

Problem	Component check sequence
Engine will not start	<ul style="list-style-type: none">. Electrical connections - engine/battery• Immobilizer. Pre-heating system• Incorrect valve timing• Engine mechanical condition. Air in fuel system• Fuel level in tank low. Condition of fuel/fuel filter/fuel pipes. Air filter/intake system - blockage. Fuel injection pump timing. Access diagnostic trouble codes. Fuel shut-off solenoid - MSA 15.6• Fuel shut-off solenoid relay - MSA 15.6• Fuel quantity adjuster. Low pressure fuel delivery pump(s) - some models• Low pressure fuel delivery pump relay(s) - some models. Crankshaft position (CKP) sensor. Fuel injection pump• Exhaust system/catalytic converter - blockage• Engine management system - connections/wiring. Engine control (EC) relay. Engine control module (ECM) programming. Fuel injection pump control module• Engine control module (ECM)
Engine difficult to start - engine cold	
Engine difficult to start - engine warm	
Engine starts then stops	
Idle speed too low	
Idle speed too high	
Vibration at idle	
Erratic idling	
Frequent stalling/cutting out	
Hesitation/surging	
Lack of power	
Excessive fuel consumption	
Engine knocking	
Misfire	
Black smoke	
VWhite or blue smoke	
Running on	

