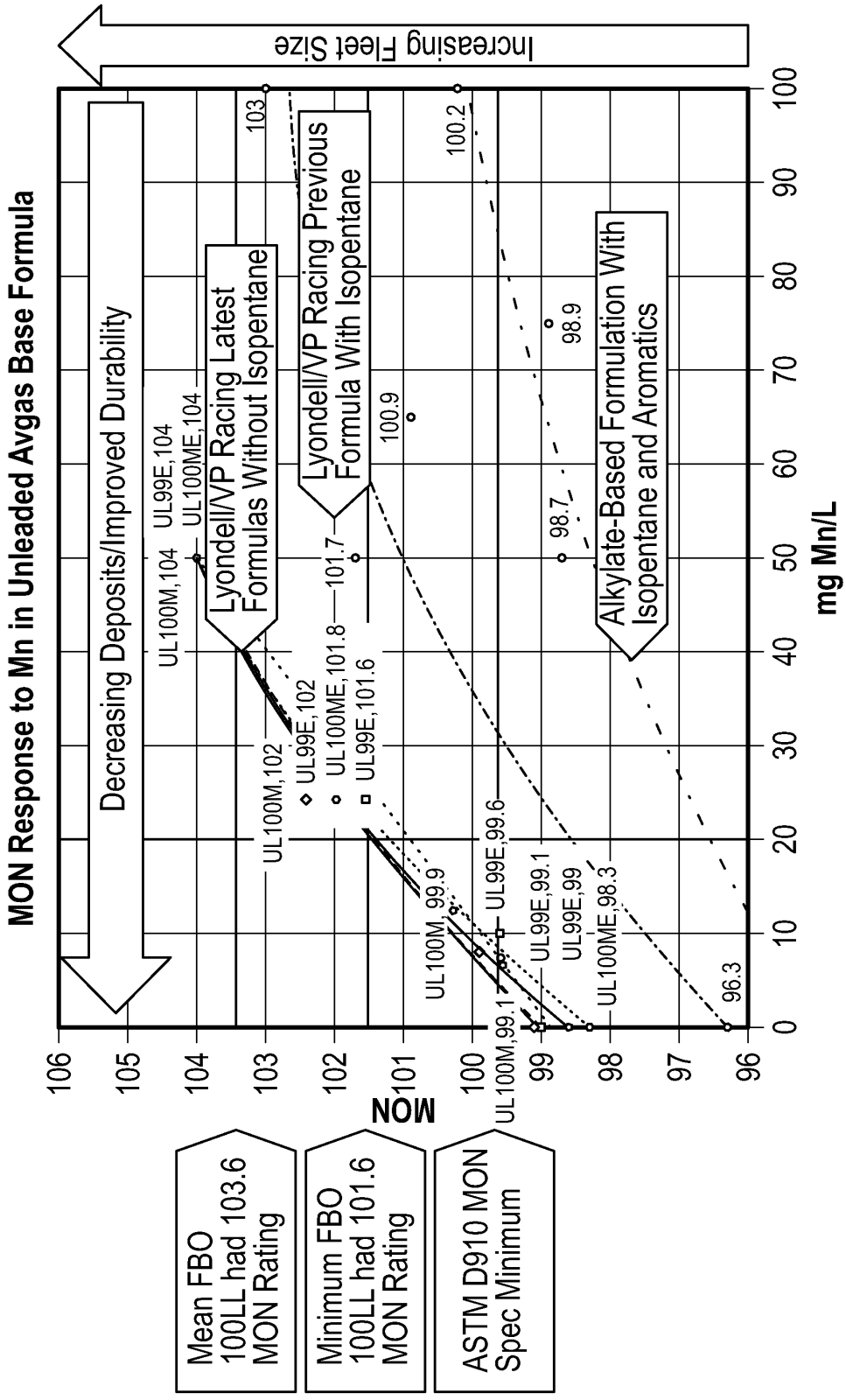

MON Response to Mn in Unleaded Avgas Base Formula
Increasing Fleet Size
Decreasing Deposits/Improved Durability
Lyondell/VP Racing Latest Formulas Without Isopentane
Lyondell/VP Racing Previous Formula With Isopentane
Alkylate-Based Formulation With Isopentane and Aromatics
UL100M,104
UL99E,104
UL100ME,104
UL100M,102
UL99E,102
UL100ME,101.8
101.7
UL99E,101.6
100.9
100.2
98.9
98.7
UL100M, 99.9
UL99E,99.6
UL99E,99.1
UL99E,99
UL100ME,98.3
UL100M,99.1
96.3
MON
mg Mn/L
Mean FBO 100LL had 103.6 MON Rating
Minimum FBO 100LL had 101.6 MON Rating
ASTM D910 MON Spec Minimum

FIG. 1

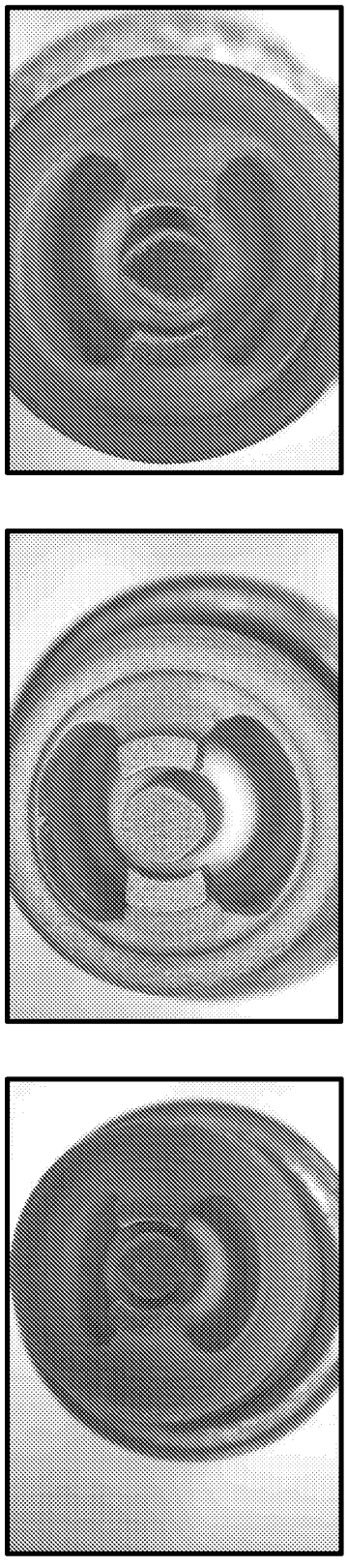


FIG. 2

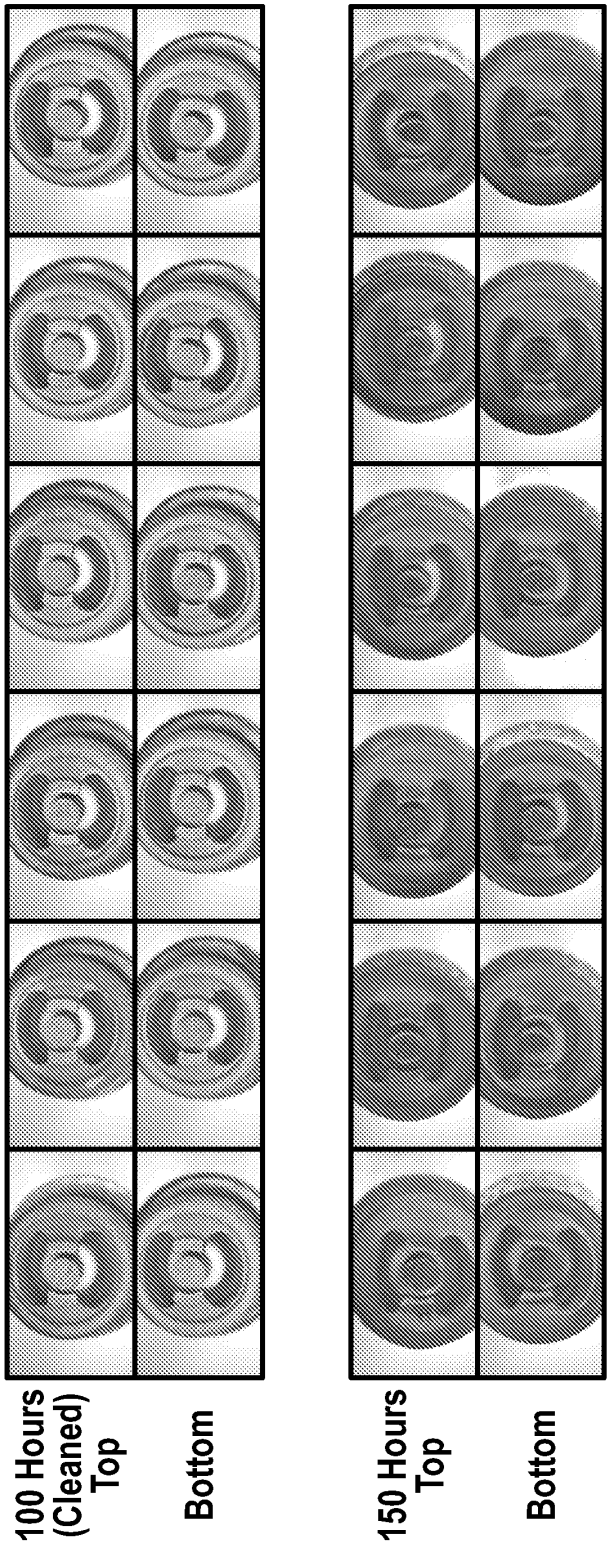


FIG. 3

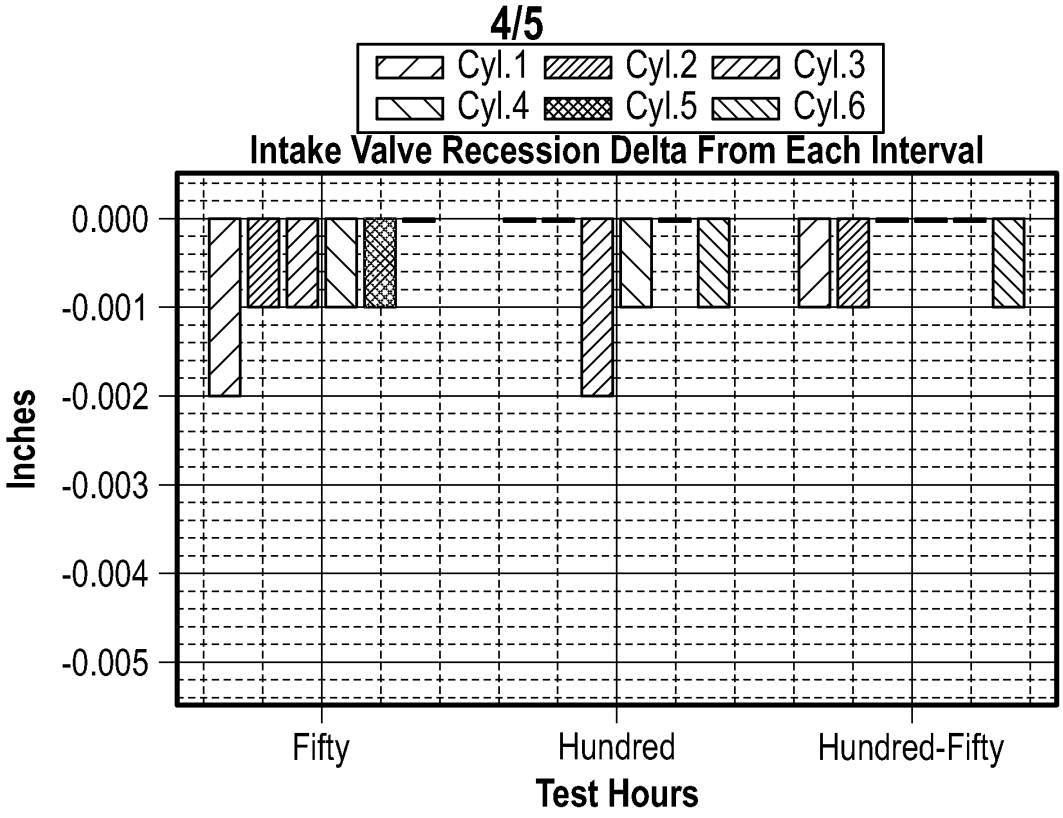

Cyl.1 Cyl.2 Cyl.3
Cyl.4 Cyl.5 Cyl.6
Intake Valve Recession Delta From Each Interval
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
Inches
Fifty
Hundred
Hundred-Fifty
Test Hours

FIG. 4A

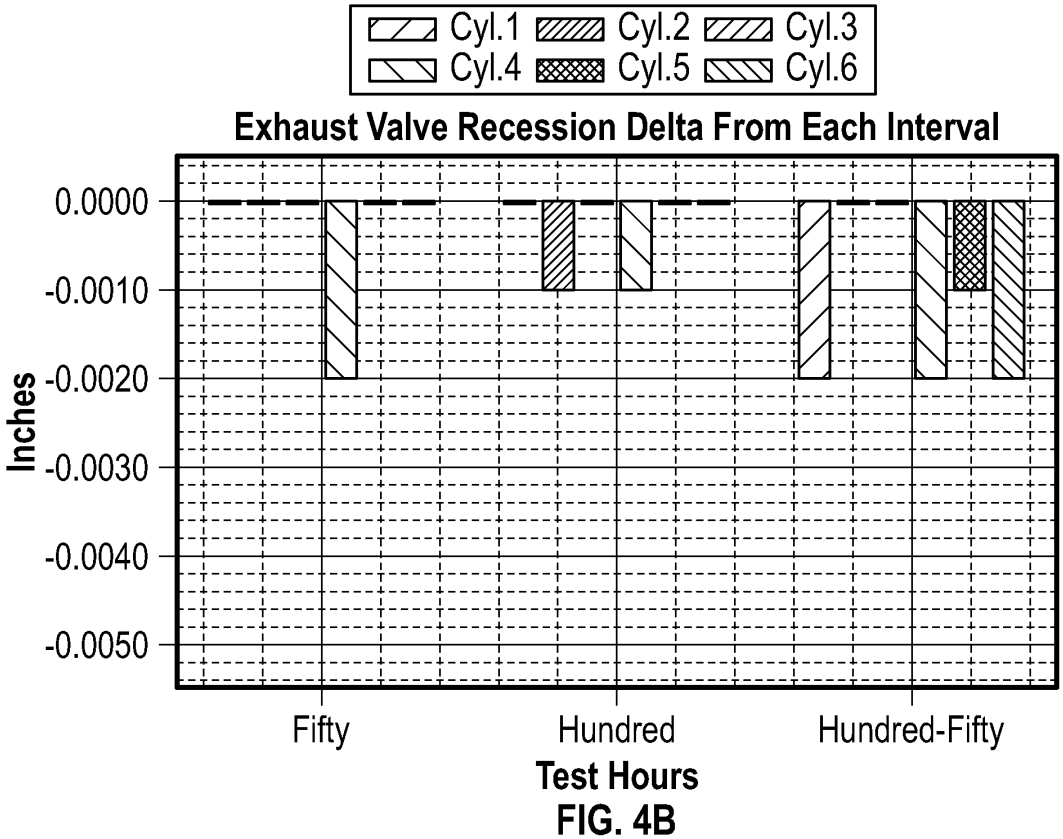

Cyl.1 Cyl.2 Cyl.3
Cyl.4 Cyl.5 Cyl.6
Exhaust Valve Recession Delta From Each Interval
0.0000
-0.0010
-0.0020
-0.0030
-0.0040
-0.0050
Inches
Fifty
Hundred
Hundred-Fifty
Test Hours

FIG. 4B

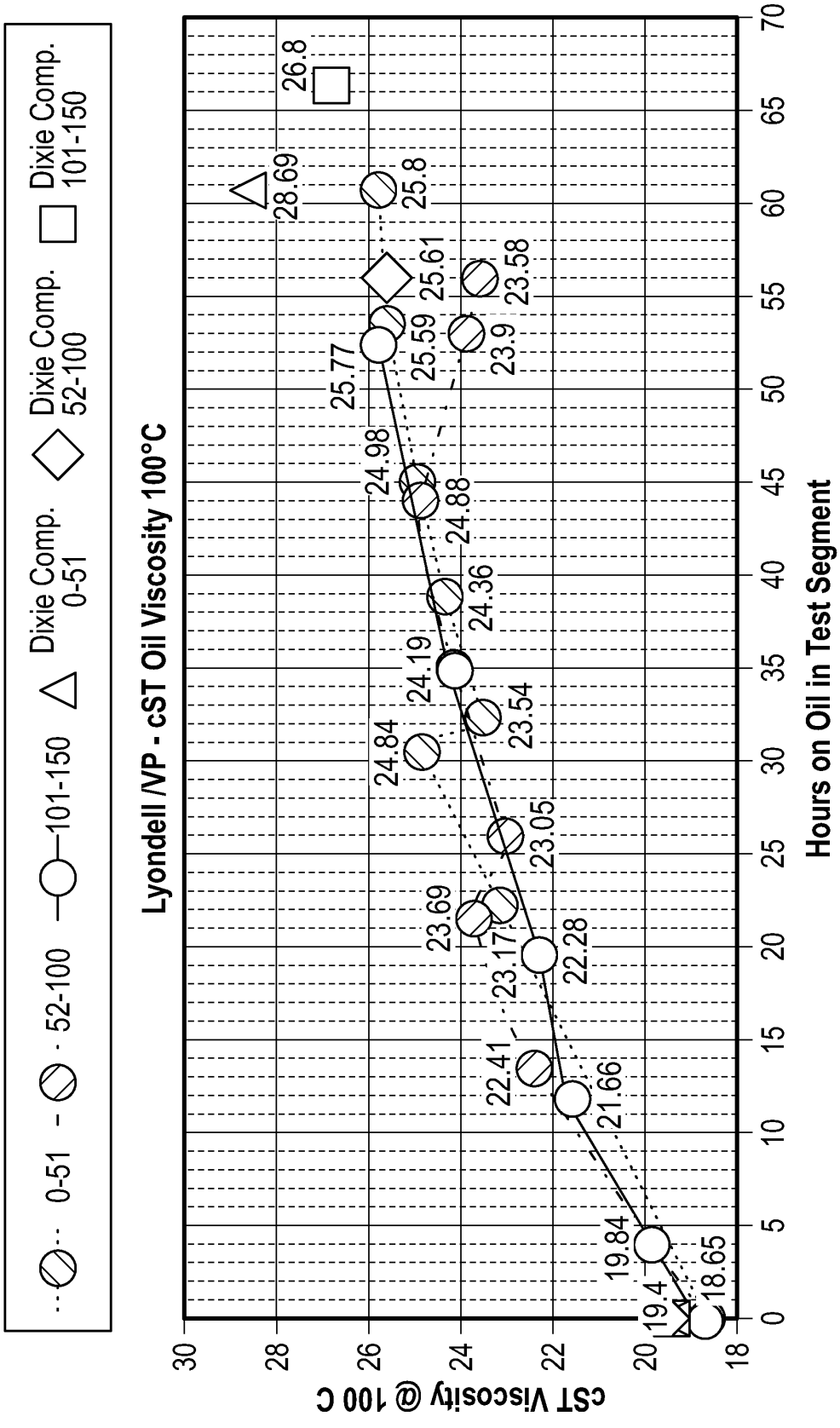

Dixie Comp. 0-51
Dixie Comp. 52-100
Dixie Comp. 101-150
Lyondell /VP - cST Oil Viscosity 100°C
cST Viscosity @ 100 C
Hours on Oil in Test Segment
30
28
26
24
22
20
18
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
26.8
28.69
25.8
25.61
23.58
25.77
25.59
23.9
24.98
24.88
24.36
24.19
24.84
23.54
23.05
23.69
23.17
22.28
22.41
21.66
19.84
19.4
18.65

FIG. 5