

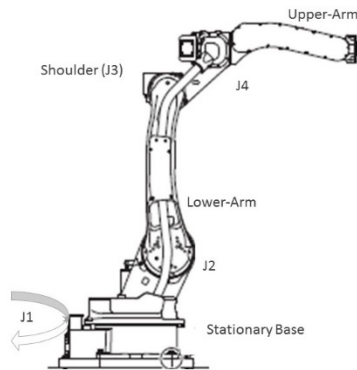


## ROBOSUIT® INSTALLATION INSTRUCTIONS FOR THE MOTOMAN MH24 “HYBRID” HALF-SUIT

Prior to installing the Robosuit®, clean the robot surface, particularly if the robot has been in operation without any effective protection. This suit is designed to fit over the OE casting only. Disconnect any custom brackets/valve-packs (etc.) that will interfere with installation—these may be reattached after suiting the robot.

Read through this entire set of instructions, and familiarize yourself with these procedures. If you have questions, call Roboworld at any of the phone numbers provided at the bottom of pages 1-2.

1. Move the robot to its home position.



Motoman MH24 “Home Position”

### PREPARATIONS FOR SUITING ROBOT:

2. Remove shipping lugs (eye-bolts) and any fork-lift pockets. Confirm you have removed all custom bracketry, valve-packs, etc.
3. You **MUST** remove synch markers (at axes J1 and J2) prior to installing the suit. **Failure to do so will result in (non-warranted) damage** to the Robosuit®.

**Note:** All photos shown depict a blue, prototyping vinyl suit. Your production suit will differ in appearance, but installation is similar.

## **INSTALLING THE ROBOSUIT®:**

4. “Hybrid” suit coverage is depicted in photo-1. The suit terminates midway up the lower arm, and is clamped along the circumference of the lower-arm with a stainless steel band clamp.
5. Remove both pieces of the Robosuit®, and identify the stationary base (photo-2).
4. Remove the synch markers, and apply Velcro HOOK tape along the rear section of stationary base (photo-3).
5. Open the Velcro seam (located on the right-side of the stationary base cover). Drape the stationary base cover around the casting of the robot, and orient the gum-rubber panel along the bump-out on the top/rear of the base (facing the robot).
6. Align (and affix) the mating section of Velcro LOOP (sewn to the inside of the stationary base cover) to the Velcro HOOK tape applied in step-4.
7. Close the (vertical) seam along the right-side of the stationary base cover (photo-5).
8. Locate the truncated lower-arm cover. This is most easily identified by the Velcro-seamed bellowed convolutions at J2 (depicted in photo-6). Open all seams/snaps. The smaller diameter opening faces “up.”
9. Wrap the lower-arm cover around the robot. Orient the seam toward the rear of the robot (photo-7). Secure the upper-most section of Velcro seam to temporarily hold the lower-arm cover in position.
10. Secure the belt on the lower-arm cover around/underneath the J2 motor housing (photo-8).
11. Beginning at the upper-most section of the lower-arm, close the Velcro seam, and work your way down the arm to the bellowed convolutions. Take your time to align/mate each sections of Velcro throughout the J2 bellows.
10. Using the (provided) stainless steel band clamp, secure the lower-arm cover to the casting of the robot. Note: do not lift the cover to the shoulder section. The cover is meant to sit in a relaxed position on the robot. Note the position of the bellows on photos-9 and approximate clamp position in photo-10.
11. Continue to close the lower portion of the upper-arm cover (to the stationary base cover). Secure any remaining Velcro, and ensure that the lower arm cover overlaps the base cover. This will prevent any coolant/fluids from dripping off of the lower-arm and into the stationary base.

## **CONFIRM FIT/FUNCTION:**

12. Remove all tools, ladders, and unnecessary materials from the cell.
13. Power up the robot, and slowly jog each axis to the limit of its range, both positive/negative (start at J2, and finish at J1). This will allow the suit to properly “seat” along each joint.
14. Once you have confirmed no interference, run your robot program. Adjust any clamps as required.
15. Reattach any customer-specific brackets/cable connections/valve-packs (etc.).



Photo-1, MH24 "Hybrid" suit coverage



Photo-2, Stationary base cover

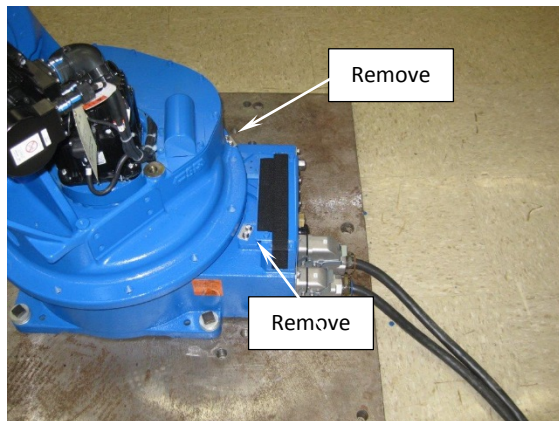


Photo-3, Remove Synch placards and Apply Velcro Tape



Photo-4, Orient Stationary base so gum-rubber faces robot



Photo-5, Close Velcro Seam

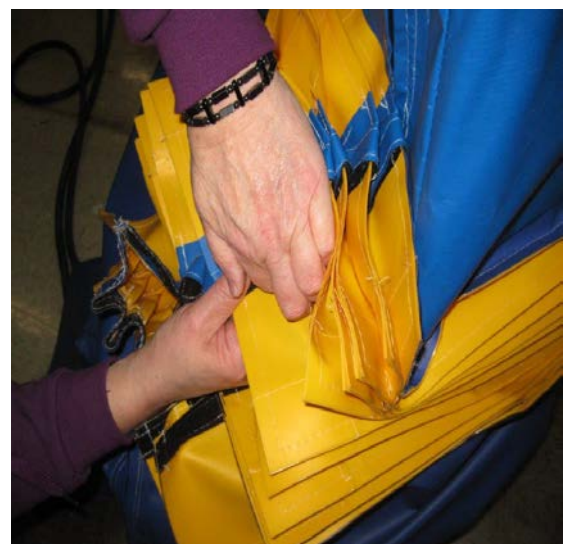


Photo-6, Lower-Arm Cover





Photo-7, Orient Seam to the rear of arm



Photo-8, Secure the belt underneath the J2 motor



Photo-9, Note "relaxed" position of bellows

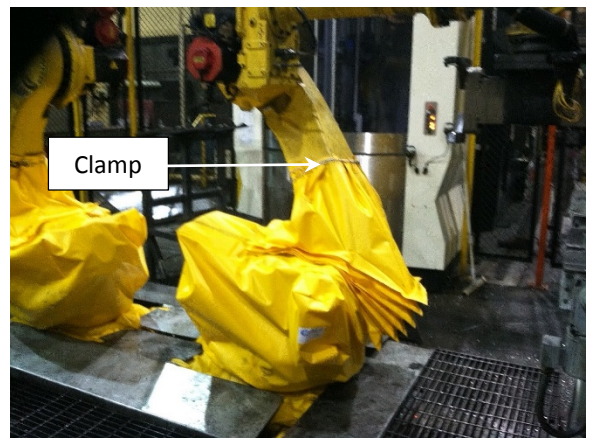


Photo-10, Note clamp position of "hybrid" lower-arm