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Standard Operating Procedure:

Replace the V-belt in M1 motor for the high-volume integrated ¹⁴CO₂ sampler

1. Purpose

Replace the V-belt in M1 motors of the high-volume integrated ¹⁴CO₂ sampler. The v-belt of the motor type M1-xxx (Heidolph, Art Nr.26-300-001-11-1) is faulty and prone to failure. This SOP shall assist the station personnel in replacing the V-belt of motors from type M1.


2. Scope

This SOP shall assist the station personnel in maintaining the motors of the high-volume integrated ¹⁴CO₂ sampler.

3. Prerequisites

Screwdriver TORX TX25

V-belt for Hei-Vap (Heidolph, Art Nr.26-300-001-11-1)

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4. Procedure

Motor drive

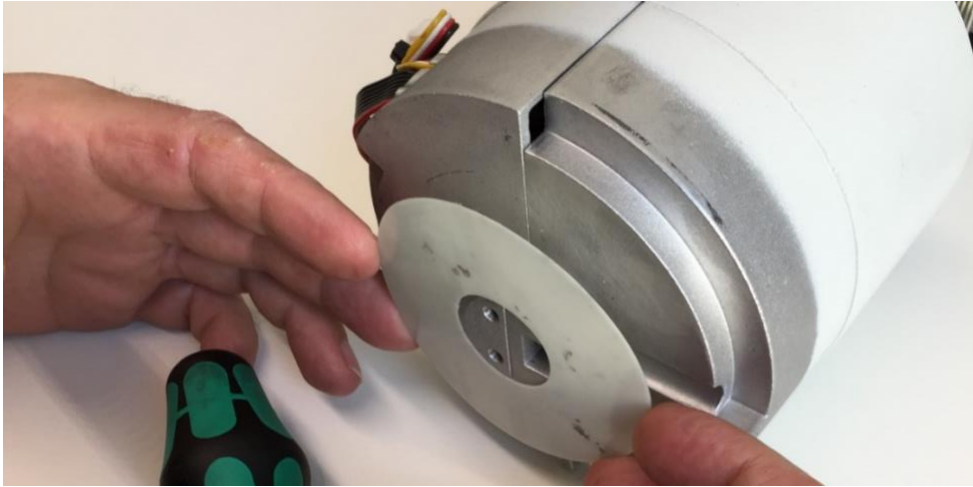


Press and hold down the gray fixing knob and turn the lock counter clockwise. Unscrew the lock from the motor drive.

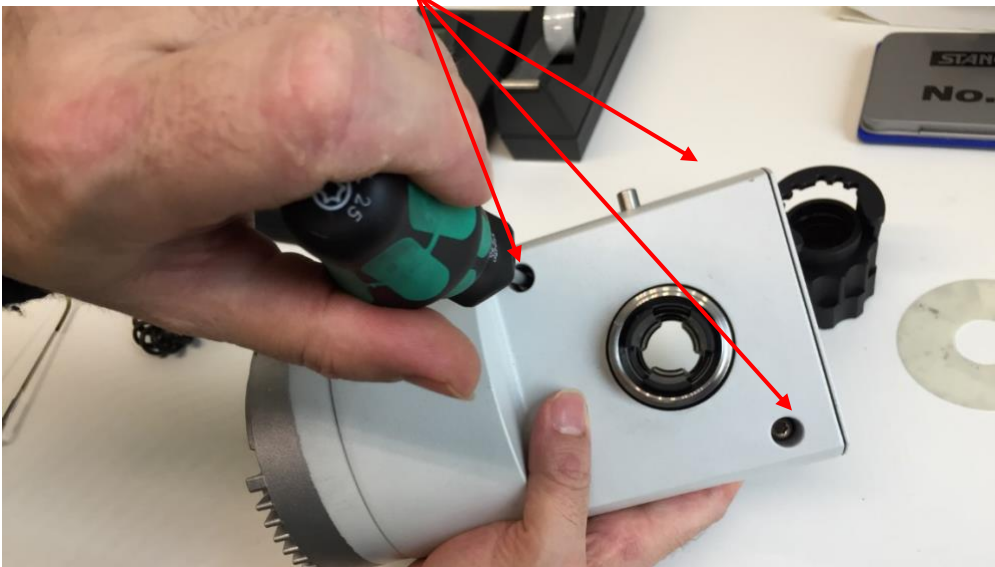


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Remove the circular protective foil.

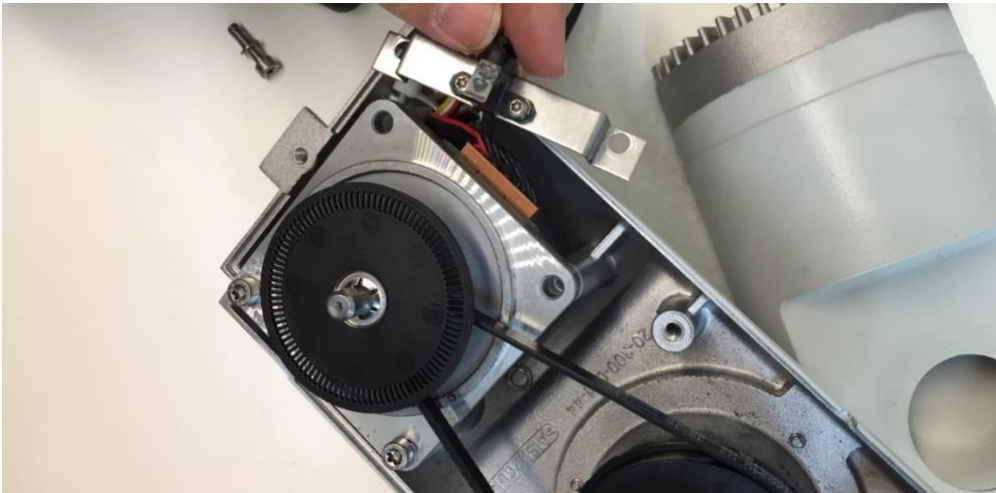
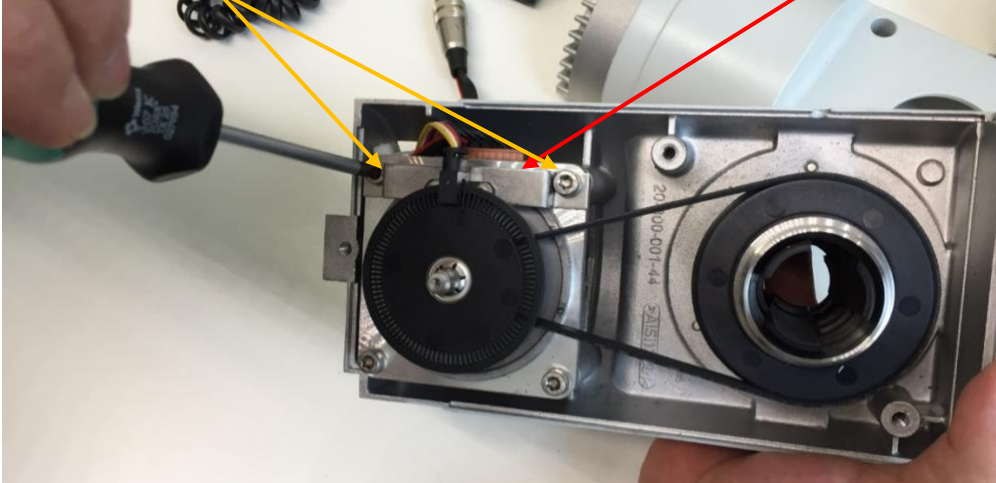



Unscrew the three Torx bolts to remove the lid.



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Unscrew the bolts above and slightly pull aside the photo-sensor

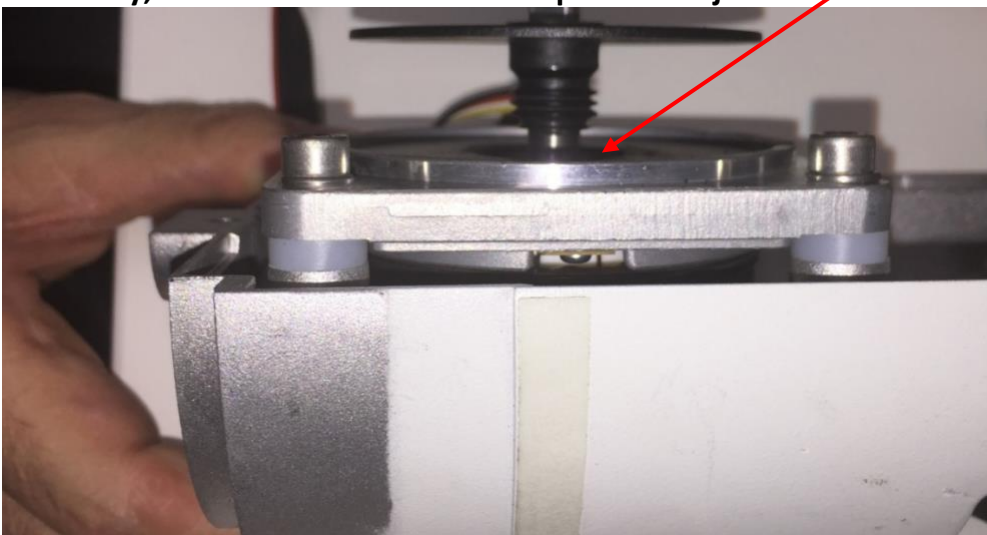



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Push up the V-belt with your finger and simultaneously rotate the drive disk until the V-belt slides over the edge. Remove the defective V-belt.

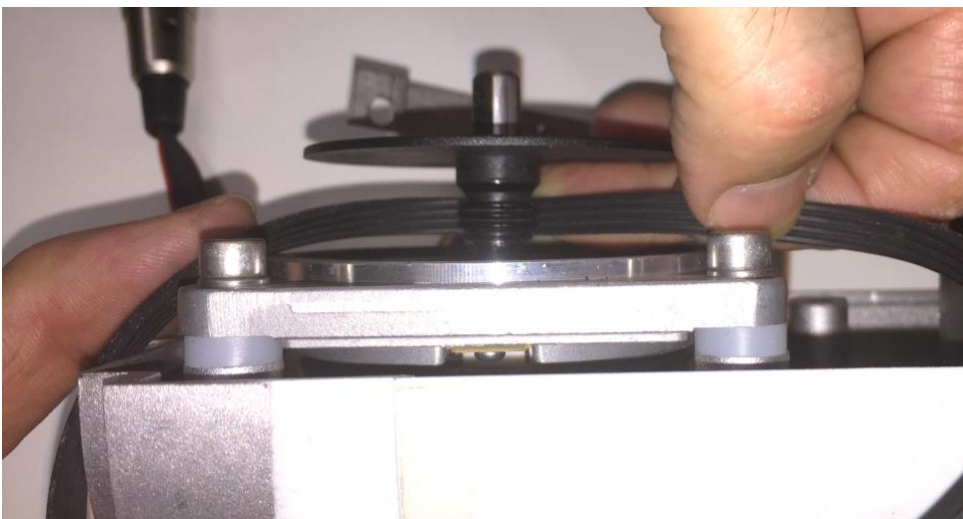


Please check if there is any rubbed residual of the belt in the notch. If necessary, remove the residual with a pointed object.

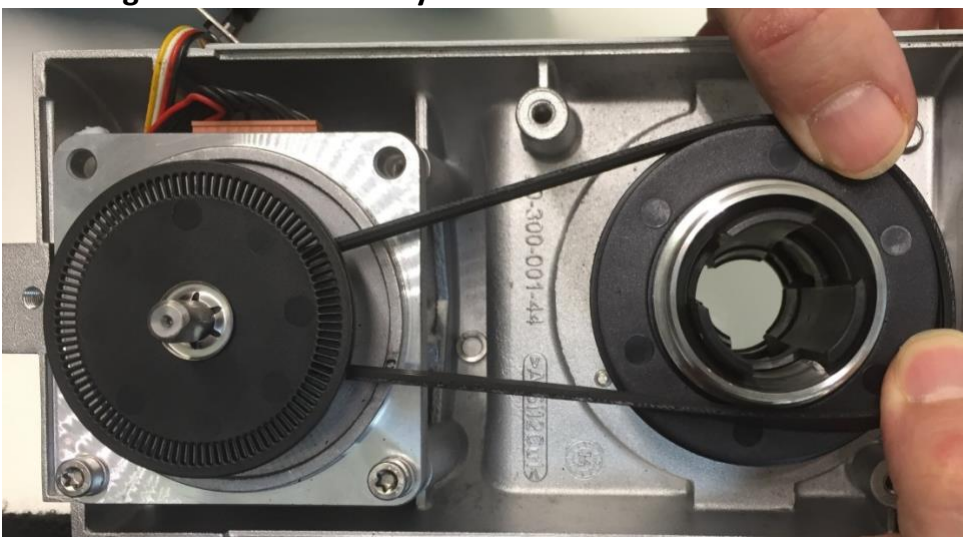


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Put in the new V-belt and check that the ribs are in the exact position on the drive disk.



As shown in the picture put the belt in position and rotate the drive disk until the belt glides down correctly.



Now you can close the motor driver.

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5. *References*

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7. *Acronyms*

ICOS: Integrated Carbon Observation System
 SOP: Standard operating procedures
 CRL: Central Radiocarbon Laboratory