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# Mack T12 Engine Test Update

February 23rd 2005



- Mack T-12
- Based on Mack T10 & Mack T11
  - With ULSD Fuel
  - Length - ~ 300 Hours
  - Two Phase Test
    - Phase 1 100 hr ( 4.0 % Soot )
    - Phase 2 200 hr ( EOT of 6 % Soot )
      - Phase 2 260 F Oil Temp
  - Increased EGR Flow (Heavy EGR)  
(35% Phase 1 – 15-% Phase 2)
  - Precision Matrix Required



## •2 Production EGR Coolers ( Breadboard ) Replaces Tube Cooler

### *Now 90C IMT – Phase 1*

#### T12 Conversion Kits Sent to Labs

#### •T12 TASK FORCE –

Numerous Teleconferences,

Oct 20 Mtg in San Antonio – Meeting Nov 22<sup>nd</sup> @ ExxonMobil- Next Mtg Jan 12<sup>th</sup>  
in San Antonio - Meeting – Feb 22<sup>nd</sup> SWRI

•Test Procedure Ready - T12 Parts List Completed

•Completed 4 Test on 820-2 (T10 Ref Oil) 3 More Test in March

•Engines in 5 (820-2) Labs Running week of Jan 10<sup>th</sup>

•Reviewed Operational Data March 4

•Data for Initial Precision & Discrimination Review March 17th

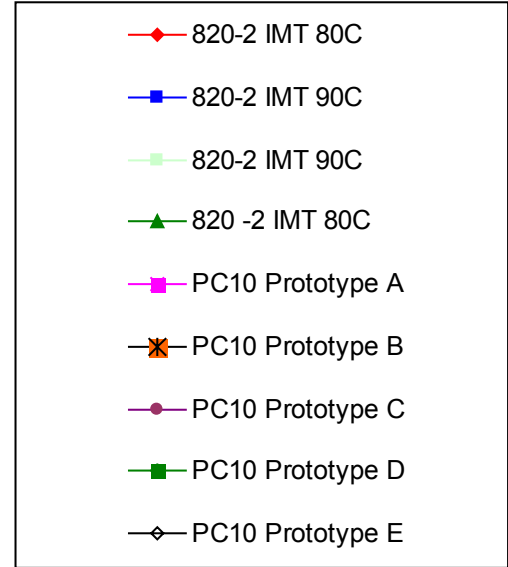
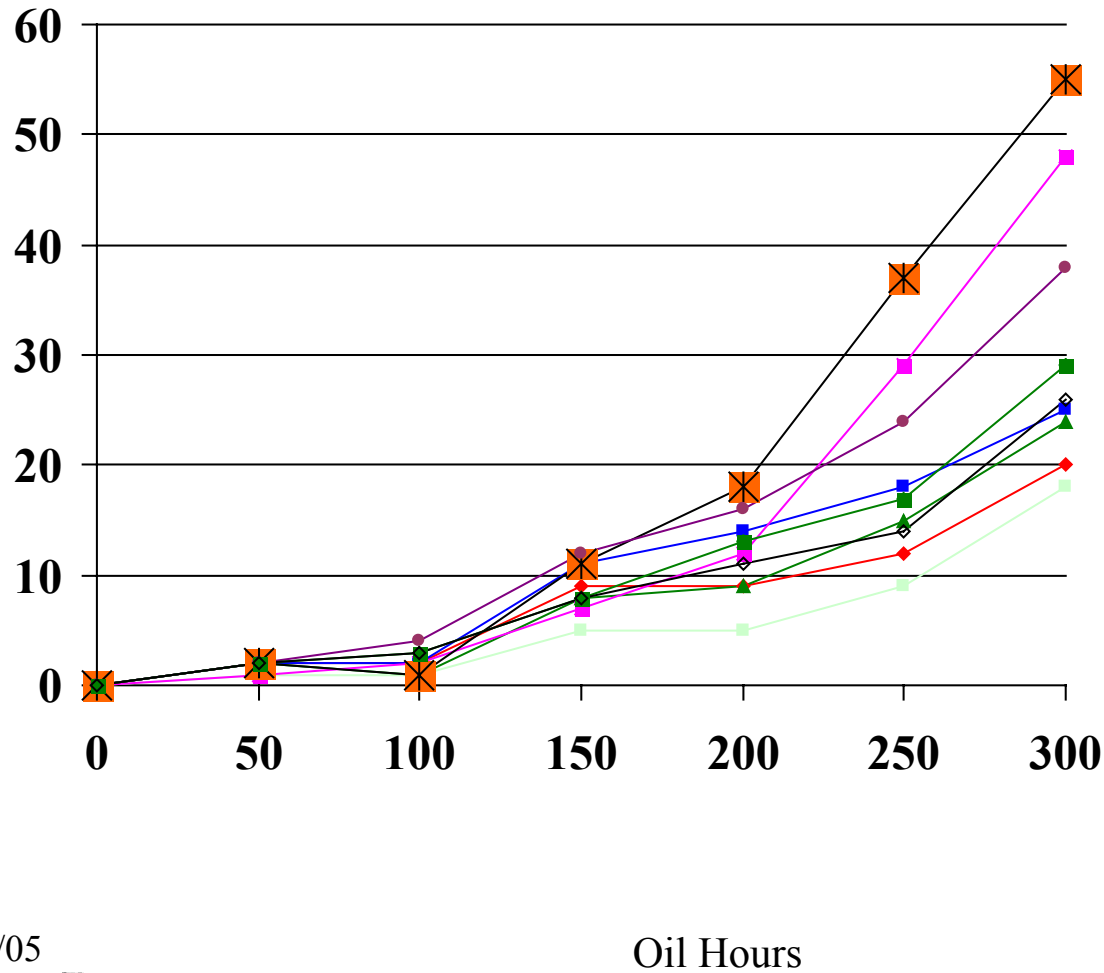
•Task Force Recommends the use of dyed PC 10 ULSD

• 820-2 Will be Part of Precision Matrix



# T12 Pb (ppm) Discrimination

P  
b

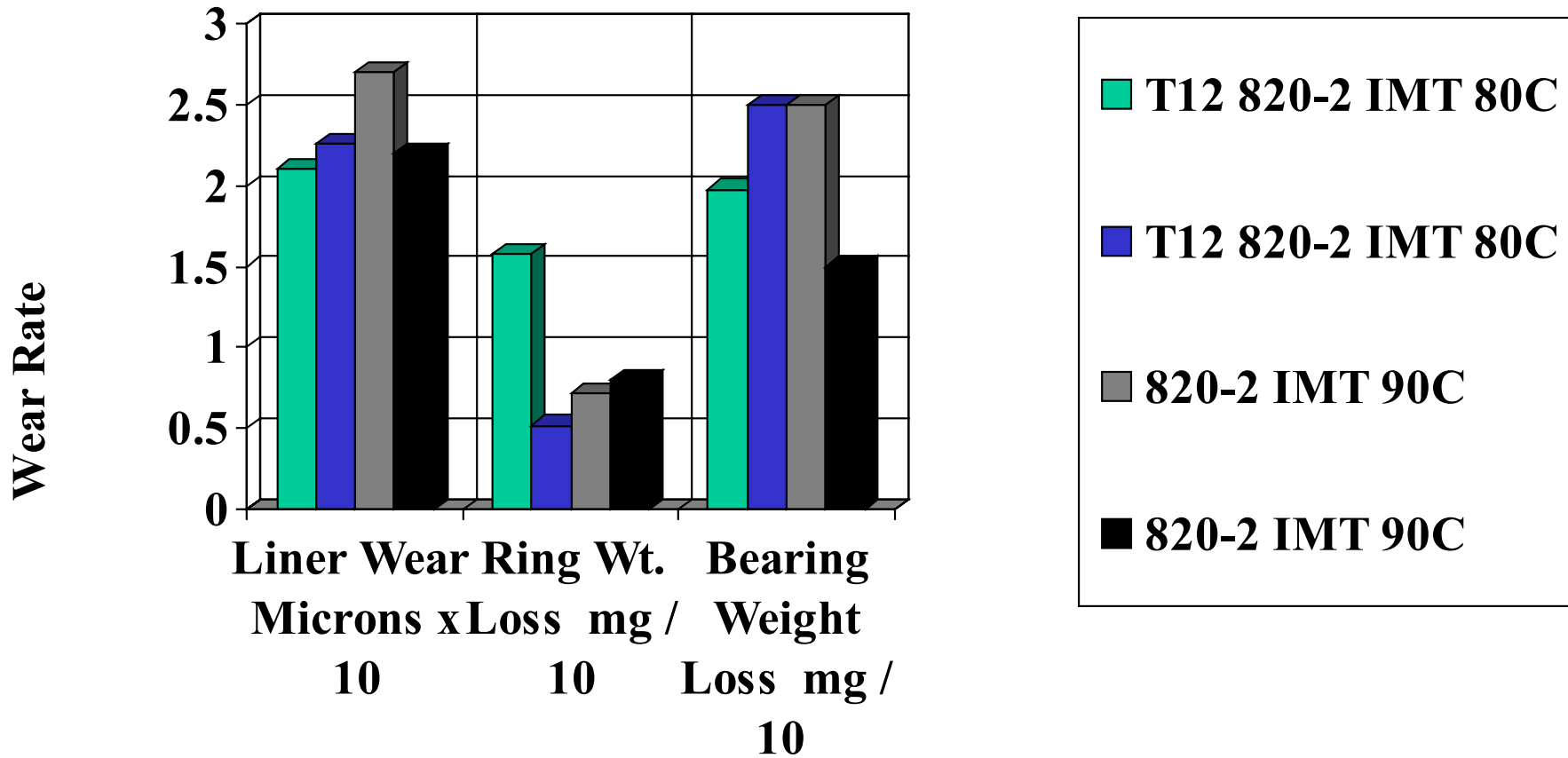


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# T12-820-2 vs. PC10 Prototype

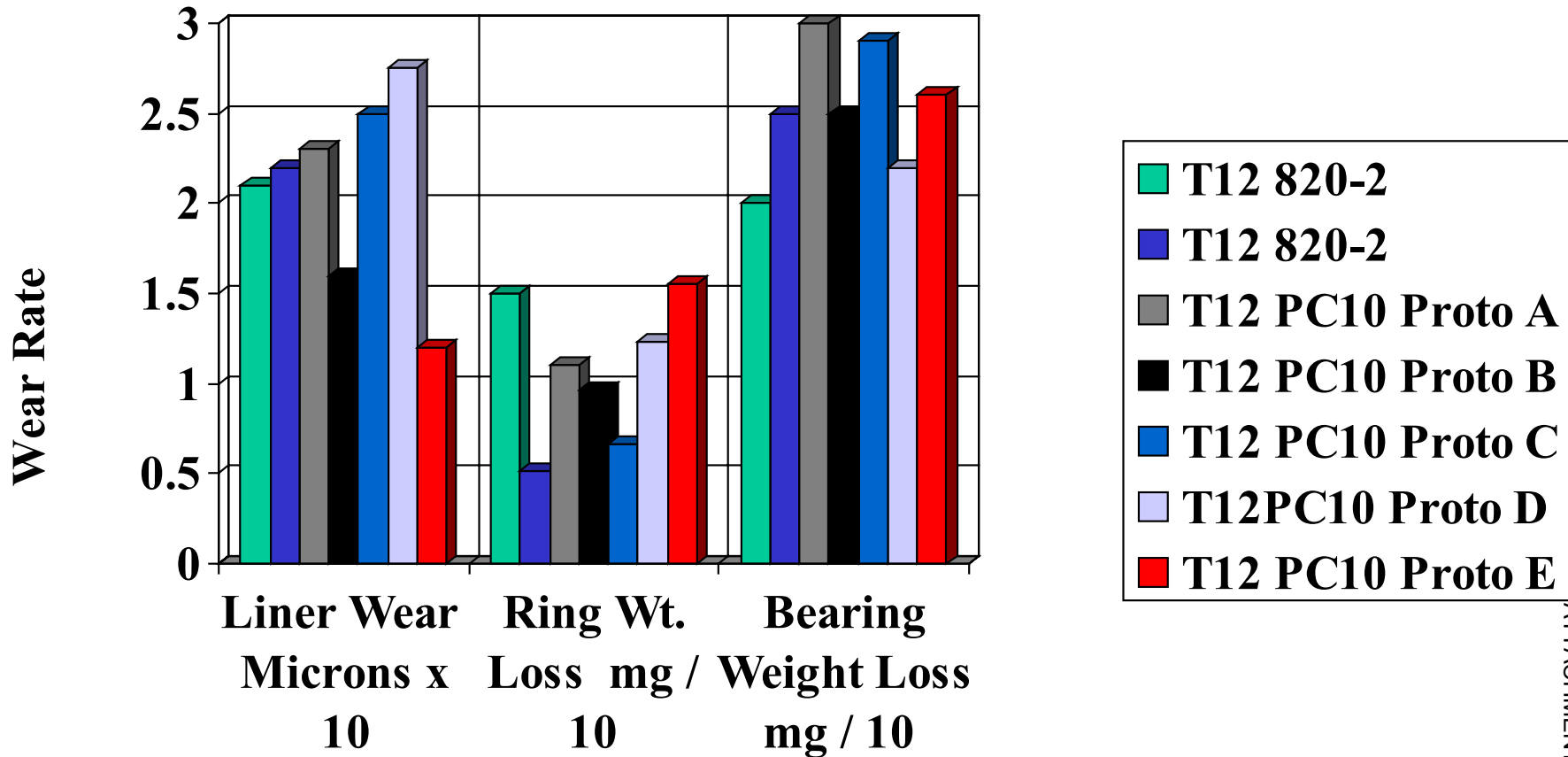


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# T12-820-2 vs. PC10 Prototype



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## T12 PC10 Engine Oil Test Development Schedule

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

