

# CLUTCH

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## Introduction

### CAUTION

The clutch driven disc may contain asbestos, which has been determined to be a cancer causing agent. Never clean clutch surfaces with compressed air! Avoid inhaling any dust from any clutch surface! When cleaning clutch surfaces, use a commercially available brake cleaning fluid

## Adjustments

### PEDAL HEIGHT/FREE-PLAY

The free-play in the clutch is adjusted by a built in mechanism that allows the clutch controls to be self-adjusted during normal operation. The self-adjusting feature should be checked every 5,000 miles (8,052 km). This is accomplished by insuring that the clutch pedal travels to the top of its upward position. Grasp the clutch pedal by hand or put a foot under the clutch pedal; pull up on the pedal until it stops. Very little effort is required (about 10 lbs.). During the application of upward pressure, a click may be heard which means an adjustment was necessary and has been accomplished.

## Clutch Pedal

### REMOVAL & INSTALLATION

#### 1986-92 Vehicles

1. Disconnect the negative battery cable.

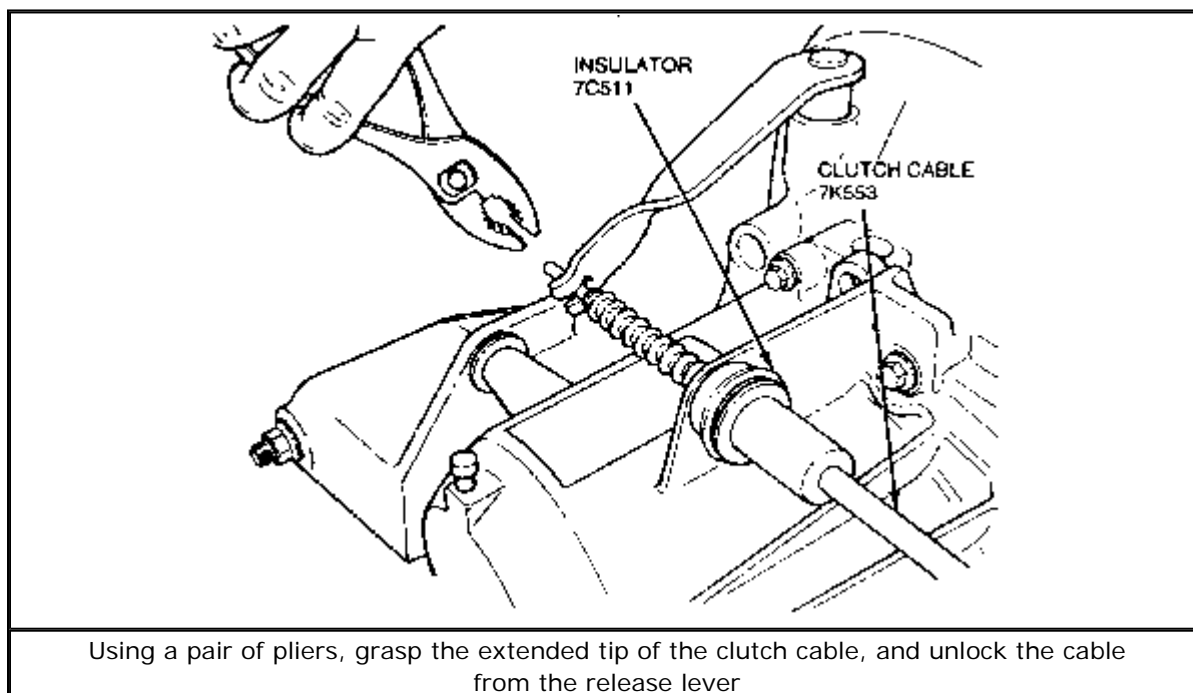




View of the clutch pedal and related components-1986 2.5L Taurus shown

2. Prop the clutch pedal up to disengage the automatic clutch adjuster using tape or a piece of wire.
3. Remove the air cleaner assembly to gain access to the clutch cable.
4. Grasp the extended tip of the clutch cable with a pair of pliers and unlock the cable from the release lever. Do not grasp the wire strand portion of the inner cable because the strands may be damaged, causing cable failure.

Do NOT grasp the wire strand portion of the inner cable because this may cut the wires, causing cable failure.



Using a pair of pliers, grasp the extended tip of the clutch cable, and unlock the cable from the release lever

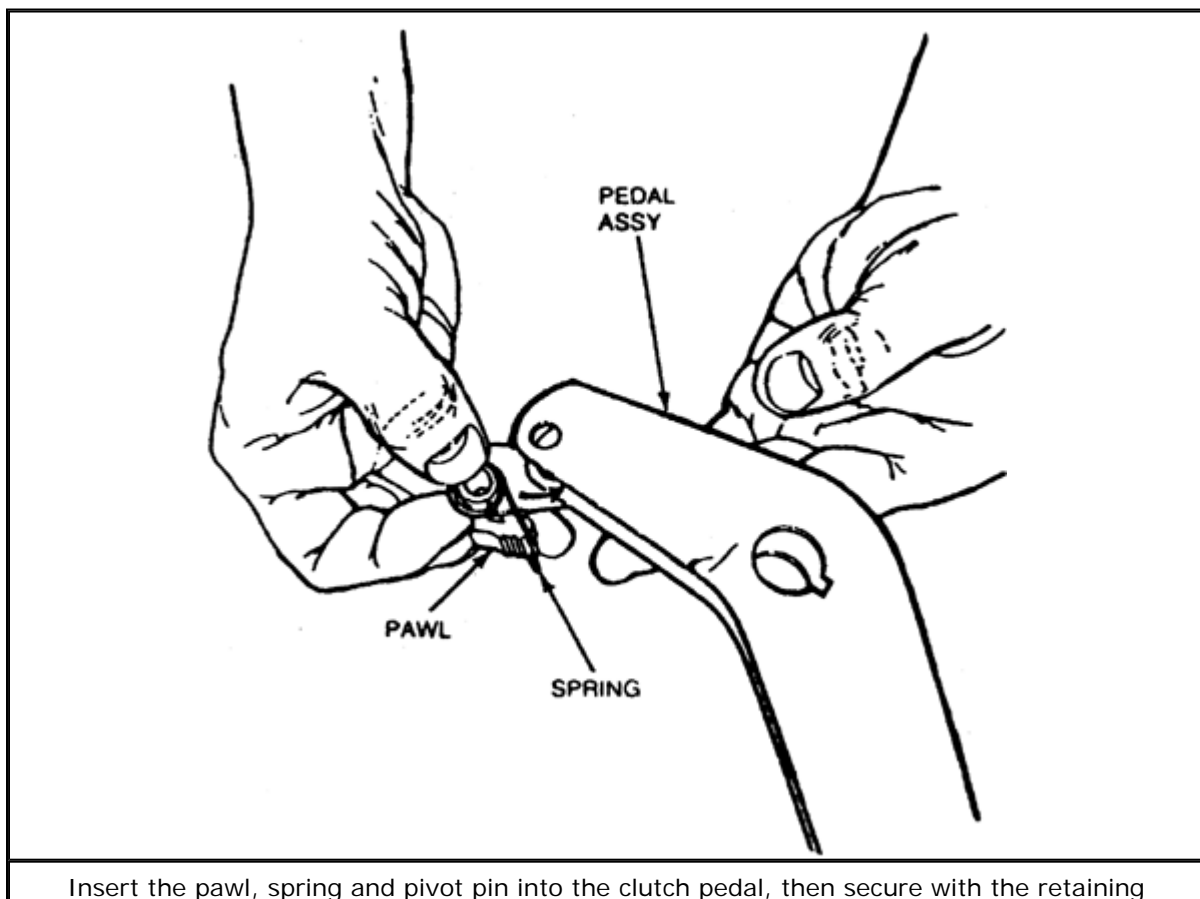
[Click to enlarge](#)

5. Unlatch the fuse panel.

6. Position the clutch shield away from the mounting plate bracket by removing the rear retaining screw. Loosen the front retaining screw located near the toe board, then rotate the shield out of the way. Secure by snugging up the front screw (the rear retaining screw is closest to the instrument panel).
7. Lift up on the clutch pedal to release the pawl and rotate the gear quadrant forward and unhook the cable from the quadrant. Allow the gear quadrant to swing rearward. Do NOT allow the quadrant to snap back.
8. Pull the cable out through the recess between the pedal and gear quadrant.
9. Unseat the cable from the insulator at the clutch pedal stop bracket. Disconnect the clutch switches.
10. Remove the clutch mounting plate and pedal assembly from the brake pedal support by removing the two nuts from the brake booster studs and two screws from the pedal support.
11. Disconnect the retaining nuts securing the clutch pedal stop bracket to the clutch pedal mounting plate, then remove the pedal.
12. If pawl removal is necessary, disconnect the quadrant tension spring from the pedal. Remove the spacer nut and pivot bolt from the clutch pedal and pivot sleeve. Remove the spring washer, two bushings, pivot sleeve and gear quadrant. Remove the pale pivot pin retaining clip, pawl pivot pin, pawl tension spring and the pawl.

**To install:**

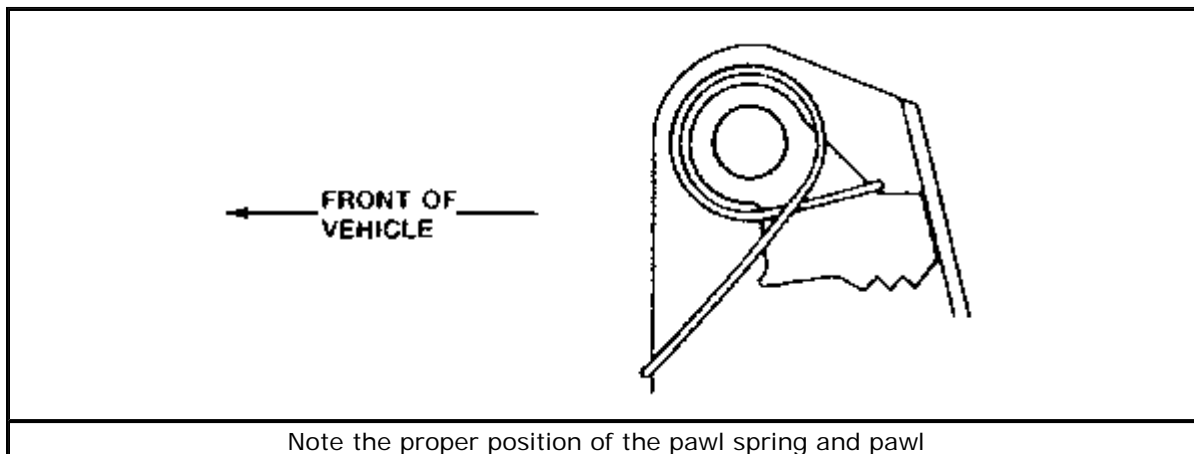
13. Lubricate the quadrant pivot bore, pawl pivot bore, quadrant pivot pin, and quadrant pivot sleeve with Premium Long Life Grease XG-1-C, or equivalent.
14. Insert the pawl, spring, and the pivot pin into the clutch pedal, then secure the retaining clip. Note the proper position of the pawl spring and pawl.



Insert the pawl, spring and pivot pin into the clutch pedal, then secure with the retaining

clip

[Click to enlarge](#)

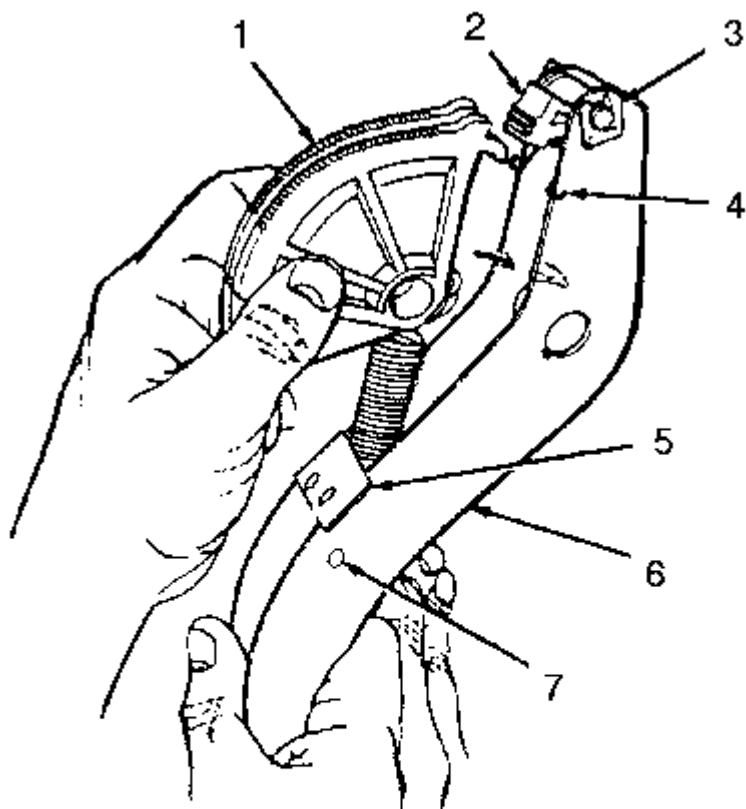


Note the proper position of the pawl spring and pawl

[Click to enlarge](#)

15. Assemble the gear quadrant spring to the gear quadrant noting the direction of the hook on the free end of the spring.



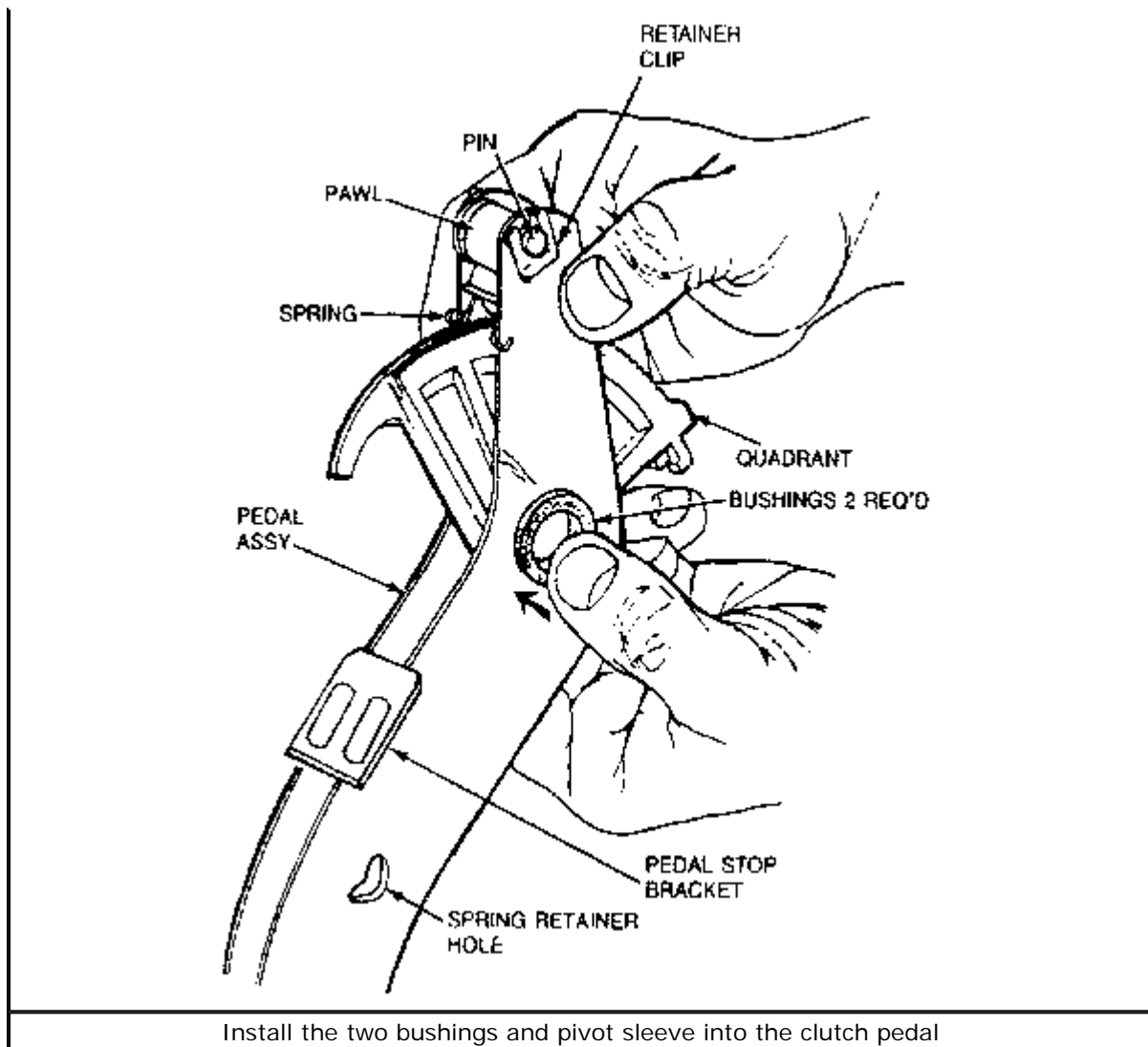


1. Gear quadrant
2. Pawl
3. Retainer
4. Spring
5. Pedal stop bracket
6. Pedal assy
7. Spring retainer hole

Assemble the gear quadrant spring to the gear quadrant, making sure to note the direction of the hook on the free end of the spring

[Click to enlarge](#)

16. Feed the gear quadrant tension spring into the pedal. Rotate the gear quadrant, then place the pawl on the gear quadrant face.
17. Install the two bushings and pivot sleeve into the clutch pedal.



[Click to enlarge](#)

18. Hook the tension spring to the hole in the clutch pedal.
19. Place the bolt through the pivot sleeve. Position the spring washer, stop mounting bracket and install the switch plate and pivot bolt nut. Tighten to 25-30 ft. lbs. (34-41 Nm).

Make sure the spring washer is functional and is not trapped under the pivot sleeve.

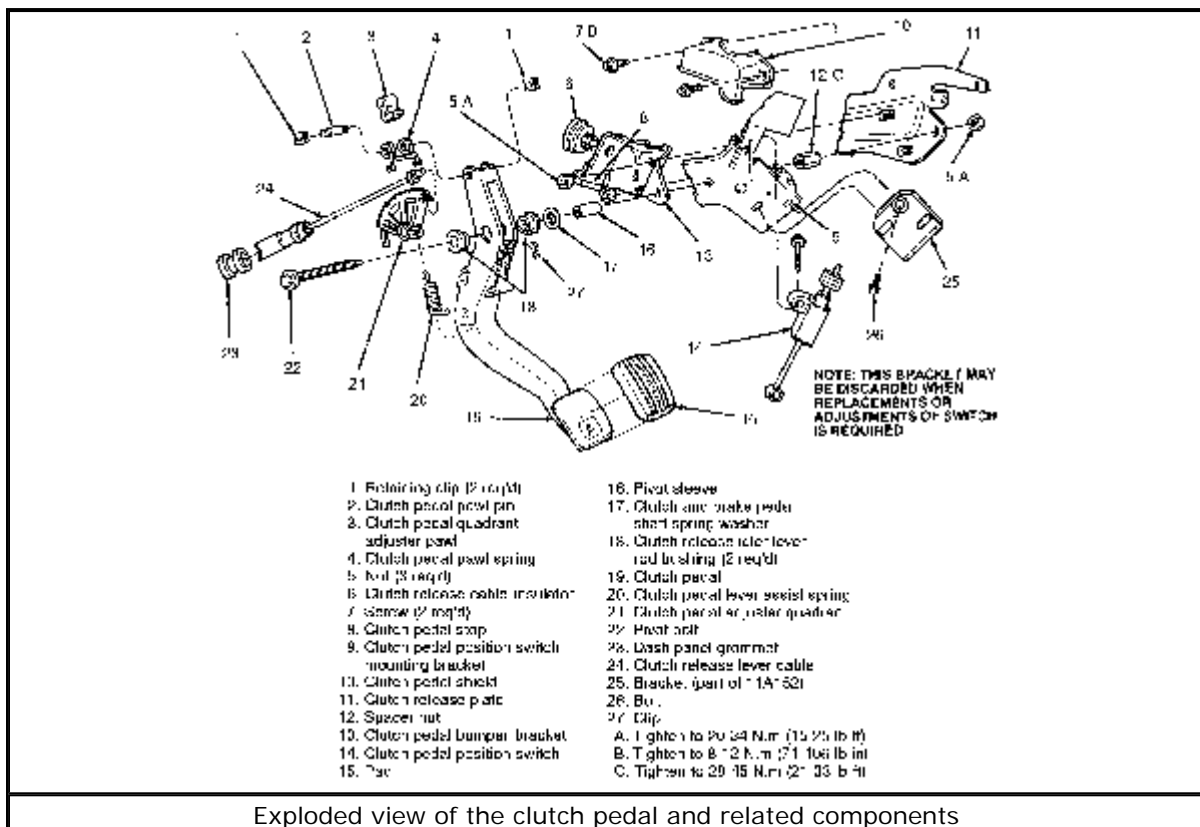
20. Position the pedal assembly on the clutch mounting plate, then install the three nuts and tighten to 15-25 ft. lbs. (20-34 Nm).
21. Secure the clutch pedal assembly and mounting plate to the brake booster studs and brake pedal support.
22. Pull the clutch cable through the insulator, clutch pedal stop bracket and the recess between the pedal and the gear quadrant. Rotate the gear quadrant forward by lifting up on the clutch pedal to release the pawl, then hook the cable into the gear quadrant.
23. Secure the clutch shield to the clutch mounting plate.
24. Install the clutch switches.
25. Using a piece of wire, cord or tape, secure the clutch pedal in its upright position

to be sure the pawl is disengaged from the quadrant.

26. Hook the clutch cable into the release lever in the engine compartment.
27. Remove the equipment used to secure the clutch pedal up against the stop in step 25.
28. Adjust the clutch by depressing the clutch pedal up against its stop several times.
29. Connect the negative battery, then install the air cleaner and start the engine to check clutch operation.

## 1993-95 Vehicles

1. Disconnect the negative battery cable.



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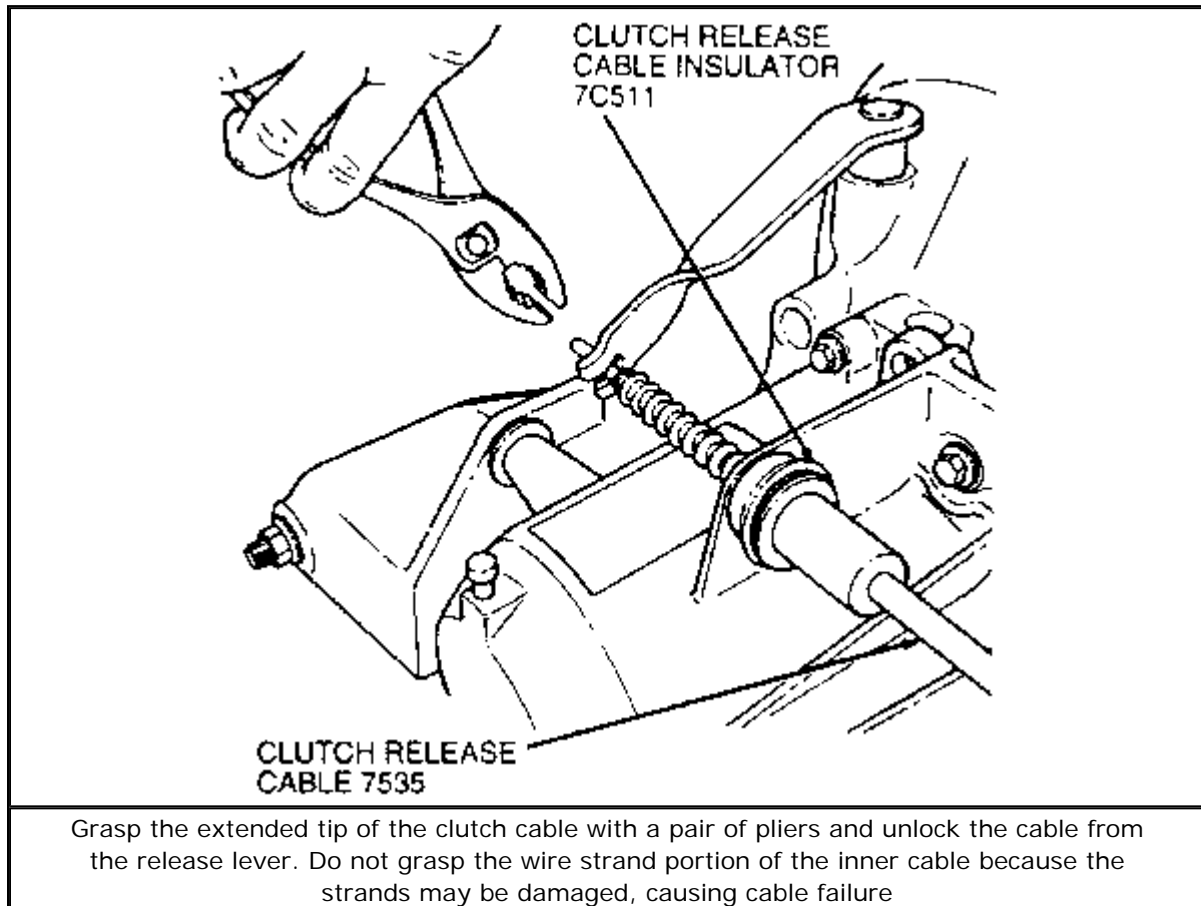
2. Unlatch the fuse panel.
3. Position the clutch shield away from the mounting plate bracket by removing the rear retaining screw. Loosen the front retaining screw located near the toe board, then rotate the shield out of the way. Secure by snugging up the front screw (the rear retaining screw is closest to the instrument panel).
4. Prop up the clutch pedal to lift the clutch pedal quadrant adjuster pawl free of the clutch pedal adjuster quadrant, which is part of the self-adjuster mechanism.

Do NOT allow the quadrant to snap back.

5. Lift up on the clutch pedal to release the pedal quadrant adjuster pawl and rotate the gear quadrant forward and unhook the cable from the quadrant. Allow the gear quadrant to swing rearward. Do NOT allow the quadrant to snap back.
6. Remove the air cleaner assembly to gain access to the clutch release lever cable.

7. Grasp the extended tip of the clutch cable with a pair of pliers and unlock the cable from the release lever. Do not grasp the wire strand portion of the inner cable because the strands may be damaged, causing cable failure.

Do NOT grasp the wire strand portion of the inner cable because this may cut the wires, causing cable failure.



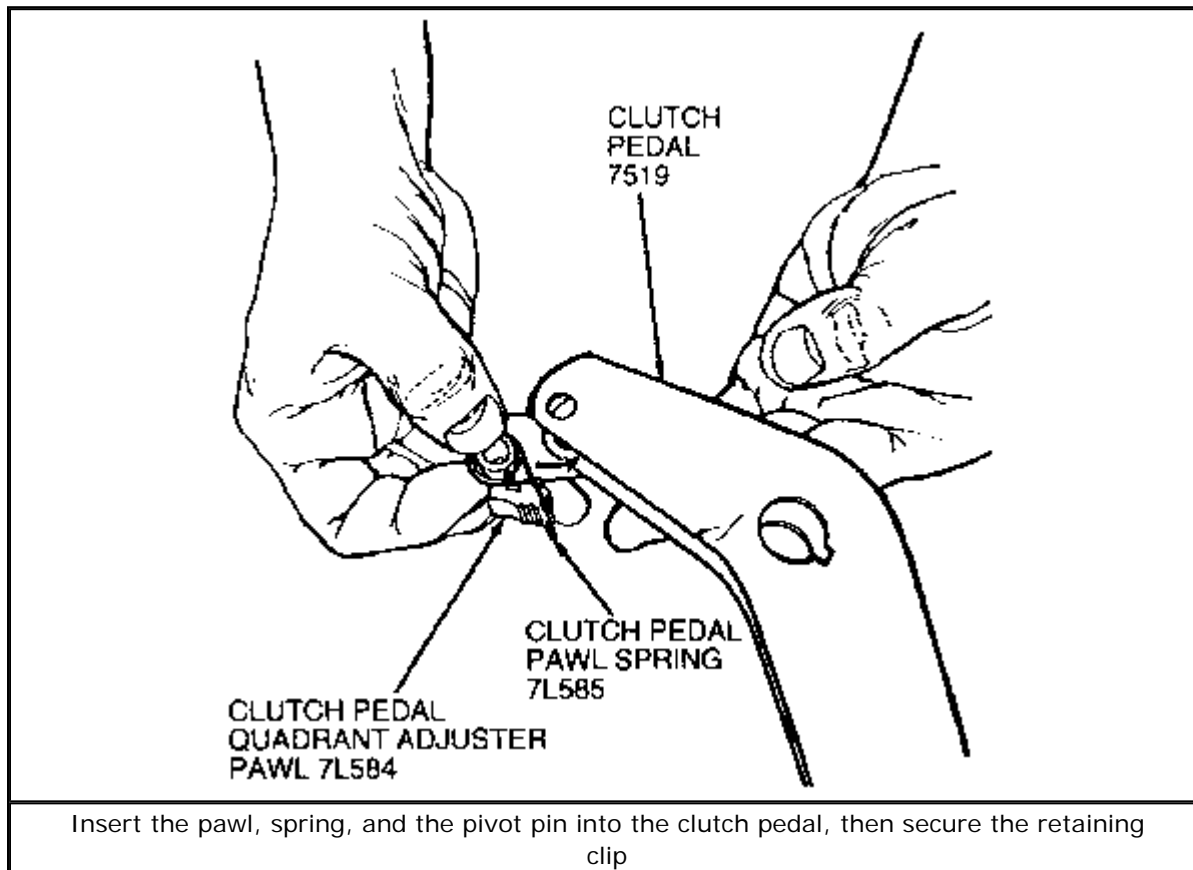
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8. Pull the clutch release lever cable out through the recess between the pedal and adjuster quadrant.
9. Unseat the clutch release lever cable from the insulator at the clutch pedal bumper bracket.
10. Disconnect the clutch pedal position switch.
11. Remove the clutch release plate and pedal assembly from the brake pedal support by removing the two nuts from the brake booster studs and two screws from the pedal support.
12. Disconnect the retaining nuts securing the clutch pedal bumper bracket to the clutch pedal release plate, then remove the clutch pedal.
13. If pawl removal is necessary, disconnect the clutch pedal lever assist spring from the pedal. Remove the spacer nut and pivot bolt from the clutch pedal and pivot sleeve. Remove the clutch and brake pedal shaft spring washer, two clutch release idler lever rod bushings, pivot sleeve and clutch pedal adjuster quadrant. Remove the pawl pivot pin retaining clip, pawl pivot pin, clutch pedal pawl spring and the pawl.

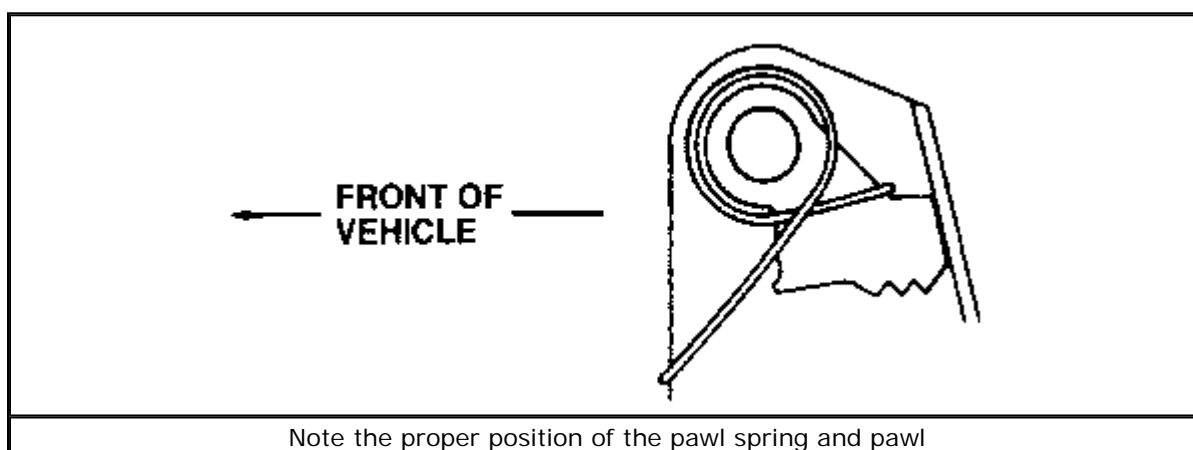
To install:



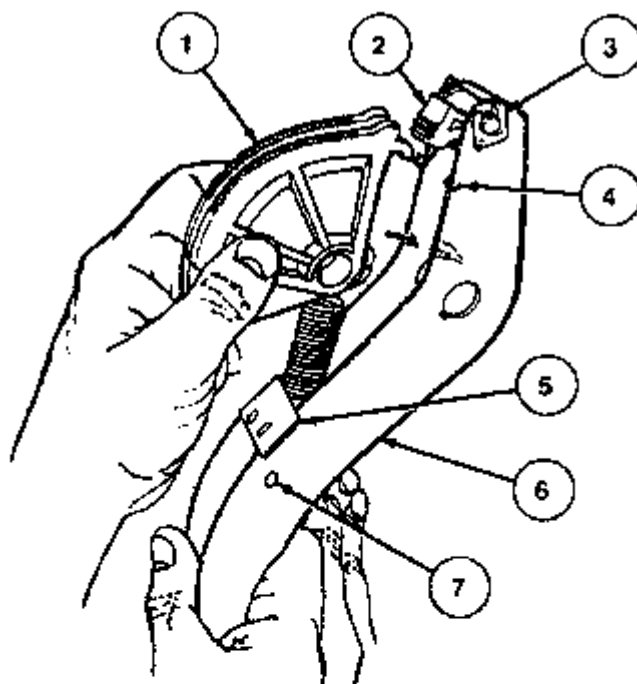
14. Lubricate the quadrant pivot bore, pawl pivot bore, quadrant pivot pin, and quadrant pivot sleeve with Premium Long Life Grease XG-1-C, or equivalent.
15. Insert the pawl, spring, and the pivot pin into the clutch pedal, then secure the retaining clip. Note the proper position of the pawl spring and pawl. Note the proper position of the clutch pedal pawl spring and clutch pedal quadrant adjuster pawl.



[Click to enlarge](#)



16. Connect the clutch pedal lever assist spring to the quadrant, noting the direction of the hook on the free end of the spring.

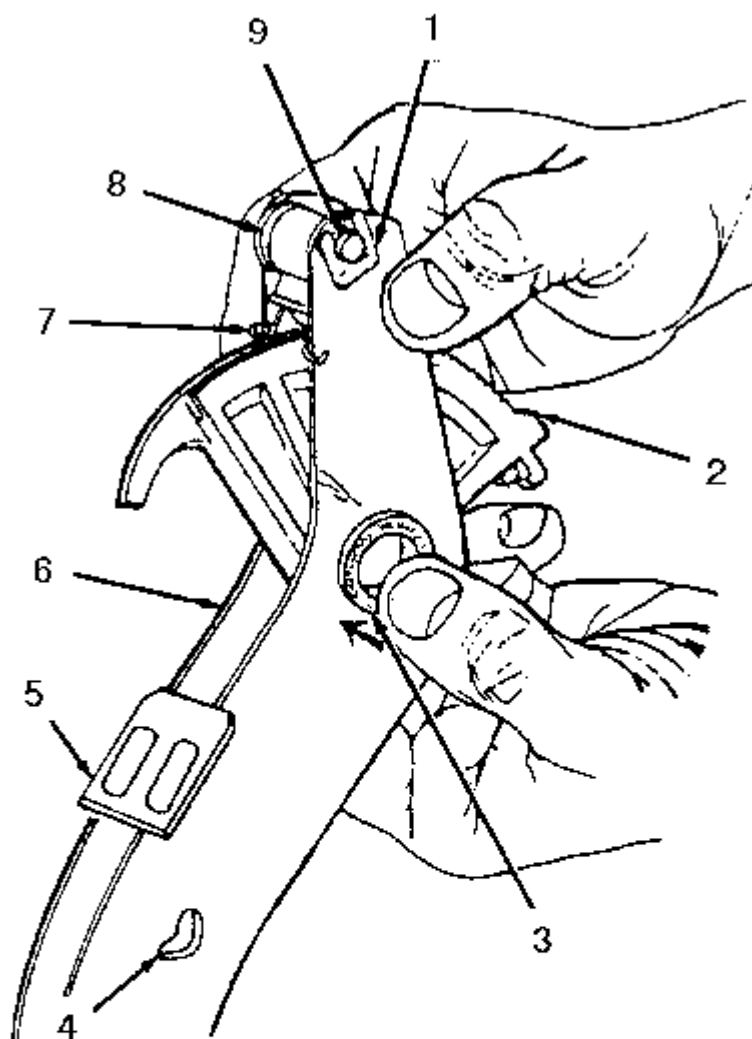


Item	Part Number	Description
1	7L583	Clutch Pedal Adjuster Quadrant
2	7L584	Clutch Pedal Quadrant Adjuster Pawl
3	N801406-S2	Retainer (2 Req'd)
4	7534	Clutch Pedal Lever Assist Spring
5	—	Pedal Stop Bracket (Part of 7519)
6	7519	Clutch Pedal
7	—	Spring Retainer Hole (Part of 7519)

Connect the clutch pedal lever assist spring to the quadrant, noting the direction of the hook on the free end of the spring

[Click to enlarge](#)

17. Feed the clutch pedal lever assist spring into the clutch pedal. Rotate the clutch pedal adjuster quadrant, then place the pawl on the quadrant face.
18. Install the two clutch release idler level rod bushings and pivot sleeve into the clutch pedal.



1. Retainer (2 req'd)
2. Clutch pedal adjuster quadrant
3. Clutch release idler lever  
rod bushing (2 req'd)
4. Spring retainer hole (part of 7519)
5. Pedal stop bracket (part of 7519)
6. Clutch pedal
7. Clutch pedal pawl spring
8. Clutch pedal quadrant  
adjuster pawl
9. Clutch pedal pawl pin

Install the two clutch release idler level rod bushings and pivot sleeve into the clutch pedal.

[Click to enlarge](#)

19. Hook the clutch pedal lever assist spring to the hole in the clutch pedal.

Make sure the spring washer is functional and is not trapped under the pivot sleeve.

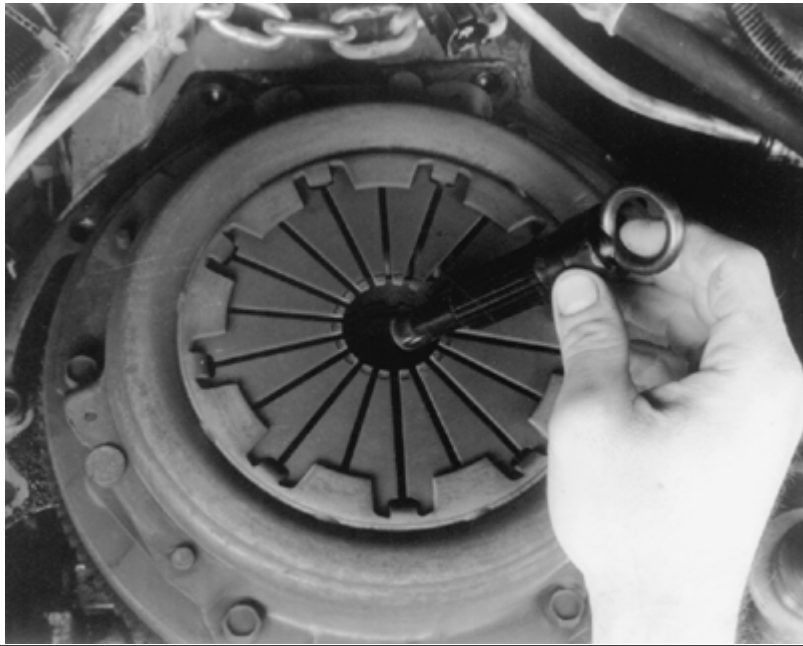
20. Place the bolt through the pivot sleeve. Position the clutch and brake pedal shaft spring washer, clutch and brake pedal shaft spring washer, clutch pedal bumper bracket, then install the clutch pedal position switch mounting bracket and pivot bolt nut. Tighten to 26-29 ft. lbs. (34-40 Nm).
21. Position the clutch pedal assembly on the clutch release plate, then install the retaining nuts. Tighten to 15-25 ft. lbs. (20-34 Nm).
22. Secure the clutch pedal assembly and release plate to the brake booster studs and brake pedal support.
23. With the quadrant at the window stop position, pull the clutch release lever cable through the clutch release cable insulator, clutch pedal bumper bracket and the recess between the clutch pedal and the clutch pedal adjuster quadrant. Rotate the quadrant forward by lifting up on the clutch pedal to release the pawl and hook the cable into the quadrant.
24. Secure the clutch pedal shield to the clutch release plate, then tighten to 71-106 inch lbs. (8-12 Nm).
25. Install the clutch pedal position switch, then adjust by pressing the clutch pedal to the floor.
26. Using a piece of wire, cord or tape, secure the clutch pedal in its upmost position to make sure the clutch pedal quadrant adjuster pawl is disengaged from the quadrant.
27. Hook the clutch release lever cable into the clutch assist lever in the engine compartment.
28. Remove the equipment used to secure the clutch pedal up in step 25.
29. Reposition the fuse panel.
30. Adjust the clutch by pressing the clutch pedal several times.
31. Install the air cleaner, then connect the negative battery cable.

## Driven Disc and Pressure Plate

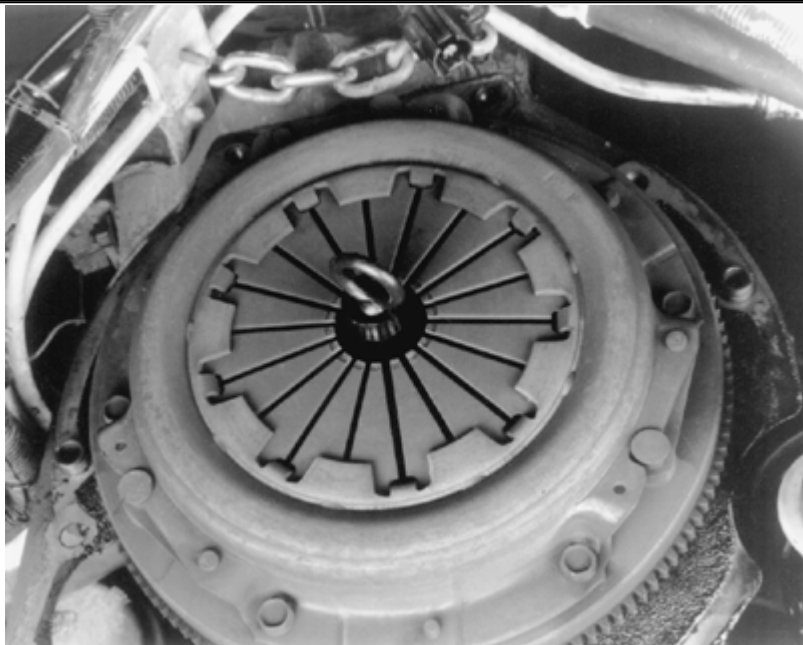
### REMOVAL & INSTALLATION

1. Disconnect the negative battery cable, then raise and safely support the vehicle.
2. Remove the transaxle. For details, please refer to the procedure located earlier in this section.

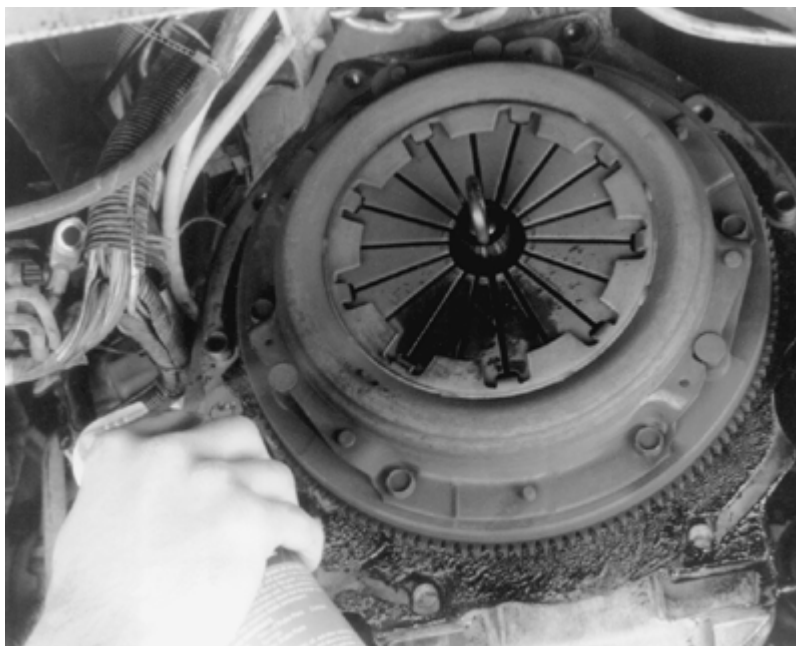




Installing the clutch arbor/alignment tool-this can be done before removal, or during installation

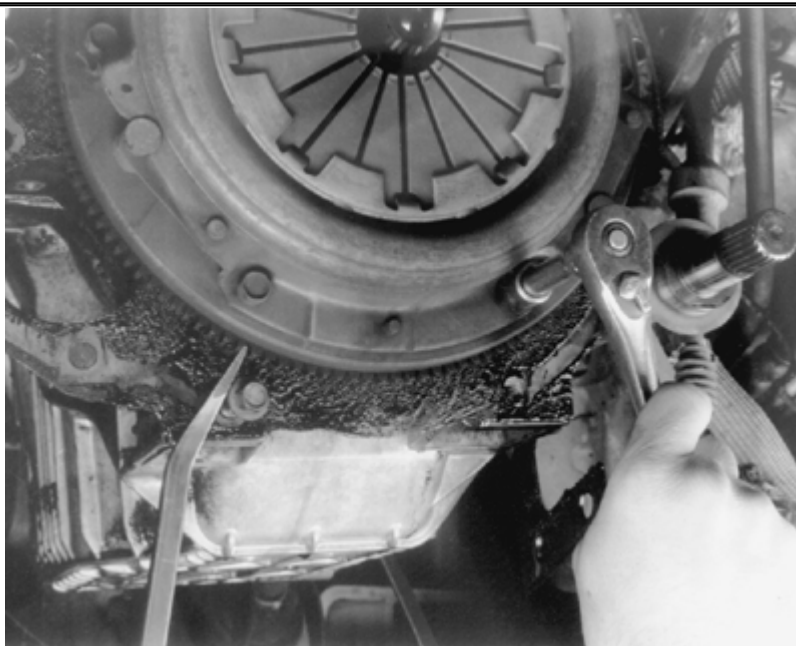


Once the transaxle is removed, the clutch pressure plate cover is visible



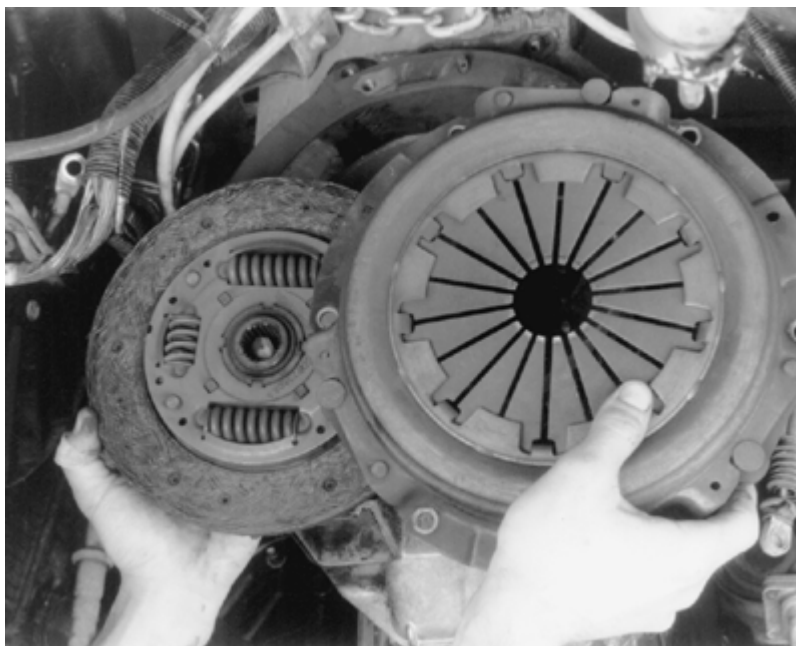
If the pressure plate cover is dirty or dusty, clean it with a commercially available spray cleaner

- 3. Loosen the six clutch pressure plate cover retaining bolts evenly to release the spring tension gradually, and to avoid distorting the cover. If the same clutch pressure plate and cover are to be installed, mark the cover and the flywheel so the pressure plate can be installed in its original position.**

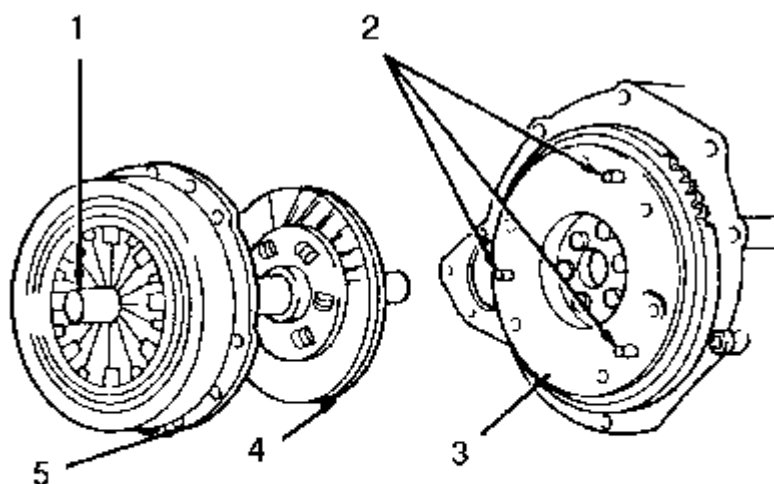


Loosen the six pressure plate retaining bolts evenly to release the tension gradually

- 4. Remove the pressure plate and clutch disc from the flywheel.**



After all of the retaining bolts are removed, you can remove the pressure plate and clutch disc from the flywheel

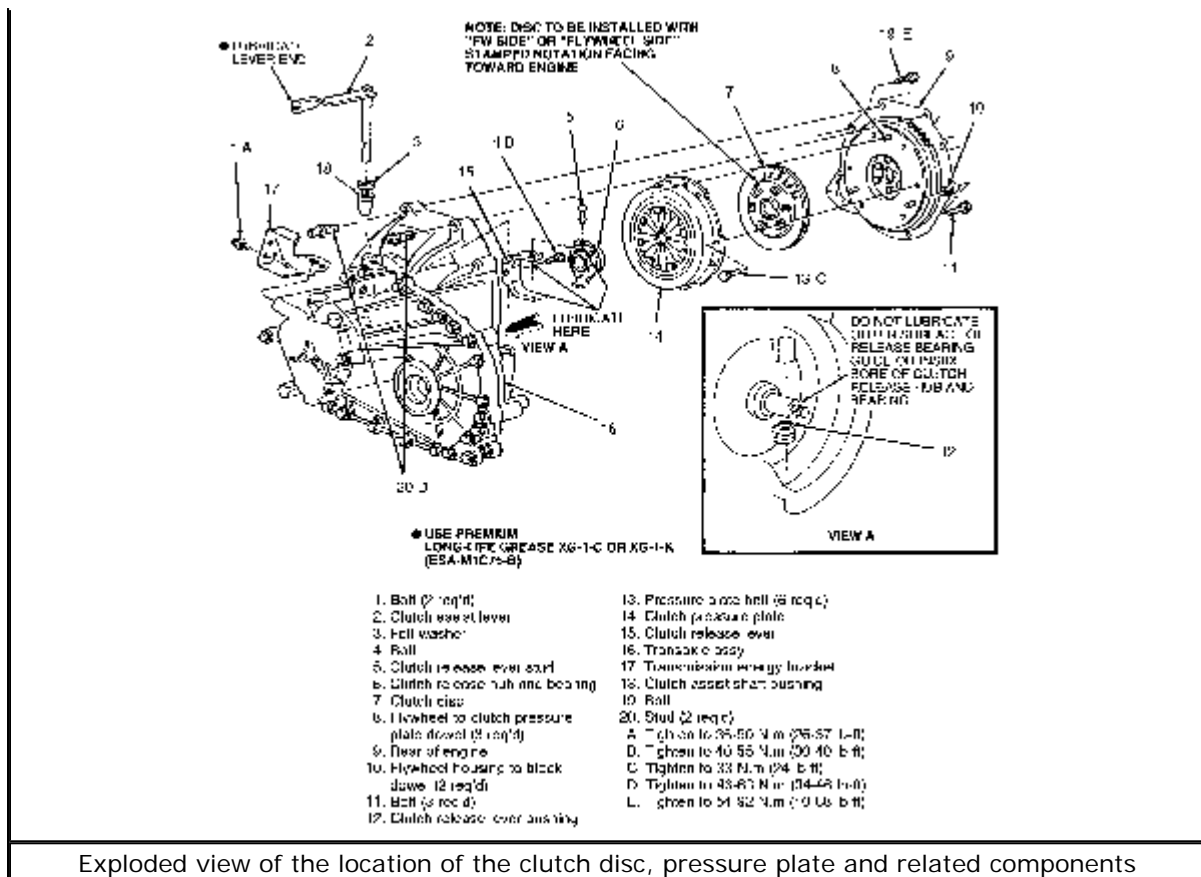


1. Clutch aligner
2. Flywheel-to-clutch pressure plate (3 req'd)
3. Flywheel
4. Clutch disc
5. Clutch pressure plate

View of a common clutch disc and pressure plate mounting

[Click to enlarge](#)

5. Inspect the flywheel, clutch disc, pressure plate, throwout bearing and the clutch fork for wear. Replace parts as required. If the flywheel shows any signs of overheating (blue discoloration) or if it is badly grooved or scored, it should be refaced or replaced.



Exploded view of the location of the clutch disc, pressure plate and related components

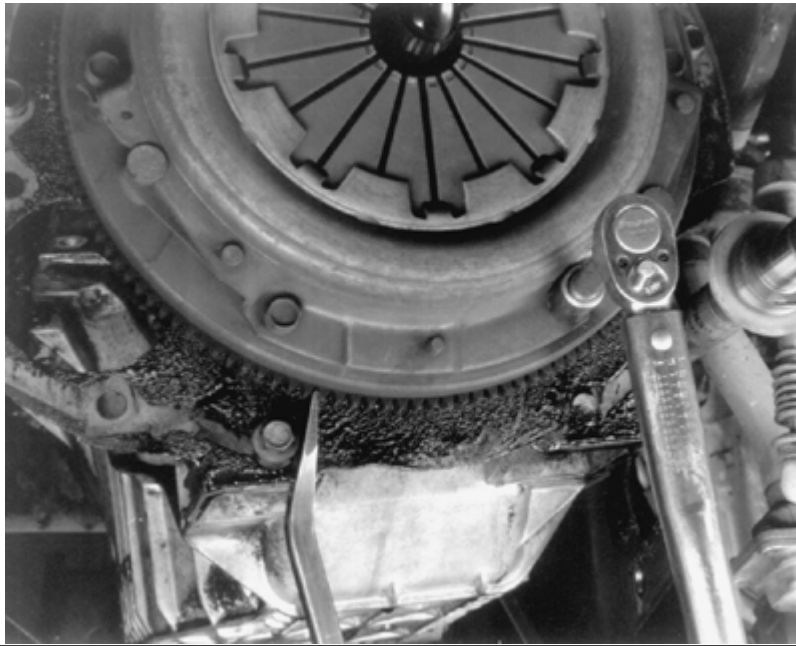
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#### To install:

Avoid touching the clutch disc face, dropping parts or contaminating parts with oil or grease.

6. The clutch disc must be assembled so that the stamped notation is facing toward the engine. The three flywheel-to-clutch pressure plate dowels must be properly aligned with the clutch pressure plate. (Bent, damaged or missing dowels must be replaced.)
7. Clean the pressure plate and flywheel surfaces thoroughly.
8. Position the disc and pressure plate on the flywheel, then insert the cover retaining bolts, but do not tighten them at this time.
9. Align the clutch disc using Clutch Arbor/Aligner Tool T81P-7550-A or equivalent, inserted in the crankshaft. To avoid clutch pressure plate cover distortion, alternately tighten the cover bolts until the cover is fully seated, then tighten to 24 ft. lbs. (33 Nm) for 1993-95 vehicles. For 1986-92 vehicles, alternately tighten the cover bolts to 12-24 ft. lbs. (16-33 Nm). Remove the alignment tool.





Alternately tighten the bolts, in a crisscross pattern, until the cover is fully seated to avoid cover distortion, then tighten the bolts to specification

10. Install the transaxle. For details, please refer to the procedure earlier in this section.
11. Connect the negative battery cable.

## Clutch Cable

### REMOVAL & INSTALLATION

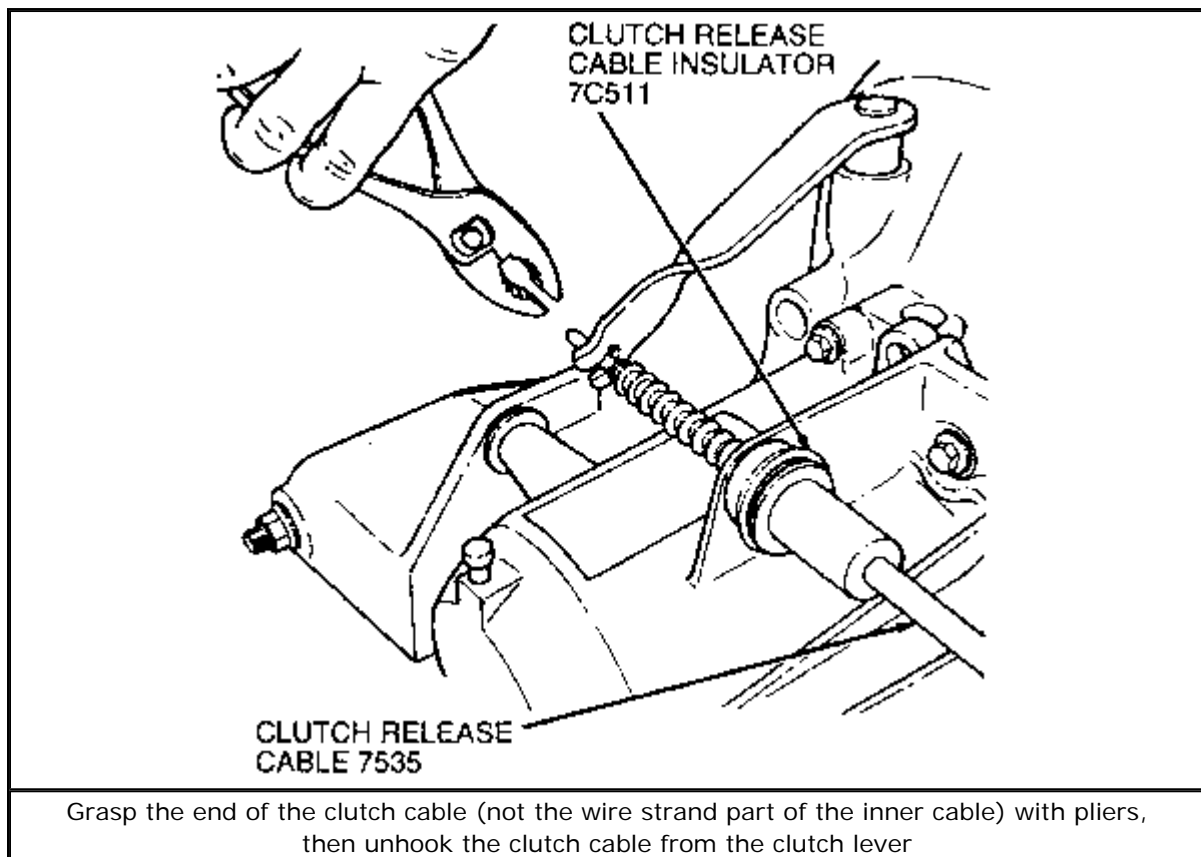
Whenever the clutch cable is disconnected for any reason, such as transaxle removal or clutch/clutch pedal/clutch cable replacement, the proper method for installing the clutch cable must be followed.

1. Disconnect the negative battery cable.
2. Position the clutch shield away from the mounting plate bracket/clutch release plate by removing the rear retaining screw. Loosen the front retaining screw located near the toe board, then rotate the clutch pedal shield aside. Secure by tightening the front screw. (The rear retaining screw is closest the the instrument panel.)
3. Prop up the clutch pedal to lift the pawl free of the quadrant which is part of the self-adjuster mechanism.

Do NOT allow the clutch pedal adjuster quadrant to snap back.

4. With the clutch pedal lifted up to release the clutch pedal quadrant adjuster pawl, rotate the clutch pedal adjuster quadrant forward. Unhook the clutch cable from the quadrant. Allow the quadrant to swing rearward.
5. Remove the air cleaner assembly to gain access to the clutch cable.
6. Grasp the end of the clutch cable using pliers, then unhook the clutch cable from the clutch bearing release lever.

Do not grasp the wire strand portion of the inner cable since this might cut the wires and result in cable failure.

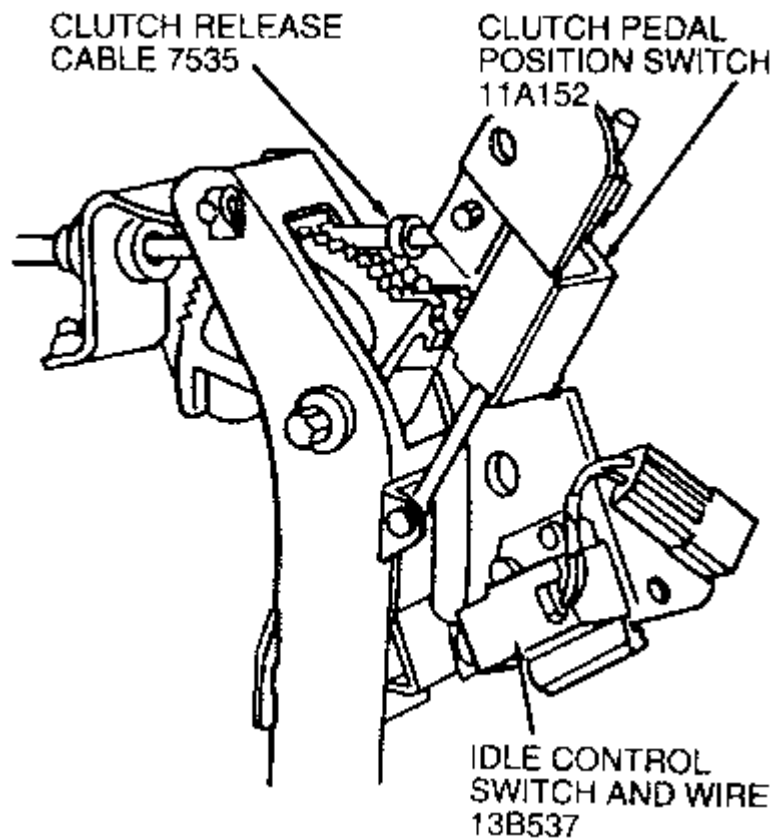


7. Disconnect the cable from the insulator that is located on the rib of the transaxle.
8. Pull the cable out through the recess between the pedal and the quadrant, and from the insulator on the pedal assembly.
9. Remove the cable by withdrawing it through the engine compartment.

**To install:**

The clutch pedal must be lifted to disengage the adjusting mechanism during cable installation. Failure to do so will result in damage to the self-adjuster mechanism. A prying instrument must never be used to install the cable into the quadrant.

10. Insert the clutch cable assembly from the engine or passenger compartment (if the clutch pedal was removed) through the dash panel and dash panel grommet. Make sure the cable is routed inboard of the brake lines and not trapped at the spring tower by the brake lines.
11. With the quadrant at the window stop position, push the clutch cable through the insulator on the stop bracket and through the recess between the pedal and the gear quadrant.



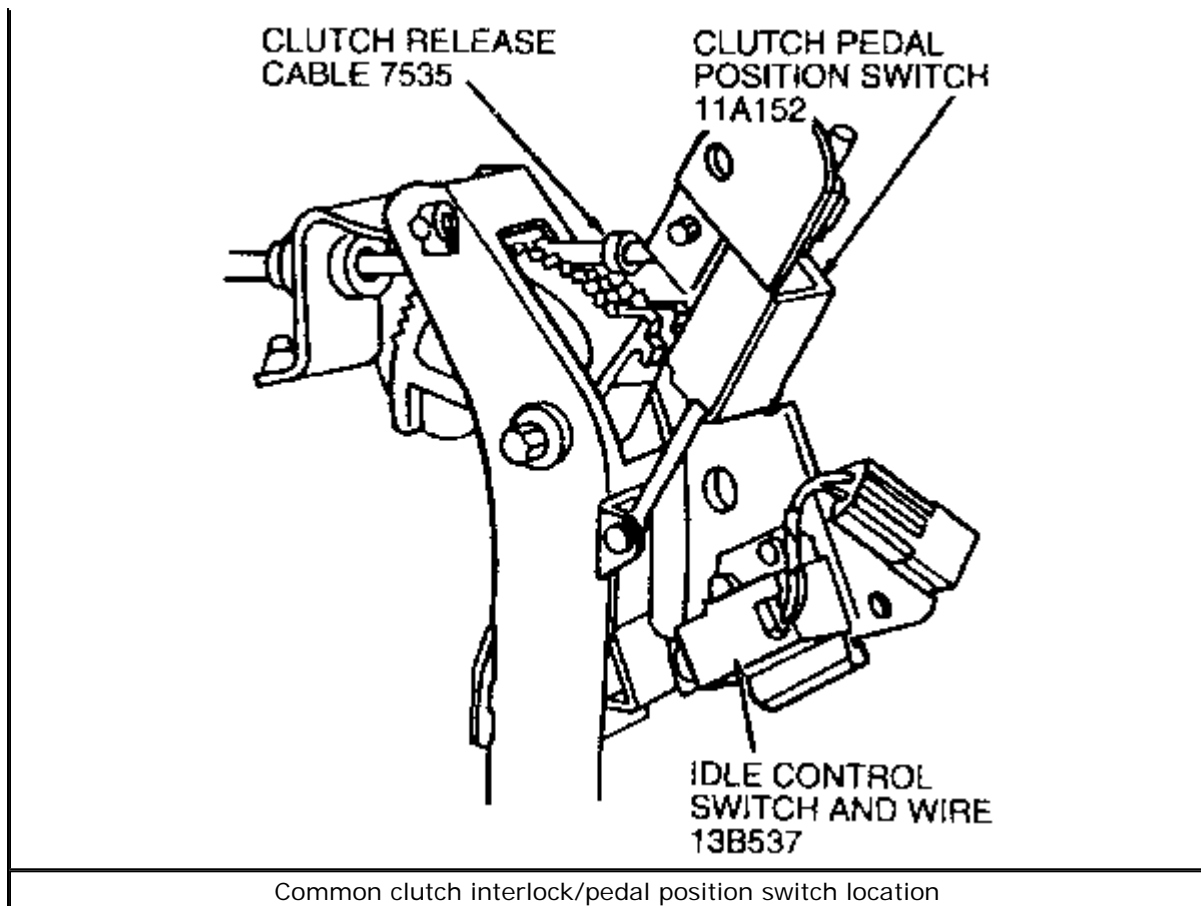
With the quadrant at the window stop position, push the cable through the insulator on the bumper bracket and through the recess between the pedal and quadrant

12. With the clutch pedal lifted up to release the pawl, rotate the gear quadrant forward. Hook the cable into the gear quadrant.
13. Secure the clutch shield on the clutch mounting/release plate.
14. Using a piece of wire, cord or other suitable device, secure the pedal in the upmost position.
15. Install the clutch cable in the insulator on the rib of the transaxle.
16. Hook the cable into the clutch release lever in the engine compartment.
17. Remove the device that was used to temporarily secure the pedal against its stop.
18. Adjust the clutch by pressing the clutch pedal down several times.
19. Install the air cleaner, then connect the negative battery cable.

## Clutch Interlock/Pedal Position Switch

### REMOVAL & INSTALLATION

1. Disconnect the negative battery cable.
2. Disengage the switch electrical connector.
3. Remove the retaining screw and hairpin clip, then remove the switch from the vehicle.



**To install:**

Always install the switch with the self adjusting clip about 1 in. (25mm) from the end of the rod. Be sure that the clutch pedal is in the full up position or the switch will be improperly adjusted.

4. Insert the eyelet end of the rod over the pin on the clutch pedal, then secure with the retaining clip.
5. Align the mounting boss with the corresponding hole in the bracket, then install the screw. Tighten the screw to 80-115 inch lbs. (9-13 Nm).
6. Reset the switch by pressing the clutch pedal to the floor.
7. Engage the switch electrical connector, then connect the negative battery cable.