



1391-DES Digital AC Servo Drive Board Replacement Kit

(Cat. No. 1391-DESxx-DI-AQB)

Instructions

Introduction

This publication provides the steps needed to replace any of the following 1391-DES Digital AC Servo Drive circuit boards:

- Display Board
- Memory Board
- Logic Control Board
- A Quad B (Encoder Output) Board

Information on replacement board part numbers can be obtained in the 1391 Renewal Parts publication (1391-6.0).

Replacement Procedures

Substituting or interchanging major board assemblies is a common technique used in troubleshooting/repairing closed loop position systems. The procedures provided must be followed when substituting or interchanging board assemblies. Refer to Figure 1 for board and connector locations.



ATTENTION: This product contains stored energy devices. To avoid hazard of electrical shock, verify that all voltage on the capacitors has been discharged before attempting to service, repair or remove this unit.

Voltage at terminals 9 (+) and 7 (-) of TB5 must be “0.00” as measured with a standard digital voltmeter or multimeter.

Only qualified personnel familiar with solid-state control equipment and safety procedures in publication NFPA 70E should attempt this procedure.



ATTENTION: This drive contains ESD (Electrostatic Discharge) sensitive parts and assemblies. Static control precautions are required when installing, testing, servicing or repairing this drive. Component damage may result if ESD control procedures are not followed. If you are not familiar with static control procedures, reference A-B publication 8000-4.5.2, *Guarding Against Electrostatic Damage* or any other applicable ESD protection handbook.



ATTENTION: To avoid a shock hazard, assure that all power to the drive has been removed before replacing any circuit boards.

Display Board Substitution

1. Remove all power to the drive branch circuit.
2. Remove the front cover from the drive.
3. Loosen the 4 thumb screws and remove the cable between the Display and Logic Control Boards. Remove the Display Board.
4. Install the new Display Board. Reconnect cable.
5. Apply power to the system and check for proper operation – tuning is not be required.

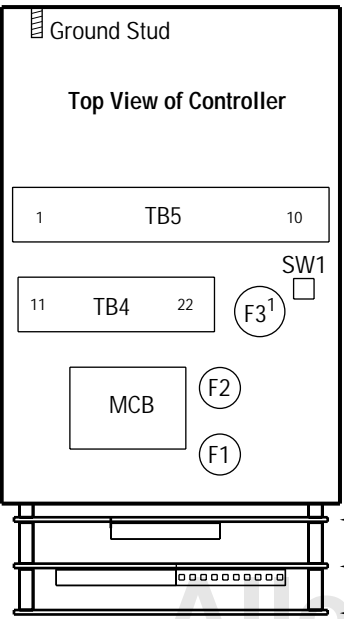
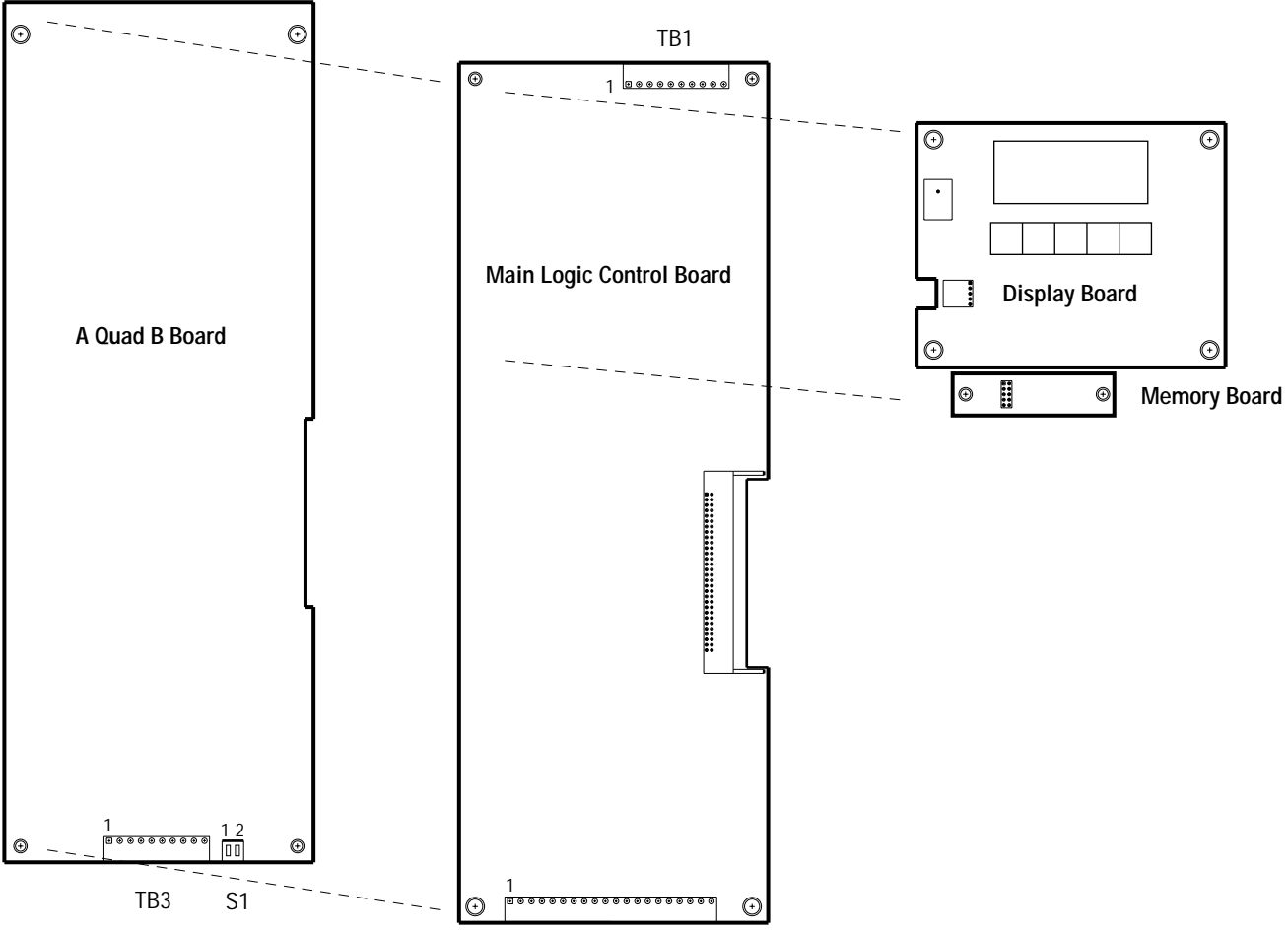
Memory Board Substitution

1. Remove all power to the drive branch circuit.
2. Remove the front cover from the drive.
3. Remove the Memory Board from the Logic Board by squeezing the nylon latches.
4. Install the new Memory Board.
5. Apply power to the system – tuning will be required if the board is a new replacement part. Refer to the *1391-DES User Manual* (publication 1391-5.3) for tuning information. If the Memory Board is from a programmed, operational drive, tuning is not required.

Logic Control Board Substitution

1. Remove all power to the drive branch circuit.
2. Remove the front cover from the drive. Label and remove the ribbon cables and signal connectors (TB1 and TB2) from the Logic Control Board.
3. Remove the Memory and Display Boards per previous instructions.
4. Insert the replacement Logic Control Board.
5. Replace the Memory and Display Boards and reconnect the signal connectors/cables previously removed.
6. Apply power to the system and check for proper operation – tuning is not required.

Figure 1
 Circuit Board Locations



¹ F3 provided on 15 & 22.5A units only
 15A = Bussmann KLM10 or equivalent
 22.5A = Bussmann FNQ6 1/4 or equivalent

- ← A Quad B Board
- ← Main Logic Control Board
- ← Display, Memory and Adapter Boards

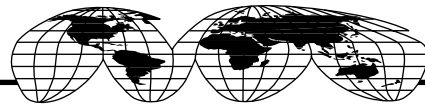
A Quad B Board Substitution

1. Remove all power to the drive branch circuit.
2. Remove the front cover from the drive. Label and remove the ribbon cables and signal connectors (TB1, TB2 and TB3) from the A Quad B and Logic Control Boards.
3. Remove the Display and Logic Control Boards per previous instructions.
4. Remove the A Quad B Board per previous instructions.
5. Install the new A Quad B Board to the Logic Control Board with the 8 thumb screws.
6. Install the Logic Control Board (w/AQB Board) verifying that the connectors between the boards mate. Tighten the 8 screws.
7. Install the Display Board and cable.
8. Reconnect the signal connectors/cables previously removed.
9. Apply power to the system and check for proper operation – tuning is not required.



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