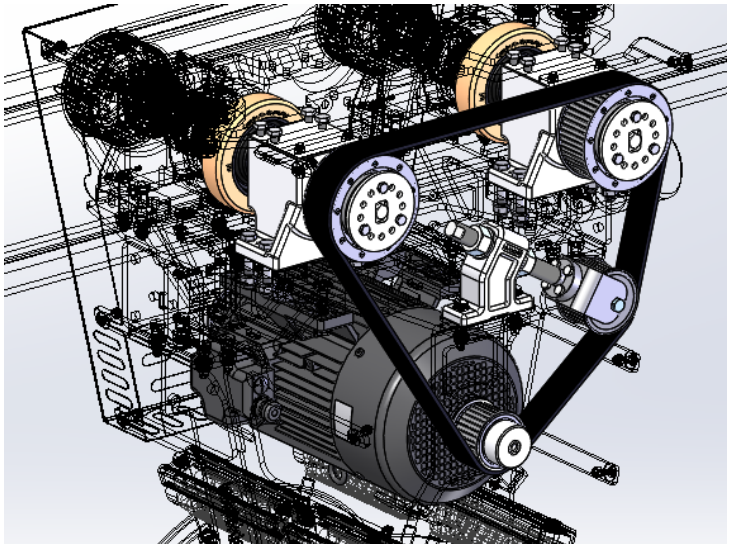
Maintenance Instructions
Inspection of belt drive components
Motorized cable trolley
Program 0380



Contents

1 Preparatory activities

1.1 Required equipment

1.1.1 Tools

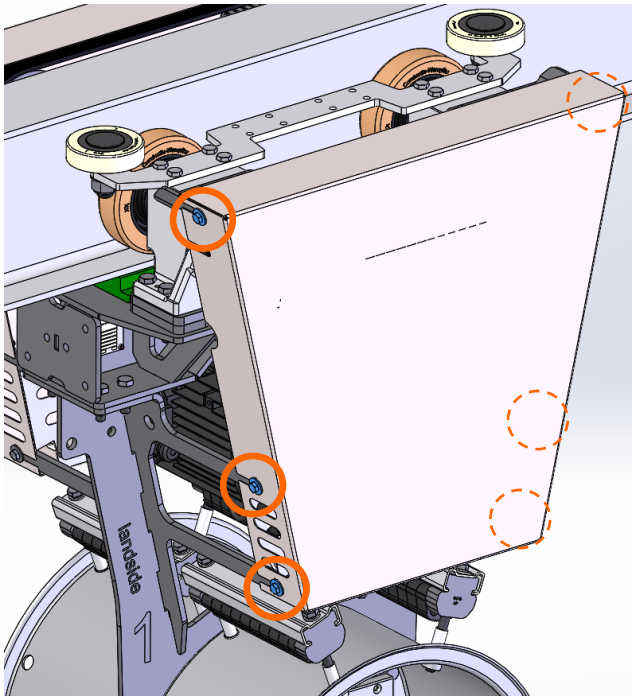
- Wrenches SW13, SW17, SW19, SW36
- Allen key SW2,5, SW10
- Torque wrench with sockets for hexagonal screws SW13, SW17, SW19 and hexagon socket screws SW10
- Screwdriver for slotted head, cross slot

1.1.2 Documents

- Drawing of the motorized trolley
- Printed out checklist of this document

1.2 Remove protective cover

a) Loosen the 6 screws that fix the cover.



b) Remove the cover by pulling it towards yourself.

2 Inspection steps

2.1 Visual inspection

2.1.1 Toothed belt

Check for visual damages or signs of inappropriate wear such as

- uneven belt wear,
- extreme belt edge wear or
- excessive tooth wear.

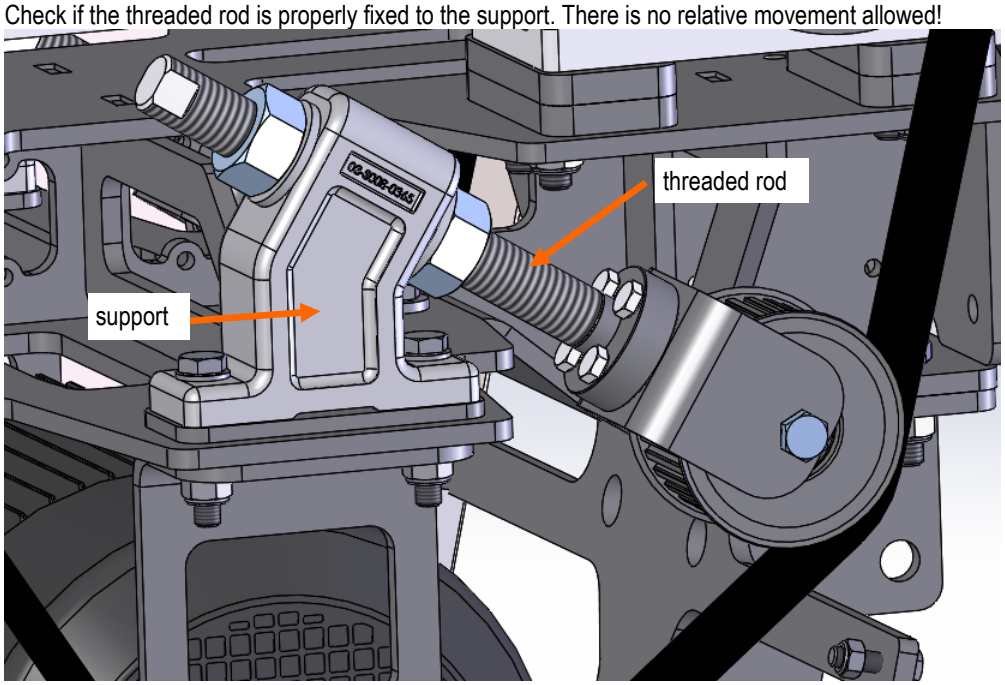
2.1.2 Belt pulleys

Check all belt pulleys (1 motor pulley, 2 driven pulley, 1 tension pulley per belt drive) for visual damages such as

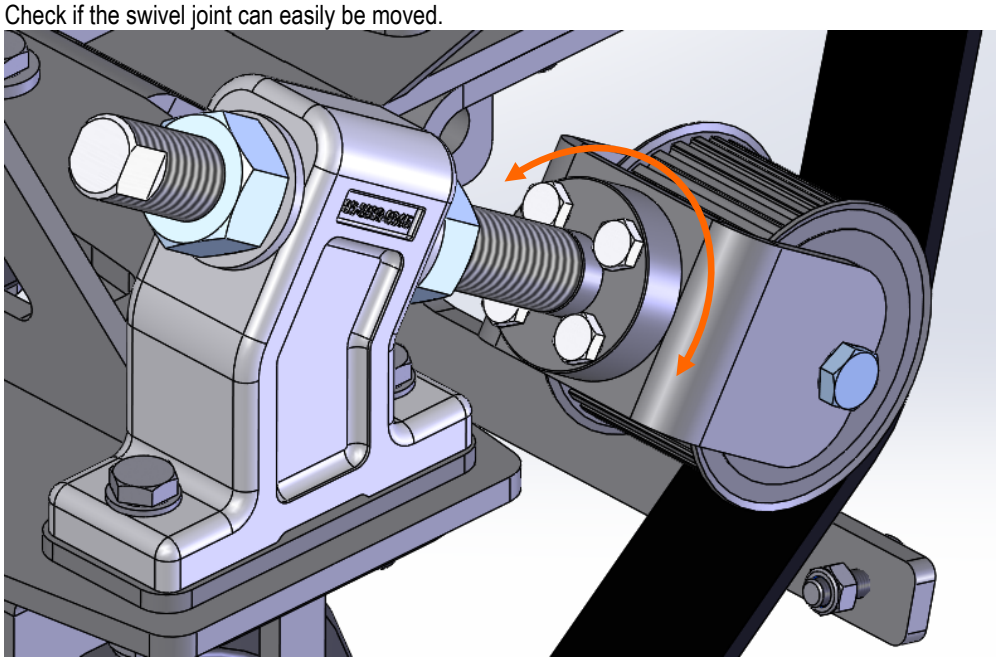
- missing flanges,
- deformed flanges or
- excessive wear of teeth.

2.1.3 Tensioning device

a) Check if the threaded rod is properly fixed to the support. There is no relative movement allowed!

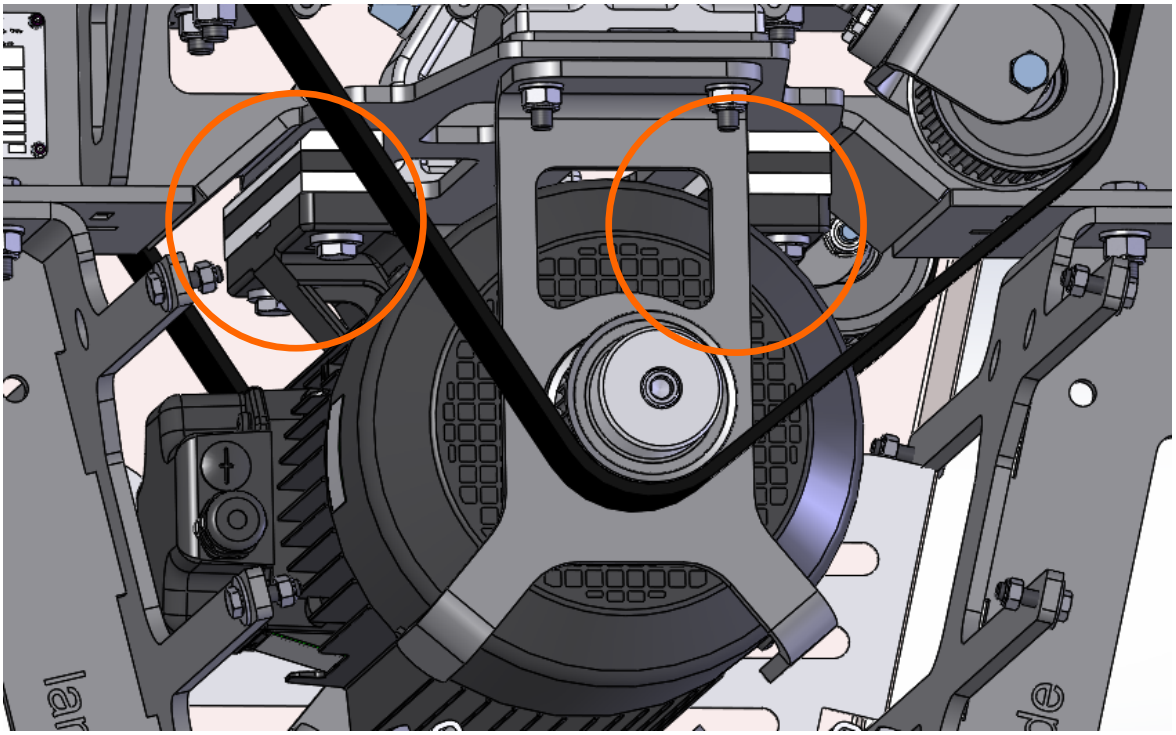


b) Check if the swivel joint can easily be moved.



2.1.4 Motor mount

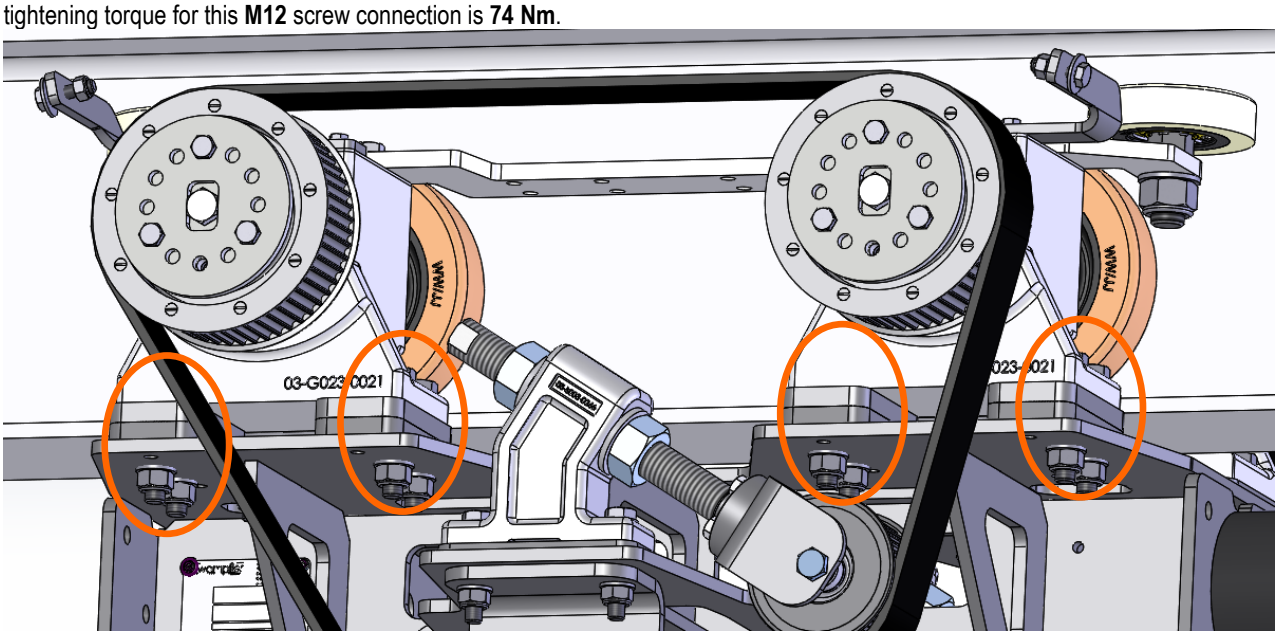
Check the motor mount for damages and excessive corrosion (corrosion that separates the rubber from the metal part).



2.2 Inspection of screw connections

2.2.1 Bearing housing

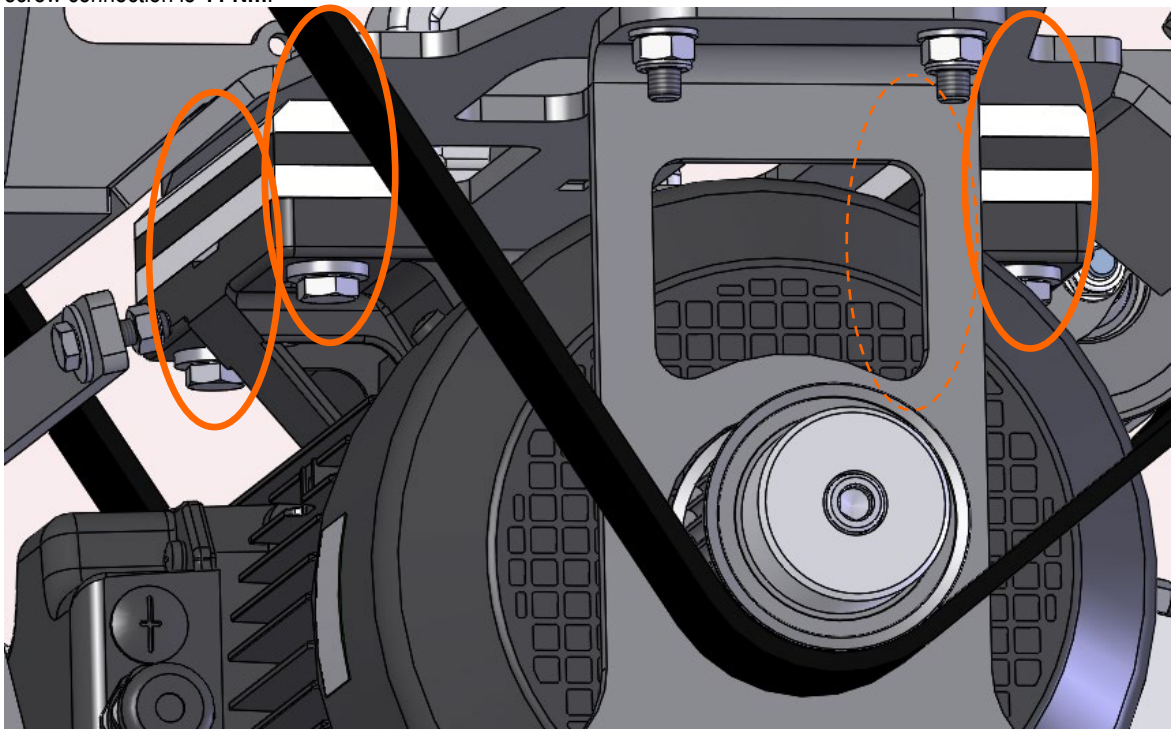
Check the tightening of the screws that connect the bearing housing to the main frame of the motorized cable trolley. The nominal tightening torque for this **M12** screw connection is **74 Nm**.



2.2.2 Motor

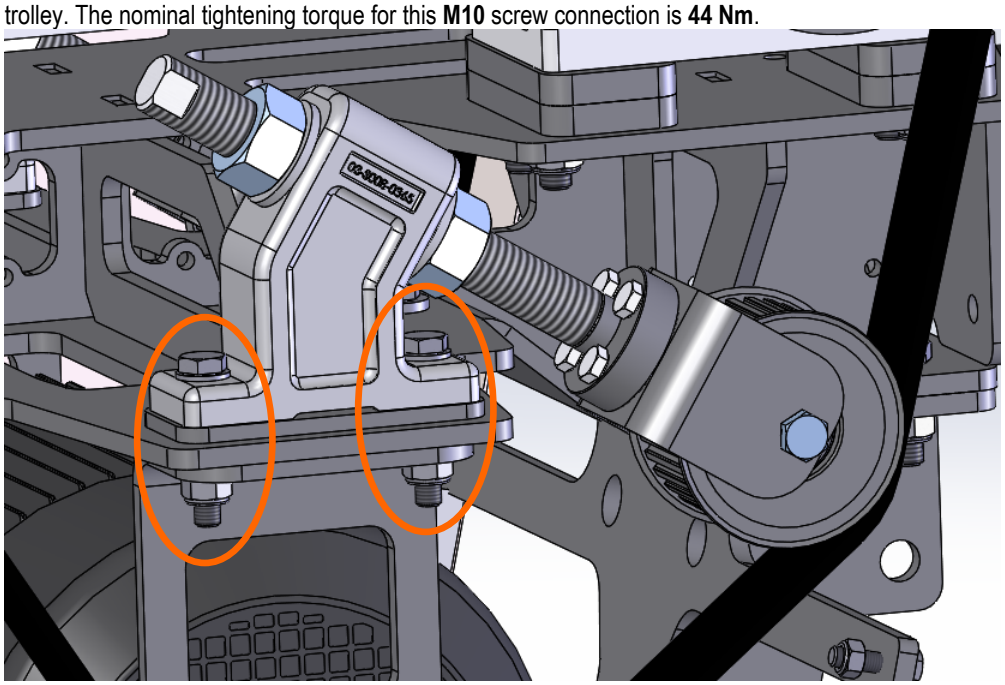
a) Check the tightening of the screws that connect the motor mount to the main frame of the motorized cable trolley. The nominal tightening torque for this **M10** screw connection is **44 Nm**.

b) Check the tightening of the screws that connect the motor to the motor mount. The nominal tightening torque for this **M10** screw connection is **44 Nm**.

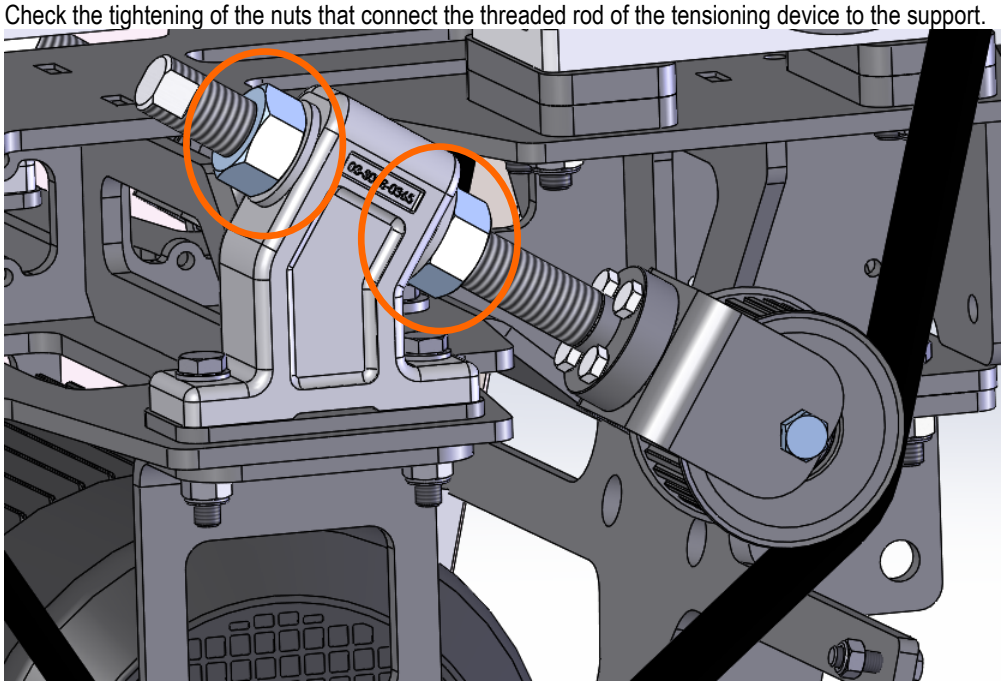


2.2.3 Tensioning device

a) Check the tightening of the screws that connect support of the tensioning device to the main frame of the motorized cable trolley. The nominal tightening torque for this **M10** screw connection is **44 Nm**.

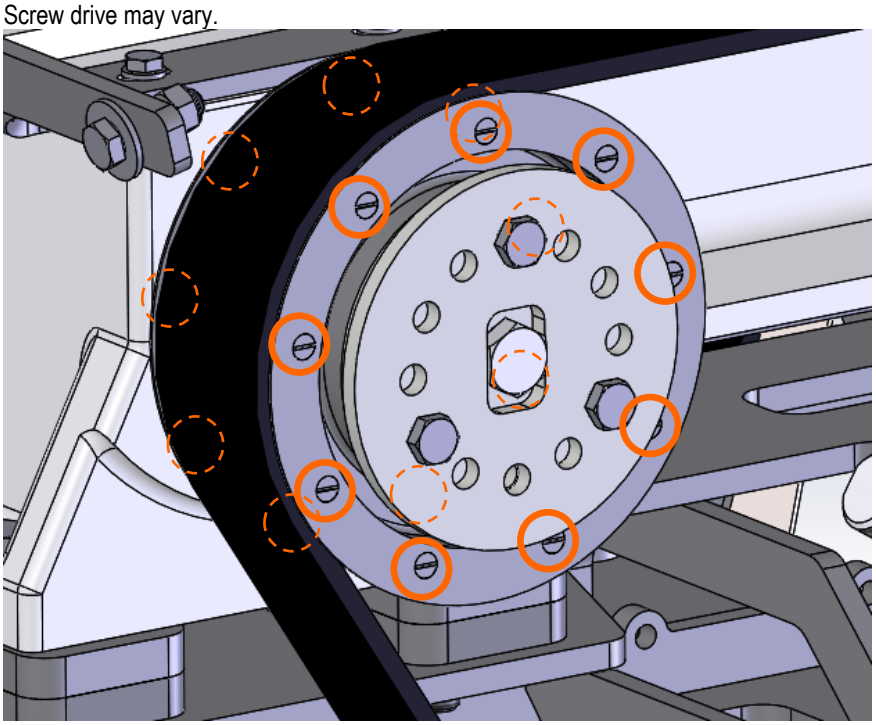


b) Check the tightening of the nuts that connect the threaded rod of the tensioning device to the support.



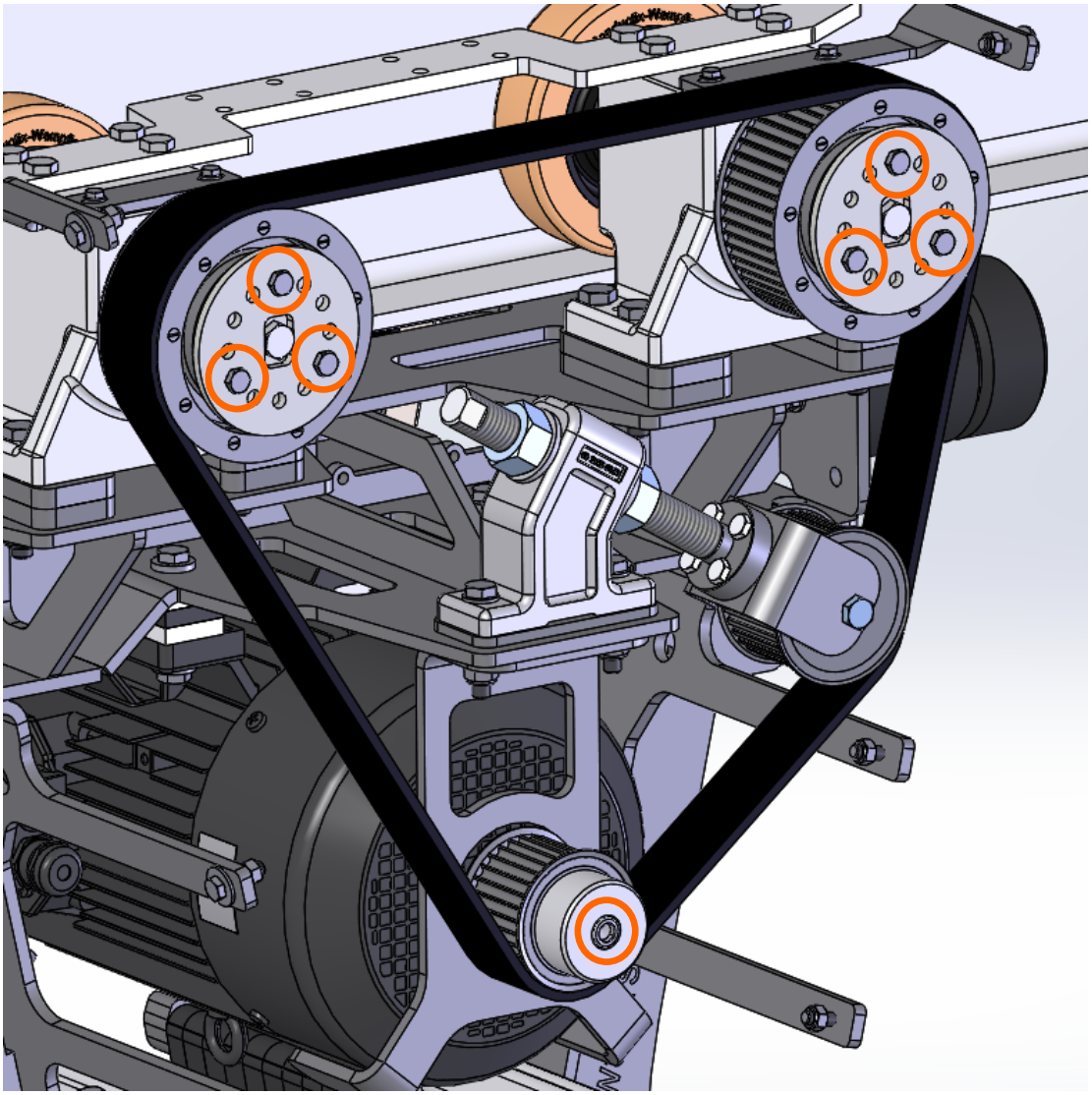
2.2.4 Screwed pulley flange

Some belt pulleys (usually the 2 driven ones on each side) have screwed flanges. Check if there are screws loose or missing. Screw drive may vary.



2.2.5 Securing screws of belt pulleys

Check the tightening of the screws that secure the pulleys on the shafts. The nominal tightening torque for **M8** screw connection usually used for the 3 screws on the driven pulleys is **21,4 Nm**. The nominal tightening torque for **M12** screw connection usually used for the screw on the motor pulleys is **74 Nm**.

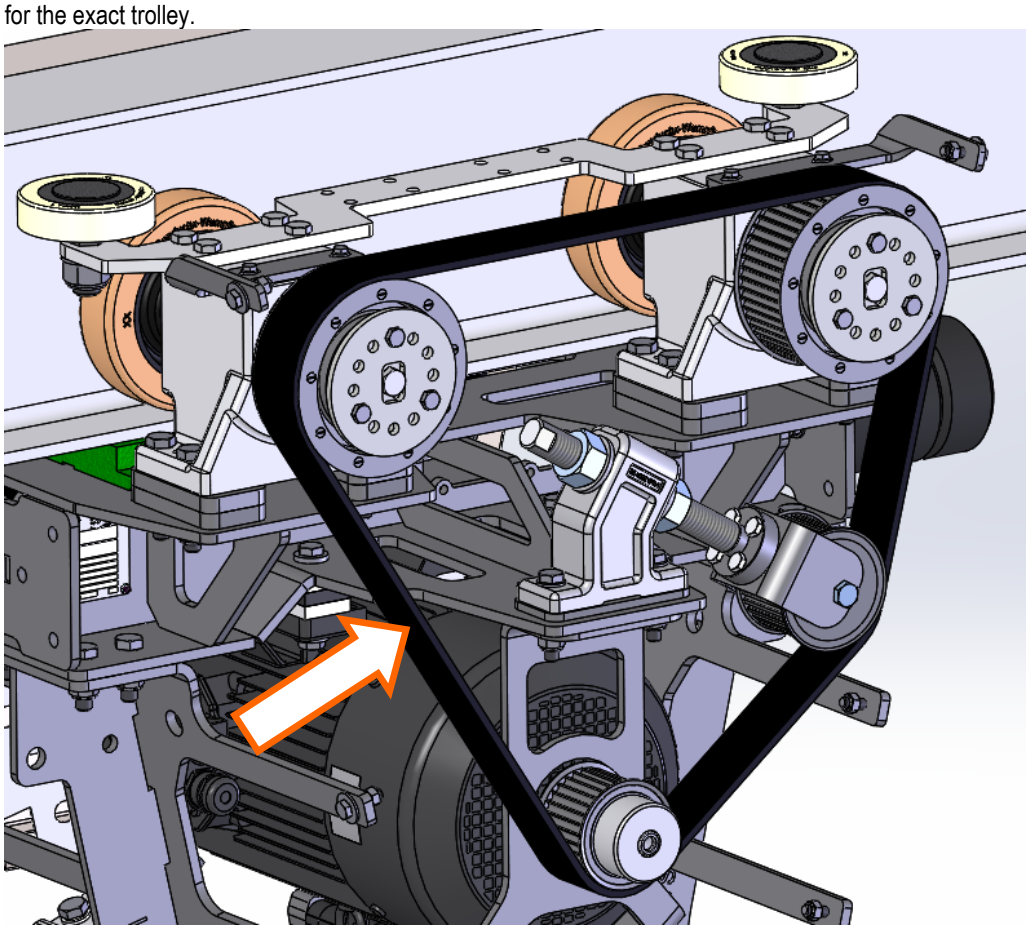


2.3 Functional inspection

2.3.1 Belt tension

a) Make sure that there is no unequal tension in the belt by moving the trolley back and forth a few times.
b) Hit the belt with a wrench or similar at the designated spot to set it into vibration.

c) Measure the frequency with a trummeter. Check the drawing of the motorized cable trolley to get the correct frequency for the exact trolley.



2.3.2 Noise

Move the trolley back and forth and check for noise that indicate advance wear.

3 Final activities

3.1 Mount protective cover

Mount protective cover and tighten screw with **21,4 Nm**.

3.2 Final check-up

Check for left behind tools before setting back to operation.

4 Checklist

This checklist should be used as a guideline to ensure the safe operation of the belt drive of motor driven cable trolleys!

The checklist is addressed to qualified specialists who maintain energy transmission systems and who are familiar with the regulations regarding work safety and prevention of accidents.

Read and follow all safety and warning instructions in the assembly instruction MAL0300-0005.

Project:	
Customer:	
CXW-Order-No.:	

End Customer:	
Address:	
Country:	

Facility/Building/Block/Aisle:	
Serial Number (if applicable):	
Additional Remarks:	

	Service Technician
Name:	
Date/Signature:	

No.	Description	Remarks	OK	Not OK
2.1	**Visual inspection**			
2.1.1	**Toothed belt**			
	No visual damages			
	No signs of inappropriate wear			
2.1.2	**Belt pulleys**			
	No visual damages (missing/deformed flanges or excessive teeth wear) on motor pulley			

No.	Description	Remarks	OK	Not OK
	No visual damages (missing/deformed flanges or excessive teeth wear) on driven pulleys			
	No visual damages (missing/deformed flanges or excessive teeth wear) on tension pulley			
2.1.3	**Tensioning device**			
	The threaded rod is properly fixed to the support of the tensioning device and cannot be moved.			
	The swivel joint can easily be moved.			
2.1.4	**Motor mount**			
	The bonding between the rubber and the metal parts is not damaged (e.g., by corrosion).			
2.2	**Screw connections**			
2.2.1	**Bearing housing**			
	Screw connections between bearing housings and main frame are tightened correctly (M12: 74 Nm).			
2.2.2	**Motor**			
	Screw connections between motor mount and main frame are tightened correctly (M10: 44 Nm).			
	Screw connections between motor mount and motor are tightened correctly (M10: 44 Nm).			
2.2.3	**Tensioning device**			
	Screw connections between support of tensioning device and main frame are tightened correctly (M10: 44 Nm).			
	Nuts fixing the threaded rod are tightened.			
2.2.4	**Screwed pulley flange**			
	There are no screws loose or missing			
2.2.5	**Securing screws of belt pulleys**			
	Screws securing the driven belt pulley are tightened correctly (M8: 21,4 Nm).			
	Screw securing the motor pulley is tightened correctly (M12: 74 Nm).			
2.3	**Functional inspection**			
2.3.1	**Belt tension**			
	Measure and note belt tension frequency.			
2.3.2	**Noise**			
	There are no noises indicating advanced wear when moving the trolley back and forth.			

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