INSTRUCTIONS FOR FIELD REPLACEMENT:

THESE INSTRUCTIONS ARE APPLICABLE FOR REPLACEMENT OF THE MAIN CONTROL PC BOARD ASSEMBLY (A1) FOR ANY AT10.1 OR AT30 SERIES FLOAT BATTERY CHARGER. PLEASE NOTE THAT THE MAIN CONTROL BOARD (A1) IS TREATED AS A SINGLE ENTITY, AND CIRCUIT-LEVEL TROUBLE-SHOOTING WITHIN THE ACTUAL PC BOARD IS NOT SUPPORTED BY THE MANUFACTURER.

IF YOU ARE SERVICING AN OLDER AT10 (NOT AT10.1) BATTERY CHARGER MANUFACTURED BEFORE 12/2001, DO NOT USE THIS DOCUMENT.
http://www.ATSeries.net/PDFs/JA0087-00.pdf
PLEASE REFER TO SERVICE INSTRUCTION JA0087-00 (REV. 4). JA0087-00 CONTAINS FURTHER INFORMATION REGARDING THE SEPERATE PRIMARY ALARM PC BOARD (A4), FEATURED IN OLDER AT10 MODELS.

WARNING
DISCONNECT AND LOCK OUT ALL POWER TO THE BATTERY CHARGER BEFORE STARTING ANY MAINTENANCE PROCEDURES. TURN OFF THE CHARGER'S INTERNAL AC AND DC CIRCUIT BREAKERS. TURN OFF ALL AC POWER UPSTREAM FROM THE CHARGER. DISCONNECT THE BATTERY AND/OR LOCK OUT DC LOADS FROM THE CHARGER. IF INSTALLED, DISCONNECT REMOTE ALARM WIRING AND/OR REMOTE SENSE CONNECTED TO THE BATTERY.

CAUTION:

THE REPLACEMENT PC BOARD (p/n EN5002-00) IS SUSCEPTIBLE TO DAMAGE FROM STATIC DISCHARGE. PLEASE USE THE FOLLOWING PRECAUTIONS:

1) IF YOU HAVE A GROUND WRISTSTRAP, PLEASE USE IT TO GROUND YOURSELF TO CHARGER ENCLOSURE, USING THE GROUND STUD ON THE BACK OF THE DOOR.

2) TOUCH THE GROUND STUD ON THE BACK OF THE DOOR BEFORE AND DURING HANDLING OF PRINTED CIRCUIT BOARDS, OR OTHER STATIC-SENSITIVE PARTS.

3) HANDLE ALL PRINTED CIRCUIT BOARDS BY THEIR EDGES ONLY.

4) IF YOU ARE REPLACING A STATIC-SENSITIVE CIRCUIT BOARD PART (SUCH AS AN EPROM), BE SURE YOU ARE GROUNDED BEFORE REMOVING THE NEW PART FROM ITS ANTI-STATIC CARRIER (BAG).

PROCEDURE:

STEP 1) IDENTIFY TYPE OF AT SERIES BATTERY CHARGER IN QUESTION:

1A) AT10.1 SERIES GROUP I - SINGLE PHASE INPUT / 6-25 Adc OUTPUT
1B) AT10.1 SERIES GROUP II - SINGLE PHASE INPUT / 30-100 Adc OUTPUT
1C) AT30 SERIES - THREE PHASE INPUT / 25-1000 Adc OUTPUT

STEP 2) REMOVE THE PLEXIGLAS SAFETY COVER (IF SUPPLIED). USING A VOLTMETER, VERIFY THAT ALL POTENTIAL VOLTAGES ON THE I/O PANEL ARE AT ZERO.

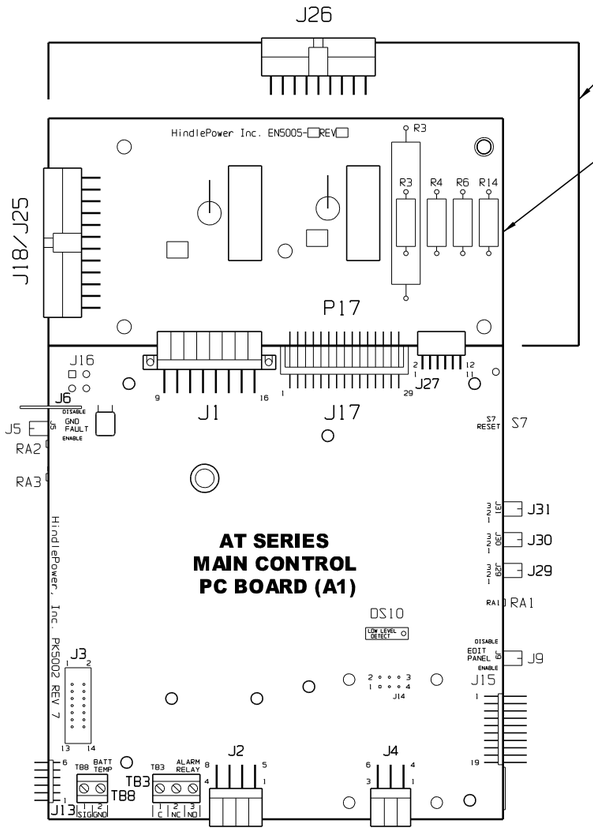
2A) CHECK INPUT VOLTAGE FROM L1, L2, AND L3 TO GROUND
2B) CHECK LINE VOLTAGE FROM L1 TO L2, L2 TO L3, AND L1 TO L3
2C) CHECK OUTPUT VOLTAGE FROM TB1(+) TO TB1(-)
2D) CHECK REMOTE SENSE VOLTAGE FROM RS(+) TO RS(-)

STEP 3) LOCATE THE MAIN CONTROL PC BOARD (A1) ON THE BACK OF THE INSTRUMENT PANEL DOOR AND DISCONNECT ALL EXTERNAL WIRING COMPONENTS.

3A) AT10.1 GROUP I: UNPLUG GROUND WIRE #30 FROM JUMPER (J6) ON THE LEFT SIDE OF THE PC BOARD. DISCONNECT THE WIRE HARNESS JACK FROM THE 16-PIN CONNECTOR (J1) ON THE TOP OF THE PC BOARD BY SQUEEZING THE LOCKING FINGER AND SIMULTANEOUSLY PULLING THE JACK DIRECTLY OUT FROM THE CONNECTOR ON THE BOARD.

3B) AT10.1 GROUP II: DISCONNECT THE WIRE HARNESS JACK FROM THE 24-PIN CONNECTOR (J18) ON THE LEFT SIDE OF THE GATE DRIVER PC BOARD (A11), USING THE SAME PROCEDURE LISTED IN STEP 3A.

3C) AT30: DISCONNECT THE WIRE HARNESS JACK FROM THE 20-PIN CONNECTOR (J25) ON THE LEFT SIDE OF THE GATE DRIVER PC BOARD (A15) AND THE 16-PIN CONNECTOR (J26) ON THE TOP OF THE GATE DRIVER BOARD USING THE SAME PROCEDURE LISTED IN STEP 3A.



BACK VIEW - FACING CHARGER
COMPONENTS WHEN INSTALLED

STEP 4) REMOVE THE EXISTING MAIN CONTROL PC BOARD (A1) AND (IF SUPPLIED), THE GATE DRIVER PC BOARD (A11/A15).

4A) AT10.1 GROUP I: LOCATE THE SIX (6) STAND-OFFS THAT MOUNT THE CONTROL BOARD. USE NEEDLE NOSE PLIERS TO PINCH THE RETAINING EAR ON ONE OF THE STAND-OFFS, WHILE GENTLY PULLING THE PC BOARD BACK ABOUT 0.25in FROM THE LOCKED POSITION. UNLATCH ALL STAND-OFFS FIRST, WITH THE PC BOARD STILL RESTING ON THE STAND-OFFS. REMOVE THE PC BOARD IN ONE CAREFUL MOTION.

4B) AT10.1 GROUP II/AT30: LOCATE THE TEN (10) STAND-OFFS THAT MOUNT THE CONTROL BOARD AND GATE DRIVER BOARD. REMOVE BOTH BOARDS SIMULTANEOSULY, USING THE SAME PROCEDURE LISTED IN STEP 4A.

STEP 5) FOR AT10.1 GROUP II AND AT30 UNITS, SEPARATE THE GATE DRIVER PC BOARD (A11/A15) FROM THE EXISTING MAIN CONTROL PC BOARD (A1). CONNECT THE GATE DRIVER BOARD TO THE REPLACEMENT CONTROL BOARD BY MATING PLUG (P17) ON THE GATE DRIVER BOARD TO JUMPER (J17) ON THE MAIN CONTROL PC BOARD. ENSURE AN EVEN AND SECURE FIT.

STEP 6) INSTALL THE REPLACEMENT MAIN CONTROL PC BOARD (A1) AND (IF SUPPLIED), THE GATE DRIVER PC BOARD (A11/A15).

6A) AT10.1 GROUP I: POSITION THE REPLACEMENT CONTROL BOARD DIRECTLY OVER THE SIX (6) PLASTIC STAND-OFFS. FIRMLY PUSH THE BOARD ONTO THE STANDOFFS UNTIL IT IS FULLY SEATED UNDER ALL PLASTIC CLIPS. MINIMIZE FLEXING OF THE PC BOARD BY PUSHING DIRECTLY ON AREAS SURROUNDING THE STAND-OFF HOLES. CHECK THE FRONT PANEL FOR PROPER ALIGNMENT OF INDICATOR LIGHTS AND PUSH BUTTON SWITCHES.

6B) AT10.1 GROUP II/AT30: POSITION THE TWO MATED BOARDS DIRECTLY OVER THE TEN (10) PLASTIC STAND-OFFS AND MOUNT USING THE SAME PROCEDURE LISTED IN STEP 6A.

STEP 7) REVERSING THE PROCEDURE IN STEP 3, RECONNECT THE WIRE HARNESS JACK(S) TO THE PROPER PIN CONNECTOR(S) ON THE APPROPRIATE PC BOARDS. MAKE SURE ALL JACKS ARE FULLY SEATED, AND LOCKING FINGER(S) ARE PROPERLY CLOSED WITH THE CONNECTOR(S). FOR AT10.1 GROUP I UNITS, RECONNECT GROUND WIRE #30 TO J6 ON THE MAIN COTROL PC BOARD (A1). MAKE SURE WIRE #30 FITS SNUGLY WITH J6. IF THE SLIP-ON LUG DOES NOT CREATE A TIGHT FIT, DISCONNECT IT, CAREFULLY TIGHTEN THE LUG EARS USING NEEDLE NOSED PLIERS, AND RECONNECT THE LUG TO J6.

STEP 8) PLEASE CHECK YOUR WORK!!! READ STEPS 1 THROUGH 7 AGAIN AND MAKE SURE ALL INSTRUCTIONS WERE PROPERLY PERFORMED:

- ☐ ALL NYLON STANDS-OFFS ARE LATCHED TO PC BOARD(S)
- ☐ GATE DRIVER PC BOARD (IF SUPPLIED) IS REINSTALLED
- ☐ ALL WIRE HARNESS CONNECTORS ARE PROPERLY MATED TO BOARDS
- ☐ INDICATOR LIGHTS PROPERLY ALIGN WITH FRONT PANEL HOLES AND PUSH BUTTON SWITCHES WORK PROPERLY
- ☐ GND WIRE #30 (AT10.1 GRP I) IS PROPERLY CONNECTED TO J6

STEP 9) REPLACE THE PLEXIGLAS SAFETY SHIELD (IF SUPPLIED). CLOSE THE INSTRUMENT PANEL DOOR. RE-ENERGIZE THE CHARGER BY CLOSING THE DC BREAKER FIRST, FOLLOWED BY THE AC BREAKER SECOND. CONSULT SECTION 2.1 OF THE AT SERIES USER'S MANUAL ENTITLED "STARTING THE AT10.1/AT30".

STEP 10) THE NEWLY-INSTALLED AT SERIES MAIN CONTROL PC BOARD MUST HAVE ITS INTERNAL DC VOLTMETER RECALIBRATED. REFER TO SECTION 2.3.7 OF THE USER'S MANUAL FOR DETAILS.

THE REPLACEMENT PC BOARD (A1) IS ALSO SUPPLIED WITH FACTORY DEFAULT VALUES FOR ALL VARIABLE PARAMETERS. THEREFORE, THE AT SERIES CHARGER MUST BE REPROGRAMMED TO FACILITY-DESIRED VALUES. REFER TO 2.3 OF THE USER'S MANUAL FOR DETAILS.

REV	ECN No	DATE	APP
2	24970	051615	ND
1	24671	112014	ND
0	20180	041906	ND

THIRD ANGLE PROJECTION

DRAWN BY	MCR	041906
APPROVED	ND	041906

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

TITLE	FIELD REPLACEMENT INSTRUCTIONS FOR AT SERIES MAIN CONTROL PC BOARD (A1)		
DRAWING No	JD5012-00	REV 2	B
SCALE NTS	PART No JD5012-00	SHEET 1 OF 1	