

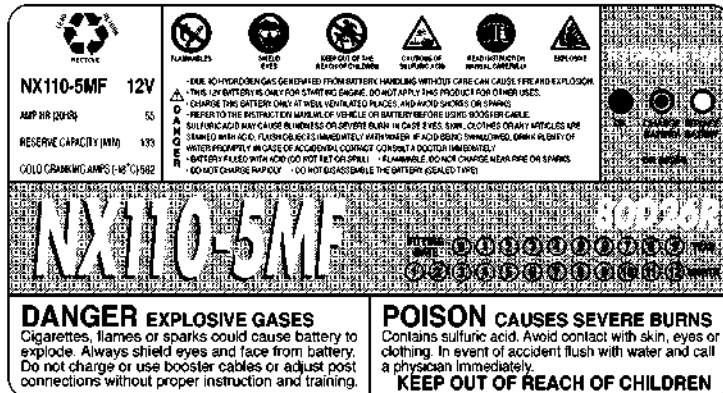
(1) Part No. 35260-3491-4

**⚠ CAUTION**

**TO AVOID PERSONAL INJURY:**

1. Read and understand the operator's manual before operation.
2. Before starting the engine, make sure that everyone is at a safe distance from the tractor and that the PTO is OFF.
3. Do not allow passengers on the tractor at any time.
4. Before allowing other people to use the tractor, have them read the operator's manual.
5. Check the tightness of all nuts and bolts regularly.
6. Keep all shields in place and stay away from all moving parts.
7. Lock the two brake pedals together before driving on the road.
8. Slow down for turns, or rough roads, or when applying individual brakes.
9. On public roads use SMV emblem and hazard lights, if required by local traffic and safety regulations.
10. Pull away from the drawbar.
11. Before dismounting, lower the implement to the ground, set the parking brake, stop the engine and remove the key.
12. Securely support tractor and implement before working underneath.

(2) Part No. TD060-3012-1



(3) Part No.

32751-4958-1

Stay clear of engine fan and fan belt.



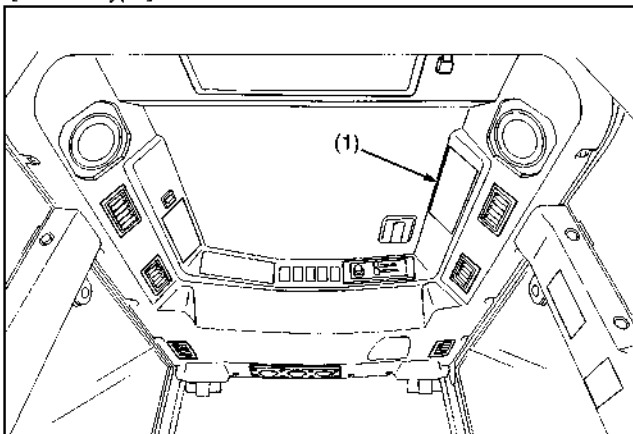
(4) Part No.

TC030-4958-1

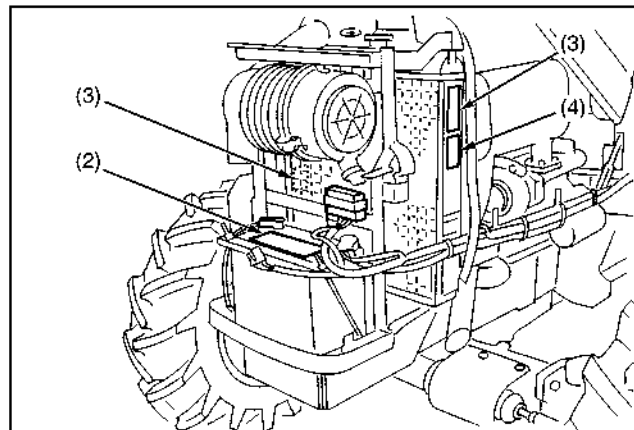
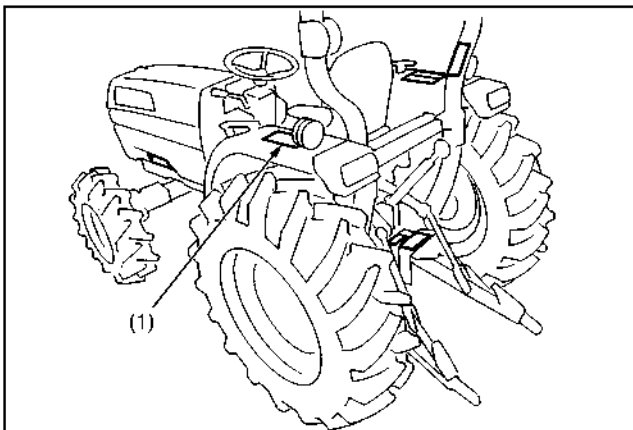
Do not touch hot  
surface like muffler etc.



## [CABIN Type]



## [ROPS Type]



**CABIN Type**

Model			L5030		
			Manual Transmission		GST
Engine	Model		V2403-MA-E-GST-EU		
	Type		Indirect injection vertical, water-cooled, 4-cycle diesel		
	Number of cylinders		4		
	Total displacement		2.434 L (148.5 cu.in.)		
	Bore and stroke		87 × 102.4 mm (3.4 × 4.0 in.)		
	Net power		37.3 kW (50.7 HP)*		
	PTO power (factory observe)		32.8 kW (44.6 HP)* / 2700 min <sup>-1</sup> (rpm)		31.7 kW (43.1 HP)* / 2700 min <sup>-1</sup> (rpm)
	Maximum torque		162.4 N·m (16.6 kgf·m, 119.8 ft-lbs)		
	Battery capacity		12 V, RC : 133 min, CCA : 582 A		
	Fuel		Diesel fuel No. 1 [below −10 °C (14 °F)], Diesel fuel No. 2 [above −10 °C (14 °F)]		
Capacities	Fuel tank		43 L (11.4 U.S.gals, 9.5 Imp.gals)		
	Engine crankcase (with filter)		8.2 L (8.7 U.S.qts, 7.2 Imp.qts)		
	Engine coolant		9.2 L (9.7 U.S.qts, 8.1 Imp.qts)		
	Transmission case		45 L (11.9 U.S.gals, 9.9 Imp.gals)		
Dimensions	Overall length (without 3P)		3245 mm (127.8 in.)		
	Overall width (min. tread)		1470 mm (57.9 in.)		
	Overall height		2275 mm (89.6 in.)		
	Wheel base		1915 mm (75.4 in.)		
	Min. ground clearance		425 mm (16.7 in.)		
	Tread	Front	1135 mm (44.7 in.)		
Rear		1125 mm (44.3 in.), 1225 mm (48.2 in.), 1325 mm (52.2 in.)			
Weight			1840 kg (4057 lbs)	1860 kg (4101 lbs)	
Travelling system	Standard tire size	Front	9.5-16		
		Rear	13.6-28		
	Clutch		Dry type single stage		
	Steering		Hydrostatic power steering		
	Transmission		16 forward and 16 reverse speeds	24 forward and 16 reverse speeds	3 speeds
	Braking system		Wet disk type		
	Min. turning radius (with brake)		3.2 m (10.5 feet)		
Hydraulic system	Hydraulic control system		Position control		
	Pump capacity		37.0 L (9.8 U.S.gals, 8.1 Imp.gals) / min.		
	Three point hitch		SAE Category 1		
	Max. lift force	At lift points	1750 kg (3860 lbs)		
		24 in. behind lift points	1350 kg (2976 lbs)		
	System pressure		17.7 MPa (180 kgf/cm <sup>2</sup> , 2560 psi)		
PTO	Rear PTO		SAE 1-3/8, 6 splines		
	PTO / Engine speed		540 min <sup>-1</sup> (rpm) / 2550 min <sup>-1</sup> (rpm)		540 min <sup>-1</sup> (rpm) / 2660 min <sup>-1</sup> (rpm)

Note : \* Manufacture's estimate

The company reserves the right to change the specifications without notice.

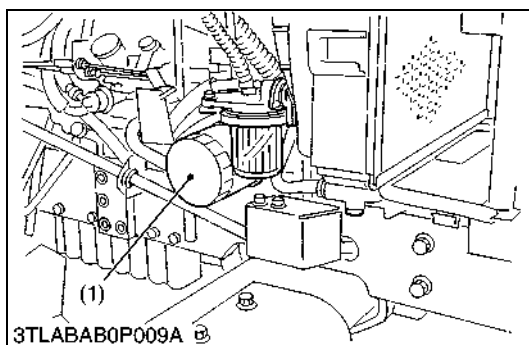
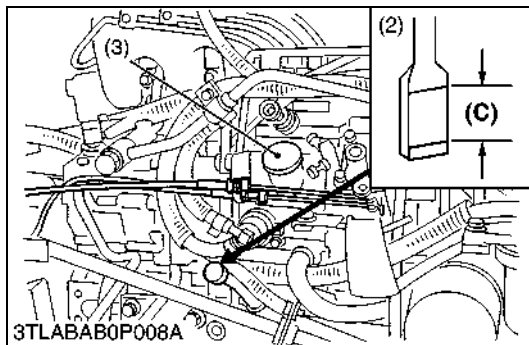
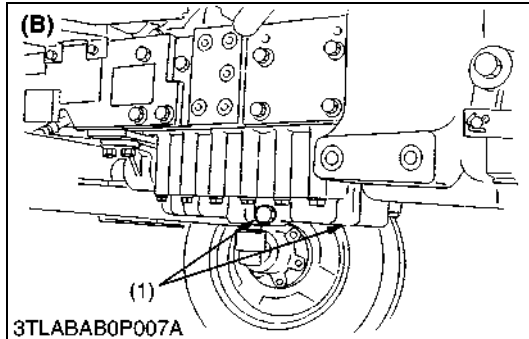
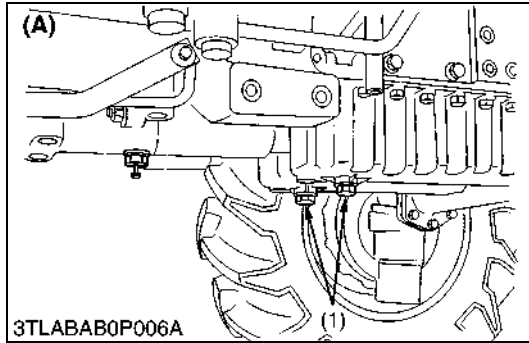
W10399600

## 4. LUBRICANTS, FUEL AND COOLANT

	Place	Capacity			Lubricants, fuel and coolant	
		L3130	L3430	L3830		
1	Fuel tank	40 L 10.6 U.S.gals 8.8 Imp.gals			No. 2-D diesel fuel No. 1-D diesel fuel if temperature is below –10 °C (14 °F)	
2	Cooling system (ROPS Type)	6.0 L 6.3 U.S.qts 5.3 Imp.qts		7.5 L 7.9 U.S.qts 6.6 Imp.qts	Fresh clean water with anti-freeze	
	Cooling system (CABIN Type)	–		8.7 L 9.2 U.S.qts 7.7 Imp.qts		
3	Engine crankcase (with filter)	5.7 L 6.0 U.S.qts 5.0 Imp.qts		6.7 L 7.1 U.S.qts 5.9 Imp.qts	Engine oil : API service classification CD, CE or CF Above 25 °C : SAE30, (77 °F) 10W-30 or 10W-40 0 to 25 °C : SAE20, (32 to 77 °F) 10W-30 or 10W-40 Below 0 °C : SAE10W, (32 °F) 10W-30 or 10W-40	
4	Transmission case	42 L 11.1 U.S.gals 9.2 Imp.gals		43 L 11.4 U.S.gals 9.5 Imp.gals	KUBOTA UDT or SUPER UDT fluid*	
5	Front axle case	6.5 L 6.9 U.S.qts 5.7 Imp.qts			KUBOTA UDT or SUPER UDT fluid* or SAE80, 90 gear oil	
Greasing						
	Place	No. of greasing point			Capacity	Type of grease
6	Front axle support	2			Until grease overflows	Multipurpose type grease
	Top link	2				
	Top link bracket (if equipped)	2 (with draft control)				
	Lift rod	1				
	Lift cylinder	4				
	Battery terminal	2			Moderate amount	Engine oil
	Throttle cable	Oiling				

\* KUBOTA original transmission hydraulic fluid.

## [2] CHECK POINTS OF INITIAL 50 HOURS



### Changing Engine Oil

#### ⚠ CAUTION

- Before changing oil, be sure to stop the engine.
- Allow engine to cool down sufficiently, oil can be hot and can burn.

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 both drain plugs (1) at the bottom of the engine and drain the oil completely.
4. Screw in the both drain plugs (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-7, 8.)

Engine oil capacity (with filter)	L3130 L3430	5.7 L 6.0 U.S.qts 5.0 Imp.qts
	L3830	6.7 L 7.1 U.S.qts 5.9 Imp.qts
	L4630 L5030	8.2 L 8.7 U.S.qts 7.2 Imp.qts

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

(A) L3130, L3430, L4630, L5030

(B) L3830

(C) Oil level is acceptable within this range.

W10145330

### Replacing Engine Oil Filter Cartridge

#### ⚠ CAUTION

- Be sure to stop the engine before changing oil filter cartridge.
- Allow engine to cool down sufficiently, oil can be hot and can burn.

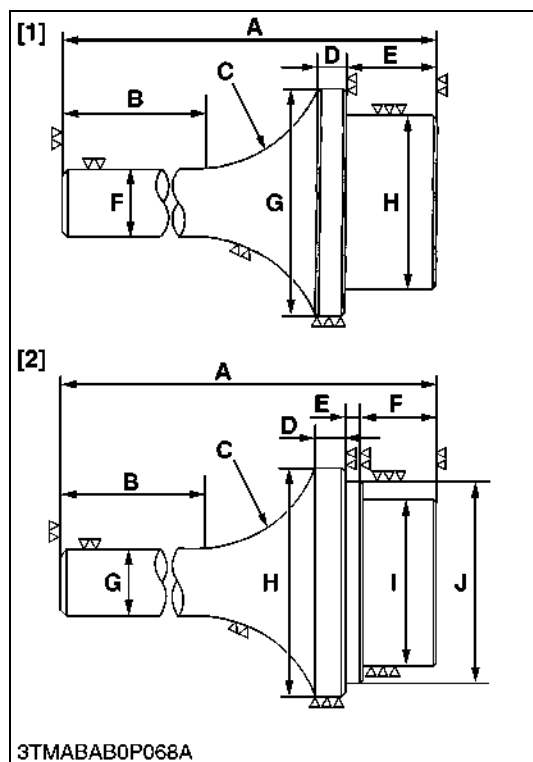
1. Remove the oil filter cartridge with the filter wrench.
2. Apply a slight coat of oil onto the new cartridge gasket.
3. To install the new cartridge, screw it in by hand. Over tightening may cause deformation of rubber gasket.
4. After the new cartridge has been replaced, the engine oil normally decrease 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 Cartridge

W10148920



### Crankshaft Bearing 1 Replacing Tool

Application: Use to press out and press fit the crankshaft bearing 1.

#### 1. Extracting tool (D1503, D1703, V2203)

A	135 mm (5.31 in.)
B	72 mm (2.83 in.)
C	R40 mm (R1.57 in.)
D	10 mm (0.39 in.)
E	20 mm (0.79 in.)
F	20 mm dia. (0.79 in. dia.)
G	56.8 to 56.9 mm dia. (2.236 to 2.240 in. dia.)
H	51.8 to 51.9 mm dia. (2.039 to 2.043 in. dia.)

#### 2. Inserting tool (D1503, D1703, V2203)

A	130 mm (5.12 in.)
B	72 mm (2.83 in.)
C	R40 mm (R1.57 in.)
D	9 mm (0.35 in.)
E	4 mm (0.16 in.)
F	20 mm (0.79 in.)
G	20 mm dia. (0.79 in. dia.)
H	68 mm dia. (2.68 in. dia.)
I	51.8 to 51.9 mm dia. (2.039 to 2.043 in. dia.)
J	56.8 to 56.9 mm dia. (2.236 to 2.240 in. dia.)

#### 1. Extracting tool (D1803, V2403)

A	135 mm (5.31 in.)
B	72 mm (2.83 in.)
C	R40 mm (R1.57 in.)
D	10 mm (0.39 in.)
E	20 mm (0.79 in.)
F	20 mm dia. (0.79 in. dia.)
G	64.8 to 64.9 mm dia. (2.551 to 2.555 in. dia.)
H	59.8 to 59.9 mm dia. (2.354 to 2.358 in. dia.)

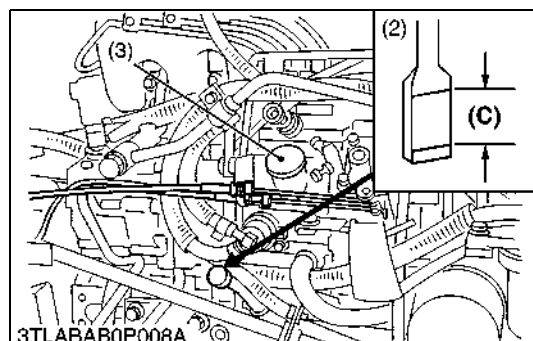
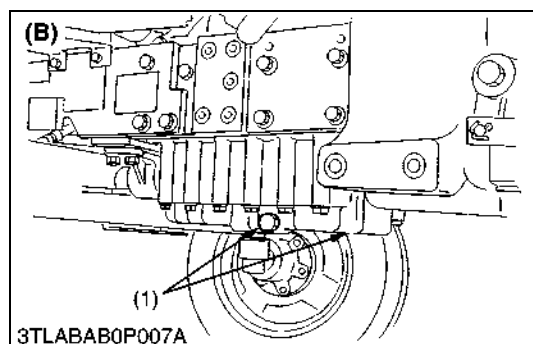
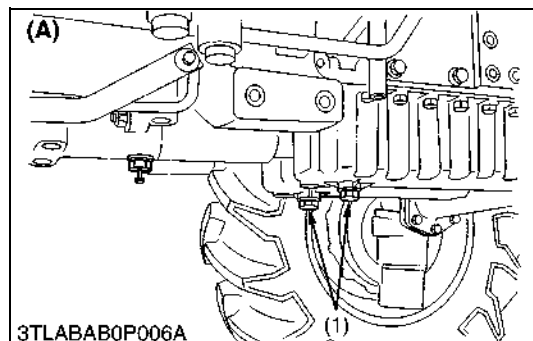
#### 2. Inserting tool (D1803, V2403)

A	130 mm (5.12 in.)
B	72 mm (2.83 in.)
C	R40 mm (R1.57 in.)
D	9 mm (0.35 in.)
E	4 mm (0.16 in.)
F	20 mm (0.79 in.)
G	20 mm dia. (0.79 in. dia.)
H	68 mm dia. (2.68 in. dia.)
I	59.8 to 59.9 mm dia. (2.354 to 2.358 in. dia.)
J	64.8 to 64.9 mm dia. (2.551 to 2.555 in. dia.)

W10261390

## 4. CHECKING, DISASSEMBLING AND SERVICING

### [1] SEPARATING ENGINE FROM TRACTOR



#### Draining 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 plugs (1) to drain oil.
4. Screw in the drain plugs (1).

#### (When refilling)

- Fill the engine oil up to the upper line on the dipstick (2).

#### ■ **IMPORTANT**

- **Never mix two different type of oil.**
  - **Use the proper SAE Engine Oil according to ambient temperature.**
- Refer to “LUBRICANTS, FUEL AND COOLANT”. (See page G-7, 8.)**

Engine oil capacity	L3130 L3430	5.7 L 6.0 U.S.qts 5.0 Imp.qts
	L3830	6.7 L 7.1 U.S.qts 5.9 Imp.qts
	L4630 L5030	8.2 L 8.7 U.S.qts 7.2 Imp.qts

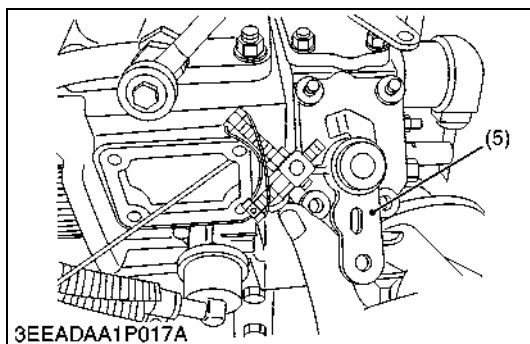
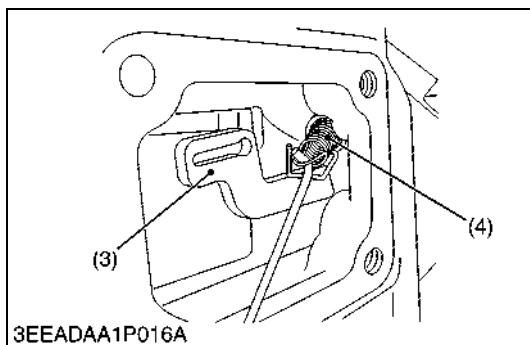
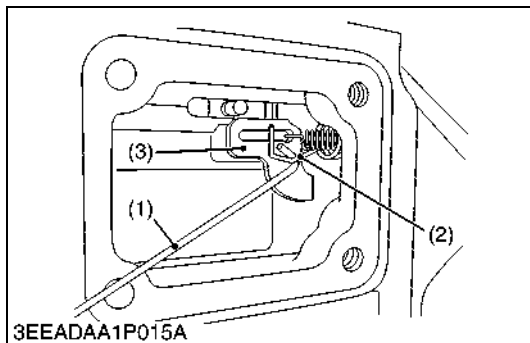
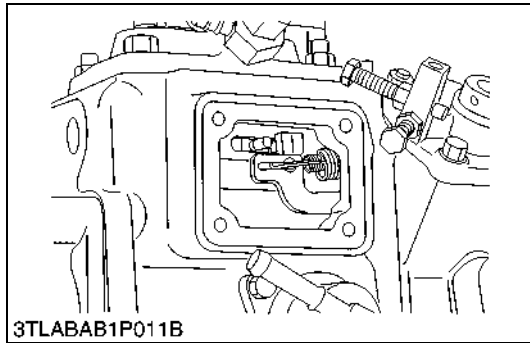
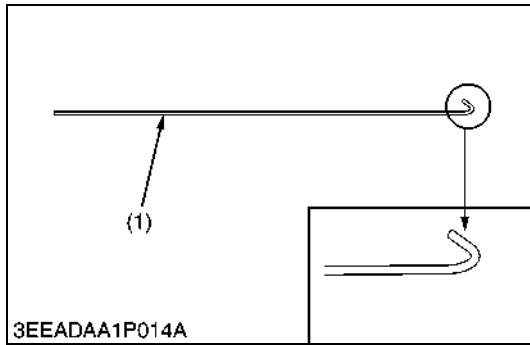
- (1) Drain Plug  
(2) Dipstick  
(3) Oil Inlet Plug

**(A) L3130, L3430, L4630, L5030**

**(B) L3830**

**(C) Oil level is acceptable within this range.**

W1013940



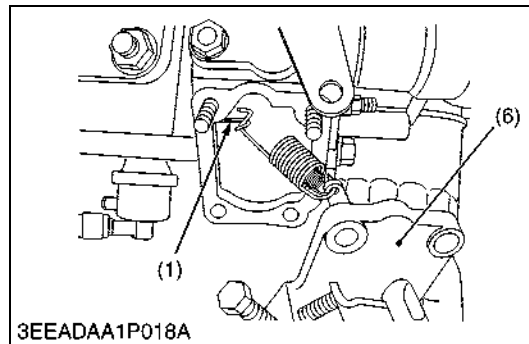
## Governor Springs and Speed Control Plate

### NOTE

- Specific tool (1) :  
1.2 mm diameter hard wire with its end hooked, overall length 200 mm (7.87 in.).

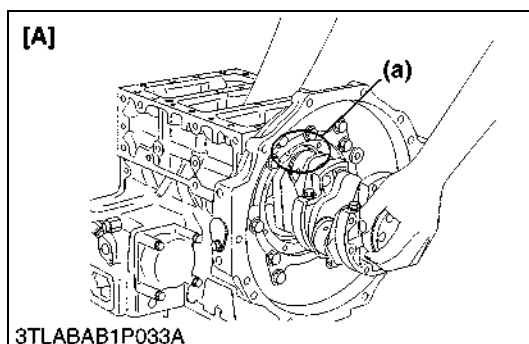
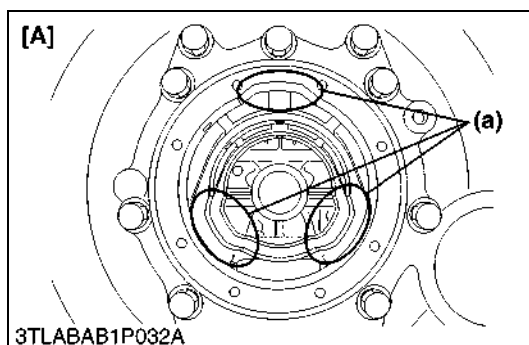
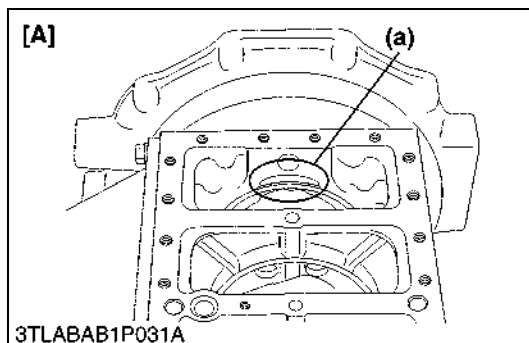
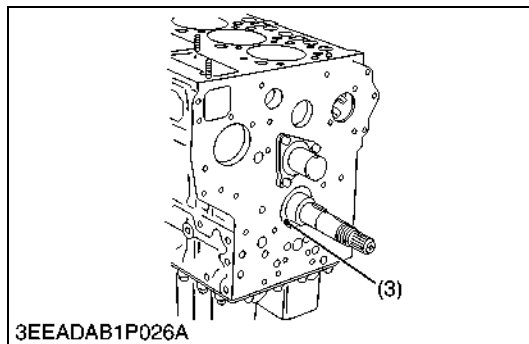
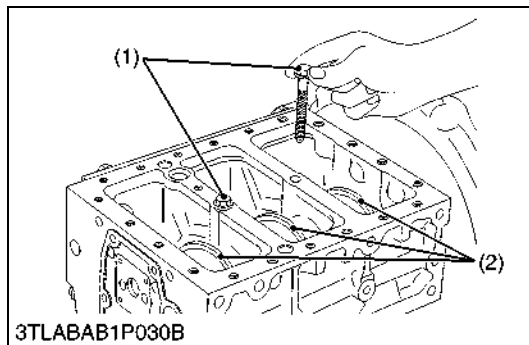
The tip of wire is bent like the hook to hang governor springs.

1. Remove the injection pump cover.
2. Remove the speed control plate (6) mounting nuts and bolts.
3. Using the specific tool (1), undo the large governor spring (2) from the fork lever (3).
4. Using the specific tool (1), undo the small governor spring (4) from the fork lever (3).
5. Set the speed control lever (5) as the figure.
6. Take out the speed control plate (6) with care not to let the large (2) and small (4) governor springs come off this plate and fall in to the gear case.



- |                           |                           |
|---------------------------|---------------------------|
| (1) Specific Tool         | (4) Small Governor Spring |
| (2) Large Governor Spring | (5) Speed Control Lever   |
| (3) Fork Lever            | (6) Speed Control Plate   |

W1148604



## Crankshaft

### NOTE

- Before disassembling, check the side clearance of crankshaft. Also check it during reassembling.

#### For D1503-M, D1703-M and V2203-M

- Remove the main bearing case screw 2 (1).
- Pull out the crankshaft assembly, taking care not to damage the crankshaft bearing 1 (3).

#### For D1803-M

- Remove the main bearing case screw 2 (1).
- Turn the crankshaft to set the crank pin of the third cylinder to the bottom dead center. Then draw out the crankshaft until the crank pin of the second cylinder comes to the center of the third cylinder.
- Turn the crankshaft by 2.09 rad (120 °) counterclockwise to set the crank pin of the second cylinder to the bottom dead center. Draw out the crankshaft until the crank pin of the first cylinder comes to the center of the third cylinder.
- Repeat the above steps to draw out all the crankshaft.

#### For V2403-M

- Remove the main bearing case screw 2 (1).
- Turn the crankshaft to set the crank pin of the 4th cylinder to the horizontal directions (Right or Left). Then draw out all the crankshaft, holding the crank pins to the horizontal directions (Right or Left).

### (When reassembling)

### IMPORTANT

- Install the crankshaft sub assembly, aligning the screw hole of main bearing case 2 (2) with the screw hole of cylinder block.
- When tightening the main bearing case screw 2, apply oil to the screw and screw by hand before tightening the specific torque.

If not smooth to screw by hand, align the screw holes between the cylinder block and the main bearing case.

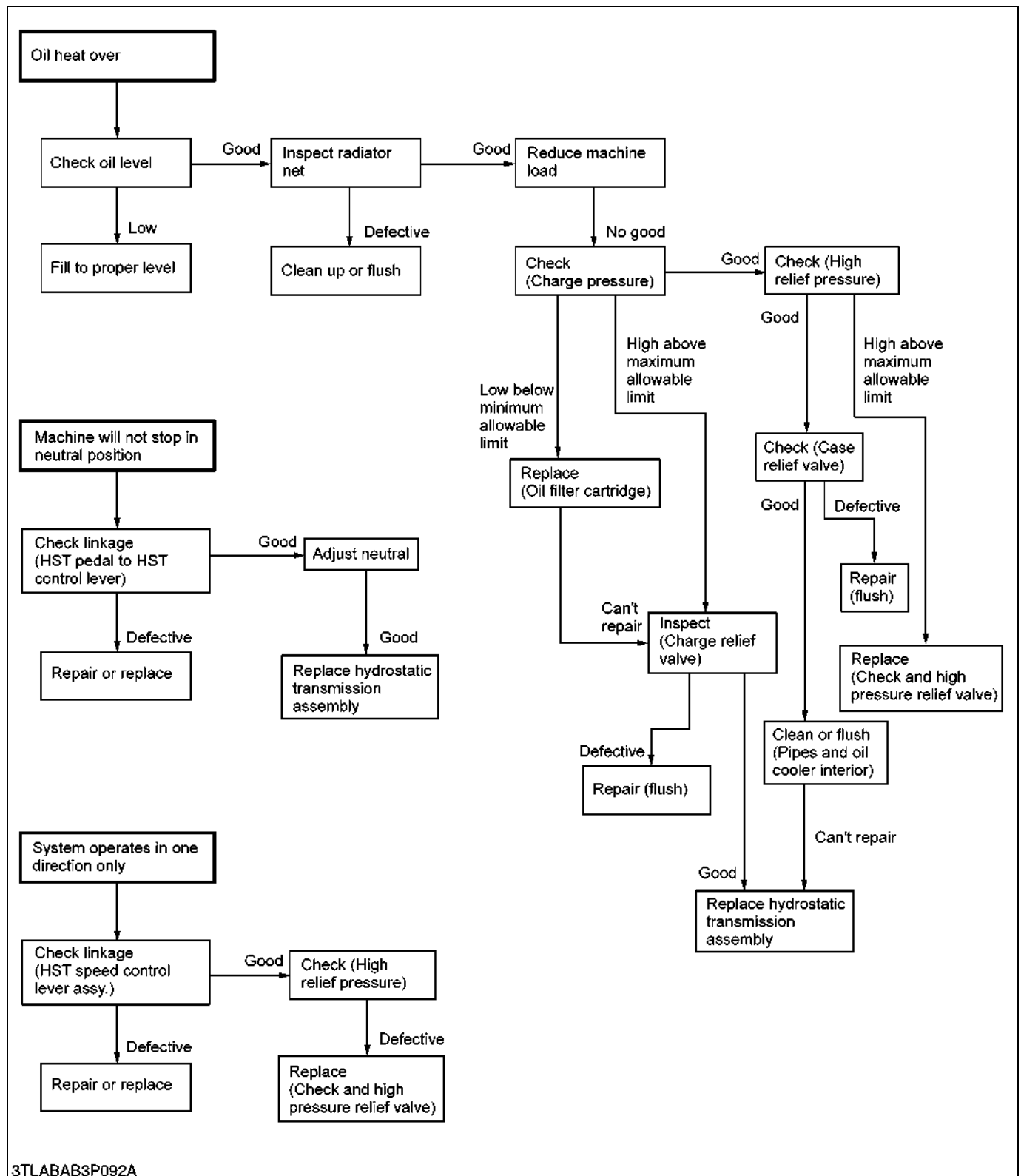
Tightening torque	Main bearing case screws	68.6 to 73.5 N·m
	2	7.0 to 7.5 kgf·m 50.6 to 54.2 ft-lbs

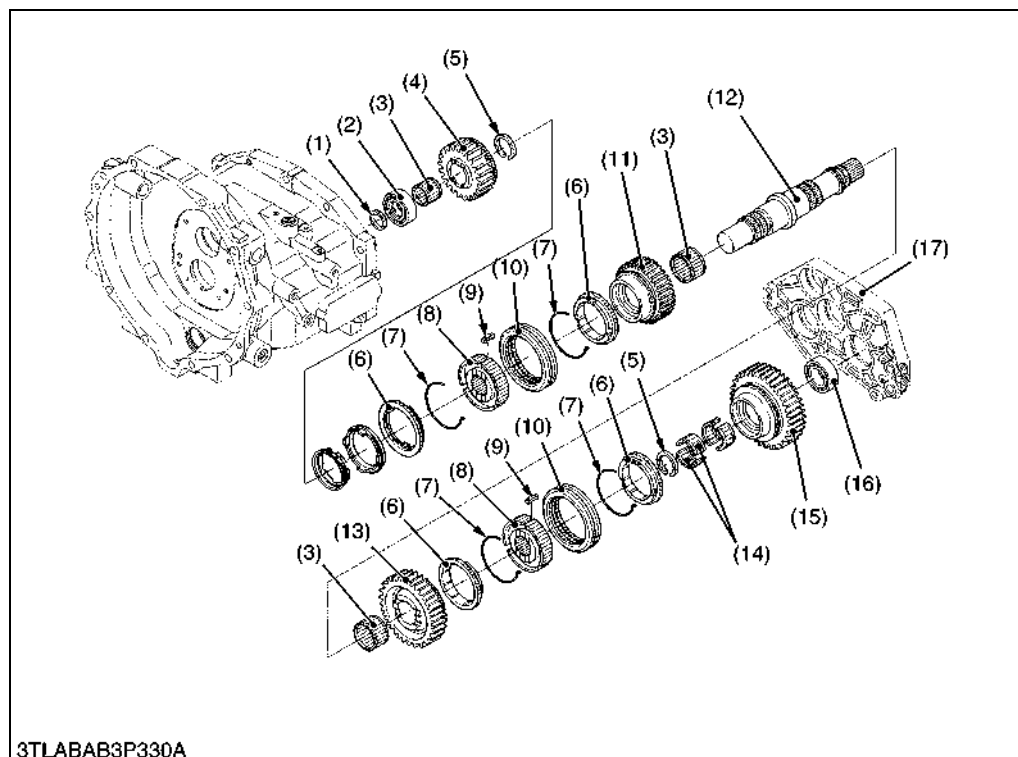
- Main Bearing Case Screw 2
- Main Bearing Case 2
- Crankshaft Bearing 1

(a) Cut place for removing and installing the crankshaft  
[A] D1803-M

W1066311



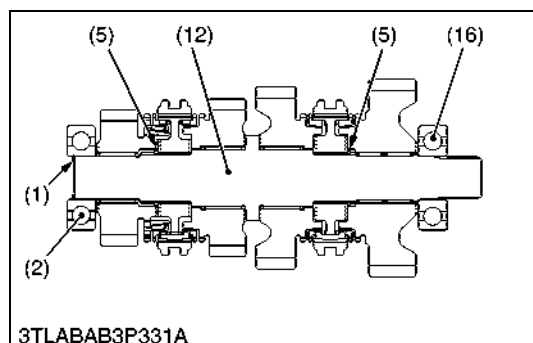


**Counter Shaft**

3TLABAB3P330A

- (1) Internal Snap Ring
- (2) Bearing
- (3) Needle Bearing
- (4) 24T Gear (4th)
- (5) External Snap Ring
- (6) Synchronizer Ring
- (7) Synchronizer Spring
- (8) Hub
- (9) Synchronizer Key
- (10) Shifter
- (11) 29T Gear (3rd)
- (12) Counter Shaft
- (13) 34T Gear (2nd)
- (14) Needle Bearing
- (15) 37T Gear (1st)
- (16) Bearing
- (17) Bearing Holder
- (18) Inner Synchronizer Ring
- (19) Center Ring
- (20) Outer Synchronizer Ring

W1050216



3TLABAB3P331A

1. Remove the internal snap ring (1) and remove both side of the bearings (2), (16).
2. Remove the gears on the counter shaft (12) and external snap rings (5).

**(When reassembling)**

- Reinstall the synchronizer keys (9) in the key grooves of the synchronizer rings (6) or (20) firmly.
- Be sure to install the synchronizer rings (18), (19), (20) with referring to page 3-S31.

W1050447

## 2. TIGHTENING TORQUES

Tightening torques of screws and nuts on the table below are especially specified.  
(For general use screws and nuts : See page G-10.)

Item	N·m	kgf·m	ft-lbs
Rear wheel mounting screw and nut	215	22	160
Rear wheel mounting stud bolt	98.1 to 112.8	10.0 to 11.5	72.3 to 83.2
ROPS lower frame mounting screw	166.7 to 196.1	17 to 20	123 to 144
Cabin mounting bolt and nut	124 to 147	13.0 to 15.0	91.0 to 108.0
Cabin mount bracket mounting screw	166.7 to 196.1	17 to 20	123 to 144
Rear axle case mounting screw (M10)	48.1 to 55.9	4.9 to 5.7	35.4 to 41.2
Rear axle case mounting nut (M10, 9T)	60.8 to 70.5	6.2 to 7.2	44.9 to 52.1
Rear axle case mounting screw (M12)	77.5 to 90.2	7.9 to 9.2	57.1 to 66.5
Rear axle case mounting stud bolt	24.5 to 31.4	2.5 to 3.2	18.1 to 23.1
Rear axle lock nut	196 to 245	20 to 25	145 to 181

W10127360



### Rear Axle Case

1. Disconnect the brake rod.
2. Disconnect the parking brake rod and parking brake cable (left side only).
3. Place the disassembling stand under the rear axle case.
4. Remove the rear axle mounting screws and nuts.
5. Separate the rear axle case from brake case.

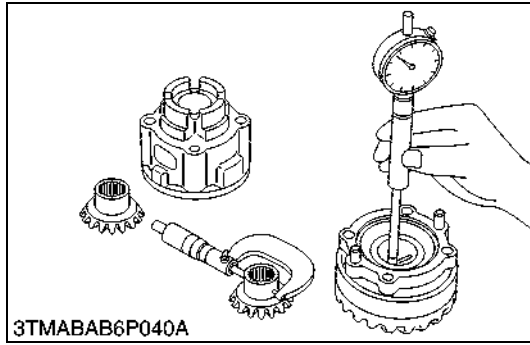
### (When reassembling)

- Apply liquid gasket (Three Bond 1208D or equivalent) to joint face of the rear axle case and brake case.
- Be sure to check and adjust the parking brake lever free play (see page 5-S4).

Tightening torque	Rear axle case mounting screw and nut	M10 screw	48.1 to 55.9 N·m 4.9 to 5.7 kgf·m 35.4 to 41.2 ft-lbs
		M10 nut (9T) (Except L3130, L3430)	60.8 to 70.5 N·m 6.2 to 7.2 kgf·m 44.9 to 52.1 ft-lbs
		M12 screw (Except L3130, L3430)	77.5 to 90.2 N·m 7.9 to 9.2 kgf·m 57.1 to 66.5 ft-lbs
		Stud bolt	24.5 to 31.4 N·m 2.5 to 3.2 kgf·m 18.1 to 23.1 ft-lbs

W10200480

### [3] SERVICING



#### **Clearance between Differential Case (Differential Case Cover) and Differential Side Gear**

1. Measure the differential side gear O.D..
2. Measure the differential case bore I.D. and calculate the clearance.
3. Measure the differential case cover bore I.D. and calculate the clearance.
4. If the clearance exceeds the allowable limit, replace faulty parts.

#### **(L3130, L3430, L3830 and L4630)**

Clearance between differential case (differential case cover) and differential side gear	Factory spec.	0.050 to 0.151 mm 0.00197 to 0.00594 in.
	Allowable limit	0.20 mm 0.0079 in.

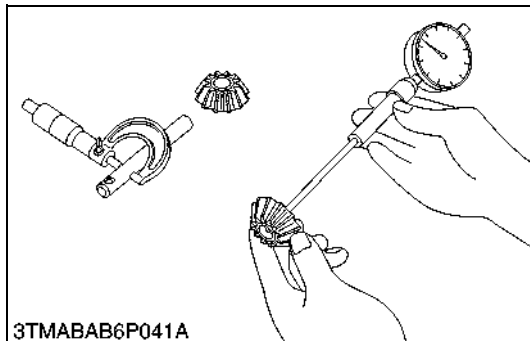
Differential case bore I.D.	Factory spec.	32.000 to 32.062 mm 1.25984 to 1.26228 in.
Differential case cover bore I.D.	Factory spec.	32.000 to 32.025 mm 1.25984 to 1.26083 in.
Differential side gear O.D.	Factory spec.	31.911 to 31.950 mm 1.25634 to 1.25789 in.

#### **(L5030)**

Clearance between differential case (differential case cover) and differential side gear	Factory spec.	0.050 to 0.114 mm 0.00197 to 0.00449 in.
	Allowable limit	0.20 mm 0.0079 in.

Differential case bore I.D.	Factory spec.	32.000 to 32.025 mm 1.25984 to 1.26083 in.
Differential case cover bore I.D.	Factory spec.	32.000 to 32.025 mm 1.25984 to 1.26083 in.
Differential side gear O.D.	Factory spec.	31.911 to 31.950 mm 1.25634 to 1.25789 in.

W10182040



#### **Clearance between Pinion Shaft and Differential Pinion**

1. Measure the pinion shaft O.D.
2. Measure the differential pinion I.D. and calculate the clearance.
3. If the clearance exceeds the allowable limit, replace faulty parts.

Clearance between pinion shaft and differential pinion	Factory spec.	0.064 to 0.100 mm 0.00252 to 0.00394 in.
	Allowable limit	0.25 mm 0.0096 in.

Pinion shaft O.D.	Factory spec.	13.950 to 13.968 mm 0.54921 to 0.54992 in.
Differential pinion I.D.	Factory spec.	14.032 to 14.050 mm 0.55244 to 0.55315 in.

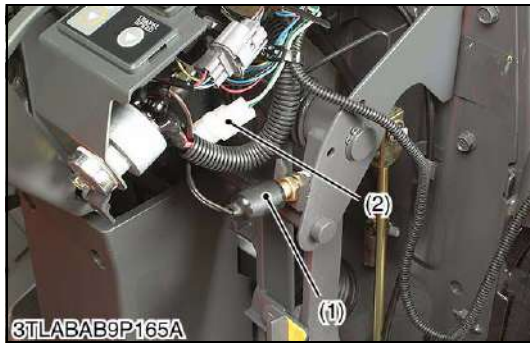
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### 3. TIGHTENING TORQUES

Tightening torques of screws, bolts and nuts on the table below are especially specified.  
(For general use screws, bolts and nuts : See page G-10.)

Item	N·m	kgf·m	ft-lbs
Main delivery pipe joint bolt	49.0 to 68.6	5.0 to 7.0	36.2 to 50.6
Power steering delivery pipe joint bolt (Except HST model)	49.0 to 68.6	5.0 to 7.0	36.2 to 50.6
GST/PTO delivery pipe joint bolt	34.3 to 39.2	3.5 to 4.0	25.3 to 28.9
Regulator delivery pipe joint bolt	39.2 to 49.0	4.0 to 5.0	28.9 to 36.2
Regulator valve mounting screw	17.7 to 20.6	1.8 to 2.1	13.0 to 15.2
Power steering delivery pipe joint bolt (HST model)	39.2 to 49.0	4.0 to 5.0	28.9 to 36.2
Hydraulic pump assembly mounting screw and nut	23.5 to 27.5	2.4 to 2.8	17.4 to 20.3
Pump cover mounting screw	39.2 to 44.1	4.0 to 4.5	28.9 to 32.5
Relief valve plug	49.0 to 68.6	5.0 to 7.0	36.2 to 50.6
Hydraulic cylinder hose	34.3 to 48.1	3.5 to 4.9	25.3 to 35.4
Delivery pipe joint bolt	49.0 to 68.6	5.0 to 7.0	36.2 to 50.6
Cylinder safety valve assembly	39.2 to 49.0	4.0 to 5.0	28.9 to 36.2
Cylinder safety valve lock nut	58.8 to 78.5	6.0 to 8.0	43.4 to 57.9
Unload plug	39.2 to 58.8	4.0 to 6.0	28.9 to 43.4
Plug 2	39.2 to 58.8	4.0 to 6.0	28.9 to 43.4
Plug 1	39.2 to 58.8	4.0 to 6.0	28.9 to 43.4
Lift arm pin mounting nut	77.5 to 90.2	7.9 to 9.2	57.1 to 66.5
Lift arm pin lock nut	62.8 to 72.6	6.4 to 7.4	46.3 to 53.5
Drawbar frame mounting screw (M14)	166.7 to 196.1	17.0 to 20.0	123.0 to 144.7
(M12)	77.5 to 90.2	7.9 to 9.2	57.1 to 66.5
Top link holder mounting screw	77.5 to 90.2	7.9 to 9.2	57.1 to 66.5

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### Brake Lamp Switch Continuity

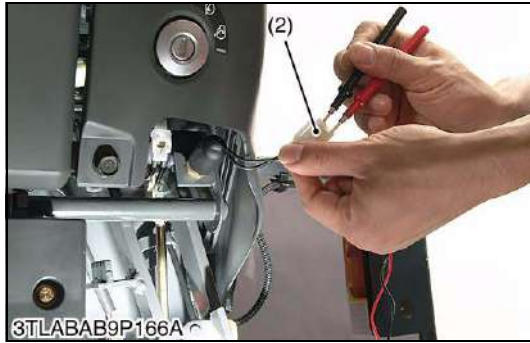
1. Disconnect the connector, and measure the resistance with an ohmmeter between connector terminal.
2. If the measurement differs from the table below, the brake switch is faulty.

Resistance between connector terminals	When brake pedal is released	Infinity
	When brake pedal is depressed	0 $\Omega$

(1) Brake Lamp Switch

(2) Brake Lamp Switch Connector

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## [3] STARTING SYSTEM

### (1) Checking

#### (A) Main Switch (ROPS Type)

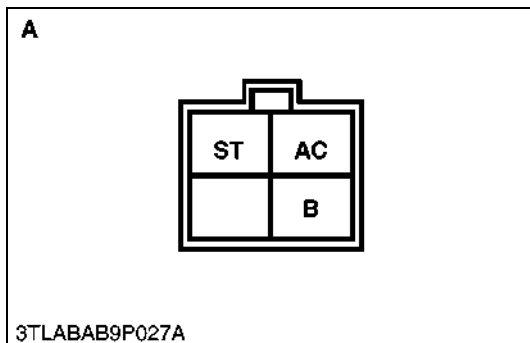


### Remove the Main Switch

1. Remove the combination switch.
2. Remove the panel cover.
3. Disconnect the main switch connector.
4. Perform the following checking.

(1) Main Switch

W1013848



### Connector Voltage

1. Measure the voltage between the terminal **B** and chassis.
2. If the voltage differs from the battery voltage (11 to 14 V), the wiring harness is faulty.

Voltage	Terminal <b>B</b> – Chassis	Approx. battery voltage
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**A : Wire Harness Side Connector 4C**

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