WSM

(M4900 · M5700)



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NOTE: ·Please click the item to which you want to refer. When returning the index, click the arrow on the tool bar which introduces to the first page.
·The code No. of these Workshop Manuals is as follows.
WSM for North America:No.97897-12460

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GENERAL

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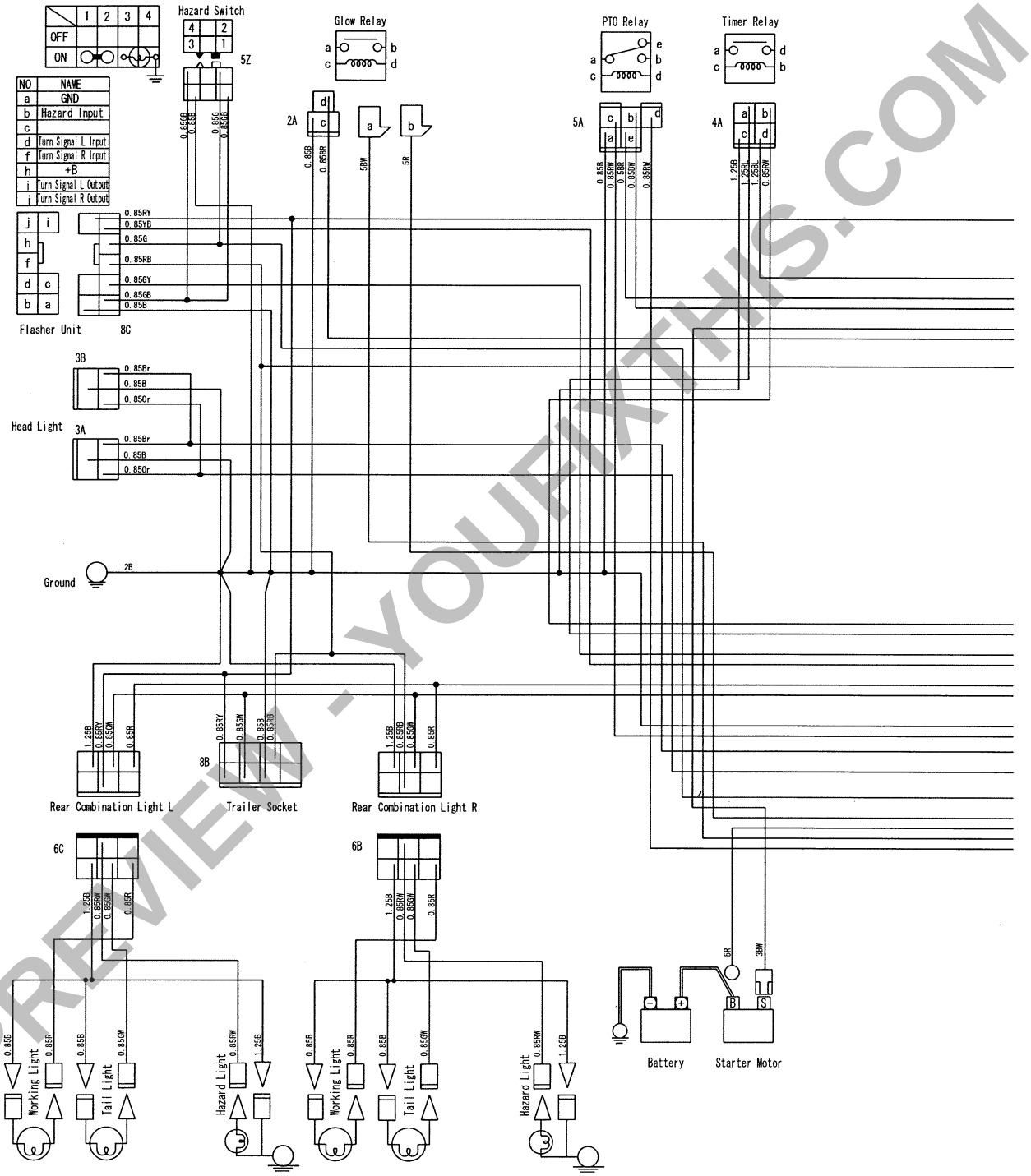
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[1] WIRING DIAGRAM

(1) ROPS Type

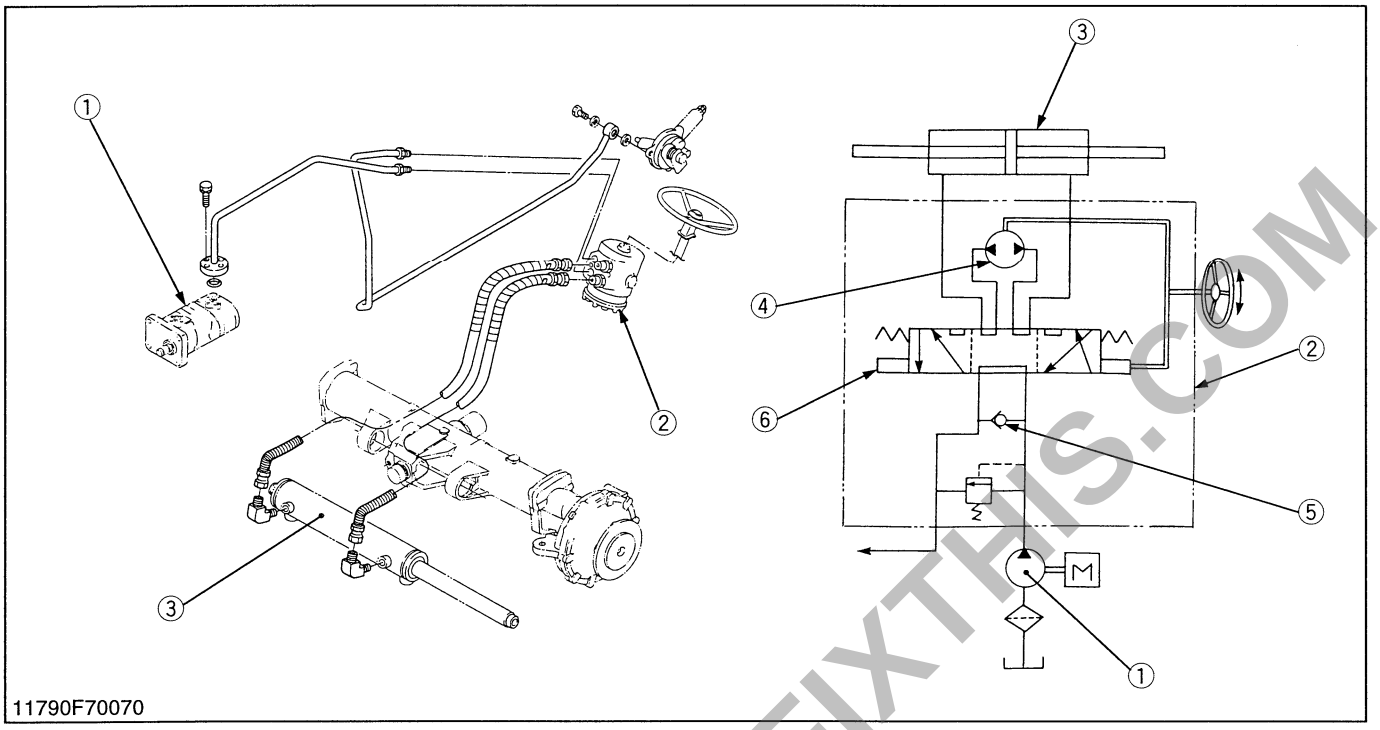


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[2] POWER STEERING HYDRAULIC CIRCUIT



11790F70070

(1) Hydraulic Pump
(2) Steering Controller
(3) Steering Cylinder
(4) Gerotor
(5) Check Valve
(6) Control Valve

■ Hydraulic Oil Flow

When the engine starts, the hydraulic pump (1) of the power steering system pressure-feeds the oil drawn from the transmission case through the suction pipe.

The oil which has entered steering controller (2) is directed to control valve (6).

As the steering wheel is turned, control valve (6) operates and the oil passes through gerotor (4) and into steering cylinder (3). The cylinder rod then moves to control the directional movement of the front wheels.

Return oil from steering cylinder (3) passes through control valve (6) is sent to the PTO clutch valve.

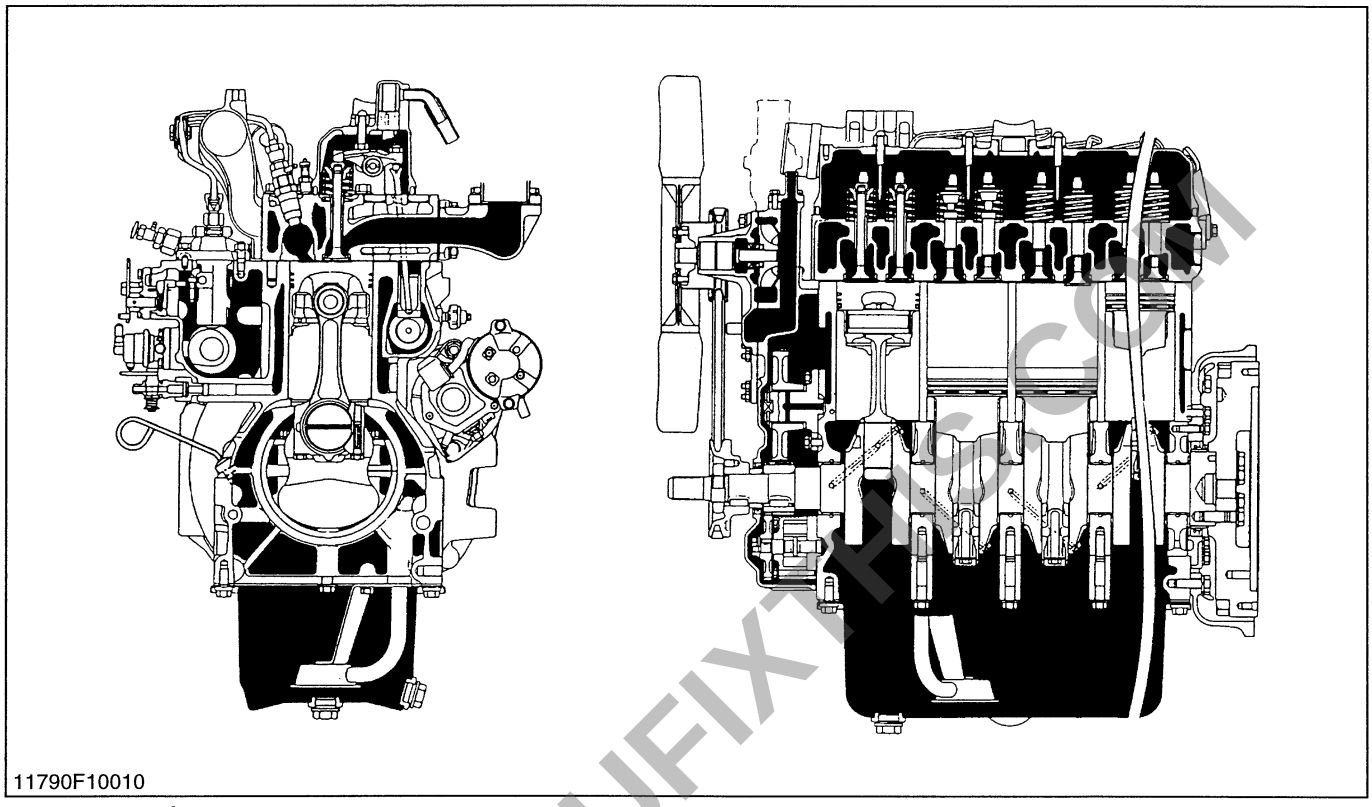
When the engine is not operating, and the steering wheel is turned, gerotor (4) rotates to supply oil to steering cylinder (3). Thus the machine can be steered manually.

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[1] FEATURES

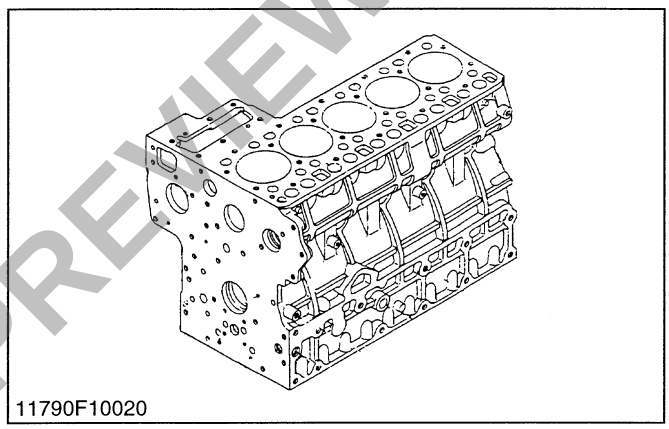

11790F10010

The F2803-ELA and F2803-EA are vertical, water-cooled, 4 cycle diesel engines. They are incorporated KUBOTA's foremost technologies. With KUBOTA's E-TVCS (Three Vortex Combustion System), well-known Bosch type injection pump and the well-balanced designs, they give greater power, low fuel consumption, little vibration and quiet operation.

12550M10010

[2] ENGINE BODY

(1) Cylinder Block


11790F10020

The engine has a high durability tunnel-type cylinder block in which the crank bearing component is a constructed body.

Furthermore, liner less type, allow effective cooling, less distortion, and greater wear-resistance.

The noise level is reduced to a minimum because each cylinder had its own chamber.

11790M10020

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

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

Indication on top of bolt	⬡ 4 No-grade or 4T						⬡ 7 7T						⬡ 9 9T		
Material of bolt	SS400, S20C						S43C, S48C						SCr435, SCM435		
Material of opponent part	Ordinariness			Aluminum			Ordinariness			Aluminum			Ordinariness		
Diameter	N·m	kgf·m	ft-lbs	N·m	kgf·m	ft-lbs	N·m	kgf·m	ft-lbs	N·m	kgf·m	ft-lbs	N·m	kgf·m	ft-lbs
M6 (6 mm, 0.24 in.)	7.84 to 9.31	0.80 to 0.95	5.79 to 6.87	7.84 to 8.83	0.80 to 0.90	5.79 to 6.51	9.80 to 11.2	1.00 to 1.15	7.24 to 8.32	7.84 to 8.83	0.80 to 0.90	5.79 to 6.51	12.3 to 14.2	1.25 to 1.45	9.05 to 10.5
M8 (8 mm, 0.31 in.)	17.7 to 20.5	1.8 to 2.1	13.0 to 15.2	16.7 to 19.6	1.7 to 2.0	12.3 to 14.5	23.6 to 27.4	2.4 to 2.8	17.4 to 20.2	17.7 to 20.6	1.8 to 2.1	13.0 to 15.2	29.4 to 34.3	3.0 to 3.5	21.7 to 25.3
M10 (10 mm, 0.39 in.)	39.2 to 45.0	4.0 to 4.6	29.0 to 33.2	31.4 to 34.3	3.2 to 3.5	23.1 to 25.3	48.1 to 55.8	4.9 to 5.7	35.5 to 41.2	39.2 to 44.1	4.0 to 4.5	28.9 to 32.5	60.8 to 70.5	6.2 to 7.2	44.9 to 52.1
M12 (12 mm, 0.47 in.)	62.8 to 72.5	6.4 to 7.4	46.3 to 53.5				77.5 to 90.1	7.9 to 9.2	57.2 to 66.5	62.8 to 72.5	6.4 to 7.4	46.3 to 53.5	103 to 117	10.5 to 12.0	76.0 to 86.8
M14 (14 mm, 0.55 in.)	108 to 125	11.0 to 12.8	79.6 to 92.5				124 to 147	12.6 to 15.0	91.2 to 108				167 to 196	17.0 to 20.0	123 to 144
M16 (16 mm, 0.63 in.)	167 to 191	17.0 to 19.5	123 to 141				196 to 225	20.0 to 23.0	145 to 166				260 to 303	26.5 to 31.0	192 to 224
M18 (18 mm, 0.71 in.)	245 to 284	25.0 to 29.0	181 to 210				275 to 318	28.0 to 32.5	203 to 235				343 to 401	35.0 to 41.0	254 to 297
M20 (20 mm, 0.79 in.)	334 to 392	34.0 to 40.0	246 to 289				368 to 431	37.5 to 44.0	272 to 318				490 to 568	50.0 to 58.0	362 to 420

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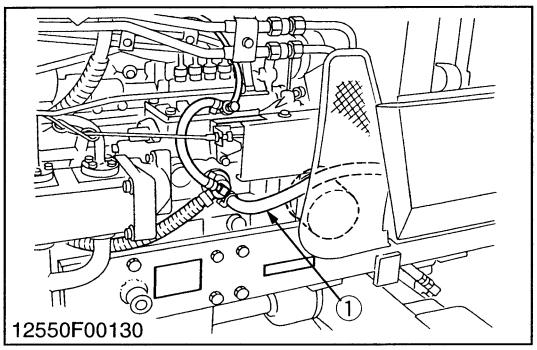
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CHECKING, DISASSEMBLING AND SERVICING

[1] SEPARATING ENGINE FROM TRACTOR DISASSEMBLING AND ASSEMBLING

(1) Draining Coolant, Engine Oil and Transmission Fluid



Draining Coolant

CAUTION

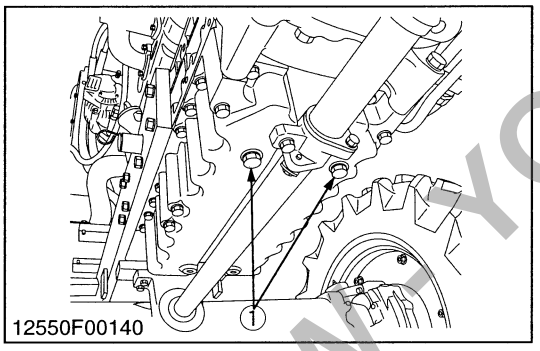
- **Never remove the radiator cap until coolant temperature is well below its boiling point. Then loosen cap slightly to the stop to relieve any excess pressure before removing cap completely.**

1. Stop the engine and let cool down.
2. Remove the radiator hose (1) from the engine side to drain the coolant.
3. Remove the radiator cap to completely drain the coolant.
4. After all coolant is drained, reinstall the radiator hose.

Draining coolant	Capacity	7.3 L 7.7 U.S.qts. 6.4 Imp.qts.

(1) Radiator Hose

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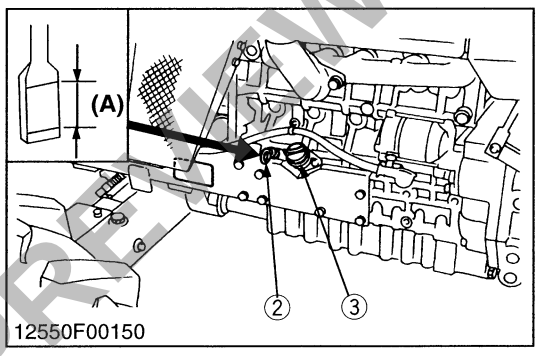
Changing Engine Oil

1. Start and warm up the engine for approx. 5 minutes.
2. Place an oil pan underneath the engine.
3. Remove the drain plug (1) to drain oil.
4. After draining, screw in the drain plugs (1).

(When refilling)

- Fill the engine oil up to the upper line on the dipstick (3).

Engine oil	Capacity	8.0 L 8.5 U.S.qts. 7.0 Imp.qts.



IMPORTANT

- **Never mix two different types of oil.**
- **Use the proper SAE Engine Oil according to ambient temperatures.**
  Refer to "LUBRICANTS, FUEL AND COOLANT". (See page G-9.)

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

(A) Oil level is acceptable within this range.

12550S10100

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SERVICING

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[CABIN TYPE]

Model			M4900		M5700	
			2WD	4WD	2WD	4WD
Engine	Model		F2803-ELA		F2803-EA	
	Type		Vertical, water-cooled, 4-cycle diesel engine			
	Number of cylinders		5			
	Total displacement		2746 cm^3 (167.6 cu.in.)			
	Bore and stroke		87 × 92.4 mm (3.4 × 3.6 in.)			
	Net power		37.7 kW (50.5 HP)*		42.5 kW (57 HP)*	
	PTO power (factory observed)		33.6 kW (45 HP)* / 2600 min^{-1} (rpm)		38.8 kW (52 HP)* / 2800 min^{-1} (rpm)	
	Maximum torque		171 N·m (17.4 kgf·m, 126.1 ft-lbs.)/ 1400 to 1600 min^{-1} (rpm)		183 N·m (18.7 kgf·m, 135.0 ft-lbs.)/ 1400 to 1600 min^{-1} (rpm)	
	Battery capacity		12 V, CCA 700A			
	Fuel		Diesel fuel No.1 [below –10 °C (14 °F)], Diesel fuel No. 2 [above –10 °C (14 °F)]			
	Fuel tank capacity		95 L (25.1 U.S.gal., 20.9 Imp.gal.)			
	Engine oil capacity		8.0 L (8.5 U.S.qts., 7.5 Imp.qts.)			
	Coolant capacity		7.3 L (7.7 U.S.qts., 6.4 Imp.qts.)			
Dimensions	Overall length		3570 mm (140.6 in.)	3480 mm (137.1 in.)	3570 mm (140.6 in.)	3480 mm (137.1 in.)
	Overall width (Minimum tread)		1706 mm (67.2 in.)		1850 mm (72.8 in.)	
	Overall height (with CAB)		2485 mm (98.1 in.)		2515 mm (99.0 in.)	
	Wheel base		2075 mm (81.7 in.)			
	Tread	Front	1420 to 1820 mm (55.9 to 71.7 in.)	1330 mm (52.4 in.) 1430 mm (56.3 in.)	1420 to 1820 mm (55.9 to 71.7 in.)	1330 mm (52.4 in.) 1430 mm (56.3 in.)
		Rear	1320 to 1720 mm (52.0 to 67.7 in.)		1420 to 1720 mm (55.9 to 67.7 in.)	
	Minimum ground clearance		400 mm (15.7 in.) (COVER TANK)		430 mm (16.9 in.) (COVER TANK)	
Weight (with CAB)			1940 kg (4277 lbs.)	2040 kg (4497 lbs.)	2020 kg (4453 lbs.)	2090 kg (4607 lbs.)
Travelling system	Standard tire size	Front	6.5-16	9.5-22	7.5-16	9.5-22
		Rear	14.9-28		16.9-28	
	Clutch		Dry, Single plate			
	Steering		Full hydrostatic power steering			
	Transmission		Shuttle synchromesh, 8F/8R (with creep speed 12F/12R)			
	Braking system		Wet type, multiple discs (mechanical)			
	Differential		Bevel gears (with differential lock)			
Hydraulic system	Hydraulic control system		Position, draft and mix control			
	Pump capacity		41.6 L (44.0 U.S.qts.)/min.			
	Three point hitch		Category I & II			
	Maximum lifting force	At lifting points	1900 kg (4200 lbs.) at lower link end with links horizontal			
		24 in. behind lifting point	1500 kg (3307 lbs.)			
	Remove hydraulic control		One remote valve with detent and self-canceling			
	System pressure		19.1 MPa (195 kgf/cm^2)			
	Traction system		Swinging drawbar, adjustabnle in direction			
PTO	Live PTO (Independent)	Direction of turning	Clockwise, viewed from tractor rear			
		Standard PTO / Engine speed	540 min^{-1} (rpm) at 2295 engine min^{-1} (rpm)			

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

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[7] MAINTENANCE

No.	Item		Period	Service Interval										After purchase		Important		Reference page
				50	50	100	200	300	400	600	800	1500	3000	1 year	2 years			
1	Engine oil		Change	★		☆												G-13
2	Engine oil filter		Replace	★			☆											G-13
3	Hydraulic oil filter		Replace	★				☆										G-14
4	Transmission fluid		Change	★						☆								G-14
5	Front axle case oil		Change	★						☆								G-15
6	Clutch		Adjust	★		☆												G-15
7	Water separator (CAB)		Clean	★					☆									G-15
8	Engine start system		Check		☆													G-16
9	Wheel bolt torque		Check		☆													G-16
10	Greasing		–			☆												G-17
11	Battery condition		Check			☆												G-17
12	Air cleaner element [Double type]	Primary element	Clean			☆										*	@	G-18
			Replace											☆		**		G-18
		Secondary element	Replace											☆				G-18
13	Fuel filter element		Clean			☆												G-18
			Replace						☆								@	G-23
14	Fan belt		Adjust			☆												G-19
15	Brake		Adjust			☆												G-19
16	Radiator hose and clamp		Check				☆											G-20
			Replace												☆			G-20
17	Power steering oil line		Check				☆											G-20
			Replace												☆			G-20
18	Fuel line		Check				☆										@	G-20
			Replace												☆			G-20
19	Toe-in		Adjust				☆											G-21
20	Intake air line		Check				☆										@	G-21
			Replace												☆	***		G-21
21	Inner air filter		Clean				☆											G-22
22	Fresh air filter		Clean				☆											G-22
23	Air conditioner condenser		Clean				☆											G-22
24	Air conditioner drive belt		Adjust				☆											G-23
25	Greasing (2WD front wheel hub)		–						☆									G-23
26	Fuel filter (CAB)		Replace						☆								@	G-23
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32	CAB isolation cushion		Check											☆				G-26
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34	Coolant		Change												☆			G-28

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⚠ SAFETY FIRST

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

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

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

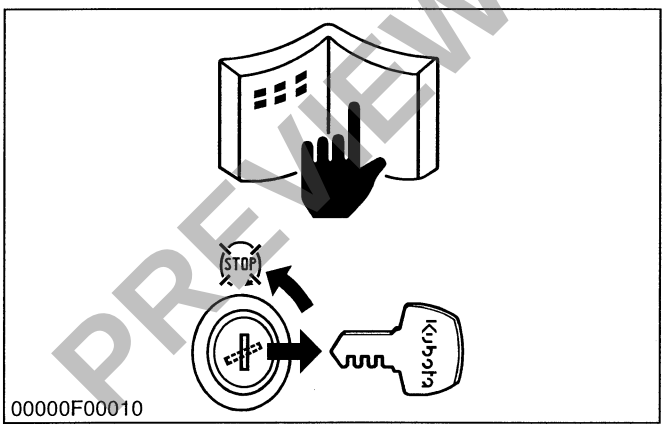
⚠ **WARNING : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

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

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

■ **NOTE : Gives helpful information.**

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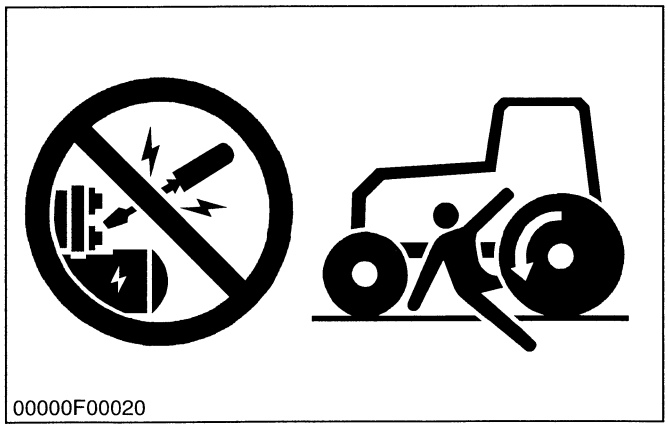
BEFORE SERVICING AND REPAIRING

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

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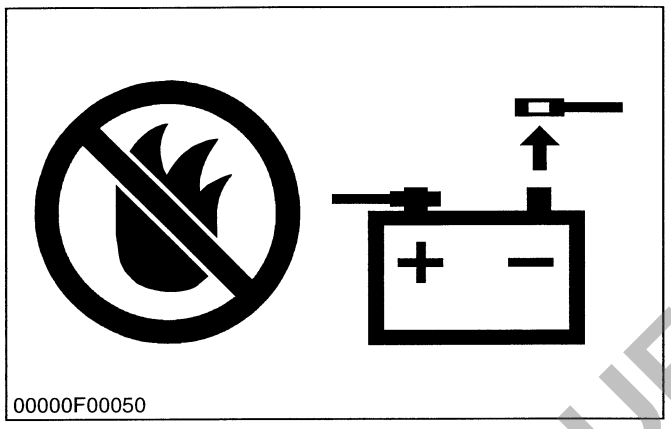
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SAFETY STARTING

(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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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.

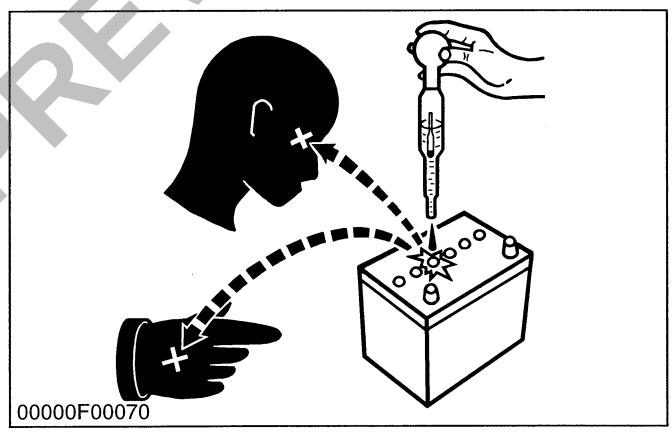
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VENTILATE WORK AREA

(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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No.	Implement		Remarks		M4900, M5700	
					2WD	4WD
1	Slurry Tank		Max. Tank Capacity L (gals.)		3000 (790)	
			Max. Load Capacity kg (lbs.)		4000 (8800)	
2	Trailer		Max. Load Capacity kg (lbs.)		4000 (8800)	4500 (9900)
			Max. Draw bar Load kg (lbs.)		1000 (2200)	
3	Mower	Rotary-Cutter-	Max. Cutting Width mm (in.)		2130 (84)	
			Max. Weight kg (lbs.)		540 (1200)	
		Flail Mower (Heavy)	Max. Cutting Width mm (in.)		3050 (120)	
			Max. Weight kg (lbs.)		800 (1760)	
		Sickle Bar	Max. Cutting Width mm (in.)		2130 (84)	
4	Sprayer		Max. Tank-capacity	Mid L (gals.)	680 (180)	
				Rear 3P L (gals.)	680 (180)	
				Drawbar L (gals.)	3000 (800)	3500 (920)
5	Rotary Tiller		Max. Tilling Width mm (in.)		2130 (84)	
			Max. Weight kg (lbs.)		800 (1760)	
6	Bottom Plow		Max. Size		16 in. × 2 18 in. × 1	14 in. × 3 16 in. × 2 18 in. × 1
			Max. Weight kg (lbs.)		450 (1000)	
7	Disc-harrow	3P Type	Max. Size		18 in.× 24	
			Max. Harrowing Width mm (in.)		2130 (84)	
			Max. Weight kg (lbs.)		450 (1000)	
		Drawbar Type	Max. Harrowing Width mm (in.)		2450 (96)	2750 (108)
8	Disc Plow		Max. Size		24 in. × 3 26 in. × 2	
			Max. Weight kg (lbs.)		450 (1000)	
9	Sub Soiler		Numbers of Cultivating Tines		2	
			Cultivating Depth mm (in.)		300 (12)	400 (16)
10	Cultivator		Max. Width mm (in.)		3050 (120)	3660 (144)
			Number of Rows		4	
			Max. Weight kg (lbs.)		450 (1000)	
11	Front Blade*		Max. Cutting Width mm (in.)		1820 (72)	
			Max. Oil Pressure MPa (kgf/cm^2)		19.1 (195)	
12	Rear Blade		Max. Cutting Width mm (in.)		1820 (72)	
			Max. Oil Pressure MPa (kgf/cm^2)		19.1 (195)	
13	Front Loader*		Max. Lifting Capacity kgf (lbs.)		1000 (2200)	
			Max. Oil Pressure MPa (kgf/cm^2)		18.6 (190)	
14	Box Blade		Max. Cutting Width mm (in.)		1820 (72)	
			Max. Weight kg (lbs.)		450 (1000)	
15	Back Hoe		Max. Digging Depth mm (in.)		2530 (100)	
			Max. Weight kg (lbs.)		900 (2000)	
16	Snow Blade		Max. Width mm (in.)		1820 (72)	
			Max. Weight kg (lbs.)		450 (1000)	

NOTE :

- **Implement size may vary depending on soil and operating conditions.**

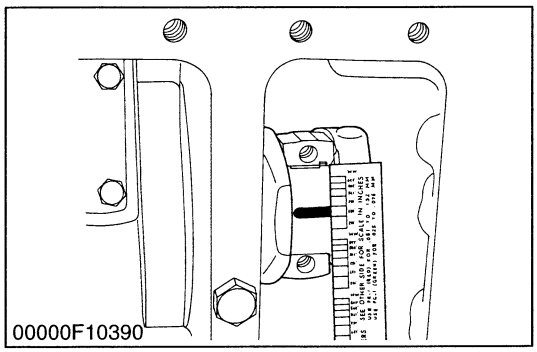
*** Must remove front weight with this implement.**

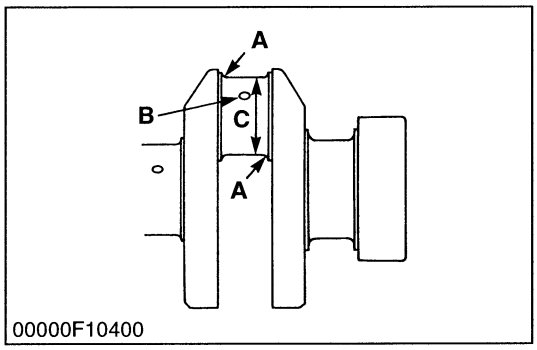
12550G00410

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00000F10390



00000F10400

Oil Clearance between Crankpin and Crankpin Bearing

1. Clean the crankpin and crankpin bearing.
2. Put a strip of plastigage (Code No. 07909-30241) on the center of the crankpin.
3. Install the connecting rod cap and tighten the connecting rod screws to the specified torque, and remove the cap again.
4. Measure the amount of the flattening with the scale, and get the oil clearance.
5. If the oil clearance exceeds the allowable limit, replace the crankpin bearing.
6. If the same size bearing is useless because of the crankpin wear, replace it with an undersize one referring to the table and figure.

■ NOTE

- **Never insert the plastigage into the crankpin oil hole.**
- **Be sure not to move the crankshaft while the connecting rod screws are tightened.**

Oil clearance between crankpin and crankpin bearing	Factory spec.	0.025 to 0.087 mm 0.00098 to 0.00343 in.
	Allowable limit	0.20 mm 0.0079 in.

Crankpin O.D.	Factory spec.	46.959 to 46.975 mm 1.84878 to 1.84941 in.
Crankpin bearing I.D.	Factory spec.	47.000 to 47.046 mm 1.85039 to 1.85220 in.

(Reference)

- Undersize crankpin bearing

Undersize	Bearing	Code Number	Marking
0.2 mm 0.008 in.	Crankpin bearing 02	17331-22971	020 US
0.4 mm 0.016 in.	Crankpin bearing 04	17331-22981	040 US

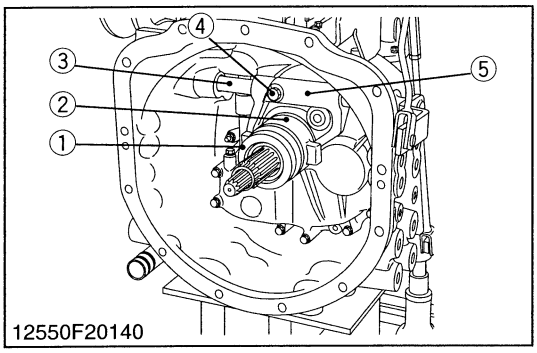
- Undersize dimensions of crankpinl

Undersize	0.2 mm 0.008 in.	0.4 mm 0.016 in.
Dimension A	3.3 to 3.7 mm radius 0.1299 to 0.1457 in.radius	3.3 to 3.7 mm radius 0.1299 to 0.1457 in.radius
Dimension B	1.0 to 1.5 mm radius 0.0394 to 0.0591 in. radius	1.0 to 1.5 mm radius 0.0394 to 0.0591 in. radius
Dimension C	46.759 to 46.775 mm 1.84090 to 1.84153 in.	46.559 to 46.575 mm 1.83303 to 1.83366 in.
The crankpin must be fine-finished to higher than ∇∇∇∇ .		(0.4S)

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12550F20140

Clutch Release Bearing

1. Draw out the release bearing (1) and the release hub (2) together.
2. Remove the release fork setting screw (4).
3. Draw out the control shaft (3) to take out the release fork (5).

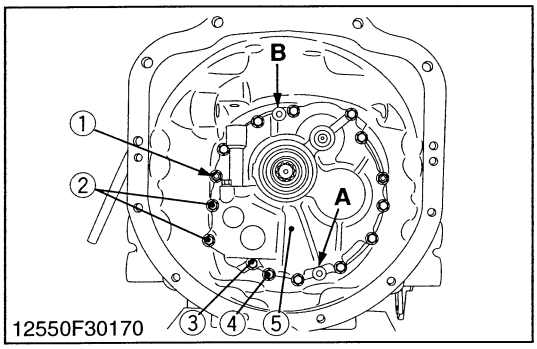
(When reassembling)

- After tightening the release fork setting screw to the specified torque, insert a wire through the holes of the setting screw head and release fork.
- Apply grease to the sliding surface of the clutch release hub.
- Apply grease to the bushing of control shaft.

Tightening torque	Release fork setting screw	166.7 to 186.3 N·m 17.0 to 19.5 kgf·m 122.9 to 137.4 ft-lbs

(1) Release Bearing
(2) Release Hub
(3) Control Shaft
(4) Release Fork Setting Screw
(5) Release Fork

12550S30090



12550F30170

Shuttle Case Assembly

1. Loosen only two nuts (1) and five screws (grade 9 is marked) (4) and remove the shuttle case assembly (5) by screwing M8 × Pitch 1.25 screws into holes **A** and **B**. Two grade 9 screws (2) and six grade 7 screws (3) are not necessary to remove.

Tightening torque	Shuttle case assembly screw, nut	M8, grade 7 nut	23.5 to 27.4 N·m 2.4 to 2.8 kgf·m 17.4 to 20.3 ft-lbs
		M8, grade 9 screw	29.4 to 34.3 N·m 3.0 to 3.5 kgf·m 21.7 to 25.3 ft-lbs

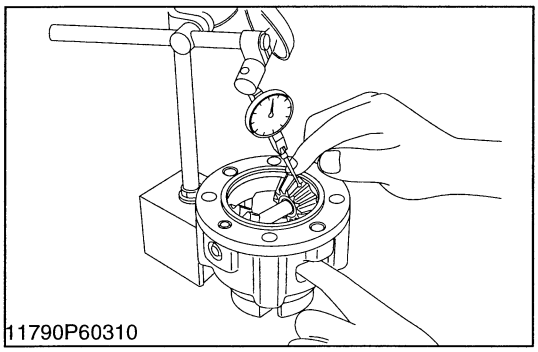
(1) Nut
(2) Grade 7 Screw
(3) Grade 9 Screw
(4) Grade 9 Screw
(5) Shuttle Case Assembly

12550S30100

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11790P60310

Backlash between Differential Pinion and Differential Side Gear

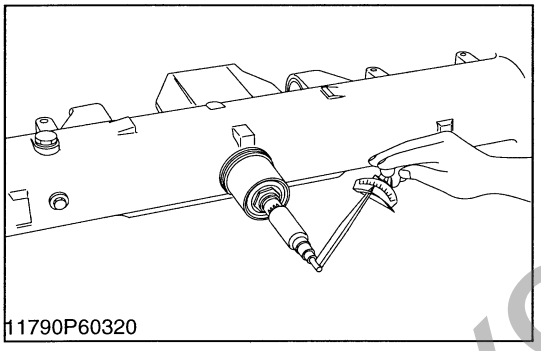
1. Set a dial gauge (lever type) on a tooth of the differential pinion.
2. Fix the differential side gear and move the differential pinion to measure the backlash.
3. If the measurement exceeds the factory specifications, adjust with the differential side gears shims.

Backlash between differential pinion and differential side gear	Factory spec.	0.2 to 0.3 mm 0.008 to 0.012 in.
	Allowable limit	0.4 mm 0.016 in.

(Reference)

- Thickness of adjusting shims
  0.4 mm (0.016 in.) 1.0 mm (0.039 in.)
  0.6 mm (0.024 in.) 1.2 mm (0.047 in.)
  0.8 mm (0.031 in.)
- Tooth contact : More than 35 %

11790S60290


11790P60320

Turning Torque of Spiral Bevel Pinion Shaft (Pinion Shaft Only)

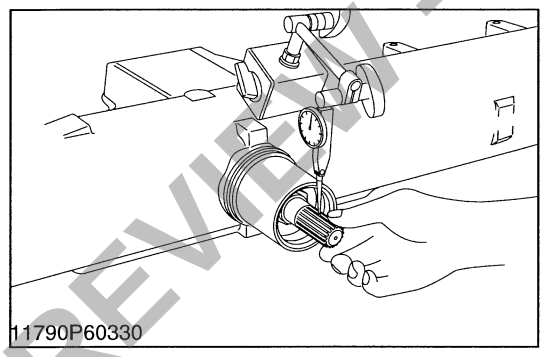
1. Install the spiral bevel pinion shaft assembly only to the front axle case.
2. Measure the turning torque of spiral bevel pinion shaft.
3. If the turning torque is not within the factory specifications, adjust with the lock nut.

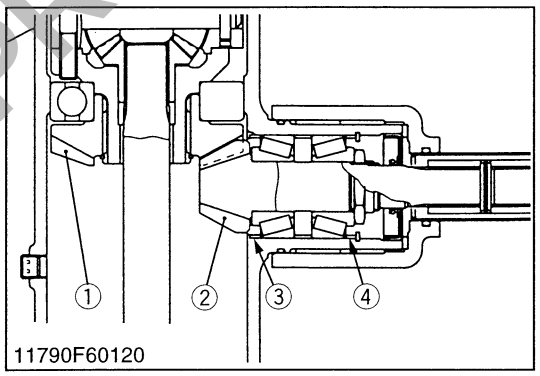
Turning torque of spiral bevel pinion shaft	Factory spec.	0.98 to 1.18 N·m 0.10 to 0.12 kgf·m 0.72 to 0.87 ft-lbs

NOTE

- **After turning torque adjustment, be sure to stake the lock nut.**

11790S60300


11790P60330



11790F60120

Backlash between Spiral Bevel Pinion Shaft and Spiral Bevel Gear

1. Set a dial gauge (lever type) with its finger on the spline of spiral bevel pinion shaft.
2. Measure the backlash by moving the spiral bevel pinion shaft by hand lightly.
3. If the backlash is not within the factory specifications, change the adjusting collar (3), (4).
4. Adjust the backlash properly by repeating the above procedures.

Backlash between spiral bevel pinion shaft and spiral bevel gear	Factory spec.	0.2 to 0.3 mm 0.008 to 0.012 in.
	Allowable limit	0.4 mm 0.016 in.

(1) Spiral Bevel Gear
(2) Spiral Bevel Pinion Shaft
(3) Adjusting Collar
(4) Adjusting Collar

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- Color of Wiring

B ..... Black	RW ..... Red / White
W ..... White	RY ..... Red / Yellow
R ..... Red	RG ..... Red / Green
G ..... Green	RL ..... Red / Blue
Or ..... Orange	GB ..... Green / Black
Y ..... Yellow	GW ..... Green / White
Br ..... Brown	GR ..... Green / Red
L ..... Blue	GY ..... Green / Yellow
Lg ..... Light Green	GL ..... Green / Blue
WB ..... White / Black	YR ..... Yellow / Red
WR ..... White / Red	YB ..... Yellow / Black
BL ..... Black / Blue	LB ..... Blue / Black
BR ..... Black / Red	YL ..... Yellow / Blue
BW ..... Black / White	LW ..... Blue / White
BY ..... Black / Yellow	LR ..... Blue / Red
BPu ..... Black / Purple	LY ..... Blue / Yellow
BP ..... Black / Pink	LgW ..... Light Green / White
BrY ..... Brown / Yellow	LgB ..... Light Green / Black
RB ..... Red / Black	LgY ..... Light Green / Yellow

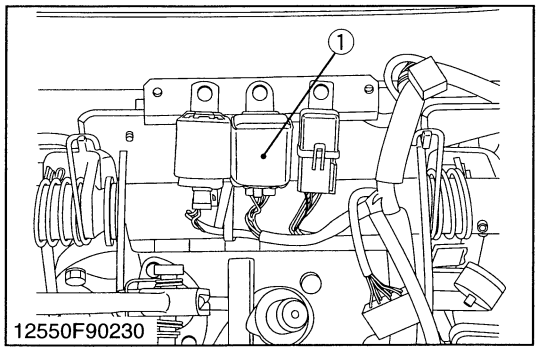
■ **Color of wiring that are shown Fig [1] and Fig [2] is same as above.**

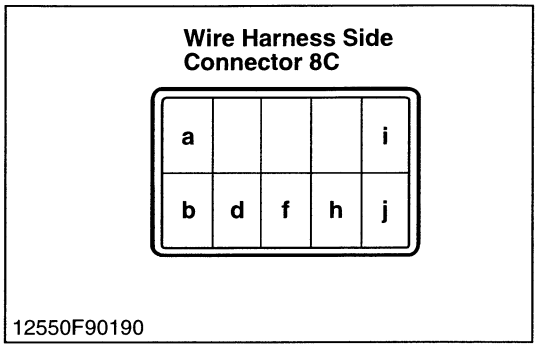
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(2) Flasher Unit





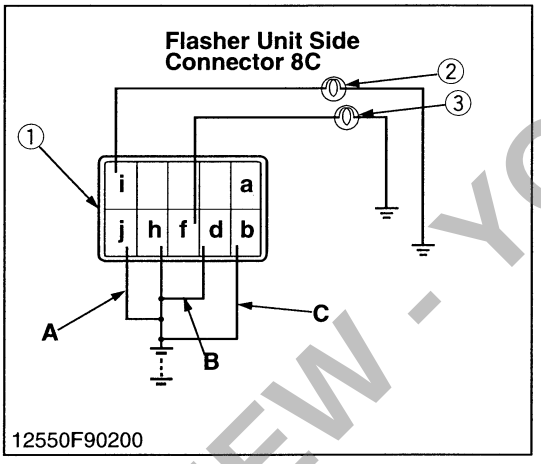
Connector Voltage

1. Disconnect the connector **8C** from hazard unit (1) after turning the main switch **ON** position.
1. Measure the voltage with a voltmeter across the connector **a** terminal and chassis, across **b** terminal and chassis, across **d** terminal and chassis.
2. If the voltage differs from the battery voltage (11 to 14 V) the wiring harness, fuses or main switch is faulty.

Voltage	Turn switch **R** position	**a** – Chassis	Battery voltage
	Turn switch **L** position	**b** – Chassis	
	Hazard switch **ON** position	**d** – Chassis	

(1) Hazard Unit

12550S90350



Flasher Unit Test

1. Remove the flasher unit (1).
2. Connect jumper leads across the hazard unit, bulbs (2), (3) and 12 V battery as shown in the following figure.
3. When the jumper lead **A**, **B** or **C** are connected, the bulb, should flicker by each switch position. When it is disconnected, the bulb, should not flicker
1. If the bulbs does not flicker or off correctly, renew the unit.

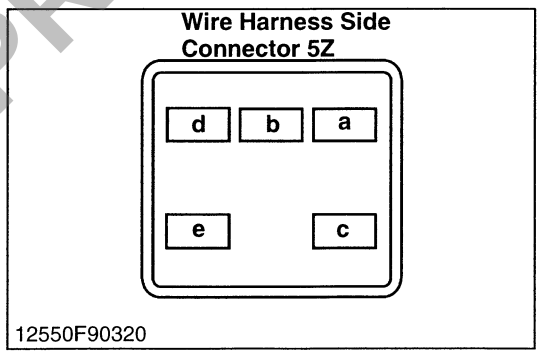
Ampere	Bulb	When jumper lead **A** is connected	Bulb (3) is flicker
		When jumper lead **B** is connected	Bulb (2) is flicker
		When jumper lead **C** is connected	Bulb (2), (3) are flicker

(1) Flasher Unit
(2) Bulb
(3) Bulb

12550S90360

(3) Hazard Switch

(3)-1 ROPS Type



Connector Voltage

1. Connect the battery negative code, then measure the voltage with a voltmeter across the **a** terminal and chassis.
2. If the voltage differ from the battery voltage, the wiring harness is faulty.

Voltage	**a** terminal – Chassis	Approx. battery voltage

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