

**Component Identifiers (CID)  
Module Identifier (MID)  
Power Train ECM  
(MID No. 027)**

CID	Component
0041	Sensor Power Supply
0046	Fuel Level Sensor
0444	Banked Air Pressure
0748	Electronic System Voltage
0777	Temperature Of Temperature Sensor
0800	Engine Speed Sensor
0844	Start Relay
116	Control Oil Pressure Sensor (A)
0500	Engine Control Module
0602	Transaxle Converter Output Speed Sensor
0603	Transaxle Brake Pressure Switch
0704	Service Brake Pressure Sensor
0702	Shift Lever Sensor
0703	Solenoid Valve (A)
0704	Solenoid Valve (B)
0705	Lockup Clutch Sensor
0706	Lockup Clutch Sensor
0724	Body Lower Solenoid
0725	Body Lower Solenoid
0809	TC Temperature Sensor
0810	Manifold Absolute Pressure
0811	Manifold Absolute Pressure
1100	Transmission Oil Lock Solenoid
1207	Transmission Oil Lock Solenoid
1207	Transmission Oil Lock Solenoid
1246	Pressure Solenoid
1247	Pressure Solenoid
1251	Transmission Valve No. 1
1252	Transmission Valve No. 2
1401	Transmission Clutch Modulating Valve No. 1
1402	Transmission Clutch Modulating Valve No. 2
1403	Transmission Clutch Modulating Valve No. 3
1404	Transmission Clutch Modulating Valve No. 4
1405	Transmission Clutch Modulating Valve No. 5
1837	Clear Sol
1838	Clear Sol

**Wire Description**

Wire Number	Wire Color	Power Circuits	Wire Number	Wire Color	Control Circuits
101	RED	Start	701	RED	Start
102	RED	Start	702	RED	Start
103	RED	Start	703	RED	Start
104	RED	Start	704	RED	Start
105	RED	Start	705	RED	Start
106	RED	Start	706	RED	Start
107	RED	Start	707	RED	Start
108	RED	Start	708	RED	Start
109	RED	Start	709	RED	Start
110	RED	Start	710	RED	Start
111	RED	Start	711	RED	Start
112	RED	Start	712	RED	Start
113	RED	Start	713	RED	Start
114	RED	Start	714	RED	Start
115	RED	Start	715	RED	Start
116	RED	Start	716	RED	Start
117	RED	Start	717	RED	Start
118	RED	Start	718	RED	Start
119	RED	Start	719	RED	Start
120	RED	Start	720	RED	Start
121	RED	Start	721	RED	Start
122	RED	Start	722	RED	Start
123	RED	Start	723	RED	Start
124	RED	Start	724	RED	Start
125	RED	Start	725	RED	Start
126	RED	Start	726	RED	Start
127	RED	Start	727	RED	Start
128	RED	Start	728	RED	Start
129	RED	Start	729	RED	Start
130	RED	Start	730	RED	Start
131	RED	Start	731	RED	Start
132	RED	Start	732	RED	Start
133	RED	Start	733	RED	Start
134	RED	Start	734	RED	Start
135	RED	Start	735	RED	Start
136	RED	Start	736	RED	Start
137	RED	Start	737	RED	Start
138	RED	Start	738	RED	Start
139	RED	Start	739	RED	Start
140	RED	Start	740	RED	Start
141	RED	Start	741	RED	Start
142	RED	Start	742	RED	Start
143	RED	Start	743	RED	Start
144	RED	Start	744	RED	Start
145	RED	Start	745	RED	Start
146	RED	Start	746	RED	Start
147	RED	Start	747	RED	Start
148	RED	Start	748	RED	Start
149	RED	Start	749	RED	Start
150	RED	Start	750	RED	Start
151	RED	Start	751	RED	Start
152	RED	Start	752	RED	Start
153	RED	Start	753	RED	Start
154	RED	Start	754	RED	Start
155	RED	Start	755	RED	Start
156	RED	Start	756	RED	Start
157	RED	Start	757	RED	Start
158	RED	Start	758	RED	Start
159	RED	Start	759	RED	Start
160	RED	Start	760	RED	Start
161	RED	Start	761	RED	Start
162	RED	Start	762	RED	Start
163	RED	Start	763	RED	Start
164	RED	Start	764	RED	Start
165	RED	Start	765	RED	Start
166	RED	Start	766	RED	Start
167	RED	Start	767	RED	Start
168	RED	Start	768	RED	Start
169	RED	Start	769	RED	Start
170	RED	Start	770	RED	Start
171	RED	Start	771	RED	Start
172	RED	Start	772	RED	Start
173	RED	Start	773	RED	Start
174	RED	Start	774	RED	Start
175	RED	Start	775	RED	Start
176	RED	Start	776	RED	Start
177	RED	Start	777	RED	Start
178	RED	Start	778	RED	Start
179	RED	Start	779	RED	Start
180	RED	Start	780	RED	Start
181	RED	Start	781	RED	Start
182	RED	Start	782	RED	Start
183	RED	Start	783	RED	Start
184	RED	Start	784	RED	Start
185	RED	Start	785	RED	Start
186	RED	Start	786	RED	Start
187	RED	Start	787	RED	Start
188	RED	Start	788	RED	Start
189	RED	Start	789	RED	Start
190	RED	Start	790	RED	Start
191	RED	Start	791	RED	Start
192	RED	Start	792	RED	Start
193	RED	Start	793	RED	Start
194	RED	Start	794	RED	Start
195	RED	Start	795	RED	Start
196	RED	Start	796	RED	Start
197	RED	Start	797	RED	Start
198	RED	Start	798	RED	Start
199	RED	Start	799	RED	Start
200	RED	Start	800	RED	Start

**Engine Control  
(MID No. 036)**

CID	Component
0001	Fuel Injector Solenoid #1
0002	Fuel Injector Solenoid #2
0003	Fuel Injector Solenoid #3
0004	Fuel Injector Solenoid #4
0005	Fuel Injector Solenoid #5
0006	Fuel Injector Solenoid #6
0007	Fuel Injector Solenoid #7
0008	Fuel Injector Solenoid #8
0009	Fuel Injector Solenoid #9
0010	Fuel Injector Solenoid #10
0011	Throttle Sensor
0012	Throttle Sensor
0013	Throttle Sensor
0014	Throttle Sensor
0015	Throttle Sensor
0016	Throttle Sensor
0017	Throttle Sensor
0018	Throttle Sensor
0019	Throttle Sensor
0020	Throttle Sensor
0021	Throttle Sensor
0022	Throttle Sensor
0023	Throttle Sensor
0024	Throttle Sensor
0025	Throttle Sensor
0026	Throttle Sensor
0027	Throttle Sensor
0028	Throttle Sensor
0029	Throttle Sensor
0030	Throttle Sensor
0031	Throttle Sensor
0032	Throttle Sensor
0033	Throttle Sensor
0034	Throttle Sensor
0035	Throttle Sensor
0036	Throttle Sensor
0037	Throttle Sensor
0038	Throttle Sensor
0039	Throttle Sensor
0040	Throttle Sensor
0041	Throttle Sensor
0042	Throttle Sensor
0043	Throttle Sensor
0044	Throttle Sensor
0045	Throttle Sensor
0046	Throttle Sensor
0047	Throttle Sensor
0048	Throttle Sensor
0049	Throttle Sensor
0050	Throttle Sensor
0051	Throttle Sensor
0052	Throttle Sensor
0053	Throttle Sensor
0054	Throttle Sensor
0055	Throttle Sensor
0056	Throttle Sensor
0057	Throttle Sensor
0058	Throttle Sensor
0059	Throttle Sensor
0060	Throttle Sensor
0061	Throttle Sensor
0062	Throttle Sensor
0063	Throttle Sensor
0064	Throttle Sensor
0065	Throttle Sensor
0066	Throttle Sensor
0067	Throttle Sensor
0068	Throttle Sensor
0069	Throttle Sensor
0070	Throttle Sensor
0071	Throttle Sensor
0072	Throttle Sensor
0073	Throttle Sensor
0074	Throttle Sensor
0075	Throttle Sensor
0076	Throttle Sensor
0077	Throttle Sensor
0078	Throttle Sensor
0079	Throttle Sensor
0080	Throttle Sensor
0081	Throttle Sensor
0082	Throttle Sensor
0083	Throttle Sensor
0084	Throttle Sensor
0085	Throttle Sensor
0086	Throttle Sensor
0087	Throttle Sensor
0088	Throttle Sensor
0089	Throttle Sensor
0090	Throttle Sensor
0091	Throttle Sensor
0092	Throttle Sensor
0093	Throttle Sensor
0094	Throttle Sensor
0095	Throttle Sensor
0096	Throttle Sensor
0097	Throttle Sensor
0098	Throttle Sensor
0099	Throttle Sensor
0100	Throttle Sensor

**Failure Mode Identifiers (FMI)  
The FMI is a diagnostic code that indicates what type of failure has occurred.**

FMI No.	Failure Description
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 below normal or open circuit.
6	Current above normal or grounded circuit.
7	Mathematical operation not supported properly.
8	Abnormal frequency, pulse width, or period.
9	Abnormal speed.
10	Abnormal rate of change.
11	Failure mode not identifiable.
12	Test device or component.
13	Out of calibration.
14	Parameter failure.
15	Parameter failure.
16	Parameter not available.
17	Module not responding.
18	Sensor supply fault.
19	Configuration error.
20	Parameter failure.

**Resistor, Sender and Solenoid Specifications**

Part No.	Component Description	Resistance (Ohms)
38-6332	Solenoid Start Aid	120 ± 6.0
89-3006	Solenoid Air Churn Valve	17.2 ± 0.5
132-2008	Solenoid Air Churn Valve	17.2 ± 0.5
152-8386	Solenoid Air Churn Valve	32.6 ± 1.6
113-2006	Solenoid Air Churn Valve	2.2 ± 0.2
151-7702	Solenoid Air Churn Valve	2.2 ± 0.2
152-4315	Solenoid Air Churn Valve	41.2 ± 2.1
251-0500	Solenoid Air Churn Valve	41.2 ± 2.1
239-8388	Solenoid Air Churn Valve	276 ± 27.0
248-3144	Solenoid Air Churn Valve	8.7 ± 0.4
249-0112	Solenoid Air Churn Valve	1.0 ± 0.05
257-0287	Solenoid Air Churn Valve	6.0 ± 0.3
261-6023	Solenoid Air Churn Valve	A ± 2 ± 1 B ± 1 ± 0.1 C 0 ± 0.4

**Off Machine Switch Specification**

Part No.	Function	Activate	Deactivate	Contact Position
38-5684	Temperature Switch	11.1 ± 0.5°C (52 ± 1.4°F)	2.2 ± 0.1°C (36 ± 1.4°F)	Normally Closed
38-6400	Blowing Pressure Switch	100 kPa (14.5 psi)	100 kPa (14.5 psi)	Normally Open A-B
38-7992	OTF Low Oil Pressure Switch	113 kPa (16.4 psi)	100 kPa (14.5 psi)	Normally Closed A-B
114-8233	AC Pressure Switch	118 kPa (17.1 psi)	89 ± 20 kPa (12.8 ± 2.9 psi)	Normally Open
117-7773	High Tank Filter Bypass Switch	100 ± 4 kPa (14.5 ± 0.6 psi)	13.3 ± 0.4 kPa (1.9 ± 0.1 psi)	Normally Closed
119-7071	High Tank Filter Bypass Switch	100 ± 4 kPa (14.5 ± 0.6 psi)	13.3 ± 0.4 kPa (1.9 ± 0.1 psi)	Normally Open
212-2768	Fuel Oil Pressure Switch	110 ± 2 kPa (15.8 ± 0.3 psi)	110 ± 2 kPa (15.8 ± 0.3 psi)	Normally Closed
215-6847	Park Brake Pressure Switch	100 ± 4 kPa (14.5 ± 0.6 psi)	1184 ± 45 kPa (171 ± 6.5 psi)	Normally Closed A-C
227-6745	OTF Filter Bypass Switch	100 ± 4 kPa (14.5 ± 0.6 psi)	1184 ± 45 kPa (171 ± 6.5 psi)	Normally Closed A-C
266-6477	Low Brake Oil Pressure Switch	100 ± 4 kPa (14.5 ± 0.6 psi)	1184 ± 45 kPa (171 ± 6.5 psi)	Normally Closed A-C

**Event Codes**

Event Code	Condition
E006	High Fuel Pressure
E112	High Air Filter Restriction
E300	Low Engine Oil Pressure Warning
E301	High Engine Coolant Temperature
E362	Engine Overtemp
E363	High Fuel Temperature
E390	Fuel Filter Restriction
E391	High Inertia Restriction or Temperature
E399	Transmission Filter Plugged
E330	Transmission Output Speed Warning
E392	Downshift Suspended
E393	Low Bearing Pump Pressure
E394	High Oil Temperature
E607	Machine Driven with Parking Brake On
E879	Hydraulic Tank Oil Filter Plugged

**Related Electrical Service Manuals**

Title	Part Number
Alternator	200-2232 (D6000)
Electric Starting Motor	201-7558
Generator	201-7558 (D6000)
Compressor	201-7558 (D6000)
Engine Control	201-7558 (D6000)
Powertrain Control	201-7558 (D6000)

**Component Location**

Component	Schematic Location	Machine Location	Component	Schematic Location	Machine Location
Adjuster Water Valve	B-7	E	Sensor BHR Level	D-8	D
Alarm Alarm	B-13	C	Sensor 2 Fuel Temp	F-13	C
Alarm Backup	B-15	B3	Sensor Throttle	D-8	B
Alarm	B-15	B3	Sensor Turb Inlet Pressure	D-8	B
AC Suppressor - AC	B-2	B	Sensor Xman Out Speed A	A-13	22
AC Suppressor - Rectifier/Generator	B-2	B	Sensor Xman Out Speed B	A-13	22
Battery -	D-2	3	Sensor Xman TDC Output Speed	C-13	12
Battery -	D-2	3	Sensor 1 Fuel Pressure	F-11	A
Blower - Alternator	F-2	6	Solenoid 1 Xman Clutch	B-14	45
Blower - Hood	F-2	6	Solenoid 2 Xman Clutch	B-14	45
Blower - Main	F-2	6	Solenoid 3 Xman Clutch	B-13	45
Blower - Fan	F-2	6	Solenoid 4 Xman Clutch	B-13	45
Blower - Fan	F-2	6	Solenoid 5 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 2 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 3 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 4 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 5 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 6 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 7 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 8 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 9 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 10 Fuel Injector	B-13	45
Blower - Fan	F-2	6	Solenoid 11 Fuel Injector	B-13	45



