KENWORTH
A PACCAR COMPANY

Technical Information Bulletin

R1801

Section

Steering - 15

Subject

RH Stalk and Trailer Hand Brake Retrofit

Release Date

8/30/2019

Condition

Remove pre-production RH Shifter stalks, steering columns, and/or trailer brake hand valve assemblies and replace them with production assemblies.

Chassis Affected

9 chassis (9 U.S. and 0 Canada), T680 MY2017 and 2018 vehicles built from 10/17/2016 through 03/14/2017 included in the 2018 Quality Validation and Volume Validation (QV/VV) builds. See the attached chassis list.

Action

Retrofit

The chassis may require more than one of the campaigns noted below. Ensure that the customer is aware of the work that will be performed on their particular chassis.

1. Review the attached chassis list for your dealer code and schedule your customer(s) for service if their chassis is on the list.
2. Confirm with the customer that your dealership will be the repairing location before scheduling the chassis to come in for inspection and then ordering appropriate parts and scheduling an additional repair visit, if needed.
    a. While confirming that your dealership will be the repairing location, verify whether the steering column has a trailer brake hand control valve or a right-hand stalk AMT/engine brake controller.
    b. Refer to the repair path in the Procedures section to appropriately schedule the chassis for inspection/repair.
    c. Inform the customer that based on the results of the inspection, they may or may not need to come back for a steering column replacement.
3. Do an inventory of the parts to **ensure all required parts have arrived prior to scheduling the chassis for the retrofit.**
4. If you are not using Service Management to start repair orders, review DWWC or SIR for "Complete" or "In Process" next to the "R1801" campaign code prior to performing this repair.
5. Follow the procedures below to inspect and replace the RH stalk or column, as appropriate.

This campaign can be performed at any time convenient for the customer.

Warranty

Through Standard Warranty or for repairs completed by 09/01/2020, whichever is greater, Kenworth will pay for parts at dealer net plus applicable mark-up and labor:

- 0.3 hours to determine the controls on the right-hand side of the column. This may be done via phone call with the customer. This labor is only applicable if a RH trailer brake is found on the RH side of the steering column and no repair is necessary. This is not available in conjunction with claims for the following labor.
- 0.3 hours to R&R the dash-mounted Compact Valve for the Trailer Hand Brake for the trucks indicated on the chassis list.
- RH Stalk / Steering Column labor may vary by chassis. Remove the Upper Shroud of the Steering column, as shown in the procedure below, to determine which SRT and parts are required.
    - 0.5 hours for RH Stalk replacement.
    - 0.7 hours for Steering Column replacement. If the Steering Column is replaced, the 0.5 hours for the RH stalk is not applicable because the new column assembly includes the updated RH stalk.
- File a long form claim for applicable labor.

Kenworth dealers may not perform R1801 repairs on Peterbilt chassis.

Take-Off Parts Disposition: Destroy take-off parts 30 days after claim is paid

CLAIM CODING			
Failure Location:	015-002-004	Work Accomplished:	35
Failure Type:	700	Responsibility Code:	01
SRT Codes:	**015-XXX** 0.3 hrs. Visually inspect the steering column. Only applicable if no further action is required. **015-031** 0.5 hrs. RH Stalk R&R (includes lower panel and steering column R&R for access.) **015-032** 0.7 hrs. R&R the steering column as an assembly. (does not include R&R of individual components) **013-852** 0.3 hrs. R&R trailer brake hand valve	Claim Type:	C
		Campaign Field:	R1801

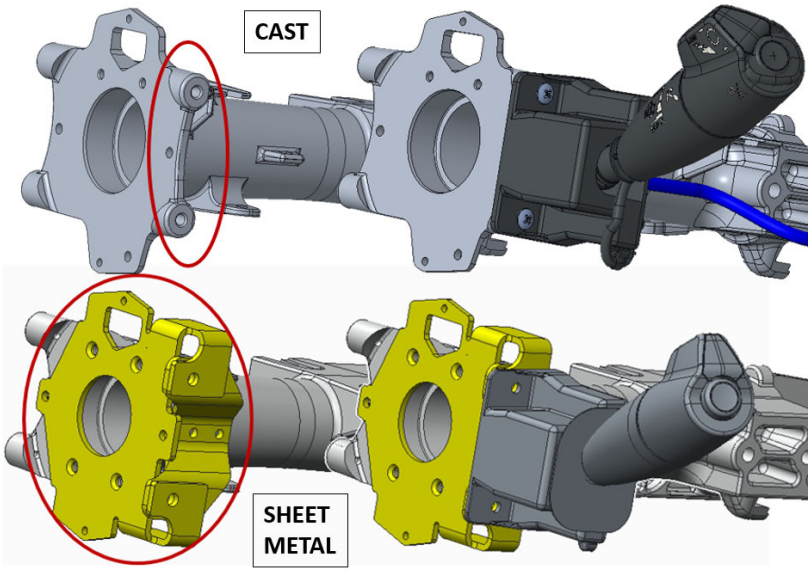
Parts

Parts vary by chassis. Refer to the procedure to determine the repair path, and then use the Chassis List to determine which parts are required.

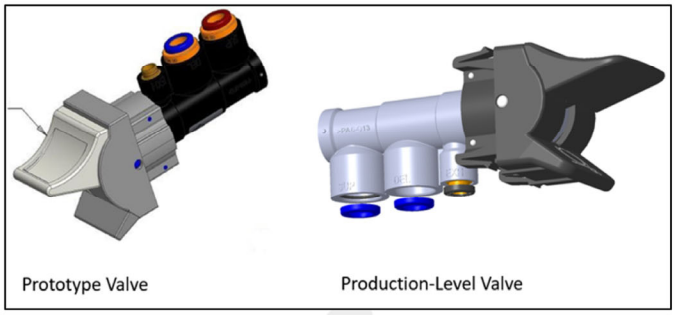
Procedure

1. Confirm the steering column control type:
   - If the control on the right hand side is a trailer brake hand control valve, no further action required.
   - If the control on the right hand side is a Right Hand (RH) stalk AMT/Engine Brake Control, then proceed to the next step.

2. Confirm RH Stalk mounting method:
   a. Remove the upper steering column shroud by pulling firmly on the top end of the shroud, in a direction away from the column assembly.
   b. Note the physical mount for the RH stalk control.
      - If the RH stalk control is mounted to two cast housing boss features, then proceed to the supplier service procedure COL-208 to replace the stalk.
      - If the RH stalk control is mounted to a sheet metal bracket, then the steering column must be replaced. Refer to the chassis list to determine the appropriate steering column p/n for the chasses. Use the Steering Column Replacement procedure in the Attachments section to remove and replace the steering column assembly.



3. Compact Trailer Hand Brake Valve Replacement
   - Remove and replace the valve with the production level part.



Attachments

Chassis list with applicable parts

Col-208 RH Stalk Replacement Procedure

Steering Column Replacement Procedure

Customer Letter

Authored by: OF

ZF Friedrichshafen AG

Commercial Vehicle Technology

Service Procedure #COL-208

J19-6032/6033 Steering Column Right Hand Stalk Remove and Replace Procedure

This ZF Commercial Steering Division installation procedure has been written to help you replace shift 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".

Use when installing service kit 480898X1 through 480907X1

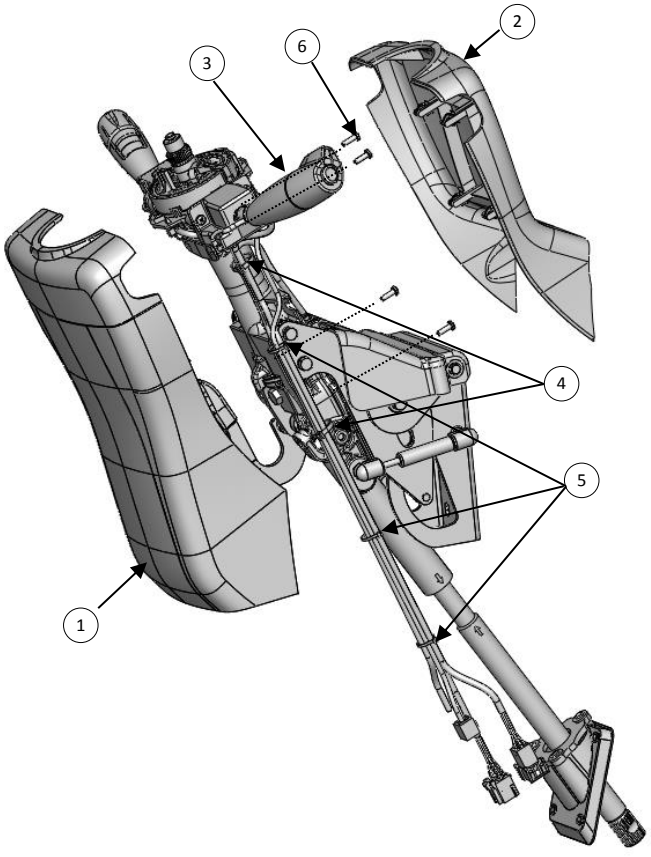
Tool List:

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

Column Components:

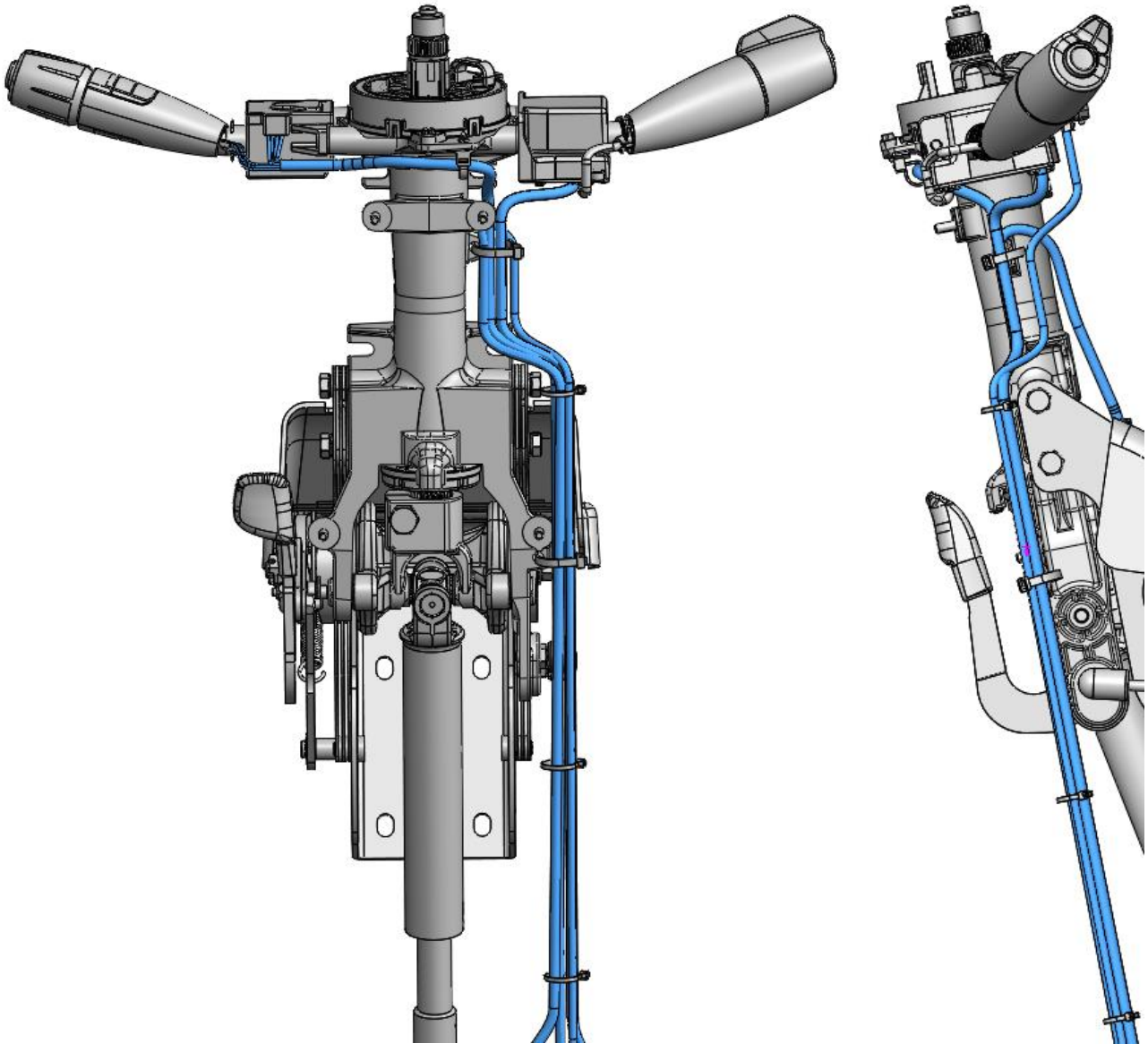
1. Back Shroud
2. Front Shroud
3. Right Hand Stalk
4. Large Cable Tie (2)
5. Small Cable Tie (3)
6. Shroud and Stalk mount screws (6)

Figure 1



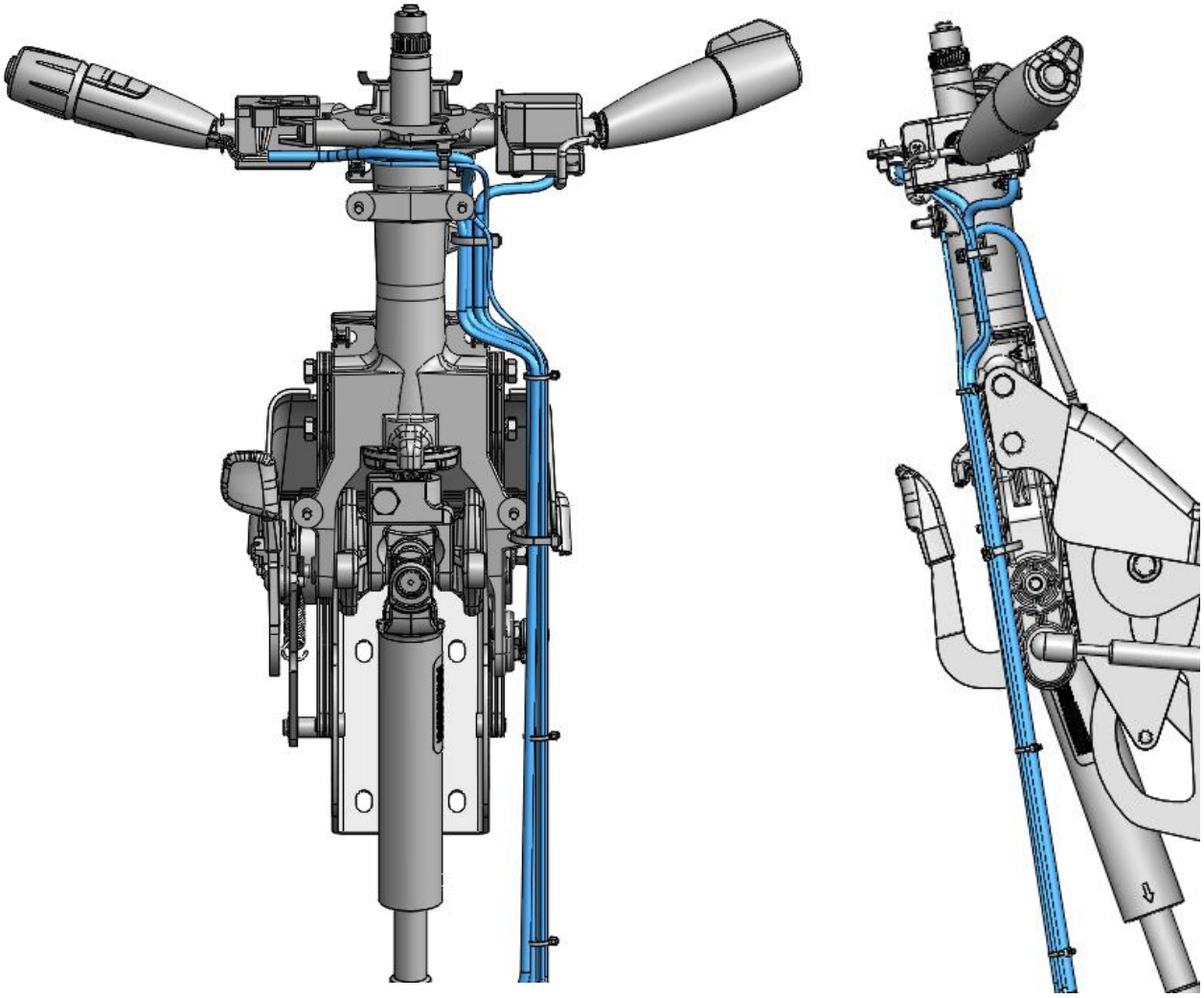
COLUMN OVERVIEW - CLOCKSPRING

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.



DISSASEMBLY PROCEDURE

1) Remove front shroud by pulling firmly on top end of shroud in a direction away from column assembly. See **Figure 2**

2) Remove (4) shroud screws using #2 Phillips screw driver. See **Figure 3**

3) Using side cuts, clip (2) large and (3) small cable ties holding wire harness bundle together. See **Figure 4**

WARNING

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

4) Using #2 screwdriver, remove (2) screws holding right hand stalk to column housing. See **Figure 5**

Figure 2

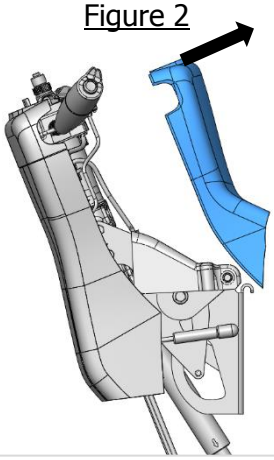


Figure 3

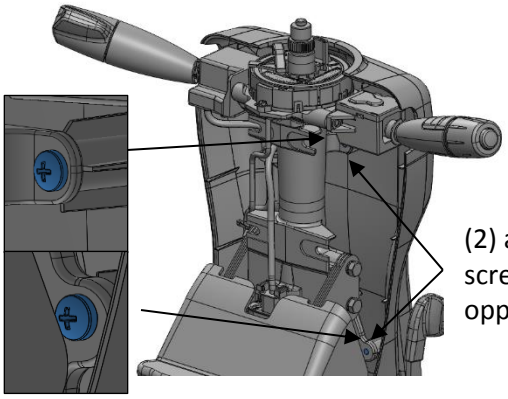


Figure 4

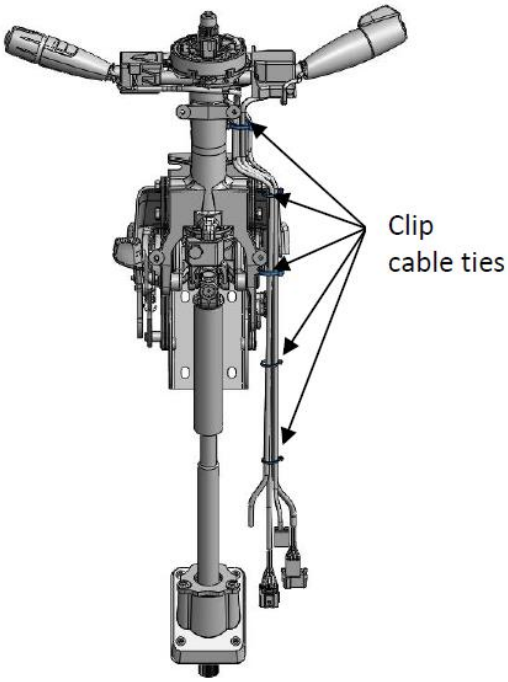
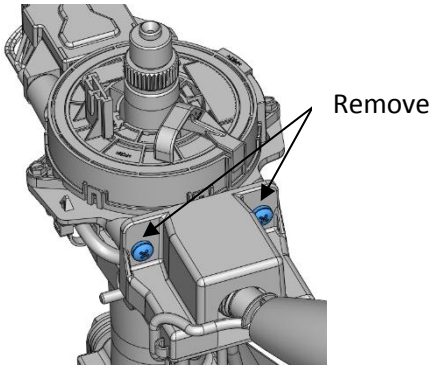


Figure 5



REASSASEMBLY PROCEDURE

1) Using new #2 Phillips screws provided with stalk service kit, install right hand stalk back onto column. Using torque wrench, **torque screws to 30-40 in-lbs.** See **Figure 6**

WARNING

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

2) Install large cable tie (036316) around harnesses and into column housing feature as shown in **Figure 7.1** ,**7.2, 7.3**. For columns utilizing clock springs, see **7.1 and 7.2**, for assemblies with horn contact systems, see **7.3**. Pull cable tie tightly. Clip excess tie.

3) Install small cable tie (036348) around harnesses. Cable tie does not attach to housing. See **Figure 8.** Pull Cable tie tightly. Clip excess tie.

4) Install large cable tie (036316) around harnesses and into column housing feature as shown in **Figure 9**. Pull cable tie tightly. Clip excess tie.

5) Install (2) small cable ties (036348) around harnesses. Cable tie does not attach to housing. See **Figure 10.** Pull cable tie tightly. Clip excess tie.

6) 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**.

WARNING

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

Figure 6

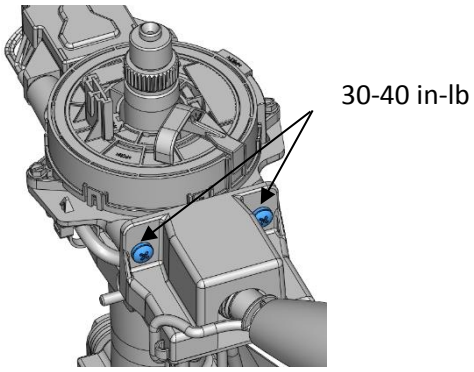


Figure 7.1

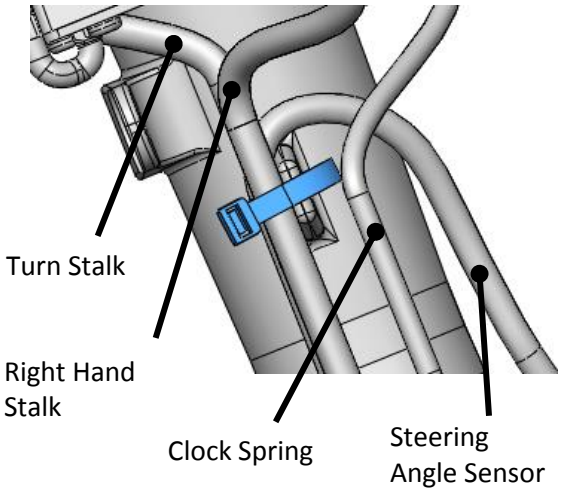
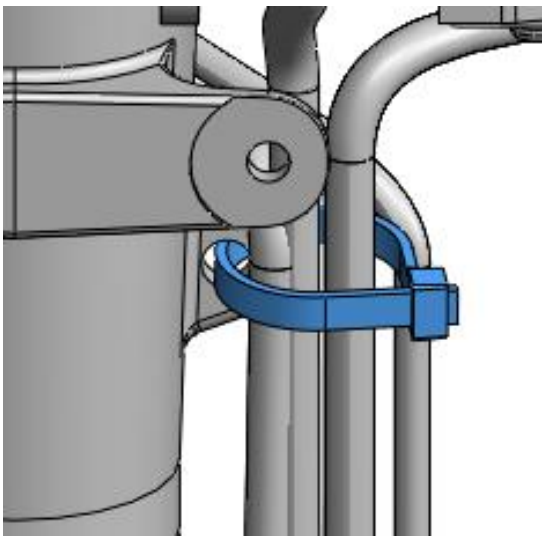


Figure 7.2



7) 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.

8) 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.

Figure 7.3

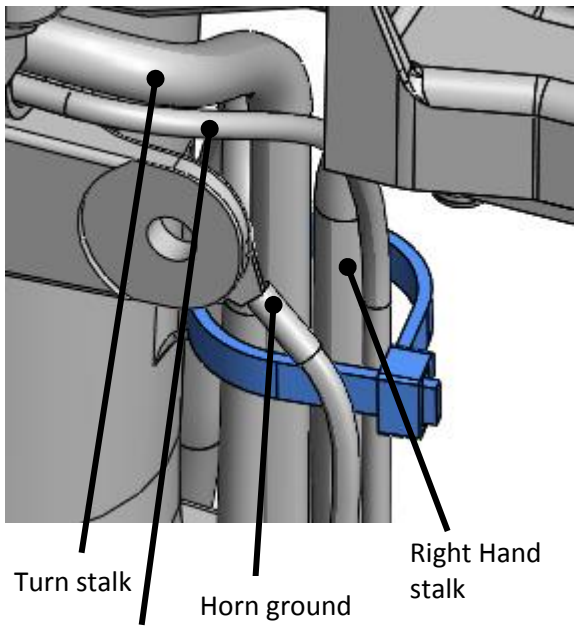
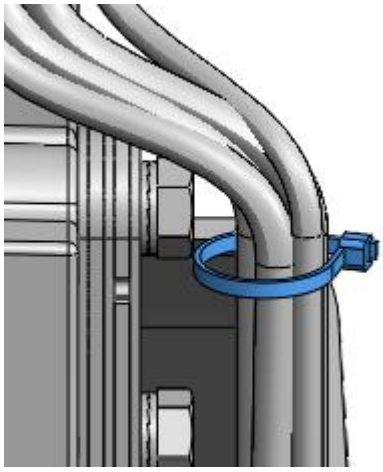
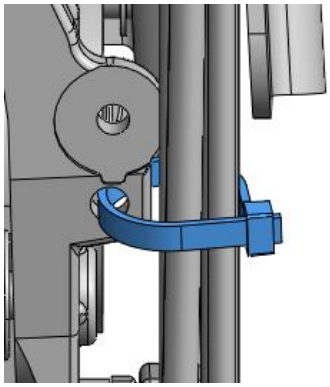
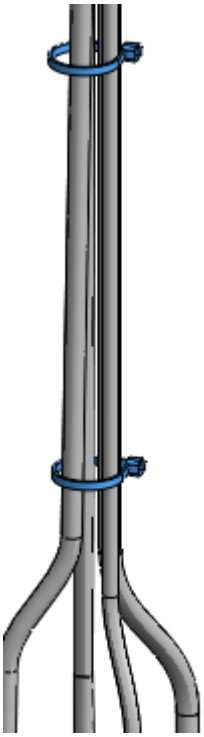


Figure 8



All harnesses are captured in cable tie

	Figure 9  All harnesses are captured in cable tie
	Figure 10  All harnesses are captured in cable tie

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

Steering Column Remove and Replace

1. Remove lower kick panels, as shown in Figure 1.

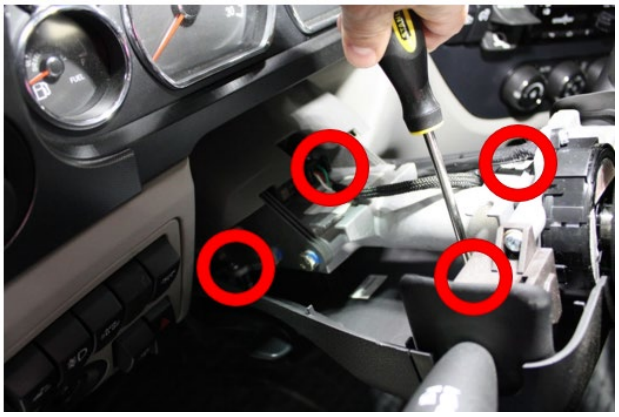
   Figure 1

NOTE
Peterbilt interior is shown in the picture. The Peterbilt kick panel is installed with 5 screws and the Kenworth kick panel is installed with 2 screws.

2. Remove the upper steering column trim shroud by pulling firmly on the top end of the shroud in a direction away from the column assembly.
3. Remove the lower trim shroud from the column by removing four screws, as shown in Figure 2.

   Figure 2

4. Pull the horn pad away from the steering column.

5. Disconnect the contacts to the horn and cruise control.

NOTE
If metal shavings are present in the steering column behind the horn pad, clean out the metal shavings before proceeding. Do not use compressed air to clean out metal shavings.

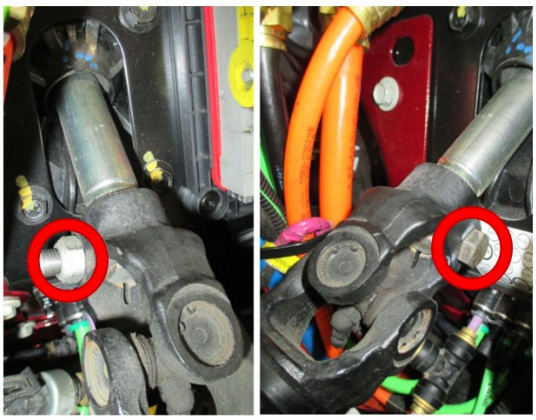
6. Remove Retaining clip and steering wheel nut.
    a. Dispose of removed wheel nut; new production intent wheel flange nut is required for reassembly.
    b. If the removed retaining clip is damaged, replace with a new production intent clip.
7. Attach steering wheel puller as shown in Figure 3. Remove the wheel while making sure the wheel remains centered and the wire connectors do not get damaged.

NOTE
If the steering wheel includes a greased slip ring surface that interfaces with the steering column horn contact spring, protect the greased wheel slip ring surface until the wheel is re-installed in step 26.

Figure 3

8. Remove the u-joint pinch bolt and lock nut under the hood to disconnect the intermediate shaft u-joint coupler from the steering column output shaft, as shown in Figure 4. Dispose of the removed pinch bolt and lock nut; new production intent fasteners are required or reassembly.

Figure 4



9. Remove the four screws that attach the steering column lower shaft bearing block to the front wall, as shown in Figure 5. Dispose of removed mounting screws; new production intent screws are required for reassembly.

Figure 5

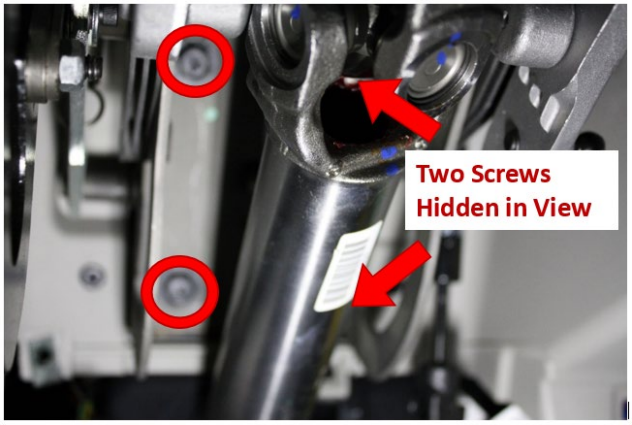
10. From inside the cab, carefully collapse the steering column lower shaft, pulling it away from the cab front wall.
11. Locate the steering column wires routing from the bottom of the steering column. Follow the wires from the column to the connectors joining the column wires to the IP harness wires.
12. ***If the wires coming from the steering column are secured with clipping hardware to dash side locations <u>BETWEEN the bottom of the steering column shrouds and the IP harness connectors</u>:***
    a. Observe and note whether other items are secured with the steering column wires (airlines, other wires, etc.) in order to return to the original condition in **STEP 25** when the new steering column wires are installed.
    b. Cut/remove the clipping hardware to enable removal of steering column wires.
    c. Dispose of any removed dash side clipping point hardware. New production intent clipping hardware is required for re-assembly.

NOTE
Take care to not cut any wires, air lines, etc. Do not cut/remove any clipping hardware that secures wires coming from the IP harness. Only cut/remove clipping hardware that prevents the removal of wires coming from the steering column.

13. Disconnect the steering column wire connectors from the IP harness wire connectors.

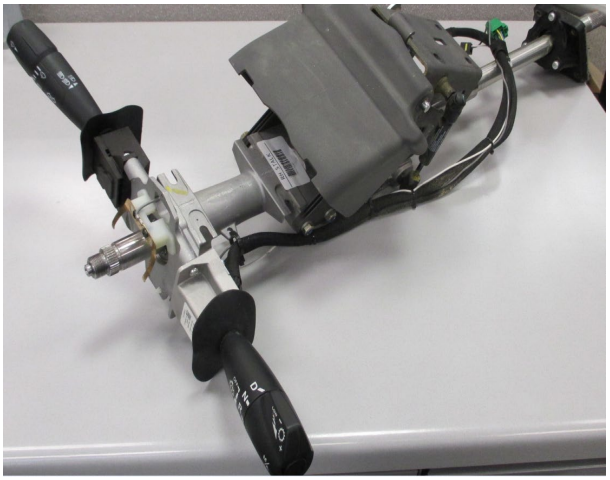
14. Remove the four screws attaching the steering column to the cross car beam as shown in Figure 6. Dispose of removed mounting screws; new production intent screws are required for re-assembly.

Figure 6



15. Remove steering column as shown in Figure 7. The column shown may not necessarily match the column configuration of the truck being serviced.

Figure 7



16. Locate the replacement steering column. If the steering column shrouds block tool access for installing the steering column mounting screws to the cross car beam, refer to **steps 2 and 3** for removal.

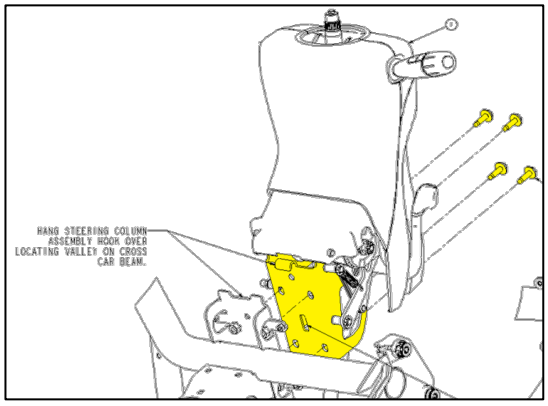
17. Hang the replacement steering column on the cross car beam using the “hook-n-go” feature on the column-mounting bracket shown in Figure 8.

Figure 8

18. Install four new production intent screws connecting the column mounting bracket to the cross car beam as shown in Figure 9 and Figure 10. Tighten the screws to 18-20 lb-ft (24-27 N·m).

Figure 9

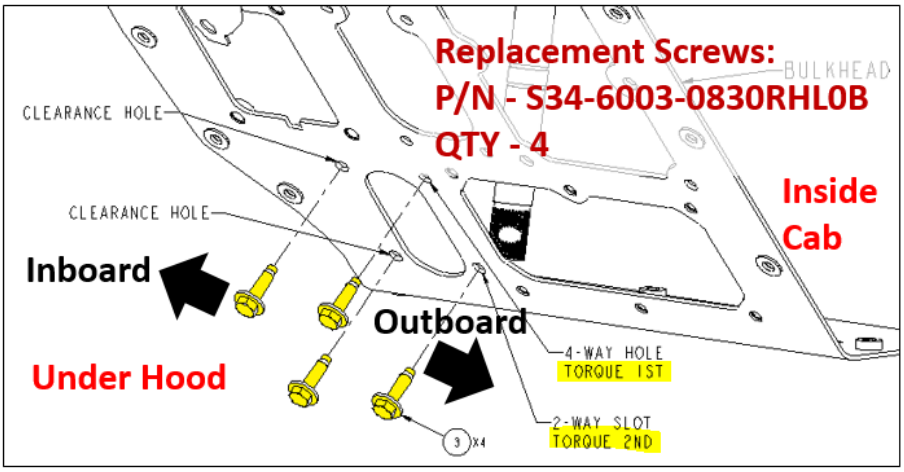
Figure 10



19. Collapse the steering column telescoping output shaft to gain clearance and then pass the steering column lower shaft end through the front cab wall slot, aligning the bearing block threaded insert pattern with the front wall mounting hole pattern.

20. From the outside of the cab under the hood, install 4 new production intent screws through the front wall mounting holes into the steering column lower shaft bearing block. **Tighten the screws in the sequence shown in** Figure 11**.** Tighten the screws to 11-13 lb-ft (15-18 N·m).

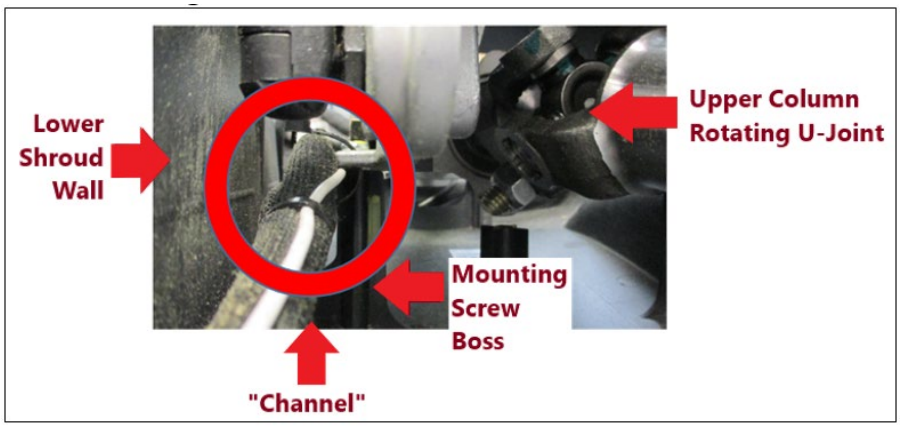
Figure 11



21. Connect the intermediate shaft u-joint coupler to the steering column splined output shaft exiting the cab front wall. Use a new production intent pinch bolt and lock nut - tighten the lock nut to 37-42 lb-ft (50-58 N·m).
22. If removal of the steering column shrouds was required in step 16, re-assemble the lower shroud to the steering column, routing all wires through the “channel” (shown in Figure 12) between the lower shroud wall and the mounting screw boss.

NOTE
Routing through the channel is required for clearance to the rotating u-joint in the upper column.

Figure 12



23. Re-secure the lower shroud with the four screws that were removed.

24. Re-install the upper shroud by aligning the retaining clips with the mating features on the cast housing and pushing firmly into place.

NOTE
When installing the lower and upper shrouds, be careful not to pinch wires or LH/RH stalk rubber boots between the shrouds.

25. Steering column wire securement.
    a. If it was noted in **step 12** that the steering column wires were secured with clipping hardware between the bottom of the column shrouds and the IP harness connectors:
        i. Unlock the steering column for adjustment and position the column in the upmost tilt position at full telescope extend toward the driver. This allows slack for future adjustment by the driver.
        ii. Route the steering column wires to match the original starting condition, securing the wires at the original clipping point(s) using new production intent clipping hardware.
        iii. Be sure to include any other items (air lines, other wires, etc.) that were originally included in the steering column routing.
        iv. Connect the steering column wire connectors to the IP harness connectors.
        v. Tuck the slack from the steering column wires above the HVAC vent and behind the dash panel as shown in Figure 13.

Figure 13

    b. If it was noted in **step 12** the steering column wires were **NOT** secured with clipping hardware between the bottom of the column shrouds and the IP harness connectors:
        i. Unlock the steering column for adjustment and position the column in the upmost tilt position at full telescope extend toward the driver. This allows slack for future adjustment by the driver.

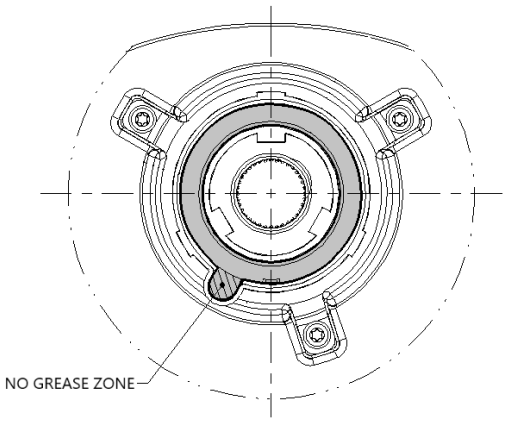
ii. Connect the steering column wire connectors to the IP harness connectors.

iii. Tuck the slack from the steering column wires above the HVAC vent and behind the dash

NOTE
Do not add clipping points that were not in the original installation.

26. If the removed steering wheel includes a greased slip ring surface that interfaces with steering column horn contact spring, with a finger, re-smooth the existing grease on the slip ring surface. Avoid the NO GREASE zone as shown in Figure 14. Depending upon steering wheel type, align the wheel with either the clock spring or the horn contact spring on the top of the steering column.

Figure 14

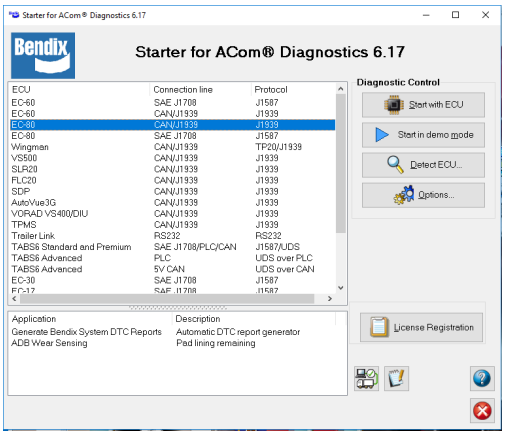


27. Re-install the steering wheel with a new production intent wheel flange nut – tighten the flange nut to 35-45 lb-ft. (47-61 N·m).
28. Re-install the retaining clip that was removed. If the retaining clip is damaged, replace with a new production intent retaining clip.
29. Re-install the horn pad, ensuring the connectors are pulled and positioned correctly.
30. Re-install the lower kick panels.
31. Continue to Steering Angle Sensor Recalibration.

Steering Angle Sensor Recalibration (required with new steering column)

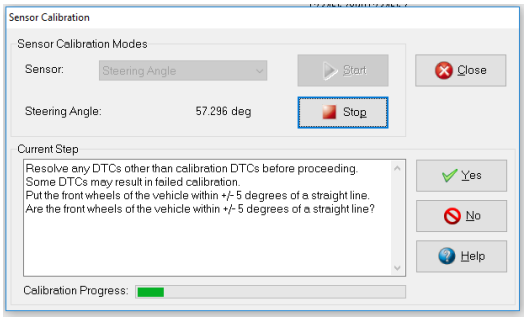
1. Using a laptop with Bendix ACOM, connect to the chassis and start ACOM.
2. Select **EC-80 CAN / J1939** from the menu, and then click **Start with ECU**.

Figure 15



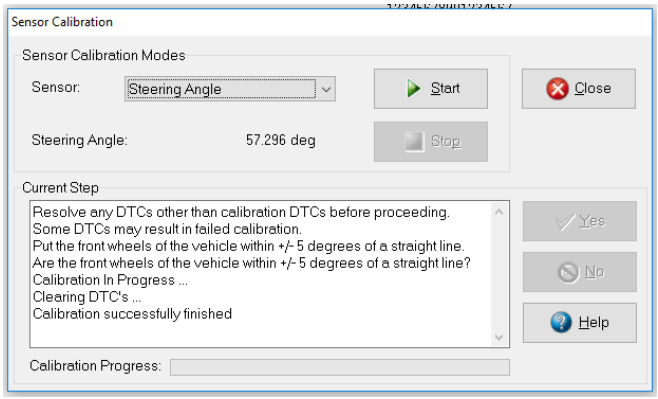
3. Resolve all DTCs other than sensor calibration DTCs, and then click **Calibrate ESP Sensors**.
4. Select **Steering Angle** from the **Sensor** dropdown, follow in the **Current Step** dialog box, and then click **Start**.

Figure 16



5. Follow the directions in the **Current Step** dialog box again and then click **Yes**.
6. If the **Current Step** dialog box indicates calibration was successful, verify DTCs are gone. No further action required.

Figure 17



Kenworth Truck Company
Customer Service Department
PO Box 1000
Kirkland, Washington 98083-1000
(425) 828-5888

Date TBD

[First VIN]
Customer Name
Address
City, State Zip

Subject: Retrofit Bulletin R1801: Right-hand (RH) Stalk and Trailer Hand Brake Retrofit

Dear Kenworth Customer,

Certain pre-production vehicles manufactured from 10/17/2016 through 03/14/2017 were built with pre-production RH Stalks and Trailer Hand Brake switches. Your vehicle (listed within this letter) is eligible for a campaign to replace the pre-production parts with production parts.

The problem is…	**The RH Stalk and Trailer Hand Brake may be pre-production parts**
What your dealer will do…	**Dealers will inspect the parts, and if needed, replace pre-production parts with production parts.**
What you must do …	**Contact your Kenworth Dealer to schedule an appointment for repair**

Please contact a Kenworth dealership to schedule an appointment for this work. If you have already had this work performed, please disregard this letter. You can find your nearest Kenworth dealer at Dealer Locator on the website www.Kenworth.com.

When contacting your selected Kenworth dealer, refer to Retrofit Bulletin **R1801** and the VIN listed on this letter. The initial inspection will take approximately **1.0 hour**, depending on dealer scheduling. If your chassis requires a new steering column, a subsequent visit may be required, and the work will take approximately **2.0 hours**, depending on vehicle configuration and dealer scheduling. There will be no charge to you if completed within Standard Warranty (excludes Extended Warranty) or for upgrades completed by **09/01/2019**, whichever is greater. We apologize for this inconvenience but ask for your cooperation to ensure your continued satisfaction with Kenworth products.

If you require further information about this campaign, reimbursement of a pre-notification remedy associated with this recall, or experience any difficulty in making arrangements for this repair, please contact Kenworth Customer Service, provide your name, your dealer's city and state, your phone number, your email address (optional), the last 8 digits of your VIN, the bulletin number, and your question using one of the following:

Email: Kenworth.Campaigns@paccar.com with the bulletin number in the subject line
or
Mail: Kenworth Truck Company, P.O. Box 1000, Kirkland, WA 98083-1000, Attn: Customer Service Department
or
Phone: 425-828-5888

If you no longer own this vehicle, we would appreciate your advising us of the new owner if you know their name.

Thank you,

Gordon Clark
Director of After Sales
Kenworth Truck Company

Scan this QR code to open the Kenworth Dealer Locator.

VIN: [VIN List]