

Service Bulletin #284

Directional Turn Switch Assembly Replacement Kit Procedures

Revised January, 1993

This TRW Commercial Steering Division service bulletin has been written to help you repair commercial vehicles more efficiently. This bulletin 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". You should not try to diagnose or repair steering problems unless you have been trained, and have the right equipment, tools and know-how to perform the work correctly and safely.

Disassembly

1. Disconnect the battery cable from battery and disconnect the lower end of all wires exiting the jacket tube (23) cable wire outlet hole that is below the instrument panel.

NOTE	Do not destroy the yellow horn contact cable or the orange pilot light cable. They will be reused during the assembly procedures.
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2. Remove the protector (28) from the cluster of wires.
3. Remove the horn button and emblem assembly (1 & 2) by twisting counterclockwise.
4. Remove the contact cup (3) and spring (4).
5. Remove base plate assembly (7) by removing two screws (5) and the contact screw (6) to access the wheel nut (8). Remove the wheel nut (8).
6. Remove the steering wheel (9) either with a wheel puller, or by reinstalling the wheel nut (8) about 4 turns, then grasping the steering wheel with both hands at the spokes and pulling up steadily while rocking the steering wheel back and forth.
7. From the top end of the wheel tube (13), remove either the spring (10) or spacer (10A). Then remove either the spring seat (11) or spacer (11A) depending on the construction of the unit.

8. To remove the directional switch assembly (22) from the turn signal housing (15), turn the switch lever (18) out of the directional switch pivot post. Remove two screws (16). If a hazard switch is part of the assembly, remove two screws (17). Carefully pull the directional switch assembly (22) with cables and hazard switch out of the turn signal housing and jacket tube assembly (15 & 23).
9. Remove the horn contact roller assembly (21) from the signal housing boss or directional switch plate (22) with pliers, taking care not to damage the bakelite shell.
10. Unclip any ground wire the pilot light socket and cable assembly (24) may have. Turn the pilot light cover (25) out of the pilot light housing (20) and pull out the pilot light (26), pilot light socket and cable (24), and the o-ring (27) as an assembly.
11. To remove the turn signal housing (15) from the jacket tube (23), remove two "J" clamp bolt assemblies (14), or bend back the turn signal housing retaining tabs on the jacket tube.
12. Remove the bearing (12) from the turn signal housing (15) for reuse, if a new bearing is not part of the replacement turn signal housing.

CAUTION	When removing the bearing, pry or press only against the outer rim of the bearing shell to avoid damaging the unit.
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Assembly

1. If the replacement turn signal housing (15) is not equipped with a new bearing (12), lubricate the bearing removed from the old turn signal housing and press it into the replacement signal housing.

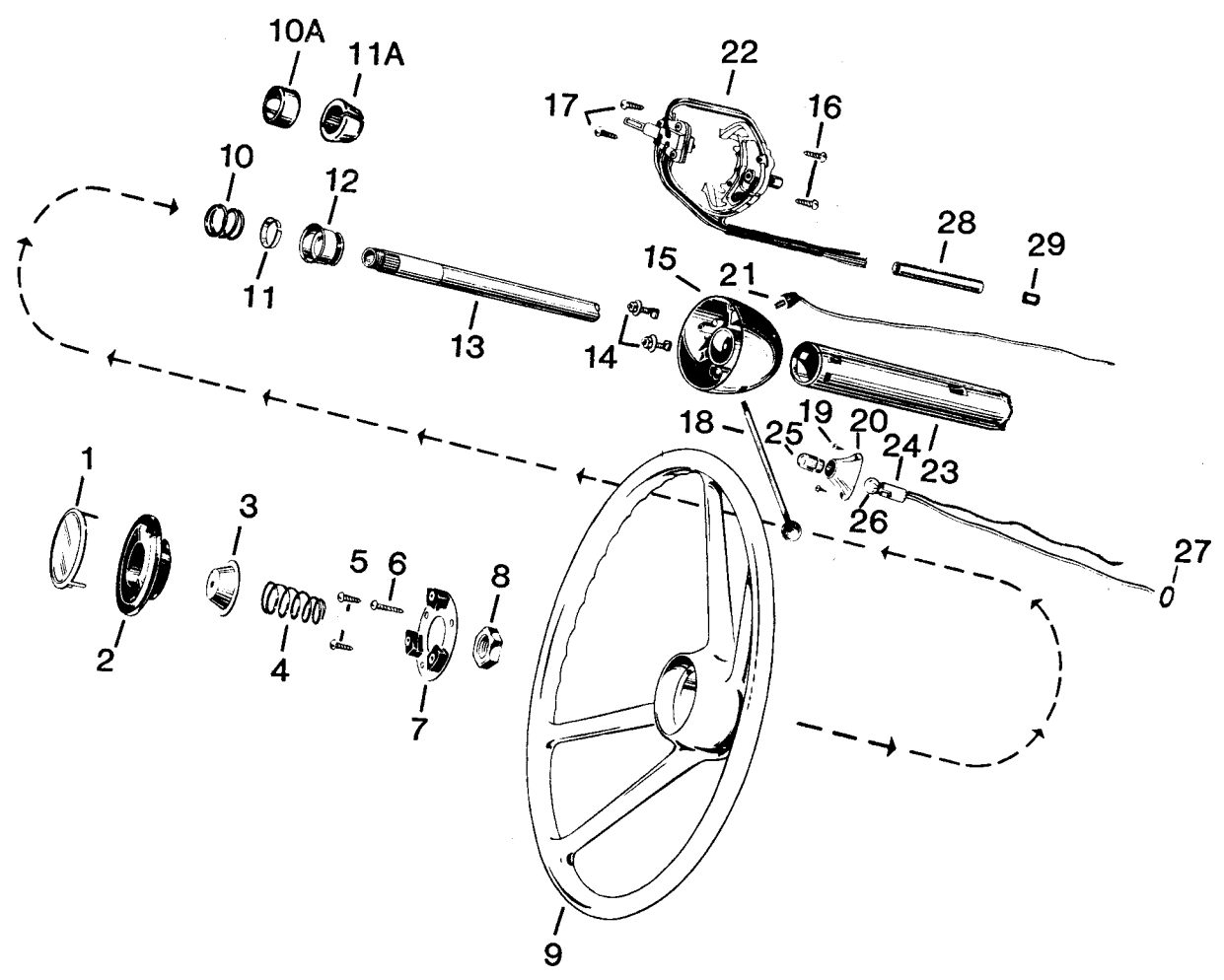
⚠ CAUTION	Press only against the outer rim of the bearing shell to avoid damaging the unit. Be sure the new or old bearing is well lubricated.
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2. Assemble the new turn signal housing (15) onto the jacket tube (23) taking care to position the housing for alignment of directional switch wiring exit hole and trough in the jacket tube. Be sure the end of the jacket tube is seated in the bottom of the turn signal housing jacket tube cavity.
3. Attach the two "J" clamp bolt assemblies (14), if they were removed from the assembly, or rebend the retaining tabs on the jacket tube (23) to retain the turn signal housing on the jacket tube.
4. Line up the pilot light housing (20), if one is required, with its aperture on the turn signal housing (15). The slot on the inside diameter of the pilot light housing should be toward the jacket tube (23). Attach the housing with two new #4-24 cross recess HD screws (19).
5. With the bulb (26) and o-ring (27) assembled to the pilot light socket assembly (24), assemble it, cable first, into the pilot light socket housing, seating the socket at the bottom of the slot on the inside diameter of the pilot light socket housing.
6. If the new signal housing is plastic, and is replacing a metal turn signal housing, a new pilot light assembly (24) with a ground wire is required. Attach the ground wire terminal firmly to the top edge of the jacket tube at the wire trough opening. Screw in the pilot light cover (25).
7. If a horn contact roller assembly (21) is required, assemble it into the slotted boss in the turn signal housing (15) with its cable wire exiting the slot. Allow at least one inch of slack in this cable wire between the boss slot and where the cable wire must enter the jacket tube wire trough.
8. Gather the yellow horn contact cable (21), orange pilot light cable (24) and directional switch assembly (22) cables with terminals slightly staggered to prevent bunching. Wrap the cluster of terminal ends lightly with tape. Attach a "lead in" wire if necessary and insert the cluster of cables into the opening in the turn signal housing (15) and feed them down through the jacket tube (23) wire trough and the outlet hole. If the directional switch has seven cable wires, it may be necessary to start by inserting the yellow horn contact wire (21) separately.
9. Lubricate the directional switch pivot post with multi-purpose grease and insert it in the signal housing (15) boss. Position the directional switch assembly (22), aligning the directional switch, and if included, the hazard switch screw holes with the holes in the housing. Attach the directional switch and hazard switch with two each of new #6-20 screws (16) furnished in the kit. Position all cable wires in the turn signal housing to allow the directional switch to function correctly.
10. Insert all wires exiting the jacket tube into the protector (28) and slide the protector down the cables until it is firmly into the wire trough opening. Turn the signal lever (18) firmly into the directional switch pivot post and actuate the switch in both directions several times to be certain there is no binding. If there is friction or binding, recheck the position of the wiring in the turn signal housing and reposition if necessary.
11. Assemble either the spring seat (11) or spacer (11A), then either the spring (10) or spacer (10A) that were disassembled.
12. Remove any burrs or sharp edges from the steering wheel hub and slot in the directional switch canceling device contact area.
13. Install the steering wheel (9), lining up the wheel spokes with the straight ahead position of the steered wheels. Assemble the wheel nut (8), and torque to 55-65 lbf•ft.
14. Assemble the base plate assembly (7) using two screws (5) and one long contact screw (6). The contact screw (6) must contact the contact ring on the bottom side of the steering wheel.
15. Assemble the spring (4), and contact cup (3).
16. Assemble the horn button and emblem assembly (1 & 2) by pushing down, with the palm of your hand, and turning clockwise.
17. Remove the tape from wire terminals and connect the wires by color codes to complete the required circuits. Insulated butt connectors (29) are furnished in the replacement kit.

18. The color coding on the replacement directional switch assembly is the same as on the replaced switch. The added pink cable wire, if included, is for an optional hazard switch indicator light.
19. If the wheel tube (13) is integral with the steering gear, check the gap between the upper face of the turn signal housing (15) and the lower edge of the

steering wheel skirt. This gap must be .06-.12". If adjustment is necessary, loosen the jacket tube clamp at the steering gear and move the jacket tube up or down to provide the correct gap. Torque the jacket tube clamp bolt to 30-35 lbf•ft.

20. Reconnect the battery cable.



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| 1 Emblem Plate | 11A Spacer | 23 Jacket Tube Assembly |
| 2 Horn Button | 12 Bearing Assembly | 24 Pilot Light Socket and Cable |
| 3 Contact Cup | 13 Wheel Tube | 25 Pilot Light Cover |
| 4 Spring | 14 "J" Bolt Assembly (2) | 26 Pilot Light Bulb |
| 5 Metal Tapping Screw (2) | 15 Turn Signal Housing | 27 O-ring |
| 6 Contact Screw | 16 Pan Head Machine Screws (2) | 28 Protector |
| 7 Base Plate Assembly | 17 Pan Head Maching Screws (2) | 29 Insulated Butt Connector
(number as required) |
| 8 Wheel Nut | 18 Switch Lever | |
| 9 Steering Wheel | 19 Metal Tapping Screw (2) | |
| 10 Spring | 20 Pilot Light Housing | |
| 10A Spacer | 21 Horn Contact Roller Assembly | |
| 11 Spring Seat | 22 Directional Switch Assembly | |

Seal kit SK000040 includes items 12, 15, 16, 18, 22 and 29.

Seak kit SK000042 includes items 12, 15, 16, 17, 18, 22 and 29.

TRW Commercial Steering Systems
P.O. Box 60
Lafayette, IN 47902
Phone: 765.423.5377
Fax: 765.429.1868

