Upon receipt of the product and prior to initial operation, read these instructions thoroughly and retain for future reference.

MOTOMAN INSTRUCTIONS
MOTOMAN RM2-POSITIONER INSTRUCTIONS
CONTROLLER INSTRUCTIONS
CONTROLLER OPERATOR’S MANUAL
CONTROLLER MAINTENANCE MANUAL

The controller operator’s manual above correspond to specific usage. Be sure to use the appropriate manual.
### MANDATORY

- This addendum provides an information concerning the YASKAWA RM2-Positioner Remote Main Axis Lubrication system. Be sure to read and understand this addendum thoroughly before operating the RM2-Positioner Remote Main Axis Lubrication system.
- General items related to safety are listed in Section 2 of the Controller Manual. To ensure correct and safe operation, carefully read the Controller and Positioner Manual before reading this manual.
- It is the purchaser’s responsibility to ensure that all local, county, state, and national codes, regulations, rules, or laws relating to safety and safe operating conditions for each installation are met and followed.

### CAUTION

- Some drawings in this manual are shown with the protective covers or shields removed for clarity. Be sure that all covers and shields are replaced before operating this product.
- The drawings and photos in this manual are representative, and differences may exist between them and the delivered product.
- YASKAWA may modify this model without notice when necessary due to product improvements, modifications, or changes in specifications. If such a modification is made, the manual number will also be revised.
- If your copy of the manual is damaged or lost, contact a YASKAWA representative to order a new copy. The representatives are listed on the back cover. Be sure to tell the representative the manual number listed on the front cover.
- YASKAWA is not responsible for incidents arising from unauthorized modification of its products. Unauthorized modification voids your product's warranty.
We suggest that you obtain and review a copy of the ANSI/RIA National Safety Standard for Industrial Robots and Robot Systems (ANSI/RIA R15.06-2012). You can obtain this document from the Robotic Industries Association (RIA) at the following address:

Robotic Industries Association
900 Victors Way
P.O. Box 3724
Ann Arbor, Michigan 48106
TEL: (734) 994-6088
FAX: (734) 994-3338
www.roboticsonline.com

Ultimately, well-trained personnel are the best safeguard against accidents and damage that can result from improper operation of the equipment. The customer is responsible for providing adequately trained personnel to operate, program, and maintain the equipment. NEVER ALLOW UNTRAINED PERSONNEL TO OPERATE, PROGRAM, OR REPAIR THE EQUIPMENT!

We recommend approved YASKAWA training courses for all personnel involved with the operation, programming, or repair of the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Register Trademarks

In this manual, names of companies, corporations, or products are trademarks, registered trademarks, or bland names for each company or corporation. The indications of (R) and ^TM^ are omitted.

Summary of Warning Information

This manual is provided to help users establish safe conditions for operating the equipment. Specific considerations and precautions are also described in the manual, but appear in the form of Dangers, Warnings, Cautions, and Notes.

It is important that users operate the equipment in accordance with this instruction manual and any additional information which may be provided by YASKAWA. Address any questions regarding the safe and proper operation of the equipment to YASKAWA Customer Support.
Customer Support Information

If you need assistance with any aspect of your RM2-Positioner Remote Main Axis Lubrication system, please contact YASKAWA Customer Support at the following 24-hour telephone number:

(937) 847-3200

For routine technical inquiries, you can also contact YASKAWA Customer Support at the following e-mail address:

techsupport@motoman.com

When using e-mail to contact YASKAWA Customer Support, please provide a detailed description of your issue, along with complete contact information. Please allow approximately 24 to 36 hours for a response to your inquiry.

Please use e-mail for routine inquiries only. If you have an urgent or emergency need for service, replacement parts, or information, you must contact YASKAWA Customer Support at the telephone number shown above.

Please have the following information ready before you call Customer Support:

- System: RM2-Positioner Remote Main Axis Lubrication
- Primary Application: ___________________________
- Controller: DX200
- Software Version: Access this information on the Programming Pendant’s LCD display screen by selecting {MAIN MENU} - {SYSTEM INFO} - {VERSION}
- Robot Serial Number: Located on the robot data plate
- Robot Sales Order Number: Located on the DX200 controller data plate
## 1 Introduction

The process for lubricating the main axis has changed due to the installation of the optional remote main axis lubrication kit.

With the optional remote main axis kit the grease fittings move from the main axis motor cover to the top of the headstock column allowing lubrication of the main axis while the positioner is running. See Fig. 1-1.

**Fig. 1-1: Remote Lubrication Fittings**

![Remote Lubrication Fittings](image)

The optional remote main axis kit allows for greasing anytime, though this development optimizes grease coverage by spreading grease evenly and immediately throughout the gear teeth.
2 Keeping Track of Number of Cycles

The I/F panel on the teach pendant keeps track of the number of cycles on the positioner since the last lubrication cycle.

Starting a lubrication job is available anytime by using the pendant. When starting a lubrication job, the lubrication cycle counter will reset.

To assist with timely lubrication, the system will display an error message at 4000, 5000, and 6000 cycles.

_YASKAWA recommends greasing the main axis every week or 5000 cycles dependent on which comes first._

**Fig. 1-2: Error Messages**

**Error Message at 4000 Cycles**

**Error Message at 5000 Cycles**

**Error Message at 6000 Cycles**
3 Running a Lubrication Job

CAUTION

- Do not change the name of the main sweep job.

Changing the name of the main sweep job will result in an error from the lubrication job not finding the main sweep job. The main sweep job checks for the latest changes to accommodate the tools and avoid mechanical interference.

A lubrication job is available at anytime by highlighting the Lubrication job from the “JOB LIST” using the [UP] and [DOWN] arrow keys on the pendant and pressing the [START] button while in PLAY MODE and following the below steps.

**Fig. 1-3: Job List**

1. Hit the (RESET) button to clear alarm, if not already done.
3. Running a Lubrication Job

2. Click on the I/F Panel and switch the (Run Lube) switch to the right and observe the “Lube Cycle” indicator turns on.

*Fig. 1-4: I/F Panel*

3. Attach a lever style grease gun with Mobil CM-P EP2 to the CCW grease fitting.

*Fig. 1-5: Location of Grease Fittings*
3 Running a Lubrication Job

4. Press the [START] button on the pendant and evenly pump three shots into the grease fitting.

Fig. 1-6: Lubrication Job

5. Repeat the above process when the positioner sweeps in the other direction.

NOTE When triggering a lubrication job, the positioner executes a normal sweep cycle at 30% speed.
RM2-POSITIONERS
REMOTE MAIN AXIS
LUBRICATION ADDENDUM
FOR DX200

Specifications are subject to change without notice for ongoing product modifications and improvements.