

M11-EGR Task Force Report HDEOCP

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September 20, 2000
Chicago, IL



M11-EGR (300 hr) Test Conditions:

Parameter	Unit	A (Soot)	B (Rated)
Stage Length	H	50	50
Engine Speed	r/min	1800	1600
Torque	N·m (lb·ft)	1300 (960)	1930 (1424)
Fuel Rate	Kg/hr (lb/hr)	58 (128)	64.4 (142)
Intake Manifold Air Temperature	°C (°F)	80 (176)	65.5 (150)
Coolant Out Temperature	°C (°F)	65.5 (150)	65.5 (150)
Oil Gallery Temperature	°C (°F)	115.5 (240)	115.5 (240)

250 hr soot: 8.5% - 9.5%

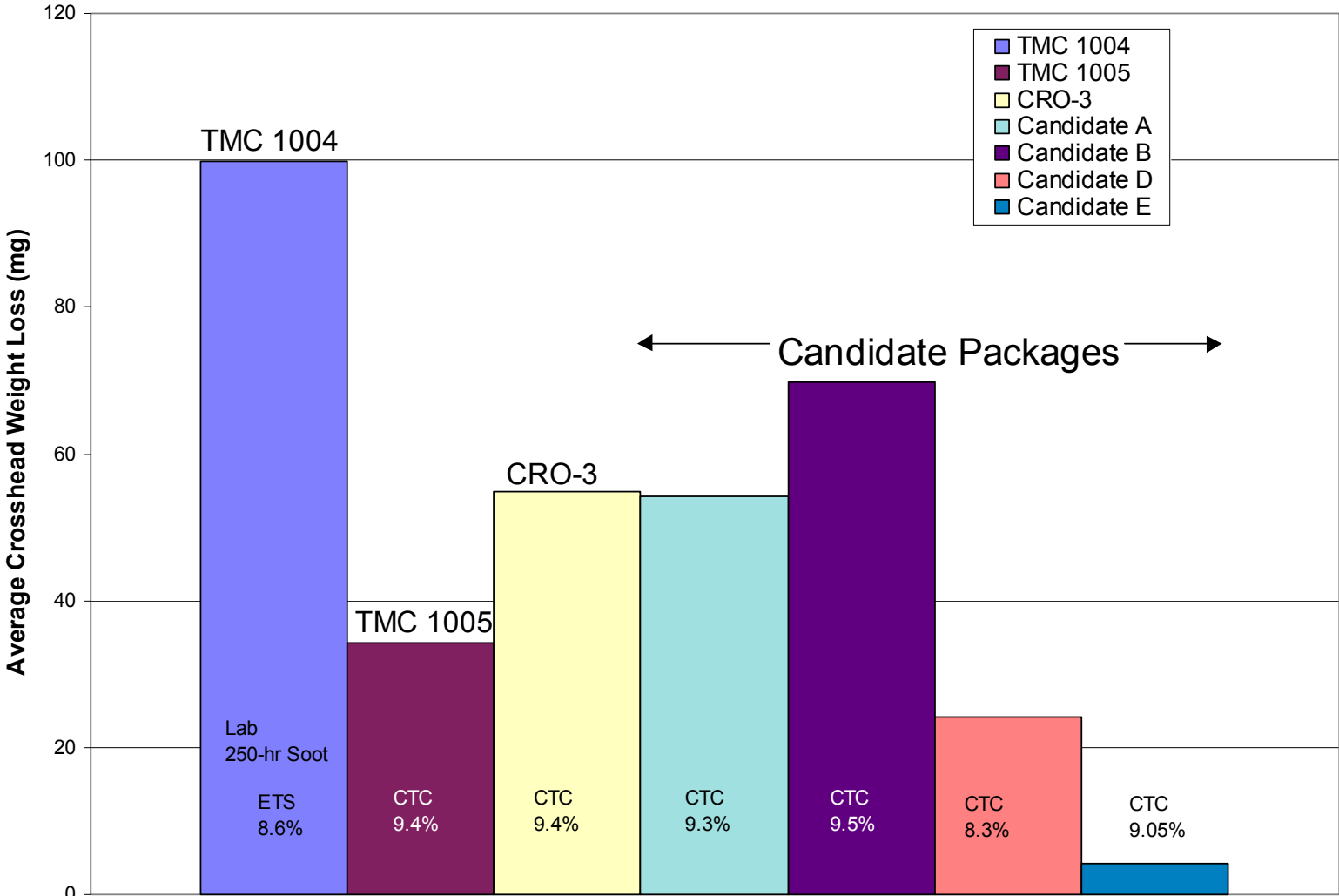
9/7/00 Task Force Mtg. Summary

- 5000 crossheads shipped to TEI
 - Batch process heat treatment
 - To be distributed to labs by 9/25
- IMT (stage A) changed from 64°C to 80°C
- Aftercooler change: K19 to Modine
 - rust concern
- IMP range parameter to be established

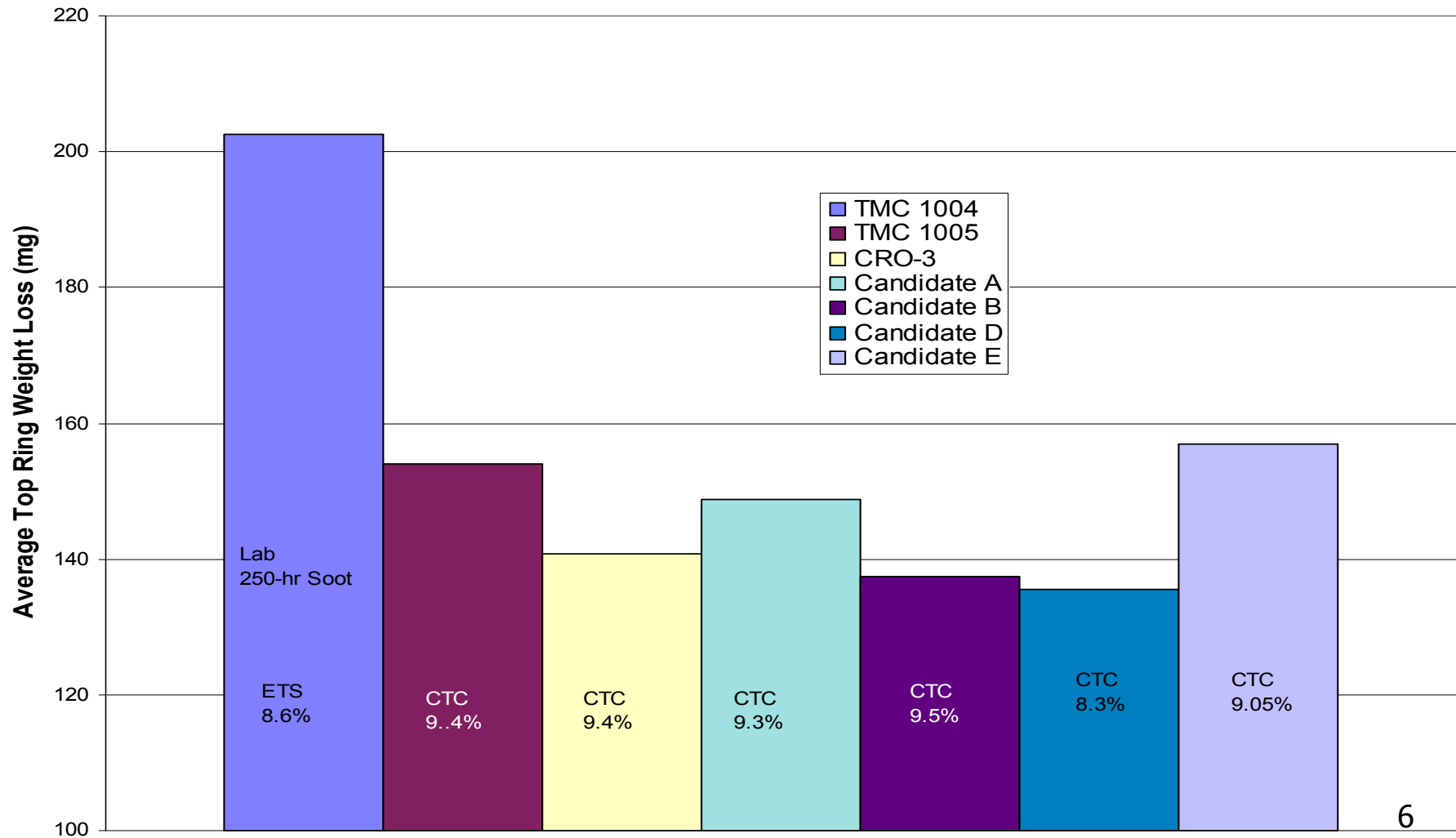
Action Plan

- Test labs must run at least two tests including at least one test incorporating the new requirements (crossheads, cooler, IMT, IMP) by 10/23/00
- Cummins to complete metallurgical evaluation of the new crosshead batch by 10/4/00
- Cummins to release ASTM formatted procedure TF by 9/22/00

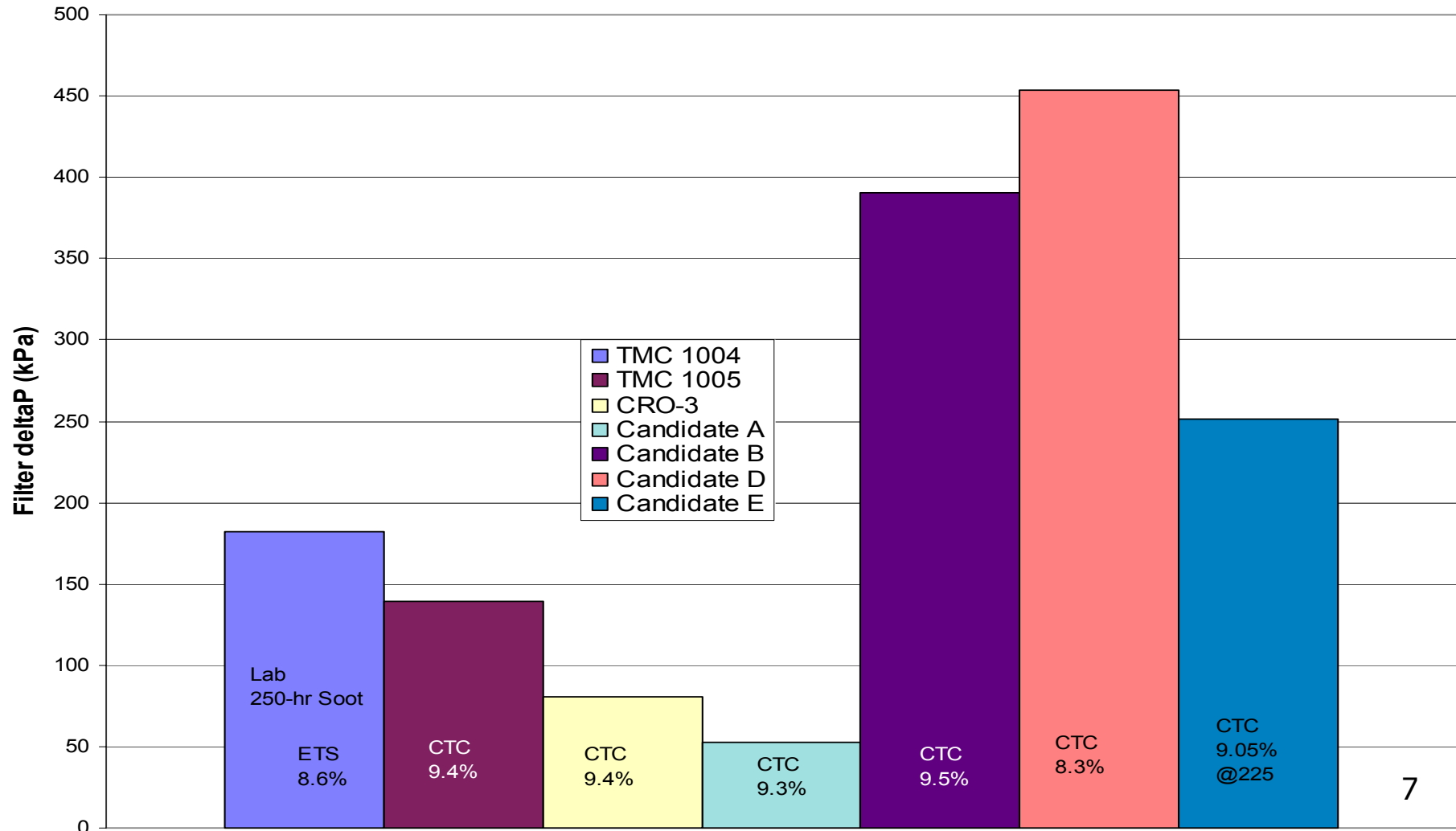
300-hr M11 EGR Test Results: Crosshead Weight Loss



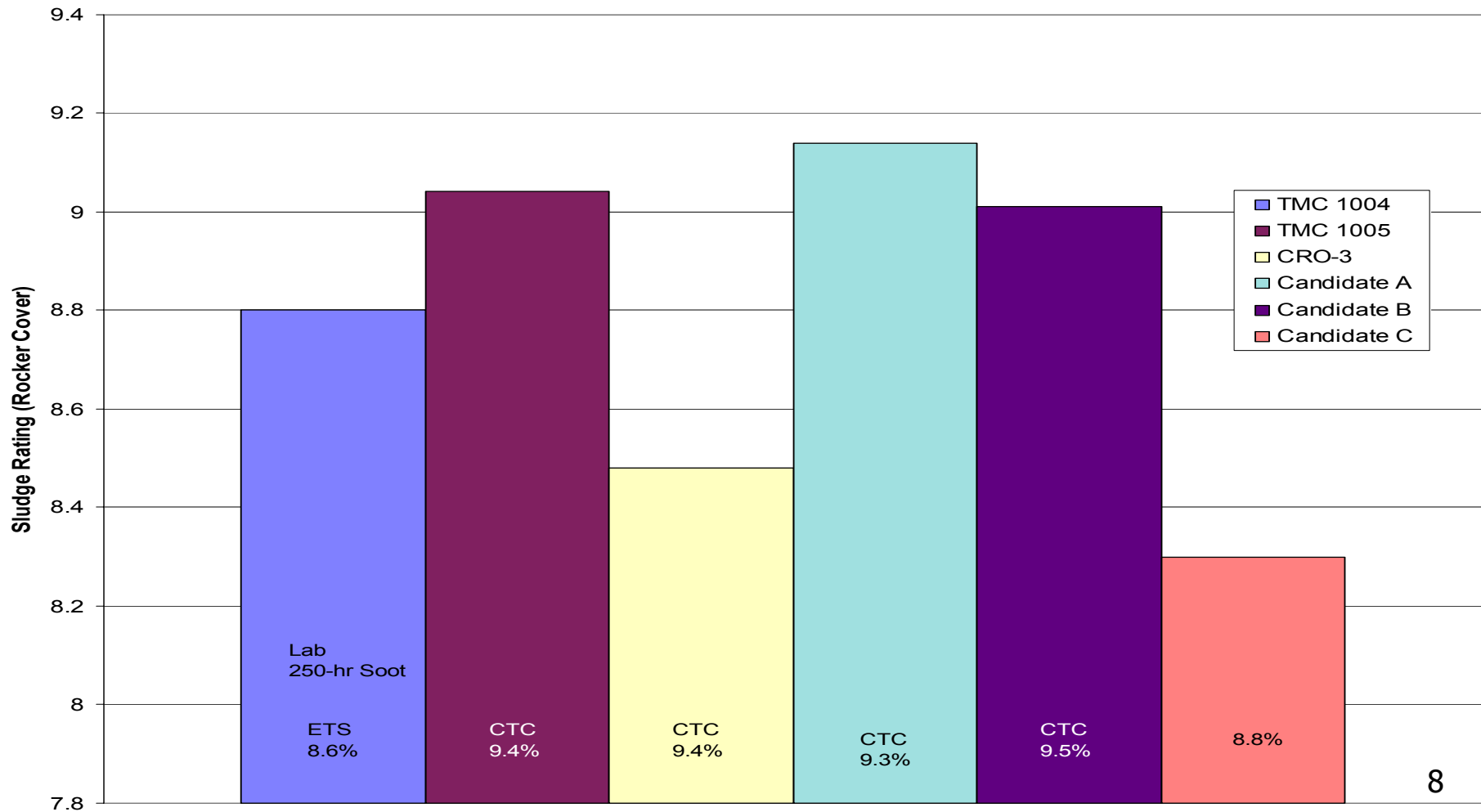
300-hr M11 EGR Test Results: Top Ring Wear



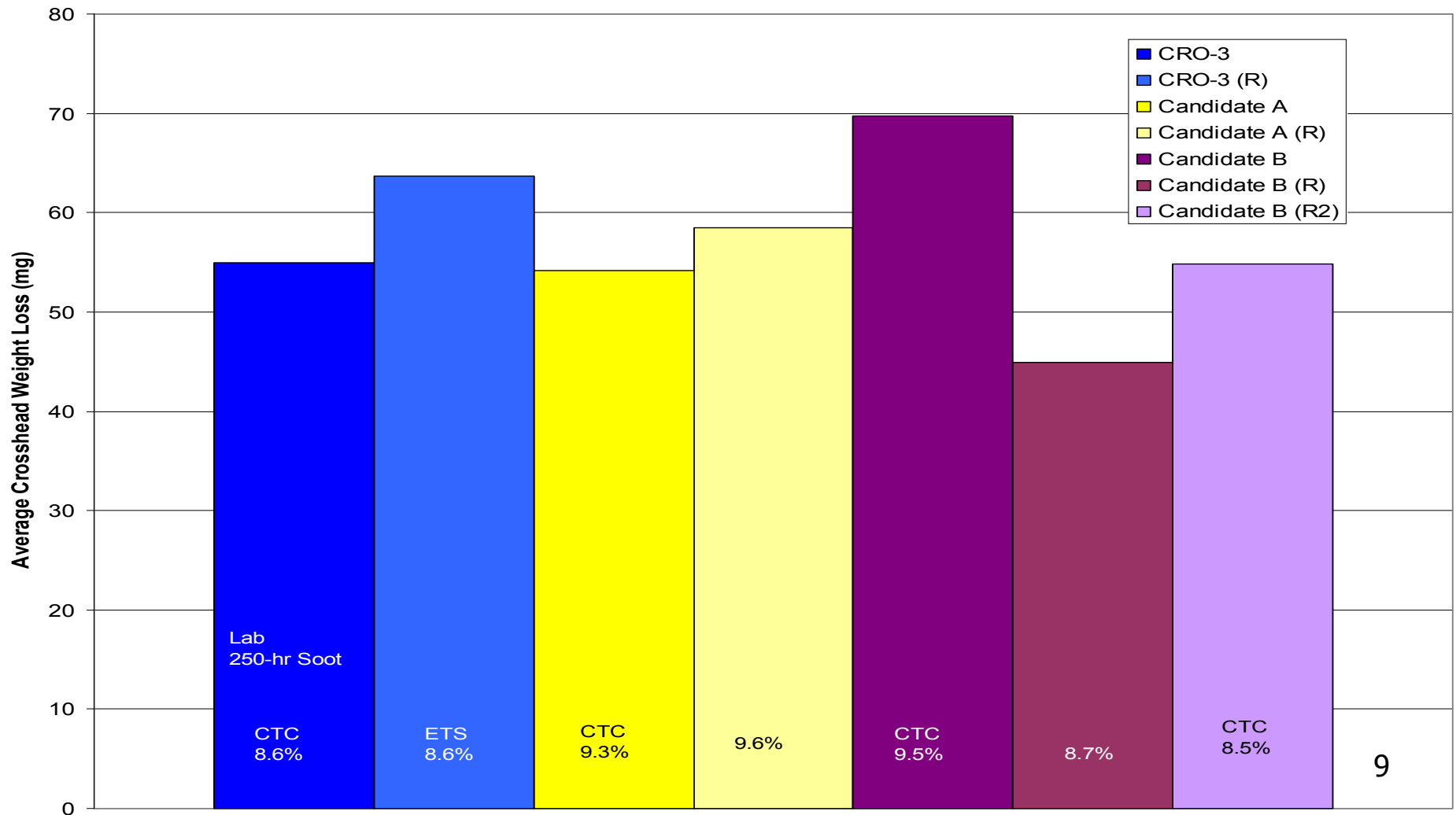
300-hr M11 EGR Test Results: Oil Filter delta P



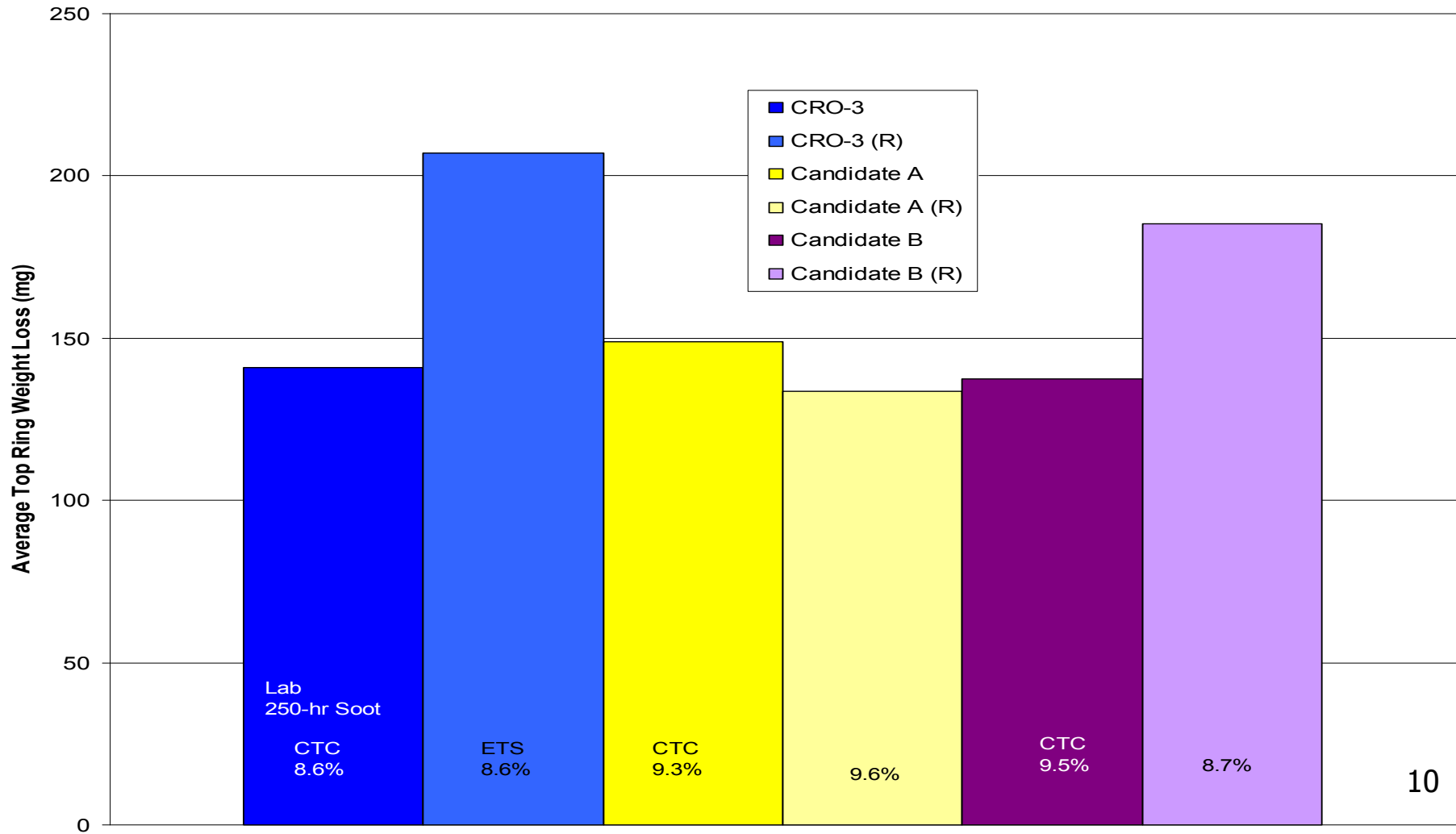
300-hr M11 EGR Test Results: Rocker Cover Sludge



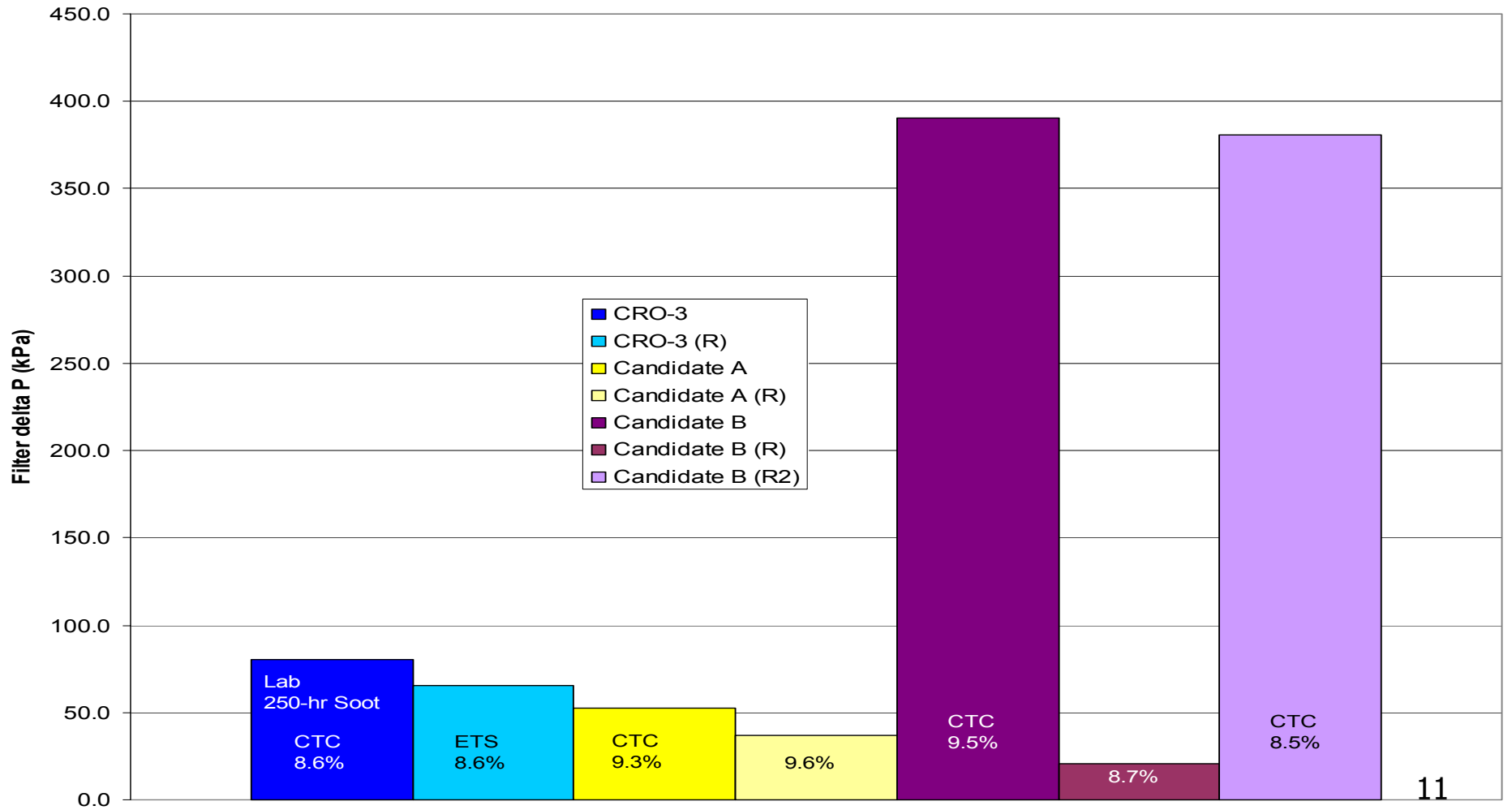
300-hr M11 EGR Precision Data: Crosshead Weight Loss



300-hr M11 EGR Precision Data: Top Ring Wear



300-hr M11 EGR Precision Data: Oil Filter delta P



300-hr M11 EGR Precision Data: Rocker Cover Sludge

