



# STARTING WORK

CHECK the following prior to starting the equipment:

- Check condition of cutter drum assembly
- Check all bolts for tightness
- Check drive belt condition and tension
- Check drive pulleys are undamaged and clean
- Check all leads, pipes and hoses for damage
- Check electrical cables/plugs
- Check RCD protection is fitted and working

1. Ensure power supply is correct. BEF320-1A requires a 380/415v 32amp supply from the mains or generated by a minimum of 25kva on 50 cycles.
2. After connecting the machine to the power supply turn the red isolator (on the front of electric panel) to the on position. Red light will illuminate on panel.
3. BEFORE starting the machine ensure the cutter drum assembly is clear of the ground. If not adjust using hand wheel.
4. ENSURE the drive control levers are in the non-drive/neutral (central) position and speed control knob is turned to OFF position.
5. Connect vacuum hose to dust port at side of machine if dust control vacuum is being used.
6. START the electric motor using the green button on top of the electric panel. Check that the three phase power supply is phased to suit the machine. The electric motor should be turning in direction of arrow on cooling fan cover ie clockwise when viewed from the non drive side of machine. If not the electric motor will be turning in reverse and hydraulic drive systems will not operate. (To reverse phases see page 3).
7. OPERATE the hydraulic lift/lower lever allowing the machine to fall to its lowest position
8. SLOWLY rotate the hand wheel until the cutters make contact with the surface to be treated.
9. Push both drive control levers forward and slowly open the speed control knob until machine is moving at satisfactory speed.
10. Adjust hand wheel to desired cutting depth and engage hand wheel locking pin.
11. To raise and lower machine use hydraulic lift lever to the left of hand wheel.
12. To turn machine around at end of run raise out of cut, reduce forward speed and pull either drive control lever back through neutral and into reverse. Pulling the left lever will make machine turn left and the right one turn right.



## GENERAL OPERATION

It is essential that the cutters are not lowered too far and too hard onto the surface as serious damage could be caused to the machine and cutter drum assembly.

THE cutters must be allowed to "float" on the cutter shafts without excessive downward pressure. This floating action allows the cutters to perform as the designer intended i.e. as cutters rather than as grinders or picks. Do not pull the control levers into reverse when cutting as this could result in the machine reversing quickly in an uncontrolled manner.

**The machine should operate smoothly with a minimum of vibration. When the depth of cut is correctly set very little effort should be required to operate the machine.**

EXCESSIVE downward pressure on the cutters may marginally improve the work rate/finish but the definite increase in wear rates on the cutter drum assembly and machine components is the negative result. Remember two light passes are quicker and more cost effective than one slow heavy pass. Tests have proven conclusively that heavy downward pressure reduces cutter and drum life by over 50%.

The BEF320 should always be operated in a forward direction. The operator varies the speed of travel to determine the final finish having already pre-set the depth control. It is recommended that the machine is not operated in reverse whilst the cutters are in contact with the surface. When lifting the cutter drum from the work surface it is not necessary to turn the hand wheel - lift upwards by simply operating the hydraulic lift lever.

Always use the shortest possible length of extension cable. To avoid voltage drop the cable must be a minimum of 6mm. Maximum length of cable can then be up to 75 metres.

The motor is fitted with thermal overload protection. Should the thermal trip be activated then it must be allowed to cool and reset. Almost without exception if a motor trips out it is an indicator of a fault elsewhere either on the machine or with the power supply or simply that the machine is being overloaded.

**Note: the thermal trip on the motor is a fail safe device and is not intended to be continuously reset.**

If the motor repeatedly cuts out then it will be damaged.

Possible causes are: An inadequate or faulty power supply.

Overloading of the machine.

Mechanical fault on the machine e.g. bearing or cutter drum failure.

The machine can only be overloaded by setting the depth of cut to low. When overloaded the machine can vibrate which will in turn damage the electrical switch components.

The electric control panel is fitted with two safety devices which further protect the motor from damage. The switches are set by the manufacturer and under no circumstances should be adjusted.



## DUST CONTROL

To control any dust created by the operation connect an industrial dust collector or vacuum to the 50mm port at the rear of the machine. We recommend the SPE 316 for almost 100% dust control. In the absence of a dust control unit it is acceptable to spray water onto the surface or to feed water down the vacuum port. Cutter drum assembly life is increased by around 10% when operating the machine in this way. **(Note: Electrical motors and switches are not waterproof, take care to protect them from splashes.)**

## PHASE REVERSING

If the electrical motor is turning anti clockwise when viewed from the non drive end and the hydraulic drive system is not working the power supply to your BEF320 is incorrectly phased. The correct carry out the following.

1. Isolate power supply.
2. Open electric panel door.
3. Turn phase reverse switch to opposite position.
4. Close panel door.
5. Re connect power supply and retest.

**Note:** If machine is still turning in reverse seek advice of qualified electrician.

The BEF320 machine should always be moved by its own hydraulic power driven system as pushing the machine continually around by hand could result in internal damage to the hydraulic motor and pump system.