

Technical Bulletin

Model
6 Cyl.

Group
4

Subject: **Noise from Power Steering Hydraulic System**

Part Identifier
4890

Number
9402

ATTENTION: Service Manager / Service Technician

Models Affected: *911 Carrera 2/4/Turbo, up to 1994*

Concern: Some customers may complain of noises from the power steering hydraulic system.

General Information: Since model year 1992, the above mentioned vehicles have used a rotary valve power steering rack instead of the piston valve system used previously. When the rotary valve steering rack is installed, hydraulic noise may occur due to tolerances in the pressure and return pipes of the steering system. The rotary valve steering rack has been used in production since July 19, 1991 from the following VIN's:

968 NS 42 0179
966 NS 44 0094
969 NS 46 0201
968 NS 48 0210

Power steering rack identification: (Figures 1 and 2)

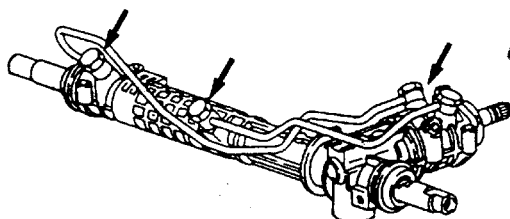


Figure 1

Piston valve steering gear

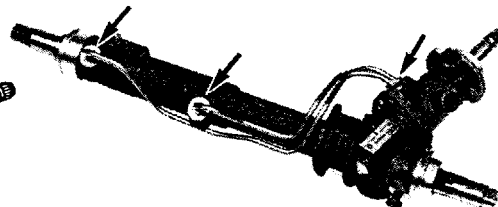


Figure 2

Rotary valve steering gear

Arrows = distinctive feature (pipe connections)

To correct a customer complaint of hydraulic noises from the steering system when the steering system has no defects, the pressure and return lines should be replaced. This applies to all 911 C2 and Turbos only. The new type pressure and return lines are the same as used on the 911 Carrera (993) and are fitted with additional expansion hoses.

IMPORTANT NOTE: Carrera 4

The 911 Carrera 4 cannot be fitted with the new type pressure and return lines due to lack of space (front differential); therefore, a new piston valve steering rack must be installed. (See Parts Information on page 2.)



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Parts Information:

911 Carrera 2, 911 Turbo
Conversion to new pressure and return pipes

Qty.	Description	Part Number
1	Pressure pipe	993 347 448 11
1	Return pipe	993 347 449 01
1	Mount	993 347 473 00
1	Hose clamp	999 512 346 00
1	Sealing ring	900 123 026 20
1	Mounting clamp	964 356 555 00
1	Rubber mount	964 356 557 00
1	Pop rivet set	944 501 941 00

911 Carrera 4

Qty.	Description	Part Number
1	Steering rack	964 347 009 BV (Rebuilt) or 000 043 202 70 (New)
4	Sealing ring	900 123 026 20

Repair Time Allowance:

Modify power steering

Includes:

Replace pressure and return pipes,
install new mount in center tunnel, and
bleed steering system.

Model	Labor Operation	
911 Carrera 2/Turbo	48 90 31 00	170TU
911 Carrera 4	48 90 19 00	330TU

Reference:

911 Carrera 2/4 Repair Manual, Vol. IV.

Repair Procedure:

Disconnect pressure and return pipes from steering gear (arrows) and remove the pipes (Figure 4).

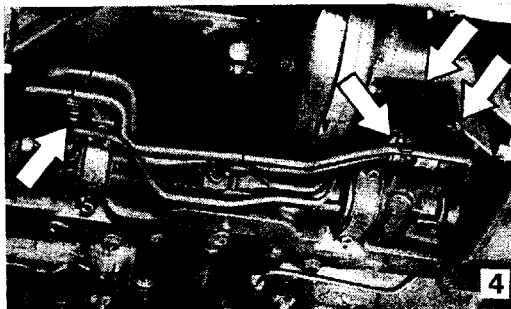


Figure 4



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Repair Procedures (cont.): Remove old pipe mount from steering gear. Fit new mount, Part Number 993 347 473 00 (arrow C), install plastic clip from old mount on new part (arrow D, Figure 5).

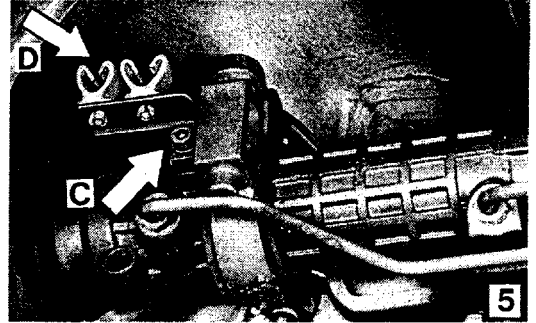


Figure 5

Note: Due to changes in the pipes, the old pipe mount in the center tunnel can no longer be used.

Fit new mount. To do so, drill a 5mm dia. hole. (For dimensions, see Figure 6). Fit pop rivet with stud bolt (8mm long, 5mm dia. from pop rivet repair set, Part Number 944 501 941 00, using a pop rivet tool. The mounting sleeve included in the repair kit must be pushed over the stud bolt.

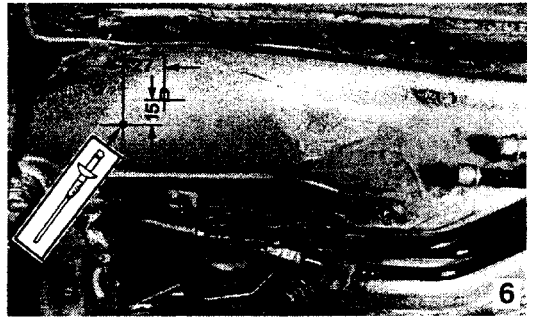


Figure 6

Saw off old stud bolt and treat bare metal with anti-corrosion paint.

Screw pressure and return pipes to steering gear using the banjo bolts and new sealing rings (arrow E). Only tighten banjo bolts slightly.

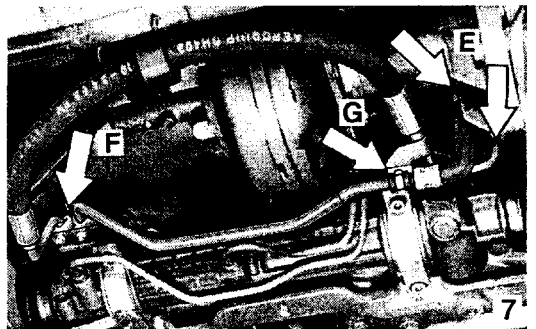


Figure 7

Clip pipes to mount (arrow F). Screw mount to pressure line together with hose clamp for return line (arrow G, Figure 7).



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Repair Procedure (cont.):

Connect the pressure and return lines (arrow H) in the center tunnel. Secure the suction line (arrow I) with a hose clamp.

Install new mount (rubber mount and hose clamp) on the new stud bolt which you have just riveted into place (arrow K, Figure 8).

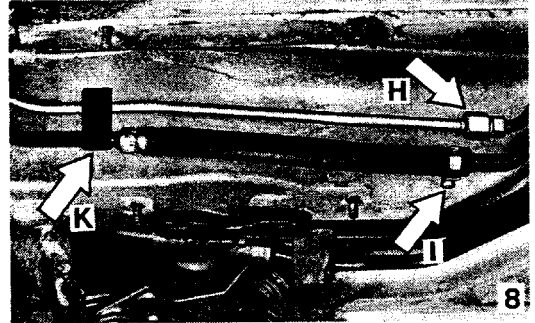


Figure 8

Tighten all pipe connections with the specified tightening torque:

Pressure and return pipe to steering gear **20 Nm**
Pressure pipe connection in center tunnel **25 Nm**

Top up hydraulic fluid and bleed steering system in accordance with instructions in 911 Carrera 2/4 Repair Manual, Vol. IV, page 48-2.

Check all pipe connections for leaks and install underbody panel.

