WARNING

- Never attempt to run the Microfix with the product discharge chute removed! Severe injury will result.
- Never place hand inside worm trough when machine is running.
- Never attempt to override rotor safety limit switch by hand!
- Never spray water onto machine electrics! Injury or death could result.
- Check condition of power cable before attempting to operate machine. Machines operate in a wet environment. Electrocution or shock can result.
- Ensure that machine is connected to a main supply that is adequately protected with an earth leakage device.
- Never operate machines on an uneven floor machine can roll causing injury.
- Always chock machine wheels top prevent accidental movement of the machine.
- Always isolate machine electrically and lock out before attempting to perform any maintenance.
- Maintenance should only be performed by a competent technician.

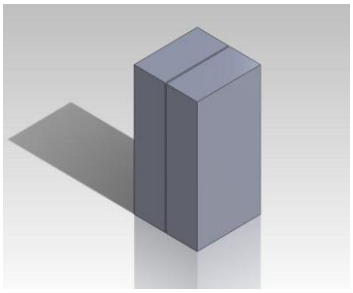
General

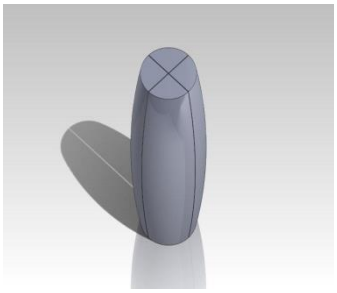
-The Microfix homogeniser is designed to mechanically work butter to a suitable homogeneous consistency for further processing.

-During operations excess loose moisture will be expelled from the product. This will run out at two ports at the rear of the machine onto the ground.

-The machine is designed to handle pre-cut blocks of butter. The machine will battle to handle a solid 25kg solid block, this is normal.

The blocks can be cut up as per figure below:





-A pneumatic feeder unit is available to handle a solid 25kg block, see attached Image 10.0

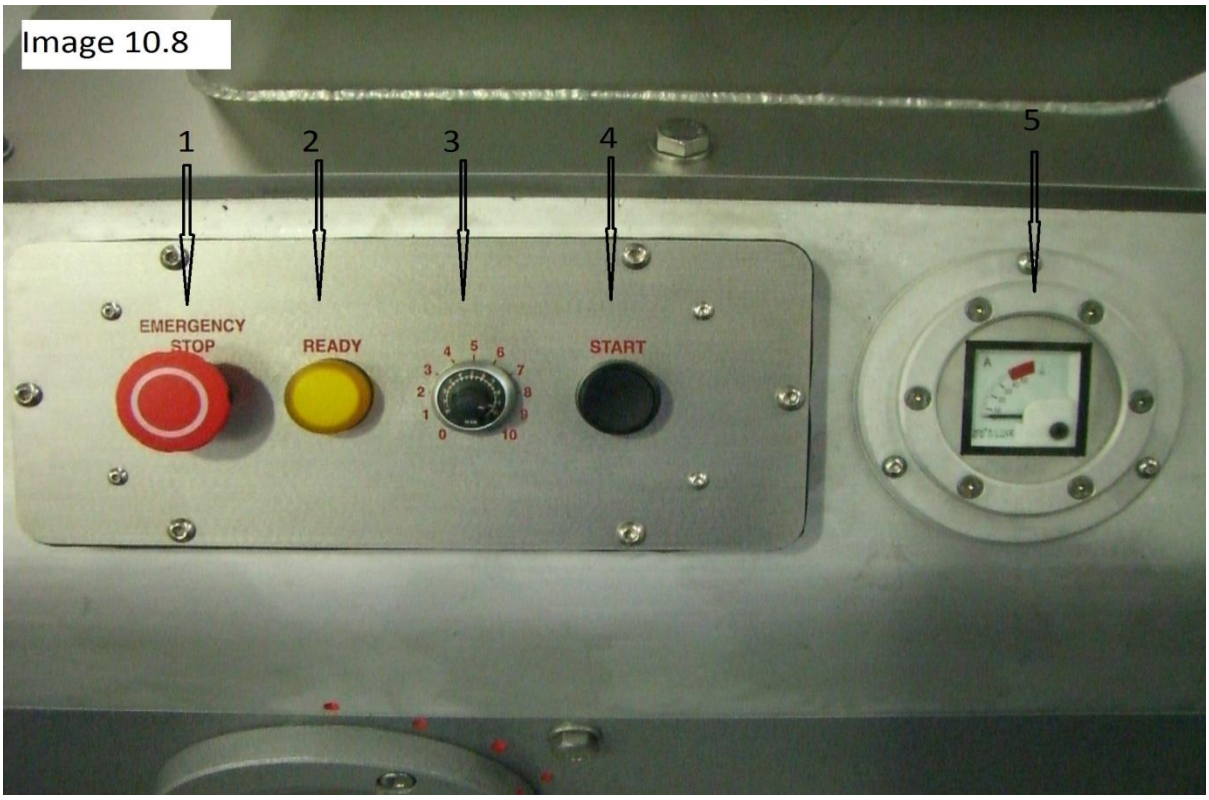
1. Pneumatic Press Down Cylinder
2. Pneumatic Cabinet
3. Filter Regulator Adjustment

-The lowest temperature product these machines can handle is 0℃ lower temperatures will damage the machines. The product must be slowly and uniformly pre- tempered to correct the temperature throughout.

-Finer or coarser rotors are available to achieve the correct product discharge consistency. A finer rotor (more blades) will result in a softer consistency but the through-put of the machine will be lowered. A coarser rotor (fewer blades) will result in a stiffer consistency product.

-The maximum current of the rotor drive motor must be observed to prevent damage to the motor.

-The feed speed of the augers can be adjusted with a potentiometer on the control panel Image 10.8



CONTROL PANEL

1. Emergency Stop
2. System Healthy
3. Auger Speed Control
4. Start Button
5. Amp Meter (Max. 40 amps)

Maintenance

Always ensure that machine is isolated electrically and locked out before attempting any maintenance procedure.

Grease Weekly: Recommended Grease BP MMEP1 or equivalent

- Bearings on the Rotor Main Drive Shaft, both ends (Image 10.1)
- Three grease points for the Auger Gearbox (Image 10.2)
- Bearings on the Rotor Stub Shaft (Image 10.3)
- Auger Motor Tension Bushes (Image 10.4)

IMAGE 10.1

IMAGE 10.2

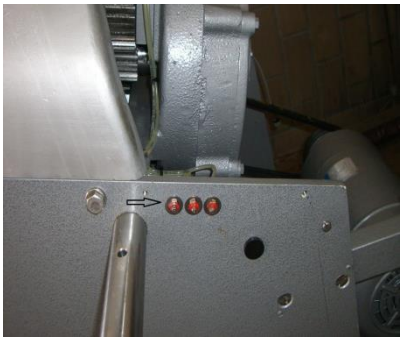


IMAGE 10.3

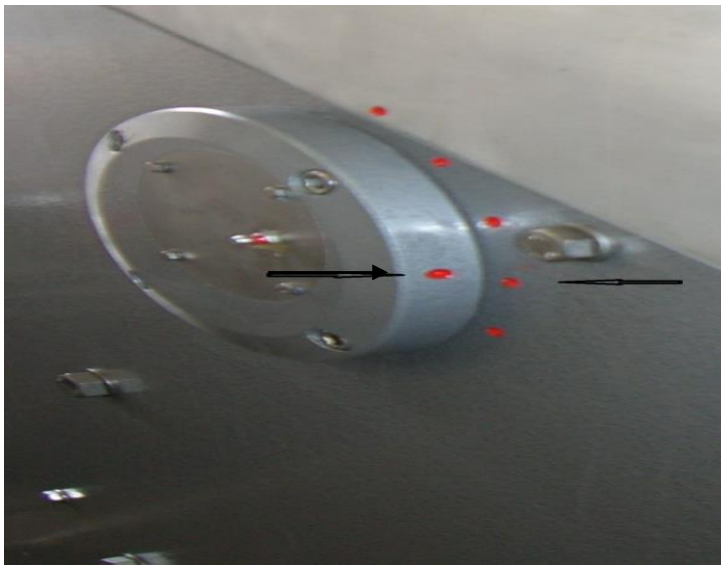
IMAGE 10.4

Oil Change: Recommended Gear Oil BP EP460

- Six litres of oil is required for the Auger Gearbox
- First oil change after 200 hours; thereafter change every 1000 hours
- Drain oil and rinse with 4 to 5 litres of flushing oil by running the Machine for 3 minutes, re-drain and fill with BP EP 460 or equivalent to 2/3 of the oil sight glass

Belt Tension - Rotor

In the event that the Rotor belts need tensioning, the eccentric housings on the side walls must be turned to the same position on both sides. There are corresponding marks to assist the technician with this operation (see below) this method is used to tension the upper belts. The main drive motor is moved upwards or downwards using jacking bolts to adjust lower belt tension.

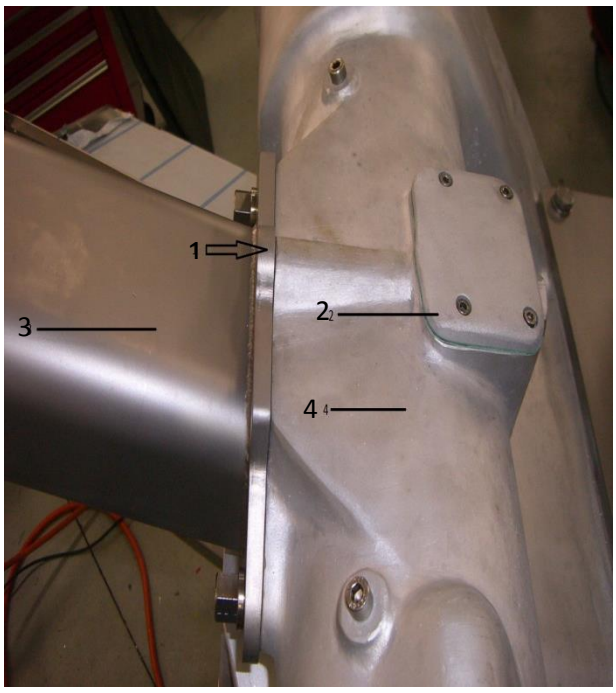


Belt Tension – Auger drive

Remove protective rear cover, the cable of the rear emergency stop button is joined with a plug beneath the cover to facilitate complete removal of the guard. Adjust belts tension by loosening the lock nut (M20) and adjusting the spindle to achieve the correct belt tension.

Machine Installation

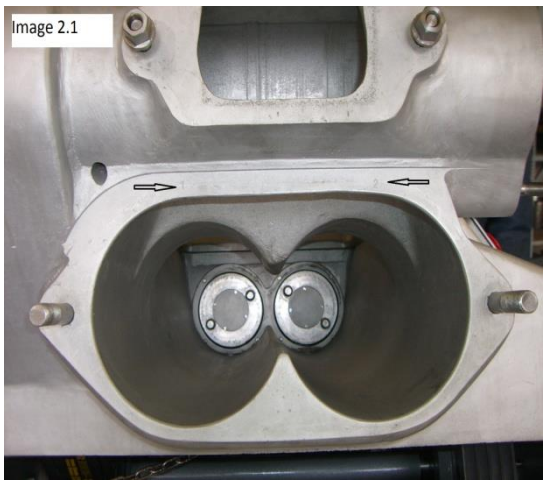
1. Machine must be carefully unwrapped, parts must be cleaned.
2. A supply cable with a suitable plug (5 prong with earth and neutral) must be installed by a component electrician. The distribution board must be installed with a 50A overload and earth leakage protection.
3. The Product Chute must be fitted firmly onto the Rotor Housing, as to press the pin down that activates the limit switch – the machine will not run without the product chute.

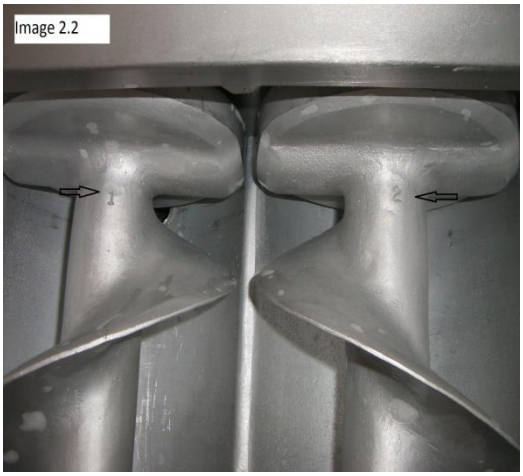


1. Floating Pin for Limit Switch
2. Limit Housing Cover
3. Product Chute
4. Rotor Housing

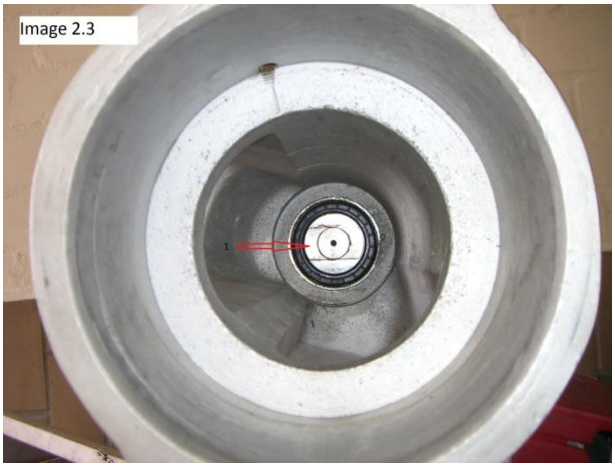
Caution: Do not depress the pin by hand to test the machine!

4. Insert Augers as to coincide with the numbers punched on the housing and the base of the Augers(image 2.1 and 2.2), Then fit the end cap on to secure the Augers making sure the curved section faces down.





5. Fit Rotor correctly into the keyed drive on the stub shaft (Image 2.3) and fit Rotor Cap



Start Up

To test the Machine all loose articles must be removed from the Hopper Section (product infeed)

If the “Ready” LED is on (Image 10.8) No.2, the Machine can be started with push button No.4.

If the “Ready” LED is not on, check that the Machine is correctly connected and all emergency stops are in the up position.

Start the machine, check direction, it may be necessary to swop phases to achieve correct rotation of augers. See image.

When running the Machine make sure the Augers are rotating towards the centre of the Machine, the Auger Spirals must be opposite each other (Image2.2) and not offset.

The Spirals must feed the product towards the Rotor. If the feed direction is away from the Rotor, the Augers must be swapped around.

Before start of production, all parts making contact with product must be cleaned completely with a suitable detergent/sanitiser.

Recommended agent: Johnson Diversey Diton/ Heinkel Asepto P3Z or equivalent

Caution: Do not handle parts after washing, parts must be assembled wet.

Press Down Unit (if fitted)

Adjusting the Press down Unit:

The minimum pressure must be used when adjusting the regulator, as to allow the Augers to take the product away effectively and feed up to the Rotor.

Take into account that the Augers are not supported in the centre and can crack due to excessive pressure.

The force of the press down plate is adjusted using the filter regulator see Image 10.0(3)

Note: the regulator must be adjusted to the minimum pressure that effectively forces the product into the augers. The augers are supported at the rear where they are driven and at the front of the guide bushes. Excessive pressure may damage the augers. Product must be fed forward by the augers. Excessive pressure will result in the product leaking out of the rear seals and water drain holes at the rear of the hopper casing.

Cleaning

1. Isolate machine at supply
2. Isolate machine at machine control panel
3. Remove product discharge chute
4. Remove auger cover
5. Remove rotor bearing cap
6. Remove 2x augers
7. Scrape out all excess product by hand
8. Wash out remaining product with a low pressure hot water hose set to a low flow rate.

   MAX 60 degrees
9. Wash out machine with mild detergent or Heinkel Asepto P3/ Johnson Diversey Diton

Cleaning Cautions

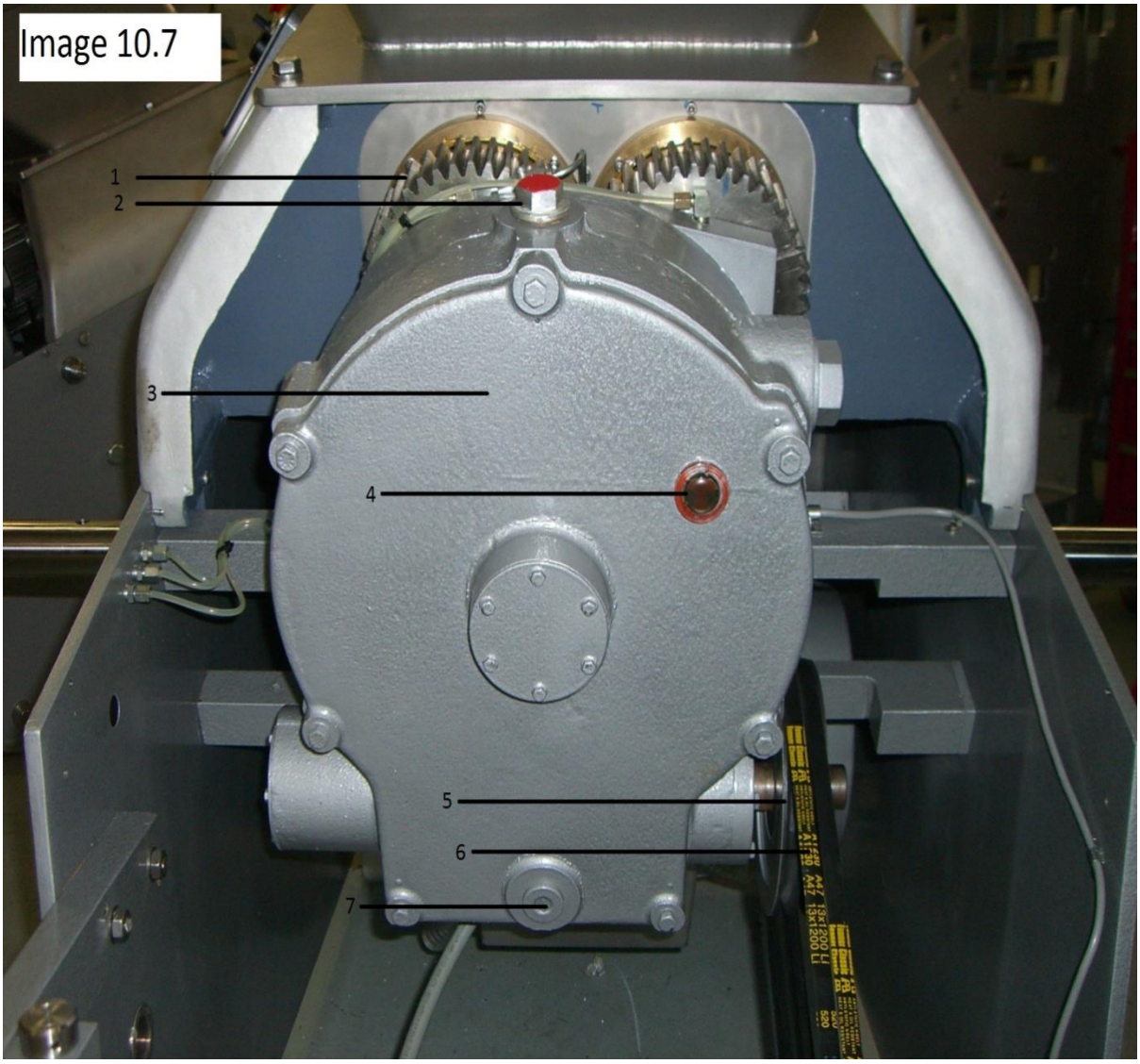
Do not submerge parts in water or chemical baths!

Make sure that detergents are aluminium friendly and mixed according to manufacturers instruction

Avoid excessive temperature shock i.e. very hot water on ice cold augers etc.

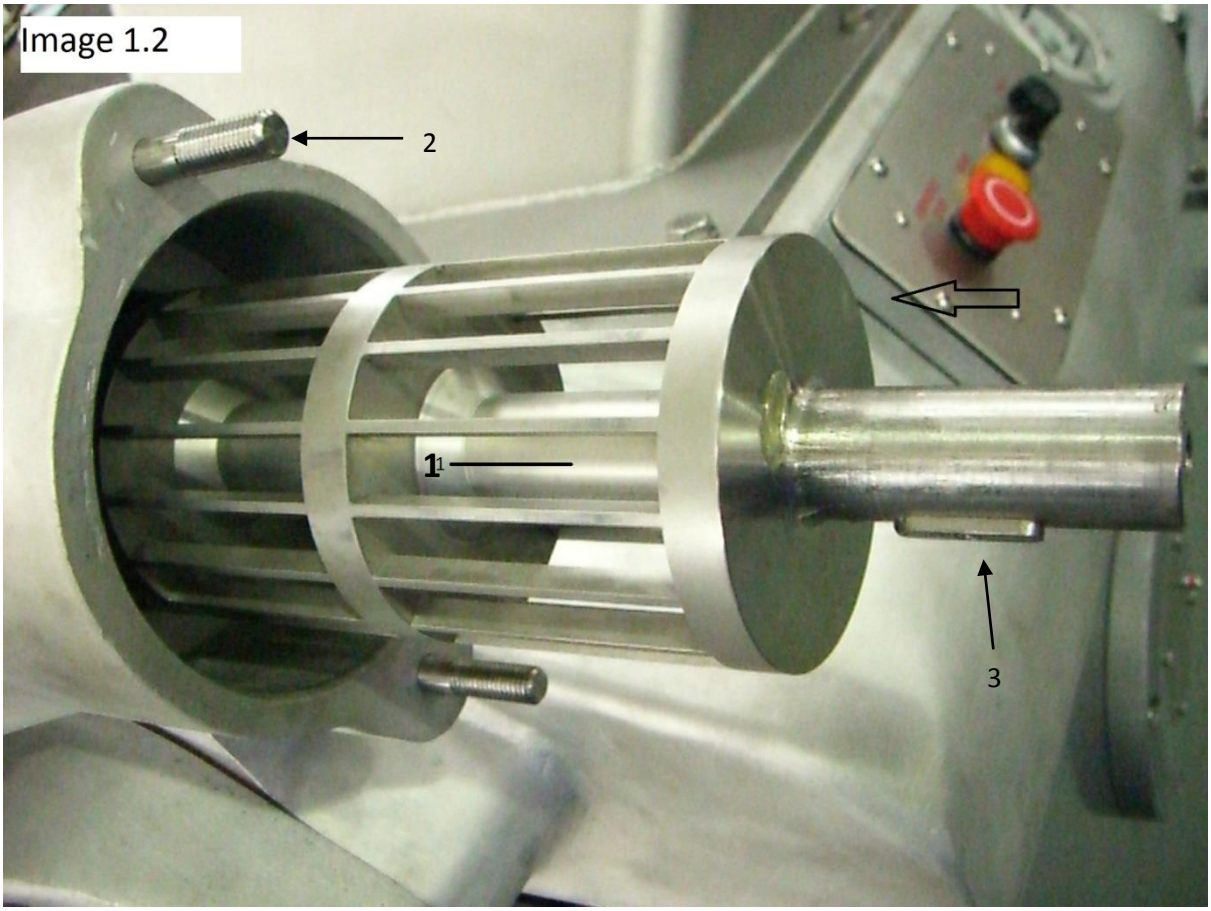
Do not spray water direct on control panel or electrical box. Avoid excessive use of water on machine.

Worm Drive Gearbox



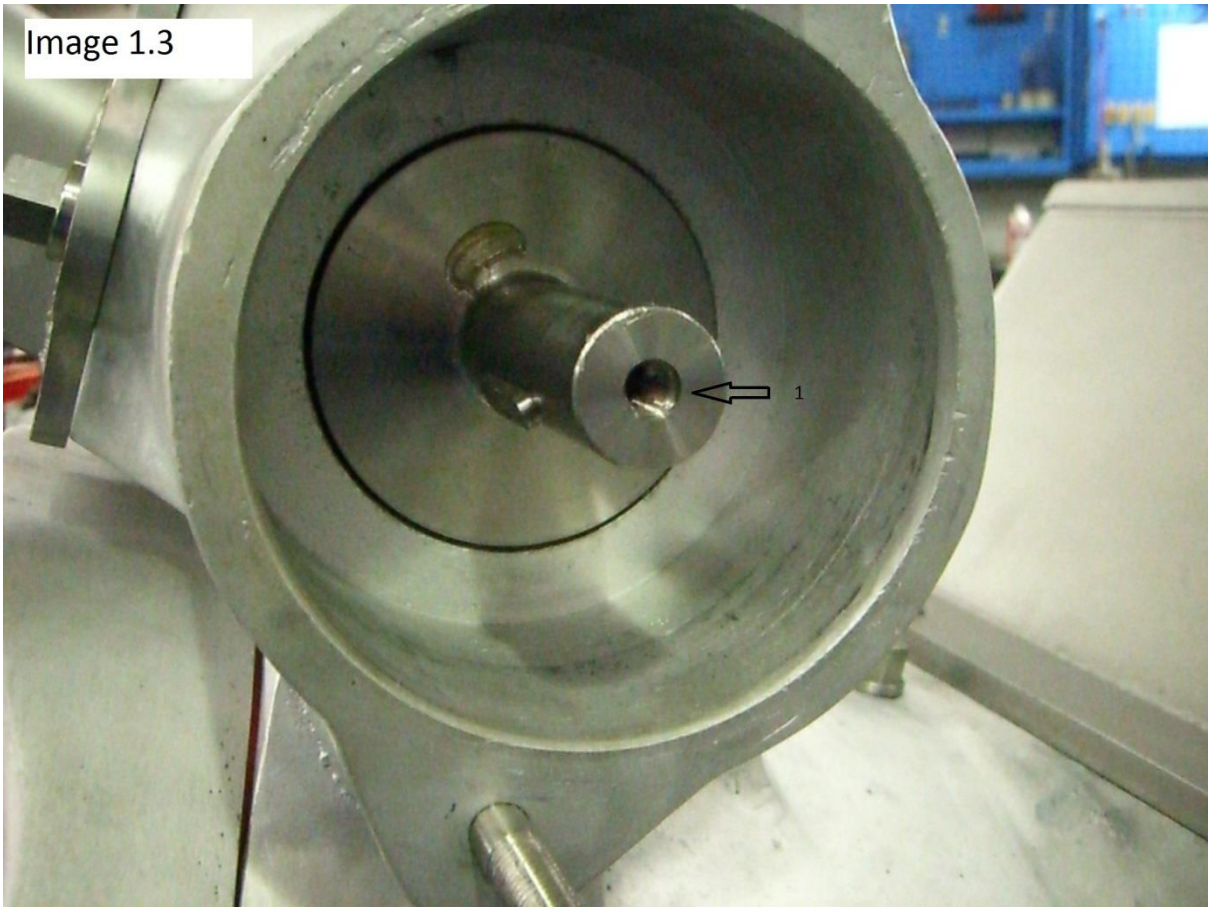
1 Toothed Gear
2 Gear Oil Filler Cap
3 Gearbox Casing
4 Oil Sight Glass
5 Driven Pully
6 V Belt
7 Sump Plug (Drain Screw)

Product Rotor



1 Rotor
2 M10 Stud to Rotor Cap
3 Rotor Key

Rotor Removal Point



1 M10 Thread for T – Bar (Rotor Extraction)

Fig. 71/4- Rotor Drive & Idler Assembly

1. V-Belt pulley
2. KM nut
3. KM washer
4. Roller bearing
5. Nilosring
6. Clamp ring
7. Grooved ball bearing
8. Nilosring
9. Nilosring
10. T- handle
11. Circlip
12. Circlip
13. Nilosring
14. Nilosring
15. Lid
16. Bearing housing
17. Plug
18. Roller bearing
19. Bushing
20. Oil seal gland with support ring
21. Fitting key
22. Rotor
23. Drive shaft
24. Oil seal gland with support ring
25. Fitting key
26. Distance ring
27. Distance ring

Fig. 71/5 – Worm Screw Assembly

1. Worm screw
2. Lid
3. Deflector housing
4. Worm screw
5. Hexagonal screw
6. Collar Bolt
7. Stud
8. Bushings (Nylon)