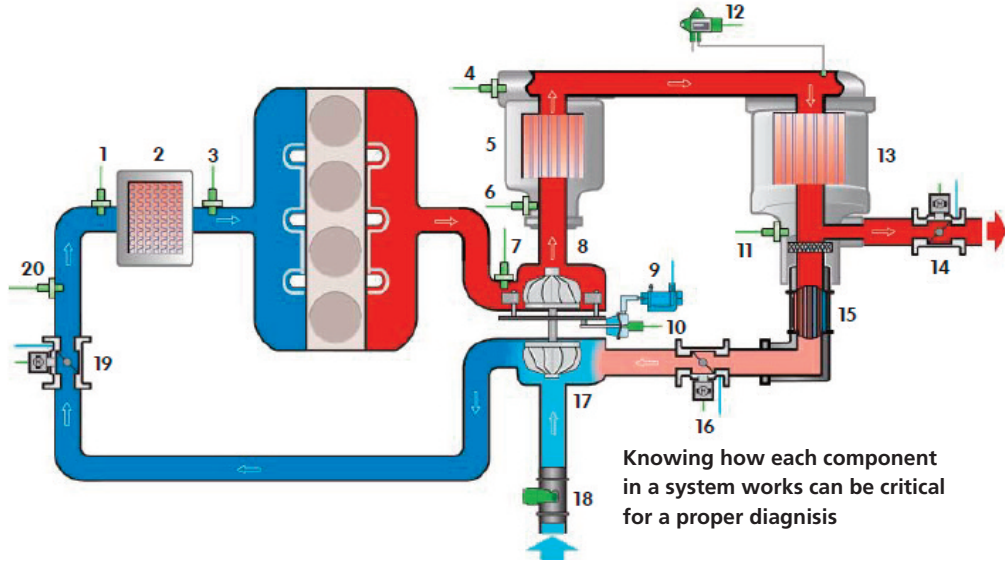


How does it boost? - Turbo boost knowledge critical to a proper diagnosis



Knowing how each component in a system works can be critical for a proper diagnosis

The importance of knowing the basics on what every system you are diagnosing is becoming more important. Recently, a garage called the Technical helpline with a boost issue. They had already replaced the boost control solenoid due to a stored fault code, but this did not improve the boost pressure issue. They decided the turbocharger was the main problem and replaced it with a

rebuilt unit. This did not solve the boost control fault code either. We asked for some basic tests on the control solenoid:

1. Supply voltage to solenoid
2. Control signal to solenoid
3. Vacuum supply

They tested these and reported all ok, but we insisted on actual values for all of these, before deciding on the next path to take.

This is where we found the issue, vacuum to the solenoid was only 8 inches of Mercury (inHg). The technician thought the vacuum reading was OK, and did not know the correct minimum vacuum should be much higher. We expected a minimum of 25 inHg, and preferably 30 inHg.

A test plan was given to find the reason for this low vacuum. The EGR valve diaphragm was found to be leaking and the vacuum in the complete system was too low. After replacing this component, the system vacuum was 30 inHg and the boost was restored.

Knowing your system and the expected data is very important for fast accurate diagnosis. This System based approach to diagnosis can be a valuable tool, giving the Technician greater skills across multiple makes.