



Test Monitoring Center

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DD13 Information Letter 17-1
Sequence No. 2
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ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.

TO: Daimler Surveillance Panel Mailing List
SUBJECT: DD13 General Procedure Revisions

The Daimler Surveillance Panel approved via email on May 12th, 2017 changes to method D8047 to clarify or correct multiple sections of the procedure. Accordingly sections 6.2.11, A7.3.1 through A7.3.4 and Table A7.1 were changed and section A7.3.5, Tables A7.2 and A7.3 were added and all are attached.

This revision is effective with the date of this information letter.

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Attachment

c: ftp://ftp.astmtmc.cmu.edu/docs/diesel/daimler/procedure_and_ils/DD13/il17-01.pdf

Distribution: Email

(Revises D8074-16 as amended by IL 16-1)

6.2.11 *Dynamometer*—Use a dynamometer capable of controlling engine speed to the set points in Table 1. A Midwest 1519^{15,9} dynamometer has been found suitable for this purpose.

TABLE A7.1 Quality Index and Average Calculation Values

Controlled Quantity, unit	Quality Index Threshold	Quality Index U & L Values						Limit Count Values		
		U		L		High	Low			
Speed, r/min	0.000	1805		1795		N/A	N/A			
Fuel Flow Rate, kg/h	0.000	33	72	31	70	N/A	N/A			
Air Temperature in Engine Intake, °C	0.000	36		34		40	30			
Coolant Temperature at Jacket Outlet, °C	0.000	106		104		108	102			
Oil Temperature in Gallery, °C	0.000	119		117		121	115			
Fuel Temperature at Engine Inlet, °C	0.000	39		37		N/A	N/A			
Air Temperature in Intake Manifold, °C	0.000	76	88	74	86	80	92	70	82	
Coolant Pressure at Jacket Inlet, kPa (gauge)	0.000	255		245		N/A	N/A			
Exhaust Pressure in Tailpipe, kPa (absolute)	0.000	106	126	105	125	N/A	N/A			
Air Pressure in Intake Manifold, kPa (absolute)	0.000	207.5	332.5	197.5	322.5	217.5	342.5	182.5	307.5	
Air Pressure in Engine Intake, kPa (absolute)	0.000	96.65	95.05	96.15	94.55	N/A	N/A			
Ranged Quantity, unit	Range									
Coolant Flow Rate, L/min	340 to 360					N/A	N/A			

A7.3.1 If the total number of data points exceeding the limit count values in Table A7.1 is greater than or equal to 3, conduct an engineering review to determine the operational validity of the test. Exclude data taken during the 30 h stage transition.

A7.3.2 During the 30 h stage transition (see Table 4 and Table A6.3), if the total number of data points outside of the ranges listed in Table A7.2 is greater than or equal to 6 conduct an engineering review to determine operational validity.

TABLE A7.2 30 h Stage 1 to 2 Transition Limit Count Ranges

Steps	Controlled Quantity, unit	Limit Count Range Values	
		High	Low
All	Air Temperature in Engine Intake, °C	40	30
All	Coolant Temperature at Jacket Outlet, °C	108	102
All	Oil Temperature in Gallery, °C	121	115
All	Air Temperature in Intake Manifold, °C	Linear Ramp Setpoint + 5 °C	Linear Ramp Setpoint - 5 °C
All	Air Pressure in Intake Manifold, kPa (absolute)	Linear Ramp Setpoint +15 kPaA	Linear Ramp Setpoint -20 kPaA
2	Torque N-m	Linear Ramp Sepoint + 50 Nm	Linear Ramp Sepoint - 50 Nm

A7.3.3 During Stage 2 warm-ups (See Table A6.5), if the total count of data points exceeding any of the conditions listed in Table A7.3 is greater than or equal to 6 conduct an engineering review to determine operational validity.

TABLE A7.3 Stage 2 Warm-Up Limit Count Ranges

Steps	Controlled Quantity, unit	Limit Count Range Values	
		High	Low
All	Coolant Temperature at Jacket Outlet, °C	108	N/A
All	Oil Temperature in Gallery, °C	121	N/A
3 & 4	Air Temperature in Engine Intake, °C	40	30
3 & 4	Air Temperature in Intake Manifold, °C	Linear Ramp Setpoint + 5 °C	Linear Ramp Setpoint - 5 °C
3 & 4	Air Pressure in Intake Manifold, kPa (absolute)	Linear Ramp Setpoint +15 kPaA	Linear Ramp Setpoint -20 kPaA
3	Torque N-m	Linear Ramp Setpoint +50 Nm	Linear Ramp Setpoint -50 Nm

A7.3.4 Record the Limit Counts in A7.3.1, A7.3.2, and A7.3.3 on the appropriate report forms.

A7.3.5 If a test has scuffed, do not use any data taken after the hours to scuff (as calculated in 10.7) for limit count calculations specified in A7.3.1, A7.3.2, or A7.3.3.