WSM

WORKSHOP MANUAL

F2890,F3690,RCK60P-F39, RCK60R-F36,RCK72P-F39, RCK72R-F36

Kubota

KiSC issued 05, 2018 A

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TO THE READER

This Workshop Manual tells the servicing personnel about the mechanism, servicing and maintenance of the F2890 and F3690, KUBOTA Mower RCK60P-F39, RCK60R-F36, RCK72P-F39 and RCK72R-F36. It contains 4 parts: **"Information"**, **"General"**, **"Mechanism"** and **"Servicing"**.

■ **Information**

This section primarily contains information below.

- Safety First
- Safety Decal
- Specification
- Dimension

■ **General**

This section primarily contains information below.

- Engine Identification
- Model Identification
- General Precautions
- Maintenance Check List
- Check and Maintenance
- Special Tools

■ **Mechanism**

This section contains information on the structure and the function of the unit. Before you continue with the subsequent sections, make sure that you read this section.

Refer to the latest version of Workshop Manual (Code No. 9Y021-01870) for the diesel engine / tractor mechanism that this workshop manual does not include.

■ **Servicing**

This section primarily contains information below.

- Troubleshooting
- Servicing Specifications
- Tightening Torques
- Checking, Disassembling and Servicing

All illustrations, photographs and specifications contained in this manual are of the newest information available at the time of publication.

KUBOTA reserves the right to change all information at any time without notice.

Since this manual includes many models, information or illustrations and photographs can show more than one model.

September, 2013

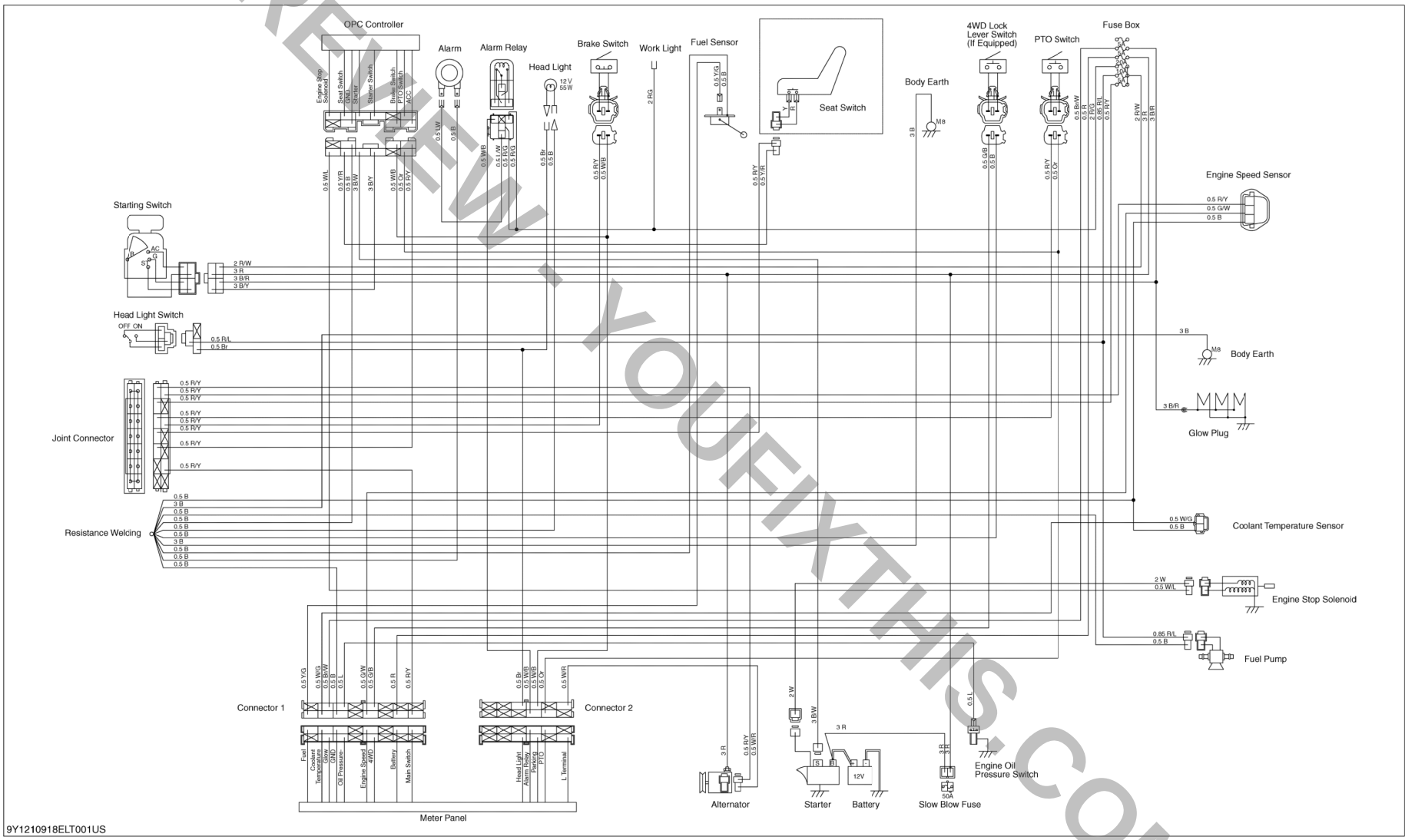
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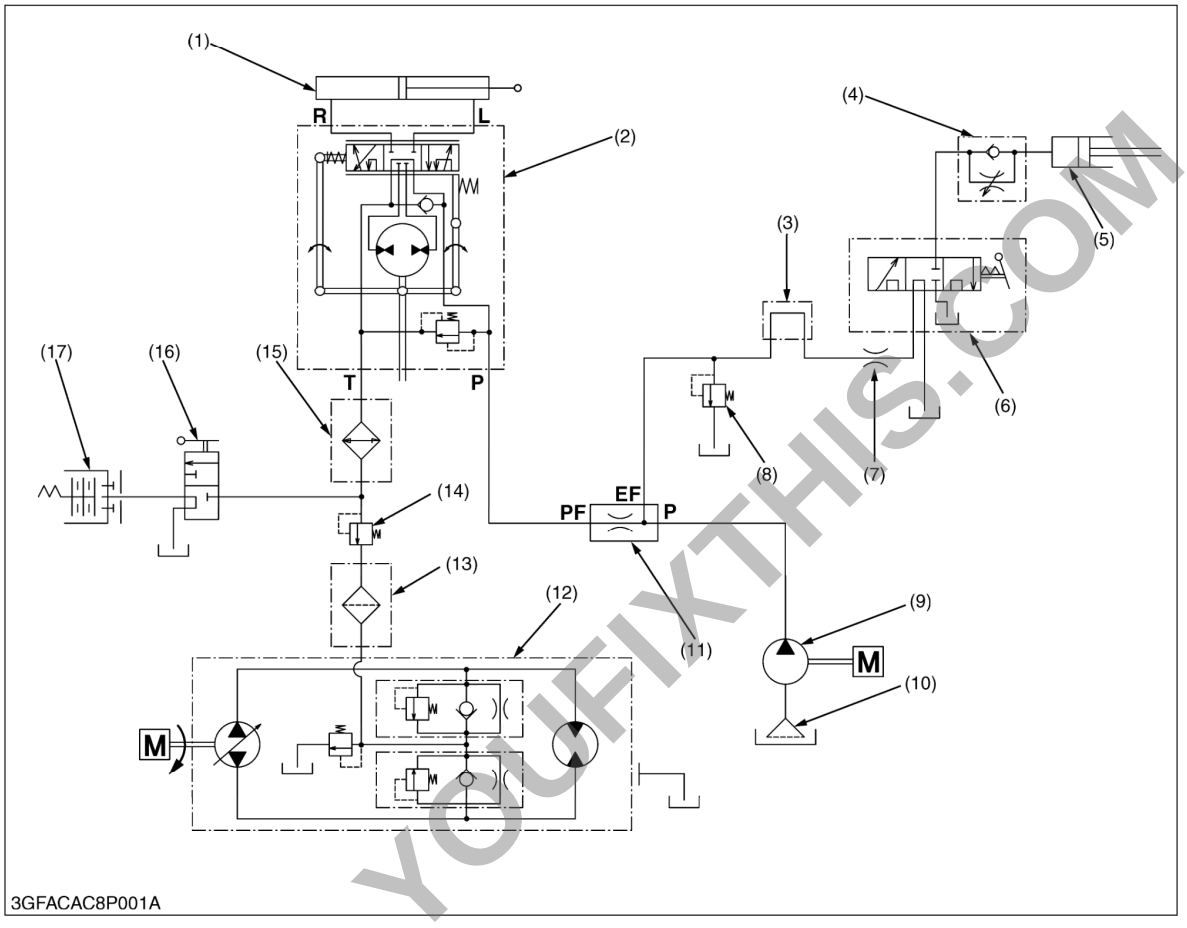
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1. WIRING DIAGRAM



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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 (to Hydraulic Cylinder)
PF: PF Port (to Power Steering)
P: P Port
T: T Port
L: L Port
R: R Port

The hydraulic system of these machines consists 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.

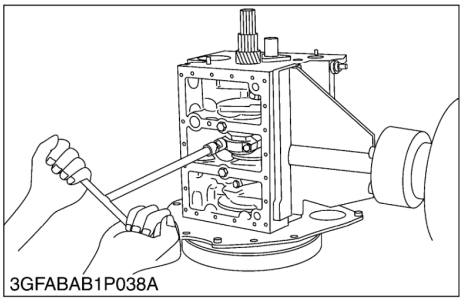
Hydraulic power take off from the hydraulic block type outlet (3) to operate the implements such as a grass collector and, etc..

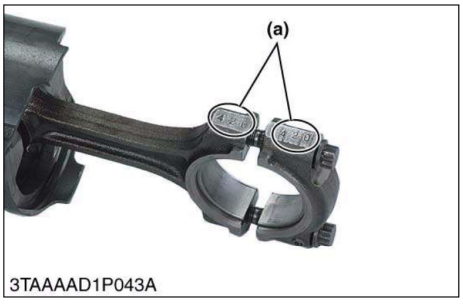
Oil is supplied by a hydraulic pump (9) connected to the engine. When an engine is started, hydraulic pump (9) starts running, sucks oil from a transmission case. The hydraulic pump (9) forces out the oil to the hydraulic block type outlet (3), implement control valve (6), hydraulic cylinder (5), steering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

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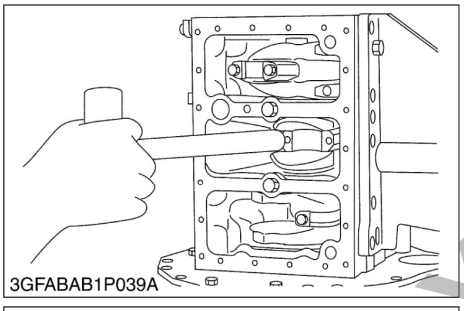
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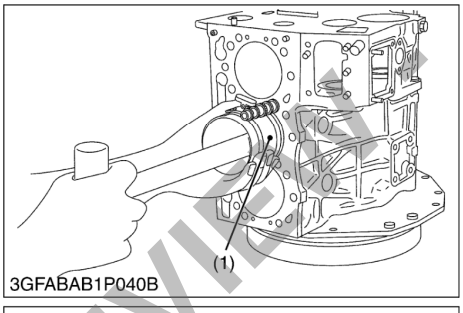
(5) Piston and Connecting Rod


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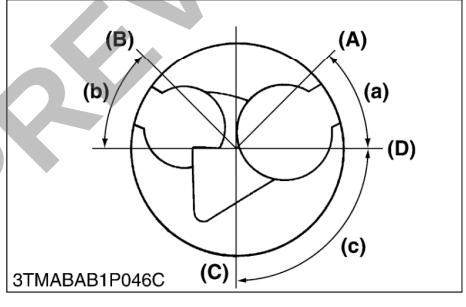


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3TMABAB1P046C

Connecting Rod

1. Remove the connecting rod cap.

(When reassembling)

- Align the marks **(a)** with each other. (Face the marks toward the injection pump.)
- Apply engine oil to the connecting rod screws and lightly screw it in by hand, then tighten it to the specified torque.
  If the connecting rod screw is difficult to turn, clean the threads.
  If the connecting rod screw is still hard to turn or screw in, replace it.

Tightening torque	Connecting rod screw	42 to 46 N·m 4.2 to 4.7 kgf·m 31 to 33 lbf·ft

(a) Mark

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Pistons

1. Turn the flywheel and bring the piston to top dead center.
2. Draw out the piston upward by lightly tapping it from the bottom of the crankcase with the handle of a hammer.
3. Draw out the other pistons in the same method as above.

(When reassembling)

- Before inserting the piston into the cylinder, apply enough engine oil to the piston.
- When inserting the piston into the cylinder, face the mark on the connecting rod to the injection pump.

■ **IMPORTANT**

- **Do not change the combination of cylinder and piston. Make sure of the position of each piston by marking. For example, mark "1" on the No.1 piston.**
- **When installing the piston into the cylinder, place the gaps of all the piston rings as shown in the figure.**
- **Carefully insert the pistons using a piston ring compressor (1). Otherwise, their chrome-plated section may be scratched, causing problem inside the cylinder.**

(1) Piston Ring Compressor

(A) Top Ring Gap
(B) Second Ring Gap
(C) Oil Ring Gap
(D) Piston Pin Hole
(a) 0.79 rad (45°)
(b) 0.79 rad (45°)
(c) 1.6 rad (90°)

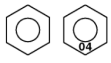
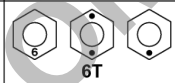
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5. TIGHTENING TORQUES

[1] GENERAL USE SCREWS, BOLTS AND NUTS

Tighten screws, bolts and nuts whose tightening torques are not specified in this Workshop Manual according to the table below.

Indication on top of bolt	 4 No-grade or 4T						7 7T						9 9T		
Indication on top of nut	 No-grade or 4T												 6T		
Material of opponent part	Ordinariness			Aluminum			Ordinariness			Aluminum			Ordinariness		
Unit	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft
M6	7.9 to 9.3	0.80 to 0.95	5.8 to 6.8	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5	9.81 to 11.2	1.00 to 1.15	7.24 to 8.31	7.9 to 8.8	0.80 to 0.90	5.8 to 6.5	12.3 to 14.2	1.25 to 1.45	9.05 to 10.4
M8	18 to 20	1.8 to 2.1	13 to 15	17 to 19	1.7 to 2.0	13 to 14	24 to 27	2.4 to 2.8	18 to 20	18 to 20	1.8 to 2.1	13 to 15	30 to 34	3.0 to 3.5	22 to 25
M10	40 to 45	4.0 to 4.6	29 to 33	32 to 34	3.2 to 3.5	24 to 25	48 to 55	4.9 to 5.7	36 to 41	40 to 44	4.0 to 4.5	29 to 32	61 to 70	6.2 to 7.2	45 to 52
M12	63 to 72	6.4 to 7.4	47 to 53	–	–	–	78 to 90	7.9 to 9.2	58 to 66	63 to 72	6.4 to 7.4	47 to 53	103 to 117	10.5 to 12.0	76.0 to 86.7
M14	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	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	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	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

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[2] METRIC SCREWS, BOLTS AND NUTS

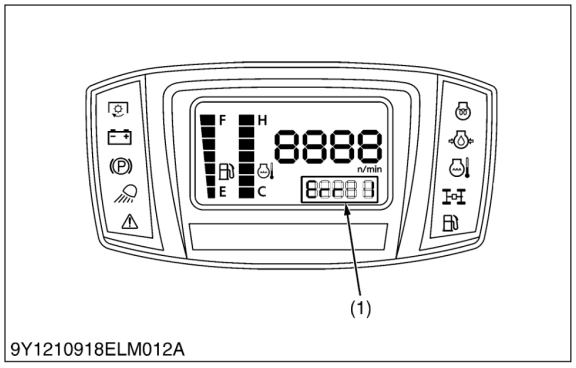
Grade	8.8 Property class 8.8			10.9 Property class 10.9		
Unit	N·m	kgf·m	lbf·ft	N·m	kgf·m	lbf·ft
M8	24 to 27	2.4 to 2.8	18 to 20	30 to 34	3.0 to 3.5	22 to 25
M10	48 to 55	4.9 to 5.7	36 to 41	61 to 70	6.2 to 7.2	45 to 52
M12	78 to 90	7.9 to 9.2	58 to 66	103 to 117	10.5 to 12.0	76.0 to 86.7
M14	124 to 147	12.6 to 15.0	91.2 to 108	167 to 196	17.0 to 20.0	123 to 144
M16	197 to 225	20.0 to 23.0	145 to 166	260 to 304	26.5 to 31.0	192 to 224

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[3] ERROR CODE DISPLAY



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If trouble should occur at the meter panel, the indicator flashes and error code appears as a warning.

If the trouble is not corrected by restarting the machine, solve the problem according to the following table.

(1) Error Code

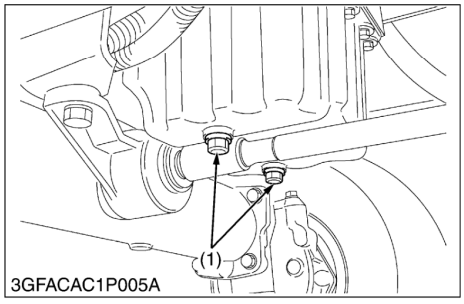
Error code	Trouble	Check point or solution
Err 1	Water temperature sensor power circuit trouble	Checking battery voltage or replacing meter panel
Err 2	Fuel sensor power circuit trouble	Checking battery voltage or replacing meter panel
Err 3	Meter panel memory reading trouble	Replacing meter panel

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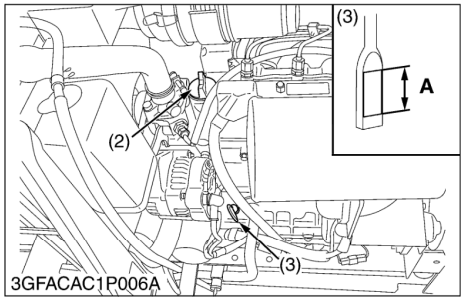
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[2] CHECK POINTS OF INITIAL 50 HOURS



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3GFACAC1P006A

Changing Engine Oil

CAUTION

- **Be sure to stop the engine and remove the key before changing oil.**
- **Allow engine to cool down sufficiently. Oil can be hot and may cause burns.**

Oil capacity with filter	F2890	3.5 L 3.7 U.S.qts 3.1 Imp.qts
	F3690	5.0 L 5.3 U.S.qts 4.4 Imp.qts

1. Place an oil pan underneath the engine.
2. To drain the used oil, remove the drain plugs (1) at the bottom of the engine and drain the oil completely.
3. Screw in the drain plugs (1) and tighten.
4. Fill with new oil up to upper line on the dipstick (3).

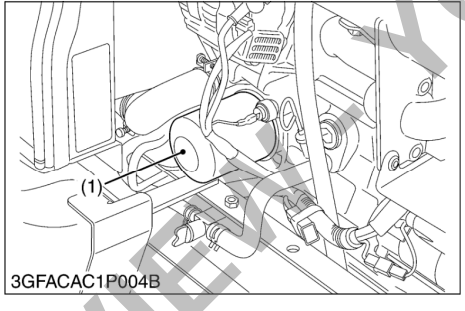
■ **IMPORTANT**

- **When using an oil of different manufacture or viscosity from the previous one, remove all of the old oil.**
- **Never mix two different types of oil.**
- **Use the proper SAE Engine Oil according to ambient temperatures.**
  Refer to "4. LUBRICANTS, FUEL AND COOLANT" on page G-9.

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

A: Oil level is acceptable within this range.

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Replacing Engine Oil Filter Cartridge

CAUTION

- **Be sure to stop the engine and remove the key before changing the oil and the oil filter cartridge.**
- **Allow engine to cool down sufficiently; oil can be hot and may cause burns.**

1. Remove the oil filter cartridge (1) with the filter wrench.
2. Put a film of engine oil on the rubber seal of the new filter cartridge.
3. Tighten the filter cartridge quickly until it contacts the mounting surface.
4. Tighten the filter cartridge by hand an additional 1/2 turn only.
5. After the new filter is replaced, the engine oil normally decreases a little. Check that the engine oil does not leak through the seal and be sure to check the oil level on the dipstick.
6. Then, replenish the engine oil up to the prescribed level.

■ **IMPORTANT**

- **To prevent serious damage to the engine. Use only a genuine KUBOTA filter.**

(1) Engine Oil Filter Cartridge

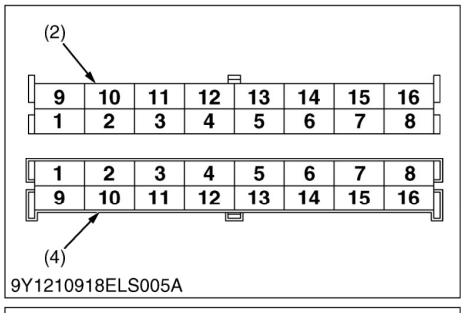
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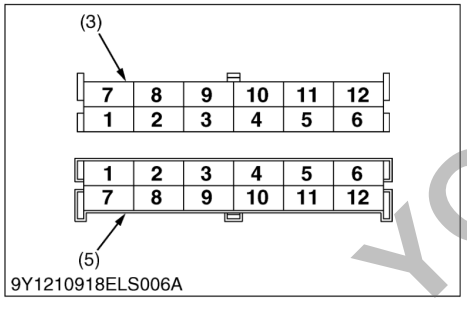
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[5] METER PANEL AND OPC CONTROLLER

(1) Meter Panel







Arrangement of Digital Display Connector Pin

[Connector 1]

Terminal No.	Item	Color of wiring
1	Fuel Sensor	Y/G
2	Coolant Temperature Sensor	W/G
3	GND	B
4	Blank	–
5	Engine Speed Sensor	G/W
6	Blank	–
7	Battery	R
8	ACC	R/Y
9	Blank	–
10	Glow Indicator	Br/W
11	Engine Oil Pressure Switch	L
12	Blank	–
13	4WD Lock Lever Switch	G/B
14	Blank	–
15	Blank	–
16	Blank	–

[Connector 2]

Terminal No.	Item	Color of wiring
1	Blank	–
2	Blank	–
3	Blank	–
4	Alarm Relay	W/B
5	PTO Switch	Or
6	Blank	–
7	Blank	–
8	Blank	–
9	Head Light Indicator	Br
10	Parking Brake Indicator	W/B
11	Blank	–
12	L Terminal	W/R

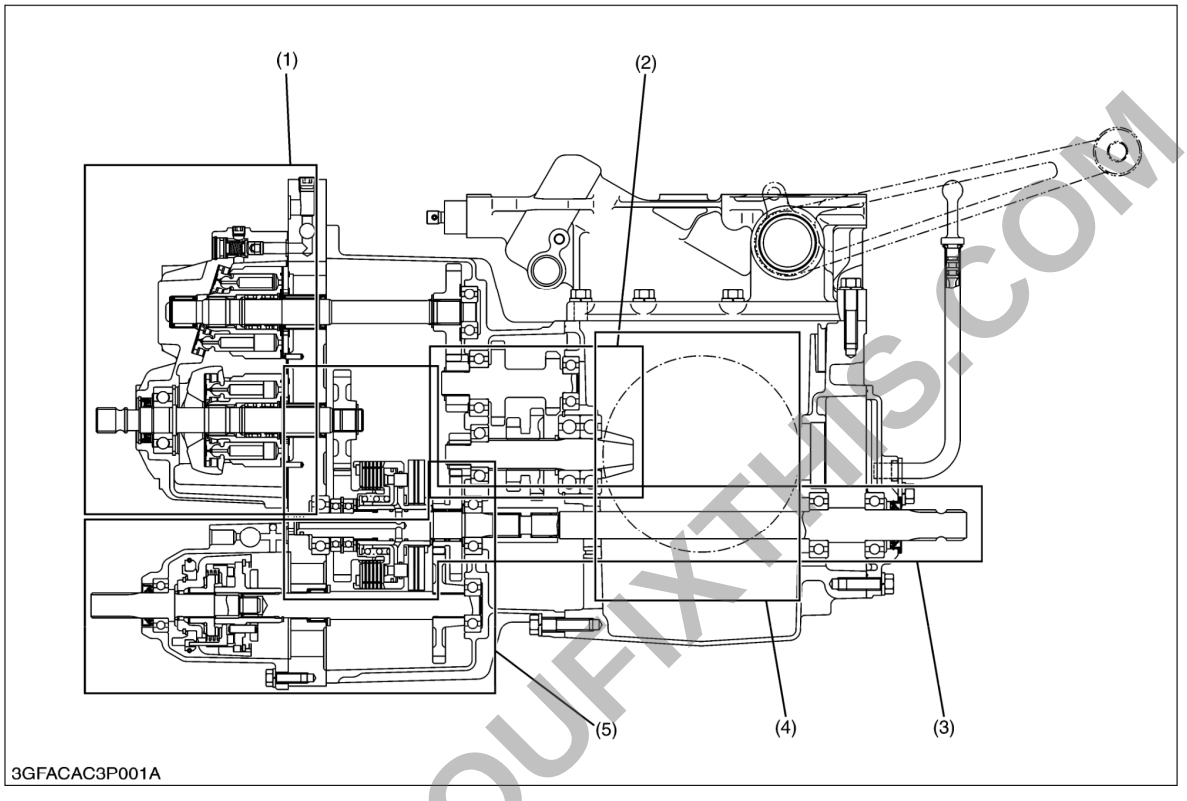
(1) Meter Panel
(2) Connector 1 (Harness Side)
(3) Connector 2 (Harness Side)
(4) Connector 1 (Panel Side)
(5) Connector 2 (Panel Side)

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1. STRUCTURE



(1) Hydrostatic Transmission (HST) Section
(2) Range Gear Shift Section
(3) PTO Section
(4) Differential Gear Section
(5) Rear Wheel Drive Section (Dual Acting Overrunning Clutch)

4WD model has a dual acting overrunning clutch (5) at the bottom of transmission.
The other sections are the same with 2WD.

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1. TROUBLESHOOTING

Symptom	Probable Cause	Solution	Reference Page
Engine Does Not Start	No fuel	Fill fuel	G-9
	Air in the fuel system	Bleed	G-35
	Water in the fuel system	Change fuel and repair or replace fuel system	G-9, 1-S15
	Fuel pipe clogged	Clean	G-27
	Fuel filter clogged	Change	G-31
	Excessively high viscosity of fuel or engine oil at low temperature	Use specified fuel or engine oil	G-9
	Fuel with low cetane number	Use specified fuel	G-9
	Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	1-S25
	Incorrect injection timing	Adjust	1-S15
	Fuel camshaft worn	Replace	1-S33
	Injection nozzle clogged	Repair or replace	1-S19
	Injection pump malfunctioning	Repair or replace	1-S32
	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-S28
	Improper valve timing	Correct or replace timing gear	1-S33
	Piston ring and cylinder worn	Repair or replace	1-S34
	Excessive valve clearance	Adjust	1-S11
(Starter Does Not Run)	Battery discharged	Charge	G-24
	Starter malfunctioning	Repair or replace	8-S26
	Main switch malfunctioning	Replace	8-S11
	Brake switch damaged	Replace	8-S12
	PTO switch damaged	Replace	8-S12
	Seat switch damaged	Replace	8-S12
	Wiring disconnected	Connect	–
Engine Revolution Is Not Smooth	Fuel filter clogged or dirty	Change	G-27
	Air cleaner clogged	Clean or replace	G-26
	Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	1-S25
	Injection pump malfunctioning	Replace	1-S32
	Incorrect nozzle injection pressure	Adjust	1-S18
	Injection nozzle stuck or clogged	Repair or replace	1-S19
	Governor malfunctioning	Repair	–

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[3] SPECIFICATIONS

Model			F2890	F3690
Engine	Model		D1105	V1505
	Engine gross power (SAE) *1		20.6 kW (28 HP)	26.5 kW (36 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		3000 min^{-1} (rpm)	
	Low idling revolution		1300 to 1400 min^{-1} (rpm)	
	Starting system		Electric starter with battery, glow plug, 12 V, 1.4 kW	
	Lubricating system		Forced lubrication by gear pump	
	Cooling system		Pressurized radiator, forced circulation with water pump	
	Battery		12 V, RC: 133 min, CCA: 582 A	
	Fuel		Diesel fuel No. 1-D [below −10 °C (14 °F)] Diesel fuel No. 2-D [above −10 °C (14 °F)]	
Capacities	Fuel tank		61.0 L (16.1 U.S.gals, 13.4 Imp.gals)	
	Engine crankcase (with filter) *2		3.5 L (3.7 U.S.qts, 3.1 Imp.qts)	5.0 L (5.3 U.S.qts, 4.4 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, 1.3 Imp.qts)	
	Rear axle differential case		1.5 L (1.6 U.S.qts, 1.3 Imp.qts)	
	Rear axle gear case		0.5 L (0.5 U.S.qts, 0.4 Imp.qts)	
Tire	Front		24 × 12-12 (4PR) Turf	
	Rear		18 × 9.5-8 (4PR) Turf	
Travelling speeds *3	Forward	Low	0 to 5.6 mph (0 to 9.0 km/h)	
		High	0 to 12.5 mph (0 to 20 km/h)	
	Reverse	Low	0 to 3.0 mph (0 to 4.8 km/h)	
		High	0 to 6.9 mph (0 to 11 km/h)	
Dimensions	Overall length		2450 mm (96.5 in.)	
	Overall width		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	975 mm (38.4 in.)	1063 mm (41.9 in.)
		Rear	875 mm (34.4 in.)	1020 mm (40.2 in.)
Weight (without mower deck)			770 kg (1698 lbs)	788 kg (1740 lbs)
PTO	Revolution		1 speed (2545 rpm at 3000 engine rpm)	
	Drive system		Shaft drive. KUBOTA 10-tooth involute spline (2545 rpm)	
	Clutch type		Wet multi plates	
	PTO brake		Wet single plate	
Traveling system	Steering		Hydrostatic power steering	
	Transmission		Main-hydrostatic transmission, High-Low gear shift (2 forward, 2 reverse)	
	Brake		Wet disk type	
	Minimum turning radius		Less than 750 mm (29.5 in.) (inside of front tire)	
	Differential	Front	Bevel gear	
		Rear	Bevel gear	
	4WD system		Dual-acting overrunning 4WD	

■ **NOTE**

- **Specifications and design subject to change without notice**

  ***1: Manufacture's estimate.**

  ***2: At the center of the oil level gauge.**

  ***3: At 3000 engine min^{-1} (rpm)**

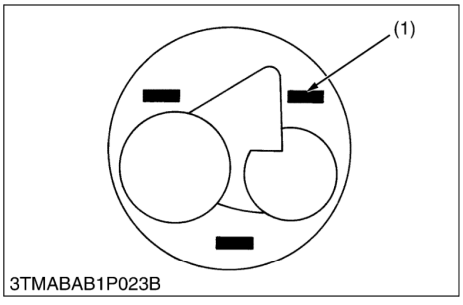
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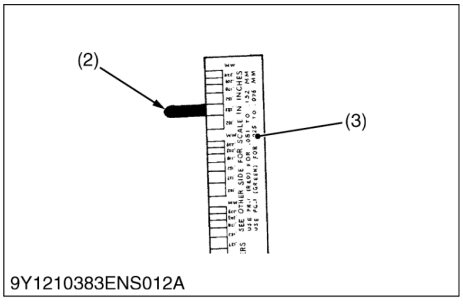
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[3] SERVICING

(1) Cylinder Head and Valve



3TMABAB1P023B



9Y1210383ENS012A

Top Clearance

1. Remove the cylinder head.
2. With the piston at TDC, use grease to affix three or four plastigauges (1) of a diameter 1.5 mm (0.059 in.) × 5.0 to 7.0 mm (0.20 to 0.27 in.) long to the crown of the piston; keep the gauges away from the intake valve and combustion chamber fittings.
3. Take the piston to an intermediate position, install the cylinder head and tighten the head bolts to the specified torque.
4. Turn the crankshaft so the piston goes through TDC.
5. Remove the cylinder head and compare the width of the crushed plastigauges (2) with the scale.
6. If they are out of spec, check the oil clearance of the crankpin, journals and piston pins.

■ **NOTE**

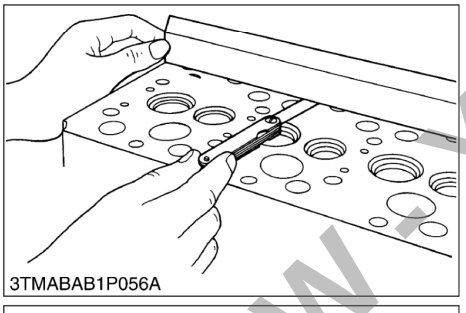
- **Top clearance = Width of the crushed plastigauge (2).**

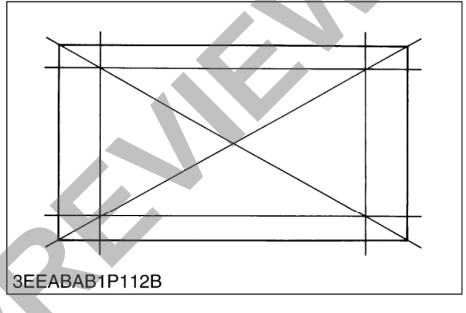
Top clearance	Factory specification	0.55 to 0.75 mm 0.022 to 0.029 in.

Tightening torque	Cylinder head screw	64 to 68 N·m 6.5 to 7.0 kgf·m 47 to 50 lbf·ft

(1) Plastigauge
(2) Crushed Plastigauge
(3) Scale

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3EEABAB1P112B

Cylinder Head Surface Flatness

1. Clean the cylinder head surface.
2. Place a straightedge on the cylinder head's four sides and two diagonal as shown in the figure.
3. Measure the clearance with a thickness gauge.
4. If the measurement exceeds the allowable limit, correct it with a surface grinder.

■ **IMPORTANT**

- **Do not place the straightedge on the combustion chamber.**
- **Be sure to check the valve recessing after correcting.**

Cylinder head surface flatness	Allowable limit	0.05 mm 0.0020 in.

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6. MAINTENANCE CHECK LIST

No.	Item		Indication on hour meter (Hr)												Interval	Reference page	
			50	100	150	200	250	300	350	400	450	500	550	600			
1	Engine start system	Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr	G-20	
2	OPC system	Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr	G-21	
3	Greasing	–	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr	G-22	
4	Wheel bolt torque	Check	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr	G-23	
5	Oiling	–	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	every 50 Hr	G-23	
6	Battery condition	Check		☆		☆		☆		☆		☆		☆	every 100 Hr	G-24	
7	Air cleaner element	Clean		☆		☆		☆		☆		☆		☆	every 100 Hr	G-26	*1
		Replace													every 1 year	G-26	
8	Engine oil	Change	★			☆				☆				☆	every 200 Hr	G-19	
9	Fan belt	Adjust		☆		☆		☆		☆		☆		☆	every 100 Hr	G-28	*2
10	Brake pedal	Adjust		☆		☆		☆		☆		☆		☆	every 100 Hr	G-27	
11	Fuel filter element	Check		☆		☆		☆		☆		☆		☆	every 100 Hr	G-27	
		Replace								☆					every 400 Hr	G-31	*2
12	Engine oil filter	Replace	★			☆				☆				☆	every 200 Hr	G-19	
13	Transmission fluid	Change								☆					every 400 Hr	G-30	
14	Transmission oil filter	Replace	★			☆				☆				☆	every 200 Hr	G-20	
15	Transmission strainer	Clean								☆					every 400 Hr	G-30	
16	Rear axle differential case fluid	Change								☆					every 400 Hr	G-31	
17	Rear axle gear case (RH and LH) fluid	Change								☆					every 400 Hr	G-31	
18	Radiator hose and clamp	Check				☆				☆				☆	every 200 Hr	G-29	
		Replace													every 2 years	G-29	*2
19	Hydraulic hose	Check				☆				☆				☆	every 200 Hr	G-29	
		Replace													every 2 years	G-29	*2
20	Fuel line	Check		☆		☆		☆		☆		☆		☆	every 100 Hr	G-27	
		Replace													every 2 years	G-27	*2
21	Intake air line	Check				☆				☆				☆	every 200 Hr	G-29	
		Replace													every 2 years	G-29	*3
22	Engine breather hose	Replace													every 2 years	1-S25	
23	Rear axle pivot	Adjust								☆					every 400 Hr	G-31	
24	Engine valve clearance	Adjust													every 800 Hr	1-S11	

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1. MACHINE

[1] SAFETY FIRST

⚠ 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 try to repair or use this unit.**

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

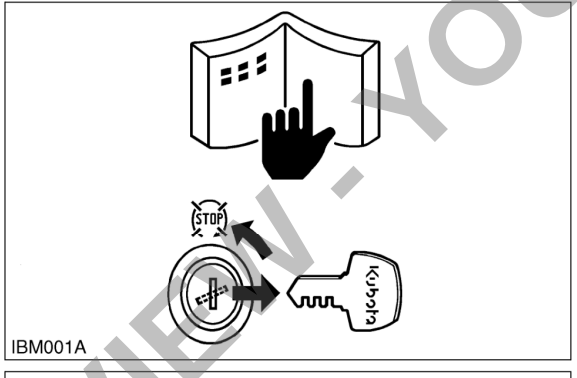
⚠ WARNING
- **Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ CAUTION
- **Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury.**

■ IMPORTANT
- **Indicates that equipment or property damage could result if instructions are not followed.**

■ NOTE
- **Gives helpful information.**

WSM000001INI0001US1



IBM001A


IBM002A

BEFORE YOU START SERVICE

- 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 stable and level ground, and set the parking brake.
- Lower the implement to the ground.
- Stop the engine, then remove the key.
- Disconnect the battery negative cable.
- Hang a **"DO NOT OPERATE"** tag in the operator station.

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START SAFELY

- Do not do the procedures below when you start the engine.
  - short across starter terminals
  - bypass the safety start switch
- Do not alter or remove any part of machine safety system.
- Before you start the engine, make sure that all shift levers are in neutral positions or in disengaged positions.
- Do not start the engine when you stay on the ground. Start the engine only from operator's seat.

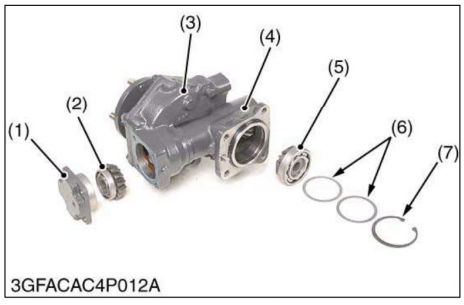
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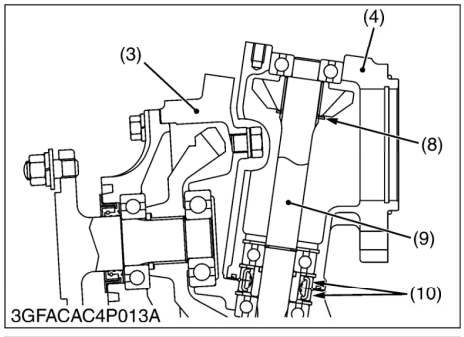
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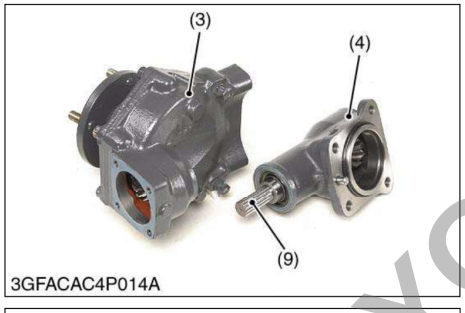
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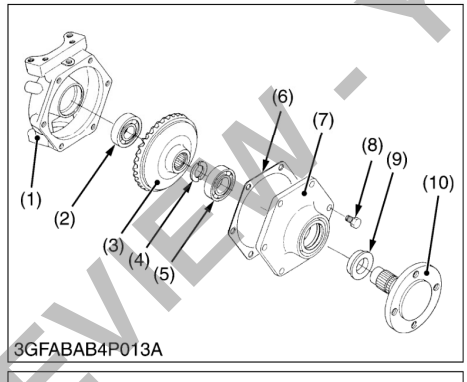
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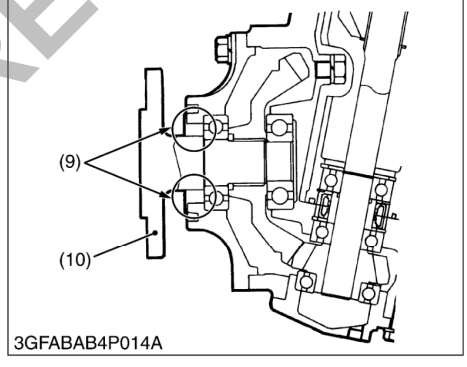
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Separation of Bevel Gear Case and Rear Axle Gear Case

1. Remove the internal snap ring (7) and shims (6), and remove the bevel gear (5) with the bearing.
2. Shift the external snap ring (8).
3. Remove the bevel support cover (1).
4. Tap out the bevel gear shaft (9) upward, and separate the bevel gear case (4) from the rear axle gear case (3).

(When reassembling)

- Apply grease to the lip of oil seals (10).
- Apply liquid gasket (Three Bond 1206D or its equivalent) to both side of a new gasket.
- Install the bevel gear (5) with the bearing, noting the number of shims.

Tightening torque	Bevel support cover mounting screw	18.7 to 32.3 N·m 1.9 to 3.3 kgf·m 13.8 to 23.8 lbf·ft

(1) Bevel Support Cover
(2) Bevel Gear
(3) Rear Axle Gear Case
(4) Bevel Gear Case
(5) Bevel Gear
(6) Shim
(7) Internal Snap Ring
(8) External Snap Ring
(9) Bevel Gear Shaft
(10) Oil Seal

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Axle Flange and Rear Wheel Hub

1. Remove the axle flange mounting screw (8).
2. Separate the axle flange (7) from the rear axle gear case (1).
3. Remove the bearing (2), bevel gear (3) and collars (4).
4. Tap out the rear wheel hub (10).

(When reassembling)

- Install the oil seal (9) of axle flange (7), noting its direction as shown in the figure.
- Apply liquid gasket (Three Bond 1206D or its equivalent) to both sides of a new gasket.
- Apply grease to the lip of oil seal.

Tightening torque	Axle flange mounting screw	44.2 to 63.7 N·m 4.5 to 6.5 kgf·m 32.6 to 47.0 lbf·ft

(1) Rear Axle Gear Case
(2) Bearing
(3) Bevel Gear
(4) Collar
(5) Bearing
(6) Gasket
(7) Axle Flange
(8) Axle Flange Mounting Screw
(9) Oil Seal
(10) Rear Wheel Hub

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