

SECTION 3F5B

SUPPLEMENTAL INFLATABLE RESTRAINT (SIR) TILT STEERING COLUMN FLOOR SHIFT UNIT REPAIR

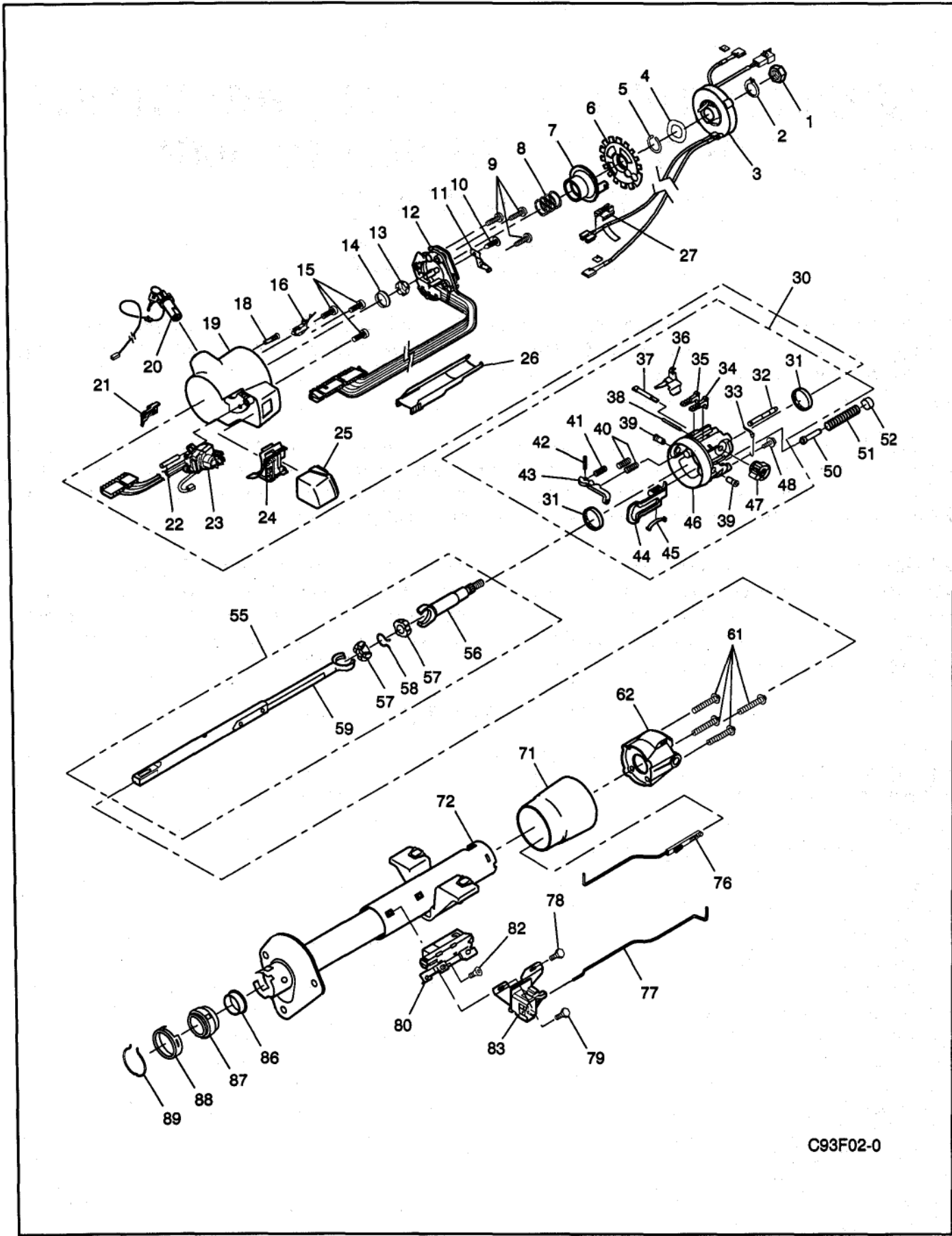
CAUTION: The procedures in this section must be followed in the order listed to temporarily disable the Supplemental Inflatable Restraint (SIR) System and prevent false diagnostic codes from setting. Failure to follow procedures could result in possible air bag deployment, personal injury, or otherwise unneeded SIR system repairs.

CAUTION: Before removing or installing any electrical unit or when a tool or equipment could easily come in contact with "live" exposed electrical terminals, disconnect the negative battery cable to help prevent personal injury and/or damage to the vehicle or components. Unless instructed otherwise, the ignition switch must be in the "off" or "lock" position.

NOTICE: When fasteners are removed, always reinstall them at the same location from which they were removed. If a fastener needs to be replaced, use the correct part number fastener for that application. If the correct part number fastener is not available, a fastener of equal size and strength (or stronger) may be used. Fasteners that are not reused, and those requiring thread locking compound will be called out. The correct torque value must be used when installing fasteners that require it. If the above conditions are not followed, parts or system damage could result.

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Tilt Spring Assembly			



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Figure 1 - Tilt Steering Column

- | | |
|--|---|
| <ul style="list-style-type: none"> 1- NUT, HEX LOCKING (M14x1.5) 2- RING, RETAINING 3- COIL ASM, INFL RESTRAINT 4- WASHER, WAVE 5- RING, RETAINING 6- LOCK, SHAFT 7- CAM ASM, TURN SIG CANCEL 8- SPRING, UPPER BEARING 9- SCREW, BNDG HD CR RECESS 10- SCREW, RD WASH HD (M4.2x1.41) 11- ARM ASM, SIGNAL SWITCH 12- SWITCH ASM, TURN SIGNAL 13- SEAT, UPPER BRG INNER RACE 14- RACE, INNER 15- SCREW, PAN HD SOC TAP 16- SWITCH ASM, BUZZER 18- SCREW, LOCK RETAINING 19- COVER ASM, LOCK HOUSING 20- LOCK CYLINDER SET, STRG COL
PASS KEY 21- ACTUATOR, DIMMER SW ROD 22- PIN, SWITCH ACTUATOR PIVOT 23- SWITCH ASM, PIVOT & (PULSE) 24- BASE PLATE, COL HSG CVR END 25- CAP, COL HSG COVER END 26- PROTECTOR, WIRING 27- SHROUD, CONNECTOR 30- HOUSING ASM, STRG COLUMN 31- BEARING ASM 32- BOLT, LOCK 33- SPRING, LOCK BOLT 34- SHOE, STEERING WHEEL LOCK 35- SHOE, STEERING WHEEL LOCK 36- SHIELD, WIRE PROTECTOR 37- SHAFT, DRIVE 38- PIN, DOWEL 39- PIN, PIVOT 40- SPRING, SHOE 41- SPRING, RELEASE LEVER 42- PIN, RELEASE LEVER 43- LEVER, SHOE RELEASE 44- RACK, SWITCH ACTUATOR 45- SPRING, RACK PRELOAD 46- HOUSING, STRG COLUMN 47- SECTOR, SWITCH ACTUATOR 48- SCREW, HEX WASHER HEAD | <ul style="list-style-type: none"> 50- GUIDE, SPRING 51- SPRING, WHEEL TILT 52- RETAINER, SPRING 55- SHAFT ASM, STEERING COLUMN 56- SHAFT ASM, RACE & UPPER 57- SPHERE, CENTERING 58- SPRING, JOINT PRELOAD 59- SHAFT ASM, LOWER STEERING 61- SCREW, SUPPORT 62- SUPPORT ASM, STRG COL HSG 71- SHROUD, STRG COLUMN HOUSING 72- JACKET ASM, STRG COL 76- ACTUATOR ASM, IGNITION SWITCH 77- ROD, DIMMER SWITCH 78- SCREW, WASH HD (#10-24X.25) 79- SCREW, HEX WASH HD TAP 80- SWITCH ASM, IGNITION 82- SCREW, FLT HD (#10-24X.31) 83- SWITCH ASM, DIMMER 86- ADAPTER, LOWER BEARING 87- BEARING ASM 88- RETAINER, BEARING ADAPTER 89- CLIP, LOWER BEARING ADAPTER <p>Service Kits</p> <ul style="list-style-type: none"> 201- RACK SERV KIT, COL SECTOR &
-INCLUDES: 14,31,33,44,47,48 202- SPRING SERV KIT, TILT COLUMN
-INCLUDES: 13,14,39,50,51,52 203- COIL SERV KIT, INFL RESTRAINT
-INCLUDES: 3,4,27 204- SPHERE SERV KIT, TILT COLUMN
-INCLUDES: 57,58 205- GREASE SERV KIT, (SYNTHETIC) |
|--|---|

Figure 2 - Tilt Steering Column - Legend

SUB SECTION A - UPPER COLUMN

INCLUDES:

DISABLING THE SIR SYSTEM
 ENABLING THE SIR SYSTEM
 INFL RESTRAINT COIL ASSEMBLY
 SHAFT LOCK
 TURN SIGNAL CANCELLING CAM ASM
 UPPER BEARING SPRING
 UPPER BEARING INNER RACE SEAT
 INNER RACE
 TURN SIGNAL SWITCH ASSEMBLY
 BUZZER SWITCH ASSEMBLY
 STRG COL PASS KEY LOCK CYL SET
 CENTERING INFL RESTRAINT COIL

Tools Required:

J 23653-C Lock Plate Compressor

SERVICE PRECAUTIONS

CAUTION: When performing service on or around SIR components or SIR wiring, follow the procedures listed below to temporarily disable the SIR system. Failure to follow procedures could result in possible air bag deployment, personal injury or otherwise unneeded SIR system repairs.

The DERM can maintain sufficient voltage to cause a deployment for up to 2 minutes after the ignition switch is turned "OFF" or the battery is disconnected. Many of the service procedures require disconnection of the "AIR BAG" fuse and the inflator module circuits from the deployment loops to avoid an accidental deployment.

DISABLING THE SIR SYSTEM

↔ Remove or Disconnect

- Turn the steering wheel so that the vehicle's wheels are pointing straight ahead.
 - Turn the ignition switch to "LOCK" and remove key.
1. "AIR BAG" fuse from I/P fuse block.
 2. Lower sound insulator panel - LH. Refer to SECTION 8C.
 3. Connector Position Assurance (CPA) retainer and yellow 2-way SIR connector at base of steering column.
 4. I/P compartment door assembly, refer to SECTION 8C.
 5. Connector Position Assurance (CPA) retainer and yellow 2-way SIR connector located near the yellow 24-way DERM harness connector.

? Important

- With the "AIR BAG" fuse removed and ignition switch "ON", the "AIR BAG" warning lamp will be "ON". This is normal operation and does not indicate an SIR system malfunction.

ENABLING THE SIR SYSTEM

↔ Install or Connect

- Turn ignition switch to "LOCK" and remove key.
1. Yellow 2-way SIR connector and CPA retainer located near the yellow 24-way DERM harness connector.
 2. I/P compartment door assembly, refer to SECTION 8C.
 3. Yellow 2-way SIR connector and CPA retainer at base of steering column.
 4. Lower sound insulator panel-LH, refer to SECTION 8C.
 5. "AIR BAG" fuse to I/P fuse block.
 - Turn ignition switch to "RUN" and verify that the "AIR BAG" warning lamp flashes 7 times and then turns "OFF". If it does not operate as described, perform the "SIR Diagnostic System Check" in SECTION 9J-A.

? Important

- Before doing any service procedures in this section, disabling the SIR system and removal of Inflator Module and Steering Wheel is needed. Columns equipped with Supplemental Inflatable Restraint (SIR) and Redundant Steering Wheel Control (RSWC) will have Inflatable Restraint coils with two wire leads. (SIR) wire leads are yellow with a yellow connector shroud. (RSWC) wire leads are grey with black connectors. (Refer to "Disabling the SIR System" in this section and service procedures in section 3F).

↔ Remove or Disconnect

Figures 1 through 9 and 13

NOTICE: Place ignition to "LOCK" position to prevent uncentering coil assembly (3).

1. Disable the SIR system; Refer to "Disabling the SIR System" in this Section.
2. Negative (-) battery cable.

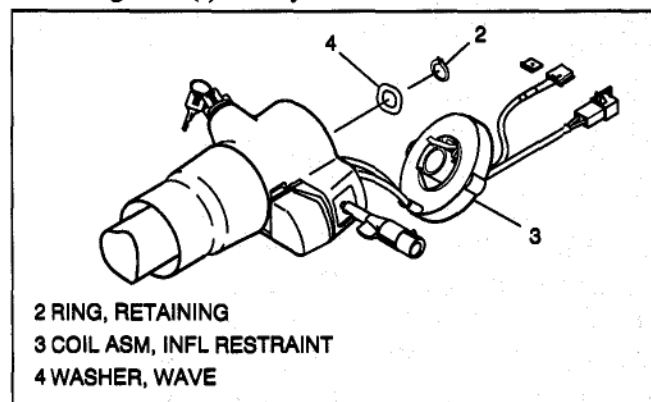


Figure 3 - Removing Coil Assembly Off Shaft

3. Coil assembly retaining ring (2).
4. Inflatable restraint coil assembly (3).
 - Let switch hang freely if removal is not needed.
 - To remove coil (3), do steps 5 through 17 in this section.
5. Wave washer (4).
6. Shaft lock retaining ring (5) using J 23653-C to push down shaft lock (6).
 - Dispose of ring (5).
7. Shaft lock (6).
8. Turn signal cancelling cam assembly (7).
9. Upper bearing spring (8).

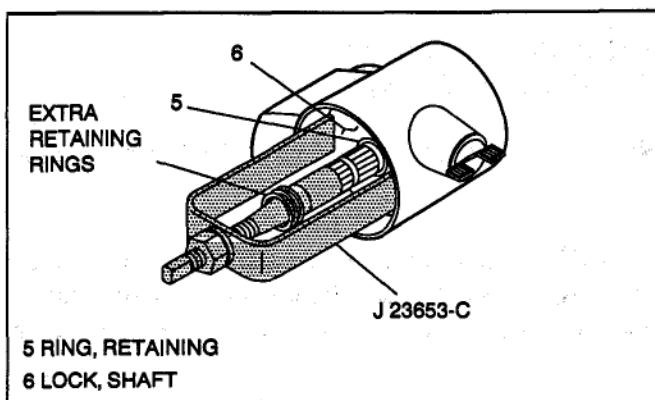


Figure 4 - Removing Shaft Lock Retaining Ring

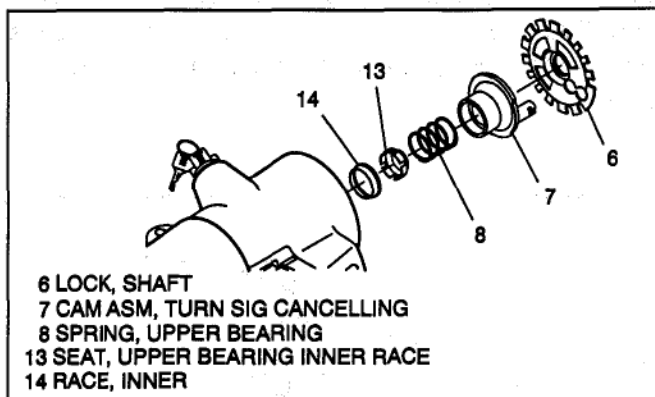


Figure 5 - Removing Components from Upper Shaft

10. Upper bearing inner race seat (13).
11. Inner race (14).
12. Turn signal to "RIGHT TURN" position (up).
13. Multi-function lever and hazard knob assembly. (See Section 3F)
14. Screw (10) and signal switch arm (11).
15. Turn signal switch screws (9).

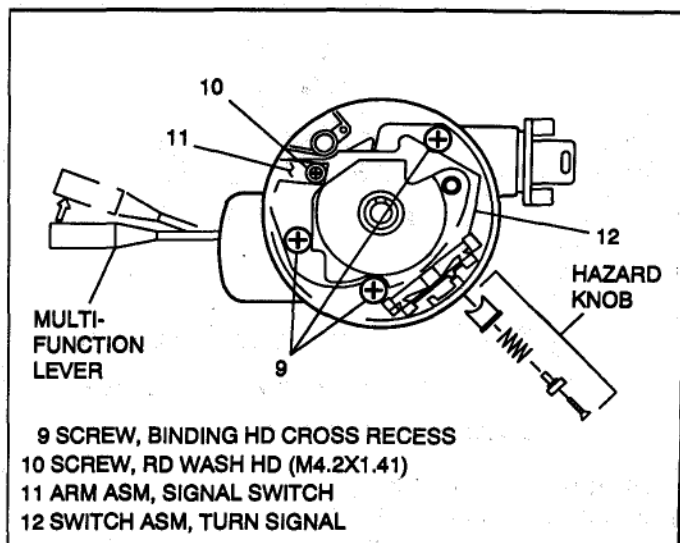


Figure 6 - Turn Signal Switch Removal Preparation

16. Turn signal switch assembly (12).

- Let switch hang freely if removal is not needed.
- To remove switch (12):
 - A. Turn signal switch connector from bulkhead connector.
 - B. Wiring protector (26).
 - C. Gently pull wire harness through column.

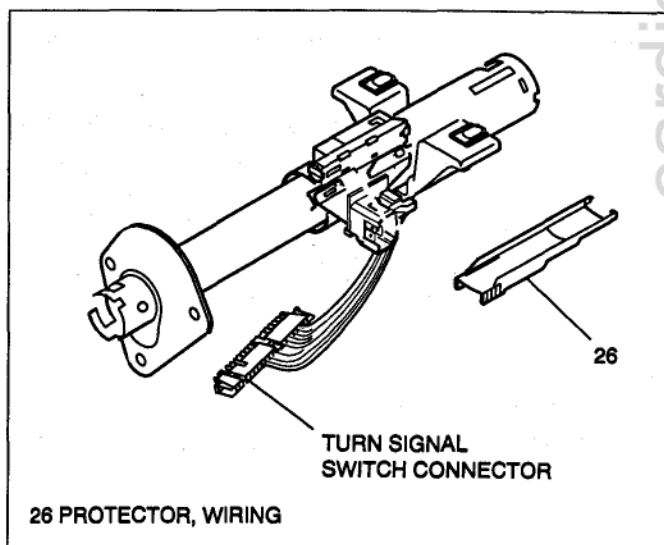


Figure 7 - Removing Turn Signal Switch

NOTICE: Coil assembly (3) will become uncentered if:

- 1) Steering column is separated from steering gear and is allowed to rotate, or
- 2) Centering spring is pushed down, letting hub rotate while coil (3) is removed from steering column. (If this occurs, see Figure 13)

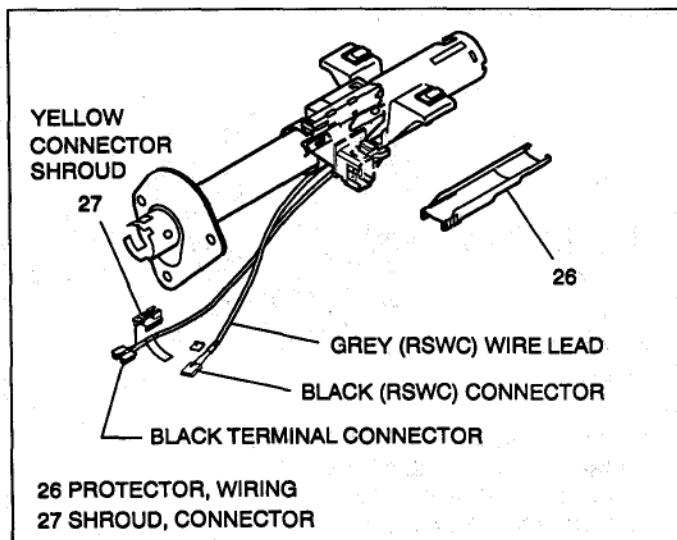


Figure 8 - Removing Coil Assembly Switch

17. Inflatable restraint coil assembly (3) with wire harness from column assembly.

- A. Wiring protector (26).
- B. Attach two lengths of mechanics wire to coil terminal connectors to aid in reassembly.
- C. Gently pull wires through column.

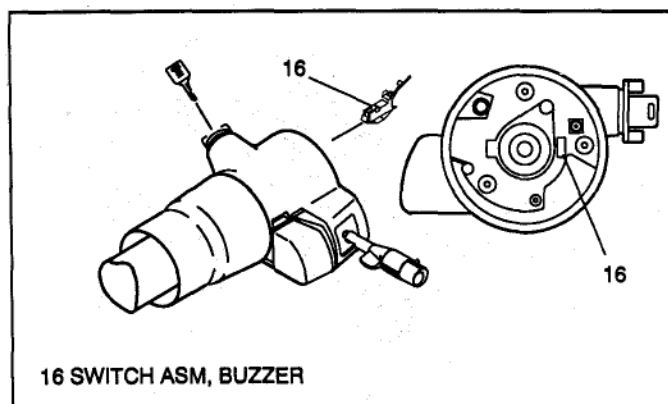


Figure 9 - Removing Buzzer Switch

18. Key from pass key lock cylinder set (20).
19. Buzzer switch assembly (16).
20. Reinsert key in pass key lock cylinder (20).
 - Key in "LOCK" position.

21. Lock retaining screw (18).
22. Pass key lock cylinder (20) and harness.
 - To remove lock cylinder (20):

- A. Terminal connector from bulkhead connector.
- B. Wiring protector (26).
- C. Attach a length of mechanics wire to terminal to aid in reassembly.
- D. Retaining clip from housing cover (19) and gently pull wire harness through column.

Install or Connect

Figures 1, 10 through 15 and 26

NOTICE: See "Notice" on page 3F5B-1 of this section.

NOTICE: Ensure all fasteners are securely seated before applying needed torque. Failure to do so may result in component damage or malfunctioning of steering column.

NOTICE: Route wire from pass key lock cylinder as shown and snap retaining clip into hole in housing (19). (See Figures 10 and 11) Failure to do so may result in component damage or malfunction of pass key lock cylinder.

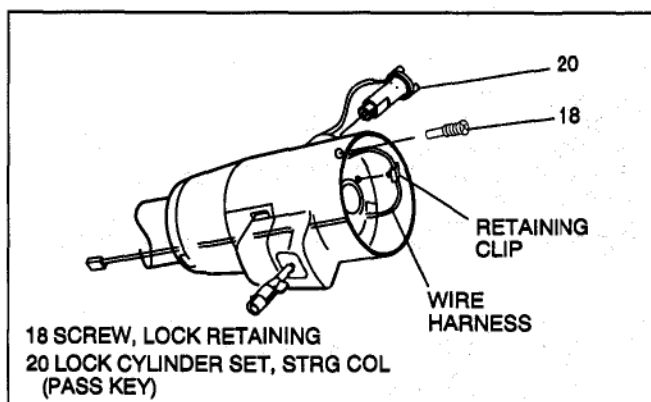


Figure 10 - Installing Pass Key Lock Cylinder Set

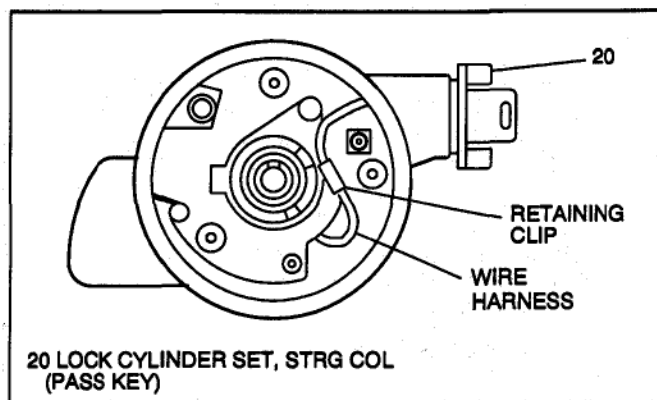


Figure 11 - Routing Pass Key Wire Harness

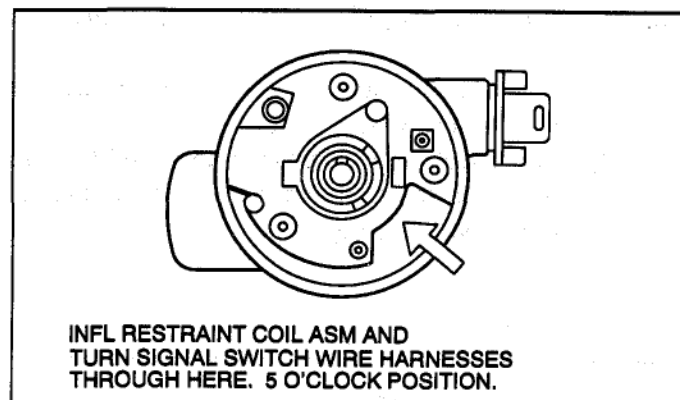


Figure 12 - Wire Harnesses through Column

1. Pass key lock cylinder (20).
 - A. Wire terminal through column and snap retaining clip into hole in housing.
 - B. Lock cylinder (20) connector to vehicle wire harness.
2. Lock retaining screw (18).

 **Tighten**

 - Tighten screw (18) to 2.5 N·m (22 lb.in.).
3. Key from pass key lock cylinder set (20).
4. Buzzer switch assembly (16).
5. Reinstall key in pass key lock cylinder set (20).
 - Key in "OFF-LOCK" position.
6. Turn signal switch assembly (12) wire harness through steering column.
 - A. Let switch hang freely.
 - B. Switch connector to bulkhead connector.
7. Coil assembly (3) wire harness through column.
 - Let coil hang freely.
8. Turn signal switch assembly (12) and screws (9).

 **Tighten**

 - Tighten screws (9) to 3.4 N·m (30 lb.in.).
9. Signal switch arm (11) with screw (10).

 **Tighten**

 - Tighten screw (10) to 2.3 N·m (20 lb.in.).
10. Hazard knob assembly and multi-function lever. (See Section 3F)
11. Inner race (14).
12. Upper bearing inner race seat (13).
13. Upper bearing spring (8).
14. Turn signal cancelling cam assembly (7).
 - Lubricate with grease, synthetic (service kit).
15. Shaft lock (6).
16. New shaft lock retaining ring (5) using J 23653-C to push down shaft lock (6).
 - Ring (5) must be firmly seated in groove on shaft.

NOTICE: Set steering shaft so that block tooth on upper steering shaft (56) is at the 12 o'clock position, wheels on vehicle should be straight ahead, then set ignition switch to "LOCK" position, to ensure no damage to coil assembly (3). (See Figure 26 for steering shaft orientation)

17. Wave washer (4).

NOTICE: Coil assembly (3) will become uncentered if:

- 1) Steering column is separated from steering gear and is allowed to rotate, or
- 2) Centering spring is pushed down, letting hub rotate while coil is removed from column. (If this occurs, see Figure 13)

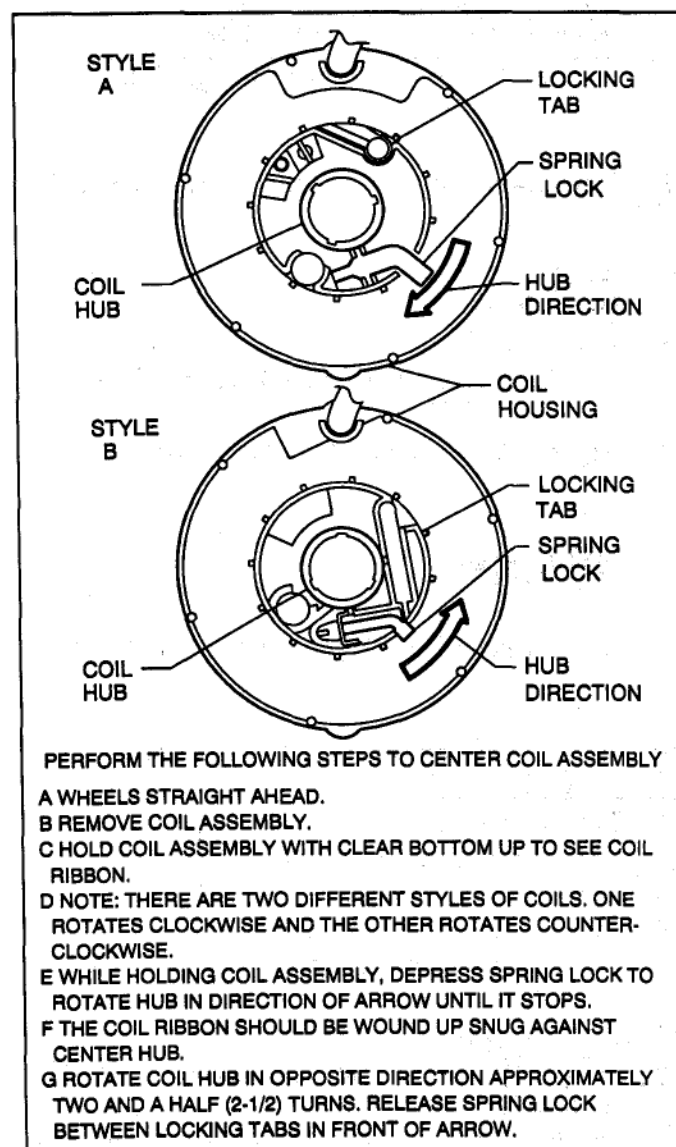


Figure 13 - Centering Coil Assembly

NOTICE: If a new coil assembly (3) is being installed, assemble pre-centered coil assembly (3) to steering column. Remove centering tab and dispose. (See Figure 13)

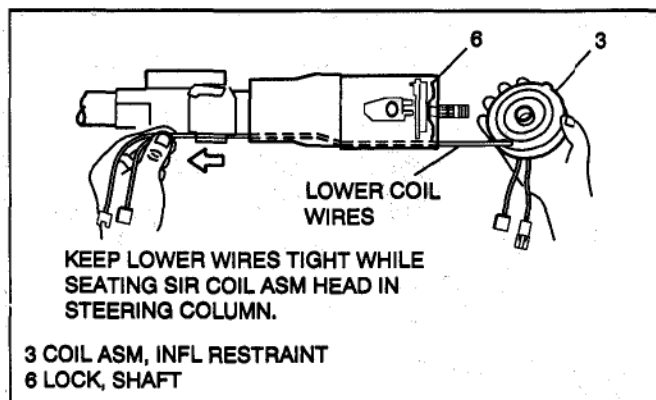


Figure 14 - Routing Coil Assembly Wires

NOTICE: Sir coil assembly wires must be kept tight with no slack while installing SIR coil assembly. Failure to do so may cause wires to be kinked near shaft lock area and cut when steering wheel is turned.

18. Ensure coil assembly (3) hub is centered.
19. Coil assembly (3).
 - A. Pull wires tight while positioning SIR coil to steering shaft.
 - B. Align opening in coil with horn tower and "locating bump" between two tabs on housing cover.
 - C. Seat coil assembly into steering column.

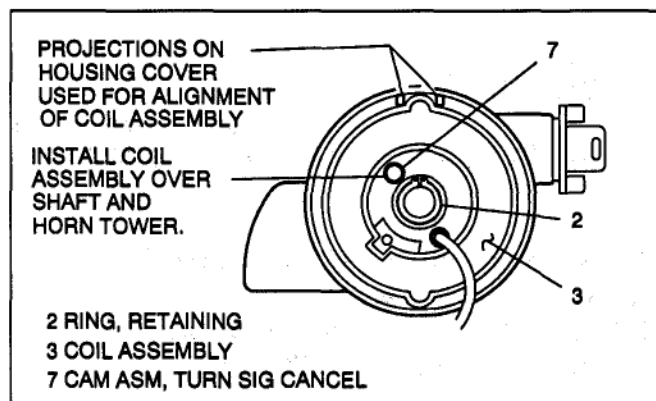


Figure 15 - Coil Assembly Installed

20. Coil assembly retaining ring (2).
 - Ring (2) must be firmly seated in groove on shaft.

NOTICE: Gently pull lower coil assembly, turn signal, pass key, and pivot & (pulse) wires to remove any wire kinks that may be inside steering column assembly. Failure to do so may cause damage to wire harness.

21. Wiring protector (26).
22. Refer to Section 3F to complete remaining steering column assembly.
23. Negative (-) battery cable.
24. If all service operations are completed, enable the SIR system; refer to "Enabling the SIR System" in this Section.

SUB SECTION B - HOUSING COVER

Figures 1,2,16 through 20

INCLUDES:

**LOCK HOUSING COVER ASSEMBLY
COL HSG COVER END CAP
PIVOT & (PULSE) SWITCH ASSEMBLY
DIMMER SWITCH ROD ACTUATOR
TILT SPRING ASSEMBLY**

Tools Required:

J 23653-C Lock Plate Compressor

! Important

- Before doing any service procedures in this section, removal of Inflator Module and Steering Wheel is needed. (Refer to service procedures in Section 3F)

! Important

- Remove only those components necessary to do repairs.

↔ Remove or Disconnect

1. Do all steps, "Remove or Disconnect", Sub Section A.
2. Housing cover end cap (25).

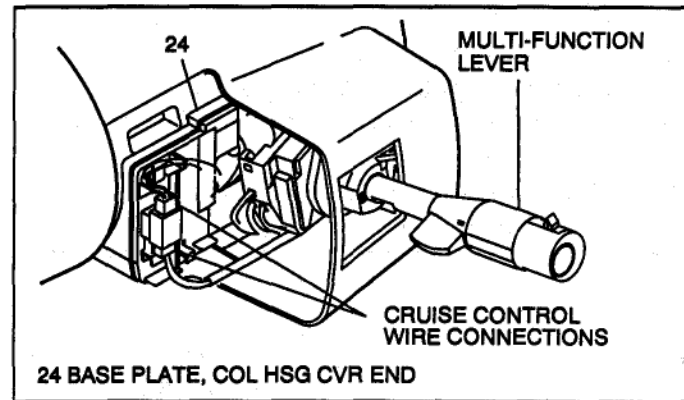


Figure 16 - Cruise Control Equipped Steering Columns

! Important

- Remove cruise control and multi-function lever connectors from base plate (24) and disconnect.
- Remove multi-function lever. (See Section 3F)

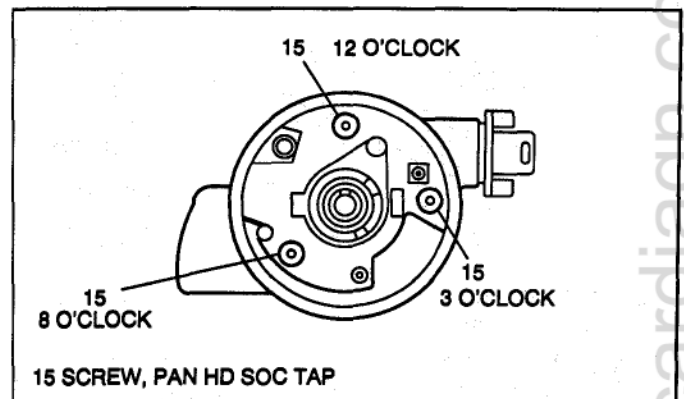


Figure 17 - Lock Housing Cover Screw Positions

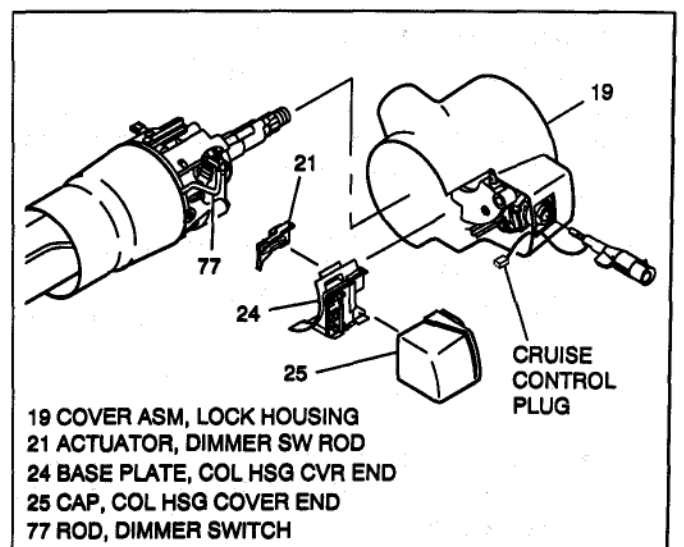


Figure 18 - Removing Lock Housing Cover

3. Cover screws (15).
4. Tilt lever. (See Section 3F)
5. Lock housing cover assembly (19).
6. Base plate (24) and dimmer switch rod actuator (21).
7. Wire protector shield (36).

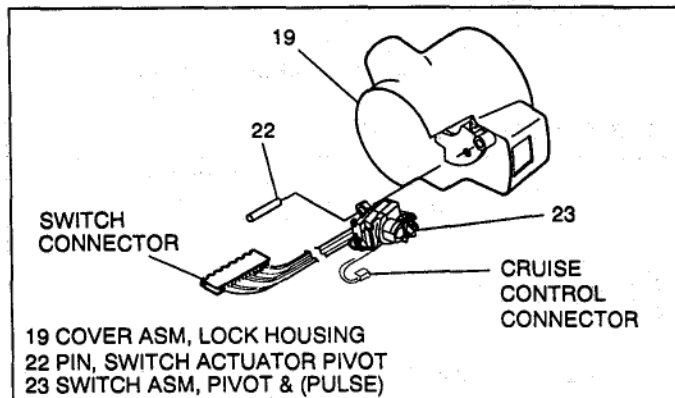


Figure 19 - Removing Pivot & (Pulse) Switch

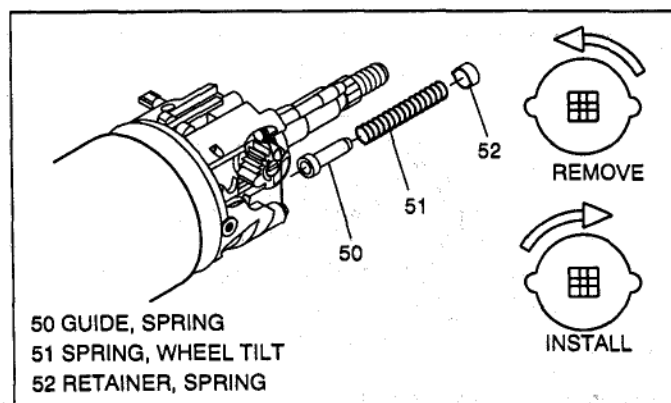


Figure 20 - Removing Tilt Spring Assembly

8. Switch actuator pivot pin (22).
9. Pivot & (pulse) switch assembly (23).
 - Let switch hang freely if removal is not needed.
 - To remove switch (23):
 - A. Pivot & (pulse) switch connector from bulkhead connector.
 - B. Gently pull wire harness through column.
10. Spring retainer (52).
 - Using a cross recess head screwdriver, push retainer down and turn counterclockwise to release.
11. Spring (51) and spring guide (50).

Install or Connect

NOTICE: See "Notice" on page 3F5B-1 of this section.

NOTICE: Ensure all fasteners are securely seated before applying needed torque. Failure to do so may result in component damage or malfunctioning of steering column.

1. Spring guide (50) and spring (51).
 - Lubricate with lithium grease.
2. Spring retainer (52).
 - Using a cross recess screwdriver push retainer down and turn clockwise to lock in place.
3. Pivot & (pulse) switch assembly (23) to lockhousing cover assembly (19).
4. Switch actuator pivot pin (22) to switch (23) and cover (19).
5. Pivot & (pulse) switch wire harness through steering column.
 - Switch connector to bulkhead connector.
 - Wire protector shield (36).
6. Dimmer switch rod actuator (21) to base plate (24).
 - Lubricate with lithium grease.
7. Base plate (24) to lock housing cover assembly (19).
 - Bottom edge of dimmer switch rod actuator (21) must rest on bend in dimmer switch rod (77).
8. Lock housing cover assembly (19).
9. Screws (15). Tighten screw in 12 o'clock position first, screw in 8 o'clock position second, and screw in 3 o'clock position third.

Tighten

- Tighten screws (15) in same order to 9.0 N·m (80 lb.in.).
10. Install multi-function lever. (See Section 3F)
 11. Plug multi-function lever and cruise control connectors together and mount on base plate (24).
 12. Housing cover end cap (25).
 13. Do all steps, "Install or Connect", Sub Section A.

SUB SECTION C - MID COLUMN**INCLUDES:**

**STEERING COLUMN HOUSING ASM
STEERING WHEEL LOCK SHOE
SWITCH ACTUATOR SECTOR
SWITCH ACTUATOR RACK
BEARING ASSEMBLY
LOCK BOLT
STEERING COL HSG SUPPORT ASM
STEERING SHAFT ASSEMBLY**

Tools Required:

J 23653-C Lock Plate Compressor
J 21854-01 Pivot Pin Remover
J 22635 Lock Shoe and Release Lever Pin
Remover and Installer
J 8092 Driver Handle
J 38639 Strg Col Housing Bearing Installer

! Important

- Before doing any service procedures in this section, removal of Inflator Module and Steering Wheel is needed. (Refer to service procedures in Section 3F)

↔ Remove or Disconnect
Figures 1 through 28,30 and 34

- Disable the SIR system; refer to "Disabling the SIR System" in this Section.
- Negative (-) battery cable.
- Steering column from vehicle. (See Section 3F)

NOTICE: Once steering column is removed from vehicle, the column is extremely susceptible to damage. Dropping steering column assembly on its end could collapse steering shaft or loosen plastic injections which maintain column rigidity. Leaning on steering column assembly could cause jacket to bend or deform. Any of the above damage could impair steering column's collapsible design. If it is necessary to remove steering wheel, use only the specified steering wheel puller. Under no conditions should the end of shaft be hammered on as hammering could loosen plastic injections which maintain steering column rigidity.

🔍 Inspect

- Steering column for accident damage. (See Figure 34)
- Do steps 3 through 22, "Remove or Disconnect", Sub Section A.
 - Do steps 2 through 10, "Remove or Disconnect", Sub Section B.

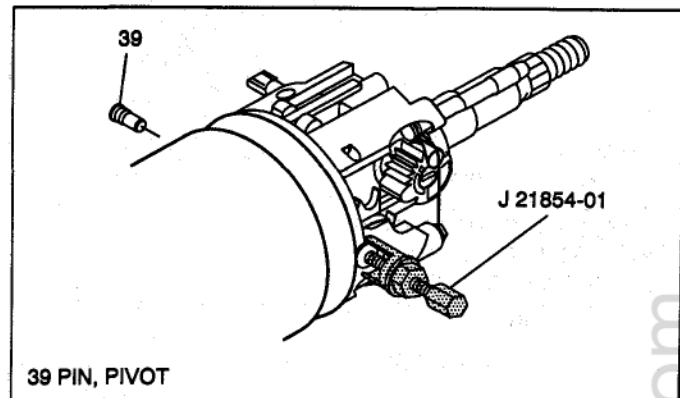


Figure 21 - Removing Pivot Pin

- Pivot pins (39) using J 21854-01.
 - Reinstall tilt lever. (See Section 3F)
- Steering column housing assembly (30).
 - Pull back on tilt lever and pull steering column housing assembly (30) down and away from column.

! Important

- Remove only those components necessary to do repairs.

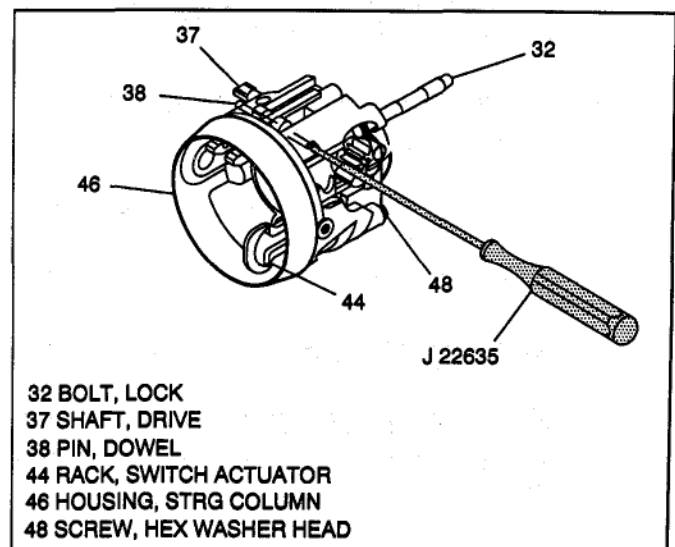


Figure 22 - Lock Housing Cover Components, Exterior

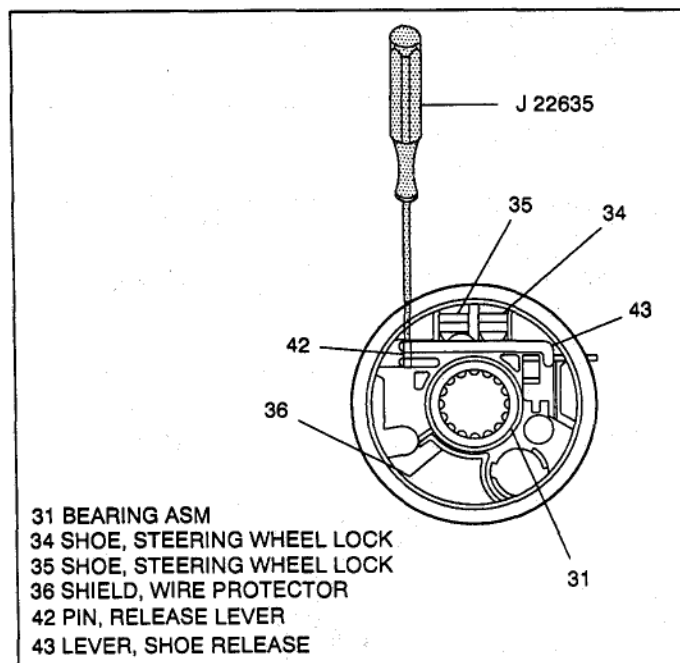


Figure 23 - Lock Housing Cover Components, Interior

Disassemble

Steering Column Housing Assembly

- A. Bearing assembly (31).
- B. Hex head screw (48).
- C. Lock bolt spring (33).
- D. Lock bolt (32).
- E. Switch actuator rack (44) and rack preload spring (45).
- F. Drive shaft (37).
- G. Switch actuator sector (47).
- I. Release lever pin (42) using J 22635.
- J. Shoe release lever (43).
- K. Release lever spring (41).
- L. Dowel pin (38) using J 22635.
- M. Lock shoes (34) and (35).
- N. Shoe springs (40).

Assemble

Steering Column Housing Assembly

- A. Shoe springs (40).
- B. Lock shoes (34) and (35).
- C. Dowel pin (38) using J 22635.
- D. Release lever spring (41).
- E. Shoe release lever (43).

- F. Release lever pin (42) using J 22635.
- G. Switch actuator sector (47).
- H. Drive shaft (37).
- I. Rack preload spring (45).
- J. Switch actuator rack (44) to actuator sector (47).
- K. Bearing assembly (31) lubricated with lithium grease to column housing (46) using J 38639 and J 8092.
- L. Lock bolt (32).
- M. Lock bolt spring (33). (See Figure 30)
- N. Hex head screw (48).

Tighten

- Tighten screw (48) to 4.0 N·m (35 lb.in.).

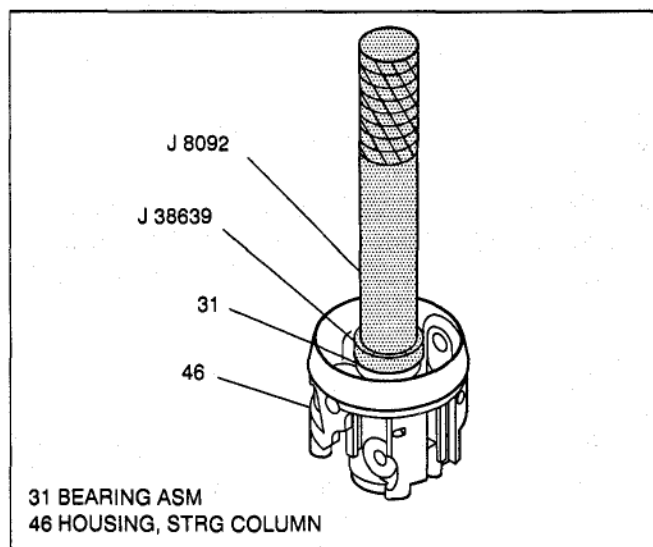


Figure 24 - Installing Bearings

8. Lower bearing adapter clip (89).
9. Bearing adapter retainer (88).
10. Lower bearing adapter (86) and bearing assembly (87).
11. Steering column shaft assembly (55).

Inspect

- Steering column shaft assembly (55) for accident damage. (See Figure 34)

! Important

- Mark upper shaft assembly (56) and lower steering shaft asm (59) to ensure proper assembly. Failure to assemble properly will cause steering wheel to be turned 180 degrees. (See Figures 25 and 26)

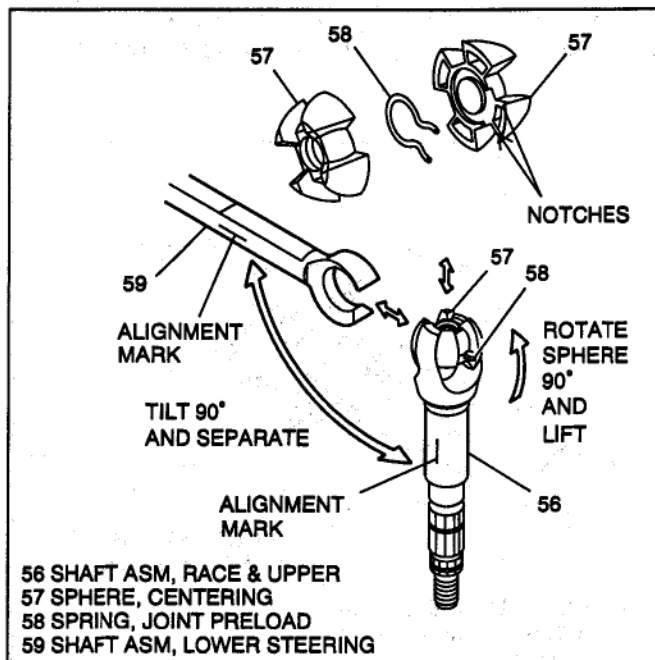


Figure 25 - Removing Steering Shaft Components

! Important

- Remove only those components necessary to do repairs.

+ Disassemble

Steering Column Shaft Assembly

- Upper shaft assembly (56), lower steering shaft assembly (59).
 - Tilt 90 degrees to each other and disengage.
- Centering sphere (57) from upper shaft assembly (56).
 - Rotate sphere 90 degrees and slip out.
- Joint preload spring (58) from centering sphere (57).

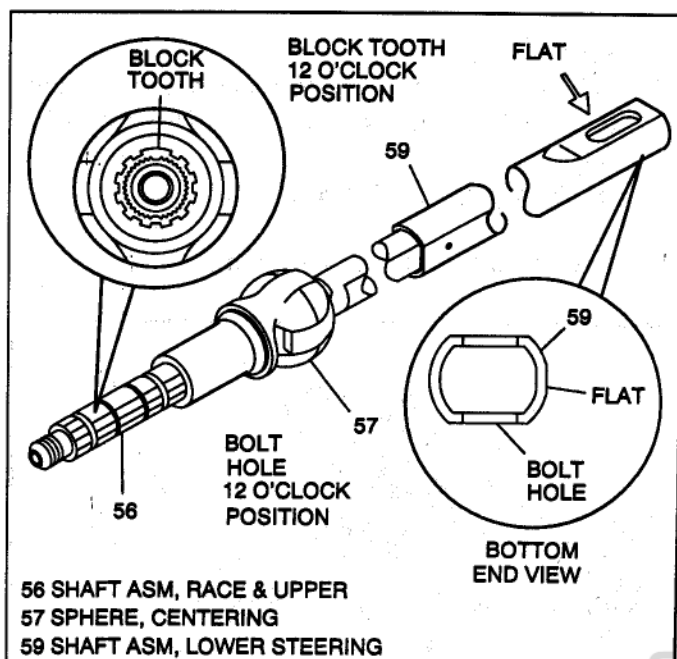


Figure 26 - Correct Upper to Lower Shaft Orientation

+ Assemble

Steering Column Shaft Assembly

- Joint preload spring (58) to two centering sphere (57).
- Centering sphere (57).
 - Lubricate with lithium grease, slip into upper shaft assembly (56), and rotate sphere 90 degrees.
- Upper shaft assembly (56) to lower steering shaft assembly (59).
 - Line up marks and tilt assemblies 90 degrees to each other.

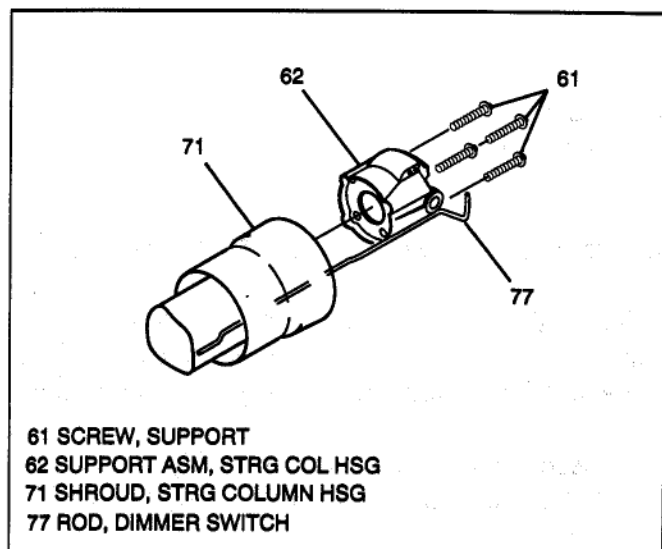


Figure 27 - Removing Column Housing Support

12. Support screws (61).
13. Column housing support assembly (62) with dimmer switch rod (77) from steering column jacket assembly (72).
 - Rod (77) from support (62).
14. Steering column housing shroud (71).

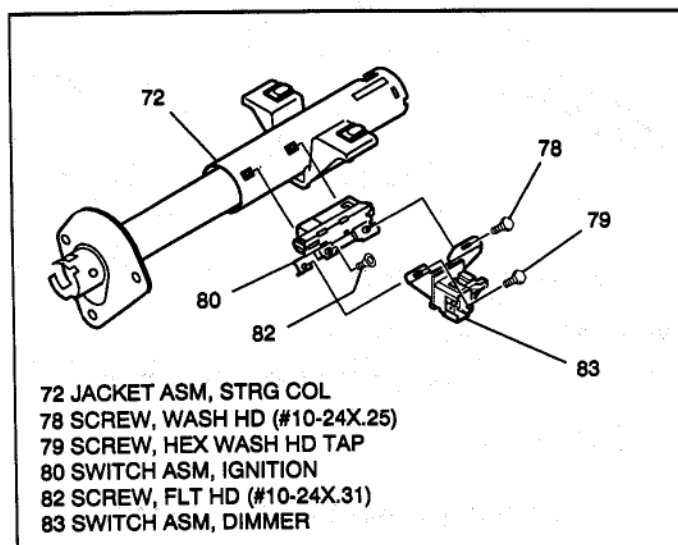


Figure 28 - Removing Ignition and Dimmer Switches

15. Hex head tapping screw (79).
16. Washer head screw (78).
17. Dimmer switch assembly (83).
 - Dimmer switch (83) from vehicle wire harness.
18. Flat head screw (82).
 - Ignition switch assembly (80) from ignition switch actuator assembly (76).

Install or Connect *Figures 1 through 32*

NOTICE: See "Notice" on page 3F5B-1 of this section.

NOTICE: Ensure all fasteners are securely seated before applying needed torque. Failure to do so may result in component damage or malfunctioning of steering column.

1. Steering column housing shroud (71).
2. Column housing support (62) to jacket assembly (72).

3. Four support screws (61).

Tighten

- Tighten screws (61) to 8.8 N·m (77 lb.in.)
4. Dimmer switch rod (77) to housing support (62).
 5. Actuator assembly (76) to housing support (62).

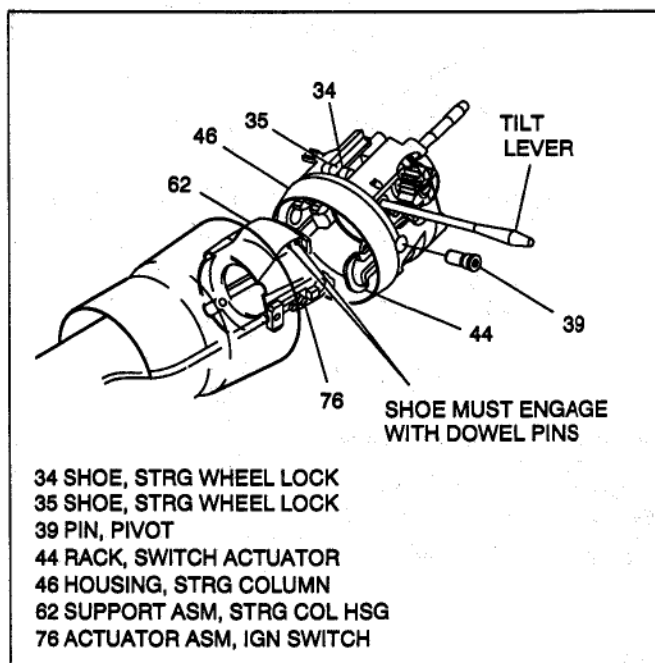


Figure 29 - Installing Column Housing to Housing Support

6. Steering shaft assembly (55) to jacket assembly (72).
 - Lubricate with lithium grease.
7. Tilt lever. (See Section 3F)
8. Column housing assembly (30) to column.
 - Position column housing assembly (30) and align switch actuator rack (44) with pin on end of ignition switch actuator assembly (76).
 - Pull back on tilt lever, pushing column housing assembly (30) onto column housing support assembly (62).
 - Release tilt lever to lock shoes (34) and (35) onto dowel pins.
 - Remove tilt lever. (See Section 3F)

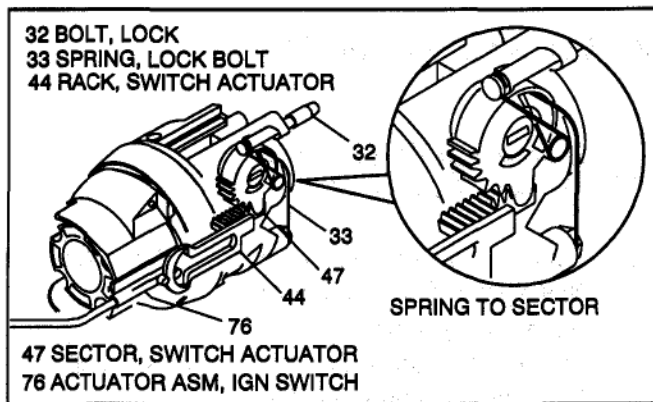


Figure 30 - Actuator Assembly to Actuator Rack Installed

9. Pivot pins (39).
 - Lubricate with lithium grease.
 - Press pin until firmly seated, two places.
10. Lower bearing adapter (86) and bearing assembly (87).
 - Lubricated with lithium grease.
11. Bearing adapter retainer (88).
12. Lower bearing adapter clip (89).
13. Do steps 1 through 12, "Install or Connect", Sub Section B.
14. Do steps, 1 through 21 "Install or Connect", Sub Section A.
15. To install ignition and dimmer switch assemblies, do all steps Ignition Switch Assembly, "Install or Connect", Sub Section D.

SUB SECTION D - LOWER COLUMN

INCLUDES:

**DIMMER SWITCH ASSEMBLY
DIMMER SWITCH ADJUSTMENT
IGNITION SWITCH ASSEMBLY
IGNITION SWITCH ADJUSTMENT
ADAPTER & BEARING ASSEMBLY**

NOTICE: Once steering column is removed from vehicle, the column is extremely susceptible to damage. Dropping steering column assembly on its end could collapse steering shaft or loosen plastic injections which maintain column rigidity. Leaning on steering column assembly could cause jacket to bend or deform. Any of the above damage could impair steering column's collapsible design. If it is necessary to remove steering wheel, use only the specified steering wheel puller. Under no conditions should the end of shaft be hammered on as hammering could loosen plastic injections which maintain steering column rigidity.

Inspect

- Steering column for accident damage. (See Figure 34)

Dimmer Switch Assembly

Remove or Disconnect Figures 1,2,28 and 34

1. Disable the SIR system; refer to "Disabling the SIR System" in this Section.
2. Negative (-) battery cable.
3. Steering column from vehicle. (See Section 3F)
4. Hex head tapping screw (79).
5. Washer head screw (78).
6. Dimmer switch assembly (83) from rod (77).
 - Vehicle wire harness from dimmer switch (83).

Install or Connect Figures 1,2,28 and 31

NOTICE: See "Notice" on page 3F5B-1 of this section.

NOTICE: Ensure all fasteners are securely seated before applying required torque. Failure to do so may result in component damage or malfunctioning of steering column.

1. Dimmer switch assembly (83).
2. Hex head tapping screw (79) and washer head screw (78).
 - Tighten finger tight.

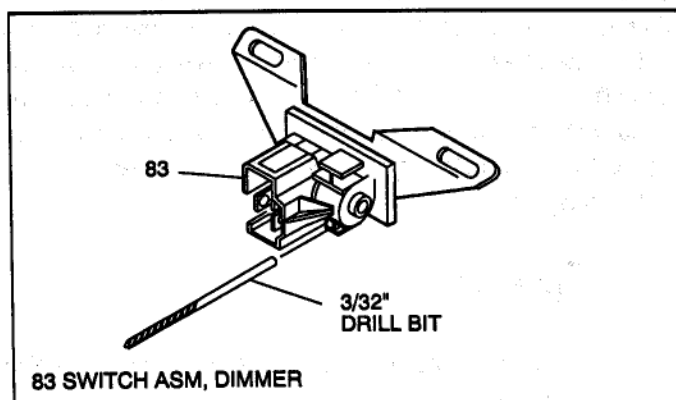


Figure 31 - Adjusting Dimmer Switch

Adjust

- Dimmer switch (83). (See Figure 31)
 - A. Place 3/32-inch drill bit in hole on switch to limit travel.
 - B. Position switch on column and push against dimmer switch rod (77) to remove all lash.
 - C. Remove drill bit.

Tighten

- Tighten screw (79) to 2.5 N·m (22 lb.in.)

Tighten

- Tighten screw (78) to 4.0 N·m (35 lb.in.).

3. Vehicle wire harness to dimmer switch (83).
4. Steering column to vehicle. (See Section 3F)
5. Negative (-) battery cable.
6. If all service operations are completed, enable the SIR system; refer to "Enabling the SIR System" in this section.

Ignition Switch Assembly

Remove or Disconnect Figures 1,2,28 and 34

1. Disable the SIR system; refer to "Disabling the SIR System" in this section.
2. Negative (-) battery cable.
3. Steering column from vehicle. (See Section 3F)
4. Hex head tapping screw (79).
5. Washer head screw (78).
6. Dimmer switch assembly (83) from rod (77).
7. Flat head screw (82).
8. Ignition switch assembly (80) from ignition switch actuator assembly (76).
 - Vehicle wire harness from ignition switch assembly (80).

Install or Connect Figures 1,2,28,31 and 32

NOTICE: See "Notice" on page 3F5B-1 of this section.

NOTICE: Ensure all fasteners are securely seated before applying needed torque. Failure to do so may result in component damage or malfunctioning of steering column.

1. Lock cylinder (20) to "OFF-LOCK" position.

NOTICE: Install ignition switch (80) to jacket (72) with switch in "OFF-LOCK" position. (See Figure 32) New ignition switch will be pinned in "OFF-LOCK" position. Remove plastic pin after switch is assembled to column. Failure to do so may cause switch damage.

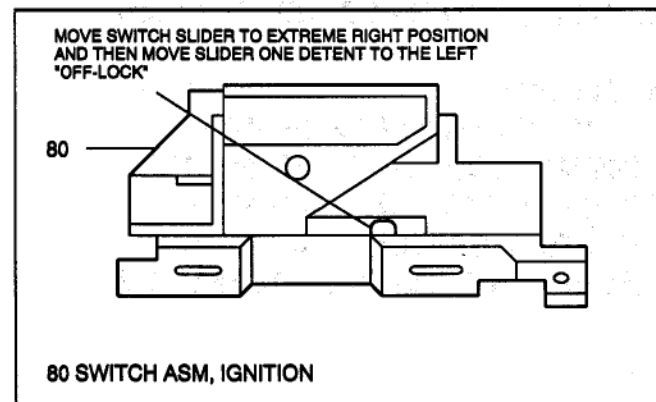


Figure 32 - Adjusting Ignition Switch

Adjust

- Ignition switch assembly (80).
 - A. Move switch slider to extreme right position.
 - B. Move switch slider one detent to left "OFF-LOCK" position.
- 2. Ignition switch assembly (80) to actuator assembly (76).
- 3. Flat head screw (82).

Tighten

- Tighten screw (82) to 3.7 N·m (33 lb.in.).
- 4. Dimmer switch assembly (83) to rod (77).
- 5. Hex head tapping screw (79) and washer head screw (78).
 - Tighten finger tight.

Adjust

- Dimmer switch (83). (See Figure 31)
 - A. Place 3/32-inch drill bit in hole on switch to limit travel.
 - B. Position switch on column and push against dimmer switch rod (77) to remove all lash.
 - C. Remove drill bit.

Tighten

- Tighten screw (79) to 2.5 N·m (22 lb.in.)

Tighten

- Tighten screw (78) to 4.0 N·m (35 lb.in.).
- 6. Steering column to vehicle. (See Section 3F)
- 7. Vehicle wire harness to dimmer switch assembly (83).
- 8. Vehicle wire harness to ignition switch assembly (80).
- 9. Negative (-) battery cable.
- 10. If all service operations are completed, enable the SIR system; refer to "Enabling the SIR System" in this Section.

Adapter & Bearing Assembly

Remove or Disconnect Figures 1,2,33 and 34

1. Disable the SIR system; refer to "Disabling the SIR System" in this section.
2. Negative (-) battery cable.
3. Steering column from vehicle. (See Section 3F)
4. Lower bearing adapter clip (89).
5. Bearing adapter retainer (88).
6. Lower bearing adapter (86) and bearing assembly (87).

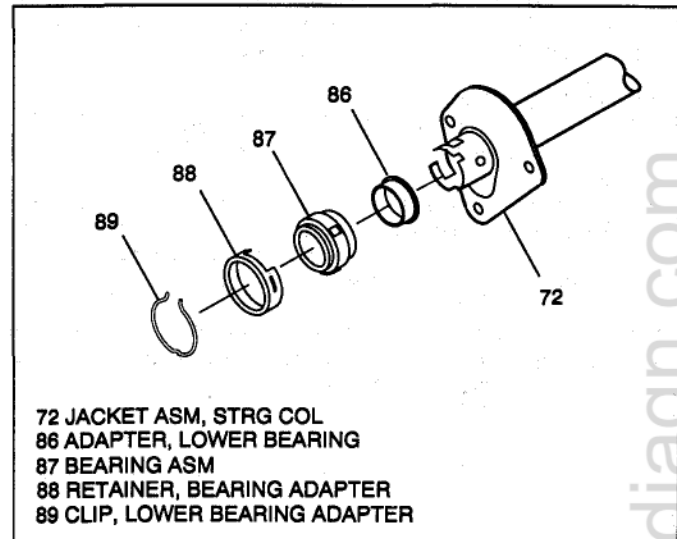


Figure 33 - Removing Lower Bearing Assembly

Install or Connect Figures 1,2 and 33

NOTICE: See "Notice" on page 3F5B-1 of this section.

NOTICE: Ensure all fasteners are securely seated before applying needed torque. Failure to do so may result in component damage or malfunctioning of steering column.

1. Lower bearing adapter (86) and bearing assembly (87).
 - Lubricate inner surface with lithium grease.
2. Bearing adapter retainer (88).
3. Lower bearing adapter clip (89).
4. Steering column to vehicle. (See Section 3F)
5. Negative (-) battery cable.
6. If all service operations are completed, enable the SIR system; refer to "Enabling the SIR System" in this Section.

CHECKING STEERING COLUMN FOR ACCIDENT DAMAGE

NOTICE: Vehicles involved in accidents resulting in frame damage, major body or sheet metal damage, or where the steering column has been impacted, or where supplemental inflatable restraints systems deployed may also have a damaged or misaligned steering column.

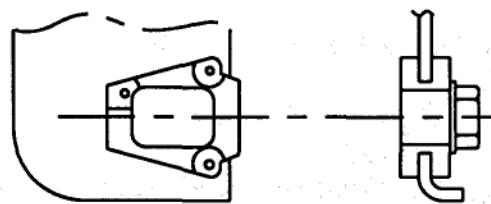
CHECKING PROCEDURE**JACKET ASM, STEERING COLUMN**

- Check capsules on steering column bracket assembly; all must be securely seated in bracket slots and checked for any loose conditions when pushed or pulled by hand (View A). If not, bracket should be replaced if bracket is bolted to the jacket assembly or the jacket assembly should be replaced if bracket is welded to jacket assembly.
- Check for jacket assembly collapse by measuring the distance from the lower edge of upper jacket to a defined point on the lower jacket (View C). If measured dimensions are not within specifications, a new jacket must be installed.

STEERING SHAFT ASM

- Visually inspect steering shaft for sheared injected plastic (View B). If steering shaft shows sheared plastic, a new steering shaft must be installed.
- Any frame damage that could cause a bent steering shaft must have steering shaft runout checked in the following manner: Using a dial indicator at lower end of steering shaft, have steering wheel rotated. Runout must not exceed 1.59mm.

NOTICE: Inflatable restraint coil assembly must be removed from steering column and allowed to hang freely before shaft is rotated. Failure to do so could damage coil assembly.

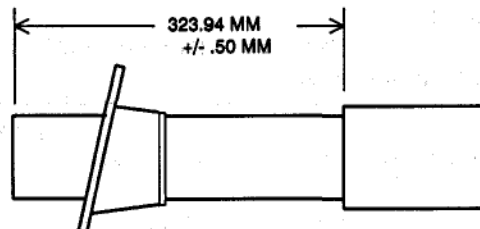
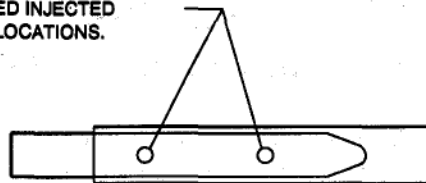


VIEW A
(CAPSULES)

CHECK FOR ANY LOOSE CONDITION WHEN PUSHED OR PULLED BY HAND.

CHECK FOR SHEARED INJECTED PLASTIC AT THESE LOCATIONS.

VIEW B
(STEERING SHAFT)



VIEW C (METHOD TO DETERMINE COLUMN COLLAPSE)
WITH LOWER BEARING REMOVED
MEASURE DISTANCE BETWEEN ARROWS.

Figure 34 - Checking Steering Column for Accident Damage

SPECIFICATIONS**FASTENER TORQUES**

1 Steering Wheel-to-Shaft Nut	41.0 N·m (30 lb.ft.)
9 Turn Signal Switch Connecting Screws	3.4 N·m (30 lb.in.)
10 Turn Signal Switch Actuator Assembly Screw	2.3 N·m (20 lb.in.)
15 Lock Housing Cover Screws	9.0 N·m (80 lb.in.)
18 Lock Retaining Screw	2.5 N·m (22 lb.in.)
48 Lock Bolt Spring Screw	4.0 N·m (35 lb.in.)
61 Support-to-Jacket Screws	8.8 N·m (77 lb.in.)
78 Upper dimmer Switch Mounting Screw	4.0 N·m (35 lb.in.)
79 Lower dimmer Switch Mounting Screw	2.5 N·m (22 lb.in.)
82 Ignition Switch Mounting Screw	3.7 N·m (33 lb.in.)

