A Program of ASTM International

Test Monitoring Center

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Sequence X Information Letter 20-4
Sequence Number 4
October 14, 2020

TO: Sequence X Surveillance Panel

SUBJECT: 1) Correcting PCV Flow Meter Values.
2) Correction to Section 12.1.1

1. Recently, it was noted that PCV valve flow measurements were not corrected as per the manufacturer's specifications. A new section 8.6.2.3 has been added to describe how to correct these measurements. Also, renumbered section 8.6.2.5 has been updated to reflect using the corrected flowrate when determining acceptability of these results.
2. Also identified recently was that existing equation one did not include multiplying the result by one hundred to obtain the percent change, which is corrected in the attached. Also, because a correction equation was added in section 8.6, this existing equation (1) has been changed to equation (2).

The revised text has been highlighted in red and is included in the attached. These changes are effective with the issuance of this letter

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Attachment

c: http://www.astmtmc.cmu.edu/ftp/docs/gas/sequencex/procedure_and_ils/il20-4_x.pdf

Distribution: Email

Revises D8279-20a as modified by Information Letters 20-2 and 20-3

Add new section 8.6.2.3:

8.6.2.3 Correct the actual flow measurements to 65.5°C and 100.7 kPa using the formula

$$F_C = 1.8338 * F_A[(P_{baro})/(T_{AIR}+273)]^{0.5} \quad (1)$$

F_C = the corrected flow rate, L/min,
F_A = the actual flow rate, L/min,
P_{baro} = the barometric pressure in the measurement area, kPa (absolute), and
T_{AIR} = the air temperature in the measurement area, °C.

When using a float type flow meter for the PCV valve measurement, correct the converted flow value from meter's standard-condition scale to actual flow (using actual temperature and pre-PCV outlet pressure), before applying correction formula (1)

Renumber existing 8.6.2.3 and 8.6.2.4 as 8.6.2.4 and 8.6.2.5.

8.6.2.5 Reject any PCV valve that does not exhibit an average corrected flowrate of 36 L/min to 54 L/min at 27 kPa and 19 L/min to 21 L/min at 60 kPa.

12.1.1 Use the following equation to calculate the chain elongation (that is, the change in timing chain length) from Hour 0 to the end of test:

$$CE = 2(L_f - L_i)/L_{nom} \times 100 \quad (2)$$

where:

CE = the chain elongation from hour 0 to end of test, %,
L_f = final average chain length (see 8.20.8), mm,
L_i = initial average chain length (see 8.20.8), mm,
L_{nom} = the nominal chain length = 1095.375 mm (43.125 in.).