

Remote Control Fault Codes

Code	Remote Control Circuit/Sensor	Single	Dual	Critical	Digital Displays	Audible Alarm*	Indictor LED's	Fault Information/ Corrective Action/ Sensor: Circuit Voltage or Resistance (Ω)
1	Port lever sensor 0 OVER range	X	X	X	Code 1 Lever sensor fault			Signal reading out of range. Throttle command allowed, but limited.
2	Port lever sensor 1 OVER range	X	X	X	Code 2 Lever sensor fault			Signal reading out of range. Throttle command allowed, but limited.
3	Port lever sensor mismatch	X	X	X	Code 3 Lever sensor fault	X		Port sensor 0 and sensor 1 readings do not match. Shift and throttle commands NOT available.
4	Port lever failure	X	X	X	Code 4 Lever sensor fault	X		Port sensor 0 and sensor 1 readings do not match. Shift and throttle commands NOT available.
5	Starboard lever sensor 0 OVER range		X	X	Code 5 Lever sensor fault			Signal reading out of range. Throttle command allowed, but limited.
6	Starboard lever sensor 1 OVER range		X	X	Code 6 Lever sensor fault			Signal reading out of range. Throttle command allowed, but limited.
7	Starboard lever sensor mismatch		X	X	Code 7 Lever sensor fault	X		Starboard sensor 0 and sensor 1 readings do not match. Shift and throttle commands NOT available.
8	Starboard lever failure		X	X	Code 8 Lever sensor fault	X		Starboard sensor 0 and sensor 1 readings do not match. Shift and throttle commands NOT available.
9	Pedal sensor 0 OVER range	X		X	Code 9 Pedal sensor fault			Signal reading out of range. Throttle command allowed, but limited.
10	Pedal sensor 1 OVER range	X		X	Code 10 Pedal sensor fault			Signal reading out of range. Throttle command allowed, but limited.
11	Pedal sensor mismatch	X		X	Code 11 Pedal sensor fault	X		Pedal sensor 0 and sensor 1 readings do not match. Shift and throttle commands NOT available.
12	Pedal sensor failure	X		X	Code 12 Pedal sensor fault	X		Pedal sensor 0 and sensor 1 readings do not match. Shift and throttle commands NOT available.
13	Lever calibration error	X	X					Lever calibration not initialized or corrupted. Calibrate control lever(s).
14	Hardware code error	X	X					
15	Calibration signature error	X	X		Code 15 Lever Calibration Error			Calibration memory not initialized or corrupted. Calibrate control lever(s).
16	Part number not supported	X	X					
17	Throttle calibration error	X	X		Code 17 Throttle calibration fault		FNR indicators flash	Throttle calibration not initialized or corrupted. Turn key to OFF position, then to ON position to reset. Calibrate control lever(s).
18	FT CAN transceiver fault	X	X		Code 18 Private Network communications fault		FNR indicators flash	Check remote control (private) network connections.
19	<i>EMM</i> Instance 0 Remote Control (Private) network bus heart beat lost	X	X		Code 19 Private Network communications fault		FNR indicators flash	Check remote control (private) network connections.
20	<i>EMM</i> Instance 0 <i>NMEA 2000</i> bus heart beat lost	X	X		Code 20 Public Network communications fault		FNR indicators flash	Check <i>NMEA 2000</i> (public) network connections.
21	<i>EMM</i> Instance 0 communication lost	X	X	X	Code 21 Network communications fault	X	FNR indicators flash	Shift and throttle commands NOT available. Check remote control (private) and <i>NMEA 2000</i> (public) network connections.
22	<i>EMM</i> Instance 1 Remote Control (Private) network bus heart beat lost	X	X		Code 22 Private Network communications fault		FNR indicators flash	Check remote control (private) network connections. On new multi-engine installations, verify engine instances are set correctly.
23	<i>EMM</i> Instance 1 <i>NMEA 2000</i> bus heart beat lost		X		Code 23 Public Network communications fault		FNR indicators flash	Check <i>NMEA 2000</i> (public) network connections. On new multi-engine installations, verify engine instances are set correctly.

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24	EMM Instance 1 communication lost		X	X	Code 24 Network communications fault	X	FNR indicators flash	Shift and throttle commands NOT available. Check remote control (private) network and <i>NMEA 2000</i> (public) network connections. On new multi-engine installations, verify engine instances are set correctly.
25	EMM Instance 2 Remote Control (Private) network bus heart beat lost		X		Code 25 Private Network communications fault		FNR indicators flash	Check remote control (private) network connections. On new multi-engine installations, verify engine instances are set correctly.
26	EMM Instance 2 <i>NMEA 2000</i> bus heart beat lost		X		Code 26 Public Network communications fault		FNR indicators flash	Check <i>NMEA 2000</i> (public) network connections. On new multi-engine installations, verify engine instances are set correctly.
27	EMM Instance 2 communication lost		X	X	Code 27 Network communications fault	X	FNR indicators flash	Shift and throttle commands NOT available. Check remote control (private) network and <i>NMEA 2000</i> (public) network connections. On new multi-engine installations, verify engine instances are set correctly.
28	EMM Instance 3 Remote Control (Private) network bus heart beat lost		X		Code 28 Private Network communications fault		FNR indicators flash	Check remote control (private) network connections. On new multi-engine installations, verify engine instances are set correctly.
29	EMM Instance 3 <i>NMEA 2000</i> bus heart beat lost		X		Code 29 Public Network communications fault		FNR indicators flash	Check <i>NMEA 2000</i> (public) network connections. On new multi-engine installations, verify engine instances are set correctly.
30	EMM Instance 3 communication lost		X	X	Code 30 Network communications fault	X	FNR indicators flash	Shift and throttle commands NOT available. Check remote control (private) network and <i>NMEA 2000</i> (public) network connections. On new multi-engine installations, verify engine instances are set correctly.
31	Main power disconnected	X	X		Code 31 Main Power Fault		FNR indicators flash	No voltage detected. Check fuse and power connections from remote control to battery.
32	Accessory power disconnected	X	X		Code 32 Accessory Power Fault		FNR indicators flash	Check fuse and power connections from remote control to battery.
33	Main ground disconnected	X	X		Code 33 Ground Fault		FNR indicators flash	Check fuse and power connections from remote control to battery.
34	Accessory ground disconnected	X	X		Code 34 Accessory Ground Fault		FNR indicators flash	Check ground (negative) connections from remote control to battery.
35	System configuration mismatch	X	X		Code 35 System config fault		FNR indicators flash	– The number of <i>EMM</i> instances detected does not match the current configuration. – OR – – There are two different <i>EMMs</i> configured with the same instance number. Use diagnostic software to correct system configuration
36	Waiting for Neutral	X	X		Code 36 Waiting for Neutral			System has been powered ON with control lever(s) not in the NEUTRAL position. Move control lever(s) to NEUTRAL position.

*Audible alarm function only available if system is equipped with optional accessory warning horn

Universal Control Module (UCM) Fault Codes

Code	Universal Control Module (UCM) Circuit/ Sensor	Controllable	Critical	Condition	SystemCheck	Activation	Sensor: Circuit Voltage / Resistance (Ω)
1	TPS A malfunction low	X				10 occurrences	TPS A < 0.25 V. TPS A is either open or shorted to ground. Check connectors and wiring. Perform electrical circuit tests.
2	TPS A malfunction high	X				10 occurrences	TPS A > 4.75 V. TPS A is shorted to +5 V, or reference ground is OPEN. Check connectors and wiring. Perform electrical circuit tests.
3	TPS B malfunction low	X				10 occurrences	TPS B < 0.25 V. TPS B is either open or shorted to ground. Check connectors and wiring. Perform electrical circuit tests.
4	TPS B malfunction high	X				10 occurrences	TPS B > 4.75 V. TPS B is shorted to +5 V, or reference ground is OPEN. Check connectors and wiring. Perform electrical circuit tests.
5	SPS A malfunction low	X				10 occurrences	Shift Position Sensor A is either open or shorted to ground. SPS voltage <0.25 V. Actuator will remain in current gear until shifting, then will only remain in neutral.
6	SPS A malfunction high	X				10 occurrences	Shift Position Sensor A is shorted to +5V. SPS voltage > 4.75 V. Actuator will remain in current gear until shifting, then will only remain in neutral.
7	SPS B malfunction low	X				10 occurrences	Shift Position Sensor B is either open or shorted to ground. SPS voltage <0.25 V. Actuator will remain in current gear until shifting, then will only remain in neutral.
8	SPS B malfunction high	X				10 occurrences	Shift Position Sensor B is shorted to +5V. SPS voltage > 4.75 V. Actuator will remain in current gear until shifting, then will only remain in neutral.
9	TPS signal out of correlation		X		Check Engine	20 occurrences	TPS A and TPS B correlated voltage out of range. Engine limited to idle speed. Check connectors and wiring. Perform electrical circuit tests.
10	SPS signal out of correlation		X		Check Engine	20 occurrences	SPS A and SPS B correlated voltage out of range. Engine limited to NEUTRAL gear position. Check connectors and wiring. Perform electrical circuit tests.
11	TPS/SPS calibration threshold exceeded	X				10 occurrences	The CAM traveled outside the allowable calibration range including hysteresis. Engine limited to NEUTRAL gear position/ idle speed.
12	TPS/SPS calibration invalid		X		Check Engine		TPS/SPS ADC > 923, or TPS/SPS ADC < 100, or TPS Total Travel < 500, or SPS Total Travel between each gear < 250. Engine limited to NEUTRAL gear position/idle speed. Check CAM travel at endpoints, minimum travel between FORWARD, NEUTRAL, and REVERSE, and minimum total travel during lever calibration.
13	Waiting for neutral			X			System has been powered ON with control lever(s) not in the NEUTRAL position. Move control lever(s) to NEUTRAL position. Engine limited to NEUTRAL gear position/idle speed.
14	TPS Stability Performance		X		Check Engine	10 occurrences	Both TPS A & B are malfunctioning/failed. Engine limited to idle speed. Replace TPS sensors.
15	SPS Stability Performance		X		Check Engine	10 occurrences	Both SPS A & B are malfunctioning/failed. Engine limited to NEUTRAL gear position. Replace SPS sensors.
16	Reserved						
17	ROM checksum error		X		Check Engine	15 seconds	ROM "CHECKSUM" failure. Engine limited to NEUTRAL gear position/idle speed. Indicates corrupt <i>EMM</i> program. Re-load/update EMM software.
18	Neutral Start Protect	X					Attempted engine start while in gear. Engine will not start. Move shift lever to NEUTRAL position.
19	Reserved						
20	Battery voltage below expected range	X			Check Engine	5 seconds	Battery voltage <12 V below 2000 RPM or < 12.5 V above 2000 RPM. Perform stator/charging tests.
21	Battery voltage above expected range	X				5 seconds	Battery voltage > 15.5 V. Check battery connections and wiring.
22	Fused B+ fault		X		Check Engine	5 seconds	Battery voltage <0.25 V. Check fuses

Universal Control Module (UCM) Fault Codes

Code	Universal Control Module (UCM) Circuit/ Sensor	Controllable	Critical	Condition	SystemCheck	Activation	Sensor: Circuit Voltage / Resistance (Ω)
23	Analog 5V supply overload detected		X		Check Engine	1 second	Analog +5 V < 4.75V. Low voltage on analog sensor supply voltage. Check
24	Remote Control (private) network CAN Error fault	X				5 seconds	Remote Control (private) network CAN shorted or open, may still function depending upon failure
25	NMEA 2000 (public) network CAN communication lost	X			*	3 seconds	Lost communications from EMM on NMEA 2000 (public) network. *If communication on remote control (private) network CAN is also lost, Check Engine will flash AND engine limited to NEUTRAL gear position/idle speed.
26	Remote Control (private) network CAN communication lost	X			*	3 seconds	Lost communications from EMM on remote control (private) network. *If communication on NMEA 2000 (public) network CAN is also lost, Check Engine will flash AND engine limited to NEUTRAL gear position/idle speed.
27	Low Oil Light Open Circuit	X				5 seconds	Low oil light disconnected.
28	No Oil Light Open Circuit	X				5 seconds	No oil light disconnected.
29	Check Engine Light Open Circuit	X				5 seconds	Check engine light disconnected.
30	Overheat Light Open Circuit	X				5 seconds	Overheat light disconnected.

Outboard *EMM* Fault Codes

Code	<i>EMM</i> /Circuit Sensor	Internal Sensor	S.A.F.E	Shut Down	Digital Displays	<i>SystemCheck</i>	Activation	Sensor: Circuit Voltage / Resistance (Ω)
1–6	Excessive knock detected		X		Engine	Check Engine	Immediate	Code number indicates affected cylinder. 20 knock events in 100 combustion cycles with maximum correction applied. Make sure sensor is securely fastened to the cylinder head. Check timing adjustments. Test fuel and cooling systems. Check fuel quality.
7–8	Knock Sensor circuit OPEN – Port/Starboard			X		Check Engine	5 seconds	Sensor output < 0.15 V and RPM > 3000. Check sensor connection.
15	ROM (<i>EMM</i> program)	X	X		Engine	Check Engine	15 seconds	ROM “CHECKSUM” failure. Engine shutdown if ESC checksum error. S.A.F.E. activated if ETC checksum error, engine RPM limited to 1000 RPM.
16	Crankshaft Position Sensor (CPS) Intermittent loss of SYNC				Engine		5 losses, RPM<2000 1 loss, RPM<2000	<i>EMM</i> counts losses of synchronization with crankshaft sensor. Check CPS mounting and resistance. Air gap range: 0.036 to 0.110 in. (1 to 2.8 mm), nominal 0.073 in. (1.85 mm). Resistance: 560 Ω $\pm$ 10% @ 77°F (25°C).
17	55 V circuit BELOW range	X	X		Engine	Check Engine	10 seconds	55 V alternator output < 45 V at 500 to 1000 RPM, or < 52 V above 1000 RPM. Engine limited to 1200 RPM. Perform stator/charging tests.
18	55 V circuit ABOVE range	X	X		Engine	Check Engine	1 minute	System Voltage > 57 V. Engine limited to 1200 RPM. Perform stator/charging tests. Check for loose connections in 55 V circuit. Check capacitor.
19	Start-in-gear					Check Engine		Attempted engine start while in gear. Engine will not start.
21	Winterization activated					All LED's Flashing		Engine is speed limited, and stops after 360 oil pulses. Refer to Maintenance or Operator's Guide.
23	<i>EMM</i> Temperature sensor circuit fault	X					10 seconds	<i>EMM</i> Temperature < -67° F (-55° C), or > 311° F (155° C).
24	<i>EMM</i> Temperature BELOW range	X					10 seconds	<i>EMM</i> Temperature < -22 ° F (-30° C).
25	<i>EMM</i> Temperature ABOVE range	X	X		Temp	Water Temp/Hot	10 seconds	<i>EMM</i> Temperature > 176°F (80°C). Engine limited to 1200 RPM. See Code 29.
26	12 V circuit BELOW range	X			Battery	Check Engine	5 minutes	Battery voltage <12 V below 2000 RPM or < 12.5 V above 2000 RPM. Perform stator/charging tests.
27	12 V circuit ABOVE range				Battery	Check Engine	5 minutes	Battery voltage > 15.5 V. Check battery connections and wiring.
29	<i>EMM</i> Temperature OVER range	X		X	Temp	Water Temp/Hot (flashing)	5 seconds	<i>EMM</i> Temperature > 212° F (100° C). Engine SHUTDOWN. Will NOT restart until <i>EMM</i> temperature returns to normal operating range. Check outboard and <i>EMM</i> cooling systems.
31	Engine Temperature OVER range			X	Temp	Water Temp/Hot (flashing)	3 seconds	Engine Temperature > 239° F (115° C). Engine SHUTDOWN. Check cooling system. Check temperature sensor resistance: 9000 to 11000 Ω @ 77°F (25°C).
33	Critical NO OIL detected	X		X	Oil	No Oil (Flashing)	5 hours	Outboard has run five hours with code 34, 36 or 117. Engine SHUTDOWN. Will restart and run for 1 minute intervals.
34	Crankcase oil pump circuit OPEN		X		Oil	No Oil	4 seconds	Engine limited to 1200 RPM. Perform oil pump electrical tests.
36	Cylinder oil pump circuit OPEN		X		Oil	No Oil	4 seconds	Engine limited to 1200 RPM. Perform oil pump electrical tests.
37	Water in fuel				Engine	Check Engine	10 seconds	Check fuel supply, 5 V circuit, and ground (NEG). Resistance between probes should be infinite (no continuity).
40	Engine Temperature ABOVE range (port cylinder head) – low speed		X		Temp	Water Temp/Hot	3 seconds	Engine Temperature > 212° F (100° C) below 3500 RPM
41	Engine Temperature Sensor circuit fault (port cylinder head)				Temp	Check Engine	10 seconds	Engine Temperature < -13° F (-25° C), or > 329° F (165° C). Check 5 V circuit and ground (NEG), and sensor resistance: 9000 to 11000 Ω @ 77°F (25°C).

Outboard *EMM* Fault Codes

Code	<i>EMM</i> /Circuit Sensor	Internal Sensor	S.A.F.E	Shut Down	Digital Displays	<i>SystemCheck</i>	Activation	Sensor: Circuit Voltage / Resistance (Ω)
42	Engine Temperature BELOW range (port cylinder head)				Temp		10 seconds	Engine Temperature < -4° F (-20° C). Check engine temperature and sensor resistance.
43	Engine Temperature ABOVE range (port cylinder head)				Temp	Water Temp/Hot	3 seconds	Engine Temperature > 194° ±3°F (90° ±1.6°C) above 3500 RPM activates warning light and horn. Engine Temperature > 203° ±3°F (95° ±1.6°C) activates S.A.F.E., engine limited to 1200 RPM. Check cooling system.
44	Barometric Pressure (BP) Sensor circuit fault	X					10 seconds	Pressure < 3.8 in. Hg (13 kPa), or > 35.1 in. Hg (119.0 kPa). Make sure <i>EMM</i> BP sensor tube is NOT plugged. Check atmospheric condition for comparison. Clear code and retest.
45	Barometric Pressure (BP) Sensor BELOW range	X					10 seconds	Pressure < 20.7 in. Hg (70 kPa).
46	Barometric Pressure (BP) Sensor ABOVE range	X					10 seconds	Pressure > 31 in. Hg (105 kPa).
47	Air Temperature (AT) circuit fault				Temp	Check Engine	10 seconds	Air temperature < -67° F (-55° C), or > 212° F (100° C). Check 5 V circuit and ground (NEG), and sensor resistance: 9000 to 11000 Ω @ 77°F (25°C).
48	Air Temperature BELOW range				Temp		10 seconds	Air temperature below -22°F (-30°C)
49	Air Temperature ABOVE range				Temp		10 seconds	Air temperature above 158°F (70°C)
51–56	Fuel injector circuit OPEN				Engine	Check Engine	10 seconds	Last digit indicates affected cylinder. Check injector resistance: 2 to 3 Ω @ 72°F (22°C). Perform fuel system electrical tests.
57	High RPM with low TPS setting	X		X	Engine	Check Engine (Flashing)	10 seconds	TPS < 5% and RPM > 3000. Engine SHUTDOWN. Will NOT restart until code has been cleared. The problem could be caused by uncontrolled fuel entering the engine. DO NOT attempt to start the outboard until the problem has been found and repaired.
58	Operating temperature not reached (port cylinder head)				Engine		10 minutes	Engine temperature < 104°F (40°C) with engine speed < 1000 RPM. Check thermostat and pressure relief valve.
59	Operating temperature not reached (starboard cylinder head)				Engine		10 minutes	Engine temperature < 104°F (40°C) with engine speed < 1000 RPM. Check thermostat and pressure relief valve.
67	Engine Temperature Sensor circuit fault (starboard cylinder head)				Temp	Check Engine	10 seconds	Engine Temperature < -13° F (-25° C), or > 329° F (165° C). Check 5 V circuit and ground (NEG), and sensor resistance: 9000 to 11000 Ω @ 77°F (25°C).
68	Engine Temperature BELOW range (starboard cylinder head)				Temp		10 seconds	Engine Temperature < -4° F (-20° C). Check engine temperature and sensor resistance.
69	Engine Temperature ABOVE range (starboard cylinder head)				Temp	Water Temp/Hot	3 seconds	Engine Temperature > 194° ±3°F (90° ±1.6°C) above 3500 RPM activates warning light and horn. Engine Temperature > 203° ±3°F (95° ±1.6°C) activates S.A.F.E., engine limited to 1200 RPM. Check cooling system.
70	Engine Temperature ABOVE range (starboard cylinder head) – low speed		X		Temp		3 seconds	Engine Temperature > 212° F (100° C) below 3500 RPM
74	Water Pressure Sensor circuit fault detected						10 seconds	Sensor voltage < 0.15 V or > 4.85 V. <i>EMM</i> water pressure option enabled.
75	Water Pressure BELOW expected range						10 seconds	Sensor voltage < 0.4 V. <i>EMM</i> water pressure option enabled. Confirm engine water pressure. Check sensor circuit.

Outboard EMM Fault Codes

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76	Water Pressure ABOVE expected range							Sensor voltage > 4.6 V. <i>EMM</i> water pressure option enabled. Confirm engine water pressure. Check sensor circuit.
77	S.A.C. over-current fault	X			Engine	Check Engine	10 instances	SAC current > 2 amps and/or < 20 V. Check for shorted 55 V wiring (white/red stripe, such as injector circuits). Check for pinched or chafed wiring.
78	Sensor supply voltage fault	X			Engine	Check Engine	10 seconds	Sensor voltage < 4.75 V. Check sensors and related wiring. Check for pinched or chafed wiring.
79	Starter relay circuit OPEN				Engine	Check Engine	10 seconds	Check starter relay circuit for continuity (key switch OFF) and for 12 V with key switch ON.
81–86	Ignition coil circuit OPEN						16 instances	Last digit indicates affected cylinder. <i>EMM</i> counts failed ignition events (crankshaft revolutions). Check ignition electrical circuit.
87	Exhaust Pressure circuit fault	X					10 seconds	< -85 in. water or > 85 in. water. Check for plugged or pinched hose or exhaust fitting.
88	Exhaust Pressure BELOW expected range	X					10 seconds	<-40 in. water
89	Exhaust Pressure ABOVE expected range	X					10 seconds	> 80 in. water
91	Fuel pump circuit OPEN				Engine	Check Engine	10 seconds	Check pump resistance: 2 to 3 Ω @ 77°F (25°C). Check connectors and wiring. Perform electrical circuit tests.
93	Water injection valve OPEN						< 1 second	Check exhaust water valve resistance: 16 to 18 Ω . Perform exhaust water valve circuit tests.
94	Fuel pump circuit SHORTED				Engine	Check Engine	2 seconds	Check pump resistance: 2 to 3 Ω @ 77°F (25°C). Check connectors and wiring. Perform electrical circuit tests.
101 – 106	Ignition coil circuit SHORTED				Engine	Check Engine	16 events (16 RPM)	Last digit indicates affected cylinder. <i>EMM</i> counts failed ignition events. Check wiring. Test with known good ignition coil.
112	Onboard oil level sensor BELOW expected range						8 seconds	Oil level sensor < 0.22 V.
113	Onboard oil level sensor ABOVE expected range						8 seconds	Oil level sensor > 4.75 V.
114	Loss of <i>NMEA 2000</i> (public) network communication					Check Engine	3 seconds	<i>EMM</i> detects no communication on the <i>NMEA 2000</i> network. Check <i>NMEA 2000</i> devices, buss cables, tees and backbone cable.
115	Loss of Remote Control (private) network communication					Check Engine	3 seconds	<i>EMM</i> detects no communication on the Remote Control network. Check remote control connections, buss cables, hubs and backbone cable.
117	Critical LOW OIL detected	X	X		Oil	No Oil	immediate	<i>EMM</i> counts 20,000 oil pump pulses after LOW OIL switch closes. Engine limited to 1200 RPM. Stop outboard and add oil to tank. Warning resets after three oil pump pulses.
132	Vapor separator upper level switch OPEN circuit		X		Engine	Check Engine	5 seconds	Switch voltage > 4.8 V. Check connectors and wiring. Perform electrical circuit tests.
133	Vapor separator lower level switch OPEN circuit		X		Engine	Check Engine	5 seconds	Switch voltage > 4.8 V. Check connectors and wiring. Perform electrical circuit tests.
134	Exhaust Temperature circuit OPEN fault		X		Engine	Check Engine	5 seconds	Exhaust temperature $\leq$ 60°F (20°C). Check connectors and wiring. Check sensor resistance. Perform electrical circuit tests.

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136	Exhaust Temperature ABOVE limit		X		Engine	Temperature	1 second	If EGT temperature values exceed these limits, check the cooling system. 150 to 200 HP 2.7 L 66° V6 Models • 124° F (51° C), less than 1500 RPM • 124 to 145° F (51 to 63° C), 1500 to 3500 RPM • 145 to 160° F (63 to 71° C), 3500 to 5000 RPM • 160° F (71° C), greater than 5000 RPM 200 H.O. to 300 HP 3.4 L 74° V6 Models • 131° F (55° C), less than 1500 RPM • 131 to 158° F (55 to 70° C), 1500 to 2500 RPM • 158 to 230° F (70 to 110° C), 2500 to 3750 RPM • 230° F (110° C), greater than 3750 RPM
137	Vapor separator low fuel level detected		X		Engine	Check Engine	5 seconds	Vapor separator lower level fuel switch closed. Engine limited to 1200 RPM. Check for fuel level or fuel system restriction.
138	Vapor separator fuel switch fault		X		Engine	Check Engine	5 seconds	Vapor separator upper level fuel switch and lower level fuel switch closed. Engine limited to 1200 RPM. Use Engine Monitor screen in <i>Evinrude Diagnostics</i> software v6.x to check Upper Fuel and Lower Fuel switch activation. If both switches are CLOSED, disconnect the vapor separator electrical connector. If both switches go to OPEN, replace the vapor separator. If one or both switches remain closed, check the engine harness Pin 5 (Brown/Orange wire) and Pin 6 (Brown/Green wire) for shorts to ground.
140	Trim Position sensor output BELOW expected level						10 seconds	Trim sender voltage < 0.22 V. Check connectors and wiring. Perform electrical circuit tests.
141	Trim Position sensor output ABOVE expected level						10 seconds	Trim sender voltage > 4.75 V. Check connectors and wiring for short to ground
153	VRH reference fault	X			Engine	Check Engine	2 seconds	Internal 5 V analog reference is < 4.50 V, or > 5.50 V.
154	Trim UP relay OPEN circuit				Engine		5 seconds	Trim up relay voltage < 4.0 V. Check connectors and wiring. Perform electrical circuit tests.
155	Trim DOWN relay OPEN circuit				Engine		5 seconds	Trim down relay voltage < 4.0 V. Check connectors and wiring. Perform electrical circuit tests.
156	Remote Control (Private) network CAN error fault						5 seconds	The CANbus transceiver has detected a non-critical fault. A fault on the remote control (private) network has been detected which adversely impacts communication on that network but does not completely disable messaging. The fault conditions which will initiate this code include: CAN Hi signal shorted to ground, CAN Hi signal shorted to B+, CAN Lo signal shorted to ground, CAN Lo signal shorted to B+, CAN Hi signal shorted to CAN Lo, CAN Hi open, CAN Lo open. Check remote control network cables, hub, or the devices. Other devices on the network should also indicate the same fault with the fault code appropriate for the reporting device.
157	Fuel lift pump OPEN circuit				Engine	Check Engine	5 seconds	Fault is detected when key ON, engine OFF. Fuel lift pump voltage < 4.0 V. Check connectors and wiring. Perform electrical circuit tests.
158	Fuel lift pump SHORT circuit				Engine	Check Engine	5 seconds	Fuel lift pump current > 8 amps. Check wiring for shorts to ground.
159	Purge valve OPEN circuit					Check Engine	5 seconds	Fault is detected when output is off. Fuel vent solenoid voltage < 4.0 V. Check connectors and wiring. Perform electrical circuit tests.
160	Purge valve SHORT circuit					Check Engine	5 seconds	Fuel vent solenoid current > 8 amps. Check wiring for shorts to ground.
161	Fused B fault				Engine	Check Engine	5 seconds	Fused B+ voltage < 3.20 V. Check fuses and relays.

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Electronic Throttle Controller (ETC)								
162	ETC Shut-down		X		Engine	Check Engine	< 1 second	Communication lost for > 250 ms. Engine limited to 1200 RPM. Use diagnostic software to check software program version and revision in <i>EMM</i> . Reload or replace with proper program. Check connectors and wiring. Perform electrical circuit tests.
163	ETC TPS A BELOW expected range						< 1 second	TPS A < 0.17 V. TPS A is either open or shorted to ground. Check connectors and wiring. Perform electrical circuit tests.
164	ETC TPS A ABOVE expected range						< 1 second	TPS A > 4.92 V. TPS A is shorted to +5 V, or reference ground is OPEN. Check connectors and wiring. Perform electrical circuit tests.
165	ETC TPS B BELOW expected range						< 1 second	TPS B < 0.07 V. TPS B is either open or shorted to ground. Check connectors and wiring. Perform electrical circuit tests.
166	ETC TPS B ABOVE expected range						< 1 second	TPS B > 4.82 V. TPS B is shorted to +5 V, or reference ground is OPEN. Check connectors and wiring. Perform electrical circuit tests.
167	ETC TPS signal OOC		X		Engine	Check Engine	< 1 second	TPS A and TPS B correlated voltage out of range. Engine limited to 1200 RPM. Check connectors and wiring. Perform electrical circuit tests.
168	ETC TPS idle window exceeded		X		Engine	Check Engine	< 1 second	Throttle at spring rest position, key ON, TPS A < 0.25 V or > 1.47 V. Or TPS B < 3.53 V or > 4.75. TPS is out of idle range. Engine limited to 1200 RPM. Check for foreign object in throttle body. Check throttle plate movement manually when key is in the OFF position. Check connectors and wiring. Perform electrical circuit tests.
172	ETC lever Position out of range		X		Engine	Check Engine	immediate	1000 < Lever Position < 65535. Lever position is in an invalid range. Engine limited to 1200 RPM. Check remote control for damaged components. Use diagnostic software to check for remote control fault codes.
173	ETC motor OPEN circuit		X		Engine	Check Engine	< 1 second	Motor current not detected while attempting to move throttle plate. Motor circuit is OPEN. Engine limited to 1200 RPM. Check connectors and wiring. Perform electrical circuit tests.
174	ETC motor excessive current		X		Engine	Check Engine	< 1 second	Motor is drawing > 4.50 Amps when throttle plate position is not moving. Engine limited to 1200 RPM. Check for foreign object in throttle body. Check motor resistance: $xx\ \Omega \pm 10\% @ 77^{\circ}\text{F} (25^{\circ}\text{C})$. Check connectors and wiring. Perform electrical circuit tests.
175	ETC TPS stability performance		X		Engine	Check Engine	immediate	Faults 163 or 164 and 165 or 166. Both TPS A and TPS B are faulty. Engine limited to 1200 RPM. Check connectors and wiring. Perform electrical circuit tests.
179	ETC running error fault		X		Engine	Check Engine	< 1 second	Throttle plate cannot achieve commanded position. The actual throttle plate position out of limit. Engine limited to 1200 RPM. Check for foreign object in throttle body.
180	ETC running effort fault		X		Engine	Check Engine	< 1 second	The throttle plate requires too much effort to move. Engine limited to 1200 RPM. Check for foreign object in throttle body.
181	ETC drive status fault		X		Engine	Check Engine	immediate	Driver under voltage < 4.15 V, Driver over temperature > 347°F (175°C), or motor over current > 9 A. Engine limited to 1200 RPM. Low battery voltage or battery switch OFF with key switch ON. Check connectors and wiring for short circuit. Perform electrical circuit tests.
182	ETC system critical fault		X		Engine	Check Engine	≤ 4 seconds	Sensor reference voltage fluctuating but sensor fault NOT detected. Engine limited to 1200 RPM. Check for code 78 or code 153. Check connectors and wiring. Perform electrical circuit tests.

Outboard EMM Fault Codes

Code	EMM/Circuit Sensor	Internal Sensor	S.A.F.E	Shut Down	Digital Displays	SystemCheck	Activation	Sensor: Circuit Voltage / Resistance (Ω)
183	Controller level monitoring error		X		Engine	Check Engine	< 1 second	Safety message interval > 250 ms or co-processor disable key ON test failure. Safety messages not being received from co-processor or co-processor cannot disable driver. Engine limited to 1200 RPM. Use diagnostic software to check software program version and revision in <i>EMM</i> . Reload or replace with proper program. Check connectors and wiring. Perform electrical circuit tests.
191	ETC step response failure		X		Engine	Check Engine	immediate	Throttle position $\geq$ 10% during step closed or throttle position $\leq$ 80% during step open. Throttle plate not opening or closing enough. Engine limited to 1200 RPM. Check for foreign object in throttle body.
Electronic Shift Controller (ESC)								
195	ESC SPS BELOW expected range		X		Engine	Check Engine	< 1 second	Shift Position Sensor open or shorted to ground. SPS voltage <0.25 V. Actuator will remain in current gear until shifting, then will only remain in neutral. Engine limited to 1200 RPM.
196	ESC SPS ABOVE expected range		X		Engine	Check Engine	< 1 second	Shift Position Sensor shorted to +5 V. SPS voltage > 4.75 V. Actuator will remain in current gear until shifting, then will only remain in neutral. Engine limited to 1200 RPM.
197	ESC NEUTRAL switch BELOW expected range		X		Engine	Check Engine	< 1 second	Neutral switch open or shorted to ground. Neutral switch voltage <0.50 V. Actuator will remain in current gear until shifting, then will only remain in neutral. Engine limited to 1200 RPM.
198	ESC NEUTRAL switch ABOVE expected range		X		Engine	Check Engine	< 1 second	Neutral switch shorted to +5 V. Neutral switch voltage > 4.50 V. Actuator will remain in current gear until shifting, then will only remain in neutral. Engine limited to 1200 RPM.
199	SHIFT calibration invalid			X	Engine	Check Engine	immediate	The forward or reverse calibration exceeds the stored limits. Engine SHUTDOWN. Calibrate shift actuator.
200	ESC driver status flag			X	Engine	Check Engine	immediate	Shift actuator over current detected, current > 50 Amps. Engine SHUTDOWN. Check connectors and wiring for short circuit. Perform electrical circuit tests.
201	ESC Position Sensors OOC			X	Engine	Check Engine	< 1 second	Shift Position Sensor does not correlate with neutral switch. Check connectors and wiring. Perform electrical circuit tests. Check gearcase for presence of water in shift actuator cavity or damage to the shift actuator.
202	ESC / SPS Stability Performance			X	Engine	Check Engine	immediate	Both Shift Position Sensor A and Shift Position Sensor B are faulty (Fault codes 206 or 208 AND 209 or 210).
203	ESC Motor OPEN circuit			X	Engine	Check Engine	< 1 second	Motor current not detected when attempting to move the shift actuator. Engine SHUTDOWN. Check motor resistance: $50\ \Omega \pm 10\%$ @ 77°F (25°C). Check connectors and wiring. Perform electrical circuit tests
204	ESC Cannot achieve desired gear		X	X	Engine	Check Engine	< 2 seconds	Actuator cannot achieve commanded gear. Engine limited to 1200 RPM. Engine will SHUTDOWN if NEUTRAL cannot be achieved. Check gearcase for mechanical damage.
205	ESC System Critical Fault			X	Engine	Check Engine	$\leq$ 4 seconds	Actuator movement detected when actuator is in FORWARD, NEUTRAL or REVERSE. Sensor reference voltage fluctuating but sensor fault NOT detected. Engine SHUTDOWN. Check for code 78 or code 153. Check connectors and wiring. Perform electrical circuit tests.
206	ESC Shift position sensor A BELOW range						< 1 second	Shift Position Sensor A is either open or shorted to ground. SPS voltage <0.25 V. Actuator will remain in current gear until shifting, then will only remain in neutral.
207	ESC Motor excessive current			X	Engine	Check Engine	< 1 second	Motor is drawing excessive current (> 8.0 A) when trying to shift to neutral. Engine SHUTDOWN. Check connectors and wiring. Perform electrical circuit tests. Check gearcase for mechanical damage.
208	ESC Shift position sensor A ABOVE range						< 1 second	Shift Position Sensor A is shorted to +5V. SPS voltage > 4.75 V. Actuator will remain in current gear until shifting, then will only remain in neutral.

Outboard *EMM* Fault Codes

Code	<i>EMM</i> /Circuit Sensor	Internal Sensor	S.A.F.E	Shut Down	Digital Displays	<i>SystemCheck</i>	Activation	Sensor: Circuit Voltage / Resistance (Ω)
209	ESC Shift position sensor B BELOW range						< 1 second	Shift Position Sensor B is either open or shorted to ground. SPS voltage <0.25 V. Actuator will remain in current gear until shifting, then will only remain in neutral.
210	ESC Shift position sensor B ABOVE range						< 1 second	Shift Position Sensor B is shorted to +5V. SPS voltage > 4.75 V. Actuator will remain in current gear until shifting, then will only remain in neutral.
Dynamic Power Steering (DPS)								
211	DPS motor OPEN circuit				Engine	Check Engine	1 second	Motor current < 0.5 Amps with duty cycle > 25%. Check DPS ground lead to block. Check DPS power lead to back of + battery stud. Perform electrical circuit tests.
212	Early Models with DPS-1: DPS helm pressure sensor BELOW expected range				Engine	Check Engine	1 second	Helm pressure sensor voltage < 0.12 V. Check DPS module and pressure sensor connectors and wiring. Perform electrical circuit tests.
	All Other Models with DPS-2: Port helm pressure sensor BELOW expected range				Engine	Check Engine		Port helm pressure sensor voltage < 0.12 V. Check DPS module and pressure sensor connectors and wiring. Perform electrical circuit tests.
213	Early Models with DPS-1: DPS helm pressure sensor ABOVE expected range				Engine	Check Engine	1 second	Helm pressure sensor voltage > 4.60 V. Check DPS module and pressure sensor connectors and wiring. Perform electrical circuit tests.
	All Other Models with DPS-2: Port helm pressure sensor ABOVE expected range				Engine	Check Engine		Port helm pressure sensor voltage > 4.60 V. Check DPS module and pressure sensor connectors and wiring. Perform electrical circuit tests. If an i-Dock installation, contact Technical Service for assistance.
214	Early Models with DPS-1: DPS pump pressure BELOW expected range				Engine	Check Engine	1 second	DPS pump pressure sensor voltage < 0.12 V. Check DPS module and pressure sensor connectors and wiring. Perform electrical circuit tests.
	All Other Models with DPS-2: Starboard helm pressure BELOW expected range				Engine	Check Engine		Starboard helm pressure sensor voltage < 0.12 V. Check DPS module and pressure sensor connectors and wiring. Perform electrical circuit tests.
215	Early Models with DPS-1: DPS pump pressure ABOVE expected range				Engine	Check Engine	1 second	DPS pump pressure sensor voltage > 4.60 V. Check DPS module and pressure sensor connectors and wiring. Perform electrical circuit tests.
	All Other Models with DPS-2: Starboard helm pressure ABOVE expected range				Engine	Check Engine		Starboard helm pressure sensor voltage > 4.60 V. Check DPS module and pressure sensor connectors and wiring. Perform electrical circuit tests. If an <i>iDock</i> installation, contact Technical Service for assistance.
216	DPS Motor over current shutdown				Engine	Check Engine	3 occurrences	Excessive current detected. DPS Motor shutdown due to short circuit condition. Check connectors and wiring. Perform electrical circuit tests.
217	DPS supply voltage BELOW expected range				Engine	Check Engine	10 seconds	DPS supply voltage < 5 V. Check DPS module connectors and wiring. Check for battery voltage at DPS module power lead. Perform electrical circuit tests.
218	DPS module temperature ABOVE expected range				Engine	Check Engine	1 second	DPS module temperature > 176° (80°C). Check cooling flow to /through DPS module and cooling system.
219	1. Power Steering Fault (<i>iDock</i>) 2. Remote Control Fault (74° V6, ABA models ONLY)		X		Engine	Check Engine	1 second	1. Steering fault detected by <i>iDock</i> control module that requires <i>SAFE</i> mode; not an engine or <i>EMM</i> failure. Check for <i>iDock</i> system faults. 2. Remote Control Fault detected by <i>EMM</i> (can occur only on 74° V6, ABA models). Check for Remote Control system faults.

Outboard *EMM* Fault Codes

Code	<i>EMM</i> /Circuit Sensor	Internal Sensor	S.A.F.E	Shut Down	Digital Displays	<i>SystemCheck</i>	Activation	Sensor: Circuit Voltage / Resistance (Ω)
220	DPS steering sensor BELOW expected range (DPS-2 only)				Engine	Check Engine	1 second	Steering position sensor voltage < 0.12 V. DPS steering position sensor OPEN circuit. Check DPS module connectors and wiring. Perform electrical circuit tests. If an <i>iDock</i> installation, make sure the <i>iDock</i> button selected in <i>Evinrude Diagnostics</i> software v6.x
221	DPS steering sensor ABOVE expected range (DPS-2 only)				Engine	Check Engine	1 second	Steering position sensor voltage > 4.60 V. DPS steering position circuit too high. Check connectors and wiring. Perform electrical circuit tests.

iDock Control Module Fault Codes

Code	iDock Control Module Circuit/Sensor	Controllable	Critical	Audible Alarm*	S.A.F.E.	Digital Displays	Activation	Fault Information/ Corrective Action/ Sensor: Circuit Voltage or Resistance (Ω)
1	Sensor 5V Supply Overload Detected		X	X		Code 1 sensor volts	< 1 second	Low voltage on analog sensor supply voltage. +5A output <4.75 V, Joystick Mode not allowed. Check wiring from control module to steering position sensor for chafing and possible short circuit.
2	Mode Solenoid Open Circuit		X	X		Code 2 solenoid fault	< 1 second	Open circuit detected on mode solenoid. Solenoid not connected to ground, Joystick Mode not allowed. Check electrical connections and wiring for possible open circuit from control module to solenoid assembly on manifold. Check continuity of solenoid.
3	Mode Solenoid Short Circuit		X	X		Code 3 solenoid fault	< 1 second	Short circuit detected on mode solenoid. Solenoid current > 5 Amps, Joystick Mode not allowed. Check electrical connections and wiring for chafing and possible short circuit from control module to solenoid assembly on manifold.
4	Direction Solenoid Open Circuit		X	X		Code 4 solenoid fault	< 1 second	Open circuit detected on direction solenoid. Solenoid not connected to ground, Joystick Mode not allowed. Check electrical connections and wiring for chafing and possible open circuit from control module to solenoid assembly on manifold. Check continuity of solenoid with ohmmeter.
5	Direction Solenoid Short Circuit		X	X		Code 5 solenoid fault	< 1 second	Short circuit detected on direction solenoid. Solenoid current > 5 Amps, Joystick Mode not allowed. Check electrical connections and wiring for chafing and possible short circuit from control module to solenoid assembly on manifold.
6	Steering Sensor Signal 1 Failure	X				Code 6 sensor fault	< 1 second	Signal 1 out of range or open circuit. No pwm output detected. Check electrical connections from control module to steering position sensor. Replace steering position sensor.
7	Steering Sensor Signal 2 Failure	X				Code 7 sensor fault	< 1 second	Signal 2 out of range or open circuit. No pwm output detected. Check electrical connections from control module to steering position sensor. Replace steering position sensor.
8	Steering Sensor Out of Correlation		X	X	X	Code 8 sensor fault	< 1 second	Sensor signals do not correlate. Difference between signals > 2.5%, Joystick Mode not allowed. Replace steering position sensor.
9	Steering Sensor Failure		X	X	X	Code 9 sensor fault	< 1 second	Loss of steering angle. Faults 6 and 7, or fault 8, Joystick Mode not allowed. Check electrical connections from control module to steering position sensor. Replace steering position sensor.
10	Steering Motor Failure		X	X	X	Code 10 motor fault	2 seconds	Loss of motor operation. Motor speed < 400 rpm when > 3000 rpm commanded, Joystick Mode not allowed. Check electrical connections from control module to steering motor on manifold. Check for continuity between each motor phase (<100mΩ). Check for similar resistance between each phase (if meter allows). Check for open circuit between each phase and chassis ground (OL).
11	Reserved for future use.							
12	Unexpected Steering Response		X	X	X	Code 12 steering fault	< 1 second	Steering response to control is unexpected. Change in steering angle opposite of commanded, Joystick Mode not allowed
13	Excessive Steering Drift	X			X	Code 13 steering fault	< 1 second	Difference in steering angles too high. Difference > 14°, Joystick Mode not allowed. Check all hydraulic steering fittings for hydraulic fluid leakage. Make sure there is no leakage from outboards to alignment valve. Make sure alignment valve is in the CLOSED (operation) position. Make sure there is no air in the steering system, bleed steering system.
14	Main Power Disconnected	X				Code 14 Main Power fault	2 seconds	Main Power from <i>EMM</i> on Remote Control (Private) network disconnected. Main power < 7.0 V. Verify no other modules have similar active fault. If YES, than Remote Control (Private) network cable open circuit, causing signal break between <i>EMM</i> and first device. Possible defective hub, or failed <i>EMM</i> . If NO, then open circuit in Remote Control (Private) network hub or cable from hub to module.
15	Main Ground Disconnected	X				Code 15 Main Ground fault	2 seconds	Main Ground Disconnected. Check electrical connections from control module to battery.

iDock Control Module Fault Codes

Code	iDock Control Module Circuit/Sensor	Controllable	Critical	Audible Alarm*	S.A.F.E.	Digital Displays	Activation	Fault Information/ Corrective Action/ Sensor: Circuit Voltage or Resistance (Ω)
16	Battery Power Disconnected		X	X	X	Code 16 Power fault	2 seconds	Accessory Power Disconnected. Accessory power < 7.0 V, Joystick Mode not allowed. Check electrical connections from control module to battery.
17	Battery Ground Disconnected		X	X	X	Code 17 Power fault	2 seconds	Accessory Ground Disconnected. Joystick Mode not allowed. Check electrical connections from control module to battery.
18	ROM Checksum Error		X			Code 18 memory error	3 seconds	Indicates corrupted application program. Checksum of software is incorrect, Joystick Mode not allowed. Reload correct software. If code persists after dsoftware update, replace module.
19	Private CAN Error Fault	X				Code 19 PRVT network communications fault	5 seconds	Check Remote Control (Private) network cables and connections.
20	MC0 NMEA 2000 (Public) Network Communications Lost	X				Code 20 PBLC network communications fault	< 1 second	Control Module, Instance 0: NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections for Control Modules of all Control Module (other outboard) instances.
21	MC0 Remote Control (Private) Network Communications Lost	X				Code 21 PRVT network communications fault	< 1 second	Control Module, Instance 0: Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections for Control Modules of all Control Module (other outboard) instances.
22	MC1 NMEA 2000 (Public) Network Communications Lost	X				Code 22 PBLC network communications fault	< 1 second	Control Module, Instance 1: NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections for Control Modules of all Control Module (other outboard) instances.
23	MC1 Remote Control (Private) Network Communications Lost	X				Code 23 PRVT network communications fault	< 1 second	Control Module, Instance 1: Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections for Control Modules of all Control Module (other outboard) instances.
24	MC2 NMEA 2000 (Public) Network Communications Lost	X				Code 24 PBLC network communications fault	< 1 second	Control Module, Instance 2: NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections for Control Modules of all Control Module (other outboard) instances.
25	MC2 Remote Control (Private) Network Communications Lost	X				Code 25 PRVT network communications fault	< 1 second	Control Module, Instance 2: Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections for Control Modules of all Control Module (other outboard) instances.
26	MC3 NMEA 2000 (Public) Network Communications Lost	X				Code 26 PBLC network communications fault	< 1 second	Control Module, Instance 3: NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections for Control Module.
27	MC3 Remote Control (Private) Network Communications Lost	X				Code 27 PRVT network communications fault	< 1 second	Control Module, Instance 3: Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections for Control Modules of all Control Module (other outboard) instances.
28	JOY0 NMEA 2000 (Public) Network Communications Lost	X				Code 28 PBLC network communications fault	< 1 second	Joystick 0 NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections for Joystick at all outboard instances.
29	JOY0 Remote Control (Private) Network Communications Lost	X				Code 29 PRVT network communications fault	< 1 second	Joystick 0 Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections for Joystick at all outboard instances.
30	JOY1 NMEA 2000 (Public) Network Communications Lost	X				Code 30 PBLC network communications fault	< 1 second	Joystick 1 NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections for Joystick at all outboard instances.
31	JOY1 Remote Control (Private) Network Communications Lost	X				Code 31 PRVT network communications fault	< 1 second	Joystick 1 Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections for Joystick at all outboard instances.
32	PSM0 NMEA 2000 (Public) Network Communications Lost	X				Code 32 PBLC network communications fault	< 1 second	PS0 NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections for Pressure Sensor Module (PSM) at all outboard instances.
33	PSM0 Remote Control (Private) Network Communications Lost	X				Code 33 PRVT network communications fault	< 1 second	PS0 Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections for Pressure Sensor Module (PSM) at all outboard instances.

iDock Control Module Fault Codes

Code	<i>iDock</i> Control Module Circuit/Sensor	Controllable	Critical	Audible Alarm*	S.A.F.E.	Digital Displays	Activation	Fault Information/ Corrective Action/ Sensor: Circuit Voltage or Resistance (Ω)
34	PSM1 <i>NMEA 2000</i> (Public) Network Communications Lost	X				Code 34 PBLC network communications fault	< 1 second	PS1 <i>NMEA 2000</i> (Public) Network Communications Lost. Check <i>NMEA 2000</i> network connections for Pressure Sensor Module (PSM) at all outboard instances.
35	PSM1 Remote Control (Private) Network Communications Lost	X				Code 35 PRVT network communications fault	< 1 second	PS1 Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections for Pressure Sensor Module (PSM) at all outboard instances.
36	Reserved for future use.							
37	Reserved for future use.							
38	Manifold Controller Overheat	X				Code 38 System Fault	5 seconds	High temperature on MC module detected. Temperature is > 185°F (85°C). Check outboard cooling system and cooling water hoses to Control Module.

*Audible alarm function only available if system is equipped with optional accessory warning horn

iDock Pressure Sensor Module Fault Codes

Code	iDock Pressure Sensor Module Circuit/Sensor	Controllable	Critical	Audible Alarm*	Digital Display	Activation	Fault Information/ Corrective Action/ Sensor: Circuit Voltage or Resistance (Ω)
1	Port Pressure Sensor Over Range		X	X	Code 1 Port Pressure Sensor Fault	< 1 second	Sensor < 0.4 V or sensor > 4.6 V. Use Evinrude Diagnostics software to check ADC values for sensor, try to reproduce the fault. Replace the PSM if the fault persists.
2	Starboard Pressure Sensor Over Range		X	X	Code 2 Stbd Pressure Sensor Fault	< 1 second	Sensor < 0.4 V or sensor > 4.6 V. Use Evinrude Diagnostics software to check ADC values for sensor, try to reproduce the fault. Replace the PSM if the fault persists.
3	Analog 5V Supply Overload Detected		X	X	Code 3 Sensor Voltage	< 1 second	+5V output < 4.75 V. Use Evinrude Diagnostics software to check Voltage values. Replace the PSM if the fault persists.
4	Main Power Disconnected	X			Code 4 Main Power Fault	2 seconds	Main power < 7.0 V. Check Remote Control (Private) network connections. Check fuse and power connections from remote control to battery.
5	Main Ground Disconnected	X			Code 5 Main Ground Fault	2 seconds	Check Remote Control (Private) network connections. Check fuse and power connections from remote control to battery.
6	Accessory Power Disconnected	X			Code 6 Accessory Power Fault	2 seconds	Accessory power < 7.0 V. Check 2-pin power connector from PSM to adapter(s). Check fuse and power connections from remote control to battery.
7	Accessory Ground Disconnected	X			Code 7 Accessory Ground Fault	2 seconds	Check 2-pin power connector from PSM to adapter(s). Check fuse and power connections from remote control to battery.
8	ROM Checksum Error		X		Code 8 Memory Error	3 seconds	Checksum of software is incorrect, update PSM software to the latest revision.
9	Remote Control (Private) Network CAN Error Fault	X			Code 9 Private Network Communication Fault	5 seconds	Remote Control (Private) network open or short circuit, redundant communication lost. Check and replace Remote Control (Private) network cables as needed.
10	MC0 NMEA 2000 (Public) Network Communications Lost	X			Code 10 PBLC network communications fault	1 second	Control Module, Instance 0: NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections from Control Module.
11	MC0 Remote Control (Private) Network Communications Lost	X			Code 11 PRVT network communications fault	1 second	Control Module, Instance 0: Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections from Control Module.
12	MC1 NMEA 2000 (Public) Network Communications Lost	X			Code 12 PBLC network communications fault	1 second	Control Module, Instance 1: NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections from Control Module.
13	MC1 Remote Control (Private) Network Communications Lost	X			Code 13 PRVT network communications fault	1 second	Control Module, Instance 1: Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections from Control Module.
14	MC2 NMEA 2000 (Public) Network Communications Lost	X			Code 14 PBLC network communications fault	1 second	Control Module, Instance 2: NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections from Control Module.
15	MC2 Remote Control (Private) Network Communications Lost	X			Code 15 PRVT network communications fault	1 second	Control Module, Instance 2: Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections from Control Module.
16	MC3 NMEA 2000 (Public) Network Communications Lost	X			Code 16 PBLC network communications fault	1 second	Control Module, Instance 3: NMEA 2000 (Public) Network Communications Lost. Check NMEA 2000 network connections from Control Module.
17	MC3 Remote Control (Private) Network Communications Lost	X			Code 17 PRVT network communications fault	1 second	Control Module, Instance 3: Remote Control (Private) Network Communications Lost. Check Remote Control (Private) network connections from Control Module.

*Audible alarm function only available if system is equipped with optional accessory warning horn

iDock Joy Stick Fault Codes

Code	iDock Joystick Circuit/Sensor	Controllable	Critical	Audible Alarm*	Digital Displays	Activation	Fault Information/ Corrective Action/ Sensor: Circuit Voltage or Resistance (Ω)
1	Joystick Redundancy Sensor Failure	X			Code 1 Joystick sensor failure	< 1 second	Redundant joystick sensor > 4.65 V or < 0.35 V. Use <i>Evinrude Diagnostics</i> software v6.x to check ADC values of each axis to verify or reproduce the fault. Replace the Joystick if the fault persists.
2	Joystick Sensor Failure		X	X	Code 2 Joystick sensor failure	< 1 second	Both joystick sensors > 4.65 V or < 0.35 V, or +5V failure. The Joystick does not function. Use <i>Evinrude Diagnostics</i> software v6.x to check ADC values of each axis to verify or reproduce the fault. Replace the Joystick.
3	Orientation Sensor Failure	X			Code 3 Joystick sensor failure	< 1 second	Loss of communications to sensors, sensor calibration not performed, or +2.5V failure. Calibrate Joystick control. Replace the Joystick if calibration does not correct fault.
4	Main Power Disconnected	X			Code 4 Main Power Fault	2 seconds	Main power < 7.0 V. Check power connections from Joystick to battery.
5	Main Ground Disconnected	X			Code 5 Ground Fault	2 seconds	Check ground connections from Joystick to battery.
6	Accessory Power Disconnected	X			Code 6 Accessory Power Fault	2 seconds	Accessory power < 7.0 V. Check power connections from Joystick to battery.
7	Accessory Ground Disconnected	X			Code 7 Accessory Ground Fault	2 seconds	Check ground connections from Joystick to battery.
8	System Calibration Limits Exceeded		X	X	Code 8 Calibration Error		Perform Joystick /boat calibration.
9	ROM Checksum Error		X		Code 9 Memory Error	3 seconds	Checksum of software is incorrect, update Joystick software to the latest revision.
10	Control System Fault, or Engine Stalled	X					The <i>EMM</i> has detected a critical fault, or communications on the <i>NMEA 2000</i> (public) and remote control (private) networks has been lost. Check <i>EMM</i> communications, cables and connections. Engine speed has fallen below 100 RPM/stalled on at least one engine. Restart the engine(s).
11	Control System Critical Fault		X				System configuration mismatch. The number of joystick stations or number of control head stations doesn't match the number of stations detected/present in the system. Or two Joysticks have the same instance number. Use <i>Evinrude Diagnostics</i> software v6.x to check the joystick and / or remote control configuration. Set correct instance, set correct number of joysticks and /or remote controls.
12	Private CAN Error Fault	X			Code 12 PRVT Network communications fault	5 seconds	Check Remote Control (Private) network connections.
13	<i>EMM</i> Instance 0 <i>NMEA 2000</i> (Public) network Communications Lost	X			Code 13 PBLC Network communications fault	3 seconds	Check <i>NMEA 2000</i> (Public) network connections.
14	<i>EMM</i> Instance 0 Remote Control (Private) network Communications Lost	X			Code 14 PRVT Network communications fault	3 seconds	Check Remote Control (Private) network connections.
15	<i>EMM</i> Instance 1 <i>NMEA 2000</i> (Public) network Communications Lost	X			Code 15 PBLC Network communications fault	3 seconds	Check <i>NMEA 2000</i> (Public) network connections.
16	<i>EMM</i> Instance 1 Remote Control (Private) network Communications Lost	X			Code 16 PRVT Network communications fault	3 seconds	Check Remote Control (Private) network connections.
17	<i>EMM</i> Instance 2 <i>NMEA 2000</i> (Public) network Communications Lost	X			Code 17 PBLC Network communications fault	3 seconds	Check <i>NMEA 2000</i> (Public) network connections.
18	<i>EMM</i> Instance 2 Remote Control (Private) network Communications Lost	X			Code 18 PRVT Network communications fault	3 seconds	Check Remote Control (Private) network connections.
19	<i>EMM</i> Instance 3 <i>NMEA 2000</i> (Public) network Communications Lost	X			Code 19 PBLC Network communications fault	3 seconds	Check <i>NMEA 2000</i> (Public) network connections.

iDock Joy Stick Fault Codes

Code	iDock Joystick Circuit/Sensor	Controllable	Critical	Audible Alarm*	Digital Displays	Activation	Fault Information/ Corrective Action/ Sensor: Circuit Voltage or Resistance (Ω)
20	EMM Instance 3 Remote Control (Private) network Communications Lost	X			Code 20 PRVT Network communications fault	3 seconds	Check Remote Control (Private) network connections.
21	CH (Control Head) Instance 0 NMEA 2000 (Public) network Communications Lost	X			Code 21 PBLC Network communications fault	3 seconds	Check NMEA 2000 (Public) network connections.
22	CH (Control Head) Instance 0 Remote Control (Private) network Communications Lost	X			Code 22 PRVT Network communications fault	3 seconds	Check Remote Control (Private) network connections.
23	CH (Control Head) Instance 1 NMEA 2000 (Public) network Communications Lost	X			Code 23 PBLC Network communications fault	3 seconds	Check NMEA 2000 (Public) network connections.
24	CH (Control Head) Instance 1 Remote Control (Private) network	X			Code 24 PRVT Network communications fault	3 seconds	Check Remote Control (Private) network connections.
25	MC (Control Module) Instance 0 NMEA 2000 (Public) network Communications Lost	X			Code 25 PBLC Network communications fault	1 second	Check NMEA 2000 (Public) network connections for Control Module.
26	MC (Control Module) Instance 0 Remote Control (Private) network Communications Lost	X			Code 26 PRVT Network communications fault	1 second	Check Remote Control (Private) network connections for Control Module.
27	MC (Control Module) Instance 1 NMEA 2000 (Public) network Communications Lost	X			Code 27 PBLC Network communications fault	1 second	Check NMEA 2000 (Public) network connections for Control Module.
28	MC (Control Module) Instance 1 Remote Control (Private) network Communications Lost	X			Code 28 PRVT Network communications fault	1 second	Check Remote Control (Private) network connections for Control Module.
29	MC (Control Module) Instance 2 NMEA 2000 (Public) network Communications Lost	X			Code 29 PBLC Network communications fault	1 second	Check NMEA 2000 (Public) network connections for Control Module.
30	MC (Control Module) Instance 2 Remote Control (Private) network Communications Lost	X			Code 30 PRVT Network communications fault	1 second	Check Remote Control (Private) network connections for Control Module.
31	MC (Control Module) Instance 3 NMEA 2000 (Public) network Communications Lost	X			Code 31 PBLC Network communications fault	1 second	Check NMEA 2000 (Public) network connections for Control Module.
32	MC (Control Module) Instance 3 Remote Control (Private) network Communications Lost	X			Code 32 PRVT Network communications fault	1 second	Check Remote Control (Private) network connections for Control Module.
33	JOY (Joystick) Instance 0 NMEA 2000 (Public) network Communications Lost	X			Code 33 PBLC Network communications fault	3 seconds	Check NMEA 2000 (Public) network connections for Joystick.
34	JOY (Joystick) Instance 0 Remote Control (Private) network Communications Lost	X			Code 34 PRVT Network communications fault	3 seconds	Check Remote Control (Private) network connections for Joystick.
35	JOY (Joystick) Instance 1 NMEA 2000 (Public) network Communications Lost	X			Code 35 PBLC Network communications fault	3 seconds	Check NMEA 2000 (Public) network connections for Joystick.

iDock Joy Stick Fault Codes

Code	<i>iDock</i> Joystick Circuit/Sensor	Controllable	Critical	Audible Alarm*	Digital Displays	Activation	Fault Information/ Corrective Action/ Sensor: Circuit Voltage or Resistance (Ω)
36	JOY (Joystick) Instance 1 Remote Control (Private) network Communications Lost	X			Code 36 PRVT Network communications fault	3 seconds	Check Remote Control (Private) network connections for Joystick.

*Audible alarm function only available if system is equipped with optional accessory warning horn