

6-9. HALFSHAFT MAINTENANCE

This task covers:

- | | |
|----------------------------|-----------------|
| a. Removal | d. Assembly |
| b. Disassembly | e. Installation |
| c. Cleaning and Inspection | |

INITIAL SETUP:

Tools

General mechanic's tool kit:
automotive (Appendix B, Item 1)

Materials/Parts

Boot service kit (fixed) (Appendix G, Item 7)
Boot service kit (plunged) (Appendix G, Item 7)
Retaining ring (Appendix G, Item 231)
Cotter pin (Appendix G, Item 12)
Six lockwashers (Appendix G, Item 145)
Lockwasher (Appendix G, Item 146)
Drycleaning solvent (Appendix C, Item 18)
Lithium grease (Appendix C, Item 25)
Sealing compound (Appendix C, Item 41)

Manual References

TM 9-2320-280-24P

Equipment Condition

Wheel removed (para. 8-3).

General Safety Instructions

Drycleaning solvent is flammable and will not be used near an open flame.

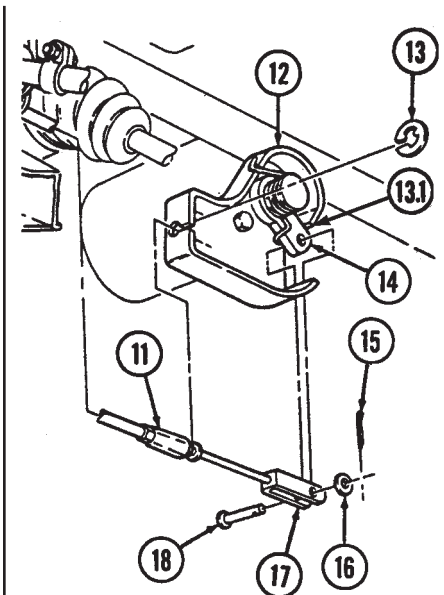
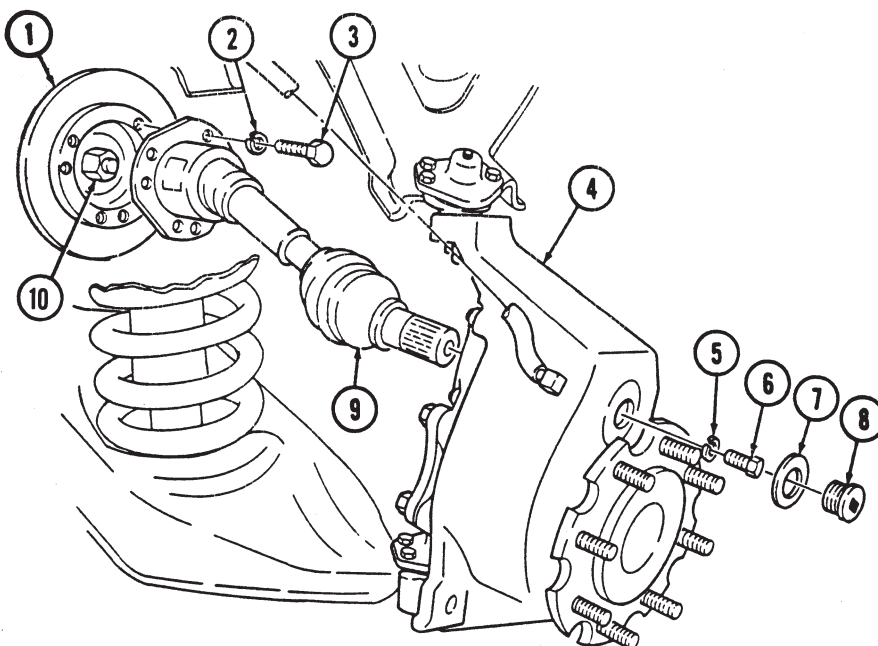
a. Removal

1. Remove access plug (8) and washer (7) from geared hub (4).
2. Remove halfshaft retaining capscrew (6) and lockwasher (5) from halfshaft (9) and geared hub (4). Discard lockwasher (5).
3. Remove six capscrews (3), lockwashers (2), and halfshaft (9) from rotor (1) and output flange (10). Discard lockwashers (2).

NOTE

Perform steps 4 and 5 for rear halfshafts only.

4. Remove cotter pin (15), washer (16), and clevis pin (18) from parking brake clevis (17) and lever (14). Discard cotter pin (15).
5. Remove retaining ring (13) and disconnect cable (11) from caliper cable bracket (12). Discard retaining ring (13).



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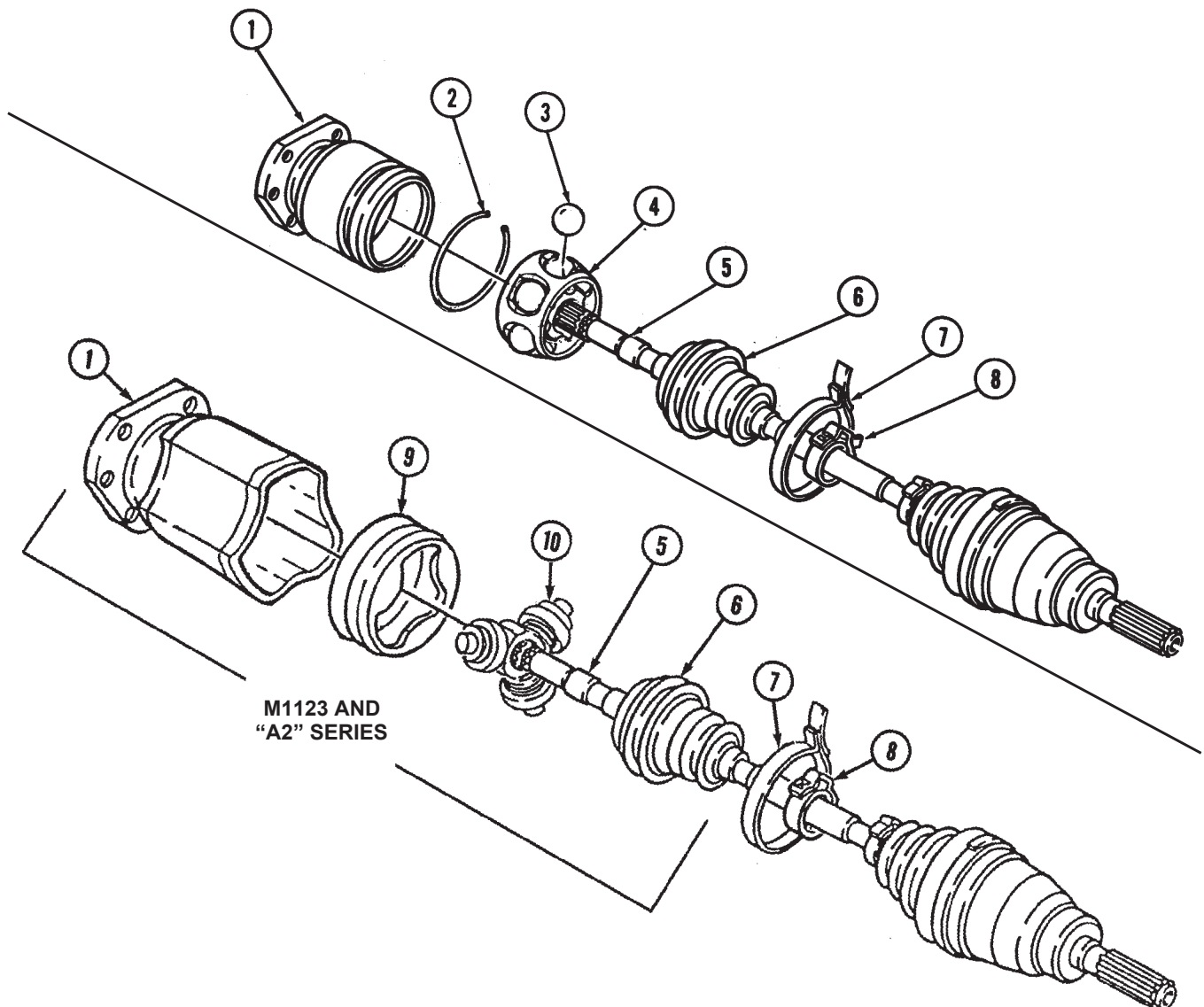
b. Disassembly

1. Loosen two clamps (7) and (8) securing inner boot (6) to inner joint (1) and shaft (5).
2. Clamp shaft (5) in soft-jawed vise.
3. Remove inner boot (6) from inner joint (1) and slide up on shaft (5).
4. Remove retainer clip (2) from inner joint (1).
5. Remove inner joint (1), retainer clip (2), and six ball bearings (3) from bearing assembly (4).

NOTE

Perform steps 5.1 through 5.3 for M1123 and "A2" series vehicles.

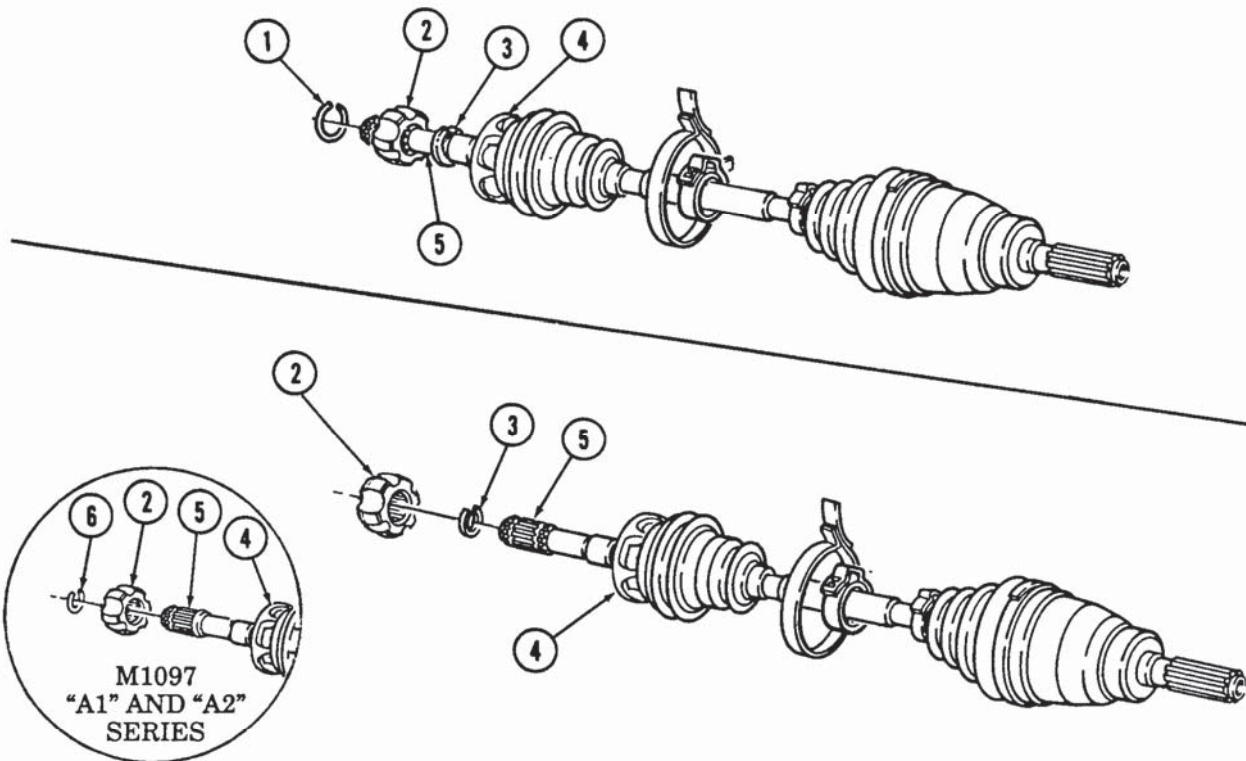
- 5.1. Remove inner boot (6) from insert (9) and slide up on shaft (5).
- 5.2. Remove inner joint (1) and insert (9) from spider assembly (10) and shaft (5).
- 5.3. Remove insert (9) from inner joint (1). Discard insert (9).



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NOTE

- Remove excess grease from bearing assembly and separate ball race from inner race.
 - Perform steps 6 through 8 for all models except the M1097, "A1" and "A2" vehicles.
 - Perform steps 9 and 10 for M1097, "A1" and "A2" series vehicles.
6. Pry spacer (3) from groove on shaft (5) and slide spacer (3) and inner race (2) up on shaft (5).
 7. Remove retainer ring (1) from shaft (5). Discard retainer ring (1).
 8. Remove inner race (2), spacer (3), and ball race (4) from shaft (5). Discard spacer (3).
 9. Remove retainer ring (6) from shaft (5). Discard retainer ring (6).
 10. Remove inner race (2) and ball race (4) from shaft (5).



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11. Remove inner boot (1) and clamps (2) and (3) from shaft (7). Discard boot (1) and clamps (2) and (3).
12. Remove shaft (7) from soft-jawed vise.
13. Loosen two boot clamps (4) and (5) securing outer boot (6) to outer joint (8) and shaft (7).
14. Remove outer boot (6) and clamps (5) and (4) from shaft (7). Discard boot (6) and clamps (5) and (4).

NOTE

Perform steps 15 through 17 for all models except the M1097 and "A1" and "A2" series vehicles.

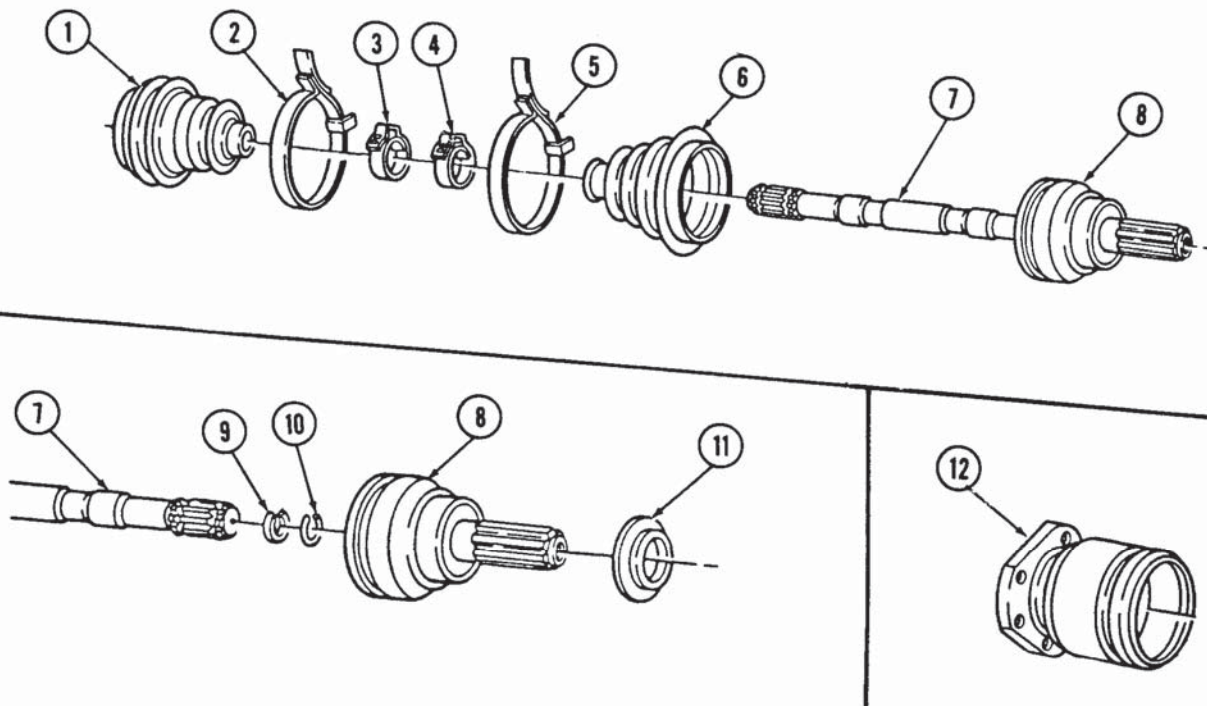
15. Remove slinger (11) from outer joint (8).
16. Remove outer joint (8) from shaft (7) using slide hammer.
17. Remove retainer ring (10) and spacer (9) from shaft (7). Discard retainer ring (10).

c. Cleaning and Inspection

WARNING

Drycleaning solvent is flammable and will not be used near an open flame. A fire extinguisher will be kept nearby when the solvent is used. Use only in well-ventilated places. Failure to do this may result in injury to personnel and/or damage to equipment.

1. Clean all metallic parts with drycleaning solvent.
2. Inspect shaft (7) for cracks and distortion. Replace shaft (7) if cracked or distorted.
3. Inspect splined end of shaft (7) for damage. Replace shaft (7) if damaged.
4. Inspect inner joint (12) for pitting or rough joint operation. Replace inner joint (12) if pitted or unserviceable.



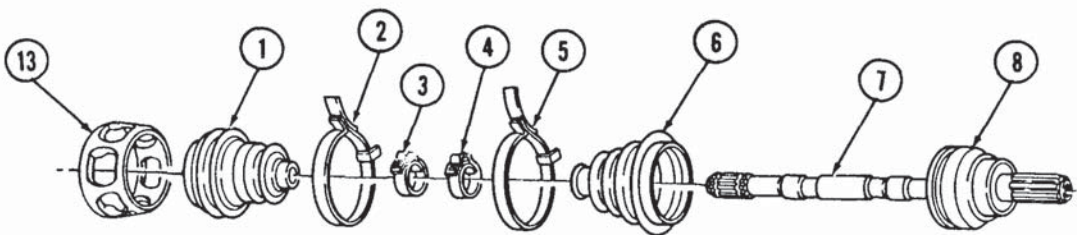
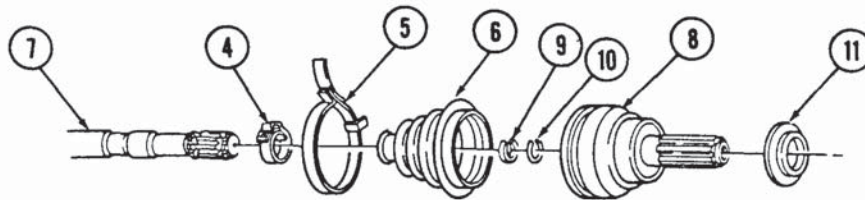
6-9. HALFSHAFT MAINTENANCE (Cont'd)

d. Assembly

NOTE

Perform steps 1 through 3 for all models except the M1097 and "A1" and "A2" series vehicles.

1. Install spacer (9) and retainer ring (10) on shaft (7).
2. Align splines on shaft (7) to outer joint (8) and push outer joint (8) onto shaft (7) until it snaps in place.
3. Install slinger (11) on outer joint (8).
4. Pack outer joint (8) with lithium grease.
5. Install outer boot (6) on shaft (7). Ensure boot (6) seats in groove of shaft (7).
6. Secure outer boot (6) on shaft (7) with clamp (4).
7. Install outer boot (6) on joint (8). Ensure boot (6) seats in groove of joint (8).
8. Secure outer boot (6) on joint (8) with clamp (5).
9. Clamp shaft (7) in soft-jawed vise.
10. Position clamps (3) and (2) on shaft (7).
11. Install inner boot (1) on shaft (7). Push boot (1) past groove on shaft (7).
12. Position ball race (13) on shaft (7).

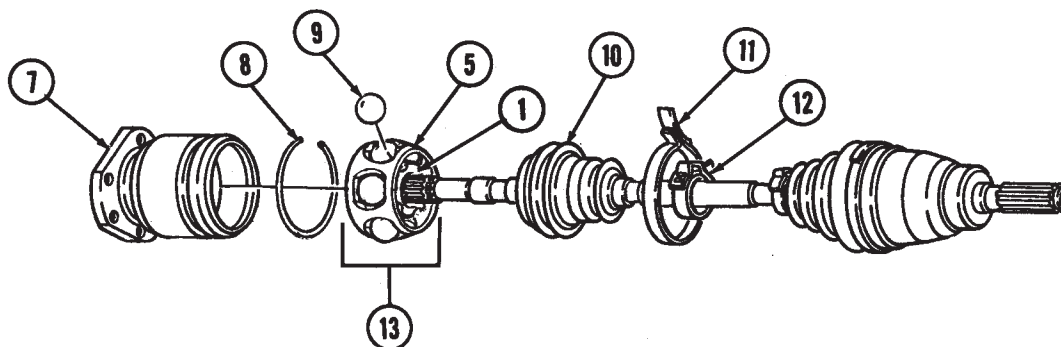
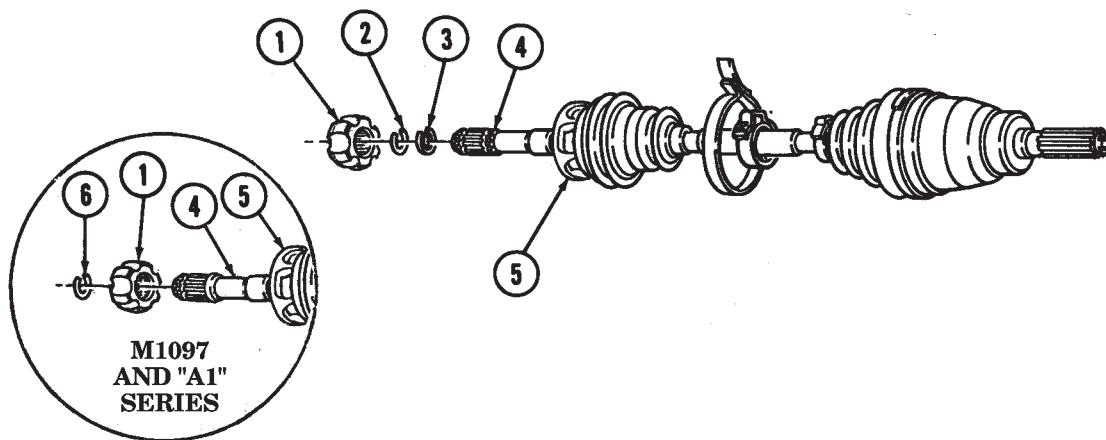


6-9. HALFSHAFT MAINTENANCE (Cont'd)

NOTE

- Perform steps 13 and 14 for all models except M1097, M1123, and "A1" and "A2" series vehicles.
- Perform steps 15 and 16 for M1097 and "A1" series vehicles.
- Perform steps 16.1 through 16.5 for M1123 and "A2" series vehicles.

13. Install spacer (3) and retainer ring (2) on shaft (4).
14. Align splines of inner race (1) with open spline of shaft (4). Use press to install inner race (1) until it snaps in place.
15. Align splines of inner race (1) with open spline on shaft (4). Use press to install inner race (1) on shaft (4) until inner race (1) seats into place.
16. Install retainer ring (6) in upper groove of shaft (4) behind inner race (1).



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NOTE

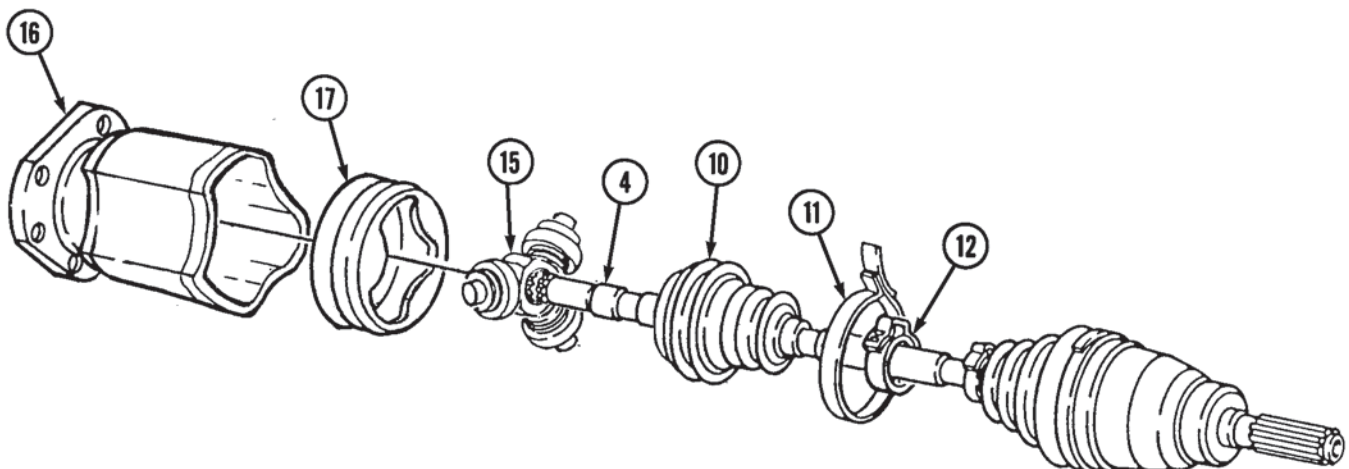
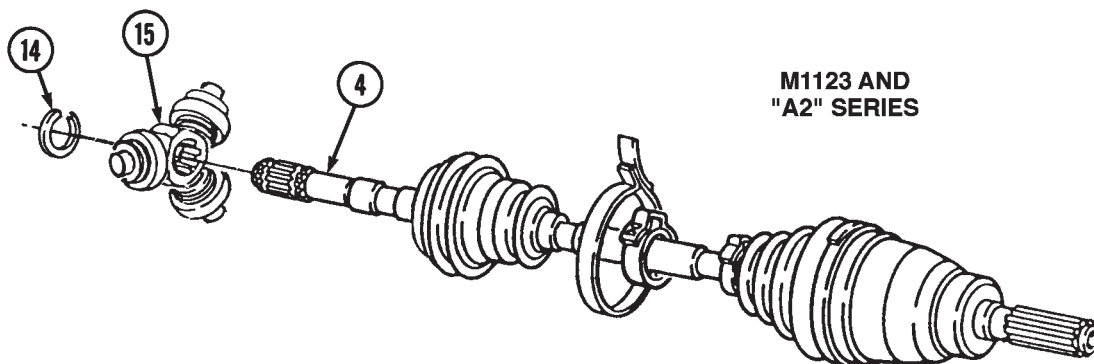
Coat spider assembly with lithium grease before installing on shaft.

- 16.1. Align splines of spider assembly (15) with open spline on shaft (4). Use press to install spider assembly (15) on shaft (4) until spider assembly (15) seats into place.
- 16.2. Install retainer ring (14) in pupper groove of shaft (4) behind spider assembly (15).
- 16.3. Pack inner joint (16) with lithium grease.
- 16.4. Install insert (17) on inner joint (15).
- 16.5. Install inner joint (16) and insert (17) on spider assembly (15) and shaft (4).
17. Position ball race (5) and six ball bearings (9) on inner race (1) and retain with lithium grease.
18. Position retainer clip (8) and inner joint (7) over bearing assembly (13).

NOTE

Ensure ball bearings are retained in ball race.

19. Secure retainer clip (8) in groove of inner joint (7).
20. Pack inner joint (7) with lithium grease.
21. Move inner boot (10) on shaft (4) until boot (10) seats in groove of shaft (4).
22. Secure inner boot (10) on shaft (4) with clamp (12).
23. Install inner boot (10) on inner joint (7). Ensure boot (10) seats in groove of joint (7).
24. Secure inner boot (10) on inner joint (7) with clamp (11).



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e. Installation

1. Install halfshaft (9) into geared hub (4).
2. Apply sealing compound to halfshaft retaining capscrew (6) and install halfshaft (9) to geared hub (4) with lockwasher (5) and halfshaft retaining capscrew (6). Tighten halfshaft retaining capscrew (6) to 37 lb-ft (50 N•m).
3. Install washer (7) and access plug (8) into geared hub (4). Tighten access plug (8) to 8-13 lb-ft (11-18 N•m).

NOTE

Ensure all six capscrew holes in the rotor align with holes in output flange.

4. Apply sealing compound to six capscrews (3). Install halfshaft (9) to rotor (1) and output flange (10), with six lockwashers (2) and capscrews (3). Tighten capscrews (3) to 48 lb-ft (65 N•m).

NOTE

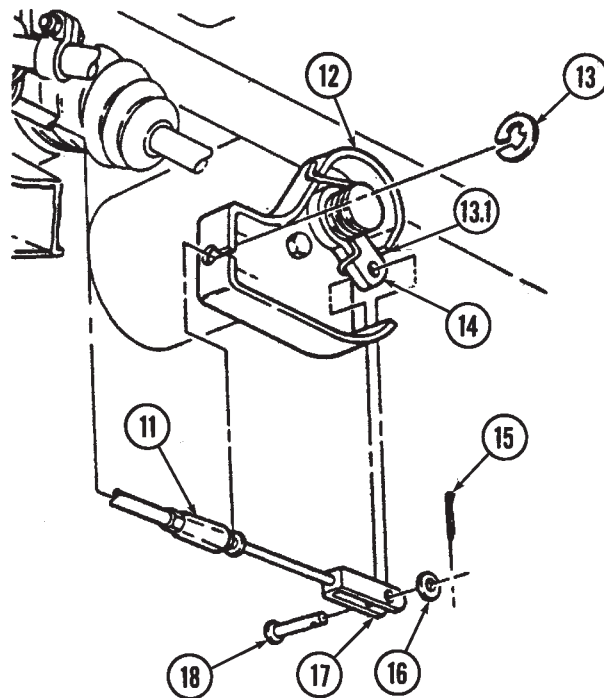
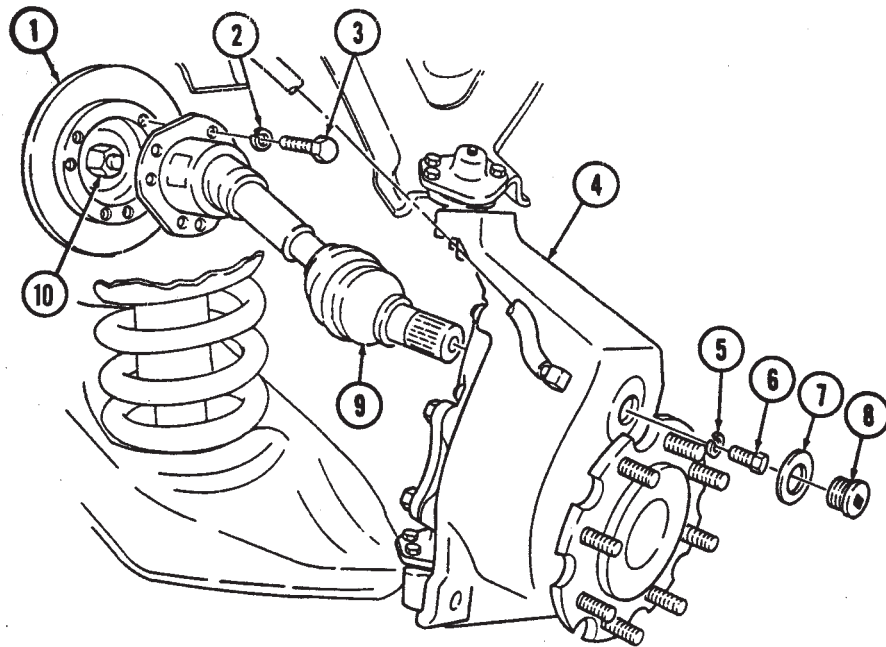
Perform steps 5 through 7 for rear halfshafts only.

5. Install parking brake cable (11) to caliper cable bracket (12) with retaining ring (13).

CAUTION

- Ensure lever is in contact with caliper cable bracket stop. Damage to equipment and poor performance will result if not aligned properly.
 - Ensure that the clevis and clevis pin are aligned in the lever. Do not move the lever to accommodate misadjusted clevis. Damage to equipment and poor performance may result.
6. Install parking brake clevis (17) to lever (14) with clevis pin (18), washer (16), and cotter pin (15). Check position of lever (13) and ensure it is in contact with caliper cable bracket stop (13.1).
 7. If lever (14) is not in contact with caliper cable bracket stop (13.1), adjust rear dual service parking brake (para. 7-26).

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FOLLOW-ON TASK: Install wheel (para. 8-3).