

3.11 Crab trolleys type LPV and bogie trolleys type BGV

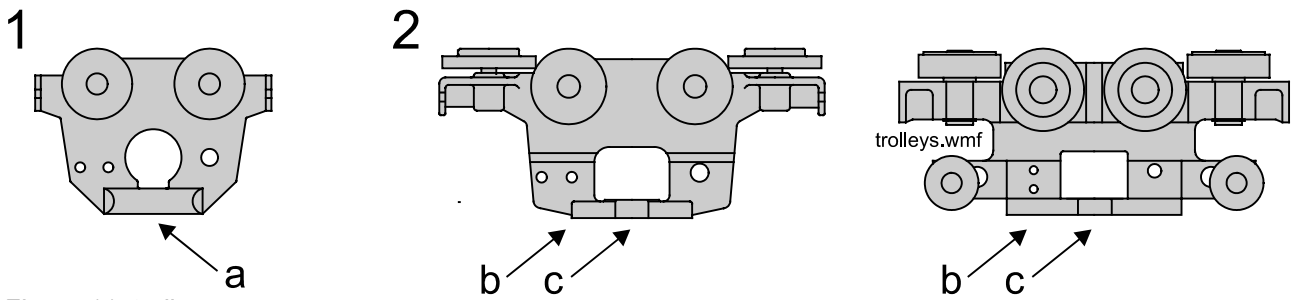


Figure 11: trolleys

All trolleys should be inspected with respect to wheel wear, rolling resistance, deformations and cracks. Defect trolleys should be replaced.

1. For crab trolleys, check the load carrying bars (a). When the wear is 2 mm the trolley should be replaced.
2. For bogie trolleys, check the suspension plate (b) and the suspension hole (c). When the wear is 1 mm the trolley should be replaced.

3.12 Cable trolleys type KBV, KBVA and KBVS, rail and trolleys cable attachments type KFFB, KFKK, KFVS and KFSB and motion limiters type BGR

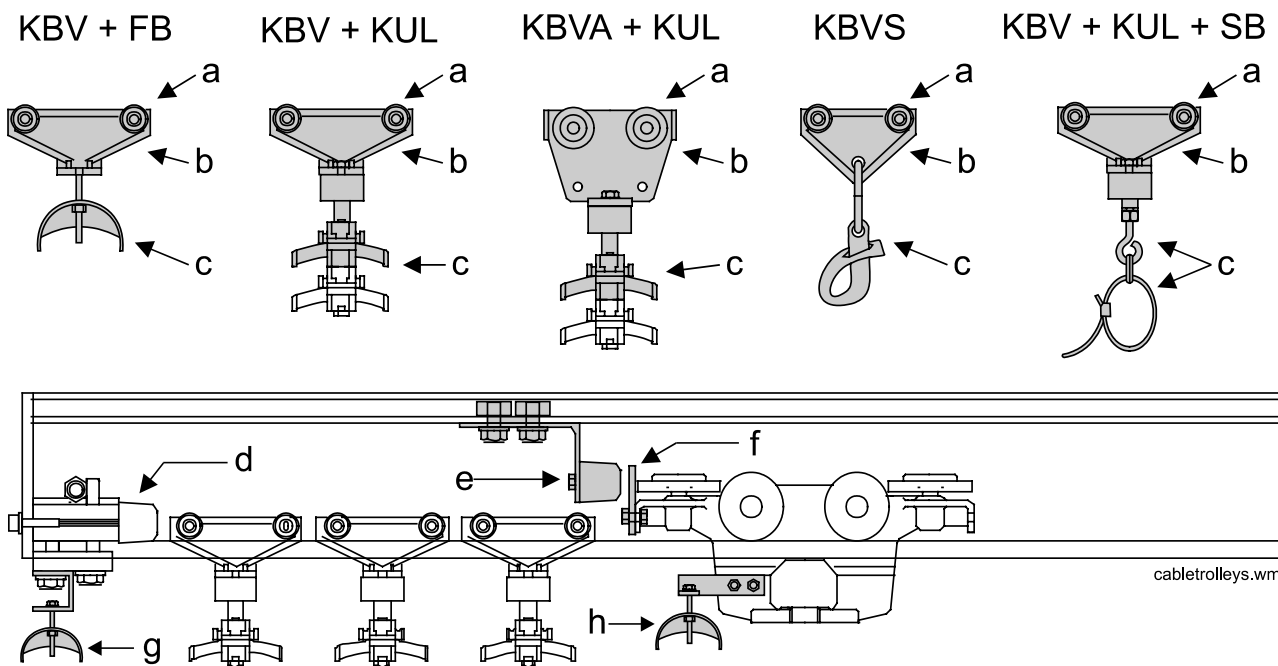


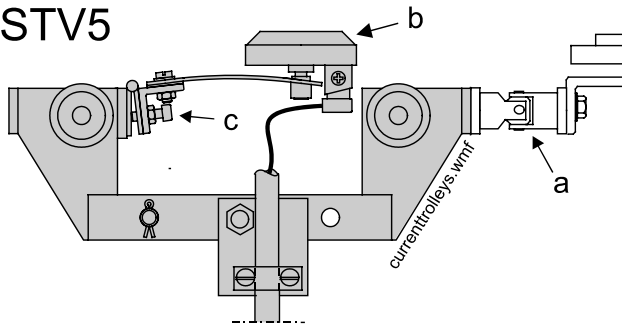
Figure 12: cable trolleys and cable components

If cable trolleys are a part of the system:

1. Check that all wheels (a) are intact and that all cable trolleys rolls easily. At wheel wear, replace the cable trolley. Also check so that the cable trolleys are rolling against the rail and is not lifted up in the rail by the cables or hoses.
2. Check that the cable trolleys (b) are not deformed or has cracks. Replace a cable trolley that has deformations or cracks.
3. Checks so that the cable attachment parts (c) are intact and are properly attached.
4. Check so that the cable trolleys are stopped against an end stop (d) and other trolleys against a motion limiter (e) and a motion limiter plate (f).
5. Check that rail cable attachments (g) and trolley cable attachments (h) are properly attached and intact.

3.13 Pick up trolleys type STV5 and STVG5

STV5



STVG5

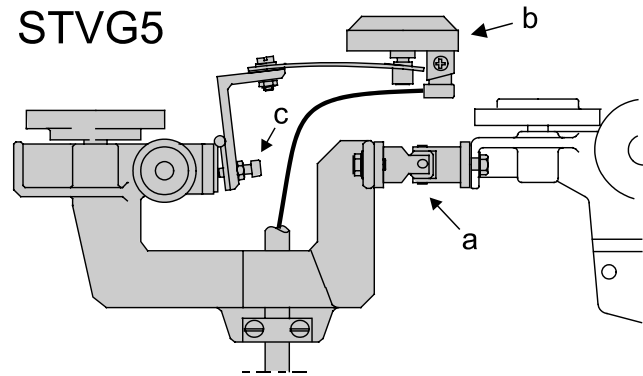


Figure 13: pick up trolleys

If pick up trolleys are a part of the system:

1. Check that the pick up trolleys are not deformed nor has cracks. Replace a defect pick up trolley.
2. Check that all wheels are intact and that the pick up trolleys rolls easily. Replace a defect pick up trolley.
3. If a pick up trolley is connected to another trolley via a cardan joint (a), check so that the cardan joint is properly attached. Adjust if needed.
4. Check so that all cable components is properly attached and that the electrical connections are done correctly. Adjust if needed.
5. Check that the brushes (b) are not worn or burned. Replace defect parts.
6. Check the contact pressure of the brushes and that the contact is good along the entire rail. Adjust the contact pressure using the adjustment screw (c).

3.14 Crane distance trolleys type TTDS

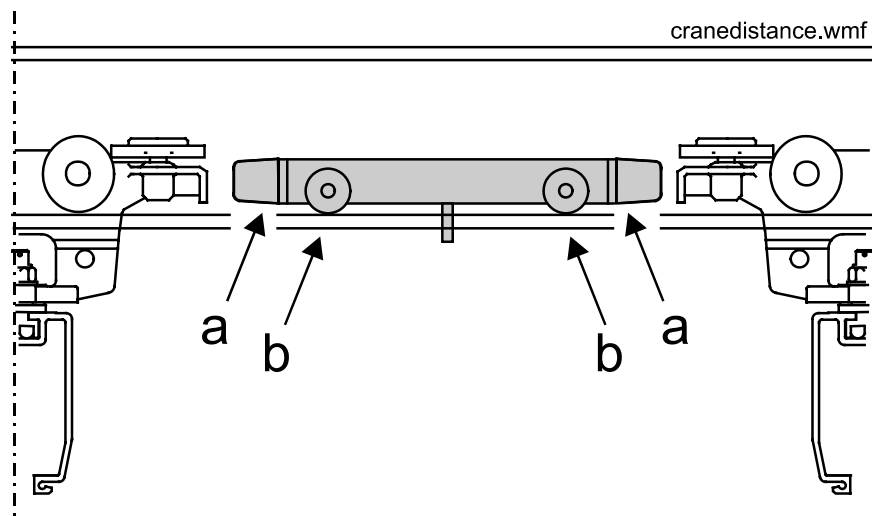


Figure 14: crane distance trolleys

If the system is equipped with crane distance trolleys, check the rubber bumpers (a) and the wheels (b) so that they are not worn and are functioning correctly. Replace a defect crane distance trolley.

3.15 General about motor trolleys type TMT

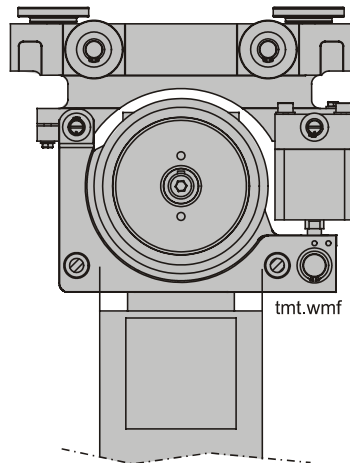


Figure 15: motor trolley

If the system are equipped with motor trolleys, check:

1. That the motor trolleys are not deformed nor has any cracks. Replace a defect motor trolley.
2. That any trolley that is connected to the motor trolley is properly attached.
3. That all wheels are intact. Replace defect wheels.
4. That the drive wheel is not worn or damaged. Replace defective drive-wheels. See point 3.16.
5. That the drive wheel do not slide. If it does, adjust the drive wheel contact pressure. See point 3.17.
6. That motor trolleys which works parallel to each other moves with the same speed. If the wheels are sliding the drive wheel contact pressure can be adjusted, see point 3.16. If the wheels are worn they may need to be replaced, see point 3.16.
7. That all cable components are properly attached and that no cables or conductors are damaged.
8. That all the electrical connections are correct.

3.16 Replacement of drive wheel on motor trolley type TMT

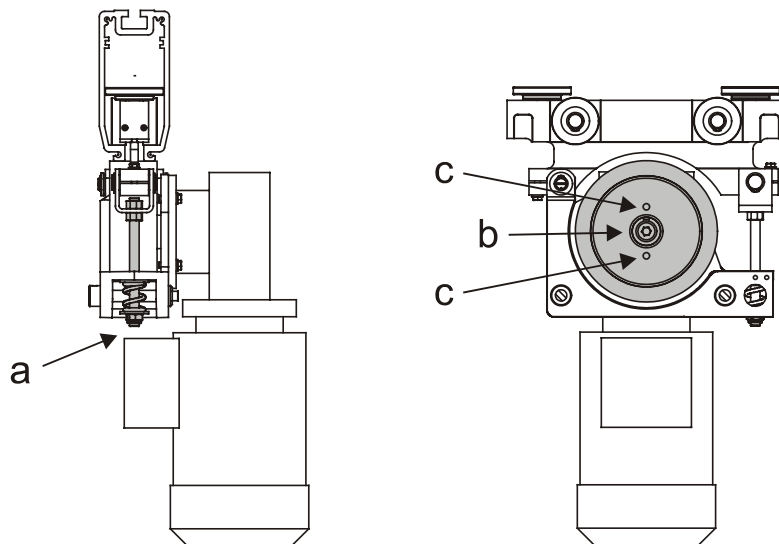


Figure 16: replacement of drive wheel

1. Loosen the drive wheel pressure spring (a) to lower the drive wheel (b). In case motor trolley is equipped with a pneumatic cylinder for the drive wheel pressure, then release the wheel and switch off the air.
2. Loosen the drive wheel by removing the centre bolt (b) of the drive wheel.
3. By screwing screws into the threaded holes (c) the wheel can be pulled of.
4. Install the new drive wheel in reverse order and adjust the contact pressure, see point 3.17.

3.17 Adjustment of drive wheel contact pressure on motor trolley type TMT

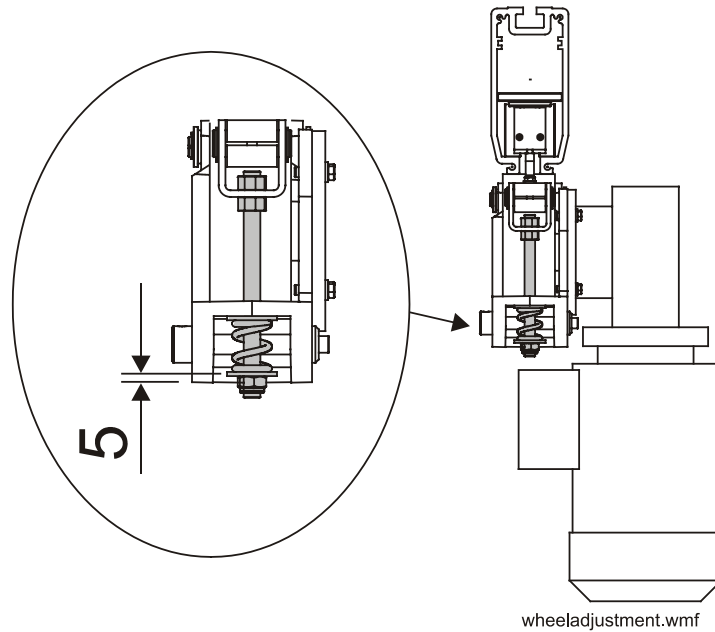


Figure 17: adjustment of the drive wheel contact pressure

1. The pressure is adjusted by means of the spring loaded adjustment bolt. When the distance between the washer and the bottom of the pressure arm is 5 mm then the pressure is correct.

3.18 Current track type SB and related components

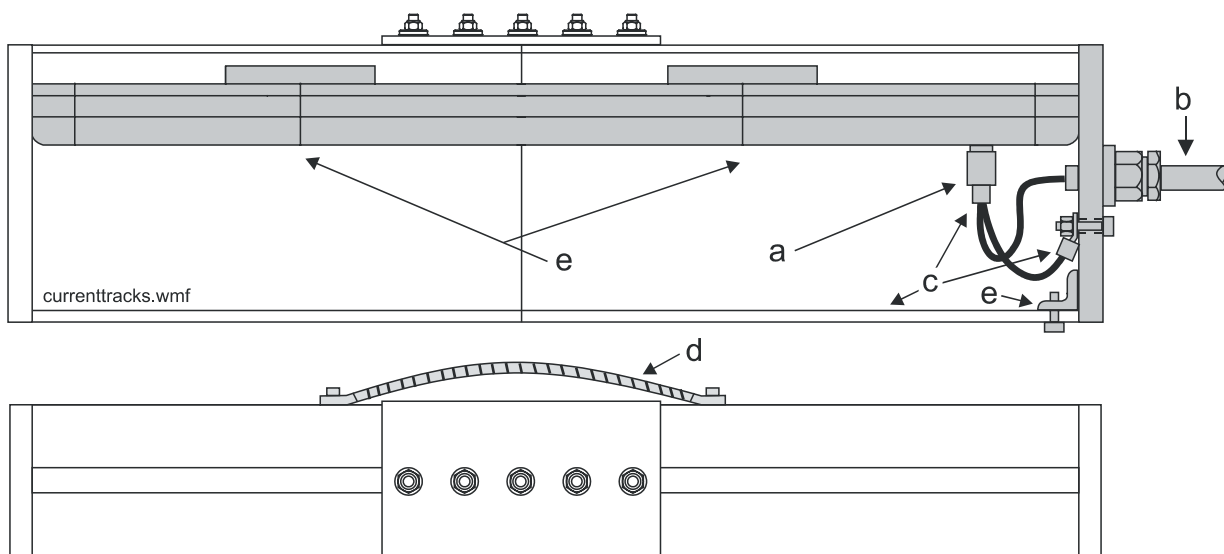


Figure 18: inspection of current track

If the system is equipped with current track, check (never work with the power on!):

1. Check (a torch is needed!) all connections (a) to the power supply track and the supply cable (b). Protective earth should at a minimum be connected (c) to the end plate, to the rail, the two outer tracks of the current track and over each rail connection (d). Adjust if needed.
2. Check so that the end plate (e) is properly attached.
3. Check so that the current track has not come apart at joints (e). Adjust if needed.
4. That any portions of the current track, which are not frequently used, have not developed any oxide. At oxidation, clean with a contact spray of type Electrolub SOB, Scotch 1607 or any equivalent spray. Wipe off any dirt from the tracks in the current track.

3.19 Yokes type TBO

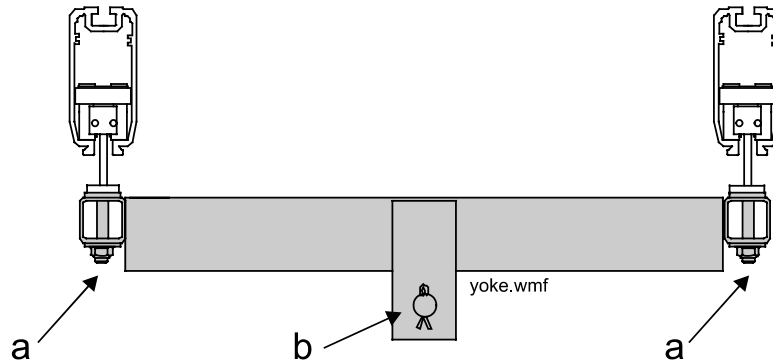


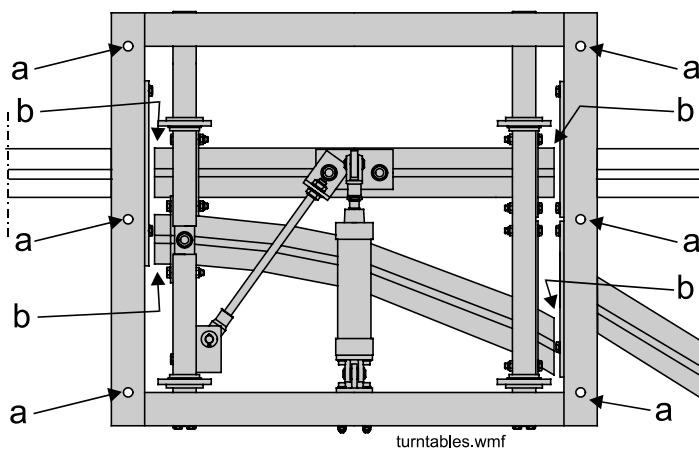
Figure 19: yoke

If the system is equipped with yokes, check:

1. That the attachment bolts (a) are intact and correctly tightened.
2. That the load carrying bar (b) is intact and is equipped with split cotter pins.

3.20 Switches type HXL and VXL and turntables type VSL

1



2

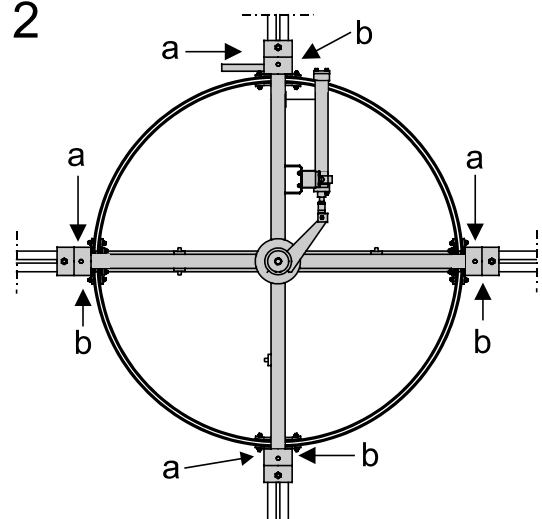


Figure 20: switches and turntables

If the system is equipped with switches (1) or/and turntables (2), check:

1. All suspension points (a).
2. That the trolleys can pass the rail joints (b) without problems.
3. That the rails have not moved out of position vertically or horizontally.
4. The function of the switch or turntable.
5. The pneumatic connections and the hoses with respect to leakage and damages.
6. At switch or turntable with current track that the copper conductors in the current rail has not become loose and moved out of the current track and that all the electrical connections are correct.

3.21 Tightening torque for bolts

The table is valid for both normal bolts and t-slot bolts. The bolt grade is normally embossed on the bolt heads, see the figure below. Use a calibrated torque wrench to gauge the torque.

Bolt dimensions	Grade	Zinc-pl. dry	Zinc-pl. oiled
M6	8.8	9,4 Nm	8,4 Nm
M8	8.8	23,0 Nm	20,6 Nm
M10	8.8	45,1 Nm	40,4 Nm
M12	8.8	77,8 Nm	69,7 Nm
M16	12.9	319,6 Nm	286,3 Nm

Table 2: tightening torque for bolts

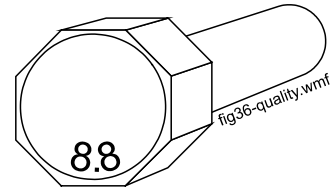


Figure 21: bolt grade

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