

Technical Tips- Toy Soldier (series) Crane

Main Logic Board (W9803D)

Listed below are service tips to help you troubleshoot and resolve common problems:

- PROBLEM:** Not Taking Coins or Bills"
SOLUTION: Check connector J-8; the IC is a 74HC244 in position U-22.
- PROBLEM:** Meters Not Working (Coin in/Prizes out)
SOLUTION: Check connector J-7; the IC is ULN2003 in position U-23.
- PROBLEM:** Gantry Switches Not Working
SOLUTION: Check connector J-4; the IC is a 74LS244 in position U20.
- PROBLEM:** Claw Not Closing
SOLUTION: Check connector J-4; the IC is a LM723 located in position U-43.
- PROBLEM:** Claw Constantly Closed
SOLUTION: Check connector J-4; the transistor is a 2SC5200 located on the large heat sink in position Q3.
- PROBLEM:** No VR Adjustment Controls
SOLUTION: Check connector J-5; check transistors at locations Q-36 and Q-37. Both transistors are B649. The receiving IC is located in position U-43. The IC is a LM723. Check the resistor between IC U-36 and U-33. It is a 1K ¼ Watt resistor.
- PROBLEM:** Up/Down Motor Not Working
SOLUTION: Check connector J-4 pins 3 and 16; follow to relay RL5 and RL6 (Small black or blue relays located on the edge of board.) The relays are 24VDC. Relay # is OMI-SS-224L.
- PROBLEM:** Left/Right Motor Not Working
SOLUTION: Check connector J-4 pins 2 and 15; follow to relay RL7 and RL8. Relays are 24VDC. Relay # is SCLB-W-DPDT-C.
- PROBLEM:** Front/Back Motor Not Working
SOLUTION: Check connector J-4 pins 1 and 14; follow to relay RL9 and RL10. Relays are 24VDC. Relay # is SCLB-W-DPDT-C.
- PROBLEM:** Prize Not Detected
SOLUTION: Check connector J-10; the IC is a 74LS244 in position U21.
- PROBLEM:** No Display
SOLUTION: Check connector J-2; the IC output IC's are located in positions U-25 and U-36. Both IC's are ULN2003.
- PROBLEM:** Joystick Not Working
SOLUTION: Check connector J-1; the IC is a 74LS244 in position U-21.
- PROBLEM:** Prize Drop Button Not Working
SOLUTION: Check connector J-1; the IC is a 74LS244 in position U-21.

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