

Product: Kubota F2260 F2560(E) F3060 F3560 Front Mount Mower Service Manual
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WORKSHOP MANUAL

F2260, F2560(E), F3060, F3560

Kubota

KiSC issued 12, 2017 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 F2260, F2560 (E), F3060 and F3560. 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 product information available at the time of publication.

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

■ Note

The following models are sold in the countries shown in the table below.

| MODEL | U.S.A | Canada | Oceania | Europe |
|--------|-------|--------|---------|--------|
| F2260 | | ○ | ○ | ○ |
| F2560 | ○ | ○ | ○ | ○ |
| F2560E | ○ | ○ | ○ | ○ |
| F3060 | ○ | ○ | ○ | ○ |
| F3560 | | ○ | ○ | ○ |

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February 2002

Record of Revisions

For pdf, use search function {Search word} to find all revised locations.

| Last digit of the Code No. | Issue month | Main Revised Point and Corrective Measures {Search word} | Reference Page |
|-----------------------------------|--------------------|---|---|
| 4 | 2017.12 | Correction of errors | G-2, G-8, G-19, 1-S12, 2-S6, 2-NS5, 3-S1, 4-S4 |

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.

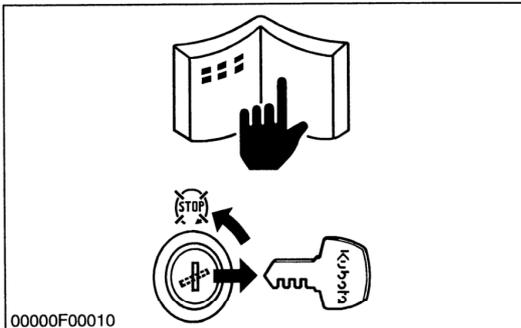
 **WARNING** : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

 **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.

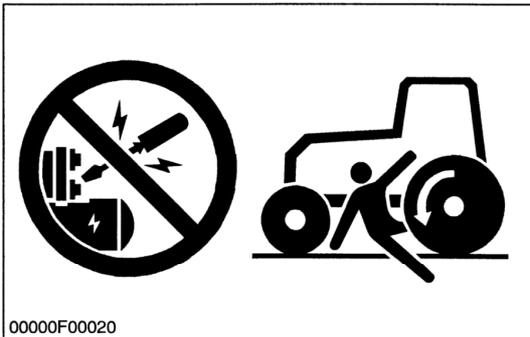
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BEFORE SERVICING AND REPAIRING

- (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.

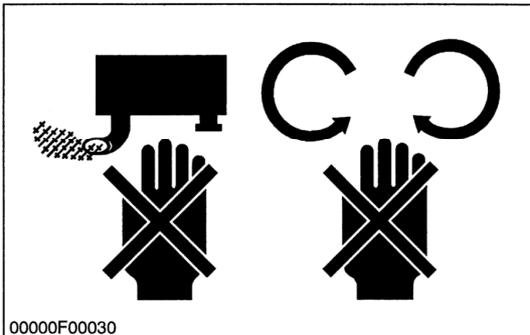
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SAFETY STARTING

- (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.

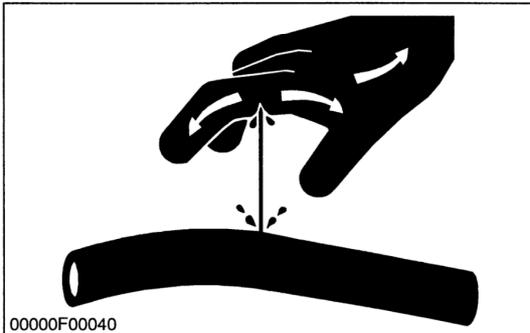
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SAFETY WORKING

- (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.

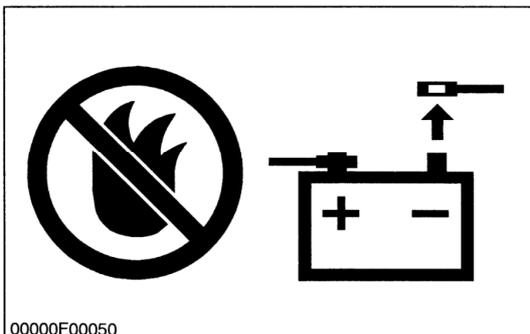
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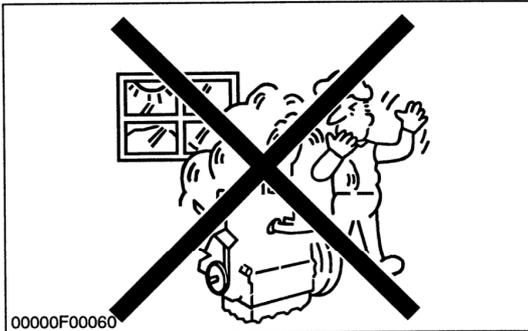


AVOID FIRES

- (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.

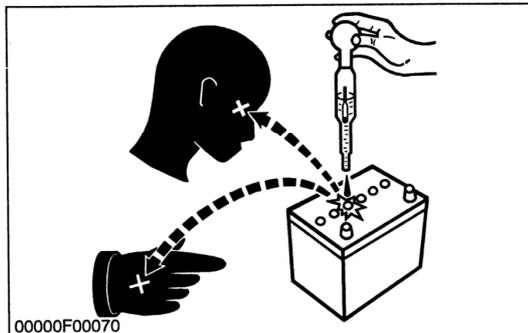
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**VENTILATE WORK AREA**

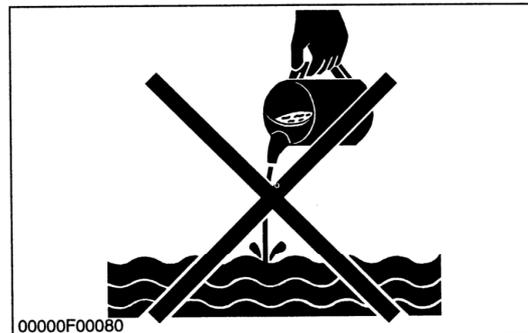
- (1) If the engine must be running to do some work, make sure the area is well ventilated. Never run the engine in a closed area. The exhaust gas contains poisonous carbon monoxide.

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**PREVENT ACID BURNS**

- (1) Sulfuric acid in battery electrolyte is poisonous. It is strong enough to burn skin, clothing and cause blindness if splashed into eyes. Keep electrolyte away from eyes, hands and clothing. If you spill electrolyte on yourself, flush with water, and get medical attention immediately.

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**DISPOSE OF FLUIDS PROPERLY**

- (1) Do not pour fluids into the ground, down a drain, or into a stream, pond, or lake. Observe relevant environmental protection regulations when disposing of oil, fuel, coolant, electrolyte and other harmful waste.

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**PREPARE FOR EMERGENCIES**

- (1) Keep a first aid kit and fire extinguisher handy at all times.
- (2) Keep emergency numbers for doctors, ambulance service, hospital and fire department near your telephone.

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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. K3311-4721-3 (RH & LH)

③ Part No. 6C040-4741-1
No fire

② Part No. TA040-4932-2

⚠ WARNING TO AVOID PERSONAL INJURY OR DEATH FROM ROLL-OVER:
 1. Kubota recommends the use of a Roll-Over Protective Structures (ROPS) and seat belt in almost all applications.
 2. Remove the ROPS only when it substantially interferes with operation or itself presents a safety risk (Examples include work in orchards and vineyards.) ALWAYS REINSTALL IT BEFORE USING THE TRACTOR IN OTHER APPLICATIONS.
 3. Never use just the seat belt or just the ROPS. They must be used together. For further details, consult your Operator's Manual or your local dealer.

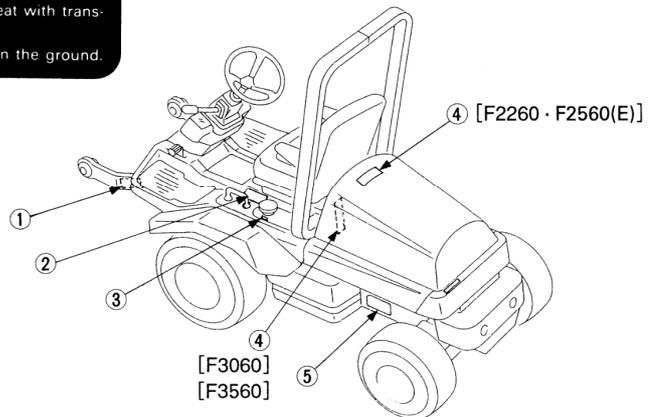
④ Part No. TA040-4957-1
Stay clear of engine fan and fanbelt.

⑤ Part No. 76611-4723-1

⚠ WARNING

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.



⑥ Part No. 18620-8806-1



⑦ Part No. 6C040-5559-1

DANGER EXPLOSIVE GASES
Cigarettes, flames or sparks could cause battery to explode. Always shield eyes and face from battery. Do not charge or use booster cables or adjust post connections without proper instruction and training.
KEEP VENT CAPS TIGHT AND LEVEL
POISON CAUSES SEVERE BURNS
Contains sulfuric acid. Avoid contact with skin, eyes or clothing. In event of accident flush with water and call a physician immediately.
KEEP OUT OF REACH OF CHILDREN

⑧ Part No. K3511-4717-2

CAUTION
TO HELP PREVENT TIPPING AND INJURY DO NOT DRIVE AT HIGH SPEED OR TURN THE FRONT MOWER WHEN THE DIFFERENTIAL IS LOCKED

TO LOCK, DEPRESS BRAKE PEDAL, FULLY PULL AND HOLD BRAKE LOCK LEVER AND REMOVE FOOT FROM PEDAL. TO UNLOCK, DEPRESS BRAKE PEDAL.

WARNING

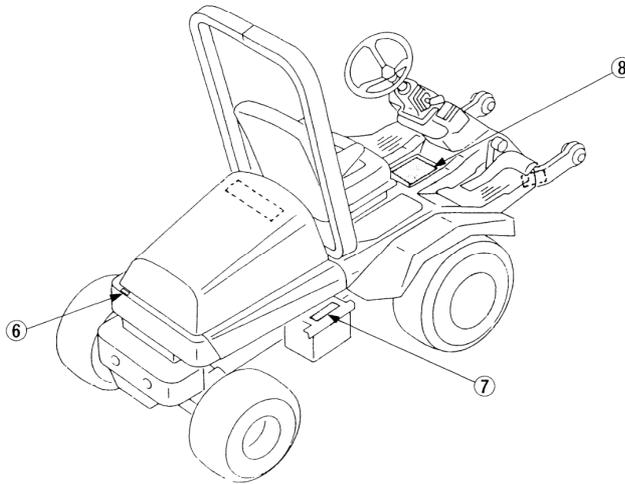
CAUTION
AVOID PERSONAL INJURY

KNOW LOCATION AND FUNCTION OF ALL CONTROLS
BEFORE STARTING ENGINE, MAKE CERTAIN PTO IS DISENGAGED, SHIFT RANGE LEVER TO NEUTRAL AND EVERYONE IS AT A SAFE DISTANCE FROM THE MACHINE
TO REDUCE FIRE HAZARD, KEEP THE EXHAUST CLEAR OF DRY GRASS, DRY LEAVES OR OTHER COMBUSTIBLE MATERIAL
BEFORE DISMOUNTING, DISENGAGE PTO CLUTCH, LOWER IMPLEMENT, SHIFT INTO NEUTRAL, SET PARKING BRAKE, STOP ENGINE AND REMOVE THE KEY
THIS MACHINE IS NOT FOR STREET OR HIGHWAY USE.

AVOID SERIOUS INJURY OR DEATH

- GO UP AND DOWN SLOPES, NOT ACROSS
- AVOID SUDDEN TURNS
- IF MACHINE STOPS GOING UP HILL, STOP BLADE AND BACK DOWN SLOWLY
- NEVER CARRY CHILDREN OR OTHERS
- KEEP SAFETY DEVICES (GUARDS, SHIELDS AND SWITCHES) IN PLACE AND WORKING
- REMOVE OBJECTS THAT COULD BE THROWN BY THE BLADE

READ OPERATOR'S MANUAL.

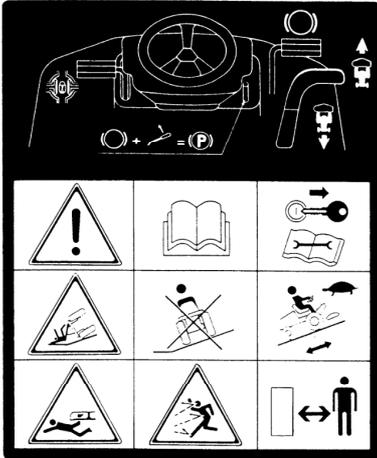


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[For Europe Specifications]

① Part No. K3512-4741-1



② Part No. K3512-4721-1



③ Part No. 6C040-4741-1
No fire



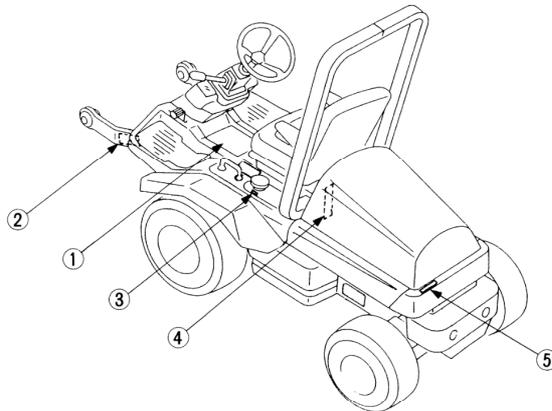
④ Part No. TA040-4957-1

Keep hands away from rotating parts.



⑤ Part No. K3512-4719-1

HOT SURFACE,
DO NOT TOUCH



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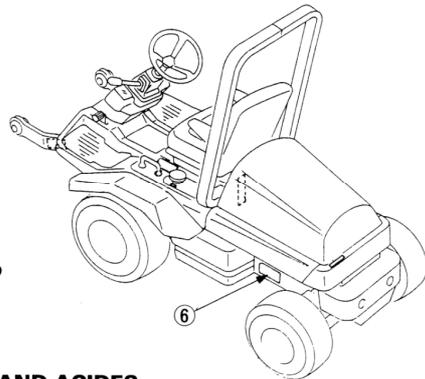
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[For Europe Specifications]

⑥ Part No. K3512-4718-1



- DO NOT start engine by shorting across starter terminals or bypassing the safety start switch to avoid a machine runaway.

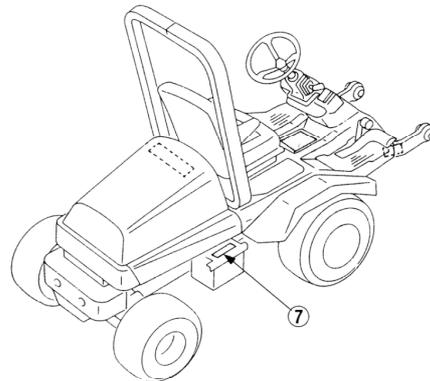


⑦ Part No. ST-CL121

TO AVOID INJURY FROM BATTERY GASES AND ACIDES

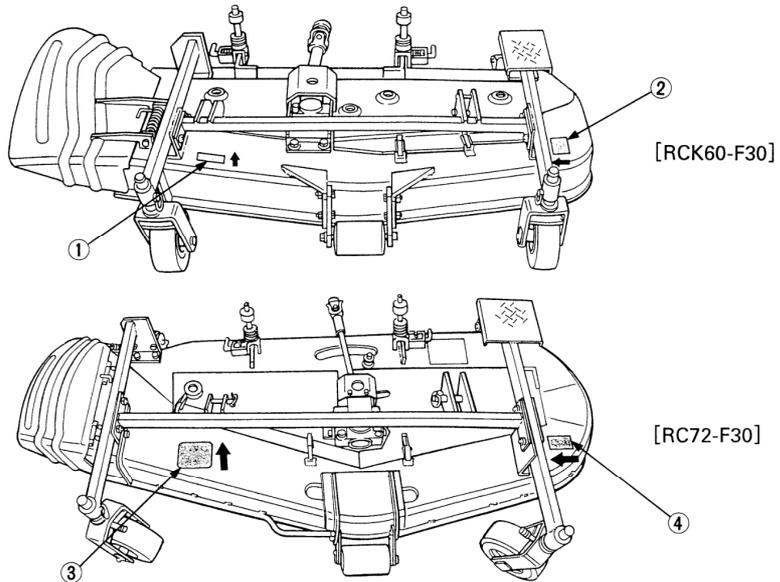


- Keep away cigarettes, flames or sparks.
- Always shield eyes and face from battery.
- Keep out of reach of children.
- Poison causes severe burns.
- Contains sulfuric acid.
- Read and understand operator's manual.
- Danger explosive gases.

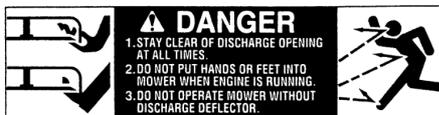


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LABEL① Part No. K5112-7311-1



LABEL② Part No. K5112-7312-1



LABEL③ Part No. 66071-6178-1



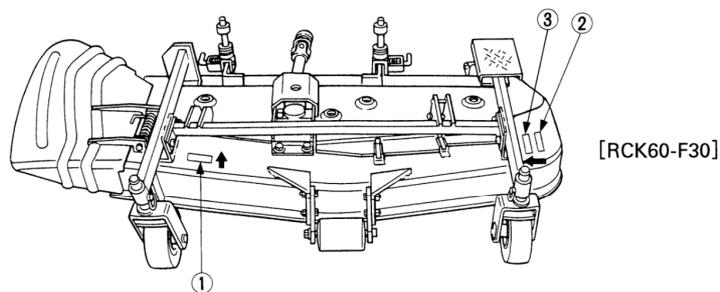
LABEL④ Part No. 66071-6179-1



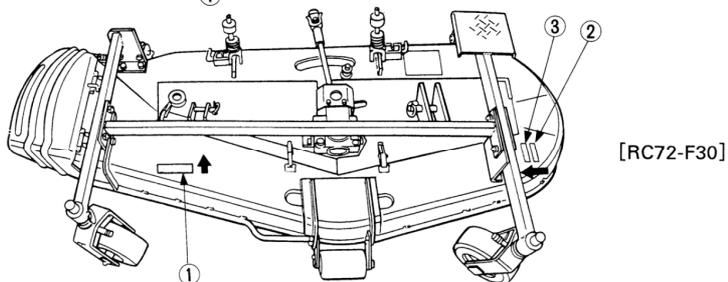
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[For Europe Specifications]

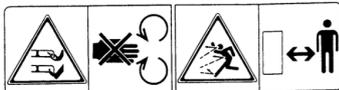


[RCK60-F30]



[RC72-F30]

LABEL ① Part No. K5761-4178-1



LABEL ② Part No. K5761-4179-1



LABEL ③ Part No. K5761-4180-1



SPECIFICATIONS

| Model | | F2260 | F2560E | F2560 | F3060 | F3560 |
|----------------------|-----------------------------|---|-------------------------------------|-------|--|--|
| Maximum P.T.O. Power | | 12 kW (16.5 HP) | 13 kW (18.5 HP) | | 16 kW (22 HP) | 18 kW (24.7 HP) |
| Engine | Model | D1005-EFM | D1105-EFM | | V1305-EFM | V1505-EFM |
| | Type | Indirect injection, vertical, water cooled, 4-cycle diesel engine | | | | |
| | Number of cylinders | 3 | | | 4 | |
| | Bore and stroke | 76.0 × 73.6 mm (2.99 × 2.90 in.) | 78.0 × 78.4 mm (3.07 × 3.09 in.) | | 76.0 × 73.6 mm (2.99 × 2.90 in.) | 78.0 × 78.4 mm (3.07 × 3.09 in.) |
| | Total displacement | 1001 cm ³ (61.08 cu.in.) | 1123 cm ³ (68.53 cu.in.) | | 1335 cm ³ (81.47 cu.in.) | 1498 cm ³ (91.41 cu.in.) |
| | Rated revolution | 2530 min ⁻¹ (2530 rpm) | | | | |
| | Combustion chamber | Spherical type (New-TVCS) | | | | |
| | Fuel injection pump | Bosch MD type mini pump | | | | |
| | Governor | Centrifugal mechanical governor | | | | |
| | Injection nozzle | Mini nozzle (DNOPD) | | | | |
| | Injection timing | 0.30 to 0.33 rad. (17 ° to 19 °) before T.D.C. | | | | |
| | Injection order | 1-2-3 | | | 1-3-4-2 | |
| | Injection pressure | 13.73 MPa (140 kgf/cm ² , 1991 psi) | | | | |
| | Compression ratio | 22 : 1 | | | | |
| | Lubricating system | Forced lubrication by gear pump | | | | |
| | Cooling system | Pressurized radiator, forced circulation with water pump | | | | |
| | Lubricating oil | MIL-L-46152, MIL-L-2104C, quality better than CC class (API) | | | | |
| | Starting system | Electric starter (12V, 1.4 kW) | | | | |
| | Battery | 12 V (70 Ah) RC : 118 min, CCA : 529 A | | | | |
| | Fuel | Diesel fuel No.2-D (ASTM D 975) [No.1-D diesel fuel, if temperature is below -10 °C (14 °F)] | | | | |
| Capacities | Fuel tank | 40 L (10.6 U.S.gals., 8.8 Imp.gals.) | | | | |
| | Engine crankcase | 2.4 L (2.5 U.S.qts., 2.1 Imp.qts.) | | | 2.7 L (2.8 U.S.qts., 2.4 Imp.qts.) | |
| | Engine coolant | 3.4 L (3.6 U.S.qts., 3.0 Imp.qts.) | | | 3.9 L (4.1 U.S.qts., 3.4 Imp.qts.) | |
| | Recovery sub tank | 0.3 L (0.3 U.S.qts., 0.3 Imp.qts.) | | | | |
| | Transmission case | 12.8 L (13.5 U.S.qts., 11.3 Imp.qts.) | | | 13.5 L (14.3 U.S.qts., 11.9 Imp.qts.) | |
| | Rear axle differential case | 1.3 L (1.4 U.S.qts., 1.1 Imp.qts.) | - | | 1.3 L (1.4 U.S.qts., 1.1 Imp.qts.) | |
| | Rear axle gear case | 0.5 L (0.5 U.S.qts., 0.4 Imp.qts.) | - | | 0.5 L (0.5 U.S.qts., 0.4 Imp.qts.) | |
| Tires | Front | 23 × 10.5-12 (4PR) Turf (For Europe 24 × 8.5-12 (4PR) Turf) | | | | |
| | Rear | 18 × 7.0-8 (4PR) Turf | 16 × 6.5-8 (4PR) Turf | | 18 × 7.0-8 (4PR) Turf | |
| Travelling speeds | Forward | Low | 0 to 9.0 km/h (0 to 5.6 mph) *2 | | | |
| | | High | 0 to 17.0 km/h (0 to 10.6 mph) *2 | | | |
| | Reverse | Low | 0 to 4.8 km/h (0 to 3.0 mph) *2 | | | |
| | | High | 0 to 8.5 km/h (0 to 5.3 mph) *2 | | | |

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| Model | | F2260 | F2560E | F2560 | F3060 | F3560 |
|------------------------------------|----------------------------|---|--|----------------------------|------------------|-------|
| Dimensions | Overall length | 2840 mm (92.1 in.) | | | | |
| | Overall width | 1140 mm (44.9 in.) [1130 mm (44.5 in.)] *3 | | | | |
| | Overall height (with ROPS) | 1910 mm (75.2 in.) [1920 mm (75.6 in.)] *3 | | | | |
| | Wheel base | 1300 mm (51.2 in.) | | | | |
| | Minimum ground clearance | 175 mm (6.9 in.) | | | | |
| | Treads | Front | 875 mm (34.4 in.) [919 mm (36.1 in.)] *3 | | | |
| Rear | | 875 mm (34.4 in.) | | | | |
| Weight (Without mower deck) | | 600 kg (272 lbs) | 580 kg (263 lbs) | 600 kg (272 lbs) | 630 kg (286 lbs) | |
| PTO shaft | | Front PTO, USA No.5 (KUBOTA 10-tooth) involute splines | | | | |
| Front PTO | | 1 speed 2530 min ⁻¹ (rpm) at 2700 engine min ⁻¹ (rpm) | | | | |
| PTO brake | | Wet single plate | | | | |
| PTO clutch | | Wet multiple discs | | | | |
| Steering | | Power, Hydraulic | | | | |
| Transmission | | Hydrostatic transmission, Hi-Low gear shift (2 forward, 2 reverse) | | | | |
| Minimum turning radius (Left turn) | | 750 mm (2.36 ft) w/o brake | 500 mm (1.64 ft) w/o brake | 750 mm (2.36 ft) w/o brake | | |
| Brake | | Wet multiple discs | | | | |
| Differential | | Bevel gear | | | | |

(Specifications and design subject to change without notice)

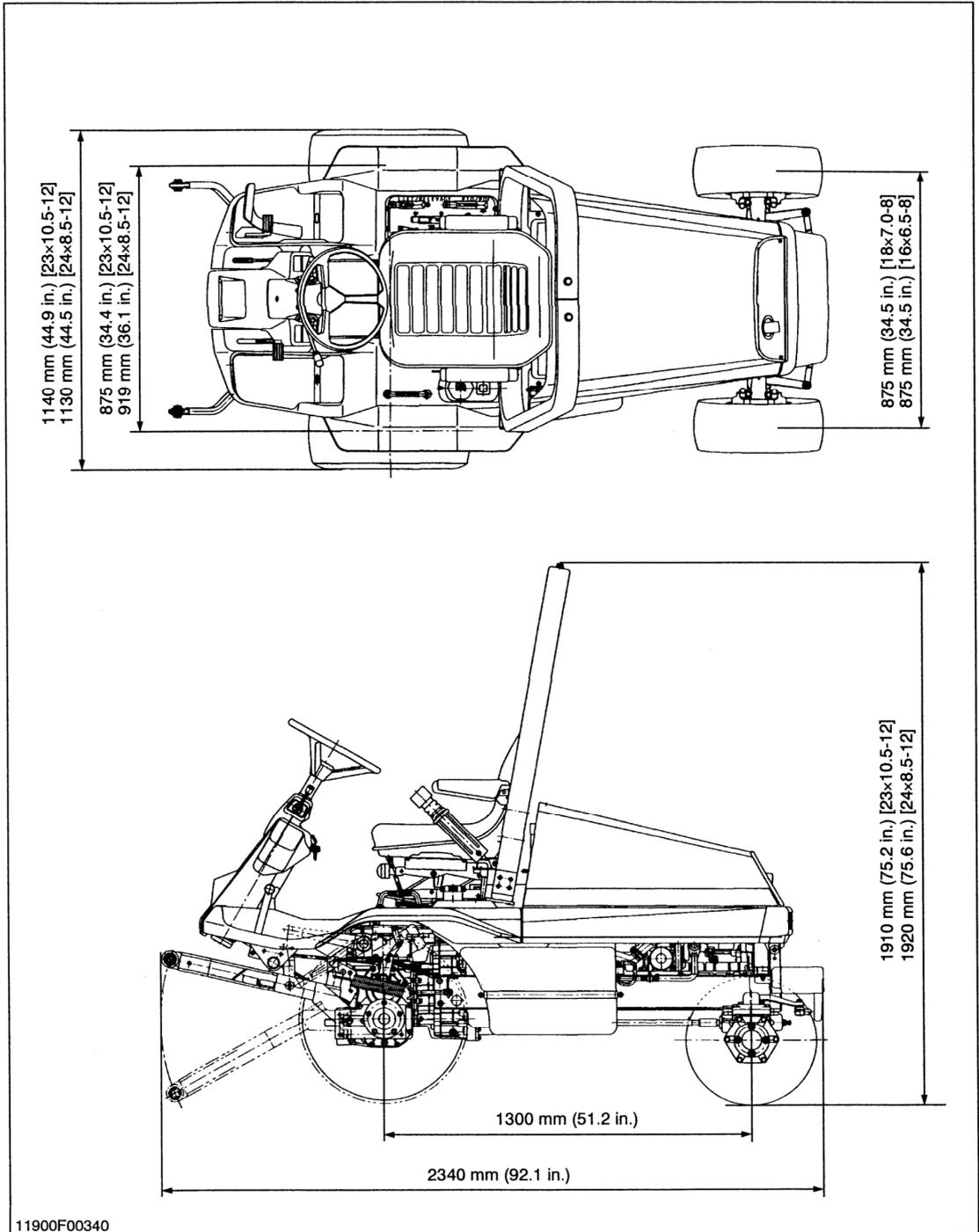
NOTE: *1 Manufacture's estimate

*2 At 2700 engine min⁻¹ (rpm)

*3 With 24 × 8.5-12 Tire

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DIMENSIONS



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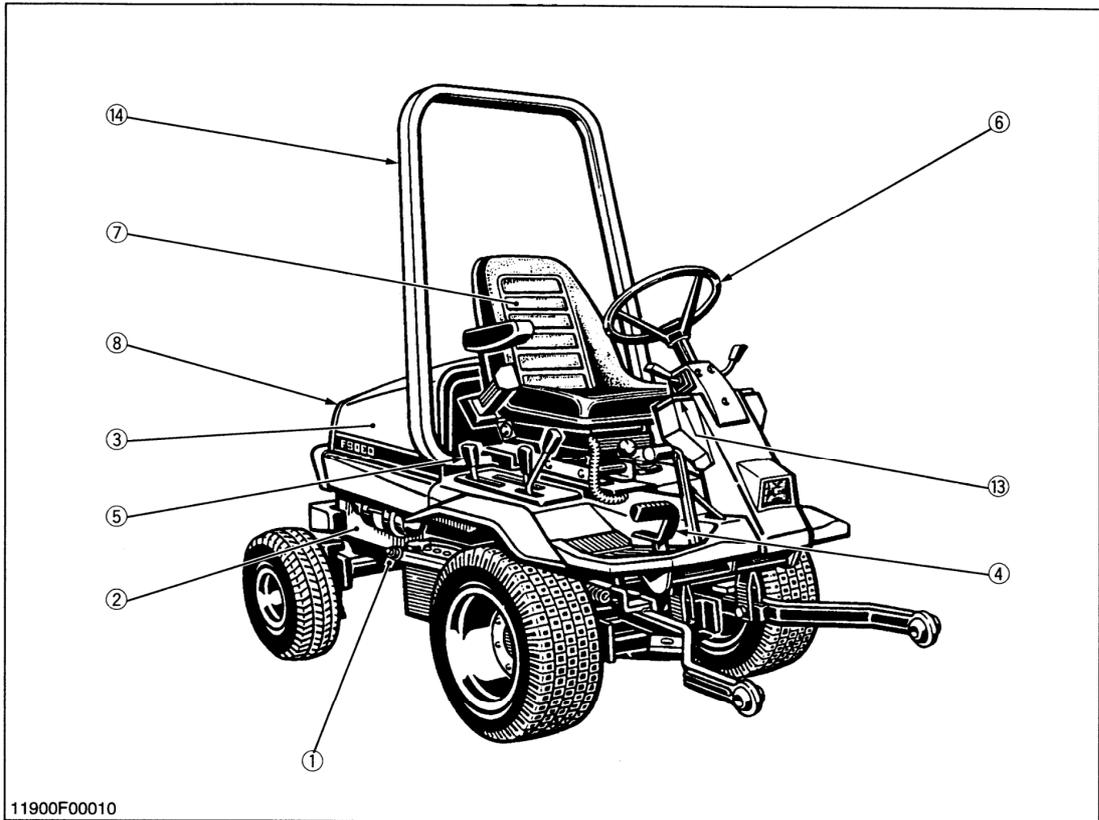
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G GENERAL

GENERAL

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[1] FEATURES

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(1) Dual-Acting Overrunning 4WD

When you need a powerful 4WD that also travels gently on lawns during turns, look to Kubota's Dual-Acting Overrunning 4WD. Previously, a vehicle could utilize its one-way clutch only in a forward gear. But Dual-Acting Overrunning 4WD works not only in forward and reverse gears, it also automatically puts you in 2WD or 4WD as required. So it can automatically release pressure built up by the rear tires during turns.

(2) Light, Compact Frame**(3) E-TVCS (Three Vortex Combustion System) Diesel Engine**

The heart of your vehicle is Kubota's lightweight and compact E-TVCS engine, 22 hp, 25 hp, 30 hp, and 33hp. These diesel powered engines emit low vibration and noise levels, and generate maximum efficiency.

(4) HST (Hydrostatic Transmission) And One-Foot Pedal

Direction changes are easier than ever with the new one-foot-pedal design.

(5) Hydraulic PTO Clutch

The hydraulically actuated PTO clutch engages smoothly, reducing shock and maintaining clutch durability.

(6) Power Steering**(7) Deluxe Operator Seat**

Ground shocks are quietly absorbed by the comfortable, spring suspension, high-back seat.

(8) Full Open Hood

The hood opens wide for fast, simple access.

(9) Shaft Drive Mower

Giving you efficient and more dependable cutting power in all mowing conditions.

(10) Tilt-Up Mower Deck

It's imperative that you have quick and safe access to the cutting blades, and Kubota ensures this with its versatile tilt-up mower deck.

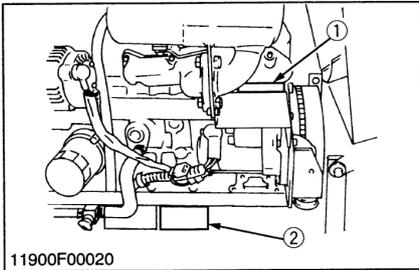
(11) Large Capacity Fuel Tank**(12) Operating Safety**

Numerous safety features are built-in.

(13) Easy Checker**(14) ROPS (Roll Over Protective Structures)**

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[2] IDENTIFICATION

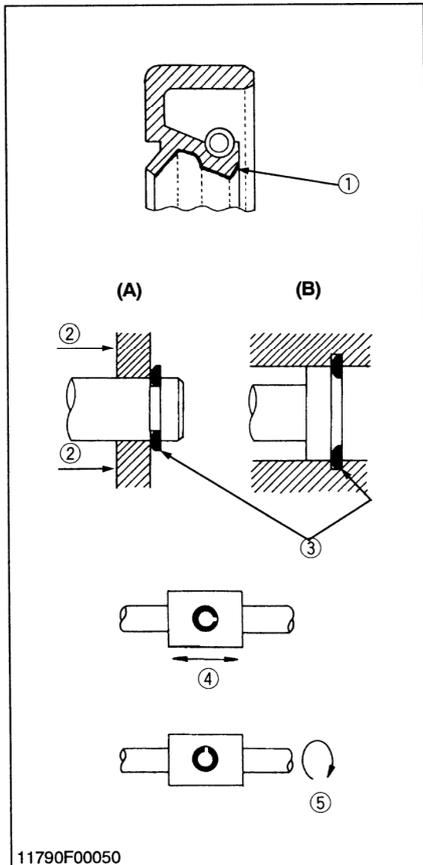


When contacting your local KUBOTA distributor, always specify engine serial number and frame serial number.

- (1) Engine Serial Number
- (2) Frame Serial Number

11900G00020

[3] GENERAL PRECAUTIONS



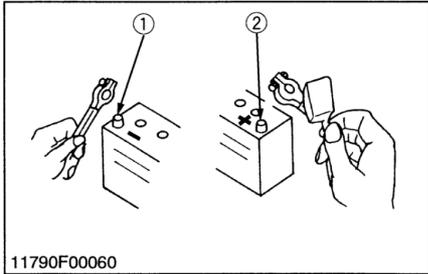
- During disassembly, carefully arrange removed parts in a clean area to prevent confusion later. Bolts and nuts should be installed in their original position to prevent reassembly errors.
- When special tools are required, use KUBOTA genuine special tools. Special tools which are not frequently used should be made according to the drawings provided.
- Before disassembling or servicing electrical wires, always disconnect the negative cable from the battery first.
- Remove oil and dirt from parts before measuring.
- We recommend the use KUBOTA genuine parts for parts replacement to maintain machine 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

11790G00031

[4] HANDLING PRECAUTIONS FOR ELECTRICAL PARTS AND WIRING



11790F00060

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

■ IMPORTANT

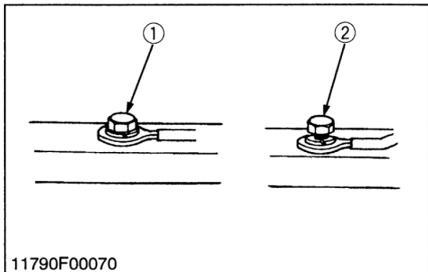
- Check electrical wiring for damage and loosened connection every year. To this end, educate the customer to do his or her own check and at the same time recommend the dealer to perform periodic check for a fee.
- Do not attempt to modify or remodel any electrical parts and wiring.
- When removing the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

(1) Negative Terminal

(2) Positive Terminal

11790G00041

(1) Wiring



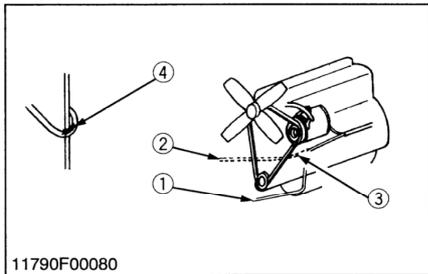
11790F00070

- Securely tighten wiring terminals.

(1) Correct
(Securely Tighten)

(2) Incorrect
(Loosening Leads to Faulty Contact)

11790G00050



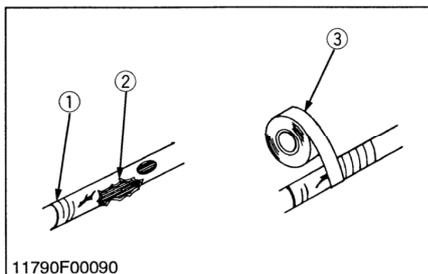
11790F00080

- Do not let wiring contact dangerous part.

(1) Wiring (Correct)
(2) Wiring (Incorrect)

(3) Dangerous Part
(4) Dangerous Part

11790G00060



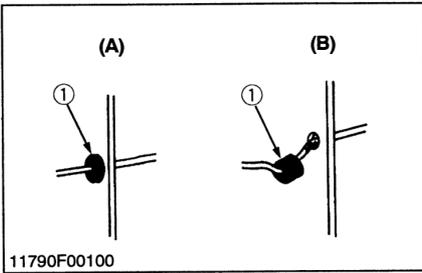
11790F00090

- Repair or change torn or aged wiring immediately.

(1) Aged
(2) Torn

(3) Insulating Vinyl Tape

11790G00070



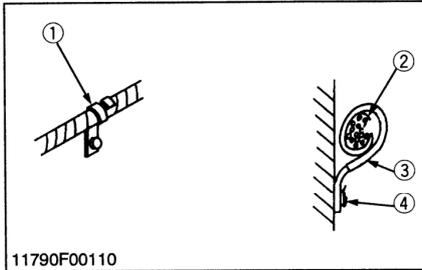
11790F00100

- Securely insert grommet.

(1) Grommet

(A) Correct
(B) Incorrect

11790G00080



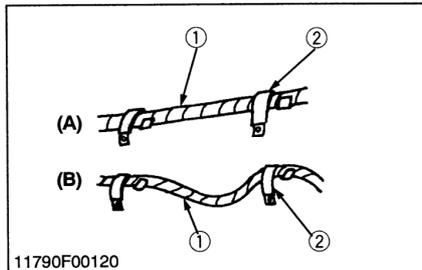
11790F00110

- Securely clamp, being careful not to damage wiring.

(1) Clamp
• Wind Clamp Spirally
(2) Wire Harness

(3) Clamp
(4) Welding Dent

11790G00090



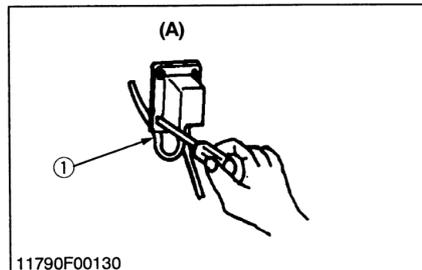
11790F00120

- Clamp wiring so that there is no twist, unnecessary sag, or excessive tension, except for movable part, where sag be required.

(1) Wiring
(2) Clamp

(A) Correct
(B) Incorrect

11790G00100



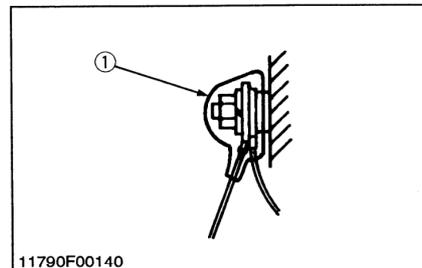
11790F00130

- In installing a part, take care not to get wiring caught by it.

(1) Wiring

(A) Incorrect

11790G00110



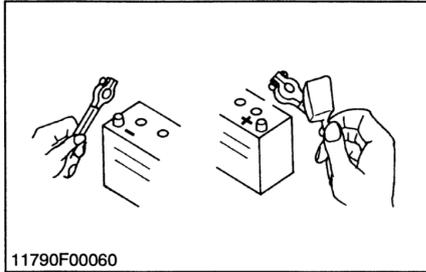
11790F00140

- After installing wiring, check protection of terminals and clamped condition of wiring, only then connect battery.

(1) Cover
• Securely Install Cover

11790G00120

(2) Battery



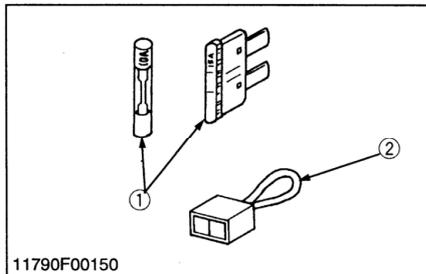
- Take care not to confuse positive and negative terminal posts.
- When removing battery cables, disconnect negative cable first. When installing battery cables, check for polarity and connect positive cable first.
- Do not install any battery with capacity other than is specified (Ah).
- After connecting cables to battery terminal posts, apply high temperature 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.

11790G00131

(3) Fuse



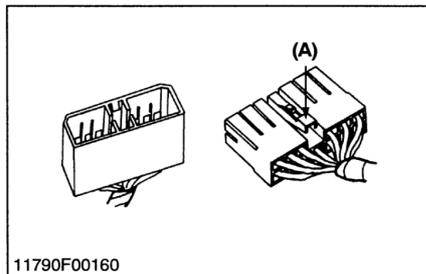
- Use fuses with specified capacity. Neither too large or small capacity fuse is acceptable.
- Never use steel or copper wire in place of fuse.
- Do not install working light, radio set, etc. on machine which is not provided with reserve power supply.
- Do not install accessories if fuse capacity of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

(1) Fuse

(2) Fusible Link

11790G00140

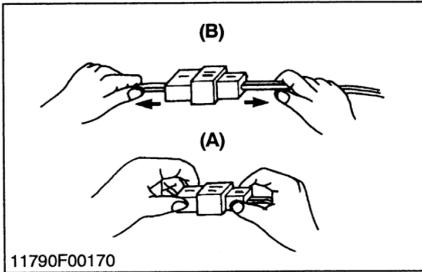
(4) Connector



- For connector with lock, push lock to separate.

(A) Push

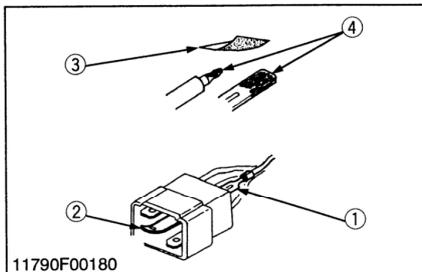
11790G00150



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

(A) Correct (B) Incorrect

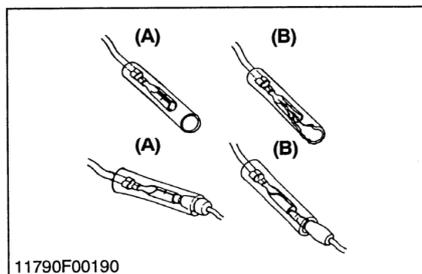
11790G00160



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

(1) Exposed Terminal (3) Sandpaper
 (2) Bend Terminal (4) Rust

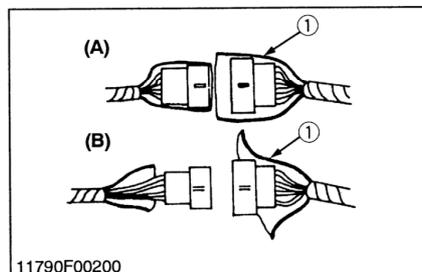
11790G00180



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

(A) Correct (B) Incorrect

11790G00180

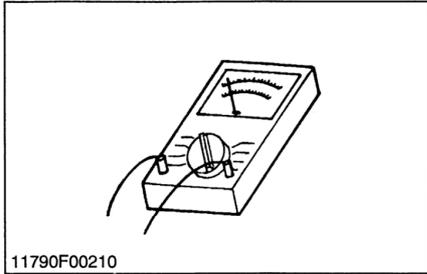


- Make certain plastic cover is large enough to cover whole connector.

(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 |
|-------------------------------------|--|----------------|--|--------|--|-------|-------|--|
| | | | F2260 | F2560E | F2560 | F3060 | F3560 | |
| 1 | Fuel | | 40 L 10.6 U.S.gals. 8.8 Imp.gals. | | | | | [ASTM D 975] No.2-D diesel fuel No.1-D diesel fuel if temperature is below -10 °C (14 °F) |
| 2 | Coolant | Cooling system | 3.4 L 3.6 U.S.qts. 3.0 Imp.qts. | | 3.9 L 4.1 U.S.qts. 3.4 Imp.qts. | | | Fresh clean water (soft water) with anti-freeze |
| | | Recovery tank | 0.3 L 0.3 U.S.qts. 0.3 Imp.qts. | | | | | |
| 3 | Engine crankcase (with filter) *1 | | 2.4 L 2.5 U.S.qts. 2.1 Imp.qts. | | 2.7 L 2.8 U.S.qts. 2.4 Imp.qts. | | | Engine oil: MIL-L-2104C, API Service Classification CC or 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 | | 12.8 L 13.5 U.S.qts. 11.3 Imp.qts. | | 13.5 L 14.3 U.S.qts. 11.9 Imp.qts. | | | KUBOTA SUPER UDT-2 fluid *2 (Reference) Maker Brand name Exxon.....Torque Fluid 56 Shell.....Donax TD Union.....Hydraulic / Tractor Fluid Mobil.....Mobil Fluid 424 |
| 5 | Rear axle differential case | | 1.3 L 1.4 U.S.qts. 1.1 Imp.qts. | - | 1.3 L 1.4 U.S.qts. 1.1 Imp.qts. | | | KUBOTA SUPER UDT-2 fluid *2 or SAE80 - SAE90 gear oil |
| 6 | Rear axle gear case | | 0.5 L 0.5 U.S.qts. 0.4 Imp.qts. | - | 0.5 L 0.5 U.S.qts. 0.4 Imp.qts. | | | |
| 7 | Speed control pedal shaft | | Until grease overflows | | | | | SAE multipurpose type grease |
| | Link pivots (Left and right) | | | | | | | |
| | Seat adjuster | | | | | | | |
| | Speed change link | | | | | | | |
| | Universal joint | | | | | | | |
| | Rear wheel drive shaft (Front and rear for 4WD) | | | | | | | |
| | Knuckle arm (Left and right for 4WD) | | | | | | | |
| Kingpin (Left and right for 2WD) | | | | | | | | |
| 8 | Accelerator cable | | Moderate amount | | | | | Oil |

■ **NOTE**

- *1 Oil amount when the oil level is at the upper level of the oil level gauge.
- *2 The product name of KUBOTA genuine UDT fluid may be different from that in the Operator's Manual depending on countries or territories.

[6] TIGHTENING TORQUES

(1) 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 | SS400, S20C | | | | | | S43C, S48C | | | | | | SCr435, SCM435 | | |
| Material of opponent part | Ordinariness | | | Aluminum | | | Ordinariness | | | Aluminum | | | Ordinariness | | |
| Unit Diameter | N-m | kgf-m | ft-lbs |
| M6 (6 mm, 0.24 in.) | 7.85 to 9.31 | 0.80 to 0.95 | 5.79 to 6.87 | 7.85 to 8.82 | 0.80 to 0.90 | 5.79 to 6.50 | 9.81 to 11.2 | 1.00 to 1.15 | 7.24 to 8.31 | 7.85 to 8.82 | 0.80 to 0.90 | 5.79 to 6.50 | 12.3 to 14.2 | 1.25 to 1.45 | 9.05 to 10.4 |
| M8 (8 mm, 0.31 in.) | 17.7 to 20.5 | 1.8 to 2.1 | 13.1 to 15.1 | 16.7 to 19.6 | 1.7 to 2.0 | 12.3 to 14.4 | 23.6 to 27.4 | 2.4 to 2.8 | 17.4 to 20.2 | 17.7 to 20.5 | 1.8 to 2.1 | 13.1 to 15.1 | 29.5 to 34.3 | 3.0 to 3.5 | 21.7 to 25.3 |
| M10 (10 mm, 0.39 in.) | 39.3 to 45.1 | 4.0 to 4.6 | 29.0 to 33.2 | 31.4 to 34.3 | 3.2 to 3.5 | 23.2 to 25.3 | 48.1 to 55.8 | 4.9 to 5.7 | 35.5 to 41.2 | 39.3 to 44.1 | 4.0 to 4.5 | 29.0 to 32.5 | 60.9 to 70.6 | 6.2 to 7.2 | 44.9 to 52.0 |
| M12 (12 mm, 0.47 in.) | 62.8 to 72.5 | 6.4 to 7.4 | 46.3 to 53.5 | | | | 77.5 to 90.2 | 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 86.7 |
| 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 | | | | 197 to 225 | 20.0 to 23.0 | 145 to 166 | | | | 260 to 304 | 26.5 to 31.0 | 192 to 224 |
| M18 (18 mm, 0.71 in.) | 246 to 284 | 25.0 to 29.0 | 181 to 209 | | | | 275 to 318 | 28.0 to 32.5 | 203 to 235 | | | | 344 to 402 | 35.0 to 41.0 | 254 to 296 |
| 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 | | | | 491 to 568 | 50.0 to 58.0 | 362 to 419 |

11790G00761

(2) Stud Bolts

| Material of opponent part | Ordinariness | | | Aluminum | | |
|---------------------------|--------------------|------------------|--------------------|--------------------|-------------------|--------------------|
| Unit Diameter | N-m | kgf-m | ft-lbs | N-m | kgf-m | ft-lbs |
| M8 (8 mm, 0.31 in.) | 11.8 to 15.6 | 1.2 to 1.6 | 8.68 to 11.5 | 8.82 to 11.8 | 0.90 to 1.2 | 6.51 to 8.67 |
| M10 (10 mm, 0.39 in.) | 24.6 to 31.3 | 2.5 to 3.2 | 18.1 to 23.1 | 19.7 to 25.4 | 2.0 to 2.6 | 14.5 to 18.8 |
| M12 (12 mm, 0.47 in.) | 29.5 to 49.0 | 3.0 to 5.0 | 21.7 to 36.1 | 31.4 | 3.2 | 23.1 |

11790G00762

[7] MAINTENANCE CHECK LIST

| No. | Items | Period | Indication on hour meter (Hr) | | | | | | | After since | Reference page | |
|-----|--|---------|-------------------------------|-----|-----|-----|-----|-----|-----|-------------|---------------------|----------------|
| | | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | | | |
| 1 | Engine oil | Change | ★ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 100 Hr | G-11 |
| 2 | Engine oil filter cartridge | Replace | ★ | | ☆ | | ☆ | | ☆ | | every 200 Hr | G-12, 20 |
| 3 | Transmission oil | Change | | | ★ | | ☆ | | ☆ | | every 200 Hr | G-19, 21 |
| 4 | Transmission oil filter cartridge | Replace | ★ | | ☆ | | ☆ | | ☆ | | every 200 Hr | G-12, 19, G-21 |
| 5 | Transmission oil strainer | Clean | | | ★ | | ☆ | | ☆ | | every 200 Hr | G-20, 21 |
| 6 | Rear axle differential case oil [4WD] | Change | | | ★ | | ☆ | | ☆ | | every 200 Hr | G-20, 21 |
| 7 | Rear axle gear case oil (Left and right) [4WD] | Change | | | ★ | | ☆ | | ☆ | | every 200 Hr | G-20, 21 |
| 8 | Rear axle pivot | Adjust | | | | | ☆ | | | | every 400 Hr | G-23 |
| 9 | Safety devices | Check | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 50 Hr | G-13 |
| 10 | Greasing | Check | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 50 Hr | G-14 |
| 11 | Battery condition | Check | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 50 Hr | G-15, 16 |
| 12 | Air cleaner element | Clean | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 50 Hr * | G-17 |
| | | Replace | | | | | | | | | | every 1 year |
| 13 | Fuel filter | Check | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 100 Hr | G-17 |
| | | Replace | | | | | ☆ | | | | every 400 Hr | G-23 |
| 14 | Radiator hose and clamp | Check | | | ☆ | | ☆ | | ☆ | | every 200 Hr | G-21 |
| | | Replace | | | | | | | | | every 2 years | G-26 |
| 15 | Hydraulic hose | Check | | | ☆ | | ☆ | | ☆ | | every 200 Hr | G-22 |
| | | Replace | | | | | | | | | every 2 years | G-26 |
| 16 | Fuel line | Check | | | ☆ | | ☆ | | ☆ | | every 200 Hr | G-22 |
| | | Replace | | | | | | | | | every 2 years | G-27 |
| 17 | Cooling system | Clean | | | | | | | | | every 1 year | G-25, 26 |
| 18 | Radiator core | Check | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 100 Hr * | G-18 |
| 19 | Coolant | Change | | | | | | | | | every 1 year | G-25, 26 |
| 20 | Fan belt tension | Adjust | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 100 Hr | G-18 |
| 21 | Brake pedal free travel | Adjust | | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | every 100 Hr | G-19 |
| 22 | Fuel system | Bleed | | | | | | | | | Service as required | G-27 |
| 23 | Fuse | Replace | | | | | | | | | | G-28 |
| 24 | Light bulb | Replace | | | | | | | | | | G-28 |

Note : The jobs indicated by ★ must be done initially.

* This maintenance should be done daily more often in dusty conditions than in normal conditions.

11900G00390

[8] CHECK AND MAINTENANCE

CAUTION

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

11790G00211

(1) Daily Check

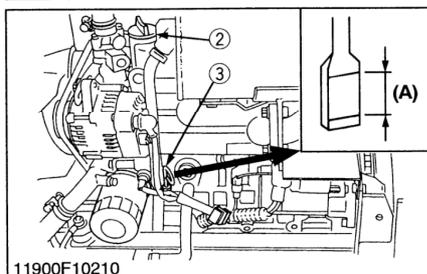
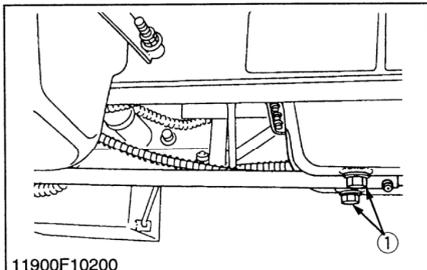
To prevent trouble from occurring, it is important to know the condition of the machine. Check the following items before starting.

Checking

- Check areas where previous trouble was experienced.
- Walk around the machine.
 - 1) The tire pressure, wear and damage
 - 2) Oil and water leak
 - 3) Engine oil level
 - 4) Transmission oil level
 - 5) Battery electrolyte level
 - 6) Coolant level in the recovery tank
 - 7) Damage of machine body, tightness of all screws, bolts and nuts
 - 8) Radiator screen
 - 9) Panel screen
 - 10) Brake play
 - 11) Oiling
 - 12) Fuel level
- While sitting in the operator's seat.
 - 1) Speed control pedal
 - 2) Brake pedal
 - 3) Speed set lever (Option)
 - 4) Parking brake
 - 5) Steering wheel
- Turning the key switch "ON".
 - 1) Performance of the easy checker light
 - 2) Head light
- Starting the engine.
 - 1) Color of the exhaust fumes
 - 2) Safety start switch, seat safety control and another safety devices
 - 3) Check for abnormal noise and vibration
- Others.
 - 1) Check the areas where previous trouble was experienced

11900G00400

(2) Check Points of Initial 50 Hours



Changing Engine Oil

CAUTION

- Be sure to stop the engine before changing oil.
 1. Start and warm up the engine for approx. 5 minutes.
 2. Place an oil pan underneath the engine.
 3. To drain the used oil, remove the drain plugs (1) at the bottom of the engine and drain the oil completely.
 4. Screw in the drain plugs (1).
 5. Fill new oil up to upper line on the dipstick (3).

■ IMPORTANT

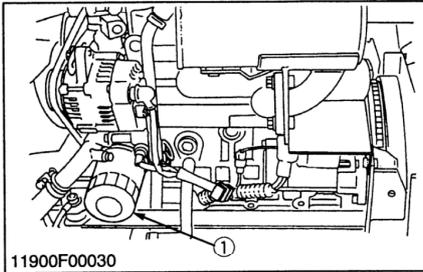
- When using an oil of different manufacture or viscosity from the previous one, remove all of the old oil.
- Never mix two different type of oil.
- Use the proper SAE Engine Oil according to ambient temperatures.

Refer to "LUBRICANTS, FUEL AND COOLING WATER".
(See page G-8.)

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

(A) Oil level is acceptable within this range.

11900G00030



Replacing Engine Oil Filter Cartridge

⚠ CAUTION

- **Be sure to stop the engine before changing the oil filter cartridge.**

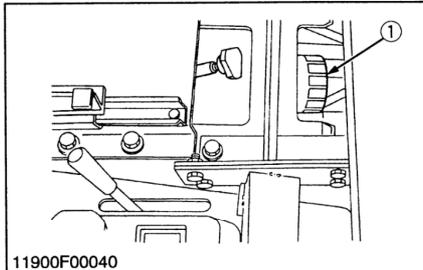
1. Remove the engine oil filter cartridge (1) with the filter wrench.
2. Apply a slight coat of oil onto the rubber gasket.
3. To install the new cartridge, screw it in by hand. Over tightening may cause deformation of rubber gasket.
4. After the new cartridge has been replaced, the engine oil normally decrease a little. Thus see that the engine oil does not leak through the seal and be sure to read the oil level on the dipstick. Then, replenish the engine oil up to the specified level.

■ IMPORTANT

- **To prevent serious damage to the engine, replacement filter cartridge must be highly efficient. Use only a KUBOTA genuine filter.**

(1) Engine Oil Filter Cartridge

11900G00040



Replacing Transmission Oil Filter Cartridge

⚠ CAUTION

- **Be sure to stop the engine before changing the oil filter cartridge.**

1. Remove the transmission oil filter cartridge (1) with the filter wrench.
2. When installing, apply the clean transmission oil slightly onto the rubber gasket.
3. Tighten the transmission oil filter cartridge quickly until it contacts the mounting surface. Tighten the transmission oil filter cartridge (1) by hand. Over tightening may cause deformation of rubber gasket.
4. After the new cartridge has been replaced, the transmission fluid level normally decreases a little. Add KUBOTA SUPER UDT fluid to proper level. Check for oil leaks around filter gasket.

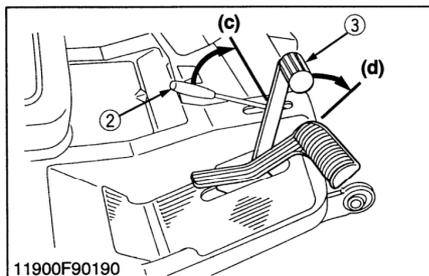
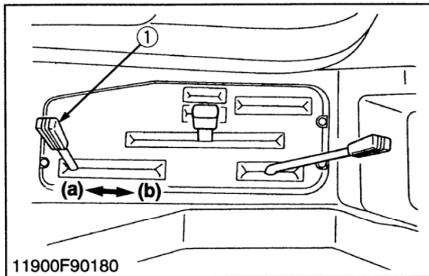
■ IMPORTANT

- **To prevent serious damage to the hydraulic system, replacement oil filter cartridge must be highly efficient. Use only a genuine KUBOTA filter.**

(1) Transmission Oil Filter Cartridge

11900G00050

(3) Check Points of Every 50 Hours



- | | |
|------------------------|-------------------|
| (1) PTO Lever | (a) DISENGAGE |
| (2) Parking Lock Lever | (b) ENGAGE |
| (3) Main Brake Pedal | (c) Lock Position |
| | (d) Depress |

Checking Safety Devices

The Safety Devices in your machine help to protect you while operating. Please check this Safety Devices periodically - daily is best - to test function of the Safety Devices before operation.

⚠ CAUTION

To avoid personal injury :

- Do not allow anyone near the machine while testing.
- If the machine does not pass a test do not operate the machine.
- Sit on operator's seat for all tests except for Test 1.

1. Check the following tests before operating the machine.
2. If the machine does not pass one of the following tests, do not operate the machine, and check the safety switches and the wiring harness.

Test 1 (OPERATOR NOT ON SEAT)

1. Do not depress the main brake pedal (3) or unlock the parking lock lever (2).
2. Turn the key switch to "START" position.
3. The engine must not crank.

Test 2 (OPERATOR ON SEAT)

1. Do not depress the main brake pedal (3) or unlock the parking lock lever (2).
2. Shift the PTO lever (1) to "DISENGAGE" position.
3. Turn the key switch to "START" position.
4. The engine must not crank.

Test 3 (OPERATOR ON SEAT)

1. Do not depress the main brake pedal (3) or unlock the parking lock lever (2).
2. Shift the PTO lever (1) to "DISENGAGE" position.
3. Depress the speed control pedal forward.
4. Turn the key switch to "START" position.
5. The engine must not crank.

Test 4 (OPERATOR ON SEAT)

1. Depress the main brake pedal (3) fully.
2. Shift the PTO lever (1) to "ENGAGE" position.
3. Turn the key switch to "START" position.
4. The engine must not crank.

Test 5 (OPERATOR ON SEAT)

1. Start the engine.
2. Do not depress the main brake pedal (3) or unlock the parking lock lever (2).
3. Shift the PTO lever (1) to "ENGAGE" position.
4. Stand up. (Do not get off the machine.)
5. The engine must shut off.

Test 6 (OPERATOR ON SEAT)

1. Start the engine.
2. Do not depress the main brake pedal (3) or unlock the parking lock lever (2).
3. Shift the PTO lever (1) to "DISENGAGE" position.
4. Stand up. (Do not get off the machine.)
5. The engine must shut off.

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