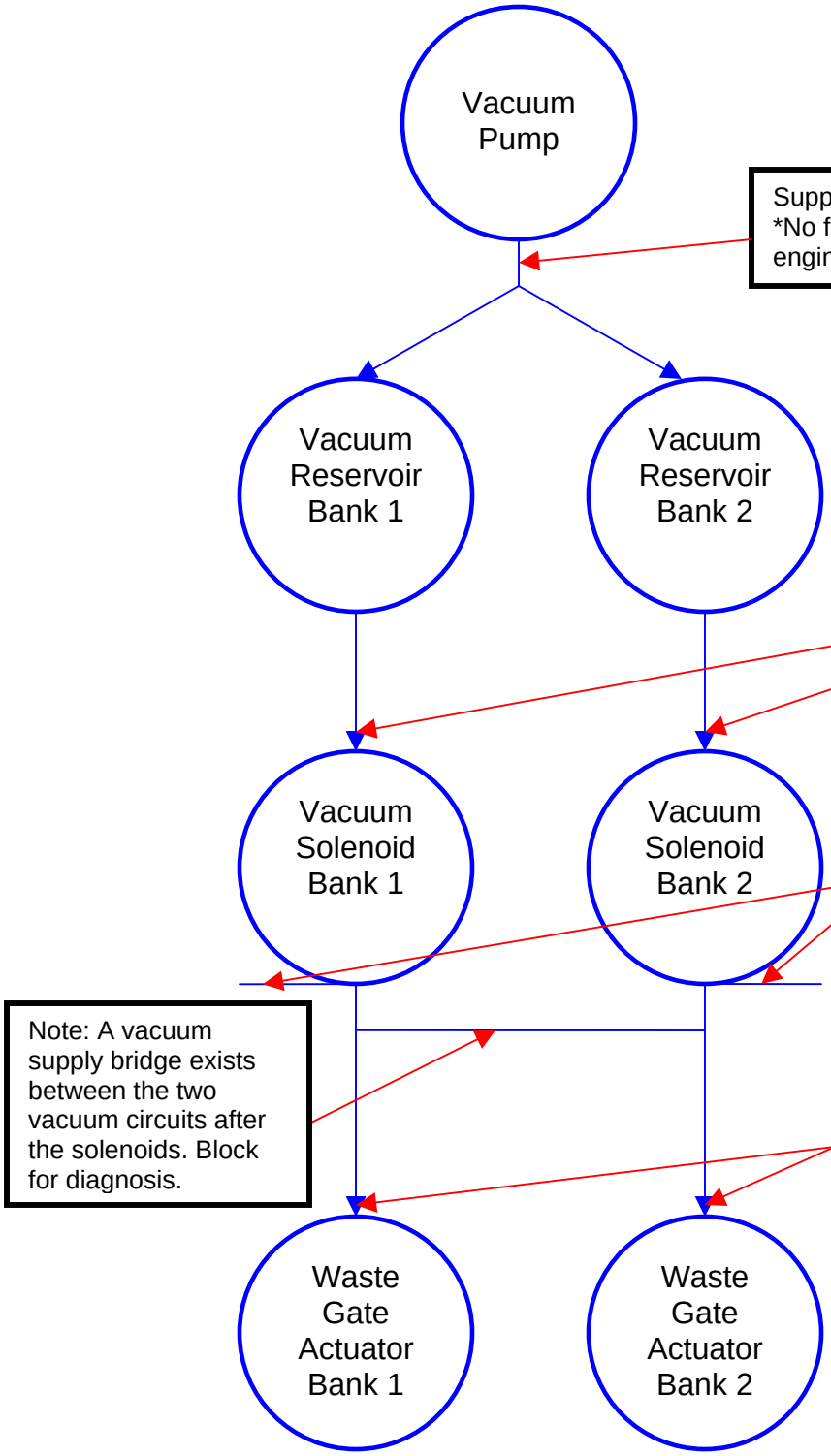
N54 Wastegate Control Vacuum Readings with the Engine at Operating Temperature and No Road Speed



Supply 30 in. hg – constant.
*No fluctuation at any RPM or change in engine load.

Canisters should be 22-25" hg at idle

Idle = 30 in. hg

3K RPM No Load = 30 in. hg

Idle to 4K RPM (heavy acceleration.) = 30 in. hg

Note: Each solenoid has an internal vent to the atmosphere, so that the wastegate can open under spring pressure after the vacuum supply has been deactivated. A measurement cannot be made at this location.

Note: A vacuum supply bridge exists between the two vacuum circuits after the solenoids. Block for diagnosis.

Start engine; allow to idle < 1 minute = 12 -14 in. hg

Engine at idle > 1 minute = 14 - 17 in. hg

3K RPM No load = 17 - 20 in. hg

Idle to 4K RPM (heavy acceleration) = 10 - 13 in. hg

E90/E92/E93 (335i and 335xi), E89x-08-03-530 or higher or E60/E61 (535i and 535xi) ,E060-08-03-525 or higher built up to 03/08 that have been programmed with Progman versions V29.2 – V32.0: use the values below.

NOTE: Does not apply to vehicles produced up to 09/07 where the “Wastegate valve conversion” as per SI B11 13 07 was performed, or to vehicles produced 09/07 – 03/08 programmed with V32.1 or higher. In such cases, use the values above.

Start engine allow to idle < 1 minute = 0.0 in. hg

Engine at idle > 1 minute = 0.0 in. hg

3K RPM No load = 17 - 20 in. hg

Idle to 4K RPM (heavy acceleration.) = 10 -13 in. hg

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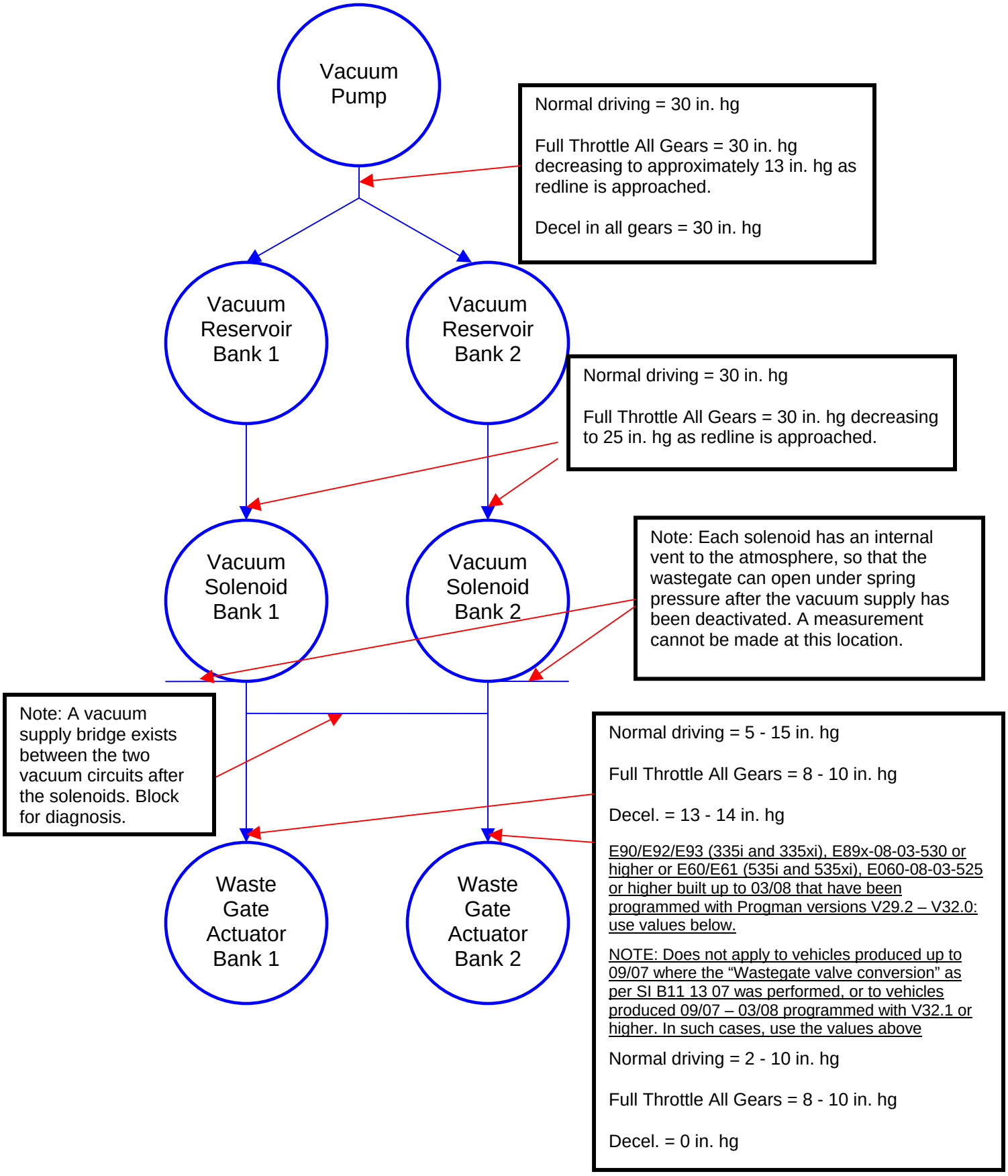

Vacuum/Boost Measurement

Measured with a vacuum/boost gauge connected to one of the pop-off (blow off) valves using a “T” connection; both valves must stay in operation during the measurement.

Idle:
18 in. hg (44.0 mbar)

Normal driving (30-45mph):
10 in hg - 0.0 in. hg (24.0 mbar – 0.0 mbar), varying

Deceleration from 35 mph:
22- 24 in. hg (54.0 mbar – 59.0 mbar)

Maximum Boost Measurement:
8.7 PSI - 9.4 PSI (0.60 bar -.065 bar) full throttle 1st and 2nd gear, maximum of 11.6 PSI (0.8) under heavy load