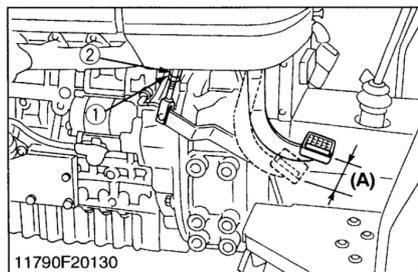
Checking Water Separator

1. As water is collected in the water separator, the red float is raised.
2. When the red float has reached the white line level, close the fuel cock, loosen the retainer ring, and take out and empty the cup. Be careful not to break the element.
3. Place the cup back into position. Vent air out of the fuel system. (See “**SERVICE AS REQUIRED**” in periodic service sectin.)

- (1) Red Float
- (2) Fuel Cock
- (3) Retainer Ring
- (4) Cup

(A) “WHITE LINE”

12170G00110



Adjusting Clutch Pedal

Adjusting Procedure

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.

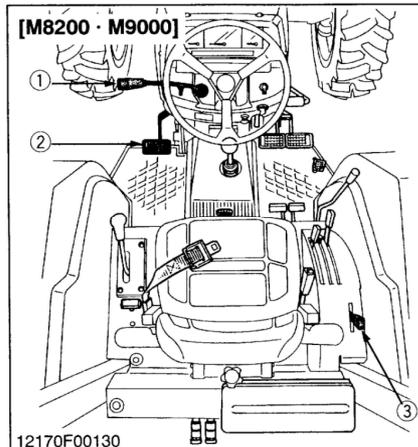
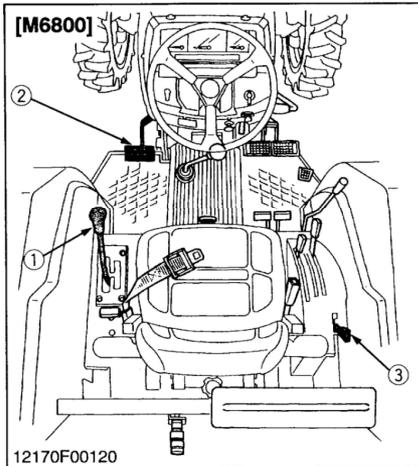
Proper clutch pedal	Free travel	35 to 45 mm (1.4 to 1.8 in.) on the pedal
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- (1) Lock Nut
- (2) Turnbuckle

(A) Free Travel

12170G00120

(3) Check Points of Every 50 Hours



Checking Engine Start System

⚠ CAUTION

- 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. Place all control levers in the "NEUTRAL" position.
2. Set the parking brake and stop the engine.

[M6800]

■ Test 1 : Switch for the range gear shift lever.

1. Sit on operator's seat.
2. Shift the range gear shift lever (1) to the desired position.
3. Depress the clutch pedal (2) fully.
4. Disengage the PTO clutch control lever (3).
5. Pull out the engine stop knob and turn the key to "START" position.
6. The engine must not crank.
7. If it cranks, consult your local KUBOTA Dealer for this service.

■ Test 2 : Switch for the PTO clutch control lever.

1. Sit on operator's seat.
2. Engage the PTO clutch control lever (3).
3. Depress the clutch pedal (2) fully.
4. Shift the range gear shift lever (1) to the neutral position.
5. Pull out the engine stop knob and turn the key to "START" position.
6. The engine must not crank.
7. If it cranks, consult your local KUBOTA Dealer for this service.

[M8200 • M9000]

■ Test 1 : Switch for the range gear shift lever.

1. Sit on operator's seat.
2. Shift the shuttle shift lever (1) to the forward or reverse position.
3. Depress the clutch pedal (2) fully.
4. Disengage the PTO clutch control lever (3).
5. Pull out the engine stop knob and turn the key to "START" position.
6. The engine must not crank.
7. If it cranks, consult your local KUBOTA Dealer for this service.

■ Test 2 : Switch for the PTO clutch control lever.

1. Sit on operator's seat.
2. Engage the PTO clutch control lever (3).
3. Depress the clutch pedal (2) fully.
4. Shift the shuttle shift lever (1) to the neutral position.
5. Pull out the engine stop knob and turn the key to "START" position.
6. The engine must not crank.
7. If it cranks, consult your local KUBOTA Dealer for this service.

- (1) Range Gear Shift Lever
(2) Clutch Pedal

- (3) PTO Clutch Control Lever

12170G00130