Maintain adequate vacuum with the vacuum source as the air purges.

f. Release the vacuum and remove the vacuum source. Add fluid, if necessary.

g. Start the engine and cycle the steering wheel.

h. Check for oil leaks at all connections.

11. In severe cases of aeration, it may be necessary to repeat the purging procedure.

Power Rack and Pinion Steering Gear

REMOVAL & INSTALLATION

◗ **See Figures 129 thru 135**

The Variable Assist Power Steering (VAPS) system used on these vehicles consists of a microprocessor based module, a power rack and pinion steering gear, an actuator valve assembly, hose assemblies and a high efficiency power steering pump.

1. Disconnect the negative battery cable.

2. From inside the vehicle, remove the nuts securing the steering column tube boot to the cowl panel.

3. Remove the two bolts retaining the steering column gear input shaft coupling to the power steering gear shaft and yoke assembly.

4. Set the steering column tube boot aside. Remove the pinch bolt at the power steering gear shaft and yoke assembly, then remove the steering column gear input shaft coupling.

5. Raise the vehicle and support safely. Remove the front wheel and tire assemblies. Support the vehicle under the rear edge of the subframe with jack stands.

6. Remove the tie rod cotter pins and nuts. Remove the left and right-side tie rod ends from the steering knuckle.

7. Mark the position of the jam nut (to maintain the alignment), then remove the tie rod ends from the spindle tie rod.

8. Remove the nuts from the gear-to-subframe attaching bolts.

9. Remove the rear subframe-to-body attaching bolts.

10. Remove the exhaust pipe-to-catalytic converter attachment.

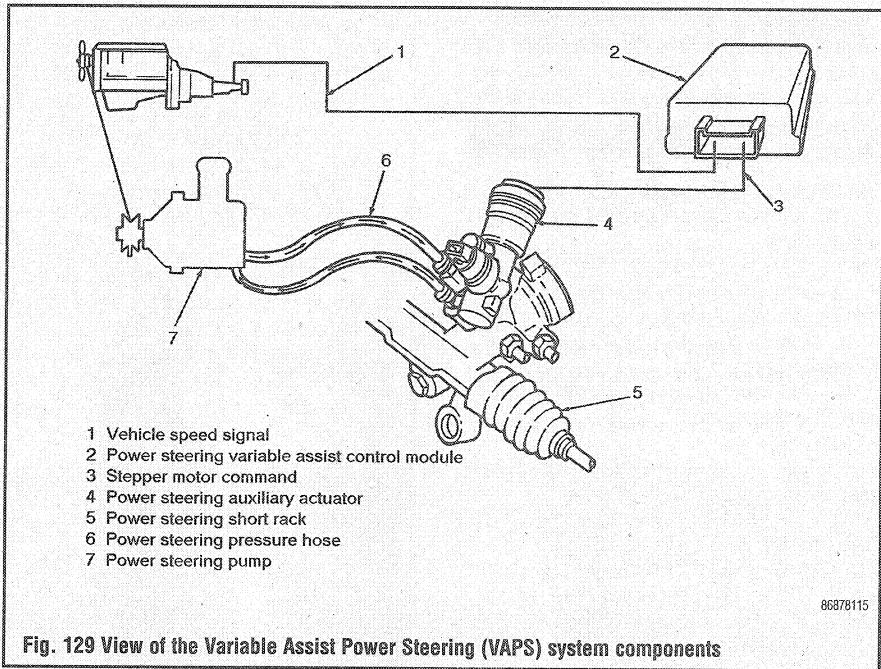11. Lower the vehicle carefully until the sub-

1 Vehicle speed signal
2 Power steering variable assist control module
3 Stepper motor command
4 Power steering auxiliary actuator
5 Power steering short rack
6 Power steering pressure hose
7 Power steering pump

Fig. 129 View of the Variable Assist Power Steering (VAPS) system components

1 Power steering control valve bolt
2 Steering gear housing assy
3 Steering gear boot camp
4 Nut
5 Tie rod bellows
6 Clamp
7 Power steering gear rack tube
8 Front wheel spindle tie rod
9 Spindle rod
10 Roll pin
11 Ball joint housing
12 Power steering auxiliary actuator
A Tighten to 27-34 Nm (20-25 lb.ft.)
B Tighten to 47-68 Nm (35-50 lb.ft.)
C Tighten to 2.2-3.4 Nm (20-30 lb.in.)
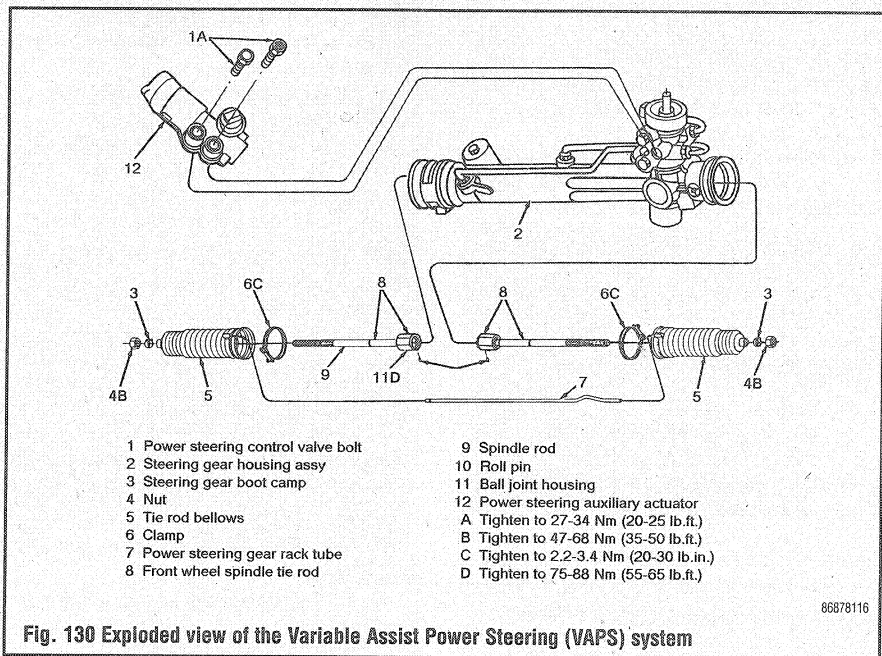D Tighten to 75-88 Nm (55-65 lb.ft.)

Fig. 130 Exploded view of the Variable Assist Power Steering (VAPS) system
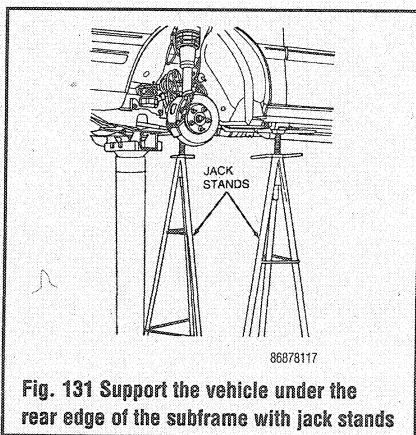
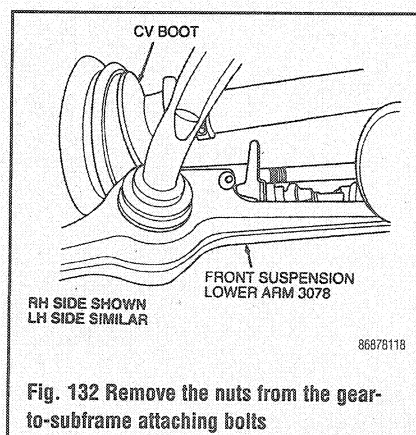**Fig. 131 Support the vehicle under the rear edge of the subframe with jack stands**

CV BOOT

RH SIDE SHOWN
LH SIDE SIMILAR

FRONT SUSPENSION
LOWER ARM 3078

Fig. 132 Remove the nuts from the gear-to-subframe attaching bolts

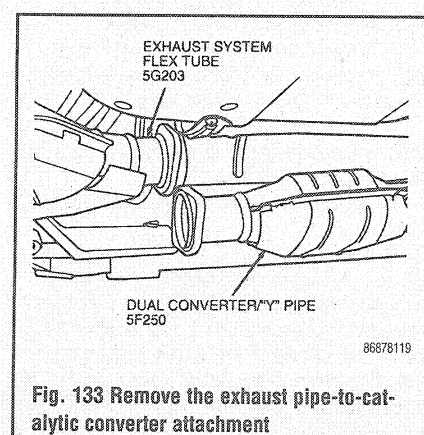EXHAUST SYSTEM
FLEX TUBE
5G203

DUAL CONVERTER/"Y" PIPE
5F250

Fig. 133 Remove the exhaust pipe-to-catalytic converter attachment