9. Clutch

Service Information	**9-1**	**Clutch Slave Cylinder Removal/ Installation**	**9-4**
Troubleshooting	**9-1**	**Clutch Disassembly/Assembly**	**9-6**
Clutch Master Cylinder Disassembly/ Assembly	**9-2**		

Service Information

- DOT 4 brake fluid is used for the hydraulic clutch and is referred to as clutch fluid in this section. Do not use other types of fluid as they are not compatible.
- Engine oil viscosity and level and the use of oil additives have an effect on clutch disengagement. Oil additives of any kind are specifically not recommended. When the clutch does not disengage or the vehicle creeps with clutch disengaged, inspect the engine oil for proper level and the presence of additives before servicing the clutch system.
- Clutch maintenance can be done with the engine in the frame.

Troubleshooting

Clutch lever soft or spongy
- Air in hydraulic system
- Low fluid level
- Leaking hydraulic system

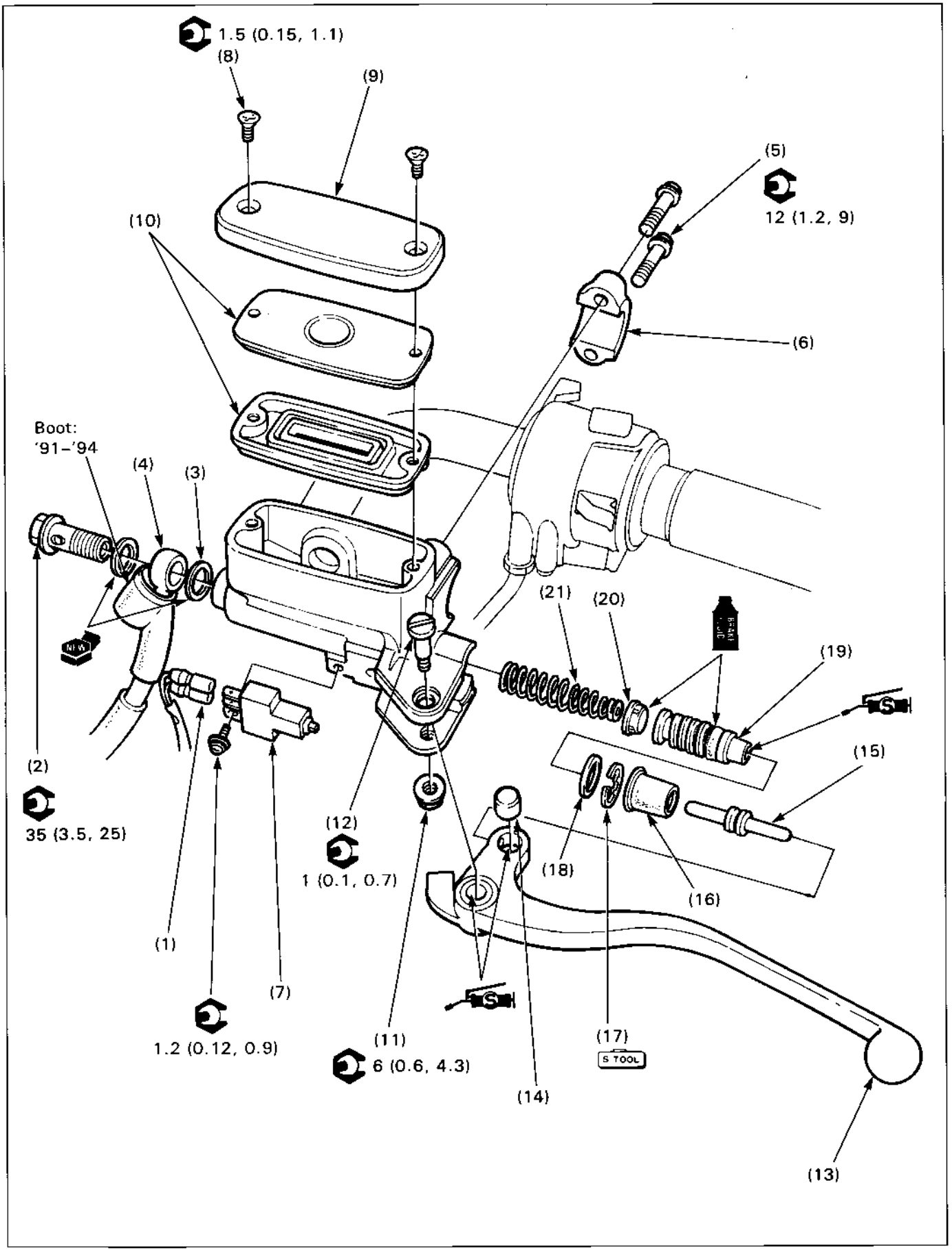
Clutch slips
- Sticking hydraulic system
- Worn discs
- Weak clutch springs
- Hydraulic system clogged
- Oil additive used

Clutch will not disengage or motorcycle creeps with clutch disengaged
- Warped plate
- Loose clutch lock nut
- Oil level too high, improper oil viscosity or oil additive used
- Air in hydraulic system
- Low fluid level
- Leaking or sticking hydraulic system

Clutch lever too hard
- Sticking master piston
- Sticking slave cylinder piston
- Clogged hydraulic system

Clutch operation feels rough
- Rough clutch outer slots
- Sticking master piston
- Sticking slave cylinder piston

Clutch Master Cylinder Disassembly/Assembly



CAUTION

- **Avoid spilling hydraulic clutch fluid on painted, plastic, or rubber parts. Place a rag over these parts whenever the system is serviced.**
- **When removing the oil bolt, cover the end of the clutch hose to prevent contamination. Do not allow the foreign material to enter the system.**
- **Handle the master piston, spring, primary cup and secondary cup as a set.**
- **Do not allow the lips of the master cylinder cups to turn inside out and be certain the snap ring is firmly seated in the groove.**

NOTE

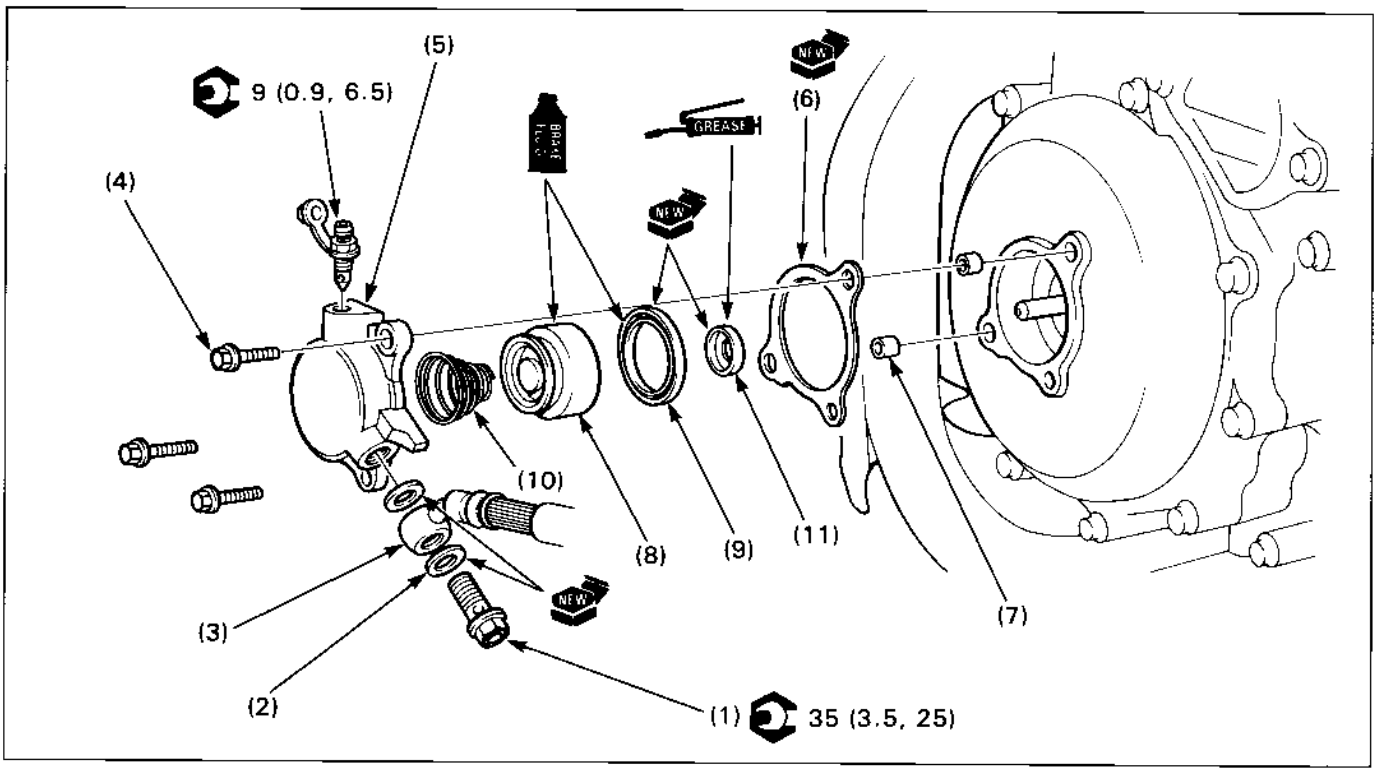
- Use only DOT 4 brake fluid from a sealed container.

Requisite Service

- Clutch fluid draining

	Procedure	Q'ty	Remarks
	Removal		Installation is in the reverse order of removal.
(1)	Clutch switch wire	2	
(2)	Oil bolt	1	
(3)	Sealing washer	2	
(4)	Clutch hose	1	
(5)	Master cylinder holder bolt	1	
(6)	Master cylinder holder	1	Remove the master cylinder assembly from the handlebar.
(7)	Clutch switch	1	
(8)	Reservoir cap screw	2	
(9)	Reservoir cap	1	
(10)	Set plate/diaphragm	1/1	
(11)	Clutch lever pivot nut	1	
(12)	Clutch lever pivot screw	1	
(13)	Clutch lever	1	
(14)	Push rod end piece	1	
(15)	Push rod	1	
(16)	Boot	1	
(17)	Snap ring	1	Use snap ring pliers (07914—3230001).
(18)	Washer	1	
(19)	Master piston	1	
(20)	Primary cup	1	
(21)	Spring	1	

Clutch Slave Cylinder Removal/Installation



CAUTION

- **Avoid spilling hydraulic clutch fluid on painted, plastic, or rubber parts. Place a rag over these parts whenever the system is serviced.**
- **When removing the oil bolt, cover the end of the clutch hose to prevent contamination. Do not allow the foreign material to enter the system.**

NOTE

- Use only DOT 4 brake fluid from a sealed container.

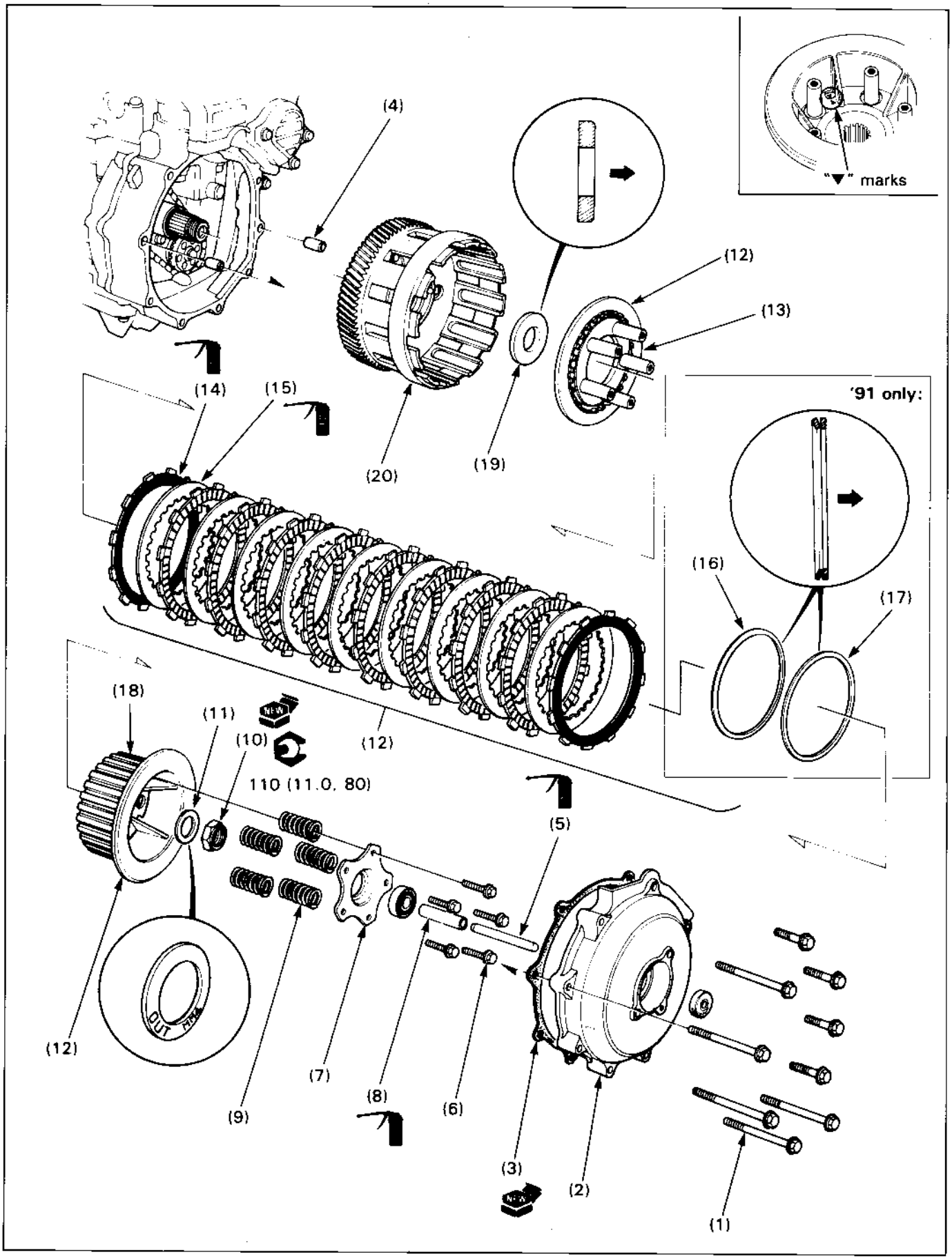
Requisite Service

- Lower fairing removal/installation (page 2-4)
- Clutch fluid draining

	Procedure	Q'ty	Remarks
	Removal Order		Installation is in the reverse order of removal.
(1)	Oil bolt	1	
(2)	Sealing washer	2	
(3)	Clutch hose	1	
(4)	Mounting bolt	3	
(5)	Slave cylinder assembly	1	
(6)	Gasket	1	
(7)	Dowel pin	2	
(8)	Slave cylinder piston	1	If piston removal is difficult, wrap the slave cylinder with a shop towel and apply compressed air to the fluid inlet to remove the piston.
(9)	Piston seal	1	
(10)	Spring	1	
(11)	Oil seal	1	

MEMO

Clutch Disassembly/Assembly



NOTE

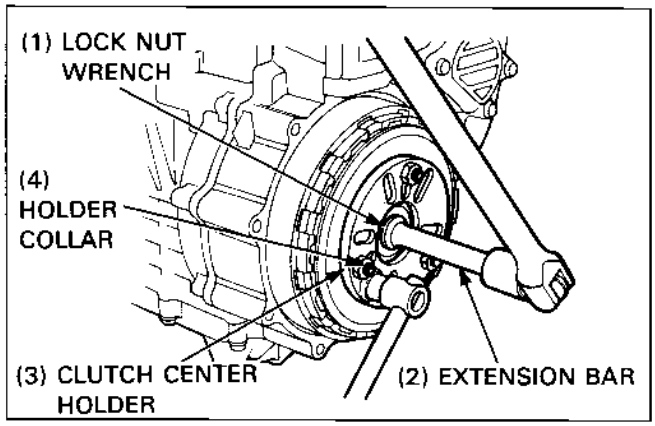
- It is not necessary to disconnect the clutch hydraulic system for clutch disassembly/assembly.

Requisite Service

- Engine oil draining
- Clutch slave cylinder removal/installation (page 9-4)
- Right exhaust pipe removal/installation (page 2-18)

	Procedure	Q'ty	Remarks
	Disassembly Order		Assembly is in the reverse order of disassembly.
(1)	Clutch cover bolt	9	
(2)	Clutch cover	1	
(3)	Gasket	1	
(4)	Dowel pin	2	
(5)	Lifter rod	1	
(6)	Lifter plate bolt	5	NOTE: • After tightening the bolts, check that the lifter rod guide rotates smoothly.
(7)	Lifter plate	1	
(8)	Lifter rod guide	1	Remove from the lifter plate.
(9)	Clutch spring	5	
(10)	Lock nut	1	Removal/installation (page 9-8)
(11)	Lock washer	1	Install with the "OUT" wark facing out.
(12)	Clutch assembly	1	
(13)	—pressure plate	1	At installation, align the "▼" marks on the pressure plate and clutch center as shown.
(14)	—clutch disc	10	
(15)	—clutch plate	9	
(16)	—judder spring '91 only:	1	At installation, install with the convex side facing to the pressure plate as shown.
(17)	—spring seat '91 only:	1	
(18)	—clutch center	1	
(19)	—Washer	1	At installation, install with the chamfered side facing out.
(20)	Clutch outer	1	Installation (page 9-8)

Clutch Lock Nut Removal/Installation

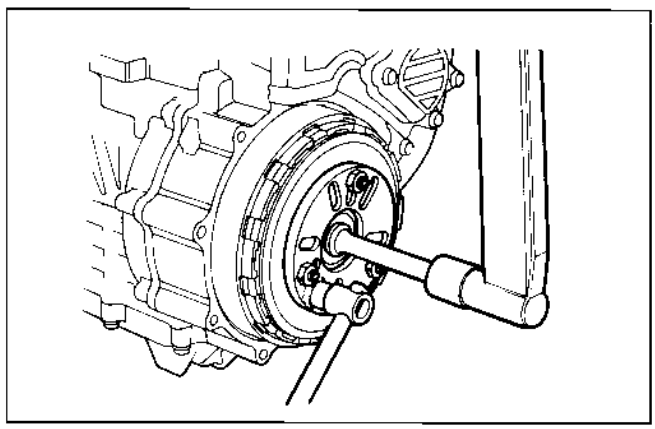


Removal

Unstake the clutch lock nut with a drill or grinder. Using the special tools, place a collar in each of the slots marked with a "5" on the tool.
Install the clutch center holder by aligning the collars in the slots so they fit over the bosses in the clutch center. Using a 17 mm wrench, tighten the collar nuts in position. Secure the holder to the clutch center using the clutch spring bolts.
Hold the clutch center with the clutch center holder and remove the lock nut.

S. TOOL

Clutch center holder	**07JMB—MN50300 or 07HGB—001010B (U.S.A. only)**
Clutch holder collar (3 pieces)	**07LMB—MT30100 or**
Clutch center collars "B"	**07MPB—764021A (U.S.A. only)**
Lock nut wrench, 30 x 32 mm	**07710—0020400**
Extension bar	**07716—0020500**
	Equivalent commercially available in U.S.A.



Installation

Hold the clutch center with the clutch center holder as described above.

S. TOOL

Clutch center holder	**07JMB—MN50300 or 07HGB—001010B (U.S.A. only)**
Clutch holder collar (3 pieces)	**07LMB—MT30100 or**
Clutch center collars "B"	**07MPB—764021A (U.S.A. only)**
Lock nut wrench, 30 x 32 mm	**07716—0020400**
Extension bar	**07716—0020500**
	Equivalent commercially available in U.S.A.

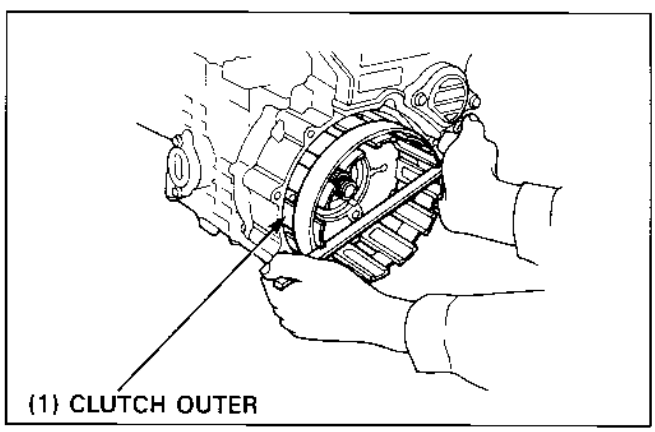
Install a new lock nut and tighten it.

Torque: 110 N·m (11.0 kg-m, 80 ft-lb)

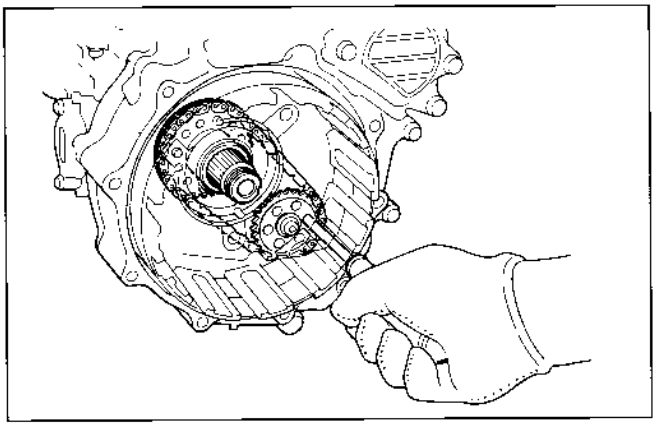
Stake the lock nut.

Clutch Outer Installation

Install the clutch outer onto the primary damper shaft and mesh it with the primary drive sub gear.
Turn the clutch outer counterclockwise while pushing inward as shown to align the primary drive sub gear teeth with the primary drive gear teeth. The clutch hub will move inward when the gear teeth align.



Turn the oil pump driven sprocket with a screwdriver as shown while pushing the clutch outer in until you feel a click. At this time, the holes in the clutch outer are aligned with the pins on the oil pump drive sprocket. Push in the clutch outer further to insert the pins into the holes.



Symbols

The symbols used throughout this manual show specific service procedures. If supplementary information is required pertaining to these symbols, it would be explained specifically in the text without the use of the symbols.

	Replace the part(s) with new one(s) before assembly.
	Use special tool
	Use optional tool. Use the same procedure you use to order parts.
 10 (1.0, 7.2)	Torque specification. 10 N·m (1.0 kg-m, 7.2 ft-lb)
	Use recommended engine oil, unless otherwise specified.
	Use molybdenum oil solution (mixture of the engine oil and molybdenum grease in a ratio of 1 : 1).
	Use multi-purpose grease (Lithium based multi-purpose grease NLGI #2 or equivalent)
	Use molybdenum disulfide grease (containing more than 3% molybdenum disulfide, NLGI #2 or equivalent) Example: Molykote® BR-2 plus manufactured by Dow Corning, U.S.A. Multi-purpose M-2 manufactured by Mitsubishi Oil Japan
	Use molybdenum disulfide paste (containing more than 40% molybdenum disulfide, NLGI #2 or equivalent) Example: Molykote® G-n Paste manufactured by Dow Corning, U.S.A. Honda Moly 60 (U.S.A. only) Rocol ASP manufactured by Rocol Limited, U.K. Rocol Paste manufactured by Sumico Lubricant, Japan
	Use silicone grease
	Apply a locking agent. Use a middle strength locking agent unless otherwise specified.
	Apply sealant
	Use brake fluid, DOT 3 or DOT 4. Use the recommended brake fluid, unless otherwise specified.
	Use Fork or Suspension Fluid.