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GROUP 17

FINAL DRIVE

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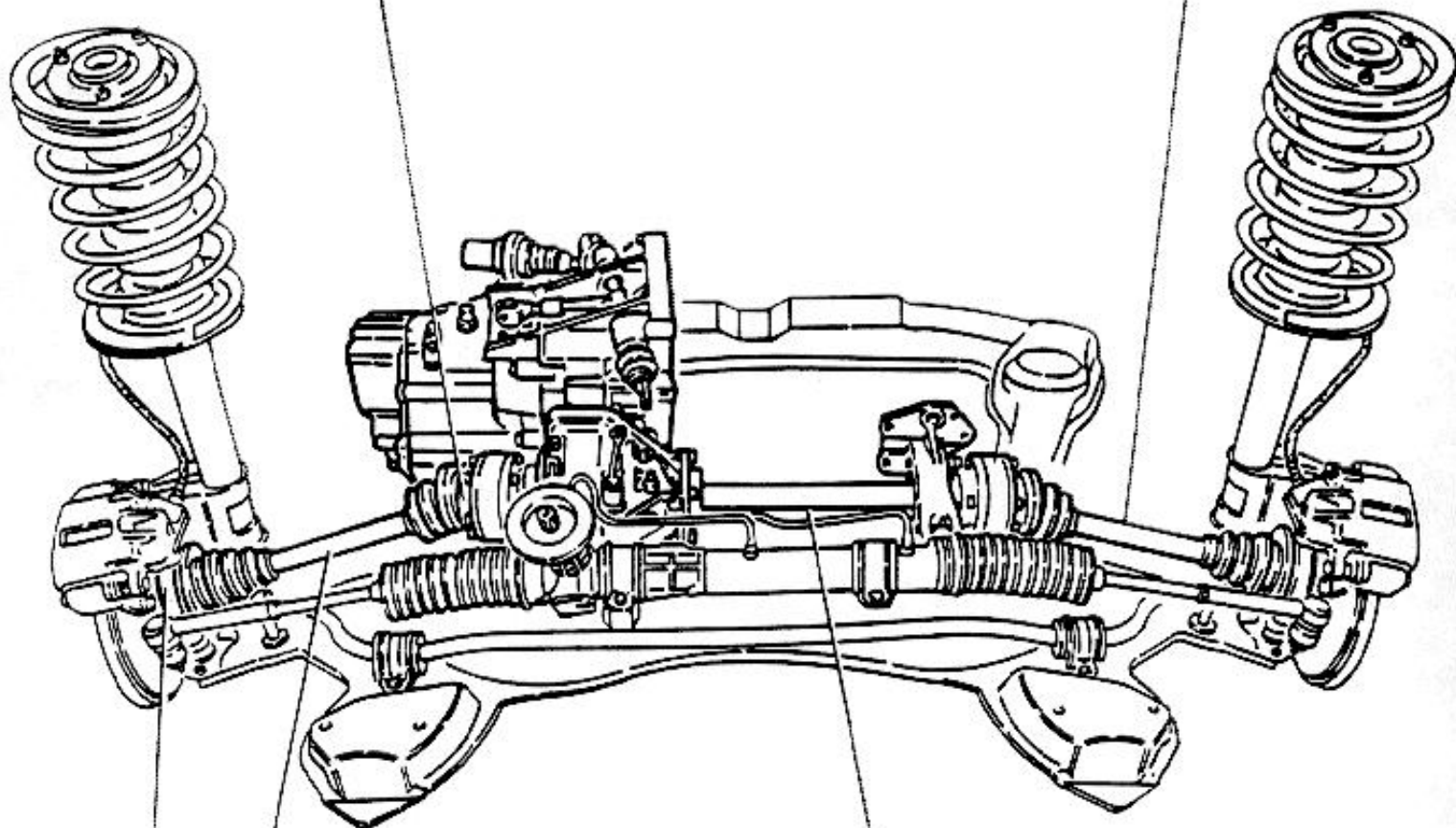
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L.H. AXLE SHAFT
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FINAL DRIVE

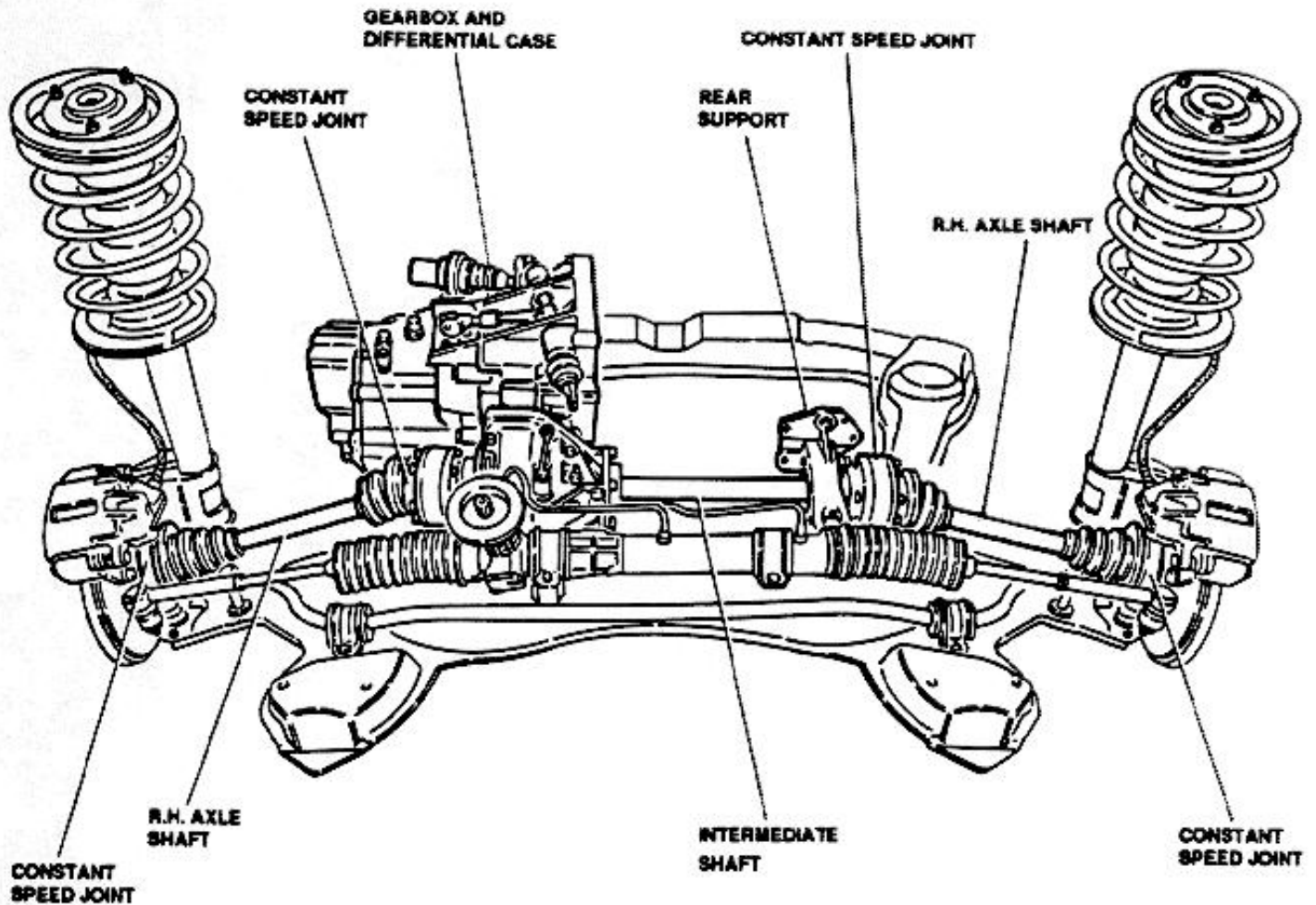
DESCRIPTION

The transmission assembly includes all those mechani-

cal elements which transfer movement from the gearbox differential to the front drive wheels.

The main components of the transmission assembly are

- L.H. and R.H. axle shafts.
- Intermediate shaft.
- L.H. and R.H. constant speed joints.

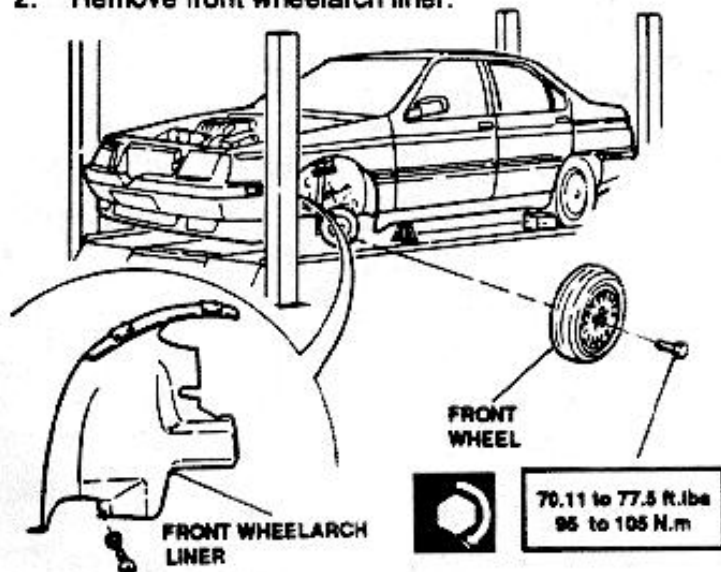




AXLE SHAFTS

L.H. AXLE SHAFT REMOVAL/INSTALLATION

1. Remove front wheel.
2. Remove front wheelarch liner.



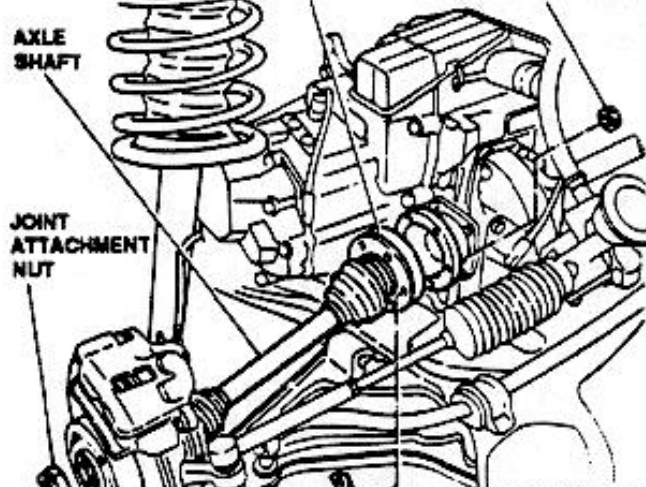
3. Remove screws securing axle shaft to differential flange.
4. Remove caulking and remove nut securing joint; when installing, replace nut and caulk it.
5. Withdraw axle shaft.



CAUTION:
Use new gasket at installation.

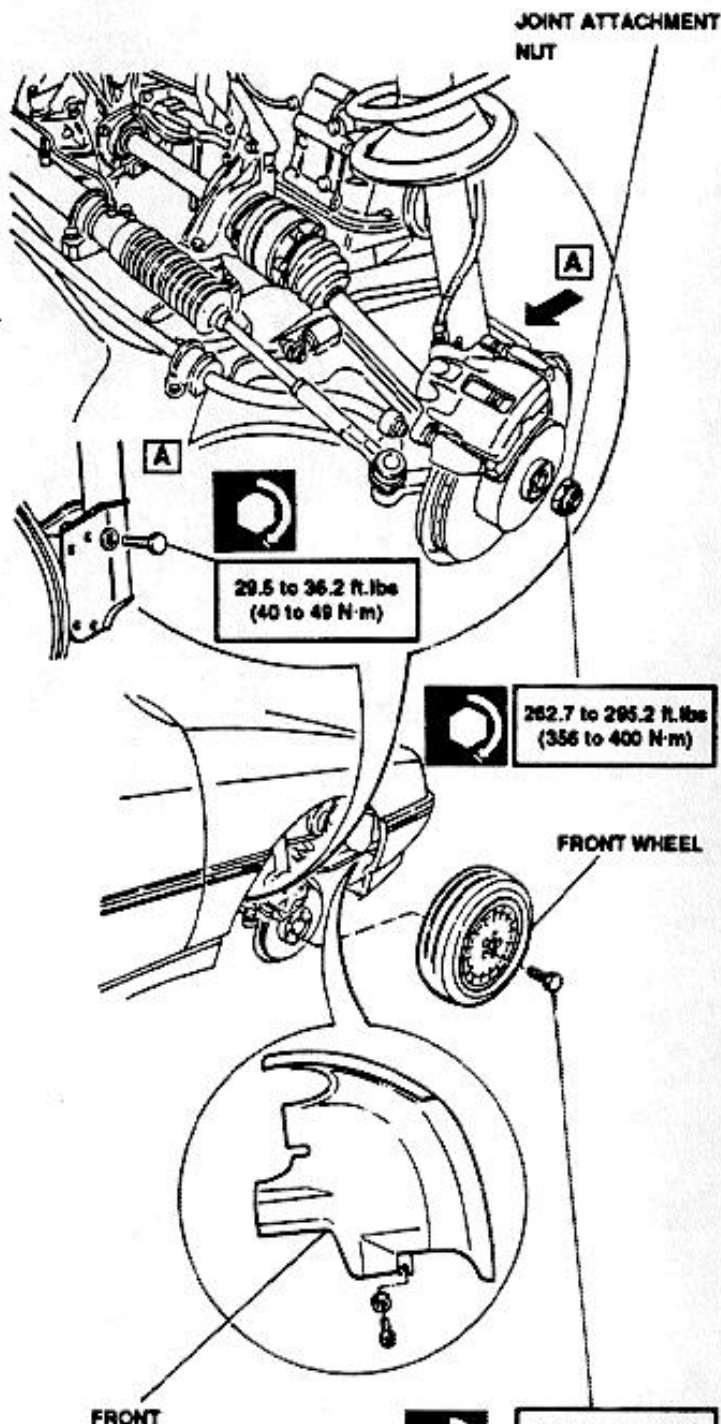


34.7 to 42.8 ft.lbs
(47 to 58 N.m)



R.H. AXLE SHAFT REMOVAL/INSTALLATION

1. Remove front wheel.
2. Remove front wheelarch liner.
3. Remove caulking and remove nut securing joint. Caulk nut at installation.
4. Disconnect shock absorber strut from wheel hub.





ATTACHMENT SCREWS



**262.7 to 295.2 ft.lbs
(356 to 400 N-m)**

**WHEELARCH
LINER**



**70.11 to 77.5 ft.lbs
(95 to 106 N-m)**

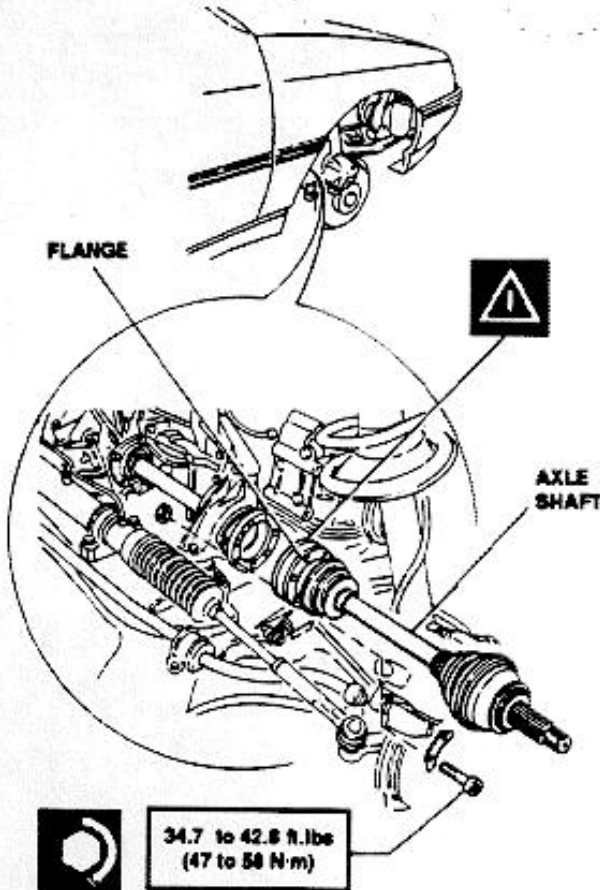
17 - 4



- 5. Disconnect axle shaft from intermediate shaft flange.
- 6. Remove axle shaft.

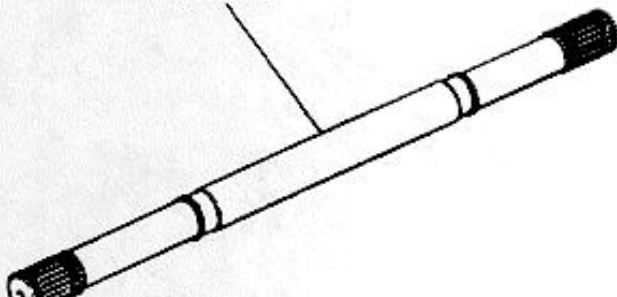


CAUTION:
Use new gasket at installation.



CHECKS AND INSPECTIONS

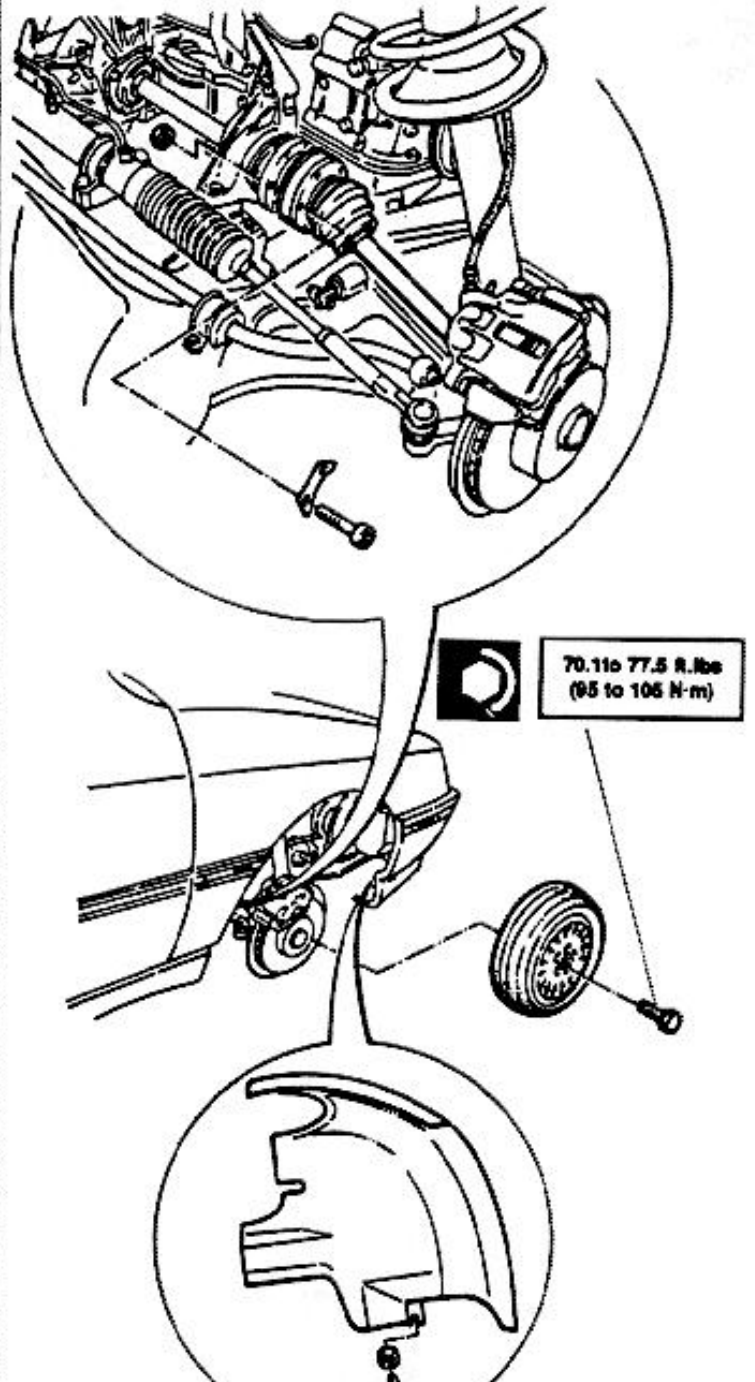
- 1. Check axle shaft for distortion or misalignment.



INTERMEDIATE SHAFT

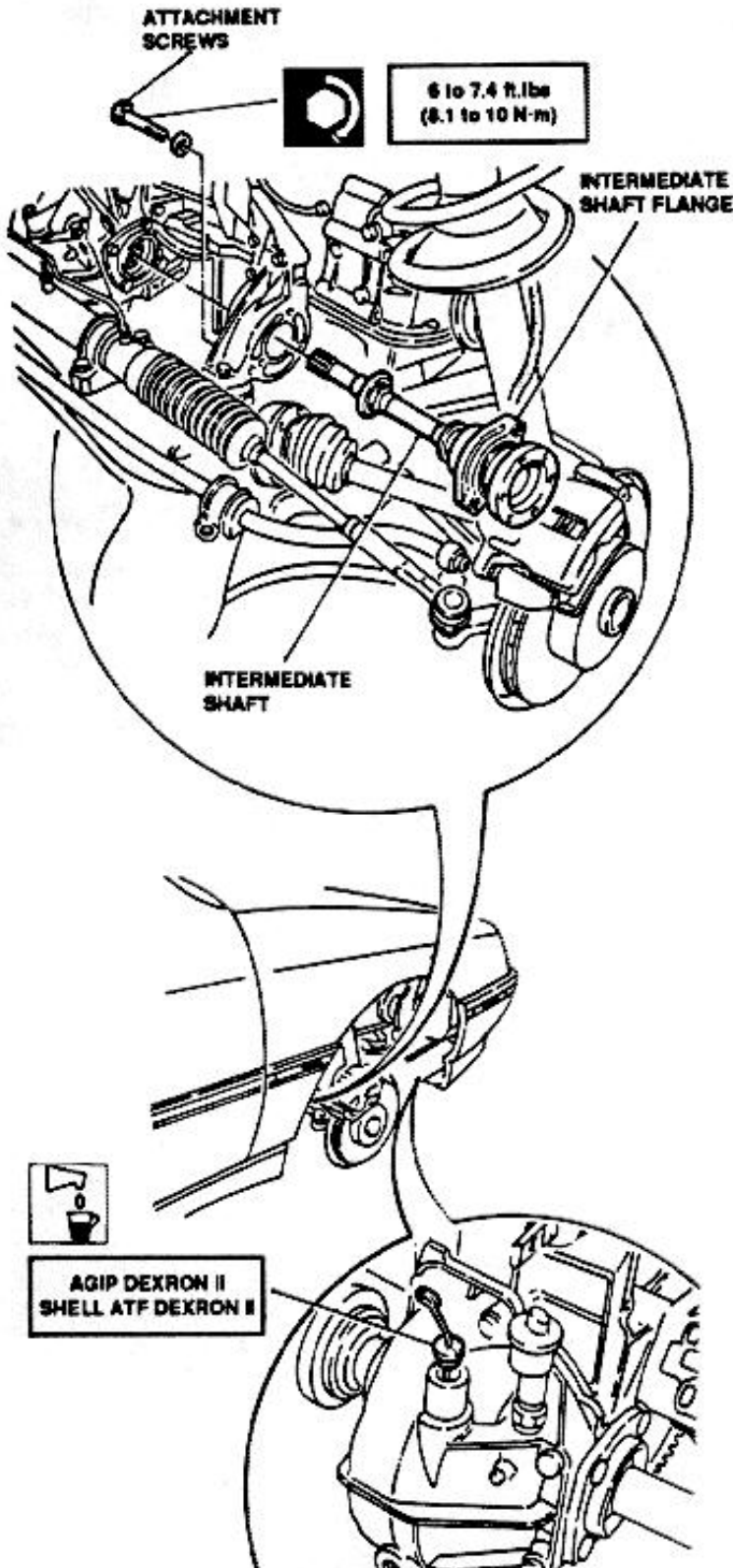
REMOVAL/INSTALLATION

- 1. Remove R.H. front wheel.
- 2. Remove front wheelarch liner.
- 3. Disconnect R.H. axle shaft from intermediate shaft flange.



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4. Remove plug and drain oil from gearbox.
5. Remove screws securing intermediate shaft flange to engine mount and withdraw shaft from differential.



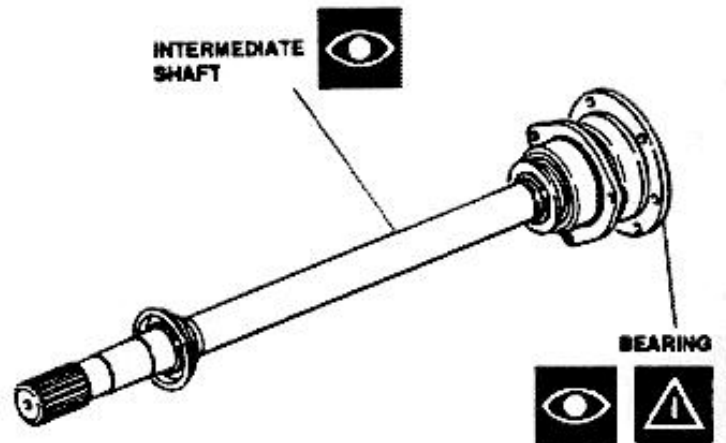
CHECKS AND INSPECTIONS

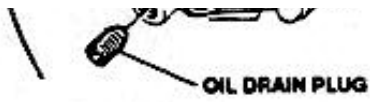
1. Check intermediate shaft for distortion or misalignment.
2. Check bearing for scoring, overheating or excessive wear.



CAUTION:

Replace complete intermediate shaft if bearing is defective.





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CONSTANT SPEED JOINTS

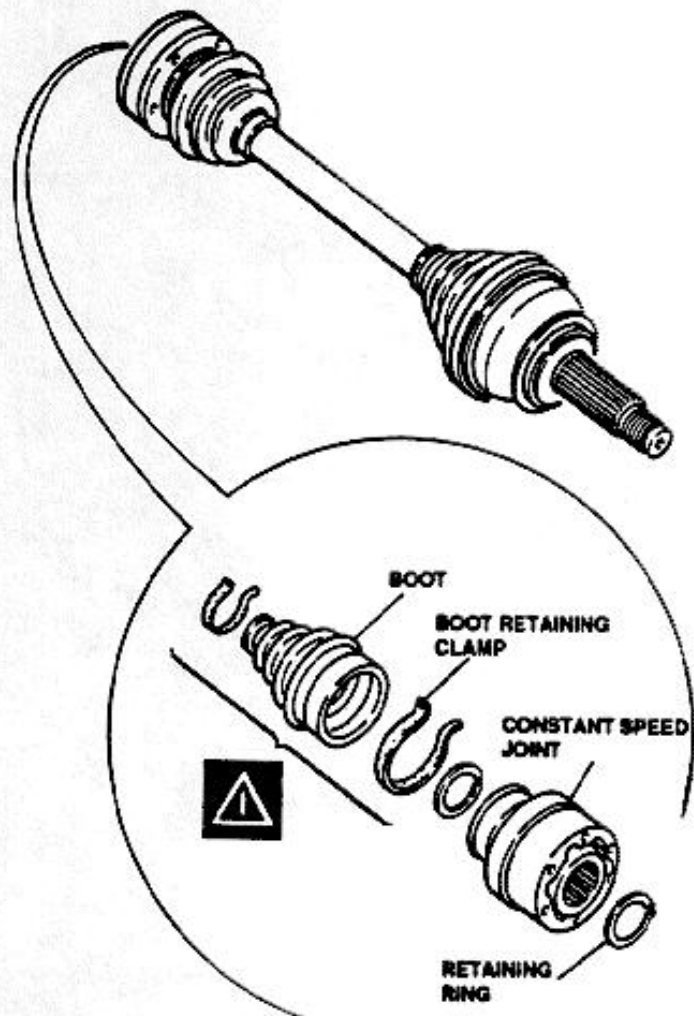
DISASSEMBLY GEARBOX SIDE

1. Remove retaining ring.
2. Remove clamp securing boot.
3. Remove constant speed joint.
4. Remove boot.



CAUTION:

It is suggested to replace boot and clamps any time they are removed.



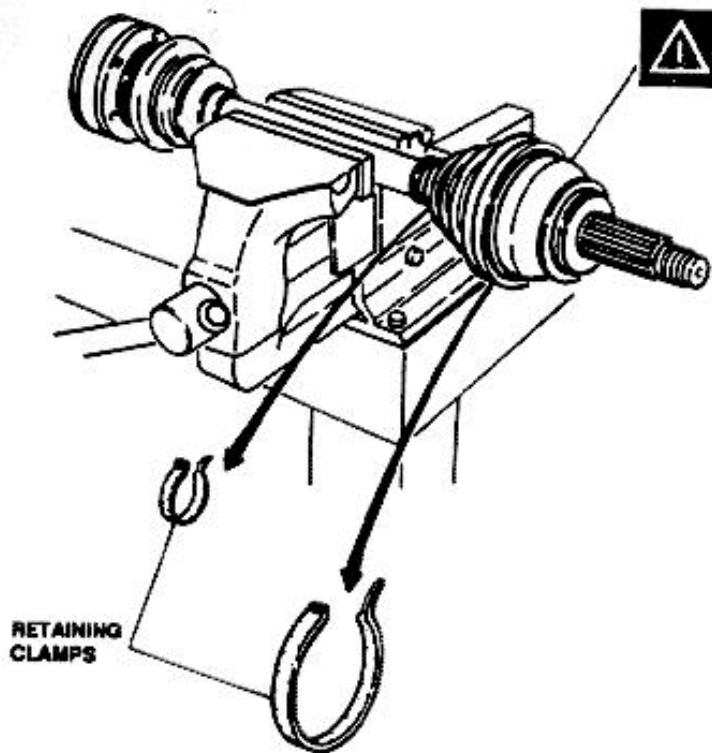
DISASSEMBLY WHEEL SIDE

1. Lock axle shaft in a vice and remove clamps securing boot.

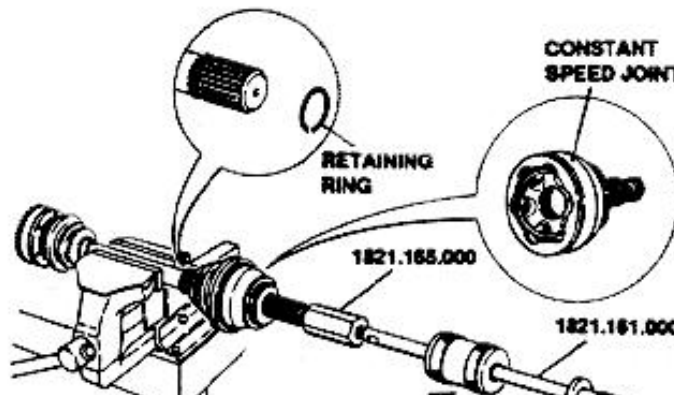


CAUTION:

It is suggested to replace boot and clamps any time they are removed.



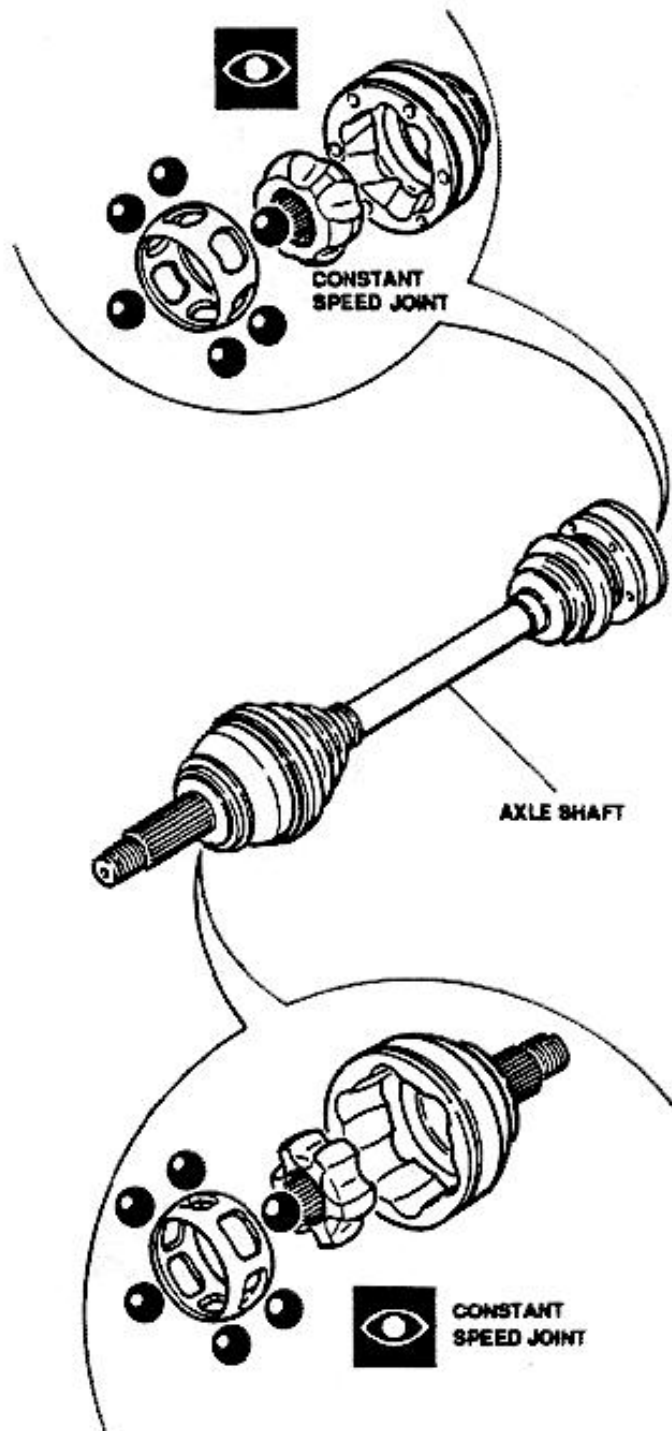
2. Install prescribed special tool.
3. Remove retaining ring using pliers.
4. Withdraw constant speed joint by acting on special tool.



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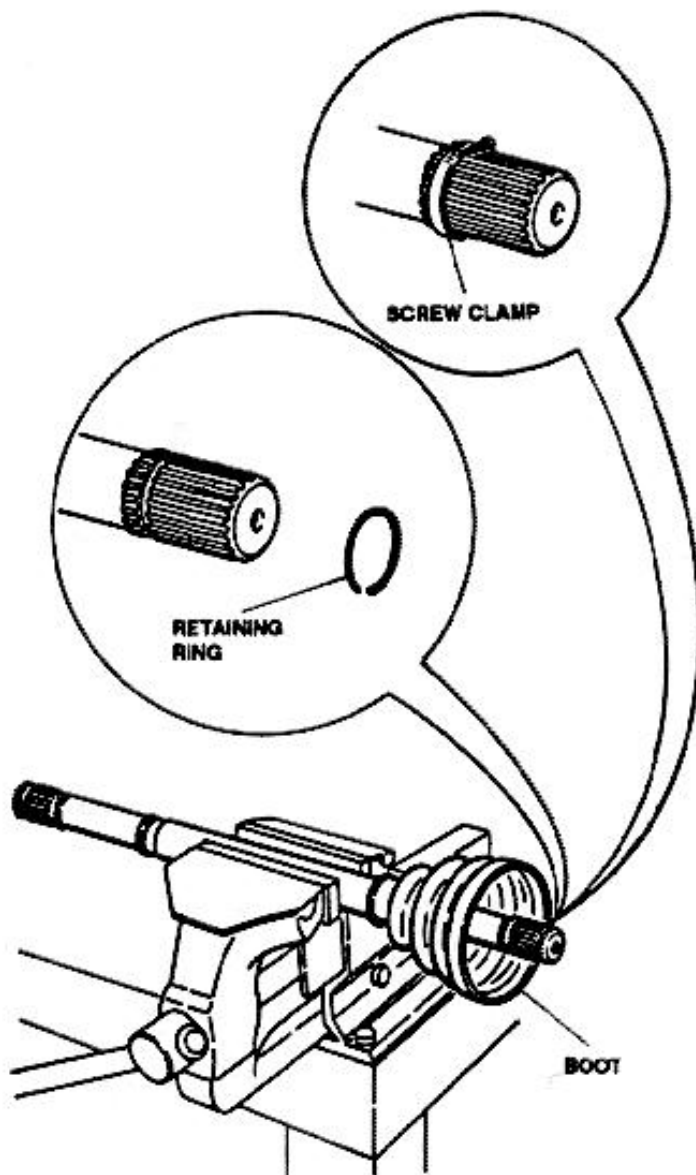
CHECKS AND INSPECTIONS

1. Clean joints with naphtha or petrol, then visually check that balls and relevant seating are perfectly specular, and free of any trace of seizing and scoring.



REASSEMBLY WHEEL SIDE

1. Install boot (preferably a new one).
2. Install retaining ring on axle shaft.
3. Compress retaining ring with screw clamps.



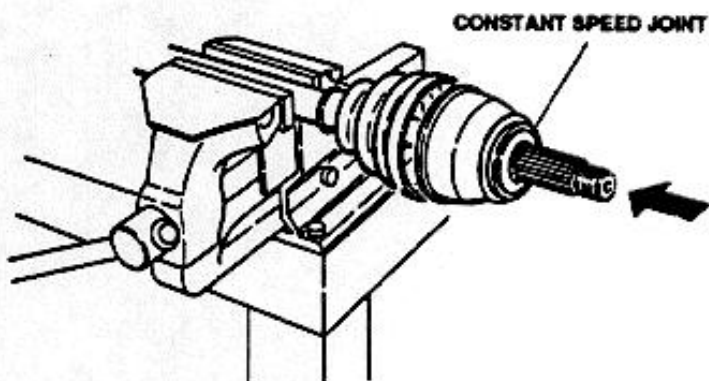
4. Position joint onto axle shaft and insert it into its

seating using a hammer.

17 - 8



Fill joint and boot with 0.26 lbs (120 g) of prescribed grease.

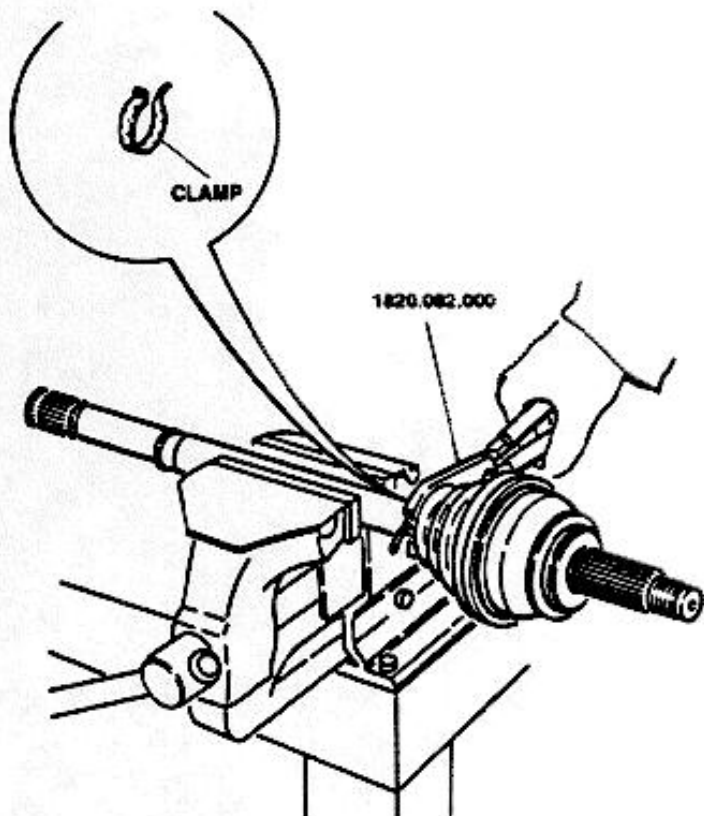


CONSTANT SPEED JOINT



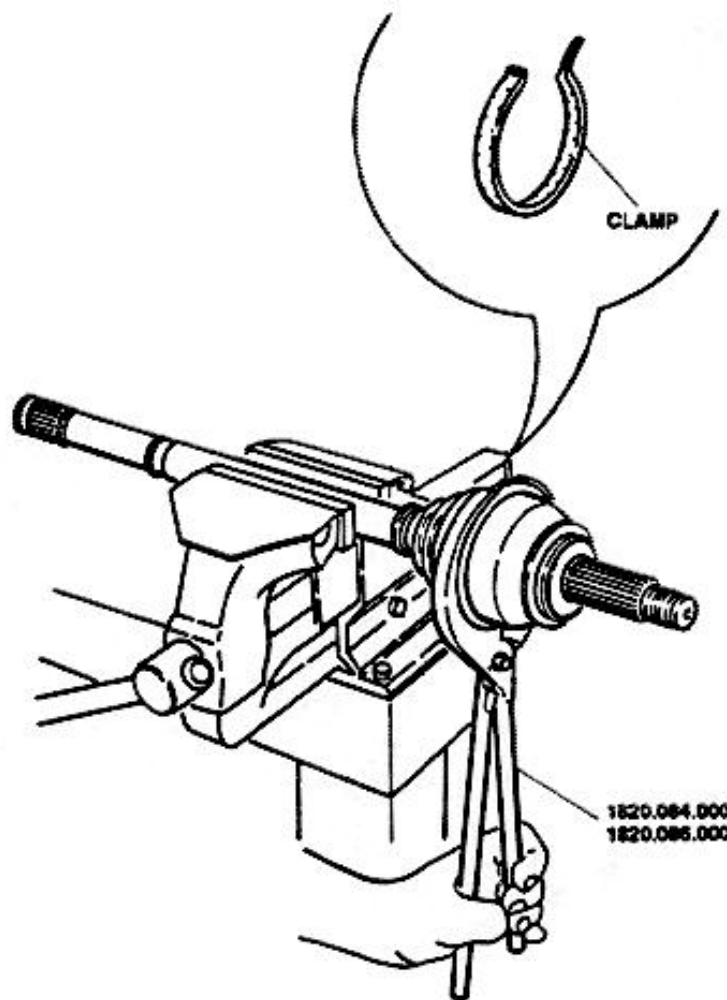
OPTIMOL-OLISTAMOLY 2LN 584
MOLYKOTE VN 2461/C

5. Install boot retaining clamp using prescribed tool.



6. Install the second boot retaining clamp using prescribed tool.

(*) Tool for vehicles equipped with wheels anti-lock device.





REASSEMBLY GEARBOX SIDE

1. Install boot (preferably a new one).



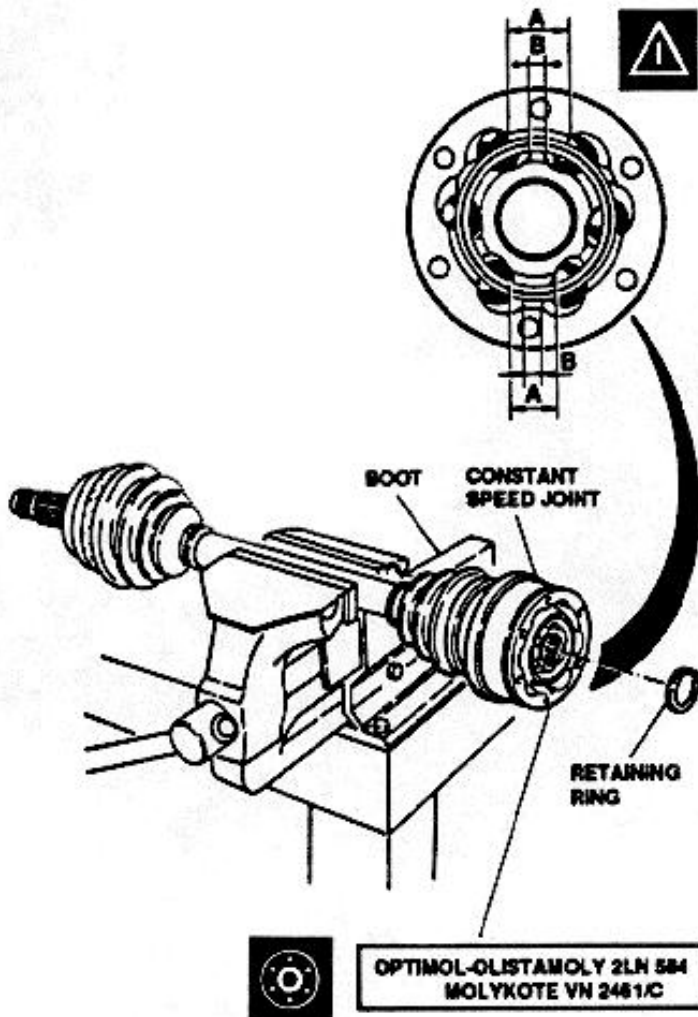
CAUTION:
If previously disassembled, reassemble joint by positioning as illustrated.

A = Greater distance between ball seats
B = Lower distance between ball seats

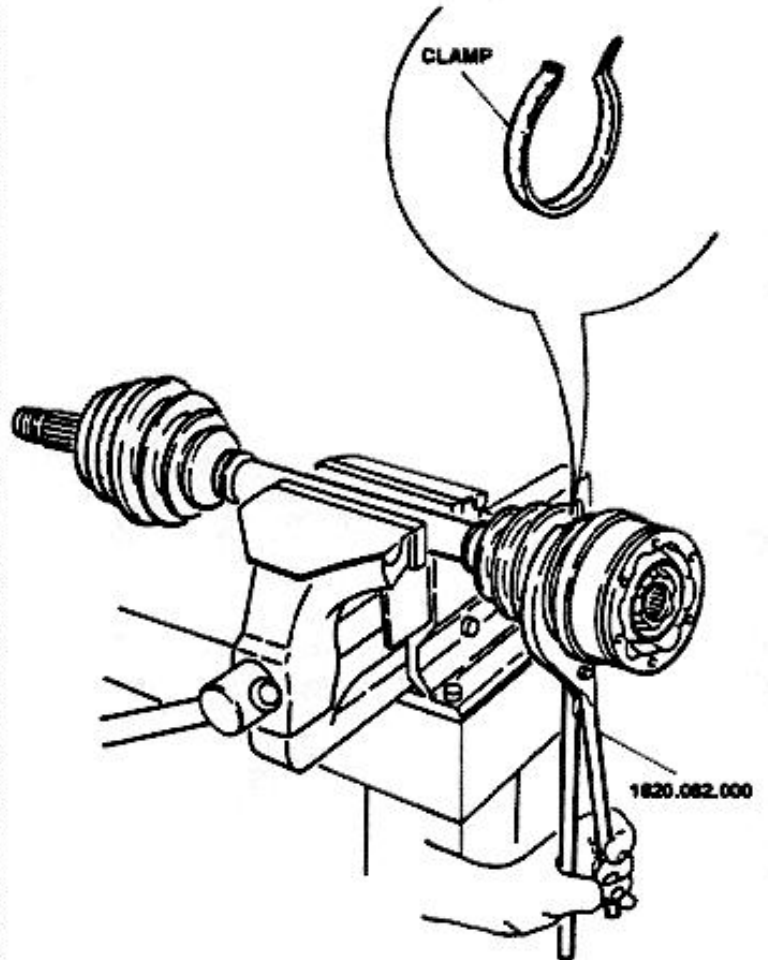
2. Install complete constant speed joint.
3. Install retaining ring.



Fill joint and boot with 0.26 lbs (120 g) of prescribed grease.



4. Install boot retaining clamp using prescribed tool.





TECHNICAL CHARACTERISTICS AND SPECIFICATIONS

FLUIDS AND LUBRICANTS

Application	Type	Name
Axle shafts constant speed joints	GREASE	OPTIMOL-OLISTAMOLY 2LN 584 MOLYKOTE VN 2461/C
Power gearbox-differential oil servicing	OIL	AGIP DEXRON II SHELL ATF DEXRON II

TIGHTENING TORQUES

Screws securing axle shaft	34.7 to 42.8 ft.lbs	47 to 58 Nm
Screw securing intermediate shaft flange	6.0 to 7.4 ft.lbs	8.1 to 10 Nm
Nut securing axle shaft to wheel hub	262.6 to 295 ft.lbs	356 to 400 Nm

SPECIAL TOOLS

Tool number	Description
1.820.082.000	Plier, axle shaft clamp installation
1.820.083.000	Plier, axle shaft boot clamp installation
1.820.084.000	Plier, axle shaft boot clamp installation
1.820.086.000	Plier, axle shaft boot clamp installation (Vehicles equipped with wheels anti-lock device)






TROUBLESHOOTING PROCEDURE

TROUBLES AND SYMPTOMS	FAULT ISOLATION	TEST REFERENCE
CONSTANT NOISE DURING RUN (EVEN WITH GEARBOX TO NEUTRAL)		A
KNOCKS DURING PICKUP AND SUDDEN CHANGES OF ENGINE TORQUE		B

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CONSTANT NOISE DURING RUN (EVEN WITH GEARBOX TO NEUTRAL)	TEST A
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TEST STEPS		RESULTS	REMEDY
A1	INTERMEDIATE SHAFT CHECK		
	- Check intermediate shaft for distortion or eccentricity	<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	Carry-out step A2
		<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	Replace intermediate shaft
A2	INTERMEDIATE SHAFT BEARING CHECK		
	- Check intermediate shaft bearing for scoring or traces of overheating	<div style="display: flex; align-items: center; gap: 10px;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	Replace intermediate shaft

End of test A

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KNOCKS DURING PICKUP AND SUDDEN CHANGES OF ENGINE TORQUE	TEST B
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TEST STEPS		RESULTS	REMEDY
B1	LUBRICATION CHECK		
	- Check for presence of lubricating grease inside bellows, check bellows for integrity	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	Carry-out step B2
		<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	Lubricate properly or replace bellows, as necessary
B2	PLAY CHECK		
	- Check for excessive play between housing and balls of the constant velocity joint	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  </div> <div style="font-size: 2em;">▶</div> </div>	Replace constant velocity joint

End of test B

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