



## Test Monitoring Center

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L-42 Information Letter No. 06-4  
Sequence No. 26  
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***ASTM consensus has not yet been obtained on this information letter. An appropriate ASTM ballot will be issued in order to achieve such consensus.***

TO: L-42 Mailing List

SUBJECT: 1. Revised Wording for Backlash Measurements  
2. Revised Wording for Coast Side Gear Contact Segment Time  
3. Revised Wording for Unscheduled Shutdowns  
4. Engine Throttle Body Calibration Procedure

1. At the November 15, 2006 L-42 Surveillance Panel meeting, the panel approved a motion revising how backlash is measured and reported. Sections 8.2.3 and 8.2.8 of the L-42 test procedure (STP 512A) have been revised. A new Section 8.2.3.1 has been added. This change is effective 30 days after the date of this information letter.
2. At the November 15, 2006 L-42 Surveillance Panel meeting, the panel approved a motion revising the calculation and reporting of average coast side gear contact segment time. Sections 12.1.4.3 and 12.1.5.3 of the L-42 test procedure (STP 512A) have been revised. This change is effective the date of this information letter.
3. At the November 15, 2006 L-42 Surveillance Panel meeting, the panel approved a motion revising the definition of an unscheduled shutdown. Section A5.2 of the L-42 test procedure (STP 512A) has been revised. This change is effective the date of this information letter.
4. At the November 15, 2006 L-42 Surveillance Panel meeting, the panel approved a motion for engine throttle body calibration. New Section 9.7 has been added to the L-42 test procedure (STP 512A). This change is effective with the first reference oil test after the date of this information letter.

The updated version of the L-42 test procedure is available in its entirety from the TMC web site ([ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/procedure\\_and\\_ils](ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/procedure_and_ils)) or by contacting the TMC for a hard copy. The revised sections of the L-42 procedure are attached.

Cory Koglin  
Chairman  
L-42 Surveillance Panel

John L. Zalar  
Administrator  
ASTM Test Monitoring Center

Attachment

c: [ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/procedure\\_and\\_ils/il06-4.pdf](ftp://ftp.astmtmc.cmu.edu/docs/gear/l42/procedure_and_ils/il06-4.pdf)

Distribution: Email

8.2.3 Record the backlash reported from the manufacturer. The reading shall be between .004 and .009 in. (0.102 to 0.229 mm).

8.2.3.1 Measure and record backlash at four equally spaced locations. Report the average and the four readings. No backlash measurement shall be greater than 0.011 in. (0.279 mm).

8.2.8 Measure and record backlash at four equally spaced locations. Report the average and the four readings. No backlash measurement shall be greater than 0.011 in. (0.279 mm).

## 9.7 *Engine Throttle Body Calibration*

9.7.1 Warm up the engine until the coolant temperature is greater than 150°F (65.6°C).

9.7.2 Connect a voltmeter to the throttle position sensor (TPS) to measure the TPS voltage sent to the engine ECM.

9.7.3 Adjust the Foxboro/Jordon “zero” potentiometer to close the throttle until engine idle speed is at  $675 \pm 75$  r/min. Record the TPS voltage.

9.7.4 Set the throttle controller at 100% output, adjust the Foxboro/Jordon “span” potentiometer until the observed TPS voltage is  $1.3 \pm 0.1$  volts higher than the voltage recorded in Section 9.7.3.

12.1.4.3 Calculate and report the maximum, minimum, and average drive side gear contact segment time. Calculate and report the maximum, minimum, and average coast side gear contact segment time. For these time calculations, ignore the first drive side segment and the last coast side segment since zero crossings are not well defined.

12.1.5.3 Calculate and report the maximum, minimum, and average drive side gear contact segment time. Calculate and report the maximum, minimum, and average coast side gear contact segment time. For these time calculations, ignore the first drive side segment and the last coast side segment since zero crossings are not well defined.

A5.2 *Unscheduled shutdowns* – Only one unscheduled shutdown is allowed per test. The shutdown can only occur during conditioning 1, conditioning 3, or anytime the driveline is disengaged as allowed or required by the procedure. Downtime cannot exceed 15 minutes. Any other unscheduled shutdowns invalidate the test.