



Mack PC10 Engine Test Update

ASTM HDEOCP

September 29, 2004



Ring & Liner Wear (Corrosive), Bearing Corrosion / Oxidation / Oil Consumption

- Mack T-12
- Based on Mack T10 & Mack T11
- With ULSD Fuel ??
- Length - ~ 300 Hours
- Two Phase Test
- Phase 1 100 hr (4.3 % Soot)
- Phase 2 200 hr (EOT 5.5- 6 % Soot)
- Phase 2 260 F Oil Sump Temp
- Increased EGR Flow (Heavy EGR)
(35% Phase 1 – 15 % Phase 2)
- Determine Ring Face & Side Wear
- Precision Matrix Required



Mack / Volvo Powertrain T12 Test

- Hardware (External)
Same as T10 Except – VGT Turbo replaces
small T10 Turbo
2 Production EGR Coolers (Breadboard) Replaces Tube Cooler
EGR on/off Valve
- Hardware (Internal)
Same as T11 Power Cylinder & Heads
New Nozzles & Spray Angle
- Hardware T12 Conversion Kit Shipped wk of Sept 20th
- Formed T12 TASK FORCE Sept 10th
- First Teleconference Sept 23rd
- 2nd Teleconference Oct 1st
- Meeting & Lab Visits Late October in San Antonio
- Draft Test Procedure - October
- Test Procedure for Matrix Testing - December



T12 PC10 Engine Oil Test

			July	August	September	October	November	December
EGR Mapping			█	█				
Soot Mapping				█				
TBN Depletion Mapping					█			
Demonstration Testing					█	█		
Discrimination Testing							█	█
Deliver Draft Procedure						█		
Deliver Procedure for Matrix Testing								█