

6 TROUBLESHOOTING AND SCHEMATICS

TROUBLESHOOTING

In case of machine failure, please first check whether :

- The hydraulic tank has sufficient oil;
- The battery is properly charged;
- The emergency stop buttons at the ground or platform controls are pulled out to the ON position;

- The ground or platform controls is selected;
- Relays are properly connected;
- The fuse works normally.

If the above inspection finds no problem, please refer to the troubleshooting table below. If the failure persists, please contact Hunan Sinoboom Intelligent Equipment Co., Ltd.

Table 6-1 Troubleshooting (DTC system)

Fault Code	Description	Function Restricted	Solution
01	System initializing fault	All functions restricted	System initializing error: the ECU may be defective, replace the ECU.
02	System communication fault	All functions restricted	ECU system communication fault: check the wiring of signal lines and other lines. If the fault persists, replace the PCU or ECU.
03	Invalid setting	All functions restricted	Setup error: set up correctly.
04	Calibration failure	All functions restricted	Calibration failure: re-calibrate or check the angle sensor and pressure sensor.
09	GPS communication fault	All functions restricted	GPS communication fault: check the wiring of signal lines and other lines. If the fault persists, replace the GPS module or ECU.
10	CAN Open communication fault	All functions restricted	Motor controller fault: check the motor controller.
12	Ground up/down switch fault	Ground controls restricted	Up/down toggle switch fault: ensure no objects press against the toggle switch at ground controls or ECU keys, check the toggle switch wiring. If the fault persists, replace the ECU.
18	Pothole protection fault	Lift and drive functions restricted	Pothole protection error: check whether the pothole protection is deployed; check the pothole limit switches and wiring; check the pothole protection harness and lower limit switch.
31	Pressure sensor fault	All functions restricted	Pressure sensor error: check the sensor and wiring, and ensure the correct sensor option is used.
32	Angle sensor	All functions restricted	Angle sensor error: check the angle sensor and wiring, and ensure the correct sensor option is used.
35	Cable break sensor fault	All functions restricted	Broken steel cable fault: check whether the steel cable becomes defective

Fault Code	Description	Function Restricted	Solution
36	Low battery charge alarm	Drive speed restricted	Low battery charge alarm: the battery level is running low, please charge the battery.
37	Battery fully depleted	All functions restricted	Battery depleted: the battery is switched into the sleep mode, move the joystick or press the keys on ECU to exit the sleep mode
38	Pothole protective plate retract valve fault	All functions restricted	Pothole protective plate retract valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
39	Pothole protective plate extend valve fault	All functions restricted	Pothole protective plate extend valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
42	Steer left button fault	Alarm allowed only	Steer left button pressed before startup: the button on joystick may be pressed, otherwise replace the joystick or PCU.
43	Steer right button fault	Alarm allowed only	Steer right button pressed before startup: the button on joystick may be pressed, otherwise replace the joystick or PCU.
46	Enable button fault	Platform operation restricted	Enable button pressed before startup: check whether the enable button is pressed, and check the neutral setting, if no problem, replace the joystick or PCU.
47	Joystick not returned to neutral	Drive speed restricted	Joystick not returned to neutral: ensure the joystick is returned to the neutral (vertical) position, and check the neutral setting, if no problem, replace the joystick or PCU.
52	Turntable rotate right valve fault	Lift and drive functions restricted	Turntable rotate right valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
53	Turntable rotate left valve fault	Lift and drive functions restricted	Turntable rotate left valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
54	Mast up valve fault	Lift and drive functions restricted	Mast up valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
55	Mast down valve fault	Lift and drive functions restricted	Mast down valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
56	Front wheel steer right valve fault	Lift and drive functions restricted	Front wheel steer right valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
57	Front wheel steer left valve fault	Lift and drive functions restricted	Front wheel steer left valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
58	Jib up valve fault	Lift and drive functions restricted	Jib up valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.

Fault Code	Description	Function Restricted	Solution
59	Jib down valve fault	Lift and drive functions restricted	Jib down valve fault: check the coil wiring, if correctly wired, check whether the coil is open or short circuited.
68	Battery undervoltage fault	All functions restricted	Check and immediately charge the battery
80	Platform load exceeding 80%	Alarm allowed only	Platform load exceeding 80% alarm: the platform load is getting near to the limit, consider not increasing the load.
90	Platform load exceeding 90%	Alarm allowed only	Platform load exceeding 90% alarm: the platform load is getting near to the limit, consider not increasing the load.
99	Platform load exceeding 99%	Alarm allowed only	Platform load exceeding 80% alarm: the platform load has reached the limit, do not increase any load.
OL	Platform overload	All functions restricted	Platform overload error: immediately remove the excessive load
LL	Machine off-level fault	Lift and drive functions restricted	Machine off-level fault: if the machine is off level, try to level it up. Otherwise check the sensor and wiring.

7L	Secondary Guarding Bar Activated	All functions except Down	Pull up the bar and make sure both limit switches are pushed in.
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