Fork Transfer Troubleshooting

This chapter includes general guidelines and troubleshooting tables as an aid in isolating and recovering from malfunctions. ***ONLY QUALIFIED, AUTHORIZED PERSONNEL SHOULD OPERATE OR MAINTAIN EQUIPMENT***.

Proper troubleshooting is finding the cause of a problem and correcting it in a safe and systematic manner. A change in the system often causes trouble. An understanding of the system, its modes of operation, and how these modes are to work will aid in finding the cause of the trouble.

⚡⚠WARNING⚠⚡

- Ensure that all requisite safety precautions are taken while diagnostic procedures are performed.
- Before attempting any maintenance or service operation, make sure that:
  - You do not begin any repair procedure until the proper shutdown procedures and the appropriate power lockout procedures have been applied.
  - The system is de-energized; main electrical switches are open.
- Some maintenance/troubleshooting procedures require the equipment to be running to perform the procedure. In this case only one person should be in command of operating the equipment in maintenance mode only. Constant communication with the person commanding the equipment should be maintained through the procedure.

Fork Transfer Troubleshooting		
Problem	**Possible Cause**	**Remedy**
Position not met	• Physical obstruction of forks or vehicle • Encoder coupling loose or broken • Communication to encoder • Power to encoder	• Check encoder for faults, power, and communication. • Check coupling for physical damage/connection point. • Check encoder points counts on HMI for position. • If the above points are not the issue, cycle power and try to manually jog into position using maintenance mode. • Once in home position, press reset and return to auto.
Fork overtravel	• Overtravel limit switch failure	• Fork overtravel/OT limit switch tripped • Use maintenance mode to jog fork back into position. Reset
Home position not met	• Home position switch failure • Home position not met	• Reset and return fork to home position, check status of home barrel prox. • Check for flag tripping home prox, if no damage to switch, adjust flag and/or prox.
Motor Overtorque	• Physical obstruction • Overtorque Limit switch failure/tripped	• Check overtorque limit switch status • Reset motor overtorque device if no damage to switch
IDC overcurrent	• Physical obstruction	• Check brake rectifier and brake operation for a motor/drive brake that is not releasing • Check the vehicle and forks for mechanical obstruction or failure • Clear obstruction or repair the physical damage/failure
IDC Overvoltage	• Dynamic brake missing/failure • Decel time too short	• Add dynamic brake • Measure Ohms/resistance of dynamic brake for manufactures rating. If the Ohms do not measure correctly, replace dynamic brake • Check that decel time is within the cycle time and if possible, increase.
Overcycle Fault	• Forks did not travel to position within cycle time	• Check for mechanical/physical obstruction • If no damage, obstruction - Return to home position in maintenance mode and return to auto if unable to clear with reset.
Part present fault	• Switch failure	• If part present is not registering, check status of switch with part/vehicle present