

Dismantling & Assembly Instructions

DW

DW 150

DW 100.110.H/200.H



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Dismantling

1



Complete pump.

2

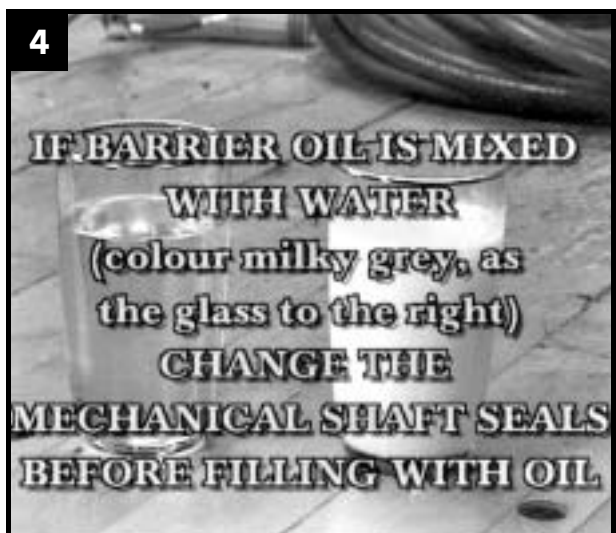


Drain off oil from chamber.
- Beware of overpressure.

3

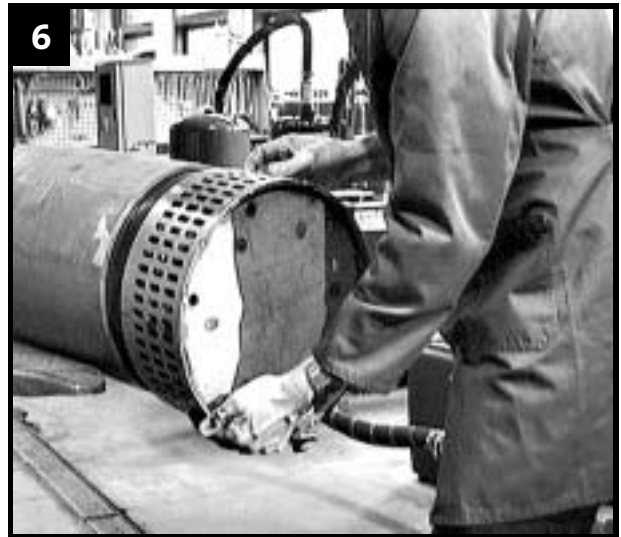


4

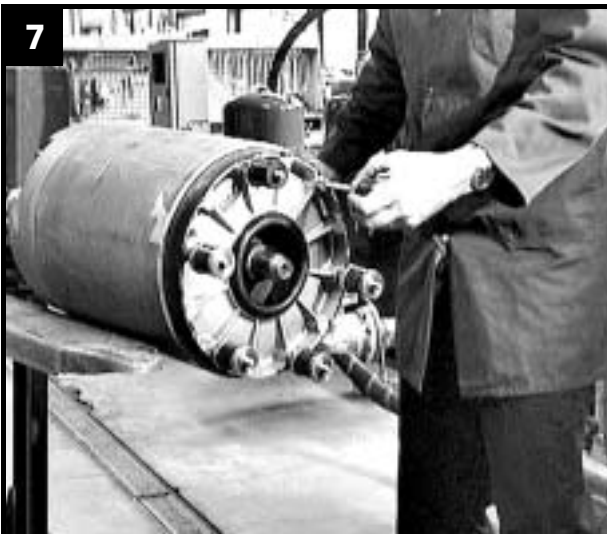




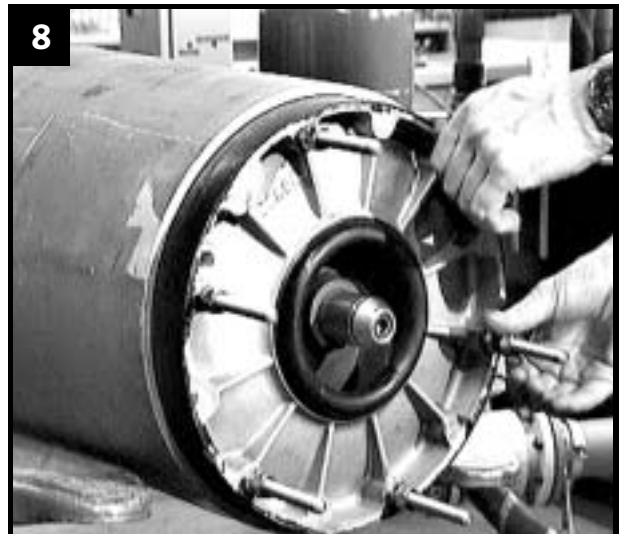
Remove nuts in strainer.



Remove strainer.



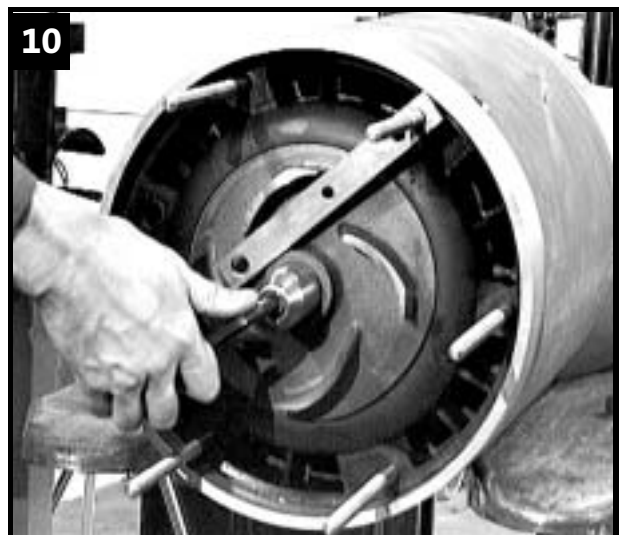
Remove distance sleeves with washers.



Remove nuts for diffuser.



Remove diffuser.



Loosen and remove impeller nut.
Use a flat bar to prevent rotation of impeller.



11

Remove impeller.



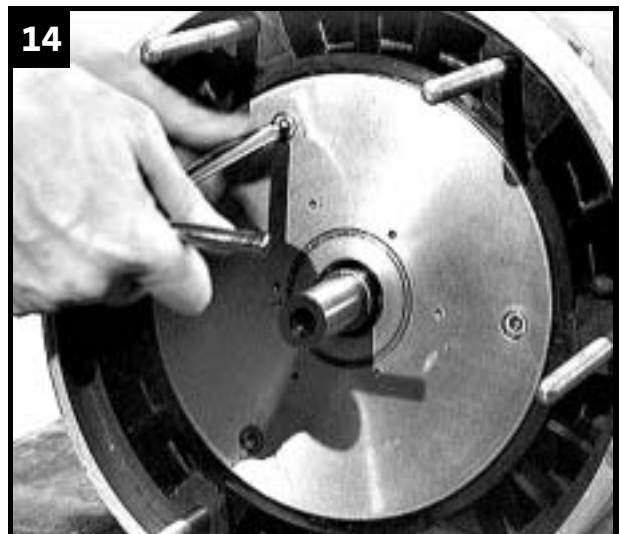
12

Remove screws in impeller disc.



13

Loosen and remove impeller disc by means of a screw driver.



14

Remove screws in oil housing cover.



15

Loosen oil housing cover



16

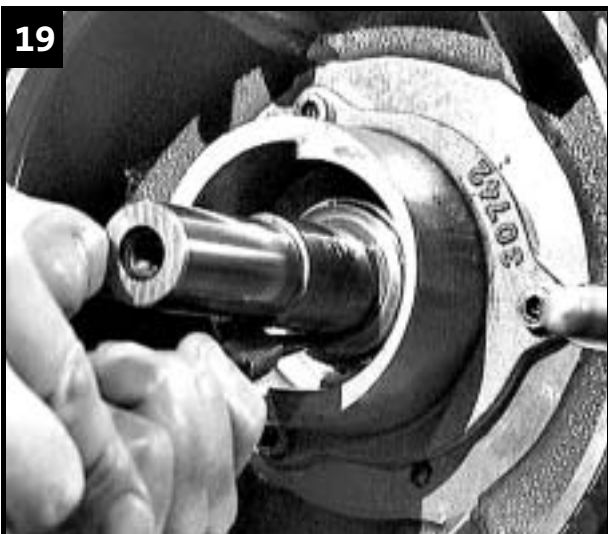
.... and remove it.



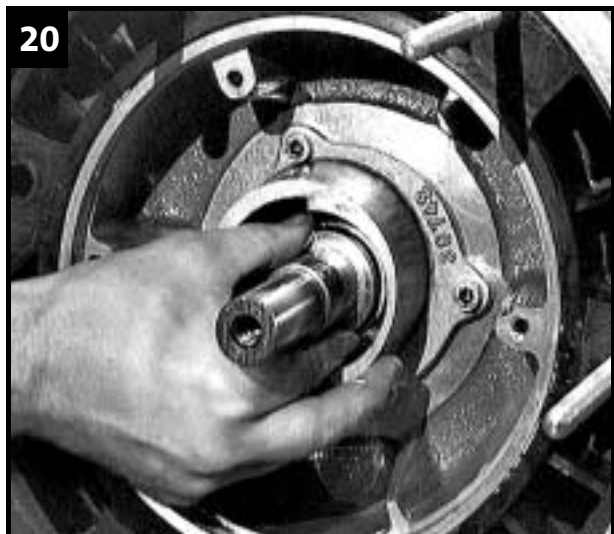
Remove rotating part of lower shaft seal.



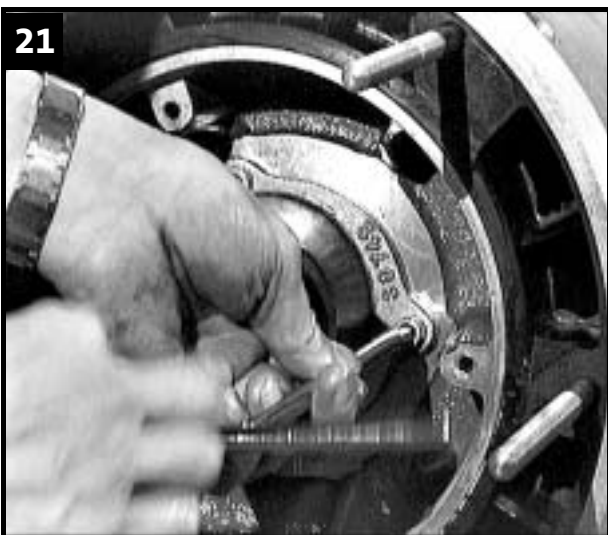
Remove washer.



Remove circlip.



Remove washer for upper shaft seal.



Remove screws in bearing cover



.... and loosen it.



23

Remove bearing cover and upper shaft seal unit.



24

Loosen rubber lining with a pair of pliers



25

... and remove it.

Assembly (low head)



1

Fit new seal ring in bearing cover.



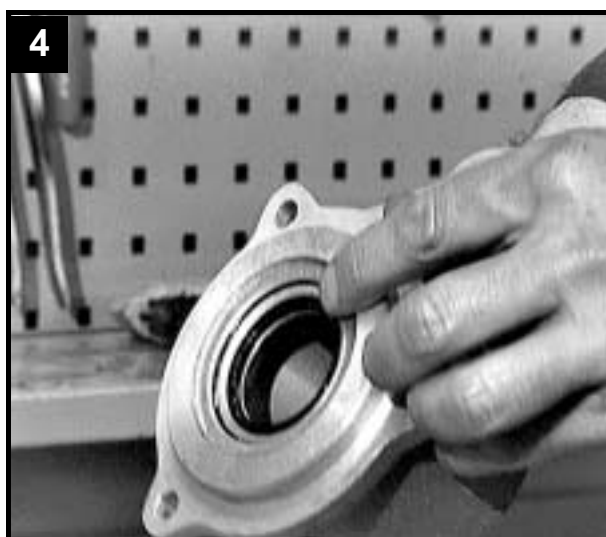
2

Use special tool for correct assembly.



3

Tap seal ring into bottom position.



4

Check that seal ring is in correct position.



5 Lubricate rubber on stationary shaft seal unit.



6 Place stationary shaft seal unit in bearing cover.



7 Place special tool on top of shaft seal unit ...



8 ... and press it into bottom position.



9 Check position of shaft seal unit.



10 Fit O-ring on bearing cover and lubricate it.



11 Fit bearing cover on motor housing.



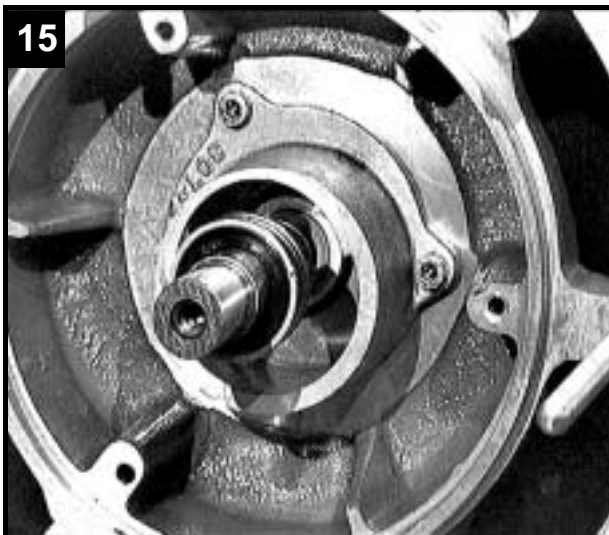
12 Tighten screws.



13 Fit protecting ring on shaft.



14 Lubricate inside of upper shaft seal.



15 Fit upper shaft seal.



16 Fit washer.



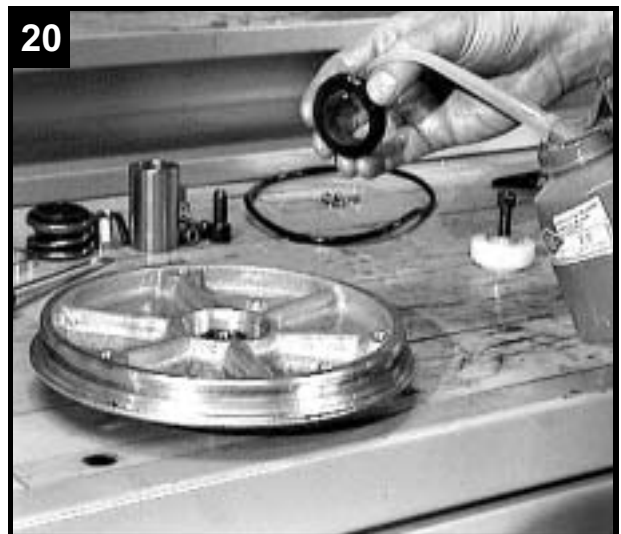
Press shaft seal and washer into position.



Fit circlip.



Press circlip into groove in shaft.



Lubricate outside of stationary seal unit.



Place special tool under oil housing cover.



Place stationary shaft seal on oil housing cover.



23 Fit the other part of special tool.



24 Tighten screw in tool until shaft seal part is in bottom position.



25 Remove tool.



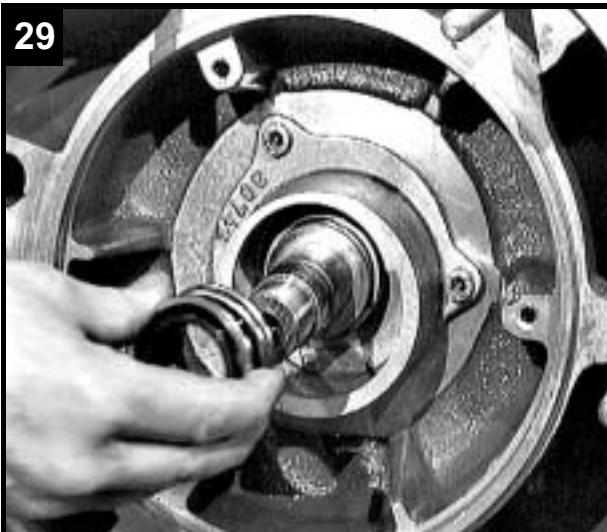
26 Inspect shaft seal unit for correct position.



27 Fit washer for lower shaft seal.

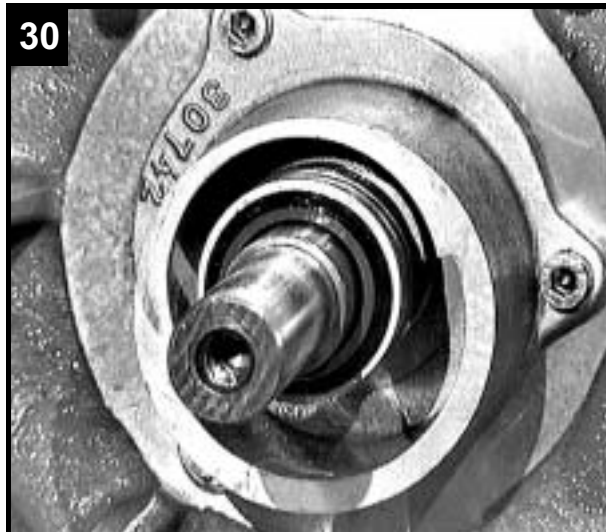


28 Fit protecting ring on shaft.



29

Fit rotating part of lower shaft seal and remove protecting ring.



30

Shaft seal in correct position.



31

Fit O-ring on oil housing cover.



32

Lubricate O-ring.



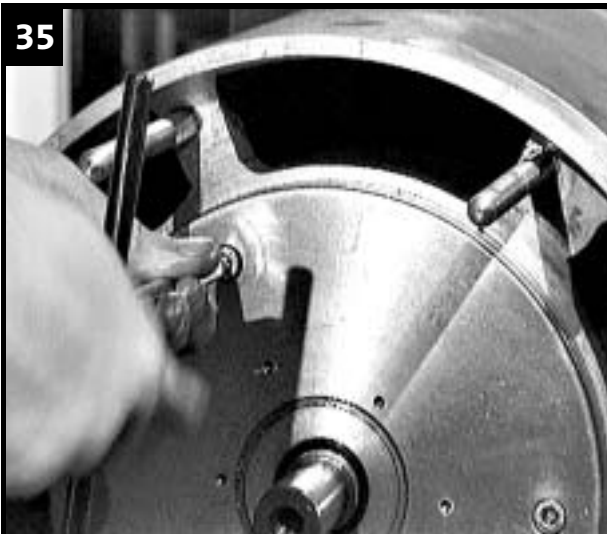
33

Fit oil housing cover.



34

Fit washers on screws for oil housing cover.



35

Fit screws in oil housing cover.



36

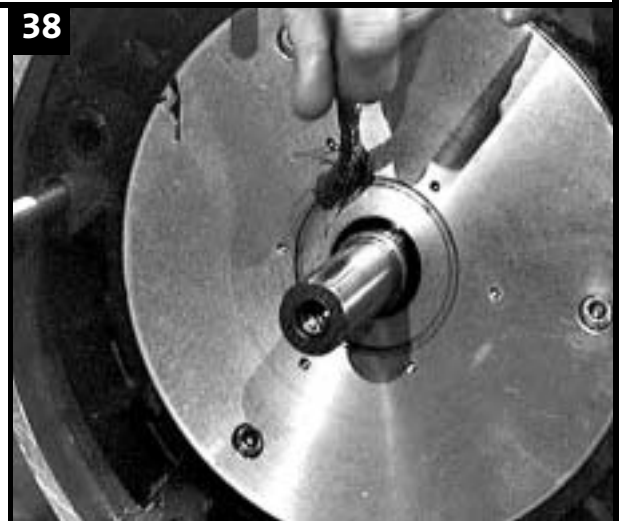
Lubricate rubber lining to ease assembly.

For assembly of DW 100.110.H/200.H, go to page 22



37

Fit rubber lining.



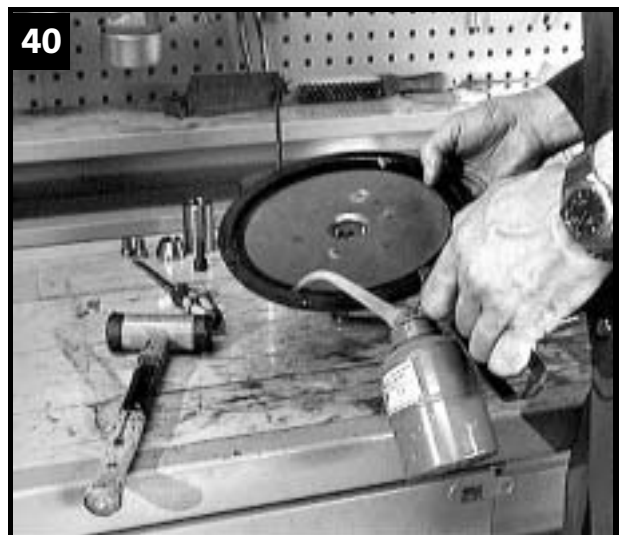
38

Grease groove for O-ring in oil housing cover.



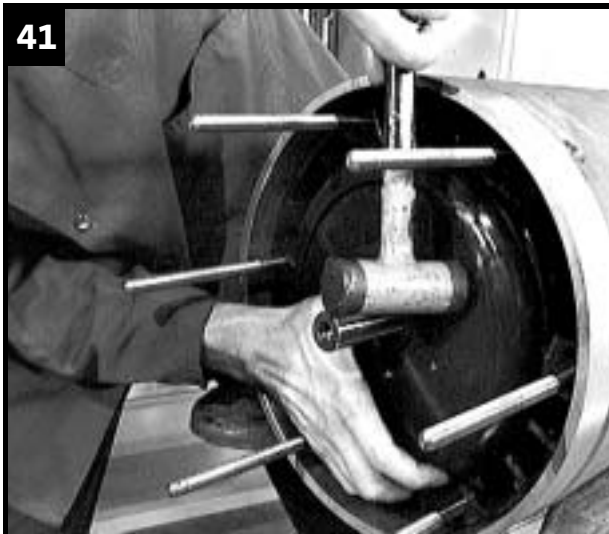
39

Fit O-ring.



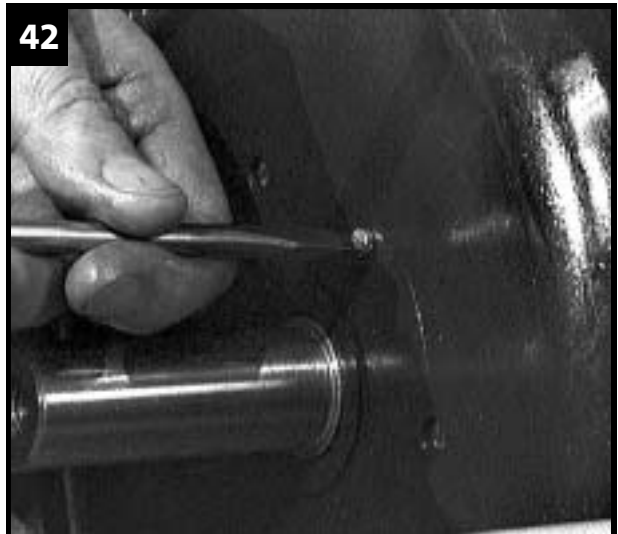
40

Lubricate impeller disc before assembly.



41

Press impeller disc to one side and tap it into position.



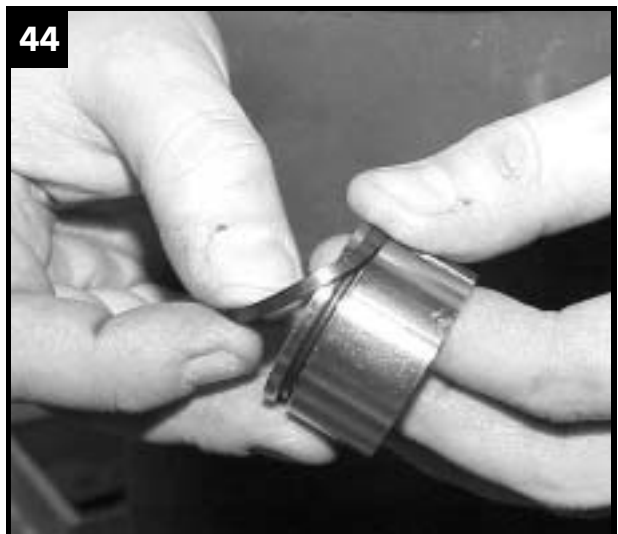
42

Fit screws in impeller disc.



43

Fit O-ring on split bushing.



44

Place square ring on top of O-ring.



45

Place split bushing on impeller



46

Position bush in impeller.



47

Fit impeller distance tool.



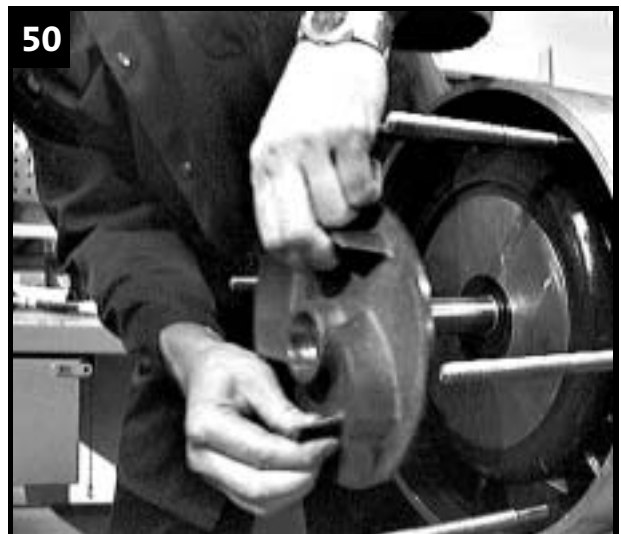
48

Position groove in opposite position.



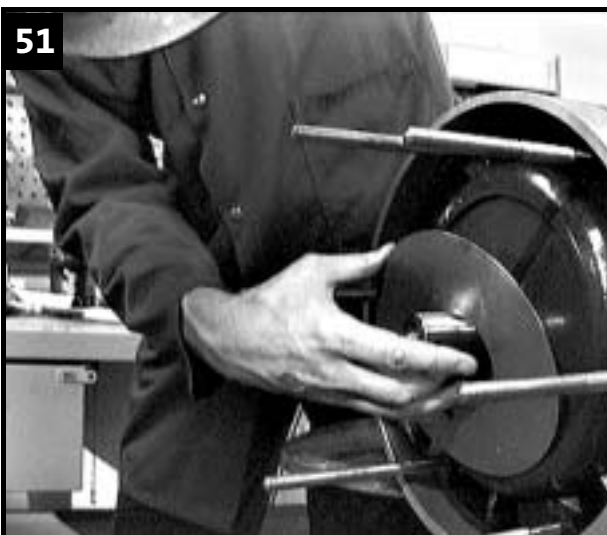
49

Tap on split bushing.



50

Split bushing is now in correct position in impeller.



51

Remove impeller distance tool.



52

Fit impeller again.



53

Fit impeller sleeve.



54

Fit impeller washer and screw.



55

Use a tool to lock impeller.



56

Tighten impeller screw.



57

Hole in diffuser



58

.... must be where hole in rubber lining is.



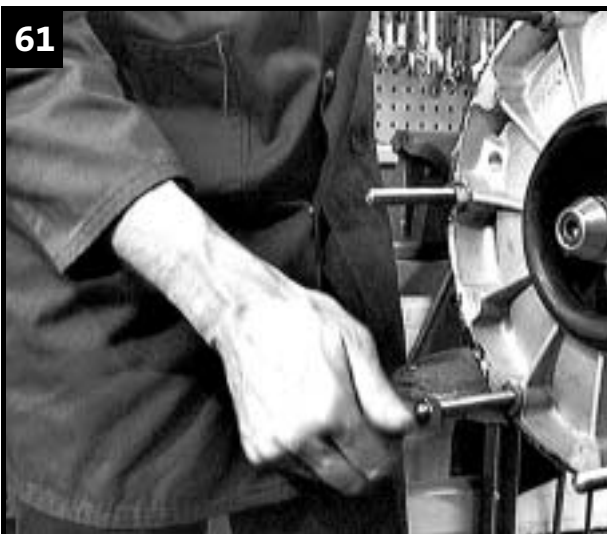
59

Fit diffuser in correct position.



60

Fit washers on stud bolts.



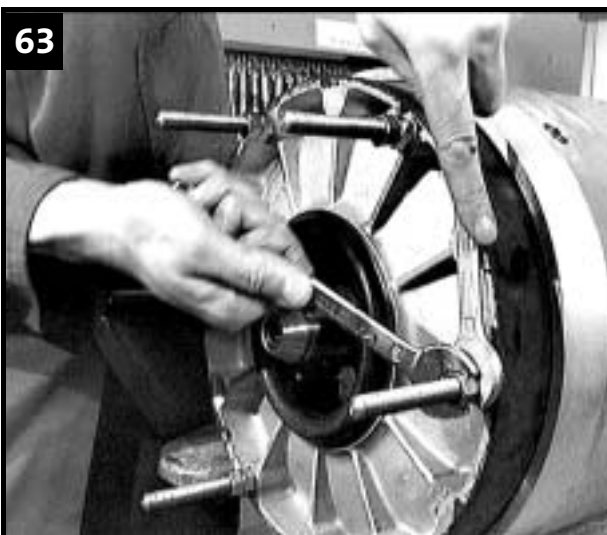
61

Fit one nut on each stud bolt.



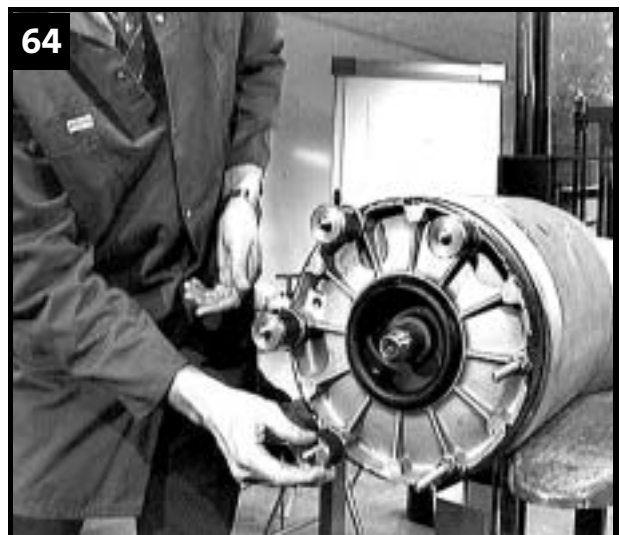
62

Tighten nuts evenly until impeller is locked.



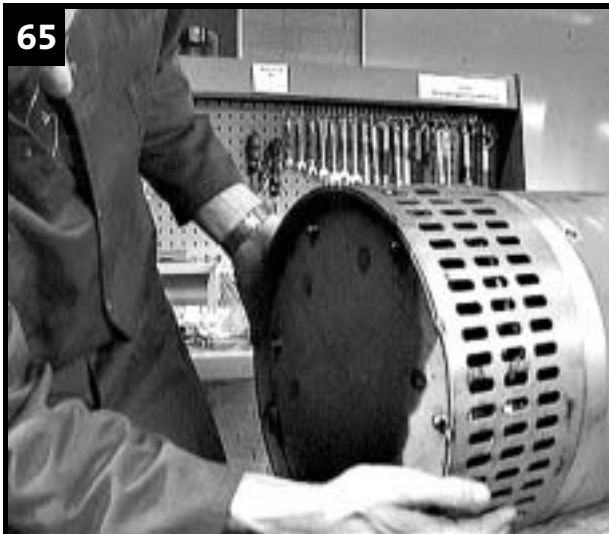
63

Loosen nut half a revolution and lock with counter nut.



64

Fit distance sleeves with washers.



65

Fit strainer.



66

Tighten lock nuts for strainer.



67

Fill oil chamber with one litre of Shell Ondina 15 oil and fit oil screw.



68



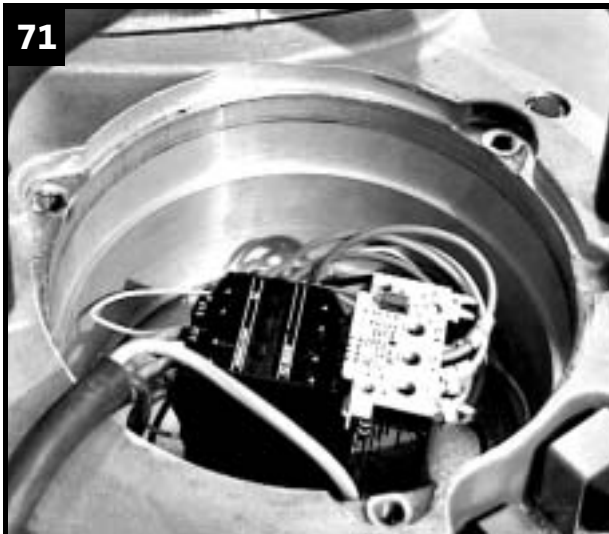
69

Remove screws in top cover.



70

Lift off top cover carefully.



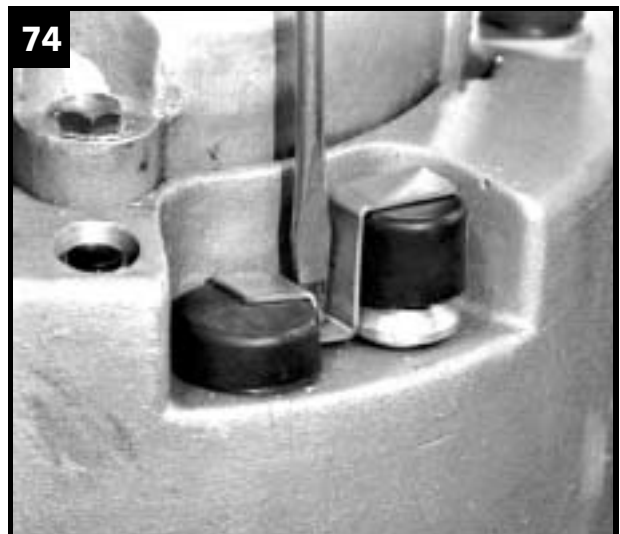
71 Inspect inside of top cover for moisture and loose connections.



72 Fit top cover.



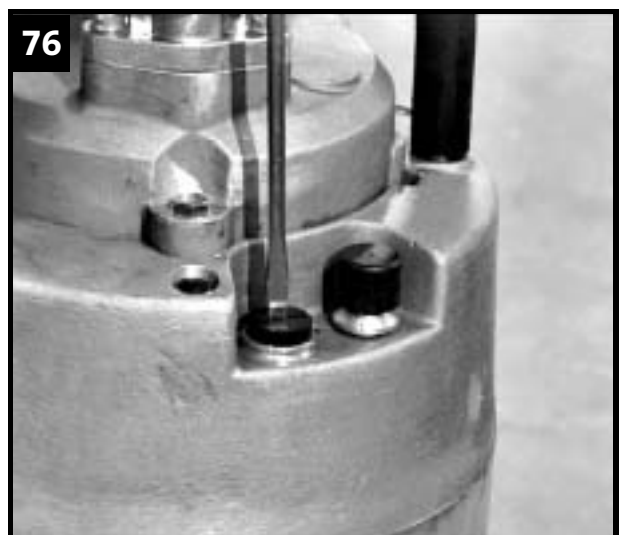
73 Tighten screws.



74 Remove bow for rubber caps.



75 Remove rubber cap for level electrodes.



76 Check electrode unit for free movement.



77

Lift up electrode unit.



78

Clean electrodes for deposits.



79

Fit electrode unit again.



80

Fit rubber cap and bow.



81

Special tools.

82

Special tools and order numbers

Assembly sleeve	96006480
Assembly tool for sealing ring	96006481
Assembly mandrel	96006482
Assembly sleeve	96006483
Assembly tool for sealing ring	96006484
Locking bar	96006485
Distance disc for impeller	96006486
Temporary spacer	96005033

DW 100.110.H/200H Assembly (high head)



83



84

Fit rubber lining.



85

Tap it into position.



86

Fit gasket.



87 Fit O-ring.



88 Lubricate O-ring.



89 Lubricate impeller disc.



90 Press impeller disc to one side ...



91 ... and tap it into position.



92 Fit and tighten screws.



93

Use two 1.0 mm impeller distance tools to fit impeller in correct position.



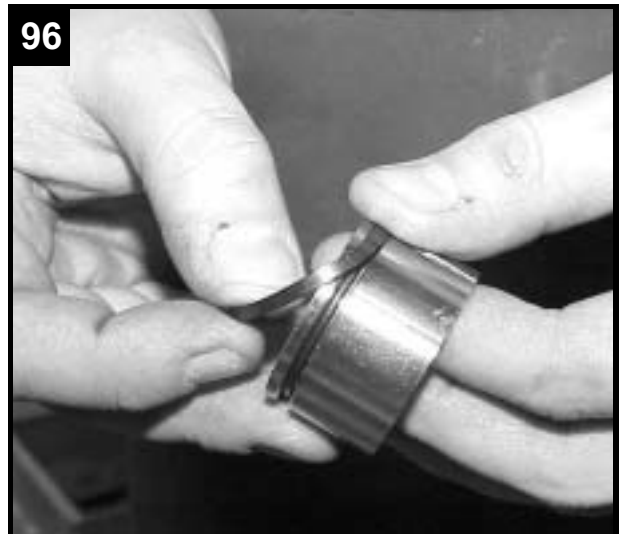
94

Place distance tools on impeller disc.



95

Fit O-ring on split bushing.



96

Place square ring on top of O-ring.



97

Place split bushing on impeller.



98

Position bushing in impeller.



99 Position groove in opposit position.



100 Tap split bushing into position.



101 Fit temporary spacer.



102 Fit and tighten impeller screw.



103 Remove impeller screw and impeller.



104 Remove impeller distance tools.

105



Fit impeller again.

106



Test for free rotation.

107



Fit temporary spacer.

108



Fit impeller screw and washer.

109



Tighten impeller screw.

110



Test for free rotation.

111



Fit diffuser.

112



Fit washers on studs.

113



Lubricate studs.

114



Fit and adjust nuts for minimum space between diffuser and impeller.

115



Fit and tighten counter nuts.

116



Fit impeller disc.



117 Lubricate screws.



118 Fit and tighten screws.



119 Remove impeller screw ...



120 ... and washer ...



121 ... and temporary spacer.



122 Final spacer.

123



Fit final spacer.

124



Use two 1.0 mm impeller distance tools to fit impeller in correct position.

125



Place distance tools on impeller disc.

126



Fit O-ring on split bushing.

127



Place square ring on top of O-ring.

128



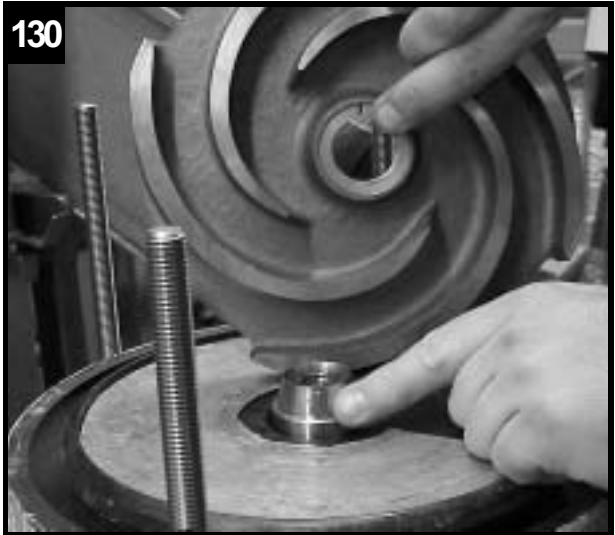
Place split bushing on impeller

129



Position bushing in impeller.

130



Position groove in opposite position.

131



Tap split bushing into position.

132



Tighten and loosen impeller screw.

133



Remove impeller.

134



Remove impeller distance tools.

135



Fit second impeller again.

136



Clean thread.

137



Apply Loctite.

138



Fit impeller washer and screw and tighten.

139



Check for free rotation.

140



Fit four spacers on each staybolt.



141

Fit diffuser.



142

Fit washers.



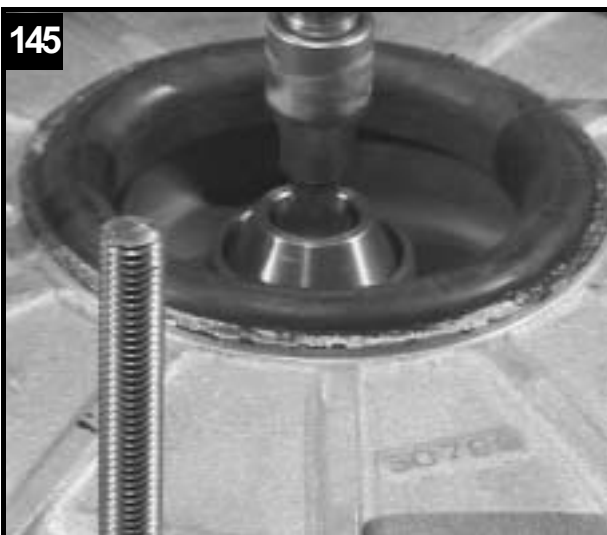
143

Lubricate threads.



144

Fit and tighten nuts.



145

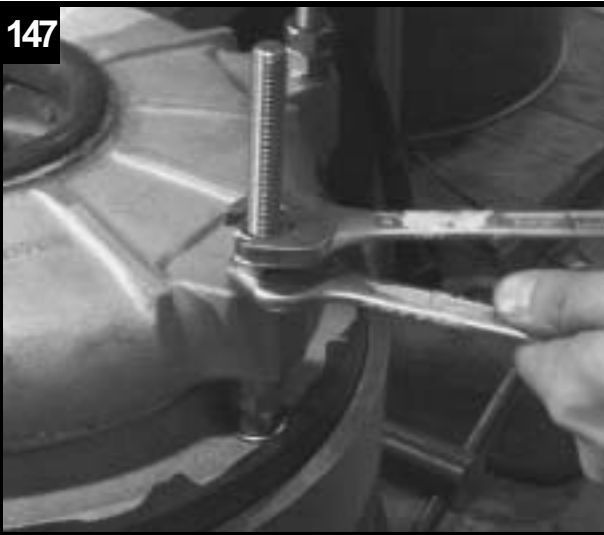
Test for free rotation.



146

Fit distance sleeves.

147



Fit and tighten counter nuts.

148



Fit strainer.

Continue assembly as from page 19

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