



## Test Monitoring Center

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T-10 INFORMATION LETTER 03-2  
Sequence No. 4

September 8, 2003

***ASTM consensus has not been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.***

TO: Mack Mailing List

SUBJECT: System Time Responses and Quality Index Calculation Values

At the April 21, 2003 meeting, the Mack Surveillance Panel accepted an operational validity proposal regarding systems time responses and Quality Index calculation constants. This proposal updated system time responses, Quality Index U & L values, and Over & Under range values. These changes went into effect April 21, 2003. The modified Tables 1 and A3.1 are attached. The updated version of the test procedure, Draft 9, is available in its entirety from the TMC web site ([ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure\\_and\\_ils/T-10](ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure_and_ils/T-10)) or by contacting the TMC for a hardcopy.

A handwritten signature in black ink that reads "Greg Shank".

Greg Shank  
Senior Project Engineer  
Mack Trucks, Inc.

A handwritten signature in black ink that reads "John L. Zalar".

John L. Zalar  
Administrator  
ASTM Test Monitoring Center

Attachment

c: [ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure\\_and\\_ils/T-10/il03-2.pdf](ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure_and_ils/T-10/il03-2.pdf)

Distribution: Email

**TABLE 1  
MAXIMUM ALLOWABLE SYSTEM TIME RESPONSES**

Measurement Type	Time Response (s)
Speed	2.0
Temperature	3.0
Pressure	3.0
Flow	45.0

**TABLE A3.1  
QUALITY INDEX AND AVERAGE CALCULATION VALUES**

Control Parameter	Units	Quality Index Threshold	Quality Index U & L Values				Over & Under Range Values	
			U		L		Low	High
Speed <sup>A</sup>	r/min	0.000	1802.5	1202.5	1797.5	1197.5	1063	1937
Fuel Flow <sup>A</sup>	kg/h	0.000	60.20	64.50	58.20	62.50	4.4	118.3
Inlet Manifold Temp.	°C	0.000	70.8	66.8	69.2	65.2	22.2	113.8
Coolant Out Temp.	°C	0.000	66.9	85.9	65.1	84.1	16.7	134.3
Fuel In Temp.	°C	0.000	40.5		39.5		12.6	67.4
Oil Gallery Temp.	°C	0.000	88.6	113.6	87.4	112.4	55.1	145.9
Intake Air Temp.	°C	0.000	26.0		24.0		-29.8	79.8
Ranged Parameter	Units	Range					Over & Under Range Values	
							Low	High
Inlet Air Restriction	kPa	3.5 – 4.0					0	14
Inlet Manifold Pressure	kPa	Tbd   Tbd					0	400
Exhaust Back Pressure	kPa	2.7 – 3.5					0	16
Crankcase Pressure	kPa	0.25 – 0.75					0	3
Intake CO <sub>2</sub>	%	1.5 ± 0.05   0.2 ± 0.05					0	5

<sup>A</sup>U and L values for speed, fuel flow, coolant out temperature, and oil gallery temperature are split by test phase.