



GENERAL MOTORS DO BRASIL LTDA.

PRODUCT ENGINEERING

TITLE

Maximum oil temperature Test of vehicles with Automatic Transmission

R.AR.07.202 - Temperatura máxima do óleo da transmissão automática

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SUMMARY

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1. Purpose

The purpose of this test is to check the maximum oil temperature in automatic transmission under Colombia and Venezuela driving and environmental conditions.

2. Definitions

WOT Wide Open Throttle
ECM Engine Control Module

3. Applicability

Passenger cars with Automatic transmission. (Ref. PEP-001 Procedure Elaboration)

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4. Equipment

4.1 Vehicle equipment

Air conditioning (optional)
Engine Cooling according to latest release.
Install a towing dynamometer hitch

4.2 Transmission equipment

Diagnostic automatic transmission display
Ecm prepared to attach at diagnostic automatic transmission display

4.3 Instrumentation

Datalogger

Thermocouples are required at least on the following 8 temperature measuring points:

Measuring points 1 - engine coolant in the radiator inlet (hot)

Measuring points 2 - engine coolant in the radiator outlet (cold)

Measuring points 3 - transmission oil sump temperature

Measuring points 4 - transmission oil line at the transmission outlet

Measuring points 5 - transmission oil line at the transmission inlet

Measuring points 6 - transmission oil line at the cooler inlet

Measuring points 7 - transmission oil line at the cooler outlet

Measuring points 8 - ambient temperature on the vehicle roof, protected from direct insolation

Further temperature measuring points are provided on external components such as required, by Product Engineer or Test Engineer, during the new development.

5. Test conditions

The test shall be performed on dry road and maximum wind speed 10 km/h.

The ambient temperature shall be $\geq 30^{\circ}\text{C}$.

Thermostats valve operating.

Vehicle load in curb condition (+ driver when using a tow bar)

The test shall be performed on Circular Track

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