



# BARFORD



## Model LTF80

**OPERATOR MANUAL + PARTS LIST**

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## 1) INTRODUCTION

**Thank you for purchasing an Barford conveyor.**

**This manual is as important as your conveyor and should be read thoroughly before operating your machine.**

Safety is always at the forefront at Barford Equipment Ltd. It is recommended that all safety information should be read and followed.

**MANUFACTURER:**

Barford Equipment Ltd  
72-74 Omagh Road  
Dromore  
Co. Tyrone  
N. Ireland  
BT78 2AJ

Tel: + 44 (0) 2882 897401

E: [info@barford.com](mailto:info@barford.com)

Serial Number: \_\_\_\_\_

Product / Model: \_\_\_\_\_

## 2) WARRANTY

Barford Conveyors carries a one year warranty on labour and on all non consumable parts e.g. filters and scrapers.

All Barford Conveyors are carefully examined and tested before leaving the premises.

Every Barford machine **must** be registered for warranty. Please complete the Warranty Registration Certificate on the next page. One copy should be kept by you the customer and a copy returned to Barford Equipment Ltd. at the above address . Before warranty can be honoured a Warranty Certificate must be held on file at BARFORD EQUIPMENT LTD.

**NOTE: If servicing or repairing any parts that is non factory supplied will invalidate the warranty. It is the sole responsibility of the operator to read, understand and comply with all instructions as stated in this manual.**



Barford Equipment Ltd  
72-74 Omagh Road  
Dromore Co.Tyrone  
N.Ireland BT78 3AJ

T: + 44 (0) 2882 897401  
E: info@barford.com

## Registration Certificate

Your Warranty starts from the day that warranty registration has taken place

Date: \_\_\_\_\_ Serial Number: \_\_\_\_\_

### SAFETY

Has the Manual been read and understood? ☐ YES ☐ NO

Have you carried out a risk assessment for the proposed working area? ☐ YES ☐ NO

Do you have a proper working Radio Remote (optional extra)? ☐ YES ☐ NO

Is the machine set up on a level surface? ☐ YES ☐ NO

Any extra options are in place? ☐ YES ☐ NO

All guards are fitted and secure? ☐ YES ☐ NO

Are you happy with the first test of the machine? ☐ YES ☐ NO

If not, why? \_\_\_\_\_

### HYDRAULICS AND THE CONVEYOR

Check oil level and for water in the diesel tank? ☐ YES ☐ NO

Comments \_\_\_\_\_ ☐ YES ☐ NO

Check oil level in hydraulic tank? ☐ YES ☐ NO

Comments \_\_\_\_\_ ☐ YES ☐ NO

Are the control valves operating? ☐ YES ☐ NO

Any leaks in the hydraulic system? ☐ YES ☐ NO

Are all persons who will be operating the machine fully trained and informed of the workings of the machine? ☐ YES ☐ NO

Is the control panel and emergency stops in good working order? ☐ YES ☐ NO

Is the belt tracking? ☐ YES ☐ NO

Checked tension of discharge belt? ☐ YES ☐ NO

*Copy to be retained and hard copy to be returned to above address.*

**Please Note:** no warranty registration received means no warranty on machine



Copy to be retained & hard copy to be returned to Barford office.  
**Please note:** No warranty registration received, means no warranty on the machine!

Customer Name: \_\_\_\_\_

BARFORD Dealer/Distributor: \_\_\_\_\_

Customer Contact Name: \_\_\_\_\_

Contact: \_\_\_\_\_

Customer Contact: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Customer Full Address:  
\_\_\_\_\_  
\_\_\_\_\_

Application: \_\_\_\_\_

Engine Registered:	<input type="checkbox"/> YES <input type="checkbox"/> NO
Instruction Manual Received:	<input type="checkbox"/> YES <input type="checkbox"/> NO

Notes or Comments: \_\_\_\_\_  
\_\_\_\_\_

I the undersigned confirm that I have received the Barford product and that the operators fully understand the operations of the machine. I was present when all checks were marked and I hereby sign below to agreeing to the conditions of the Barford warranty:

Signatures: \_\_\_\_\_

### 3) EU DECLARATION OF CONFORMITY

We the undersigned:

Barford Equipment Ltd  
72-74 Omagh Road  
Dromore  
Co.Tyrone  
N.Ireland  
BT78 3AJ

Declare under our sole responsibility that the following apparatus:

#### **BARFORD**

Model: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Is in conformity with the following relevant EC legislation:

Machinery Directive 2006/42/EC

Based on the following harmonised standards: EN12100-2:1998, EN ISO 12100:2010, BS EN ISO 4413:2010 and therefore complies with the following essential requirements of the Machinery Safety Directive EHSR1.1, EHSR1.2, EHSR1.3, EHSR1.4, EHSR1.5, EHSR1.7.

We the undersigned, undertake to transmit, in response to a reasoned request by national authorities, relevant information on the machinery by the following method of transmission:

Parcel

Name and position of person binding the manufacturer or authorised representative:

Signature: \_\_\_\_\_

Name:

Function:

Location: Same as above address

Date of issue: \_\_\_\_\_

#### 4) SAFETY RECOMMENDATIONS

The Barford Conveyor is designed with Safety in mind.

**Barford Equipment Ltd. reserve the right not to take responsibility for any injury or damage if the manual is not read and followed.**

Ensure all operators are familiar with the machine, its functions and capabilities

Inadequate knowledge of the machines operation can lead to death or serious injury

Before commencing any maintenance work ensure that all energy sources i.e. Diesel Engine or Electric Power pack are locked out using the isolators provided and signs are in place indicating that maintenance work is being carried out.

**Ensure the machine cannot be started while others carry out work on the machine by locking out all energy sources.**

All moving parts are covered by guards and shields to prevent accident or injury. If in the event of repair work or servicing to be carried out, these covers may be removed.

Removed guards and shields should be replaced immediately after maintenance work is finished. **Operating the machine is not permitted with missing guards**

Ensure machine is operated and driven on a level and stable surface

#### OPERATING CONVEYOR SAFELY

- Read the operator's manual carefully taking note of all the safety information.
- **DO NOT** attempt to adjust the conveyor belt while they are running.
- If excessive machine vibration occurs, stop the engine and remedy the problem.

#### CHEMICAL SAFETY

- Always follow instructions on chemical container. Protective clothing should be worn when using chemicals (gloves and goggles). Use the appropriate tools when opening a chemical container. Always use a well ventilated area.
- **DO NOT** smoke, eat or drink while handling chemicals. Dispose of all waste in line with local and national regulations.

#### HIGH PRESSURE FLUIDS

- Check all hoses and lines regularly. Replace when needed.
- Check all connections and tighten when needed.
- Always relieve pressure if fluid escapes before disconnecting hydraulic hose or lines.
- **DO NOT** use your bare hands or parts of the body to check for leaks.
- Always seek medical help if an accident occurs.



### **OPERATING PERSONNEL**

- Only authorized, competent or trained personnel should operate the Barford conveyor.
- Only authorized, competent or trained personnel should carry out and maintenance work on the Barford conveyor.
- All instructions should be followed.

### **PLANT MANAGEMENT IS RESPONSIBLE FOR**

- The working area around the machine and the machine itself.
- Any persons in the area of the equipment.
- Any persons operating the equipment.
- Safety of any persons carrying out machine maintenance on site.
- Risk assessment and Health & Safety regulations are adhered to (local and national).
- Ensuring that all doors and guards are closed and installed correctly.
- Ensuring that all maintenance issues, electrical or mechanical, are fixed before machine is operated.

### **ON SITE ENVIRONMENT**

- Risk assessment should be carried out before, during and after operation of the machine.
- Ensure appropriate measures are taken for site personnel training in Health & Safety awareness.
- All hazardous materials must be handled in accordance with the manual instructions.

### **APPROPRIATE CLOTHING**

- All persons operating the machine should wear appropriate clothing e.g. Hard hat, ear protection, dust masks and protective footwear.
- Any loose clothing should be tucked in and kept away from rotating parts.

##### WORKING WITH ELECTRICS

- It is recommended that any persons working with the electrical operations on the conveyor must work to the standards of EN50110 or similar.
- Before starting machine ensure that all electrical cables and connectors are in good working order. Also de-energised parts are checked for presence of power and ground or short circuit them in addition to insulating elements and adjacent live parts.
- Use recommended current rating original fuses. If the operator suspects that there is a problem, switch off the machine immediately.
- Before starting the machine, the isolator that carries the high voltage must be earth bonded by a qualified electrician.
- Always risk assess the area where the machine will be in operation for overhead cables and other dangerous obstacles. If contact is made with a live wire, de-energise and alert all persons about approaching and touching the machine immediately.
- When cleaning the conveyor **DO NOT** hose down any electrical enclosures or the electrical motor.

### DECALS FOR MACHINE SAFETY

Operators should be familiar with all equipment and be trained in their safe use. Before operation the operator must:

- Have read and understood the operators manual and all safety signs in the manual and on the machine.
- Have received specific and adequate training in the operation to be carried out.
- Know the location and function of all controls on the machine.
- Know the location of all Emergency Stops and other safety equipment.
- Be aware of all moving parts of the machine.

Listed below are all the safety signs used throughout this manual and on the machine. Operators must be familiar with these signs and be aware of their meaning. These signs are used in this manual to warn of some of the potential hazards, which may exist while operating this machine.

### DECALS FOR MACHINE SAFETY



#### **WARNING: Finger Crush Hazard.**

Be careful when removing and replacing prop leg pins.

#### **WARNING: Entanglement In The Conveyor Hazard.**

Make sure all guards are in place, shut off the engine and remove the key before performing maintenance or repair work.

#### **WARNING: Possibility Of Crushing By Overhead Conveyor.**

Stay a safe distance from the conveyor while it is being raised or lowered



#### **WARNING: Electric Shock Hazard.**

Beware of overhead cables when setting up or moving the machine.

#### **WARNING!**

Read the instruction manual before proceeding.

#### **WARNING: Falling Objects Hazard.**

Stay a safe distance from area.

## DECALS FOR MACHINE SAFETY (CONTINUED)



**WARNING:**  
**High Pressure**  
**Fluids Hazard.**

Read the  
instruction manual  
before proceeding.



**WARNING:**  
**Crush Hazard.**

Nip point.



**WARNING:**  
**Foot Crushing**  
**Hazard.**

Contact with  
moving parts may  
cause death or  
serious injury.  
Keep away from  
moving parts.

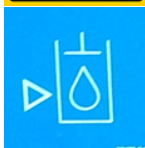
## Information Signs



**Emergency Stop Button.**



**Noise level.**



**Hydraulic oil**  
**tank.**



**Diesel tank.**

## Personal Protective Equipment (PPE)



**Mandatory:**

Use eye protection.



**Mandatory:**

Use hearing protection.



**Mandatory:**

Wear a hard hat.



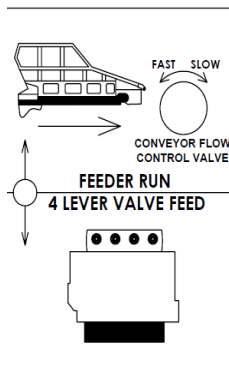
**Mandatory:**

Wear respirator.

**NOTE: Actual decals on your machine may differ slightly from above as new versions are released.**

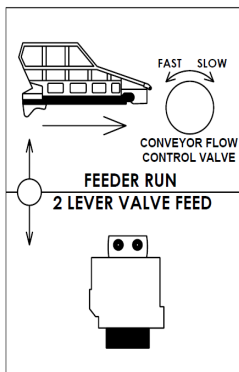
## 5) DECALS FOR MACHINE OPERATING

**A**



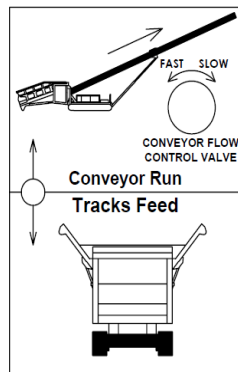
1. RUNNING THE FEEDER CONVEYOR (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. 4 LEVER VALVE ACTIVATION ( TOWARDS OPERATOR)

**B**



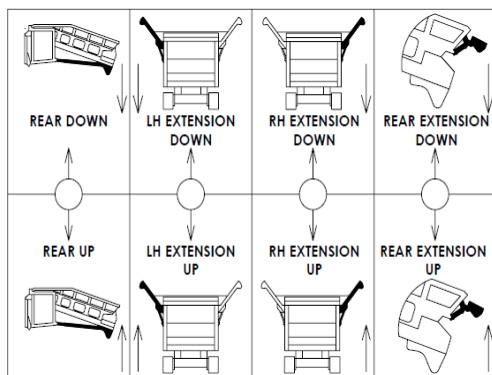
1. RUNNING THE FEEDER CONVEYOR (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. 2 LEVER VALVE ACTIVATION ( TOWARDS OPERATOR)

**C**



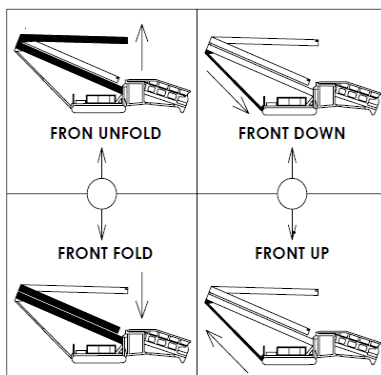
1. RUNNING THE MAIN CONVEYOR (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. TRACKS ACTIVATION ( TOWARDS OPERATOR)
3. FLOW CONTROL VALVE.

**D**



1. REAR LEG DOWN (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. FRONT LEG UP (TOWARDS OPERATOR)
1. LH EXTENSION DOWN (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. LH EXTENSION UP (TOWARDS OPERATOR).
1. RH EXTENSION DOWN (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. RH EXTENSION UP (TOWARDS OPERATOR).
1. REAR EXTENSION DOWN (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. REAR EXTENSION UP (TOWARDS OPERATOR).

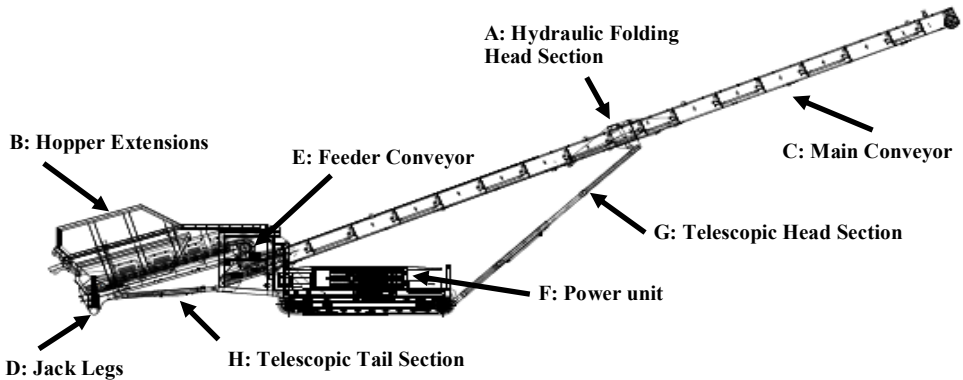
**E**



1. HEAD SECTION UNFOLD (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. HEAD SECTION FOLD ( TOWARDS OPERATOR).
1. FRONT LEG DOWN (AGAINST OPERATOR).
0. NEUTRAL POSITION.
2. FRONT LEG UP (TOWARDS OPERATOR)

## 6) KNOW YOUR MACHINE

Please take note of all the different components of the machine



**A: Hydraulic Folding Head Section** -This allows the machine to be easily folded for transport.

**B: Hopper Extensions**- Hydraulic fold down hopper extensions enables loading from all three sides and increases hopper capacity.

**C: Main Conveyor**- This main unit carries the raw material from the feeder belt to create a stockpile belt speed can be adjusted on the Conveyor Belt control valve

**D: Jack Legs**- These are used for machine stability and should be lowered and secured into place when the machine is in operation.

**E: Feeder Conveyor**- This conveyor carries material onto the main conveyor belt, Height can be adjusted on the travelling material & Belt speed can be adjusted on the Feeder Belt control valve

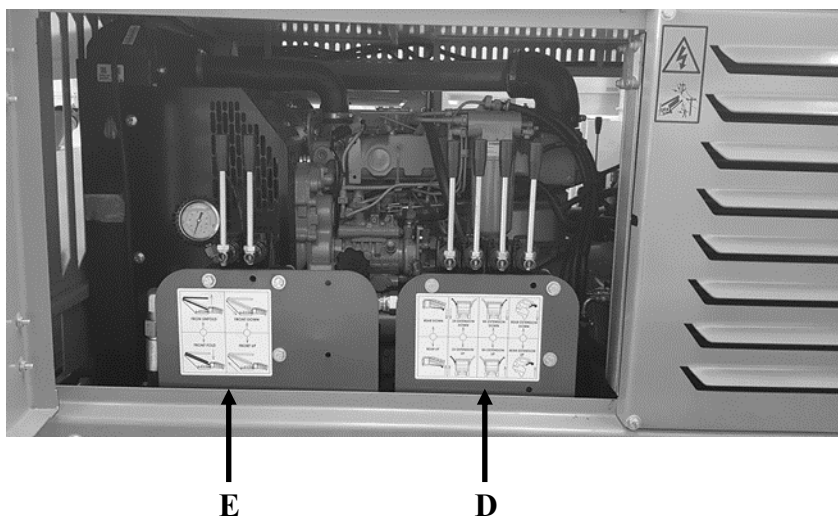
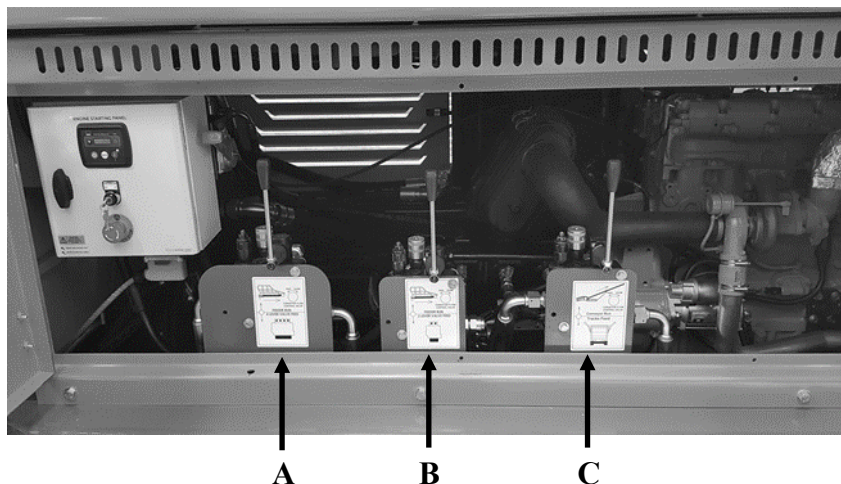
**F: Power Unit**- The power unit is the main source of electric and hydraulic power. The unit is easily accessible & lockable.

**G: Telescopic Head Section**- The height can be easily adjusted in order to achieve maximum stockpile heights.

**H: Telescopic Tail Section**- The height can be easily adjusted in order to achieve maximum/ minimum feed heights.

## 8) THE POWER UNIT

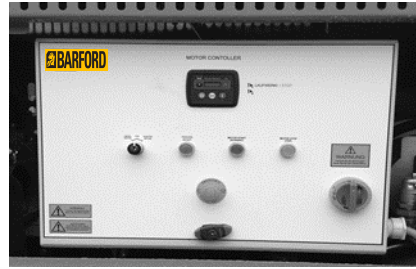
The power unit is attached at the chassis and provides the power output. This contains the control panel, engine throttle, engine, radio remote control, drive control valve bank and also the auxiliary control valve bank. The hydraulic and diesel tanks are placed at either side of the power unit.



## 8) THE POWER UNIT CONTINUED



Standard Conveyor Control Panel



Dual Power Conveyor Control Panel (Optional)

ICON	DESCRIPTION	
	AUXILIARY INPUTS	Auxiliary inputs can be user configured and will display the message as written by the user.
	FAIL TO START	The engine has not fired after the preset number of start attempts
	FAIL TO STOP	The module has detected a condition that indicates that the engine is running when it has been instructed to stop.
		<b>NOTE:- 'Fail to Stop' could indicate a faulty oil pressure sensor - If engine is at rest check oil sensor wiring and configuration.</b>
	LOW OIL PRESSURE	The module detects that the engine oil pressure has fallen below the low oil pressure pre-alarm setting level after the <i>Safety On</i> timer has expired.
	ENGINE HIGH TEMPERATURE	The module detects that the engine coolant temperature has exceeded the high engine temperature pre-alarm setting level after the <i>Safety On</i> timer has expired.
	UNDERSPEED	The engine speed has fallen below the underspeed pre alarm setting
	OVERSPEED	The engine speed has risen above the overspeed pre alarm setting
	CHARGE FAILURE	The auxiliary charge alternator voltage is low as measured from the W/L terminal.
	LOW FUEL LEVEL	The level detected by the fuel level sensor is below the low fuel level setting.
	BATTERY UNDER VOLTAGE / BATTERY OVER VOLTAGE	The DC supply has fallen below or risen above the low/high volts setting level.
	EMERGENCY STOP	The emergency stop button has been depressed. This a failsafe (normally closed to battery positive) input and will immediately stop the set should the signal be removed. Removal of the battery positive supply from the emergency stop input will also remove DC supply from the Fuel and Start outputs of the controller.
		<b>NOTE:- The Emergency Stop Positive signal must be present otherwise the unit will shutdown.</b>
	MAGNETIC PICKUP FAILURE	Pulses are no longer being detected from the magnetic pickup probe (3110-xxx-01 magnetic pickup version only)
	INTERNAL MEMORY ERROR	Either the configuration file or engine file memory is corrupted. Contact your supplier for assistance.



### HYDRAULIC TANK INDICATOR AND RETURN LINE FILTER

The indicator is located at the side of the hydraulic tank, the return line filter is located on the top of the hydraulic tank.



### SHUT DOWN OF DIESEL/ELECTRIC POWERED CONVEYOR

Observe all safety warnings. Make sure the conveyor is empty and clear of all materials.

Empty the conveyor.

Lower the engine revs by lowering the hand throttle.

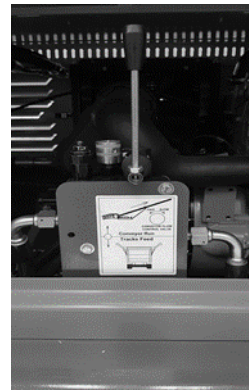
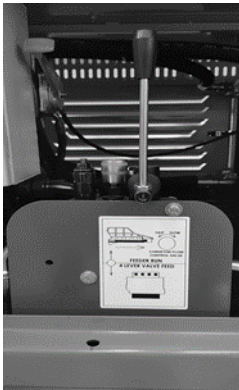
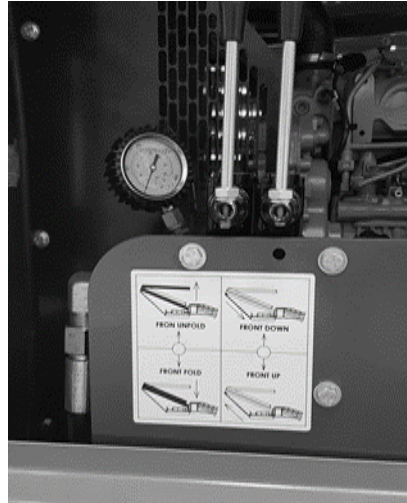
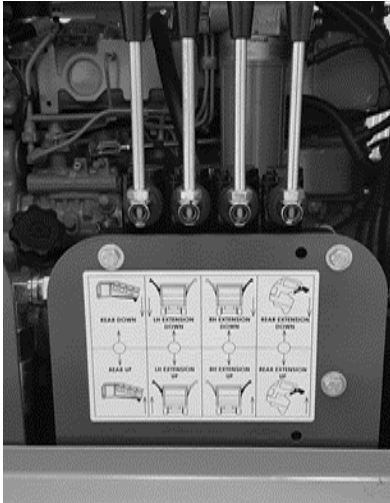
Stop the main conveyor unit.

Stop the engine.

### CONTROL VALVES AND HAND THROTTLE

The control valves and speed adjustments are contained within the power unit. Also the full remote controls can be found in this location. Parts to be noted are the 4 and 2 Levers Valves, which is used to fold/unfold the conveyor and hopper extensions, raise/lower the main conveyor and the feeder conveyor.

The flow controls will be used to adjust the speed of the various parts of the conveyor, feeder belt and main conveyor belt.



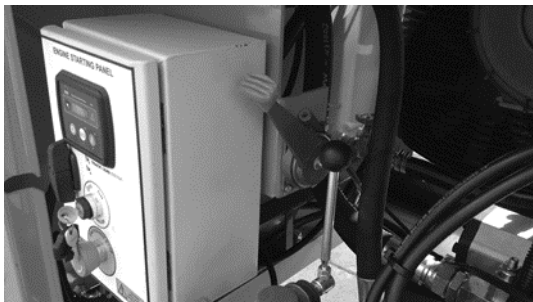
## 9) CONVEYOR IN TRANSIT POSITION

Observe all safety warnings.

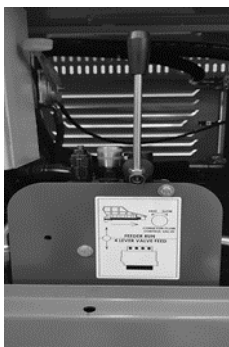
Before setting up for transit mode, ensure that the belt and the feed boot are clear of any material.

To set the conveyor up for transit mode the following steps must be followed:

1. Reduce engine revs using the hand throttle



2. Activate fold/lift rams— valves **A** and **B** (towards operator).

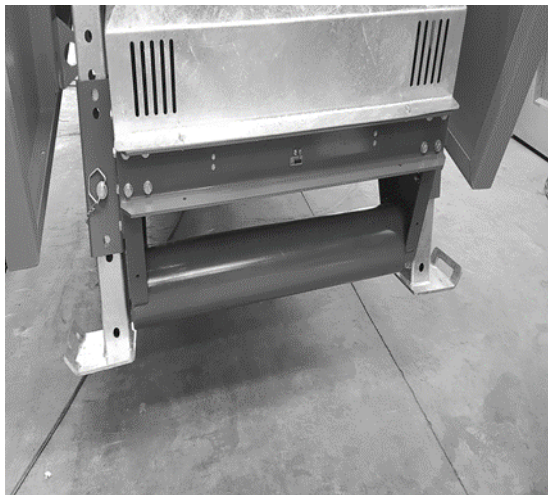
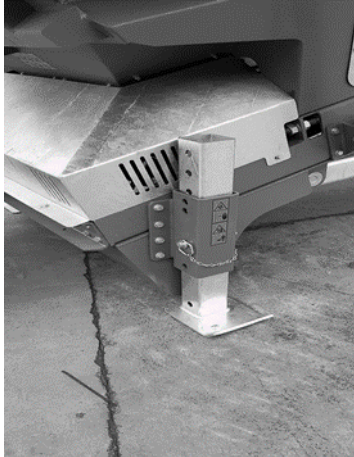


3. Fold Head Section— using the 2 lever control valve **E**



## 9) CONVEYOR IN TRANSIT POSITION CONTINUED

4. The conveyor will be fully folded.
5. Raise up feeder conveyor—using the 4 lever control valve.
6. Your conveyor is now in transit mode.



### PRESTART CHECKS

Before starting and operating the conveyor ensure that:

- All personnel are clear of the machine.
- All personnel are fully trained on the operation and the dangers of the machine.
- All personnel are wearing the correct PPE.
- Belts are clear from debris.
- Feed boot is empty.
- Machine operational area is clear and free from any obstructions.
- Machine operational area is level and even.
- Machine operational area is able to support the machine weight.
- All guards are securely in place.
- Conveyor is unfolded and secure.

### STARTING HYDRAULIC POWERED CONVEYOR

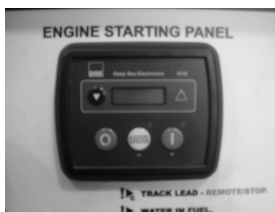
1. Check fuel tank for level of fuel.
2. Check hydraulic oil level.
3. Put all control valve levers in to neutral position.
4. Start the machine through the following steps; Turn control panel key to on position (pics a-b), push green button on the control panel display twice and allow 30 seconds for the machine to self start (pics c-d).



A



B



C



D

5. The machine should now be running. The conveyor will have to be firstly taken out of transit mode. To do this the single level valve located closest to the starting control panel must be in the neutral position.
6. Go to the other side of the unit and by using the 2 lever valve carefully and slowly unfold the head section.

## 10) OPERATING THE DIESEL POWERED CONVEYOR CONTINUED

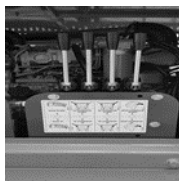
7. Now the conveyor can be raised to stockpile height. Again this is controlled by the 2 lever valve.
8. Manual jack legs has to be in contact with the ground.

**E**



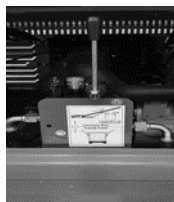
9. Unfold hopper extensions controlled by 4 lever control valve.

**D**



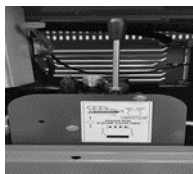
10. Now go to the control panel side of the unit. Before the main conveyor belt is run it is recommended to once again carry out the risk assessment (away operator).

**C**



11. Run feeder conveyor belt (run main conveyor belt first before run the feeder conveyor belt) (away operator).

**A**



**B**



12. Check the conveyor belts is running smoothly and in alignment.
13. On first use let the conveyor run for 10 minutes before loading the feed boot.

14. Adjust engine revs with the hand throttle.
15. To stop all conveyors you have to do it in sequence: 1. Feeder conveyor 2. Main conveyor (prior to stop the conveyor, be sure that no material left on the belt).

### STOPPING PROCEDURE

1. Check that all levers are in neutral positions.
2. Reduce engine revs with throttle.
3. Let the conveyor belt run a few minutes to ensure there is no material left on the belt.
4. Push the red button on the control panel to stop the engine. Always remove key from machine when not in use.
5. Check that all control panels are closed securely.

### EMERGENCY STOPPING

1. Only use emergency stops for emergencies.
2. When an emergency stop has been pressed, do not restart the engine until it is safe to do so. Pressing an emergency stop will stop the engine and machine.
3. Be familiar with emergency stop locations. When emergency stops have been pressed turn the Ignition key off (hydraulic option) or turn off isolator (electric option).
4. The emergency stops will now have to be physically disengaged by pulling or twisting. Only when the machine is fully switched off and safe should you try to get to the root of the problem.

### RESTART AFTER EMERGENCY START

1. Ensure the problem is solved before starting the machine.
2. Check all emergency stops are released.
3. Restart machine in the normal procedure.

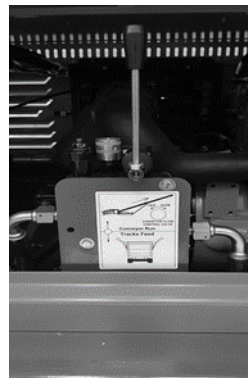




### MOVING

1. Before moving the conveyor, ensure all material has run off the conveyor, the feed boot is empty
2. Avoid moving the conveyor on uneven ground. It may cause damage to the conveyor and engine.
3. In cold conditions start up the machine for approximately 10 minutes before moving. When hydraulic oil is cold the machine would tend to steer to the right and track fast forward.
4. Never stand on the conveyor while it is being moved.
5. To track the machine the Single Lever Valve must be engaged in TRACK position (towards operator). This will allow the conveyor to be tracked with the remote.

C

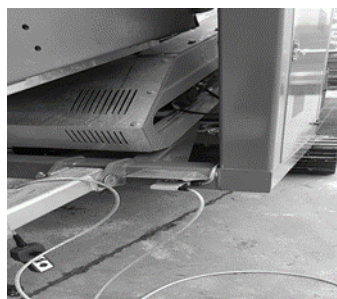
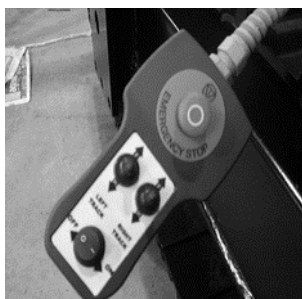


### SAFE TRACKING

1. When travelling down a gradient, tracks should be driven sprocket first. Going up a gradient, the tracks should be driven forward.
2. Machine should be parked on level ground that is suitable to support the weight of the machine.
3. Track the machine every day for a short distance. This will reduce the risk of track seizure. Never track the machine if they are frozen to the ground or attempt to move the machine in any other way.
4. Always clear the tracks of any surrounding debris. Do not track the machine without clearing the area. Do not attempt to move the machine if it is not possible to track it.

### TRACKING WITH DOG LEAD REMOTE CONTROL

Ensure the machine is clear of any obstacles before tracking





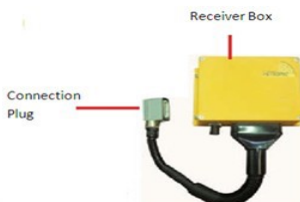
- Check that the dog lead is connected to the machine and the machine stop is not pressed
- Start the engine
- Push the two levers of the drive control up fully
- Switch the tracking switch (aux / track) on the handset to the track position. At this point the safety siren will sound. There will be a short delay before the tracks will operate.
- You can now use the handset to track the conveyor

Please note that when the remote is not in use, the function controls should be left in neutral position.

### TRACKING WITH RADIO REMOTE CONTROL (Optional Extra)

The radio remote is an independent control unit for the tracks only.

- First plug in the Receiver Box connection. The machine will not track if the receiver box is not plugged in. Always unplug the dog lead remote control.
- Start the engine / machine
- Push the two levers of the drive control up fully
- After the remote tracking manual handset has been disconnected from the machine press any button on the transmitter
- There will be a short delay and then the transmitter becomes active.



### Transporting

1. Before transporting always check that the machine is secure and there are no loose objects or material.
2. Always use the appropriate vehicle for hauling the conveyor. Take into consideration the weight and size of the machine and the route when transporting.
3. Check local regulations of transporting large machinery i.e. certification.

Good records and maintenance are mandatory aspects of a machine's life. Good maintenance of your conveyor is vital; the conveyor will perform at its best when cared for. Only personnel with proper qualifications for servicing and maintenance can perform these tasks. All safety regulations and risk assessment should be followed before maintenance is carried out. Never work under unsupported equipment. It is important to remember that any raised part of the machine can fall, causing injury or death. When maintenance is carried out ensure all safety aspects are in good working order before returning the machine to operating service. Any hydraulic maintenance should be carried out by qualified personnel. Always bleed and depressurize the hydraulic lines before attempting maintenance or repairs. Replace any worn or broken parts as soon as possible. Keep power units dry at all times. Power washing can weaken the seal on plugs. All electricity should be isolated before removing the front panel.

## Maintenance Schedules

Engine	Daily (10 hour)
Coolant level	Check/fill up
Engine lube oil level	Check/fill up
Fuel tank level	Check fill up
Fuel water separator	Check fill up
Engine air cleaner service indicator	Inspect/replace air filter if illuminated
<b>Moving components</b>	
Material build up	Remove
Turning/moving freely	Check/repair
<b>Power unit</b>	
Hydraulic oil level	Check/fill up
<b>Conveyor belt</b>	
Alignment	Check/align
Tension	Check/tension
Rubber cushions	Check/replace

### ANNUALLY

- Change engine filters
- Change in line filters

***Never power wash around the control panels. Always abide by the safety standards when carrying out maintenance.***

### ELECTRIC MAINTENANCE

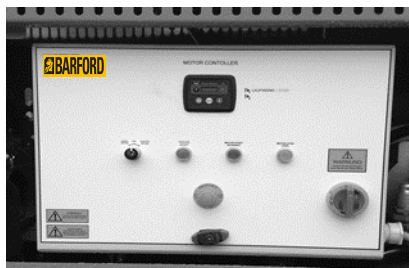
Disconnect battery ground cable before carrying out maintenance on electrics.

The control panel lids should be closed at all times.

A regular check of the control panel and all the connections is recommended.

When maintenance or repairs are being carried out on the control panel, ensure it is covered to prevent any rain or water getting in.

Check daily for any damages, worn out parts and good operating switches.



### WELDING

Only welders qualified to European Standards or similar are permitted to perform welding operations on the machine.

Before working on the plant, switch off and isolate battery power.

Again assess risk before working on the conveyor.

### HYDRAULICS

Only certified personnel should carry out any maintenance or servicing to the hydraulic system. Always relieve pressure from the hydraulic system before carrying out any kind of maintenance or servicing.

**NEVER ATTEMPT TO ADJUST ANY HYDRAULICS WHEN THE MACHINE IS IN OPERATION**

### BELT MAINTENANCE

#### ONLY AUTHORISED AND TRAINED PERSONNEL TO WORK ON BELT MAINTENANCE

### BELTS

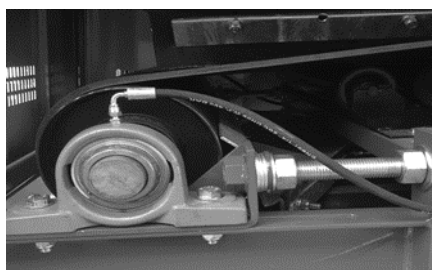
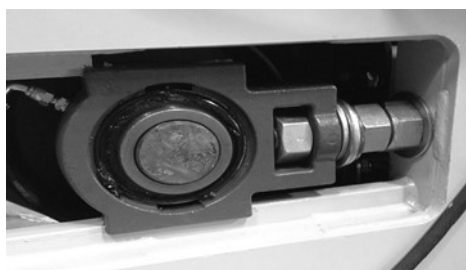
- Belts, scrapers and drum lagging are consumable items and will need to be replaced through general wear and tear.
- The belt must be checked regularly for rips, cuts and any damage.
- Always keep the belt at the proper tension.
- Belts need to be aligned.
- Never overload the belt. If the above is not followed, belt slippage can occur.
- Belt should be cleaned from ground height by rotating the belt slightly each time.

### BELT ALIGNMENT AND TENSION

It is important that the conveyor belt is in alignment. If the belt is not in alignment, the machine may not be level, the belt tension is faulty or the position of the drum is faulty.

Naturally the belt will stretch due to wear and as a result it will need adjusted occasionally. The belt should be tensioned so it is not too tight or too loose. Loose belts cause slippage whilst a tight belt will damage the drum bearings. As well as visual inspections it is important to use hearing inspections as any unusual sounds can indicate a potential problem with the belt and its running gear.

If the belt needs tensioned or aligned all the work is done at the tail section of the conveyor. Ensure the running of the belt is disengaged to carry out this work. Using a spanner, alter the tail drum adjuster to the desired location.



### POWER UNIT MAINTENANCE (OPTIONAL EXTRA)

The engine in your Barford Power Unit comes with its own manual. If you have not received this please contact Barford Equipment Ltd.

All safety and maintenance information should be read and understood before carrying out maintenance on the power unit.

### FUEL

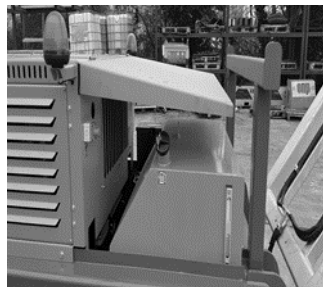
Diesel is a highly flammable fuel. Do not fill the diesel tank to capacity. The fuel level of the machine can be checked by viewing the indicator. We recommend you will fill the fuel tank at the end of the day.

Check the level indicator.

Clean around the cap.

Remove the cap and funnel in the fuel until the indicator is at it's highest level then replace the cap.

Always clean any spillage of the fuel.



### HYDRAULIC SYSTEM

It is essential that the hydraulics are regularly serviced. Keep air vents in the cap open to allow the hydraulic system to breathe.

### CHECKING HYDRAULIC OIL LEVEL

It is important that the correct grade of oil is used. If you find that you are filling the hydraulic oil more than usual, check all hydraulic parts and pipes for leaks.

Before checking the hydraulic oil, ensure it is at normal temperature.

Where possible, have all cylinders retracted.

Check the oil indicator. The oil level must be in the middle of the maximum and minimum marks on the indicator.



### FILLING THE HYDRAULIC OIL

When filling the hydraulic oil tank, always make sure the engine is switched off and fill between the maximum and minimum indicator. As always follow the safety regulations. Never overfill the hydraulic tank as this will cause leakage from the filter cap and system overheating.

### CHANGING HYDRAULIC OIL

1. Always assess risk before carrying out work on the hydraulic oil system
2. Ensure oil is at normal operating temperature and cylinders are retracted where possible
3. Before removing the drain plug, slowly unscrew the filler cap to release any pressure in the hydraulic tank
4. Ensure you have a suitable container to catch all of the oil. Ensure to clean any spillage
5. Remove the drain plug. Remove the cover plate which is under the filler cap. Dispense the gasket
6. Remove the suction filters by unscrewing them from the suction pipes
7. Using clean oil, flush out the tank removing any dirt. Clean and reuse the suction filters and replace on the suction pipes
8. Replace cover plate using a new gasket, then replace drain plug. Change the return line filter
9. Refill the tank with clean hydraulic oil at the level marked on the indicator
10. Run the engine, operate the hydraulic controls which will take any air from the system
11. Stop the engine and check level of oil at the indicator and top up if required

### BATTERY CHECK

Always abide by safety regulations when dealing with batteries. Always wash hands after handling a battery. Ensure to maintain battery level. In cold weather distilled water should only be added immediately before starting the engine to prevent it freezing. Always keep the terminals and case clean.



### CHANGE OF BATTERY

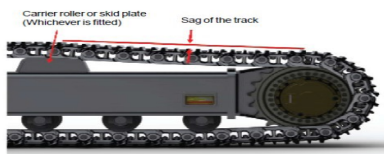
Always follow safety regulations. Ensure all electrical circuits are switched off. Disconnect the earth lead from the battery. Disconnect the positive lead from the battery. Remove battery from the machine. To reinstall always connect positive first and then connect the earth.

### Track Maintenance

Refer to Tracks Operation Manual for advice and information. It is important to maintain your tracks on a regular basis. Always remove any debris and built up oil and grease. Replace any damaged and broken parts

### Track Tension

When checking the tension on the tracks, drive your machine about 2 – 3 metres forward. Measure the sag on the top part of the track on the longest section of unsupported track as shown below



The sag of the track must be between 5mm and 15mm. You must check the track tension on a new machine. DO NOT set track tension too tight.

### Adjusting Track Tension

Crawler track systems use a grease cylinder to keep each track chain in tension. Screwed into the end of the grease cylinder is grease fitting enabling grease to be pumped into the grease chamber and released from it, tightening and slackening the track

1. Take care when loosening the grease fitting as it is pressurised.
2. If the tracks keep becoming slack, check for any leakage on the outer face of grease fitting.
3. Check if there is any grease leakage at contact surface between the grease tension and grease fitting. Ensure the tension seal are not damaged.
4. Before replacing seals, place a straight edge along the cylinder barrel as shown above to ensure outer sleeve has not swollen from being overlooked.
5. To replace seals, simply unscrew grease fitting push or pull out inner cylinder to expose lip seal and inner seal.

### Tightening the Tracks

At the side of the track frame there is an access cover, unscrew this to gain entry. Check that the grease fitting and grease gun adaptor is clean. Connect a grease gun to the grease fitting and add grease until the track tension is normal. Drive the conveyor forward and backward to check if the track is tightened.



### SLACKENING THE TRACK

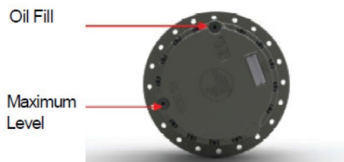
At the side of the track frame there is an access cover, unscrew this to gain entry. Loosen the track fitting, by turning it in a anti-clockwise direction, using small movements until the grease is released. Once you have achieved the correct tension, tighten the grease fitting by turning in a clockwise direction. Clean all excess grease. Remember to track the machine for a while forward and backward in order to assess if the tracks are at the right tension. This movement will help the grease work through the tracks.

### TRACK CHAINS

It is important to be aware of the conditions that the conveyor tracks are working in. Certain surfaces and environmental surroundings could cause corrosion. Tracks can also seize if they are not moved on a daily basis. To prevent this, track the machine a few meters in both directions.

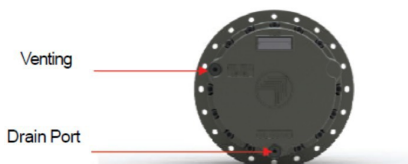
### OIL FILLING

To fill the oil, track the machine until the gearbox casing is level with a plug positioned at 12 o'clock (see diagram). Unscrew the two plugs and fill from the upper hole until oil reaches the level of the lower hole.



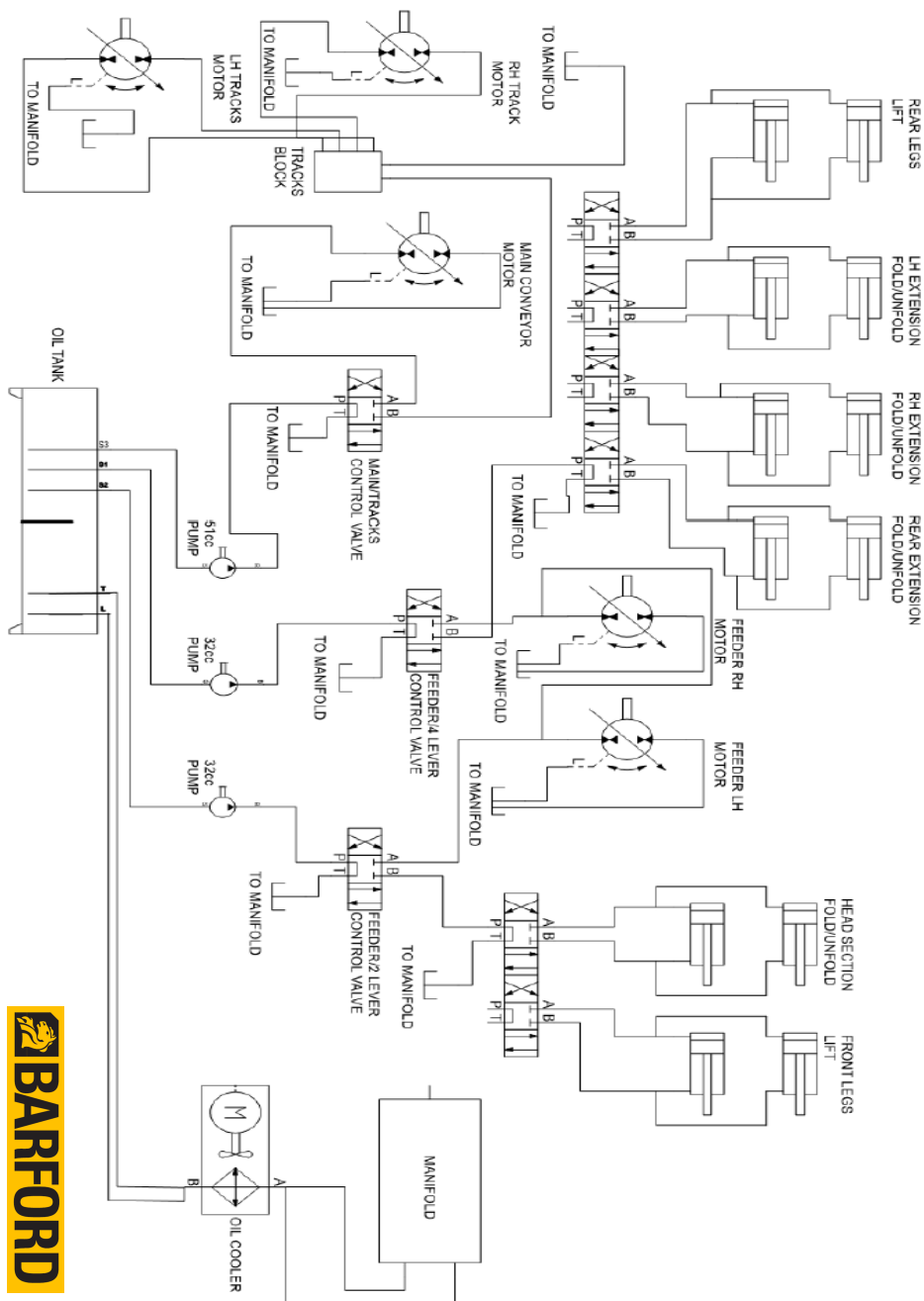
### OIL DRAINING

To drain the oil, track the machine until the plug is at 6 o'clock position (see diagram). Unscrew both plugs and allow all oil to empty into a container. Do not fill oil in the track drive without checking oil level inside it. Track systems are supplied with a quantity of oil in track drive. The gearbox life will shorten if oil becomes dirty. Only use new clean oil in clean containers.





## 12) HYDRAULIC SCHEMATIC



### SPECIFICATION

- |                     |  |
|---------------------|--|
| • Discharge Height. | 8.82 m / 28ft 9ins                           |
| • Belt Width.       | 1200mm / 48ins                               |
| • Belt Length.      | 19m 880mm/ 65ft                              |
| • Belt Type.        | EP 500 3PLY / Optional                       |
| • Power unit.       | Diesel Hydraulic with Cat C4.4 100bhp Engine |
| • Developing.       | 74.5kw / 100bhp @ 2200 rpm                   |
| • Fuel Consumption. | 5.2 – 6.2 ltr / hr                           |

### ADVANTAGES

- Can be used for various applications: Top Soil, Sand, Coal, Bark and Crushed Aggregate.
- A wide range of heights for output and input and can be used with other crusher and screeners.
- Height on front stanchions can be set with out using manual pins by special load holding cylinders.
- Easy mobility on site
- Increased efficiency while operating. And increased stockpile capacity
- Reduced fuel costs ie: no need for shovel operator to move materials from under Conveyor.

### OVERALL DIMENSIONS

- |                     |                     |
|---------------------|---------------------|
| • Machine Width.    | 2600mm / 8ft 5ins   |
| • Transport Length. | 15772mm / 51ft 7ins |
| • Transport Height. | 2714mm / 8ft 9ins   |

### HYDRAULICS

- |                                  |                       |
|----------------------------------|-----------------------|
| • Hydraulic Motor Main Conveyor: | Twin Drive OMV500cc   |
| • Feeder Conveyor:               | Twin Drive OMSS160CC  |
| • Hydraulic Pump:                | Triple 51cc/32cc/32cc |

### 4M HEAVY DUTY CRAWLER TRACK DATA

- |                   |                      |
|-------------------|----------------------|
| • Tractive effort | 14300daN             |
| • Gearbox ratio   | 119:0                |
| • Hydraulic Motor | Rexroth 45cc / Rev   |
| • Approx. Speed   | 1.6 km p/hr (0.9mph) |

### Battery

- Type - 12v negative earth.

### Electric Information

- 3 Phase 380 – 415 Volts (depending on normal national voltage).

### Optional Extras

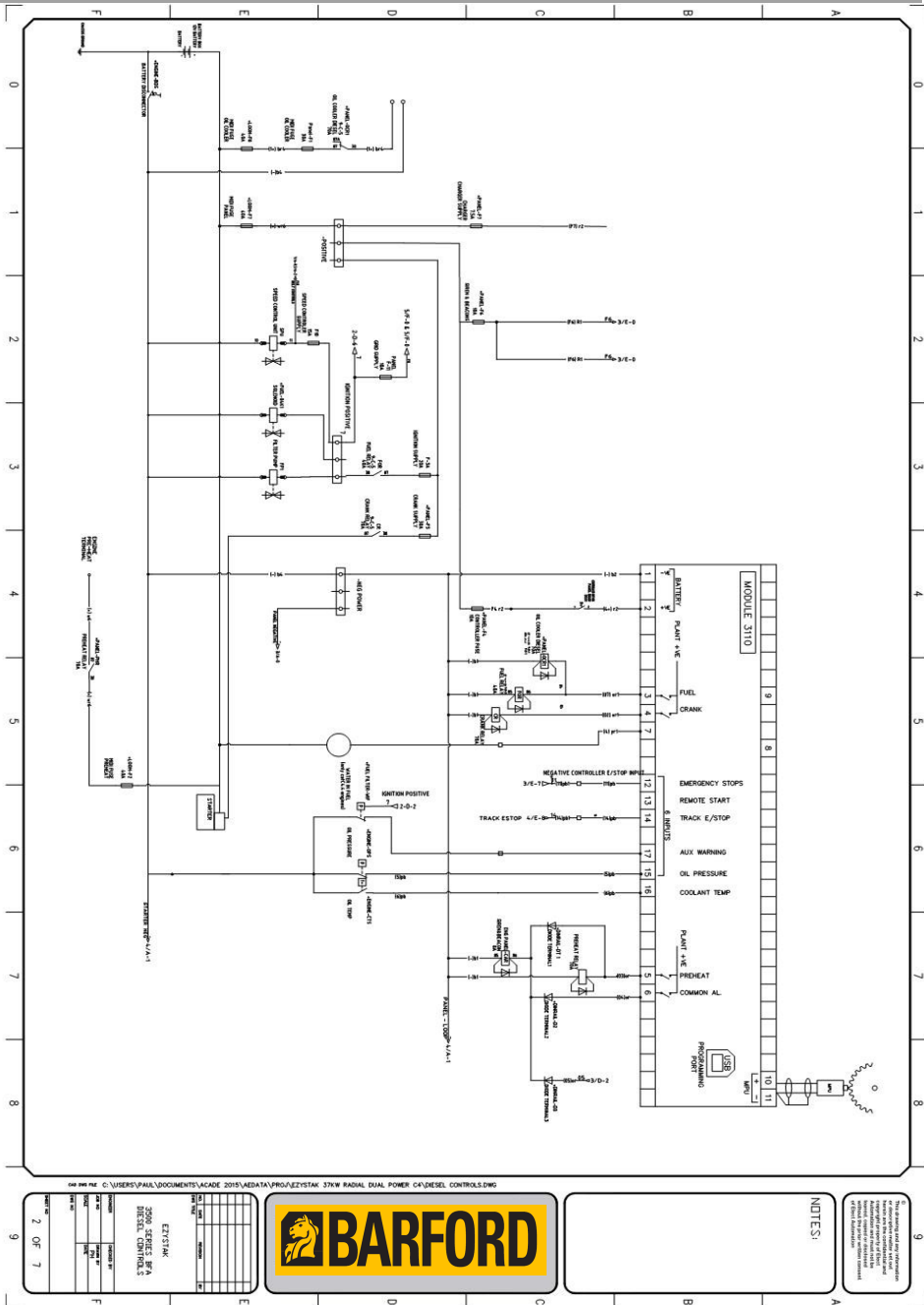
- Higher HP Engine.
- Dual Power (Diesel / Electric Hydraulic).
- Full Side skirting or Half side skirting.
- Hardox hopper liner plates.
- Rubber hopper liners.
- Feedboot extension.
- Dust Covers ( Canvas or Steel).
- Spray bar (reduce dust).
- Radio remote controlled tracks.
- Belt scraper upgrade.
- Chevron belt.
- Hydraulic folding head.
- Rotating Auger.

### Standard Features

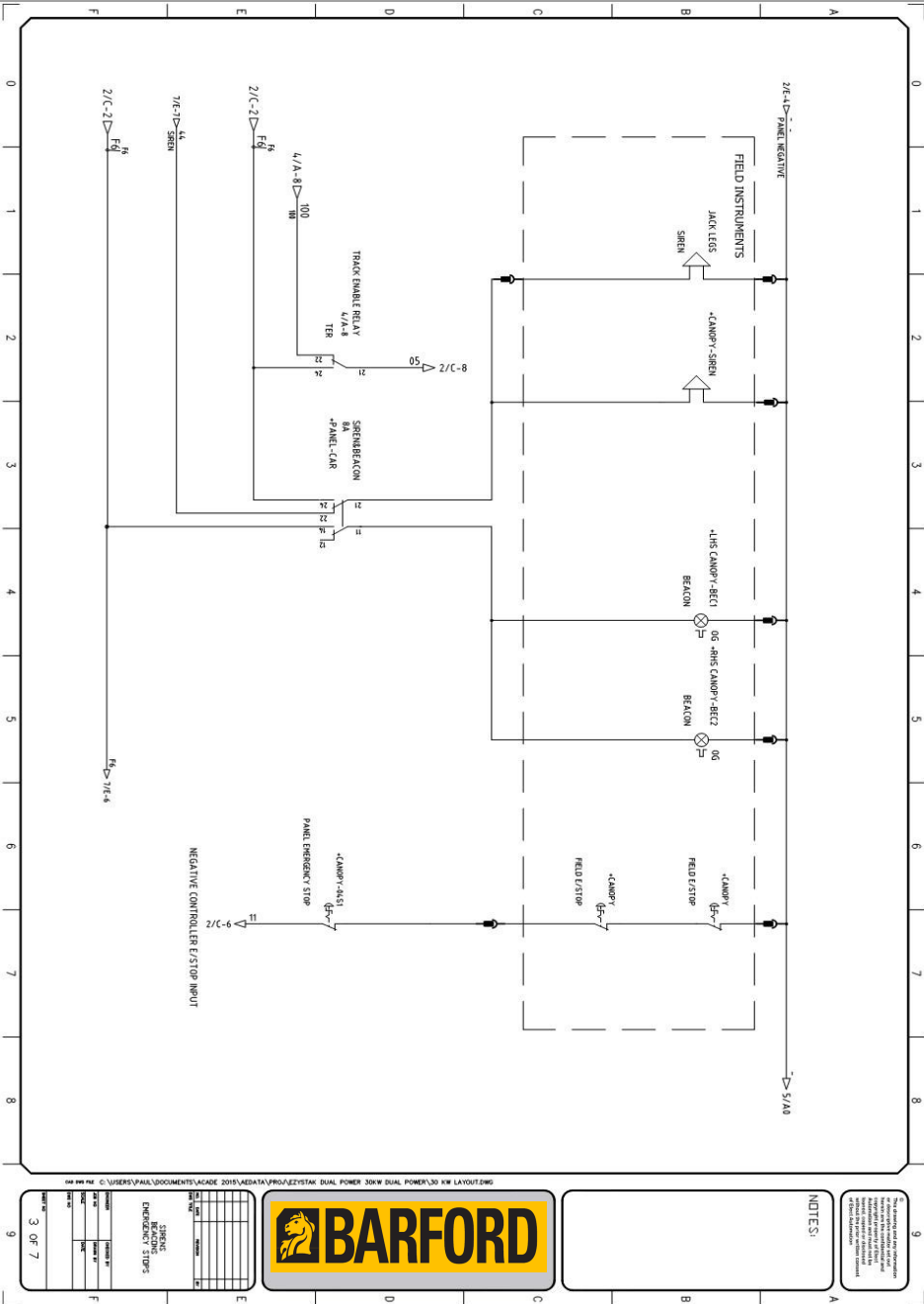
- Full dog lead remote control.
- Heavy duty head and tail drums.
- Heavy duty rollers.
- Cat engine.
- Impact bars on tail section.
- Galvanised telescopic legs.
- Hydraulic folding head section.
- Cat C4.4 74.5kw engine.
- Painted with 2 pack epoxy primer and 2 pack high level gloss CE approved.



# 14) ELECTRIC SCHEMATIC CONTINUED

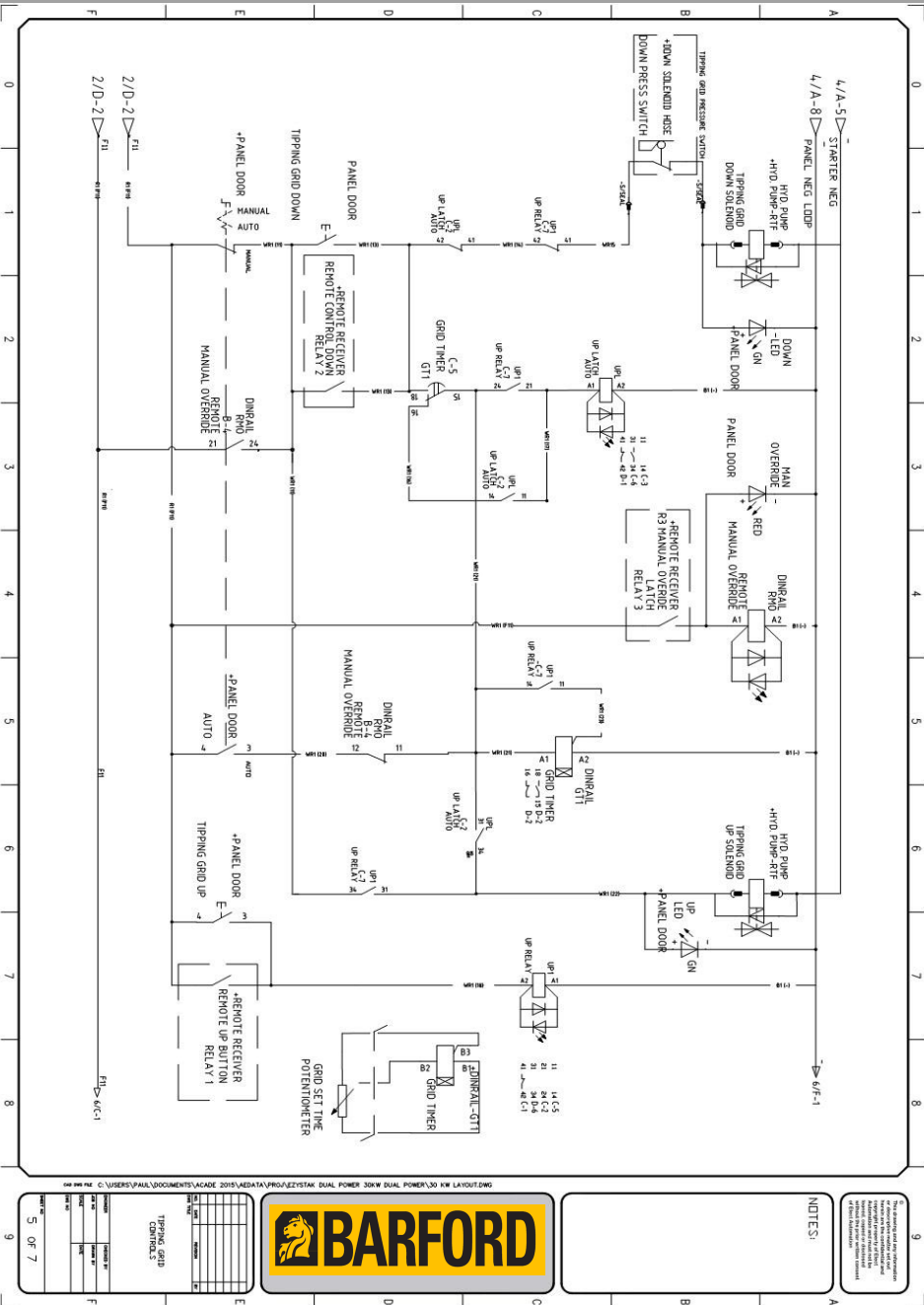


## 14) ELECTRIC SCHEMATIC CONTINUED





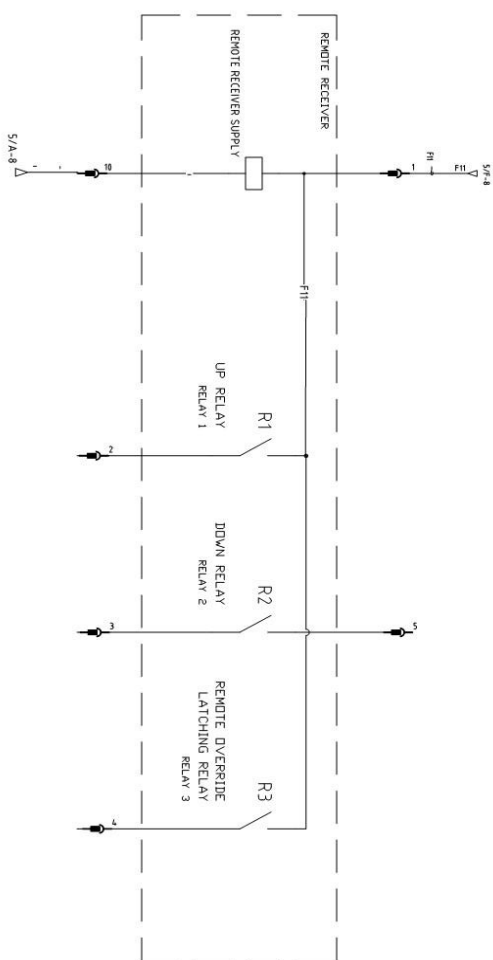
## 14) ELECTRIC SCHEMATIC CONTINUED





TIPPING GRID REMOTE CONTROL

TY CABLE NUMBER	PIN NUMBER	PANEL CABLE NUMBER	DESCRIPTION	REMOTE RECEIVER RELAY NUMBER
1	PIN 1	F11	POSITIVE SUPPLY	RELAY 1
2	PIN 2	F18	REMOTE DOWN CONTROL	RELAY 1
3	PIN 5	F19	REMOTE DOWN CONTROL	RELAY 1
4	PIN 4	F19	REMOTE DIVERIDE LATCH SWITCH	RELAY 3
5	PIN 5	F11	REMOTE DIVERIDE LATCH COMMON	RELAY 3
6	PIN 10	-	NEGATIVE SUPPLY	RELAY 3
7				
8				
9				
10				
11				



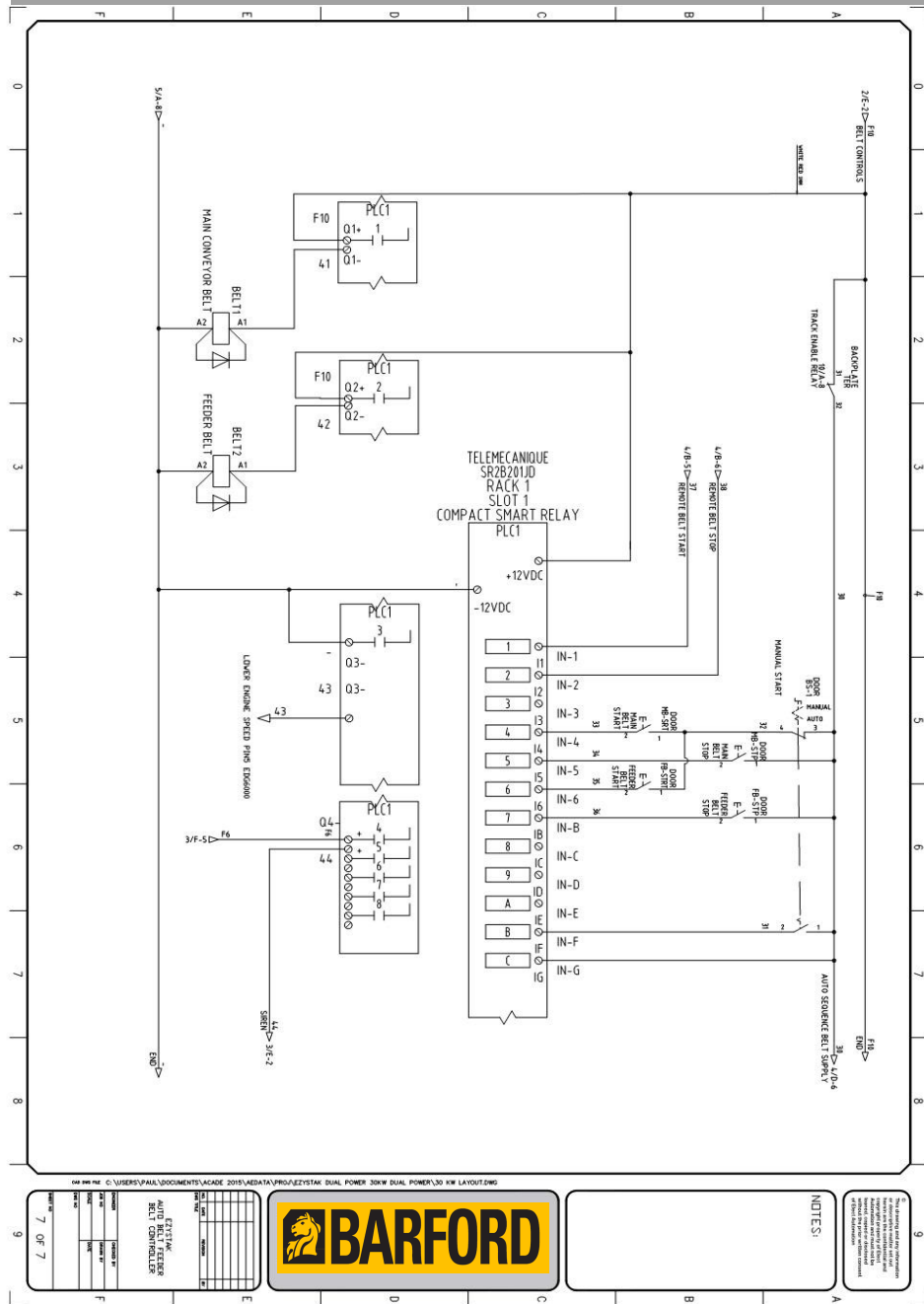
\\barford\p\l\documents\acad\2015\data\proj\2125\2125.dwg DUAL POWER 30W DUAL POWER 30W LAYOUT.DWG

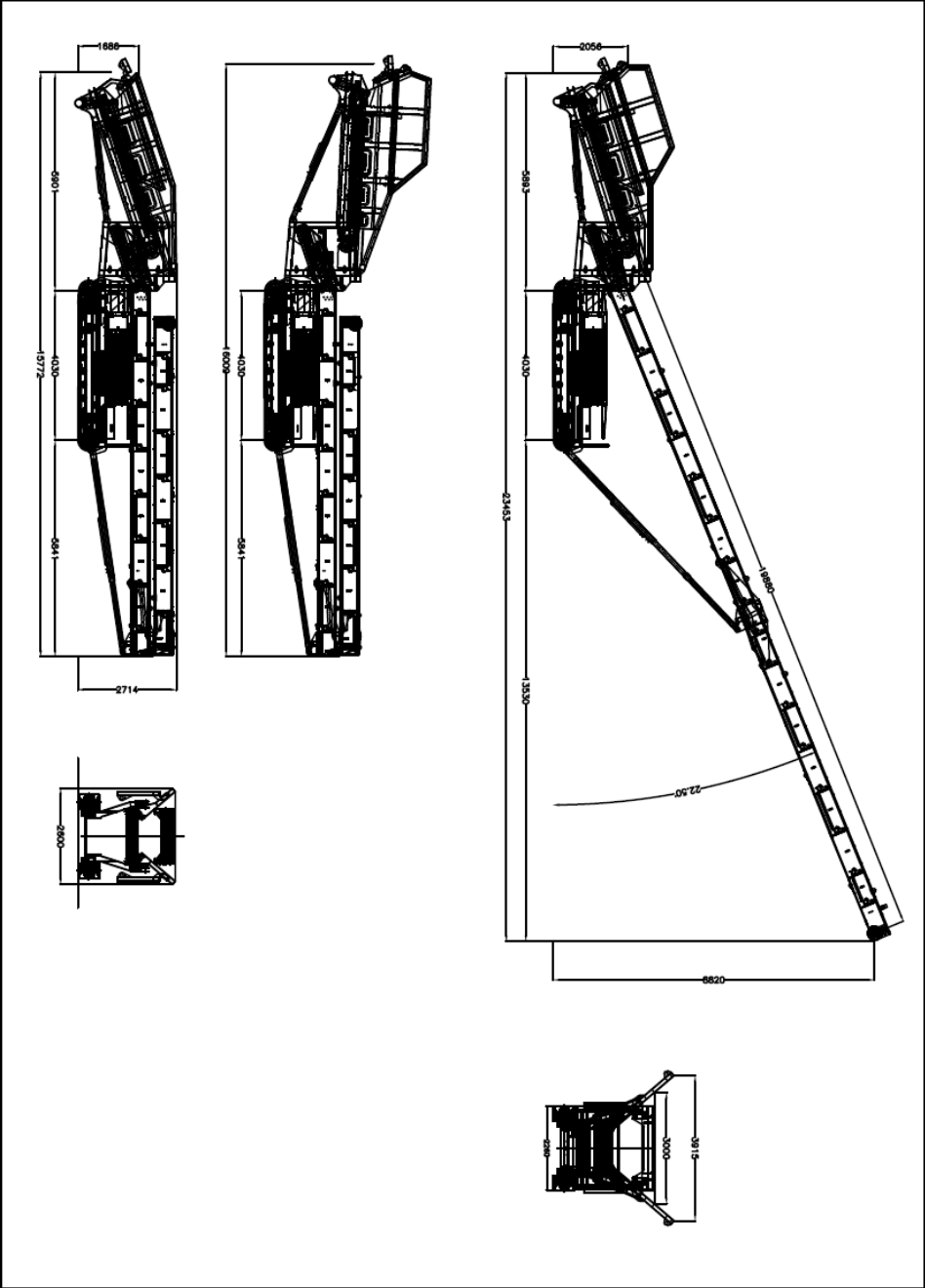


NOTES:

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2000 30W DUAL POWER 30W LAYOUT.DWG	
DATE	2015/01/01
BY	2015/01/01
CHECKED BY	2015/01/01
APPROVED BY	2015/01/01
TIPPING GRID REMOTE	
6 OF 7	







## SPARE PARTS LIST

# BARFORD SPARE PARTS

## Barford Equipment Ltd. General Information

Barford Equipment Ltd. recommend that only genuine spare parts are used on their machines, this is to ensure the minimum amount of downtime and ensure the longevity of the warranty period

Parts which have not been supplied by Barford or its dealer network cannot be guaranteed to be of the same specification as supplied on the machine

Barford Equipment Ltd. cannot be responsible for damaged or downtime arising from the use of non genuine parts and the use of any such parts shall result in the end of the warranty period.

## Barford Ordering Procedure

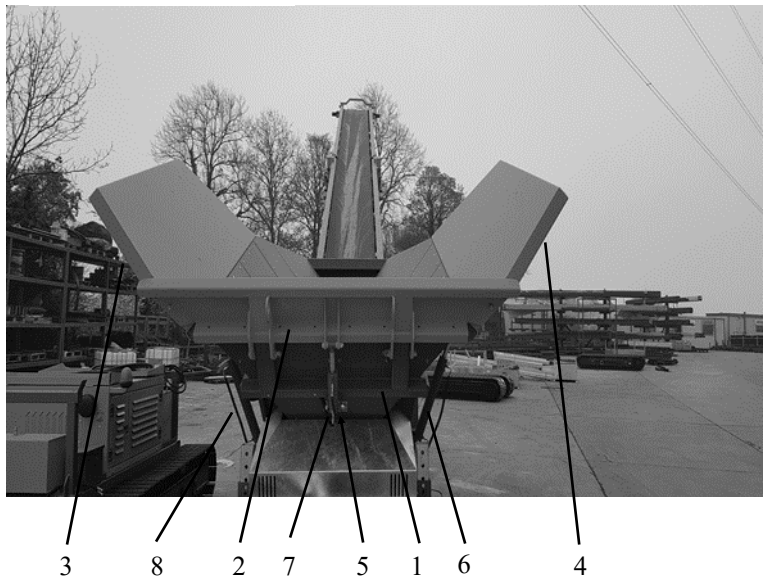
When placing an order for spare parts, please ensure that the following is listed:

- Machine type
- Machine Serial Number
- Part Number
- Quantity
- Delivery Address
- Delivery Method

Orders may be emailed, faxed or posted to us; failure to supply the required information may result in a delay on your parts being dispatched. Orders by post should be sent to the following address:

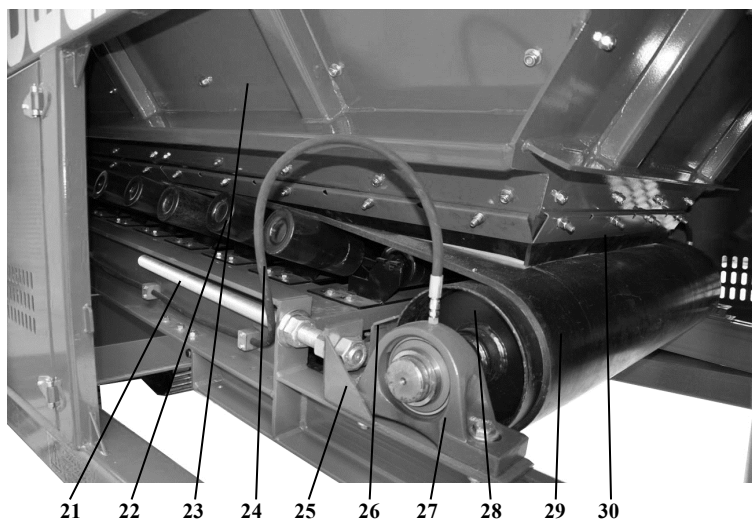
**Barford Equipment Ltd**  
**72-74 Omagh Road**  
**Dromore**  
**Co.Tyrone**  
**N.Ireland**  
**BT78 3AJ**  
**Tel: + 44 (0) 2882 897401**  
**Email: [info@barford.com](mailto:info@barford.com)**

**Hopper**

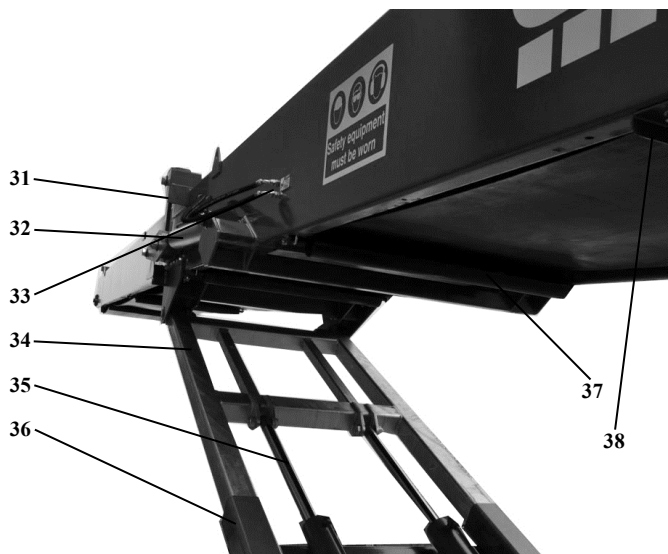


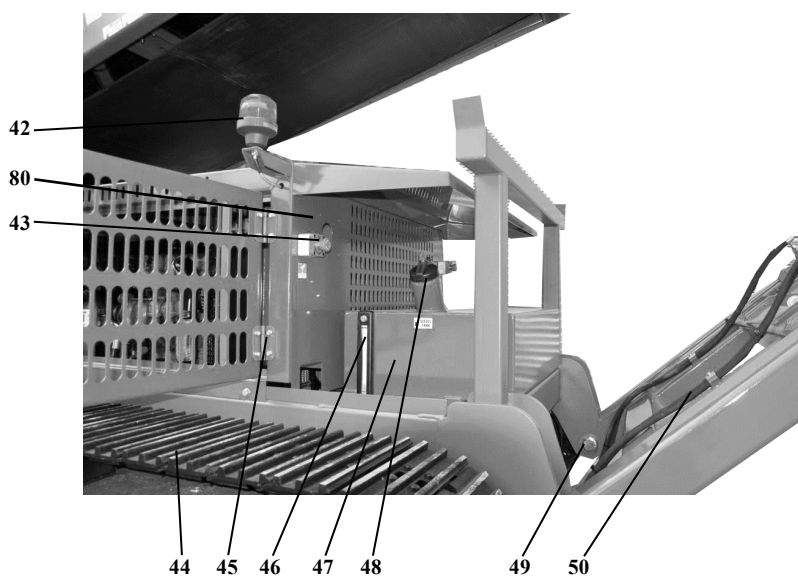
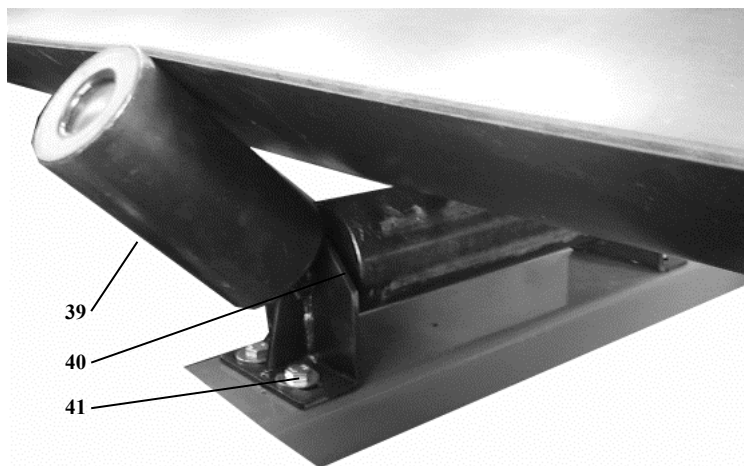
**Feeder Conveyor**





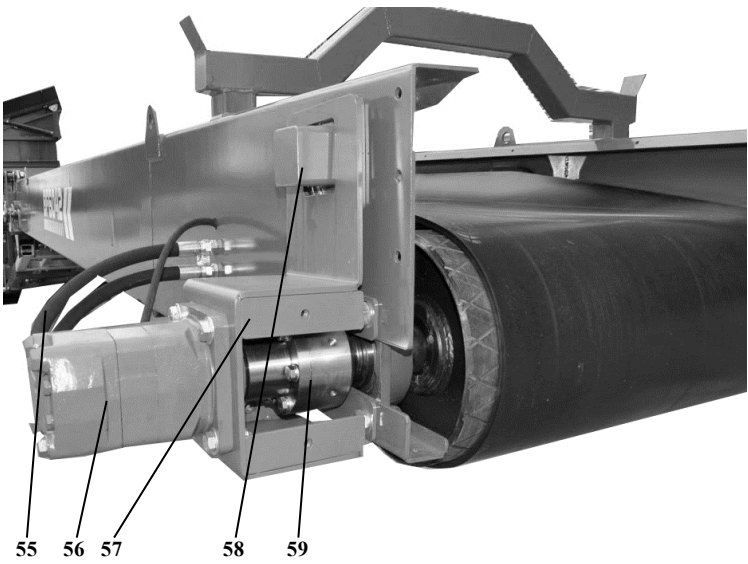
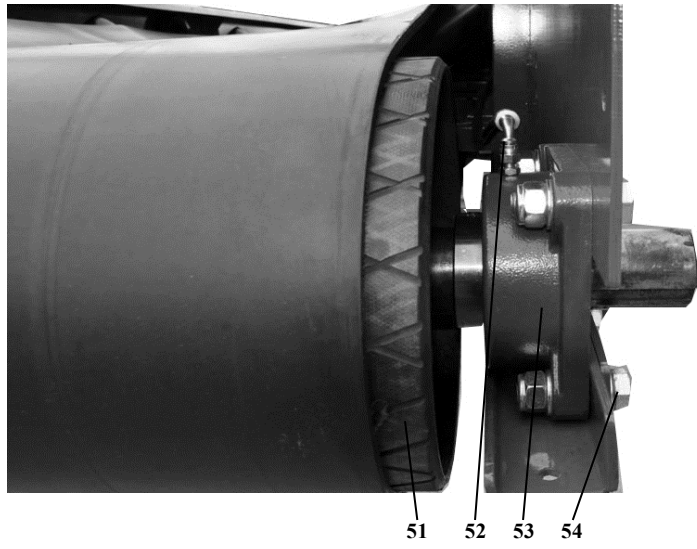
## Main Conveyor



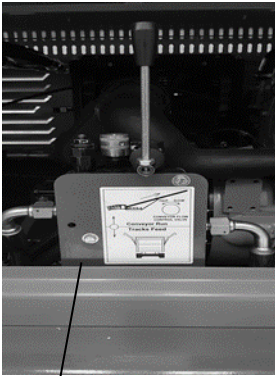
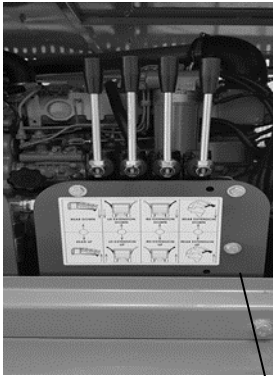




Conveyor Head Section



**Power Unit and Controls**



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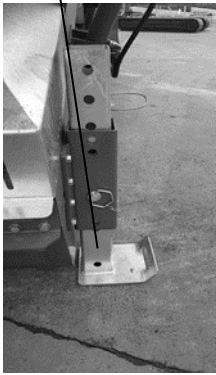
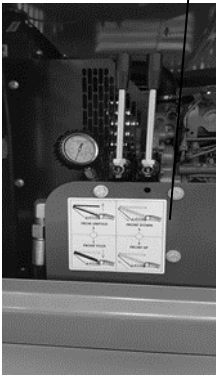
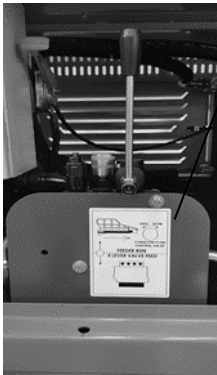
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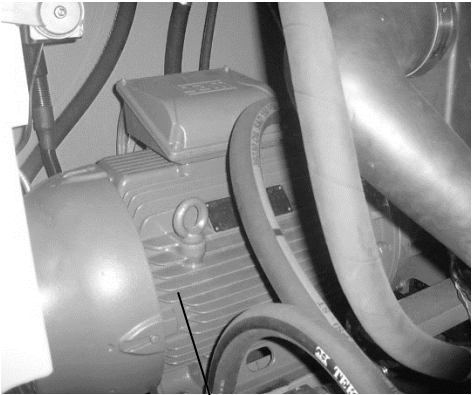
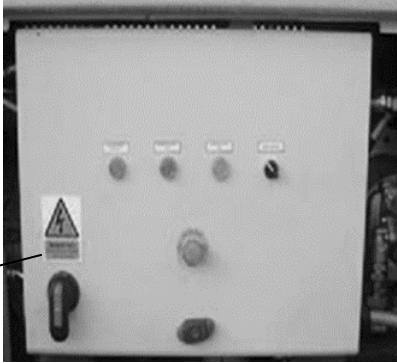




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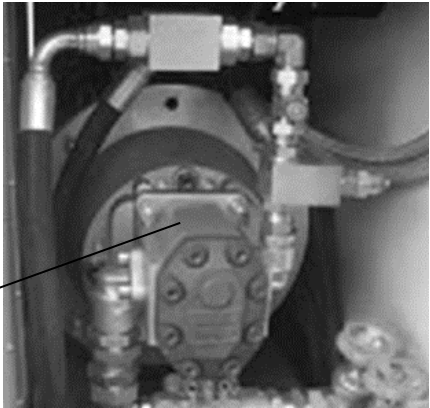
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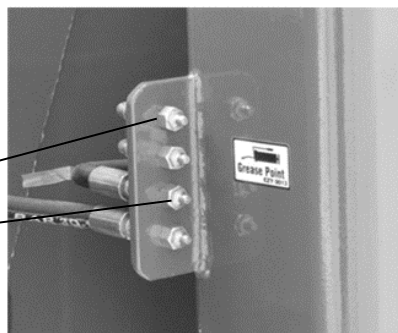




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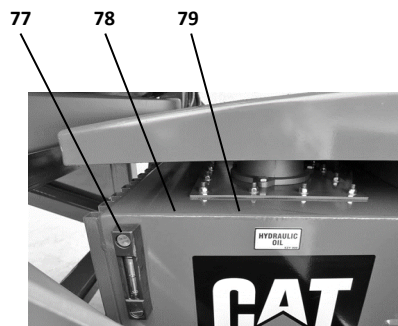
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Item Number	Part Number	Description
1	7040001	Hopper
2	7040002	Hopper Extension Rear
3	7040003	Hopper Extension RH
4	7040004	Hopper Extension LH
5	7040005	Rear Extension Ram
6	7040006	LH/RH Extension Ram
7	7040007	Rear Extension Ram Pipes
8	7040008	LH/RH extension Ram Pipes
9	7040009	Feeder Wiring Loom
10	7040010	Feeder Conveyor Return Rollers
11	7040011	Feeder Conveyor Drive Motor
12	7040012	Tail Drum Bearings (Main Conv)
13	7040013	Tail Drum Plough/Scraper (Main)
14	7040014	Grease Pipes Tail (Main Conv)
15	7040015	Hopper Chute Skirting/Clamp
16	7040016	Hydraulic Pipe Clamps)
17	7040017	Head Drum Bearing (Feeder Conv)
18	7040018	Feeder Conveyor Chute
19	7040019	Head Grease Pipes (Feeder Conv)
20	7040020	Pipe Clamps
21	7040021	Conveyor Adjustment Assembly
22A	7040022	Feeder Conveyor Wing Rollers
22B	704022B	Feeder Conveyor Centre Rollers
23	7040023	Hopper
24	7040024	Feeder Tail Grease Pipes
25	7040025	Tail Drum Plough Assembly
26	7040026	Tail Drum Scraper
27	7040027	Tail Drum Bearings
28	7040028	Tail Drum
29	7040029	Feeder Conveyor Belt
30	7040030	Hopper Skirting/Clamps



31	7040031	3 Point Fold Linkage
32	7040032	Fold Rams
33	7040033	Fold Ram Pipes
34	7040034	Inner Leg Assembly
35	7040035	Leg Rams
36	7040036	Outer Leg Assembly
37	7040037	Return Roller (Main Conv)
38	7040038	Return Roller Scraper
39	7040039	Main Conveyor Wing Roller
40	7040040	Main Conveyor Centre Roller
41	7040041	Bolt Kit
42	7040042	Beacon
43	7040043	Emergency Stop
44	7040044	Tracks
45	7040045	Canopy Door Hinges
46	7040046	Fuel Gauge
47	7040047	Fuel Tank
48	7040048	Fuel Cap
49	7040049	Leg Pins
50	7040050	Leg Ram Pipes
51	7040051	Head Drum (Main Conv)
52	7040052	Head Drum Grease Pipes
53	7040053	Head Drum Bearings
54	7040054	Bolt Kit
55	7040055	Conveyor Drive Pipes
56	7040056	Conveyor Drive Motor
57	7040057	Conveyor Motor Housing
58	7040058	Conveyor Motor Mount
59	7040059	Motor Coupling
60	7040060	4 Lever Valve
61	7040061	Main Conveyor/Tracks Control Valve

62	7040062	Feeder Run/2 Lever Feed Valve
63	7040063	Feeder Run/4 Lever Feed Valve
64	7040064	Galvanised Jack Legs
65	7040065	2 Lever Control Valve
67	7040067	Main Control Panel
68	7040068	Dual Power Control Panel
69	7040069	Remote Control (Tipping Grid)
70	7040070	Dual Power Motor
71	7040071	Dual Power Hydraulic Pumps
72	7040072	Exhaust
73	7040073	Grease Bulkheads
74	7040074	Grease Nipples
75	7040075	Door Latch/Handles
76	7040076	Dog Lead Plug
77	7040077	Hydraulic Oil Gauge
78	7040078	Hydraulic Tank
79	7040079	Suction Filter
80	7040080	Siren
81	7040081	Feeder Tail Drum Guard
82	7040082	Jack Legs Pin
83	7040083	Hopper Side Guard
84	7040084	Tail Outer Leg Assembly
85	7040085	Tail Legs Rams
86	7040086	Tail Legs Rams Pipes
87	7040087	Tail Inner Legs Assembly



## This image shows a full page of blank white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for writing or drawing. There are no margins, text, or other markings present.

## **CONTACT US**

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