



Application Note 51634
(Revision 2, 02/2022)
Original Instructions

ELA 80/150 Field Motor Replacement

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Field Replacement

Introduction

Motors for ELA 80 and ELA 150 products have integral position resolvers. Some of these resolvers are falling short of the full expected lifespan, requiring premature motor replacement.

This document provides instructions to replace the motor in the field without the need to return the unit to a Woodward factory or channel partner.

Special Tools & Equipment

Part Number	Description	Required
1014-1446	Motor lifting tool	No
8935-1372	Replacement motor with gear and bearing	Yes
O-ring Lubricant	Parker Super O-Lube or equivalent	Yes
2001-161	Dupont Molykote GN Plus Paste (or equivalent)	Yes
N/A	3/8" Ball-end hex bit	No
8923-2283	Grease syringe, ELA lubrication	No

Replacement Procedure

1. Remove the ELA from the turbine package and move it to a clean, safe workspace with equipment capable of holding and repositioning the unit.
2. Loosen and remove four bolts retaining the nameplate.
3. Loosen and remove four bolts retaining the motor.
4. Carefully remove the motor using hoist and motor lifting tool 1014-1446, or a suitable substitute.
5. Remove the spacer and old O-rings from the grooves in the spacer and motor. Remove the wave spring located between the spacer and housing. Retain the wave spring for use in reassembly. Discard O-ring.

**WARNING**

INGRESS SEAL: The spacer seal is an ingress seal. Refer to CMM-02028, Section 1.2 for specific instructions.

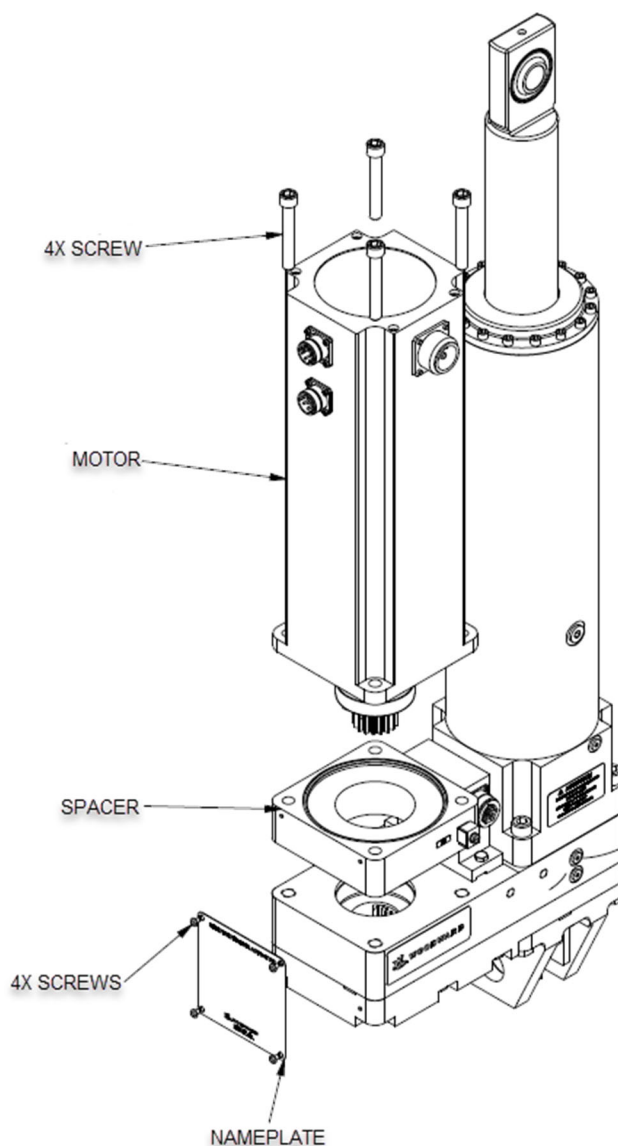


Figure 1. Remove Motor

6. Apply approximately 5 cc of 3901-1006 grease contained within 8923-2283 to the gear teeth of gear. A film of grease should cover all teeth
7. Lubricate the motor O-ring with Super O-Lube and install around the piloting OD of the motor's base.
8. Lubricate the spacer O-ring with Super O-Lube and install into the face groove of the motor spacer.
9. Ensure the spacer is in the correct orientation with respect to the ground lug and nameplate holes.

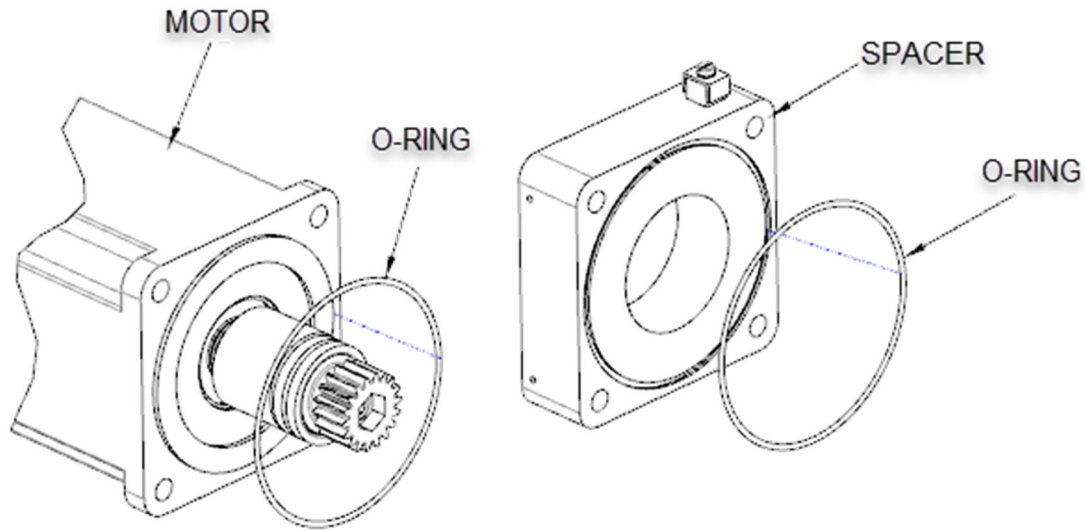


Figure 2. Motor Gear Spacer Preparation

10. Orient the output shaft of assembly in the upward position. Install the wave washer into the counterbore of the gearbox housing.
11. Orient the motor spacer with the ground lug positioned on the same side as the grease ports of the gearbox housing. Align the bolt holes of the spacer with the threaded holes of the gearbox housing and place the spacer on the housing. Verify that the O-ring remains in place.
12. With the hoist and motor lifting tool number 1014-1446, lift and orient the motor assembly above the motor spacer and position the single connector side of the motor on the grease port side of the gearbox housing. Install the motor assembly onto the spacer. Verify that the O-ring remains in place.
13. Apply GN paste to the threads of four bolts. Install the bolts through the flange holes of the motor and the spacer into the gearbox housing. Torque bolts to 33 lb-ft, ± 3 lb-ft.
14. Calibrate motor per instructions TBD.

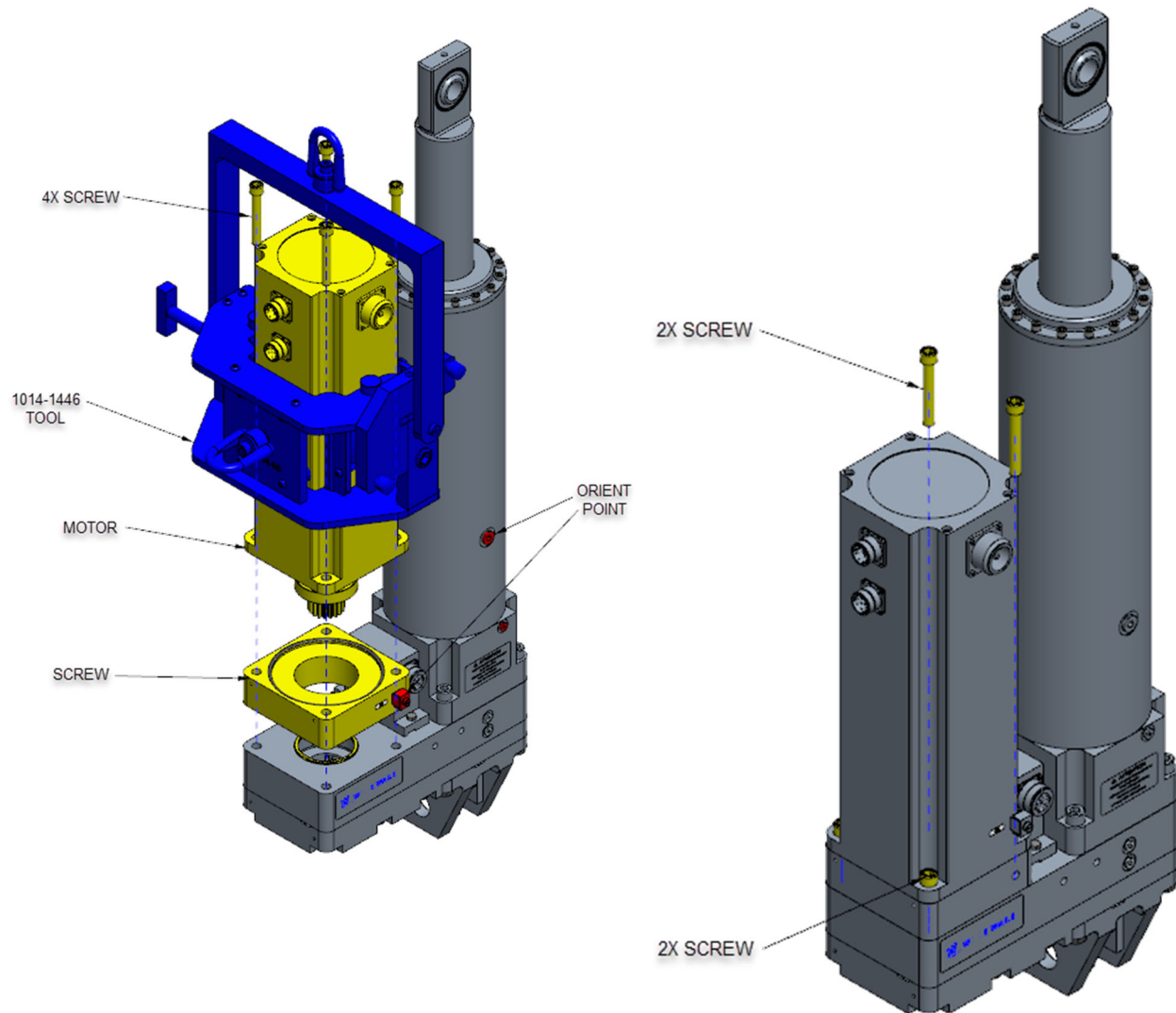


Figure 3. Motor Installation

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