

## LOADER XX-XX Codes

Bobcat Controller	
Code	Description
01-16	Air Filter Not Connected
01-17	Air Filter Plugged
02-16	Hydraulic Implement Filter Not Connected
02-17	Hydraulic Implement Filter Plugged
03-09	Battery Voltage Low
03-10	Battery Voltage High
03-11	Battery Voltage Extremely High
03-14	Battery Voltage Extremely Low
03-22	Battery Voltage Out of Range Low
04-09	Engine Oil Pressure Low
04-14	Engine Oil Pressure Extremely Low
04-15	Engine Oil Pressure In Shutdown
04-21	Engine Oil Pressure Out Of Range High
04-22	Engine Oil Pressure Out Of Range Low
05-09	Hydraulic Charge Pressure Low
05-10	Hydraulic Charge Pressure High
05-11	Hydraulic Charge Pressure Extremely High
05-14	Hydraulic Charge Pressure Extremely Low
05-15	Hydraulic Charge Pressure In Shutdown
05-21	Hydraulic Charge Pressure Out Of Range High
05-22	Hydraulic Charge Pressure Out Of Range Low
06-10	Engine Speed High
06-11	Engine Speed Extremely High
06-13	Engine Speed No Signal
06-15	Engine Speed In Shutdown
06-18	Engine Speed Out Of Range
07-10	Hydraulic Oil Temperature High
07-11	Hydraulic Oil Temperature Extremely High
07-15	Hydraulic Oil Temperature In Shutdown
07-21	Hydraulic Oil Temperature Out Of Range High
07-22	Hydraulic Oil Temperature Out Of Range Low
08-10	Engine Coolant Temperature High
08-11	Engine Coolant Temperature Extremely High
08-15	Engine Coolant Temperature In Shutdown
08-21	Engine Coolant Temperature Out Of Range High
08-22	Engine Coolant Temp Out Of Range Low
09-09	Fuel Level Low
09-21	Fuel Level Out Of Range High
09-22	Fuel Level Out Of Range Low
10-16	Hydraulic Charge Filter Not Connected
10-17	Hydraulic Charge Filter Plugged
11-05	Seat Bar Sensor Short To Battery
11-06	Seat Bar Sensor Short To Ground
12-21	Front Auxiliary Thumb Paddle Switch Out Of Range High
12-22	Front Auxiliary Thumb Paddle Switch Out Of Range Low
12-23	Front Auxiliary PWM Switch Not In Neutral
13-05	Fuel Shutoff Hold Coil Short To Battery
13-06	Fuel Shutoff Hold Solenoid Short To Ground
13-07	Fuel Shutoff Hold Solenoid Open Circuit
14-02	Fuel Shutoff Pull Coil Error On
14-03	Fuel Shutoff Pull Coil Error Off
15-02	Traction Lock Pull Coil Error On
15-03	Traction Lock Pull Coil Error Off
16-05	Traction Lock Hold Coil Short To Battery
16-06	Traction Lock Hold Coil Short To Ground
16-07	Traction Lock Hold Solenoid Open Circuit
17-05	Hydraulic Lock Solenoid Short To Battery
17-06	Hydraulic Lock Solenoid Short To Ground
17-07	Hydraulic Lock Solenoid Open Circuit
18-05	Spool Lock Coil Short To Battery
18-06	Spool Lock Coil Short To Ground
18-07	Spool Lock Coil Open Circuit
19-02	Bucket Position Solenoid Error On
19-03	Bucket Position Solenoid Error Off
20-02	Two Speed Solenoid Error On
20-03	Two Speed Solenoid Error Off
21-02	Glow Plug Error On
21-03	Glow Plug Error Off
22-02	Starter Error On
22-03	Starter Error Off
23-02	Rear Base Solenoid Error On
23-03	Rear Base Solenoid Error Off
24-02	Rear Rod Solenoid Error On

Bobcat Controller (Cont'd)	
Code	Description
24-03	Rear Rod Solenoid Error Off
25-02	Rear Auxiliary Relief Solenoid Error On
25-03	Rear Auxiliary Relief Solenoid Error Off
26-02	Front Base Solenoid Error On
26-03	Front Base Solenoid Error Off
27-02	Front Rod Solenoid Error On
27-03	Front Rod Solenoid Error Off
28-02	Diverter Solenoid Error On
28-03	Diverter Solenoid Error Off
29-02	High Flow Solenoid Error On
29-03	High Flow Solenoid Error Off
30-28	Controller Memory Failure
31-28	Interrupted Power
33-23	Bobcat Controller Not Programmed
34-04	Deluxe Panel In Error
35-02	Hydraulic Fan Error On
35-03	Hydraulic Fan Error Off
36-48	Multiple ACDs Present
37-02	Two Speed Make-up Solenoid Error On
37-03	Two Speed Make-up Error Off
37-07	Two Speed Secondary Solenoid Open Circuit
39-04	Left Joystick Switches In Error
39-12	Left CAN Joystick Thumb Paddle Switch Not In Neutral
39-13	Left CAN Joystick Grip No Communication
39-16	Left CAN Joystick Base No Communication
39-28	Left CAN Joystick Internal Failure
39-48	Left CAN Joystick Multiple
40-04	Right Joystick Switches In Error
40-12	Right CAN Joystick Thumb Paddle Switch Not In Neutral
40-13	Right CAN Joystick Grip No Communication
40-16	Right CAN Joystick Base No Communication
40-28	Right CAN Joystick Internal Failure
40-48	Right CAN Joystick Multiple
41-09	Alternator Low Output
41-10	Alternator Voltage High
41-11	Alternator Voltage Extremely High
44-02	Horn Relay Error On
44-03	Horn Relay Error Off
45-02	Right Blinker Relay Error On
45-03	Right Blinker Relay Error Off
46-02	Left Blinker Relay Error On
46-03	Left Blinker Relay Error Off
47-21	8 Volt Sensor Supply Out Of Range High
47-22	8 Volt Sensor Supply Out Of Range Low
48-02	Front Light Relay Error On
48-03	Front Light Relay Error Off
49-02	Rear Light Relay Error On
49-03	Rear Light Relay Error Off
60-21	Rear Auxiliary Control Out Of Range High
60-22	Rear Auxiliary Control Out Of Range Low
60-23	Rear Auxiliary Control Not In Neutral
64-02	Switched Power Relay Error On
64-03	Switched Power Relay Error Off
74-72	Main Bobcat Controller In Boot Code
76-73	Left Display Panel System Rx In Error
77-48	Key Switch Multiple
78-74	Door / Transport Lock Open / Active
80-02	ACD/RACD Output "A" Error On
80-03	ACD/RACD Output "A" Error Off
81-02	ACD/RACD Output "B" Error On
81-03	ACD/RACD Output "B" Error Off
82-02	ACD/RACD Output "C" Error On
82-03	ACD/RACD Output "C" Error Off
83-02	ACD/RACD Output "D" Error On
83-03	ACD/RACD Output "D" Error Off
84-02	ACD/RACD Output "E" Error On
84-03	ACD/RACD Output "E" Error Off
85-02	ACD/RACD Output "F" Error On
85-03	ACD/RACD Output "F" Error Off
86-02	ACD/RACD Output "G" Error On
86-03	ACD/RACD Output "G" Error Off
87-02	ACD/RACD Output "H" Error On
87-03	ACD/RACD Output "H" Error Off

## LOADER XX-XX Codes

ACS Controller	
Code	Description
32-04	No Communication From ACS Controller
32-23	ACS Controller Not Calibrated
32-24	ACS Controller Calibration Performed
32-25	ACS Controller Calibration Failure
32-31	ACS / AHC Tilt Actuator Fault
32-32	AHC Tilt Actuator Wiring Fault
32-33	AHC Tilt Handle Wiring Fault
32-34	ACS / AHC Tilt Actuator Not In Neutral
32-35	ACS / AHC Tilt Handle / Pedal Not In Neutral, SJC Right Joystick X-axis Not In Neutral
32-36	ACS / AHC Lift Actuator Fault
32-37	AHC Lift Actuator Wiring Fault
32-38	AHC Lift Handle Wiring Fault
32-39	ACS / AHC Lift Actuator Not In Neutral
32-40	ACS / AHC Lift Handle / Pedal Not In Neutral, SJC Right Joystick Y-axis Not In Neutral
32-41	AHC Controller No Communication
32-49	ACS Lift Actuator Short To Ground (Error Off)
32-50	ACS Tilt Actuator Short To Ground (Error Off)
32-51	ACS Lift Actuator Short To Battery (Error On)
32-52	ACS Tilt Actuator Short To Battery (Error On)
32-53	ACS Lift Handle / Pedal Short To Ground, SJC Right Joystick Y-axis Short To Ground
32-54	ACS Tilt Handle / Pedal Short To Ground, SJC Right Joystick X-axis Short To Ground
32-55	ACS Lift Handle / Pedal Short To Battery, SJC Right Joystick Y-axis Short To Battery
32-56	ACS Tilt Handle Pedal Short To Battery, SJC Right Joystick X-axis Short To Battery
32-57	ACS Lift Actuator Reduced Performance
32-58	ACS Tilt Actuator Reduced Performance
32-59	ACS Lift Actuator Wrong Direction
32-60	ACS Tilt Actuator Wrong Direction
32-61	ACS Handle Lock Short To Ground
32-62	ACS Handle Lock Short To Battery
32-63	ACS Pedal Lock Short To Ground
32-64	ACS Pedal Lock Short To Battery
32-65	ACS Sensor Supply Voltage Out Of Range
32-66	ACS Battery Voltage Out Of Range
32-67	ACS Operating Mode Switch Flipped While Operating
32-68	ACS Lift Handle Information Error
32-70	Right Joystick Y-axis Out Of Range Low
32-71	Right Joystick Y-axis Out Of Range High
32-75	Interrupted Un-switched Power
32-76	CAN Joystick Information Error
32-97	ACS Controller Programmed
40-05	Right CAN Joystick X-axis Not In Neutral
40-07	Right CAN Joystick Y-axis Not In Neutral

AWS-SJC Controller	
Code	Description
38-01	CAN Joystick Information Error
38-02	Remote Control Information Error
38-03	Actuator Calibration Failure
38-04	AWS/SJC Controller No Communication
38-05	Left Analog Joystick X-Axis Not In Neutral
38-06	Right Analog Joystick X-Axis Not In Neutral
38-07	Left Analog Joystick Y-Axis Not In Neutral
38-08	Right Joystick Y-Axis Not In Neutral
38-09	Operating Mode Switch Short to Ground or Battery
38-10	Actuator Calibration Performed
38-11	AWS / SJC Lift Actuator Not In Neutral
38-12	AWS / SJC Tilt Actuator Not In Neutral
38-13	AWS / SJC Lift Actuator Fault
38-14	AWS / SJC Tilt Actuator Fault
38-15	AWS / SJC Right Wheel Speed Fault
38-16	AWS / SJC Left Wheel Speed Fault
38-17	AWS / SJC Tilt Actuator Reduced Performance
38-18	AWS / SJC Lift Actuator Reduced Performance
38-19	Left Joystick X-Axis Out Of Range High
38-20	Right Joystick X-Axis Out Of Range High
38-21	Left Joystick Y-Axis Out Of Range High
38-22	Right Joystick Y-Axis Out Of Range High
38-23	Right Front Steering Sensor Out Of Range High
38-24	Left Front Steering Sensor Out Of Range High
38-25	Right Rear Steering Sensor Out Of Range High

AWS-SJC Controller (Cont'd)	
Code	Description
38-26	Left Rear Steering Sensor Out Of Range High
38-27	AWS / SJC Lift Actuator Out Of Range High
38-28	AWS / SJC Tilt Actuator Out Of Range High
38-29	Left Joystick X-Axis Out Of Range Low
38-30	Right Joystick X-axis Out Of Range Low
38-31	Left Joystick Y-Axis Out Of Range Low
38-32	Right Joystick Y-Axis Out Of Range Low
38-33	Right Front Steering Sensor Out Of Range Low
38-34	Left Front Steering Sensor Out Of Range Low
38-35	Right Rear Steering Sensor Out Of Range Low
38-36	Left Rear Steering Sensor Out Of Range Low
38-37	5 Volt Sensor Supply 1 Out Of Range Low
38-38	5 Volt Sensor Supply 2 Out Of Range Low
38-39	AWS / SJC Lift Actuator Short To Ground
38-40	AWS / SJC Tilt Actuator Short To Ground
38-41	Tilt Actuator Wrong Direction
38-42	Lift Actuator Wrong Direction
38-43	Left Forward Drive Solenoid Error On
38-44	Left Reverse Drive Solenoid Error On
38-45	Right Forward Drive Solenoid Error On
38-46	Right Reverse Drive Solenoid Error On
38-47	Right Front Steering Solenoid Error On
38-48	Left Front Steering Solenoid Error On
38-49	Right Rear Steering Solenoid Error On
38-50	Left Rear Steering Solenoid Error On
38-51	Pressure Control Steering Solenoid Error On
38-52	Backup Alarm Error On
38-53	Left Forward Drive Solenoid Error Off
38-54	Left Reverse Drive Solenoid Error Off
38-55	Right Forward Drive Solenoid Error Off
38-56	Right Reverse Drive Solenoid Error Off
38-57	Right Front Extend Steering Solenoid Error Off
38-58	Right Front Retract Steering Solenoid Error Off
38-59	Left Front Extend Steering Solenoid Error Off
38-60	Left Front Retract Steering Solenoid Error Off
38-61	Right Rear Extend Steering Solenoid Error Off
38-62	Right Rear Retract Steering Solenoid Error Off
38-63	Left Rear Extend Steering Solenoid Error Off
38-64	Left Rear Retract Steering Solenoid Error Off
38-65	Pressure Control Steering Solenoid Error Off
38-66	Backup Alarm Short To Ground
38-67	No Communication From Bobcat Controller
38-68	Wheel Angle Sensors Not Calibrated
38-69	AWS / SJC Controller Not Calibrated
38-70	Interrupted Power
38-71	Battery Voltage Out Of Range
38-72	Drive Pump Not Calibrated
38-73	Operating Mode Switch Pressed While Operating
38-74	Right Wheel Speed Uncommanded Motion
38-75	Left Wheel Speed Uncommanded Motion
38-85	5.0 Volt Sensor Supply 1 Out Of Range High
38-86	Sensor Supply 2 Out Of Range High
38-87	Right Front Steering Solenoid Error
38-88	Left Front Steering Solenoid Error
38-89	Right Rear Steering Solenoid Error
38-90	Left Rear Steering Solenoid Error
38-93	Right Speed Sensor Unresponsive
38-94	Left Speed Sensor Unresponsive
38-95	Left Speed Sensor Reverse Direction
38-96	Right Speed Sensor Reverse Direction
38-97	AWS/SJC Controller Programmed
38-98	Controller In Drive Calibration Mode
38-99	AWS Controller In Wheel Position Calibration Mode
39-05	Left CAN Joystick X-axis Not In Neutral
39-07	Left CAN Joystick Y-axis Not In Neutral
40-05	Right CAN Joystick X-axis Not In Neutral
40-07	Right CAN Joystick Y-axis Not In Neutral

## LOADER XX-XX Codes

SSL Drive / Drive Plus Controller	
Code	Description
39-05	Left CAN Joystick X-axis Not In Neutral
39-07	Left CAN Joystick Y-axis Not In Neutral
75-01	CAN Joystick Information Error
75-04	No Communication From Drive Controller
75-05	Left Joystick X-axis Not In Neutral Left (ISO Mode Only)
75-07	Left Joystick Y-axis Not In Neutral
75-08	Right Joystick Y-axis Not In Neutral (H-Pattern Only)
75-09	Operating Mode Switch Short To Ground Or Battery
75-13	Right Front Wheel Unresponsive
75-14	Left Front Wheel Unresponsive
75-15	Right Rear Wheel Unresponsive
75-16	Left Rear Wheel Unresponsive
75-17	Left Swash Plate Not In Neutral
75-18	Right Swash Plate Not In Neutral
75-19	Left Joystick X-axis Out Of Range High
75-21	Left Joystick Y-axis Out Of Range High
75-23	Right Front Steering Sensor Out Of Range High
75-24	Left Front Steering Sensor Out Of Range High
75-25	Right Rear Steering Sensor Out Of Range High
75-26	Left Rear Steering Sensor Out Of Range High
75-27	Left Swash Plate Out Of Position
75-28	Right Swash Plate Out Of Position
75-29	Left Joystick X-axis Out Of Range Low
75-31	Left Joystick Y-axis Out Of Range Low
75-33	Right Front Steering Sensor Out Of Range Low
75-34	Left Front Steering Sensor Out Of Range Low
75-35	Right Rear Steering Sensor Out Of Range Low
75-36	Left Rear Steering Sensor Out Of Range Low
75-37	5.0 Volt Sensor Supply 1 Out Of Range Low
75-38	5 Volt Sensor Supply 2 Out Of Range Low
75-39	Left Swash Plate Sensor Out Of Range High
75-40	Left Swash Plate Sensor Out Of Range Low
75-41	Right Swash Plate Sensor Out Of Range High
75-42	Right Swash Plate Sensor Out Of Range Low
75-43	Left Forward Drive Solenoid Error On
75-44	Left Reverse Drive Solenoid Error On
75-45	Right Forward Drive Solenoid Error On
75-46	Right Reverse Drive Solenoid Error On
75-47	Right Front Extend Steering Solenoid Error On
75-48	Left Front Extend Steering Solenoid Error On
75-49	Right Rear Extend Steering Solenoid Error On
75-50	Left Rear Extend Steering Solenoid Error On
75-51	Pressure Control Steering Solenoid Error On
75-52	Backup Alarm Error On
75-53	Left Forward Drive Solenoid Error Off
75-54	Left Reverse Drive Solenoid Error Off
75-55	Right Forward Drive Solenoid Error Off
75-56	Right Reverse Drive Solenoid Error Off
75-57	Right Front Extend Steering Solenoid Error Off
75-58	Right Front Retract Steering Solenoid Error Off
75-59	Left Front Extend Steering Solenoid Error Off
75-60	Left Front Retract Steering Solenoid Error Off
75-61	Right Rear Extend Steering Solenoid Error Off
75-62	Right Rear Retract Steering Solenoid Error Off
75-63	Left Rear Extend Steering Solenoid Error Off
75-64	Left Rear Retract Steering Solenoid Error Off
75-65	Pressure Control Steering Solenoid Error Off
75-66	Backup Alarm Error Off
75-67	No Communication From Bobcat Controller
75-68	Angle Sensors Not Calibrated
75-69	Battery Voltage Out Of Range High
75-70	Interrupted Power
75-71	Battery Voltage Out Of Range Low
75-72	Drive Pump – Not Calibrated
75-73	Operating Mode Switch Flipped While Operating
75-74	Right Wheel Speed Uncommanded Motion
75-75	Left Wheel Speed Uncommanded Motion
75-76	No Communication From ACS Controller
75-77	Left Speed Sensor Out Of Range High
75-78	Right Speed Sensor Out Of Range High
75-79	Left Speed Sensor Out Of Range Low
75-80	Right Speed Sensor Out Of Range Low
75-81	Right Front Retract Steering Solenoid Error On

SSL Drive / Drive Plus Controller	
Code	Description
75-82	Left Front Retract Steering Solenoid Error On
75-83	Right Rear Retract Steering Solenoid Error On
75-84	Left Rear Retract Steering Solenoid Error On
75-85	5.0 Volt Sensor Supply 1 Out Of Range High
75-86	Sensor Supply 2 Out Of Range High
75-87	Software Update Required
75-88	Switched Power Error On
75-91	Left Swash Plate Sensor - Reversed
75-92	Right Swash Plate Sensor - Reversed
75-93	Unresponsive Right Speed Sensor
75-94	Unresponsive Left Speed Sensor
75-95	Left Speed Sensor Reverse Direction
75-96	Right Speed Sensor Reverse Direction
75-97	Drive / Drive Plus Controller Programmed
75-98	Controller In Calibration Mode
75-99	Drive Plus Controller In Wheel Position Calibration Mode

## LOADER ALPHA-NUMERIC CODES

Gateway Controller	
Code	Description
M0116	Air Filter Not Connected
M0117	Air Filter Plugged
M0216	Hydraulic Implement Filter Not Connected
M0217	Hydraulic Implement Filter Plugged
M0309	Battery Voltage Low
M0310	Battery Voltage High
M0311	Battery Voltage Extremely High
M0314	Battery Voltage Extremely Low
M0322	Battery Voltage Out Of Range Low
M0409	Engine Oil Pressure Low
M0414	Engine Oil Pressure Extremely Low
M0415	Engine Oil Pressure In Shutdown
M0421	Engine Oil Pressure Out Of Range High
M0422	Engine Oil Pressure Out Of Range Low
M0509	Hydraulic Charge Pressure Low
M0510	Hydraulic Charge Pressure High
M0511	Hydraulic Charge Pressure Extremely High
M0514	Hydraulic Charge Pressure Extremely Low
M0515	Hydraulic Charge Pressure In Shutdown
M0521	Hydraulic Charge Pressure Out Of Range High
M0522	Hydraulic Charge Pressure Out Of Range Low
M0610	Engine Speed High
M0611	Engine Speed Extremely High
M0613	Engine Speed No Signal
M0615	Engine Speed In Shutdown
M0618	Engine Speed Out Of Range
M0710	Hydraulic Oil Temperature High
M0711	Hydraulic Oil Temperature Extremely High
M0715	Hydraulic Oil Temperature In Shutdown
M0721	Hydraulic Oil Temperature Out Of Range High
M0722	Hydraulic Oil Temperature Out Of Range Low
M0810	Engine Coolant Temperature High
M0811	Engine Coolant Temperature Extremely High
M0815	Engine Coolant Temperature In Shutdown
M0821	Engine Coolant Temperature Out Of Range High
M0822	Engine Coolant Temperature Out Of Range Low
M0909	Fuel Level Low
M0921	Fuel Level Out Of Range High
M0922	Fuel Level Out Of Range Low
M1016	Hydraulic Charge Filter Not Connected
M1017	Hydraulic Charge Filter Plugged
M1121	Seatbar Sensor Out Of Range High
M1122	Seatbar Sensor Out Of Range Low
M1305	Fuel Shutoff Hold Coil Short To Battery
M1306	Fuel Shutoff Hold Coil Short To Ground
M1307	Fuel Shutoff Hold Coil Open Circuit
M1402	Fuel Pull Output Error On
M1403	Fuel Pull Output Error Off
M1407	Fuel Pull Output Open Circuit
M1428	Fuel Pull Output Controller Failure
M1502	Traction Lock Pull Output Error On
M1503	Traction Lock Pull Output Error Off
M1507	Traction Lock Pull Output Open Circuit
M1528	Traction Lock Pull Output Controller Failure
M1605	Traction Lock Hold Solenoid Short To Battery
M1606	Traction Lock Hold Solenoid Short To Ground
M1607	Traction Lock Hold Solenoid Open Circuit
M1705	Hydraulic Lock Valve Solenoid Short To Battery
M1706	Hydraulic Lock Valve Solenoid Short To Ground
M1707	Hydraulic Lock Valve Solenoid Open Circuit
M1732	Hydraulic Lock Valve Solenoid Over Current
M1805	Lift Spool Lock Short To Battery
M1806	Lift Spool Lock Short To Ground
M1807	Lift Spool Lock Open Circuit
M1832	Lift Spool Lock Solenoid Over Current
M2005	Two Speed Solenoid Short To Battery
M2006	Two Speed Solenoid Short To Ground
M2007	Two Speed Solenoid Open Circuit
M2032	Two Speed Solenoid Over Current
M2102	Glow Plug Output Error On
M2103	Glow Plug Output Error Off
M2107	Glow Plug Output Open Circuit

Gateway Controller (Cont'd)	
Code	Description
M2128	Glow Plug Output Controller Failure
M2202	Starter Output Error On
M2203	Starter Output Error Off
M2207	Starter Output Open Circuit
M2228	Starter Output Controller Failure
M2302	Starter Relay Error On
M2303	Starter Relay Error Off
M2307	Starter Relay Open Circuit
M2402	Fuel Pull Relay Error On
M2403	Fuel Pull Relay Error Off
M2407	Fuel Pull Output Open Circuit
M2502	Traction Lock Relay Error On
M2503	Traction Lock Pull Relay Error Off
M2507	Traction Lock Output Open Circuit
M2602	Glow Plug Relay Error On
M2603	Glow Plug Relay Error Off
M2607	Glow Plug Output Open Circuit
M2805	Auxiliary Interlock Output Short To Battery
M2806	Auxiliary Interlock Output Short To Ground
M2807	Auxiliary Interlock Output Open Circuit
M3028	Controller Memory Failure
M3128	Interrupted Power Failure
M3204	ACS In Error
M3304	Deluxe Panel No Communication
M3323	Gateway Controller Not Programmed
M3404	Deluxe Panel No Communication
M3505	Hydraulic Fan Solenoid Error On
M3506	Hydraulic Fan Solenoid Error Off
M3507	Hydraulic Fan Solenoid Open Circuit
M3532	Hydraulic Fan Solenoid Over Current
M3648	Multiple ACDs Present (Attachment Control Device)
M3705	Two Speed Secondary Error On
M3706	Two Speed Secondary Error Off
M3707	Two Speed Secondary Solenoid Open Circuit
M3732	Two Speed Secondary Over Current
M4109	Alternator Low Output
M4110	Alternator Voltage High
M4404	Auxiliary Controller No Communication
M4621	5 Volt Sensor Supply Out Of Range High
M4622	5 Volt Sensor Supply Out Of Range Low
M4721	8 Volt Sensor Supply Out Of Range High
M4722	8 Volt Sensor Supply Out Of Range Low
M4802	Front Light Relay Error On
M4803	Front Light Relay Error Off
M4807	Front Light Output Open Circuit
M4902	Rear Light Relay Error On
M4903	Rear Light Relay Error Off
M4907	Rear Light Output Open Circuit
M5002	Front Light Output Error On
M5003	Front Light Output Error Off
M5007	Front Light Output Open Circuit
M5028	Front Light Output Controller Failure
M5102	Rear Light Output Error On
M5103	Rear Light Output Error Off
M5107	Rear Light Output Open Circuit
M5128	Front Light Output Controller Failure
M5202	PTOL (Press To Operate Loader)Switch Error On
M5221	PTOL Switch Out Of Range High
M5222	PTOL Switch Out Of Range Low
M5305	PTOL Led Short To Battery
M5306	PTOL Led Short To Ground
M5405	Tilt Spool Lock Short To Battery
M5406	Tilt Spool Lock Short To Ground
M5407	Tilt Spool Lock Open Circuit
M5432	Tilt Spool Lock Over Current
M6402	Switched Power Relay Error On
M6403	Switched Power Relay Error Off
M6407	Switched Power Output Open Circuit
M7002	Switched Power Output Error On
M7003	Switched Power Output Error Off
M7007	Switched Power Output Open Circuit
M7028	Switched Power Output Controller Failure

## LOADER ALPHA-NUMERIC CODES

<b>Gateway Controller (Cont'd)</b>	
Code	Description
M7304	Remote Control Receiver No Communication
M7423	Gateway Controller Not Programmed
M7472	Gateway Controller In Boot Code
M7504	Drive Controller No Communication
M7604	Left Display Panel No Communication
M7748	Key Switch Multiple
M7974	Door Open

<b>Auxiliary Controller</b>	
Code	Description
H1221	Front Auxiliary Thumb Paddle Switch Out Of Range High
H1222	Front Auxiliary Thumb Paddle Switch Out Of Range Low
H1224	Front Auxiliary Thumb Paddle Switch Not In Neutral
H1324	Rear Auxiliary Thumb Paddle Switch Not In Neutral
H2305	Rear Base Solenoid Shorted to Battery
H2306	Rear Base Solenoid Short To Ground
H2307	Rear Base Solenoid Open Circuit
H2332	Rear Base Solenoid Over Current
H2405	Rear Rod Solenoid Short To Battery
H2406	Rear Rod Solenoid Short To Ground
H2407	Rear Rod Solenoid Open Circuit
H2432	Rear Rod Solenoid Over Current
H2605	Front Base Solenoid Short To Battery
H2606	Front Base Solenoid Short To Ground
H2607	Front Base Solenoid Open Circuit
H2632	Front Base Solenoid Over Current
H2705	Front Rod Solenoid Short To Battery
H2706	Front Rod Solenoid Short To Ground
H2707	Front Rod Solenoid Open Circuit
H2732	Front Rod Solenoid Over Current
H2805	Diverter Solenoid Short To Battery
H2806	Diverter Solenoid Short To Ground
H2807	Diverter Solenoid Open Circuit
H2905	High Flow Solenoid Short To Battery
H2906	High Flow Solenoid Short To Ground
H2907	High Flow Solenoid Open Circuit
H2932	High Flow Solenoid Over Current
H3028	Auxiliary Controller Memory Failure
H3128	Interrupted Power Failure
H3648	Multiple ACDs Present (Attachment Control Device)
H3913	Left CAN Joystick Grip No Communication
H3916	Left CAN Joystick Base No Communication
H3928	Left CAN Joystick Internal Failure
H3948	Left CAN Joystick Multiple
H4013	Right CAN Joystick Grip No Communication
H4016	Right CAN Joystick Base No Communication
H4028	Right CAN Joystick Internal Failure
H4048	Right CAN Joystick Multiple
H4302	Horn Relay Error On
H4303	Horn Relay Error Off
H4423	Auxiliary Controller Not Programmed
H4502	Right Blinker Error On
H4503	Right Blinker Error Off
H4602	Left Blinker Error On
H4603	Left Blinker Error Off
H4721	8 Volt Sensor Supply Out Of Range High
H4722	8 Volt Sensor Supply Out Of Range Low
H7404	Gateway Controller No Communication
H7604	Left Display Panel No Communication

<b>ACD Controller</b>	
Code	Description
A8002	ACD/RACD Output "A" Error On
A8003	ACD/RACD Output "A" Error Off
A8102	ACD/RACD Output "B" Error On
A8103	ACD/RACD Output "B" Error Off
A8202	ACD/RACD Output "C" Error On
A8203	ACD/RACD Output "C" Error Off
A8302	ACD/RACD Output "D" Error On
A8303	ACD/RACD Output "D" Error Off
A8402	ACD/RACD Output "E" Error On
A8403	ACD/RACD Output "E" Error Off
A8502	ACD/RACD Output "F" Error On
A8503	ACD/RACD Output "F" Error Off
A8602	ACD/RACD Output "G" Error On
A8603	ACD/RACD Output "G" Error Off
A8702	ACD/RACD Output "H" Error On
A8703	ACD/RACD Output "H" Error Off

<b>ACS Controller</b>	
Code	Description
W3223	ACS Controller Not Calibrated
W3224	ACS Controller Calibration Successful
W3225	ACS Controller Calibration Failure
W3231	ACS Tilt Actuator Fault
W3234	ACS Tilt Actuator Not In Neutral
W3235	ACS Tilt Handle/Pedal Not In Neutral
W3236	ACS Lift Actuator Fault
W3239	ACS Lift Actuator Not In Neutral (ACS Only)
W3240	ACS Lift Handle/Pedal Not In Neutral
W3249	ACS Lift Actuator Short To Ground (Error Off) (ACS Only)
W3250	ACS Tilt Actuator Short To Ground (Error Off)
W3251	ACS Lift Actuator Short To Battery (Error On) (ACS Only)
W3252	ACS Tilt Actuator Short To Battery (Error On)
W3253	ACS Lift Handle/Pedal Short To Ground
W3254	ACS Tilt Handle/Pedal Short To Ground
W3255	ACS Lift Handle/Pedal Short To Battery
W3256	ACS Tilt Handle/Pedal Short To Battery
W3257	ACS Lift Actuator Reduced Performance
W3258	ACS Tilt Actuator Reduced Performance
W3259	ACS Lift Actuator Wrong Direction (ACS Only)
W3260	ACS Tilt Actuator Wrong Direction
W3261	ACS Handle Lock Short To Ground
W3262	ACS Handle Lock Short To Battery
W3263	ACS Pedal Lock Short To Ground
W3264	ACS Pedal Lock Short To Battery
W3265	ACS Sensor Supply Voltage Out Of Range (ACS Only)
W3266	ACS Battery Voltage Out Of Range (ACS Only)
W3267	ACS Operating Mode Switch Flipped While Operating
W3275	Interrupted Un-switched Power
W3276	CAN Joystick Information Error
W3297	ACS Controller Programmed
W3905	Left CAN Joystick X-axis Not In Neutral
W4005	Right CAN Joystick X-axis Not In Neutral
W4007	Right CAN Joystick Y-axis Not In Neutral

<b>Left Hand Panel Controller</b>	
Code	Description
L0102	Lights Button Error On
L0202	High Flow Button Error On
L0302	Auxiliary Button Error On
L0402	Information Button Error On
L7404	Gateway Controller No Communication
L7672	Left Hand Panel Programming Error



## LOADER ALPHA-NUMERIC CODES

<b>SSL Drive / Drive Plus Controller</b>	
<b>Code</b>	<b>Description</b>
D3905	Left CAN Joystick X Axis Not In Neutral
D3907	Left CAN Joystick Y-axis Not In Neutral
D4007	Right CAN Joystick Y-axis Not In Neutral
D7501	CAN Joystick Information Error
D7509	Operating Mode Switch Short To Ground Or Battery
D7513	Right Front Wheel Unresponsive
D7514	Left Front Wheel Unresponsive
D7515	Right Rear Wheel Unresponsive
D7516	Left Rear Wheel Unresponsive
D7517	Left Swash Plate Not In Neutral
D7518	Right Swash Plate Not In Neutral
D7523	Right Front Steering Sensor Out Of Range High
D7524	Left Front Steering Sensor Out Of Range High
D7525	Right Rear Steering Sensor Out Of Range High
D7526	Left Rear Steering Sensor Out Of Range High
D7527	Left Swash Plate Out Of Position
D7528	Right Swash Plate Out Of Position
D7533	Right Front Steering Sensor Out Of Range Low
D7534	Left Front Steering Sensor Out Of Range Low
D7535	Right Rear Steering Sensor Out Of Range Low
D7536	Left Rear Steering Sensor Out Of Range Low
D7537	5.0 Volt Sensor Supply 1 Out Of Range Low
D7538	5 Volt Sensor Supply 2 Out Of Range Low
D7539	Left Swash Plate Sensor Out Of Range High
D7540	Left Swash Plate Sensor Out Of Range Low
D7541	Right Swash Plate Sensor Out Of Range High
D7542	Right Swash Plate Sensor Out Of Range Low
D7543	Left Forward Drive Solenoid Error On
D7544	Left Reverse Drive Solenoid Error On
D7545	Right Forward Drive Solenoid Error On
D7546	Right Reverse Drive Solenoid Error On
D7547	Right Front Extend Steering Solenoid Error On
D7548	Left Front Extend Steering Solenoid Error On
D7549	Right Rear Extend Steering Solenoid Error On
D7550	Left Rear Extend Steering Solenoid Error On
D7551	Pressure Control Steering Solenoid Error On
D7552	Backup Alarm Error On
D7553	Left Forward Drive Solenoid Error Off
D7554	Left Reverse Drive Solenoid Error Off
D7555	Right Forward Drive Solenoid Error Off
D7556	Right Reverse Drive Solenoid Error Off
D7557	Right Front Extend Steering Solenoid Error Off
D7558	Right Front Retract Steering Solenoid Error Off
D7559	Left Front Extend Steering Solenoid Error Off
D7560	Left Front Retract Steering Solenoid Error Off
D7561	Right Rear Extend Steering Solenoid Error Off
D7562	Right Rear Retract Steering Solenoid Error Off
D7563	Left Rear Extend Steering Solenoid Error Off
D7564	Left Rear Retract Steering Solenoid Error Off
D7565	Pressure Control Steering Solenoid Error Off
D7566	Backup Alarm Error Off
D7567	No Communication From Gateway Controller
D7568	Angle Sensors Not Calibrated
D7569	Battery Voltage Out Of Range High
D7570	Interrupted Power
D7571	Battery Voltage Out Of Range Low
D7572	Drive Pump – Not Calibrated
D7573	Operating Mode Switch Flipped While Operating
D7574	Right Wheel Speed Uncommanded Motion
D7575	Left Wheel Speed Uncommanded Motion
D7577	Left Speed Sensor Out Of Range High
D7578	Right Speed Sensor Out Of Range High
D7579	Left Speed Sensor Out Of Range Low
D7580	Right Speed Sensor Out Of Range Low
D7581	Right Front Retract Steering Solenoid Error On
D7582	Left Front Retract Steering Solenoid Error On
D7583	Right Rear Retract Steering Solenoid Error On
D7584	Left Rear Retract Steering Solenoid Error On
D7585	5.0 Volt Sensor Supply 1 Out Of Range High
D7586	Sensor Supply 2 Out Of Range High
D7587	Software Update Required
D7588	Switched Power Stuck On

<b>SSL Drive / Drive Plus Controller (Cont'd)</b>	
<b>Code</b>	<b>Description</b>
D7591	Left Swash Plate Sensor - Reversed
D7592	Right Swash Plate Sensor - Reversed
D7593	Unresponsive Right Speed Sensor
D7594	Unresponsive Left Speed Sensor
D7595	Left Speed Sensor Reverse Direction
D7596	Right Speed Sensor Reverse Direction
D7597	Drive / Drive Plus Controller Programmed
D7598	Drive / Drive Plus Controller In Calibration Mode
D7599	Drive Plus Controller In Wheel Position Calibration Mode

## EXCAVATOR XX-XX CODES

Excavator Display Controller	
Code	Description
02-16	Hydraulic/Hydrostatic Filter Not Connected
02-17	Hydraulic/Hydrostatic Filter Plugged
03-09	Battery Voltage Low
03-10	Battery Voltage High
03-11	Battery Voltage Extremely High
03-14	Battery Voltage Extremely Low
03-15	Battery Voltage In Shutdown
03-22	Battery Voltage Out Of Range Low
04-14	Engine Oil Pressure Extremely Low
04-15	Engine Oil Pressure Shutdown Level
05-09	Travel Pilot Pressure Low
05-14	Travel Pilot Pressure Extremely Low
05-15	Travel Pilot Pressure In Shutdown
05-21	Travel Pilot Pressure Out Of Range High
05-22	Travel Pilot Pressure Out Of Range Low
06-10	Engine Speed High
06-11	Engine Speed Extremely High
06-13	Engine Speed No Signal
06-15	Engine Speed In Shutdown
06-18	Engine Speed Out Of Range High
07-10	Hydraulic Oil Temperature High
07-11	Hydraulic Oil Temperature Extremely High
07-15	Hydraulic Oil Temperature In Shutdown
07-21	Hydraulic Oil Temperature Out Of Range High
07-22	Hydraulic Oil Temperature Out Of Range Low
08-10	Engine Coolant Temperature High
08-11	Engine Coolant Temperature Extremely High
08-15	Engine Coolant Temperature In Shutdown
08-21	Engine Coolant Temperature Out Of Range High
08-22	Engine Coolant Temperature Out Of Range Low
09-21	Fuel Level Out Of Range High
09-22	Fuel Level Out Of Range Low
12-21	Auxiliary PWM Switch Out Of Range High
12-22	Auxiliary PWM Switch Out Of Range Low
12-23	Auxiliary PWM Switch Not In Neutral
13-05	Fuel Shutoff Hold Solenoid Short To Battery
13-06	Fuel Shutoff Hold Solenoid Short To Ground
13-07	Fuel Shutoff Hold Solenoid Open Circuit
14-02	Fuel Shutoff Pull Solenoid Error On
14-03	Fuel Shutoff Pull Solenoid Error Off
20-02	Two Speed Error On
20-03	Two Speed Error Off
21-02	Glow Plug Error On
21-03	Glow Plug Error Off
22-02	Starter Error On
22-03	Starter Error Off
26-02	Front Base Solenoid Error On
26-03	Front Base Solenoid Error Off
26-05	Front Base PWM Short to Battery
26-06	Front Base PWM Short to Ground
26-07	Front Base PWM Open Circuit
27-02	Front Rod Solenoid Error On
27-03	Front Rod Solenoid Error Off
27-05	Front Rod PWM Short to Battery
27-06	Front Rod PWM Short to Ground

Excavator Display Controller	
Code	Description
20-03	Two Speed Error Off
21-02	Glow Plug Error On
21-03	Glow Plug Error Off
22-02	Starter Error On
22-03	Starter Error Off
26-02	Front Base Solenoid Error On
26-03	Front Base Solenoid Error Off
26-05	Front Base PWM Short to Battery
26-06	Front Base PWM Short to Ground
26-07	Front Base PWM Open Circuit
27-02	Front Rod Solenoid Error On
27-03	Front Rod Solenoid Error Off
27-05	Front Rod PWM Short to Battery
27-06	Front Rod PWM Short to Ground
27-07	Front Rod PWM Open Circuit
28-02	Diverter Solenoid Error On
28-03	Diverter Solenoid Error Off
31-28	Interrupted Power Failure
33-23	Main Controller Not Programmed
35-05	Hydraulic Fan Short To Battery
35-06	Hydraulic Fan Short To Ground
62-04	Load Moment Monitoring In Error
63-05	Console Switch Short To Battery
63-06	Console Switch Short To Ground
64-05	Switched Power Relay Short To Battery
64-06	Switched Power Relay Short To Ground
64-07	Switched Power Relay Open Circuit
65-05	Workgroup Lockout Solenoid Short To Battery
65-06	Workgroup Lockout Solenoid Short To Ground
65-07	Workgroup Lockout Solenoid Open Circuit
66-05	Travel Pilot Pressure Short To Battery
66-06	Travel Pilot Pressure Short To Ground
66-07	Travel Pilot Pressure Open Circuit

## EXCAVATOR ALPHA-NUMERIC CODES

<b>Excavator Display Controller</b>	
<b>Code</b>	<b>Description</b>
C0216	Hydraulic/Hydrostatic Filter Not Connected
C0217	Hydraulic/Hydrostatic Filter Plugged
C0309	Battery Voltage Low
C0310	Battery Voltage High
C0311	Battery Voltage Extremely High
C0314	Battery Voltage Extremely Low
C0315	Battery Voltage In Shutdown
C0322	Battery Voltage Out Of Range Low
C0414	Engine Oil Pressure Extremely Low
C0415	Engine Oil Pressure In Shutdown
C0610	Engine Speed High
C0611	Engine Speed Extremely High
C0613	Engine Speed No Signal
C0615	Engine Speed In Shutdown
C0618	Engine Speed Out Of Range High
C0710	Hydraulic Oil Temperature High
C0711	Hydraulic Oil Temperature Extremely High
C0715	Hydraulic Oil Temperature In Shutdown
C0721	Hydraulic Oil Temperature Out Of Range High
C0722	Hydraulic Oil Temperature Out Of Range Low
C0810	Engine Coolant Temperature High
C0811	Engine Coolant Temperature Extremely High
C0815	Engine Coolant Temperature In Shutdown
C0821	Engine Coolant Temperature Out Of Range High
C0822	Engine Coolant Temperature Out Of Range Low
C0921	Fuel Level Out Of Range High
C0922	Fuel Level Out Of Range Low
C1221	Auxiliary PWM Switch Out Of Range High
C1222	Auxiliary PWM Switch Out Of Range Low
C1223	Auxiliary PWM Switch Not In Neutral
C1305	Fuel Shutoff Hold Solenoid Short To Battery
C1306	Fuel Shutoff Hold Solenoid Short To Ground
C1307	Fuel Shutoff Hold Solenoid Open Circuit
C1402	Fuel Shutoff Pull Solenoid Error On
C1403	Fuel Shutoff Pull Solenoid Error Off
C2005	Two Speed Error On
C2006	Two Speed Error Off
C2102	Glow Plug Error On
C2103	Glow Plug Error Off
C2202	Starter Error On
C2203	Starter Error Off
C2305	Offset Base Solenoid Short To Battery
C2306	Offset Base Solenoid Short to Ground
C2307	Offset Base Solenoid Open Circuit
C2405	Offset Rod Solenoid Short To Battery
C2406	Offset Rod Solenoid Short to Ground
C2407	Offset Rod Solenoid Open Circuit
C2505	Offset Return Short To Battery
C2506	Offset Return Short To Ground
C2507	Offset Return Open Circuit
C2605	Auxiliary Base Solenoid Short to Battery
C2606	Auxiliary Base Solenoid Short to Ground
C2607	Auxiliary Base Solenoid Open Circuit
C2705	Auxiliary Rod Solenoid Short to Battery
C2706	Auxiliary Rod Solenoid Short to Ground
C2707	Auxiliary Rod Solenoid Open Circuit
C2802	Hydraulic Exchange Error On

<b>Excavator Display Controller (Cont'd)</b>	
<b>Code</b>	<b>Description</b>
C2803	Hydraulic Exchange Error Off
C3028	Controller Memory Failure
C3128	Interrupted Power Failure
C3323	Main Controller Not Programmed
C3397	Main Controller Programmed
C4021	Angle Blade Control Out Of Range High
C4022	Angle Blade Control Out Of Range Low
C4023	Angle Blade Control Not In Neutral
C4105	Angle Blade Base Solenoid Short to Battery
C4106	Angle Blade Base Solenoid Short to Ground
C4107	Angle Blade Base Solenoid Open Circuit
C4205	Angle Blade Rod Solenoid Short to Battery
C4206	Angle Blade Rod Solenoid Short to Ground
C4207	Angle Blade Rod Solenoid Open Circuit
C4321	Load Sense Pressure Out Of Range High
C4322	Load Sense Pressure Out Of Range Low
C4516	Throttle Controller No Communication
C6021	Offset Control Out Of Range High
C6022	Offset Control Out Of Range Low
C6023	Offset Control Not In Neutral
C6204	Load Moment Monitoring In Error
C6305	Console Switch Short To Battery
C6306	Console Switch Short To Ground
C6405	Switched Power Relay Short To Battery
C6406	Switched Power Relay Short To Ground
C6407	Switched Power Relay Open Circuit
C6505	Workgroup Lockout Solenoid Short To Battery
C6506	Workgroup Lockout Solenoid Short To Ground
C6507	Workgroup Lockout Solenoid Open Circuit

<b>Engine Controller</b>	
<b>Code</b>	<b>Description</b>
E0105	Throttle Actuator Short To Battery
E0106	Throttle Actuator Short To Ground
E0107	Throttle Actuator Open Circuit
E0123	Throttle Controller Not Calibrated
E0321	5 Volt Sensor Supply Out Of Range High
E0322	5 Volt Sensor Supply Out Of Range Low
E0421	Engine Speed Control Dial Out Of Range High
E0422	Engine Speed Control Dial Out Of Range Low
E0521	Throttle Actuator Feedback Out Of Range High
E0522	Throttle Actuator Feedback Out Of Range Low



## E60/E80 E-ECU CONTROLLER CODES

<b>E60/E80 E-ECU Controller</b>	
<b>Code</b>	<b>Description</b>
P0117	Engine Coolant Temperature Sensor Out Of Range Low
P0118	Engine Coolant Temperature Sensor Out Of Range High
P0119	Engine Coolant Temperature Sensor Intermittent Connection
P0122	Accelerator Sensor Out Of Range Low
P0123	Accelerator Sensor Out Of Range High
P0124	Accelerator Sensor Intermittent Connection
P0217	Engine Coolant Temperature High
P0340	Engine Speed Sensor No Signal
P0562	Battery Voltage Low
P0563	Battery Voltage High
P0605	E-ECU Internal FlashROM Checksum Error A (Main Software)
P0634	E-ECU Temperature Sensor High
P0642	5 Volt Sensor Supply Out Of Range Low
P0643	5 Volt Sensor Supply Out Of Range High
P0668	E-ECU Temperature Sensor Out Of Range Low
P0669	E-ECU Temperature Sensor Out Of Range High
P1202	Rack Position Sensor Out Of Range Low
P1203	Rack Position Sensor Out of Range High
P1211	Rack Actuator Solenoid Stuck
P1212	Rack Actuator Solenoid Undercurrent
P1213	Rack Actuator Solenoid Overcurrent
P1222	Rack Actuator Relay Error On
P1223	Rack Actuator Relay Error Off
P1224	Rack Actuator Relay Intermittent Connection
P1232	Preheat relay Error On
P1233	Preheat relay Error Off
P1234	Preheat Relay Intermittent Connection
P1242	CSD Solenoid Valve Error On
P1243	CSD Solenoid Valve Error Off
P1244	CSD Solenoid Valve Intermittent Connection
P1402	EGR Valve Phase A Error On
P1403	EGR Valve Phase A Error Off
P1412	EGR Valve Phase B Error On
P1413	EGR Valve Phase B Error Off
P1422	EGR Valve Phase C Error On
P1423	EGR Valve Phase C Error Off
P1432	EGR Valve Phase D Error On
P1433	EGR Valve Phase D Error Off
P1605	E-ECU Internal FlashROM Checksum Error B (Main Software)
P1606	E-ECU Internal FlashROM Checksum Error C (Main Software)
P1644	5 Volt Sensor Supply Intermittent Connection
P1664	E-ECU Temperature Sensor Intermittent Connection

## TOOLCAT XX-XX CODES

<b>Toolcat Display Controller</b>	
Code	Description
02-16	Hydraulic Charge Filter Not Connected
02-17	Hydraulic Charge Filter Plugged
03-09	Battery Voltage Low
03-10	Battery Voltage High
03-11	Battery Voltage Extremely High
03-14	Battery Voltage Extremely Low
03-15	Battery Voltage In Shutdown
03-22	Battery Voltage Out Of Range Low
04-14	Engine Oil Pressure Extremely Low
04-15	Engine Oil Pressure Shutdown Level
06-10	Engine Speed High
06-11	Engine Speed Extremely High
06-13	Engine Speed No Signal
06-15	Engine Speed In Shutdown
06-18	Engine Speed Out Of Range High
07-10	Hydraulic Oil Temperature High
07-11	Hydraulic Oil Temperature Extremely High
07-15	Hydraulic Oil Temperature In Shutdown
07-21	Hydraulic Oil Temperature Out Of Range High
07-22	Hydraulic Oil Temperature Out Of Range Low
08-10	Engine Coolant Temperature High
08-11	Engine Coolant Temperature Extremely High
08-15	Engine Coolant Temperature In Shutdown
08-21	Engine Coolant Temperature Out Of Range High
08-22	Engine Coolant Temperature Out Of Range Low
09-09	Fuel Level Low
09-21	Fuel Level Out Of Range High
09-22	Fuel Level Out Of Range Low
12-21	Auxiliary PWM Switch Out Of Range High
12-22	Auxiliary PWM Switch Out Of Range Low
12-23	Auxiliary PWM Switch Not In Neutral
13-05	Fuel Shutoff Hold Solenoid Short To Battery
13-06	Fuel Shutoff Hold Solenoid Short To Ground
13-07	Fuel Shutoff Hold Solenoid Open Circuit
14-02	Fuel Shutoff Pull Solenoid Error On
14-03	Fuel Shutoff Pull Solenoid Error Off
18-05	Spool Lock Short To Battery
18-06	Spool Lock Short To Ground
18-07	Spool Lock Open Circuit
20-02	Two Speed Error On
20-03	Two Speed Error Off
21-02	Glow Plug Error On
21-03	Glow Plug Error Off
22-02	Starter Error On
22-03	Starter Error Off
26-02	Front Base Output Error On
26-03	Front Base Output Error Off
27-02	Front Rod Solenoid Error On
27-03	Front Rod Solenoid Error Off
28-02	Diverter Solenoid Error On
28-03	Diverter Solenoid Error Off
29-02	High Flow Solenoid Error On
29-03	High Flow Solenoid Error Off
30-28	Controller Memory Failure
31-28	Interrupted Power Failure
33-23	Main Controller Not Programmed
35-05	Two Speed Fan Short To Battery
35-06	Two Speed Fan Short To Ground
36-48	ACD Multiple Controllers Present
63-05	TICS Sensor Short To Battery
63-06	TICS Switch Short To Ground
64-05	Switched Power Relay Short To Battery
64-06	Switched Power Relay Short To Ground
64-07	Switched Power Relay Open Circuit
65-05	Workgroup Lockout Solenoid Short To Battery
65-06	Workgroup Lockout Solenoid Short To Ground
65-07	Workgroup Lockout Solenoid Open Circuit
67-05	Bobtach Short To Battery
67-06	Bobtach Short To Ground
69-05	Operator Presence Relay Short To Battery
69-06	Operator Presence Relay Short To Ground
69-07	Operator Presence Relay Open Circuit

<b>Toolcat Drive Controller</b>	
Code	Description
50-01	Drive Pedal Out Of Range High
50-02	Drive Pedal Out Of Range Low
50-03	Travel Pedal Not Calibrated
50-04	Brake Pedal Out Of Range High
50-05	Brake Pedal Out Of Range Low
50-06	Brake Pedal Not Calibrated
50-07	Travel Direction Control Lever No Signal
50-08	Travel Direction Control Lever Multiple Inputs
50-09	Front Wheel Speed Sensor Out Of Range High
50-10	Front Wheel Speed Sensor Out Of Range Low
50-11	Rear Wheel Speed Sensor Out Of Range High
50-12	Rear Wheel Speed Sensor Out Of Range Low
50-13	Front Wheel Speed Sensor No Signal
50-14	Rear Wheel Speed Sensor No Signal
50-15	Dual Wheel Speed Sensor Fault
50-19	Swash Plate Sensor Out Of Range High
50-20	Swash Plate Sensor Out Of Range Low
50-24	Battery Voltage Over Voltage
50-25	Battery Voltage Under Voltage
50-26	Interrupted Power
50-27	5.0 Volt Sensor Supply 1 Out Of Range High
50-28	5.0 Volt Sensor Supply 1 Out Of Range Low
50-29	5.0 Volt Sensor Supply 2 Out Of Range High
50-30	5.0 Volt Sensor Supply 2 Out Of Range Low
50-31	Front Drive PWM Solenoid Error On
50-32	Forward Drive Coil Short To Battery
50-33	Front Drive PWM Solenoid No Signal
50-34	Front Drive PWM Solenoid Not Calibrated
50-35	Front Drive Forward Solenoid Error On
50-36	Front Drive Forward Solenoid Error Off
50-37	Front Drive Reverse Solenoid Error On
50-38	Front Drive Reverse Solenoid Error Off
50-39	Rear Drive PWM Solenoid Error On
50-40	Reverse Drive Coil Short To Battery
50-41	Rear Drive PWM Solenoid No Signal
50-42	Rear Drive PWM Solenoid Not Calibrated
50-43	Rear Drive Forward Solenoid Error On
50-44	Rear Drive Forward Solenoid Error Off
50-45	Rear Drive Reverse Solenoid Error On
50-46	Rear Drive Reverse Solenoid Error Off
50-47	Two Speed Error Off
50-48	Two Speed Error On
50-49	Brake Solenoid Error On
50-50	Brake Solenoid Error Off
50-51	Brake Solenoid No Signal
50-52	Brake Lights Short To Battery
50-53	Brake Lights Short To Ground
50-54	Differential Lock Error On
50-55	Differential Lock Error Off
50-56	CAN Communications Fault
50-57	Drive Controller Not Calibrated
50-59	Front Wheel Speed Sensor Missing Pulses
50-60	Remote Hydraulics Short To Battery
50-61	Remote Hydraulics Short To Ground
50-63	Front Angle Sensor Calibration Error
50-65	Auxiliary Base Coil Short To Ground or Open Circuit
50-66	Rear Angle Sensor Calibration Error
50-67	Front Drive Forward No Signal
50-68	Front Drive Reverse No Signal
50-69	Rear Drive Forward No Signal
50-70	Rear Drive Reverse No Signal
50-72	Fan Coil Short To Ground
50-74	Throttle Sensor Channel A Out Of Range Low
50-75	Throttle Sensor Channel B Out Of Range High
50-76	Throttle Sensor Channel B Out Of Range Low
50-77	Auxiliary Diverter Error On
50-78	Auxiliary Diverter Error Off
50-80	PTO Speed Sensor Out Of Range High
50-81	PTO Speed Sensor Out Of Range Low
50-82	PTO Speed Sensor Open Circuit
50-99	In Calibration Mode

## VersaHANDLER XX-XX CODES

<b>VersaHANDLER Display Controller</b>	
Code	Description
02-16	Hydraulic Charge Filter Not Connected
02-17	Hydraulic Charge Filter Plugged
03-09	Battery Voltage Low
03-10	Battery Voltage High
03-11	Battery Voltage Extremely High
03-14	Battery Voltage Extremely Low
03-15	Battery Voltage in Shutdown
03-22	Battery Voltage Out of Range Low
04-14	Engine Oil Pressure Extremely Low
04-15	Engine Oil Pressure in Shutdown
06-10	Engine Speed High
06-11	Engine Speed Extremely High
06-13	Engine Speed No Signal
06-15	Engine Speed In Shutdown
06-18	Engine Speed Out of Range
07-10	Hydraulic Oil Temperature High
07-11	Hydraulic Oil Temperature Extremely High
07-15	Hydraulic Oil Temperature In Shutdown
07-21	Hydraulic Oil Temperature Out Of Range High
07-22	Hydraulic Oil Temperature Out Of Range Low
08-10	Engine Coolant Temperature High
08-11	Engine Coolant Temperature Extremely High
08-15	Engine Coolant Temperature In Shutdown
08-21	Engine Coolant Temperature Out Of Range High
08-22	Engine Coolant Temperature Out of Range Low
09-21	Fuel Level Out Of Range High
09-22	Fuel Level Out Of Range Low
13-05	Fuel Shutoff Hold Solenoid Short To Battery
13-06	Fuel Shutoff Hold Solenoid Short To Ground
13-07	Fuel Shutoff Hold Solenoid Open Circuit
14-02	Fuel Shutoff Pull Solenoid Error On
14-03	Fuel Shutoff Pull Solenoid Error Off
21-02	Glow Plug Error On
21-03	Glow Plug Error Off
22-02	Starter Error On
22-03	Starter Error Off
30-28	Controller Memory Failure
31-28	Interrupted Power
33-23	Constant Data Not Calibrated
36-48	ACD (Attachment Control Device) Multiple Controllers Present
63-05	Operator Presence Sensor Short To Battery
63-06	Operator Presence Sensor Short to Ground
64-05	Switched Power Relay Short To Battery
64-06	Switched Power Relay Short To Ground
64-07	Switched Power Relay Open Circuit
65-05	Joystick Lockout Short To Battery
65-06	Joystick Lockout Short To Ground
65-07	Joystick Lockout Open Circuit
70-28	Brake Pressure Failure
77-48	Key Switch Multiple

<b>VersaHANDLER Drive Controller</b>	
Code	Description
50-02	Extend / Retract Control Out of Range High
50-03	Extend/Retract Control Out of Range Low
50-04	Extend/Retract Control Not In Neutral
50-05	Auxiliary Control Out of Range High
50-06	Auxiliary Control Out of Range Low
50-07	Auxiliary Control Not In Neutral
50-14	Inching Control Out of Range High
50-15	Inching Control Out of Range Low
50-16	Inching Control Not Calibrated
50-20	Boom Pressure Out Of Range High
50-21	Boom Pressure Out Of Range Low
50-23	Drive Controller Not Programmed
50-24	Stability Valve Error On
50-25	Stability Valve Error Off
50-26	Interrupted Power
50-28	FNR No Inputs Active
50-29	FNR More than One Input Active
50-30	Rear Light Relay Error On
50-31	Rear Light Relay Error Off
50-33	Passive Brake Valve Error On
50-34	Passive Brake Valve Error Off
50-36	Brake Light Relay Error On
50-37	Brake Light Relay Error Off
50-42	Secondary Auxiliary Hydraulic Valve Error On
50-43	Secondary Auxiliary Hydraulic Valve Error Off
50-45	Extend/Retract Base Error On
50-46	Extend/Retract Base Error Off
50-48	5 Volt Sensor Supply 1 Out Of Range Low
50-49	5 Volt Sensor Supply 1 Out Of Range High
50-50	5 Volt Sensor Supply 2 Out of Range Low
50-51	5 Volt Sensor Supply 2 Out of Range High
50-54	Switched Battery Over Voltage
50-55	Switched Battery Under Voltage
50-56	CAN Communication Fault
50-57	Drive Controller Not Calibrated
50-58	CAN RPM Message Stale
50-60	Drive Pump Forward Error On
50-61	Drive Pump Forward Error Off
50-63	Drive Pump Reverse Error On
50-64	Drive Pump Reverse Error Off
50-66	Extend/Retract Rod Error On
50-67	Extend/Retract Rod Error Off
50-69	Auxiliary Hydraulics Base Error On
50-70	Auxiliary Hydraulics Base Error Off
50-72	Auxiliary Hydraulics Rod Error On
50-73	Auxiliary Hydraulics Rod Error Off
50-78	Boom Float Relay Error On
50-79	Boom Float Relay Error Off
50-80	Two Speed Relay Error On
50-81	Two Speed Relay Error Off
50-82	EEPROM Error