



## Test Monitoring Center

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T-12 Information Letter 12-1  
Sequence No. 10  
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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: Mack Mailing List  
SUBJECT: Updated STWN Hardware Correction Factors

On June 4, 2012, via teleconference, the Mack Test Surveillance panel approved updated correction factors for the 'STWN' hardware combination. These updated correction factors are in effect for all tests starting on or after June 5, 2012. Accordingly, sections 11.6.2.1, 11.6.3.1, 11.6.4.4, 11.6.5.1, and 11.6.6.1 have been revised and are attached.

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Attachment

c: [ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure\\_and\\_ils/T-12/il12-1.pdf](ftp://ftp.astmtmc.cmu.edu/docs/diesel/mack/procedure_and_ils/T-12/il12-1.pdf)

Distribution: Email

**(Revises D 7422-11, as amended by Information Letters 11-2 and 11-3)**

11.6.2.1 *Correction Factor for Average Top Ring Mass Loss*—For all tests using the STWN hardware combination that completed on or before May 18, 2011, multiply the average top ring mass loss from 11.6.2 by 0.95 to get the final average top ring mass loss result. For all tests using the STWN hardware combination that completed on or after May 19, 2011 and started before June 5, 2012, multiply the average top ring mass loss from 11.6.2 by 0.92 to get the final average top ring mass loss result. For all tests using the STWN hardware combination that started on or after June 5, 2012, multiply the average top ring mass loss from 11.6.2 by 0.705 to get the final average top ring mass loss result. Report the data on the appropriate form.

11.6.3.1 *Correction Factor for Average Cylinder Liner Wear*—For all tests using Batch R piston ring and cylinder liner hardware, multiply the average cylinder liner wear from 11.6.3 by 0.58 to get the final average cylinder liner wear result. For all tests using the SWTN hardware combination that completed on or before May 18, 2011, multiply the average cylinder liner wear from 11.6.3 by 0.86 to get the final average cylinder liner wear result. For all tests using the STWN hardware combination that completed on or after May 19, 2011 and started before June 5, 2012, multiply the average cylinder liner wear from 11.6.3 by 0.83 to get the final average cylinder liner wear result. For all tests using the STWN hardware combination that started on or after June 5, 2012, multiply the average cylinder liner wear from 11.6.3 by 0.946 to get the final average cylinder liner wear result. Report the data on the appropriate form.

11.6.4.4 *Correction Factor for  $\Delta$ Lead at EOT* —For all tests using the STWN hardware combination that completed on or before May 18, 2011, determine the final  $\Delta$ Lead at EOT result by applying the correction factor of 0.95 according to the following equation:

$$\Delta\text{Lead}_{\text{Final}} = \exp[ (\ln(\Delta\text{Lead}) \times 0.95) ] \quad (3)$$

Where:

$\Delta\text{Lead}_{\text{Final}}$  = final  $\Delta$ Lead at EOT

$\Delta\text{Lead}$  = value calculated per 11.6.4.3, equation (2)

For all tests using the STWN hardware combination that completed on or after May 19, 2011 and started before June 5, 2012, determine the final  $\Delta$ Lead at EOT result by applying the correction factor of 0.92 according to the following equation:

$$\Delta\text{Lead}_{\text{Final}} = \exp[ (\ln(\Delta\text{Lead}) \times 0.92) ] \quad (4)$$

Where:

$\Delta\text{Lead}_{\text{Final}}$  = final  $\Delta$ Lead at EOT

$\Delta\text{Lead}$  = value calculated per 11.6.4.3, equation (2)

For all tests using the STWN hardware combination that started on or after June 5, 2012, determine the final  $\Delta$ Lead at EOT result by applying the correction factor of 0.923 according to the following equation:

$$\Delta\text{Lead}_{\text{Final}} = \exp[ (\ln(\Delta\text{Lead}) \times 0.923) ] \quad (4)$$

Where:

$\Delta\text{Lead}_{\text{Final}}$  = final  $\Delta$ Lead at EOT

$\Delta\text{Lead}$  = value calculated per 11.6.4.3, equation (2)

Report the data on the appropriate form.

11.6.5.1 *Correction Factor for  $\Delta$ Lead (250 to 300) h* —For all tests using the STWN hardware combination that completed on or before May 18, 2011, determine the final  $\Delta$ Lead (250 to 300) h result by applying the correction factor of 1.03 according to the following equation:

$$\Delta\text{Lead (250-300)}_{\text{Final}} = \exp[ (\ln(\Delta\text{Lead 250-300}) \times 1.03) ] \quad (5)$$

Where:

$\Delta\text{Lead (250-300)}_{\text{Final}}$  = final  $\Delta\text{Lead (250 to 300) h}$

$\Delta\text{Lead (250-300)}$  = value calculated per 11.6.5

For all tests using the STWN hardware combination that completed on or after May 19, 2011 and started before June 5, 2012, determine the final  $\Delta\text{Lead (250 to 300) h}$  result by applying the correction factor of 0.93 according to the following equation:

$$\Delta\text{Lead (250-300)}_{\text{Final}} = \exp[ (\ln(\Delta\text{Lead 250-300}) \times 0.93) ] \quad (6)$$

Where:

$\Delta\text{Lead (250-300)}_{\text{Final}}$  = final  $\Delta\text{Lead (250 to 300) h}$

$\Delta\text{Lead (250-300)}$  = value calculated per 11.6.5

For all tests using the STWN hardware combination that started on or after June 5, 2012, determine the final  $\Delta\text{Lead (250 to 300) h}$  result by applying the correction factor of 0.956 according to the following equation:

$$\Delta\text{Lead (250-300)}_{\text{Final}} = \exp[ (\ln(\Delta\text{Lead 250-300}) \times 0.956) ] \quad (6)$$

Where:

$\Delta\text{Lead (250-300)}_{\text{Final}}$  = final  $\Delta\text{Lead (250 to 300) h}$

$\Delta\text{Lead (250-300)}$  = value calculated per 11.6.5

Report the data on the appropriate form.

11.6.6.1 *Correction Factor for Oil Consumption*—For all tests using the STWN hardware combination that completed on or before May 18, 2011, determine the final oil consumption result by applying the correction factor of 0.96 according to the following equation:

$$\text{OC} = \exp[ (\ln(\text{OC}_{100-300}) \times 0.96) ] \quad (7)$$

Where:

OC = final oil consumption

$\text{OC}_{100-300}$  = average oil consumption from 11.6.6

For all tests using the STWN hardware combination that completed on or after May 19, 2011 and started before June 5, 2012, determine the final oil consumption result by applying the correction factor of 0.95 according to the following equation:

$$\text{OC} = \exp[ (\ln(\text{OC}_{100-300}) \times 0.95) ] \quad (8)$$

Where:

OC = final oil consumption

$\text{OC}_{100-300}$  = average oil consumption from 11.6.6

Report the data on the appropriate form.

For all tests using the STWN hardware combination that started on or after June 5, 2012, determine the final oil consumption result by applying the correction factor of 0.961 according to the following equation:

$$\text{OC} = \exp[ (\ln(\text{OC}_{100-300}) \times 0.961) ] \quad (8)$$

Where:

OC = final oil consumption

OC<sub>100-300</sub> = average oil consumption from 11.6.6

Report the data on the appropriate form.