

WHY WON'T THIS BLASTED ENGINE START?

Hard starting problems of newly overhauled diesel engines are time consuming and frustrating, as you well know!

Field observations indicate two prevailing reasons:

- Final/actual compression ratio after overhaul—this has to do with piston protrusion and recession of the valve face/head position in the head. The position of the piston at TDC is critical to the compression ratio and subsequently the creation of sufficient heat to reach the flash point of diesel fuel.
- Electrical deficiency resulting in poor starter performance—electrical power deterioration due to poor contacts, insufficient cable size, distance from the power source, and poor batteries, result in low cranking speed.

Other factors may include:

- Quantity of fuel—regulated by the fuel injection system.
- Quality of fuel—self-explanatory. Ignition quality of fuel should not be a problem, but...? The higher the cetane number (index), the better the ignition.
- Vaporizing of fuel with air is dependent upon condition of injectors, fuel pressure at nozzle, and availability of air.
- Timing of fuel injection in accordance with factory instructions. Number of degrees BTDC.
- Heat—the result of compressing proper quantity of air relative to fuel at the proper piston speed to create heat.