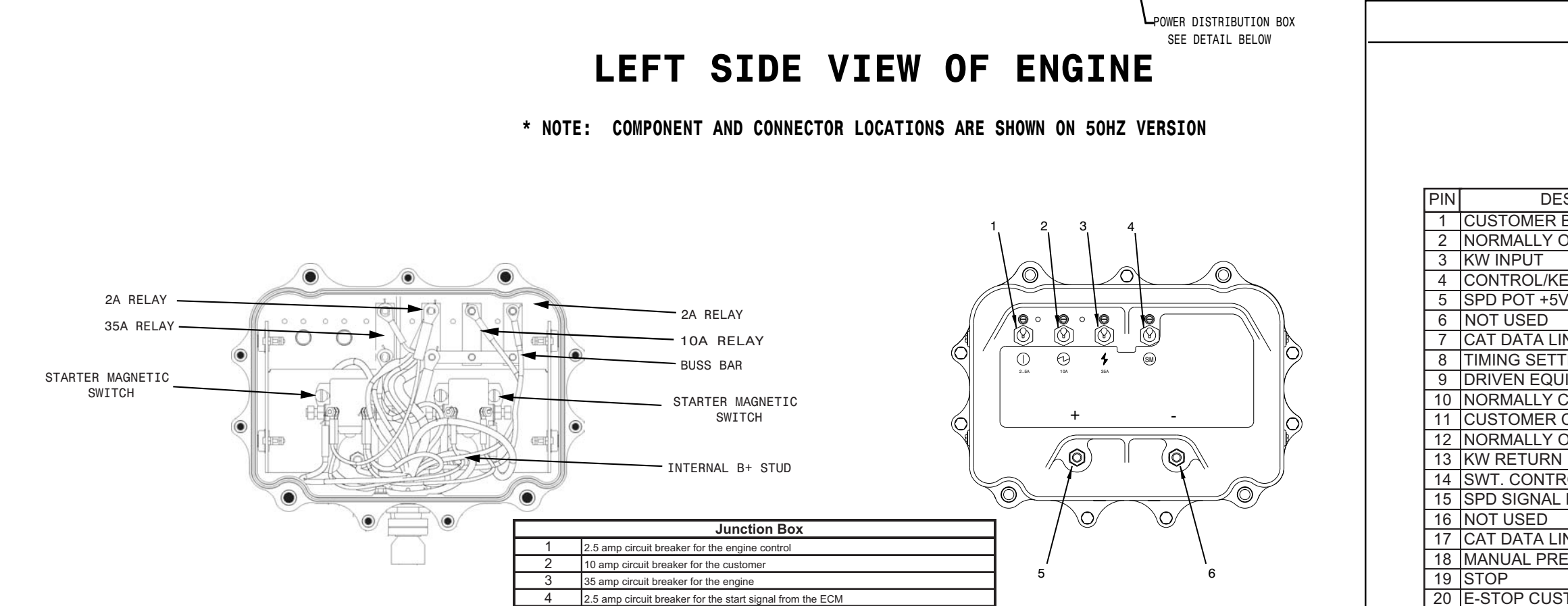
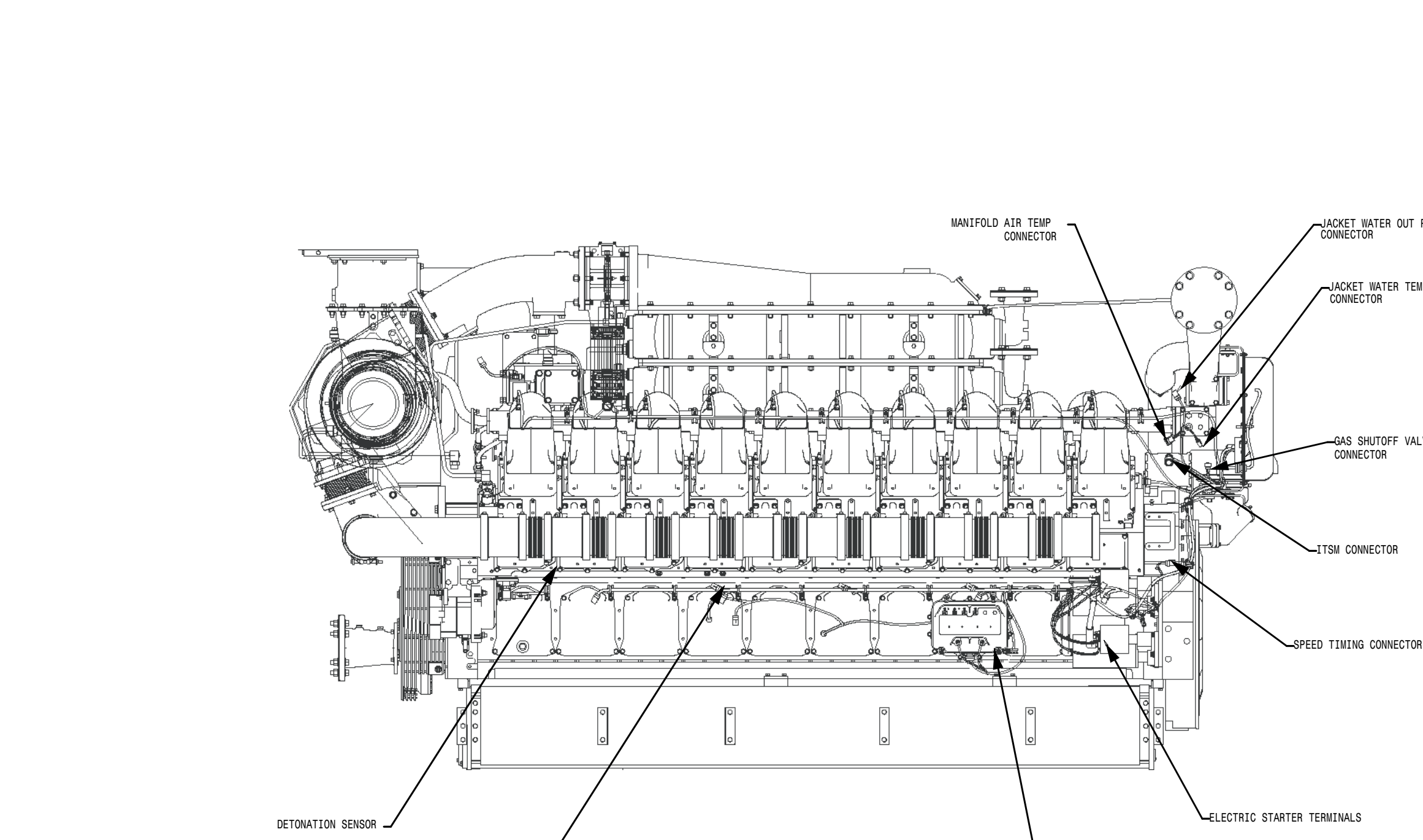
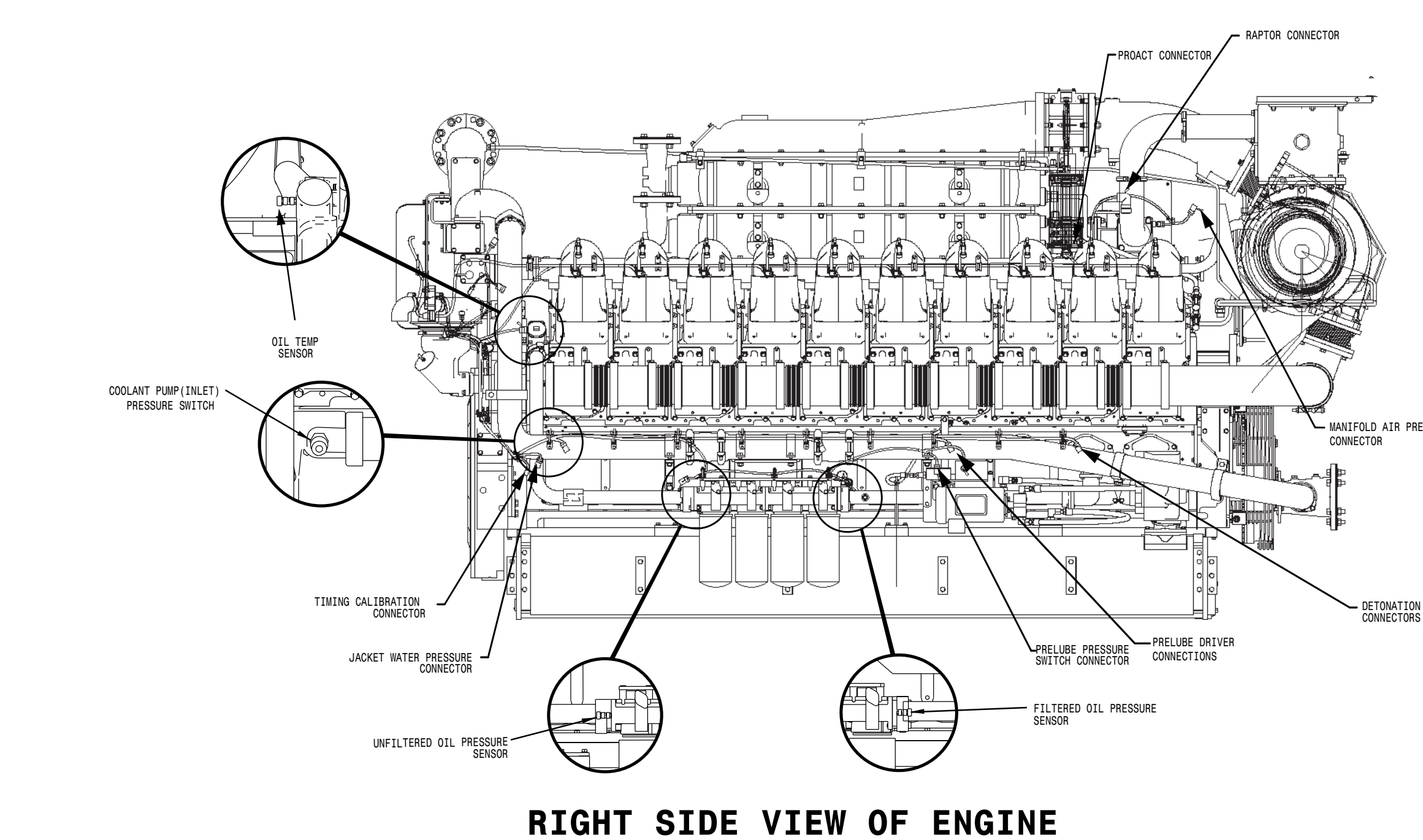
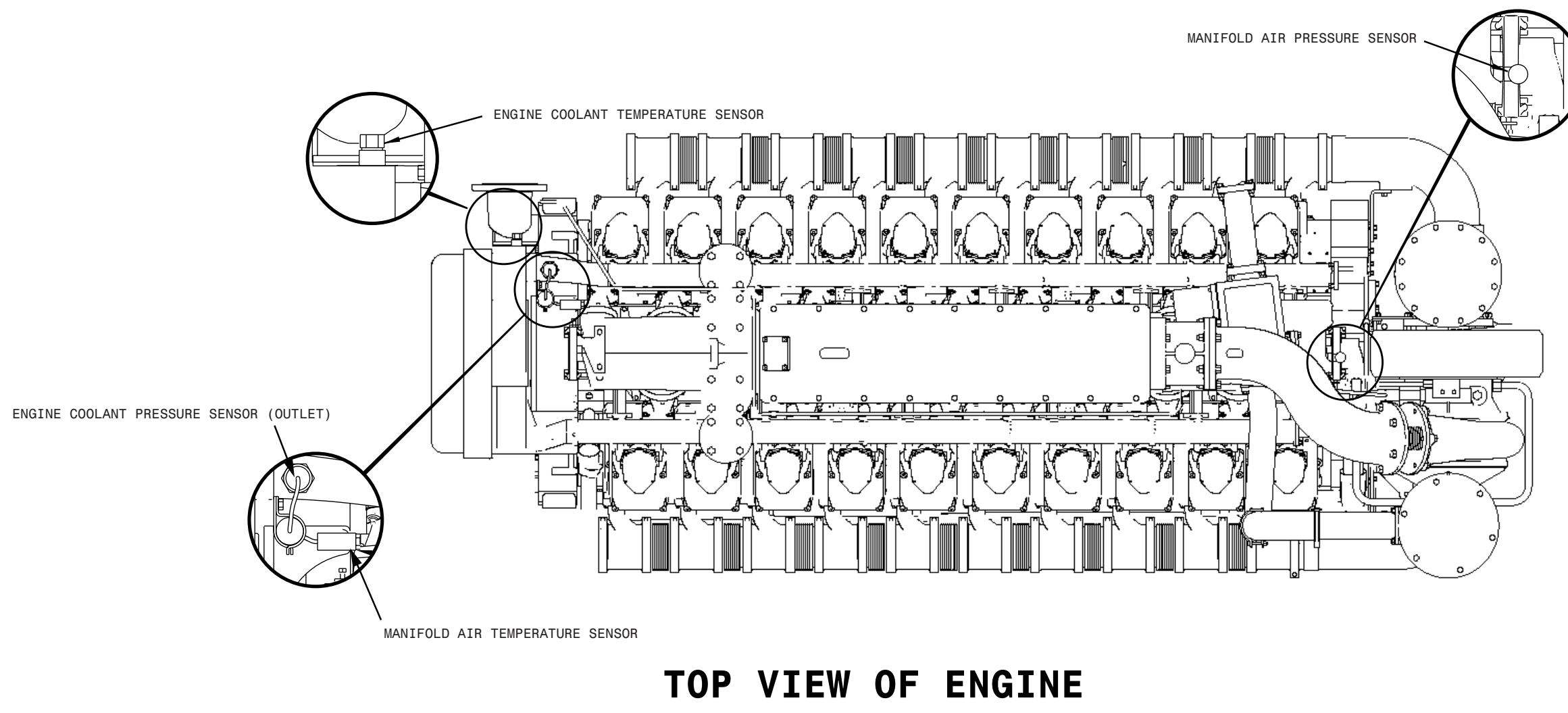


Event Codes		
Event Code	Machine Control Condition	Component
0004	Engine Overspeed Shutdown.	
0015	High Engine Coolant Temperature Derate.	
0016	High Engine Coolant Temperature Shutdown.	
0017	High Engine Coolant Temperature Warning.	
0019	High Engine Temperature Shutdown.	
0020	High Engine Temperature Warning.	
0025	High Inlet Air Temperature Derate.	
0026	High Inlet Air Temperature Shutdown.	
0027	High Inlet Air Temperature Warning.	
0028	Low Engine Coolant Temperature Warning.	
0040	Low Engine Oil Pressure Shutdown.	
0042	Low System Voltage Shutdown.	
0043	Low System Voltage Warning.	
0050	High System Voltage Warning.	
0053	Low Fuel Pressure Warning.	
0096	High Fuel Pressure.	
0100	Low Engine Oil Pressure Warning.	
0127	Engine Oil Filter Differential Pressure Low Warning.	
0128	Engine Oil Filter Differential Pressure Shutdown.	
0129	Engine Oil Filter Differential Pressure High Warning.	
0130	Engine Oil Filter Differential Pressure High Shutdown.	
0135	Low Jacket Water Pressure Shutdown.	
0223	High Gas Temperature.	
0224	High Jacket Water Inlet Pressure.	
0225	Engine Overcrank.	
0229	Driven Equipment Not Ready.	
0229	Fuel Energy Content Setting Low.	
0230	Fuel Energy Content Setting High.	
0231	Fuel Quality Out of Range.	
0242	Engine Overheat.	
0243	High Left Turbo Turbine Outlet Temperature.	
0244	High Right Turbo Turbine Outlet Temperature.	
0245	High Right Turbo Turbine Inlet Temperature.	
0246	High Left Turbo Turbine Inlet Temperature.	
0284	Emergency Stop Activated.	
0288	Unexpected Engine Shutdown.	
0270	Driven Equipment Shutdown Requested.	
0317	High Engine Oil to Engine Coolant Differential.	
0401	Cylinder #1 Detonation.	
0402	Cylinder #2 Detonation.	
0403	Cylinder #3 Detonation.	
0404	Cylinder #4 Detonation.	
0405	Cylinder #5 Detonation.	
0406	Cylinder #6 Detonation.	
0407	Cylinder #7 Detonation.	
0408	Cylinder #8 Detonation.	
0409	Cylinder #9 Detonation.	
0410	Cylinder #10 Detonation.	
0411	Cylinder #11 Detonation.	
0412	Cylinder #12 Detonation.	
0413	Cylinder #13 Detonation.	
0414	Cylinder #14 Detonation.	
0415	Cylinder #15 Detonation.	
0416	Cylinder #16 Detonation.	
0417	Cylinder #17 Detonation.	
0418	Cylinder #18 Detonation.	
0419	Cylinder #19 Detonation.	
0420	Cylinder #20 Detonation.	
0421	Cylinder #1 Detonation Shutdown.	
0422	Cylinder #2 Detonation Shutdown.	
0423	Cylinder #3 Detonation Shutdown.	
0424	Cylinder #4 Detonation Shutdown.	
0425	Cylinder #5 Detonation Shutdown.	
0426	Cylinder #6 Detonation Shutdown.	
0427	Cylinder #7 Detonation Shutdown.	
0428	Cylinder #8 Detonation Shutdown.	
0429	Cylinder #9 Detonation Shutdown.	
0430	Cylinder #10 Detonation Shutdown.	
0431	Cylinder #11 Detonation Shutdown.	
0432	Cylinder #12 Detonation Shutdown.	
0433	Cylinder #13 Detonation Shutdown.	
0434	Cylinder #14 Detonation Shutdown.	
0435	Cylinder #15 Detonation Shutdown.	
0436	Cylinder #16 Detonation Shutdown.	
0437	Cylinder #17 Detonation Shutdown.	
0438	Cylinder #18 Detonation Shutdown.	
0439	Cylinder #19 Detonation Shutdown.	
0440	Cylinder #20 Detonation Shutdown.	
0801	Cylinder #1 High Exhaust Port Temp.	
0802	Cylinder #2 High Exhaust Port Temp.	
0803	Cylinder #3 High Exhaust Port Temp.	
0804	Cylinder #4 High Exhaust Port Temp.	
0805	Cylinder #5 High Exhaust Port Temp.	
0806	Cylinder #6 High Exhaust Port Temp.	
0807	Cylinder #7 High Exhaust Port Temp.	
0808	Cylinder #8 High Exhaust Port Temp.	
0809	Cylinder #9 High Exhaust Port Temp.	
0810	Cylinder #10 High Exhaust Port Temp.	
0811	Cylinder #11 High Exhaust Port Temp.	
0812	Cylinder #12 High Exhaust Port Temp.	
0813	Cylinder #13 High Exhaust Port Temp.	
0814	Cylinder #14 High Exhaust Port Temp.	
0815	Cylinder #15 High Exhaust Port Temp.	
0816	Cylinder #16 High Exhaust Port Temp.	
0817	Cylinder #17 High Exhaust Port Temp.	
0818	Cylinder #18 High Exhaust Port Temp.	
0819	Cylinder #19 High Exhaust Port Temp.	
0820	Cylinder #20 High Exhaust Port Temp.	
0821	Cyl #1 Exhaust Port Temp Deviating High.	
0822	Cyl #2 Exhaust Port Temp Deviating High.	
0823	Cyl #3 Exhaust Port Temp Deviating High.	
0824	Cyl #4 Exhaust Port Temp Deviating High.	
0825	Cyl #5 Exhaust Port Temp Deviating High.	
0826	Cyl #6 Exhaust Port Temp Deviating High.	
0827	Cyl #7 Exhaust Port Temp Deviating High.	
0828	Cyl #8 Exhaust Port Temp Deviating High.	
0829	Cyl #9 Exhaust Port Temp Deviating High.	
0830	Cyl #10 Exhaust Port Temp Deviating High.	
0831	Cyl #11 Exhaust Port Temp Deviating High.	
0832	Cyl #12 Exhaust Port Temp Deviating High.	
0833	Cyl #13 Exhaust Port Temp Deviating High.	
0834	Cyl #14 Exhaust Port Temp Deviating High.	
0835	Cyl #15 Exhaust Port Temp Deviating High.	
0836	Cyl #16 Exhaust Port Temp Deviating High.	
0837	Cyl #17 Exhaust Port Temp Deviating High.	
0838	Cyl #18 Exhaust Port Temp Deviating High.	
0839	Cyl #19 Exhaust Port Temp Deviating High.	
0840	Cyl #20 Exhaust Port Temp Deviating High.	
0841	Cyl #1 Exhaust Port Temp Deviating Low.	
0842	Cyl #2 Exhaust Port Temp Deviating Low.	
0843	Cyl #3 Exhaust Port Temp Deviating Low.	
0844	Cyl #4 Exhaust Port Temp Deviating Low.	
0845	Cyl #5 Exhaust Port Temp Deviating Low.	
0846	Cyl #6 Exhaust Port Temp Deviating Low.	
0847	Cyl #7 Exhaust Port Temp Deviating Low.	
0848	Cyl #8 Exhaust Port Temp Deviating Low.	
0849	Cyl #9 Exhaust Port Temp Deviating Low.	
0850	Cyl #10 Exhaust Port Temp Deviating Low.	
0851	Cyl #11 Exhaust Port Temp Deviating Low.	
0852	Cyl #12 Exhaust Port Temp Deviating Low.	
0853	Cyl #13 Exhaust Port Temp Deviating Low.	
0854	Cyl #14 Exhaust Port Temp Deviating Low.	
0855	Cyl #15 Exhaust Port Temp Deviating Low.	
0856	Cyl #16 Exhaust Port Temp Deviating Low.	
0857	Cyl #17 Exhaust Port Temp Deviating Low.	
0858	Cyl #18 Exhaust Port Temp Deviating Low.	
0859	Cyl #19 Exhaust Port Temp Deviating Low.	
0860	Cyl #20 Exhaust Port Temp Deviating Low.	
0864	Low Gas Fuel Differential Pressure.	
0865	High Gas Fuel Differential Pressure.	
0866	Low Gas Fuel Flow Rate.	
0867	Improper Gas Flow Control Valve Response.	
0868	Gas Flow Control Valve Malfunction.	

Component Identifiers (CID)*		
Module Identifier (MID)*		
Engine Control #2 (MID No. 033)		
CID	Component	
0017	Fuel Shutoff Valve	
0041	ECM (Electronic Control Module) 8 Volt DC Supply	
0100	Engine Oil Pressure Sensor	
0106	Air Inlet Pressure Sensor	
0109	Engine Coolant Outlet Pressure Sensor	
0110	Engine Coolant Temperature Sensor	
0145	12 Volt Power Supply	
0168	Electrical System Voltage	
0172	Inlet Manifold Air Temperature Sensor	
0175	Engine Oil Temperature Sensor	
0261	Engine Timing Calibration	
0262	5 Volt Sensor Power Supply	
0302	Ignition Transformer Primary #2	
0304	Ignition Transformer Primary #4	
0306	Ignition Transformer Primary #6	
0308	Ignition Transformer Primary #8	
0310	Ignition Transformer Primary #10	
0312	Ignition Transformer Primary #12	
0314	Ignition Transformer Primary #14	
0316	Ignition Transformer Primary #16	
0320	Speed/Timing Sensor	
0320	Speed/Timing Sensor	
0323	Engine Shutdown Lamp	
0324	Warning Lamps (Mech)	
0336	Engine Control Switch	
0402	Ignition Transformer Secondary #2	
0404	Ignition Transformer Secondary #4	
0406	Ignition Transformer Secondary #6	
0408	Ignition Transformer Secondary #8	
0410	Ignition Transformer Secondary #10	
0412	Ignition Transformer Secondary #12	
0414	Ignition Transformer Secondary #14	
0416	Ignition Transformer Secondary #16	
0443	Cone Starter Relay	
0444	Starter Motor Relay	
0445	Run Relay	
0446	Desired Engine Speed Sensor	
0542	Engine Oil Pressure Sensor - before oil filter	
1042	ITSM (Integrated Temperature Sensing Module)	
1307	Throttle Actuator	
1446	Fuel Metering Module	
1447	Fuel Metering Sensor Module	
1502	Detonation Sensor #2	
1506	Detonation Sensor #6	
1510	Detonation Sensor #10	
1514	Detonation Sensor #14	
1518	Detonation Sensor #18	
1526	(Slave) Engine #2 Electronic Control Module	
1719	Generator Output Power Sensor	
1720	Turbocharger Compressor Bypass Valve Solenoid	
1749	Ignition Transformer Secondary #18	
1751	Ignition Transformer Secondary #20	
1753	Ignition Transformer Primary #18	
1755	Ignition Transformer Primary #20	
Engine Control #1 (MID No. 035)		
CID	Component	
0591	Electrically Erasable Programmable Read Only Memory	
1489	Left Turbo Turbine Outlet Temperature Sensor	
1490	Right Turbo Turbine Outlet Temperature Sensor	
1491	Right Turbo Turbine Inlet Temperature Sensor	
1492	Left Turbo Turbine Inlet Temperature Sensor	
1531	Engine Cylinder #1 Exhaust Port Temperature Sensor	
1532	Engine Cylinder #2 Exhaust Port Temperature Sensor	
1533	Engine Cylinder #3 Exhaust Port Temperature Sensor	
1534	Engine Cylinder #4 Exhaust Port Temperature Sensor	
1535	Engine Cylinder #5 Exhaust Port Temperature Sensor	
1536	Engine Cylinder #6 Exhaust Port Temperature Sensor	
1537	Engine Cylinder #7 Exhaust Port Temperature Sensor	
1538	Engine Cylinder #8 Exhaust Port Temperature Sensor	
1539	Engine Cylinder #9 Exhaust Port Temperature Sensor	
1540	Engine Cylinder #10 Exhaust Port Temperature Sensor	
1541	Engine Cylinder #11 Exhaust Port Temperature Sensor	
1542	Engine Cylinder #12 Exhaust Port Temperature Sensor	
1543	Engine Cylinder #13 Exhaust Port Temperature Sensor	
1544	Engine Cylinder #14 Exhaust Port Temperature Sensor	
1545	Engine Cylinder #15 Exhaust Port Temperature Sensor	
1546	Engine Cylinder #16 Exhaust Port Temperature Sensor	
1547	Engine Cylinder #17 Exhaust Port Temperature Sensor	
1548	Engine Cylinder #18 Exhaust Port Temperature Sensor	
1549	Engine Cylinder #19 Exhaust Port Temperature Sensor	
1550	Engine Cylinder #20 Exhaust Port Temperature Sensor	
Integrated Temperature Sensing Module (MID No. 111)		
CID	Component	
0041	ECM (Electronic Control Module) 8 Volt DC Supply	
0168	Electrical System Voltage	
0301	Ignition Transformer Primary #1	
0303	Ignition Transformer Primary #3	
0305	Ignition Transformer Primary #5	
0307	Ignition Transformer Primary #7	
0309	Ignition Transformer Primary #9	
0311	Ignition Transformer Primary #11	
0313	Ignition Transformer Primary #13	
0315	Ignition Transformer Primary #15	
0320	Speed/Timing Sensor	
0401	Ignition Transformer Secondary #1	
0403	Ignition Transformer Secondary #3	
0405	Ignition Transformer Secondary #5	
0407	Ignition Transformer Secondary #7	
0409	Ignition Transformer Secondary #9	
0411	Ignition Transformer Secondary #11	
0413	Ignition Transformer Secondary #13	
0415	Ignition Transformer Secondary #15	
0590	Engine Control Module	
1501	Detonation Sensor #1	
1505	Detonation Sensor #5	
1509	Detonation Sensor #9	
1513	Detonation Sensor #13	
1517	Detonation Sensor #17	
1748	Ignition Transformer Secondary #17	
1750	Ignition Transformer Secondary #19	
1752	Ignition Transformer Primary #17	
1754	Ignition Transformer Primary #19	
* The CID is a diagnostic code that indicates which circuit is faulty.		
* The MID is a diagnostic code that indicates which electronic control module diagnosed the fault.		

Failure Mode Identifiers (FMI)*		
FMI No.	Failure Description	
0	Data valid but above normal operational range.	
1	Data valid but below normal operational range.	
2	Data erratic, intermittent, or incorrect.	
3	Voltage above normal or shorted high.	
4	Voltage below normal or shorted low.	
5	Current above normal or open circuit.	
6	Current below normal or grounded circuit.	
7	Mechanical item not responding properly.	
8	Abnormal frequency, pulse width, or period.	
9	Abnormal update.	
10	Abnormal rate of change.	
11	Failure mode not identifiable.	
12	Bad device or component.	
13	Out of calibration.	
14	Parameter failures.	
15	Parameter not available.	
16	Parameter not responding.	
17	Condition not met.	
18	Sensor supply fault.	
19	Condition not met.	
20	Parameter failure.	

The FMI is a diagnostic code that indicates what type of failure has occurred.



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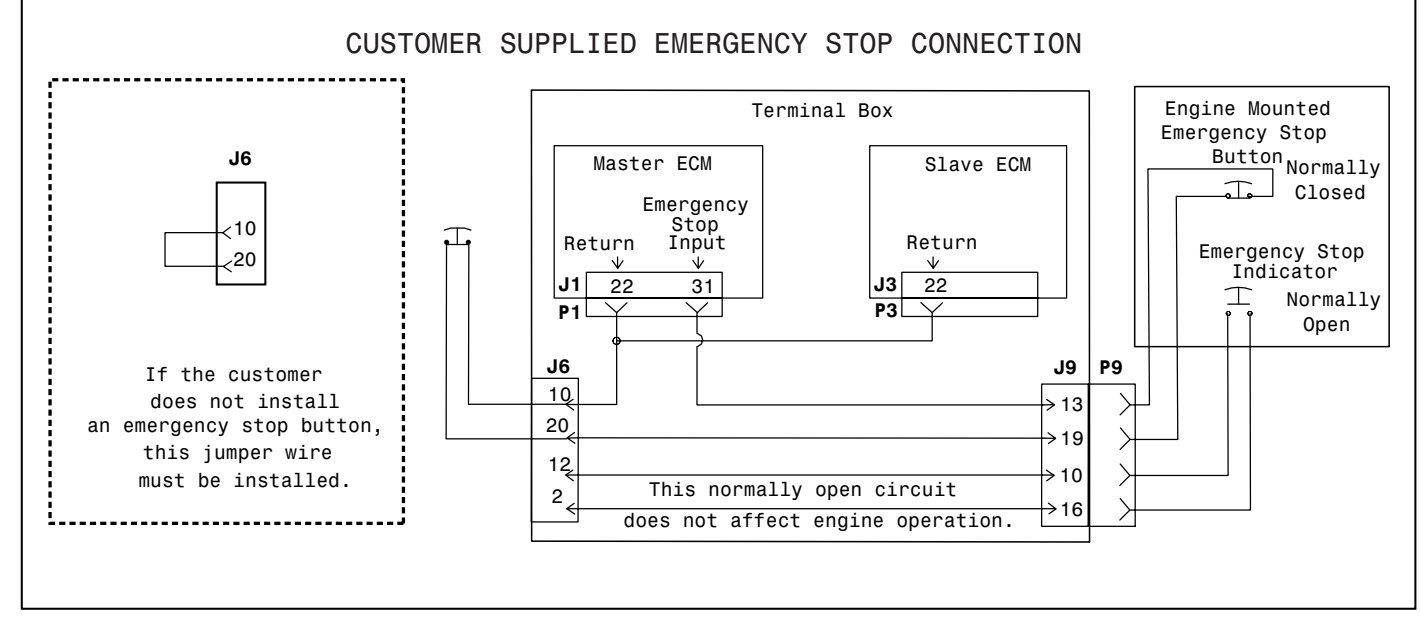
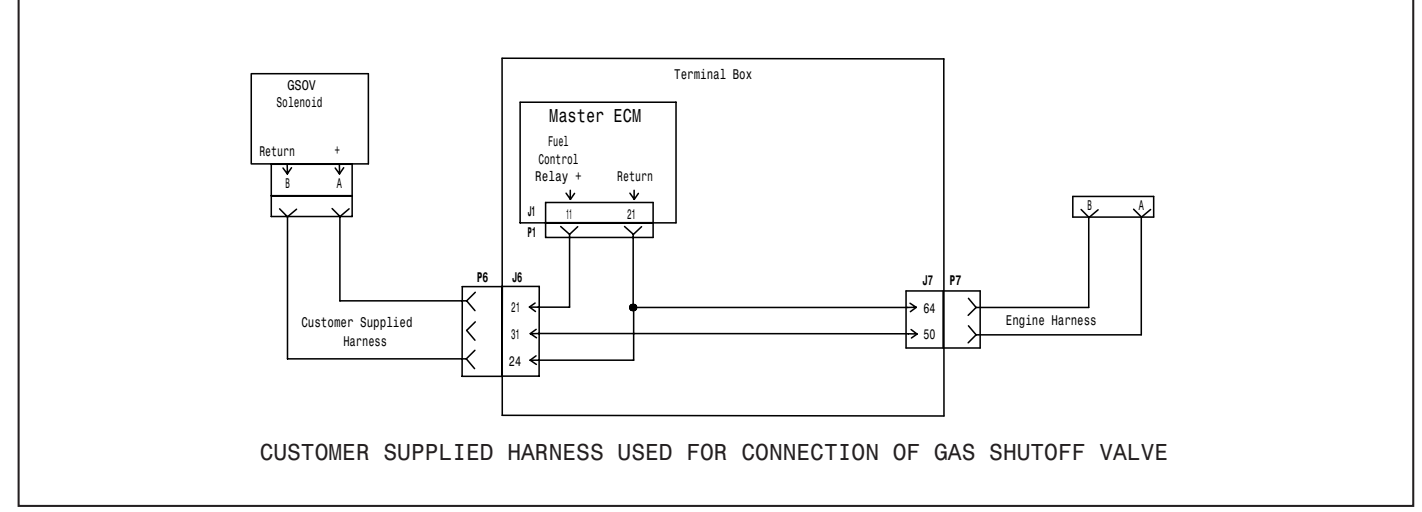
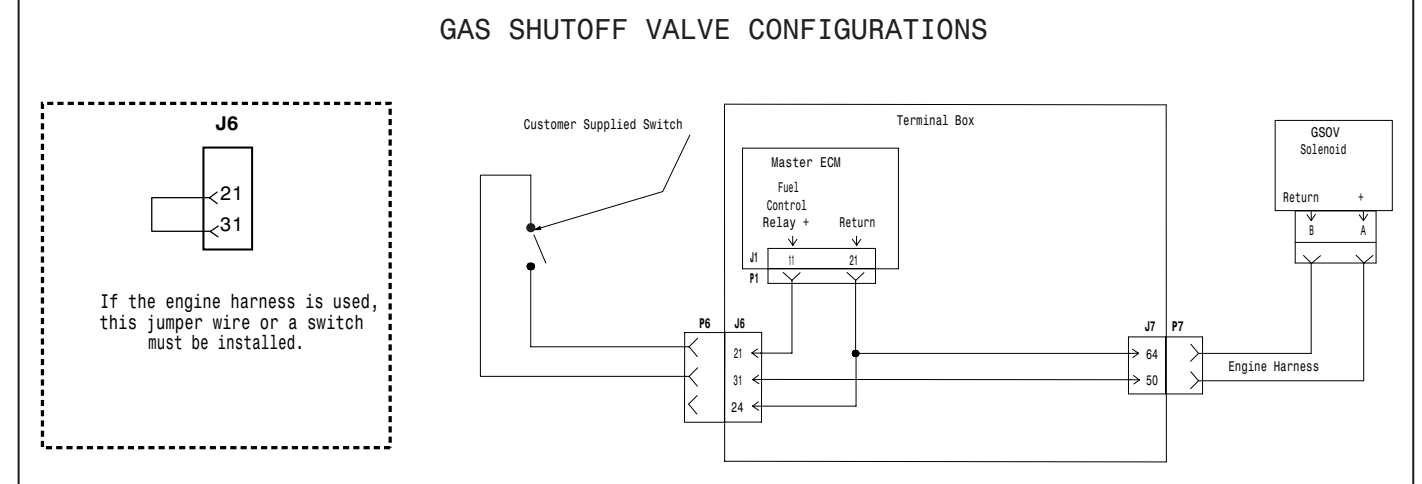
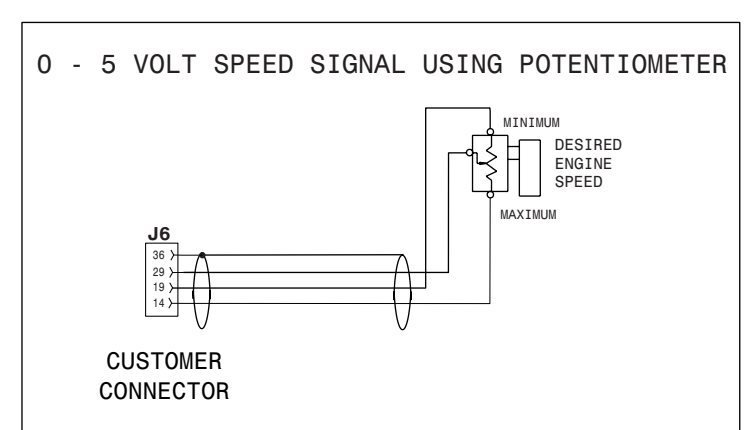
RENRS955-04  
April 2005

# Schematic

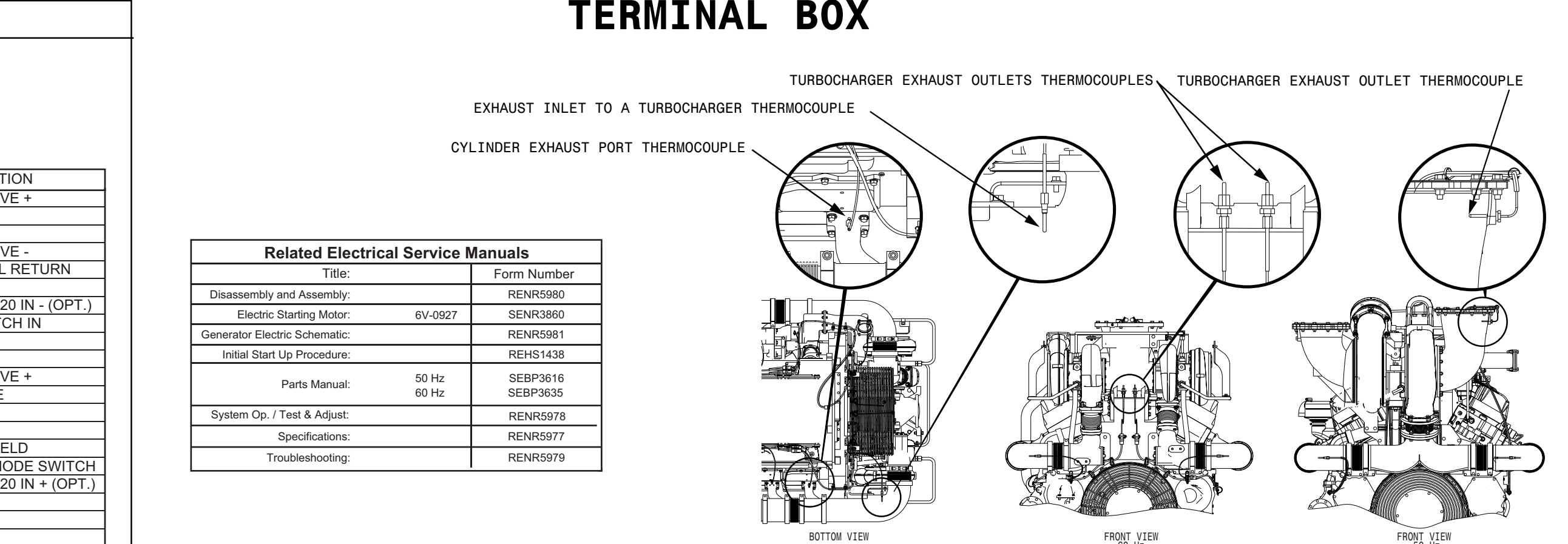
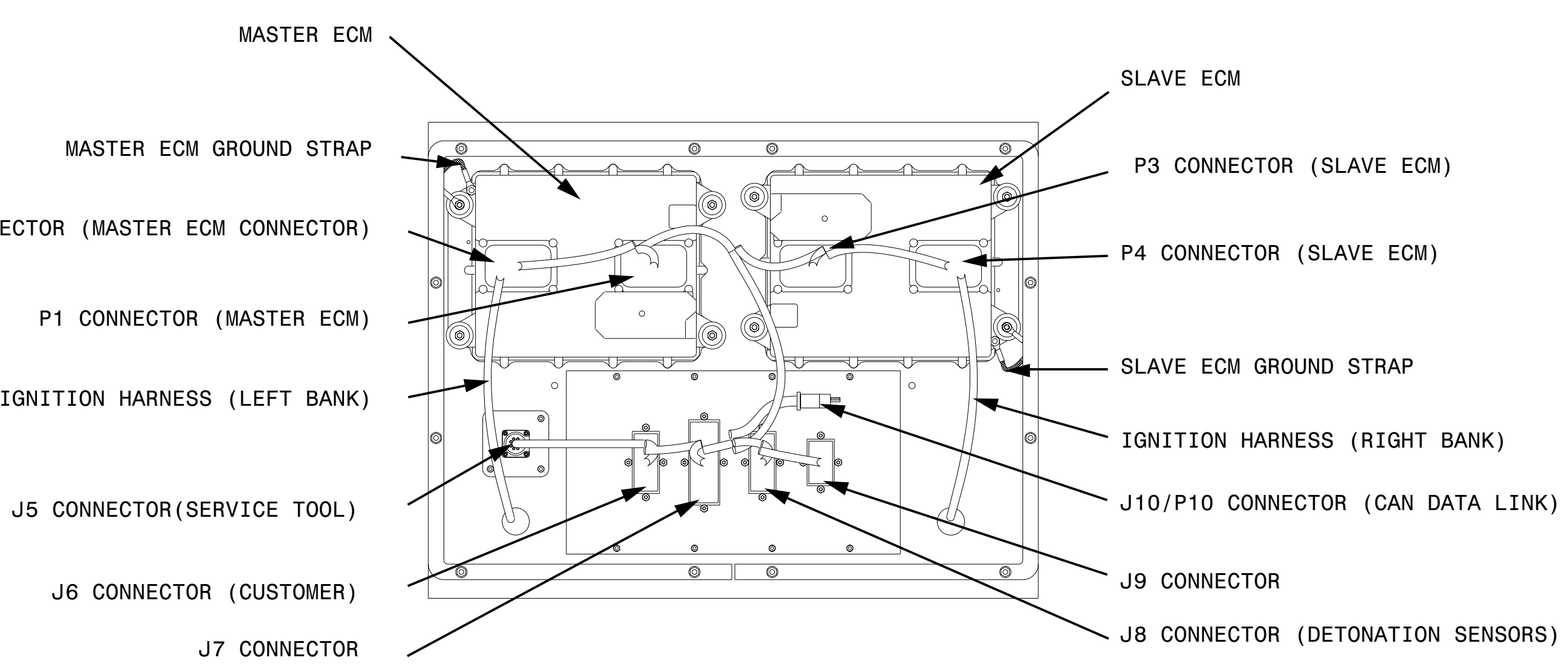
## G3520C and G3520E Engine Electrical System

- GDB1-UP
- GHC1-UP
- MAD1-UP
- GHE1-UP
- GZG1-UP
- GZH1-UP
- GZJ1-UP
- GZK1-UP
- GZL1-UP
- HALL1-UP
- GHM1-UP

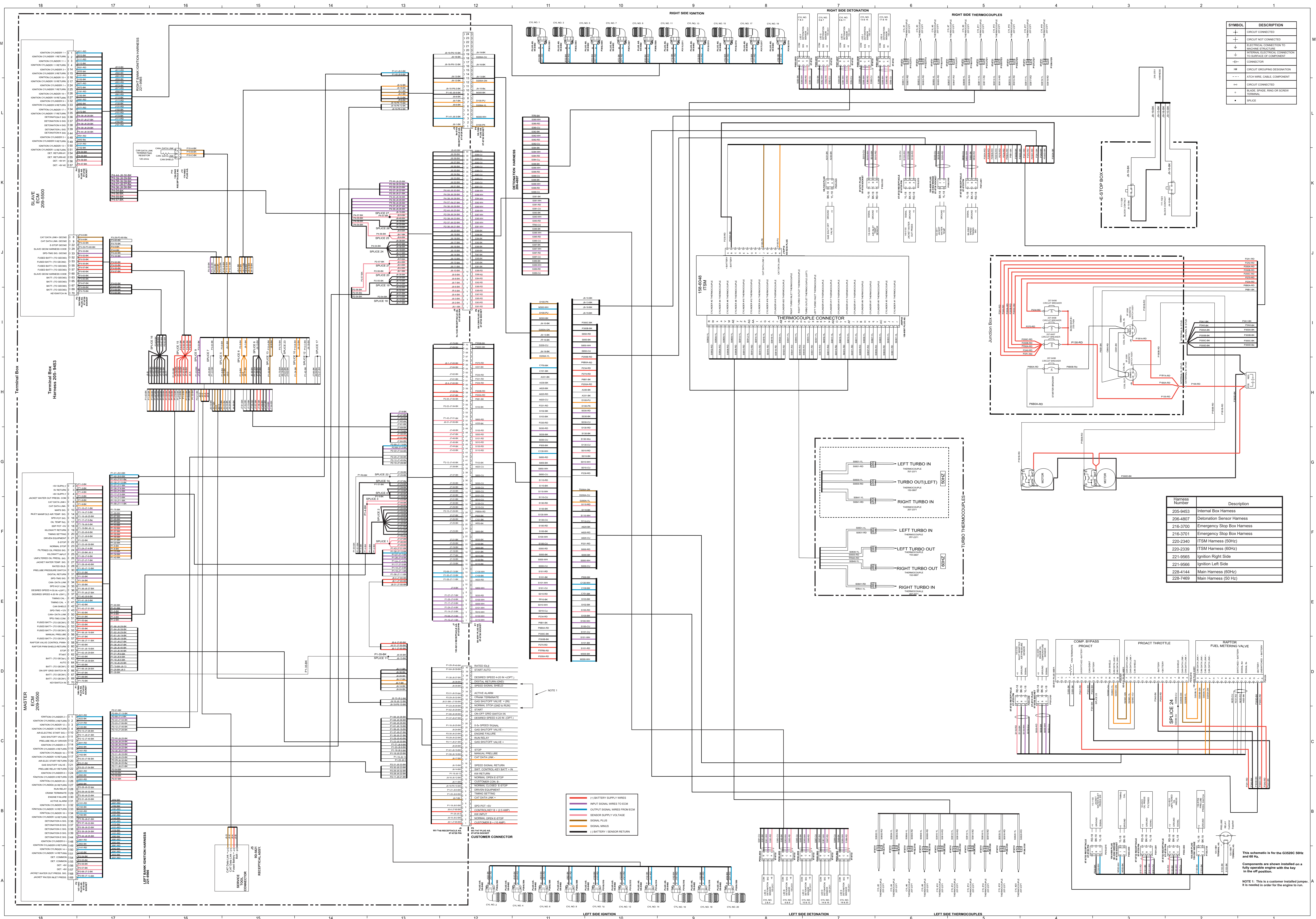
- GZM1-UP
- GZN1-UP
- B9P1-UP
- GHR1-UP
- HAT1-UP
- CWW1-UP
- JBX1-UP
- CWY1-UP
- JBZ1-UP
- SXY1-UP



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RENRS955-04  
30 Page, MDW



SYMBOL	DESCRIPTION
+	CIRCUIT CONNECTED
+	CIRCUIT NOT CONNECTED
+	INTERNAL CONNECTOR TO SURFACE OF COMPONENT
+	INTERNAL CONNECTOR TO SURFACE OF COMPONENT
+	CONNECTOR
+	CIRCUIT BRANCHING DESIGNATION
+	INTERNAL WIRE COMPONENT
+	CIRCUIT CONNECTOR
+	SLACK SPACE, PAD OR SCREW TERMINAL
+	SPURGE

Harness Number	Description
205-9453	Internal Box Harness
206-4807	Detonation Sensor Harness
216-3700	Emergency Stop Box Harness
216-3701	Emergency Stop Box Harness
220-2340	ITSM Harness (50Hz)
220-2339	ITSM Harness (60Hz)
221-9565	Ignition Right Side
221-9566	Ignition Left Side
228-4144	Main Harness (60Hz)
228-7489	Main Harness (50 Hz)

— (1) BATTERY SUPPLY WIRES  
— OUTPUT SIGNAL WIRES FROM ECM  
— SENSOR SUPPLY VOLTAGE  
— SENSOR VOLTAGE  
— SIGNAL MINUS  
— BATTERY / SENSOR RETURN

This schematic is for the G320C 50Hz and 60 Hz. Components are shown installed on a left opposite engine with the key in the off position. NOTE 1: This is a customer installed jumper. It is needed in order for the engine to run.