

7. Engine Removal Installation

Service Information

7-1

Engine Removal/Installation

7-2

Service Information

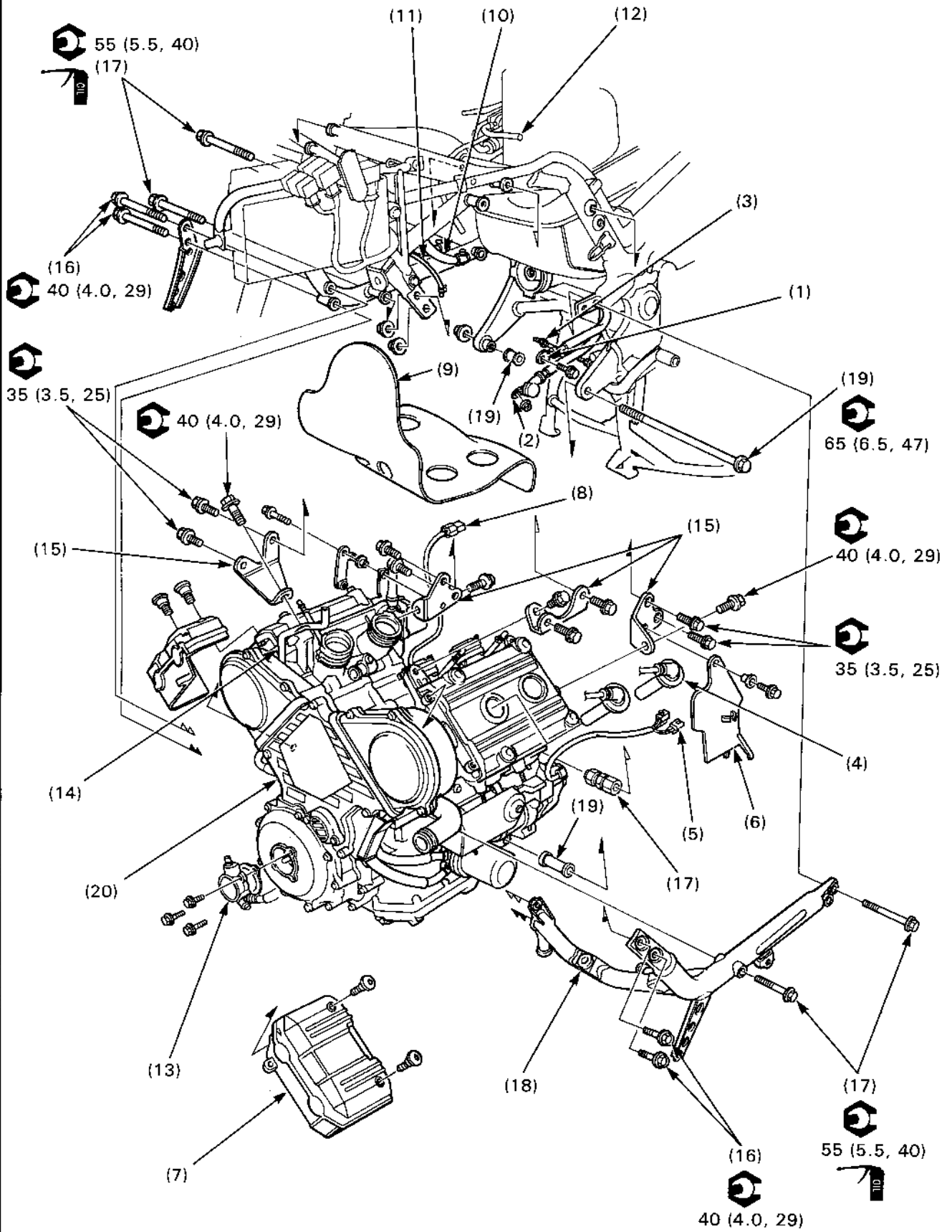
- A floor jack or other adjustable support is required to support and maneuver the engine.

CAUTION

- **Do not support the engine using the oil filter.**
- The following components can be serviced with the engine installed in the frame.
 - Oil pump (Section 4)
 - Carburetor (Section 5)
 - Oil cooler (Section 5)
 - Water pump (Section 6)
 - Cylinder head (Section 8)
 - Timing belt (Section 8)
 - Clutch (Section 9)
 - Gearshift linkage (Section 10)
 - Alternator (Section 17)
 - Ignition pulse generator (Section 18)
 - Starter motor (Section 20)
- The following components require engine removal for service.
 - Transmission (Section 10)
 - Primary damper shaft (Section 10)
 - Crankshaft (Section 11)
 - Connecting rod (Section 11)
 - Piston (Section 11)
 - Primary drive gear (Section 11)
 - Starter clutch

Engine Removal/Installation

'91-'95

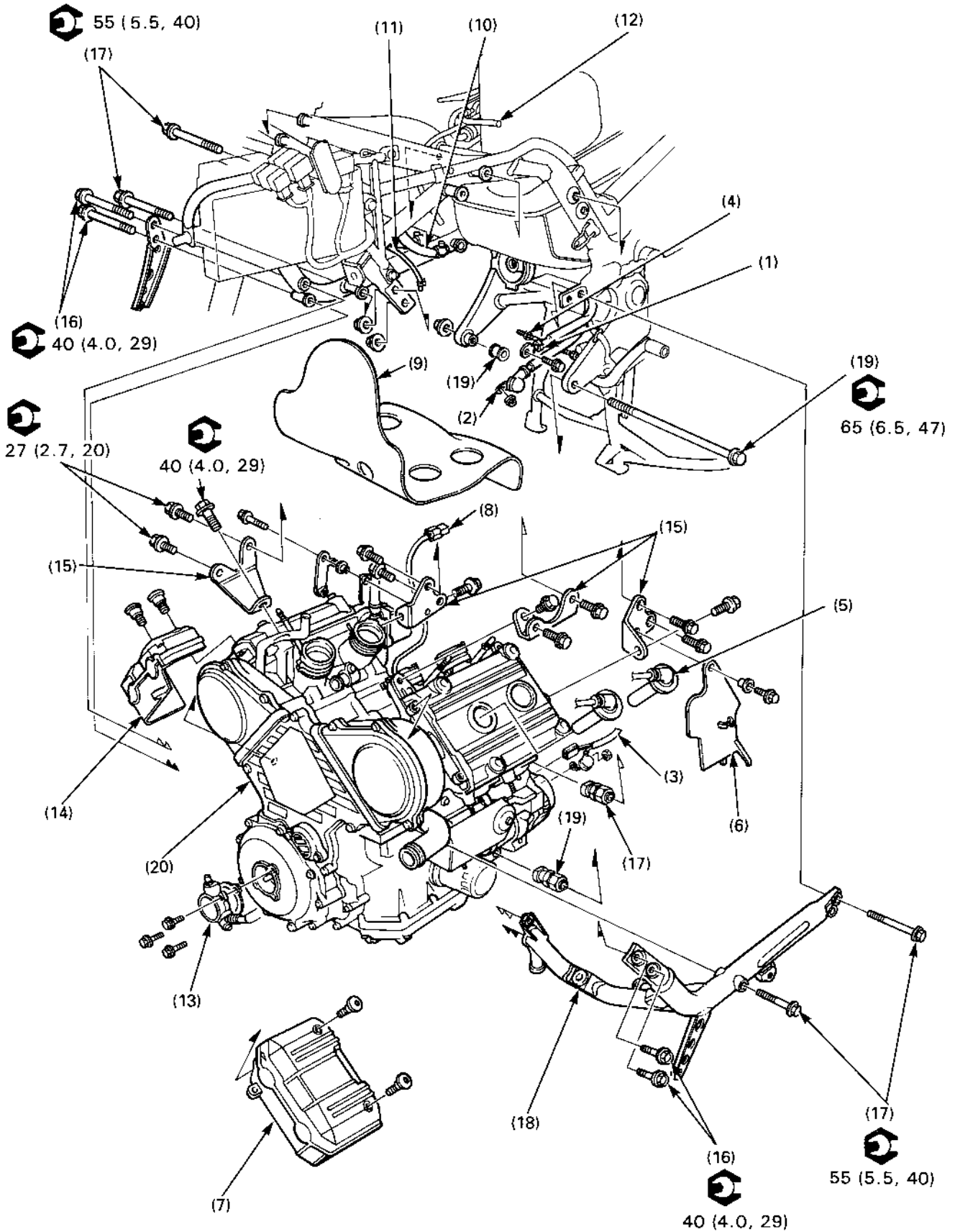


Requisite Service

- Muffler removal/installation (page 2-13)
- Exhaust pipe removal/installation (page 2-18)
- Carburetor removal/installation (page 5-3)
- Radiator removal/installation (page 6-5)

Procedure	Q'ty	Remarks	
Removal Order			
(1) Engine ground cable	1	Installation is in the reverse order of removal.	
(2) Starter motor cable	1		
(3) Gearshift pedal tie rod bolt	1	Loosen the lock nuts and remove the bolt by turning it.	
(4) Spark plug cap	4		
(5) Alternator wire connector	2		
(6) Heat guard plate	1		
(7) Front head cover	2		
(8) Ignition pulse generator wire connector	1		
(9) Carburetor heat insulator rubber	1		
(10) Water outlet hose	2		Disconnect from the cylinder heads.
(11) Water bypass hose	1		Disconnect from the water pipe.
(12) Auto fuel valve vacuum tube	1		Disconnect from the No.3 cylinder intake manifold.
(13) Clutch slave cylinder	1	Remove the three mounting bolts.	
(14) Breather hose	1	Remove from air cleaner housing.	
(15) Engine mounting bracket	4	<ul style="list-style-type: none"> • Remove the two 8 mm bolts and 10 mm bolt per each bracket. • Tightening procedure (page 7-6) 	
(16) Sub frame bolt	4	Tightening procedure (page 7-6)	
(17) 10 mm engine mounting bolt/adjusting collar	4/1		
(18) Sub frame	1		
(19) 12 mm engine mounting bolt/collar	1/2		
(20) Engine assembly	1	<p>Move the engine assembly out of the frame to the left.</p> <p>CAUTION</p> <ul style="list-style-type: none"> • Carefully align the mounting points with the jack to prevent damage to the mounting bolt threads, wire harnesses and cables. 	

After '95



Requisite Service

- Muffler removal/installation (page 2-13).
- Exhaust pipe removal/installation (page 2-18).
- Carburetor removal/installation (page 5-3).
- Radiator removal/installation (page 6-5).

Procedure		Q'ty	Remarks
Removal Order			Installation is in the reverse order of removal.
(1)	Engine ground cable	1	
(2)	Starter motor cable	1	
(3)	Alternator cable/connector	1	
(4)	Gearshift pedal tie rod bolt	1	Loosen the lock nuts and remove the bolt by turning it.
(5)	Spark plug cap	4	
(6)	Hear guard plate	1	
(7)	Front head cover	2	
(8)	Ignition pulse generator wire connector	1	
(9)	Carburetor heat insulator rubber	1	
(10)	Water outlet hose	2	Disconnect from the cylinder heads.
(11)	Water bypass hose	1	Disconnect form the water pipe.
(12)	Auto fuel valve vacuum tube	1	Disconnect from the No.3 cylinder intake manifold.
(13)	Clutch slave cylinder	1	Remove the three mounting bolts.
(14)	Breather hose	1	Remove from air cleaner housing.
(15)	Engine mounting bracket	4	<ul style="list-style-type: none"> • Remove the two 8 mm bolts and 10 mm bolt per each bracket. • Tightening procedure (page 7-6)
(16)	Sub frame bolt	4	Tightening procedure (page 7-6)
(17)	10 mm engine mounting bolt/adjusting collar	4/1	
(18)	Sub frame	1	
(19)	12 mm engine mounting bolt/adjusting collar	1/2	
(20)	Engine assembly	1	Move the engine assembly out of the frame to the left. CAUTION <ul style="list-style-type: none"> • Carefully align the mounting points with the jack to prevent damage to the mounting bolt threads, wire harnesses and cables.

Engine Mounting Bolt Tightening Procedure

Apply oil to the 10 mm engine mounting bolt threads and seating surfaces.

Loosely install all engine mounting bolts, nut, sub frame bolts, nuts, and engine mounting brackets.

Tighten the sub frame bolts in the sequence below.

①—②—③—④—⑤

Torque: 40 N·m (4.0 kg-m, 29 ft-lb)

Tighten the 10 mm engine mounting bolts ⑥ and ⑦.

Torque: 55 N·m (5.5 kg-m, 40 ft-lb)

Lengthen the adjusting collar on the 10 mm engine mounting bolt ⑧ until the collar contacts with the engine and frame by turning the adjusting nut of the collar.

After '95:

Lengthen the lower adjusting collar on the 12 mm engine mounting bolt ⑩ until the collar contacts with the engine and frame by turning the adjusting nut of the collar. Tighten the adjusting nut of the lower adjusting collar.

Torque: 10 N·m (1.0 kg-m, 7 ft-lb)

Tighten the 10 mm engine mounting bolts ⑧ and ⑨.

Torque: 55 N·m (5.5 kg-m, 40 ft-lb)

Tighten the 12 mm engine mounting bolt ⑩ and nut ⑪.

Torque: 85 N·m (6.5 kg-m, 47 ft-lb)

Tighten the adjusting collar lock nut.

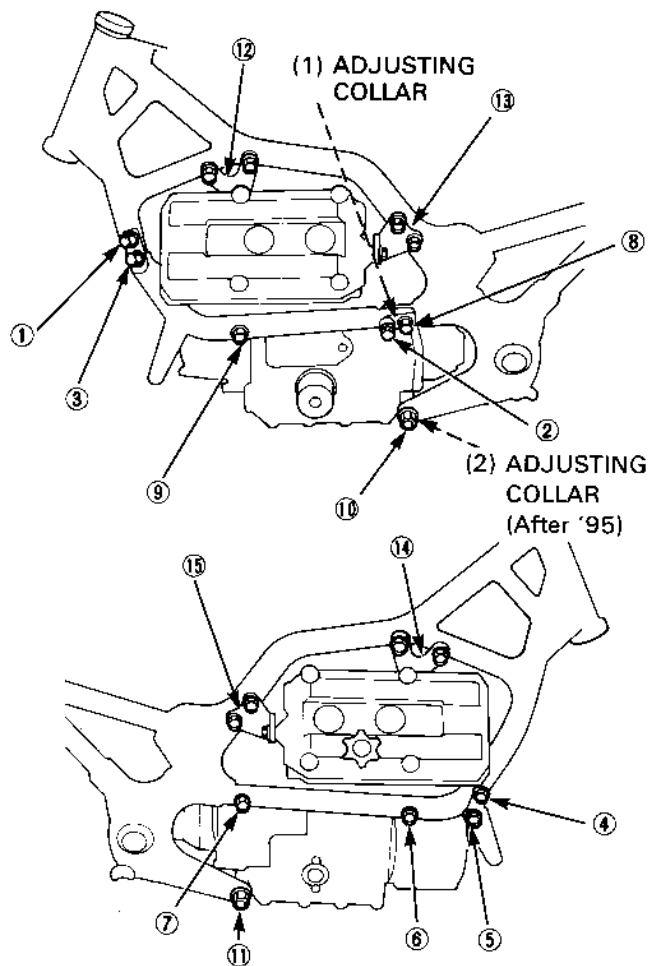
Torque: '91—'95: 21 N·m (2.1 kg-m, 15 ft-lb)

After '95: 28 N·m (2.8 kg-m, 20 ft-lb)

Tighten the engine mounting brackets ⑫, ⑬, ⑭ and ⑮.

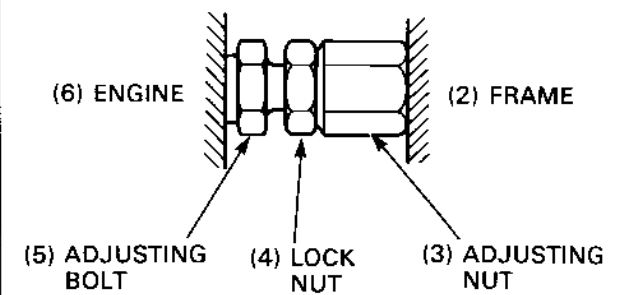
Torque: 10 mm bolt: 40 N·m (4.0 kg-m, 29 ft-lb)

8 mm bolt: 35 N·m (3.5 kg-m, 25 ft-lb)

















'91—'95 Shown:

(1) ADJUSTING COLLAR



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.

	<p>Replace the part(s) with new one(s) before assembly.</p>
	<p>Use special tool</p>
	<p>Use optional tool. Use the same procedure you use to order parts.</p>
 <p>10 (1.0, 7.2)</p>	<p>Torque specification. 10 N·m (1.0 kg-m, 7.2 ft-lb)</p>
	<p>Use recommended engine oil, unless otherwise specified.</p>
	<p>Use molybdenum oil solution (mixture of the engine oil and molybdenum grease in a ratio of 1 : 1).</p>
	<p>Use multi-purpose grease (Lithium based multi-purpose grease NLGI #2 or equivalent)</p>
	<p>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</p>
	<p>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</p>
	<p>Use silicone grease</p>
	<p>Apply a locking agent. Use a middle strength locking agent unless otherwise specified.</p>
	<p>Apply sealant</p>
	<p>Use brake fluid, DOT 3 or DOT 4. Use the recommended brake fluid, unless otherwise specified.</p>
	<p>Use Fork or Suspension Fluid.</p>