FAULT CODE		POSSIBLE CAUSE	SUGGESTED REMEDY
1	SW Fault	Software error.	Update software.
2	SW Fault	Software error.	Update software.
3	SW Fault	Software error.	Update software.
4	SW Fault	Software error.	Update software.
5	SW Fault	Software error.	Update software.
6	SW Fault	Software error.	Update software.
7	SW Fault	Software error.	Update software.
8	SW Fault	Software error.	Update software.
0	SW Fault	Software error.	Update software.
10	SW Fault	Software error.	Update software.
11	SW Fault	Software error.	Update software.
12	SW Fault	Software error.	Update software.
13	SW Fault	Software error.	Update software.
14	SW Fault	Software error.	Update software.
15	SW Fault	Software error.	Update software.
16	SW Fault	Software error.	Update software.
17	SW Fault	Software error.	Update software.
			Check bus cables.
	Communication Fault:	Communication to a module	Check if a fatal error occurred on another module. If
19	NM protocol fatal error	over system bus has failed.	necessary, replace this module or update the software.
20	SW Fault: wrong profile version of remote device		Remove incompatible module or update the software.
20		Incompatible module connected.	
21	SW Fault: CMM error, pool empty	Module out of resources.	Remove one or more modules.
22	SW Fault: A/D conversion timeout	Software error.	Replace module (see error history). Check bus cables.
	Communication Fault:	Bus cable unplugged while driving; bus cable defective; or	Unplug device after device from bus until fault is
23	more than 1 active power flip flop	hardware failure.	recovered.
23	more than I detive power imp nop	Communication to a module	1000 101041
		over system bus has failed; or a	Check bus cables.
	SW Fault: CMM stopping	module (not the powerbase)	Check if a fatal error occurred on another module.
24	not received	created a critical failure.	If necessary, replace this module or update the software.
26-34	SW Fault	Software error.	Update software.
			Check if joystick is connected.
		Joystick disconnected or	Replace joystick
35	Joystick Center Fault	defective.	Replace module.
26	Lond'd Not Conton 1	Joystick out of center position	Release joystick or other input command. Cycle on/off switch.
36	Joystick Not Centered	for >5 sec after power up.	Check if joystick is connected.
			Replace joystick.
37	Joystick Connection	Joystick disconnected or defective.	Replace module.
			A
		Limiter plate changed;	Calibrate joystick.
		limiter plate defective; or joystick	Replace joystick.
38	Joystick Out of Range	is badly calibrated.	Replace module
			Check if joystick is connected. Replace joystick.
39	Joyetick Signal Fault	Joyetick disconnected or defective	Replace module.
J)	Joystick Signal Fault	Joystick disconnected or defective.	Check bus cables.
			Check if a fatal error occurred on another module. If
		Bus cable unplugged while	necessary, replace this module or update the software.
	Communication Fault: timeout	driving; bus cable defective; or	Unplug module after module from bus until fault is
40	for output DF	hardware defective.	recovered.
41–43	SW Fault	Software error.	Update software.
			Check position feedback connector and wiring.
44	Limit Sense Pots Open	Position feedback wiring open.	Check position feedback devices.
45	Limit Sense Pots Shorted	Position feedback wiring shorted.	(Same as #44.)
46	High Battery Voltage	Battery voltage too high.	Disconnect charger.
47	Low Battery Voltage	Battery voltage too low.	Charge battery.
48	Temperature Out of Range	Temp. outside operating range.	Let system cool down (wait 15 minutes).
	perment out of runige	- simple database operating range.	

			Check motor brake connector.
			Check motor wiring.
			Check motor resistance and current.
		Motor connector unplugged;	Decrease motor resistance: use a motor with a smaller
	Motor 1 Not Connected:	motor wiring open; or defective	resistance or add a parallel resistor.
49	resistance too high	motor.	Replace motor.
50	Motor 2 Not Connected: R too high	(Same as #49.)	(Same as #49.)
51	Motor 3 Not Connected: R too high	(Same as #49.)	(Same as #49.)
52	Motor 4 Not Connected: R too high	(Same as #49.)	(Same as #49.)
		,	,
53	Motor 5 Not Connected: R too high	(Same as #49.) Motor overloaded or stalled;	(Same as #49.) Check motor wiring.
		short in actuator or wiring; or	Check motor resistance and current.
54	Motor Overcurrent	defective motor.	Replace motor.
54	Motor Overcurrent	Motor operated in one direction	Increase the value of the Timeout
==	Motor Timeout	longer than the programmed limit.	parameter (this is an OEM parameter).
55			
56	Sensor Reference Fault	Pressure sensor defective.	Replace device.
57	SW Fault: buffer empty or overflow	Module out of resources.	Update software.
	EEPROM Fault: CRC of profile	Data in the nonvolatile memory	
58	section is incorrect	is incorrect.	Replace module.
L_	EEPROM Fault: CRC of calibration	Data in the nonvolatile memory	
59	section is incorrect	is incorrect.	Replace module.
	EEPROM Fault: CRC of calibration	Data in the nonvolatile memory	Download parameter file with the PCPS
60	section is incorrect	is incorrect.	(Activate Advanced Cloning).
	EEPROM Fault: CRC of critical	Data in the nonvolatile memory	Download parameter file with the PCPS
61	section is incorrect	is incorrect.	(Activate Advanced Cloning).
	EEPROM Fault: CRC of critical	Data in the nonvolatile memory	Download parameter file with the PCPS
62	section is incorrect	is incorrect.	(Activate Advanced Cloning).
	EEPROM Fault: E2PROM parameter		Download parameter file with the PCPS
63	disturbed	A parameter value is out of range.	(Activate Advanced Cloning).
	EEPROM Fault: E2PROM parameter		Download parameter file with the PCPS
64	disturbed in critical section	A parameter value is out of range.	(Activate Advanced Cloning).
·			
65	DMS Fault: inactive input device not centered	Inactive input device not centered; bus cable defective; or hardware failure.	Release inactive input device. Check bus cables Unplug device after device from bus until fault is recovered.
65 69	centered	bus cable defective; or hardware failure.	Check bus cables Unplug device after device from bus until fault is recovered.
65 69	_	bus cable defective; or hardware	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables.
	centered	bus cable defective; or hardware failure. Bus supply is overloaded.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start
69	centered Bus Overload: bus B+ fuse has tripped	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software).
	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start
69 70	centered Bus Overload: bus B+ fuse has tripped	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module.
69	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software).
69 70	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase.
69 70	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector.
69 70	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged;	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor wiring.
70 73	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor.
69 70 73 74 75	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.)	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor wiring. Check motor resistance and current. Replace motor. (Same as #74.)
70 73	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor wiring. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase
69 70 73 74 75	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.)	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector.
70 73 74 75 80	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor-brake connector.
70 73 74 75 80	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor wiring. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current.
70 73 74 75 80	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current.
70 73 74 75 80	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. Replace powerbase Check motor-brake connector. Check motor-brake connector. Check motor-brake connector. Check motor-brake connector. (Same as #81.) Check motor-brake connector.
70 73 74 75 80	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded. Short in motor or wiring.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. Replace powerbase Check motor-brake connector. Check motor-brake connector. Check motor resistance and current. (Same as #81.) Check motor-brake connector. Check motor-brake connector. Check motor-brake connector.
70 73 74 75 80	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted Right Motor Shorted	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded. Short in motor or wiring. Short in motor or wiring.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor viring. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. (Same as #81.) Check motor-brake connector. Check brake wiring. Check brake wiring.
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70 73 74 75 80 81 82	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted Right Motor Shorted Left Brake Disconnected: left brake current is too low	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded. Short in motor or wiring. Short in motor or wiring. Motor connector unplugged; brake wiring open; brake defective; or brake voltage set too low.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. Replace powerbase Check motor-brake connector. Check brake wiring. Check brake resistance. Increase value of Brake Voltage parameter (this is an OEM parameter).
70 73 74 75 80 81 82	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted Right Motor Shorted Left Brake Disconnected: left brake	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded. Short in motor or wiring. Short in motor or wiring. Motor connector unplugged; brake wiring open; brake defective;	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. (Same as #81.) Check motor resistance and current. (Same as #81.) Check motor-brake connector. Check brake wiring. Check brake resistance. Increase value of Brake Voltage parameter (this is an OEM parameter). (Same as #83.)
70 73 74 75 80 81 82	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted Right Motor Shorted Left Brake Disconnected: left brake current is too low	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded. Short in motor or wiring. Short in motor or wiring. Motor connector unplugged; brake wiring open; brake defective; or brake voltage set too low.	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor viring. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. (Same as #81.) Check motor-brake connector. Check motor-brake connector. Check motor resistance and current. (Same as #81.) Check motor-brake connector. Check brake wiring. Check brake resistance. Increase value of Brake Voltage parameter (this is an OEM parameter). (Same as #83.) Check motor-brake connector.
70 73 74 75 80 81 82	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted Right Motor Shorted Left Brake Disconnected: left brake current is too low Right Brake Disconnected	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded. Short in motor or wiring. Short in motor or wiring. Motor connector unplugged; brake wiring open; brake defective; or brake voltage set too low. (Same as #83.)	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. (Same as #81.) Check motor resistance and current. (Same as #81.) Check motor-brake connector. Check brake wiring. Check brake resistance. Increase value of Brake Voltage parameter (this is an OEM parameter). (Same as #83.) Check motor-brake connector. Check brake wiring.
70 73 74 75 80 81 82 83	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted Right Motor Shorted Left Brake Disconnected: left brake current is too low Right Brake Disconnected	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded. Short in motor or wiring. Short in motor or wiring. Motor connector unplugged; brake wiring open; brake defective; or brake voltage set too low. (Same as #83.) Brake wiring shorted; or brake	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor wiring. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. (Same as #81.) Check motor resistance and current. (Same as #81.) Check motor-brake connector. Check brake wiring. Check brake resistance. Increase value of Brake Voltage parameter (this is an OEM parameter). (Same as #83.) Check motor-brake connector. Check brake wiring. Check brake wiring.
70 73 74 75 80 81 82	centered Bus Overload: bus B+ fuse has tripped Hardware Fault: CRC of ROM incorrect Precharge Fault: H-bridge voltage does not reach battery voltage Left Motor Disconnected: left motor current is too low Right Motor Disconnected Main Relay Not Open Left Motor Shorted Right Motor Shorted Left Brake Disconnected: left brake current is too low Right Brake Disconnected	bus cable defective; or hardware failure. Bus supply is overloaded. The continuous check of the program memory has detected an error. The supervision of a module function has detected an error. Motor connector unplugged; motor wiring open; or defective motor. (Same as #74.) Main relay contact is welded. Short in motor or wiring. Short in motor or wiring. Motor connector unplugged; brake wiring open; brake defective; or brake voltage set too low. (Same as #83.)	Check bus cables Unplug device after device from bus until fault is recovered. Check bus cables. Update software with the PCPS (Inhibit Application Start and download compatible software). Replace module. Replace powerbase. Check motor-brake connector. Check motor resistance and current. Replace motor. (Same as #74.) Replace powerbase Check motor-brake connector. Check motor resistance and current. (Same as #81.) Check motor resistance and current. (Same as #81.) Check motor-brake connector. Check brake wiring. Check brake resistance. Increase value of Brake Voltage parameter (this is an OEM parameter). (Same as #83.) Check motor-brake connector. Check brake wiring.

Brake wiring open brake defective hottery voltage helow nominual operating range finits or brake voltage is too low Check brake resistance. Check brake voltage is not low. Replace brake. Replace brower Module. Replace Prover Modul		T		Check motor-brake connector.
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Left Brake Not Released			O 1	
Same as 887. Same as 887.		Laft Broke Not Released: laft broke		
Check motor brake connector.	87			
Motor connector unplugged; brake wiring, or on shorted; Check brake resistance.	88	Right Brake Not Released	(Same as #87.)	` /
Section Sect			Matan anno atan umulu ana di busha	
Septence Parke Fault: voltage too high Nake defective. Replace Parke.				
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Main Relay Not Closed Current Sense Fault: current sense measurement left out-of-range Gurrent Sense Fault: current sense measurement left out-of-range Mass detected an error. Constant high load made the temperature reach the maximum limit: or excessive Joad on outputs Overtemperature: Statimated motor temperature is too high; the parameters for the motor temperature estimation are not set optimally. Powerhase High Temperature Powerhase High Temperature Battery Voltage A downhill ride with fully charged batteries. A downhill ride with fully charged batteries. Continue downhill ride are reduced speed. (This error is at the Recoverable Fault level.) Low Battery Voltage Battery Voltage A downhill ride with fully charged batteries. Continue downhill ride are reduced speed. (This error is at the Recoverable Fault level.) Charger/Drive Inhibit: driving inhibited due to low voltage on the DNS line Communication Fault: drive command missing (Timeout CAN message) High Pedal Protection; joystick out-of- center position during power up Center Detect Fault: center detect is not active while JS is not centered Center Detect Fault: center detect is not active while JS is not centered Supervision of a module function has detected an error. Replace Power Module Let system cool down (wait 15 minutes). Check output currents. Let system cool down (wait 15 minutes). Check output currents. Check the parameters for the motor tempe relative is the temperature is too high; the parameters for the motor temperature is too high; the parameters for the motor temperature is too high; the parameters for the motor temperature is too high; the parameters for the motor temperature is too high; the parameters for the motor temperature is too high; the parameters for the motor temperature is too high; the parameters for the motor temperature is too high; the parameters for the motor temperature		0 0		*
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			driving; bus cable defective; or	necessary, replace this module or update the software.
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121 failed detected breakdown of a module. until fault is recovered.	121	failed	detected breakdown of a module.	until fault is recovered.
				Defeative aufternamentary with the Con-
Defective software; replace module. (See	100	CIVIT I		-
·	122	SW Fault: overtake abort		error history to determine which module caused the error.
Multiple modules of the same		CW Foult unaccoloud to the Part	*	Damana dantinata madalan tan tan tan
SW Fault: unresolvable duplicate kind, which are only allowed to Remove duplicate modules, leaving just	100	_		2
123 output definition in system exist once in the system. one unique module in the system.	1.4.5	output aeminion in system	exist once in the system.	one unique module in the system.

	SW Fault: unresolvable duplicate		
124	input definition in system	(Same as #123.)	(Same as #123.) Check if a fatal error occurred on another module. If
125	SW Fault: requested output definition not found	Communication to a module over the system bus has failed.	necessary, replace this module or update the software.
126	SW Fault: start of output failed	(Same as #125.)	(Same as #125.)
127	SW Fault: general menu error	The module whose function was just active, or was just activated, has failed.	Check if a fatal error occurred on another module. If necessary, replace this module or update the software.
	Motor Control Warning:	The control parameters do not match the motors being used; motor impedance parameters is set too high; or defective	Download parameter file with the PCPS (Activate Advanced Cloning). Check Motor Impedance parameter and decreased value if necessary (this is a OEM parameter).
128	motor control loop is not stable	motor.	Replace motor.
129	Communication Fault: Y-dataflow timeout	Bus cable unplugged while driving, or bus cable defective; hardware failure	Check bus cables. Replace defective bus cable or hardware Remove one or more modules.
130	SW Fault: general SDO client error	Generic software fault.	If error persists, contact Quantum Rehab.
131	Left Motor Output Fault: Incorrect output voltage	Motor connector unplugged; motor wiring open; short in motor or power module failure.	Check motor wiring. Replace motor. Replace power module.
132	Right Motor Ouput Fault	See error code #131	See error code #131
	EEPROM Fault: incorrect CRC	Data in the nonvolatile memory	Note: BDI will automatically reset to 100%. Update module software. Replace module if this error occurs periodically. (Check
133	of BDI section	is incorrect. Input command is not zero	error history. Release input command.
134	High Pedal Fault	during power up.	Cycle on/off switch.
135	Direction Assignment Error	Two commands assigned for the same direction.	Reassign directions.
136	Incompatible Device Connected: wrong protocol version of remote device	Incompatible module connected.	Remove incompatible module or update software.
137	Incompatible Device Connected: invalid device type or serial number	Incompatible module connected, or a module (other than the Powerbase) created a critical failure.	Unplug module after module from bus until fault is recovered. Check if a fatal error occurred on another module. If necessary, replace this module or update the software.
138	Main Relay Not Open: main relay not open during initial test	Charger connected; battery voltage below nominal operating range limit; or main relay contact is welded. Bus cable defective, or hardware	Disconnect charger. Charge battery. Replace Powerbase. Check bus cables. Unplug module after module from bus until fault is
139	Communication Fault: CAN bus off	failure.	recovered.
140	Controller Power Down Fault: internal controller supply remains active when switched off	Supervision of a module funcion has detected an error	Disconnect and reconnect battery. Replace power module.
141	Drive Restricted	Driving restriction active.	Clear restrictions.
142	Current Offset. Calibration Left: current offset Left is out of limit	Supervision of a module function has detected an error.	Replace power module if this error occurs periodically.
143	Current Offset Calibration Right	(Same as #142.)	(Same as #142.)
144	Puff Parameters Overlap	Puff parameters are overlapping (4-pressure setup). Sip parameters are overlapping	Adjust parameters.
145	Sip Parameters Overlap	(4-pressure setup). Indicator bulb blown, or indicator	Adjust parameters. Check indicator bulb.
149	Open Wire in Indicator Left Circuit	not connected.	Check indicator wiring.
150	Open Wire in Indicator Right Circuit	(Same as #149.)	(Same as #149.)
151	Open Wire in Light (L/R) Circuit	Light bulb blown, or light not connected.	Check light bulb. Check light wiring.
155	EEPROM Fault: CRC of config section is incorrect	Data in the nonvolatile memory is incorrect.	Set the configuration data with the help of the PCP S (OEM only). Replace Powerbase.
156	SW Fault: unexpected interrupt	The microcontroller system has triggered an unexpected interrupt.	Replace Powerbase if this error occurs periodically.
-20	S I water unexpected interrupt	00	replace I offerouse if and error occurs periodically.

157	SW Fault: out of window range	Incompatible module connected.	Remove incompatible module or update software.
160	Set Recline to Vertical Position First!	Recline is not in down position.	Move recline to down position.
161	Set Standup to Down Position!	Standup is not in down position.	Move standup to down position.
163	One or More Initial Tests Not Processed	Not all initialize tests were processed.	Replace Powerbase if this error occurs periodically.
164	Invalid Configuration	Invalid value(s) in config section.	Set the configuration data with the help of the PCPS.
101	EEPROM Fault: CRC of distance	invalid value(s) in coming section.	Note: This fault automatically resets the trip counters.
166	section is incorrect.	Distance values are corrupted.	Replace Powerbase if this error occurs periodically.
		Brake switch is either open or not	Close brake switch.
167	Brake Switch Opened During Idle	connected.	Check brake wiring.
174	Memory Full: Code Could Not Be Saved	Not enough memory available (e.g., while learning IR codes).	Delete unused data in data section.
1/4	Memory Full: User-Defined Menu	Memory holding dynamic protocol	Update software.
175	Too Big	table is full.	Replace Powerbase.
		Incorrect positioning of remote	Try again with the remote control device in a different
176	Learning of IR Code Failed. Retry.	control device.	position
177	Motor 6 Not Connected: resistance too high	Motor connector unplugged; motor wiring open; or defective motor.	Check motor brake connector. Check motor wiring. Check motor resistance and current. Decrease motor resistance, by using a motor with a smaller resistance or by adding a resistor in parallel with motor.
181	Speed Potentiometer Out of Range	Invalid speed pot connection.	Replace Handcontrol.
192	Motor 1 Disconnected	Motor connector unplugged; motor wiring open; or defective motor.	Check motor brake connector. Check motor wiring. Check motor resistance and current. Replace motor.
193	Motor 2 Disconnected	(Same as #192.)	(Same as #192.)
194	Motor 1 Shorted	Short in motor or wiring.	Check motor brake connector. Check motor wiring. Check motor resistance and current.
195	Motor 2 Shorted	(Same as #194.)	(Same as #194.)
196	Current Offset Calibration Motor 1	Current offset of Motor 1 is outside the allowable limits.	Replace Powerbase.
197	Current Offset Calibration Motor 2	(Same as #196.)	(Same as #196.)
400		Current measurement of Motor 1	
198	Current Sense Fault: Motor 1	is out of range.	Replace Powerbase.
199	Current Sense Fault: Motor 2	(Same as #198.) Motor connector unplugged;	(Same as #198.) Check motor wiring.
200	Motor 1 Output Fault: output voltage is incorrect	motor wiring open; short in motor or wiring; or controller failure.	Replace Powerbase. Replace motor.
201	Motor 2 Output Fault	(Same as #200.)	(Same as #200.)
203	Brake 1 Disconnected	Motor connector unplugged; brake wiring open; brake defective; or brake voltage set too low.	Check motor brake connector. Check brake wiring. Check brake resistance. Increase the Brake Voltage parameter (this is an OEM parameter) Replace brake.
204	Brake 2 Disconnected	(Same as #203.)	(Same as #203.)
205	Brake Driver Defective	Brake fault input high.	Replace Powerbase.
206	Hardware Fault: oscillator failure	Hardware failure.	Replace AAM.
207	On/Off Switch Disconnected	On/off switch disconnected while system is running.	Reconnect on/off switch.
•			Check motor brake connector. Check brake wiring. Check brake resistance.
208	Brake 1 Overload: current too high	Brake wiring shorted, or brake defective.	Replace brake.
209	Brake 2 Overload: current too high	(Same as #208.)	(Same as #208.)
210	EEPROM Fault: CRC of poti section is incorrect	Data in the nonvolatile memory	Recalibrate potentiometer.
		•	•
211	Poti Value Out Of Range	Poti calibration is invalid. Short in actuator or wiring; or	Recalibrate poti. Check actuator wiring.
217	Actuator Overcurrent	actuator overload.	Check actuator resistance and current.
218	Actuator Timeout	Actuator operated too long in one direction.	Release input command.
			^
219	Reference Voltage Failed	Reference voltage failed.	Replace Powerbase.

			Reconnect Mode switch.
			If supervision not required, deactivate
221	Mode Switch Disconnected	Mode switch disconnected.	the Mode Jack Supervision parameter.
		Handcontrol not connected or	Reconnect Handcontrol.
		defective; or wrong system	Replace Handcontrol
222	Handcontrol Missing or Defective	configuration data.	Execute Save System Configuration function.
			Reconnect SAJ.
		SAJ not connected or defective;	Replace SAJ.
223	Standalone Missing or Defective	or wrong system configuration data.	Save System Configuration.
		Attendant Joystick not connected	Reconnect Attendant Joystick.
		or defective; or wrong system	Replace Attendant Joystick.
224	Attendant Missing or Defective	configuration data.	Execute Save System Configuration function.
			Reconnect AAM.
	Advanced Actuator Module Missing	AAM not connected or defective;	Replace AAM.
225	or Defective	or wrong system configuration data.	Execute Save System Configuration function.
			Reconnect Enhanced Display.
		Enhanced Display not connected	Replace Enhanced Display.
		or defective; or wrong system	Execute Save System Configuration
226	Enhanced Display Missing or Defective	configuration data.	function.
			Reconnect S&P.
		S&P not connected or defective;	Replace S&P.
227	Sip&Puff Module Missing or Defective	or wrong system configuration data.	Execute Save System Configuration function.
			Reconnect ECU.
		ECU not connected or defective;	Replace ECU.
228	ECU Missing or Defective	or wrong system configuration data.	Execute Save System Configuration function.
			Reconnect device.
		Device not connected or defective;	Replace device.
229	Module Missing or Defective	wrong system configuration data.	Execute Save System Configuration function.
		Supervision of a module function	
230	Hardware Fault: charge pump defective	has detected an error.	Replace Powerbase.
			Release any inactive devices.
			Unplug module after module from bus until fault is
			recovered.
			Check joystick cable connection.
			Replace joystick.
231	Input Device Not Active	Input device not properly centered.	Replace module.
234	Incompatible Module Connected	Incompatible module connected.	Remove incompatible module or update software.