WSM

WORKSHOP MANUAL

F2880,F2880E,F3680,RCK72P-F36, RCK72R-F36,RCK60P-F36, RCK60R-F36

Kubota

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GENERAL

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SAFETY FIRST

This symbol, the industry's "Safety Alert Symbol", is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully.

It is essential that you read the instructions and safety regulations before you attempt to repair or use this unit.

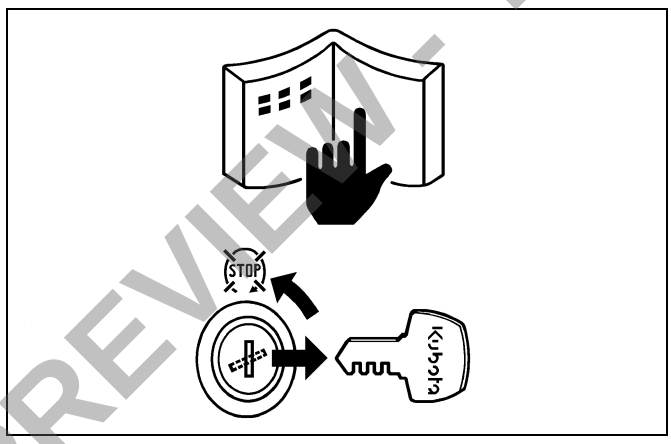
DANGER : Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

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.



BEFORE SERVICING AND REPAIRING

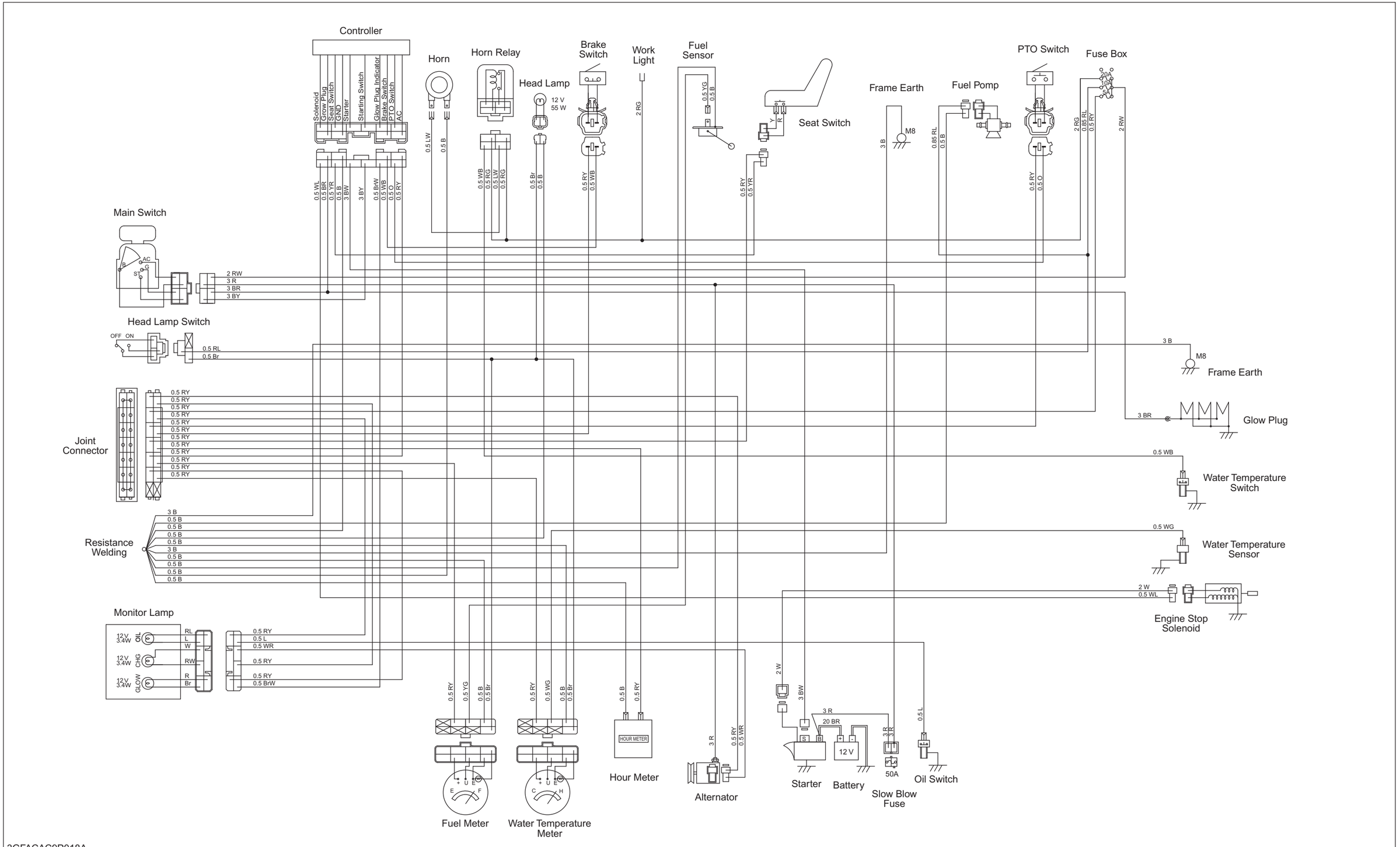
- Read all instructions and safety instructions in this manual and on your machine safety decals.
- Clean the work area and machine.
- Park the machine on a firm and level ground, and set the parking brake.
- Lower the implement to the ground.
- Stop the engine, and remove the key.
- Disconnect the battery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

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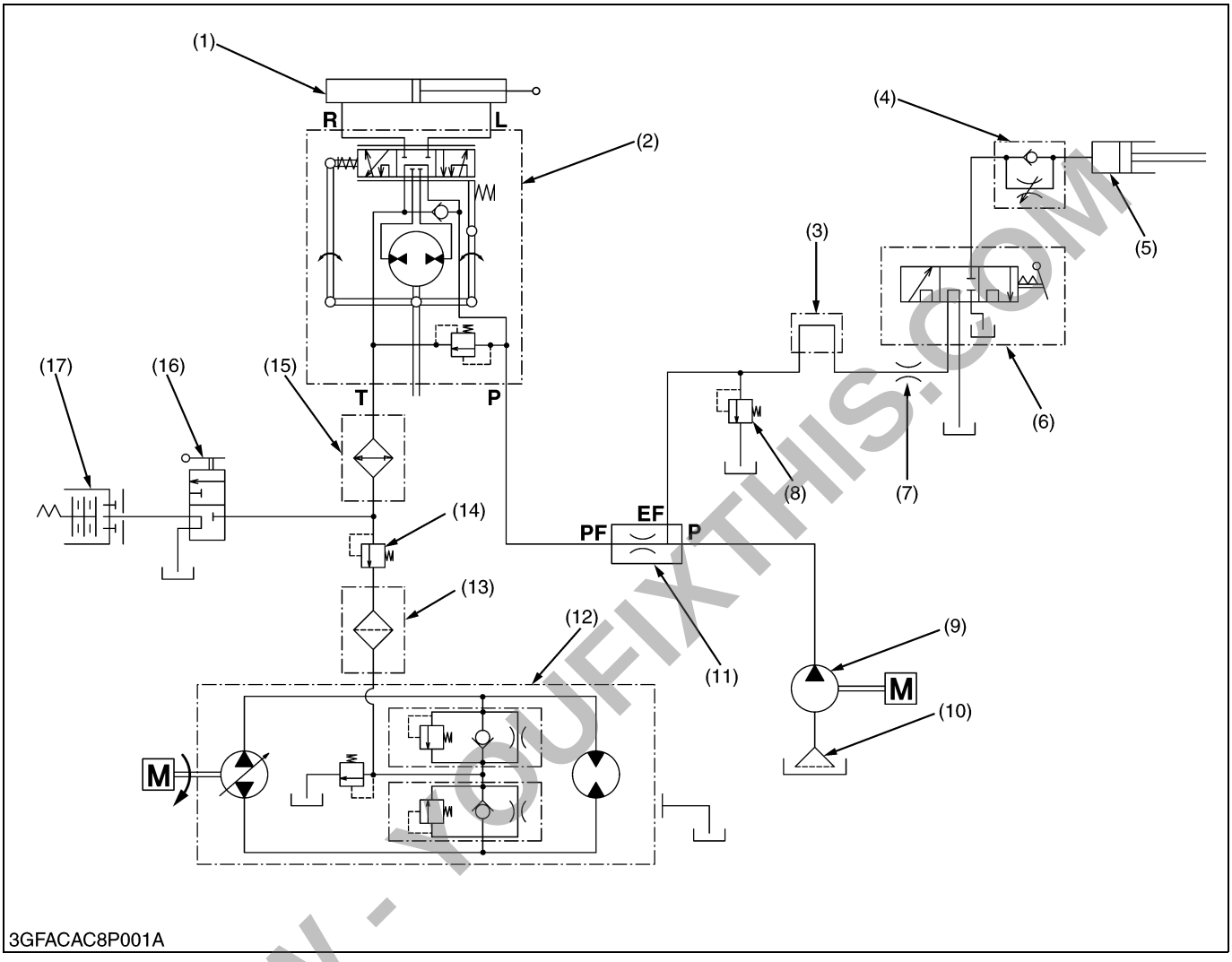
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1. WIRING DIAGRAM



3GFACAC9P018A

1. HYDRAULIC CIRCUIT



(1) Steering Cylinder
(2) Steering Controller
(3) Hydraulic Block Type Outlet
(4) Lowering Speed Adjusting Valve
(5) Hydraulic Cylinder
(6) Implement Control Valve
(7) Orifice
(8) Relief Valve
(9) Hydraulic Pump
(10) Oil Strainer
(11) Flow Priority Valve
(12) Hydraulic Transmission
(13) Filter Cartridge
(14) PTO Charge Relief Valve
(15) Oil Cooler
(16) PTO Control Valve
(17) Hydraulic PTO Clutch

EF :EF Port
PF :PF Port
P : P Port
T : T Port
L : L Port
R : R Port

The hydraulic system of these machines are composed of a hydraulic pump (9), hydraulic block type outlet (3), implement control valve (6), hydraulic cylinder (5) and other components.

This system has the following functions.

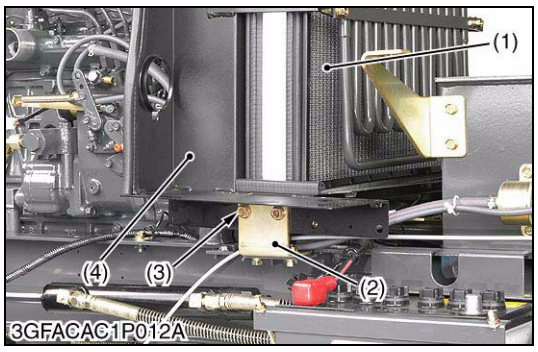
Position control of the front implement connected to the lift arm.

Hydraulic power take off from the hydraulic block type outlet (3) to operate the implements such as a grass collector and, etc..

Oil is supplied by a hydraulic pump (9) connected to the engine. When an engine is started, hydraulic pump (9) starts running, sucks oil from a transmission case. The hydraulic pump (9) forces out the oil to the hydraulic block type outlet (3), implement control valve (6), hydraulic cylinder (5), steering controller (2), PTO control valve (16), hydraulic PTO clutch (17) and hydrostatic transmission (12).

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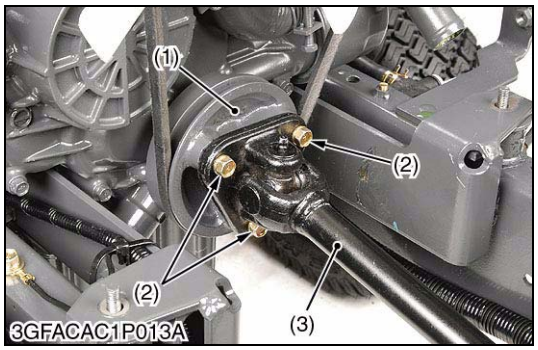


Radiator

1. Unscrew the dust plate mounting screws (3).
2. Remove the radiator assembly (1) with the dust plate (4).

(1) Radiator Assembly
(2) Dust Plate Stay
(3) Dust Plate Mounting Screw
(4) Dust Plate

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Drive Shaft

1. Unscrew the drive shaft mounting screws (2), and disconnect the drive shaft (3) from the fan drive pulley (1).

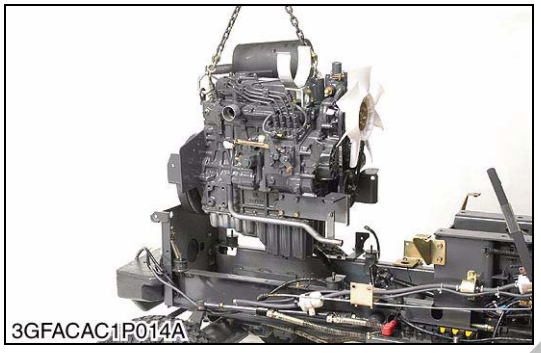
(When reassembling)

- Apply grease to the all splines on the drive shaft.

Tightening torque	Drive shaft mounting screw	19.6 to 29.4 N·m 2.0 to 3.0 kgf·m 14.5 to 21.7 ft-lbs

(1) Fan Drive Pulley
(2) Drive Shaft Mounting Screw
(3) Drive Shaft

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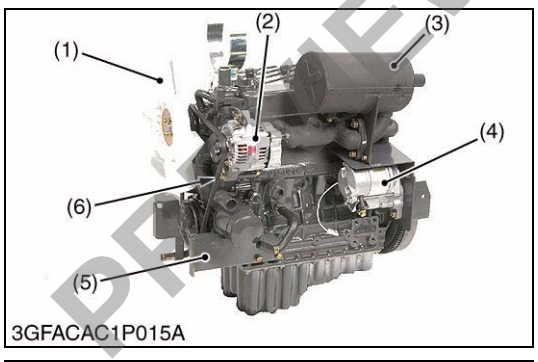
Separating Engine

1. Unscrew the engine mounting nuts, and support the engine with an engine lift hook and hoist.
2. Separate the engine from the frame.

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[3] DISASSEMBLING AND ASSEMBLING

(1) External Components

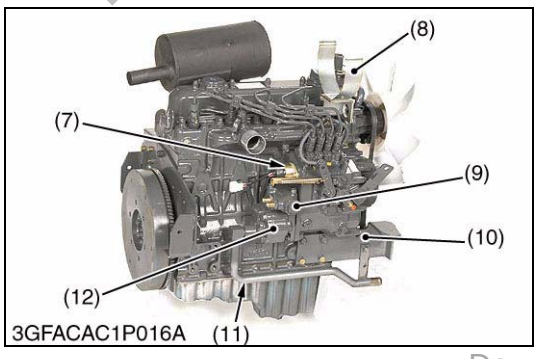


External Components

1. Remove the alternator (2) and the fan belt (6).
2. Remove the cooling fan (1).
3. Remove the muffler (3) and the starter (4).
4. Remove the air cleaner stay (8).
5. Remove the engine stop solenoid (7).
6. Remove the flow priority valve (9).
7. Remove the hydraulic pump (12) with the rear suction pipe (11).
8. Remove the engine support LH (5) and RH (10).

(1) Cooling Fan
(2) Alternator
(3) Muffler
(4) Starter
(5) Engine Support LH
(6) Fan Belt
(7) Engine Stop Solenoid
(8) Air Cleaner Stay
(9) Flow Priority Valve
(10) Engine Support RH
(11) Rear Suction Pipe
(12) Hydraulic Pump

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3. TIGHTENING TORQUES

Tightening torques of screws bolts and nuts on the table below are especially specified.
(For general use screws, bolts and nuts : See page G-8.)

Item	N·m	kgf·m	ft-lbs
Oil strainer	98.1 to 137.2	10.0 to 14.0	72.4 to 101.2
ROPS mounting screw	123 to 147	12.6 to 14.9	90.8 to 108.4
Seat base mounting screw	17.7 to 20.5	1.8 to 2.1	13.1 to 15.1
Drive shaft mounting screw	19.6 to 29.4	2.0 to 3.0	14.5 to 21.7
Cylinder head cover cap nut	6.9 to 8.8	0.7 to 0.9	5.1 to 6.5
Injection pipe retaining nut	24.5 to 34.3	2.5 to 3.5	18.1 to 25.3
Nozzle holder assembly	49.0 to 68.6	5.0 to 7.0	36.2 to 50.6
Nozzle holder	34.3 to 39.2	3.5 to 4.0	25.3 to 28.9
Overflow pipe assembly retaining nut	19.6 to 24.5	2.0 to 2.5	14.5 to 18.1
Glow plug	7.8 to 14.7	0.8 to 1.5	5.8 to 10.8
* Rocker arm bracket nut	21.6 to 26.5	2.2 to 2.7	15.9 to 19.5
* Cylinder head screw	63.7 to 68.6	6.5 to 7.0	47.0 to 50.6
* Fan drive pulley screw	235.4 to 245.2	24.0 to 25.0	173.6 to 180.8
* Connecting rod screw	41.2 to 46.1	4.2 to 4.7	30.4 to 34.0
* Flywheel screw	53.9 to 58.8	5.5 to 6.0	39.8 to 43.4
Bearing case cover screw	9.8 to 11.3	1.00 to 1.15	7.2 to 8.3
* Main bearing case screw 1	29.4 to 34.3	3.0 to 3.5	21.7 to 25.3
* Main bearing case screw 2	49.0 to 53.9	5.0 to 5.5	36.2 to 39.8
* Idle gear shaft 1 mounting screw	9.8 to 11.3	1.00 to 1.15	7.2 to 8.3
Oil pressure switch	14.7 to 19.6	1.5 to 2.0	10.8 to 14.5

■ **NOTE**

- **For * marked screws, bolts and nuts on the table, apply engine oil to their threads and seats before tightening.**
- **The letter "M" in Size × Pitch means that the screw, bolt or nut dimension stands for metric. The size is the nominal outside diameter in mm or the threads. The pitch is the nominal distance in mm between two threads.**

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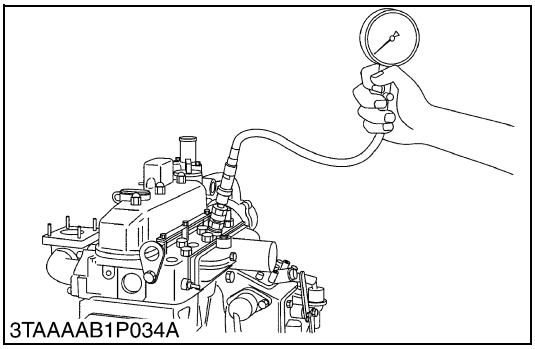
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4. CHECKING, DISASSEMBLING AND SERVICING

[1] CHECKING AND ADJUSTING

(1) Engine Body



Compression Pressure

1. Run the engine until it is warmed up.
2. Stop the engine.
3. Remove the air cleaner, the muffler and all glow plugs (or nozzles).
4. Set a compression tester with the adaptor to the glow plug hole (or nozzle hole).
   Nozzle hole : Adaptor **H** (07909-31231)
   Glow plug hole : Adaptor **L** (07909-31301)
5. After making sure that the stop lever is set at the stop position (non-injection), run the engine with the starter and measure the compression pressure.
6. Repeat steps 4 and 5 for each cylinder.
7. If the measurement is below the allowable limit, apply a small amount of oil to the cylinder wall through the glow plug hole (or nozzle hole) and measure the compression pressure again.
8. If the compression pressure is still less than the allowable limit, check the top clearance, valve clearance and cylinder head.
9. If the compression pressure increases after applying oil, check the cylinder wall and piston rings.

■ **NOTE**

- **Check the compression pressure with the specified valve clearance.**
- **Always use a fully charged battery for performing this test.**
- **Variances in cylinder compression values should be under 10 %.**

Compression pressure	Factory spec.	3.72 to 4.12 MPa 38 to 42 kgf/cm^2 539 to 596 psi
	Allowable limit	2.25 MPa 23.0 kgf/cm^2 327 psi

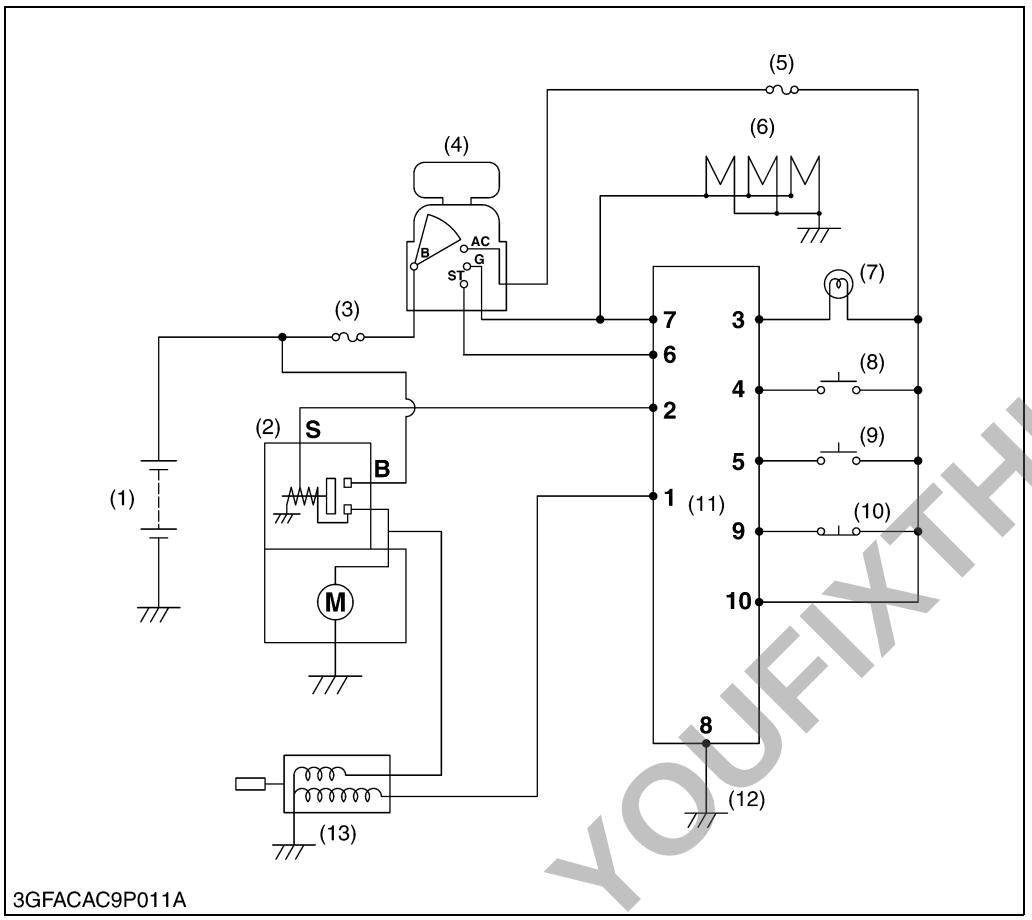
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2. STARTING SYSTEM

[1] OPERATOR PRESENCE CONTROL (OPC) SYSTEM



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(1) Battery
(2) Starter
(3) Slow Blow Fuse (50A)
(4) Main Switch
(5) Fuse (5A)
(6) Glow Plug
(7) Glow Plug Lamp
(8) Seat Switch
(9) PTO Switch
(10) Brake Switch
(11) Controller
(12) Frame Earth
(13) Engine Stop Solenoid

1 to 10 :Controller Terminals
AC :AC Terminal
G : G Terminal
ST :ST Terminal
S : S Terminal
B : B Terminal

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This machine is equipped with the operator presence control (OPC) system.

This system is controlled by three safety switch (seat switch (8), PTO switch (9) and brake switch (10)) and controller (11).

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1. TROUBLESHOOTING

Symptom	Probable	Solution	Reference page
Engine Does Not Start	No fuel	Replenish fuel	G-7
	Air in the fuel system	Bleed	G-36
	Water in the fuel system	Change fuel and repair or replace fuel system	–
	Fuel pipe clogged	Clean	G-36
	Fuel filter clogged	Change	G-31
	Excessively high viscosity of fuel or engine oil at low temperature	Use specified fuel or engine oil	G-7
	Fuel with low cetane number	Use specified fuel	G-7
	Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	1-S25
	Incorrect injection timing	Adjust	1-S15
	Fuel camshaft worn	Replace	–
	Injection nozzle clogged	Repair or replace	1-S18
	Injection pump malfunctioning	Repair or replace	1-S30
	Seizure of crankshaft, camshaft, piston, cylinder or bearing	Repair or replace	–
	Compression leak from cylinder	Replace head gasket, tighten cylinder head screw, glow plug and nozzle holder	1-S27
	Improper valve timing	Correct or replace timing gear	1-S31
	Piston ring and cylinder worn	Repair or replace	1-S34
	Excessive valve clearance	Adjust	1-S12
(Starter Does Not Run)	Battery discharged	Charge	G-24
	Starter malfunctioning	Repair or replace	8-S19 to S21
	Main switch malfunctioning	Replace	8-S6 to S7
	Brake switch defective	Replace	8-S10
	PTO switch defective	Replace	8-S10
	Seat switch defective	Replace	8-S9
	Wiring disconnected	Connect	–
Engine Revolution Is Not Smooth	Fuel filter clogged or dirty	Change	G-31
	Air cleaner clogged	Clean or replace	G-26, 32
	Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	1-S25
	Injection pump malfunctioning	Replace	1-S30
	Incorrect nozzle injection pressure	Adjust	1-S17
	Injection nozzle stuck or clogged	Repair or replace	1-S18
	Governor malfunctioning	Repair	–

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SPECIFICATIONS

Model			F2880	F2880E	F3680
Engine	Model		D1105-E2-FM2		V1505-E2-FM3
	Engine gross power (SAE) *1		20.4 kW (27.3 HP)		26.3 kW (35.3 HP)
	Type		Indirect Injection, vertical, water-cooled, 4-cycle diesel		
	Number of cylinders		3		4
	Bore and stroke		78.0 × 78.4 mm (3.07 × 3.09 in.)		
	Total displacement		1123 cm^3 (68.58 cu.in.)		1498 cm^3 (91.42 cu.in.)
	Rated revolution		3000min^{-1} (rpm)		
	Starting system		Electric starter 12 V, 1.1 kW		
	Lubricating system		Forced lubrication by gear pump		
	Cooling system		Pressurized radiator, forced circulation with water pump		
	Battery		12 V, CCA : 490 A, RC : 112 min.		
	Fuel		Diesel fuel No. 1 [below –10 °C (14 °F)] Diesel fuel No. 2-D [above –10 °C (14 °F)]		
Capacities	Fuel tank		61 L (16.1 U.S.gals, 13.4 Imp.gals)		
	Engine crankcase		3.8 L (4.0 U.S.qts., 3.3 Imp.qts)		
	Engine coolant		4.6 L (4.9 U.S.qts., 4.0 Imp.qts)		
	Recovery tank		0.6 L (0.6 U.S.qts, 0.5 Imp.qts)		
	Transmission case		14.0 L (14.8 U.S.qts, 12.3 Imp.qts)		
	Rear axle differential case		1.5 L (1.59 U.S.qts, 1.32 Imp.qts)	–	1.5 L (1.59 U.S.qts, 1.32 Imp.qts)
	Rear axle gear case		0.5 L (0.53 U.S.qts, 0.44 Imp.qts)	–	0.5 L (0.53 U.S.qts, 0.44 Imp.qts)
Tire	Front		24 × 12 – 12 (4PR) Turf	23 × 10.5 – 12 (4PR) Turf	24 × 12 – 12 (4PR) Turf
	Rear		18 × 9.5 – 8 (4PR) Turf	16 × 6.5 – 8 (4PR) Turf	18 × 9.5 – 8 (4PR) Turf
Travelling speeds	Forward	Low	0 to 5.6 mph (0 to 9.0 km/h) *2		
		High	0 to 12.6 mph (0 to 20.0 km/h) *2		
	Reverse	Low	0 to 3.0 mph (0 to 4.8 km/h) *2		
		High	0 to 6.9 mph (0 to 11.0 km/h) *2		
Dimensions	Overall length		2450 mm (96.5 in.)		
	Overall width		1370 mm (53.9 in.)	1240 mm (48.8 in.)	1370 mm (53.9 in.)
	Overall height	without ROPS	1350 mm (53.1 in.)		
		with ROPS	1985 mm (78.2 in.)		
	Wheel base		1300 mm (51.2 in.)		
	Min. ground clearance		185 mm (7.3 in.)		
	Tread	Front	1063 mm (41.9 in.)	975 mm (38.4 in.)	1063 mm (41.9 in.)
		Rear	1020 mm (40.2 in.)	875 mm (34.4 in.)	1020 mm (40.2 in.)
Weight (without mower deck)			748 kg (1649 lbs)	723 kg (1594 lbs)	765 kg (1687 lbs)

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6. MAINTENANCE CHECK LIST

■ **IMPORTANT**

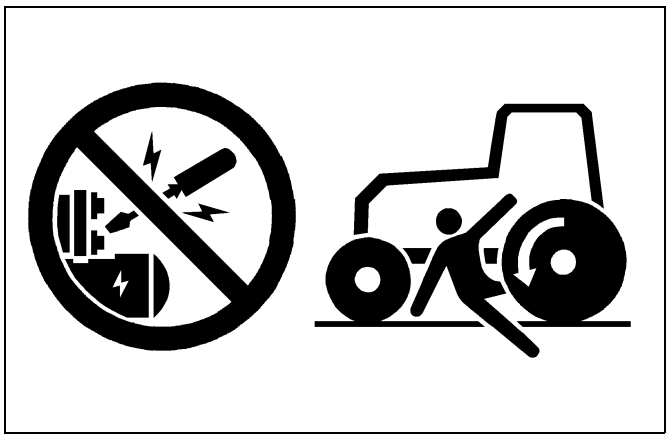
- **The jobs indicated by ★ must be doneinitially.**
- ***1 : This maintenance should be done daily more in dusty conditions than in normal conditions. Suggested cleaning interval is every 100 hours in normal conditions.**
- **The items listed above (@ marked) are registered as emission related critical parts by KUBOTA in the U.S.EPA nonroad emission regulation. As the engine owner, you are responsible for the performance of the required maintenance on the engine according to the above instruction.**

No.	Item \ Period		Service Interval												After since	Important		Reference page
			50	100	150	200	250	300	350	400	450	500	550	600				
1	Safety device	Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50Hr			G-21
2	Greasing	–	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50Hr			G-22
3	Oiling	–	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50Hr			G-23
4	Battery condition	Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50Hr			G-24
5	Air cleaner element	Clean	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50Hr	*1	@	G-26
		Replace													every 1 year			G-32
6	Engine oil	Change	★	☆		☆		☆		☆		☆		☆	every 100Hr			G-19
7	Fan belt	Adjust		☆		☆		☆		☆		☆		☆	every 100Hr			G-27
8	Brake pedal free travel	Adjust		☆		☆		☆		☆		☆		☆	every 100Hr			G-27
9	Fuel filter	Check		☆		☆		☆		☆		☆		☆	every 100Hr		@	G-27
		Replace								☆					every 400Hr			G-36
10	Engine oil filter cartridge	Replace	★			☆				☆				☆	every 200Hr			G-19
11	Transmission fluid	Change				★				☆				☆	every 200Hr			G-28
12	Transmission oil filter cartridge	Replace	★			☆				☆				☆	every 200Hr	*1		G-20
13	Transmission oil strainer	Clean				★				☆				☆	every 200Hr			G-28
14	Rear axle differential case fluid [4WD model]	Change				★				☆				☆	every 200Hr			G-29
15	Rear axle gear case (RH and LH) fluid [4WD model]	Change				★				☆				☆	every 200Hr			G-29
16	Radiator hose and clamp	Check				☆				☆				☆	every 200Hr			G-29
		Replace													every 2 years			G-35
17	Hydraulic hose	Check				☆				☆				☆	every 200Hr			G-30
		Replace													every 2 years			G-35

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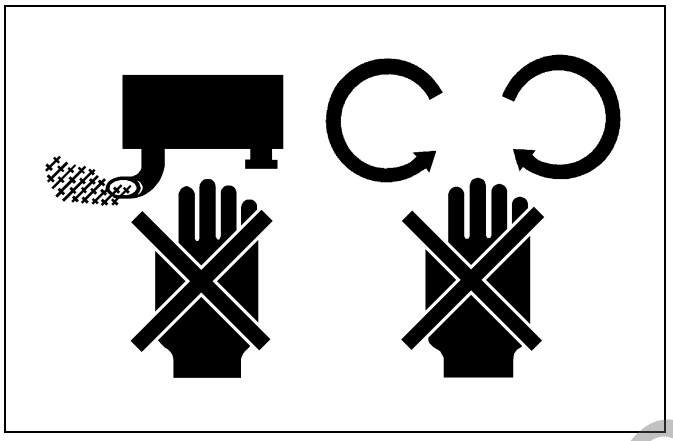
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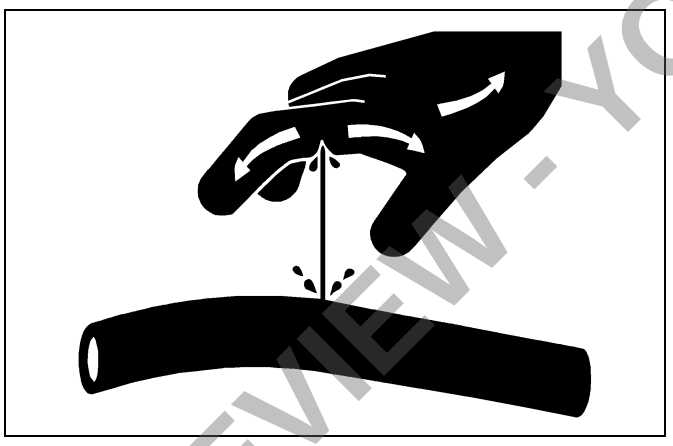
SAFETY STARTING

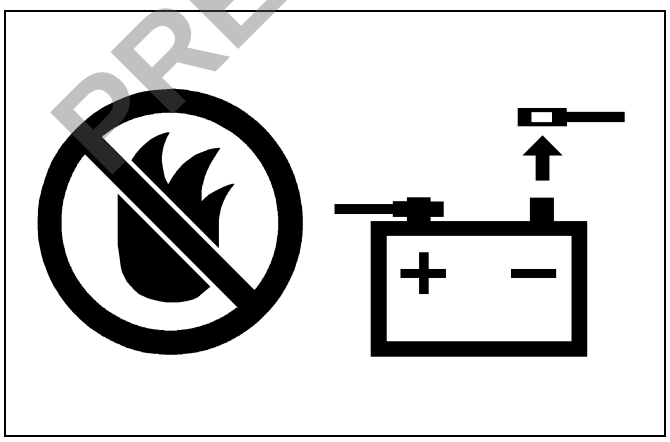
- Do not start the engine by shorting across starter terminals or bypassing the safety start switch.
- Do not alter or remove any part of machine safety system.
- Before starting the engine, make sure that all shift levers are in neutral positions or in disengaged positions.
- Never start the engine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



SAFETY WORKING

- Do not work on the machine while under the influence of alcohol, medication, or other substances or while fatigued.
- Wear close fitting clothing and safety equipment appropriate to the job.
- Use tools appropriate to the work. Makeshift tools, parts, and procedures are not recommended.
- When servicing is performed together by two or more persons, take care to perform all work safely.
- Do not work under the machine that is supported solely by a jack. Always support the machine by safety stands.
- Do not touch the rotating or hot parts while the engine is running.
- 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.
- 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.



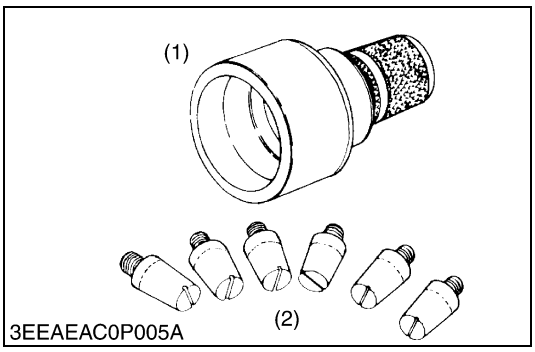


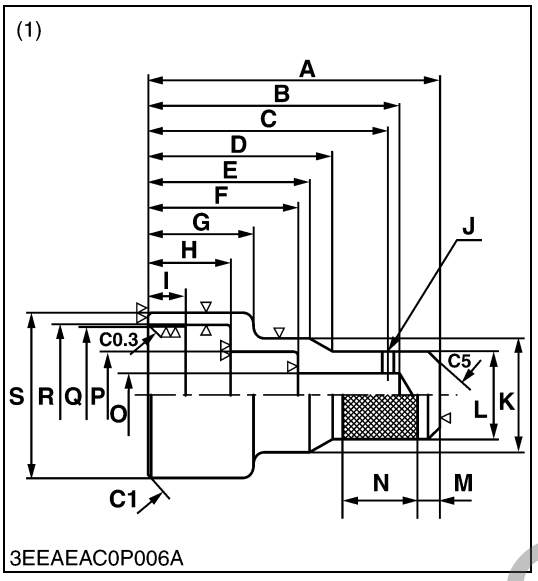
AVOID FIRES

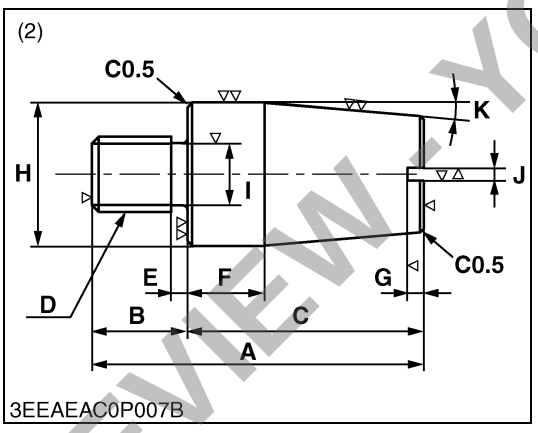
- Fuel is extremely flammable and explosive under certain conditions. Do not smoke or allow flames or sparks in your working area.
- To avoid sparks from an accidental short circuit, always disconnect the battery negative cable first and connect it last.
- Battery gas can explode. Keep sparks and open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

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Crank Sleeve Setter

Application: Use to fix the crankshaft sleeve.

(1) Auxiliary Socket for Pushing

A	130 mm (5.12 in.)
B	112 mm (4.41 in.)
C	107 mm (4.21 in.)
D	82 mm (3.23 in.)
E	72 mm (2.83 in.)
F	67 mm (2.64 in.)
G	47 mm (1.85 in.)
H	36.0 to 36.2 mm (1.417 to 1.425 in.)
I	17 mm (0.67 in.)
J	5 mm dia. (0.20 in. dia.)
K	52 mm dia. (2.05 in. dia.)
L	40 mm dia. (1.57 in. dia.)
M	10 mm (0.39 in.)
N	33 mm (1.30 in.)
O	20 mm dia. (0.79 in. dia.)
P	40 mm dia. (1.57 in. dia.)
Q	72.10 to 72.15 mm dia. (2.840 to 2.841 in. dia.)
R	73 mm dia. (2.87 in. dia.)
S	83 mm dia. (3.27 in. dia.)
C0.3	Chamfer 0.3 mm (0.01 in.)
C1	Chamfer 1 mm (0.04 in.)
C5	Chamfer 5 mm (0.2 in.)

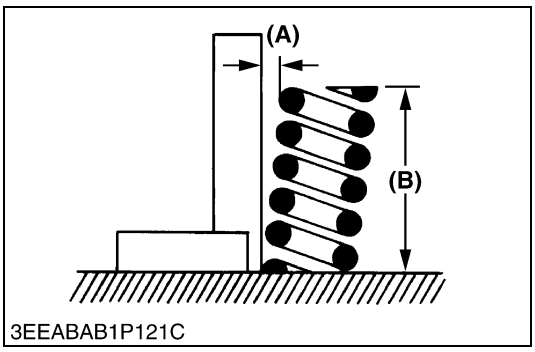
(2) Sleeve Guide

A	42 mm (1.65 in.)
B	12 mm (0.47 in.)
C	30 mm (1.18 in.)
D	M10 × Pitch 1.25
E	2 mm (0.08 in.)
F	10 mm (0.39 in.)
G	2.0 mm (0.08 in.)
H	17.90 to 17.95 mm dia. (0.700 to 0.707 in. dia.)
I	8 mm dia. (0.31 in. dia.)
J	1.8 mm (0.07 in.)
K	0.09 rad (5 °)
C0.5	Chamfer 0.5 mm (0.02 in.)

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Free Length and Tilt of Valve Spring

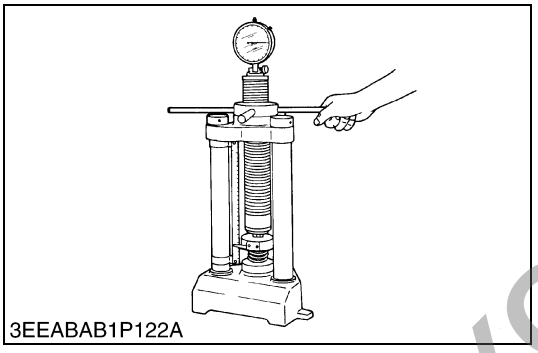
1. Measure the free length **(B)** of valve spring with vernier calipers. If the measurement is less than the allowable limit, replace it.
2. Put the valve spring on a surface plate, place a square on the side of the valve spring.
3. Check to see if the entire side is in contact with the square. Rotate the valve spring and measure the maximum tilt **(A)**. If the measurement exceeds the allowable limit, replace it.
4. Check the entire surface of the valve spring for scratches. If there is any defect, replace it.

Tilt **(A)**	Allowable limit	1.0 mm 0.039 in.

Free length **(B)**	Factory spec.	37.0 to 37.5 mm 1.457 to 1.476 in.
	Allowable limit	36.5 mm 1.437 in.

(A) Tilt **(B) Free Length**

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Valve Spring Setting Load

1. Place the valve spring on a tester and compress it to the same length it is actually compressed in the engine.
2. Read the compression load on the gauge.
3. If the measurement is less than the allowable limit, replace it.

Setting load / Setting length	Factory spec.	117.4 N / 31.0 mm 11.97 kgf / 31.0 mm 26.4 lbs / 1.22 in.
	Allowable limit	100.0 N / 31.0 mm 10.2 kgf / 31.0 mm 22.5 lbs / 1.22 in.

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Oil Clearance between Rocker Arm and Rocker Arm Shaft

1. Measure the rocker arm shaft O.D. with an outside micrometer.
2. Measure the rocker arm I.D. with an inside micrometer, and then calculate the oil clearance.
3. If the oil clearance exceeds the allowable limit, replace the rocker arm and measure the oil clearance again. If it still exceeds the allowable limit, replace also the rocker arm shaft.

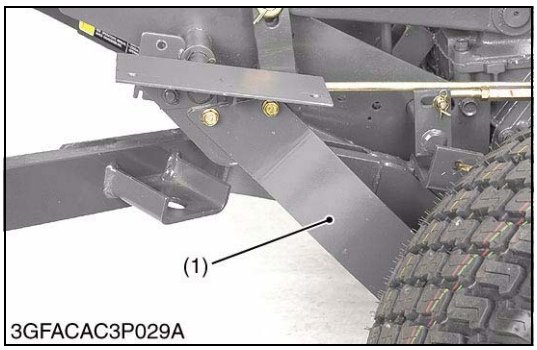
Oil clearance between rocker arm and rocker arm shaft	Factory spec.	0.016 to 0.045 mm 0.00063 to 0.00177 in.
	Allowable limit	0.10 mm 0.0039 in.

Rocker arm shaft O.D.	Factory spec.	11.973 to 11.984 mm 0.4714 to 0.4718 in.
Rocker arm I.D.	Factory spec.	12.000 to 12.018 mm 0.4724 to 0.4731 in.

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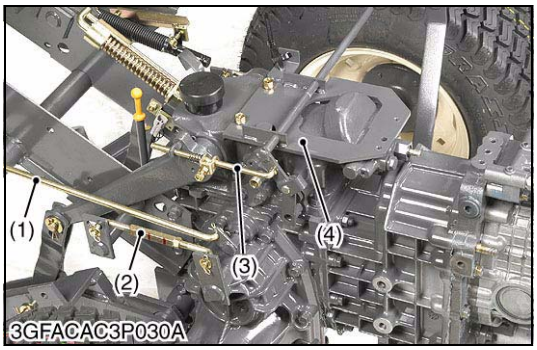


Support Plate

1. Remove the support plate (1) from the front frame.

(1) Support Plate

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Brake Rod, Differential Lock Rod and Mower Lift Lever

1. Remove the brake rod 1 (2) and differential lock rod (1).
2. Remove the feedback rod (3).
3. Remove the hydraulic control lever assembly (4).

(When reassembling)

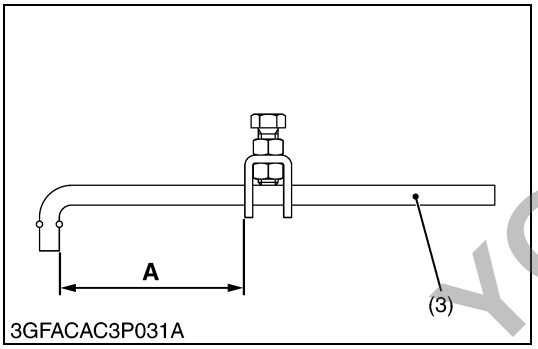
- Adjust the length "**A**" of the feedback rod (3).

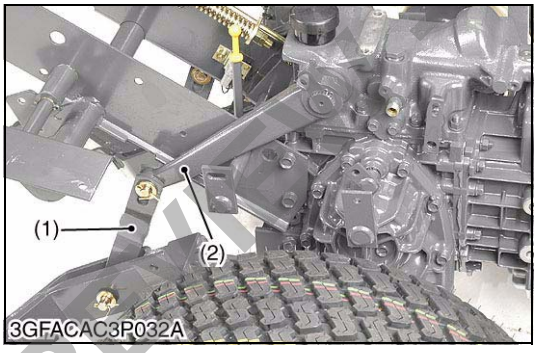
(Reference)

- Length "**A**" : 75 to 76 mm (2.96 to 2.99 in.)

(1) Differential Lock Rod
(2) Brake Rod 1
(3) Feedback Rod
(4) Hydraulic Control Lever Assembly

W1045187





Mower Lift Arm and Front Wheel

1. Remove the cotter pin and clevis pin, and disconnect the lift link (1) and lift arm (2).
2. Remove the front wheel (3).
3. Unscrew the pin mounting screw and pull out the mower lift arm pin (4), and remove the mower lift arm (5).

(When reassembling)

- Apply grease to the mower lift arm pin (4) and pivot of mower lift arm.

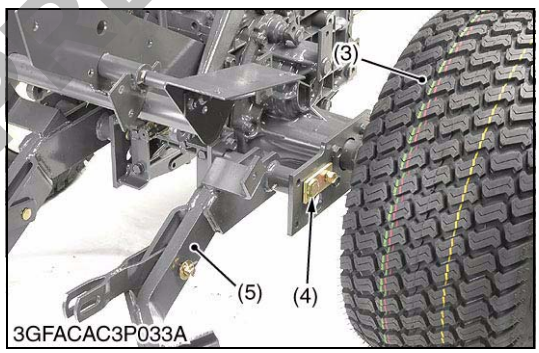
■ **IMPORTANT**

- **Be sure to tighten the front wheel mounting nuts to the specification torque.**

Tightening torque	Front wheel mounting nut	39.3 to 44.1N·m 4.0 to 4.5 kgf·m 29.0 to 32.5 ft-lbs

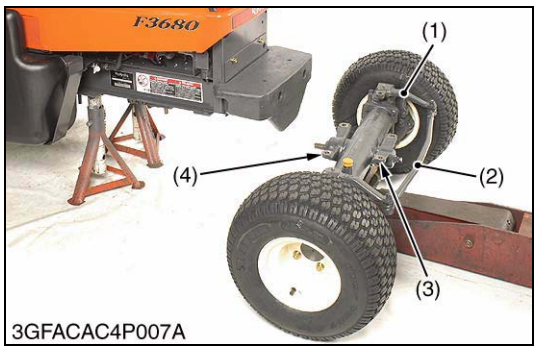
(1) Lift Link
(2) Lift Arm
(3) Rear Wheel
(4) Mower Lift Arm Pin
(5) Mower Lift Arm

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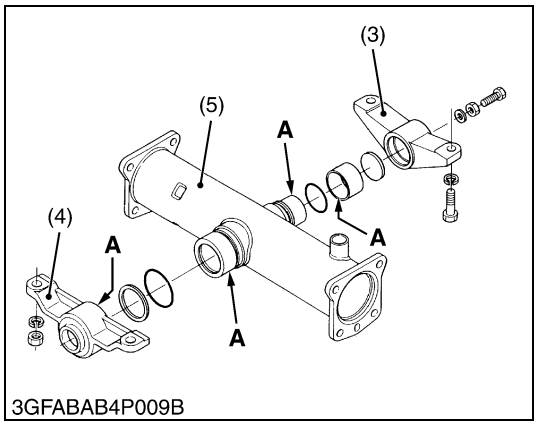


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Rear Axle

1. Place the jacks under the rear axle, and hang up the rear axle frame.
2. Remove the rear axle bracket mounting screws and nuts.
3. Separate the rear axle from the rear axle frame.
4. Remove the rear wheels.
5. Remove the slotted nut, and disconnect the tie-rod (2) from the knuckle arm (1).
6. Remove the rear axle brackets (2), (4).

(When reassembling)

- Apply grease to the oil seal of rear axle bracket (Front) (4).
- Apply grease to the O-rings.
- Apply grease to the inside of rear axle brackets (3), (4) and bosses of rear axle differential case (5).
- Apply liquid lock (Three Bond 1324 or its equivalent) to the rear axle bracket mounting screws.

■ **IMPORTANT**

- **Be sure to tighten the rear wheel mounting nuts to the specified torque.**
- **Be sure to tighten the slotted nuts to the specified torque.**

Tightening torque	Rear axle bracket mounting screw and nut	124 to 147 N·m 12.6 to 15.0 kgf·m 91.1 to 108.4 ft-lbs
	Rear wheel mounting nut	81.8 N·m 9.0 kgf·m 65.1 ft-lbs
	Slotted nut	17.7 to 34.3 N·m 1.8 to 3.5 kgf·m 13.1 to 25.3 ft-lbs

(1) Rear Axle Gear Case
(2) Tie-rod
(3) Rear Axle Bracket (Rear)
(4) Rear Axle Bracket (Front)
(5) Rear Axle Differential Case

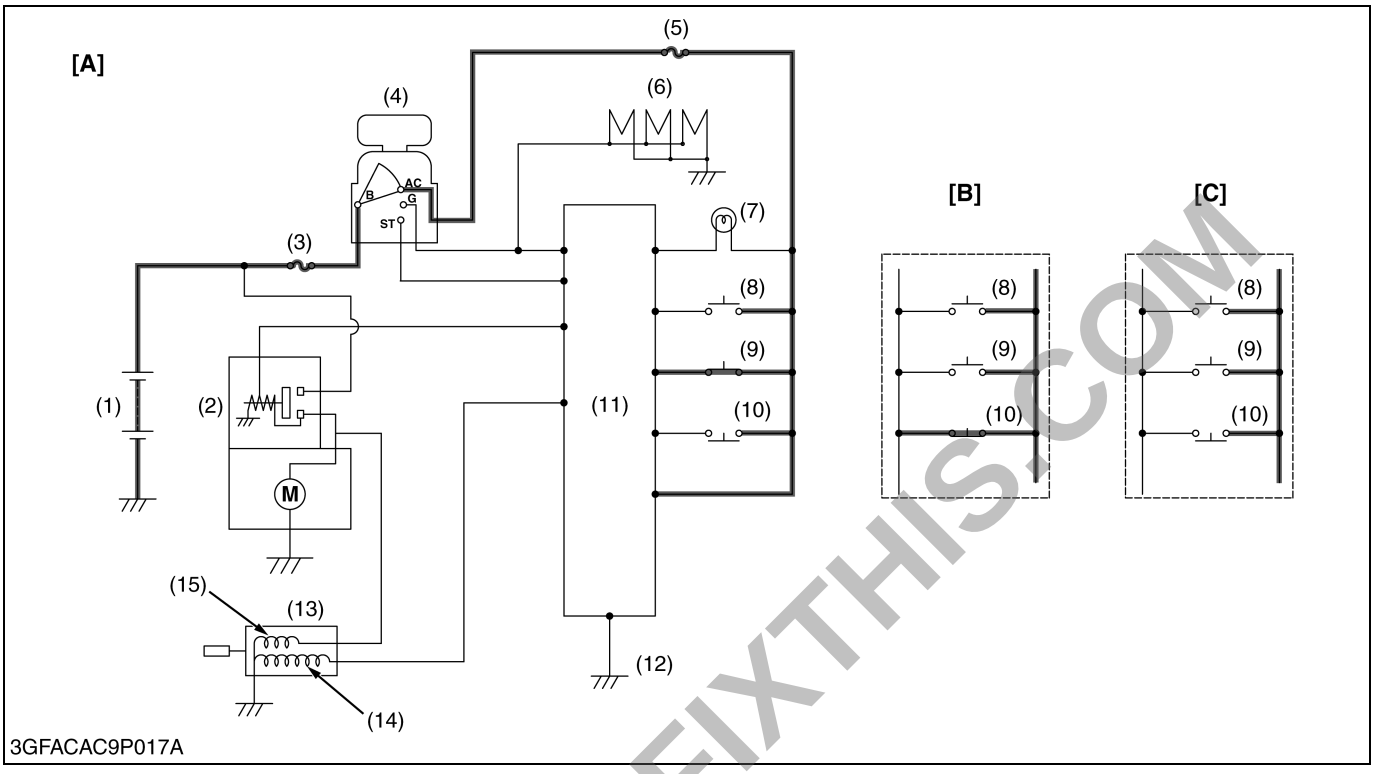
A : Grease

W1012615

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■ Stopping the Engine, Automatically



(1) Battery
(2) Starter
(3) Slow Blow Fuse (50A)
(4) Main Switch
(5) Fuse (5A)
(6) Glow Plug
(7) Glow Plug Lamp
(8) Seat Switch
(9) PTO Switch
(10) Brake Switch
(11) Controller
(12) Frame Earth
(13) Engine Stop Solenoid
(14) Holding Coil
(15) Pulling-in Coil

[A] Condition 1
[B] Condition 2
[C] Condition 3

When the following conditions become complete, the electrical current does not flow to the holding coil (14) of the engine stop solenoid (13) from the controller (11). Then, the engine stop in 0.6 to 1.4 seconds.

Condition	Seat Switch (8) (Occupied : **ON**) (Vacant : **OFF**)	PTO Switch (9) (Disengaged : **ON**) (Engaged : **OFF**)	Brake Switch (10) (Pedal depressed : **ON**) (Pedal free : **OFF**)
1	OFF	ON	OFF
2	OFF	OFF	ON
3	OFF	OFF	OFF

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