



HD 38/50 Motor Assembly

Issue 2016-11

Maintenance and repair work may only be performed by staff trained in accordance with JBF guidelines on the specific machine. Electrical work must only be performed by skilled staff or the company's electrical fitter.

Safety measures

Switch off the main switch and secure it against switching-on (e.g. with a padlock).

Unplug the mains plug and ensure that the machine is not plugged-in while working on it.

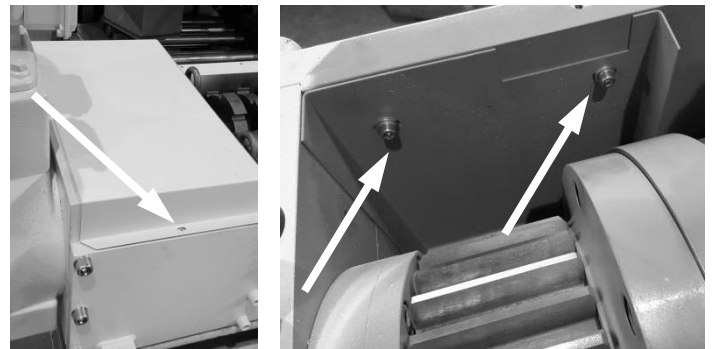
Clear and clean the area around the machine and provide for proper illumination.

If necessary, install protective grating around the machine and working area to keep trespassers away.

Removal of the sheet steel cover atop the synchronizing gears

Unbolt the two allen-head-screws with an allen-head-key size 4 or 5 (both types are in use) and remove the cover.

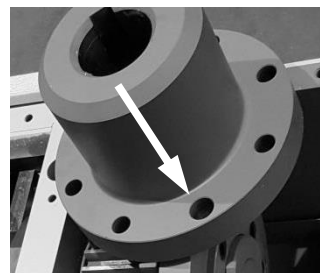
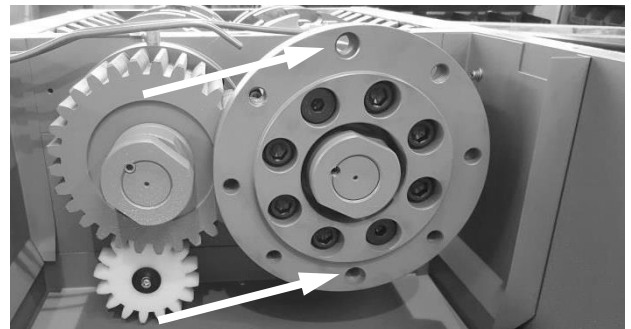
Also it is helpful, to remove the sheet steel oil baffle plate close to the flange for better access.



Rough orientation of the motor flange

The flanges of motor and cutting shafts are connected via 6 allen-head-bolts and 2 fitted bolts. The two large diameter clearance holes of the fitted bolts in both flanges must be brought into rough alignment **PRIOR** to the assembly of the motor to the cutting unit. For this, bring the geared drive roughly in the assembly position, then remove the fan shroud of the geared drive and rotate the fan by hand, which will allow for a rough orientation of the holes in both motor and cutting shaft flanges.

NOTE: When putting a standard bolt into the clearance hole and tightening it, it will damage the clearance hole, which then needs to be reworked with a shortened reamer.





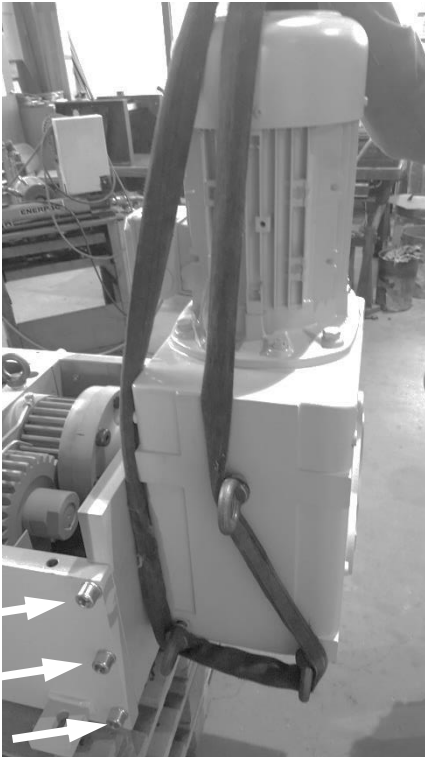
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Raw assembly of the geared drive

Fix the motor to a suitable hoist or forklift with appropriate lifting gear (weight of the geared drive is approx. 275 kg). In optimum case use 4 eyed bolts M16 and a minimum 4 m long roundsling exactly as shown on the pictures below, which will ensure the geared drive is quite well orientated during lifting.

Lift the geared drive and bring it into position at the cutting unit. Fix the motor plate with 6 bolts, but do NOT tighten the bolts.



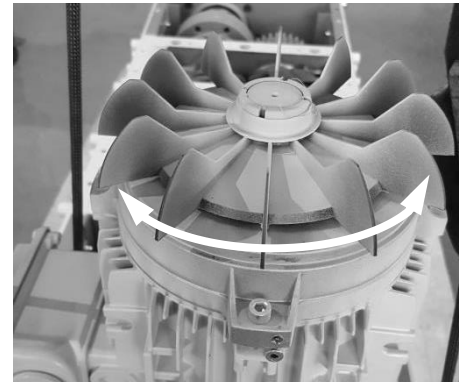
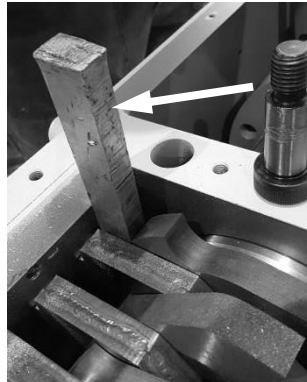
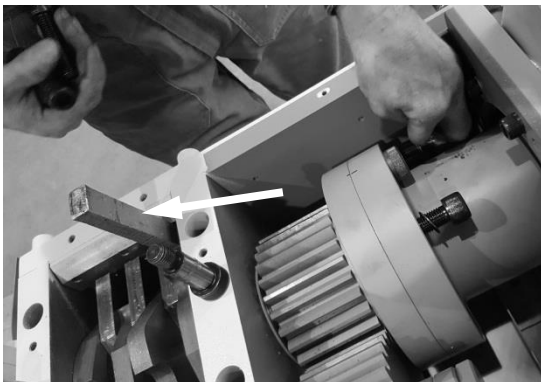


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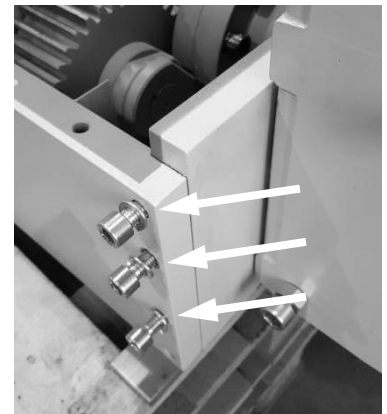
Connecting flanges of geared drive and cutting shafts

Take the first fitted bolt, apply a little grease on the fitting area (NOT on the thread) and put it into the clearance hole of the motor flange. Mate the holes of both flanges by rotating the fan with one hand, while the other hand tries to screw the fitted bolt into the thread of the cutting shaft flange. This should be done by one person, which will feel when the alignment of both flanges is perfect and the fitted bolt slides into the thread. Screw-in the fitted bolt with a size 10 allen head key or nut and tighten it with a torque-meter at 200 Nm. **TIPP:** to block the cutting unit for tightening, you can either hold the fan firmly or put an alloy bar (15 x 25 mm, approx. 220 mm long) between knives and side plate of the chassis. Then put these of the 6 standard allen-head-bolts with washers into their holes, which you can reach. Use only the supplied bolts with 12.9 tensile strength. Fix them with a size 14 allen head key or nut and tighten them with a torque-meter at 320 Nm. Now rotate the cutting block via the fan, until you have good access to the other holes and fit the other fitted bolt and allen head-bolts. Tighten them as described before.



Tightening the chassis

Now tighten the six bolts (3 on either side), which connect the motor plate with the chassis. You need an allen-head-key size 14 and a tightening torque of 195 Nm.



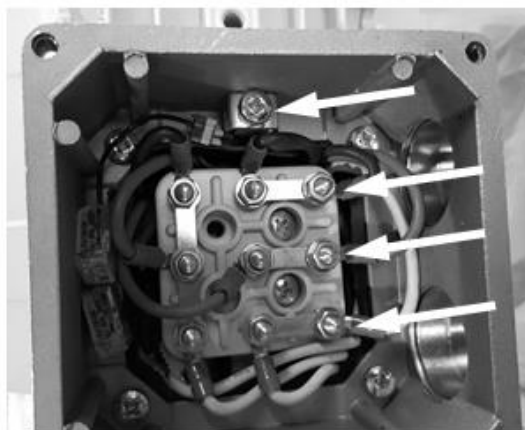


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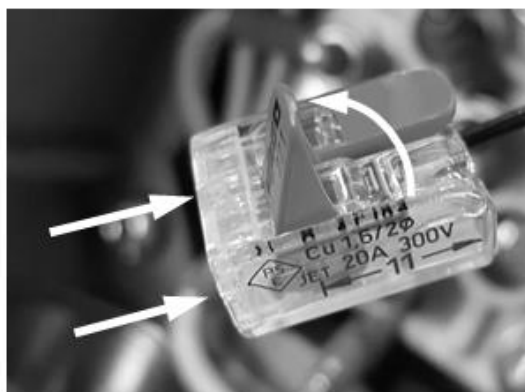
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Electrical connection

Open the terminal box with a screwdriver for recessed head screws and put the cover aside. Open the cable gland a little bit and guide the motor cable and the cable for the thermos protection through the cable gland into the terminal box. Unbolt the brass nuts with a size 8 wrench or nut and remove the washers. Now put the cables with their ring cable lugs on the terminals and fix them with the brass washers and nuts. **ATTENTION:** Check positioning of wires and jumpers and correct if necessary, depending on the applied voltage and motor execution.



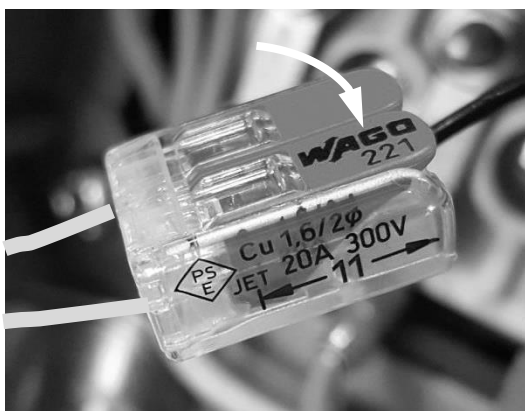
Connect the thermos protection (2 thin wires) to the respective terminals. Pull the loose WAGO terminals out of the terminal box, open the clamping by pulling the two orange levers up and insert the two wires into the terminals.



Fix the wires by pushing the orange levers down again.

Put the WAGO terminals into the terminal box at a suitable place.

Now tighten the cable gland and then put the terminal box cover in place and tighten it with the 4 recessed head screws.



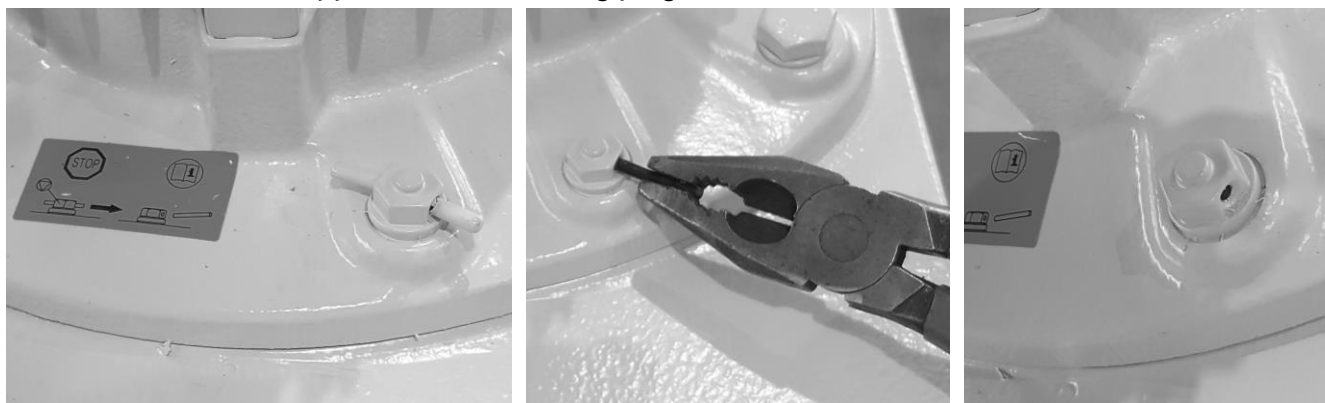


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Enable Venting

Remove the rubber stopper from the venting plug.



Test run

Ensure that no other persons are around the machine. Connect the machine with the electrical supply and switch the main switch on. Press the start button of the machine. Check if the motor and cutting shafts rotate properly and without any strange noise. Then check the correct direction of rotation.

Finishing work

Stop the machine again and assemble the sheet steel cover atop the synchronizing gears with two allen-head-bolts.

Check all safety switches for proper function and all safety features for completeness, proper installation and function. Then operate the machine with shredding material. Check again whether motor and cutting shafts rotate properly and without any strange noise. Also check whether the machine reaches the intended performance and whether the temperature of motor, gearbox and cutting shafts stays in the regular range. When all this is ok, the machine can be handed over to the operating staff again.

JBF Maschinen GmbH

Flurstrasse 8

88367 Hohentengen / Germany

Tel. 0049 7572 76410

info@jbf-maschinen.de

www.jbf-maschinen.de

