

Down the clown shelf motor trouble shooting:

Main board failure identification:

Upon power up the Down the clown game will attempt to lift the shelves if it senses any of the clowns are knocked down, you can use this function to aid in trouble shooting. The motors are constantly supplied 12vdc on the orange wire and the ground is applied through a transistor (IRL540N) located on the main board to complete the circuit to make the motor move. To determine if the fault is going to be a main board failure or a motor failure you can swap the station connections on the main board, the main board connections are as follows:

J11 – top shelf - drive transistor Q17

J12 – middle shelf - drive transistor Q18

J13- bottom shelf - drive transistor Q19

After swapping the connectors and tuning on the game on is the problem remains in the shelf then the problem is the wiring or the motor and if the problem moves then it main board failure.

Shelf motor wiring troubleshooting:

The down the Clown game shelf reset motors are 24vdc (that are driven by 12vdc from the game) motors and have the ICE part number FB2008 located on the motor, the ball gate motor is a 12v motor and has the ICE part number BL2008 printed on them, both motor have the identical foot print but a different gear ratio putting the ball gate motor in the shelf position will cause the motor to fail.

To determine if the failure is a wiring or motor failure connect your meter leads between the 2 wires at the motor then knock the clowns down and turn the game on, if you have voltage at the motor then check the set screws on the motor cam and then replace the motor. if no voltage is present at the motor during the boot up sequence then using you volt meter check for 12vdc using the black wire on the shelf sensor located on the left hand side as viewed from the back of the game. if the 12v is present then the signal wire has failed track the wire back to the appropriate connector on the main board and repair the damage or replace the harness, the ICE part number for the rear harness is BL2084HX.

