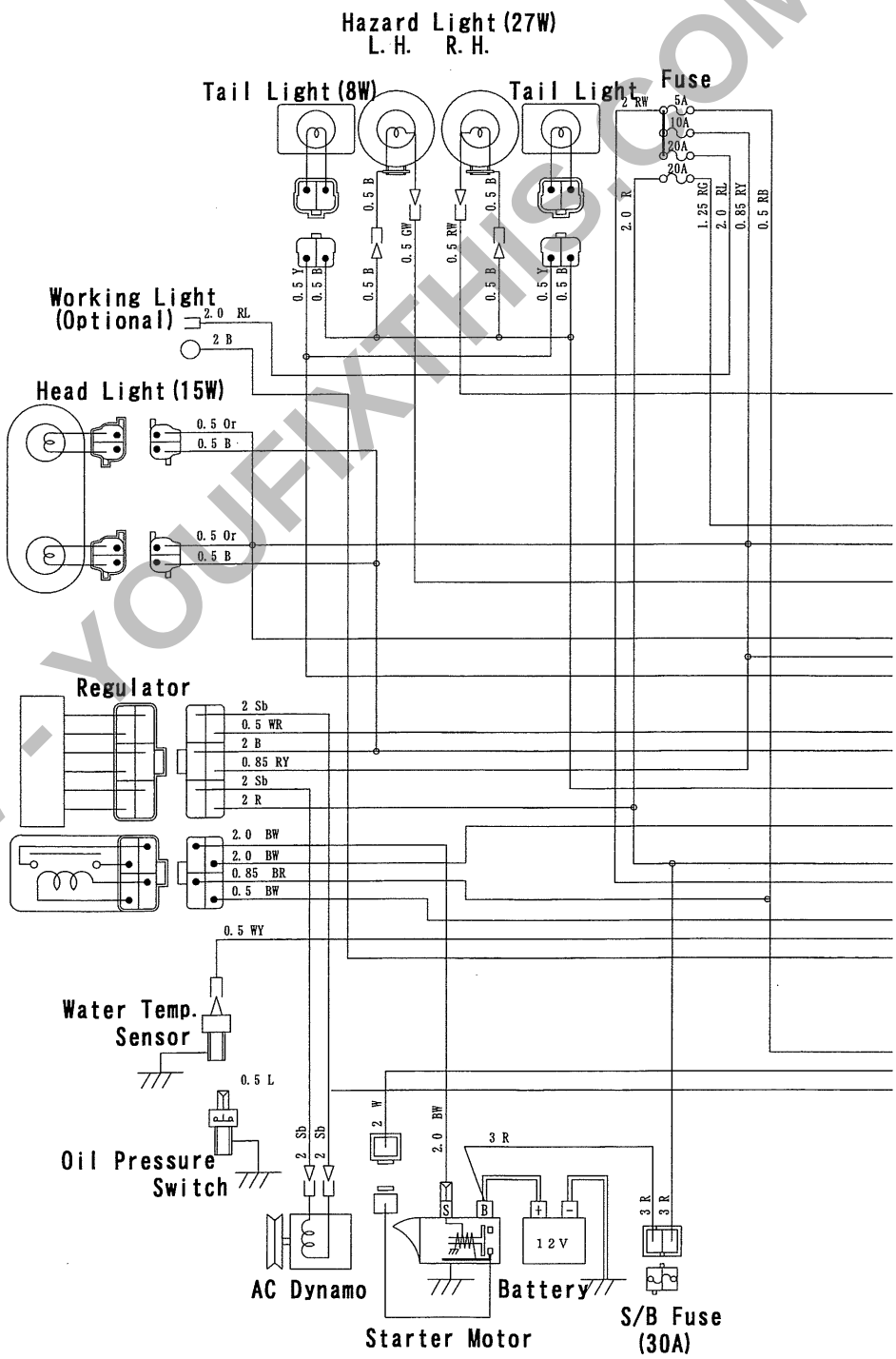
[1] WIRING DIAGRAM

- **Color of Wiring**

W	White
R	Red
L	Blue
Y	Yellow
B	Black
G	Green
P	Pink
Lg	Light Green
Br	Brown
Or	Orange
Sb	Sky Blue
WG	White / Green
WB	White / Black
WR	White / Red
WY	White / Yellow
WL	White / Blue
RW	Red / White
RL	Red / Blue
RY	Red / Yellow
RB	Red / Black
RG	Red / Green
BW	Black / White
BL	Black / Blue
BR	Black / Red
LY	Blue / Yellow
LW	Blue / White
LG	Blue / Green
LR	Blue / Red
LB	Blue / Black
LOr	Blue / Orange
YG	Yellow / Green
YR	Yellow / Red
YB	Yellow / Black
GR	Green / Red
GW	Green / White
LgY	Light Green / Yellow
LgB	Light Green / Black

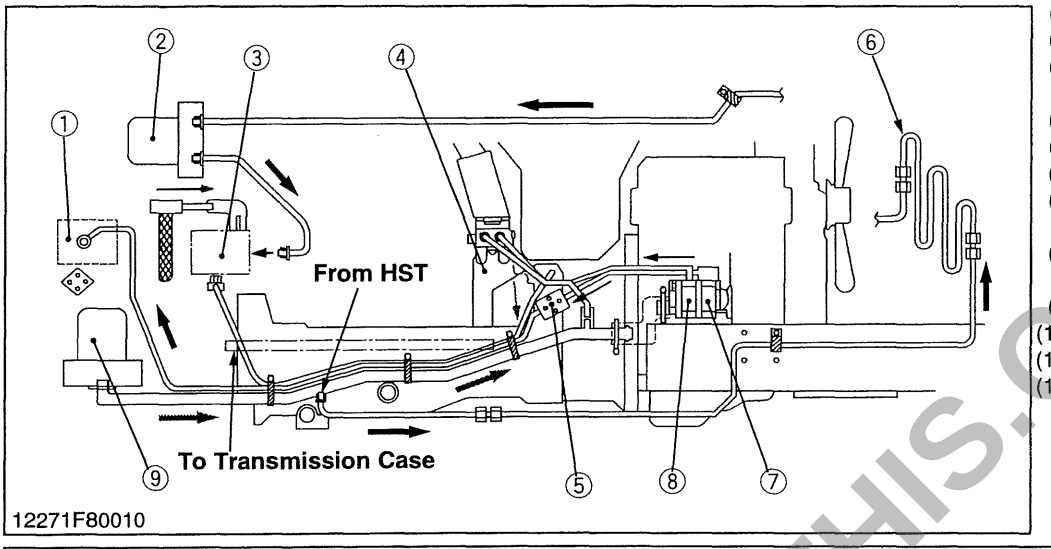


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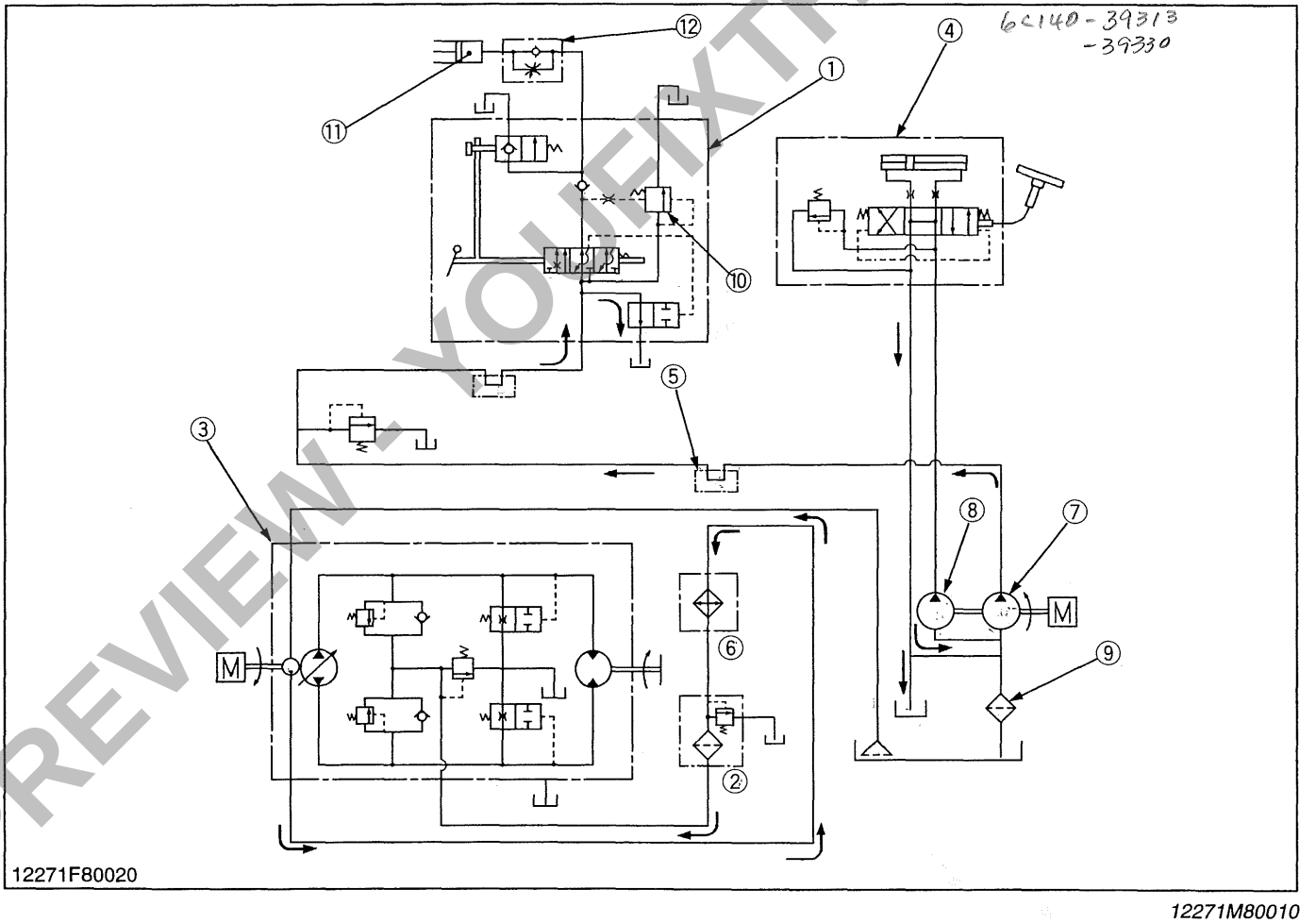
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[1] HYDRAULIC CIRCUIT



12271F80010

(1) Hydraulic Control Valve
(2) Oil Filter (for HST)
(3) Hydrostatic Transmission (HST)
(4) Power Steering (Controller)
(5) Hydraulic Block Type Outlet
(6) Oil Cooler
(7) Hydraulic Pump (for 3-Point Hitch)
(8) Hydraulic Pump (for Power Steering)
(9) Oil Filter
(10) Relief Valve
(11) Hydraulic Cylinder
(12) Lowering Speed Adjusting Valve



12271F80020

12271M80010

■ Hydraulic System

The hydraulic system of these tractors are composed of a hydraulic pump, hydraulic block type outlet, control valve, hydraulic cylinder, hydraulic oil filter and other components.

This system has the following functions.

1. Hydraulic power take off from the hydraulic block type outlet to operate the implements such as a front loader, front blade and etc.

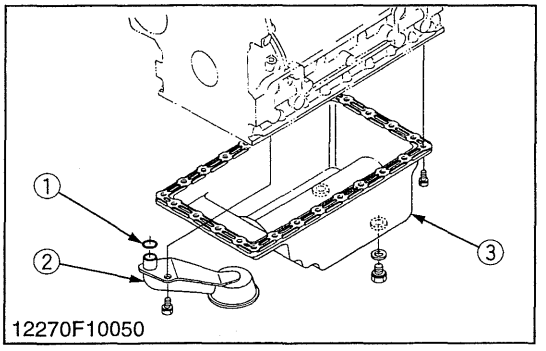
- Oil is supplied by a hydraulic pump connected to the engine. When a engine is started, a hydraulic pump starts running, sucks oil from a transmission case. The hydraulic pump forces out the oil to hydraulic block type outlet, control valve and hydraulic cylinder.

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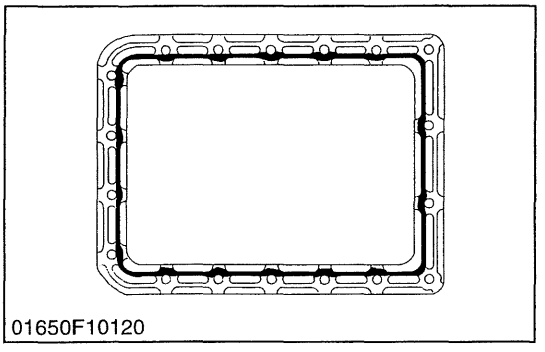
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(3) Piston and Connecting Rod



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Oil Pan and Oil Strainer

1. Remove the oil pan mounting screws.
2. Remove the oil pan (3) by lightly tapping the rim of the pan with a wooden hammer.
3. Remove the oil strainer (2).

(When reassembling)

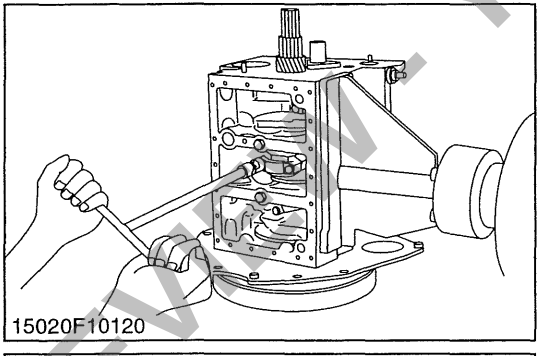
- After cleaning the oil strainer, check to see that the filter mesh in clean, and install it.
- Visually check the O-ring (1), apply engine oil, and install it.
- Securely fit the O-ring to the oil strainer.
- Apply a liquid gasket (Three Bond 1215 or equivalent) to the oil pan.
- To avoid uneven tightening, tighten oil pan mounting screws in diagonal order from the center.

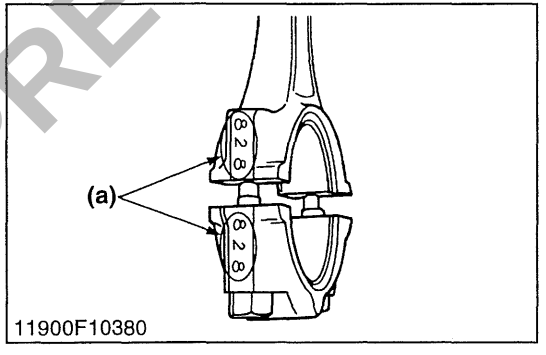
■ IMPORTANT

- **Scrape off the old adhesive completely. Wipe the sealing surface clean using waste cloth soaked with gasoline. Now apply new adhesive 3 to 5 mm (0.12 to 0.20 in.) thick all over the contact surface. Apply the adhesive also on the center of the flange as well as on the inner wall of each bolt hole.**
- **Cut the nozzle of the "liquid gasket" (Three Bond 1207D or equivalent) container at its second notch. Apply "liquid gasket" about 5 mm (0.20 in.) thick.**
  Within 20 minutes after the application of fluid sealant, reassemble the components. Wait then for about 30 minutes, and pour oil in the crankcase.

(1) O-ring
(2) Oil Strainer
(3) Oil Pan

12271S10180


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Connecting Rod Cap

1. Remove the connecting rod caps.

(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 won't be screwed in smoothly, clean the threads.
  If the connecting rod screw is still hard to screw in, replace it.

Tightening torque	Connecting rod screw	41.2 to 46.1 N·m 4.2 to 4.7 kgf·m 30.3 to 33.9 ft-lbs

(a) Mark

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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-9.)

Item		N·m	kgf·m	ft-lbs
Steering wheel mounting nut		29.4 to 49.0	3.0 to 5.0	21.7 to 36.2
Delivery pipe nut for HST		34 to 39	3.5 to 4.0	25.3 to 28.9
Oil cooler pipe nut		50 to 58	5.1 to 5.9	36.9 to 42.8
Delivery pipe nut for power steering		65 to 75	6.6 to 7.2	47.9 to 55.3
Clutch housing and engine mounting	M8	17.7 to 20.6	1.8 to 2.1	13.0 to 15.2
screw, bolt and nut	M10	48.1 to 55.8	4.9 to 5.7	35.5 to 41.2
Clutch cover mounting screw		23.5 to 27.5	2.4 to 2.8	17.4 to 20.3

	Item	Size × Pitch	N·m	kgf·m	ft-lbs
	Cylinder head cover cap nut	M7 × 1.0	6.9 to 8.8	0.7 to 0.9	5.1 to 6.5
	Injection pipe retaining nut	M12 × 1.5	24.5 to 34.3	2.5 to 3.5	18.1 to 25.3
	Nozzle holder assembly	M20 × 1.5	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	M12 × 1.5	19.6 to 24.5	2.0 to 2.5	14.5 to 18.1
	Glow plug	M8 × 1.0	7.8 to 14.7	0.8 to 1.5	5.8 to 10.8
	Bearing nut on idle gear shaft	–	34.3 to 39.2	3.5 to 4.0	25.3 to 28.9
	Lock nut for bearing nut	–	24.5 to 34.3	2.5 to 3.5	18.1 to 25.3
*	Rocker arm bracket nut	M7 × 1.0	21.6 to 26.5	2.2 to 2.7	15.9 to 19.5
*	Cylinder head screw	M10 × 1.25	63.7 to 68.6	6.5 to 7.0	47.0 to 50.6
*	Crankshaft screw	M14 × 1.5	235.4 to 245.2	24.0 to 25.0	173.6 to 180.8
*	Connecting rod screw	M8 × 1.0	41.2 to 46.1	4.2 to 4.7	30.3 to 33.9
*	Flywheel screw	M10 × 1.25	53.9 to 58.8	5.5 to 6.0	39.8 to 43.4
*	Main bearing case screw 1	M8 × 1.25	29.4 to 34.3	3.0 to 3.5	21.7 to 25.3
*	Main bearing case screw 2	M9 × 1.25	49.0 to 53.9	5.0 to 5.5	36.2 to 39.8
	Bearing case cover screw	M6 × 1.0	9.8 to 11.3	1.00 to 1.15	7.2 to 8.3
*	Idle gear shaft 1 mounting screw	M6 × 1.0	9.8 to 11.3	1.00 to 1.15	7.2 to 8.3
*	Oil pressure switch	PT 1/8	14.7 to 19.6	1.5 to 2.0	10.8 to 14.5
	Idle adjust screw cap nut	M6 × 1.0	7.8 to 9.8	0.8 to 1.0	5.8 to 7.2
	Fuel limit cap nut	M6 × 1.0	7.8 to 9.8	0.8 to 1.0	5.8 to 7.2

■ NOTE

- **In removing and applying the bolts and nuts marked with "*", a pneumatic wrench or similar pneumatic tool, if employed, must be used with enough care not to get them seized.**
- **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 of the threads. The pitch is the nominal distance in mm between two threads.**

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TROUBLESHOOTING

Symptom	Probable Cause	Solution	Reference Page
Engine Does Not Start	• No fuel	Replenish fuel	–
	• Air in the fuel system	Bleed	G-28
	• Water in the fuel system	Change fuel and repair or replace fuel system	–
	• Fuel pipe clogged	Clean	–
	• Fuel filter clogged	Change	G-20
	• Excessively high viscosity of fuel or engine oil at low temperature	Use specified fuel or engine oil	G-8
	• Fuel with low cetane number	Use specified fuel	G-8
	• Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	1-S18
	• Incorrect injection timing	Adjust	1-S53
	• Fuel camshaft worn	Replace	1-S24
	• Injection nozzle clogged	Clean	1-S55
	• Injection pump malfunctioning	Repair or replace	1-S24
	• Seizure of crankshaft, camshaft, piston, cylinder or bearing	Repair or replace	1-S28, S31
	• Compression leak from cylinder	Replace head gasket, tighten cylinder head screw, glow plug and nozzle holder	1-S20
	• Improper valve timing	Correct or replace timing gear	1-S26
	• Piston ring and cylinder worn	Replace	1-S29
	• Excessive valve clearance	Adjust	1-S17
(Starter Does Not Run)	• Battery discharged	Charge	9-S5
	• Starter malfunctioning	Repair or replace	9-S11
	• Main switch malfunctioning	Repair or replace	9-S7
	• The movement of poppet (safety switch of range gear shift) is heavy (In winter, oil viscosity increase) (B2710 Affected Serial No.: below 15496)	Range gear shift lever is moved several times	9-M7
	• Safety switches malfunctioning	Adjust or replace	9-S10
	• Wiring disconnected	Connect	–
Engine Revolution Is Not Smooth	• Fuel filter clogged or dirty	Change	G-20
	• Air cleaner clogged	Clean or replace	G-20
	• Fuel leak due to loose injection pipe retaining nut	Tighten retaining nut	1-S18
	• Injection pump malfunctioning	Repair or replace	1-S24
	• Incorrect nozzle injection pressure	Adjust	1-S55
	• Injection nozzle stuck or clogged	Repair or replace	1-S56
	• Governor malfunctioning	Repair	1-S26
Either White or Blue Exhaust Gas Is Observed	• Excessive engine oil	Reduce to specified level	G-12
	• Piston ring and cylinder worn or stuck	Repair or replace	1-S29
	• Incorrect injection timing	Adjust	1-S53
	• Deficient compression	Adjust top clearance	1-S16

12271S10010

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SPECIFICATIONS (B2410)

Model			B2410HSDB	B2410HSD	B2410HSE
PTO power			13.4 kW (18.0 HP)		
Engine	Maker		KUBOTA		
	Model		D1105-E-D16		
	Type		Indirect Injection. Vertical, water-cooled, 4-cycle diesel		
	Number of cylinders		3		
	Bore and stroke		78 × 78.4 mm (3.07 × 3.09 in.)		
	Total displacement		1123 cm^3 (68.5 cu.in.)		
	Engine net power (DIN)		17.9 kW (24.0 HP)		
	Rated revolution (min^{-1})		43.3 r/s (2600 rpm)		
	Maximum torque		67 N·m (50 ft-lbs)		
	Battery		12 V, RC : 79 min, CCA : 433 A		
	Starting system		Electric starting with cell starter 12 V, 1.0 kW		
	Lubricating system		Forced lubrication by trochoidal pump		
	Cooling system		Pressurized radiator, forced circulation with water pump		
	Fuel		Diesel fuel No. 2-D [above –10 °C (14 °F)], Diesel fuel No. 1 [below –10 °C (14 °F)]		
Capacities	Fuel tank		24 L (6.3 U.S.gals, 5.3 Imp.gal)		
	Engine crankcase (with filter)		3.0 L (3.2 U.S.qts, 2.6 Imp.qts)		
	Engine coolant		3.8 L (4.0 U.S.qts, 3.3 Imp.qts)		
	Transmission case		12.5 L (3.30 U.S.gals, 2.75 Imp.gals)		
	Front axle case		4.5 L (4.8 U.S.qts, 4.0 Imp.qts)	3.7 L (3.9 U.S.qts, 3.3 Imp.qts)	–
Dimensions	Overall length (without 3P)		2330 mm (91.7 in.)		
	Overall width		1175 mm (46.3 in.)		
	Overall height (with ROPS)		1965 mm (77.4 in.)		
	Overall height (top of steering wheel)		1372 mm (54.0 in.)		
	Wheel base		1500 mm (59.0 in.)		
	Minimum ground clearance		285 mm (11.2 in.)	325 mm (12.8 in.)	
	Tread	Front	835 mm (32.9 in.)		900 mm (35.4 in.)
		Rear	890 to 1064 mm (35.0 to 41.9 in.)		
Weight (with ROPS)			680 kg (1500 lbs)	670 kg (1477 lbs)	620 kg (1367 lbs)
Clutch			Dry single plate		
Travelling system	Tires	Front	7-12		6.5-10
		Rear	11.2-16		
	Steering		Integral type power steering		
	Transmission		Main-hydrostatic transmission, High-Low gear shift (2 forward and 2 reverse)		
	Brake		Wet disk type		
	Min. turning radius (with brake)		2.1 m (6.9 feet)		2.0 m (6.6 feet)
	Differential		Bevel gear		
Hydraulic system	Hydraulic control system		Position Control		
	Pump capacity		3P: 16.6 L (4.4 U.S.GPM, 3.7 Imp.GPM), PS: 9.8 L (2.6 U.S.GPM, 2.2 Imp.GPM)		
	Three point hitch		SAE Category I		
	Max. lift force	At lift points	750 kg (1655 lbs)		
		(24 in, behind lift points)	590 kg (1300 lbs)		
PTO system	Rear	PTO shaft	SAE 1-3/8, 6 splines		
		Revolution	1 speed (540 min^{-1} (rpm) at 2584 engine min^{-1} (rpm))		
	Mid.	PTO shaft	USA No. 5 (KUBOTA 10-tooth) involute spline		
		Revolution	1 speed (2537 min^{-1} (rpm) at 2600 engine min^{-1} (rpm))		

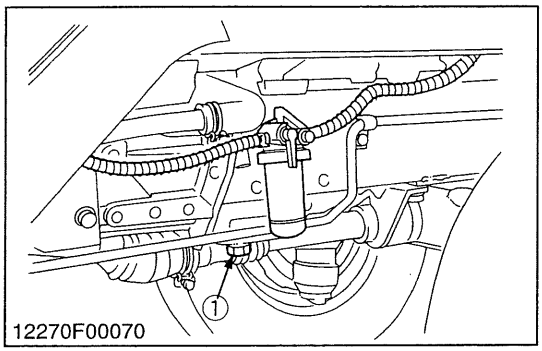
Note : * Manufacture's estimate the company reserves the right to change the specifications without notice.

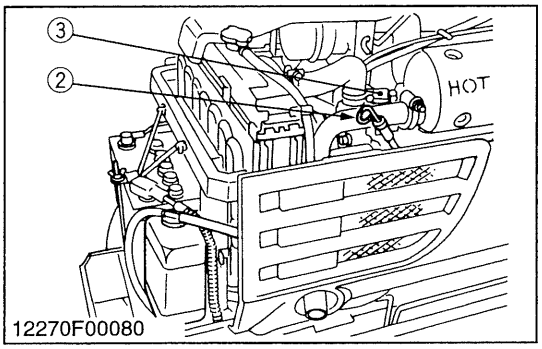
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(2) Check Points of Initial 50 Hours





Changing Engine Oil

CAUTION

- **Before changing oil, be sure to stop the engine.**

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 plug (1) at the bottom of the engine and drain the oil completely.
4. Screw in the drain plug (1).
5. Fill new oil up to upper line on the dipstick (2).

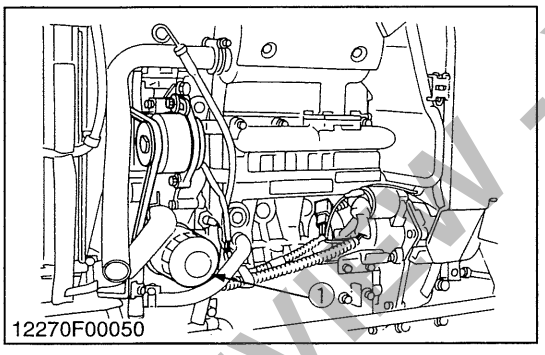
IMPORTANT

- **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 "LUBRICANTS, FUEL AND COOLANT". (See page G-8.)**

Engine oil capacity	B2410	3.0 L 3.2 U.S.qts 2.6 Imp.qts
	B2710 B2910	4.1 L 4.3 U.S.qts 3.6 Imp.qts

(1) Drain Plug
(2) Dipstick
(3) Oil Inlet
(A) Oil level is acceptable within this range.

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Replacing Engine Oil Filter Cartridge

CAUTION

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

1. Remove the oil filter cartridge with the filter wrench.
2. Apply a slight coat of oil onto the cartridge 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 element must be highly efficient. Use only a KUBOTA genuine filter or its equivalent.**

(1) Engine Oil Filter

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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.**

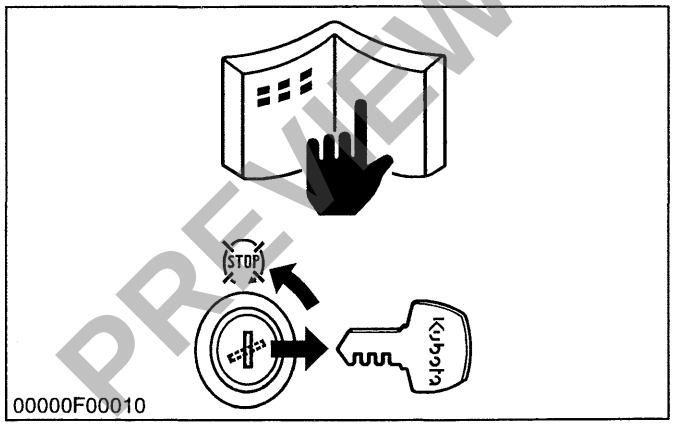
⚠ **WARNING : Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.**

⚠ **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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GENERAL

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WSM

WORKSHOP MANUAL

TRACTOR

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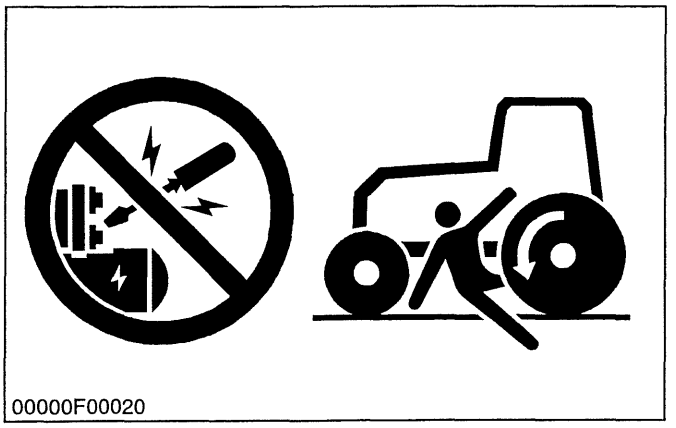
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Kubota

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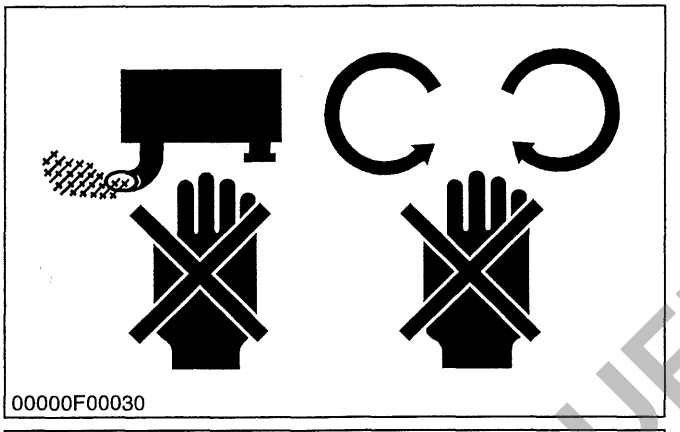
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SAFETY STARTING

(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.

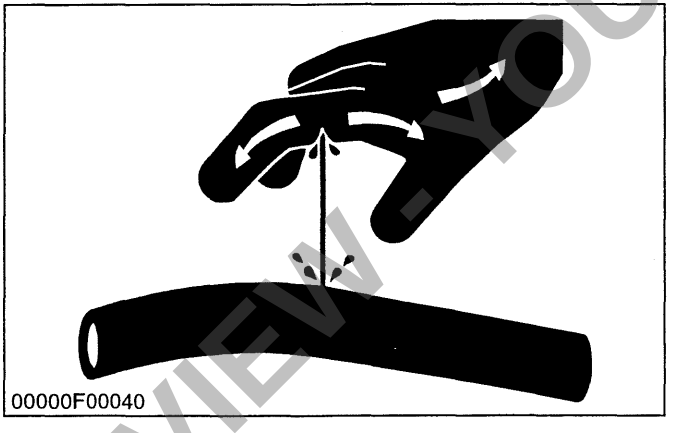
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SAFETY WORKING

(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.

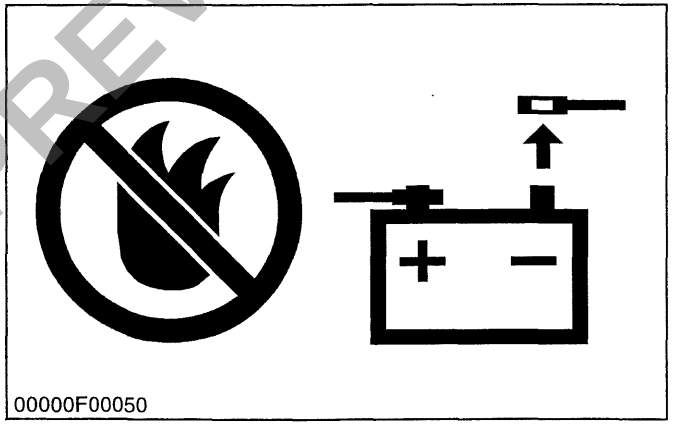
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AVOID FIRES

(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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[10] TIRES

(1) Tire Pressure

CAUTION

- **Do not attempt mount a tire. This should be done by a qualified person with the proper equipment.**
- **Always maintain the correct tire pressure.**
  Do not inflate tires above the recommended pressure shown in the operator's manual.

IMPORTANT

- **Do not use tires larger than specified.**
- **When you intend to mount different size of tires from equipped ones, consult your dealer about front drive gear ratio for detail.**
  Excessive wear of tires may occur due to improper gear ratio.

(B2410)

Type		Tire sizes	Inflation pressure
Farm (2WD)	Front	6.50 – 10 4PR	200 kPa 2.0 kgf/cm^2 28 psi
	Rear	11.2 – 16 4PR	130 kPa 1.3 kgf/cm^2 18 psi
Farm (4WD)	Front	7 – 12 4PR	170 kPa 1.7 kgf/cm^2 24 psi
	Rear	11.2 – 16 4PR	130 kPa 1.3 kgf/cm^2 18 psi
Turf	Front	23 × 8.50 – 12 4PR	160 kPa 1.6 kgf/cm^2 23 psi
	Rear	33 – 12.5 – 15 4PR	140 kPa 1.4 kgf/cm^2 20 psi
Bar	Front	21 × 8.00 – 10 4PR	160 kPa 1.6 kgf/cm^2 23 psi
	Rear	31 × 15.5 – 15 4PR	140 kPa 1.4 kgf/cm^2 20 psi

(B2710, B2910)

Type		Tire sizes	Inflation pressure
Farm	Front	7 – 12 4PR	170 kPa 1.7 kgf/cm^2 24 psi
	Rear	12.4 – 16 4PR	110 kPa 1.1 kgf/cm^2 16 psi
Turf	Front	23 × 8.50 – 12 4PR	150 kPa 1.5 kgf/cm^2 22 psi
	Rear	13.6 – 16 4PR	96.5 kPa 1.0 kgf/cm^2 14 psi
Industry	Front	23 × 8.50 – 14 Ind. 4PR	241 kPa 2.5 kgf/cm^2 35 psi
	Rear	12.4 – 16 Ind. 4PR	138 kPa 1.4 kgf/cm^2 20 psi

Though the tire pressure is factory-set to the prescribed level, it naturally drops slowly in the course of time. Thus, check it everyday and inflate as necessary.

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(2) Tread

CAUTION

- **Support tractor securely on stands before removing a wheel.**
- **Never operate tractor with a loose rim, wheel or axle.**

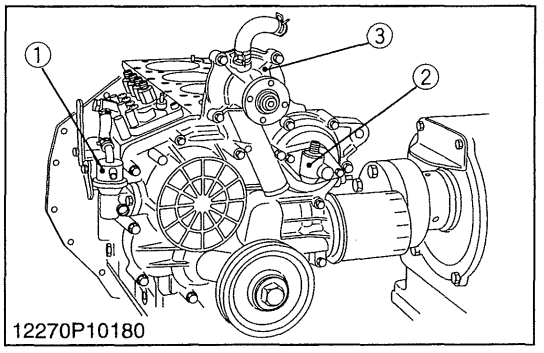
IMPORTANT

- **Always attach tires as shown in the figure.**
- **If not attached as the figure, transmission parts may be damaged.**
- **Do not use tires larger than specified.**

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Fuel Pump, Hour Meter Gear Case and Water Pump

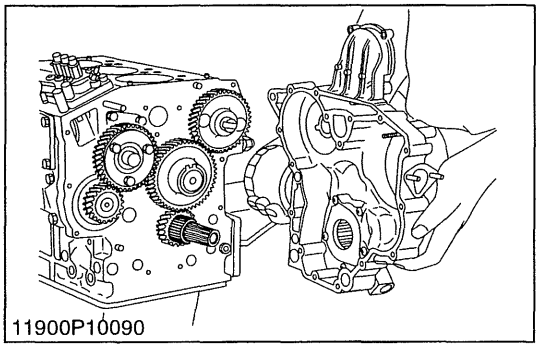
1. Remove the fuel pump (1).
2. Remove the hour meter gear case (2).
3. Remove the water pump flange.

(When reassembling)

- Before installing the hour meter gear case gasket, apply liquid gasket (Three Bond 1215 or equivalent) to the both side.

(1) Fuel Pump
(2) Hour Meter Gear Case
(3) Water Pump Flange

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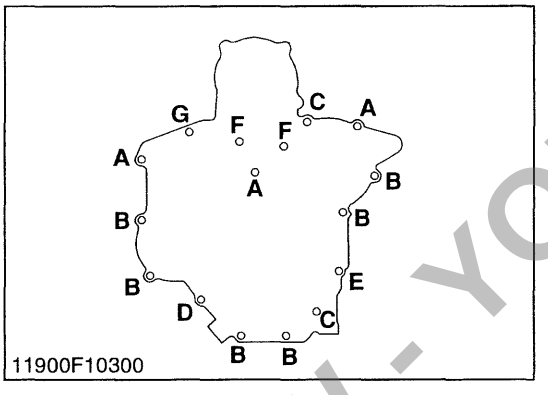

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Gear Case

1. Remove the gear case.
2. Remove the crankshaft collar and O-rings.

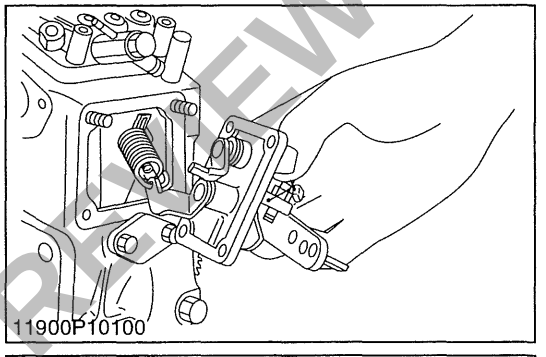
(When reassembling)

- Replace the gear case gasket with a new one.
- Be sure to set four O-rings inside the gear case and the O-ring on the crankshaft.
- Apply a thin film of engine oil to the oil seal, and install it, noting the lip come off.
- Length of the gear case mounting screws. (Refer to the figure.)
  A : 45 mm (1.77 in.)
  B : 50 mm (1.97 in.)
  C : 55 mm (2.17 in.)
  D : 59 mm (2.32 in.)
  E : 68 mm (2.68 in.)
  F : 80 mm (3.15 in.)
  G : Nut



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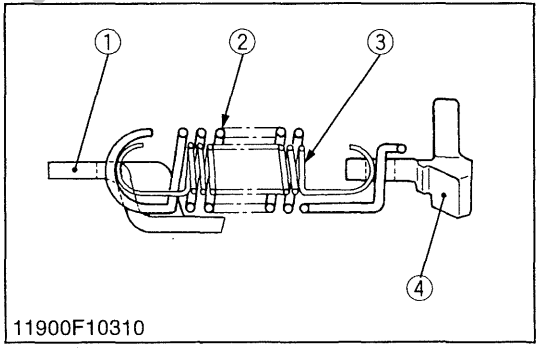
Speed Control Plate

1. Remove the speed control plate and governor lever (1) from the governor springs 1 (2) and 2 (3).

(When reassembling)

- Securely catch the governor springs 1 and 2 on the governor lever as shown in the figure.
- Apply a liquid gasket (Three Bond 1215 or equivalent) to both sides of the speed control plate gasket.

(1) Governor Lever
(2) Governor Spring 1
(3) Governor Spring 2 (D1105 only)
(4) Fork Lever 2



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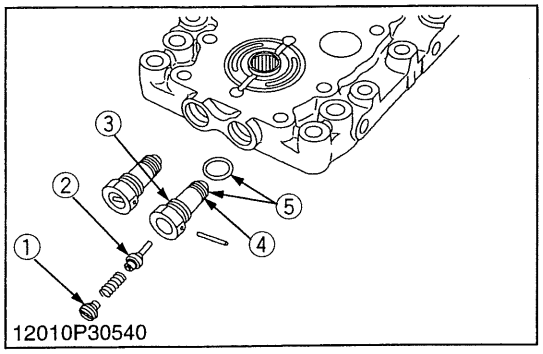
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Neutral Valve

1. Check the holes of the valve body (3) and the neutral valve (2) for clogging.
2. If clogged, open hole with compressed air.
3. Check the O-rings (1), (5) and the backup ring (4) for scratches and damage.
4. Check the springs for breakage and wear.
5. If the valve surface is scored, replace.
6. If anything unusual, replace.

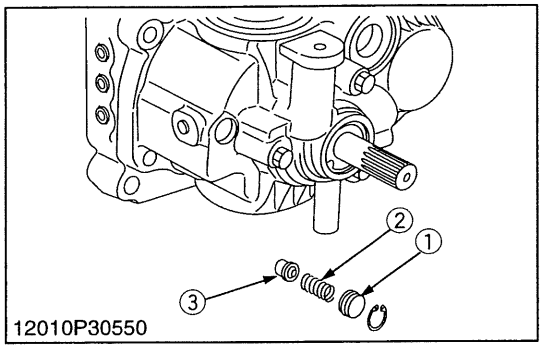
■ **NOTE**

- **When reassembling, replace the O-rings and the backup rings.**

Tightening torque	Cap screw	58.5 to 68.6 N·m 6.0 to 7.0 kgf·m 43.4 to 50.6 ft-lbs

(1) O-ring
(2) Neutral Valve
(3) Valve Body
(4) Backup Ring
(5) O-ring

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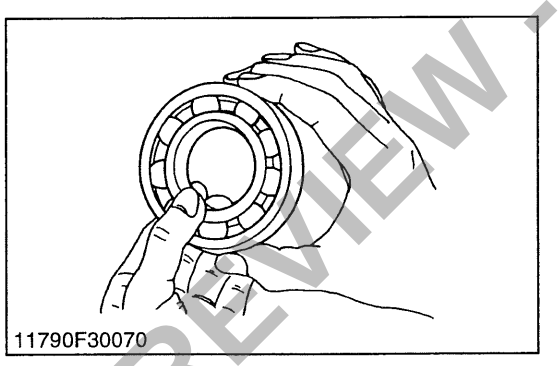
Charge Relief Valve

1. Check the spring (2) for breakage and wear.
2. If it unusual, replace.

(1) Valve Plug
(2) Spring
(3) Valve Poppet

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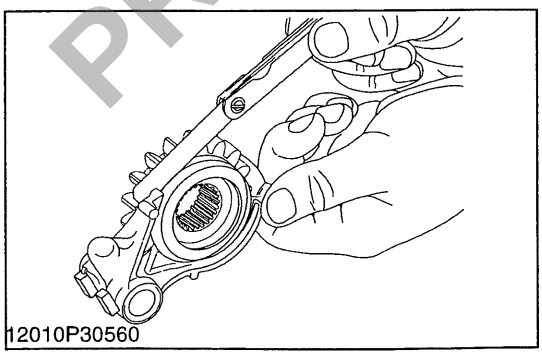
(2) Transmission Case


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Checking Bearing

1. Hold the inner race, and push and pull the outer race in all directions to check for wear and roughness.
2. Apply transmission fluid to the bearing, and hold the inner race. Then, turn the outer race to check rotation.
3. If there is any defect, replace it.

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Clearance between Shift Fork and Shift Gear Groove

1. Insert the fork into the shift gear groove and measure the clearance with a feeler gauge.
2. If the clearance exceeds the allowable limit, replace it.

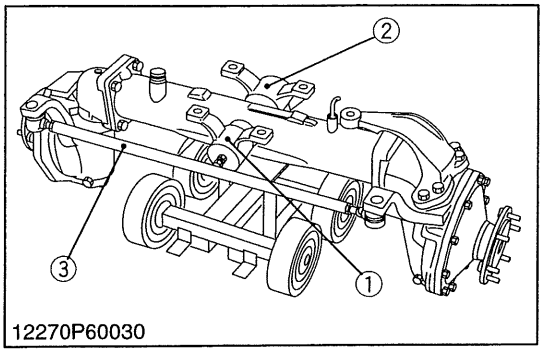
Clearance between shift fork and shift gear groove	Factory spec.	0.10 to 0.35 mm 0.004 to 0.014 in.
	Allowable limit	0.5 mm 0.020 in.

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(2) Disassembling Front Axle Assembly



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Tie-rod and Axle Bracket

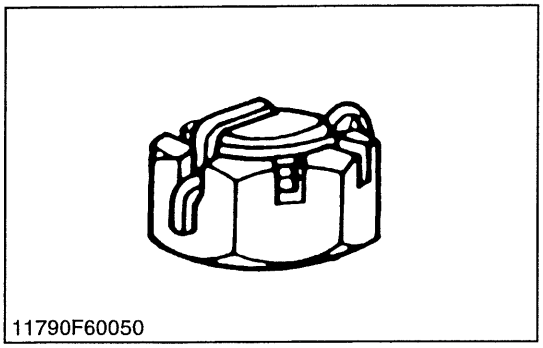
1. Remove the slotted nut and remove the tie-rod (3).
2. Remove the front axle brackets (1), (2).

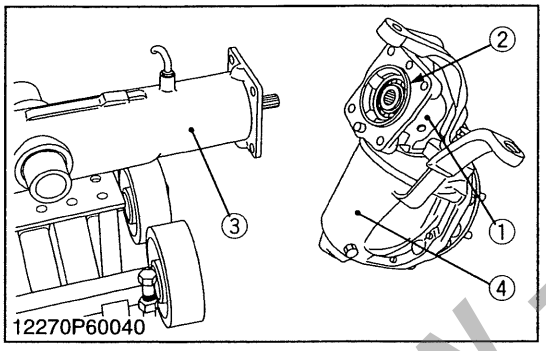
(When reassembling)

- Apply grease to the thrust collar of front axle bracket.
- Apply grease to the O-ring and take care not to damage it.
- After tightening the slotted nut to the specified torque, install the cotter pin as shown in the figure.

(1) Front Axle Bracket (Front)
(2) Front Axle Bracket (Rear)
(3) Tie-rod

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Bevel Gear Case and Front Gear Case

1. Remove the bevel gear case mounting screws.
2. Remove the bevel gear case (1) and front gear case (4) as a unit from the front axle case (3).

(When reassembling)

- Apply grease to the O-ring (2) and take care not to damage it.
- Do not interchange right and left bevel gear case assemblies and right and left gear case assemblies.

Tightening torque	Bevel gear case mounting screw	77.5 to 90.1 N·m 7.9 to 9.2 kgf·m 57.1 to 66.5 ft-lbs

(1) Bevel Gear Case
(2) O-ring
(3) Front Axle Case
(4) Front Gear Case

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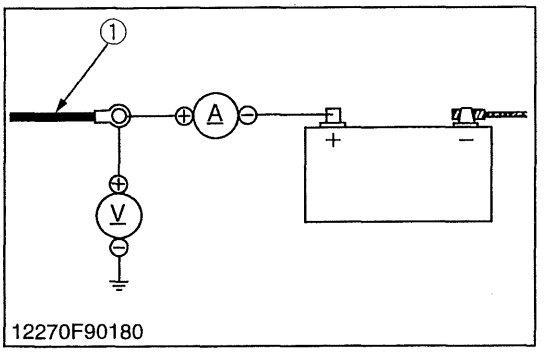
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[4] CHARGING SYSTEM CHECKING



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Battery Charging Current

1. After starting the engine, disconnect the battery positive cord (+), and connect an ammeter and voltmeter. Then switch on all electrical loads (such as headlights) and measure the charging current.

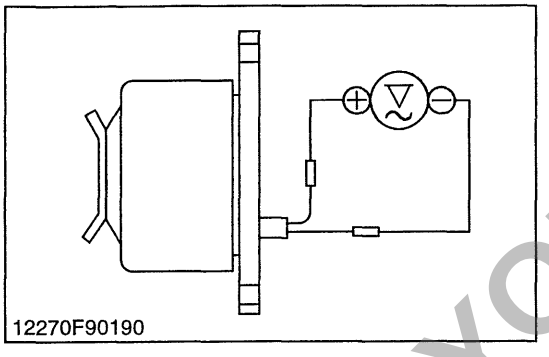
■ NOTE

- **Connect an ammeter only after starting the engine.**
- **When the electrical loads is considerably low or the battery is fully charged, the specified reading may not be obtained.**

Factory spec.	Current	14 to 15 A
	Dynamo speed	5200 rpm

(1) Battery Positive Cord

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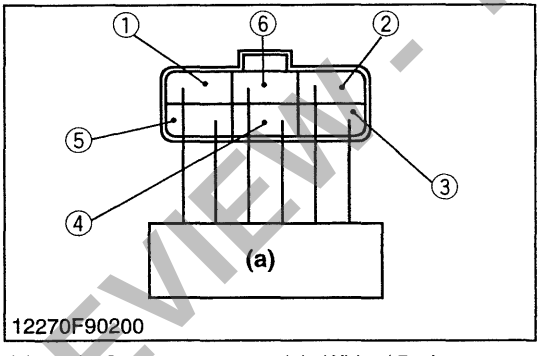
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Dynamo No-load Voltage

1. Disconnect the lead wires from the dynamo.
2. Start the engine, and check the generating voltage of the dynamo.

Factory spec.	Voltage	14 to 15 V
	Dynamo speed	5200 rpm

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12270F90200

(1) Light Green
(2) Light Green
(3) Red
(4) Red / Yellow
(5) White / Red
(6) Black
(a) Regulator

Continuity across Regulator's Terminals

1. Remove the regulator coupler.
2. Check with a tester whether the regulator is in optimum condition or not.

■ Check Table

■ NOTE

- **Type to use a high-resistance tester as far as possible.**
- **The judgement should be as below table. "ON" if the indicator moves, otherwise "OFF".**

Tester + terminal / Tester − terminal		Cord colors					
		Light Green	Light Green	Red	Red / Yellow	White / Red	Black
Cord colors	Light Green		OFF	**ON**	OFF	**ON**	OFF
	Light Green	OFF		**ON**	OFF	OFF	OFF
	Red	OFF	OFF		OFF	OFF	OFF
	Red / Yellow	**ON**	**ON**	**ON**		OFF	**ON**
	White / Red	OFF	OFF	OFF	OFF		OFF
	Black	OFF	OFF	OFF	OFF	OFF	

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