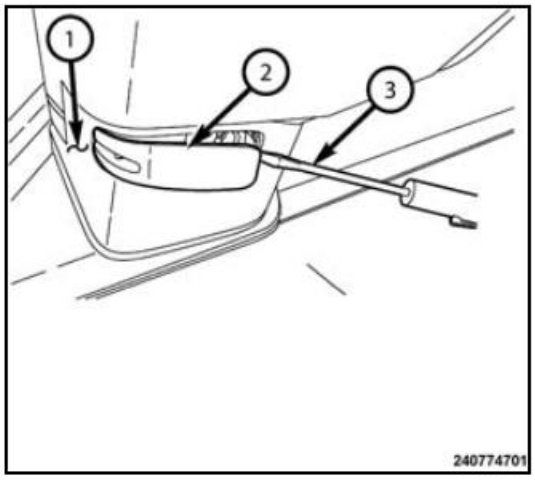
STAR ONLINE PUBLICATION

Case Number: S2223000063 Rev.B

Release Date: April 2023

Symptom/Vehicle Issue: Ambient Temperature Sensor Servicing.

Discussion: Part return analysis has revealed complete mirror assemblies are being replaced for ambient temperature faults or connector issues. The sensor is serviced separately as is the wiring harness connector. The ambient temp sensor is a sensor and cover assembly that snaps into the bottom of the left exterior mirror shown below. Refer to Service Library 24 - Heating and Air Conditioning / Controls / Sensor, Ambient Temperature for description, removal and installation information. Over repair may be subject to chargeback. Also see latest version of S2208000080.



Ambient Temp Sensor

Contact STAR Center, or your Technical Assistance Center Via TechConnect, eCONTACT or Service Library entry if no solution is found.

SENSOR-AMBIENT AIR TEMPERATURE

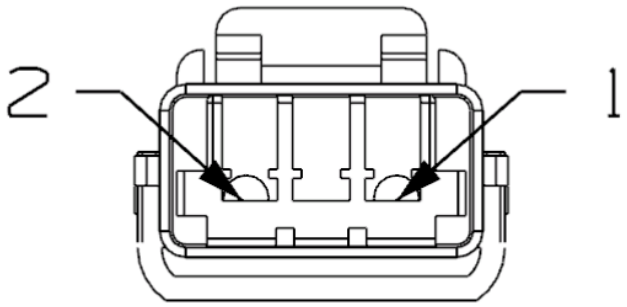
Full Repair Kit: 68248200AA

No terminal repair kits have been identified.

Removal Tools

A specific removal tool has not been identified.

End View



Pin Information

Cav	Circuit	Gauge	Color	Function
1	G31	0.35	BN/VT	AAT SIGNAL
1	G31	0.35	WH	AAT SIGNAL
1	G31	0.35	VT/GN	AAT SIGNAL
2	G931	0.35	BN/BU	SENSOR GROUND
2	G931	0.35	BK	SENSOR GROUND
2	G931	0.35	VT/BN	SENSOR GROUND

<<<NOTE>>> If a repair is performed to the Ambient Air Temperature (AAT) Sensor wiring, the sensor is replaced, or the Body Control Module (BCM) connector is disconnected during testing to correct an active Diagnostic Trouble Code (DTC), the vehicle must be driven for a minimum of 5 minutes above 15 mph to update the AAT temp signal before the DTC will go stored and can be erased.

<<<NOTE>>> The AAT Sensor is an individually serviceable component. If the measured resistance from the AAT Sensor does not meet the values from the Technical Data section listed under the diagnostic flow chart for the DTC P0073, then only the sensor should be replaced and not the entire mirror assembly.

P0073-AMBIENT AIR TEMPERATURE SENSOR CIRCUIT HIGH (MODULE, Powertrain ...

FEEDBACK

TECHNICAL DATA - AMBIENT AIR TEMP SENSOR

Use the specification table below to check the Ambient Temperature Sensor. The values in the table show the approximate resistance values for the temperatures given. The actual resistance can vary +/- 10% form the values in the table. Typically, if the sensor is faulty the resistance value will be noticeably different from the specification in the table.

AMBIENT AIR TEMP SENSOR - TEMPERATURE TO RESISTANCE CHART			
Ambient Temp - Celsius	**Ambient Temp - Fahrenheit**	**Sensor Resistance**	
-40°C	-40°F	345.26 kOhms	Lowest possible temperature reading
-10°C	14°F	53.38 kOhms	
-5°C	23°F	40.89 kOhms	
0°C	32°F	31.56 kOhms	
5°C	41°F	24.55 kOhms	
10°C	50°F	19.24 kOhms	
15°C	59°F	15.22 kOhms	Logical temperature values
20°C	68°F	12.13 kOhms	
25°C	77°F	9720 Ohms	
30°C	86°F	7780 Ohms	
35°C	95°F	6370 Ohms	
40°C	104°F	5200 Ohms	
150°C	302°F	181 Ohms	Highest possible temperature reading

Technical Data From DTC P0073 in Service Library