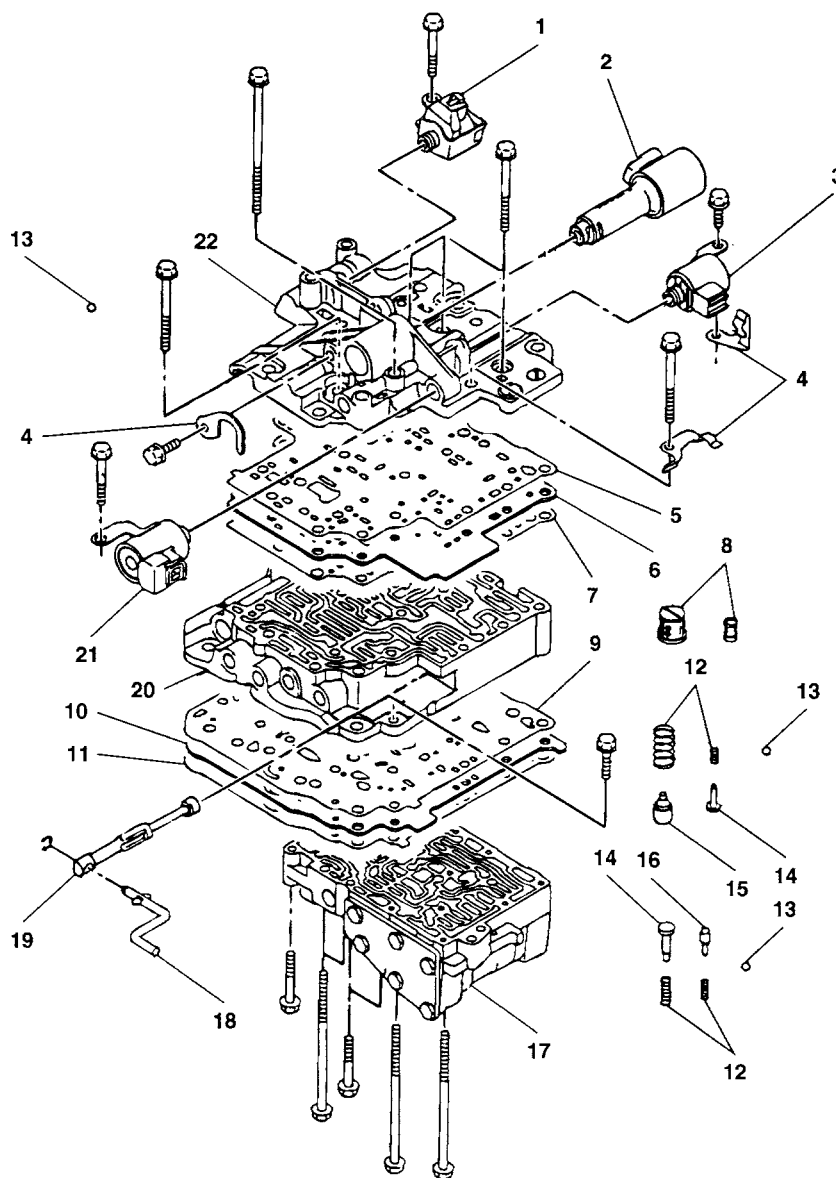
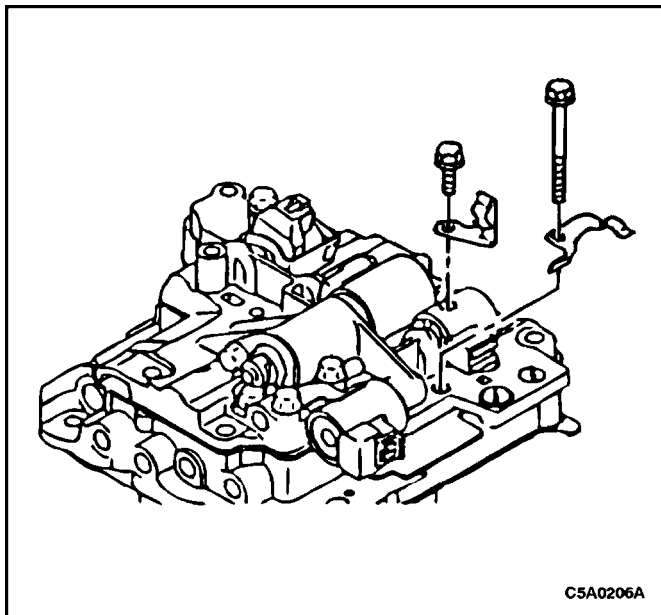


VALVE BODY ASSEMBLY



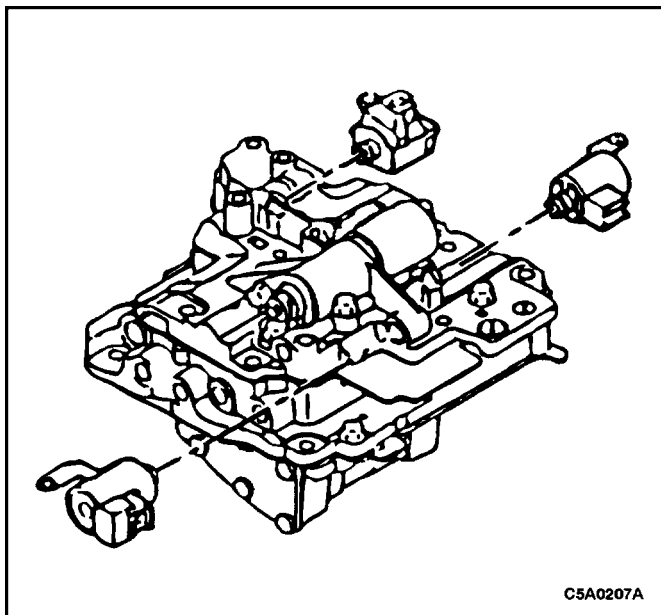
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- | | |
|---------------------------------------|----------------------------|
| 1. Lockup Solenoid | 12. Spring(s) |
| 2. Linear Solenoid | 13. Check Ball |
| 3. Shift Solenoid 1 (SS1) | 14. Check Valve |
| 4. Wire Harness Clamp | 15. Bypass Valve |
| 5. Upper Valve Body Gasket | 16. Pressure Relief Valve |
| 6. Upper Valve Body Separator Plate | 17. Lower Valve Body |
| 7. Center Valve Body Gasket (No. 1) | 18. Manual Valve Rod |
| 8. Oil Strainer | 19. Manual Valve |
| 9. Center Valve Body Gasket (No.2) | 20. Center Valve Body |
| 10. Center Valve Body Separator Plate | 21. Shift Solenoid 2 (SS2) |
| 11. Lower Valve Body Gasket | 22. Upper Valve Body |

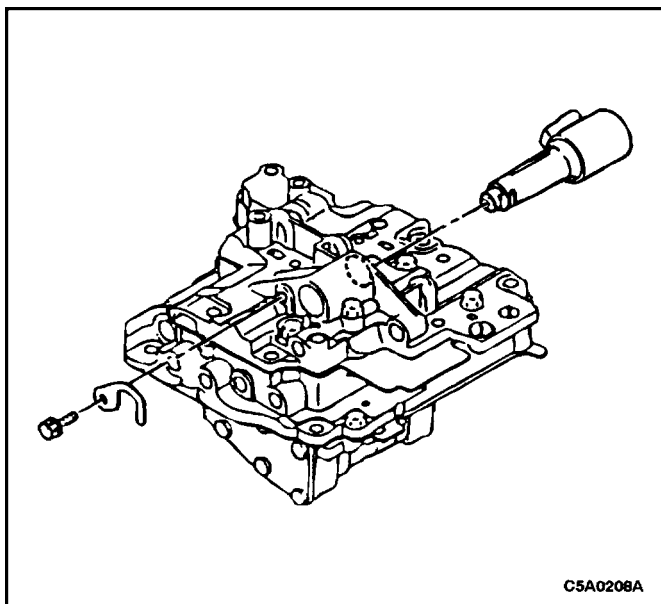


Disassembly Procedure

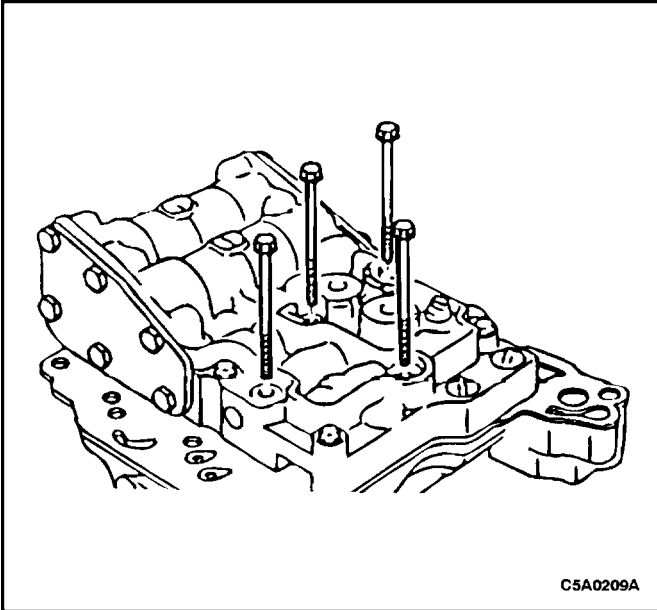
1. Remove the wire harness clamps.



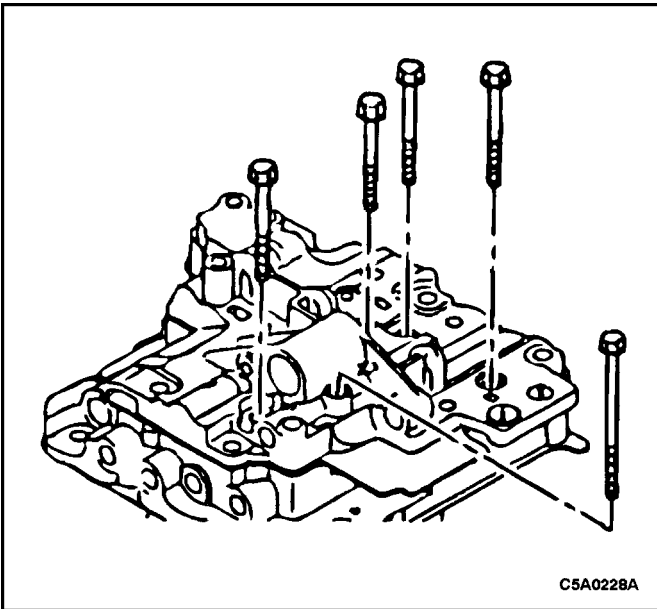
2. Remove the shift and lockup solenoids.



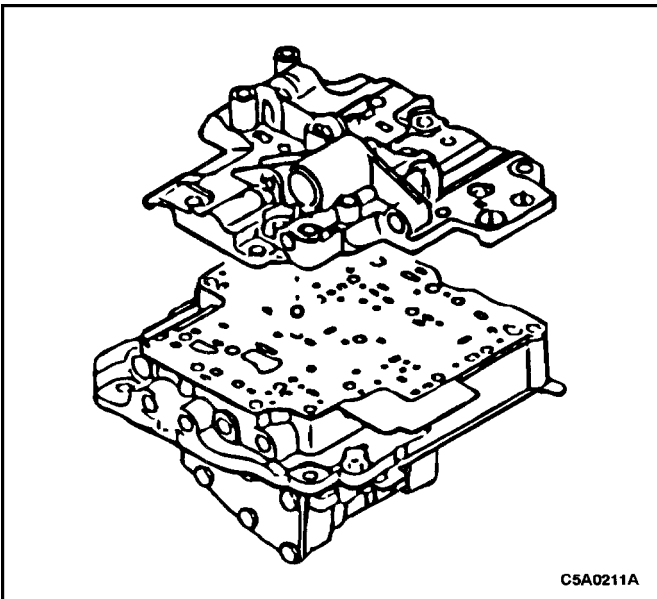
3. Remove the linear solenoid and the wire harness clamp.



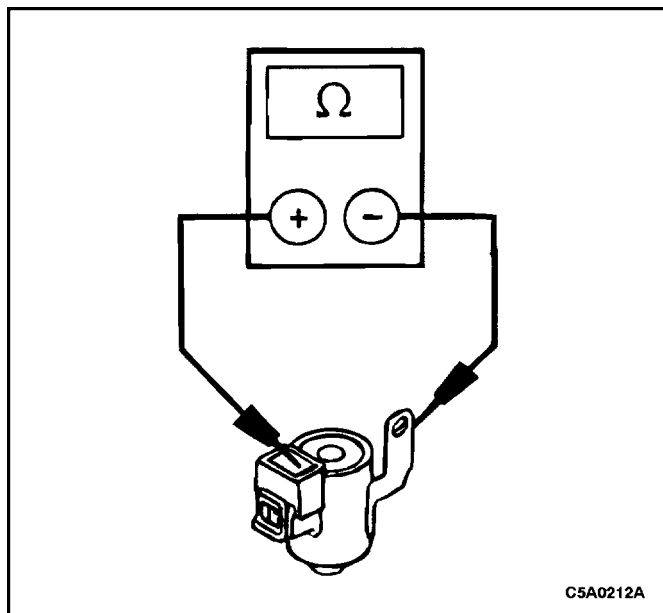
4. Turn the valve body assembly over and remove the four bolts from the lower valve body.



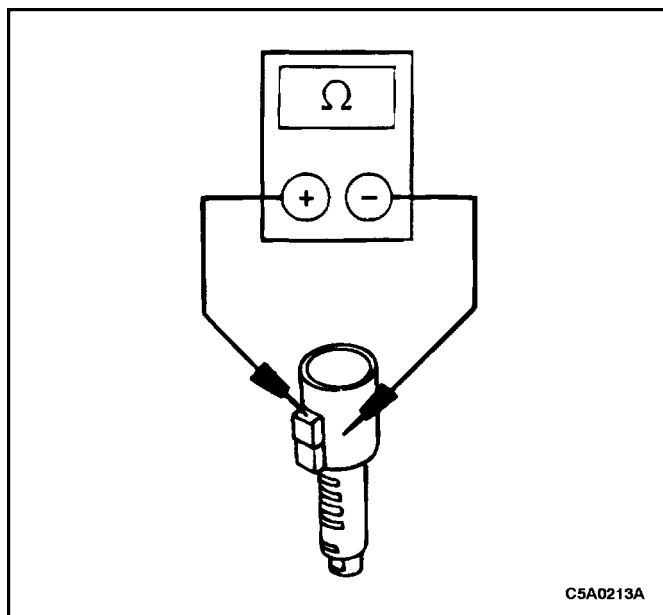
5. Turn the valve body assembly over and remove the five bolts from the upper valve body.



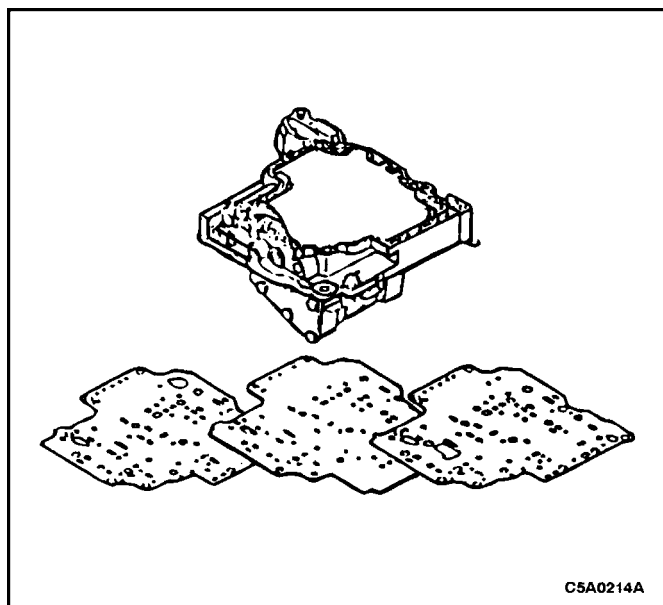
6. Lift off the upper valve body. Remove the check ball.



7. Inspect the shift solenoids and the lockup solenoid. Replace the solenoids if they are not within specifications.
 - Using an ohmmeter, check the resistance between the solenoid terminal and the solenoid body. The standard resistance for shift solenoids is 12–16 ohms. The standard resistance for the lockup solenoid is 11–15 ohms.
 - Apply battery voltage to the solenoids. An operation noise should be heard.

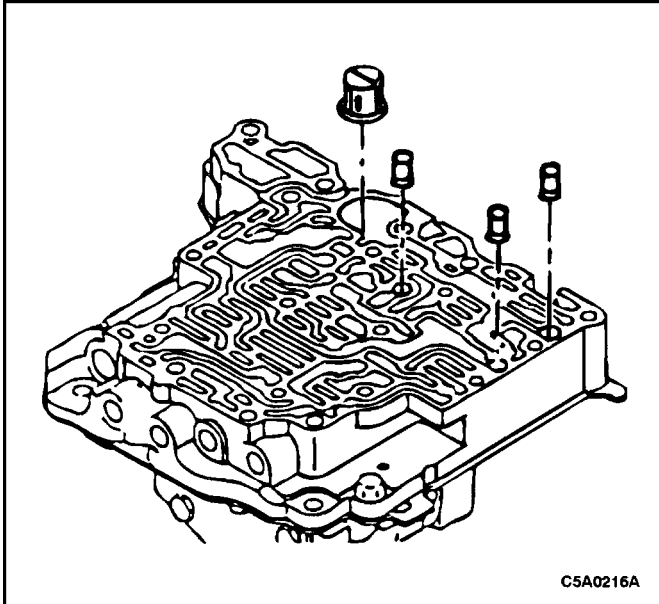


8. Inspect the linear solenoid. If the solenoid is not within specifications, replace it.
 - Using an ohmmeter, check the resistance between the solenoid terminals. The standard resistance is ~ 3.6 ohms.

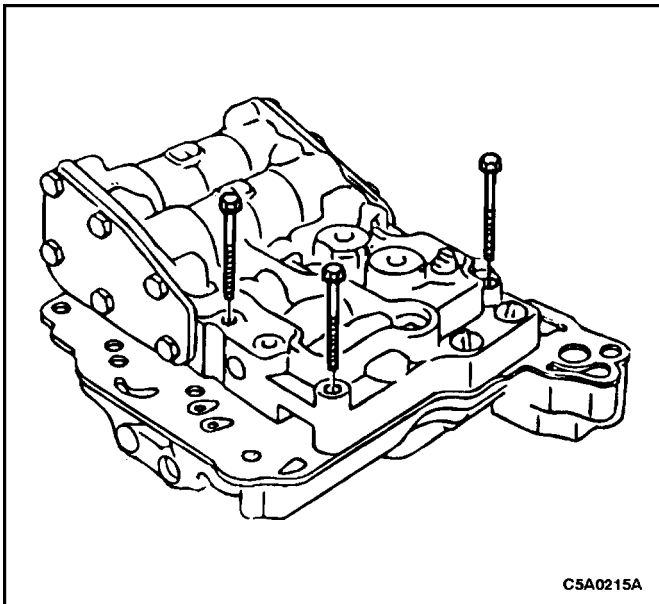


Notice : Discard the valve body gaskets.

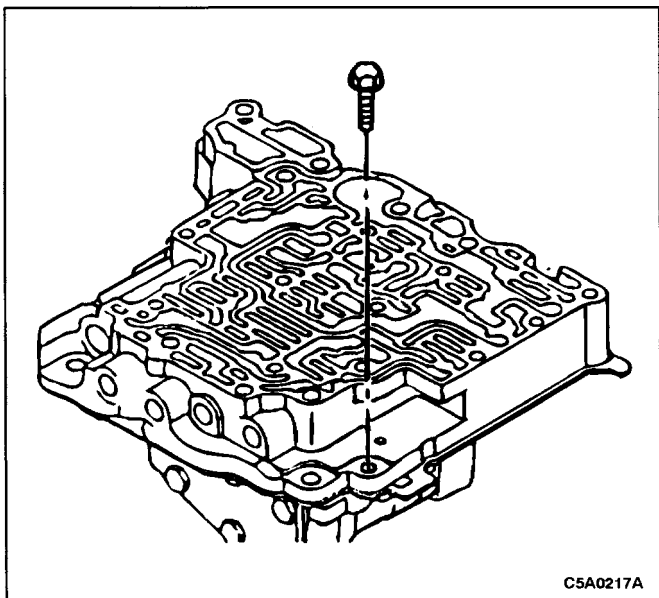
9. Remove the upper valve body gasket, the upper valve body separator plate and the center valve body gasket.



10. Remove the oil strainers from the center valve body.

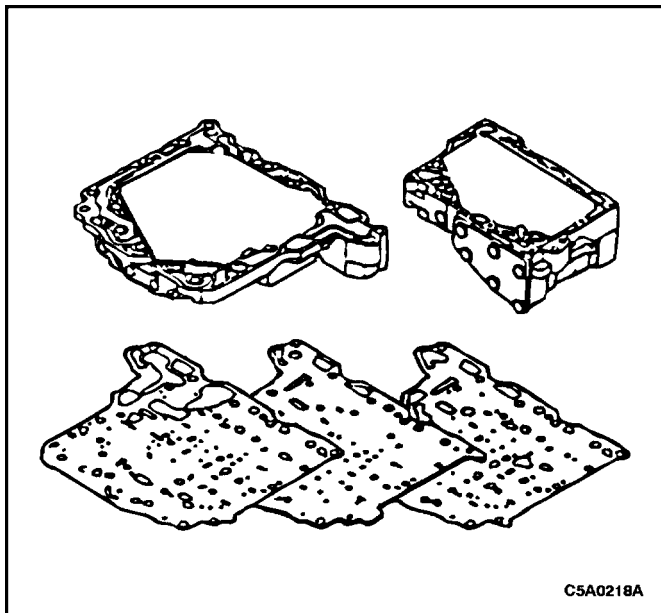


11. Remove the three bolts from the lower valve body.



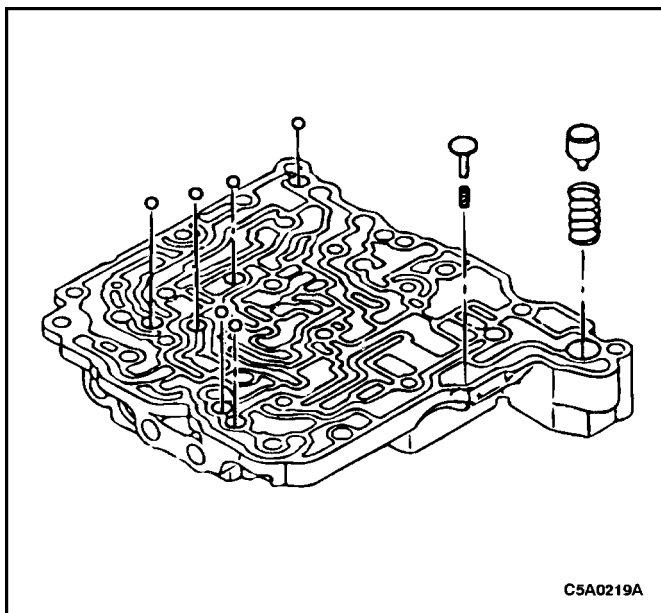
Notice : Hold the gaskets and separator plate to the center valve body and remove as an assembly.

12. Turn the valve body over and remove the remaining bolt. Separate the center valve body from the lower valve body.

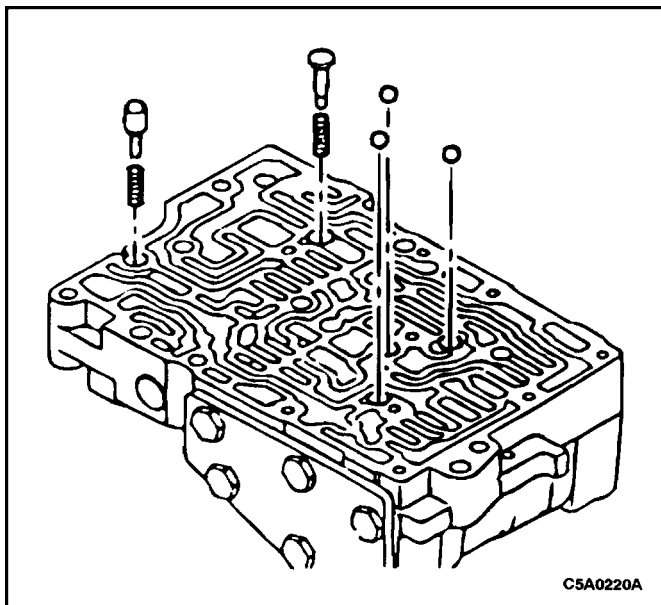


Notice : Discard the valve body gaskets.

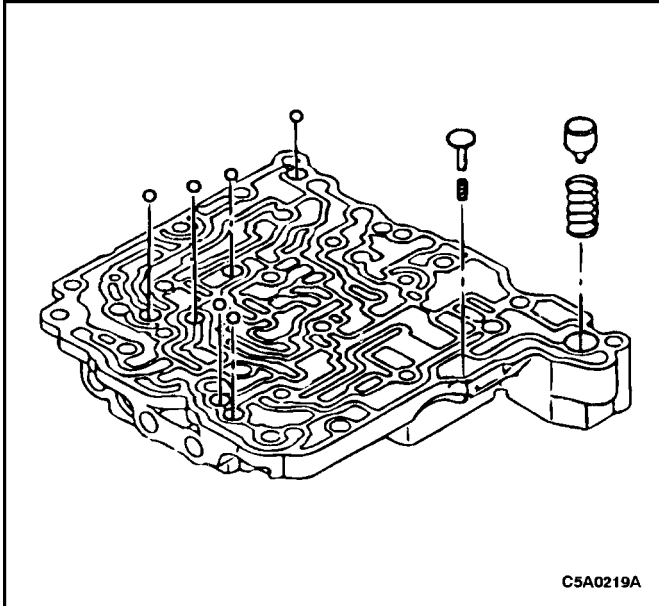
13. Separate the valve body gaskets and separator plate.



14. Remove the bypass valve, the check valve, springs and the check balls from the center valve body.



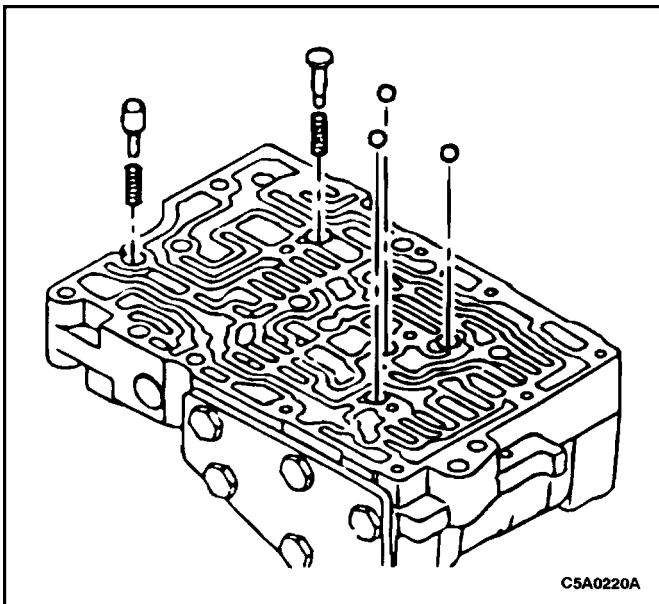
15. Remove the check valve, the pressure relief valve, springs and check balls from the lower valve body.



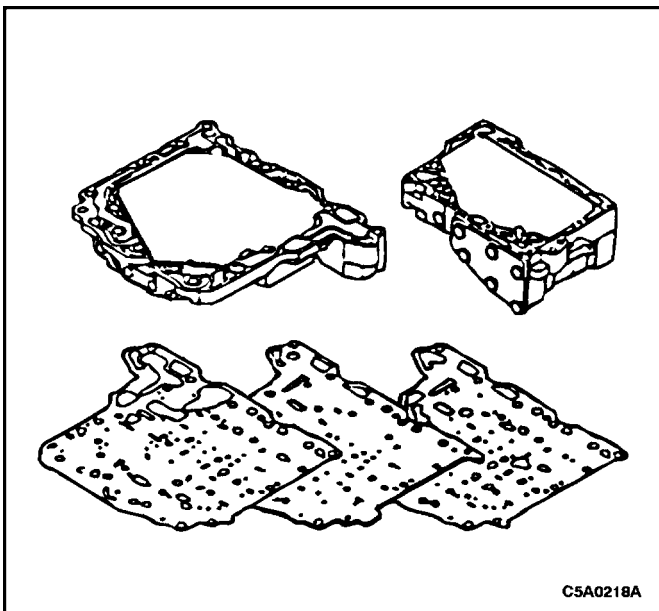
Assembly Procedure

Notice : Coat the valves and springs with Texaco 1854 automatic transmission fluid prior to assembly.

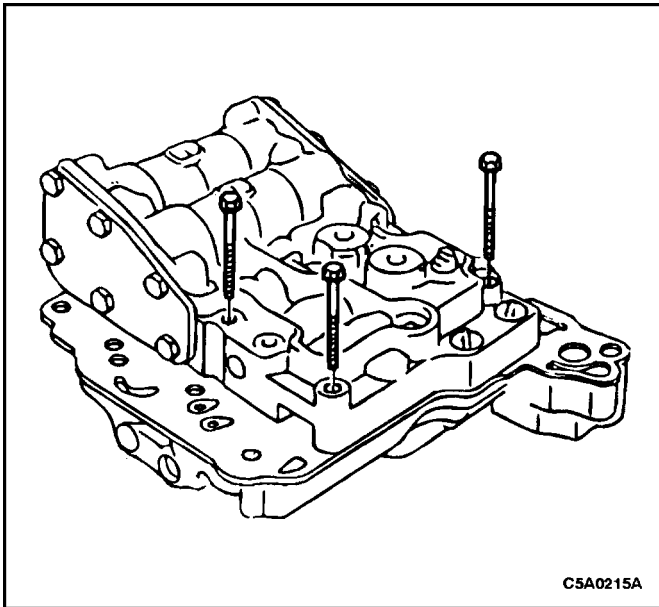
1. Install the bypass valve, the check valve, springs and the check balls in the center valve body.



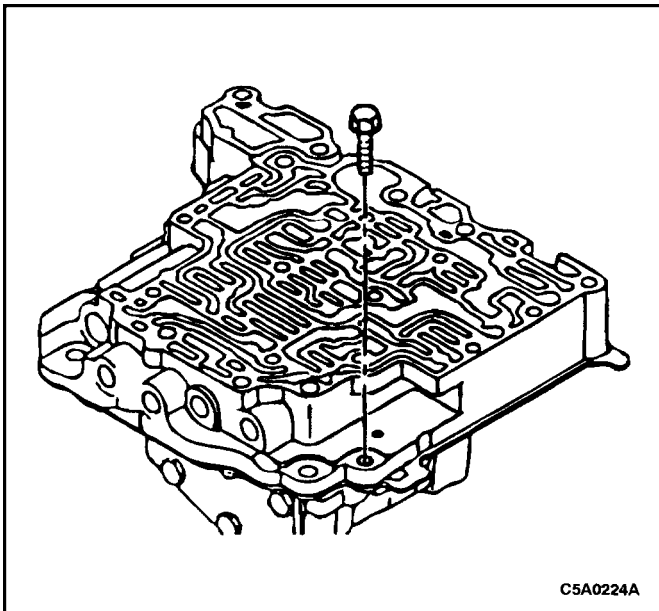
2. Install the check valve, the pressure relief valve, springs and check balls in the lower valve body.



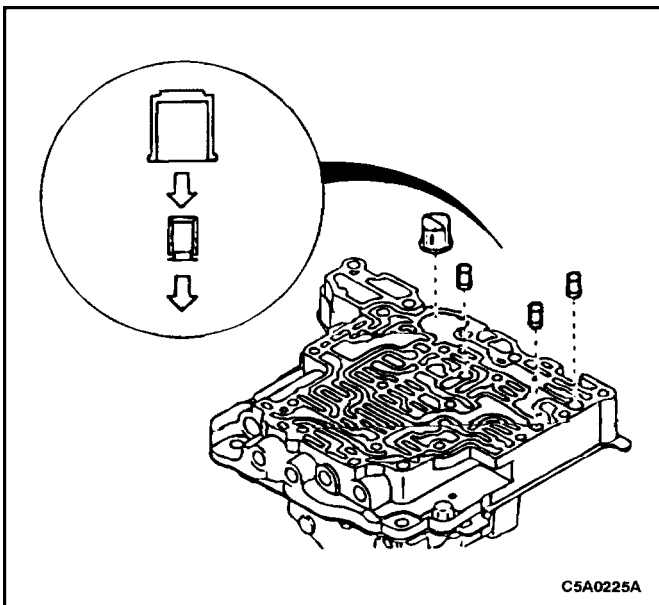
3. Install a new center valve body gasket, a center valve body separator plate and a new lower valve body gasket on the center valve body.
 - Place the center valve body onto the lower valve body. Hold the center valve body, gaskets and plate securely so they do not separate.



4. Install the three bolts in the lower valve body. Do not tighten the bolts at this time.

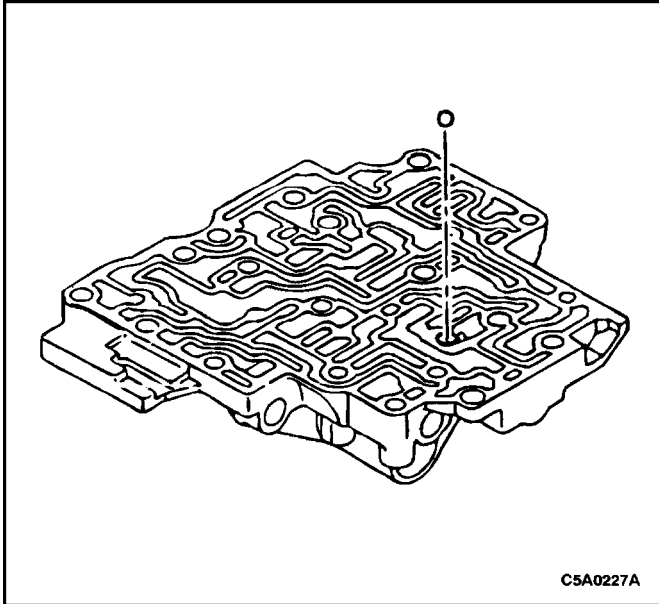


5. Turn the valve body over and install the bolt. Do not tighten the bolt at this time.

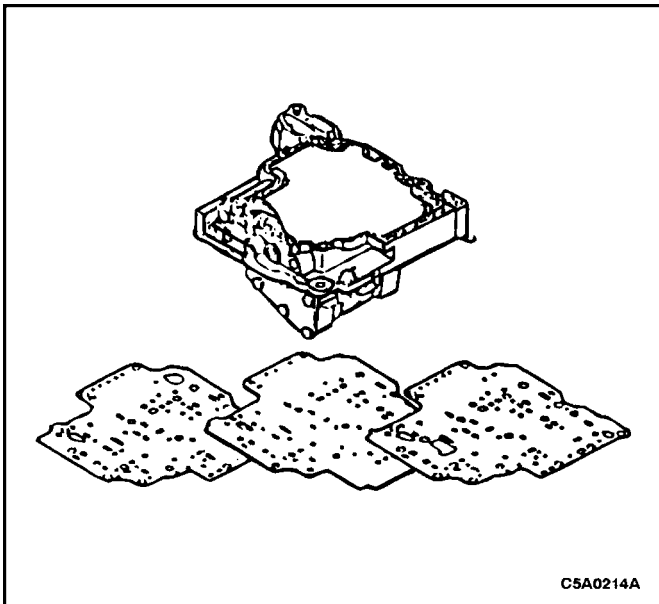


Notice : Coat the oil strainers with Texaco 1854 automatic transmission fluid prior to assembly.

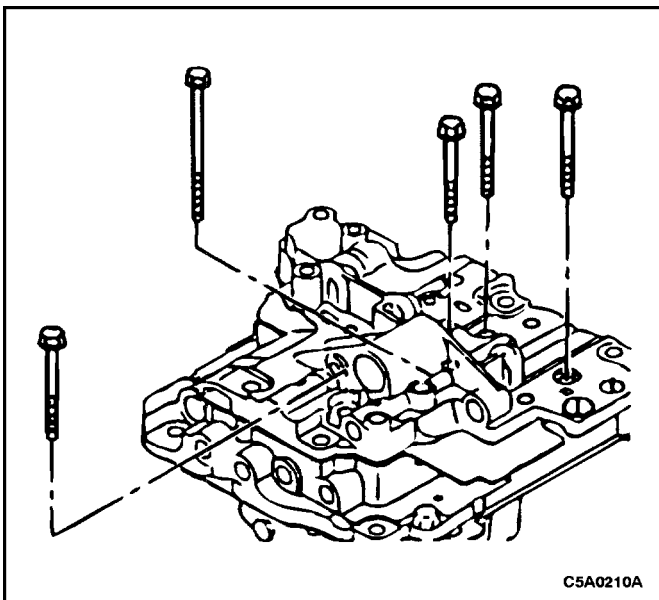
6. Install the oil strainers into the center valve body.



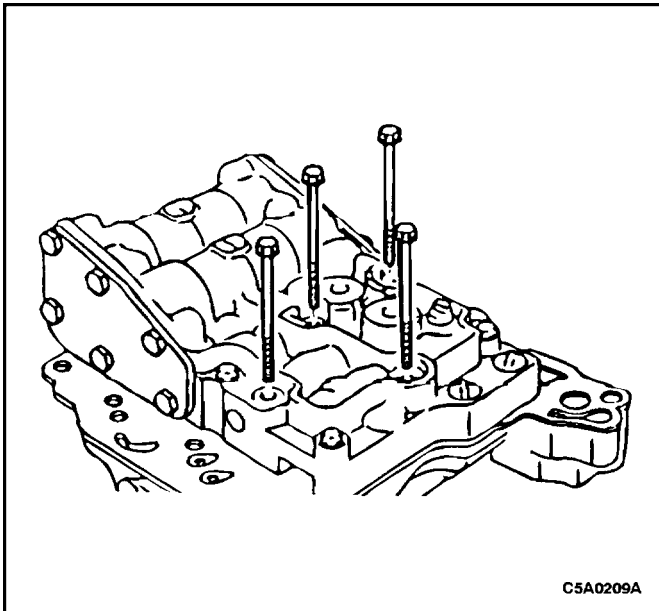
7. Install the check ball in the upper valve body.



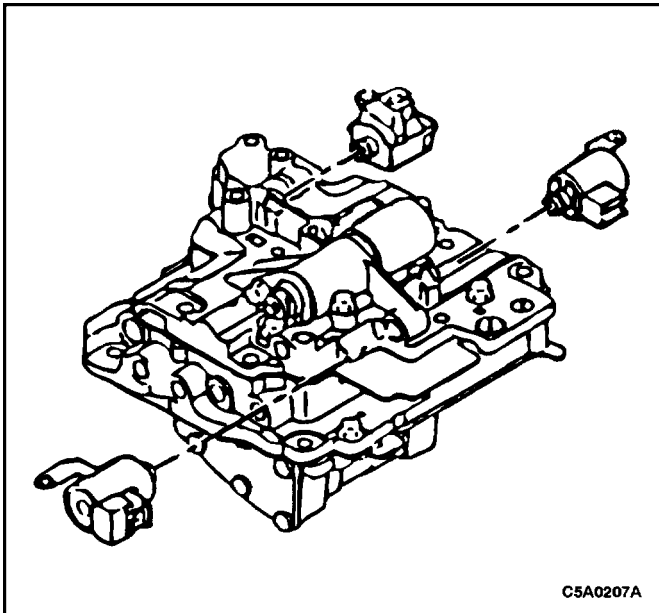
8. Install a new center valve body gasket, a center valve body separator plate and a new upper valve body gasket.
- Place the upper valve body onto the center valve body. Hold the upper valve body, gaskets and plate securely so they do not separate.



9. Install the five bolts in the upper valve body. Do not tighten at this time.
- Three 1.9 in (50 mm) bolts
 - One 1.8 in (45 mm) bolt
 - One 2.5 in (65 mm) bolt



10. Turn the valve body over and install the four bolts.
Do not tighten the bolt at this time.
 - 2.5 in (65 mm) bolts

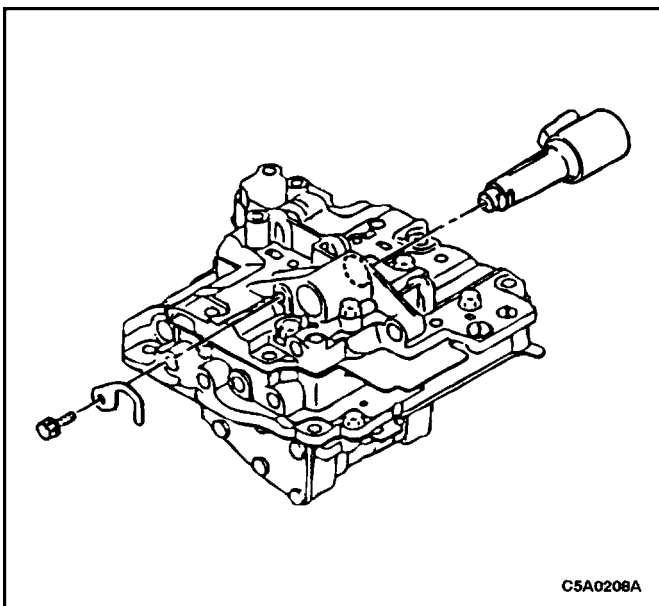


Notice : Apply Texaco 1854 automatic transmission fluid to the solenoid O–ring.

11. Install the shift and lockup solenoids.

Tighten

Tighten the solenoid bolts to 52–65 lb–in (6–7 NSm).

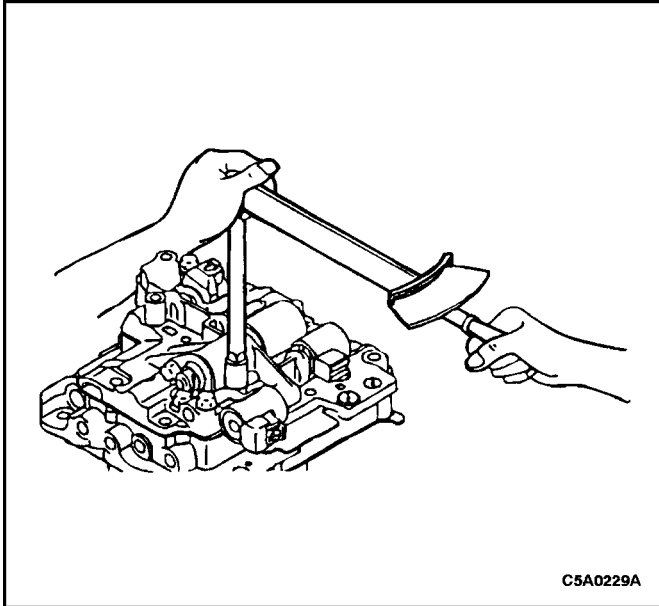


Notice : Apply TOTAL FLUID HX to the solenoid O–ring.

12. Install the linear solenoid and the wire harness clamp.

Tighten

Tighten the solenoid bolt to 52–65 lb–in (6–7 NSm).

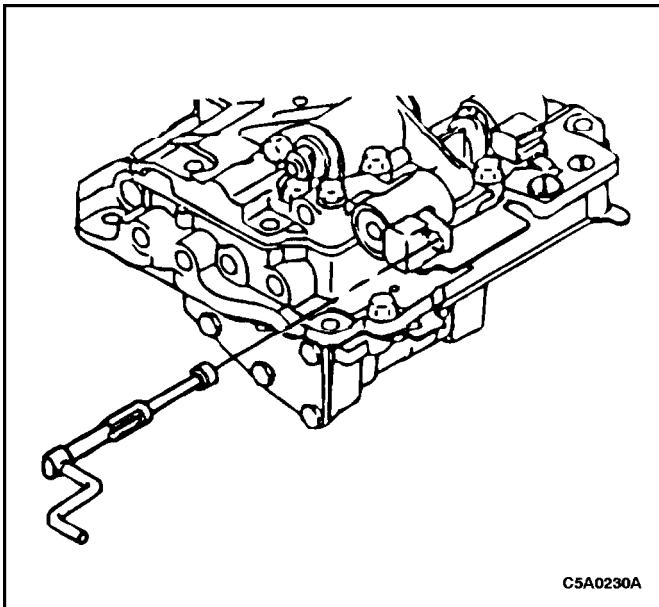


Notice : Tighten the bolts evenly and gradually.

13. Tighten the 14 upper and lower valve body bolts.

Tighten

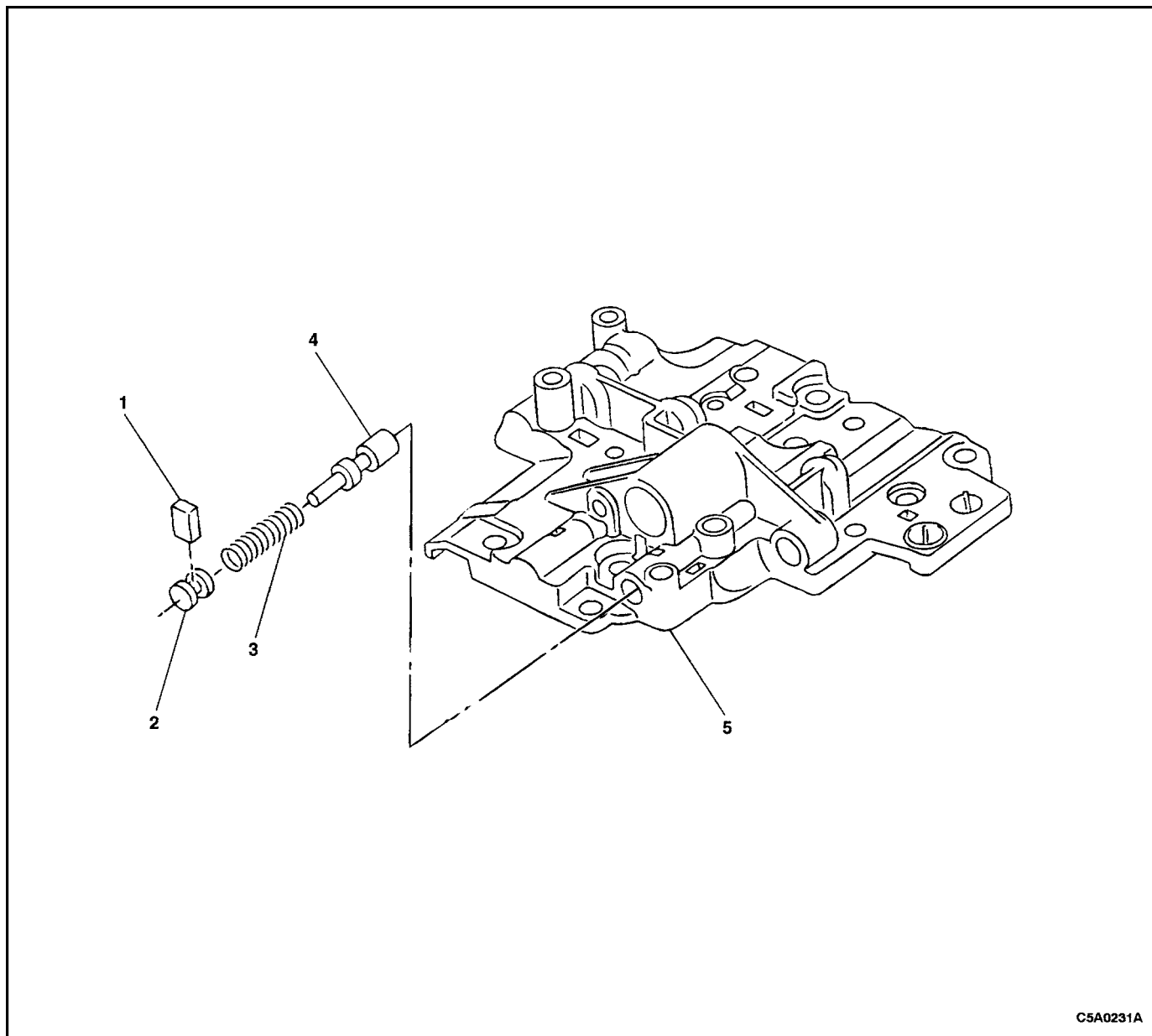
Tighten the bolts to 52–65 lb-in (6–7 NSm).



Notice : Coat the manual valve with Texaco 1854 automatic transmission fluid prior to assembly.

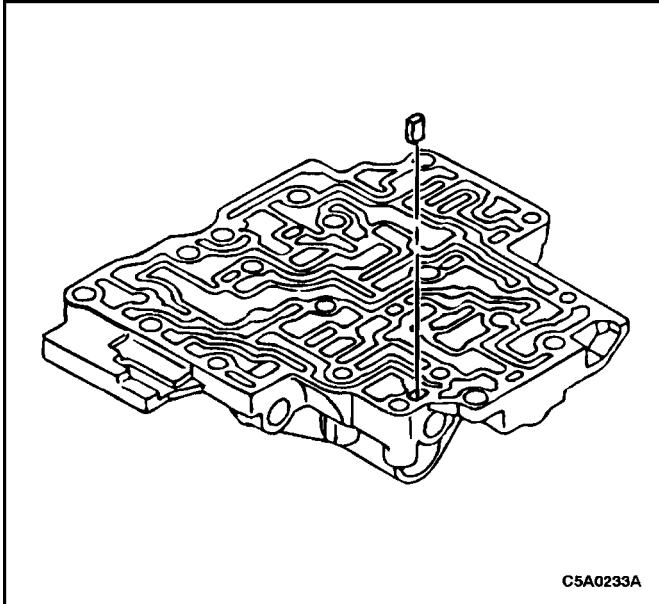
14. Install the manual valve.

UPPER VALVE BODY

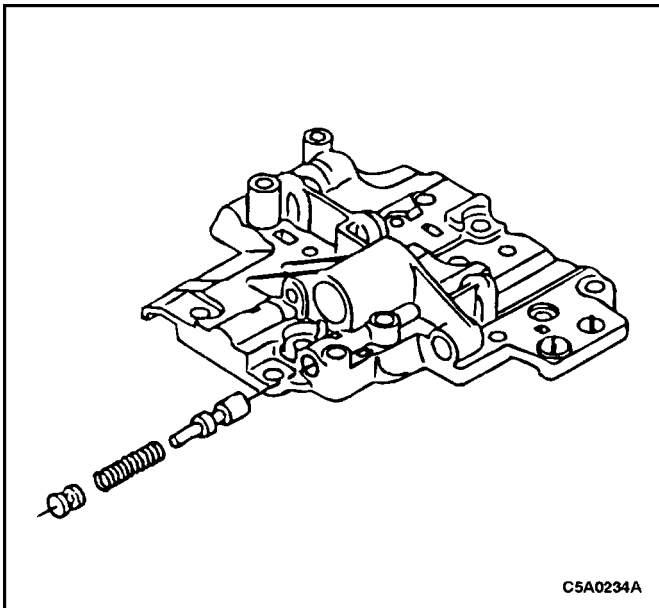


- 1. Key
- 2. Retainer
- 3. Valve Spring

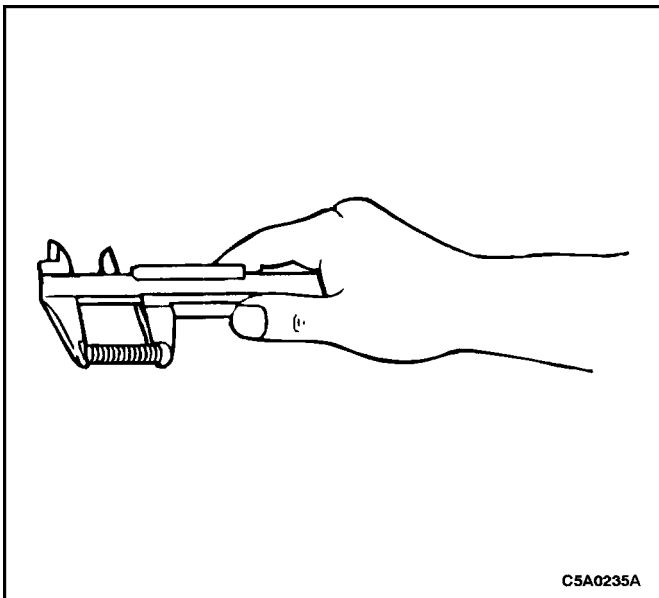
- 4. Solenoid Modulator Valve
- 5. Upper Valve Body



6. Remove the key



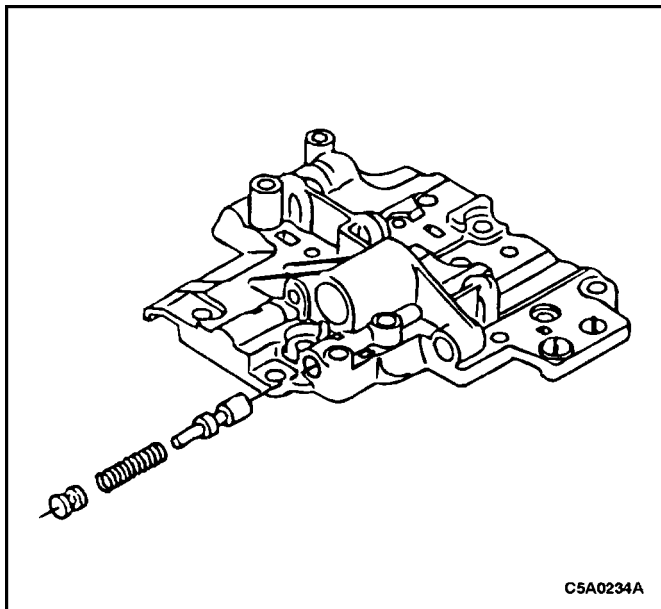
7. Remove the retainer, valve spring and the solenoid modulator valve.



8. Inspect the valve spring.

- Using vernier calipers, measure the free length and outer diameter of the spring. If it does not meet specifications, replace it.

Free Length	Outer Diameter
1.1 in (28.53mm)	0.314 in (8.0mm)

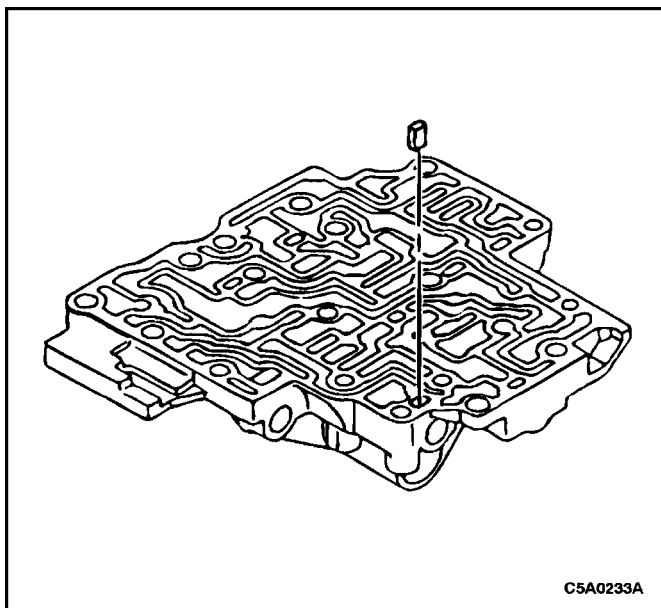


Assembly Procedure

Notice : Inspect the valve for damage or wear, replace if necessary. The valve should fit snugly in the bore.

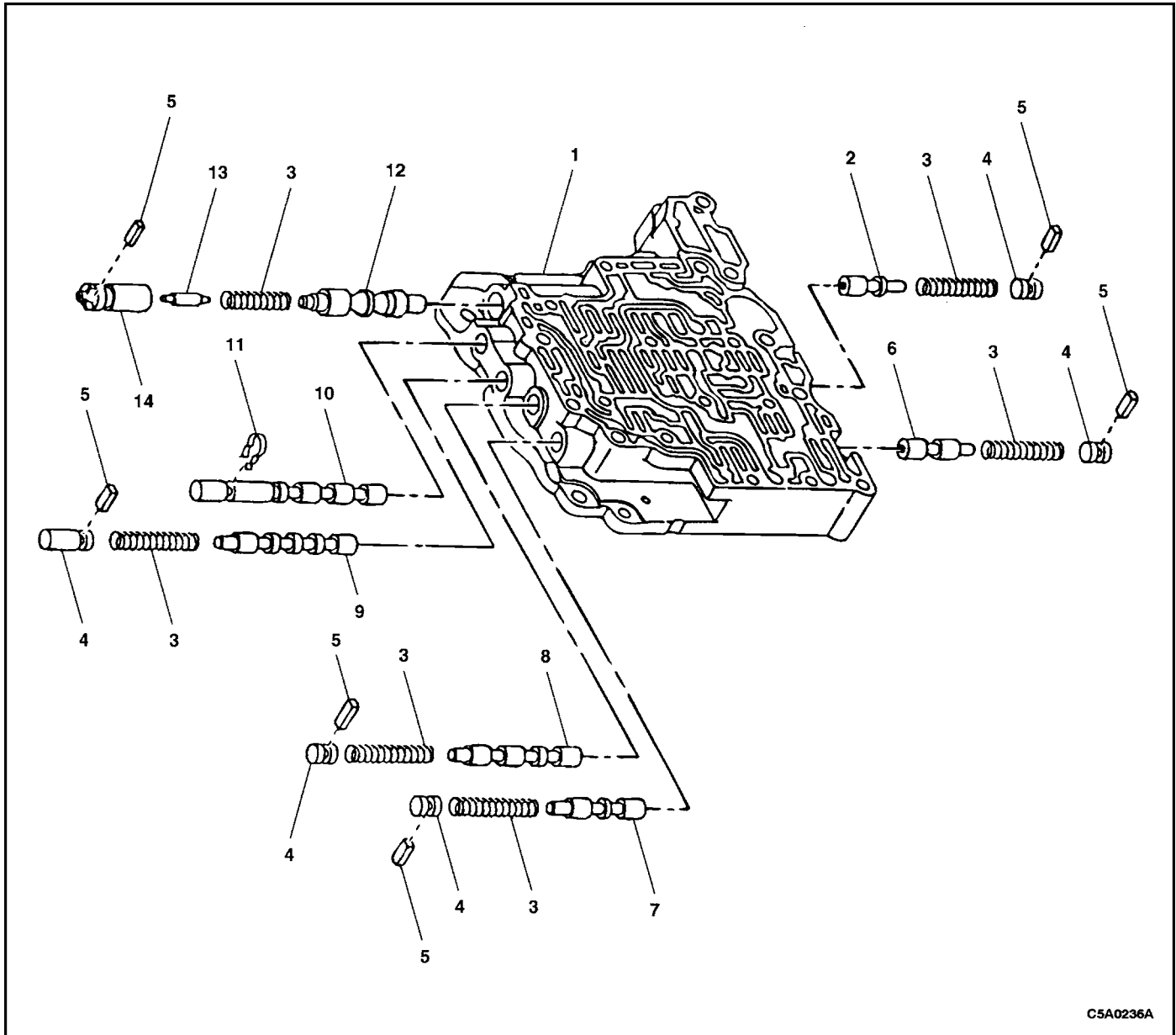
Notice : Coat the valve and spring with Texaco 1854 automatic transmission fluid prior to assembly.

1. Install the solenoid modulator valve, valve spring and the valve retainer.



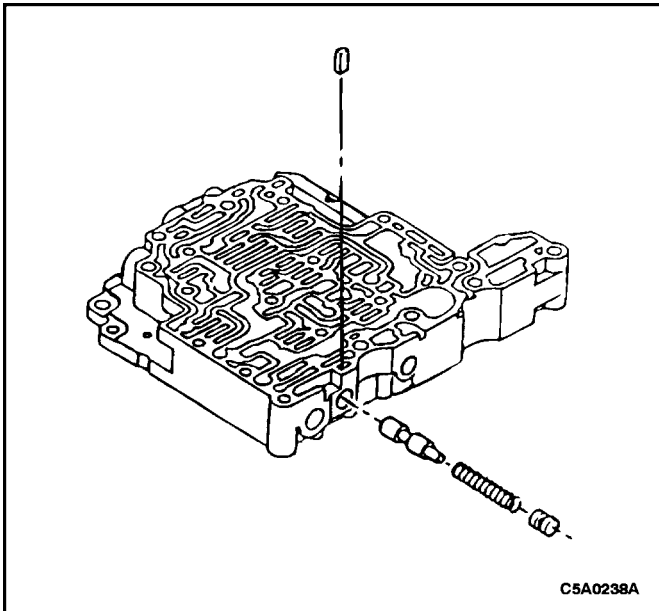
2. Install the key.

CENTER VALVE BODY

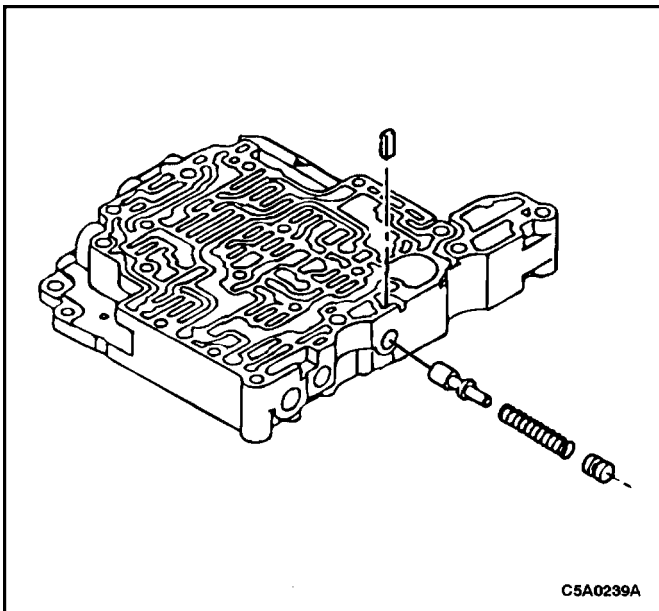


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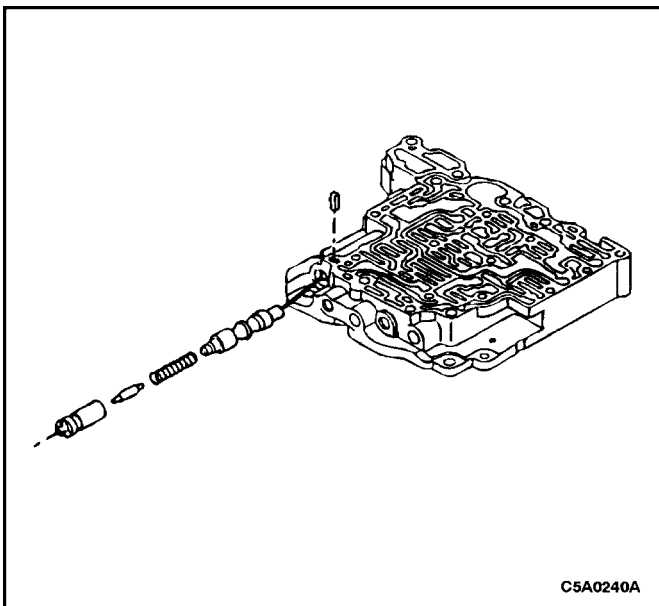
- | | |
|-----------------------------------|--|
| 1. Center Valve Body | 8. 3-4 Shift Valve |
| 2. Coast (LockUp) Modulator Valve | 9. 1-2 Shift Valve |
| 3. Valve Spring | 10. Neutral Control Valve |
| 4. Retainer | 11. Snap Ring Retainer |
| 5. Key | 12. Primary Regulator Valve |
| 6. Clutch Modulator Valve | 13. Primary Regulator Valve Plunger |
| 7. 2-3 Shift Valve | 14. Primary Regulator Valve Plunger Sleeve |



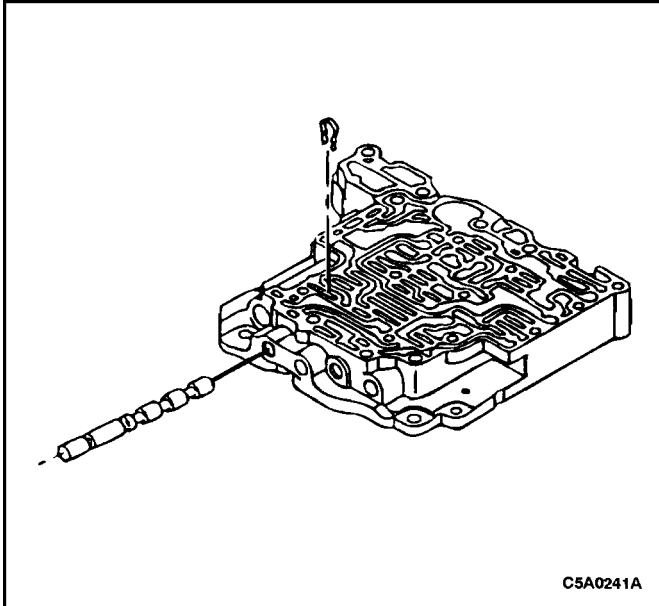
15. Remove the key, the retainer, the valve spring and the clutch modulator valve.



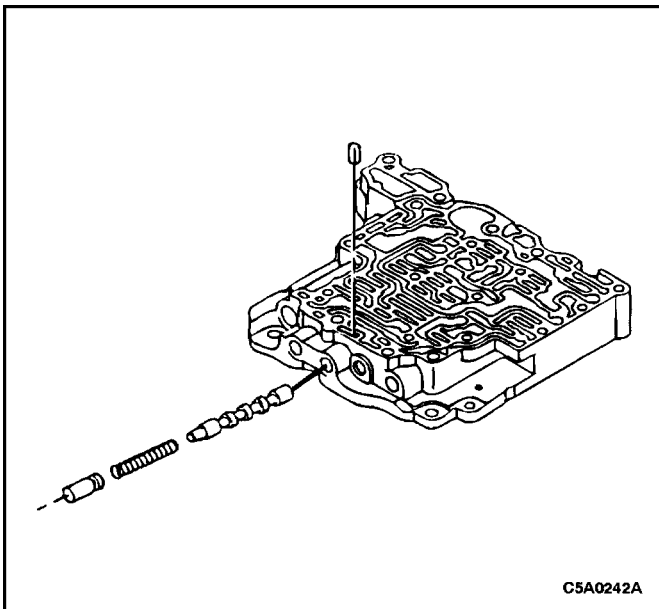
16. Remove the key, the retainer, the valve spring and the coast (lockup) modulator valve.



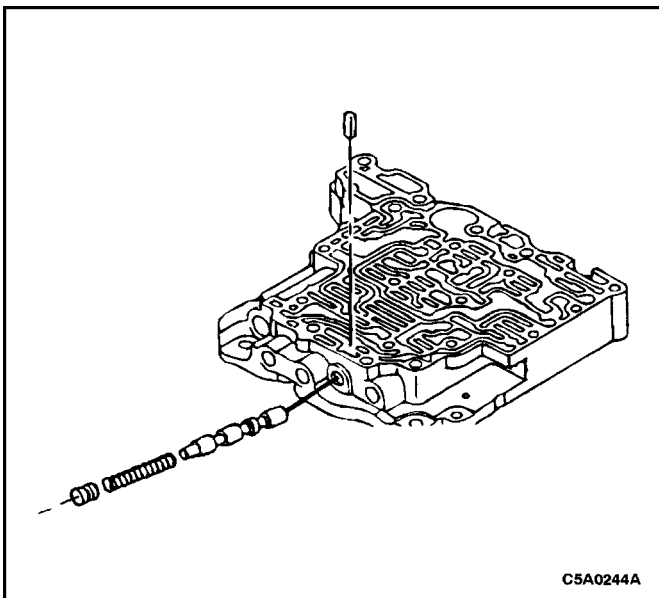
17. Remove the key, the primary regulator valve plunger sleeve, the primary regulator valve plunger, valve spring, and the primary regulator valve.



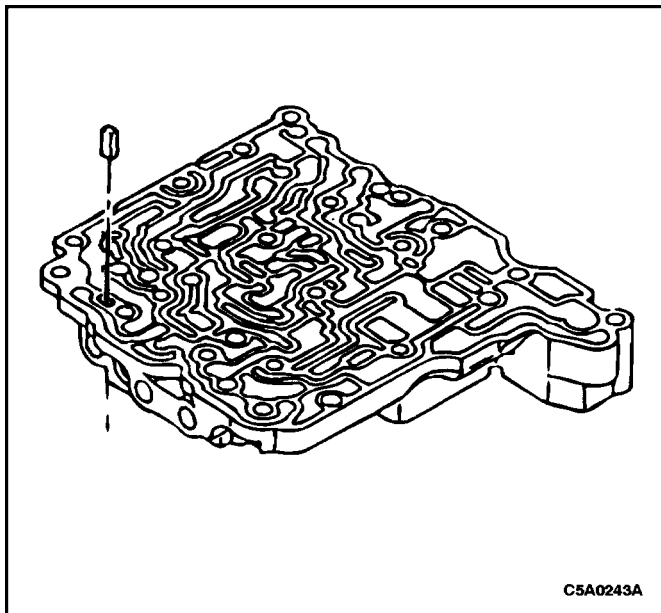
18. Remove the snap ring retainer and the neutral control valve.



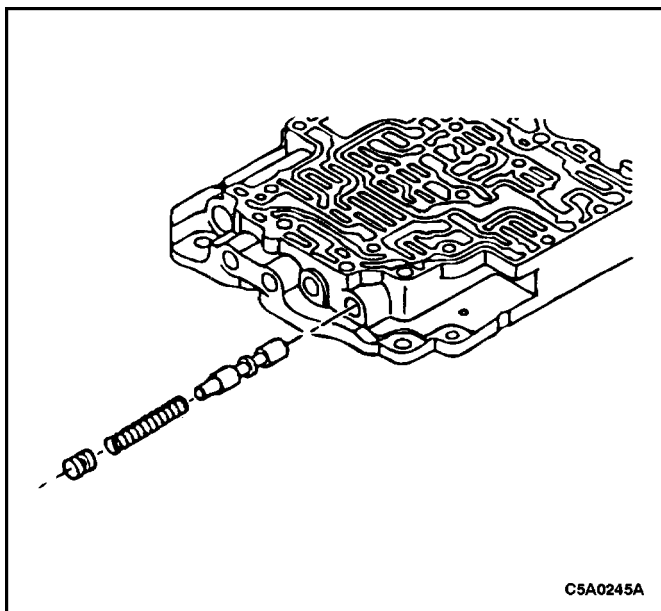
19. Remove the key, the retainer, the valve spring and the 1-2 shift valve.



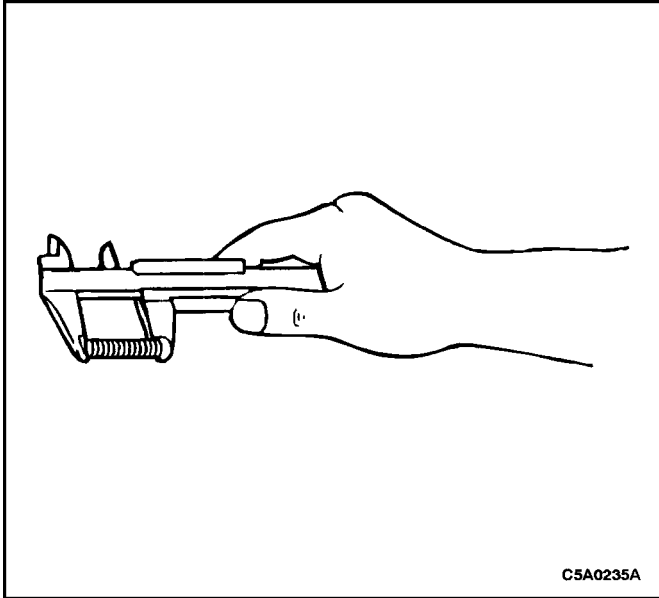
20. Remove the key, the retainer, the valve spring and the 3-4 shift valve.



21. Remove the key.



22. Remove the retainer, the valve spring and the 2-3 shift valve.



23. Inspect the valve springs.

- Using vernier calipers, measure the free length and outer diameter of the spring. If it does not meet specifications, replace it.

Valve	Valve Spring Free Length in (mm)	Valve Spring Outer Diameter in (mm)
Primary Regulator	1.2 (29.72)	0.41 (10.5)
1-2 Shift	1.3 (33.95)	0.32 (8.2)
2-3 Shift	1.3 (33.95)	0.32 (8.2)
3-4 Shift	1.3 (33.95)	0.32 (8.2)
Coast (Lockup) Modulator	0.88 (22.42)	0.31 (8.0)
Clutch Modulator	0.90 (22.78)	0.33 (8.3)

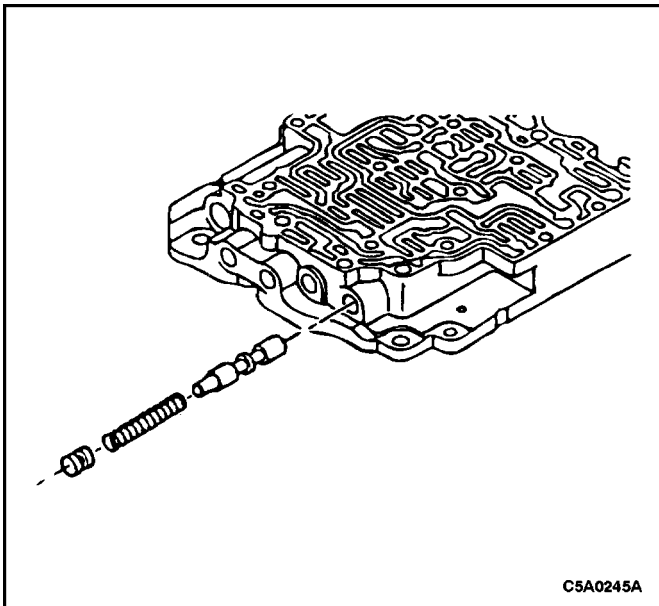
Assembly Procedure

Notice : Inspect the valve for damage or wear. Replace if necessary.

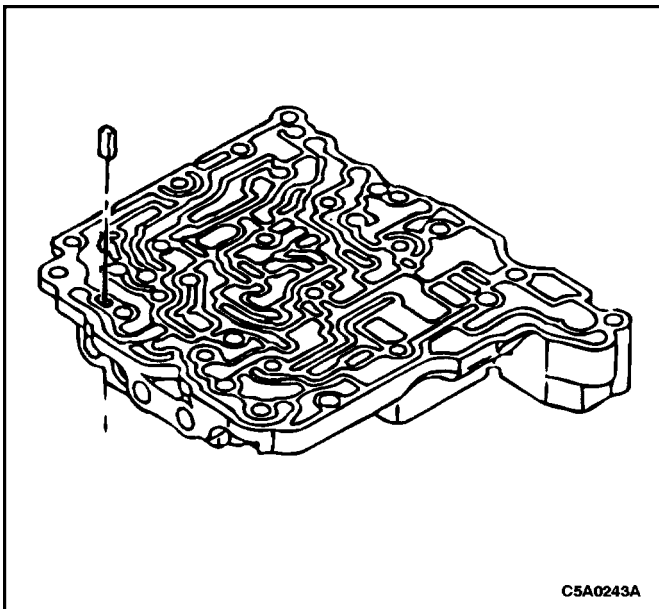
Notice : The valve should fit snugly in the bore.

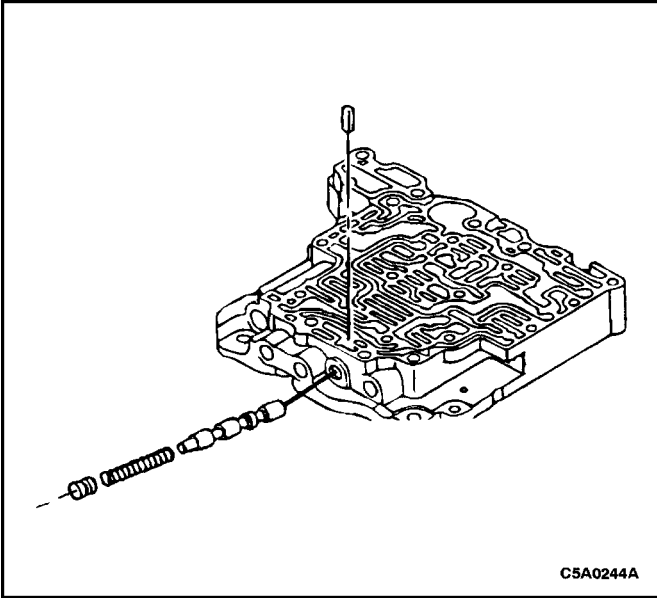
Notice : Coat the valve, spring and retainer with Texaco 1854 automatic transmission fluid prior to assembly.

1. Install the 2-3 shift valve, the valve spring and the retainer.



2. Install the key.



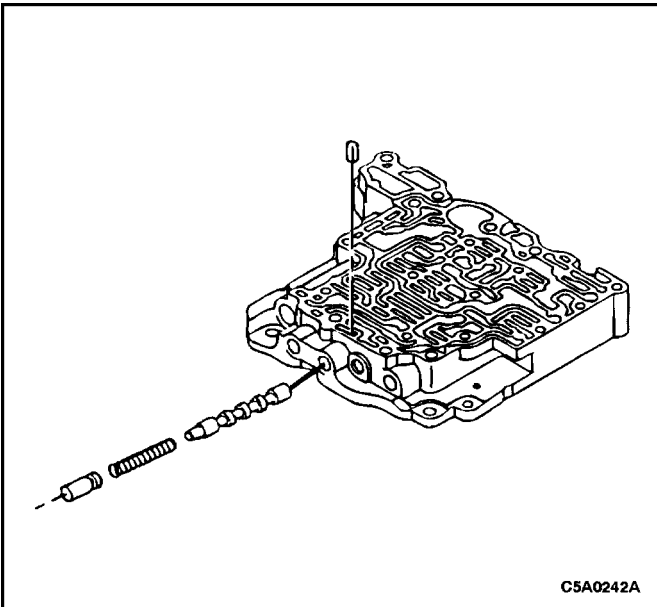


Notice : Inspect the valve for damage or wear. Replace if necessary.

Notice : The valve should fit snugly in the bore.

Notice : Coat the valve, spring and retainer with Texaco 1854 automatic transmission fluid prior to assembly.

3. Install the 3-4 shift valve, the valve spring, the retainer and the key.

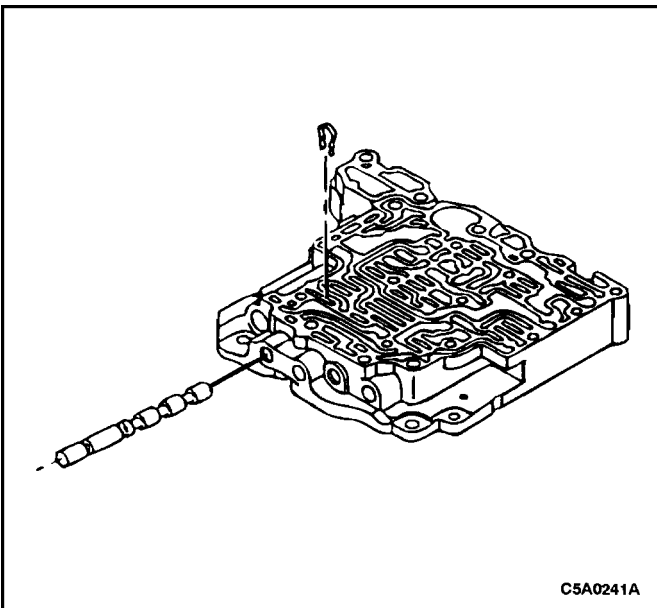


Notice : Inspect the valve for damage or wear. Replace if necessary.

Notice : The valve should fit snugly in the bore.

Notice : Coat the valve, spring and retainer with TOTAL FLUID HX prior to assembly.

4. Install the 1-2 shift valve, the valve spring , the retainer and the key.

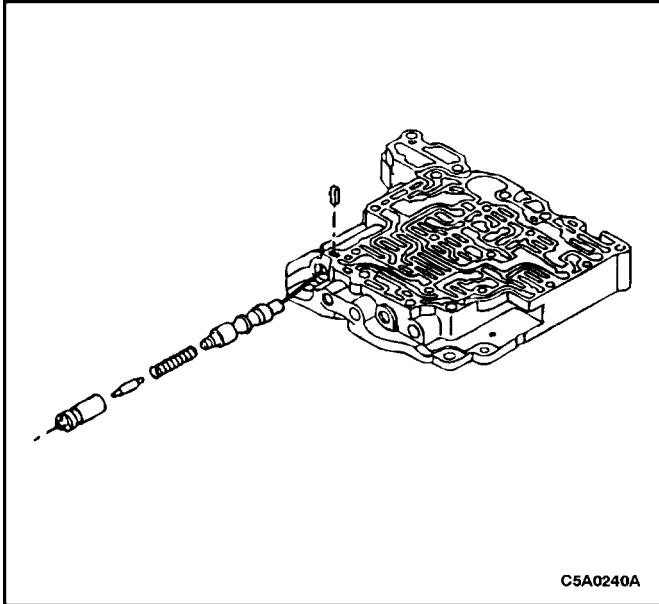


Notice : Inspect the plug for damage or wear. Replace if necessary.

Notice : The plug should fit snugly in the bore.

Notice : Coat the plug with Texaco 1854 automatic transmission fluid prior to assembly.

5. Install the neutral control plug and the snap ring retainer.

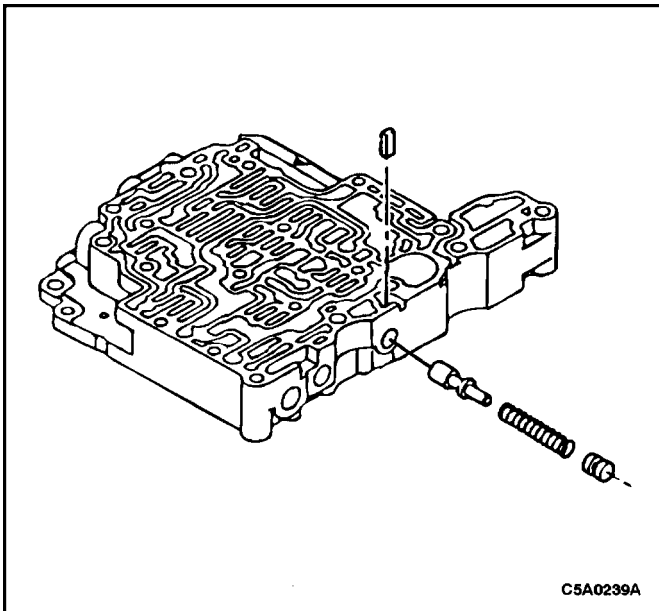


Notice : Inspect the valve for damage or wear. Replace if necessary.

Notice : The valve should fit snugly in the bore.

Notice : Coat the valve, spring and retainer with Texaco 1854 automatic transmission fluid prior to assembly.

6. Install the primary regulator valve, the valve spring, the primary regulator valve plunger, the primary regulator valve plunger sleeve, and the key.

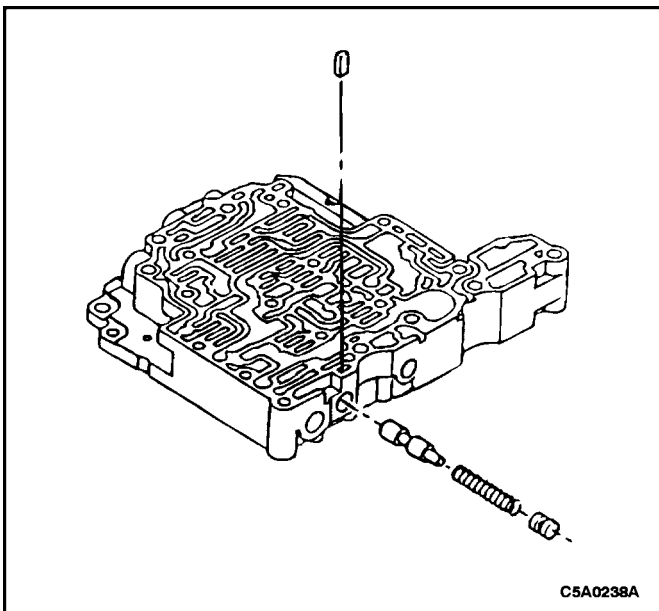


Notice : Inspect the valve for damage or wear. Replace if necessary.

Notice : The valve should fit snugly in the bore.

Notice : Coat the valve, spring and retainer with Texaco 1854 automatic transmission fluid prior to assembly.

7. Install the coast (lockup) modulator valve, the valve spring, the retainer and the key.



Notice : Inspect the valve for damage or wear. Replace if necessary.

Notice : The valve should fit snugly in the bore.

Notice : Coat the valve, spring, plunger and sleeve with Texaco 1854 automatic transmission fluid prior to assembly.

8. Install the clutch modulator valve, the valve spring, the retainer and the key.