

## Service Procedure COL-209

### J19-6032/6033 Steering Column Turn Stalk Remove and Replace Procedure

Use when installing service kit 480791X2

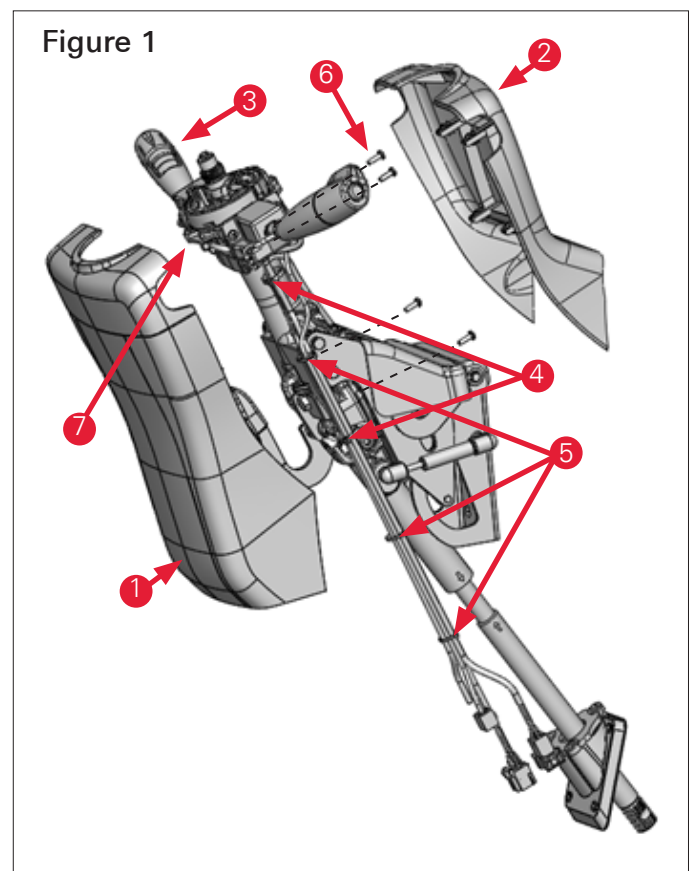
*This ZF Commercial Steering Division installation procedure has been written to help you replace turn stalks on global columns. This procedure should not replace your manuals; you should use them together. These materials are intended for use by properly trained, professional mechanics, NOT "Do-it-yourselfers".*

#### Tool List:

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

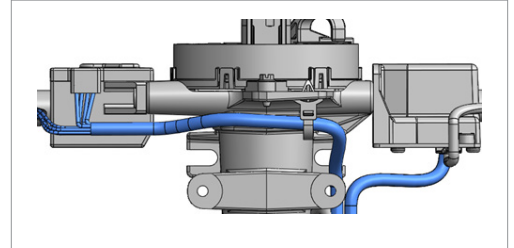
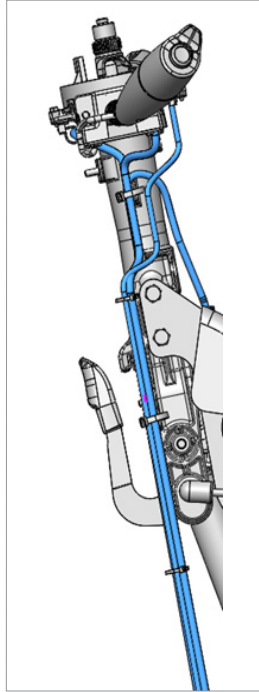
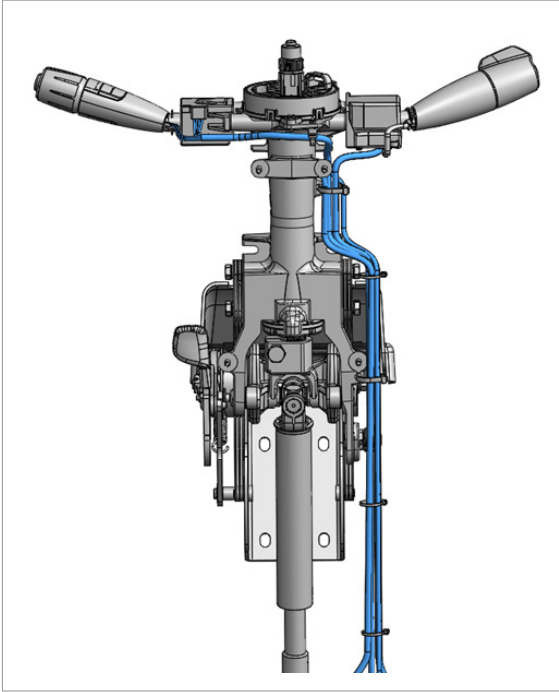
#### Column Components:

1. Back Shroud
2. Front Shroud
3. Turn Stalk
4. Large Cable Tie
5. Small Cable Tie
6. Shroud and stalk mount screws (6)
7. Push mount cable tie



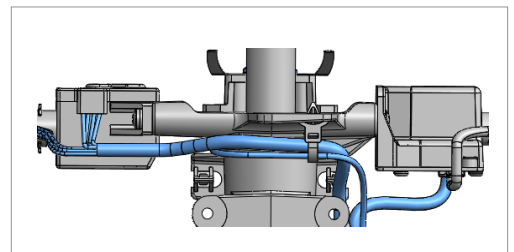
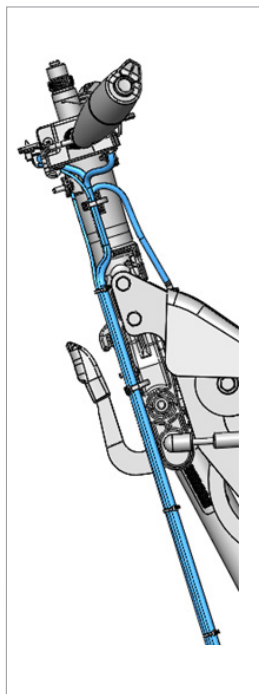
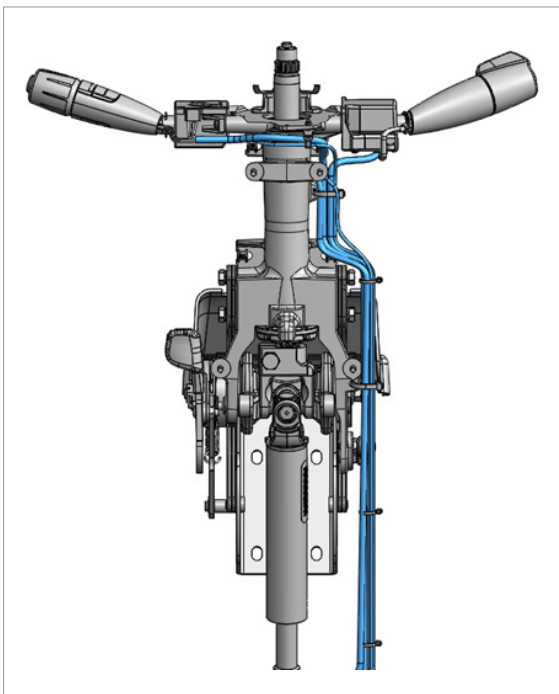
## COLUMN OVERVIEW – CLOCKSPEED

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



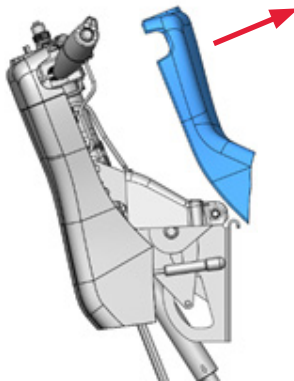
## COLUMN OVERVIEW – HORN CONTACT

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



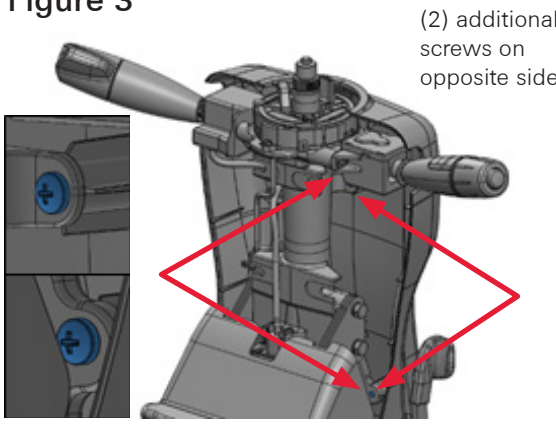
# DISASSEMBLY PROCEDURE

**Figure 2**



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

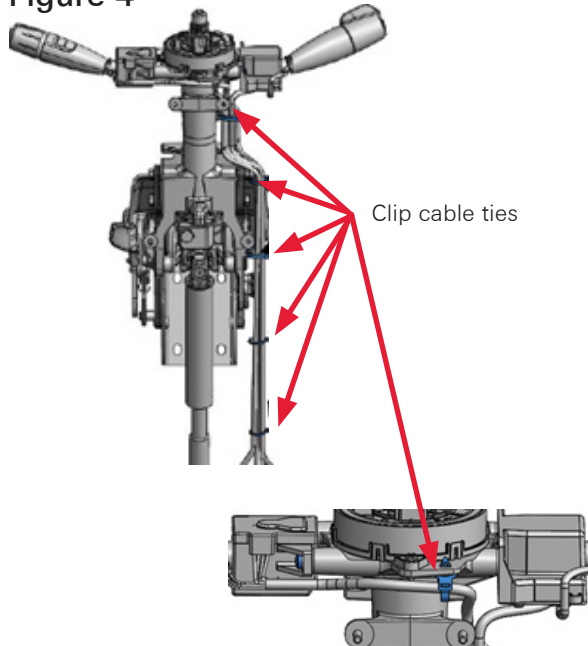
**Figure 3**



(2) additional screws on opposite side

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

**Figure 4**



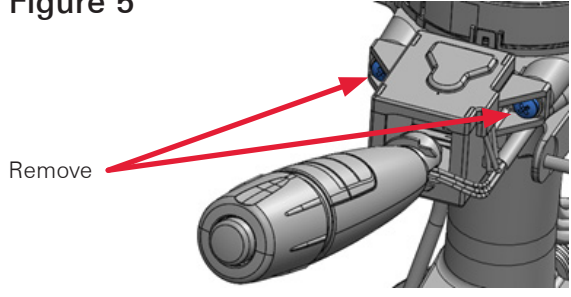
Clip cable ties

**Step 3:** Using side cutters, clip (2) large, (3) small cable ties, and (1) push mount tie holding wire harness bundle together. To remove push mount tie, clip off pointed head protruding through housing.

**WARNING**

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

**Figure 5**

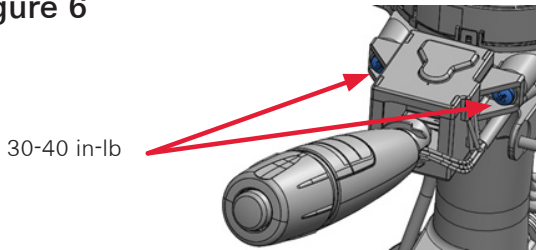


Remove

**Step 4:** Using #2 screwdriver, remove (2) screws holding turn stalk to column housing.

# REASSEMBLY PROCEDURE

**Figure 6**

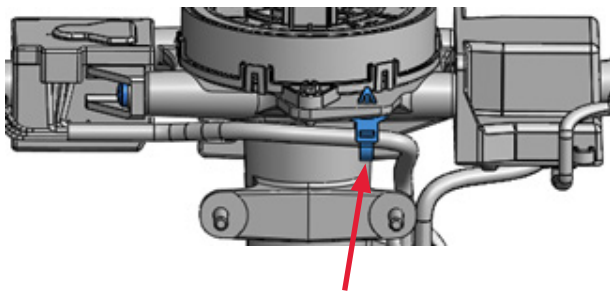


**Step 1:** Using new #2 Phillips screws provided with stalk service kit, install turn stalk back onto column. Using torque wrench, Torque screws to 30-40 in-lbs.

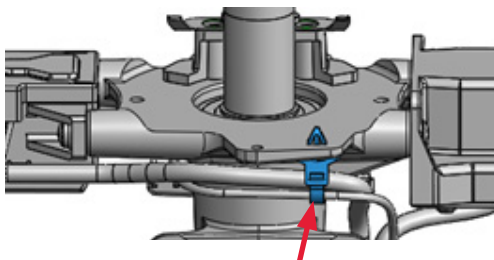
## WARNING

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

**Figure 7.1**



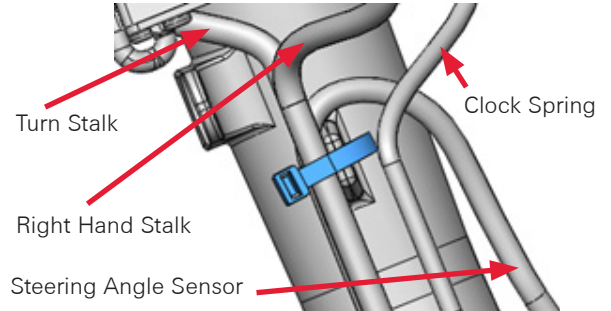
036319 Push mount – clockspring configuration



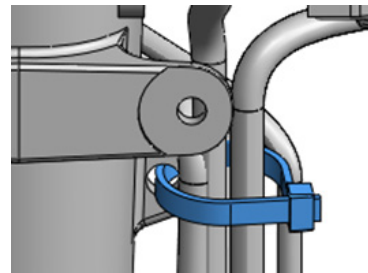
036319 Push mount – horn contact configuration

**Step 2:** Install push mount cable tie (036319) into housing. For clockspring columns, install turn stalk harness only through cable tie and pull firmly. Clip tie. For horn contact columns, install turn stalk harness and horn wire through cable tie and pull firmly. Clip excess tie.

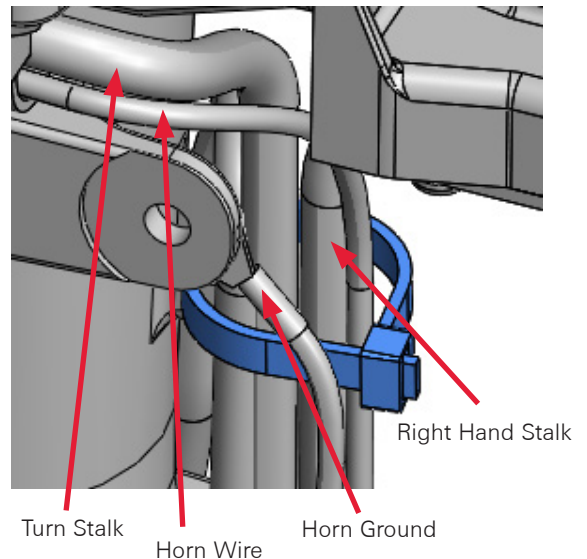
**Figure 7.2**



**Figure 7.3**



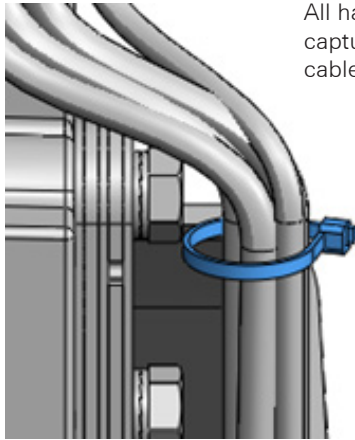
**Figure 7.3**



**Step 3:** Install large cable tie (036316) around harnesses and into column housing feature as shown in Figure 7.2 ,7.3, 7.4. For columns utilizing clock springs, see 7.2 and 7.3, for assemblies with horn contact systems, see 7.4. Pull cable tie tightly. Clip excess tie.

## REASSEMBLY PROCEDURE continued

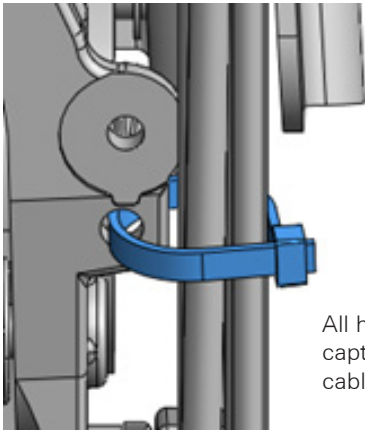
Figure 8



All harnesses are captured in the cable tie

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

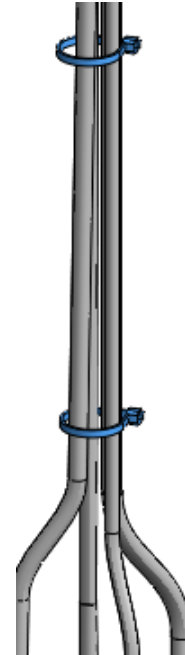
Figure 9



All harnesses are captured in the cable tie

**Step 5:** Install large cable tie (036316) around harnesses and into column housing feature as shown. Pull cable tie tightly. Clip excess tie.

Figure 10



All harnesses are captured in the cable tie

**Step 6:** Install (2) small cable ties (036348) around harnesses. Cable tie does not attach to housing. Pull cable tie tightly. Clip excess tie.

**Step 7:** 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.

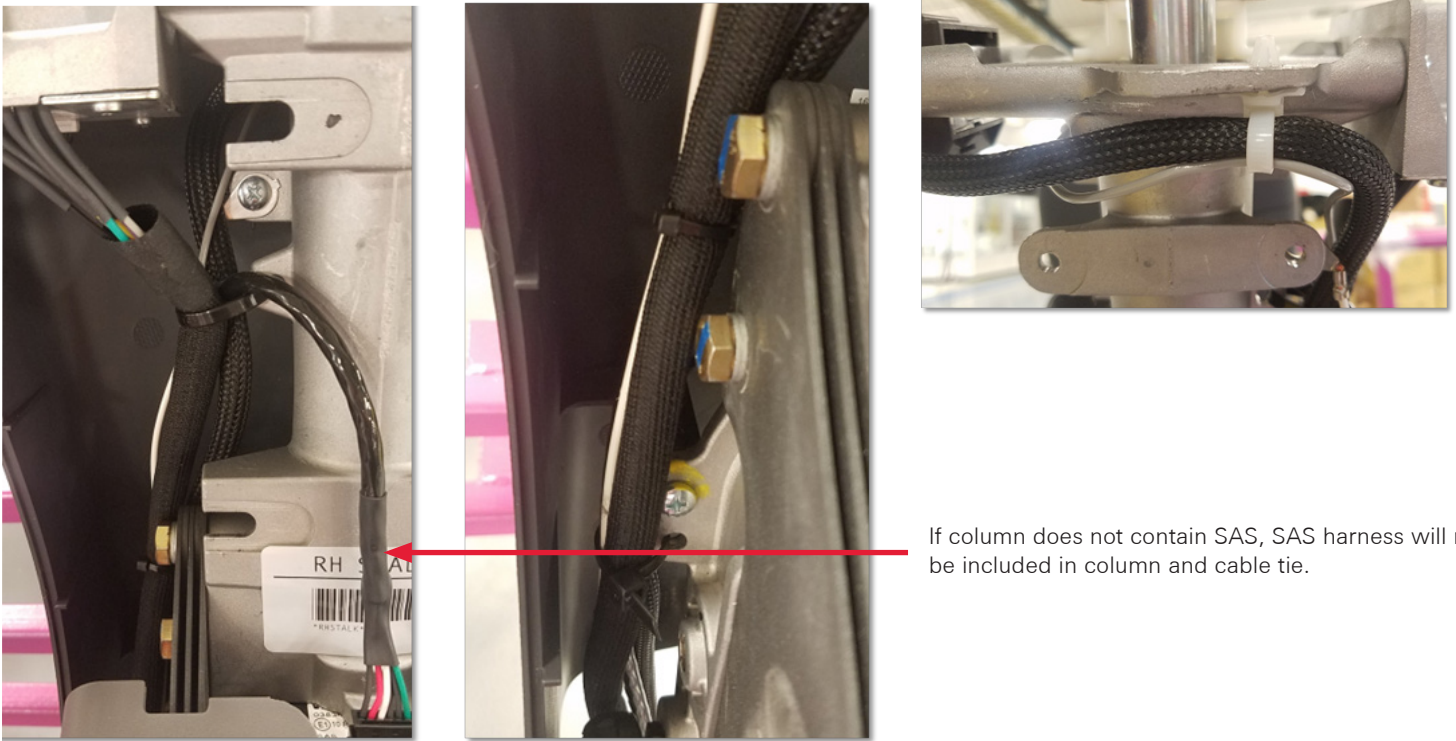
**Step 8:** Install front shroud by pushing firmly into place. Be sure not to catch turn stalk or right-hand stalk rubber closeout in-between shroud halves.

**Step 9:** See Appendix A for the finished routing of columns containing horn contact configuration. See Appendix B for the finished routing of columns containing clock spring configuration.

### WARNING

Make sure wires are not pinched between shroud halves during shroud installation.

## APPENDIX A – HORN CONTACT



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

## APPENDIX B – CLOCKSPrING



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