054JF–45

PROBLEM SYMPTOMS TABLE

Use the table below to help determine the cause of the problem symptom. The potential causes of the symptoms are listed in order of probability in the ”Suspected Area” column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

Symptom	Suspected Area	See Page
Engine does not crank (does not start)	1. Starter	—
	2. ST relay	—
	3. ECT sensor	—
Difficult to start with cold engine	1. Engine difficult to start or stalling	05–666
	2. Starter signal circuit	05–654
	3. Pre–heating control circuit	05–643
	4. Injector	11–47
	5. Fuel filter	11–121*
	6. Compression	14–186*
	7. ECM	01–36
	8. Supply pump	11–100*
	9. Fuel pressure sensor	10–17
	10. Diesel throttle body assy	10–17
	11. EDU (relay)	10–26*
	12. Battery deteriorated	—
	13. Fuel with low cetane number used	—
	14. Fuel frozen	—
	15. Air mixed into fuel pipe	—
Difficult to start with warm engine	1. Engine difficult to start or stalling	05–666
	2. Starter signal circuit	05–654
	3. Injector	11–47
	4. Fuel filter	11–121*
	5. Compression	14–186*
	6. ECM	01–36
	7. Supply pump	11–100*
	8. Fuel pressure sensor	10–17
	9. Diesel throttle body assy	10–17
	10. EDU (relay)	10–26*
	11. Air mixed into fuel pipe	—
	12. Battery deteriorated	—
Engine stalls soon after starting	1. Engine difficult to start or stalling	05–666
	2. Fuel filter	11–121*
	3. Injector	11–47
	4. ECM power source circuit	05–649
	5. ECM	01–36
	6. Supply pump	11–100*
	7. Fuel pressure sensor	10–17
	8. Diesel throttle body assy	10–17
	9. Air mixed into fuel pipe	—
	10. Immobilizer system activated	—
Engine stalls (other than the condition listed above)	Engine difficult to start or stalling	05–666
Abnormal initial idling (poor idling)	1. Rough idling or excessive engine vibration	05–688
	2. Fuel filter	11–121*
	3. Injector	11–47
	4. ECM	01–36
	5. Supply pump	11–100*
	6. Fuel pressure sensor	10–17
	7. Mass air flow meter deteriorated	—
	8. A/C’s signal circuit to ECM open and generator’s signal circuit to ECM open	—
	9. Low quality fuel	—

Symptom	Suspected Area	See Page
High engine idling speed (poor idling)	1. Rough idling or excessive engine vibration	05–688
	2. A/C signal circuit	—
	3. Injector	11–47
	4. Stater signal circuit	05–654
	5. ECM	01–36
	6. Supply pump	11–100*
	7. Accelerator pedal	10–25*
	8. Fuel pressure sensor	10–17
	9. Speed sensor circuit open	05–582
Low engine idling speed (poor idling)	1. Rough idling or excessive engine vibration	05–688
	2. A/C signal circuit	—
	3. Injector	11–47
	4. EGR system	12–19
	5. Compression	14–186*
	6. Valve clearance	14–190*
	7. Fuel line (air bleeding)	—
	8. ECM	01–36
	9. Supply pump	11–100*
	10. Fuel pressure sensor	10–17
	11. Diesel throttle body assy	10–17
	12. Mass air flow meter deteriorated	—
Rough idling (poor idling)	Rough idling or excessive engine vibration	05–688
Hunting with hot engine (poor idling)	1. Injector	11–47
	2. ECM power source circuit	05–649
	3. Compression	14–186*
	4. Fuel line (air bleeding)	—
	5. Valve clearance	14–190*
	6. ECM	01–36
	7. Supply pump	11–100*
	8. Fuel pressure sensor	10–17
	9. Diesel throttle body assy	10–17
Hunting with cold engine (poor idling)	1. Injector	11–47
	2. ECM power source circuit	05–649
	3. Compression	14–186*
	4. Fuel line (air bleeding)	—
	5. Valve clearance	14–190*
	6. ECM	01–36
	7. Supply pump	11–100*
	8. Fuel pressure sensor	10–17
	9. Diesel throttle body assy	10–17
Hesitation / Poor acceleration (poor driveability)	1. Lack of power or hesitation	05–699
	2. Injector	11–47
	3. Fuel filter	11–121*
	4. EGR system	12–19
	5. Compression	14–186*
	6. ECM	01–36
	7. Supply pump	11–100*
	8. Fuel pressure sensor	10–17
	9. Diesel throttle body assy	10–17
	10. Accelerator pedal	10–25*
	11. Turbocharger system	13–1
Knocking (poor driveability)	Engine knocking or rattling	05–713

Symptom	Suspected Area	See Page
Black smoke emitted (poor driveability)	1. Black smoke emitted	05–676
	2. EGR system	12–19
	3. Injector	11–47
	4. Accumulation in exhaust system	—
White smoke emitted (poor driveability)	1. EGR system	12–19
	2. Injector	11–47
	3. Fuel filter	11–121*
	4. ECM	01–36
	5. Supply pump	11–100*
	6. Fuel pressure sensor	10–17
	7. Diesel throttle body assy	10–17
	8. Pre–heating control circuit	05–643
	9. Low quality fuel	—
Surging / Hunting (poor driveability)	1. Injector	11–47
	2. ECM	01–36
	3. Supply pump	11–100*
	4. Fuel pressure sensor	10–17
	5. Turbocharger assy	13–1

*: Refer to RM990E