

Service Procedure COL-210

J19-6032 Steering Column Clockspring Remove and Replace Procedure

Use when installing 455079X2 service kit

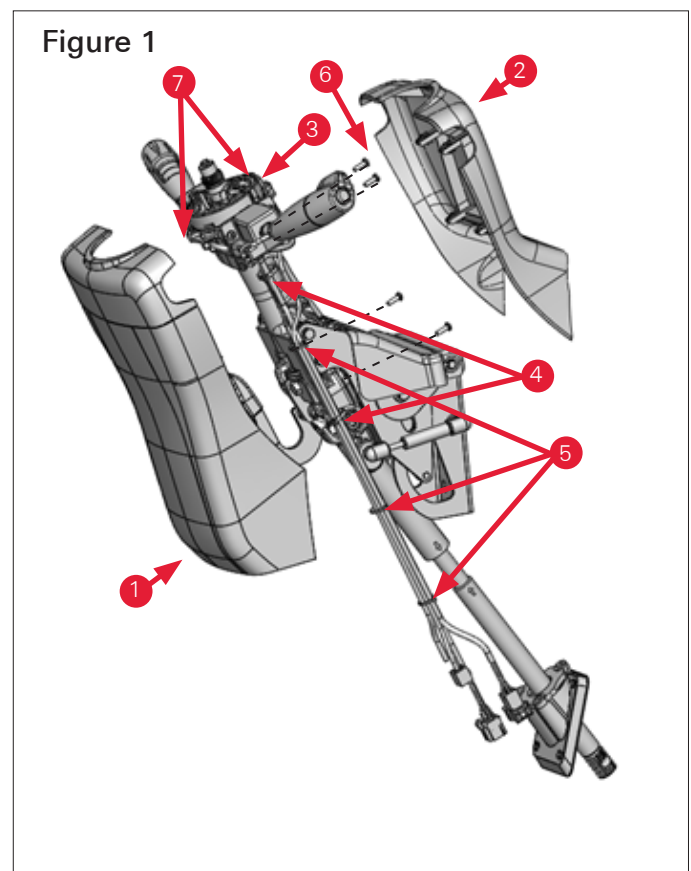
This ZF Commercial Steering Division installation procedure has been written to help you replace clocksprings on global columns. This procedure should not replace your manuals; you should use them together. These materials are intended for use by properly trained, professional mechanics, NOT "Do-it-yourselfers".

Tool List:

- Torque wrench – capable of measuring up to 40 in-lb
- ¼" socket
- #2 Phillips drive bit
- #2 Phillips screw driver
- Side-Cut pliers

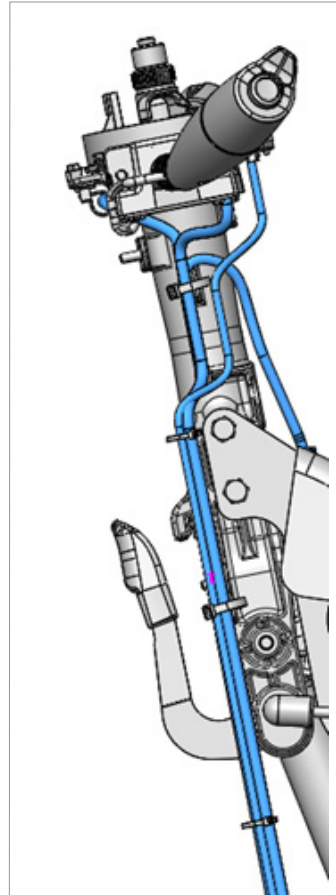
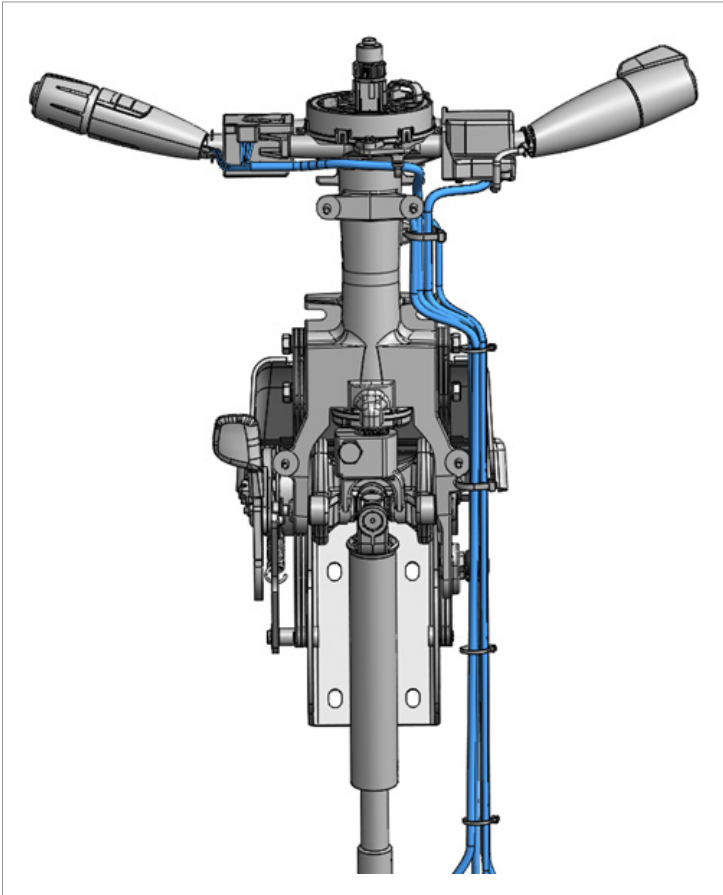
Column Components:

1. Back Shroud
2. Front Shroud
3. Clockspring
4. Large Cable Tie (2)
5. Small Cable Tie (3)
6. Shroud mount screws (4)
7. Clockspring screws (2)



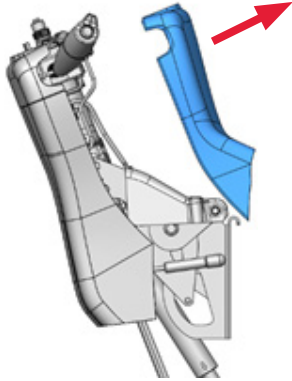
COLUMN OVERVIEW – CLOCKSPRING

Before starting service replacement work, note the harness routing shown below.



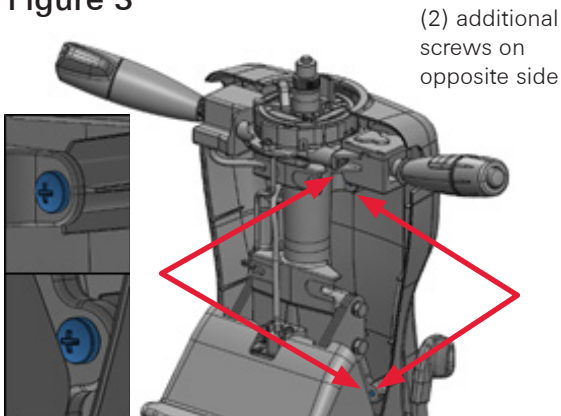
DISASSEMBLY PROCEDURE

Figure 2



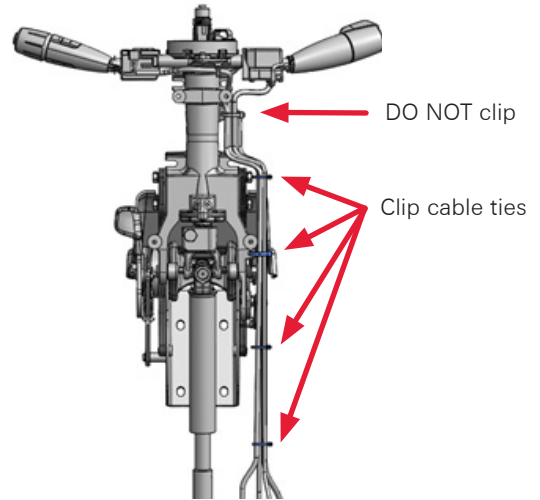
Step 1: Remove front shroud by pulling firmly on top end of shroud in a direction away from column assembly.

Figure 3



Step 2: Remove (4) shroud screws using #2 Phillips screw driver.

Figure 4

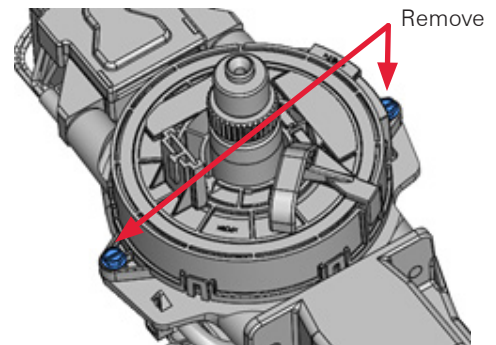


Step 3: Using side cuts, clip (1) large and (3) small cable ties holding wire harness bundle together. DO NOT CLIP TOP, LARGE CABLE TIE.

WARNING

Be sure **NOT TO CLIP OR PINCH** wires when clipping cable ties.

Figure 5



Step 4: Using 1/4" socket and wrench, remove (2) screws fastening clockspring to column housing.

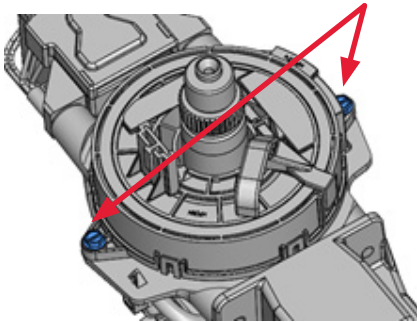
REASSEMBLY PROCEDURE

WARNING

Be sure to properly attach wire harness as prescribed below to ensure harnesses do not get caught in moving assemblies.

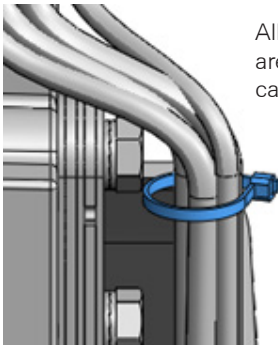
Figure 6

25-30 in-lb



Step 1: Using new screws provided with clockspring service kit and 1/4" socket, install new clockspring onto column. Using torque wrench, torque screws to 25-30 in-lbs.

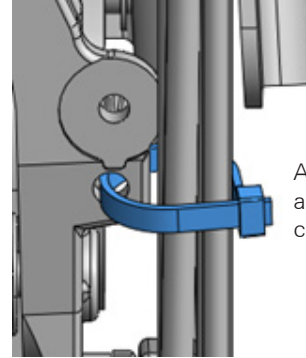
Figure 7



All harnesses are captured in cable tie

Step 2: Install small cable tie (036348) around harnesses. Cable tie does not attach to housing. Pull Cable tie tightly. Clip excess tie.

Figure 8



All harnesses are captured in cable tie

Step 3: Install large cable tie (036316) around harnesses and into column housing feature as shown. Pull cable tie tightly. Clip excess tie.

Figure 9



All harnesses are captured in cable tie

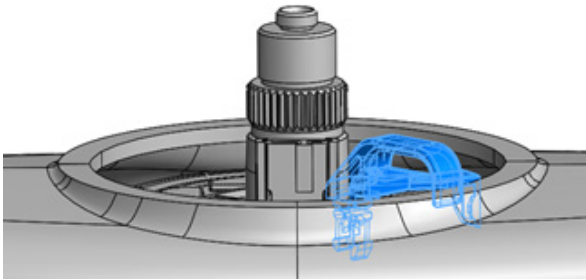
Step 4: Install (2) small cable ties (036348) around harnesses. Cable ties do not attach to housing. Pull cable tie tightly. Clip excess tie.

Step 5: Repeat disassembly steps 1-3 in reverse to install shrouds. Attach back shroud first by installing (4) new #2 Phillips screws to 30-40 in-lbs.

Step 6: Install front shroud by pushing firmly into place. Be sure not to catch turn stalk or right-hand stalk rubber closeout in-between shroud halves.

REASSEMBLY PROCEDURE continued

Figure 10



Step 7: Before installing steering wheel, with steering system on center and connected to lower column shaft, firmly pull tab in a direction parallel to steering wheel shaft until white plastic piece breaks off from column.

Step 8: See Appendix A for the finished routing

WARNING

Be sure to properly attach wire harness as prescribed below to ensure harnesses do not get caught in moving assemblies.

APPENDIX A – HORN CONTACT

If column does not contain SAS, SAS harness will not be included in column and cable tie.

