#### J. A. Mc Geehan and K. L. Eiden

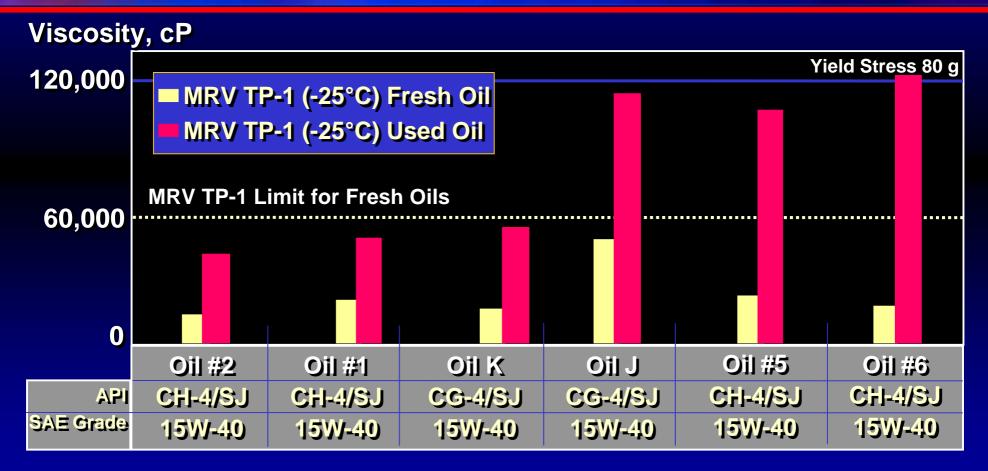
PRESENT

# Low Temperature Oil Pumpability in Emission Controlled Diesel Engines



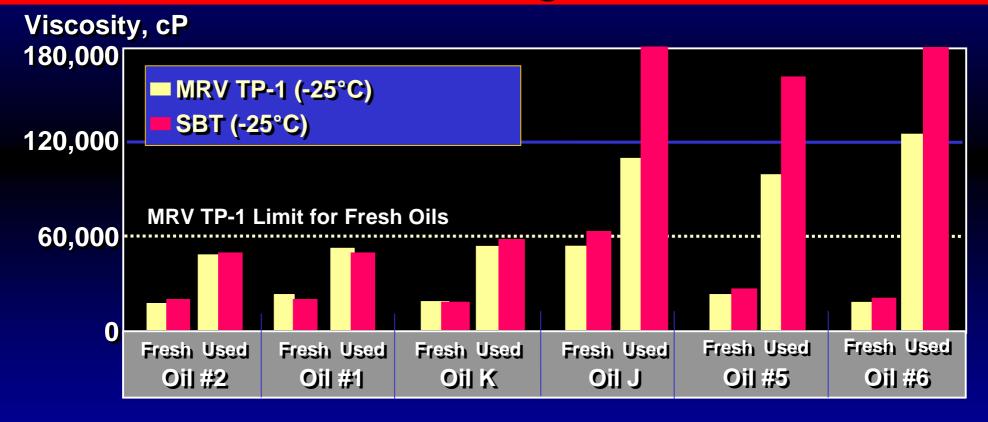
## ATTACHMENT 14, 2 OF

#### SAE 15W-40 Used Oils Containing 9% Soot 3 Passed and 3 Failed MRV TP-1



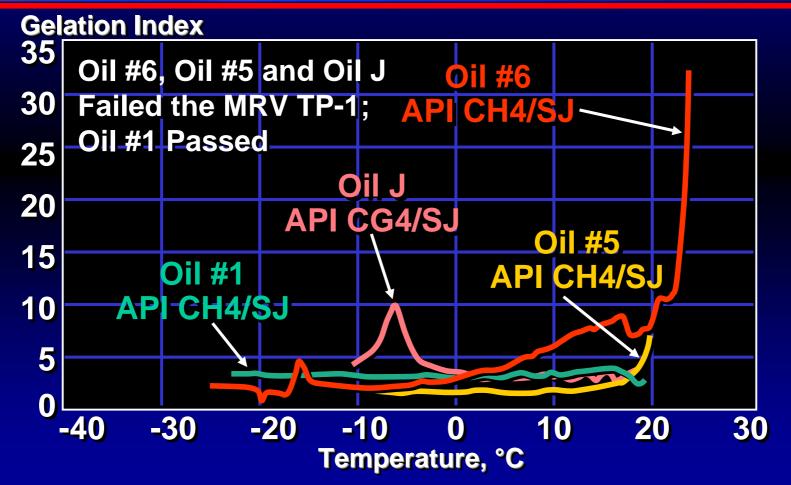
### ATTACHMENT 14, 3 OF

#### Failing Oils Have High Viscosities in MRV TP-1 & Scanning Brookfield Tests



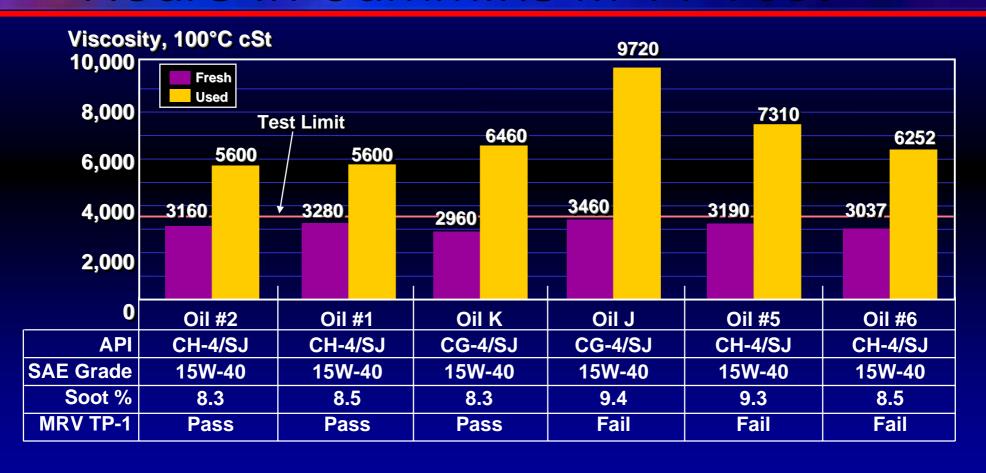
# ATTACHMENT 14, 4 OF 7

### Failing Oils Have Soot Structures Within Oils at +20 to +25°C

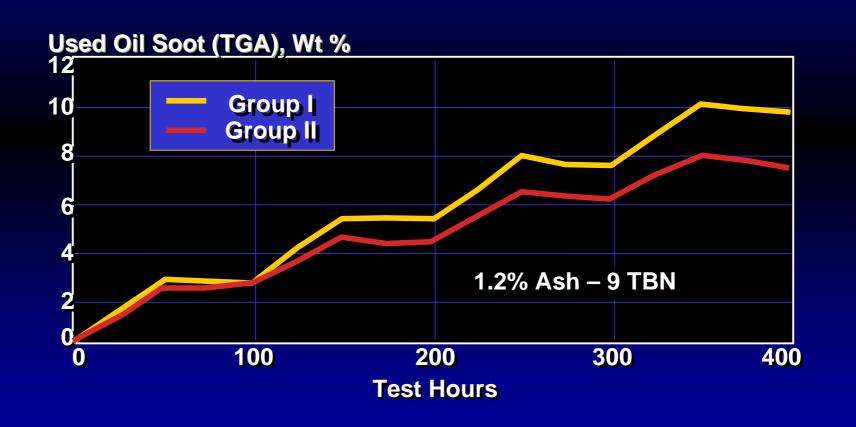


### ATTACHMENT 14, 5 OF

### Cold Crank Simulators (D 5293) of Fresh and Used Oils After 400 Hours in Cummins M-11 Test



#### Cummins M-11 High Soot Test



## ATTACHMENT 14, 7 OF 7

### MRV TP-1 Viscosities From Double Length Cummins M-11 High Soot Test

