

DIAGNOSTIC AND FAULT CODES

GENERAL

MONITORING SYSTEM

This system monitors the electronic components of the EMS (engine management system), the multifunction gauge, and other components of the electrical system to detect if they are faulty or defective. The monitoring system becomes active when the START button is pressed.

NOTE: Some components require the engine to be running to be monitored (fuel injectors for example).

The following components or functions are monitored.

EMS MONITORING
Battery voltage
EMS sensors (TAS, TPS, CPS, CAPS, MAPTS, CTS, OPS). Throttle actuator, ignition coils and fuel injectors
ECM
CAN
Engine starter solenoid (SD)
Fuel pump (FP)
Multifunction gauge (MG)
Cooling Fan Module (CFM)
Eco Mode Switch (ECO)
Radio Frequency Identification (RFID)
Relays

MULTIFUNCTION GAUGE MONITORING
Multifunction gauge
Light Switch
Vehicle Speed Sensor (VSS)
MODE switch
CAN
Fuel level sensor
ECM

When a malfunction is currently detected, the related electronic module:

- Sets an active fault code.

- Adapts the proper protection strategy according to the failure.
- Sends out warning signals to the multifunction gauge which provides beeper codes, fault indicators and fault messages to inform the rider of a particular condition.

When a minor or transient fault occurs, the fault and beeper will cease automatically if the condition that caused the fault no longer exists.

If a minor fault is active, the engine will operate without a noticeable loss of performance.

Releasing the throttle and letting the engine return to idle speed may allow normal operation to resume. If this does not work, try the following:

- Remove tether cord from the engine cut-off switch.
- Wait 3 minutes to allow the ECM to shut down.
- Start engine.
- Check if the fault code is still active.

The electronic system will react differently depending on the fault type. If a severe failure occurs, the engine may not be allowed to be started. In other cases, the engine may operate in limp home mode (reduced RPM) or not be affected at all.

These strategies are used to protect the engine system from damage and to maintain safe operation of the vehicle.

Section 04 ENGINE MANAGEMENT SYSTEM

Subsection 04 (DIAGNOSTIC AND FAULT CODES)

Engine Overheat Protection

COOLANT TEMPERATURE	ENGINE OPERATING CONDITION	EMS ACTION
Above 70°C (158°F)	Idling more than: <ul style="list-style-type: none">– 12 minutes (with radiator fan)– 5 minutes (without radiator fan)	Engine is stopped. 5 seconds before stopping engine: <ul style="list-style-type: none">– Beeper is activated.– SHUTDOWN is displayed in multifunction gauge.
Above 110°C (230°F)	Riding	Beeper is continuously activated. Temperature light is turned ON. ENGINE_TEMP is displayed in multifunction gauge.
Above 118°C (244°F)	Idling more than 30 seconds	Engine is stopped. 5 seconds before stopping engine: <ul style="list-style-type: none">– Beeper is activated.– SHUTDOWN is displayed in multifunction gauge.
	Riding	Beeper is activated. Temperature light is turned ON. ENGINE_TEMP is displayed in multifunction gauge. Check engine light is turned ON. Engine speed is limited to 5500 RPM. A fault code is set.

HOW TO FIND FAULT CODE DESCRIPTIONS

For the latest fault code table, use the **Info Center** submenu in BOSSWeb and search for: Ski-Doo DTC.

NOTE: Only select "TST" in the advanced search when searching for a DTC table.