

## ROBOSUIT™ INSTALLATION INSTRUCTIONS FOR THE FANUC M410iC ROBOT

PRIOR TO INSTALLING THE ROBOSUIT<sup>™</sup>, CLEAN THE ROBOT SURFACE--PARTICULARLY IF IT HAS BEEN IN OPERATION WITHOUT ANY EFFECTIVE PROTECTION.

REMOVE ANY DRESS PACK/CONDUIT/ETC. THE SUIT IS DESIGNED TO FIT THE CASTING OF THE ROBOT <u>ONLY</u>. THESE ITEMS WILL BE RE-ATTACHED (THOUGH THE SUIT) AFTER INSTALLATION. NORMALLY, END-OF-ARM TOOLING DOESN'T INTERFERE.

MOVE THE ROBOT TO "HOME" POSITION (LOWER ARM UP, UPPER ARM OUT) IF POSSIBLE. THIS WILL AID INSTALLATION.

OPEN ZIPPERS AND VELCRO SEAMS ON EACH SUIT PIECE. FAMILIARIZE YOURSELF WITH THE INSTALLATION SEQUENCE, AND REFERENCE PHOTOS ON PAGE 2.

- A. STATIONARY BASE AND/OR PEDESTAL COVER
  - 1. IF YOU ORDERED A STATIONARY BASE AND/OR PEDEESTAL COVER. INSTALL THESE FIRST.
  - 2. THE STATIONARY BASE COVER IS CONTOURED TO THE BASE SHAPE AND OVERHANGS THE CABLE CONNECTORS.
  - 3. BE CERTAIN THE HARDSTOP FITS INTO THE POCKET ON STATIONARY BASE COVER (SEE PHOTO PAGE-2).
- B. **IMPORTANT**: INSTALL THE AXIS ONE SERVO-MOTOR CAP. FAILURE TO DO SO WILL RESULT IN (NON-WARRANTIED) SUIT DAMAGE. (SEE PHOTO PAGE-2)
- C. INSTALL THE UPPER/LOWER ARM COVER NEXT. POSITION THE ROBOT TO YOUR LIKING TO AID WITH INSTALLATION.
  - 1. MAKE SURE THE CONVOLUTIONS (FOLDS IN THE SUIT) ARE IN PROPER POSITION AND THAT THE 2ND AXIS MOTOR IS POSITIONED WITHIN THE INTEGRATED SUIT POCKET (SEE PHOTO PAGE-2).
  - 2. THE AXIS THREE "BOOMERANG" FEATURES A SLIP RING WHICH MATES WITH A LINKAGE RING (STEP "D").
  - 3. CLOSE MAIN ARM ZIPPERS AND VELCRO SEAMS.
- D. INSTALL THE LINK ROD COVERS. POSITION THE ROBOT TO YOUR LIKING TO AID WITH INSTALLATION.
  - 1. THE LINKAGE PIECES **OVERLAP** THE MAIN ARM PIECES AT THE JUNCTIONS TO THE MAIN ARM COVER.
  - 2. YOU MAY FIND IT EASIER TO INSTALL THE LINKAGE PIECES IF YOU LOOSEN/REMOVE THE BOLTS HOLDING THE LINK COVER IN PLACE (SEE PHOTO ON PAGE-2). DOING SO ALLOWS YOU TO MOVE THE CABLE OUT OF THE WAY, AND CLOSE THE ZIPPER. RUN A "ZIP TIE" THROUGH THE EYELET OF THE ZIPPER TO AID CLOSURE.
  - 3. ALIGN THE SLIP RINGS AND INSTALL THE CIRCULAR RETAINER COVERS OVER BOTH RINGS.

VELCRO PANELS HAVE BEEN INCORPORATED THROUGHOUT THE SUIT TO ALLOW ACCESS TO FANUC INTEGRATED CONNECTORS AND MOUNTING PADS. CAREFULLY CUT INTO THESE PANELS (AS NEEDED) IN ORDER TO RE-ATTACH TOOLING OR ELECTRIC/PNEUMATIC LINES THAT WERE DISCONNECTED FROM THE ROBOT PRIOR TO INSTALLATION. MAKE "CROSSHAIR" CUTS INTO THESE COVERS WITH A RAZOR BLADE OR BOX KNIFE AS NEEDED (SEE PHOTOS PAGE-2).

REMOVE ANY LADDERS, EQUIPMENT OR TOOLS FROM THE CELL.

BEFORE PUTTING THE ROBOTO BACK INTO PRODUCTION, MOVE THE ROBOT SLOWLY (25% SERVO SPEEDS) THROUGHOUT ITS WORK ENVELOPE. RE-CHECK ALL BRACKETS, ELECTRICAL AND PNEUMATIC CONNECTIONS.

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT ROBOWORLD.

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Corporate Headquarters/US-Midwest: 262 339 0583 | US-Northeast & International Office: +1 216 798 5839 | US-South/East Office: 513 633 2585





Installation of Stationary Base Cover Note: Pedestal Cover not shown



Cover J1 Motor BEFORE Proceeding



Install Lower/Upper Arm Cover







(Main) Arms Covered. Note: Boomerang, Ring (J3) and J2 motor Pocket

Starting Near J4, Install the Fwd Link/Boomerang. Move Toward J2

On the Aft Link Arm, Consider Loosening/Removing Bolts



Link Arms and Boomerang Fitted Note: Velcro Access Panels



J2 Detail Note Cuff overlap at Link Arm.