

83—609 Testing ambient, in-car temperature sensor and potentiometer (temperature dial) without tester

Data

| | | In-car temperature sensor | | | Ambient temperature sensor | | | Potentiometer |
|--|-------|-----------------------------|------|------|------------------------------|------|------|--|
| Connections in male plug | | 4 and 5 | | | 2 and 3 | | | 9 and 10 |
| Resistance (ohm) at the following sensor temperatures: | | | | | | | | |
| Sensor temperature °C (°F) | | In-car temperature sensor Ω | | | Ambient temperature sensor Ω | | | Potentiometer ¹⁾ |
| | | nom. | max. | min. | nom. | max. | min. | nom. Ω |
| 18 | (64) | 2300 | 2500 | 2100 | 390 | 415 | 362 | 300 $\begin{matrix} + 50 \\ - 30 \end{matrix}$ at temperature dial adjustment 65 °F |
| 19 | (66) | 2200 | 2400 | 2000 | 376 | 400 | 349 | |
| 20 | (68) | 2110 | 2310 | 1910 | 363 | 388 | 337 | |
| 21 | (70) | 2030 | 2220 | 1830 | 350 | 375 | 325 | |
| 22 | (72) | 1950 | 2130 | 1740 | 338 | 362 | 314 | |
| 23 | (74) | 1870 | 2050 | 1660 | 326 | 350 | 304 | 900 at temperature dial adjustment 75 °F |
| 24 | (76) | 1790 | 1970 | 1590 | 314 | 339 | 294 | |
| 25 | (78) | 1720 | 1900 | 1510 | 303 | 328 | 283 | |
| 26 | (79) | 1650 | 1820 | 1440 | 293 | 317 | 274 | |
| 27 | (80) | 1580 | 1760 | 1370 | 282 | 307 | 265 | |
| 28 | (81) | 1510 | 1690 | 1300 | 273 | 298 | 257 | 1480 $\begin{matrix} + 140 \\ - 110 \end{matrix}$ at temperature dial adjustment 85 °F |
| 29 | (84) | 1450 | 1620 | 1230 | 263 | 280 | 248 | |
| 30 | (86) | 1390 | 1560 | 1170 | 254 | 276 | 241 | |
| 31 | (88) | 1340 | 1500 | 1110 | 246 | 272 | 235 | |
| 32 | (90) | 1290 | 1450 | 1050 | 238 | 265 | 227 | |
| 33 | (92) | 1250 | 1400 | 1000 | 232 | 250 | 222 | |
| 34 | (93) | 1190 | 1360 | 960 | 225 | 248 | 212 | |
| 35 | (96) | 1140 | 1310 | 910 | 218 | 240 | 205 | |
| 36 | (97) | 1090 | 1270 | 870 | 211 | 232 | 198 | |
| 37 | (98) | 1040 | 1230 | 830 | 204 | 224 | 191 | |
| 38 | (100) | 990 | 1180 | 780 | 197 | 216 | 184 | |
| 39 | (102) | 940 | 1140 | 740 | 190 | 208 | 177 | |
| 40 | (104) | 900 | 1100 | 700 | 184 | 200 | 170 | |

1) Ambient temperatures have no influence on specified ohm values. For checking potentiometer, adjust to 900 Ω by turning temperature dial. Hold potentiometer shaft in place by means of adjusting wrench and set temperature dial to 75 °F by rotating on shaft (refer to 83—611). Then check values at temperature dial setting of 65 °F and 85 °F.

To check temperature sensor and potentiometer, disconnect tester from system and determine specified resistance via connections in male plug for tester (refer to table).

With warm engine it is recommended to remove ambient temperature sensor during test. With in-car temperature sensor, the temperature is measured directly on sensor.

- 1 Temperature dial
- 2 Adjusting wrench

