CLUTCH - 18

PARTS CATALOG, SERVICE MANUAL & SERVICE TIME SCHEDULE CODE

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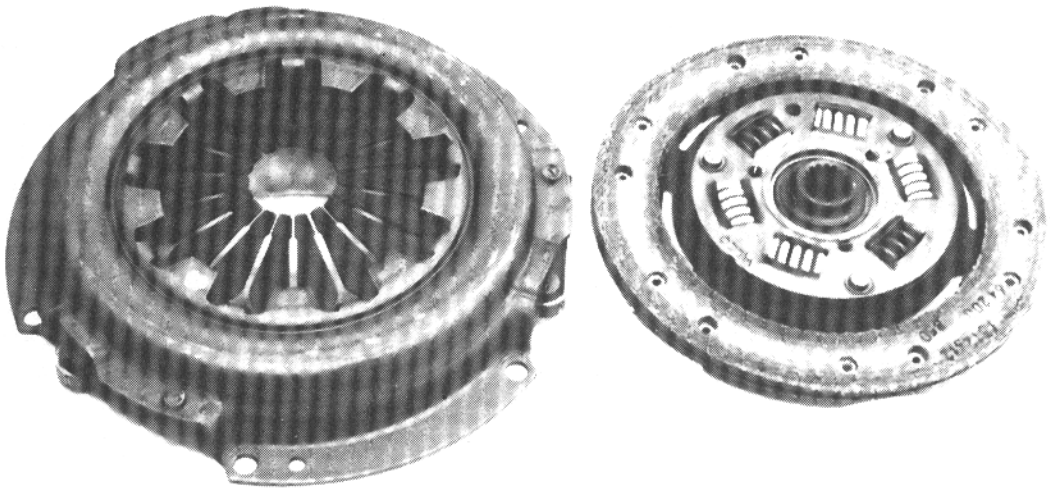
SPECIFICATIONS

DESCRIPTION	IN.	MM
Type	Dry, single plate, diaphragm spring. Hydraulically controlled. Self-adjusting, with no pedal free travel.	
Clutch disc	With friction linings	
Lining O.D.	7.5	190
Lining I.D.	5.1	130
Max. runout of disc linings	0.008	0.2
Diaphragm spring travel corresponding to a minimum pressure plate travel of not less than .067 in. (1.7 mm)	0.335 to 0.374	8.5 to 9.5
Master cylinder bore	3/4	19.05
Operating cylinder bore	3/4	19.05

TORQUE SPECIFICATIONS

DESCRIPTION	THREAD	TORQUE FIGURE N·m	Kgm	Ft. Lb.
Bolt, clutch to flywheel	M 8	38.2	3.9	28
Bolt, clutch release fork	M 8	26.5	2.7	19.5
Bolt, operating cylinder	M 8	26.5	2.7	19.5
Bolt, operating cylinder support plate to transmission case	M 8	26.5	2.7	19.5
Nut, master cylinder to support bolt	M 8	24.4	2.5	18



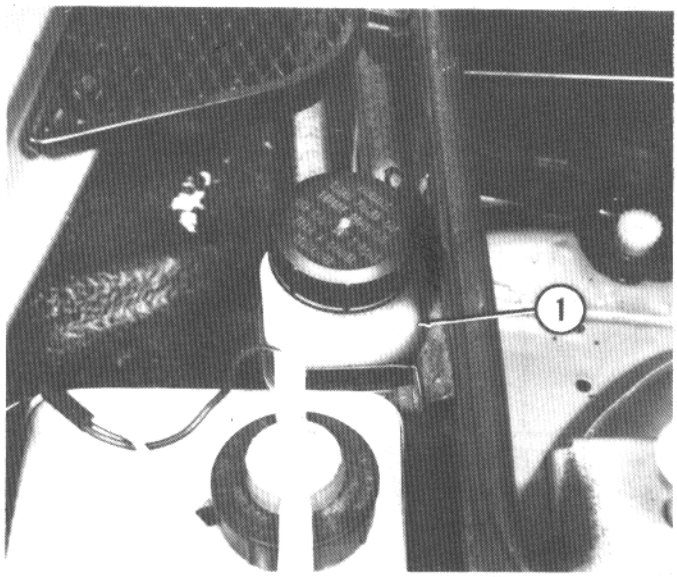
CLUTCH COVER AND CLUTCH DISC

CHECKING FLUID LEVEL

Remove cap from reservoir (1) and check fluid level. Fluid should be up to neck of reservoir.

If level is low, check fluid lines, master cylinder and operating cylinder for leakage.

1. Clutch fluid reservoir



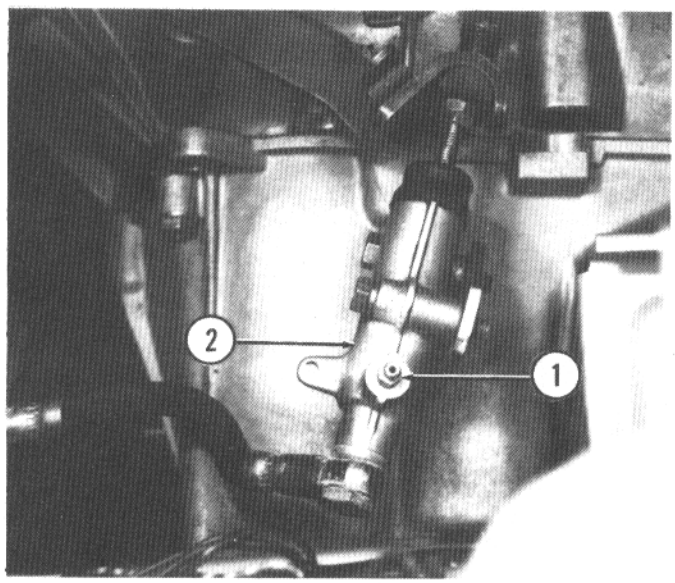
BLEEDING CLUTCH CIRCUIT

Connect a hose to bleeder screw (1) on operating cylinder (2). Place other end of hose in a container filled with fluid. Loosen bleeder screw.

Have an assistant pump clutch pedal until all air bubbles stop.

With pedal held to floor, remove hose and tighten bleeder screw. Fill reservoir.

1. Bleeder screw 2. Operating cylinder

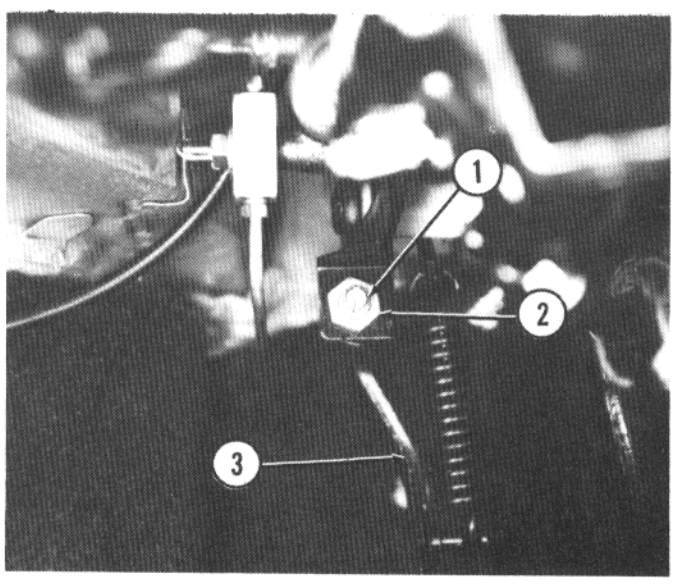


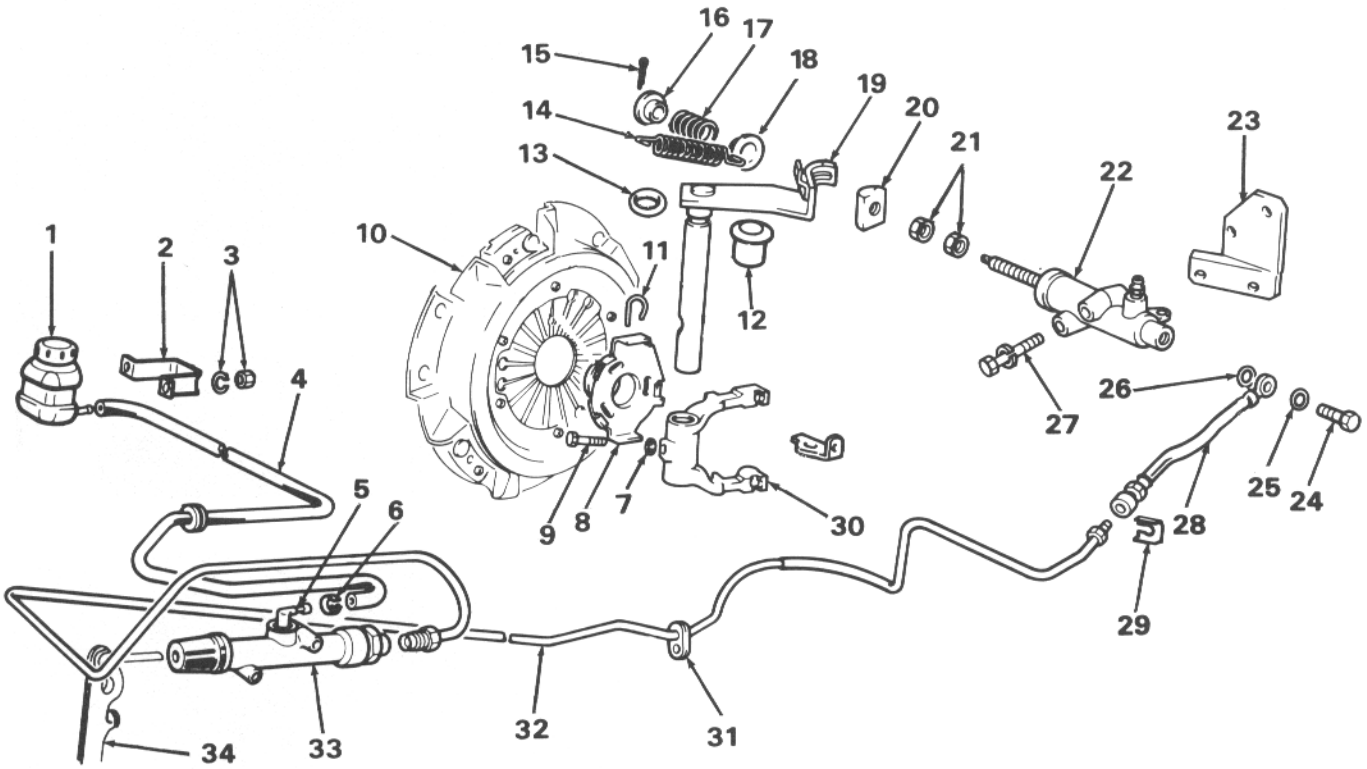
ADJUSTING PEDAL RELEASE TRAVEL

Clutch pedal travel should be about 6.7 in. (170 mm).

If travel is incorrect, loosen locknut (2) and turn screw (1) in or out as necessary to obtain proper pedal travel.

1. Adjustment screw 2. Locknut 3. Clutch pedal





1. Reservoir
2. Bracket
3. Lockwasher and nut
4. Hose
5. Connector
6. Clamp
7. Washer
8. Throwout bearing
9. Bolt
10. Clutch assembly
11. Spring clip
12. Bushing
13. Seal
14. Spring
15. Cotter pin
16. Washer
17. Spring
18. Washer
19. Lever
20. Threaded block
21. Nuts
22. Operating cylinder
23. Support plate
24. Union bolt
25. Gasket washer
26. Gasket washer
27. Bolt and lockwasher
28. Hose
29. Clip
30. Release fork
31. Rubber ring
32. Hydraulic line
33. Master cylinder
34. Clutch pedal

CLUTCH RELEASE CONTROL COMPONENTS

MASTER CYLINDER

REMOVAL AND INSTALLATION

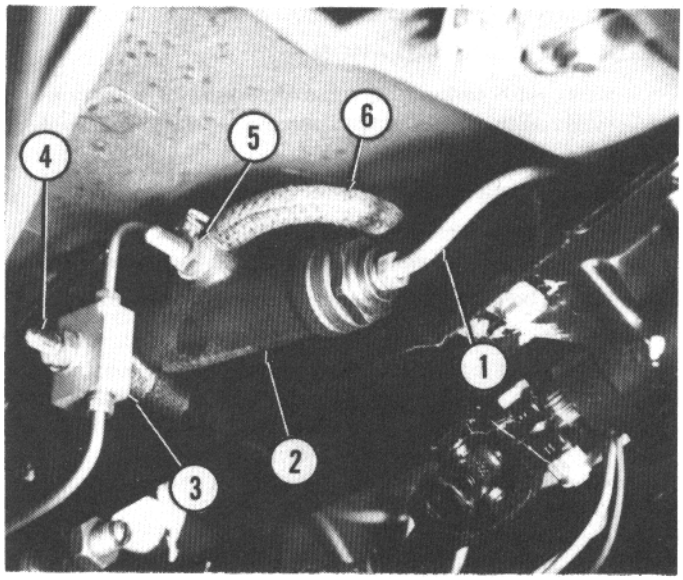
Remove lower steering column cover.

Disconnect hydraulic line (1) from master cylinder (2). Cap line.

Remove two nuts (5) and washers. Slide bolts (4) out until cylinder can be pulled out and off of cylinder rod.

Loosen hose clamp and remove hose (6). Drain fluid into container. Remove master cylinder.

Install in reverse order. Use new hose clamp. Fill reservoir, bleed clutch circuit, and check for leaks.

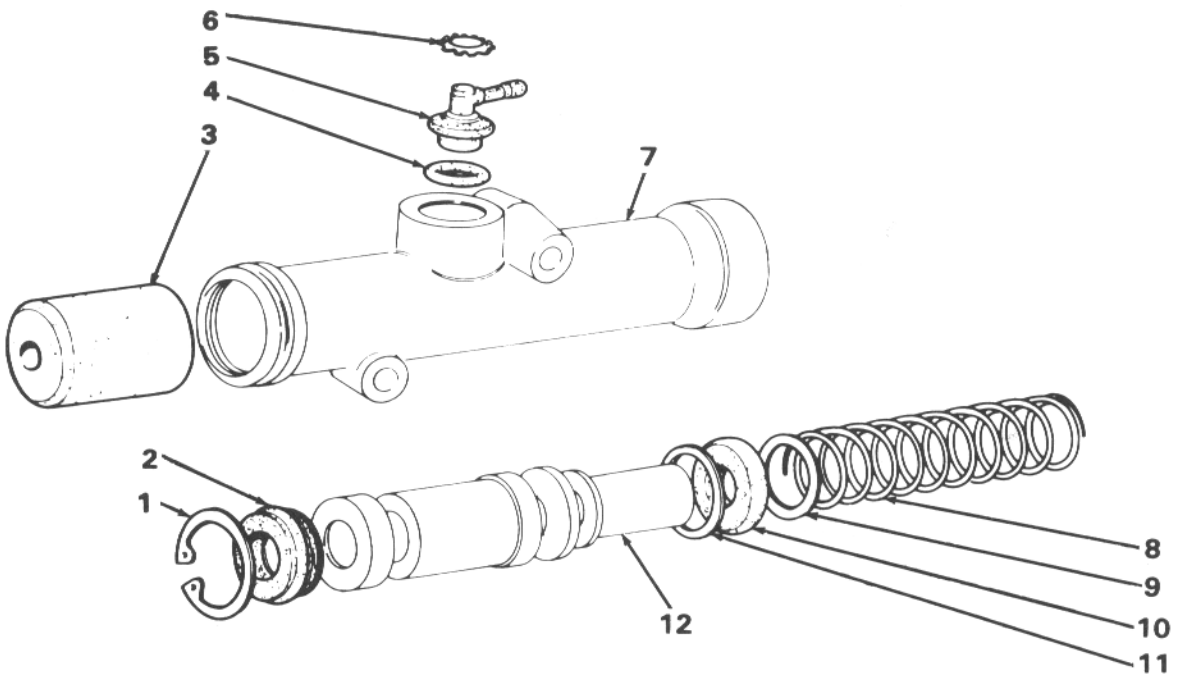


1. Hydraulic line 2. Master cylinder 3. Brake line bracket 4. Bolt 5. Nut 6. Hose

OVERHAUL

Remove boot (3), lock ring (1) and seal (2). Remove remaining internal parts (items 8 through 12) from cylinder (7).

Carefully inspect cylinder bore and piston surfaces. They should have a mirror-like finish without any kind of roughness. The cylinder bore can be honed to prevent leaks or excessive wear of seals and pistons. Do not increase size of bore. Replace seals and boot. Clean all parts with denatured alcohol and lubricate with brake fluid. Reassemble in reverse order of disassembly.



1. Lock ring
2. Seal
3. Boot
4. Gasket
5. Connector
6. Lock plate
7. Cylinder
8. Spring
9. Seal
10. Seal
11. Gasket
12. Piston

EXPLODED VIEW OF MASTER CYLINDER

OPERATING CYLINDER

REMOVAL AND INSTALLATION

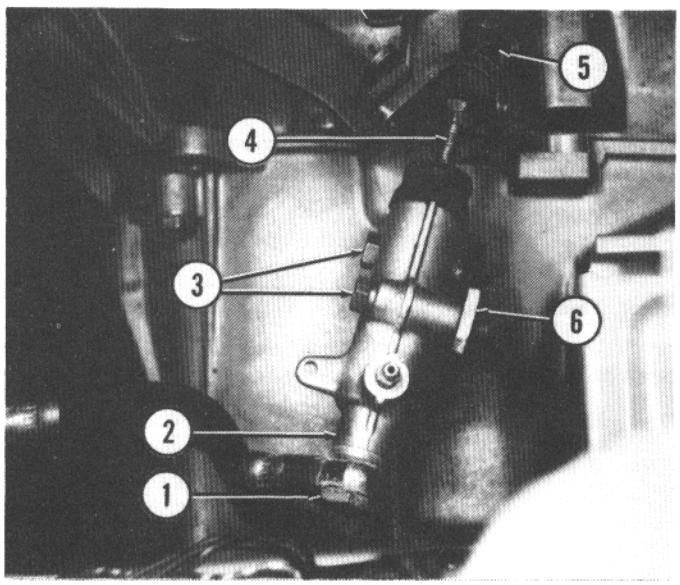
On vehicles with carburetor, remove carburetor cooling duct. On vehicles with fuel injection, remove air cleaner. Refer to 102.04.

Remove union bolt (1) from operating cylinder (2).

Hold spring (5) compressed and remove cotter pin, washer, spring and remaining washer from end of cylinder rod (4).

Remove two bolts (3) and washers holding cylinder to support plate (6). Pull cylinder out.

Install in reverse order. Use new copper gasket washers on union bolt. Bleed cylinder and fill reservoir.

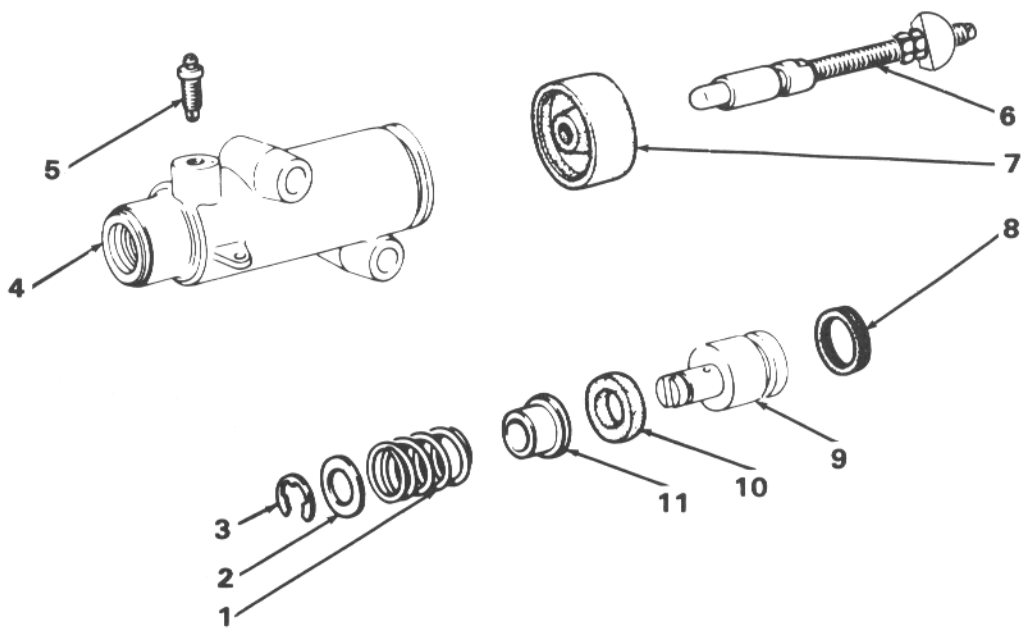


1. Union bolt 2. Operating cylinder 3. Bolts 4. Cylinder rod
5. Spring 6. Support plate

OVERHAUL

Remove bleeder screw (5). Remove cylinder rod (6) and boot (7). Remove remaining internal parts (items 8 through 11 and 1 through 3) from cylinder (4).

Carefully inspect cylinder bore and piston surfaces. They should have a mirror-like finish without any kind of roughness. The cylinder bore can be honed to prevent leaks or excessive wear of seals and pistons. Do not increase size of bore. Replace seals and boot. Clean all parts with denatured alcohol and lubricate with brake fluid. Reassemble in reverse order of disassembly.



1. Spring
2. Washer
3. Lock ring
4. Cylinder
5. Bleeder screw
6. Cylinder rod
7. Boot
8. Seal
9. Piston
10. Seal
11. Bushing

EXPLODED VIEW OF OPERATING CYLINDER

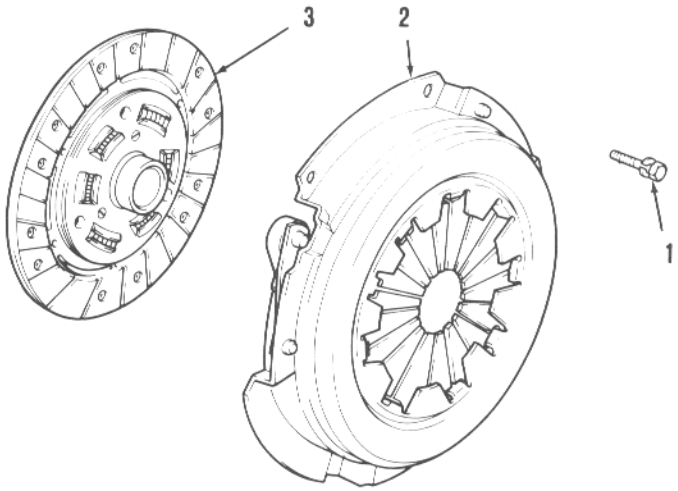
REMOVAL

Remove transmission as specified in Section 21.

If same clutch assembly is to be installed, mark position on flywheel so that correct balance will be maintained.

Remove clutch assembly (2 and 3) by gradually loosening and then removing six bolts (1).

1. Bolt 2. Pressure plate 3. Disc



INSPECTION

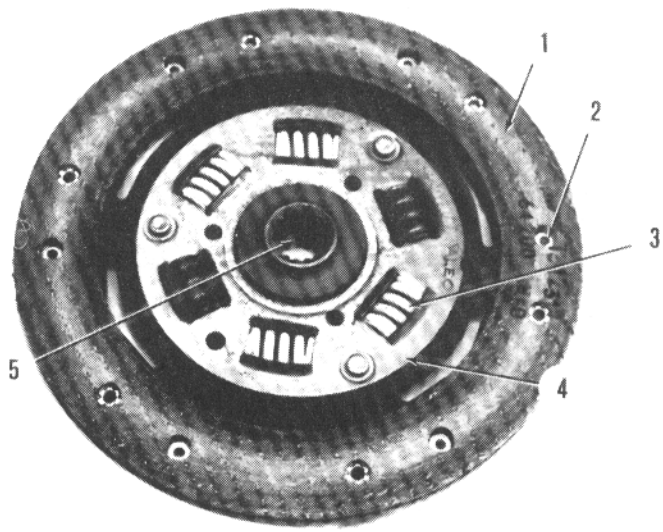
Disc

Check that surface of friction material is not less than 1/16 in. from rivet heads and is not cracked or glazed.

Check that disc is not warped.

Check that springs (3), plate (4) or splines (5) are not damaged. Replace disc if damaged.

1. Friction material 2. Rivet head 3. Spring 4. Plate 5. Splines



Pressure Plate

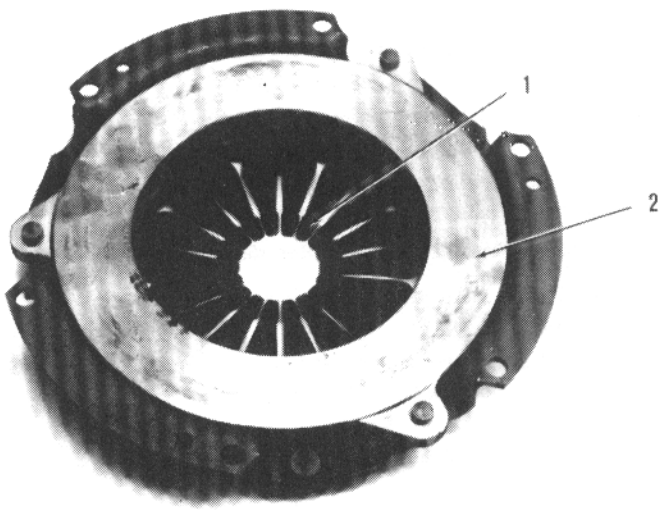
Check that fingers (1) of diaphragm spring are not broken, cracked or misaligned.

Check facing (2) for heat cracks, scoring or burns.

For minor imperfections, dress with medium grit emery cloth. Replace if damaged.

Check mounting hardware for damage. Replace if damaged.

1. Fingers 2. Facing



Flywheel

Inspect flywheel (3) for grooves, gauling, burns or heat cracks.

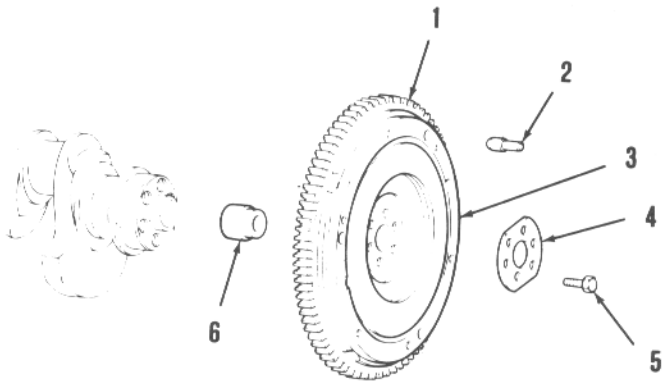
For minor imperfections, lightly dress with medium grit emery cloth. For severe damage, replace flywheel.

Check mounting bolt holes for stripped threads. Repair with helical insert. Do not use oversize bolts, as balance will be affected.

Check pilot bearing (6) for wear. Replace if worn.

Check ring gear (1) for damaged teeth. Replace if considered not serviceable.

1. Ring gear 2. Pin 3. Flywheel 4. Plate 5. Bolt 6. Pilot bearing



Throwout Bearing, Fork and Lever

Check throwout bearing (7) for serviceability. Replace if worn.

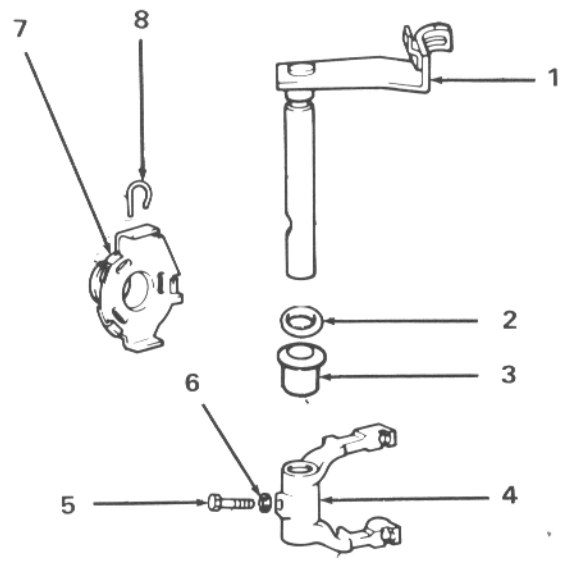
Check that spring clips (8) are properly installed.

Check that lever (1) moves freely and does not bind. If binding, disassemble by removing bolt (5) and lockwasher (6).

Clean bearing surfaces, and check that bushing (3) is not worn. Replace if bushing is worn.

Check that fork (4) is not cracked or worn. Replace if damaged. When replaced, torque bolt (5) to 19.5 ft. lbs. (2.7 kgm).

1. Lever 2. Seal 3. Bushing 4. Fork 5. Bolt 6. Lockwasher
7. Throwout bearing 8. Spring clip



INSTALLATION

If flywheel was removed, torque mounting bolts to 61 ft. lbs. (8.5 kgm).

Make sure clutch and flywheel surfaces are clean. If old clutch assembly is reinstalled, align marks made during removal.

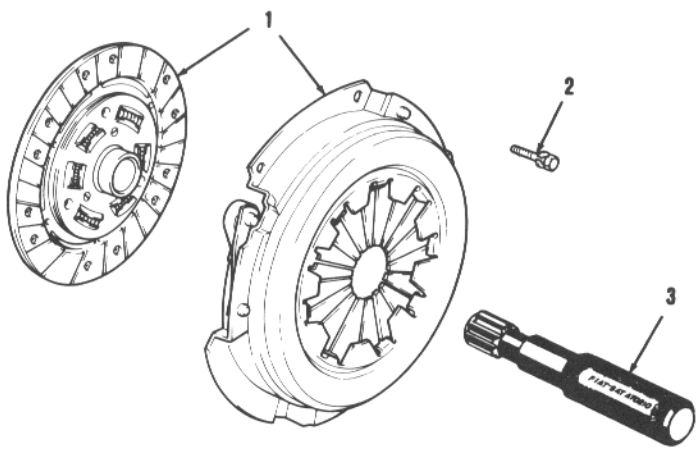
With protruding part of disc facing away from flywheel, loosely assemble clutch assembly (1) on flywheel.

Using pilot tool A.70210 (3), center disc in pressure plate.

Gradually torque mounting bolts (2) to 28 ft. lbs. (3.9 kgm). Remove pilot tool.

Lightly coat transmission shaft with white grease, then install transmission as specified in Section 21.

1. Clutch assembly 2. Bolt 3. Pilot tool



A.70210 Tool for centering driven plate on flywheel