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After that every 1000 operating hours:

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Oil cooler

Clean ribs and fins of the oil cooler with compressed air or a broom.

Biweekly



Pushing slider

Remove the face side covers and clean the area behind the pushing slider with a broom. **Insert the covers carefully !**

Biweekly



Lubrication

Biweekly



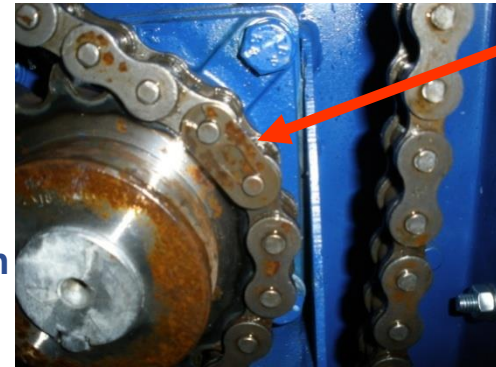
Check if the cartridges deliver grease at all. Mark the filling level when checking, check guiding rails if they are greased. Change empty cartridges.

Remark: BaleTainer with 22kW Hydraulics do not have cartridges but a central lubrication. Check if grease is delivered to every single outlet.

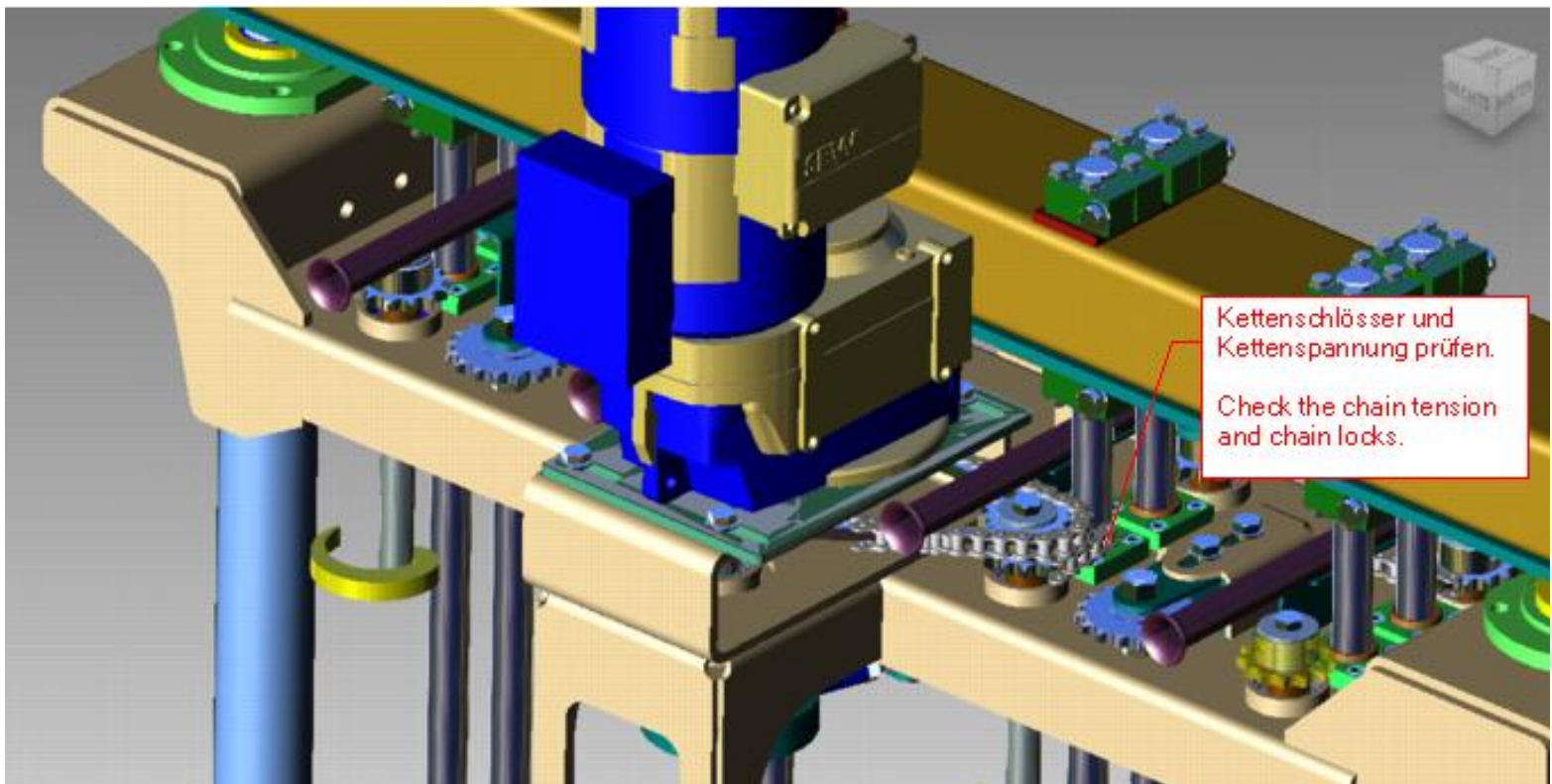


Tying system

Visual inspection at power turned off.
Clean up device with compressed air first.
Remove contaminants, especially metal
ones. Check chain tension and alignment
and the chain itself for damages, signs of
wear, chafe marks etc. Check also the chain
locks.



Monthly

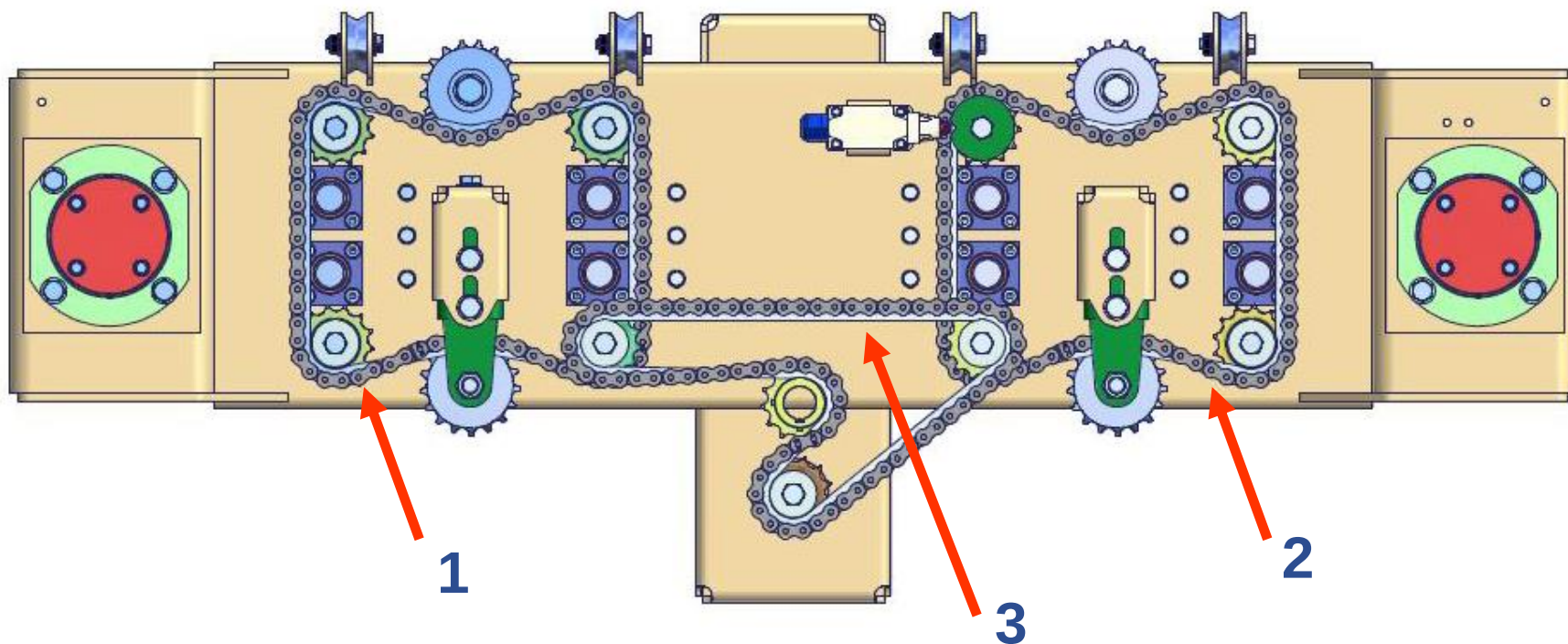


Tying system

Chain scheme :

Consists of 3 chains, one for every 4 twisting arms
and one to connect both.

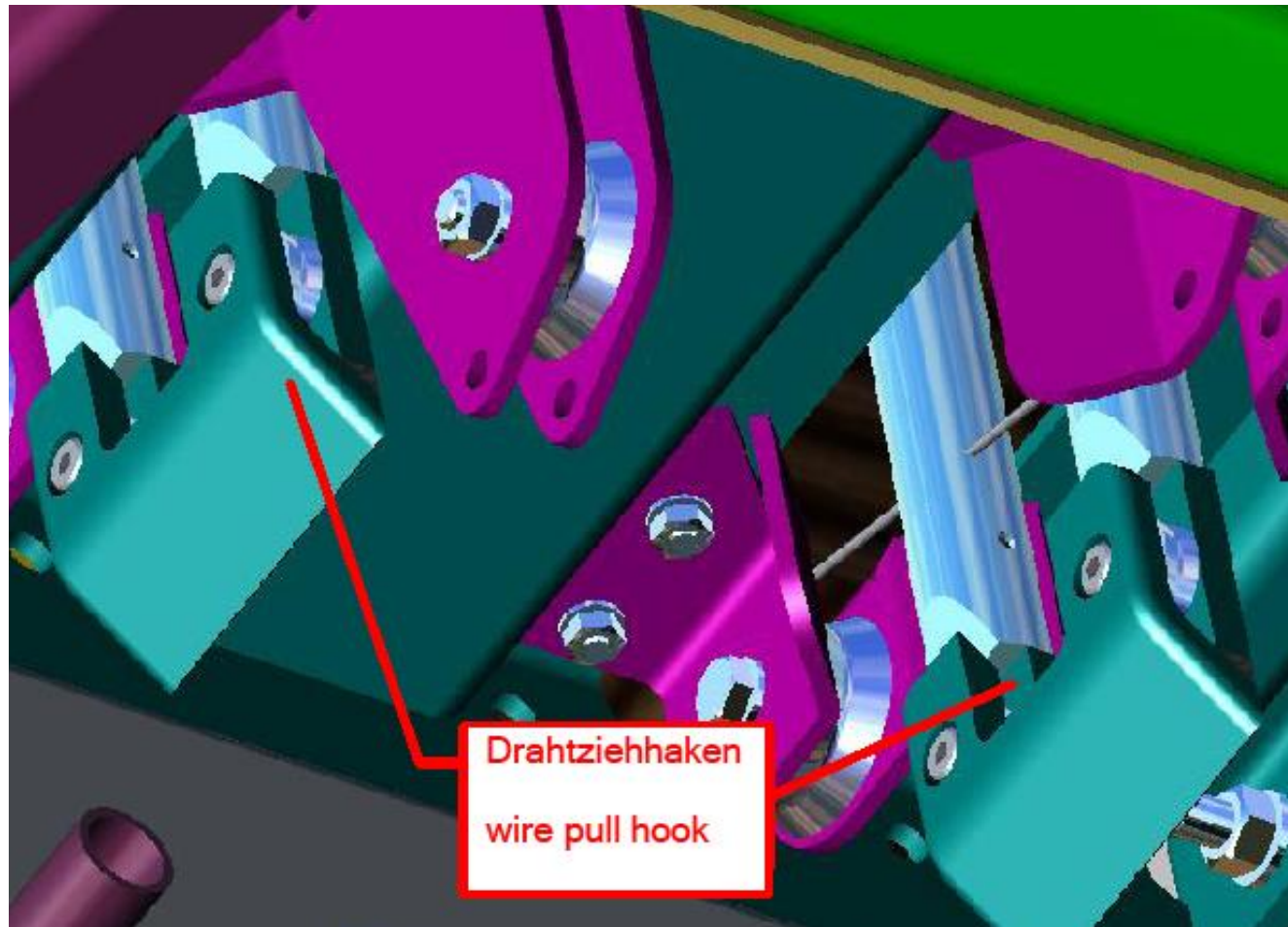
Check and clean the chains, lubricate them lightly with oil or grease.



Wire catching hooks

Visual inspection of the wire catchers for wear. Clean up the hooks and make sure the pulleys are running smooth. Also clean up the floor **UNDERNEATH** (important !) the cut-outs for the wire catchers with a broom .

Monthly



Rotor drive

Check the rotors chains tension (20 mm max.), clean and and lubricate the chain.

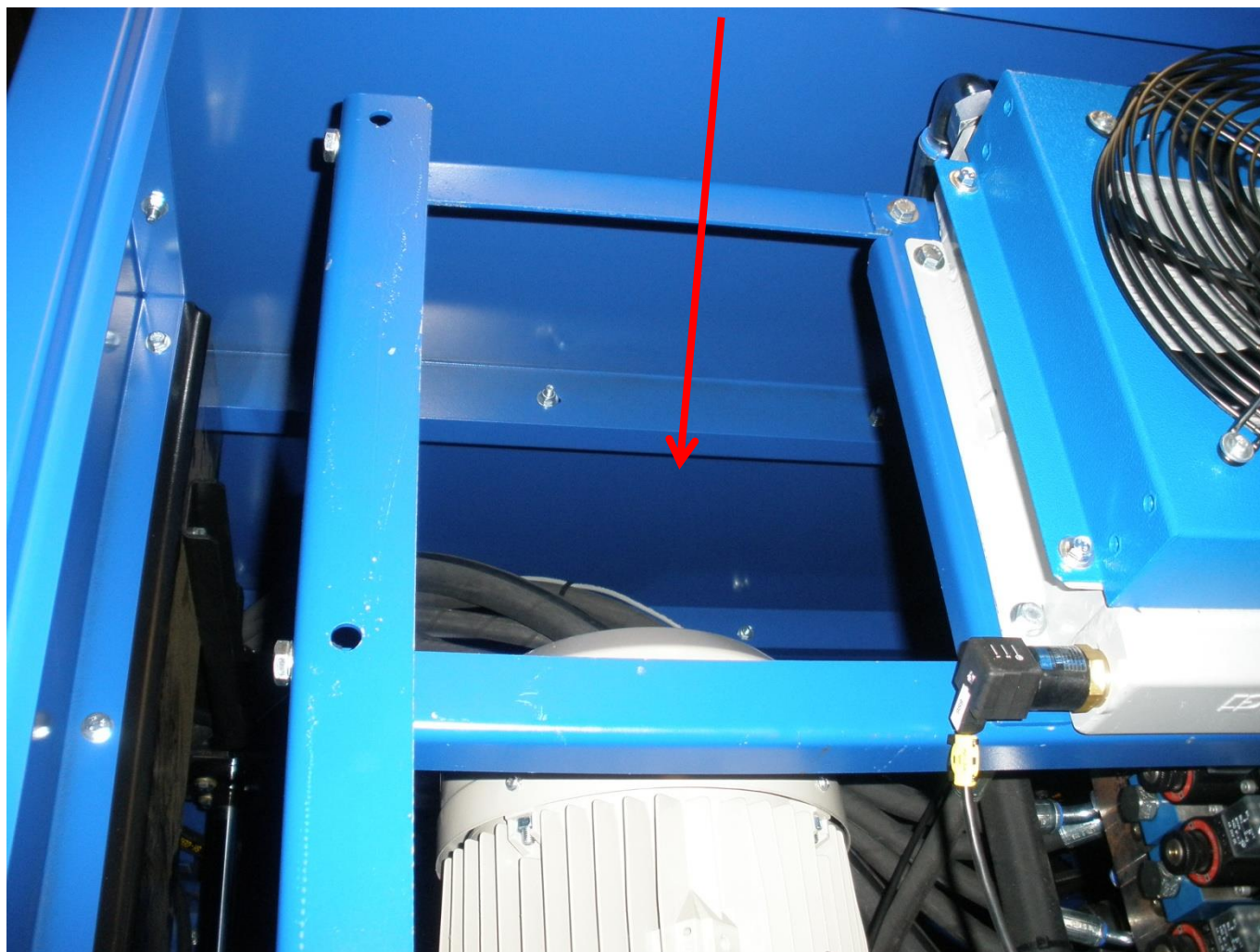
Monthly



Roof sealing

Check if the sealing between the two roof plates over the hydraulics is still tight (check for traces of water or dust)

Monthly



After 250 hours

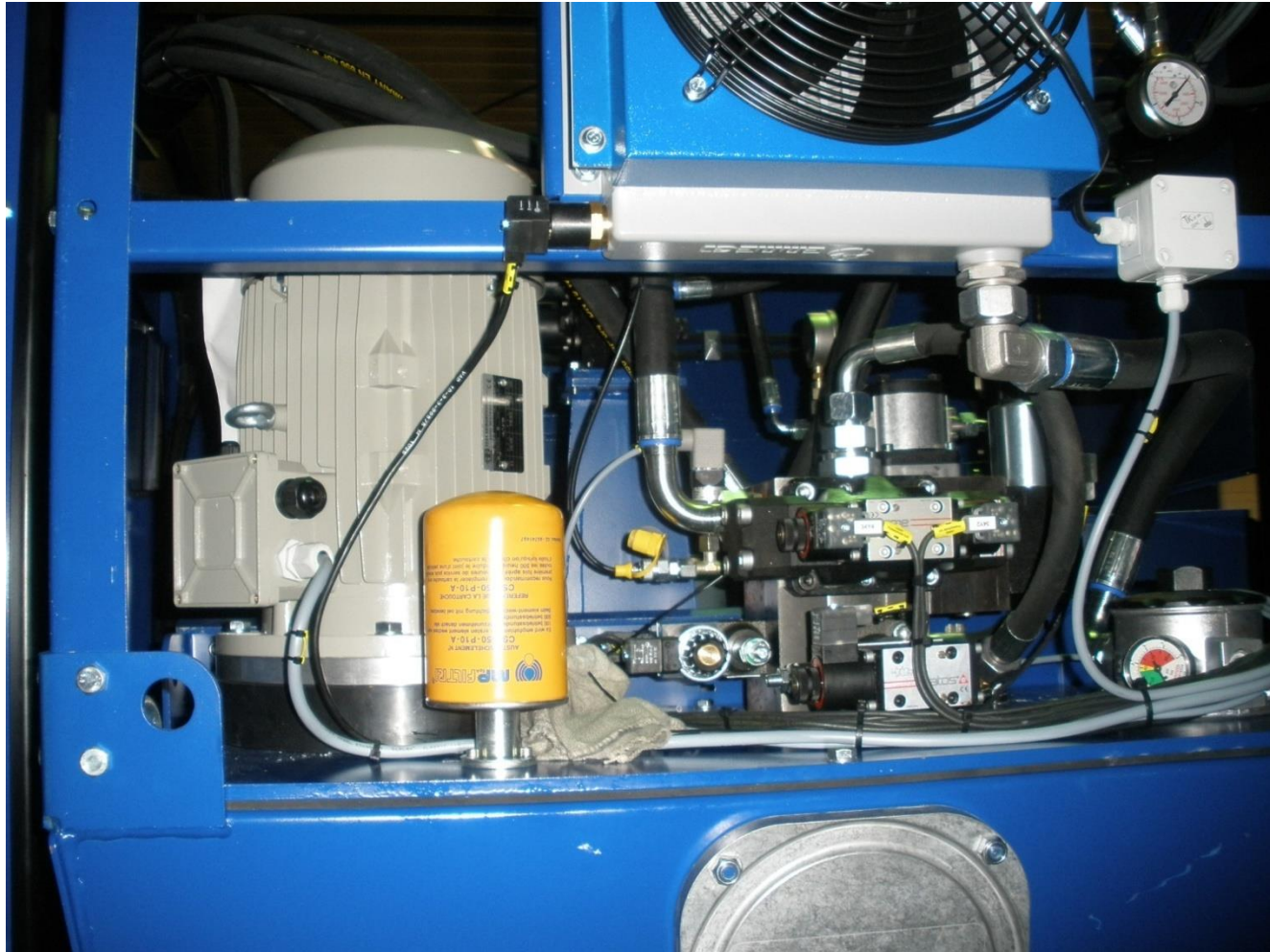
After 250 operating hours all screws have to be re-torqued and checked if they are tightened.

Also all hydraulic fittings and joints have to be checked and tightened.

Visual inspection

Visual inspection of the hydraulics for leakages (Block, hoses, valves, pumps, cylinders, tank, flanges, oil cooler, gaskets and sealings)

After 250 hours

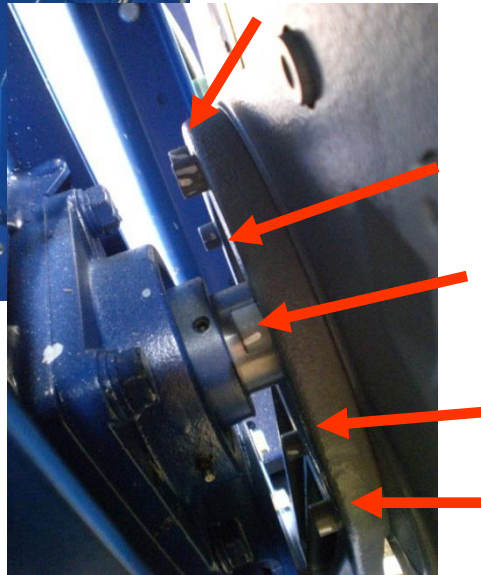
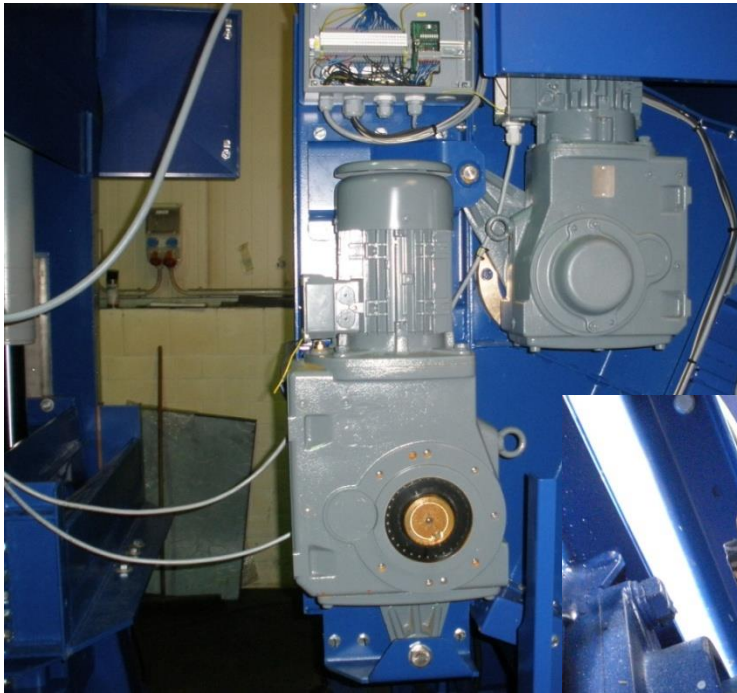


Gearmotors

Check if the mounting screws of the gearmotors are tightend

Doublerotor with 2 motors

After 250 hours



Hydrodrive



Important! Check all screws from the torque arms!

Wire binding

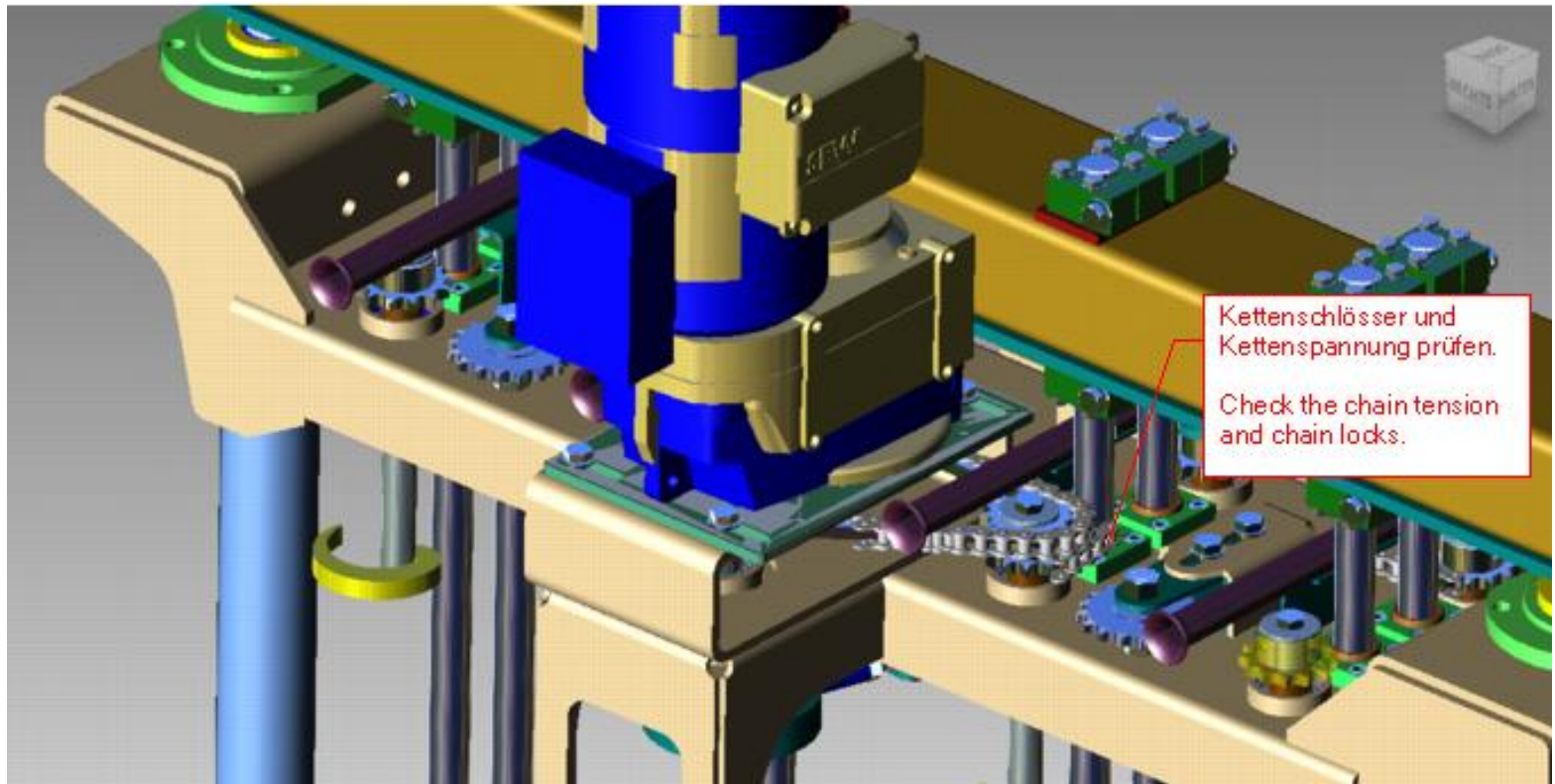
Visual inspection of the chain drive(s).

Check chain locks and chain tension.

Clean up the complete unit with compressed air and lubricate the chain.

Perform function test.

After 250 hours

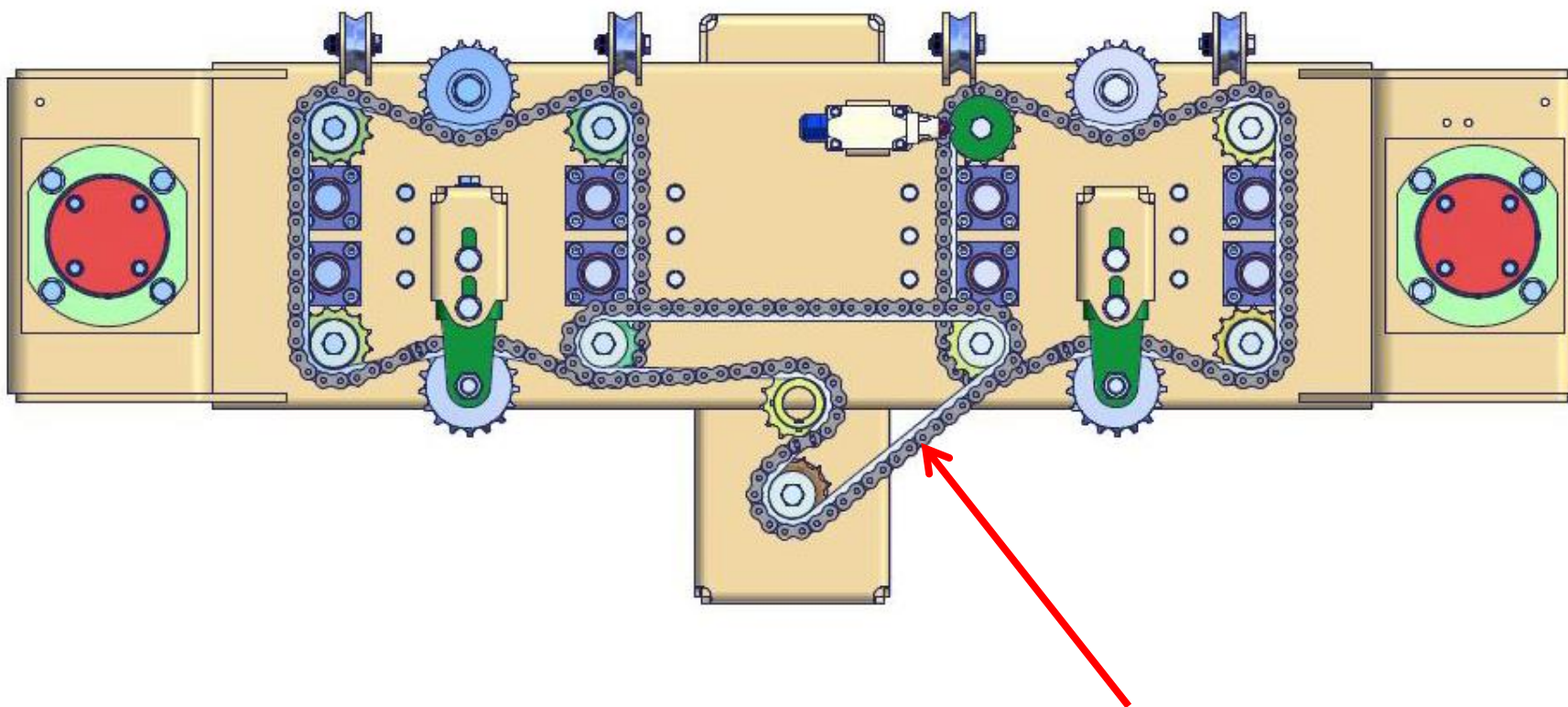


Maintenance instruction Strautmann BaleTainer®

Wire binding

Top view onto the chain drives.

Nominal chain tension : Chain should only be moveable for 5 mm at that point shown in the drawing. The chain tension can be adjusted by the tensioners or, for the central chain, by shifting the tying motor. Clean up the chain drive and lubricate lightly with oil or grease.



Every 1000 hours

After another 750 hours (total hours 1000 now) all screws have to be re-torqued and checked if they are still tightened.

Also all hydraulic fittings and joints have to be checked and tightened.

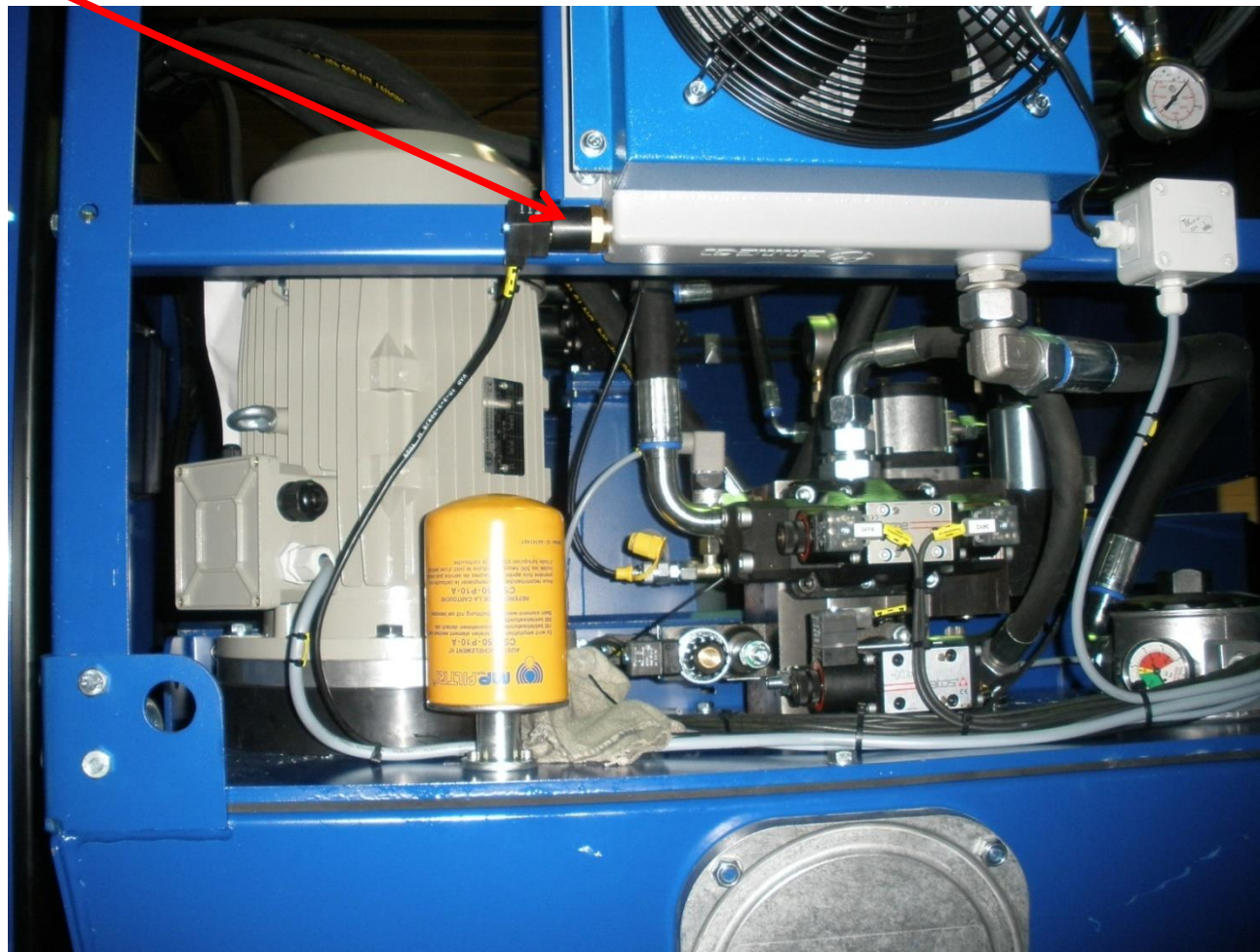
Perform a maintenance with the checklist.

Visual inspection

Visual inspection of the hydraulics for leakages
(Block, hoses, valves, pumps, cylinders, tank, flanges,
oil cooler, gaskets and sealings)

Temp. Sensor TM45A1

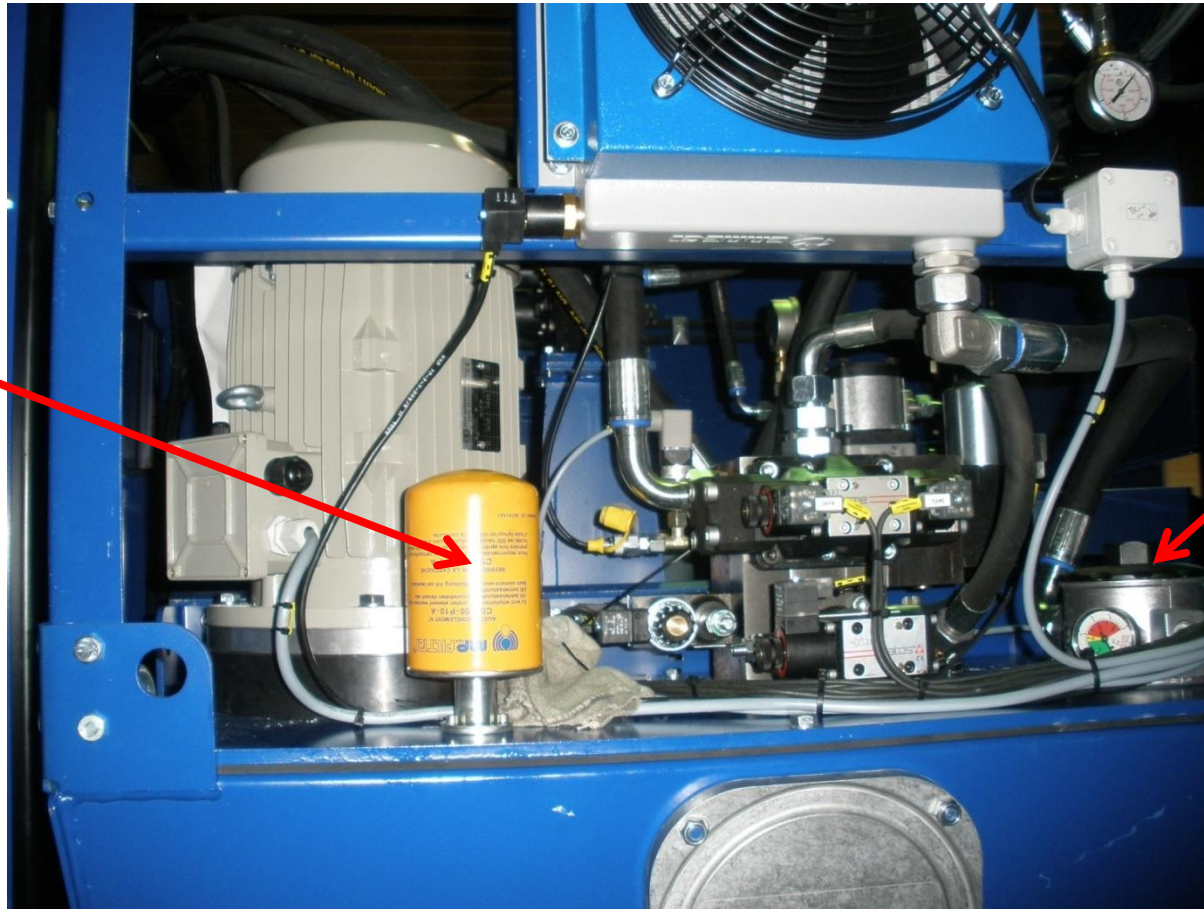
Every 1000 hours



Change filters

Change air- und oilfilter

Every 1000 hours

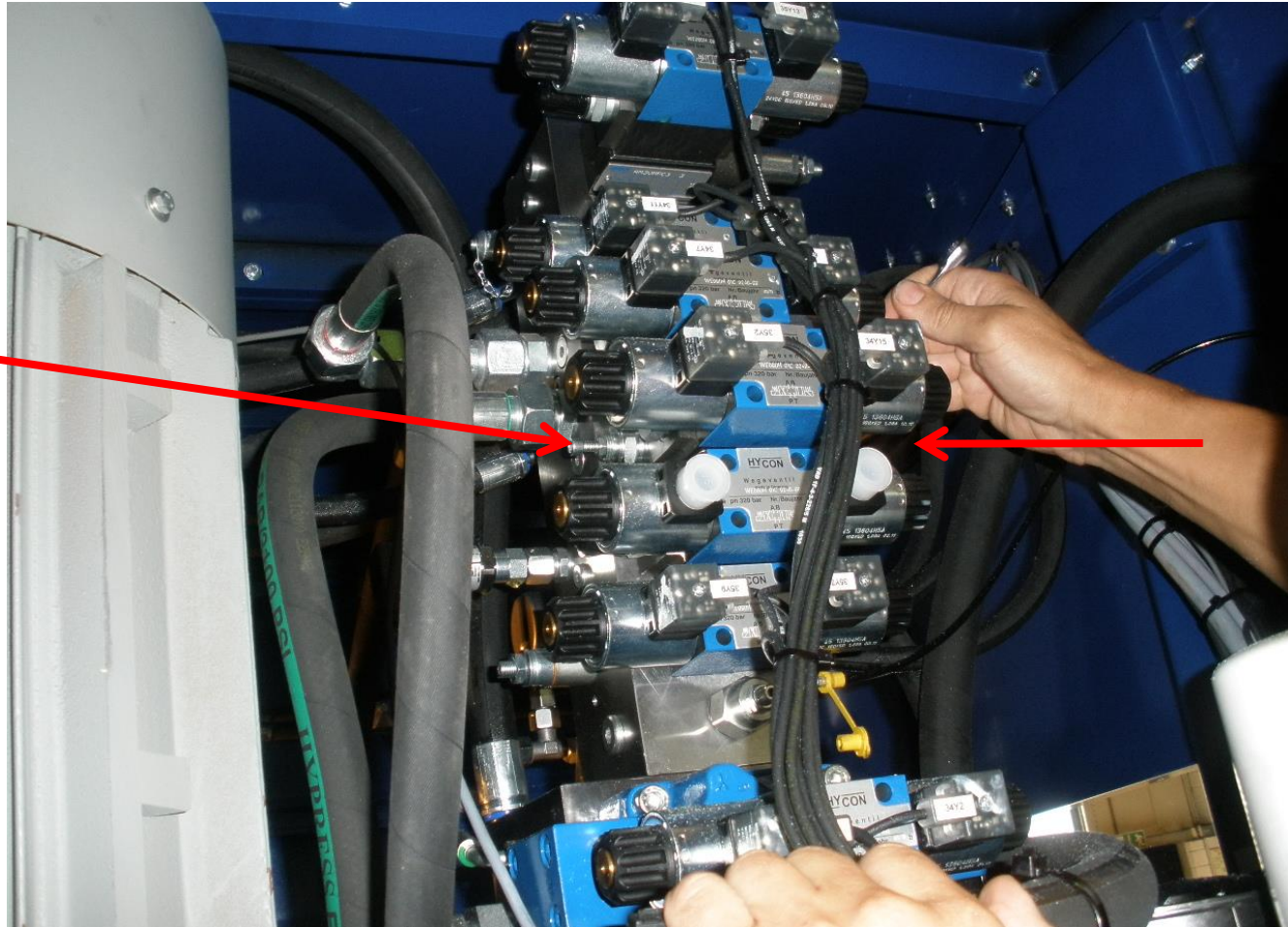


For oil filtration,
unscrew the lid
from the oil
filter and
remove the
filter bowl!

Choker valves

Remove the caps from both choker valves and check if the counter nuts are tight. If the adjusting screw is loose, the feeding slinder bangs every time when reaching the end positions because it moves too fast.

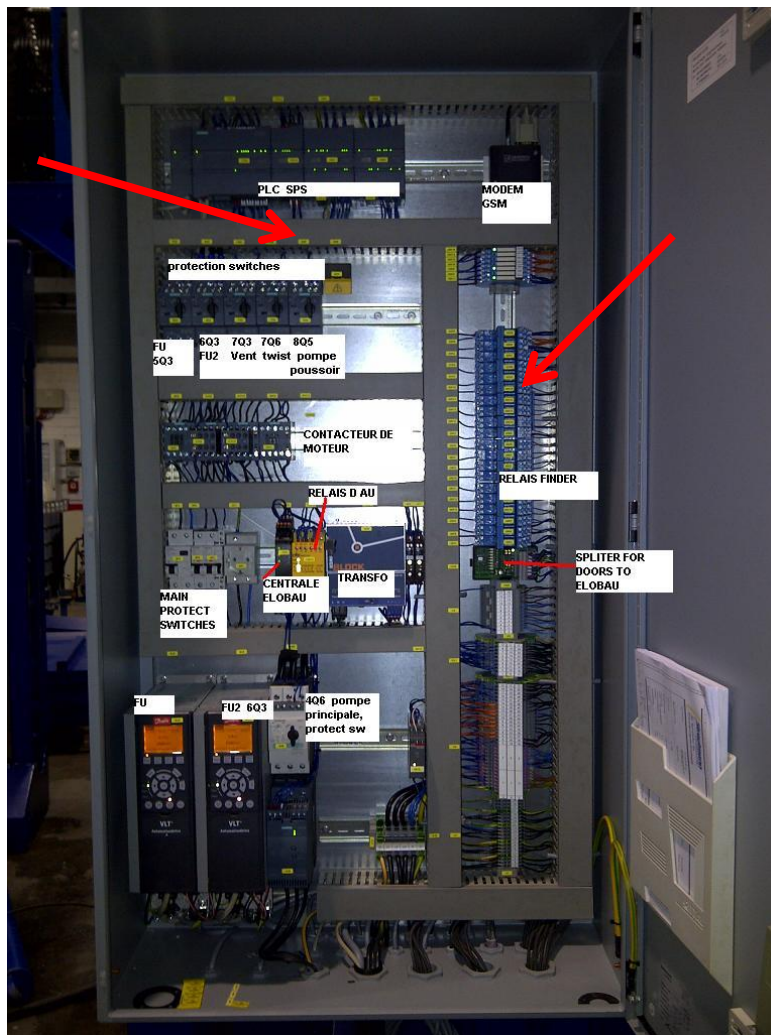
Every 1000 hours



Electric

Control Electric

Every 1000 hours



- Check relay, replace if necessary.
- Drain covers available?
- Control motor protection switch
- Electricbox clean and tidy.

Control of the cable lines to pinching and chafing.



Lubrication

Function, vision and level testing of
central lubrication system or lubricator.

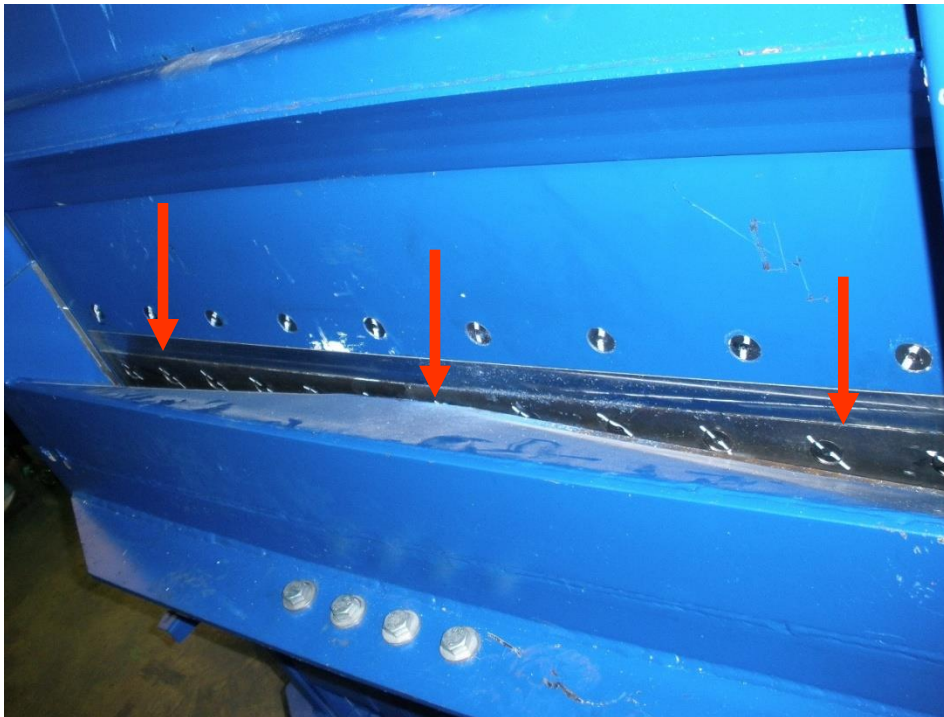


Knife bars gap

Check the knife bars gap with a thickness gauge, in the middle and also at the left and right end of the knife bar. Nominal value 0,3 – 0,7 mm.

Adjust by slackening the fixation bolts of the guiding bars, push the knives towards each other, fix the screws and measure again.

Every 1000 hours

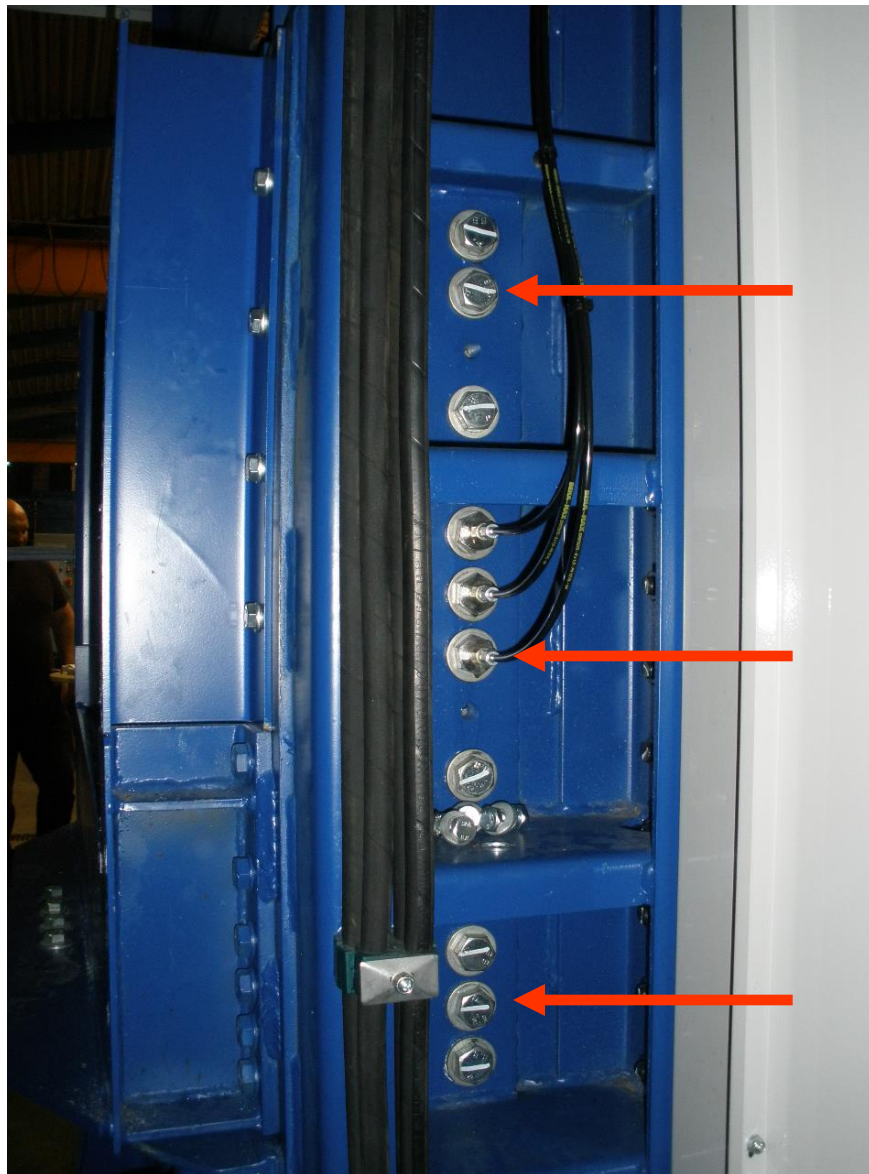


Measure the distance from slide plate to cutter bar. (e.g. with a disc)

The slide plate must stand back 3mm, so that the press shield not colliding with it.

Knife bars gap

Every 1000 hours



Adjusting the knife gap :

Drive the press shield completely down.

Slacken all the marked screws (also on the other side), remove the grease hoses first.

Then push the upper knife bar towards the feeding section, use an assembly lever or something similar.

Tighten the screws again (360 Nm) and make another measurement of the gap.

Press shield guidings

Check the guiding rails of the press shield if they are covered with grease.
Replace grease cartridges if necessary.

Remark: Machines with 22kW hydraulics have a central lubrication system,
no grease cartridges as shown here.

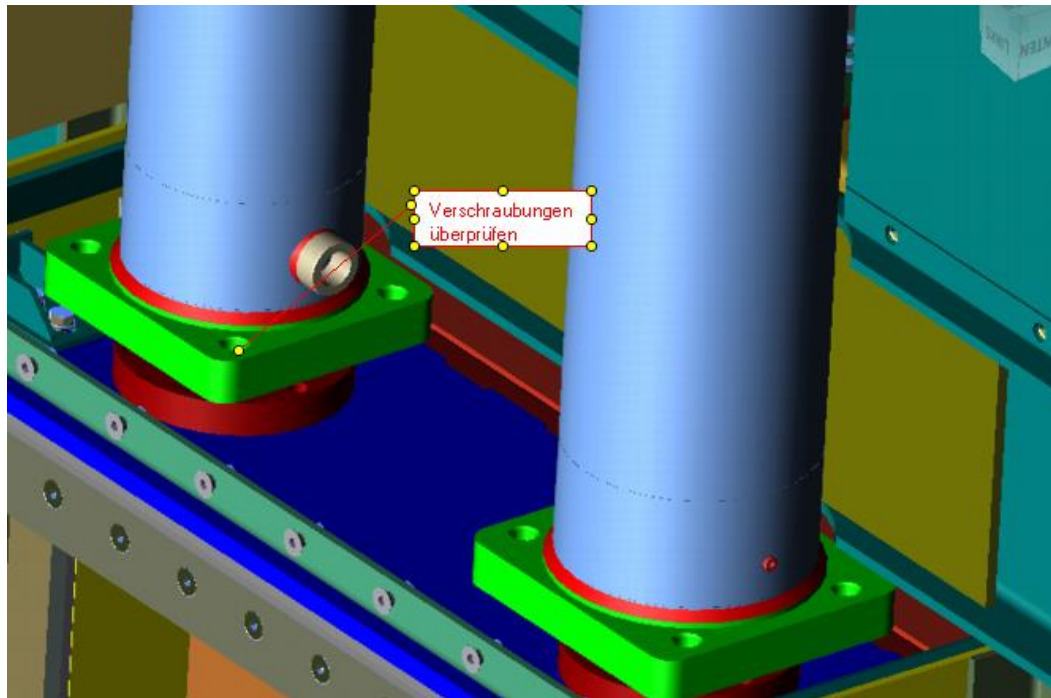
Every 1000 hours



Main cylinders

Check all cylinder screws if they are still tight.
Check hydraulic hoses and cylinder sealings for leakages.

Every 1000 hours



Guiding nut



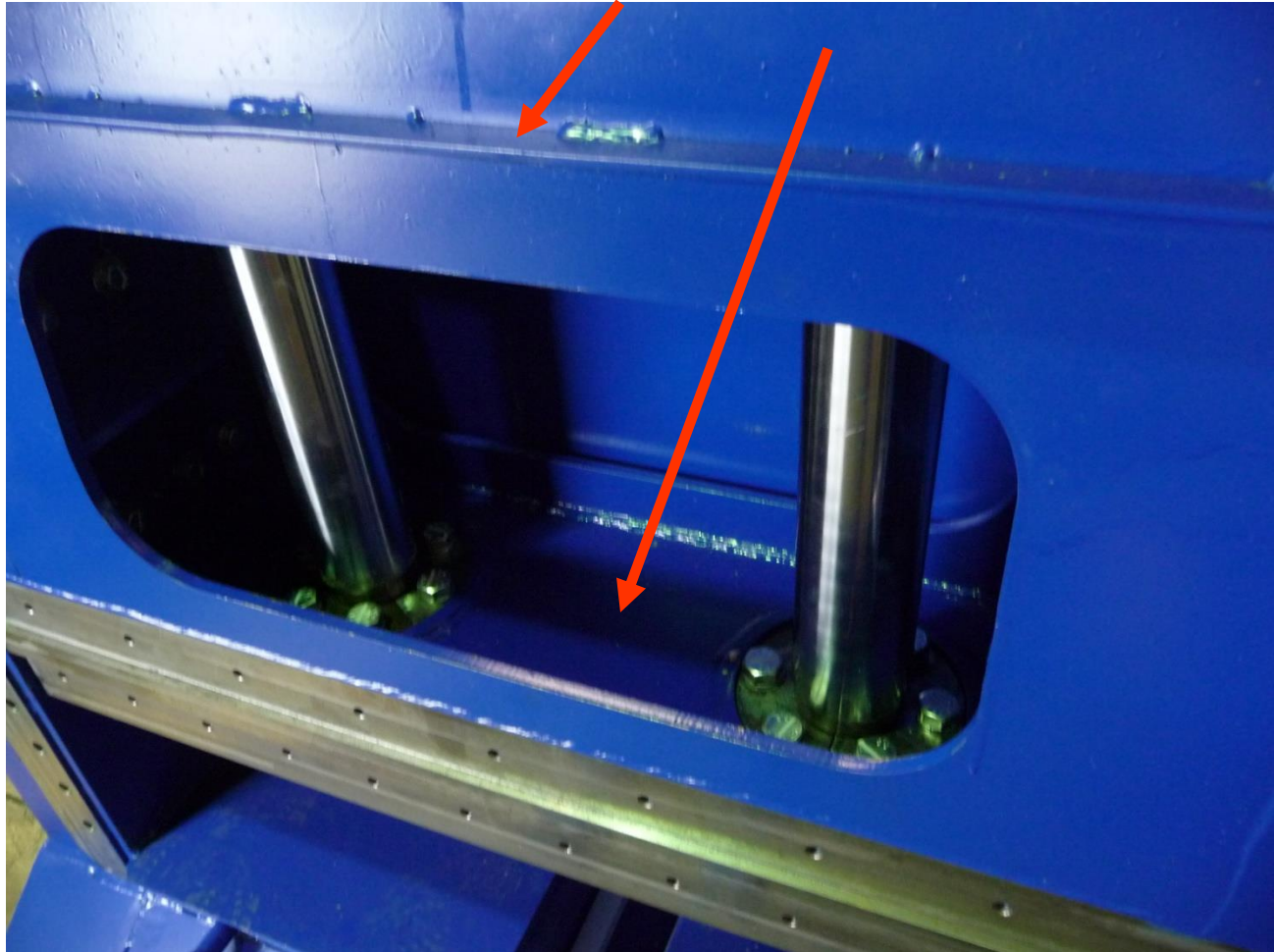
gasket

Maintenance instruction Strautmann BaleTainer®

Press shield

Remove the rear separation plate at the press shield or unscrew the Central plate at the rear (already done in the picture). Remove any material from inside and from the top of the press shield (**IMPORTANT !!**)

Every 1000 hours



Maintenance instruction Strautmann BaleTainer®

Press shield

Check the deflection bar at the rear side of the press shield if the screws are tight. Also check the plastic plates for wear and their fixation screws (accessible from the „inner“ side of the press shield)

Every 1000 hours



Slide plate

Check all inductive sensors for function and gap. Nominal 3 – 8 mm, except
Slide plate out : 10 – 15 mm. Make sure that the sensors are attached securely.

Every 1000 hours

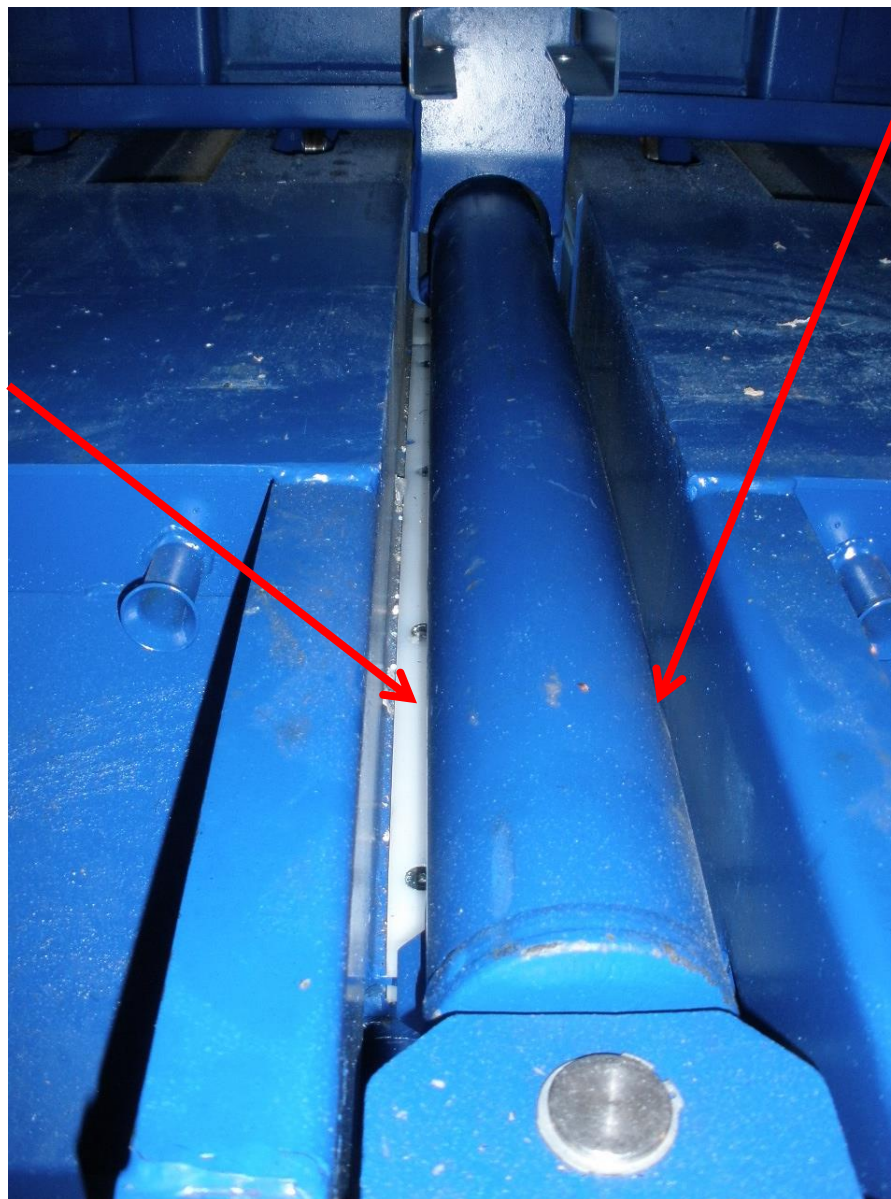


Check the slide plate position!!



Bale pusher

Every 1000 hours

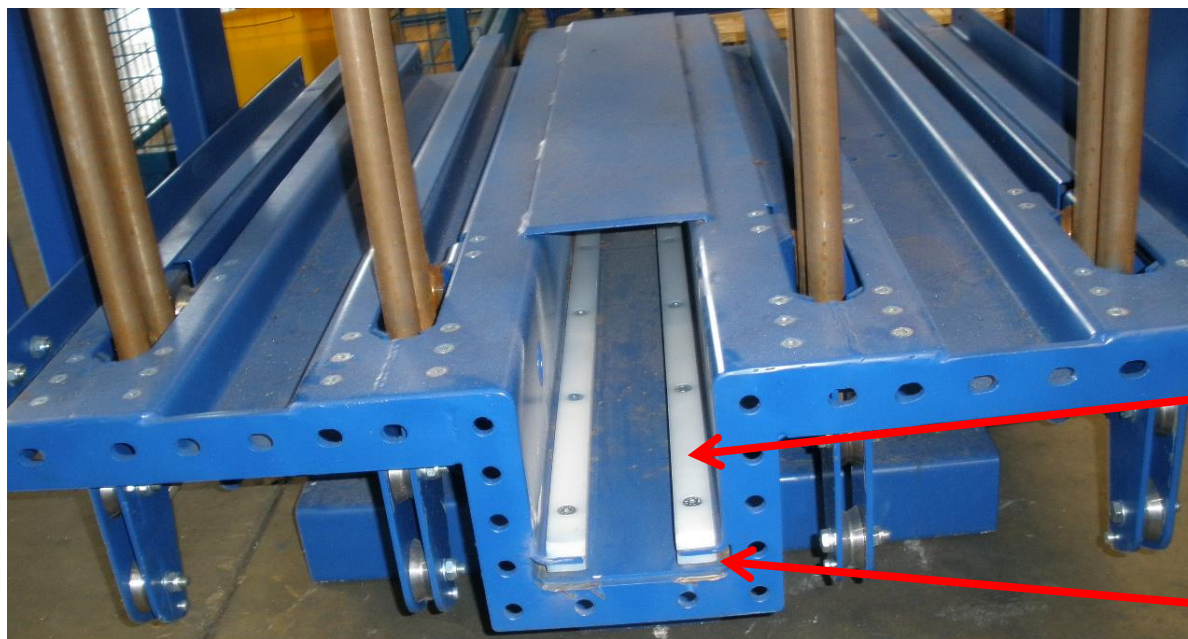


Remove
cover plate
from the bale
pushing
cylinder.

Visual
inspection of
the plastic
guiding
plates for
wear
(see next
page)

Bale pusher

Every 1000 hours



For changing the plastic bars the cylinder has to be removed first.

The bars are split, there is another set of bars underneath the press channel.

The lower bars are equipped with inserted thread nuts.

Bulkhead

Visual inspection and control (hoses, sensors up & down, cylinder and bearing)

Every 1000 hours



Bulkhead guiding bar

Every 1000 hours



Check the brass guiding bars for wear and if they are lubricated.

Check also if the fixation bolts are still tight. Change loose and defect bolts.

Bulkhead and the supporting profiles have to change after 4.000h (22kW PET)

Bulkhead and the supporting profiles have to change after 6.000h (9,2 and 5,5 kW PET)

Bulkhead

Every 1000 hours



Check the fixation bolts of the bulkheads guidings if they are still tight. Change loose and defect bolts.

Remark : Use bolts with 12.9 specification, 8.8. (standard) is not enough

The bolts have to change after 4.000h (22kW PET)

Bolts

The bolts have to change after 6.000h (9,2 and 5,5 kW PET)

Wire tying

Every 1000 hours



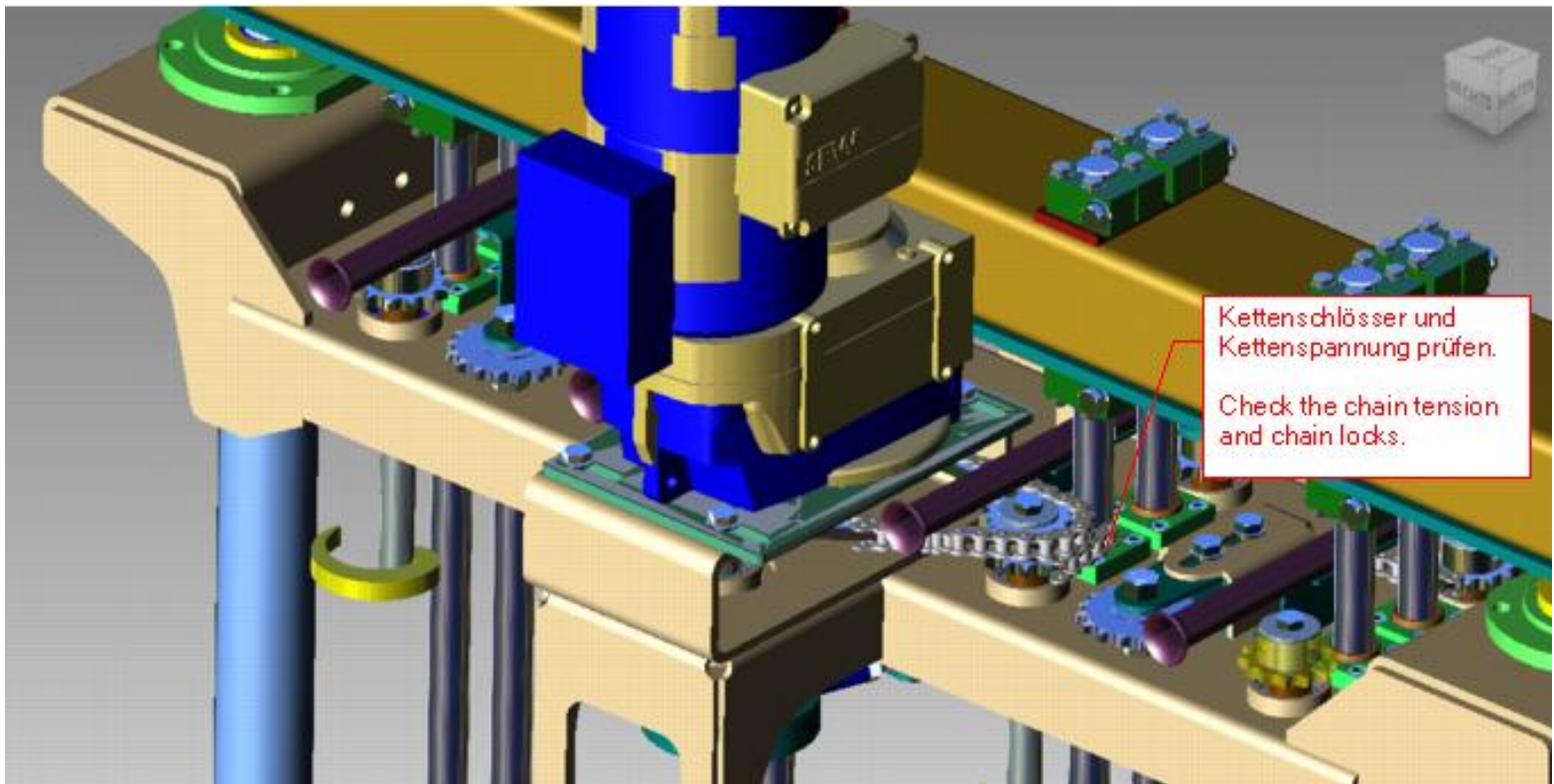
Check all hydraulic hoses and control the sensors up and down.



Tying system

Visual inspection of the chain drive(s).
Check chain locks and chain tension.
Clean up the complete unit with compressed air and lubricate the chain.
Perform function test.

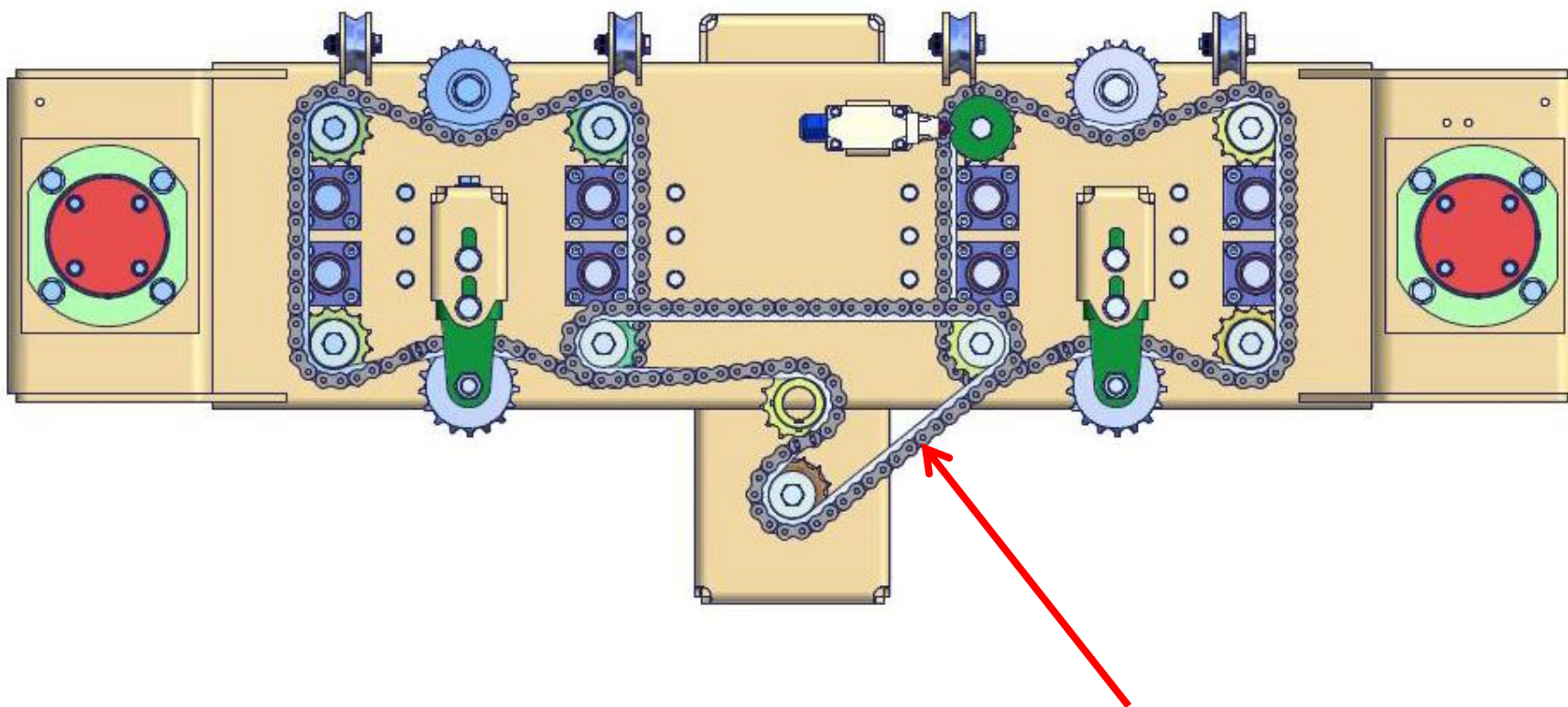
Every 1000 hours



Tying system

Top view onto the chain drives.

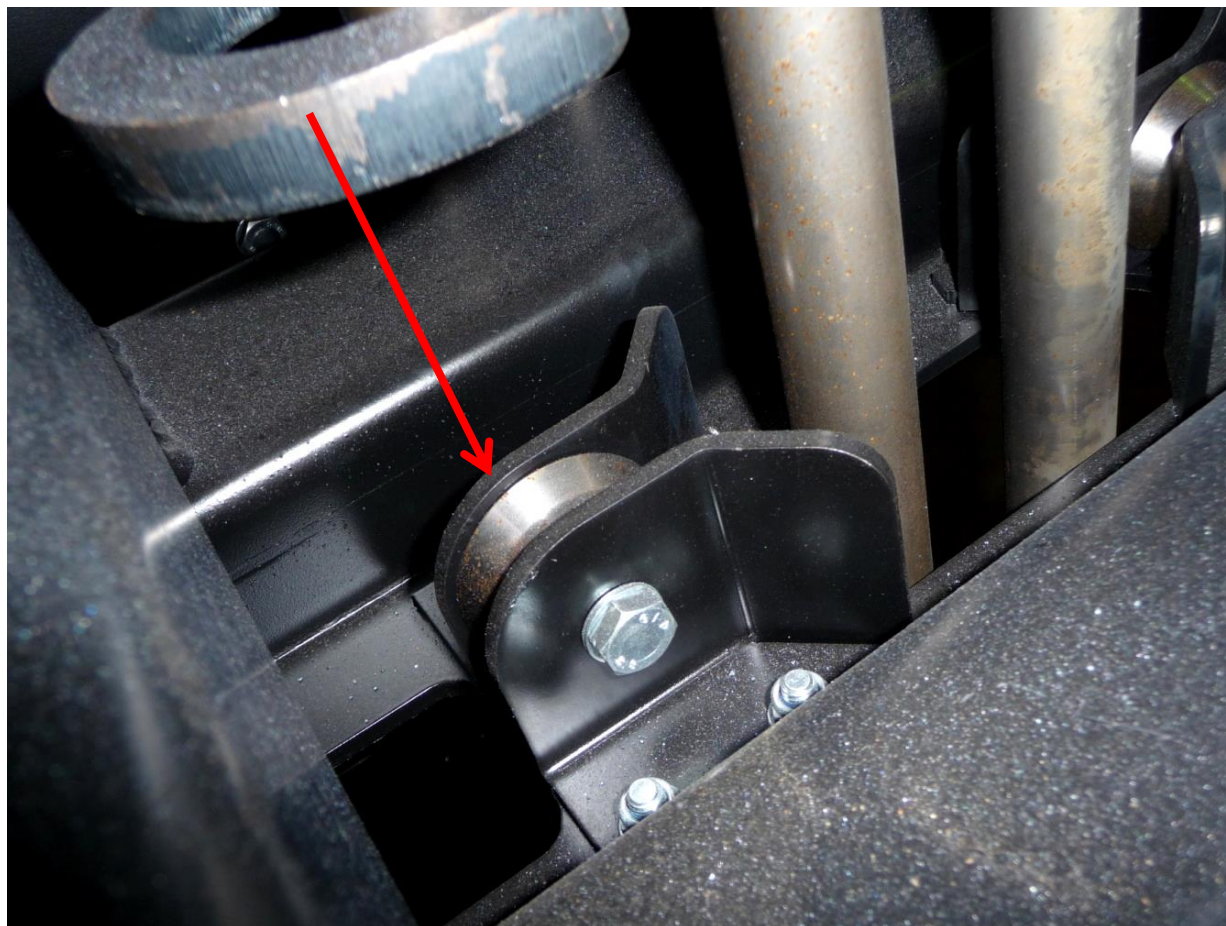
Nominal chain tension : Chain should only be moveable for 5 mm at that point shown in the drawing.



Wire rollers

Slacken the wire a little bit and check all wire rollers. They should be easily moveable by hand. Change blocked and worn out rollers.

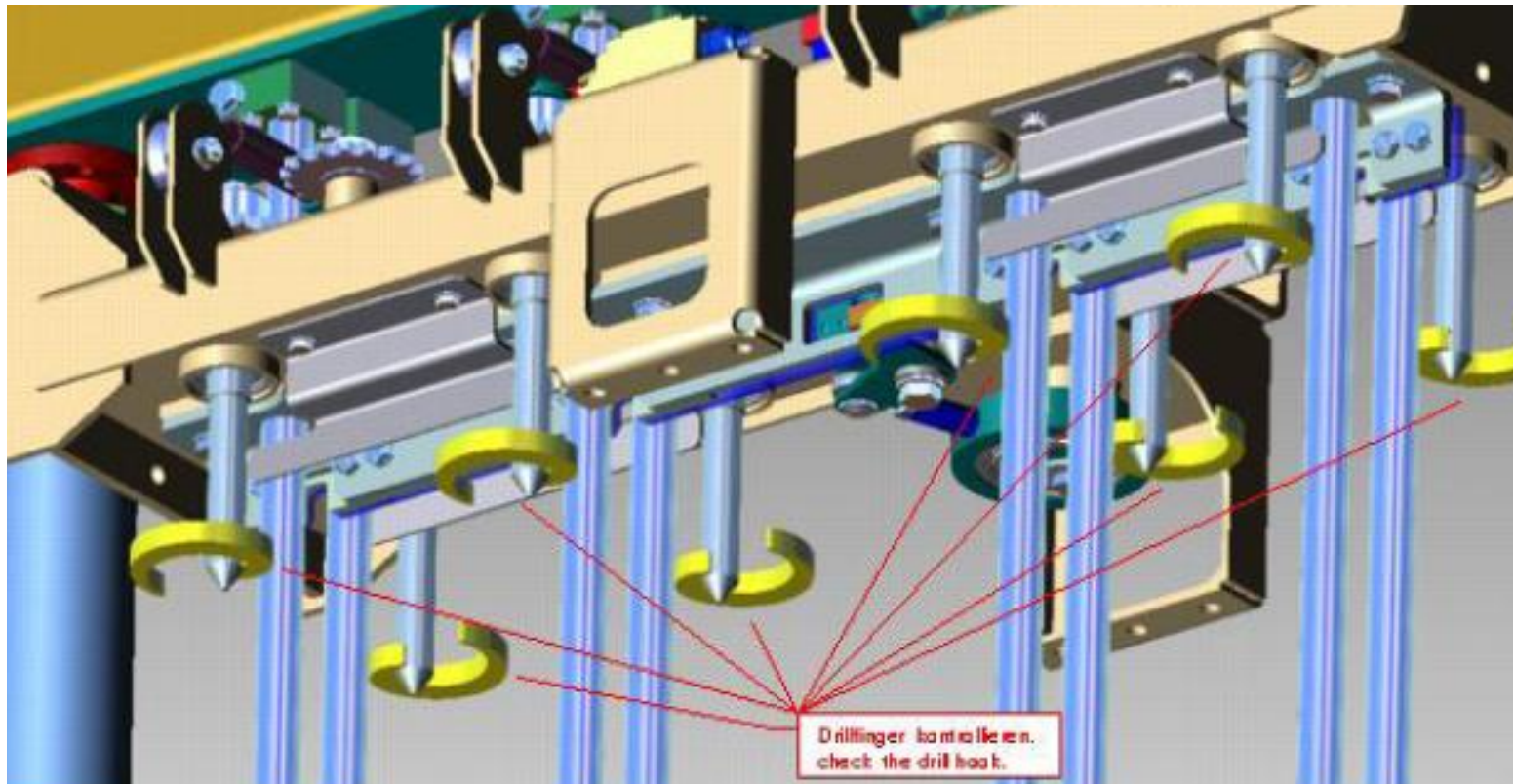
Every 1000 hours



Tying system

Check drill fingers for wear, burrs, cuts, sharp edges, bending and misalignment. Check also their central fixation bolt if it is tight.

Every 1000 hours



Drill fingers

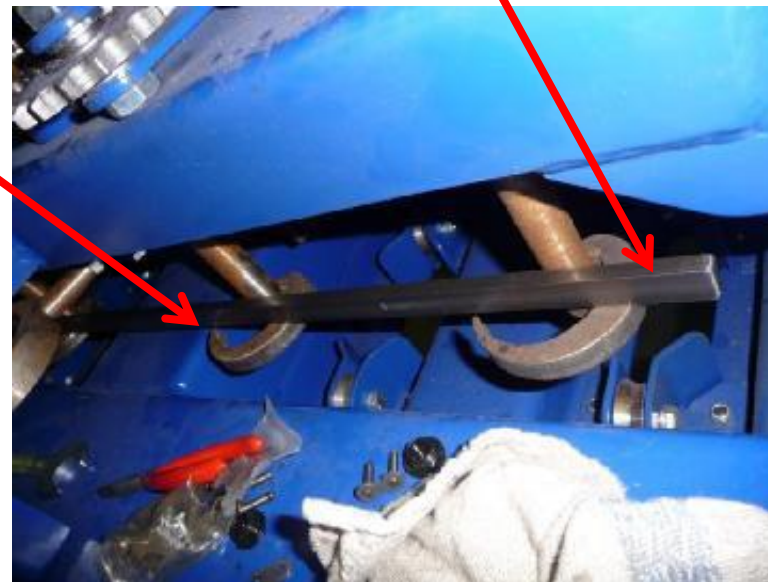
Check alignment of the fingers :
Place an 8mm thick flat steel bar at the shafts of the drill fingers.
Now the tips of the fingers should touch the steel bar (+/- 3 mm)

Every 1000 hours

Tips touch the steel bar



8mm flat steel bar



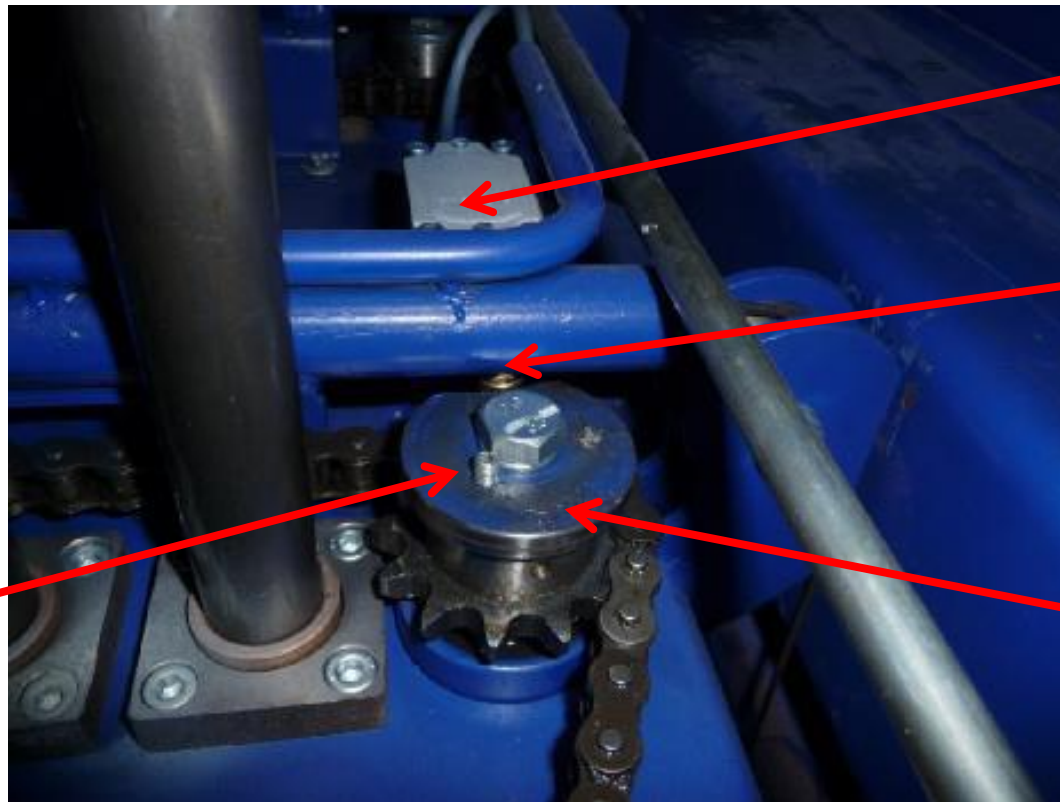
Limit switch

Check correct timing :

In this position of the drill fingers (see previous page) the limit switch of the chain drive must be active. Its plunger must be in the notch of the timing wafer. Check if the timing wafer is not only screwed but additionally secured with a straight pin !

Every 1000 hours

Straight
pin



Limit
switch

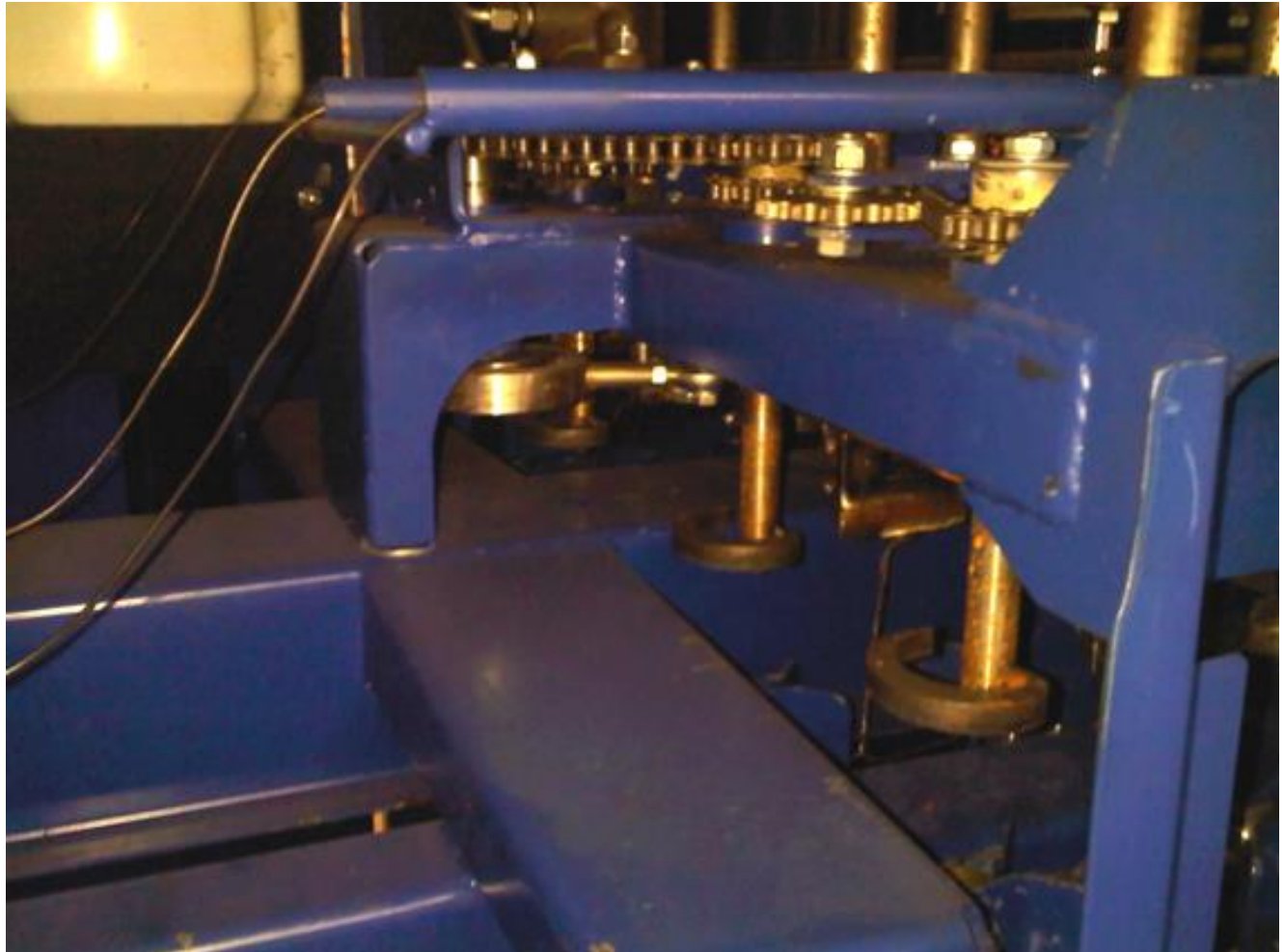
Notch and
plunger

Timing
wafer

Course of the wire

Follow the wire through the machine and check its guidings :
It has to be clean, oily and free of wear, burrs and cuts.

Every 1000 hours



Wire catcher

Check the lower ends of the wire catching arms for cuts, burrs, sharp edges and wear. The rollers should be moveable easily by hand. If not, replace. Hint : Better unscrew the complete head for this !

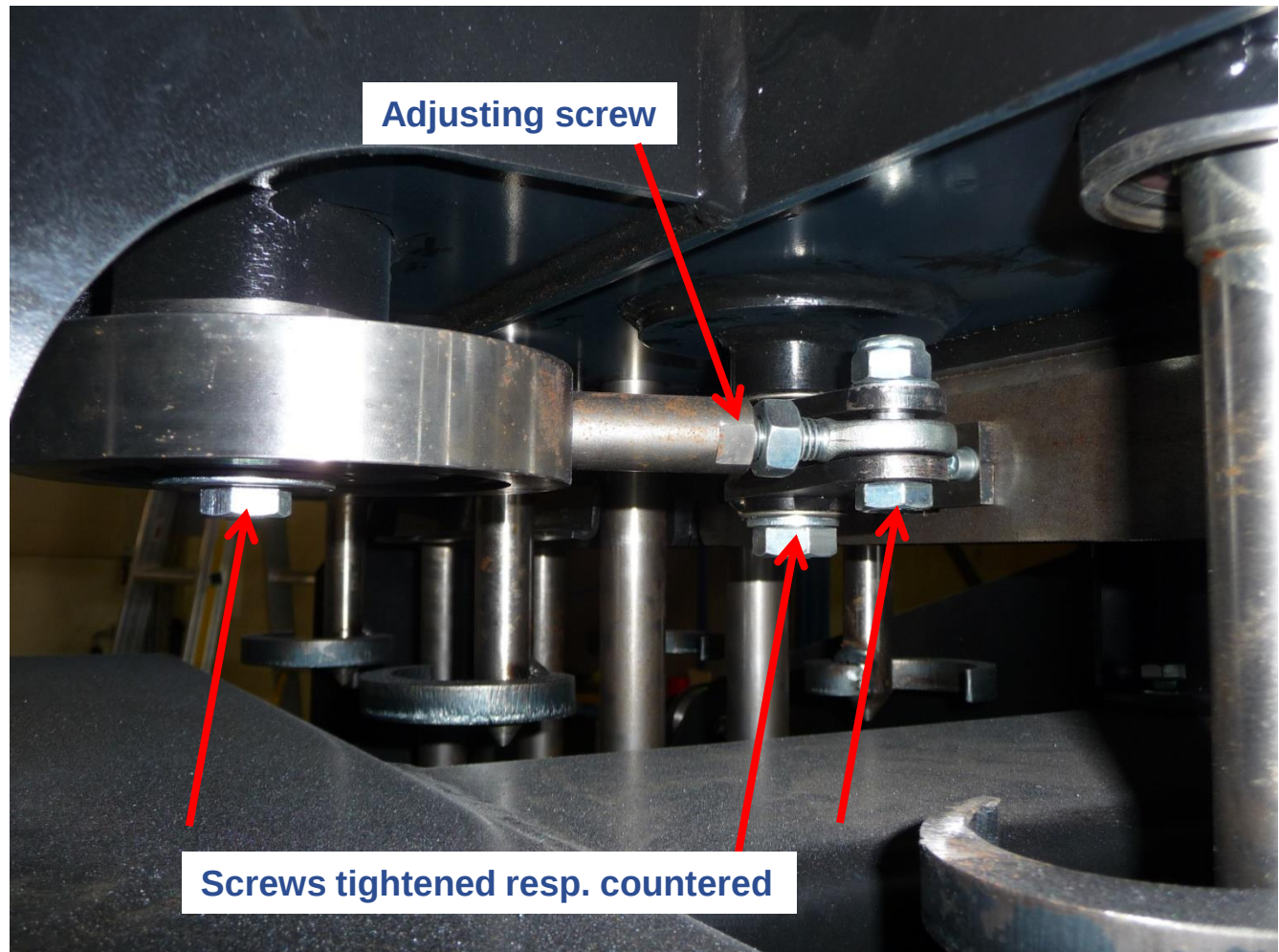
Every 1000 hours



Wire cutter

Check if all screws of the excenter drive are tight.

Every 1000 hours



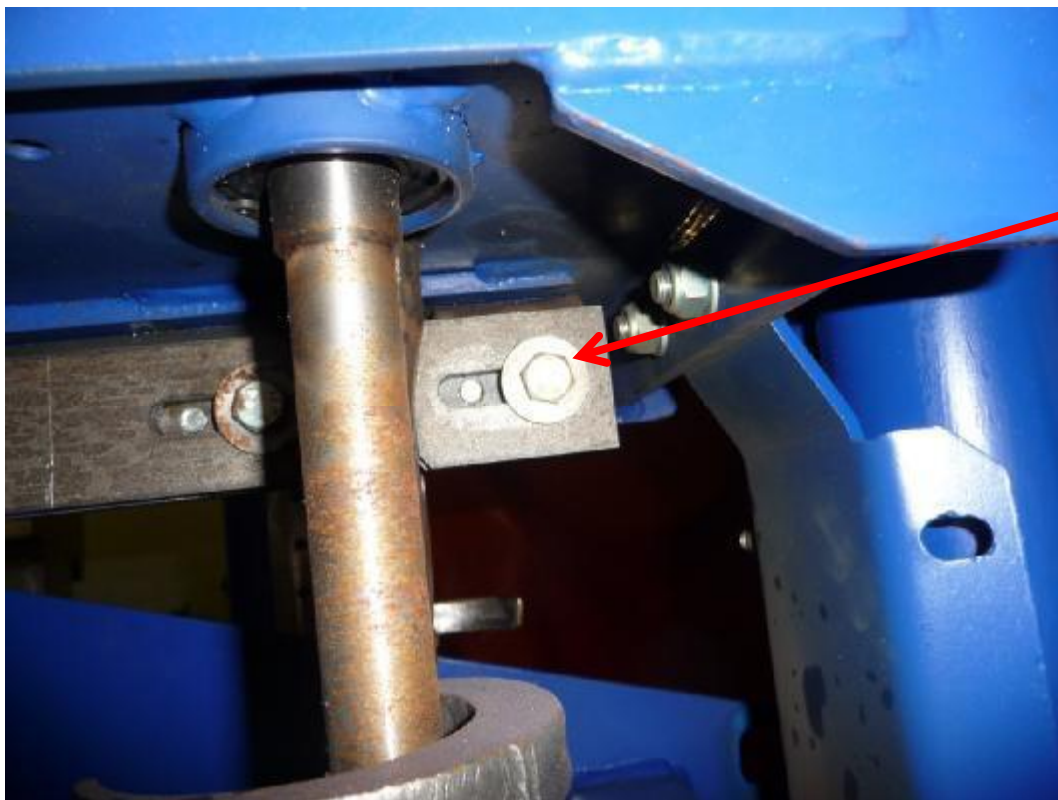
Wire cutter

Check the correct wire cutter adjustment.

1. Unscrew this bolt to get visual access to the complete slot hole
2. Make the twister run in manual mode
3. Check the threadhole's gap the the slot holes ends (see next page)
4. Adjust the gap with the adjusting screw (see previous page)

Every 1000 hours

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Rev.0



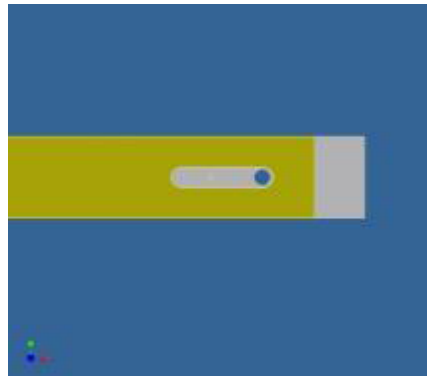
1.

Wire cutter

Check the adjustment by watching the pivoting threadhole in the slot hole. It moves from left to right and backwards. Check the gap the threadhole has towards the edges of the slot hole. Adjust, if necessary, with the adjusting screw (see pages before).

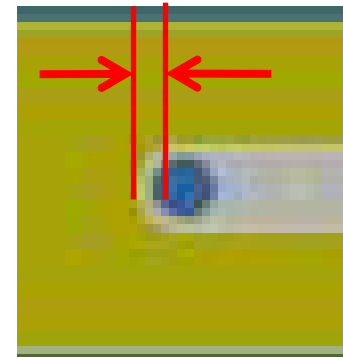
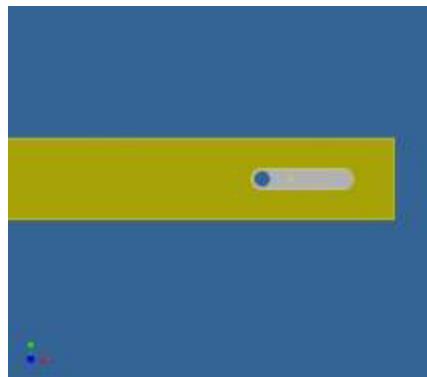
Every 1000 hours

Slot holes



Right dead centre

Nominal gap =
2,4mm



Left dead centre

Nominal gap =
2,4mm

Hydr. hoses

Every 1000 hours



Check hydraulic hoses visually at main power Turned off.
Functional checks to be done with power on.
Faulty, bended, broken, buckled or worn out hoses have to be replaced. Also remedy leakages or change the affected hose.

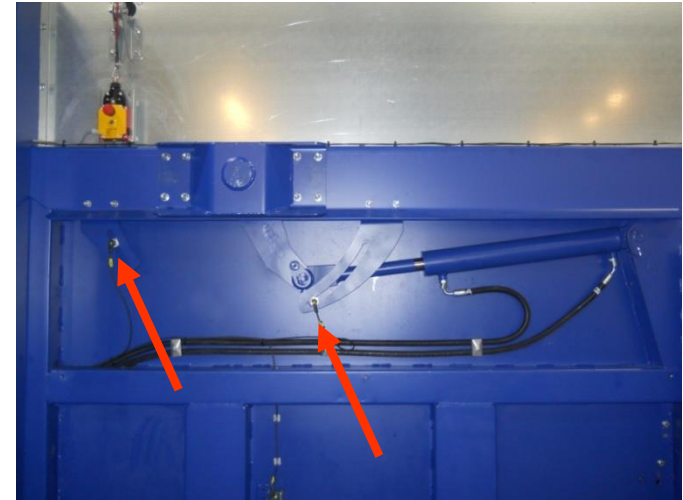
Inductive sensors

Every 1000 hours

Push plate



Swinging plate



**Check all inductive sensors
for function and gap. Nominal 3 – 8 mm**

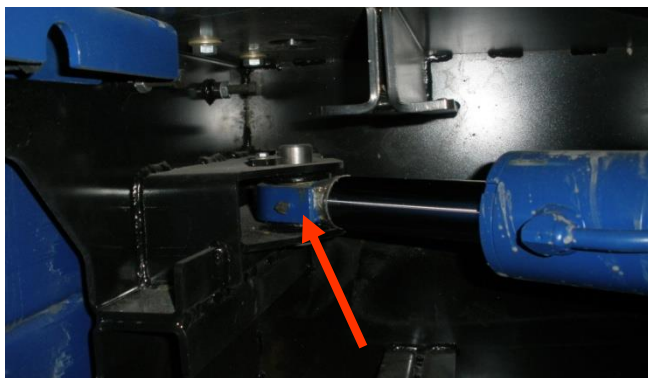


Pendulum plate

Lubrication

Every 1000 hours

Pusch plate



Swinging plate



Pendulum plate



Check the supports of every hydraulic cylinder and lubricate them. There are grease nipples assembled.

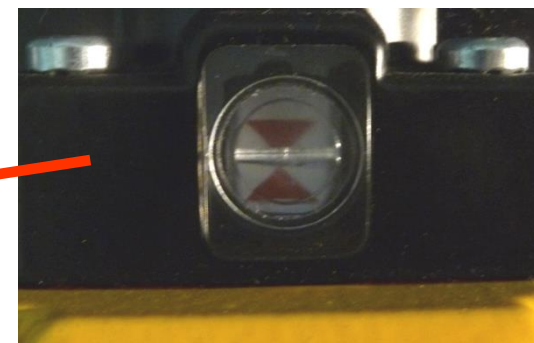
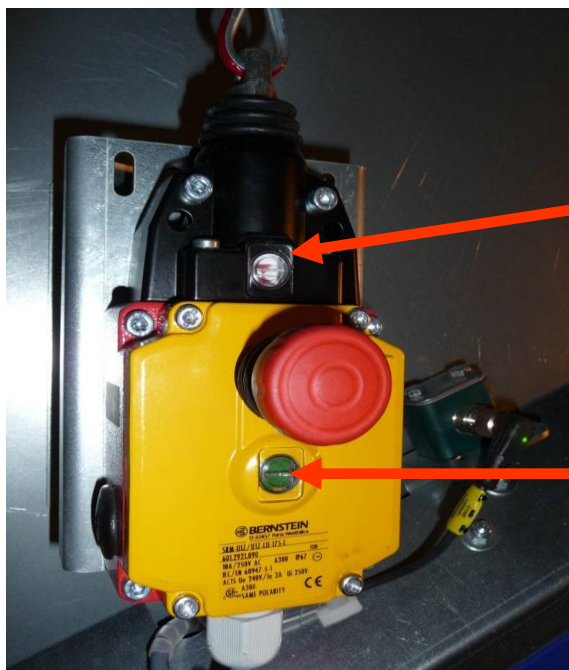
Emergency Stop

Every 1000 hours

Visual inspection of the e-stop trip wires, check the clamp bolts + screws.



Adjust the wire tension with the turnbuckle that this window shows the mark in the middle of the triangles.

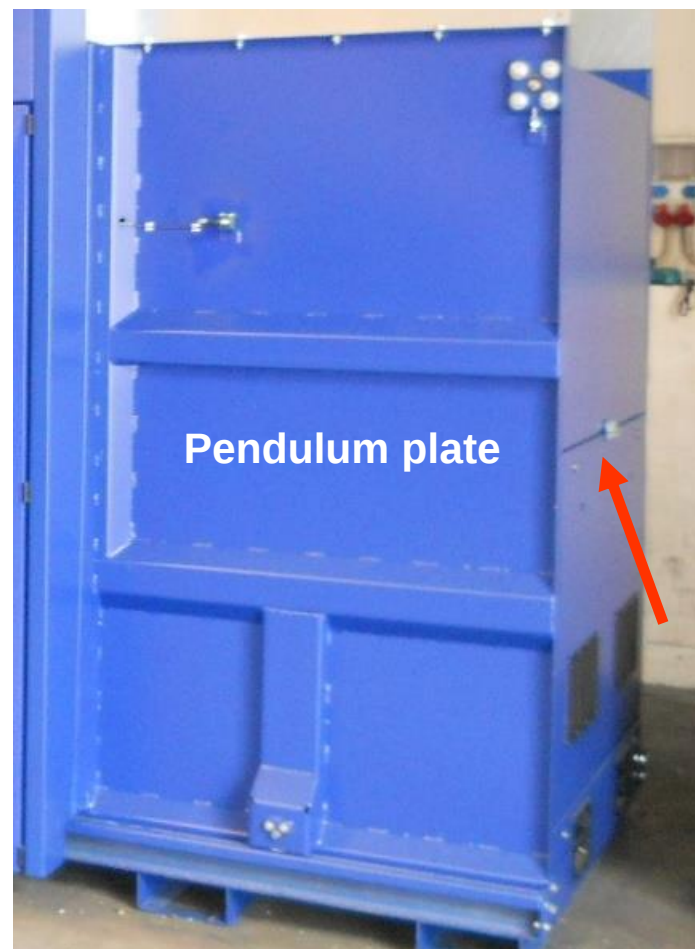


This window must show „green“ when the switch is released.

Sensors

Check door sensors for function, adjust the gap and the position if necessary

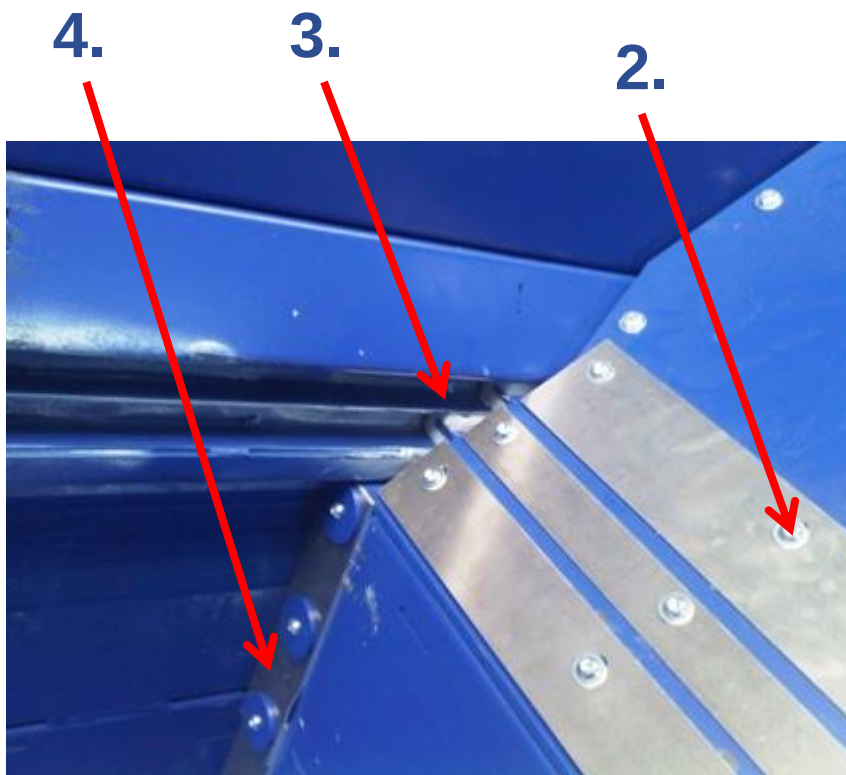
Every 1000 hours



Feeding slider

1. Visual inspection.
2. Check if the screws of the shutter are tightened
3. Check the plastic guiding rails for wear
4. Make sure that the rubber strips are close to the hoppers side walls
5. DO NOT lubricate the rubber strips or side walls !

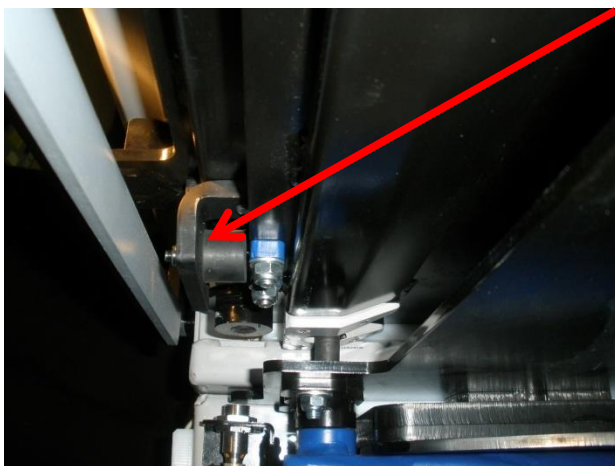
Every 1000 hours



Feeding slider

Check the rear mechanical blocks of the shutter for wear and misalignment.

Every 1000 hours



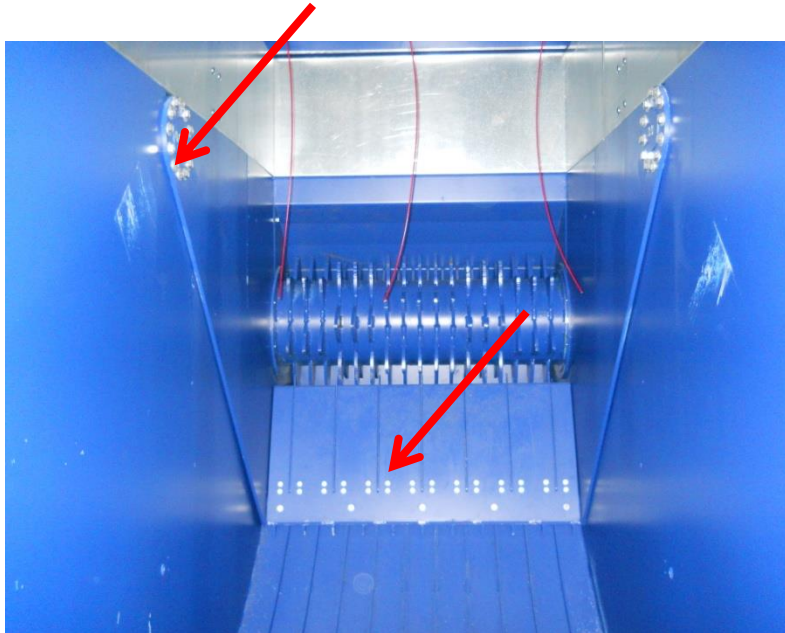
Check the rear mechanical blocks of the shutter for wear and misalignment.



Swinging plate

All screws are tight on swing arm.

Every 1000 hours



Rake

Every 1000 hours



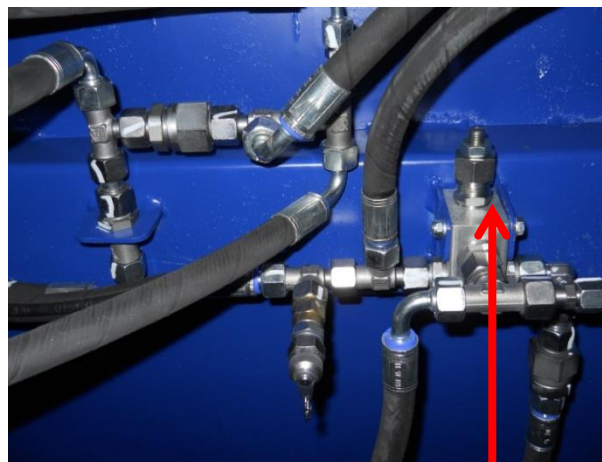
Plan view



Off valve Rake/Swinger



Speed regulation



Pressure setting (240 bar)

Pendulum plate

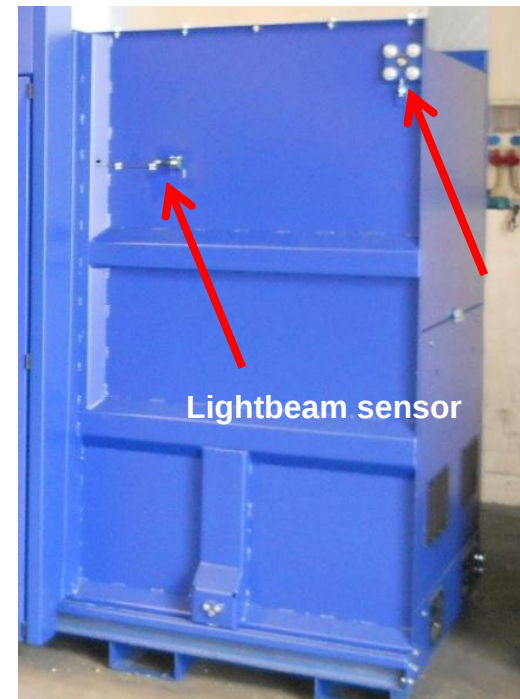
Every 1000 hours



Control of the strippers.



speed regulation



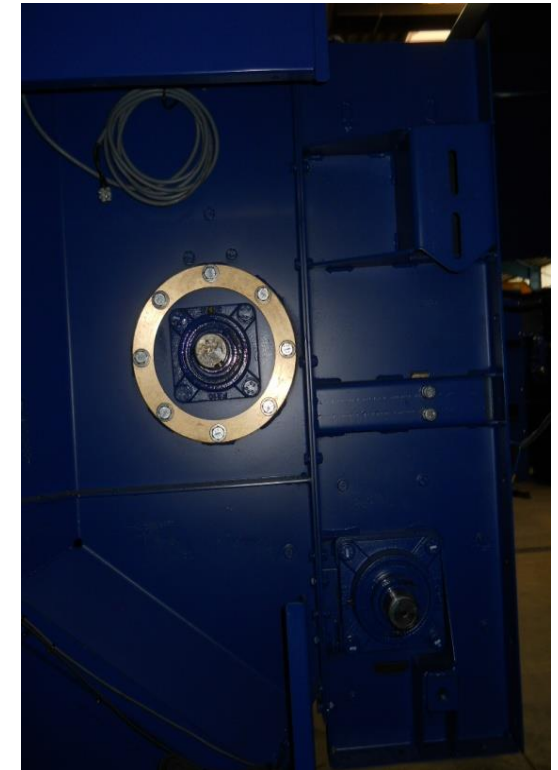
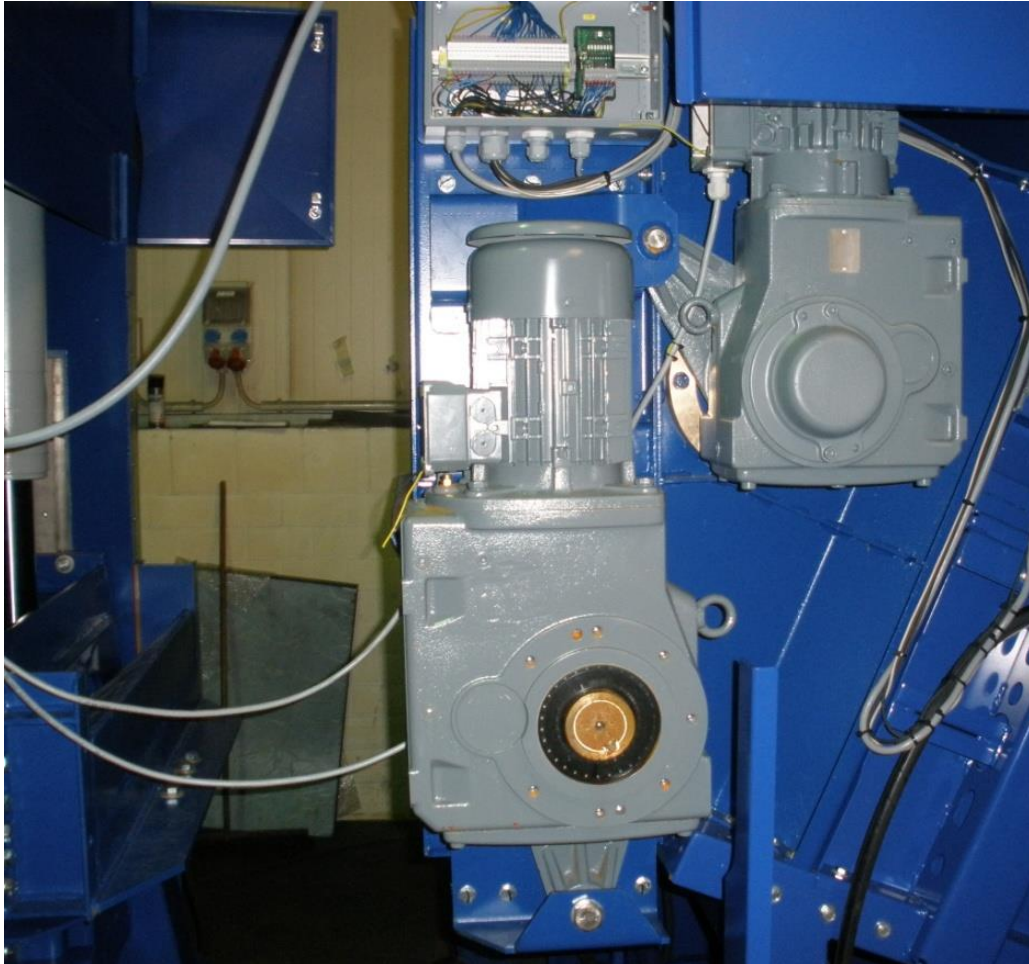
**Lubricate damper
blade guides and
check all screws.**

Gearmotors

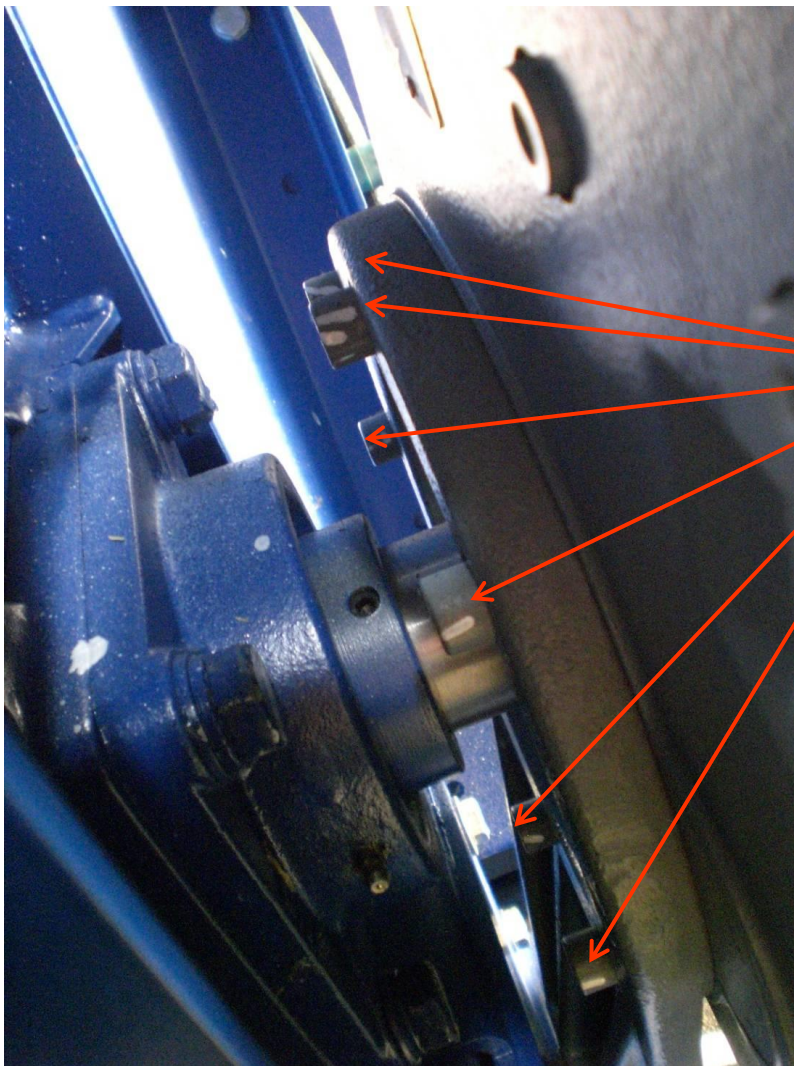
Check the fixation bolts, also of the support, if they are still tight.

Doublerotor with 2 motors

Every 1000 hours



Every 1000 hours

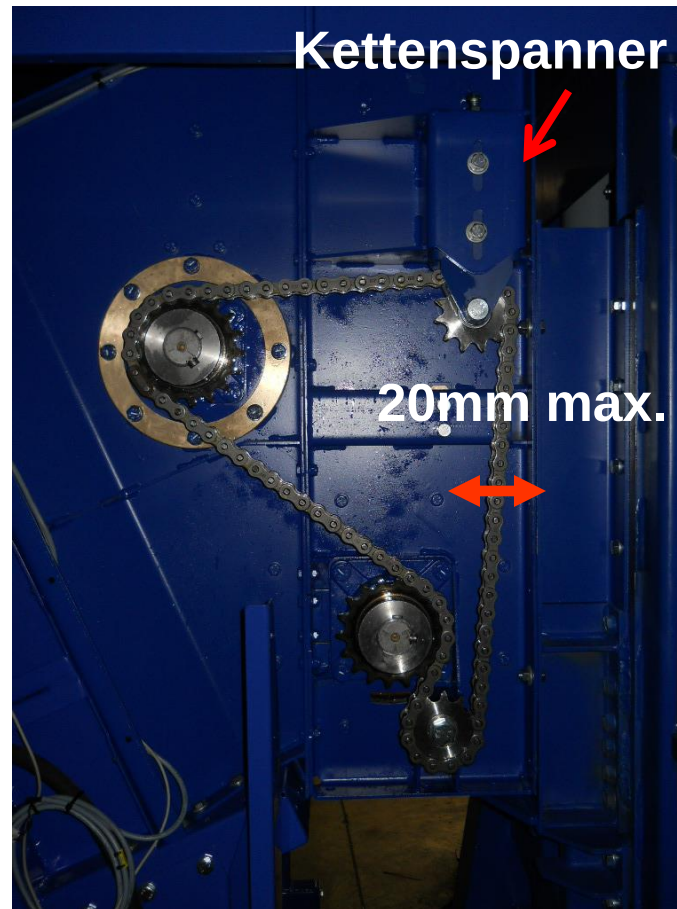


Check the fixation bolts.ey
are still tight.

Rotor

Electro chain drive

Every 1000 hours



If machine is equipped with a chain drive : Check tension and lubrication. Maximum nominal deflection at this point is 20 mm. Also check the chain lock if it is still o.k.

Rotor adjustment

Hydr. Rotor adjustment

Every 1000 hours



Check hydraulic und sensors

Spring package



This free length should be 65 – 70 mm.

Check fixation bolts of the spring package. If possible, lift the rotor comb with a crane for a few centimeters. Check if the unit moves smooth.

Comb guidings

Slacken the adjustment bolts, get the brass bars out. Check for wear, insert them inverted ! They should be barely moveable from left to right with finger force. Adjust the tension with the two bolts below.

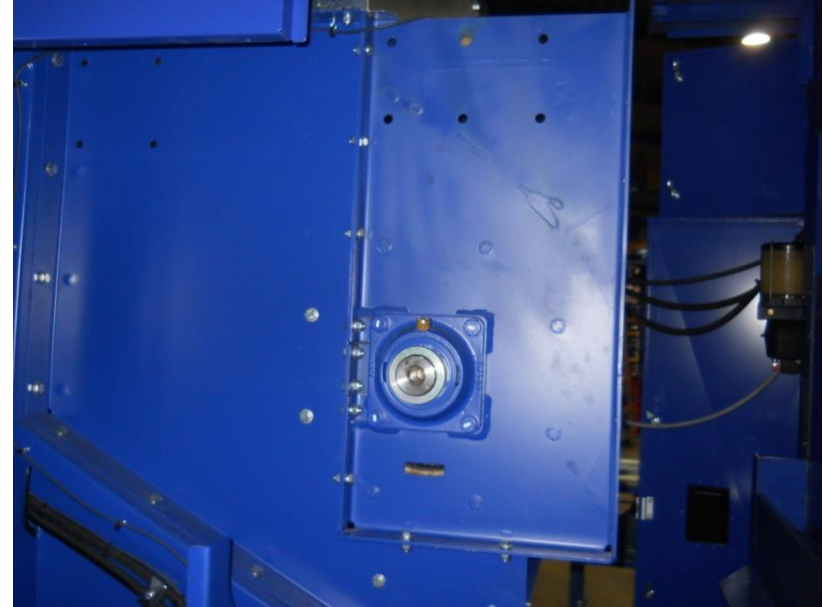
Every 1000 hours



Gear motor

Hydrodrive

Every 1000 hours

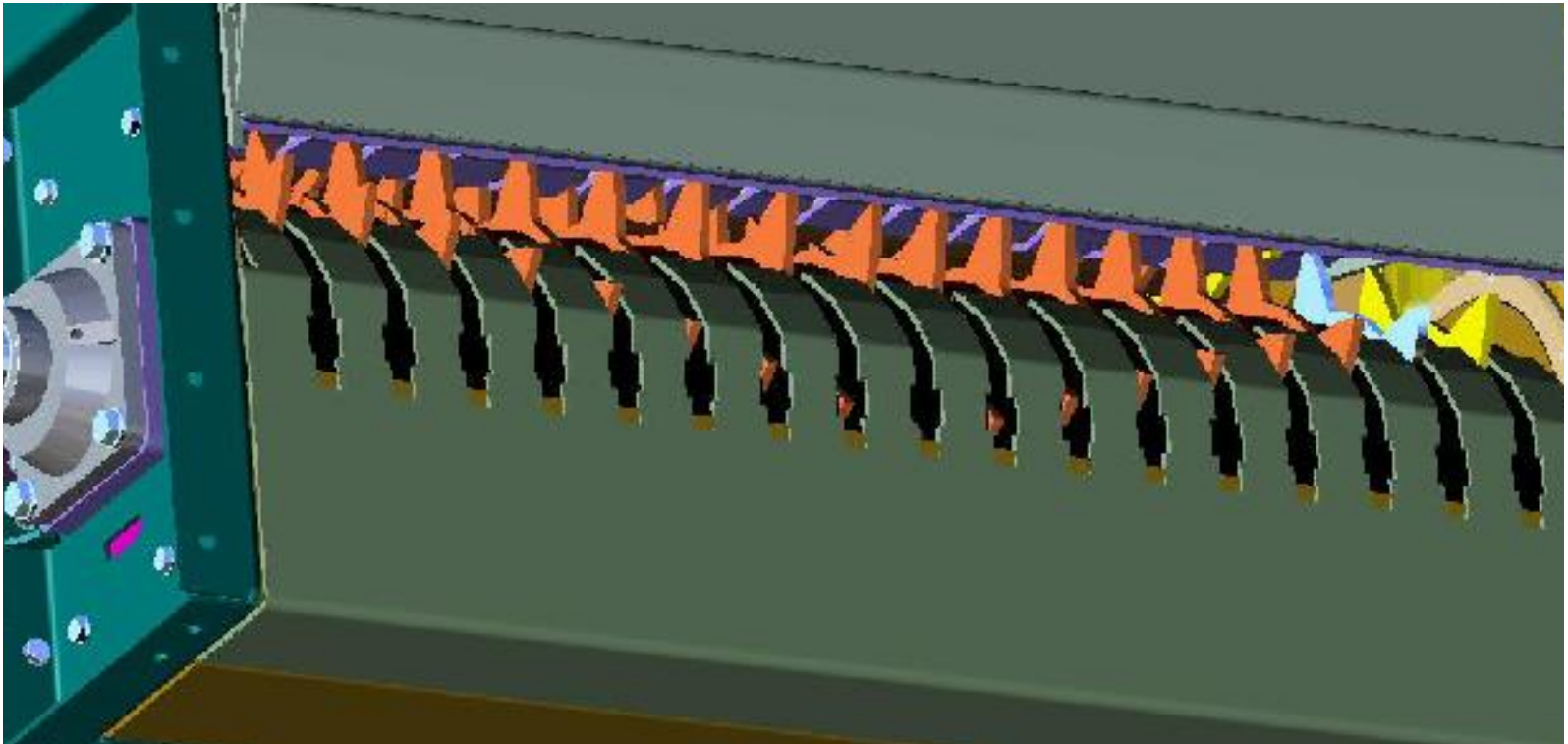


Check hydraulics and the fixation bolts, also of the support, if they are still tight.

Rotor comb

Visual inspection of ALL rotor teeth,
check for wear and broken or bended teeth

Every 1000 hours



Maintenance instruction Strautmann BaleTainer®

Parameter factory setting

delay light beam	20 sec	start by light beam	yes
Overtravel time	2 min	Number of segments	3
Lubrication OFF	120 min / 0	Lubrication ON	5 min / 0
Swinger in front	2 sec	Rotor active	30 sec
System pressure 9,2+22 / 5,5 kW	230 bar / 210 bar	pressing time	2,5 sec
Rotor load for slider stop	40% / 100 bar	Push through position	37-38,4 never change
No-load stroke pos.	69 – 72	Cylinder upper home position	0,5 – 2
Revolutions forward	6-7	Revolutions backward	3-4

	cardboard	PET	Foil
Bale ready, first and last segment	12	15	18
Bale ready, middle segments	18	18	21
Bale nearly ready, first and last segments	16	20	22
Bale nearly ready, middle segments	22	23	25

Number of strokes	1 with feeding slider & swinger, 2 with pendulum plate
Slider delay when overload	2 sec
Feeding slider empty	18 sec / 12 sec pendulum plate empty
Additional pump for feeder	yes

Load rotor comb adjustment	80 % / 100 bar
Rotor comb adjustment on	1 sec
Rotor comb adjustment off	1,2 sec
Low circulation cut-off	55 / 70 / 85 bar with 5,5 / 9,2 / 22kW Hydraulics
Override rotor feeding	no (only for PET)
Rotor backwards	yes

Before changing the parameters, consultation with the Service in Glandorf.



**Cladding panels and completely in order.
Function test of the entire emergency stop system
Machine environment swept left!**