

COMPRESSOR FAULT CODES DESCRIPTION AND TROUBLESHOOTING

Following, are the descriptions of the COMPRESSOR fault codes. These are indicated by the SECU Display Digit.

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COMPRESSOR CODE 1

S3, Discharge Temperature Switch

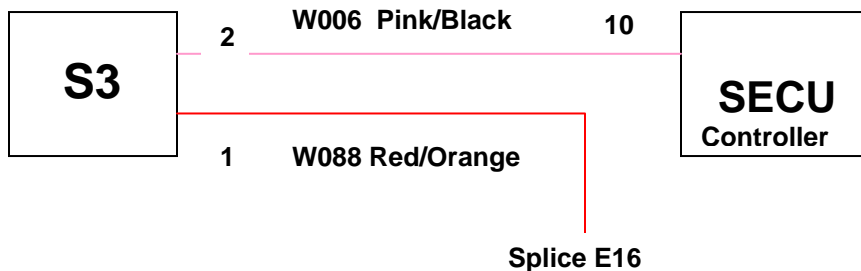
Explanation:

The SECU has detected an open S3, compressor air discharge temperature Switch. Machine could be overheated or there could be a faulty switch or wiring.

Effect:

Code 1 will cause a machine shutdown

S3 Temperature Switch Circuit:



Circuit Description:

S3 is the high temperature shutdown switch for the airend discharge temperature. The switch opens at 248° F.

Component Location:

S3 is located in the discharge pipe from the airend.

TROUBLESHOOTING STEPS

Code 1

Action	Result
Step 1: Check continuity of wire W006 from S3 pin 2 to SECU controller pin 10	Continuous connection
Step 2: Check continuity of wire W088 from S3 pin 1 to splice E16	Continuous connection
Step3 : Replace S3 switch	Machine functions correctly

COMPRESSOR CODE 2

S2, Separator Tank Temperature Switch

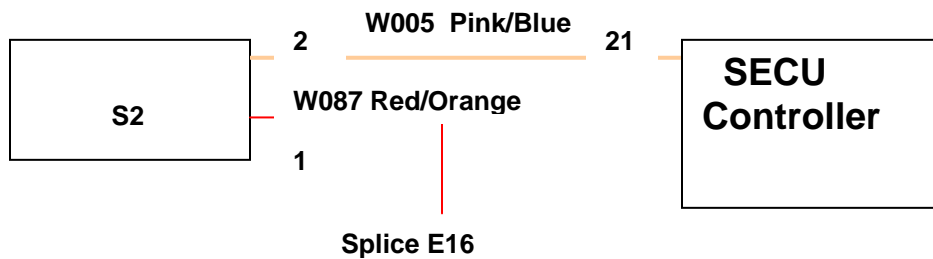
Explanation:

The SECU has detected an open S2, compressor separator tank temperature Switch. Machine could be overheated or have a faulty switch or wiring.

Effect:

Code 2 will cause a machine shutdown

S2 Temperature Switch Circuit:



Circuit Description:

S2 is the high temperature shutdown switch for the separator tank temperature. The switch opens at 248° F.

Component Location:

S2 is located in the side of the separator tank.

TROUBLESHOOTING STEPS

Code 2

Action	Result
Step 1: Check continuity of wire W005 from S2, pin 2 to SECU controller pin 21	Continuous connection
Step 2: Check continuity of wire W087 from S2 to splice E16	Continuous connection
Step 3: Replace S2 switch	

COMPRESSOR CODE 3

Low Alternator/Battery Voltage

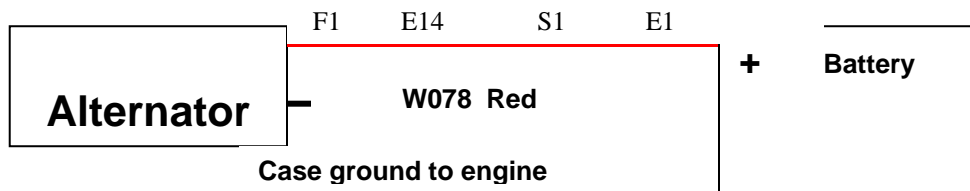
Explanation:

The SECU has detected a low alternator/battery voltage. It is below 11.6V.
The alternator may not be charging the battery.

Effect:

Code 3 is an alert condition and will not shutdown the machine

Alternator Circuit:



Circuit Description:

G1 is the engine mounted alternator. It connects to the starter solenoid via Wire W078 and connects to the SECU pin 3 via wire W095, through Splice E17.

Component Location:

The alternator is mounted to the engine.

TROUBLESHOOTING STEPS

Code 3

Action	Result
Step 1: Measure the voltage across the battery terminals with the engine running.	Should be greater than 13.0 volts. If not, check alternator belt then goto Step 2.
Step 2: Check continuity of wire W078 to starter. Check connections at battery and wire W095 to SECU	If wiring faulty, replace, if not replace alternator

COMPRESSOR CODE 5

S5, Engine Oil Pressure Switch

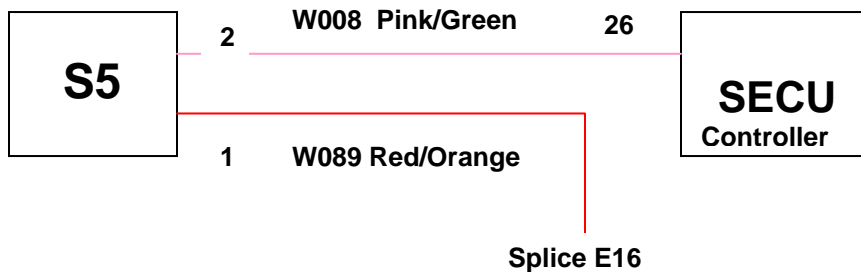
Explanation:

The SECU has detected an open S5, engine oil pressure switch. Machine could have a loss of oil pressure.

Effect:

Code 5 will cause a machine shutdown

S5 Temperature Switch Circuit:



Circuit Description:

S5 is the engine oil pressure switch. If the switch is open for 1 second while the engine is running, the SECU will shutdown the machine.

Component Location:

S5 is mounted on the side of engine block.

TROUBLESHOOTING STEPS

Code 5

Check Oil Level

Action	Result
Step 1: Check continuity of wire W008 from S5 pin 2 to SECU controller pin 26	Continuous connection
Step 2: Check continuity of wire W089 from S3 pin 1o splice E16	Continuous connection
Step3 : Replace S3 switch	Machine functions correctly

COMPRESSOR CODE 6

PT2, Regulation Pressure Transducer

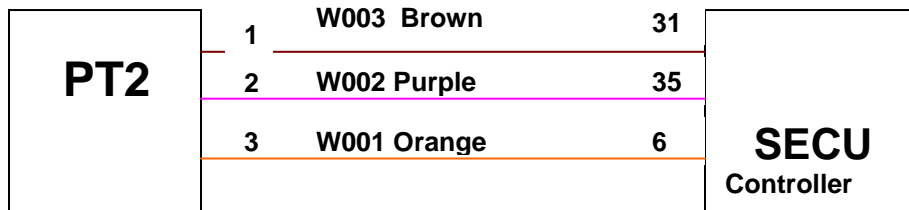
Explanation:

The SECU has detected an out of limits reading from the regulation transducer for 3 seconds while the machine is running.

Effect:

Code 6 will cause a machine shutdown

PS1 Transducer Circuit:



Circuit Description:

PT2 is a pressure transducer used to read the regulation pressure. It is used by the SECU to control engine throttle.

Component Location:

PT2 is located in the inlet valve piping.

TROUBLESHOOTING STEPS

Code 6

Action	Result
Step 1: Check for +5 VDC at pin 2 on PT2	5 VDC is correct power supply voltage
Step 2: Check continuity of wire W001 to pin 6 on the SECU controller	Continuous connection
Step3 : Replace PT2 transducer	Machine functions correctly

COMPRESSOR CODE 8

Low Fuel Shutdown

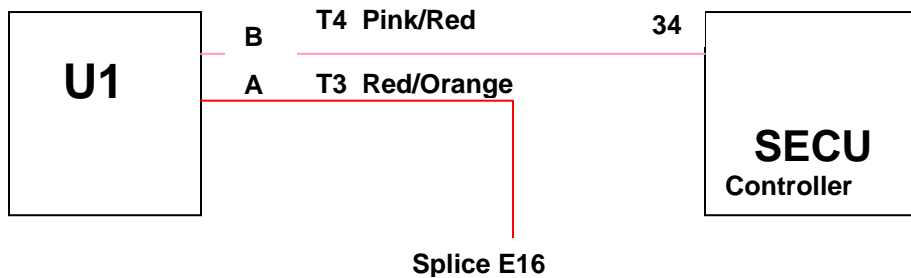
Explanation:

The SECU has detected an open switch at the optional U1 low fuel switch. This condition will prevent engine cranking.

Effect:

Code 8 will cause a machine shutdown

U1 Transducer Circuit:



Circuit Description:

The SECU controller senses the normally closed low fuel switch.

Component Location:

U1 is located in the fuel tank. If the machine does not have the optional fuel sensor, T3 and T4 are connected together, bypassing the fuel sensor switch.

TROUBLESHOOTING STEPS

Code 8

Check Fuel Level

Action	Result
Step 1: Disconnect U1 harness plug and remove U1 from fuel tank. Connect ohmmeter across pins A and B, Tilt U1 and ohmmeter should go from close to infinite ohms to near zero ohms.	Shutdown switch in U1 is working correctly
Check Connectors T3 and T4 Check W013 to SECU Pin 34 Check W090 to E16	

COMPRESSOR CODE 9

Air Filter Restriction Switch

Explanation:

The SECU has detected a closed switch at the air filter restriction indicator.

Effect:

Code 9 is an alert condition and will not shutdown the machine.

Air Filter Restriction Circuit:



Circuit Description:

Filter restriction switch is normally open and connects to the SECU controller.

Component Location:

Air filter restriction indicator is located on the air filter box.

TROUBLESHOOTING STEPS

Code 9

Action	Result
Step 1: Replace air filter	Alert goes away
Step2: Check wire W009 continuity from filter restriction switch back to SECU controller. Replace if shorted to + 12 VDC..	No voltage at SECU controller