

## 1992 Volvo 940

Submodel: | Engine Type: L4 | Liters: 2.3

Fuel Delivery: FI | Fuel: GAS

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### Throttle Linkage/Kickdown Switch

1. Remove the throttle pulley cover.
2. Remove the clip from the kickdown cable.
3. Install a 0.14 inch (3.5mm) spacer between the throttle pulley stop and the bracket stop.
4. Install the clip into the cable making sure it is firmly against the bracket.
5. Adjust until the cable is under light tension.
6. Remove the locking clip.
7. Remove the spacer.
8. Reinstall the locking clip.
9. Install the pulley cover.

Fig. 1: Remove the throttle pulley cover and cable clip in order to adjust the throttle cable

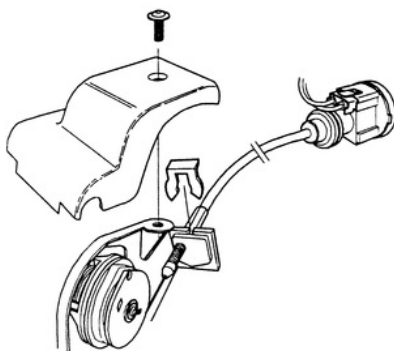
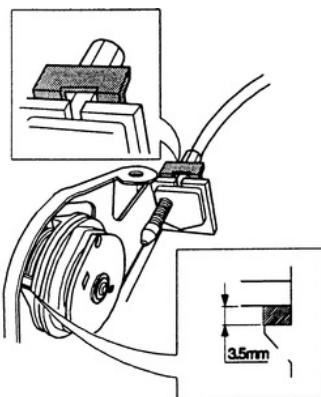


Fig. 2: Install a 3.5mm spacer between the throttle pulley stop and the bracket stop, then adjust the cable



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### [850, C70, S70 and V70 Models](#)

1. Pull the steering wheel adjustment lever out and adjust the wheel in and up as far as it will go. Then lock it in position.
2. Put the transaxle gear selector in **N** and set the parking brake.
3. Disconnect and remove the battery and air cleaner assembly.
4. Remove the battery tray.
5. On turbo models, disconnect the control valve from air cleaner and the air charge manifold clamp and hose. Also remove the turbocharger air cleaner intake.
6. Detach the transaxle cable and connector from the transaxle. Be careful not to damage the rubber seal.
7. Remove the wiring harness and ground from the control system cover.
8. On early models, disconnect the transaxle vent hose.
9. On later models, disconnect the wiring and oxygen sensor from the transaxle brackets.
10. Disconnect the transaxle cooling lines from the quick disconnects and drain the transmission fluid.
11. Remove the dipstick and tube.
12. On vehicles with an EGR valve, disconnect the hoses to the valve.
13. On turbo models, remove the cover over the control pulley, then disconnect the intake to the throttle body and pull it to one side so that the throttle body is free. Seal all oil connections to prevent dirt from entering.
14. Remove the bolts connecting the engine and transaxle and starter.
15. Disconnect the transaxle ground strap.
16. Lift off the radiator overflow tank and let it hang.
17. Remove the torque rod extension arm bolt and swing it out of the way.

**NOTE: It will be necessary to support the engine from above and still be able raise and lower the car.**

18. Install lifting yoke 999-5534 or equivalent in place of the torque rod extension arm.
19. Install support tool 999-5033 on the inside fender rail, lifting beam support 999-5006 or equivalent placing the beam directly over the eyelet for the lifting yoke.
20. Install the lifting hook 999-5460 or equivalent and pull it up slightly until the load is taken off of the engine mounts. Measure the distance between the beam and spark plug cover and make note of it.
21. Raise and safely support the vehicle.
22. Remove the front wheels.
23. Disconnect the ABS sensor from the left side axle shaft but do not disconnect.
24. Disconnect all brackets for the brake lines and ABS wiring on both sides.
25. Remove the plastic inner fender wells on both sides.
26. Remove the transfer case (V70 AWD models only).
27. Remove the left and right side halfshafts.
28. Install a seal plug in the transaxle.
29. Remove all the splash guards.
30. Separate the ball joints from the control arms, being careful not to damage the boots.
31. Disconnect the sway bar links on both sides.
32. Remove the subframe cable mounting screws and disconnect them from the subframe.
33. Disconnect the carbon canister and hoses from the subframe. Cut the wire tie and hang the holder on the body.
34. Disconnect the exhaust pipe clamp behind the catalytic converter.
35. Remove the oil line bracket screws and torque rod holder mounting screws.
36. Back the engine mounting/steering gear bolt off one turn.
37. Remove the five steering gear mounting nuts in the subframe.
38. Position a jack under the left-hand side of the subframe so that it is barely touching.
39. Remove the subframe bracket bolts on the body. Back the 15mm bolts between the frame and body on the right-hand side several turns. Remove the bolts from the left.

**NOTE: Make sure the steering gear bolts come out of the subframe.**

40. Remove the jack and let the frame hang down from the right side bolts.
41. Secure the end of the right side driveshaft on the oil lines.
42. Remove the steering gear engine mount bolt and nut at the top of the engine mount and remove the mount.

**NOTE: Make sure the steering gear is properly secured so the lower steering shaft does not slide out of the steering column.**

43. Disconnect the oxygen sensor wiring clamps from the cover and the connector and wiring to the vehicle speed sensor.
44. Remove the cover at the back of the engine and the mount from the transaxle.
45. Lower the engine and transaxle with the lifting hook until the distance between the beam and spark plug cover is 12.6 in. (320mm).

#### **WARNING**

If the engine is lowered too far, the exhaust pipe will be crushed against the steering rack. Be careful not to pinch any wiring or hoses and be sure that the engine dipstick tube is free of the fan.

46. Install transaxle fixture 5463 on the transaxle jack or equivalent, using the torque rod mounting bolts to hold it in place. At the same time, fit support plate tool 5463-1 or equivalent and raise the jack so that it is making light contact.
47. Remove the six torque converter bolts using a TX50 Torx® socket.
48. Remove the lower plastic nut and fold out the inner fender well on the right-hand side.
49. Then turn the crankshaft with a socket and ratchet.
50. Remove the seven bolts between the engine and transaxle.
51. Remove the torque converter bolts from the flywheel.
52. Remove the transaxle making sure the torque converter comes out with it and does not slip off the shaft. Use the hole in the torque converter cover to press the torque converter in to keep it from sliding off.

#### **WARNING**

Do not pry against carrier plate rim, as damage may result.

#### **To install:**

53. Flush the oil lines with clean transmission fluid.
54. Install the line and hose on the transaxle using new O-rings on the quick-connectors.
55. Install the hose on the upper transaxle cooler line catch pan under the return line.
56. Inspect all components before installing.

57. Apply a small amount of grease to the torque converter guide pin and install, making sure the converter is all the way into the transaxle. The distance between the cover and converter bolt flange should be 0.55 in. (14mm).
  58. Install the transaxle securing in place with the seven bolts between the engine and transaxle. Tighten them to 37 ft. lbs. (50 Nm).
  59. Install new torque converter bolts and tighten to 22 ft. lbs. (30 Nm) using a TX50 Torx® socket.
- NOTE: Remove the socket from the crankshaft.**
60. Install the rear transaxle mount and three bolts. Tighten the rear two bolts to 37 ft. lbs. (50 Nm), then remove the front bolt.
  61. Install the cover against the mount and tighten the bolt to 37 ft. lbs. (50 Nm).
  62. Install the engine mount guide pin into the cover. Install a new nut and hand-tighten.
  63. Install the steering rack engine mount bolt, but do not tighten.
  64. Reconnect the oxygen sensor.
  65. Install the vehicle speed sensor connector and connect the transaxle ground strap.
  66. Install the subframe using new bolts. Apply grease to the threads.
  67. Starting on the left, lift the frame with a transaxle jack. Mount the support brackets on both sides.
  68. Tighten the frame bolts to 78 ft. lbs. (105 Nm) plus an additional 120 degrees.
  69. Tighten the bracket bolts to 37 ft. lbs. (50 Nm).
  70. Remove the jack and repeat the procedure for the right side.
  71. Install five new nuts on the steering rack and tighten them to 37 ft. lbs. (50 Nm).
  72. Install the front engine mount nut, then tighten the front and rear bolts to 37 ft. lbs. (50 Nm).
  73. Install the torque rod mount on the transaxle using new bolts, tighten the M18 bolts (early models) to 13 ft. lbs. (18 Nm) plus an additional 90 degrees or M10 bolts (later models) to 26 ft. lbs. (35 Nm) plus an additional 40 degrees.
  74. Install the transfer case (if equipped).
  75. Install the right and left halfshafts.
- NOTE: Make sure the transaxle axle seal and axle boot are not damaged.**
76. Connect the control arms to the ball joints using new nuts.
  77. Install the sway bar link using new nuts and tighten to 37 ft. lbs. (50 Nm).
  78. Attach the cable pipe and carbon filter container to the subframe. Tie the hoses with a strip clamp on the subframe.
  79. Install engine splash guard on early models.
  80. Install the front splash guard by pressing in the guides and installing the screws.
  81. Install the five transaxle bolts on top side and tighten to 37 ft. lbs. (50 Nm).
  82. Install the starter.
  83. Connect the cable conduit and oxygen sensor connectors.
  84. Install the dipstick tube with a new O-ring and tighten to 19 ft. lbs. (25 Nm).
  85. Connect the wiring harness, ground lead, transaxle connectors.
  86. Connect the transaxle vent and EGR hoses.
  87. Attach the transaxle cable and adjust.
  88. Connect the ground strip to the firewall.
  89. Install a new bolt and nut for the extension arm and torque rod.
  90. Tighten early model M8 bolts to 13 ft. lbs. (18 Nm) plus an additional 120 degrees. Tighten later model M10 bolts to 26 ft. lbs. (35 Nm) plus an additional 90 degrees.
  91. Install the remaining components.
  92. Fill the transaxle with fluid.
  93. Check the fluid level after the engine has reached normal operating temperature to assure that it is correct.

Fig. 1: Remove the bell housing bolts, and use a T50 Torx® bit to remove the torque converter bolts

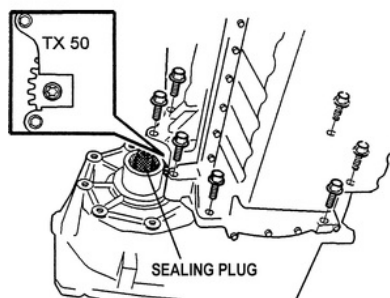
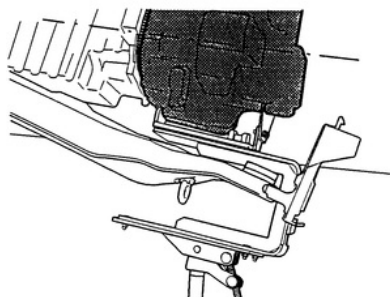


Fig. 2: Use a suitable stand to support the transaxle before removing





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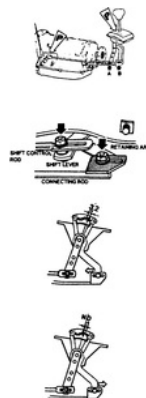
Before performing any adjustments, the following checks should be made: Check that the engine can be started, only with the selector lever in position **P** and with the brake pedal depressed. The selector lever should stand vertically when in the **P** position. Check that the back-up lights illuminate only when the selector lever is in the **R** position. On AW 70/71/72 transmissions, check that the clearance from position **D** towards **N** is the same or smaller than the clearance between position **3** towards **2**. On the AW 30-40 transmission, check that there is a noticeable play from position **D** towards **N**; however, that play should not be greater than the play from position **3** towards **L**.

### Shift Control

#### AW 70/71/72 TRANSMISSIONS

1. Set the selector lever in position **P**. Loosen the retaining nuts for the shift control rod "A" and retaining arm "B".
2. Check that the lever on the transmission is at position **P** (first step seen from the rear). Turn the transmission output shaft until it locks.
3. Set the lever in the vertical position on the shift control rod, or just facing forward; tighten the nut. Push the retaining arm lightly to the rear until slight resistance is felt. Temporarily tighten the retaining nut to 42 inch lbs. (5 Nm).
4. Check that the clearance from position **D** towards **N** is the same or smaller than the clearance between position **3** towards **2**.
5. If incorrect:
  - A. If the gear selector lever is stiff in position **D**, move the connecting rod  $\frac{5}{64}$  inch (2mm) to the rear.
  - B. If the gear selector lever is stiff in position **3**, move the connecting rod  $\frac{1}{8}$  inch (3mm) to the front.
6. When the adjustment is correct, tighten the retaining nut to 13–17 ft. lbs. (17–23 Nm).
7. After adjustment, check that the engine can be started, only with the selector lever in position **P** and with the brake pedal depressed. The back-up lights should illuminate only when the selector lever is in the **R** position.

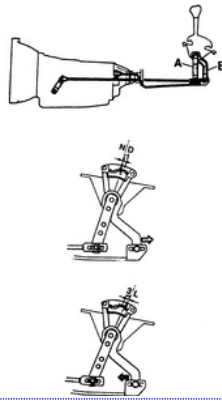
Fig. 1: Adjusting the shift control on AW 70/71/72 transmissions



#### AW 30/40 TRANSMISSION

1. Place the selector lever in position **P**.
2. Loosen the nuts on the control rod and reaction strut.
3. Make sure the selector link arm on the transmission is in position **P** (rearmost gear position).
4. Make sure the gear lever arm "A" is vertical (or slightly forward) and tighten the nut.
5. Press the reaction arm "B" gently backwards until slight resistance is felt. Tighten the nut approximately 48 inch lbs. (5 Nm).
6. Check that the play from position **D** towards **N** is the same as the play from position **3** towards **L**.
7. If incorrect:
  - A. If there is no play in position **D**, move the reaction arm backwards approximately 0.08 inches (2mm).
  - B. If there is no play in position **3**, move the reaction arm forwards approximately 0.12 inches (3mm).
8. When the adjustment is correct, tighten the retaining nut to 13–17 ft. lbs. (17–23 Nm).
9. After adjustment, check that the engine can be started, only with the selector lever in positions **P** or **N**. The back-up lights should illuminate only when the selector lever is in the **R** position.

Fig. 2: Adjusting the shift control on AW 30/40 transmissions

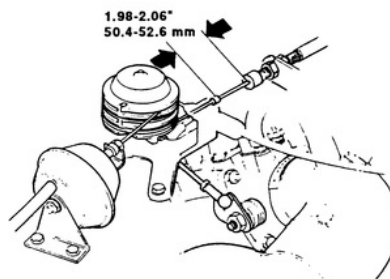


### Kickdown Cable/Throttle Linkage

#### AW 70/71/72 TRANSMISSIONS

1. Check that the wire is tensioned at idle setting, without tensioning against the throttle pulley, and that it is in the pulley groove and runs smoothly.
2. Pull the wire out approximately 0.39 inch (10mm) and release suddenly. A mechanical click should be heard from the throttle cam, when it reaches the standby setting. Adjust with the wire tensioner.
  - A. If no clicking is heard, the wire is too firmly tensioned.
  - B. If no kickdown can be obtained, the wire is too slack.
3. Check the cable sheath adjustment with the throttle pedal in the vehicle depressed, not by actuating the linkage by hand. When depressing the throttle pedal fully, the distance from the cable sheath to the clip should be 2.02 inches (51.5mm), but 1.98–2.06 inches (50.4–52.6mm) is permitted. If required, adjust the distance on the cable sheath.

Fig. 3: Adjustment of the kick-down cable on AW 70/71/72 transmissions



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### CAUTION

If the vehicle has been driven within the last 3–5 hours, the transmission oil can be scalding hot. Use extreme care when draining the oil or handling components.

### Except 240 and 960

1. Disconnect the battery ground cable.
2. Place the gear selector in the **P** position.
3. Disconnect the kickdown cable at the throttle pulley on the engine.
4. Disconnect the oil filler tube at the oil pan, and drain the transmission oil.

### CAUTION

The oil will be scalding hot if the vehicle was recently driven.

5. Disconnect the control rod at the transmission lever, and disconnect the reaction rod at the transmission housing.
6. On the AW71 transmission, disconnect the wire at the solenoid (slightly to the rear of the transmission-to-driveshaft flange).
7. Matchmark the transmission-to-driveshaft flange and unbolt the driveshaft.
8. Place a jack or transmission dolly under the transmission and support the unit. Remember that the transmission will be heavier at the front end than the rear.
9. Remove the transmission crossmember assembly.
10. Disconnect the exhaust pipe at the joint and remove the exhaust pipe bracket from the exhaust pipe.
11. Remove the rear engine mount with the exhaust pipe bracket.
12. Remove the starter motor.
13. Remove the cover plate at the torque converter housing.
14. Disconnect the oil cooler lines at the transmission.
15. Remove the upper bolts at the torque converter cover.
16. Remove the oil filler tube.

**NOTE:** It is helpful to have another person steadying and guiding the transmission during the removal process.

17. Remove the lower bell housing bolts.
18. Remove the bolts retaining the torque converter to the drive plate.
19. Pry the torque converter back from the drive plate with a small prybar.
20. Slowly lower the transmission as you pull it back to clear the input shaft.

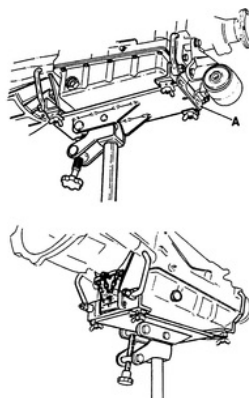
### WARNING

Do not tilt the transmission forward, or the torque converter may slide off.

### To install:

21. When reinstalling, install the two lower bolts in the casing as soon as the transmission is in place. For the B280 engine, adjust the panel between the starter motor and torque converter casing, and install the bolts for the starter.
22. Mount the oil filler tube at the oil pan, but do not tighten the nut.
23. Install the tube bracket and the two upper bolts in the converter casing.
24. Tighten the nut for the oil tube to 65 ft. lbs. (88 Nm).
25. Install the bolts for the coupling flange; hand-tighten the bolts first, then tighten in a crisscross pattern to 32 ft. lbs. (44 Nm).
26. Reinstall the rear engine mount with the exhaust pipe bracket and reconnect the exhaust system.
27. Reinstall the transmission crossmember; when it is securely bolted in place, the supporting jack may be removed.
28. Reinstall the driveshaft.
29. Making sure that both the transmission linkage and the shift selector in the vehicle are in the **P** position, attach the actuator rod and the reaction rod.
30. Adjust the shift linkage as necessary.
31. Lower the vehicle.
32. On AW71 models, install and connect the wiring to the solenoid valve.
33. Connect the kickdown cable at the throttle pulley. Adjust the cable if necessary.
34. Fill the transmission with oil.
35. Connect the negative battery cable.
36. Apply the parking brake. Start the engine and allow to idle. Move the selector lever through all gear positions.
37. Place the selector lever in **P**. Wait 2 minutes and check the fluid level. Top up, as required.

Fig. 1: Remove the transmission using a suitable holding fixture





1. Disconnect the negative battery cable.
2. Remove the dipstick and filler pipe clamp.
3. Remove the bracket and throttle cable from the dashboard and throttle control.
4. Disconnect the exhaust pipe at the manifold flange.
5. Raise and support the vehicle.
6. Drain the fluid into a clean container.
7. Disconnect the driveshaft from the transmission flange.
8. Disconnect the selector lever controls (shift linkage) and the pan reinforcing bracket.
9. Remove the converter attaching bolts.
10. Support the transmission with a jack or a transmission dolly and holding fixture.
11. Remove the rear crossmember.
12. Disconnect the exhaust pipe brackets and remove the speedometer cable from the case.
13. Remove the filler pipe.
14. Install a wooden block between the engine and firewall; lower the jack until the engine contacts the block.
15. Make sure no tension is put on the battery cable.
16. Disconnect all electrical wiring at the transmission case.
17. Disconnect the starter cable and remove the starter.
18. Remove the converter housing bolts.
19. Pull the transmission backwards to clear the guide pins.
20. Lower and remove the transmission assembly from the vehicle.

**To install:**

21. When reinstalling, load the transmission straight onto the engine and install the converter housing bolts.
22. Tighten the converter-to-drive plate bolts to 35 ft. lbs. (48 Nm).
23. Install the starter and connect its cable; hook up all other wiring to the transmission case.
24. Using the jack, elevate the transmission and engine into their proper position.
25. Install the speedometer cable and the filler pipe.
26. Reconnect the exhaust pipe and the rear engine mount brackets.
27. Install the rear crossmember and tighten its bolts to 18 ft. lbs. (25 Nm). When the crossmember is secure, the jack may be removed.
28. Install the converter attaching bolts.
29. Connect the selector lever controls and the pan reinforcing bracket.
30. Connect the driveshaft to the transmission flange.
31. Lower the vehicle.
32. Reconnect the exhaust pipe at the manifold flange.
33. Reinstall the bracket and throttle cable and adjust if necessary.
34. Install the dipstick and filler pipe.
35. Reconnect the negative battery cable.
36. Fill the transmission to the proper level with fluid.
37. Apply the parking brake. Start the engine and allow to idle. Move the selector lever through all gear positions.
38. Place the selector lever in **P**. Wait 2 minutes and check the fluid level. Top up, as required.

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1. Disconnect the negative battery cable.
2. Support the engine using the special tools (5006, 5033, 5115, 5429 and 5186, or their equivalents).
3. Remove the preheater pipe under the engine. Be careful not to damage the O-ring.
4. Disconnect the front section of the exhaust pipe.
5. Disconnect the transmission cooler lines and plug the openings.
6. Unfasten the 3 transmission connectors.
7. Disconnect the oxygen sensor lead from the transmission unit and support member.
8. Matchmark the driveshaft coupling halves to aid during re-assembly.
9. Disconnect the driveshaft.
10. Remove the clips between the gear selector lever and control rod/reaction arm. Withdraw the rods from the mounting.
11. Disconnect the transmission support member from the transmission bump stop and side members.
12. Position a service jack beneath the transmission.
13. Carefully lower the transmission.
14. Remove the torque converter-to-flexplate retaining bolts.
15. Remove the transmission housing bolts.
16. Separate the torque converter from the flexplate and lower the transmission.

**To install:**

17. Lift the transmission into position, while aligning the torque converter with the flexplate.
18. Install the transmission housing mounting bolts.
19. Install the torque converter retaining bolts and tighten alternately to 22 ft. lbs. (30 Nm).
20. Raise the transmission and secure the support member. Tighten to 37 ft. lbs. (50 Nm).
21. Install the gear selector lever.
22. Install the locking clips.
23. Connect the transmission oil cooler lines.
24. Connect the transmission connectors and oxygen sensor lead.
25. Connect the driveshaft. Check to ensure the matchmarks are aligned.
26. Lubricate the O-ring and install the preheater pipe.
27. Install the front exhaust pipe.
28. Remove the engine support tools.
29. Reconnect the negative battery cable.
30. Fill the transmission to the proper level with the appropriate fluid.
31. Apply the parking brake. Start the engine and allow to idle. Move the selector lever through all gear positions.
32. Place the selector lever in **P**. Wait 2 minutes and check the fluid level. Top up, as required.

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**NOTE:** This procedure covers removal and installation of the extension housing seal with the transmission mounted in the vehicle.

1. Disconnect the negative battery cable.
2. Raise and support the vehicle safely.
3. Matchmark the driveshaft with the coupling.
4. Disconnect the driveshaft.
5. Using tool 5244 or equivalent for a round coupling flange, remove the coupling flange nut. Use a spanner (tool 5149 or equivalent) to prevent the flange from rotating.
6. Remove the coupling flange, using a suitable puller (tool 2261 or equivalent).
7. Unfasten the retaining bolts and remove the housing with the governor assembly.
8. Remove the gasket from the housing.

**To install:**

9. Clean the sealing areas thoroughly.
10. Install a new gasket onto the housing.
11. Install the housing with the governor housing attached, and tighten the bolts to 20–35 ft. lbs. (27–47 Nm).
12. Press the coupling flange into place, using tool 1845 or equivalent.
13. Install the coupling flange nut and tighten to 65–85 ft. lbs. (90–110 Nm).
14. Install the driveshaft.
15. Lower the vehicle.
16. Connect the negative battery cable.

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1. Make sure the gear selector is in the **N** position.
2. Disconnect the battery cables and remove the battery.
3. Remove the battery tray.
4. Remove the air cleaner assembly and intake hose.
5. Remove the transmission cable from the rod arm.
6. Remove the dipstick pipe bracket.
7. Install tool 5475 on the selector shaft and check that the indentation on the tool aligns with the mark on the sensor. If the sensor requires adjustment, perform the following:
  - Remove the position sensor mounting bolts and the selector shaft nut.
  - Rotate the sensor until the marks align.
  - Tighten the sensor mounting bolts and the selector shaft nut.
- To install:**
8. Install the dipstick pipe bracket.
9. Install the selector lever.
10. Install the transmission cable onto the cable arm.
11. Install the air cleaner assembly and intake hose.
12. Install the battery tray.
13. Install the battery and connect the battery cables.

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1. Make sure the gear selector is in the **N** position.
2. Disconnect the battery cables and remove the battery.
3. Remove the battery tray.
4. Remove the air cleaner assembly and intake hose.
5. Remove the transmission cable from the rod arm.
6. Remove the selector lever.
7. Remove the dipstick pipe bracket.
8. Remove the position sensor's mounting bolts and remove the sensor from the transaxle.
9. Disconnect the clamps and remove the connector from the transaxle.

### To install:

10. Install the sensor and adjust using procedure outlined below.
11. Tighten the sensor's mounting bolts.
12. Install the dipstick pipe bracket.
13. Install the selector lever.
14. Install the transmission cable onto the cable arm.
15. Install the air cleaner assembly and intake hose.
16. Install the battery tray.
17. Install the battery and connect the battery cables.

Fig. 1: The gear position sensor is visible after the air cleaner is removed



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Refer to the Halfshaft Overhaul procedure in the Manual Transaxle portion of this section.

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NOTE: The procedure for halfshaft removal is the same for manual transaxle, so refer to the Halfshaft removal and installation procedure in the Manual Transaxle portion of this section.

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There is no adjustment for this switch.

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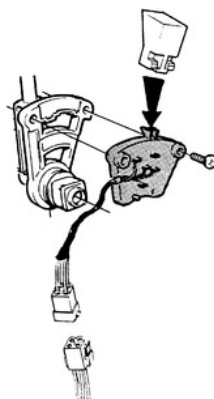
The start inhibitor (neutral safety switch) also serves to illuminate the back-up lights. The switch is found on the left side of the gear shift selector.

1. Remove the ashtray and panel in the center console.
2. Remove the faceplate with the gear position symbols.
3. Remove the start inhibitor/back-up light switch.
4. Open the connector and lift off the switch.

**To install:**

5. Install the new switch and connect the wiring. Make sure that the tab on the selector lever enters the slot on the switch. Don't forget the prism which fits onto the top of the new switch.
6. Reinstall the holder and the shifter faceplate.
7. Install the panel and the ashtray in the center console.

Fig. 1: The neutral safety/back-up light switch as mounted on the gear shift selector





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Fuel Delivery: FI | Fuel: GAS

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The automatic transaxle allows engine torque and power to be transmitted to the front wheels within a narrow range of engine operating speeds. It will allow the engine to turn fast enough to produce plenty of power and torque at very low speeds, while keeping it at a sensible rpm at high vehicle speeds (and it does this job without driver assistance). The transaxle uses a light fluid as the medium for the transmission of power. This fluid also works in the operation of various hydraulic control circuits and as a lubricant. Because the transaxle fluid performs all of these functions, trouble within the unit can easily travel from one part to another. For this reason, and because of the complexity and unusual operating principles of the transaxle, a very sound understanding of the basic principles of operation will simplify troubleshooting.

# 1992 Volvo 940

Submodel: | Engine Type: L4 | Liters: 2.3  
Fuel Delivery: FI | Fuel: GAS

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The automatic transmission allows engine torque and power to be transmitted to the rear wheels within a narrow range of engine operating speeds. It will allow the engine to turn fast enough to produce plenty of power and torque at very low speeds, while keeping it at a sensible rpm at high vehicle speeds (and it does this job without driver assistance). The transmission uses a light fluid as the medium for the transmission of power. This fluid also works in the operation of various hydraulic control circuits and as a lubricant. Because the transmission fluid performs all of these functions, trouble within the unit can easily travel from one part to another. For this reason, and because of the complexity and unusual operating principles of the transmission, a very sound understanding of the basic principles of operation will simplify troubleshooting.