

Mack T-12 and T11 Tests for Previous Mack Tests

Mark Cooper, Mack SP Chairman

December 5, 2006

Overview of Mack SP and HDEOCP Actions

- **Mack T-10A vs T-11A and T-8/E vs T-11**
 - **Jeff Clark (TMC) has sent out data request**
 - **No data has been received**

Overview of Mack SP and HDEOCP Actions

- **Mack T-12 for Mack T-10**
 - approved by HDEOCP – June 2006
 - being implemented into D 4485
- **Mack T-12 for Mack T-9 and Mack T-6**
 - three SP teleconferences to finalize SP position
 - October 30
 - November 27
 - December 1

Mack T-12 for Mack T-9

'Equivalency' proposed

	Oronite	Lubrizol	Afton
TRWL, mg	105	130	117
Liner Wear, microns	35	34	26
Max EOT lead, ppm	70	67	60

Mack T-12 for Mack T-9

	Oronite	Lubrizol	Afton	SP Recommendation
TRWL, mg	105	130	117	120
LW, microns	35	34	26	30
EOT lead, ppm	70	67	60	65

***SP Recommendation passed:
5 affirmative, 0 negative and 5 waive***

Mack T-12 for Mack T-6

'Equivalency' proposed

	Oronite	Lubrizol	Afton
TRWL, mg	Not possible	180	135
Liner Wear, microns	Not possible	47	38
Max EOT lead, ppm	N/A	N/A	N/A

Mack T-12 for Mack T-6

	Oronite	Lubrizol	Afton	SP Recommendation
TRWL, mg	Not possible	180	135	150
LW, microns	Not possible	47	38	40
EOT lead, ppm	N/A	N/A	N/A	N/A

***SP Recommendation passed:
5 affirmative, 1 negative and 4 waive***

Comments on Mack T-12 for T-6

	Intro Date	Purpose
T-12	2006	Top ring, liner, and bearing wear Soot abrasive and corrosive wear
T-6	1981	Piston Deposit Test

Comments on Mack T-12 for T-6

	Piston / Ring configuration
T-12	Coated top ring, 2 piece steel piston
T-6	No 2nd ring coating, Al trunk piston, w/ no ni resist

Comments on Mack T-12 for T-6

	Fuel / Combustion
T-12	ULSD, Cooled EGR – very high EGR rates
T-6	5000 ppm S fuel, ‘internal’ EGR

Comments on Mack T-12 for T-6

	Length	Oil Gallery
T-12	300 hr	116 C
T-6	600 hr	100 C

Comments on Mack T-12 for T-6

- **Extensive differences**
- **No common formulations run on both tests**