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Grease Alternative for FANUC Robots Hardware Engineering Bulletin

ROBOT MODEL SUPPORTED

See Below (Section 7)

SOFTWARE REQUIRED

N/A

AUTHORIZED EXTERNAL DISTRIBUTION

➔ All Customers

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REASON FOR ENGINEERING BULLETIN

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Subject: Grease Alternative for FANUC Robots Hardware Engineering Bulletin

1. RV GREASE OVERVIEW

FANUC introduced alternative grease for RV reducer lubrication on most model robots. The new grease (called Vigogrease RE-0) is manufactured by Kyodo Yushi. Originally, most FANUC robots with RV reducers were shipped with MolyWhite RE-00 installed. All manuals and maintenance charts have specifically stated MolyWhite as the only recommended lubricant for the RV reducers.

2. HARMONIC GREASE OVERVIEW

FANUC introduced alternative grease for harmonic drive lubrication on most model robots. The new grease is called SK-3. Originally, most FANUC robots with harmonic drives were shipped with MolyWhite RE-00 installed. All manuals and maintenance charts have specifically stated MolyWhite as the only recommended lubricant for the harmonic drives.

3. REASONS FOR ALTERNATIVE GREASE TYPE

Customers have requested an alternative lubricant to MolyWhite RE-00. FANUC, in cooperation with the RV drive manufacturer (Nabtesco) is now supporting an additional grease choice.

4. DESCRIPTION OF THE ALTERNATE RV GREASE

Vigogrease RE-0 is very similar in composition to MolyWhite RE-00, and is slightly thicker. Its' use has been approved by FANUC and Nabtesco for robot models with RV drives installed.

5. RV GREASE COMPATABILITY

MolyWhite RE-00 and Vigogrease RE-0 are totally compatible. There is no issue with intermixing of the grease types during PM activities if different types are chosen. This feature eliminates the need to wash or clean the drive prior to introducing the new grease. Customers may pump the new Vigogrease into the robots in the same manner as identified in the Maintenance Manual for the specific robot model.

6. HARMONIC GREASE COMPATABILITY

MolyWhite RE-00 and SK-3 are totally compatible. There is no issue with intermixing of the grease types during PM activities if different types are chosen. This feature eliminates the need to wash or clean the drive prior to introducing the new grease. Customers may pump the new SK-3 into the robots harmonic drive in the same manner as identified in the Maintenance Manual for the specific robot model.

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7. SPARE PART, DOCUMENTATION, AND MAINTENANCE IMPACT

Customers ordering replacement grease from FANUC will not receive MolyWhite. New releases of applicable robot Maintenance Manuals list only Vigogrease and SK-3 as suitable for the robot. The FANUC Robotics part numbers for replacement grease is:

* Vigogrease RE-0	2kg container	XGMF-16799
* Vigogrease RE-0	16kg container	XGMF-16156
* SK-3 grease	2.5kg container	XGMF-10018
* SK-3 grease	16kg container	XGMF-11663

8. FREQUENTLY ASKED QUESTIONS

Q1. Can Vigogrease RE-0 be used on older robots with RV reducers?

A1. Yes, Vigogrease is approved as indicated on the attached chart.

Q2. Can SK-3 be used on older robots with harmonic drives?

A1. Yes, SK-3 is approved as indicated on the attached chart.

Q3. Where do I get copies of the MSDS for the new grease?

A3. MSDS are obtained from the grease supplier. Copies are attached to the container of grease.

Q4. Where can more technical details about the grease be obtained?

A4. Specific information may be obtained from the grease supplier.

Q5. Is Vigogrease compatible with MolyWhite RE-00 for RV reducers?

A5. Yes, there are no compatibility issues between the two grease types.

Q6. Is SK-3 compatible with MolyWhite RE-00 for harmonic drives?

A6. Yes, there are no compatibility issues between the two grease types.

Q7. Where can the new grease be purchased?

A7. The new grease may be purchased from the same sources as MolyWhite Re-00. This includes: all FANUC locations, FANUC Robotics, and its Distribution partners, Kyodo Yushi and Nabtesco.

Q8. Are customers required to change to the new grease?

A8. Customers may continue to use MolyWhite RE-00 until their stock is depleted, or change to the new grease.

Q9. Does all MolyWhite RE-00 need to be removed from the gearbox before installing Vigogrease?

A9. No, since the two greases are compatible, both may reside in the gearbox without issues.

Q10. Does all MolyWhite RE-00 need to be removed from the harmonic drive before installing SK-3 grease?

A10. No, since the two greases are compatible, both may reside in the drive without issues.

Q11. What type RV grease should be used to maintain the warranty on the robot?

A11a. Robots manufactured prior to 12-01-2004, (MolyWhite RE-00 or Vigogrease RE-0)

A11b. Robots manufactured after 12-01-2004, (Vigogrease RE-0)

Q12. What type harmonic grease should be used to maintain the warranty on the robot?

A12a. Robots manufactured prior to 12-01-2004, (MolyWhite RE-00 or SK-3)

A12b. Robots manufactured after 12-01-2004, (SK-3)

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Q13. What robot models can use the new grease?

A13. See attached chart.

Q14. Do I use Vigogrease on harmonic reducers or low speed axis bearings?

A14. No. Use the FANUC recommended grease listed in the Maintenance Manual for the correct type.

9. CUSTOMER ACTION

There is no specific action required by the customer. FANUC wishes to convey the details of this change so customers are informed. New robots manufactured after November 2004 have Vigogrease RE-0 for RV reducers and SK-3 for harmonic drives installed at the factory. At the time of scheduled maintenance, these units should be serviced with Vigogrease RE-0 for RV reducers and SK-3 for harmonic drives.

10. ROBOT REFERENCE GUIDE

Model	Lube Location	Applicable grease	Replacement grease
R-2000iA, S-900iB, M-710iB, M-410iB, M-420iA,	RV reducer, Gear box	Molywhite RE-00 or VIGOGREASE RE0	VIGOGREASE RE0
ARC Mate 100iB, 120iB (M-6iB, M-16iB) SR Mate 200iA	RV reducer, Gear box	Molywhite RE-00 or VIGOGREASE RE0	VIGOGREASE RE0
	Harmonic drive	Molywhite RE-00 or SK3	SK3
LR Mate series, SR Mate 100iA	Harmonic drive	SK3	SK3

11. GREASE CROSS REFERENCE GUIDE

Vigogrease RE0 may also be used in legacy model robots. The following chart provides the grease types that may be replaced by Vigogrease RE0. As stated previously, the customer may continue to utilize the originally specified lubricants if so desired.

Original recommended grease	Recommended replacement grease
EPNOC AP0	VIGOGREASE RE0
OPTIMOL PD0	
G390	
ALVANIA EPR0	
MOLYWHITE RE00	