

# 1Q Test Status – 5/24

- 6 stands running, 1 in turn-around
- 12 complete tests
  - 6 valid (in TMC database)
  - 6 awaiting validation



# 1Q Challenges

- 5 oils have failed
  - 3 x M, A, D, E, and P
  - 5 have scuffed, 1 lost oil control, 1 operational
  - 28% failure rate
- 4 of 5 labs have experienced failures
- 6 of 7 stands involved



# Possible Causes

- Test too severe/Oils not robust enough
- Temperature
  - 60 °C for the 1P vs. 85 °C in the 1Q
    - Higher temperature required to avoid condensation
- Hardware Limitations
  - Lose averaging effect with Single-Cylinder engine



# Suggested Solutions

- Run a “modified 1R” test
  - Timing and duration same as 1Q
  - Oil known to scuff (PC-9J)
  - 60 °C and 85 °C
- If oil J scuffs at 85 and not at 60, temperature is a factor.
- Try 1Q test at lower temperature



# Suggested Solutions

- Measure piston deposits using either the T-10 or M-11 Tests
- Use 1P test
  - Sensitive to ash level
- Use “1R” test
  - 1Q without EGR

