Maintenance of
Solar Tracker ST44M2VXP or ST40M2VXP
with Linear motors SM4S520M2U8

SAT CONTROL

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This document includes maintenance periods and full maintenance procedures for solar linear motor with 520mm stroke. To provide motor's optimal function, please obey the maintenance periods and follow the maintenance procedures carefully.

1. Maintenance periods

Once per 2 months:
- Connect positioning module to computer, resolve and clear warnings or possible errors
- Clean holes in motor housing and motor cap for draining condensed water
- Re-set time

Once per a year:
- Visually check for possible corrosion on tracker shaft
- Fix screws on all connectors properly (positioning module's side and motor's side)
- Visually check all cables for possible fractures, pinched points (blue motor cables, supply cables, photovoltaic cables)
- Make sure that photovoltaic cables have not slipped out of position in a way that they could be strained due to tracker movement
- Greasing motor's moving parts (described below)

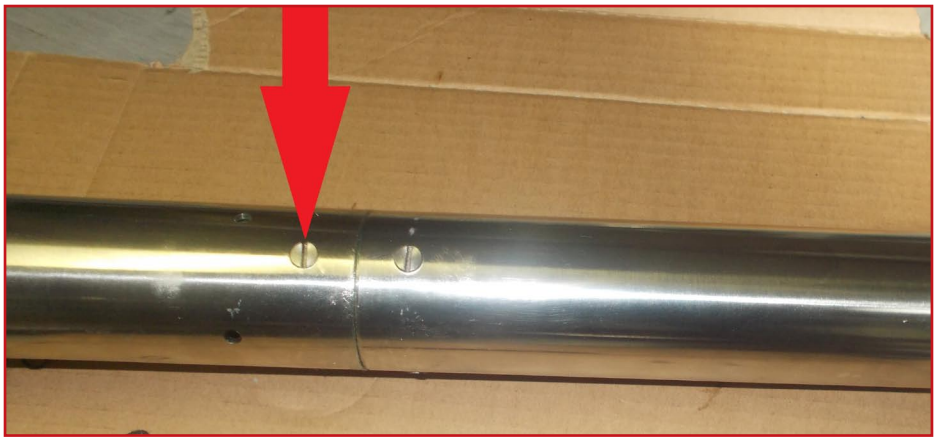
After 7 years:
- Expected motor lifetime expiry, replacing motor with mechanical gears is suggested (described below)

2. Greasing motor's moving parts

2.1. Before disassembling motor, please acquire:
- 3 replacing rubber O-rings with diameter 7mm and thickness 1mm
- 1 replacing rubber O-ring with diameter 40mm and thickness 2mm
- Mechanical grease (Molydal LCH 250 or similar)

2.2 Disassembling motor
- Disconnect motor cable and dismount motor from tracker

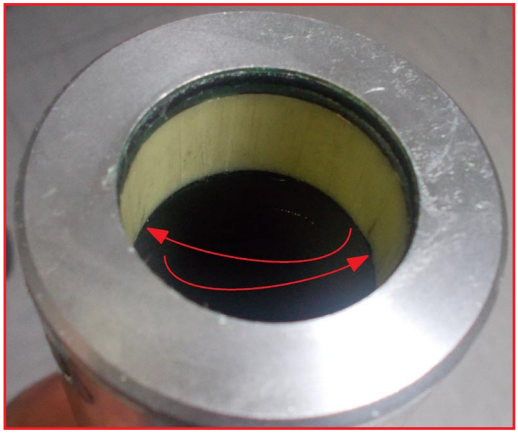
ATTENTION!!! Get help so tracker is held in place when dismounting the motor to prevent swinging. Then fix it into stable position with a piece of rope (wind shouldn't move it)
- Then re-connect motor and drive it to fully extended position (necessary for further actions)
- Screw IN the upper 3 screws on motor housing to release longer pipe and pull longer and shorter pipes apart



- Hold by longer pipe and hit motor’s piston onto a wooden block and longer pipe should slowly slip of the motor internals

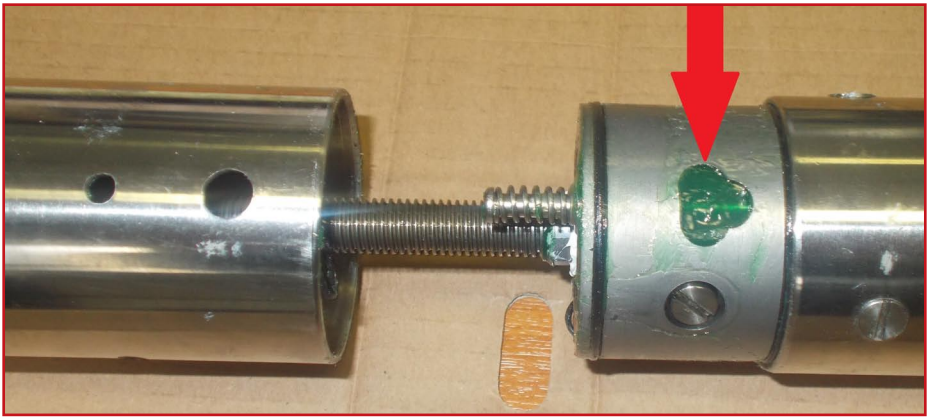
- Grease the spindle

- Insert grease under and on edge's plastic surface of motor housing so piston is greased when moving. Also apply thin layer of grease onto moving piston.

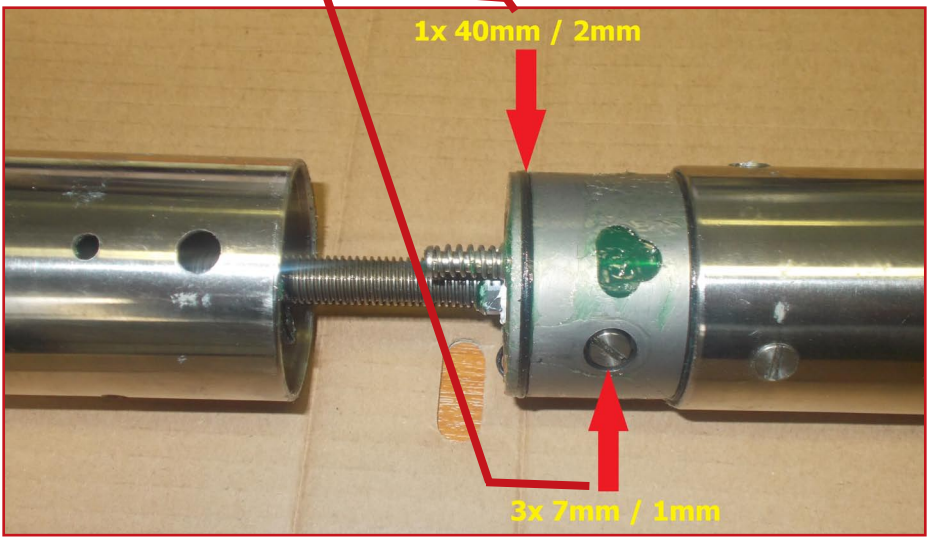


Insert grease under the edge of motor housing

- Fill up the hole of »End switch« pin with grease



- Replace rubber O-rings



- Reassemble motor in opposite sequence of disassembly

3.Replacing motor together with mechanical gears

3.1. Before disassembling motor, please acquire:
- 3 replacing rubber O-rings with diameter 7mm and thickness 1mm
- 1 replacing rubber O-ring with diameter 40mm and thickness 2mm

3.2.Disassembling motor
- Disconnect motor cable and dismount motor from tracker

ATTENTION!!! Get help so tracker is held in place when dismounting the motor to prevent swinging. Then fix it into stable position with a piece of

rope (wind shouldn’t move it)
- Screw IN the lower 3 screws on motor housing to release shorter pipe and pull longer and shorter pipes apart

- Then connect motor back to cable. Drive motor with buttons very slowly and search for 1 HEX screw OR 3 slot (flat) screws (2 options possible) Note that you will need a lot of force as it is protected agains loosening. Don’t forget to glue it when asembling!

- Release 4 small HEX screws and motor will be free.
Attention: When assembling, return small HEX screws to exactly the same holes, as one of them is 0.3mm longer

- Replace rubber O-rings

- Reassemble motor in opposite sequence of disassembly

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