FOREWORD

This manual covers the service procedures of the TOYOTA FORKLIFT 6FGU/6FDU33～45, 6FGAU/6FDAU50. Please use this manual for providing quick, correct servicing of the corresponding forklift models.

This manual deals with the above models as of March 1997. Please understand that disagreement can take place between the descriptions in the manual and actual vehicles due to change in design and specifications. Any change or modifications thereafter will be informed by Toyota Industrial Equipment Parts & Service News.

For the service procedures of the mounted engine, read the repair manuals listed below as reference together with this manual.

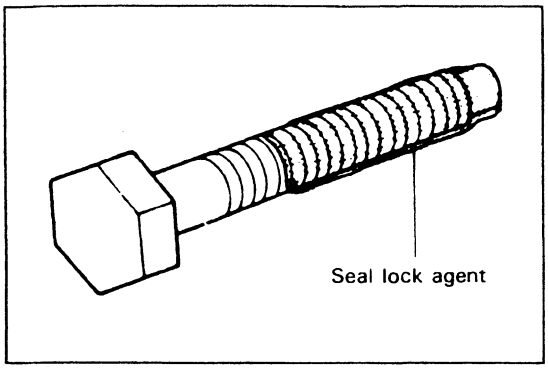
(Reference)

Repair manuals related to this manual are as follows:

TOYOTA INDUSTRIAL EQUIPMENT GM6-262 ENGINE REPAIR MANUAL (No. C4630)

TOYOTA INDUSTRIAL EQUIPMENT 11Z,12Z,13Z,14Z ENGINE REPAIR MANUAL (No. C4615)

TOYOTA MOTOR CORPORATION



PRECOAT BOLTS

(Bolts with seal lock agent coating on threads)

1. Do not use the precoat bolt as it is in either of the following cases:
   (a) After it is removed.
   (b) When the precoat bolt is moved (loosened or tightened) by tightness check, etc.

Note:
For torque check, use the lower limit of the allowable tightening torque range. If the bolt moves, retighten it according to the steps below.

2. Method for reuse of precoat bolts
   (1) Wash the bolt and threaded hole. (The threaded hole must be washed even for replacement of the bolt.)
   (2) Perfectly dry the washed parts by air blowing.
   (3) Apply the specified seal lock agent on the threaded portion of the bolt.

HIGH PRESSURE HOSE FITTING TIGHTENING TORQUE

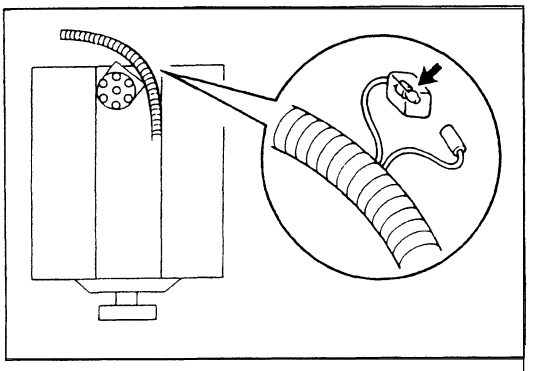
1. When connecting a high pressure hose, wipe the hose fitting and mating nipple contact surfaces with clean cloth to remove foreign matters and dirt. Also check no dent or other damage on the contact surfaces before installation.

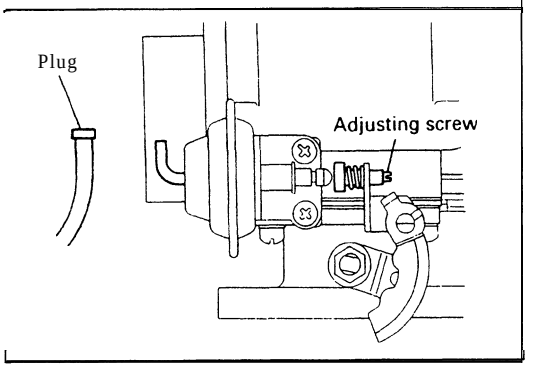
2. When connecting a high pressure hose, hold the hose to align the fitting with the nipple and tighten the fitting.

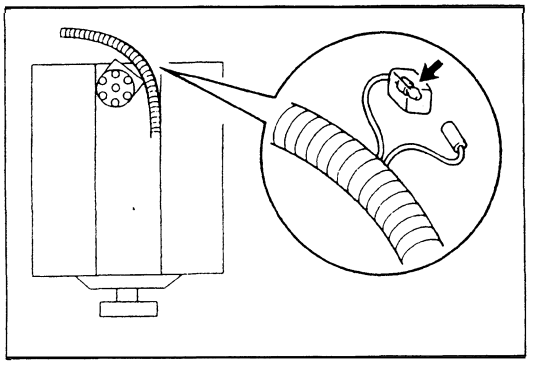
3. The maximum tightening torque must not exceed twice the standard tightening torque.

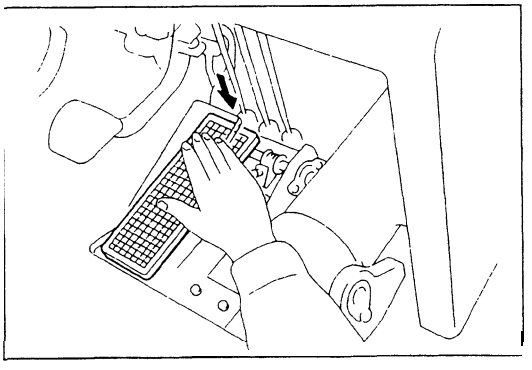
Nominal diameter of screw	Standard tightening torque N·m (kgf-cm) [ft-lbf]		Hose inside diameter mm (in)
	Standard	Tightening range	
7116 – 20UNF	25 (250) [18.11	24 – 26 (240 ~ 270) [17.4 ~ 19.51	6 (0.24)
9/16 – 18UNF	49 (500) [36.2]	47 ~ 52 (480 – 530) [34.7 – 38.31	9 (0.35)
3/4 – 16UNF	59 (600) [43.41	56 – 62 (570 ~ 630) [41.2 – 45.6]	12 (0.47)
718 – 14UNF	59 (600) [43.41	56 – 62 (570 – 630) [41.2 – 45.61	12 (0.47)
7/8 – 14UNF	78 (800) [57.91	74 ~ 82 (760 ~ 840) [55.0 – 60.81	15 (0.59)
1·1/16 – 12 UNF	118 (1200) [86.81	112 ~ 123 (1140 ~ 1250) [82.5 – 90.41	19 (0.75)
1·5/16 – 12UNF	137 (1400) [101.3]	130 ~ 144 (1330 ~ 1470) (96.2 – 106.41	25 (0.98)
PF1/4	25 (250) [18.11	24 – 26 (240 ~ 270) [17.4 – 19.51	6 (0.24)
PF3/8	49 (500) [36.21	47 – 52 (480 – 530) [34.7 – 38.31	9 (0.35)
PF1/2	59 (600) [43.41	56 ~ 62 (570 ~ 630) [41.2 – 45.61	12 (0.47)
PF3/4	118 (1200) [86.81	112 – 123 (1140 ~ 1250) [82.5 ~ 90.41	19 (0.75)
PF1	137 (1400) [101.3]	130 – 144 (1330 – 1470) [96.2 ~ 106.41	25 (0.98)

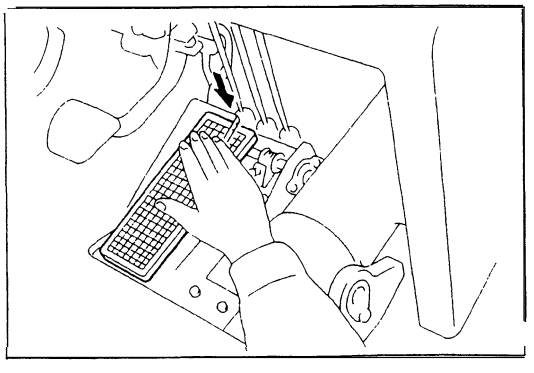
Item \ Inspection period		Every month	Every 3 months	Every 6 months	Every 12 months
		Every 170 hours	Every 500 hours	Every 1000 hours	Every 2000 hours
Direction indicator	Function and mounting condition	I	←	←	←
Instruments	Functions	I	←	←	←
Backup buzzer	Function and mounting condition	I	←	←	←
Rear-view mirror	Dirt, damage	I	←	←	←
	Rear reflection status	I	←	←	←
Seat	Loosening and damage of mounting	I	←	←	←
Body	Damage and crack of frame, cross members, etc.				I
	Bolt looseness				T
Others	Grease up	L	←	←	←











Idle Up Inspection. Adjustment

<**LPG** Engine Model>

1. Warm up the engine.

   Cooling water temperature: **80°C (176°F)** or more
   Hydraulic oil temperature: **60°C (140°F)** or more

2. Install a tachometer.

3. Check the idle-up speed.
   (1) Start the engine. Disconnect the vacuum hose from the idle-up actuator and measure the speed after plugging the hose.

   Standard: 1250 ± 50 rpm

   (2) If the standard is not satisfied, make adjustment by turning the adjusting screw.

   Note:
   Turn the adjusting screw clockwise to increase speed.

   (3) After adjustment, connect the vacuum hose.

No-Load Maximum Speed Inspection·Adjustment

<Gasoline or **Gasoline/LPG** Engine Model>

Note:
The maximum speed is controlled electronically.

1. Warm up the engine.

   Cooling water temperature: **80°C** (176°F) or more
   Hydraulic oil temperature: **60°C** (140°F) or more

2. Install a tachometer.

3. Inspect the no-load maximum speed when the accelerator pedal is fully depressed.

   Standard: 2350 ± 30 rpm

<LPG Engine Model>

1. Warm up the engine

   Cooling water temperature: **80°C** (176°F) or more
   Hydraulic oil temperature: **60°C (140°F)** or more

2. Install a tachometer.

3. Inspect and adjust the no-load maximum speed.
   (1) Measure the speed when the accelerator pedal is fully depressed.

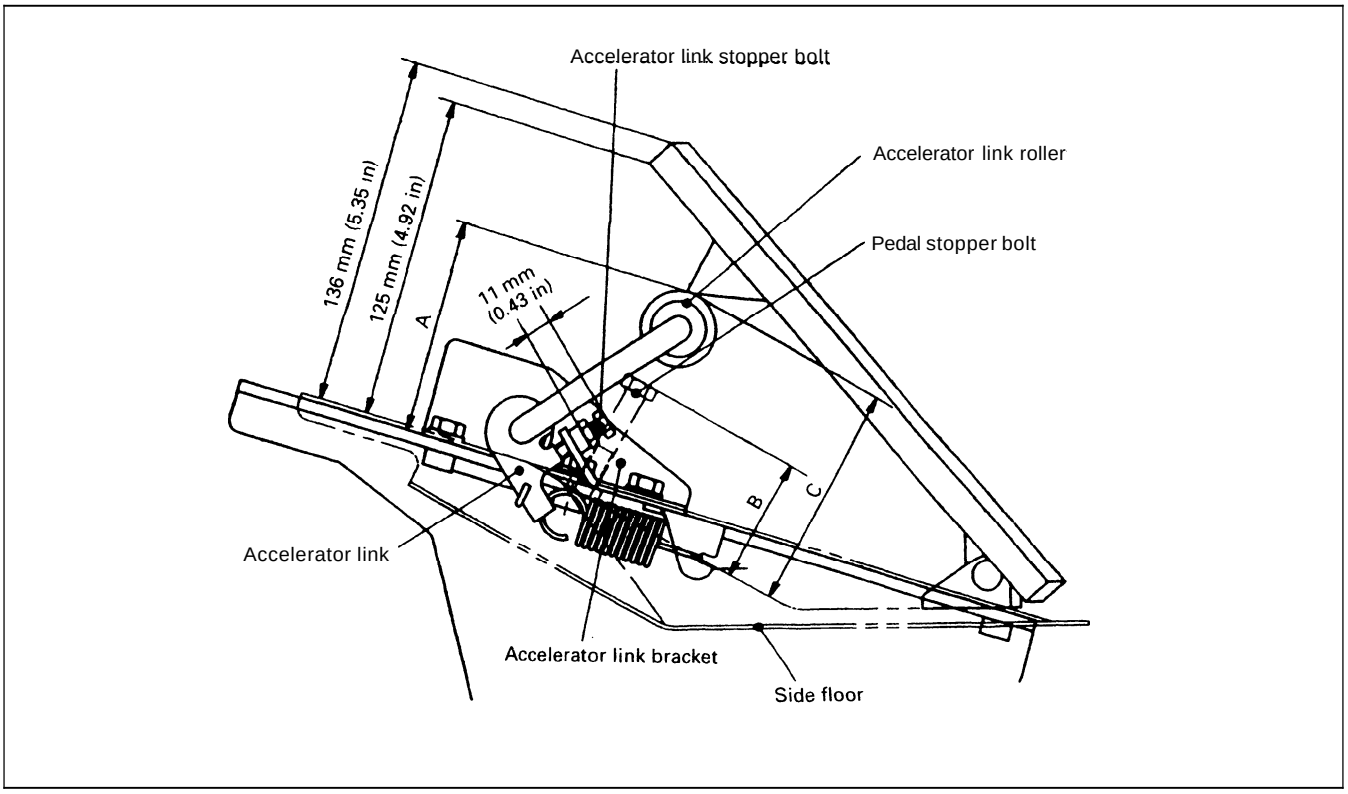
   Standard: 2400 ± 50 rpm

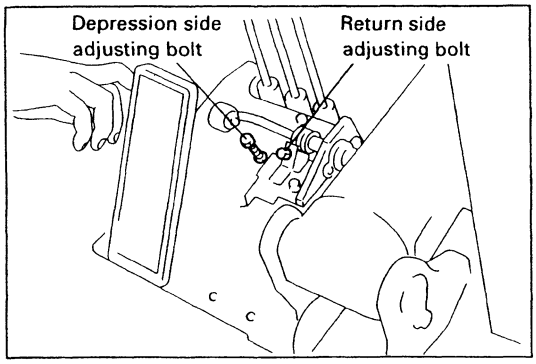
Sensor and Switch Adjustment

Acceleration Sensor

Note:
The acceleration sensor requires adjustment after the following jobs:
- **Acceleration sensor part replacement (removal/installation)**
- **Accelerator pedal height adjustment**

Accelerator Pedal Height Adjustment





1. Return side pedal height adjustment
   Make adjustment by turning the accelerator link stopper bolt to make the height (A) from top of the accelerator link roller to the link bracket mounting surface satisfy the following standard:

   Standard
   Accelerator link roller height:
   A = 83 ± 2 mm (3.35 ± 0.08 in)

   [Ref.
   From top of floor to top of roller: C = 89.5 mm **13.524** in)]

2. Depression side pedal height adjustment
   Make adjustment to make the pedal stopper bolt height (B) satisfy the following standard:

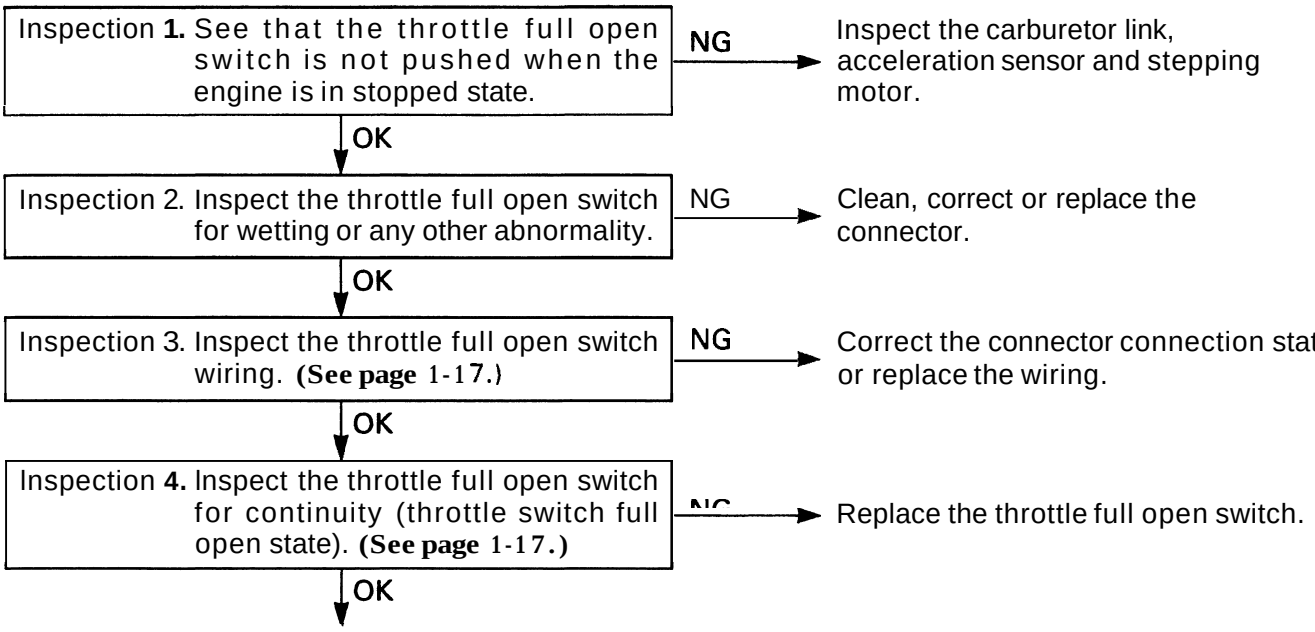
   Standard
   Pedal stopper bolt height:
   B = 50^{0}_{-5} mm ($1.97^{0}_{-0.20}$ in)

Diagnostic Code 7 (Short Circuit in Throttle Full Open Switch Signal Line)

If NG as a result of inspection, always make correction according to the given instruction. Then, be sure to conduct the operation check below to confirm if the repair has been appropriate or not.

Operation check

1. The CHECK lamp shall be off (and not flashing) when the engine switch is turned to ON (without starting the engine).

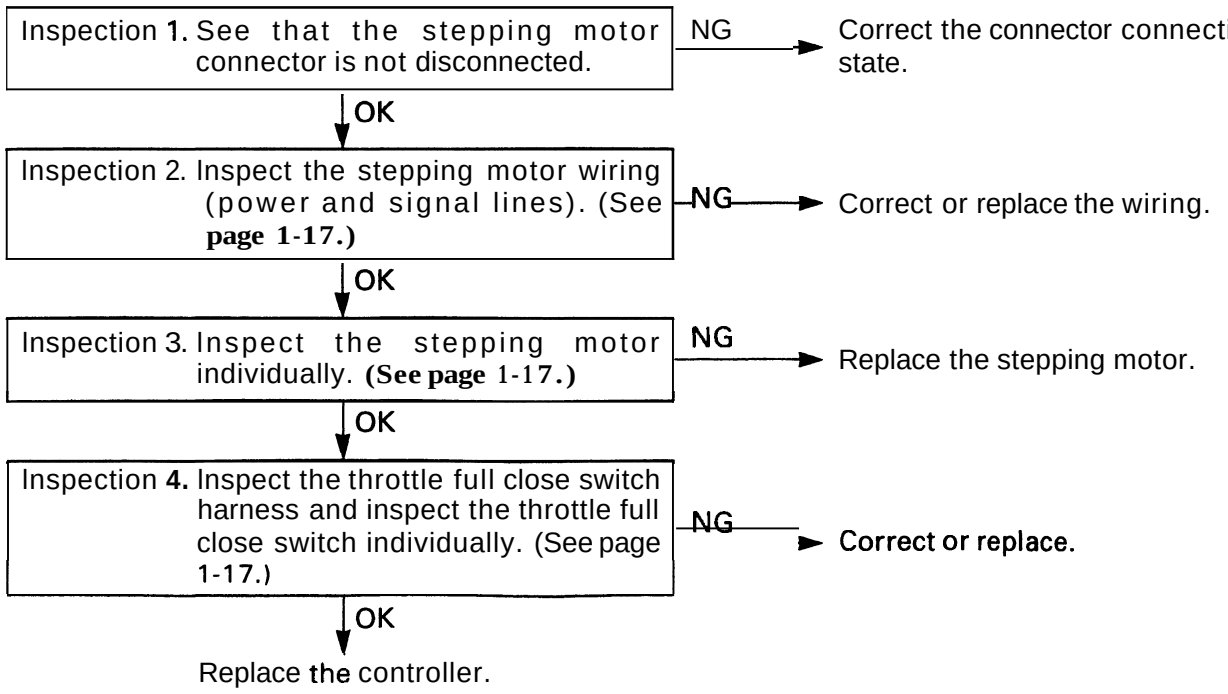


Diagnostic Code 8 (Stepping Motor Operation Defect)

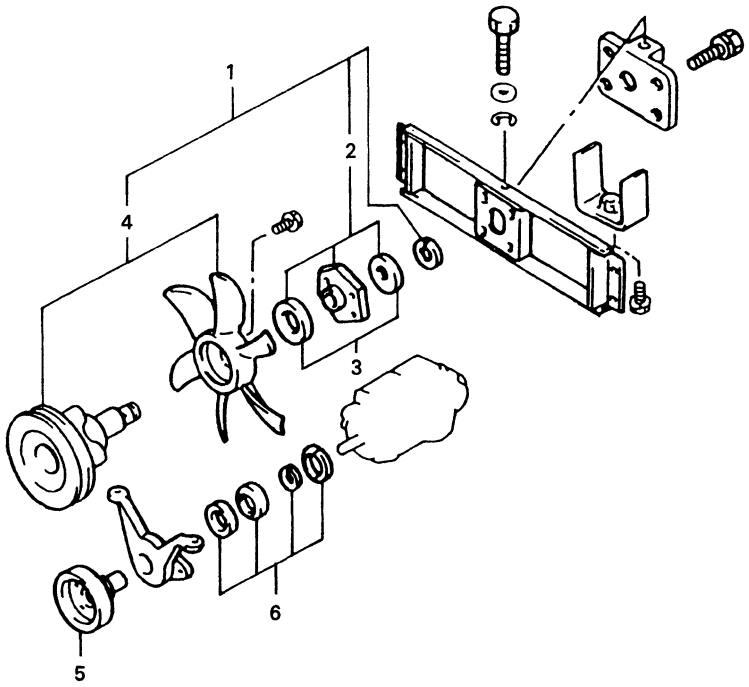
If NG as a result of inspection, always make correction according to the given instruction. Then, be sure to conduct the operation check below to confirm if the repair has been appropriate or not.

Operation check

1. The throttle valve shall open in response to accelerator pedal depression after turning the engine switch to the ON position (without starting the engine). The CHECK lamp then shall be off (and not flashing).



DISASSEMBLY·INSPECTION·REASSEMBLY



Disassembly Procedure

Fan side

1 Remove the fan and bearing housing from the fan support.

2 Remove the bearing housing. **[Point** 1**]**

3 Remove the bearing. **[Point** 2**]**

4 Remove the fan and pulley.

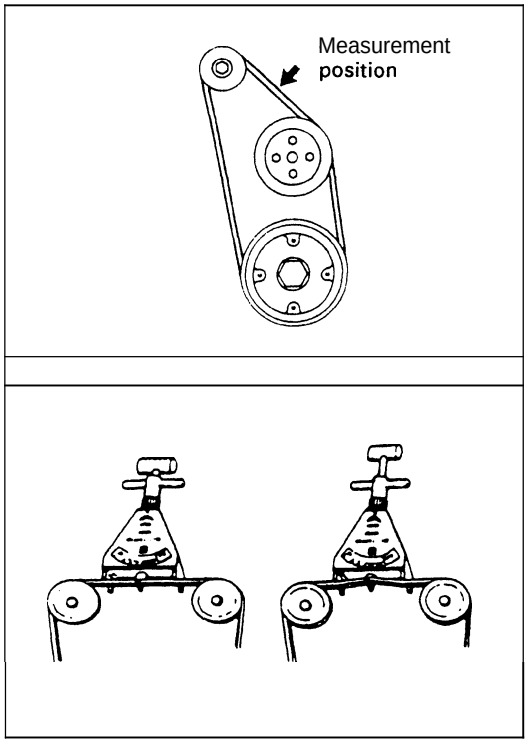
Oil pump side

5 Remove the pulley. **[Point** 3**]**

6 Remove the bearing. **[Point** 4**]**

Reassembly Procedure

The reassembly procedure is the reverse of the disassembly procedure



V Belt Tension Adjustment

1. Inspect the V belt tension.

   [Deflection when pushed with a force of 98 N **(10 kgf) [22 lbf]**]

   Standard:
   GM6-262
   New belt 7 - 9 mm (0.28 - 0.35 in)
   Reused belt 8 - 16 mm (0.31 - 0.63 **in)**
   132
   New belt 7 - 9 mm (0.28 - 0.35 in)
   Reused belt 8 - 13 mm (0.31 - 0.51 in)

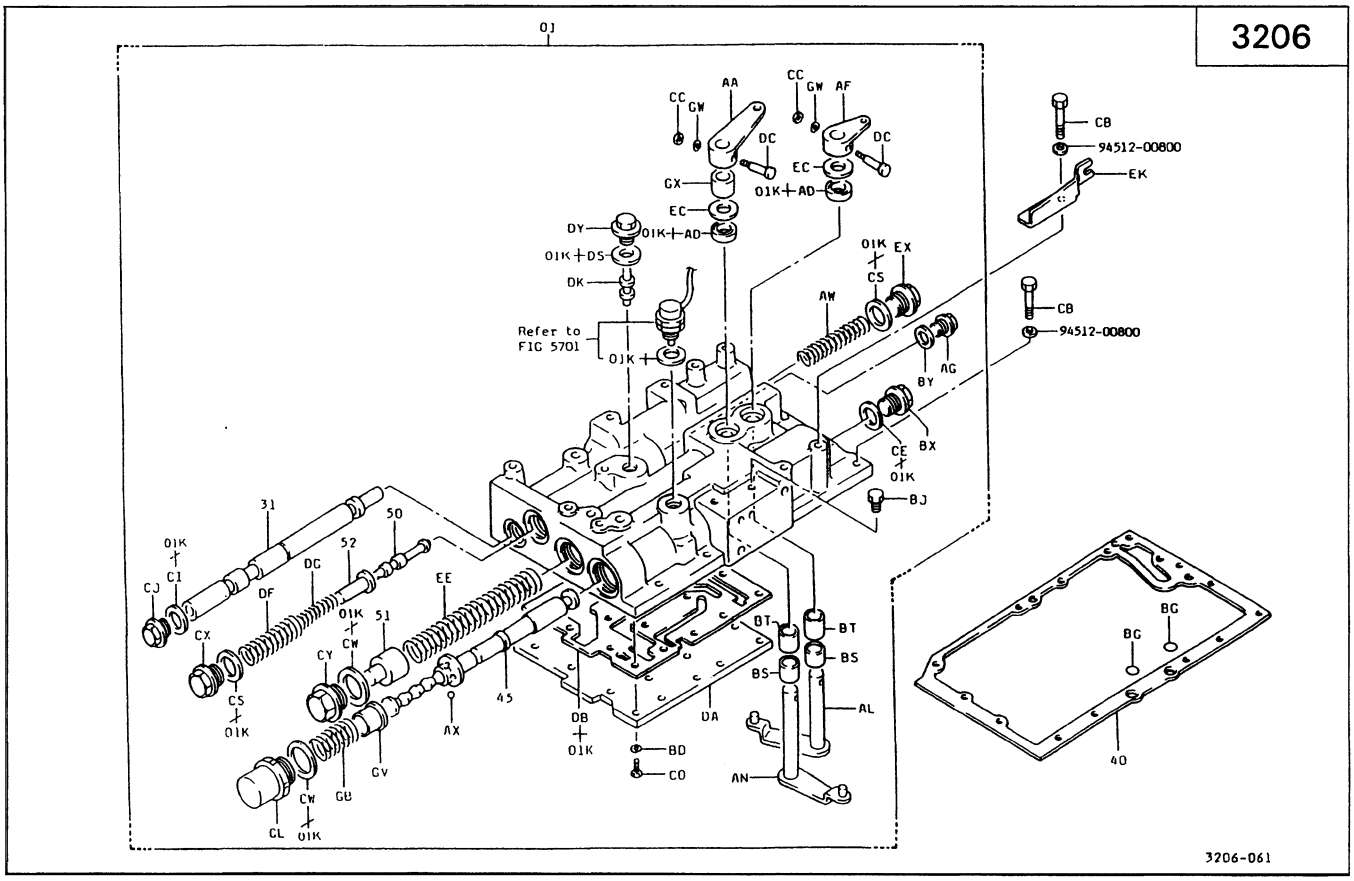
   [When the tension gauge **(SST)** is **used]**

   SST 09216-00021

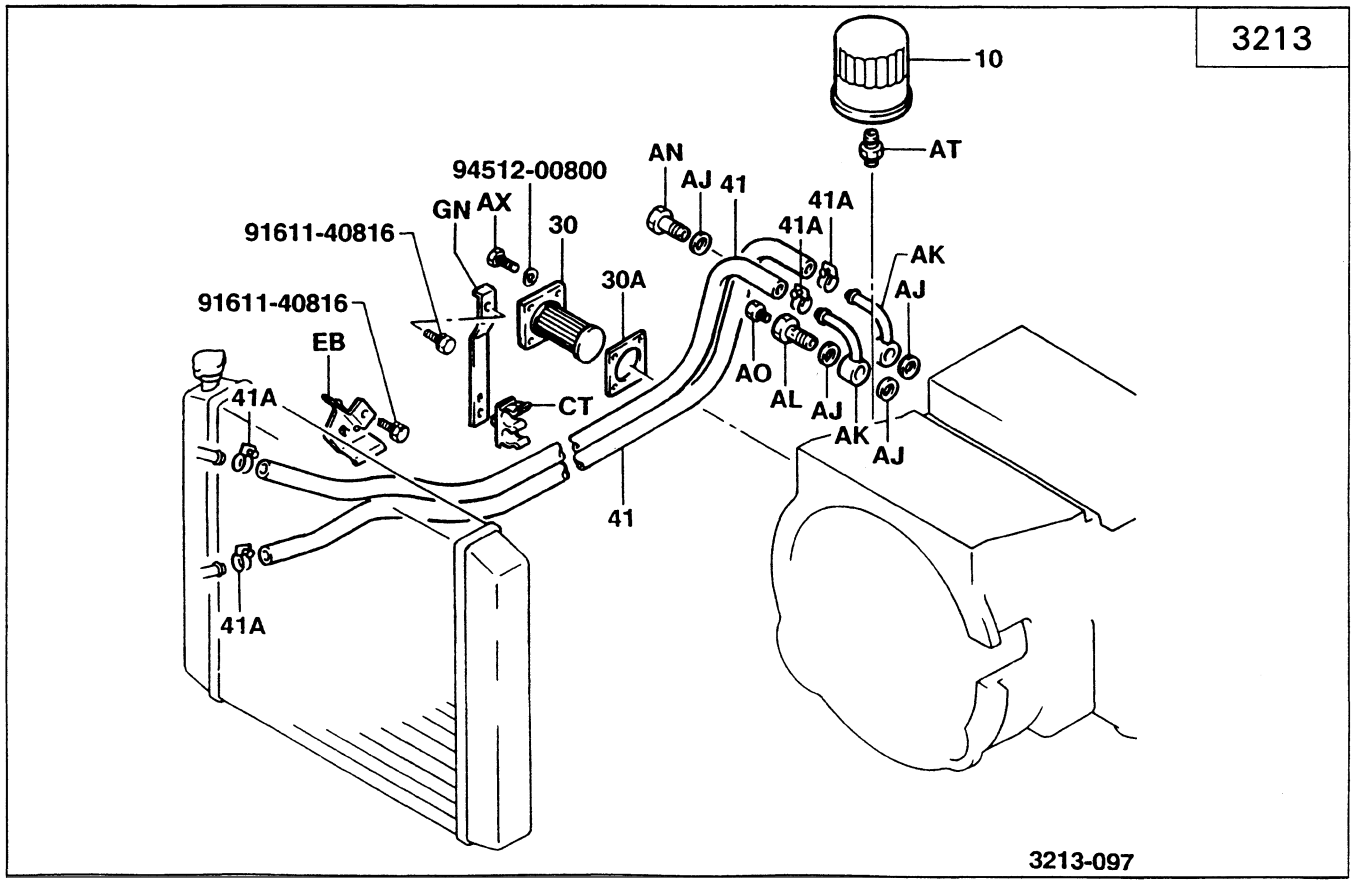
   Standard:
   GM6-262
   New belt
   392 - 588 N (40 - 60 **kgf) [88** - 132 **lbf]**
   Reused belt
   294 - 392 N (30 - 40 **kgf) [66** - 88 **lbf]**
   132
   New belt
   373 - 608 N (38 - 62 **kgf)** [84 - 137 **lbf]**
   Reused belt
   196 - 392 N (20 - 40 **kgf) [44** - 88 lbf]

2. Adjust the V belt tension.
   (1) Use a lever rod and move the alternator for adjustment.

Control Valve



Torque Converter Piping



Disassembly Procedure

1 Remove the neutral switch and backup lamp switch. [Point 1]

2 Remove the shift lever.

3 Remove the shift cam lever.

4 Remove the inching lever.

5 Remove the inching cam lever.

6 Remove the selector valve. [Point 2]

7 Remove the inching valve. [Point 3]

8 Remove the regulator valve. (Carefully operate to prevent the spring from flying out.) [Point 4]

9 Remove the accumulator piston. (Carefully operate to prevent the spring from flying out.) [Point 5]

10 Remove the orifice. [Point 6]

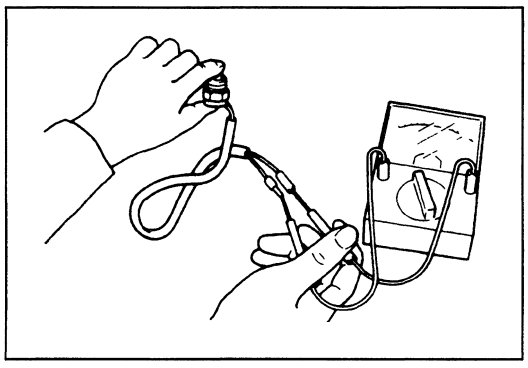
11 Remove the sub plate. [Point 7]

12 Remove the oil seal. [Point 8]

Reassembly Procedure

The reassembly procedure is the reverse of the disassembly procedure.

Note:
- When installing each of the inching and shift cam levers, apply a thin coat of MP grease on the inner side of the upper cover and on the oil seal.
- Apply torque converter oil on the sliding contact surface of each valve.

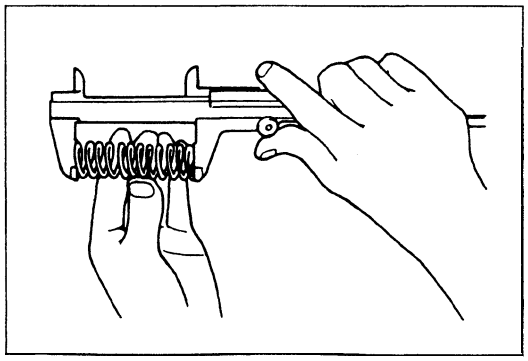


Point Operations

[Point 1]

Inspection: Inspect the switches.

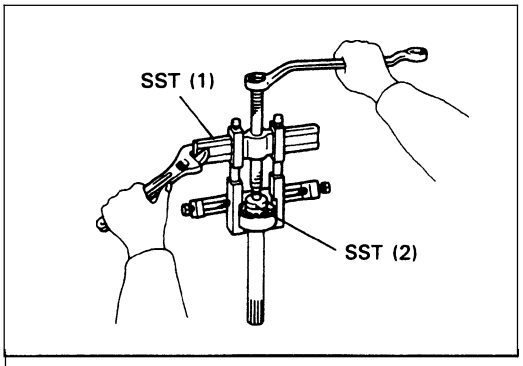
Neutral switch:	The switch is normal if it is off when pressed.
Backup lamp switch:	The switch is normal if it is on when pressed.



[Point 2]

Inspection: Measure the free length of the selector valve spring.

Standard:	64 mm (2.52 in)
Limit:	58 mm (2.28 in)

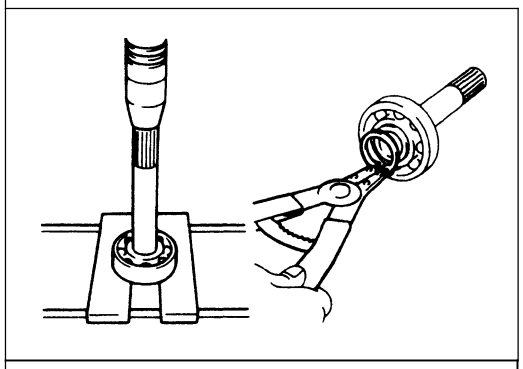


Point Operations

[Point 1]

Disassembly: Turbine shaft bearing removal

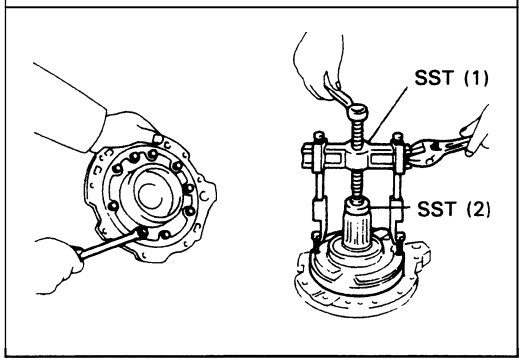
1. Remove the snap ring.
2. Use the SST to remove the bearing.
   SST 09950-40010 ..... (1)
   09950-60010 ..... (2)



Reassembly: Turbine shaft bearing installation

1. Use a press and install the bearing.
2. Install the snap ring.

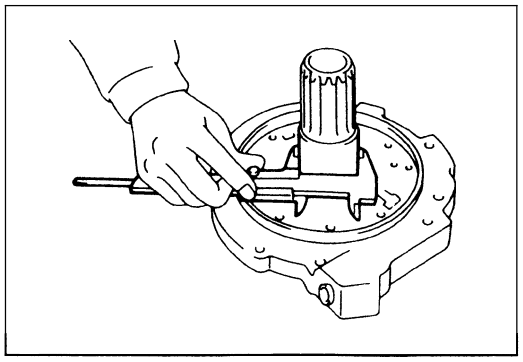
[Point 21



Disassembly: Oil pump removal

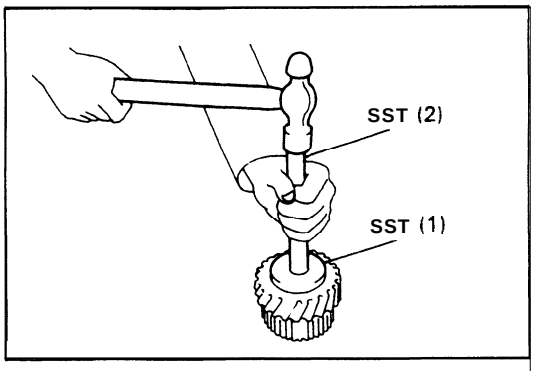
1. Remove the oil pump set bolts.
2. Use SST and two service bolts to remove the oil pump.
   SST 09950-40010 ..... (1)
   09950-60010 ..... (2)
   Service bolt size: M8 x 1.25

Reassembly: Apply grease on the O-ring and install the oil pump.

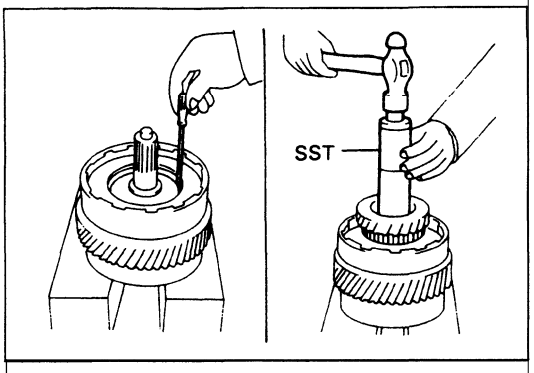


Inspection: Measure the outside diameter of the stator shaft at the pump drive gear sliding surface.

Standard: 55.0 **mm (2.17 in)**
Limit: **54.9 mm (2.16 in)**

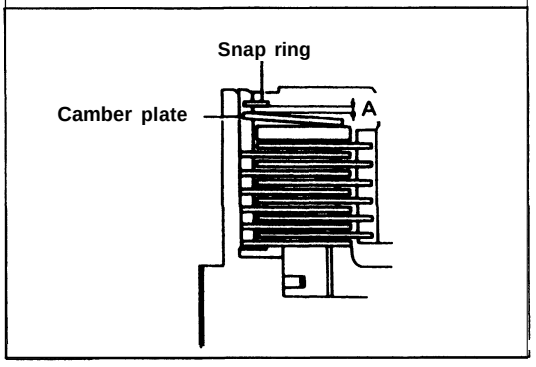


Reassembly: Install the bearing to each of the forward and reverse gears.
SST 09950-60020 ..... (1)
09950-70010 ..... **(2)**



Reassembly: Forward and reverse gear assembly

1. Match the clutch disc serration with a screwdriver.
2. Install the forward and reverse gears.
SST 09608-06041

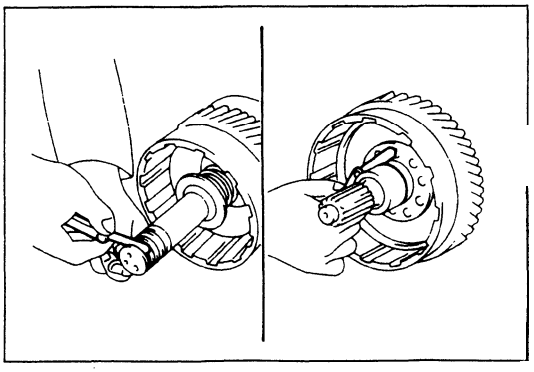


[Point 71

Inspection: Measure the clearance between the snap ring and camber plate after reassembly.

Standard:
A = 1.0 - 2.5 mm **(0.04 - 0.10** in)

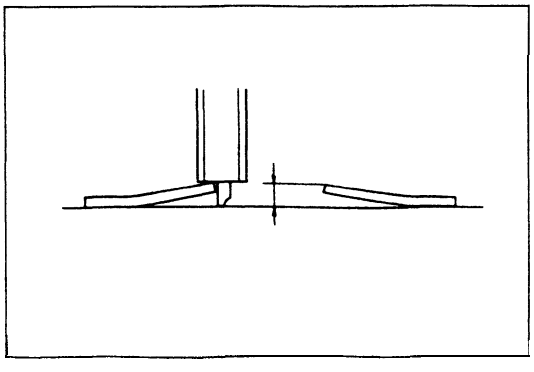
If the standard is not satisfied, change the installing position of each plate and measure the clearance again. If the standard is not satisfied yet, inspect the wear of each plate and replace it.



[Point 8]

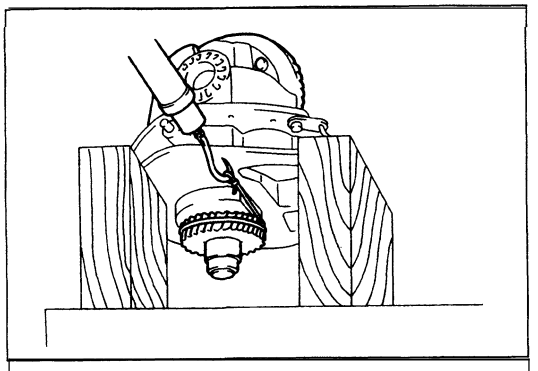
Inspection: Measure the side clearance of the seal ring.

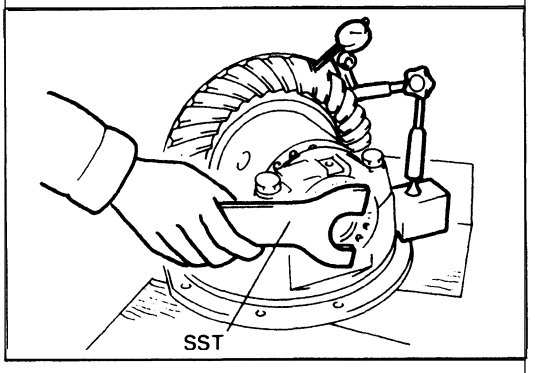
Limit:
Piston portion **0.30 mm (0.012 in)**
Servo portion **0.29 mm (0.011** in)

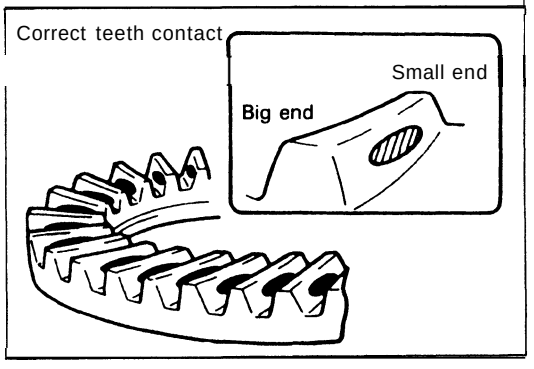


Inspection: Measure the camber plate warp height.

Standard: 3.4 mm **(0.13** in)
Limit: **3.1** mm **(0.12** in)







3. Adjust the side bearing preload as follows.

(1) Wind a rope around the ring gear and measure the preload.

Standard:
Drive pinion pre-load + 20 N (2 kgf) [4.4 lbf]

If the standard is not satisfied, make adjustment by turning the adjusting nuts.
SST 09630-10110-71

① When the preload is excessive:
Loosen each adjusting nut equally.

② When the preload is insufficient:
Tighten each adjusting nut equally.

4. Check the ring gear backlash.

Standard: 0.2 - 0.3 mm (0.008 - 0.012 in)

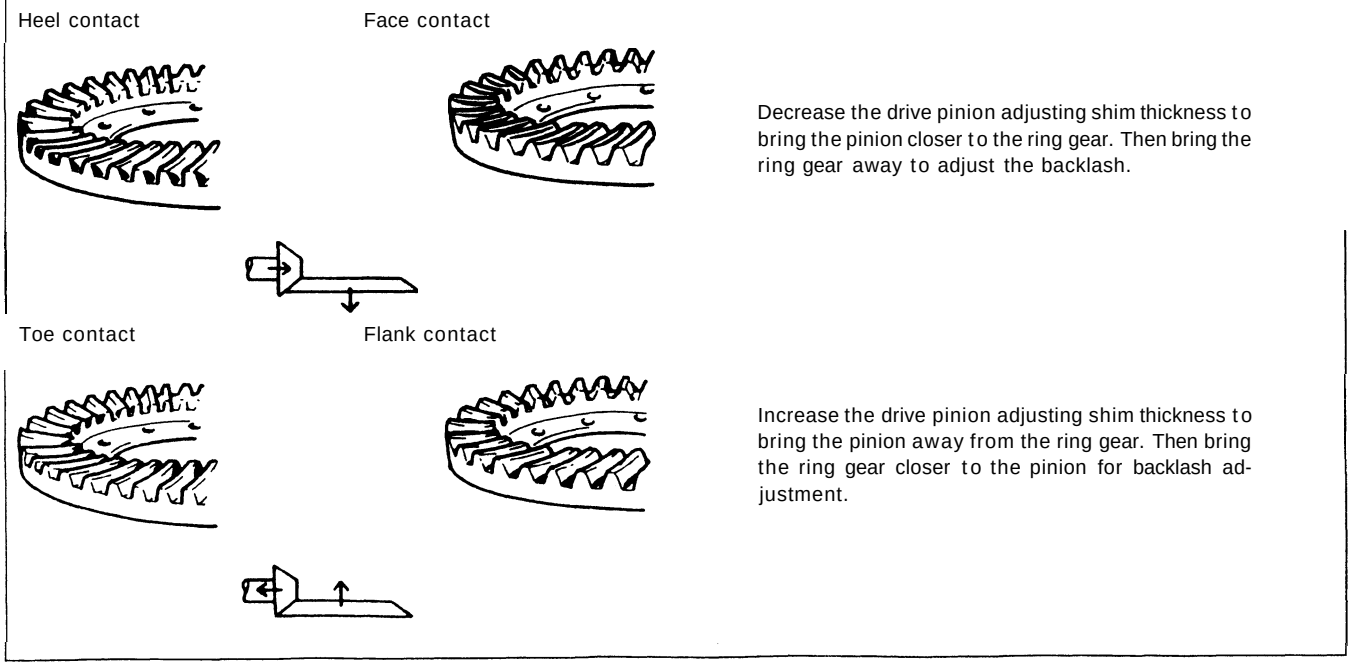
5. Tighten the bearing cap set bolt finally

T = 117.7 - 137.3 N·m (1200 - 1400 kgf-cm) [86.8 ~ 101.3 ft-lbf]

6. Inspect the teeth contact between the drive pinion and ring gear.

(1) Apply a thin uniform coat of red lead on 7 to 8 teeth of the ring gear. Set a box wrench on the output gear lock nut, and turn the nut several turns in each of the forward and reverse traveling directions.

(2) Make judgment according to the shape of the contact trace.
Correct teeth contact:
The contact trace should be slightly on the small end side from the center of the tooth width.
If the contact is not correct, Make drive pinion protrusion adjustment and ring gear backlash adjustment.



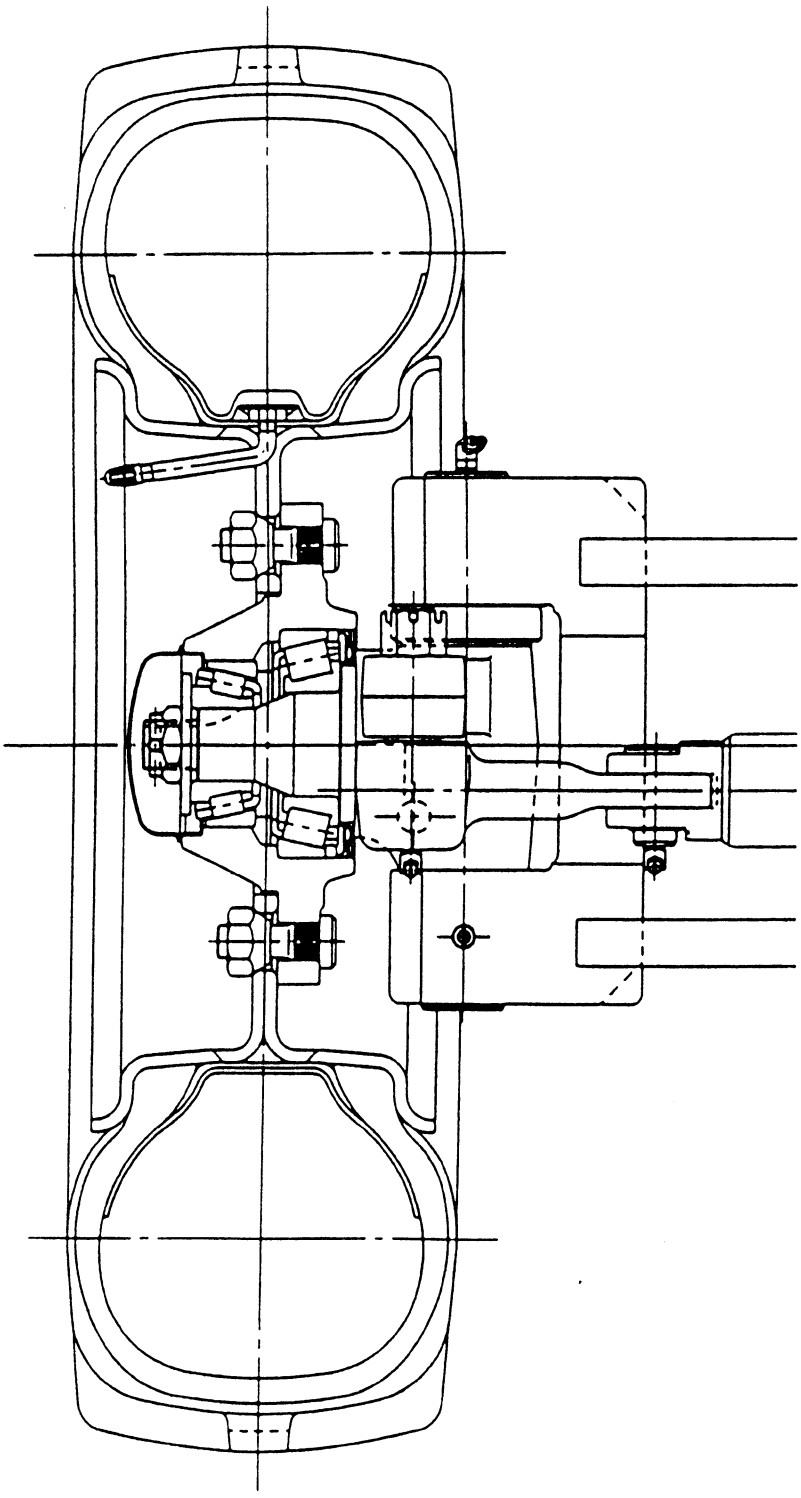
SPECIFICATIONS

Item \ Vehicle model	All models
Front axle type	Full-floating
Suspension type	Fixed to frame
Reduction type	Planetary gears
Reduction ratio	3 : 1

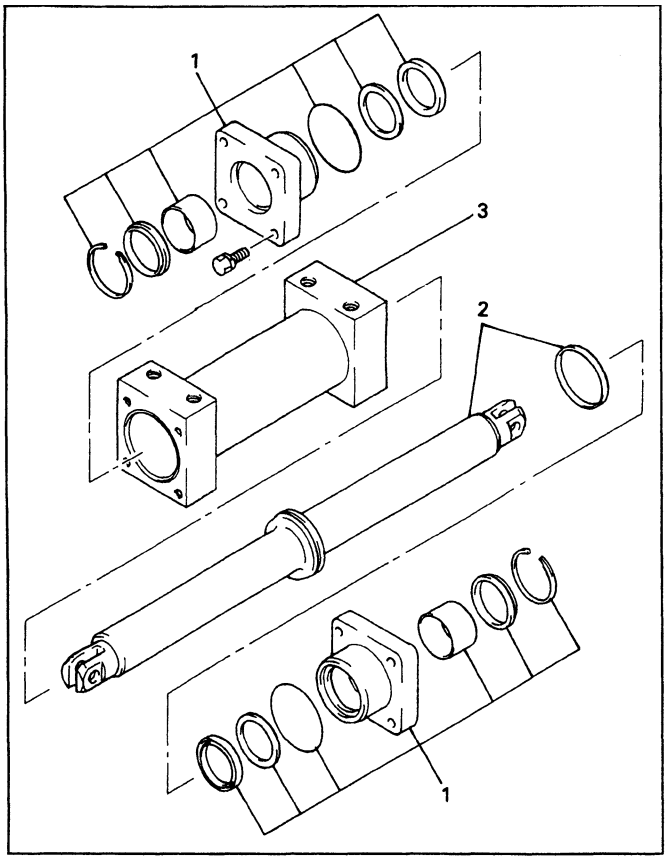
Tire

Model	Tire size	Rim size	Tire inflating pressure kPa (kgf/cm²) [psi]
3.25·3.5 ton	250-15-16PR(I)	7.00T-15IR (Side ring)	834 (8.5) [1201
	28 x 12.5-15-20PR(I)	9.75-15IR (Side ring)	760 (7.75) [1101
	29 x 8-15-12PR(I)	6.00S-15IR (Side ring)	686 (7.0) [1001
4.0·4.5·5.0 ton	300-15-20PR(I)	8.00V-15IR (Side ring)	785 (8.0) [1151
	32 x 12.1-15-20PR(I)	9.75-15IR (Side ring)	834 (8.5) [1201
	8.25-15-12PR(I)	6.50T-15IR (Side ring)	686 (7.0) [100]

GENERAL



DISASSEMBLY·INSPECTION·REASSEMBLY



Disassembly Procedure

1 Remove the rod guide.

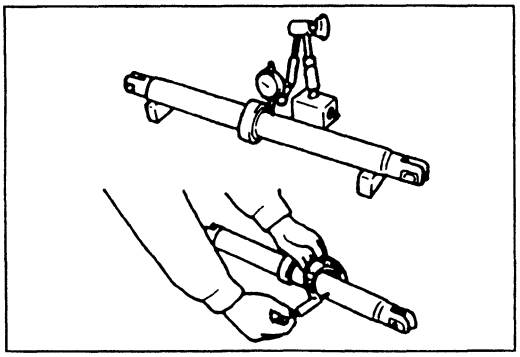
2 Extract the piston rod. [Point 11

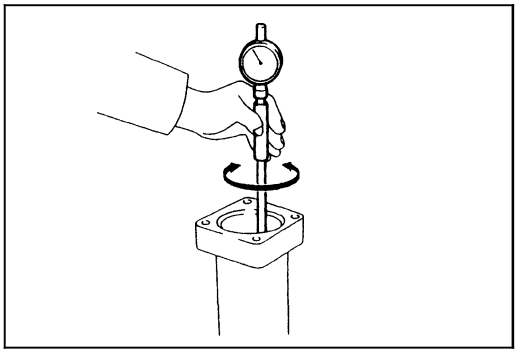
3 Remove the cylinder. [Point 21

Reassembly Procedure

The reassembly procedure is the reverse of the disassembly procedure.

Note:
- Apply hydraulic oil before reassembly.
- Rod guide set bolt tightening torque T = 88.26 ~ 107.87 N·m (900 ~ 1100 kgf-cm) 165.10 ~ 79.56 ft-lbfl





Point Operations

[Point 11

Inspection: Measure the piston rod outside diameter.

Standard: 55 mm (2.17 in)
Limit: 54.91 mm (2.1618 in)

Inspection: Measure the piston rod bend.
Limit: 0.5 mm (0.020 in)

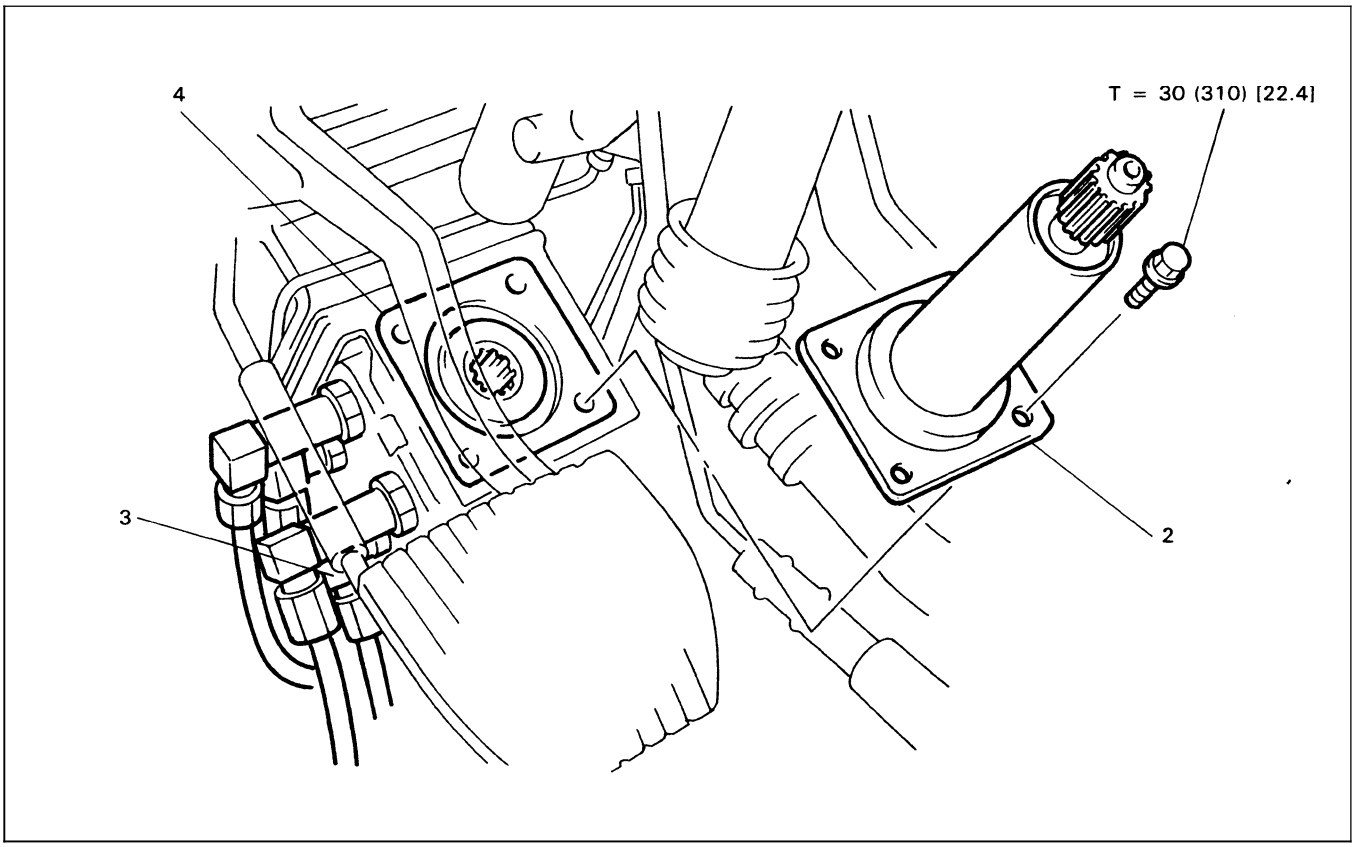
[Point 21

Inspection: Measure the cylinder bore.

Standard: 85 mm (3.35 in)
Limit: 85.40 mm (3.3622 in)

REMOVAL·INSTALLATION

T = N·m (kgf-cm) [ft-lbf]



Removal Procedure

1 Remove the toe board.

2 Remove the shaft.

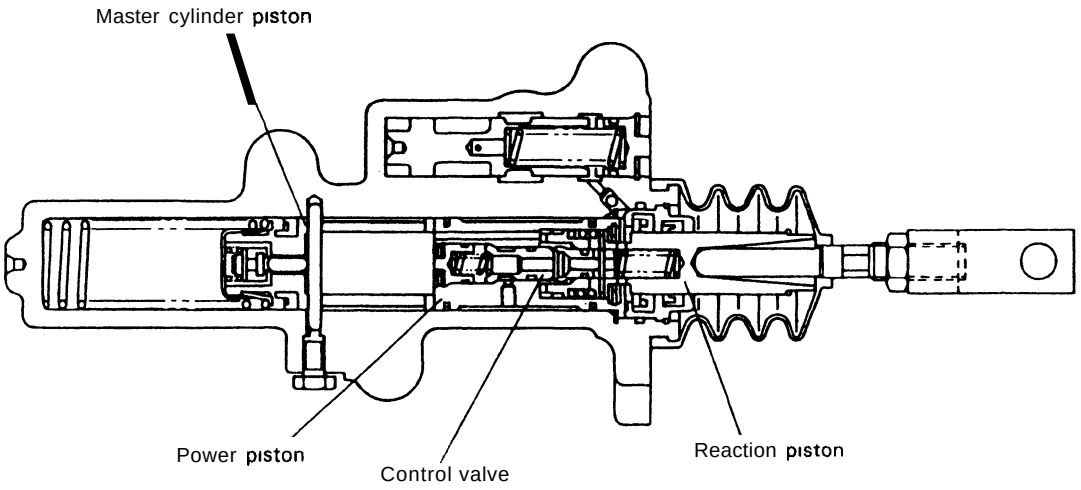
3 Disconnect the piping.

4 Remove the steering valve ASSY with bracket.

Installation Procedure

The installation procedure is the reverse of the removal procedure.

Brake Booster

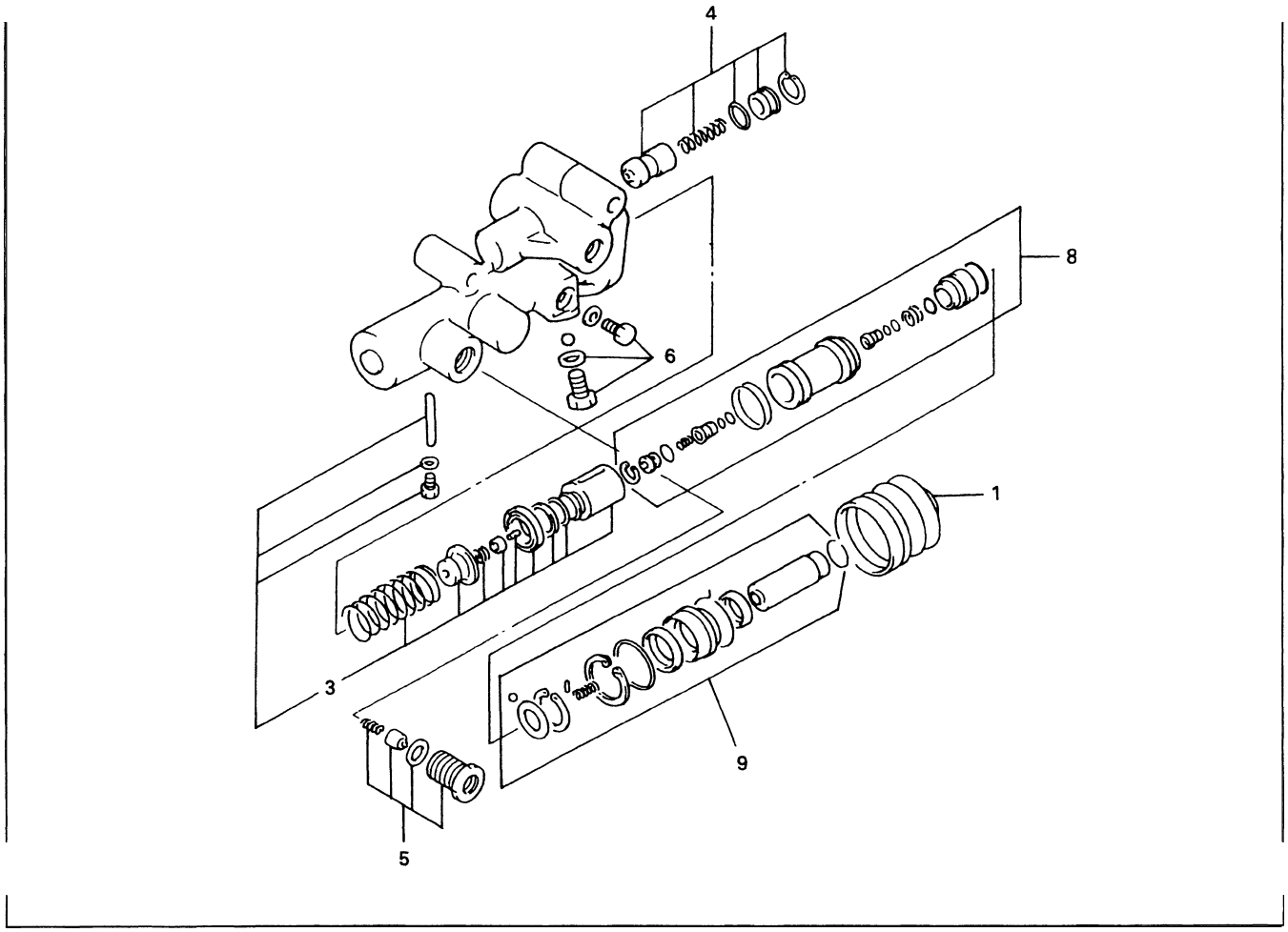


SPECIFICATIONS

Item \ Vehicle model				3.25.3.5 ton models	4.0 - 5.0 ton models
Foot brake type				Hydraulic internal expanding duo servo brake	
Parking brake type				Internal expanding mechanical brake	
Brake drum inside diameter			mm (in)	317.5 (12.501	
Brake lining material				Resin mold (asbestos-free)	
Brake lining dimensions Thickness x width x length			mm (in)	9.3 x 60 x 343 (0.37 x 2.36 x 13.50)	9.3 x 75 x 343 (0.37 x 2.95 x 13.50)
Wheel cylinder bore			mm (in)	31.75 (1.25)	
Brake booster	Master cylinder piston	Diameter	mm (in)	25.4 (1.00)	
		Full stroke	mm (in)	28 (1.10)	
	Maximum servo pressure (power relief pressure)		kPa (kgf/cm²) [psi]	10790 (110) [1564]	12750 (130) [18491
Applicable oil				Hydraulic oil ISO VG32	

DISASSEMBLY.INSPECTION·REASSEMBLY

Note:
When setting the brake booster on a vise, carefully operate so as not to damage the piping joint or clutch booster mounting surface.



Disassembly Procedure

1 Remove the boot.

2 Remove the reaction piston & power piston. **[Point** 11

3 Remove the master cylinder piston. **[Point** 21

4 Remove the flow divider spool.

5 Remove the outlet check valve.

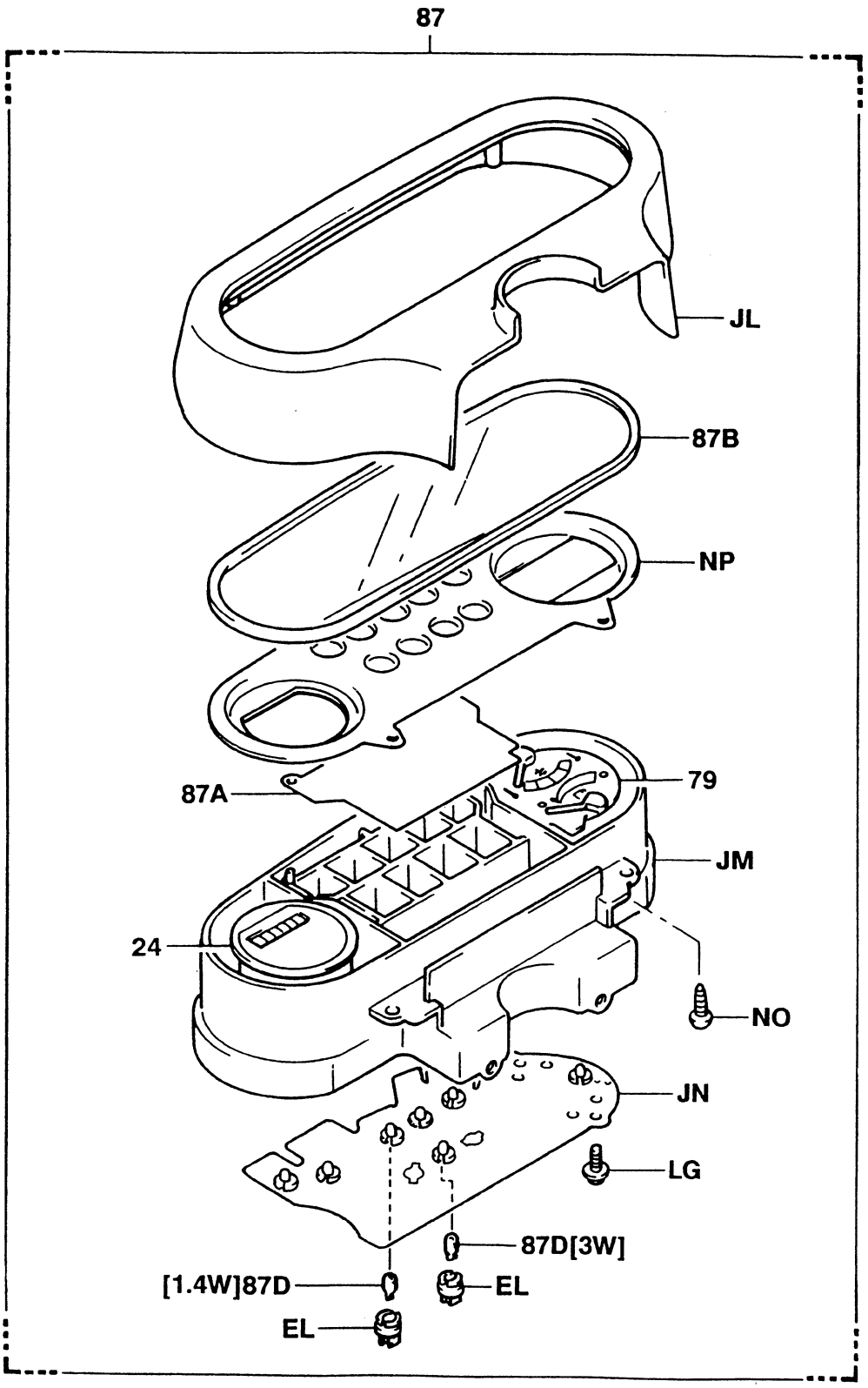
6 Remove the check ball.

7 Separate the reaction piston & power piston. **[Point 3]**

8 Disassemble the reaction piston. **[Point 41**

9 Disassemble the power piston. **[Point** 51

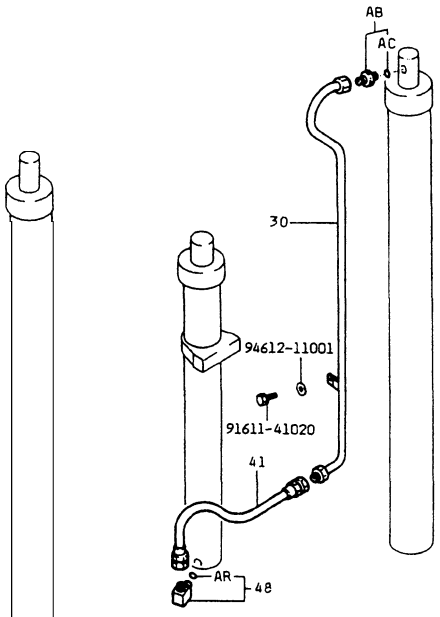
5701



5701-116A

Mast Piping (FV Mast)

6802



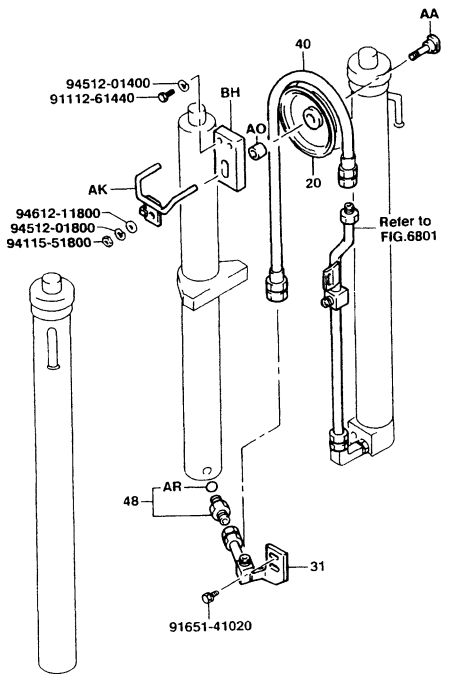
6802-252

Mast Piping (FSV Mast)

8

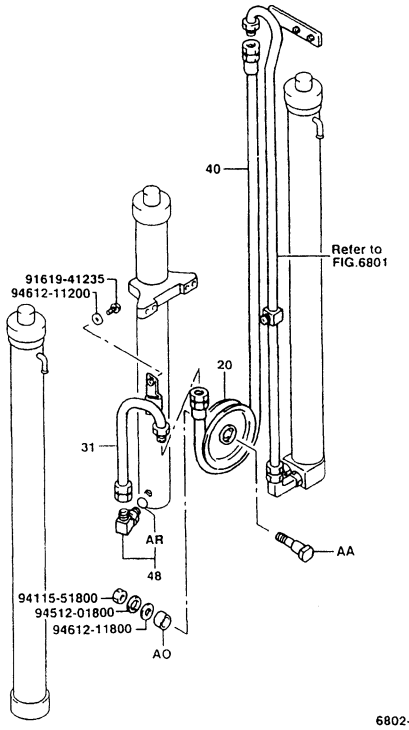
6802

3.25 ~ 4.0 ton



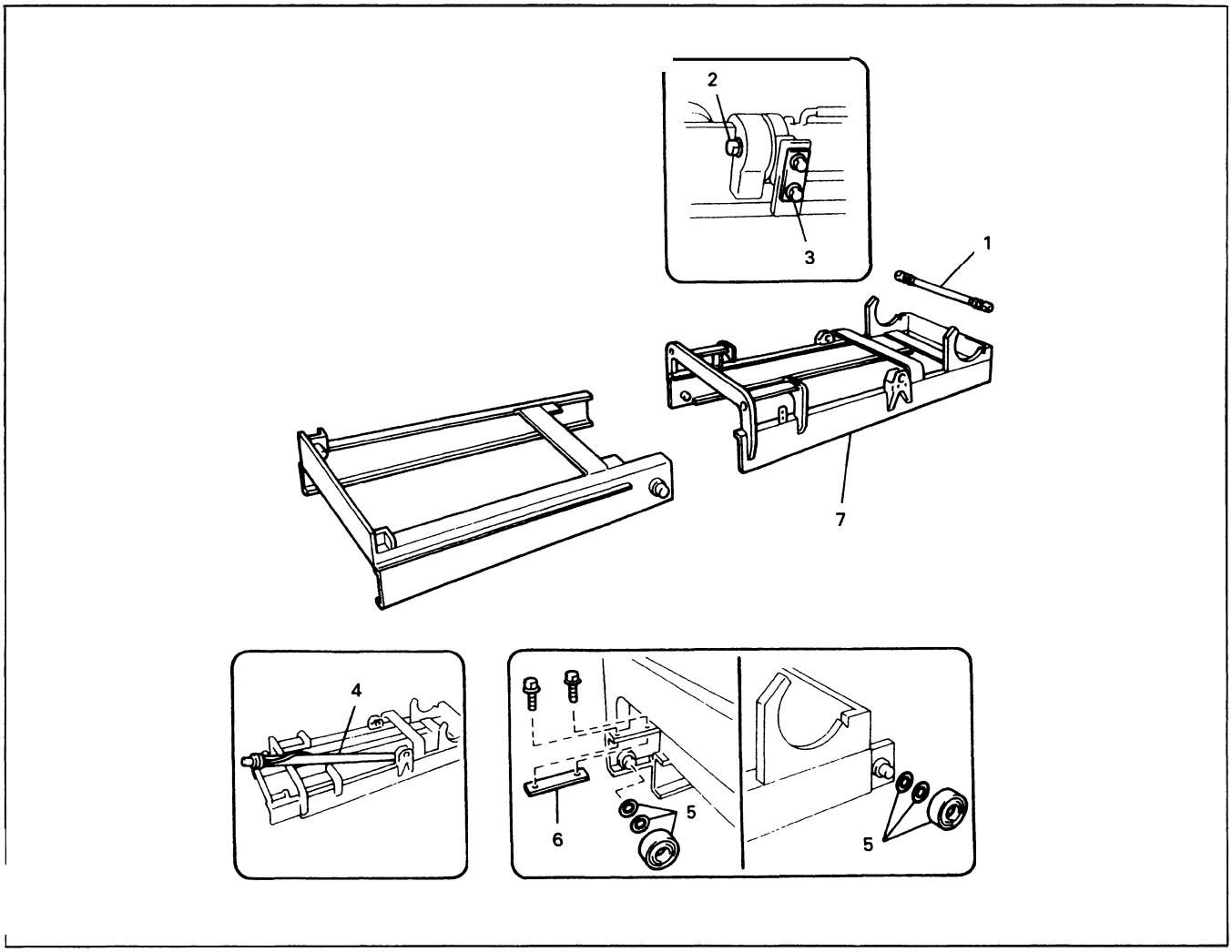
6802-416B

4.5·5.0 ton



6802-432

MAST DISASSEMBLY·INSPECTION·REASSEMBLY



Disassembly Procedure

1 Disconnect the overflow hose and high pressure hose.

2 Remove the cylinder rod end set bolt and disconnect the rod end. **[Point** 11

3 Remove the cylinder support. **[Point** 21

4 Remove the lift cylinder.

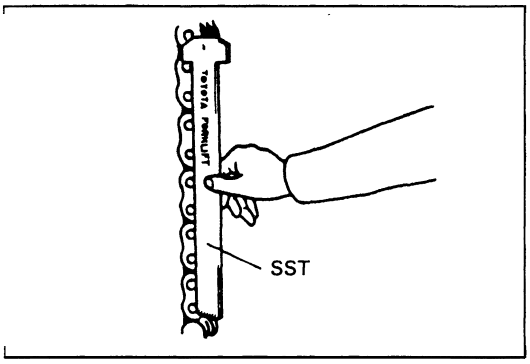
5 Slide the inner mast in the lowering direction and remove the lift rollers.

6 Remove the mast strip. **[Point** 31

7 Remove the outer mast.

Reassembly Procedure

The reassembly procedure is the reverse of the disassembly procedure.



CHAIN

INSPECTION

1. Inspect chain elongation.

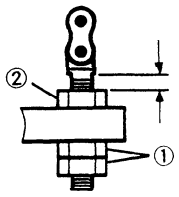
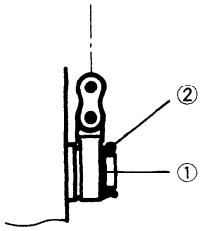
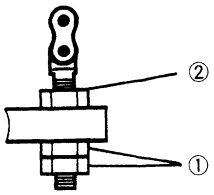
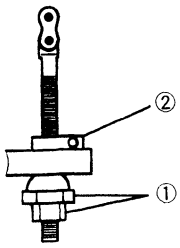
   SST 09631-22000-71

Note:
- Use the SST and inspect the chain elongation as installed on the vehicle.
- Since the elongated portion will be dispersed, inspect along the entire length of the chain.
- Chain link pitch standard
  - 3.25 ~ 4.0 ton models: 25.4 mm (1.00 in) [Type: **BL834**]
  - **4.5·5.0** ton models: 31.75 mm (1.25 in) [Type: **BL1034**]

REASSEMBLY

Note:
- Assemble in the order of the fixed side and adjusting side.
- Tighten (or install) in the order of illustrated numbers so as not to twist the chain.

3.25 ~ 4.0 ton models

Fixed side		T = N·m (kgf-cm) [ft-lbf]
Applicable mast and portion	F·FV·FSV: Lift bracket side	FSV: Inner mast side
Rough sketch	 V·FSV:0 ~ 1mm (0 ~ 0.04 in) FV:5 ~ 10 mm (0.20 ~ 0.40 in) T = 98 ~ 147 (1000 ~ 1500) [72 ~ 108]	
Adjusting side		**T = N·m (kgf-cm) [ft-lbf]**
Applicable mast and portion	V: Outer mast side FSV (H6000 ~): Outer mast side FV·FSV: Front cylinder side	FSV (~ H5500): Outer mast side
Rough sketch	 T = 98 ~ 147 (1000 ~ 1500) [72 ~ 108]	 T = 98 ~ 147 (1000 ~ 1500) [72 ~ 108]

7. Roller selection
   (1) Use only No.1 as middle rollers.
   (2) As a rule, use No.2 (oversize) as upper and lower rollers. Use No.1 only when the mast inside width (rolling contact surface) is narrow. The roller size may be different between the left and right or between the upper and lower sides.

Lift bracket roller list

Vehicle model	No.	Outside diameter mm (in)	Place used	Remarks
3.25 – 4.0 ton models	No. 1	124.5 (4.90)	Middle (upper, lower)	–
	No. 2	125.2 (4.93)	Upper, lower	Oversize
	No. 3	93.3 (3.67)	Side	–

4.5 · 5.0 ton models

1. Out of lift bracket rollers, lift rollers need no adjustment since they are fastened by snap rings. For side rollers, bring the side roller on one side into contact with the mast side surface, and adjust the clearance between the side roller and mast side surface on the opposite side to 0 to 0.8 mm (0 to 0.03 in).

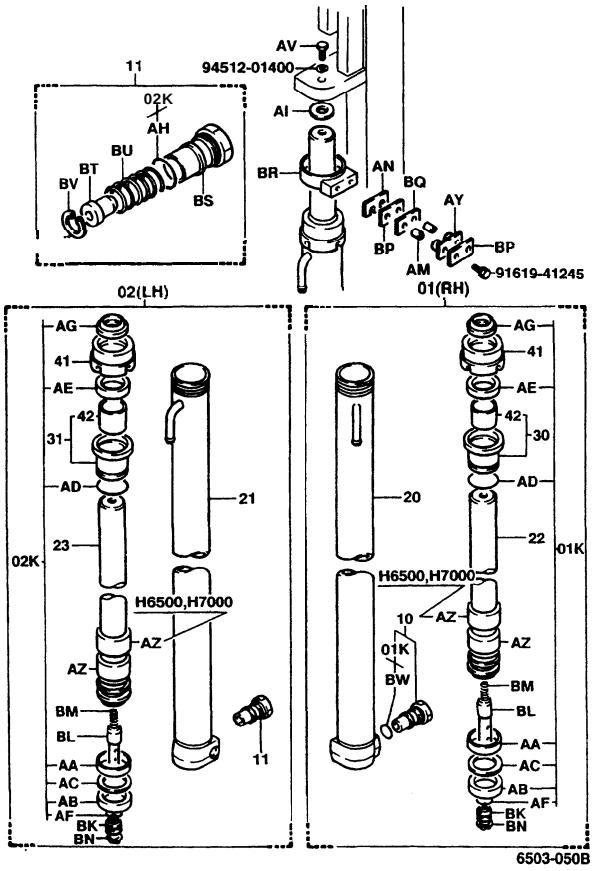
2. Perform adjustment where the center of the lift bracket upper roller is 100 mm (3.9 in) from the inner mast top end.

3. After the adjustment, the lift bracket shall move smoothly along the entire length of the mast.

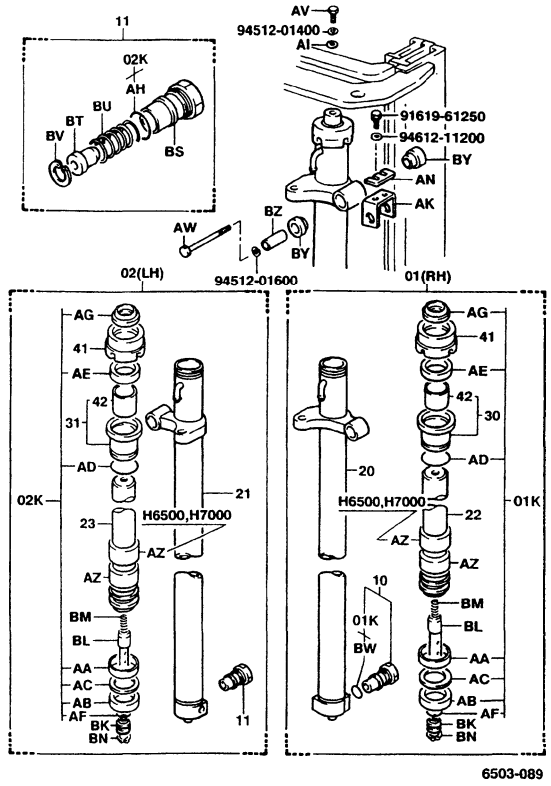
Rear Lift Cylinder (FSV)

6503

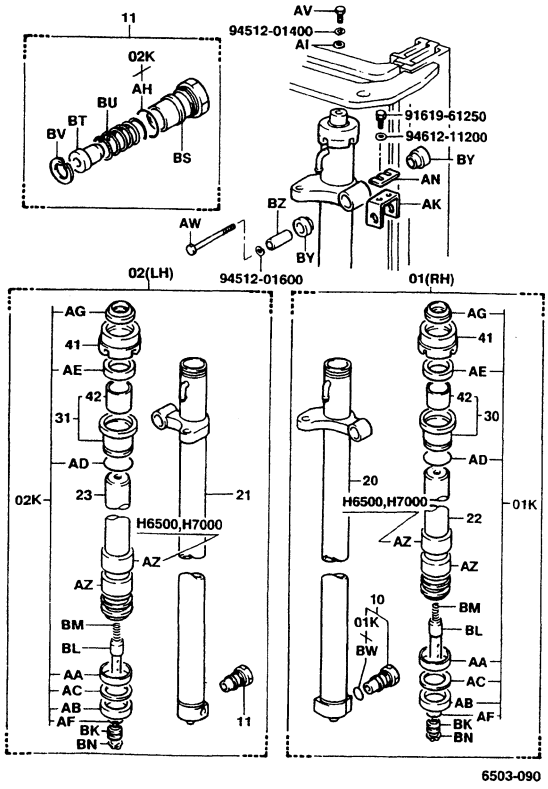
3.25 – 4.0 ton models



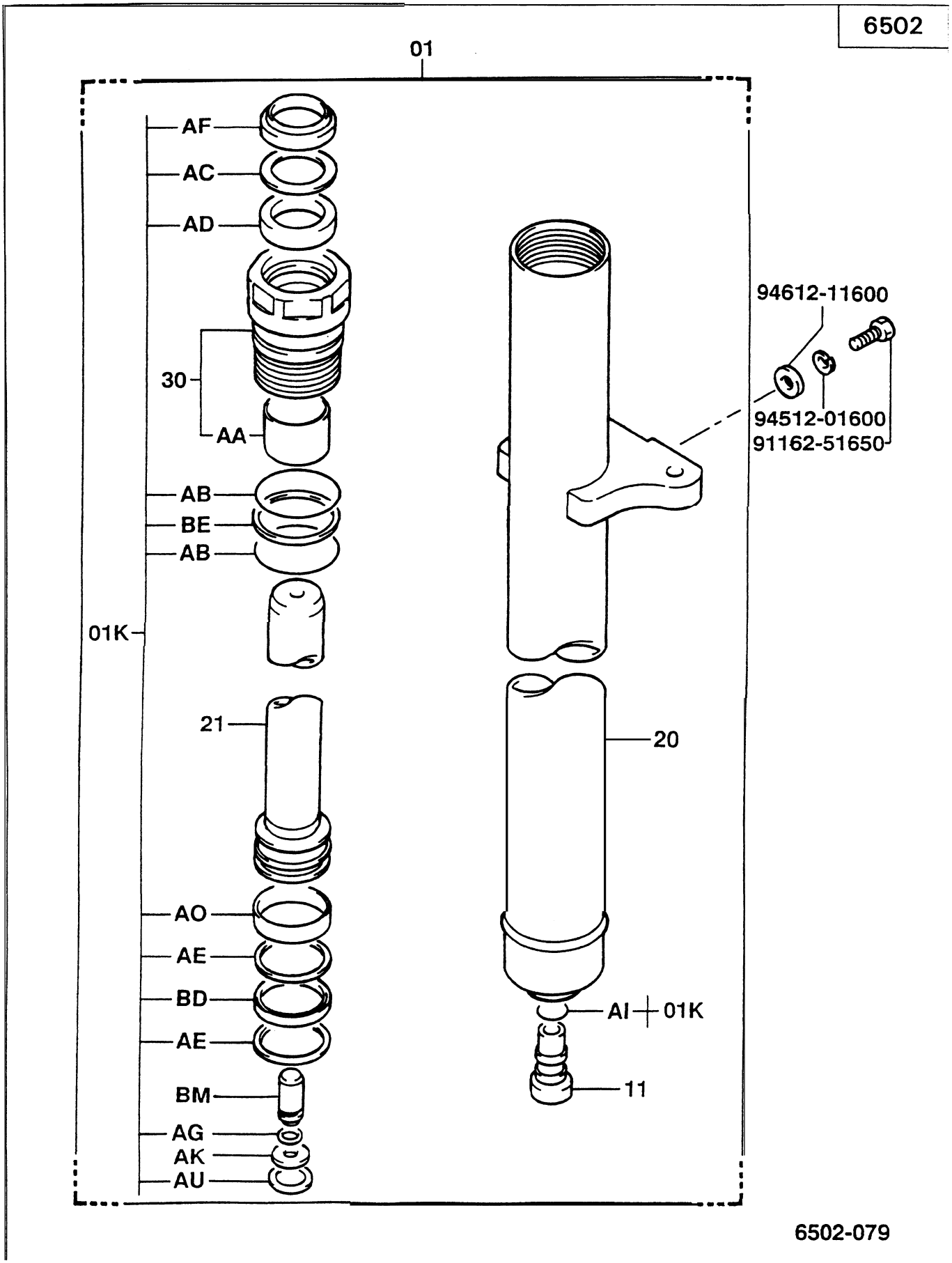
4.5 ton model



5.0 ton model



COMPONENTS


6502
01
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94612-11600
94512-01600
91162-51650
20
AI
01K
11
6502-079

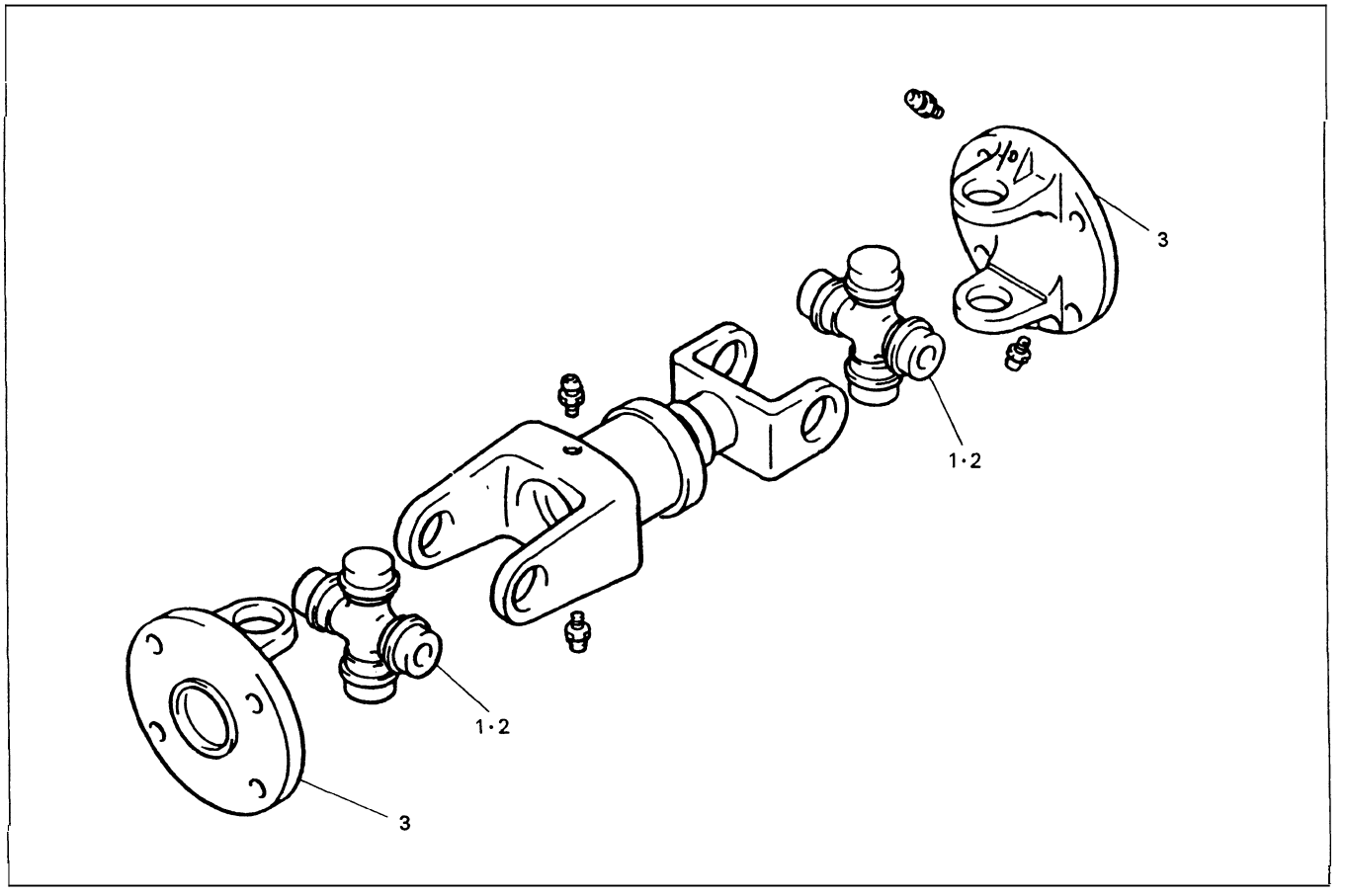
OIL PUMP

OIL PUMP DRIVE SHAFT

REMOVAL.INSTALLATION

Note:
- **See the oil pump removal·installation section on page 11-5 for the removal and installation procedures.**
- **Fill grease (molybdenum disulfide grease) through the grease fitting.**

DISASSEMBLY.INSPECTION·REASSEMBLY



Disassembly Procedure

1 Remove the snap ring. **[Point** 11

2 Pull out the needle roller bearing cup. **[Point** 21

3 Remove the universal joint flange yoke. **[Point** 31

Reassembly Procedure

The reassembly procedure is the reverse of the disassembly procedure.

RELIEF PRESSURE ADJUSTMENT

Note:
- Always make adjustment according to the following procedure. Careless adjustment will generate a high pressure to cause damage to the oil pump and other hydraulic devices.
- No adjustment is needed unless the relief valve is disassembled or replaced with a new one.

1. Remove the plug (9116-18UNF-2B) from the top of the oil control valve and install an oil pressure gauge.

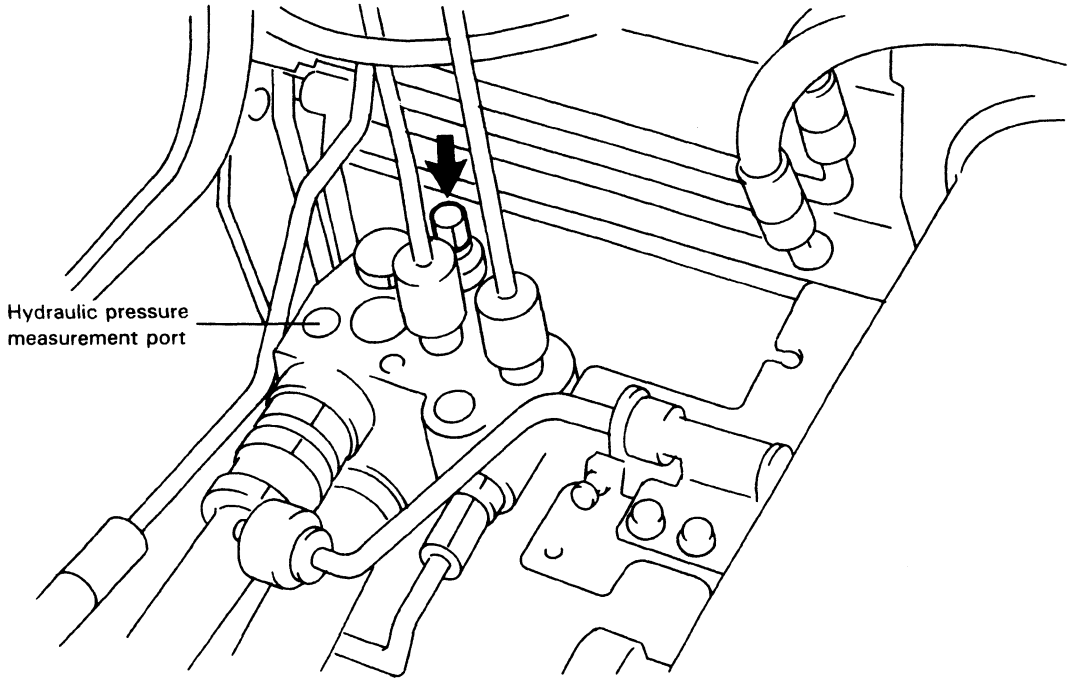
   Oil pressure gauge: Pressure resistance at 19600 **kPa** (200 kgf/cm^2) [**2844** psi] or above

2. Relief valve adjusting screw loosening
   Loosen the lock nut, and loosen the adjusting screw until it is about to come off from the body.

3. Hydraulic pressure adjustment
   (1) Start the engine and check no hydraulic oil leak or abnormal noise generation.
   (2) Set the lift lever slowly to the lift position, and gradually tighten the adjusting screw until the fork starts to rise.
   (3) Lift the fork fully upward, and read the pressure then. Tighten the adjusting screw to make the reading satisfy the standard.
   (4) Tighten the lock nut and check the hydraulic pressure again.

   Standard: 18140 kPa (185 kgf/cm^2) [2630 psi]

4. Remove the oil pressure gauge and install the plug.



FRONT AXLE

Front axle ASSY		
Planet gear bush inside diameter mm (in)	Standard	22.0 (0.866)
	Limit	22.18 (0.860)
Planet gear shaft outside diameter mm (in)	Standard	22.0 (0.866)
	Limit	21.85 (0.873)
Front axle shaft starting force (Measured at axle housing set bolt) N (kgf) [lbf]	Standard	68.6 - 127.5 (7 - 13) [15 - 291
Tightening torque		**N·m (kgf-cm) [ft-lbf]**
Brake ASSY set nut		88.3 - 117.7 (900 - 1200) [65.1 - 86.81
Hub bolt lock nut		**264.8 - 294.2(2700 - 3000) 1195.3 - 217.11**
Axle shaft lock nut		**294.2 - 343.2(3000 - 3500)**[217.1 - **253.21**
Front axle housing set bolt		**220.6 - 323.6(2250 - 3300)**[162.8 - **238.81**
Front axle bracket set bolt		**245.2 - 323.6(2500 - 3300)1180.9 - 238.81**
Front wheel hub nut	Single tire	**264.8 - 323.6(3000 -** 3300) [217.1 - **238.81**
	Double tire (inside)	**264.8 - 343.2(3000 -** 3500) **1217.1 - 253.21**
	Double tire (outside)	**343.2 - 392.3(3500 -** 4000) **1253.2 - 289.41**

REAR AXLE

Rear axle ASSY		
Rear axle ASSY front to rear clearance mm (in)	Standard	0.5 (0.020) or less
Rear axle center pin bushing inside diameter mm (in)	Limit	67.0 (2.638)
Rear axle hub and steering knuckle		
Rear axle hub starting force (at hub bolt) N (kgf) [lbf]	Standard	13.7 - 42.2 (1.4 - 4.3) [3.1 - 9.51
King pin outside diameter mm (in)	Standard	40.0 (1.575)
	Limit	39.8 (1.567)
Steering knuckle starting force (at front end of knuckle) N (kgf) [lbf]	Standard	29.4 - 49.0 (3.0 - 5.0) [6.6 - 11.01
Rear axle cylinder		
Piston rod outside diameter mm (in)	Standard	55 (2.17)
	Limit	54.91 (2.1618)
Piston rod dend mm (in)	Limit	0.5 (0.020)
Cylinder bore mm (in)	Standard	85 (3.35)
	Limit	85.40 (3.3622)
Tightening torque		**N·m (kgf-cm) [ft-lbf]**
Axle bracket cap set bolt		**117.7 - 166.7(1200 -** 1700) [86.8 - **123.01**
King pin lock pin lock nut		18.6 - 30.4 (190 - 310) [13.8 - 22.41
Divided rim bolt set nut		**117.7 - 176.5(1200 -** 1800) **186.8 - 130.21**
Hub nut		**176.5 - 264.8(1800 - 2700)1130.2 - 195.31**
Rear axle cylinder ASSY set bolt		**166.7 - 225.6(1700 - 2300)**[123.0 - **166.41**