



# Technical Service Information

## **CHRYSLER A604 FAILURE DUE TO LACK OF LUBE**

**COMPLAINT:** On 1989 and 1990 Chrysler models, equipped with the A604 transaxle, under extremely cold ambient operating temperatures (0° F or Below), transmission fluid may get cold enough to resist flow through the transmission oil cooler. The transaxle may fail prematurely due to lack of lubrication.

**CAUSE:** Not enough lube flow to the transaxle because of the restriction.  
Install a pressure actuated bypass cooler valve assembly, now available from OEM under part number 5252836, that will bypass the transmission cooler if it becomes restricted (See Figure 1). On all 1991 models a cooler bypass valve was added to the transaxle internally. (See ATSG Bulletin No. 91-01).

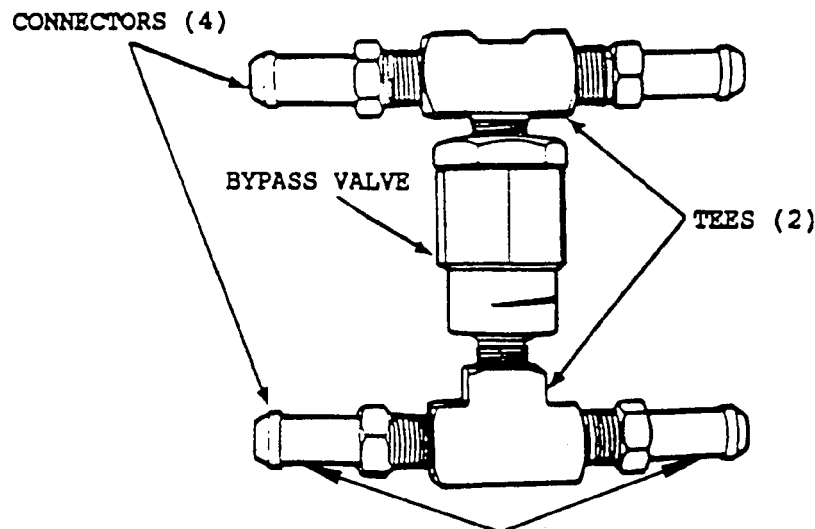
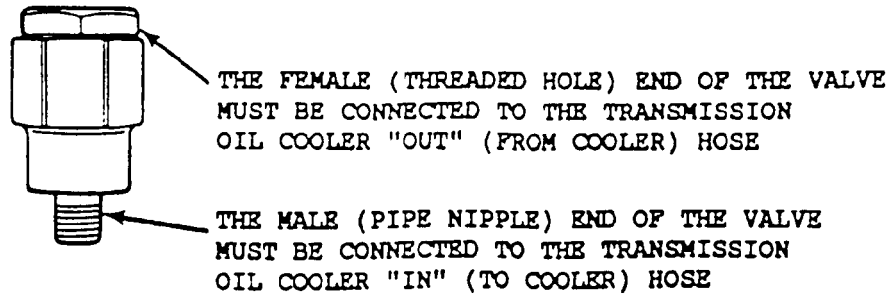
**CORRECTION:** (2) Drill hole marked "V" in the spacer plate to .112" as shown in Figure 7. This can be done on all models regardless of bypass valve installation, to improve lube flow to the transaxle.  
(3) Refer to the appropriate instruction sheet, included in this bulletin, as installation procedures vary depending on vehicle model.

**NOTE:** THE BYPASS VALVE (5252836) IS DIRECTIONAL. IF IT IS NOT CONNECTED TO THE TRANSAXLE OIL COOLER HOSES IN THE CORRECT OIL FLOW DIRECTION, THE BYPASS VALVE WILL NOT FUNCTION. (SEE FIGURE 1).

### **SERVICE INFORMATION:**

Pressure Actuated Cooler Bypass Valve Package .....	5252836
Mounting Bracket (Mini-Vans Only) .....	4333568

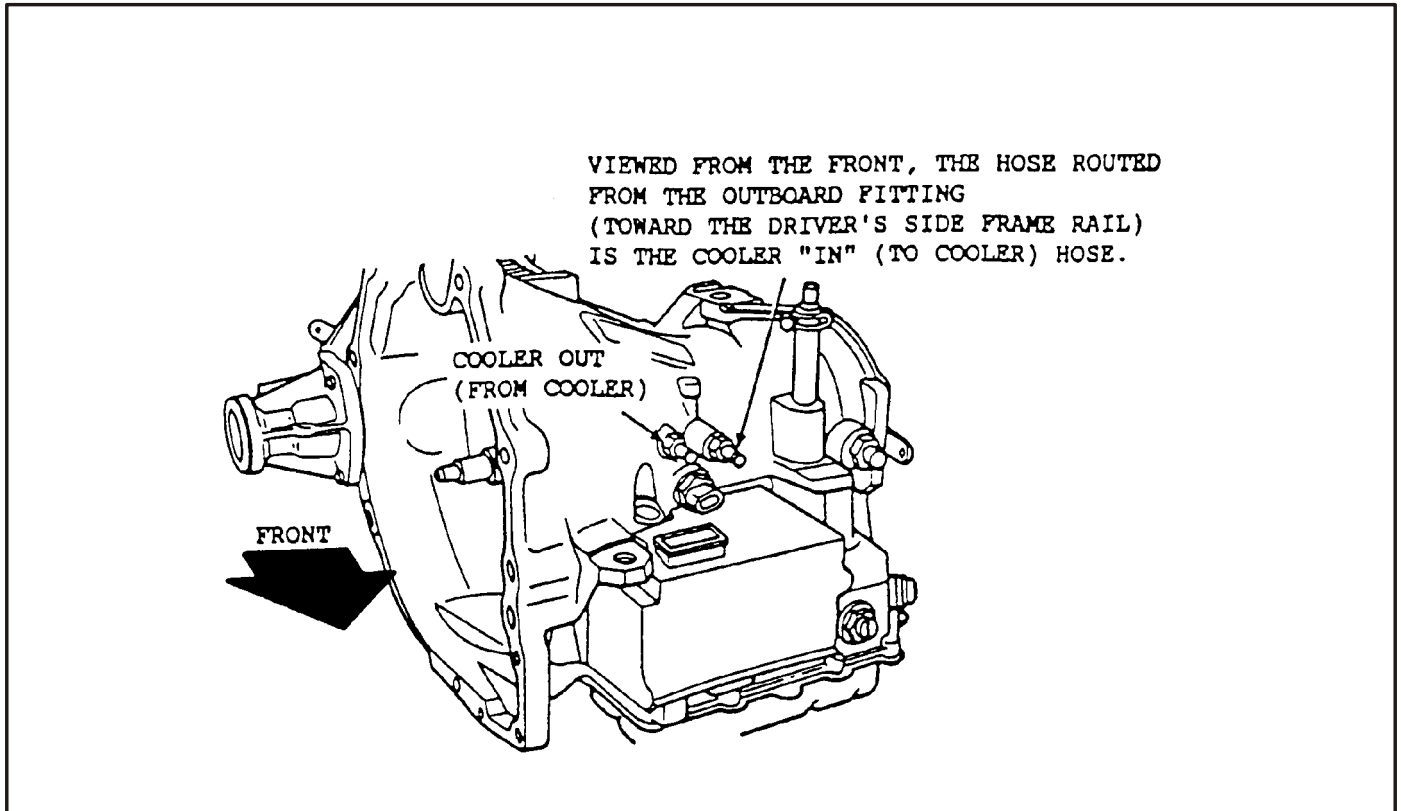
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THIS SIDE OF THE BYPASS VALVE ASSEMBLY "MUST" BE CONNECTED TO THE TRANSMISSION OIL COOLER "IN" (TO COOLER) HOSE.

NOTE: THE BYPASS VALVE IS DIRECTIONAL. IF IT IS NOT CONNECTED TO THE TRANSAXLE OIL COOLER HOSES IN THE CORRECT OIL FLOW DIRECTION, - THE BYPASS VALVE WILL NOT FUNCTION.

Figure 1



## INSTALLATION INSTRUCTIONS (GENERAL)

1. Using thread sealer on all connections, assemble the supplied bypass valve, tees, and hose connectors as shown in Figure 1.
2. Raise the vehicle on a hoist for working access to the transmission oil cooler hoses, that are routed along the inboard side of the left front frame rail.
3. Place an oil drain pan under the vehicle to catch oil leakage. Oil loss will be very minimal.
4. Referring to Figure 2, follow the cooler hoses routed from the transaxle to CLEARLY IDENTIFY THE COOLER "IN" (TO COOLER) HOSE.
5. Install the bypass valve assembly as per the following instruction sheets, as installation procedures vary depending on vehicle model.

Figure 2

## INSTALLATION INSTRUCTIONS PASSENGER CAR BODIES WITHOUT BENDIX ABS

1. Measure up 2 1/2 inches from the bottom of the frame rail, as shown in Figure 3, and drill a 1/4 inch hole in the frame rail.
2. Pushing the cooler hoses against the frame, identify and cut the cooler "in" (to cooler) hose at the drilled hole (Figure 3) and allow oil to drain. Cut only one hose at a time so as not to get them mixed.
3. The hoses are banded together with tape at several locations. Unwrap tape bands, as required, to allow hose flexibility for connection to the bypass valve assembly.
4. Slide two of the supplied clamps over the hose ends and install the hoses onto the cooler "in" (to cooler) side of the bypass valve assembly (Refer to Figure 1).
5. REFER TO FIGURE 1, TO IDENTIFY THE MALE (PIPE NIPPLE) END OF THE VALVE. THIS END OF THE VALVE ASSEMBLY "MUST" BE CONNECTED TO THE COOLER "IN" (TO COOLER) HOSES.
6. Now cut the other hose, cooler "out" (from cooler) at the drilled hole (Figure 3), allow oil to drain, and connect the hose ends to the bypass valve assembly connectors in the same manner as above.
7. Cut the supplied foam tube and wrap it around the bypass valve (Figure A).
8. Tighten the supplied "Push- in" tie strap around the foam tubing and cut off the excess strap (See Figure A).

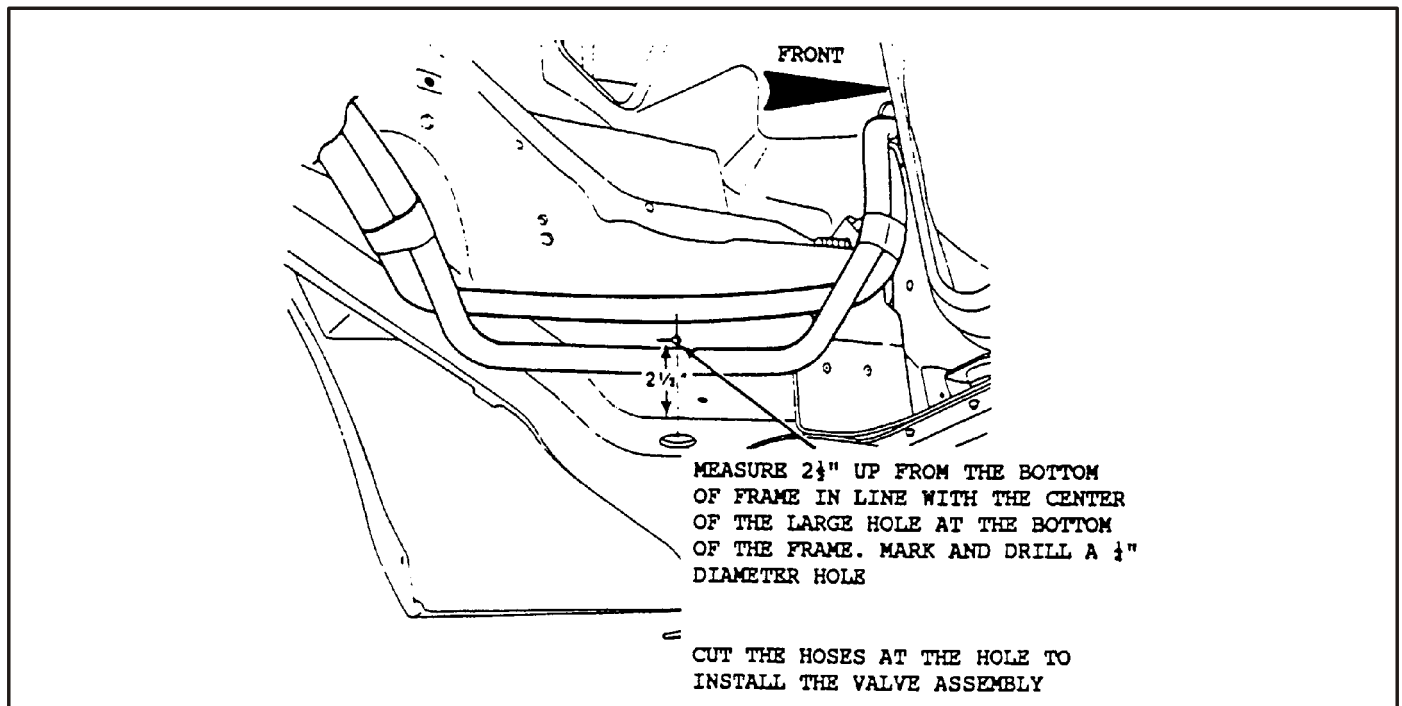


Figure 3

## INSTALLATION INSTRUCTIONS PASSENGER CAR BODIES WITHOUT BENDIX ABS

9. Engage the "Push-in" tie strap into the drilled 1/4 inch hole (See Figure 4)
10. The bypass valve assembly **MUST** be positioned vertically (See Figure 4).
11. Tighten all hose clamps.
12. Install the other supplied tie strap to secure the bypass valve assembly to the frame rail, as shown in Figure 4, and cut off excess tie strap.
13. Start the engine and inspect for leaks. Check transaxle fluid level and fill as necessary.

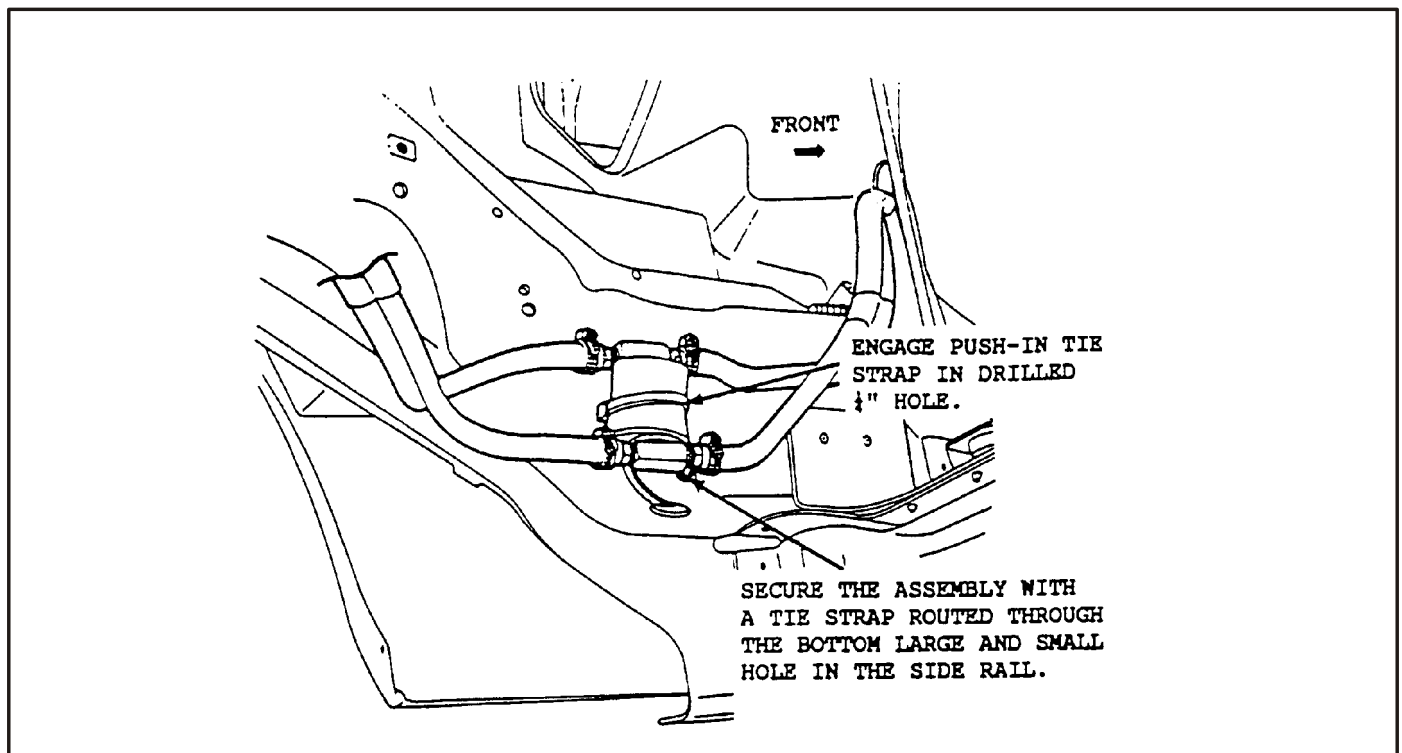


Figure 4

## INSTALLATION INSTRUCTIONS PASSENGER CAR BODIES WITH BENDIX ABS

1. The existing cooler hoses are retained by a clip at the ABS Module, as shown in Figure 5. Drilling of a hole is not required on this model.
2. Mark the hoses at the rear edge of the clip at the ABS Module, and then remove the retaining clip.
3. Identify and cut the cooler "in" (to cooler) hose at your mark, and allow the oil to drain. Cut only one hose at a time so as not to get them mixed.
4. Slide two of the supplied clamps over the hose ends and install the hoses onto the cooler "in" (to cooler) side of the bypass valve assembly (Refer to Figure 1).
5. REFER TO FIGURE 1, TO IDENTIFY THE MALE (PIPE NIPPLE) END OF THE VALVE. THIS END OF THE VALVE ASSEMBLY "MUST" BE CONNECTED TO THE COOLER "IN" (TO COOLER) HOSES.
6. Now cut the other hose, cooler "out" (from cooler) at your mark, and allow the oil to drain, and connect the hose ends to the bypass valve assembly in the same manner as above.
7. Re-install the retaining clip to support the bypass valve assembly, as shown in Figure 5, and tighten all hose clamps and retaining clip.
8. The bypass valve assembly MUST be positioned vertically (See Figure 5).
9. Start the engine and inspect for leaks. Check transaxle fluid level and fill as necessary

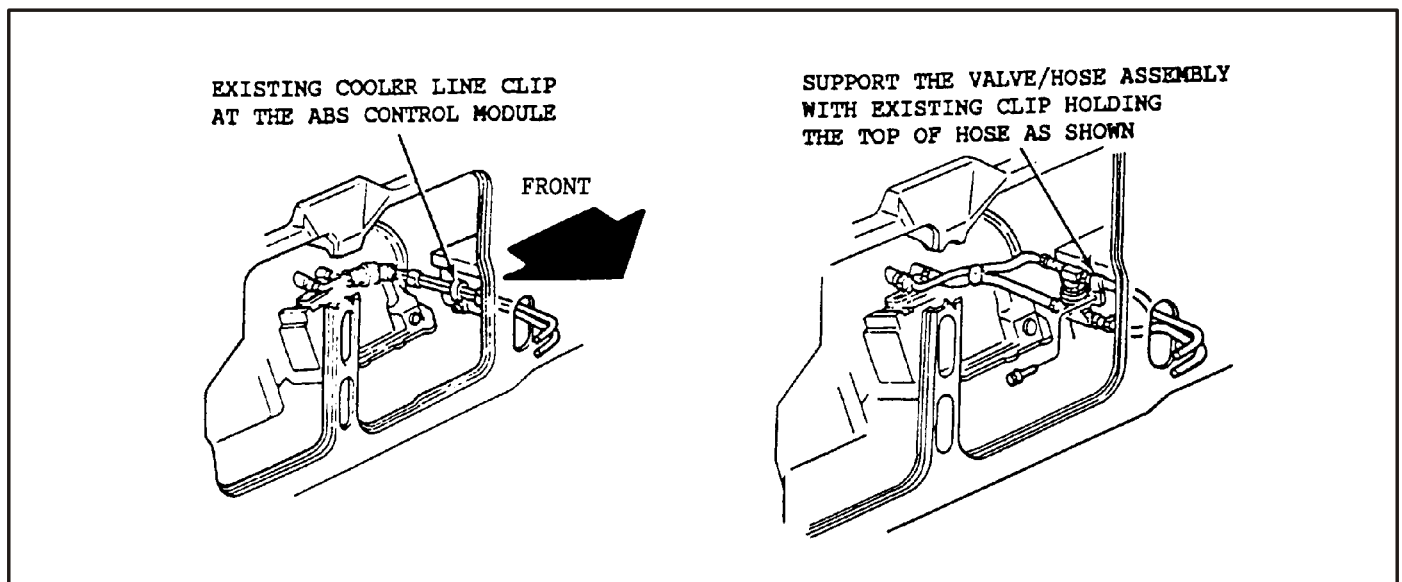


Figure 5

## INSTALLATION INSTRUCTIONS ALL MINI-VANS ONLY

1. All Mini-Vans require the purchase of an additional bracket, OEM part No. 4333568, as well as the cooler bypass valve package.
2. Mark the cooler hoses in line with the center of the large hole in the bottom of the frame rail, as shown in Figure 6.
3. Identify and cut the cooler "in" (to cooler) hose at your mark, and allow the oil to drain. Cut only one hose at a time so as not to get them mixed.
4. Slide two of the supplied clamps over the hose ends and install the hoses onto the cooler "in" (to cooler) side of the bypass valve assembly. (Refer to Figure 1).
5. REFER TO FIGURE 1, TO IDENTIFY THE MALE (PIPE NIPPLE) END OF THE VALVE. THIS END OF THE VALVE ASSEMBLY "MUST" BE CONNECTED TO THE COOLER "IN" (TO COOLER) HOSES.
6. Now cut the other hose, cooler "out" (from cooler) at your mark, and allow the oil to drain.
7. Install bracket, OEM part number 4333568, to retain the upper cooler hose, using the existing lower battery tray bolt, as shown in Figure 6.
8. Connect the other hose ends to the bypass valve assembly in the same manner as above.
9. Tighten all clamps, and position the valve and hose assembly in the clip as shown in Figure 6.
10. Since the bypass valve assembly will be clear of the frame rail with this installation, the anti-rattle foam tape and tie strap are not required.
11. Start the engine and inspect for leaks. Check transaxle fluid level and fill as necessary.

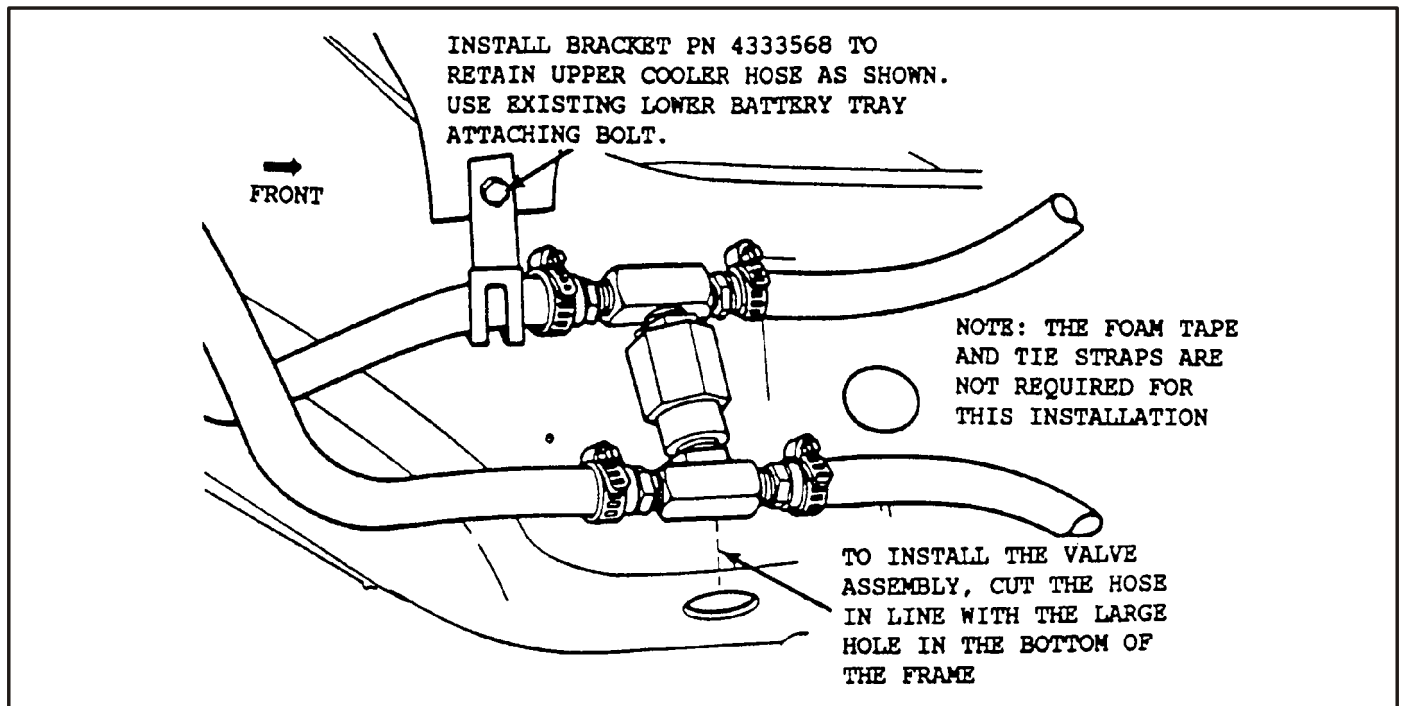
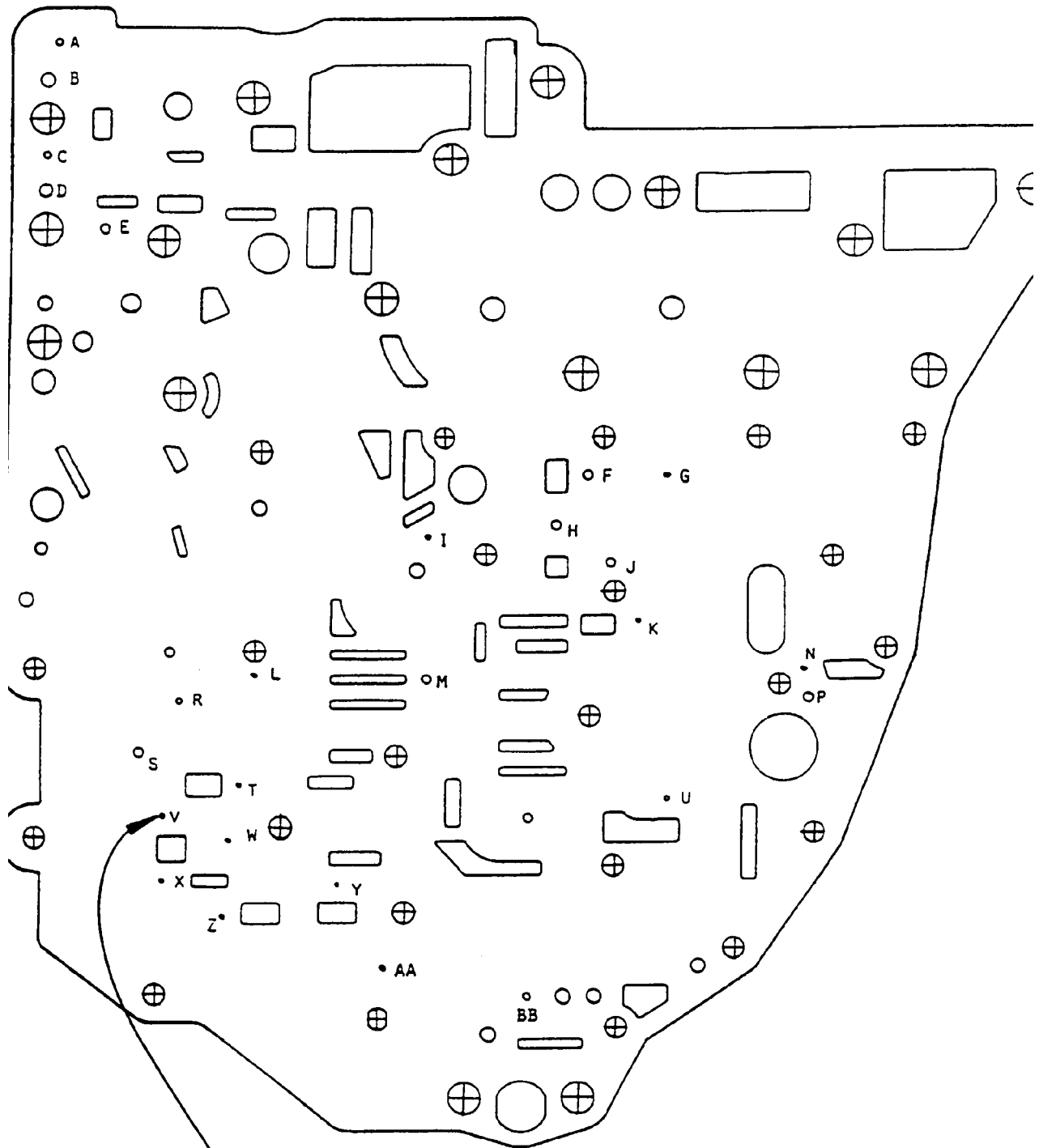


Figure 6



ENLARGE HOLE "V" TO .112" ON ALL MODELS TO IMPROVE LUBE OIL FLOW.

## A604 SPACER PLATE

Figure 7