

## FIAT POWER-ASSISTED RACK & PINION

**Brava**

### DESCRIPTION

A power-assisted rack and pinion steering gear is optional on Fiat Brava models. The system consists of a vane pump, rotary piston pinion gear assembly and an oil reservoir. The vane pump draws fluid from the reservoir and supplies it to the flow control valve. The control valve supplies fluid to the proper side of the rack/piston as the steering wheel is turned. The pump is belt driven and mounted on the lower right front side of the engine. The reservoir is located near the battery.

### GENERAL SERVICE

**Capacity** – 1.9 pt.

**Lubricant** – ATF Type A

**Oil Level Check** – Remove wing nut and cover from reservoir. With engine stopped, level should reach mark on side of reservoir. With engine idling, level must not be more than .39" (10 mm) below mark.

**Hydraulic System Bleeding** – Start engine and allow to idle. Check that fluid is at proper level. Turn steering wheel from lock to lock several times quickly. Continue until fluid level remains at reservoir mark. Make sure that no bubbles appear in reservoir when steering wheel is turned. Shut off engine and check that oil level does not rise more than  $\frac{3}{8}$ " above mark.

**Oil Filter Replacement** – Remove wing nut, outer cover, gasket and spring from reservoir. Remove inner filter cover and filter insert. Replace filter. Install new filter, replace filter cover, spring, gasket, cover and wing nut. Check fluid level.

### REMOVAL & INSTALLATION

#### STEERING GEAR

**Removal** – 1) Remove nut securing tie rod end in steering knuckle. Using appropriate tool (A-47033), remove ball joint

from steering knuckle. Repeat operation for other side. Loosen clamp and remove fluid return line from steering gear. Allow fluid to drain. Remove banjo bolt and washers from supply line and allow fluid to drain.

2) Remove bolt and nut securing universal joint to steering gear. Remove left steering gear mounting bolt at crossmember. Remove 2 right steering gear mounting bolts at crossmember. Remove power steering gear.

**Installation** – To install, reverse removal procedure and tighten. Fill system with fluid and bleed system if necessary.

#### VANE PUMP

**Removal** – Remove vane pump tensioner bolt and mounting bolt. Remove vane pump drive belt. Remove vane pump.

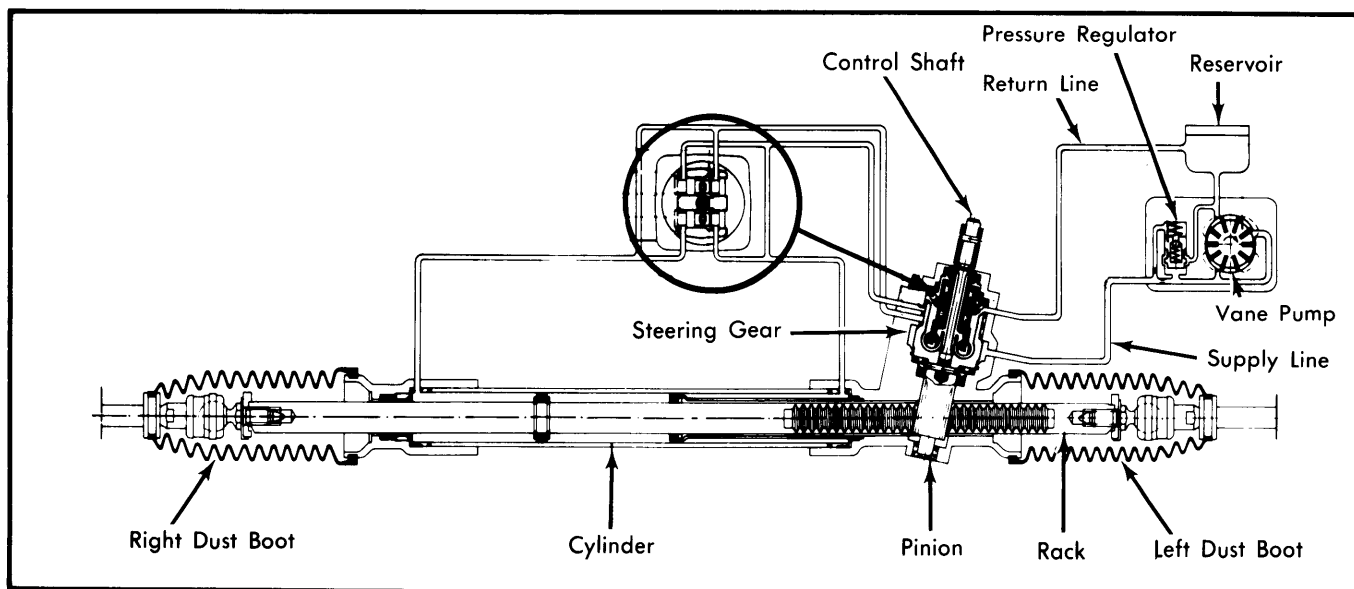
**Installation** – To install, reverse removal procedure and fill system with fluid. Bleed system if necessary.

### OVERHAUL

**NOTE** – Manufacturer does not recommend overhaul of steering gear.

### TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Steering Arm Ball Joint Nut .....	25 (3.5)
Steering Gear-to-Body Bolt .....	18 (2.5)
Ball Joint Collar .....	36 (5.0)
Universal Joint Clamp Nut .....	18 (2.5)



**Fig. 1 Schematic of Fiat Brava Power Steering System**