



Test Monitoring Center

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M11 INFORMATION LETTER 02-1
Sequence No. 4

February 25, 2002

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

TO: M11 Mailing List

SUBJECT: New Hardware / Outlier Screening / Part Numbers

As approved by the M11 Surveillance Panel, new rocker arm hardware has been introduced for M11 testing. The use of this hardware necessitates updating the industry standard deviations that are used for the outlier screening methodology. Section 11.1.2 of the test procedure has been modified accordingly, indicating the appropriate industry standard deviation to be used as a function of test kit number. Table A3.1, Engine Build Parts Kit, has been updated as well to reflect the part numbers of the new hardware. Both of the modified sections are attached. These changes went into effect on January 28, 2002. The updated version of the test procedure, Draft 8, is available in its entirety from the TMC web site (www.tmc.astm.cmri.cmu.edu/docs/diesel/m11/procedure_and_ils) or by contacting the TMC for a hardcopy.

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Attachments

c: ftp://tmc.astm.cmri.cmu.edu/docs/diesel/m11/procedure_and_ils/il02-1.pdf

Distribution: US Mail

11.1.2 Calculate the Δ/s for each crosshead as follows:

$$\Delta/s = (|x_i - \bar{x}|) / s$$

Where:

x_i = individual crosshead mass loss, mg

\bar{x} = average mass loss of crosshead group (intake or exhaust)

s = industry standard deviation, shown in the table below

Crosshead Group	Industry Standard Deviation (s)	
	Test Kit # CK11-751-A/B and prior test kits	Test Kit # CK11-752-A/B and subsequent test kits
Intake	2.20	3.48
Exhaust	3.68	5.89

A3. ENGINE BUILD PARTS KIT

Table A3.1 Engine Build Parts Kit

Description	Cummins P/N		Per Kit	Critical
Cam Follower Parts				
Injector cam follower (old material)	3328628		3	Y
Valve cam follower (old material)	3328630		6	Y
Injector lever (new material)	3161473		3	Y
Valve lever (new material)	3161475		6	Y
Cam follower shaft	3895833		2	
Drive plug	3019630		8	
Cam follower shaft support	3064582		1	
Cam follower shaft support	3895831		1	
Cam follower shaft support (center)	3895830		5	
Cam follower shaft support (end)	3064583		1	
Plain washer	3009330		7	
Cylinder Head Parts				
Expansion plug	3007632		2	
Expansion plug	206741		2	
Expansion plug	3007635		8	
Valve insert (exhaust)	3088980		12	
Valve insert (intake)	3088978		12	
Valve stem guide	3073512		24	
Valve spring	3895860		24	Y
Intake valve	3080975		12	
Valve collet	3275354		48	
Exhaust valve	3080976		12	
Valve spring retainer	3883512		24	
Spring guide	3070072		24	
Pipe plug	3008465		16	
Orifice plug	3820749		6	
Valve stem seal, intake	3073509		12	
Valve stem seal, exhaust	3328781		12	
Expansion plug	3895479		2	
Overhead Components		Casting		

Rocker lever assembly (exhaust)	3064600 or 3400971	3064602 or 4003903	3	Y
Rocker lever assembly (exhaust)	3064597 or 3400974	3064599 or 4003906	3	Y
Rocker lever assembly (intake)	3088350 or 3400972	3064605 or 4003904	3	Y
Rocker lever assembly (intake)	3068351 or 3400973	3064608 or 4003905	3	Y
Rocker lever assembly (injector)	3069020	3068947	6	Y
Rocker lever shaft	3803166	3820750	2	Y
Valve crosshead	3070175		12	Y
Push rod	3068390		12	
Push rod	3076046		6	
Rocker lever support	3893584		4	
Rocker lever support	3079662		2	
Rocker lever support	3079661		2	
Retaining clamp	3077444		8	
Pistons/Rings/Liner				
Piston top	3896030		6	Y
Piston skirt	3081334		6	Y
Piston pin	3063843		6	
Retaining ring	3016652		12	
Top compression ring	3893752		6	Y
Second compression ring	3899413		6	Y
Oil ring	3899561		6	
Cylinder liner	3080760		6	Y
Miscellaneous Components				
Pressure regulator plunger	3068979		1	
Compression spring	3010146		1	
Retainer plug	3895718		1	
Piston cooling nozzle	3080708		6	
Rectangular seal	3047188		6	
Oil cooler	3081359		1	
Connecting rod bearing	3016760		12	Y
Oil filter	390383200		1	Y