

1361 TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	SOLUTION
A. Drive wont start.	<ol style="list-style-type: none"> 1. Loss of AC control power. 2. Loss of line voltage. 3. Open Control Circuit. 4. Faulty Control logic elements or contactor. Faulty Solid State Control Logic. Faulty Anti-Plug Board. 5. Motor stalled or Current Limit pot turned fully CCW. 6. Open field winding or circuit on wound field motor. 	<ol style="list-style-type: none"> 1. No LED's illuminated. Check 3F. 2. Check for 120V/240V AC at L1 and L2. Check fuses 1F and 2F. Check branch circuit disconnect device. 3. Check for proper connections per wiring diagram. 4. Check control logic and elements Contactor coil is open/replace. Replace Main Regulator Board. Replace Anti-Plug Board. 5. Reduce mechanical loading. Reset Current Limit pot per start-up. 6. Check field conductors and coils for continuity.
B. Drive runs unstable. (HUNTING)	<ol style="list-style-type: none"> 1. Improper Stability pot adjustment. 2. Improper IR Comp pot adjustment (set too high). 3. Failure on Main Regulator Board. 4. Open armature bridge rectifier. 	<ol style="list-style-type: none"> 1. Re-adjust Stability pot. Check new setting by changing drive speed and noting whether instability exists. 2. Re-adjust turning CCW a little at a time until oscillation disappears. Turn IR Comp pot fully CCW when drive is equipped with tach feedback option. 3. Replace Main Regulator Board. 4. Replace SCR package.
C. Drive won't get up	<ol style="list-style-type: none"> 1. Maximum Speed pot set too low 2. Main Regulator Board faulty. 3. Current Limit set too low. 4. Faulty Economizing circuit on field supply. 	<ol style="list-style-type: none"> 1. Re-set Maximum Speed pot per to Speed. 2. Replace Main Regulator Board. 3. Reset Current Limit per Start-Up procedure/reduce loading. Check line voltage. 4. Check field power supply (output) condition. Replace if necessary.

WARNING: Do not touch metal test equipment chassis. A shock hazard exists if contact is made with the ungrounded chassis and any grounded metal object when test leads are connected to drive controller circuitry.

PROBLEM	PROBABLE CAUSE	SOLUTION
D. Drive runs at rated maximum speed or above with no control.	<ol style="list-style-type: none"> 1. Speed feedback level too low Main Regulator Board faulty. Incorrect Tach or Regulation ModOp. 2. No Tachometer Generator output or tach conductors to drive open. 	<ol style="list-style-type: none"> 1. Replace Main Regulator Board, Tach or Regulation ModOp as required. 2. Replace Tachometer or repair tach conductors.
E. Motor continuously in current limit.	<ol style="list-style-type: none"> 1. Current Limit pot set too low. 2. Excessive mechanical load. 3. Incorrect Shunt. 4. Main Regulator Board faulty. 	<ol style="list-style-type: none"> 1. Re-set Current Limit pot according to start-up procedure. 2. Reduce loading to within the drive rating. Check mechanical operation of machine and motor. 3. Check/Replace as necessary. 4. Replace Main Regulator Board.
F. Line Fuses 1F, 2F, blow.	<ol style="list-style-type: none"> 1. Shorted semi-conductors in armature bridge. 2. Main Regulator Board Faulty. 3. Fault after incoming line fuses. 	<ol style="list-style-type: none"> 1. Locate and replace SCR package. 2. Replace Main Regulator Board 3. Check for grounds in controller.
G. Fuse 3F blows.	<ol style="list-style-type: none"> 1. Fault in control circuitry. 	<ol style="list-style-type: none"> 1. Check for grounds in control circuit.
H. Armature fuse 4F blows.	<ol style="list-style-type: none"> 1. Fault in motor armature circuit. 	<ol style="list-style-type: none"> 1. Check for conductor grounds or insulation breakdowns.
I. Drive will not reverse.	<ol style="list-style-type: none"> 1. Faulty Anti-Plug board. 2. Faulty reversing contactor, interlock, or control device. 	<ol style="list-style-type: none"> 1. Replace Anti-Plug Board. 2. Check contactor coil for open. Check electrical and mechanical operation of all interlocks on both contactors and control device.

IMPORTANT: DO NOT REMOVE PLUG IN MODOPS FROM MAIN REGULATOR OR ISOLATED FOLLOWER BOARDS WHEN RETURNING ENTIRE UNIT FOR REPAIR OR REPLACEMENT.

CAUTION: Damage to equipment may result if the metal chassis of test equipment is grounded. A grounded chassis can place the "common" test probe at ground potential. Drive controller "common" circuits may be floating above ground potential during operation and test. Connection of ground probes to drive controller common circuits can cause damage to the drive and test equipment. An ungrounded metal test equipment chassis must be insulated from grounded metal surfaces.
