ASTM Rater Pre-Workshop Discussions

May 2009

Rating Manuals

ASTM Headquarters supplies:

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

Go to :   *WWW.ASTM.ORG*

| CRC Manual 20 | Search |

Rating Manuals 20 & 21

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)
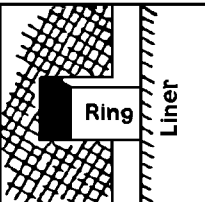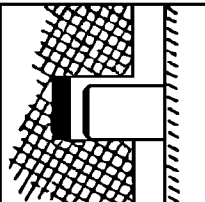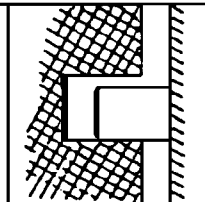   - Intake Runners (8)
    - Oil Screens (9)

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	Ring Liner		
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

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!!!