

FLA COE
FLB COE
FLD Conventional
Business Class
FLC 112 Conventional

Century Class Conventional
Argosy COE
Cargo
Columbia

Coronado
> Business Class M2
Cascadia
108SD/114SD

Freightliner
Service Bulletin

Description of Revisions: *This bulletin replaces the version dated September 2014. The production changeover date was corrected.*

General Information

Some M2 vehicles with Allison 6-speed transmissions may produce a buzzing or chirping noise emanating from the shift lever. This usually happens when the transmission is in 6th gear, and the vehicle is moving at 50 to 65 mph (80 to 105 kph). Shifting out of 6th gear stops the noise.

For production units, a shift cable isolator kit was developed and implemented December 9, 2013 to eliminate the cause of the noise. For service, the production-equivalent kit ORS 59565 was designed to fix the problem for both transmission-mounted-PTO and non-PTO applications. A new, longer shift cable is also required when installing the kit.

NOTE: As an alternative for non-PTO applications only, kit KPP 294201 may also be used, if available.

Procedure for Installing Kit ORS 59565

NOTE: Kit ORS 59565 is compatible with both transmission-mounted-PTO and non-PTO applications.

1. Test drive the vehicle and confirm it has the problem described in "General Information."
2. Park the vehicle on a level surface, set the transmission in NEUTRAL, shut down the engine, and set the parking brake. Chock the tires.
3. Remove the two capscrews that attach the shift cable bracket to the transmission, and the nut that holds the transmission shift lever on the shift selector shaft. See [Fig. 1](#).
4. Remove the P-clamp that attaches the shift cable to the underside of the cab floor near the pass-through into the cabin. See [Fig. 2](#), item 1.
5. Remove the dash trim panel (dash surround).
6. Remove the T-handle dash panel ([Fig. 3](#), item 8) from the dash.
7. Slide the cable up through the floor pass-through far enough to make it easier to access the back of the T-handle shift control assembly.
8. Remove the cable clamp that attaches the cable housing to the back of the T-handle assembly. See [Fig. 3](#).
9. Disconnect the cable from the T-handle assembly.
10. Remove the pivot pin and jam nut from the upper end of the cable to make it easier to pull the cable through the floor pass-through.
11. From underneath the cab, pull the disconnected cable assembly down through the floor pass-through.
12. Remove the boots from the T-handle end of the new cable assembly. See [Fig. 4](#).
13. Insert the new cable up through the floor pass-through, far enough to easily attach the cable and its housing to the back of the T-handle assembly. See [Table 1](#) for cable part number.
14. Install the boots on the upper end of the cable housing.
15. Install the jam nut and pivot pin onto the upper end of the cable.
16. Install the cable on the T-handle assembly, with the pivot pin in the approximate center of the adjustment range (threaded cable end).
17. Tighten the jam nut snugly against the pivot pin.

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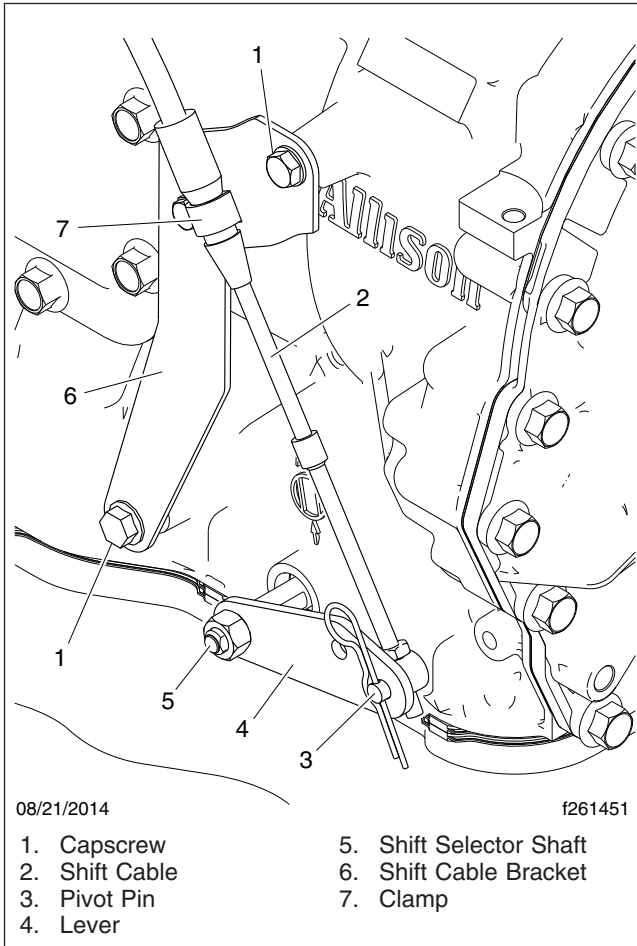


Fig. 1, Existing Shift Cable Installation at the Transmission

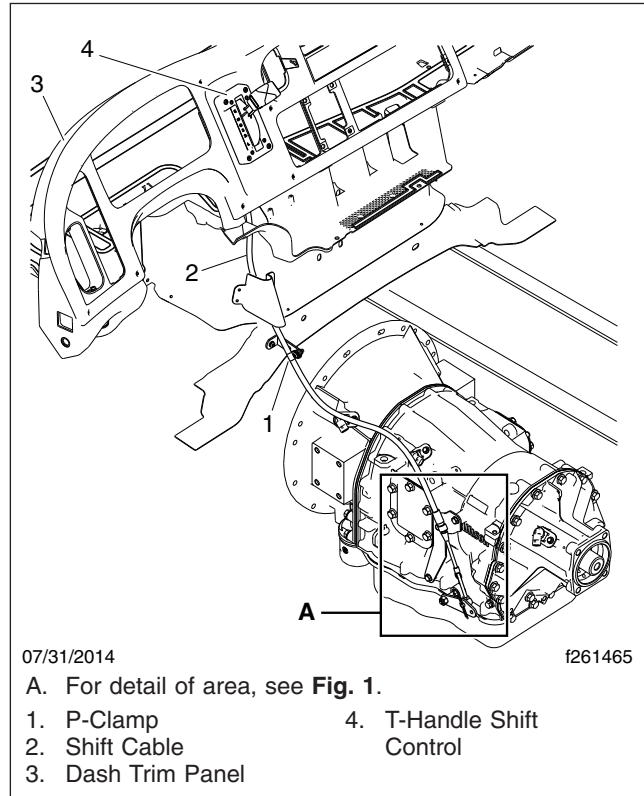


Fig. 2, Existing Shift Cable Installation

18. Install a cotter pin on the pivot.
19. Install the T-handle dash panel on the dash.
20. Install the shift lever on the transmission, pointing down, as shown in **Fig. 5**, with the letters identifying the pivot holes facing outboard. Tighten the lock nut 15 to 20 lbf·ft (20 to 27 N·m).
21. Install the new bracket on the transmission, using the capscrews from the kit. Tighten the capscrews 38 to 45 lbf·ft (51 to 61 N·m). See **Fig. 6**.
22. Assemble the nuts, flatwashers, and lockwashers on the cable, and feed the cable through the grommet in the new bracket. See **Fig. 6** for the order of assembly. Set the position of the lower cable housing so that the range of cable adjustment is within the available threads of the cable.
23. Install the jam nut and pivot pin onto the cable.
24. Attach the pivot pin on the shift lever.
25. Tighten the housing stop nut and jam nut (**Fig. 6**, items 7) against the spacer.

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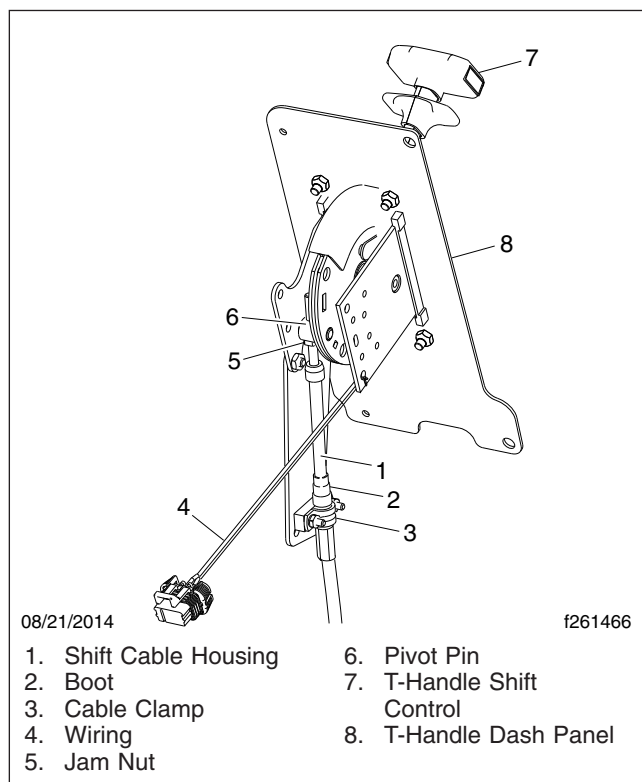


Fig. 3, T-Handle Shift Control Assembly

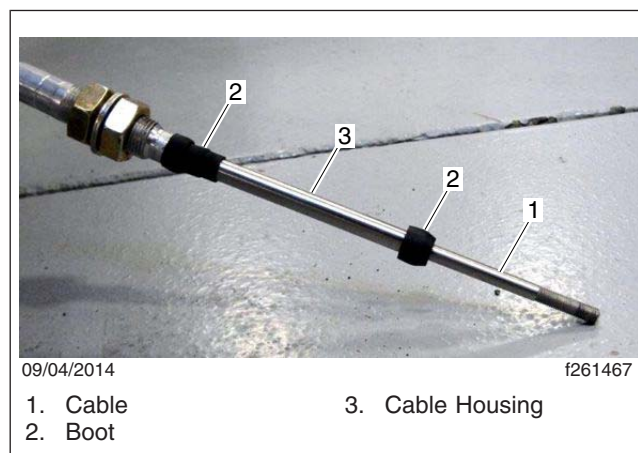


Fig. 4, Cable Boots

26. Make sure the shift control on the dash is set to NEUTRAL, and the shift lever on the transmission is in the neutral position, as indicated by the flats on the shaft and the neutral position figure cast into the transmission housing. See [Fig. 7](#).
27. Adjust the position of the pivot pin along the cable rod so it is lined up with the hole in the shift lever. The pin should insert freely into the shift lever hole when the pin is aligned correctly.
28. Tighten the jam nut snugly against the pivot pin.
29. Install the cotter pin on the pivot.
30. Install the P-clamp near the floor pass-through.
31. Install the dash trim panel (dash surround).
32. Test drive the vehicle and make sure all the gear functions work, including auto park brake (if applicable), and that the update has fixed the problem.

Procedure for Installing Kit KPP 294201

NOTE: Kit KPP 294201 is only compatible with non-PTO applications. For vehicles with transmission-mounted PTO installations, use kit ORS 59565 (see "Procedure for Installing Kit ORS 59565" above).

1. Test drive the vehicle and confirm it has the problem described in "General Information."

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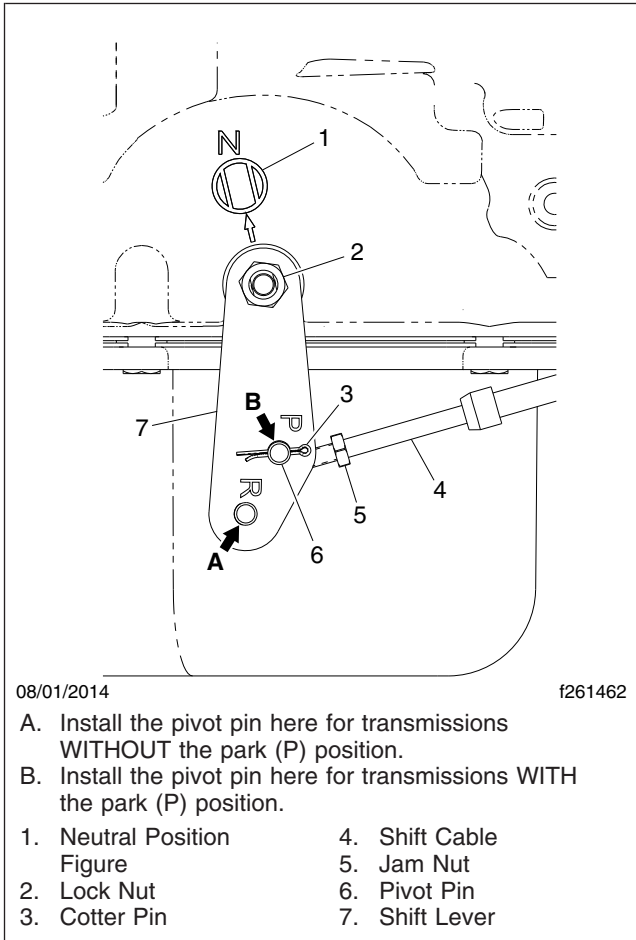


Fig. 5, Shift Lever Installed, Kit ORS 59565

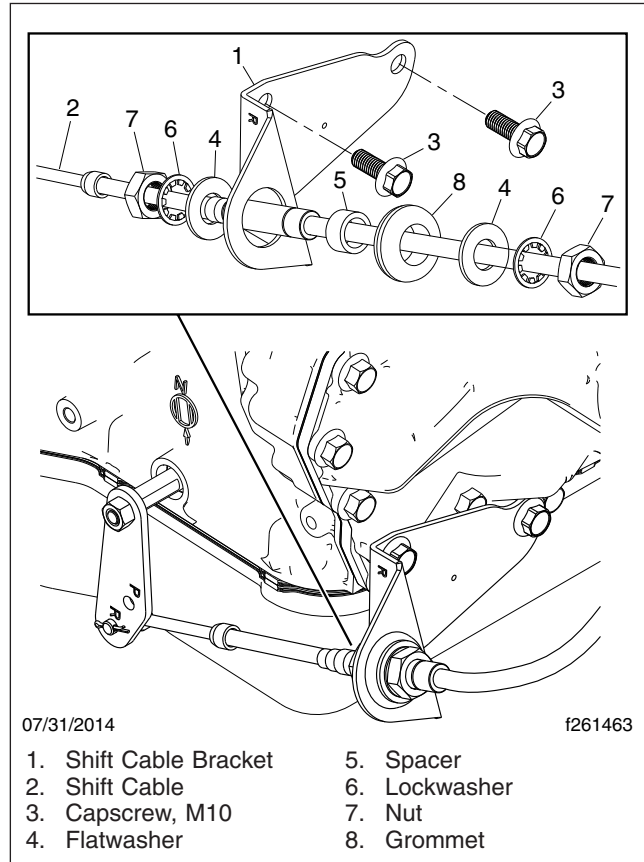


Fig. 6, Shift Cable Bracket Installation, Kit ORS 59565

- Park the vehicle on a level surface, set the transmission in NEUTRAL, shut down the engine, and set the parking brake. Chock the tires.
- Remove the cotter pin, then remove the pivot pin and shift cable from the transmission shift lever. See [Fig.1](#).
- Remove the pivot pin from the shift cable.
- Remove the clamp that secures the shift cable to the cable bracket. Save the bolt and discard the clamp.
- Remove the two capscrews that attach the cable bracket to the transmission, then remove the bracket.
- Using the isolator kit mounting bracket ([Fig. 8](#), item 4) as a template, with one hole positioned over the existing hole in the cable bracket, mark and drill a 1/4-inch (7-mm) hole in the cable bracket, as shown in [Fig. 9](#).
- Enlarge the existing holes in the isolator kit mounting bracket to fit the fasteners.
- Install the new bracket on the shift cable bracket, using the existing capscrew and the new bolt, nut, and washers. See [Fig. 10](#). Tighten the existing capscrew 35 lbf-in (395 N-cm), and the new bolt 60 to 84 lbf-in (680 to 950 N-cm).

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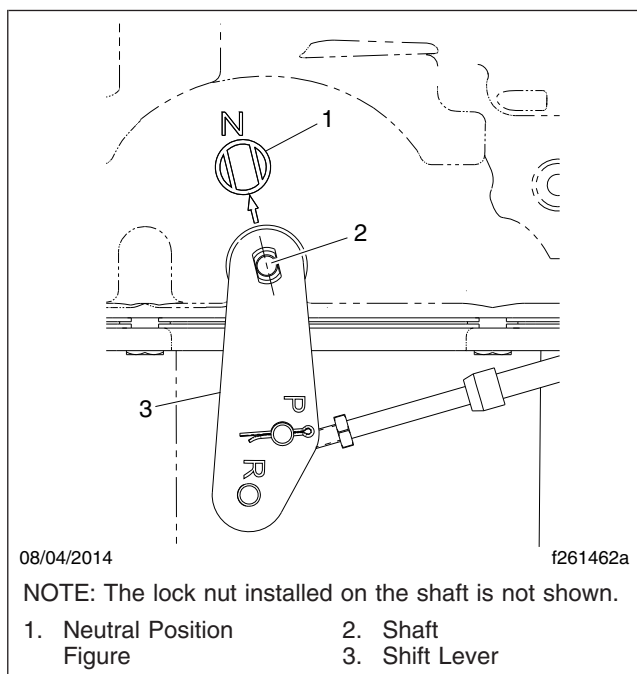


Fig. 7, Shift Lever Neutral Position, Kit ORS 59565

10. Install the cable in the bracket using the remaining isolator kit parts ([Fig. 8](#)). Make sure the snap ring is seated in the groove of the plastic bushing; see [Fig. 11](#).
11. Install the pivot pin on the shift cable.
12. Install the cable bracket on the transmission. Tighten the capscrews 18 to 21 lbf-ft (24 to 28 N-m).
13. Install the pivot pin on the outboard side of the shift lever, as shown in [Fig. 12](#).
14. Make sure the shift control on the dash is set to NEUTRAL, and the shift lever on the transmission is in the neutral position, as indicated by the flats on the shaft and the neutral position figure cast into the transmission. See [Fig. 13](#).
15. Adjust the position of the pivot pin along the cable rod so it is lined up with the hole in the shift lever. The pin should slide freely in the shift lever hole when the pin is aligned correctly.
16. Tighten the jam nut snugly against the pivot pin.
17. Install the cotter pin on the pivot.
18. Make sure that there is clearance between the shift cable and the fuel lines.
19. Test drive the vehicle and make sure all the gear functions work, including auto park brake (if applicable), and that the update has fixed the problem.

Parts

Kit ORS 59565 is compatible with both PTO and non-PTO applications. It is available through the PDCs. See [Table 1](#) for original and new BOMs, and the shift cable and transmission bracket kits required for the fix.

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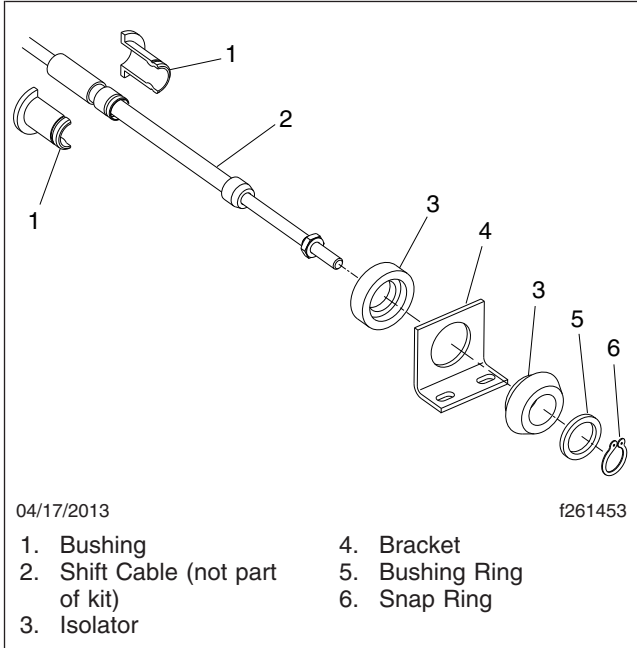


Fig. 8, Isolator Kit KPP 294201

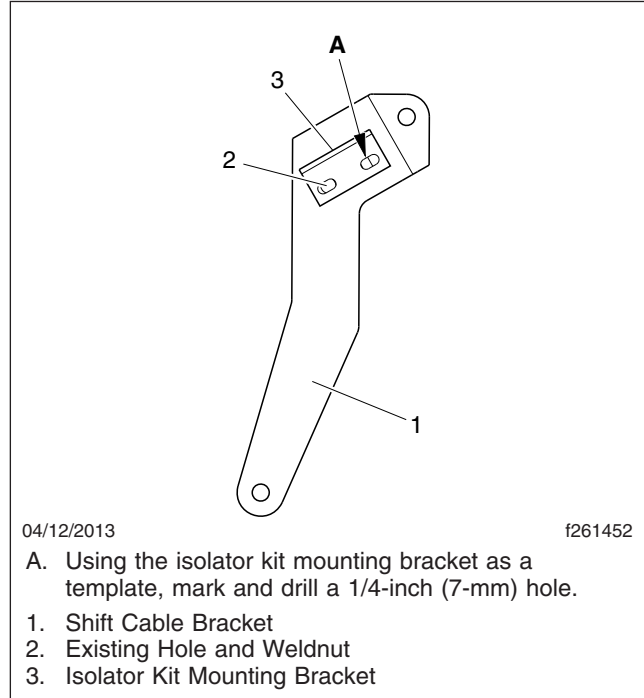


Fig. 9, Locating Isolator Kit Bracket Holes, Kit KPP 294201

An alternative service fix for non-PTO applications is kit KPP 294201, if available. A new shift cable is not required with kit KPP 294201. See [Table 2](#).

IMPORTANT: Kit KPP 294201 is compatible with non-PTO applications only. If kit KPP 294201 is not available, use kit ORS 59565 and a new cable.

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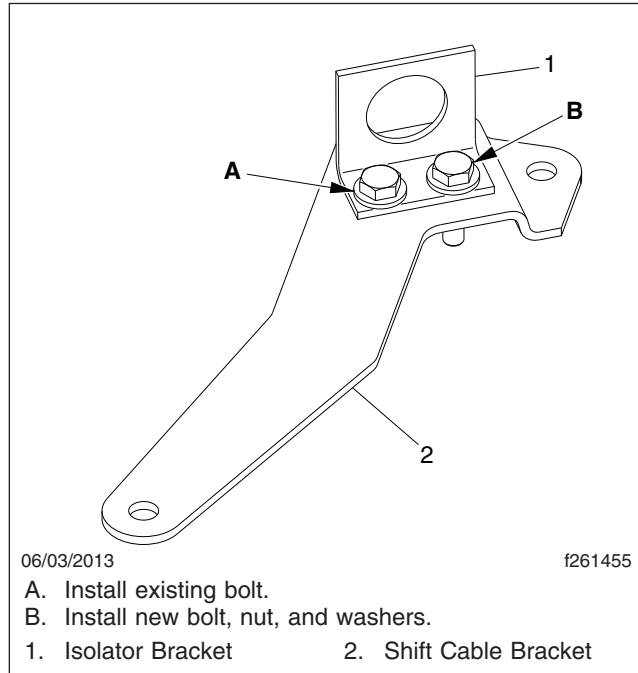


Fig. 10, Isolator Bracket Installation, Kit KPP 294201

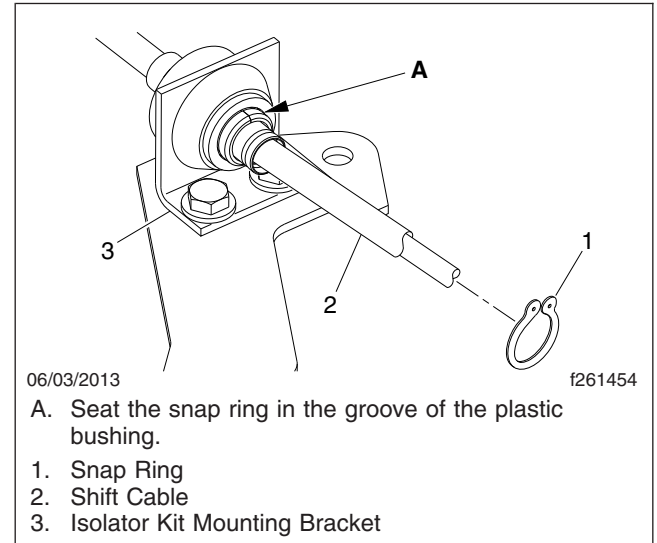


Fig. 11, Snap Ring Installation, Kit KPP 294201

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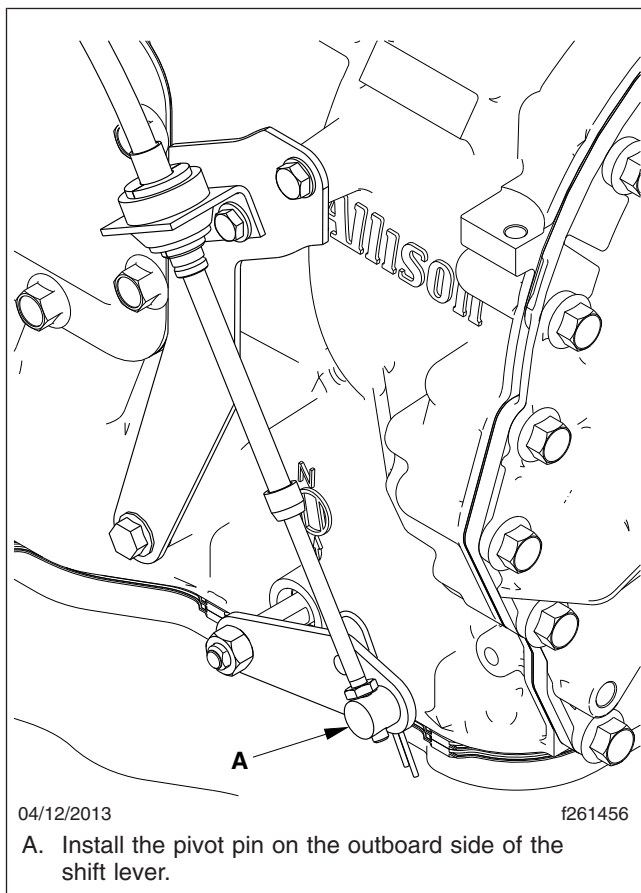


Fig. 12, Isolator Kit Installed, Kit KPP 294201

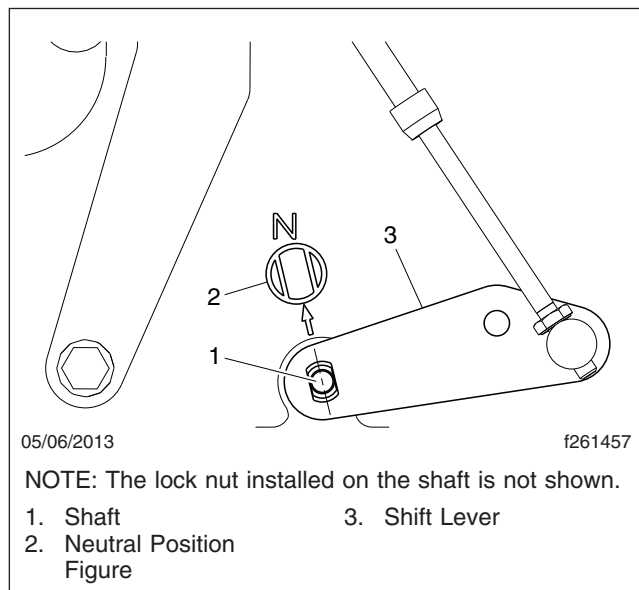


Fig. 13, Shift Lever Neutral Position, Kit KPP 294201

Shift Cable and Transmission Bracket Kit Required for PTO and non-PTO Applications			
Original BOM	New BOM	Shift Cable (qty: 1)	Transmission Bracket Kit (qty: 1)
345-C17323	345-C17348	ORS46068	ORS59565
345-C17324	345-C17349		
345-C17328 (superseded to 345-C07772)	345-C17351		
345-C17327	345-C17350	ORS46068 1	

Table 1, Shift Cable and Transmission Bracket Kit Required for PTO and non-PTO Applications

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Parts Required if Installing Alternative Kit KPP 294201 (for non-PTO applications only)		
Part Number	Description	Qty.
KPP 294201	Isolator Kit, Shift Cable	1
23-10742-075	Bolt	1
23-10900-025	Washer	2
23-13861-104	Nut	1

Table 2, Parts Required if Installing Alternative Kit KPP 294201 (for non-PTO applications only)

Warranty

This procedure is warrantable only if the described condition exists and the repair is performed within the applicable base or extended coverage warranty period. If a failure is not found, this procedure is considered preventive and warranty does not apply.

Normal warranty applies. See [Table 3](#) for OWL VMRS codes and labor allowance information. Enter this service bulletin number in the *Service Bulletin #* field.

OWL VMRS Codes and Labor Allowance					
Primary Failed Part	Component Code	Cause Code	SRT Code	Description	Time: Hours
FLD 59520	027-033-086	12	345-5039A	Isolator, Shift Cable, Install (SB26-50)	1.2
FLD 59520	027-033-086	12	345-5039B	Isolator, Shift Cable w/ PTO, Install (SB26-50)	1.5

Table 3, OWL VMRS Codes and Labor Allowance