V.W. AUDI 01M/01N/01P
LATE UP-SHIFTS HOT

COMPLAINT: Volkswagen/Audi vehicles equipped with the 01M/01N/01P transmission may exhibit a condition of late shifts when the vehicle gets to operating or high temperature.

CAUSE: The cause may be, that the ATF cooler shown in Figure 1 is restricted causing high temperature, or the Temperature Sensor shown in Figure 2 is defective. Note: When ATF temperature begins to climb over 225°F the TCM will extend the up-shift timing, the hotter the ATF gets the later the shift timing will become.
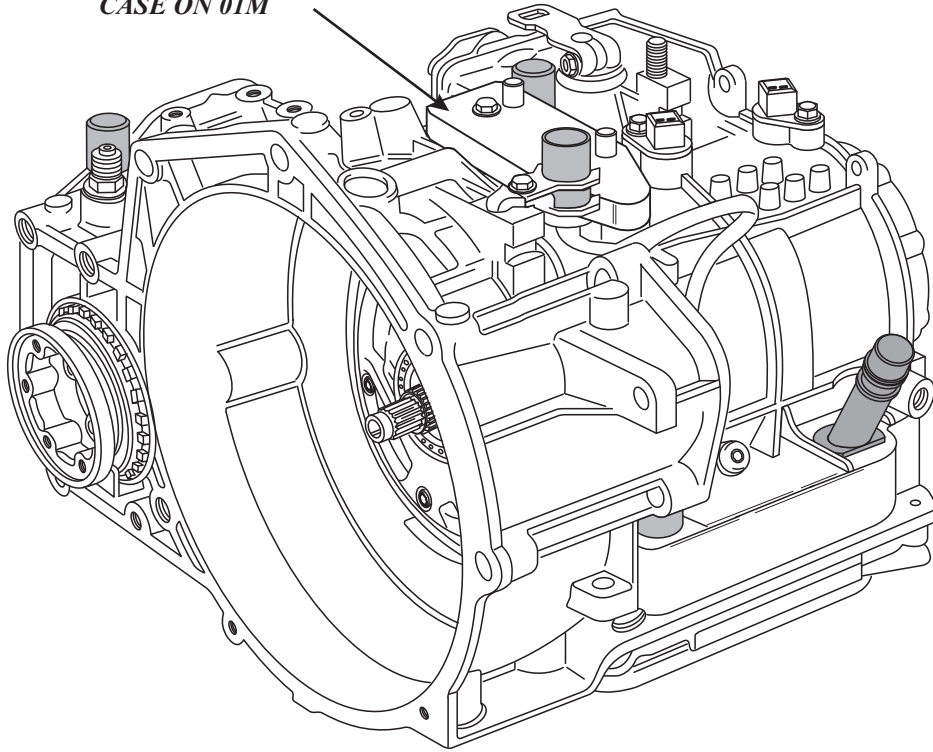
CORRECTION: To correct this condition, verify ATF temperature using a capable scan tool, then compare it to the actual sump temperature by using a laser temp probe. The comparison from the pan to the actual ATF temperature is usually within 10-15°. If transmission ATF temp is getting higher that 225-230°, the ATF cooler may be restricted. Note: These coolers are very difficult to flush and may have to be replaced if flushing does not remove the debris. If the ATF temp comparison from the pan to the scan tool is not close to actual temp, it may cause the TCM to go into an overheat mode extending the shifts because of bad information from the ATF temp sensor located in the ribbon strip as shown in Figure 2. Replacement would be necessary at that point. Refer to Figure 2 for a terminal layout and ohm test for the ATF Sensor.

SERVICE INFORMATION:

Contact your local supplier as the O.E. ribbon strip and a internal harness with a wiring harness is available. The ATF cooler may have to be purchased from a dealer if not carried by aftermarket sources.
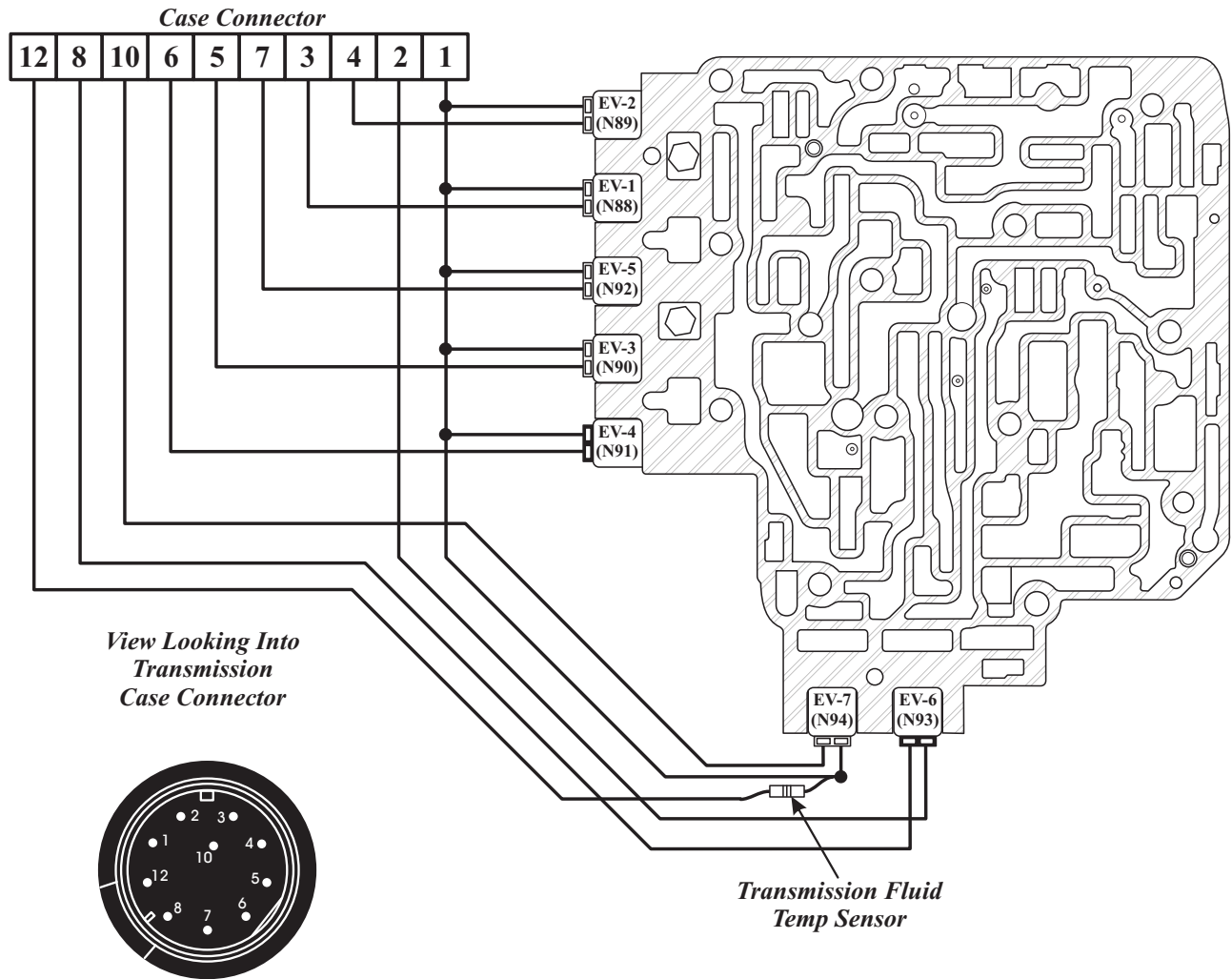
01M ATF COOLER

*BOLTS TO
THE TOP OF THE
CASE ON 01M*

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Figure 1

CASE CONNECTOR PIN FUNCTIONS

Case Connector

| 12 | 8 | 10 | 6 | 5 | 7 | 3 | 4 | 2 | 1 |

EV-2 (N89)

EV-1 (N88)

EV-5 (N92)

EV-3 (N90)

EV-4 (N91)

View Looking Into Transmission Case Connector

EV-7 (N94)   EV-6 (N93)

Transmission Fluid Temp Sensor

Component	Pin No's.	Resistance @ 20°C (72°F)
Solenoid EV-1 (N88)	1 And 3	55-65 Ohms
Solenoid EV-2 (N89)	1 And 4	55-65 Ohms
Solenoid EV-3 (N90)	1 And 5	55-65 Ohms
Solenoid EV-4 (N91)	1 And 6	4.5-5.1 Ohms
Solenoid EV-5 (N92)	1 And 7	55-65 Ohms
Solenoid EV-6 (N93)	2 And 8	4.5-5.1 Ohms
Solenoid EV-7 (N94)	1 And 10	55-65 Ohms
TFT Sensor	1 And 12	190k-200k Ohms

Figure 2