

ASTM Rater Pre-Workshop Discussions

May 2009



Rating Manuals

ASTM Headquarters supplies:

- CRC Manual 20 – Deposits
- CRC Manual 21 – Distress
 - Scales included

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Rating Manuals 20 & 21

ASTM International - Manual 20 - TMCML20 - Windows Internet Explorer

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Manual 20

Published:

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More About This Product

CRC Deposit Rating Manual — (Manual 20 supercedes CRC Manual 7, 12, 14, 16, 18, and 19). This manual represents current industry practices for all CRC Deposit Evaluations.

Manual 20
ISBN:
ISBN13:
STOCK# TMCML20

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Workshop Format

- 1st Calibration Exercise
 - 2 Composite Pistons
 - Sludge Parts
 - Left Rocker Cover Baffle
 - Varnish Parts
 - 4 Pistons
 - Left Rocker Cover Baffle

Data Review & Discussion
- 2nd Calibration Exercise
 - 2 Composite Pistons
 - Sludge Parts
 - Right Rocker Cover Baffle
 - Varnish
 - Right Rocker Cover Baffle
 - Valves (2)
 - Piston Tops (2)
 - Data Review & Discussion



Workshop Format (Continued)

- Practical Application
 - Deposits (10 small bore piston, 2 square-cut)
 - PSV (4 piston sets)
 - Varnish
 - Right & Left Rocker Cover Baffle
 - Sludge
 - Right & Left Rocker Cover
 - Right & Left Rocker Cover Baffle
 - Front Cover
 - Oil Pan & Baffle
 - Right & Left Valve Deck

Workshop Format (Continued)

- Practical Application
 - Piston Tops (8)
 - Combustion Chambers (8)
 - Intake Runners (8)
 - Oil Screens (9)

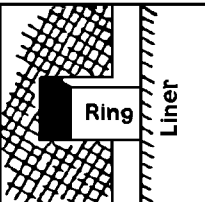
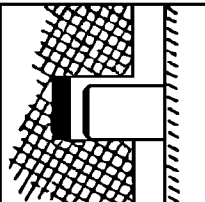
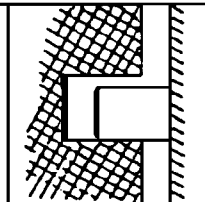
Groove Deposit Review

- Groove carbon deposits at 100% clearance fill are mostly polished. However, even lesser depths of carbon can exhibit polished areas due to excess amount of carbon on the back of the ring and relative ring movement. These deposits are deemed Heavy Carbon.

Groove Deposit Review

- Groove carbon deposits < 100% clearance fill have depth and a granular or matte surface, can be any color and are not limited to black, brown, or gray. These are deemed Light Carbon.

Groove Deposit Review

Typical Illustration			
Clearance Fill	100%	>25% <100%	≤25%
Description	HC	MC	LC
Deposit Factor (Demerit)	1.00	0.50	0.25
Deposit Factor (Merit)	0.00	0.50	0.75

HC = heavy carbon
 MC = medium carbon
 LC = light carbon



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Oil Screens

- Rate the oil screens such that if you see the screen, i.e. oil film, it is not sludge.

Volunteers

- Tony Barrera & Entire Intertek Staff for their Support
 - Thank you!!!