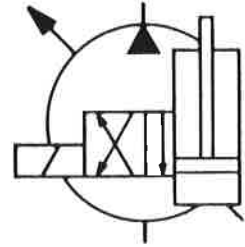


Attema

Systemtechniek

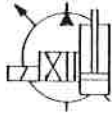


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Giro nr. van de bank 954361
Inschrijfnummer K.v.K. 58423

OWNER'S MANUAL





Maintenance

Propeller assembling and disassembling

The position numbers refer to drawingnumber 255.50.000

The propeller is mounted on a cylindrical shaft, and is secured with propellercap (14) and imbusbolt (15).

In case of disassembling you have to remove the propellercap and the imbusbolt and take off the propeller. If necessary you can use a hammer and a piece of wood to exert force on the propeller. Before assembling you have to provide the shaft with anti-bloc grease. After this you can place the propeller and the propellercap. You have to provide the imbusbolt with loctite type 242E to prevent loosening.

Chainbelt

The position numbers refer to drawingnumber 255.50.000

Replacing the chainbelt can only be done when you remove the bowthruster completely. The work-order is as followed.

- Release the securebolts and the tighteningbolts. Now take of the engine and the two excentrical deflexion shafts (pos. 21). Remove the driving shaft.
- After this, dismantle frontcover (12) by removing the the bolts. Now take out the complete shaft assemblage.
- Take out the chainbelt and replace it with the new chainbelt. check the bearings and seals, replace them if necessary.
- For assembling follow the steps the other way round.

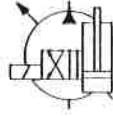
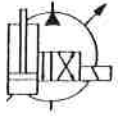
Adjustment of the chainbelt.

- Check the chainbelt on running free in the bootleg.
- Tension of the chainbelt:
F 35: between 105 N and 115 N by 4 mm depression.
F 50: between 157 N and 172 N by 4.3 mm depression.
This measurement takes place between the underplate and the upper drive with a special tension gauge of AMEQ (order no. 7401-0076).
- Check the chainbelt for running straight on the pully. When running in both directions the chainbelt will run to one side. If necessary, you can change it by moving th excentrical deflexion shafts.

Chainbelt type F 35: 8M-1120-62
F 50: 14M-1260-68

Reparation and Mechanical fault:

Reparation should be done by an approved AMEQ dealer.
Contact Attema Systeemtechniek for adresses.



Owners manual F35/F50 Bowthruster

Placing instructions

- In General:**
- Place the bowthruster as far as possible forwards in the ship. This increases the effectivity of the bowthruster.
 - The tube should be at least one times the diameter below the waterline. If the tunnel is 300mm in diameter then the top of the tube should be installed 300mm below the waterline.
 - You can place the Amej bowthruster in any position (angle). You have to keep in mind that for service, you have to take apart the bowthruster
 - To protect the ship against electrical corrosion, You need to place enough anodes in or near to the pipe. When mounting the bowthruster in a polyester or aluminium ship it's recommended to connect them to the (central) anodes of the ship with a earthwire of at least 2.5 mm².
 - After welding the pipe you need to check if the propellor is still running free in the pipe. With an different flange gasket it is possible to adjust more or less.
 - You need to inspect the chainbelt once every year. When the belt is damaged, you need to replace it. To do this, the bowthruster needs to be taken apart. Adjusting information and assembling-instructions are available at your Amej-dealer.

Assembly of the RVS-flange on a polyester tube

- Place the polyester tube in the ship.
- Fit the flange on the tube and mark the inner hole on the tube.
- Drill the holes in the polyester tube.
- The tube side of the flange has to be amply provided with sikaflex 221 or a equivalent rubber compound. Place the flange and mount the bolts through the holes. The head of the bolt has to be provided with sikaflex too. Tighten the bolts and let the sikaflex dry.