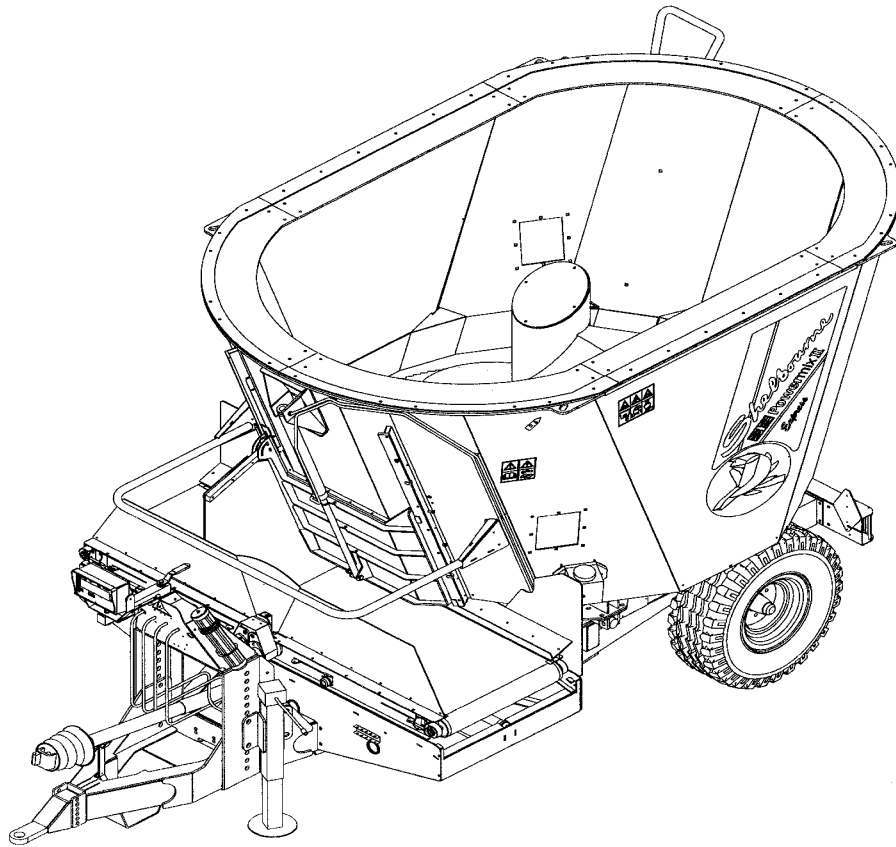


# Powermix II

## OPERATORS MANUAL - ALL MODELS



*Shelbourne*  
REYNOLDS

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INVESTOR IN PEOPLE



# EC DECLARATION OF CONFORMITY

MANUFACTURERS ADDRESS :

SHELBOURNE REYNOLDS ENGINEERING LTD.  
SHEPHERDS GROVE INDUSTRIAL ESTATE,  
STANTON,  
BURY ST. EDMUNDS,  
SUFFOLK.  
IP31 2AR  
ENGLAND.

MACHINE SPECIFICATION :

MAKE :

**Powermix II**

MODEL :

SERIAL NO.:

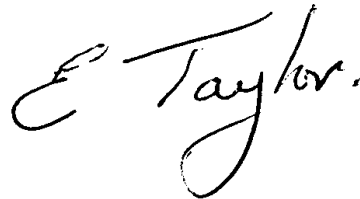
DIRECTIVES COMPLIED WITH :

MACHINERY DIRECTIVE 98/37/EC

APPLIED HARMONISED STANDARDS :

BS EN 292 PART1 & 2 : 1991  
BS EN 294 : 1992  
BS EN 349 : 1993

SHELBOURNE REYNOLDS SIGNATORY :



ERIC TAYLOR  
OPERATIONS DIRECTOR

PLACE :

**Stanton, England.**

DATE :



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Please read and observe these instructions very carefully before you proceed to operate the Powermix. In this way you will avoid accidents, reduce repair costs and downtimes and increase the reliability and service life of your Powermix. Pay particular attention to the safety instructions! Shelbourne Reynolds Engineering Ltd cannot assume any liability for damage or malfunctions caused by failure to observe the instructions contained in this operating manual.

The purpose of this operating manual is to enable you to familiarise yourself with the working of your Powermix. The manual will first of all explain the Powermix in general and then proceed to describe the special features.

The terms "right", "left", "front" and "back" when used in this manual refer to when sitting in the tractor seat looking forward.

This operators manual must be read and used by all persons who are required to carry out work either on or with the Powermix, e.g.,

- Operation (including preparatory work, troubleshooting during operation, care)
- Maintenance (servicing, inspection)
- Transporting.

Enclosed with this operating manual is a registration card. Your dealer will instruct you on the operation and care of your Powermix. After this has been done, return the registration card to your dealer. This will confirm your acquisition of the Powermix.

We reserve the right to make changes to the illustrations and data on specifications and weights contained in this operating manual if we make any improvements to the Powermix.



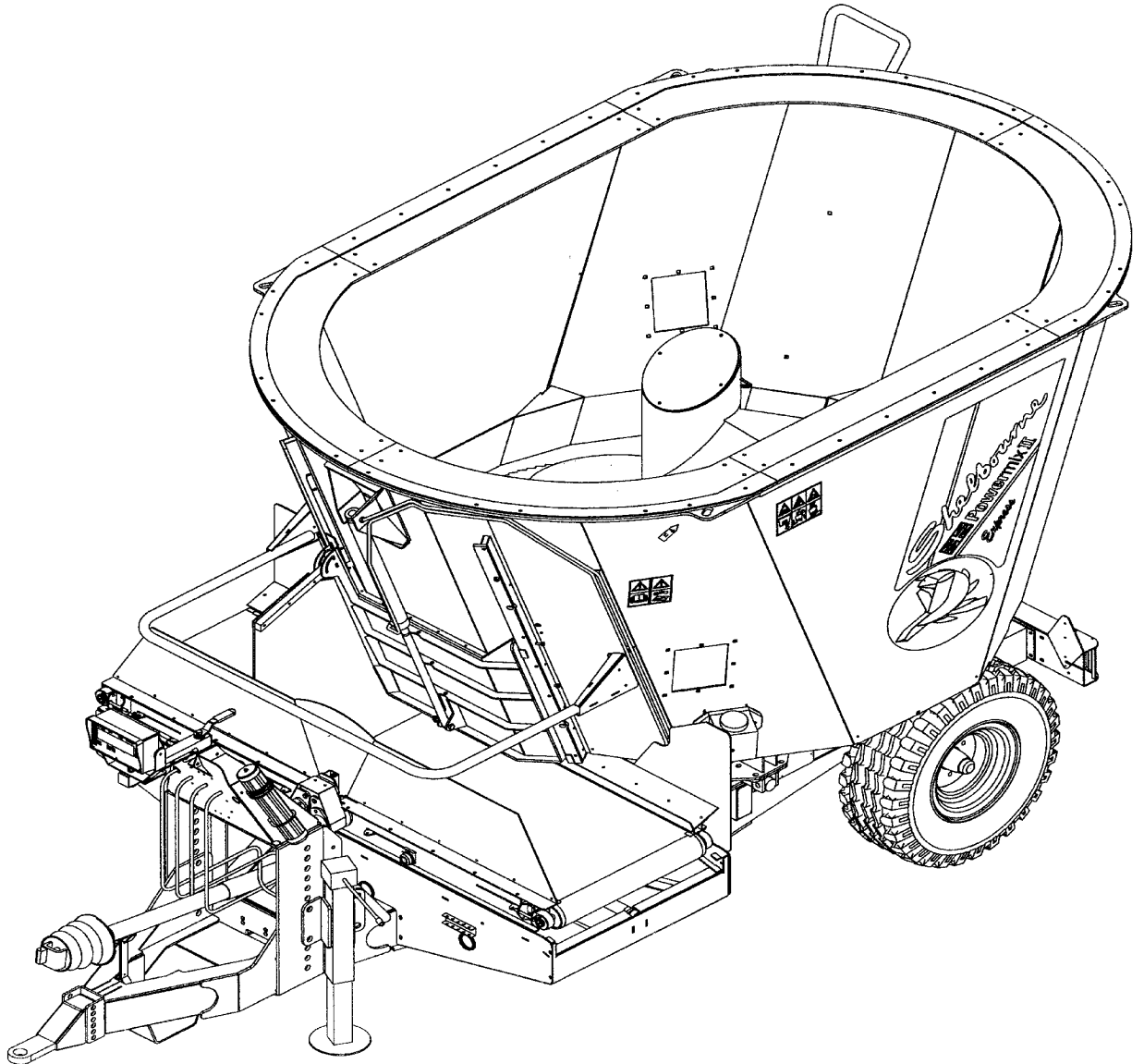


## SECTION 1:

## INTRODUCTION

### 1.1 FOREWORD

This manual will assist the operator in using the Shelbourne POWERMIX machines and realise their full potential whilst indicating safe procedures. This manual should be used in conjunction with the manual of the tractor or prime mover.



## PATENTS

Extensive patents protect the SHELBOURNE POWERMIX machines.

## 1.2 IMPROVEMENTS AND CHANGES

Shelbourne Reynolds Engineering are continually improving their products to meet the farmers needs and therefore reserve the right to make improvements and changes when practical to do so, without incurring any obligation to make changes and additions to equipment which has been sold previously.

## 1.3 SERVICE PARTS

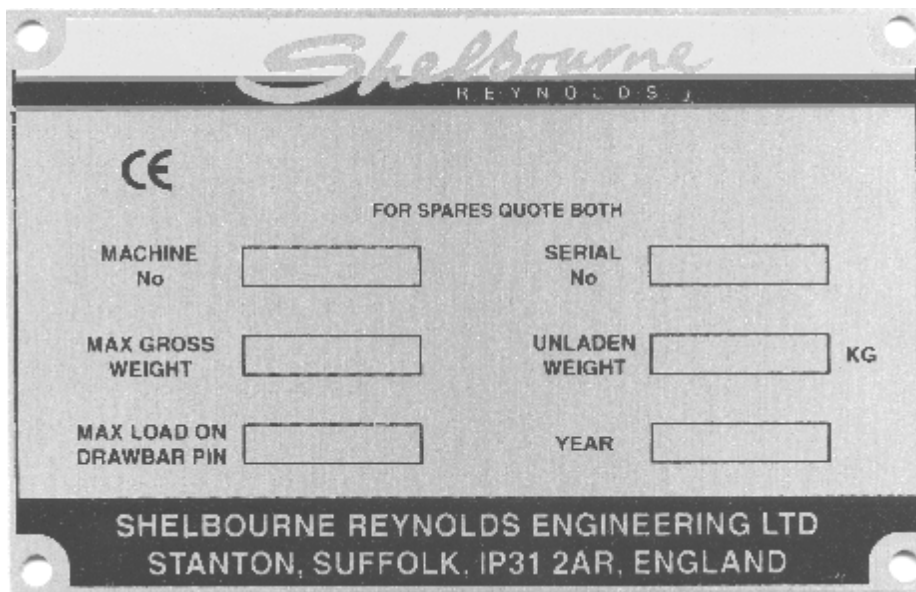
Use guaranteed and genuine Shelbourne Reynolds Engineering service parts on Shelbourne Reynolds machinery to ensure maximum life and best performance. These are available through your Shelbourne Reynolds Engineering dealer.

## 1.4 MACHINE IDENTIFICATION

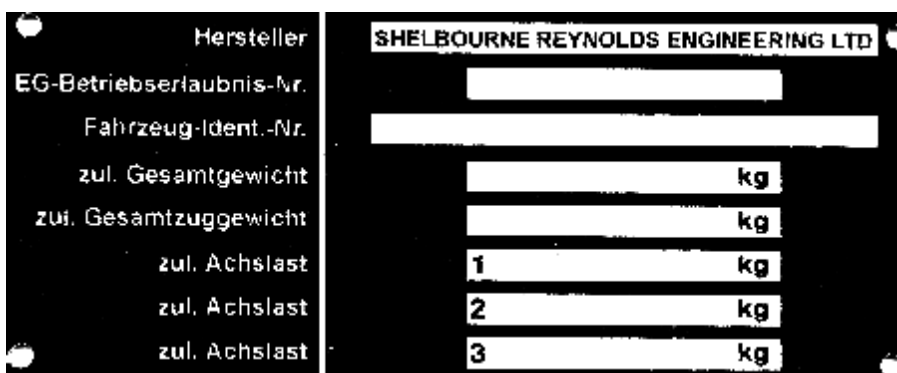
The serial and machine numbers are stamped on a plate (Fig. 1), attached midway along the LH side of the chassis.

Fig. 1

UK version



German version



## **1.5 SHELBOURNE REYNOLDS ENGINEERING LTD - WARRANTY TERMS AND CONDITIONS TO THE PURCHASER**

### **GENERAL**

This warranty will become available to you when you have paid for the equipment and returned (duly completed) the delivery and warranty registration forms. It will expire on the anniversary of the purchase from the dealer. After that date Shelbourne Reynolds will have no further liability under this warranty to you except in respect of claims already notified. This warranty is not transferable and is available only to the original purchaser from our dealer. In the case of purchasers having leasing or similar arrangements the first user shall be deemed to be the original purchaser and you shall be deemed to have paid for the equipment.

### **USE AND MAINTENANCE**

To maintain the benefit of the warranty throughout the twelve-month period you must have the machine serviced in accordance with our recommendations and use the machine properly. If on inspection the machine appears to have been either misused, overloaded, improperly operated, neglected, not properly maintained, altered or repaired without our consent this will invalidate the warranty. We shall have no further liability under it to you at all. (If you require any guidance as to the use you should contact the dealer).

Our liability under this warranty is dependent upon you making the equipment and facilities available, for inspection and testing.

In this warranty, the expression, "defective product" means any of the equipment you have purchased which shows evidence of a defect in the materials, design (due regard being given to the state of the art at the time we designed it) or Shelbourne Reynolds workmanship. Wearing parts such as belting are excluded. Parts not manufactured by Shelbourne Reynolds, for example tyres, are also excluded.

### **OUR OBLIGATIONS**

If you discover a defective product you should contact the dealer from whom your machine was purchased. The dealer will notify us of your claim. Our obligation will then be to either replace, or if we consider it appropriate, repair the defective product. Alternatively, we may arrange for our dealer to carry out this work.  
**YOU MUST NOTIFY THE DEALER OF A DEFECT WITHIN SEVEN DAYS OF THE DAY ON WHICH IT IS DISCOVERED AND YOU MUST NOT USE THE EQUIPMENT AFTER THE DISCOVERY. FAILURE TO OBSERVE EITHER OF THESE OBLIGATIONS WILL INVALIDATE THE WARRANTY AS IS APPLIED TO THAT DEFECT.** Any defective products replaced must be returned to S.R.E. for inspection.

### **NO ADMISSION**

On occasions we may, to preserve goodwill, replace parts even though they are not in our opinion defective. Accordingly, our agreeing to repair or replace a part cannot in any circumstances be deemed an admission that it was defective.

## **LIMITATIONS**

This warranty shall not apply to products made up in accordance with customer originated designs.

No warranty, condition or other term implied by statute or common law as to the merchantability or fitness for a particular purpose, is intended or given by this warranty. All such warranties, which may apply between Shelbourne Reynolds and yourself, are excluded to the fullest extent permitted by law.

In any case, except in respect of death or personal injury caused by our negligence. We shall not be liable to you by reason of any representation or implied warranty, condition or other term, or any duty at law or under the express terms of any contract, for the consequential loss or damage. (whether for loss or profit or otherwise and includes any expenses incurred for labour, additional or substitute material, rental whatsoever and whether caused by our negligence or our employees or agents or otherwise) which arises out of or in connection with the use of the goods by you.

Time of repair is not of the essence.

No person or persons are authorised to alter, modify or enlarge this warranty on behalf of Shelbourne Reynolds.

Shelbourne Reynolds shall not be liable for any failure to comply with any part of the warranty where such failure is due to circumstances beyond their reasonable control, including difficulty in obtaining materials or replacement parts.

## **CALL OUT CHARGES**

Shelbourne Reynolds and all dealers reserve the right to make a reasonable charge for call outs made at your request, which do not turn out to relate to defective products.

## **YOUR STATUTORY RIGHTS ARE UNAFFECTED.**

## **SECTION 2:**

## **SAFETY PROCEDURES**

### **2.1 PRECAUTIONS**

Accident programmes can only prevent accidents with the co-operation of the persons responsible for the operation of the equipment.

For the safety of others, operate equipment with care and do not take unnecessary risks, which could cause an accident.

Please read all safety instructions contained in this operating manual with the utmost care and also observe all warning signs attached to the Powermix.

Follow these instructions to prevent accidents. These instructions must also be made available to all other users. You are advised to refrain from any working methods, which may be hazardous.

All relevant accident prevention regulations governing the operation of agricultural machinery, as well as other generally acknowledged health and safety regulations and road traffic regulations must be strictly observed.

The tractor manufacturers operator manual safety precautions should also be adhered to when using a Shelbourne Reynolds Mixer Feeder.

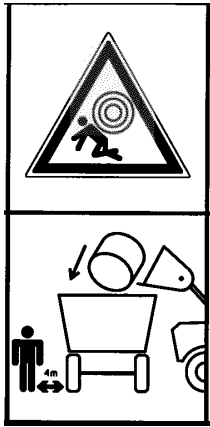
### **CAUTION**



This symbol will appear throughout this manual whenever your safety, the safety of others or the machinery, is involved.

## 2.2 DANGER / WARNING SYMBOLS

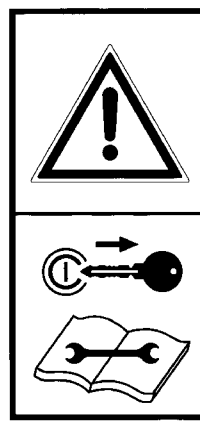
The following symbols appear on the machine and are for your safety and the safety of other people. Ensure that you identify each symbol and understand it's warning.



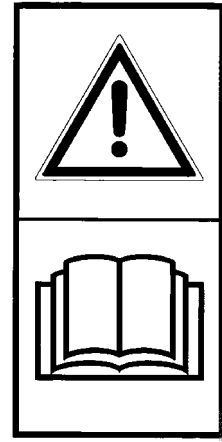
Ensure that there are no Persons standing in the Vicinity of the machine When loading. Serious Injury may result from a Falling bale.



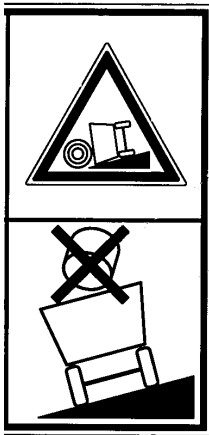
Beware of sharp blades on auger. Serious injury may result from falling into the door opening with auger stationary or rotating.



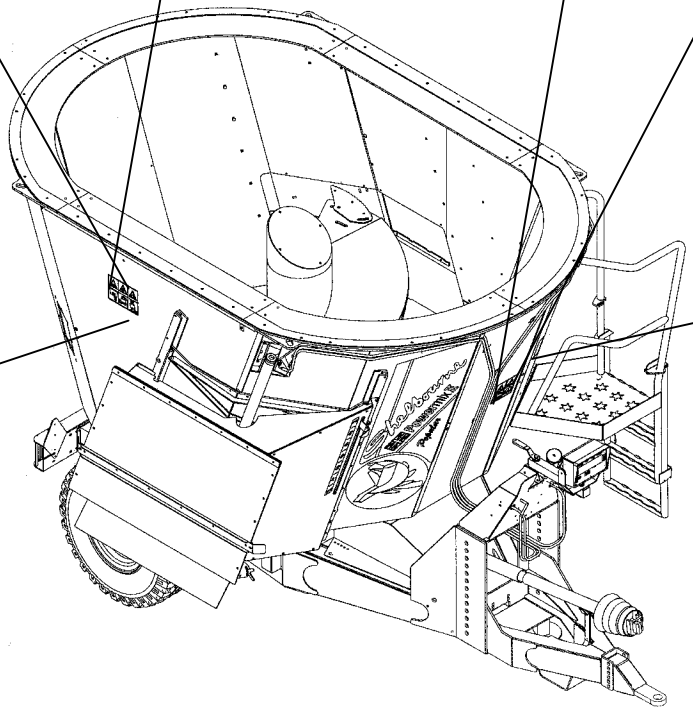
Stop the engine and remove the key from the tractor before carrying out any work on the machine.



Carefully read the operating manual before handling the machine.



Beware when using on Side slopes, the machine May be unstable when a whole bale is first loaded as the machine may topple over.



Do not attempt to climb into the machine using the platform, serious injury may result from falling into the tub.



These warning signs must be kept in a legible condition and must be replaced if missing or damaged. This is especially the case when whole sections are replaced when making repairs.

### **2.3 ACCIDENT PREVENTION BEFORE STARTING THE MACHINE**

Read the manual thoroughly.

The Powermix may be used only if all safety devices, e.g. detachable guards, are fitted and in proper working order.

Nuts and bolts should be checked at regular intervals and tightened if necessary.

Tyre pressures must also be checked regularly.

Ensure that no person is working on or inside the machine.

Always perform an internal inspection before loading or starting.

Check that all observers are clear of the machine.

Check there are no foreign objects inside the machine.

Check the machine is on level and firm ground before starting up.

### **2.4 ACCIDENT PREVENTION WHEN OPERATING THE MACHINE**

The Powermix must not be put into operation until the user has been given proper initial instructions either by the dealer or by one of Shelbourne Reynolds' representatives or employees.

Do not overload the Powermix.

Do not observe the operation of the machine from a high make shift gallery or unfenced platform.

Do not traverse slopes whilst the machine is loaded and the drive is engaged.

Do not reach into the machine whilst it is running.

No person may be allowed to ride on the Powermix when it is operating.

Keep children away from the machine at all times.

In the event of a malfunction, immediately cease operation and secure the Powermix in its stationary position. Malfunctions must be eliminated immediately.

## **2.5 ACCIDENT PREVENTION WHEN COUPLING TO THE TRACTOR**

Ensure that the Powermix has the correct type of hitch for your tractor.

Secure the Powermix in such a way that it is on level ground and cannot roll forwards or backwards.

Slowly reverse the tractor towards the Powermix - always ensure that there are no other persons in the vicinity of the Powermix or the tractor.

Connect the Powermix to the tractor hitch using only the method recommended in the tractor's operator's manual.

## **2.6 ACCIDENT PREVENTION WHEN USING THE PTO SHAFT**

Use only the universal joint shaft, which is supplied with the Powermix and is intended for use with the Powermix.

Ensure that it is fitted with the prescribed protective equipment (protective tube and funnel-shaped PTO shaft guard must be fitted).

Make sure that the tractor engine and the PTO shaft are switched off before proceeding to fit the universal joint shaft.

Make sure that the tubes overlap by the prescribed distance in both straight-ahead and in turning positions and are secured in such a way that they cannot rotate with the shaft.

Be absolutely sure that there is nobody standing in dangerous proximity to the Powermix when you switch on the PTO shaft.

The PTO shaft speed of the tractor must correspond with the maximum permissible rotational speed of the Powermix.

The angle of attachment will depend on the type of PTO shaft and on the type of tractor hitch. Always switch off the PTO shaft if the angle of divergence is excessive or whenever the PTO shaft is not required.



## **2.7 ACCIDENT PREVENTION WHEN USING THE HYDRAULIC SYSTEM**

Do not connect the hydraulic hoses to the tractor's hydraulic system until you have made sure that the system is at zero pressure on both the tractor and the equipment.

The hydraulic system generates extremely high pressures. All piping, hoses and connections must therefore be checked regularly for leakage and visible external damage.

Use proper and thorough means of searching for leakage and repair all damage immediately.

Spurting hydraulic oil can cause injuries and fires. Call a doctor immediately in the event of injury.

In order to exclude the possibility of incorrect connection, all mating plugs and sockets belonging to the hydraulic connections between the tractor and the Powermix should be marked with matching colours.

## **2.8 ACCIDENT PREVENTION WHEN LEAVING THE MACHINE**

Park the machine on reasonably level ground.

Apply the tractor's parking brake.

Stop the tractor's engine before leaving the cab.

When unhooking the Powermix apply the machine's parking brake before moving the tractor away.

Do not leave the machine adjacent to a building, hay stack or the like, where persons could climb and fall onto the knives.

Position the PTO shaft on the stand provided and locate the hydraulic hoses in the hose parking station at the front of the machine.

## **2.9 ACCIDENT PREVENTION WHEN SERVICING THE MACHINE**

Any malfunctions or defects, which might affect the safe operation of the Powermix, must be immediately eliminated.

Always disconnect the PTO shaft from the tractor before entering the machine.

Stop the tractor and remove the ignition key before servicing, adjusting or otherwise working on the machine.

Use proprietary ladders and affix to the hopper. Use these to enter the hopper.

Replace all guards after servicing.

The Powermix must be used, maintained and repaired only by persons who are familiar with it's working and have been made fully conversant with the risks involved.

OEM replacement parts and accessories from Shelbourne Reynolds have been specially designed for use with the Shelbourne Reynolds Powermix. Any replacement parts and accessories not supplied by Shelbourne Reynolds have not been tested and approved by us. The installation and/or the use of non-Shelbourne Reynolds products may under certain circumstances have a negative influence on the given design features of your Powermix and may therefore adversely affect it's safe and reliable operation and your safety. Shelbourne Reynolds cannot therefore be held liable for damage or injury caused by the use of non-OEM replacement parts or accessories.

## **2.10 ACCIDENT PREVENTION WHEN TOWING ON PUBLIC ROADS**

Road traffic regulations must be observed when towing the Powermix on roads, paths and other public places.

The Powermix must be in a road-worthy condition.

Observe the maximum permissible width for road transport and fit all necessary rear lights, warning signs and guards. Disconnect the electrical supply when fitting.

Close all doors fully and secure all rubber flaps, guards and covers so that they cannot cause injury or damage to other users of the public place. When the conveyor is fitted always place it in the transport position before towing the Powermix on public roads.

Disconnect all hydraulic connections and the PTO driveshaft from the Powermix so that it cannot be inadvertently operated.

Ensure that all braking systems and lighting systems are in full working order and that the vehicle towing the Powermix can fully and correctly operate them.

Observe the maximum permissible axle loads, the load bearing capacity of the tyres and the maximum total weights in order to ensure adequate steering and braking. Attached implements also influence the behaviour of the tractor. Take the width and the towing hitch weight into consideration, especially on sharp bends.

No person may be allowed to ride on the Powermix.

## **2.11 PROPER USE**

Always make sure that the Powermix is used properly and for its intended purpose and entirely in accordance with the instructions given in this manual.

The Shelbourne Reynolds Powermix is intended for use on typical farms and to be employed in cutting and/or mixing and discharging materials suitable for feeding to livestock. Any uses other than those for which the Powermix is intended, such as transportation, will automatically exempt Shelbourne Reynolds or the supplier from it's/his liability in respect of ensuing damage. Such cases of improper use will therefore be entirely at the user's own risk.

Shelbourne Reynolds Powermixes are based on state-of-the-art technology and are manufactured in accordance with recognised safety requirements. Nevertheless the use of the Powermix does not preclude the risk of injury to the user or third parties and/or the risk of damage to the Powermix itself or to other materials or items of equipment.

## **2.12 NO LIABILITY FOR CONSEQUENTIAL DAMAGE**

Even though your Shelbourne Reynolds Powermix has been manufactured with the utmost care and you are using it properly, fluctuations and interruptions in feed rate may still occur.

It is the duty of the operator/user to ensure that foreign objects, e.g. stones, metal objects etc. are not allowed to enter the machine and are not allowed to be mixed-in with the feed. Failure to observe this may result in damage to the Powermix and/or injury to the operator/user and/or injury to the livestock.

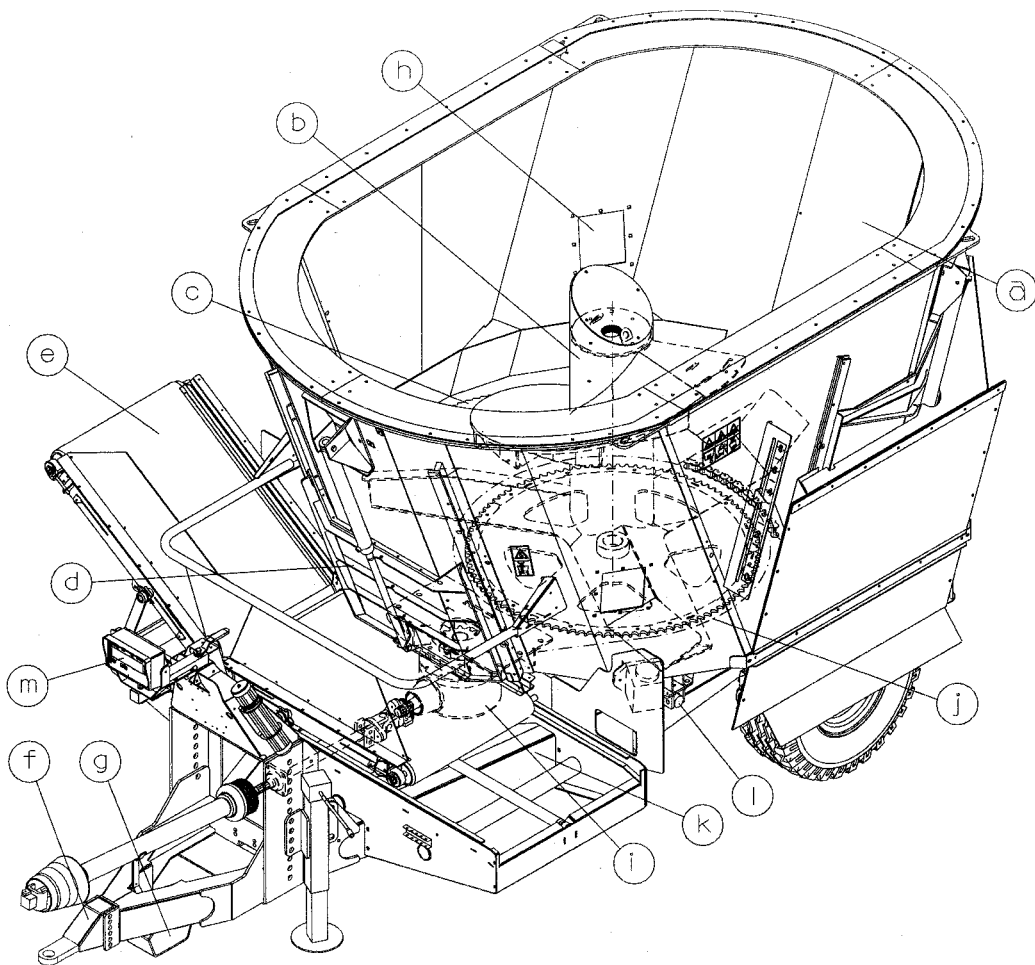
Any claims for damages not directly incurred by the Powermix cannot be accepted. By the same token, Shelbourne Reynolds cannot be held liable for any consequential damage resulting from incorrect use of the Powermix.

## SECTION 3:

## SPECIFICATION

### 3.1 DESCRIPTION

The machine consists of a tapered hopper (a) with a central rotor (b) with horizontal knives (c). At the side, front or rear of the hopper is a door (d). The powermix may be fitted with a front belt or chain & slat conveyor (e). At the very front is the adjustable towing eye (f), which may be fitted with a foot (g). The hopper contains brackets internally to facilitate the fixing of a fixed anti-rotation plate, or adjustable knife anti-rotation plates (h). Bolted to the bottom of the hopper is a gearbox (i) and chain and sprocket drive (j). The hopper is bolted to the chassis (k) via three-load cells or dummy cells if the machine has no weigh system (l), These load cells are wired into a visual read out (m).



### 3.2 INTENDED USE

The machine is intended to be used on typical farms employed in cutting and/or mixing and discharging materials suitable for feeding to livestock.

A high proportion of these materials may be in powder, liquid or granular form. The machine is at its best when a portion of the material is fibrous and may or may not require further cutting. A typical mixing operation would take 4-5 minutes whilst further cutting may take up to 20 minutes.

An additional feature is that this machine will accept fibrous material in a baled form i.e. round or square bales of grass silage, hay or straw from cereals, rice and other crops. Root crops may also be added.

### 3.3 SPECIFICATION TABLE

POWERMIX II MODELS	Unladen Weight	Unladen Drawbar Weight	Gross Weight	Max Drawbar Weight	Max Axle Weight	Capacity (Volume)	Capacity (Weight)	MIN H.P Required	Road Speed Max (km/h)	Hydraulics 2500(psi max) (170 bar)	Load Cells
<b>9m<sup>3</sup> Popular</b>	3870 kg 8533 Lbs	874 kg 1927 Lbs	<b>8870 kg</b> <b>19558 Lbs</b> <i>*As above</i>	<b>1485 kg</b> <b>3274 Lbs</b> <i>*As above</i>	<b>7385 kg</b> <b>16284 Lbs</b> <i>*As above</i>	9 m <sup>3</sup> 318 ft <sup>3</sup>	<b>5000 kg</b> <b>11025 Lbs</b> <i>*As above</i>	70	25	30 Ltrs/min	12v DC
<b>11m<sup>3</sup> Popular</b>	4080 kg 8996 Lbs	900 kg 1985 Lbs	<b>9080 kg</b> <b>20021 Lbs</b> <i>*9580 kg</i> <i>*21124 Lbs</i>	<b>1511 kg</b> <b>3332 Lbs</b> <i>*1572 kg</i> <i>*3466 Lbs</i>	<b>7569 kg</b> <b>16690 Lbs</b> <i>*8008 kg</i> <i>*17658 Lbs</i>	11 m <sup>3</sup> 388 ft <sup>3</sup>	<b>5000 kg</b> <b>11025 Lbs</b> <i>*5500 kg</i> <i>*12128 Lbs</i>	80	25	30 Ltrs/min	12v DC
<b>13m<sup>3</sup> Popular</b>	4230 kg 9327 Lbs	918 kg 2024 Lbs	<b>9230 kg</b> <b>20352 Lbs</b> <i>*10730 kg</i> <i>*23660 Lbs</i>	<b>1529 kg</b> <b>3371 Lbs</b> <i>*1713 kg</i> <i>*3777 Lbs</i>	<b>7701 kg</b> <b>16981 Lbs</b> <i>*9017 kg</i> <i>*19882 Lbs</i>	13 m <sup>3</sup> 459 ft <sup>3</sup>	<b>5000 kg</b> <b>11025 Lbs</b> <i>*6500 kg</i> <i>*14333 Lbs</i>	90	25	30 Ltrs/min	12v DC
<b>9m<sup>3</sup> Express</b>	4160 kg 9173 Lbs	1060 kg 2337 Lbs	<b>9160 kg</b> <b>20198 Lbs</b>	<b>1563 kg</b> <b>3446 Lbs</b>	<b>7597 kg</b> <b>16751 Lbs</b>	9 m <sup>3</sup> 318 ft <sup>3</sup>	<b>5000 kg</b> <b>11025 Lbs</b> <i>*As above</i>	70	25	30 Ltrs/min	12v DC
<b>11m<sup>3</sup> Express</b>	4370 kg 9636 Lbs	1081 kg 2384 Lbs	<b>9370 kg</b> <b>20661 Lbs</b> <i>*9870 kg</i> <i>*21763 Lbs</i>	<b>1584 kg</b> <b>3493 Lbs</b> <i>*1634 kg</i> <i>*3603 Lbs</i>	<b>7786 kg</b> <b>17168 Lbs</b> <i>*8236 kg</i> <i>*18160 Lbs</i>	11 m <sup>3</sup> 388 ft <sup>3</sup>	<b>5000 kg</b> <b>11025 Lbs</b> <i>*5500 kg</i> <i>*12128 Lbs</i>	80	25	30 Ltrs/min	12v DC
<b>13m<sup>3</sup> Express</b>	4520 kg 9967 Lbs	1096 kg 2417 Lbs	<b>9520 kg</b> <b>20992 Lbs</b> <i>*11020 kg</i> <i>*24299 Lbs</i>	<b>1599 kg</b> <b>3526 Lbs</b> <i>*1750 kg</i> <i>*3859 Lbs</i>	<b>7921 kg</b> <b>17466 Lbs</b> <i>*9270 kg</i> <i>*20440 Lbs</i>	13 m <sup>3</sup> 459 ft <sup>3</sup>	<b>5000 kg</b> <b>11025 Lbs</b> <i>*6500 kg</i> <i>*14333 Lbs</i>	90	25	30 Ltrs/min	12v DC
<b>16m<sup>3</sup> Express TWIN AUGER (REAR AXLE POSITION)</b>	7560 kg 16670 Lbs	1352 kg 2981 Lbs	<b>15960 kg</b> <b>35191 Lbs</b>	<b>2252 kg</b> <b>4966 Lbs</b>	<b>13708 kg</b> <b>30226 Lbs</b>	16 m <sup>3</sup> 565 ft <sup>3</sup>	<b>8400kg</b> <b>18522 Lbs</b>	100	25	30 Ltrs/min	12v DC
<b>16m<sup>3</sup> Express TWIN AUGER (FRONT AXLE POSITION)</b>	7560 kg 16670 Lbs	1135 kg 2503 Lbs	<b>15960 kg</b> <b>35191 Lbs</b> <i>*As above</i>	<b>1728 kg</b> <b>3810 Lbs</b> <i>*As above</i>	<b>14232 kg</b> <b>31382 Lbs</b> <i>*As above</i>	16 m <sup>3</sup> 565 ft <sup>3</sup>	<b>8400kg</b> <b>18522 Lbs</b> <i>*As above</i>	100	25	30 Ltrs/min	12v DC
<b>19m<sup>3</sup> Express TWIN AUGER (REAR AXLE POSITION)</b>	7880 kg 17375 Lbs	1386kg 3056 Lbs	<b>16280 kg</b> <b>35897 Lbs</b> <i>*17380 kg</i> <i>*38323 Lbs</i>	<b>2286 kg</b> <b>5041 Lbs</b> <i>*2404 kg</i> <i>*5300 Lbs</i>	<b>13994 kg</b> <b>30857 Lbs</b> <i>*14976 kg</i> <i>*33022 Lbs</i>	19 m <sup>3</sup> 671 ft <sup>3</sup>	<b>8400kg</b> <b>18522 Lbs</b> <i>*9500 kg</i> <i>*20948 Lbs</i>	110	25	30 Ltrs/min	12v DC
<b>22m<sup>3</sup> Express TWIN AUGER (REAR AXLE POSITION)</b>	8100 kg 17861 Lbs	1410 kg 3109 Lbs	<b>16500 kg</b> <b>36383 Lbs</b> <i>*19100 kg</i> <i>*42116 Lbs</i>	<b>2310 kg</b> <b>5094 Lbs</b> <i>*2588 kg</i> <i>*5707 Lbs</i>	<b>14190 kg</b> <b>31289 Lbs</b> <i>*16512 kg</i> <i>*36409 Lbs</i>	22 m <sup>3</sup> 777 ft <sup>3</sup>	<b>8400kg</b> <b>18522 Lbs</b> <i>*11000 kg</i> <i>*24255 Lbs</i>	120	25	30 Ltrs/min	12v DC

Note: All weights and other data are approximate.

**Weights in bold text and a 25km/h speed limit must not be exceeded if the machines are to be taken on public roads.**

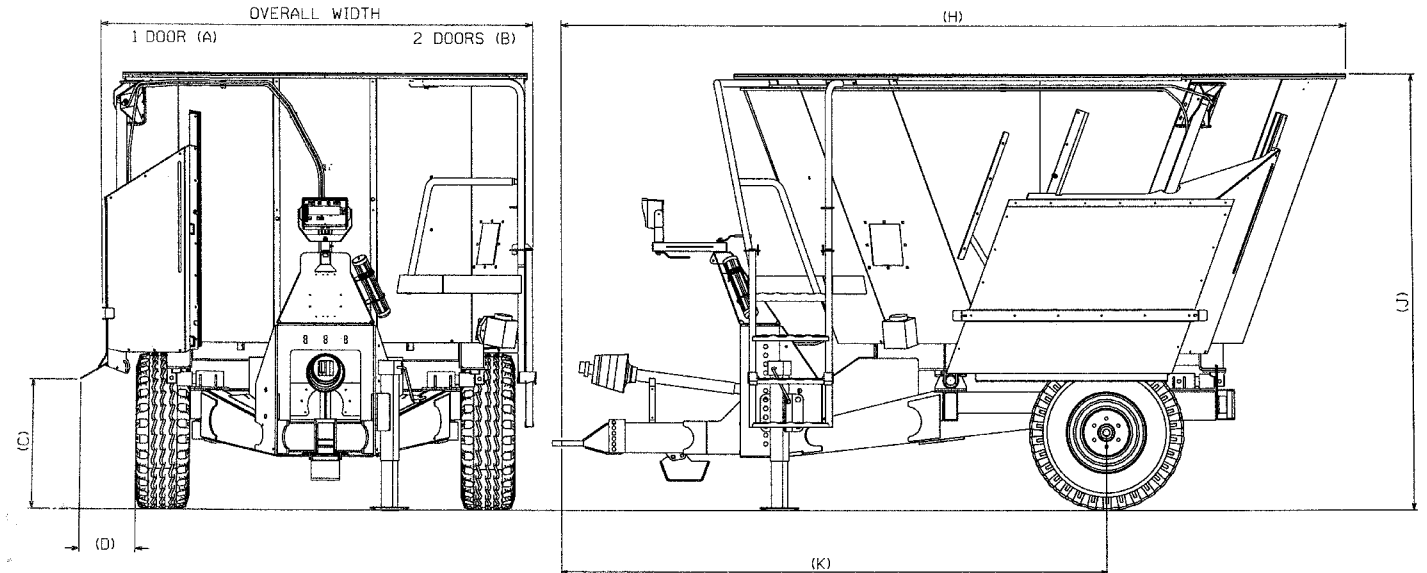
*These weights are derived due to a limitation on the carrying capacity of the tyre for single axle machines. For twin axle machines, regulations state that the weight at the wheels must not exceed 14230kg.*

*\* Increased weights are for field use only (max speed 10km/h). They are derived from the maximum weights you can physically put into the machine, (figures based on typical animal feed being no heavier than 500kg/m<sup>3</sup>).*

### 3.4 POPULAR MODEL OVERALL DIMENSIONS

# powermix II

Popular specification



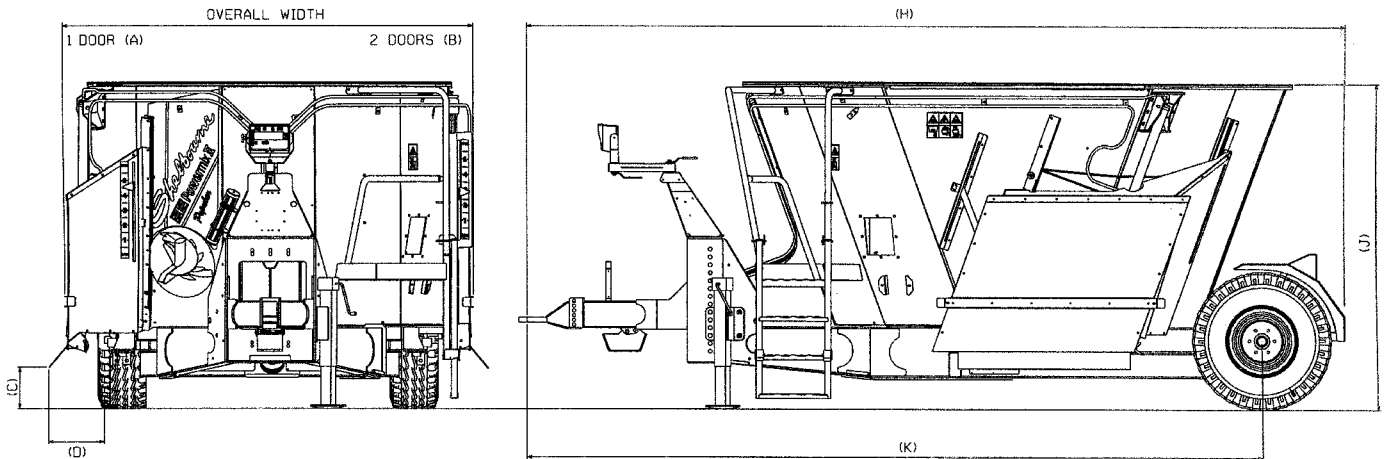
	A	B	C	D	H	J	K
<b>9m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	730mm 2'5"	330mm 1'1"	4483mm 14'9"	2495mm 8'2"	3117mm 10'3"
<b>11m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	730mm 2'5"	330mm 1'1"	4586mm 15'0"	2795mm 9'2"	3117mm 10'3"
<b>13m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	730mm 2'5"	330mm 1'1"	4689mm 15'5"	3095mm 10'2"	3117mm 10'3"

Note: All dimensions are approximate.

### 3.5 LOW-LOADER MODEL OVERALL DIMENSIONS

# powermix II

Low Loader specification



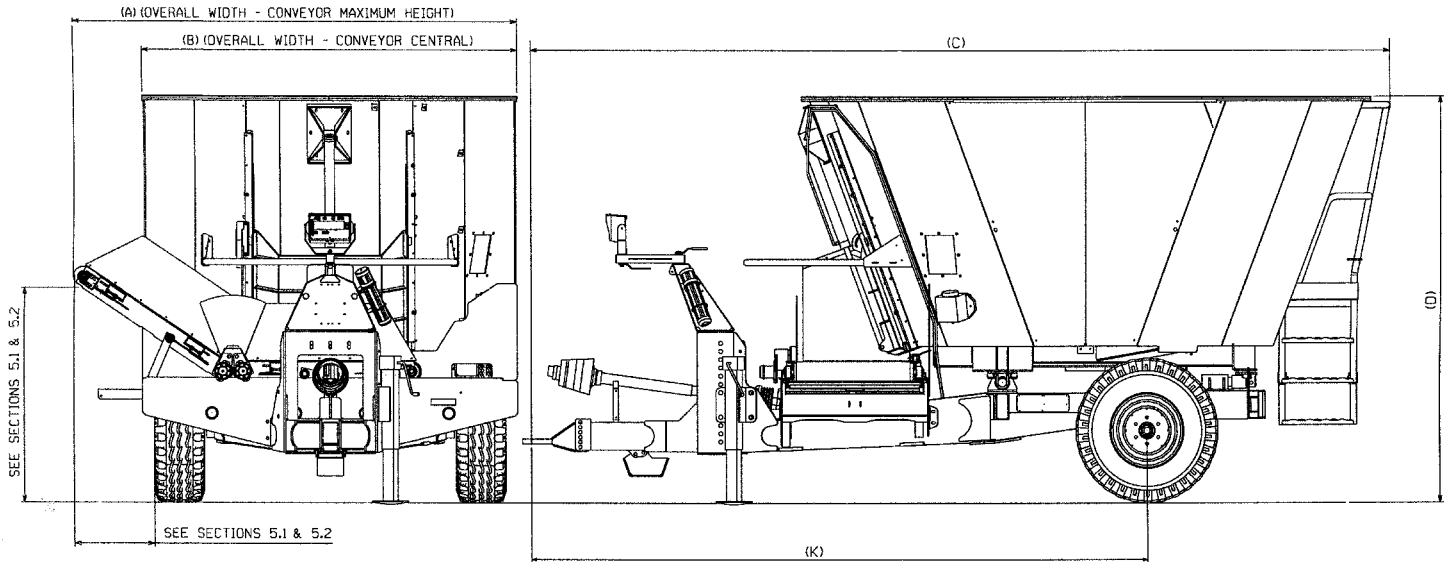
	A	B	C	D	H	J	K
<b>9m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	410mm 1'4"	330mm 1'1"	5200mm 17'	2175mm 7'2"	4680mm 15'4"
<b>11m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	410mm 1'4"	330mm 1'1"	5200mm 17'	2475mm 8'2"	4680mm 15'4"
<b>13m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	410mm 1'4"	330mm 1'1"	5250mm 17'2"	2775mm 9'1"	4680mm 15'4"

Note: All dimensions are approximate.

### 3.6 EXPRESS MODEL OVERALL DIMENSIONS

# powermix II

Express specification



	A	B	C	D	K
<b>9m<sup>3</sup></b>	2744mm 9'	2316mm 7'7"	5260mm 17'3"	2495mm 8'2"	3789mm 12'5"
<b>11m<sup>3</sup></b>	2744mm 9'	2316mm 7'7"	5365mm 17'7"	2795mm 9'2"	3789mm 12'5"
<b>13m<sup>3</sup></b>	2744mm 9'	2316mm 7'7"	5470mm 17'11"	3095mm 10'2"	3789mm 12'5"

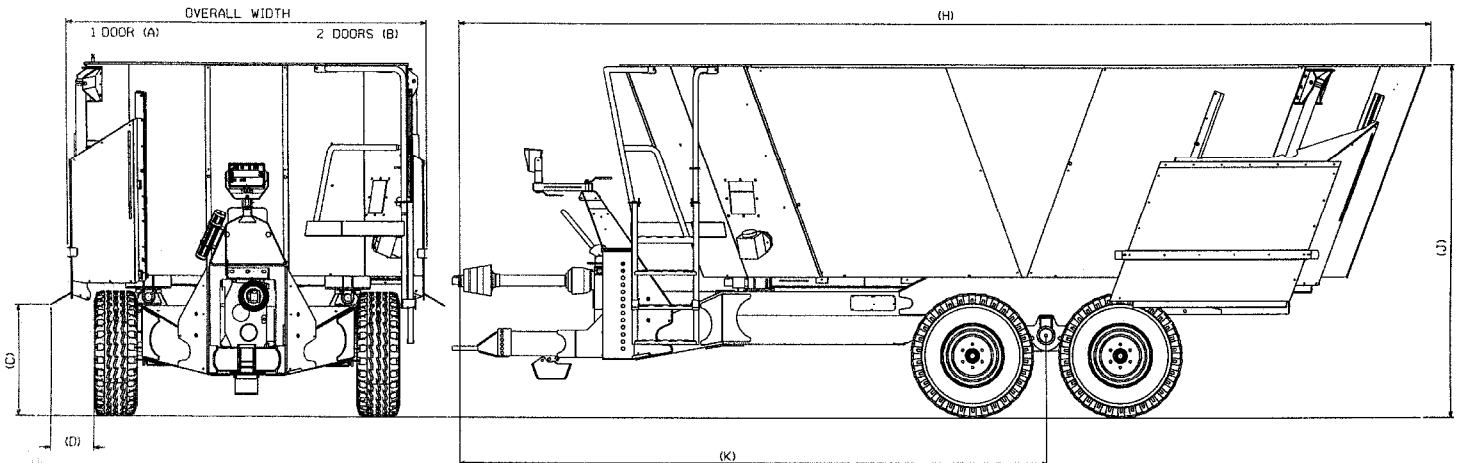
Note: All dimensions are approximate.



### 3.7 TWIN POPULAR MODEL OVERALL DIMENSIONS

# powermix II

Twin Popular specification



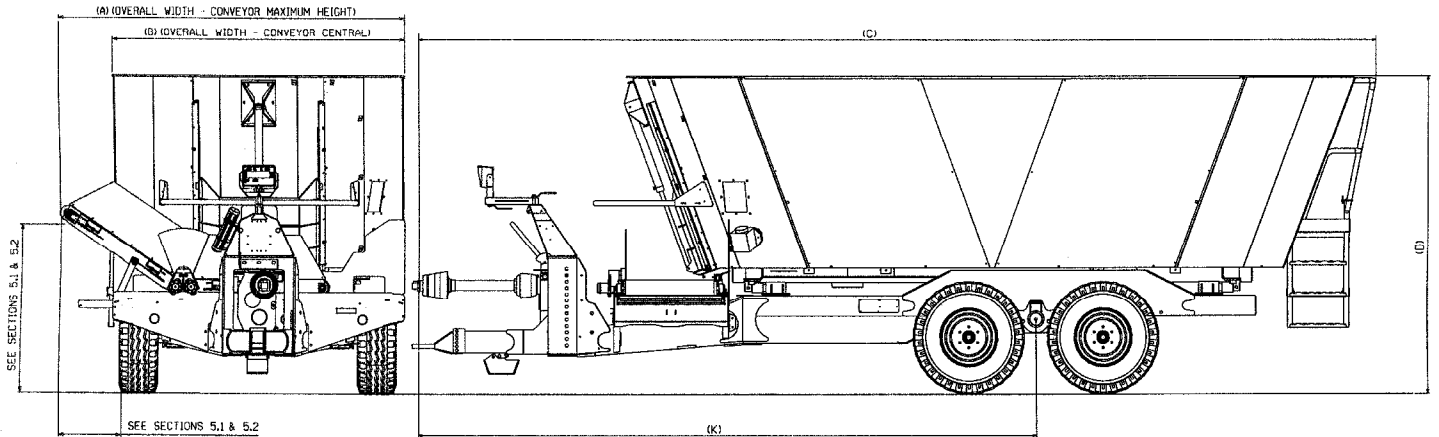
	A	B	C	D	H	J	K
<b>16m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	770mm 2'7"	270mm 11"	6681mm 21'11"	2525mm 8'3"	4197mm 13'9" or 4397mm 14'5"
<b>19m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	770mm 2'7"	270mm 11"	6784mm 22'3"	2825mm 9'3"	4397mm 14'5"
<b>22m<sup>3</sup></b>	2458mm 8'	2600mm 8'6"	770mm 2'7"	270mm 11"	6887mm 22'7"	3125mm 10'3"	4397mm 14'5"

Note: All dimensions are approximate.

### 3.8 TWIN EXPRESS MODEL OVERALL DIMENSIONS

# powermix II

Twin Express specification



	A	B	C	D	K
<b>16m<sup>3</sup></b>	2744mm 9'	2316mm 7'7"	7538mm 24'9"	2525mm 8'3"	4887mm 16' or 5087mm 16'8"
<b>19m<sup>3</sup></b>	2744mm 9'	2316mm 7'7"	7643mm 25'	2825mm 9'3"	5087mm 16'8"
<b>22m<sup>3</sup></b>	2744mm 9'	2316mm 7'7"	7748mm 25'4"	3125mm 10'3"	5087mm 16'8"

Note: All dimensions are approximate.

## SECTION 4:

## OPERATING THE MACHINE

### 4.1 TRANSPORTATION

This machine must not be towed on the public roads at a speed greater than 25km/h (15.5 mph.). The gross weight of the machine must not exceed the value stamped on the plate when towed on the public roads. Standard lighting and hydraulic brake coupling or optional pneumatic brakes coupling connections are provided. The machine can be lifted using a crane type-lifting device by attaching slings to the special lifting eyes positioned on each corner of the top rim.



A visual check of the load cell mounts would be advisable on older machines, as the chassis will be suspended on the hopper by these mountings.

### 4.2 PREPARATION FOR USE

All assembly work and pre delivery checks should have been undertaken by your dealer. As a precaution, before using check: -

1. There are no foreign objects inside the hopper.
2. The PTO shaft is fitted and revolves freely.
3. There are suitable auxiliary hydraulic outlets on your tractor.

### 4.3 ATTACHMENT TO THE TRACTOR

The Powermix can be supplied to fit four types of tractor hitch:

- UK style pick up hitch
- European style hitch – Low position
- European style hitch – High position
- USA clevis type hitch

The height of the towing hitch is adjustable, the Powermix performs best when sitting level when hitched onto the tractor, the mixing and feeding functions may be adversely affected if this is not set correctly. If a small adjustment in height is required, reposition the towing hitch bolted to the end of the drawbar, 4 heights are achievable ranging from 360-450mm if the drawbar is set in its lowest position.

After adjustment replace the M20 x 180mm bolts ensuring they are tightened to 435Nm (321lb-ft).



Ensure the machine is secure and on level ground, apply the handbrake, and ensure the machine is sitting on the foot or the parking jack before adjusting the tow hitch.

If further height adjustment is required the drawbar can be moved. After adjustment replace the M24 x 90mm bolts ensuring they are tightened to 750Nm (553lb-ft).



Ensure the machine is on level ground, apply the handbrake, and ensure the front chassis member is securely sitting on a sleeper or like before adjusting the drawbar height.

If the high continental drawbar is employed the drawbar is rotated through 180 degrees and located in the top set of holes of the front chassis member. Ensure the chain and hook plate is connected in place of the PTO rest plates to secure the PTO shaft when the machine is parked. When using this type of hitch ensure the machine cannot unhook. (The tractor hitch should incorporate a plate to prevent this.)

Alternatively a clevis type hitch may be used, this should be preferably set to its shortest position. If this type of hitch is used more care must be taken to ensure clearance with the PTO shaft on undulating terrain and that the PTO shaft is long enough to have at least 250mm of overlap (inner to outer shaft).



Ensure there is sufficient clearance with the draw bar when turning on undulating ground.



Ensure the lift links do not foul on the machine or PTO shaft when turning.



Ensure the inner and outer PTO shafts are overlapped by at least 250mm when the tractor and machine are straight. Check that the PTO shaft will not run out of slide travel before the tractor reaches its full articulation with the machine. Damage to the shaft and Injury may result.



Keeping PTO guards in place and in good order is a requirement of the law as well as safe practice.



Do not lower the machine on the hitch before disconnecting the PTO shaft or damage will certainly result with potential injury. Having connected the PTO shaft, ensure the anti-rotation chains are clipped to the chassis or tractor at both ends. The PTO shaft should turn clockwise ONLY.

Next connect the hydraulic brake pipe and the auxiliary hydraulic pipes to the tractor via the 1/2 BSP male Quick release couplings provided.



If a discharge conveyor, containing a hydraulic motor was supplied with your machine, the RETURN line must connect to a free flow / 3<sup>rd</sup> line return, and NOT through the spool valve. (See your dealer for details). Excessive pressure will damage components and in a way that may cause injury.



Oil is an irritant to the skin. At high pressures it can penetrate the skin and be a considerable health risk.

Next plug in the lights having ensured the tractor lighting is 12v D.C. This should provide power for the weigh cell unit when the sidelights are on. The machine may be supplied with a self-contained battery to power the weigh cell unit. In this case it is not necessary to connect the lighting plug. The battery can be recharged using a conventional 12 Volt battery charger - refer to the battery charger instructions before recharging the battery. The battery can be accessed by turning the isolator switch to "off" and opening the cover. Do not connect the tractor lighting circuit to the weigh cell when a battery power supply is fitted to the Powermix.

A second plug can be fitted to provide power to the weigh cell system and will require 12v D.C. fused at 5 amps. Remove the two-core cable from the light socket and ensure that the connection is made with negative (earth) to the blue wire.

#### 4.4 CONFIGURATION OF THE AUGER BLADES



See Section 2.9: - Accident prevention when servicing the machine, before entering the machine.

Within 9, 11, 13, 16, 19 & 22m<sup>3</sup> machines the blades are attached to the auger with 2 or 3 bolts, depending on the size of the blade. There should be 3 large blades fitted in positions 1, 2 and 3 from the base, and 4 smaller blades attached to the other blade carriers as standard.

NOTE: In heavy wet mixes there may be a need to remove the 3 larger blades and replace with the smaller ones to reduce horsepower requirements.

To decrease process times, and If horsepower requirement is not an issue, and if the mix is predominately dry matter, then all large blades can be fitted to the auger, however the top blade must remain as the smaller type.

On 13 & 22m<sup>3</sup> machines the auger is fitted with an extension, this increases the auger height by 300mm, and also incorporates 2 extra knives, this ensures a thorough mix to the very top of the mixing chamber.

#### 4.5 GENERAL LOADING, MIXING & CHOPPING PROCEDURE

Even when they are pre-chopped, load forages first followed by concentrate ingredients. The following is an example of a ration and recommended loading sequence.

<b>Ingredient</b>	<b>loading order and instructions</b>
Grass silage	If this is pre-chopped then load before engaging PTO. If it needs to be chopped, then start PTO immediately.
Maize silage	Load second, when maize and grass clamp silage are both loaded engage tractor PTO and commence mixing while Remaining ingredients are loaded.
Concentrate feeds	Load these as the machine mixes. If a large number of concentrate ingredients are being used and would take over 10 minutes to load then disengage the PTO to avoid over Processing the silage.
Molasses	Load this last – Allow 5-6 minutes of mixing for a total mix

To ensure thorough mixing always maintain 540rpm PTO speed.

## CHOPPING BALES

When forage ingredients are incorporated as part of the ration always load them first. Allow the Powermix to tear the bales apart and then load further ingredients. Adding wetter heavier ingredients such as clamp silage on top of the baled forage accelerates the chopping process. When chopping both straw and silage always load the driest ingredient first (normally straw).

Water can be added to improve palatability on excessively dry mixes. Retarder plates can be used inside the tub when drier forages are being chopped, particularly hay and straw. Fixed retarder plates speed up chopping by slowing the rotation of the feed in the tub holding material for the blades to cut. Most of the time the retarders mounting bracket themselves are enough. The disadvantage of the fixed retarders is a slight increase in horsepower consumption.





As an option the Powermix can be fitted with adjustable blade type Retarders, they perform in a similar manner to the fixed retarders, but have the added benefit of accelerating the chopping process, as they are machined with a knife edge. They also have the ability to be adjusted from outside the tub, when mixing and chopping is in progress.



Shown left: Blade type retarders, simply remove the 'R' clip (A), and extract the securing pin (B). Each blade can be rotated into the tub in 2 fixed positions. The further they are rotated into the tub the more aggressive the cutting action. Position shown left has the blade retarders completely withdrawn, this set-up is a suitable for very heavy, dense mixes where retarders are not required. Replace the pin and 'R' clip once the optimum position is found.

Shown right: Fixed type retarders, These must be unbolted from inside the tub, and stored on the front guard or conveyor mounting bracket if not in use.



-  Beware when adjusting the blade type retarders, as the rotation of material inside the tub will cause the retarder to retract. Preferably only adjust these when the auger has stopped
-  See section 2.9: - Accident prevention when servicing the machine, before entering the machine to remove or add anti-rotation plate.
-  Always load the bales whilst the machine is level as the machine is particularly top heavy when bales are first loaded into the machine. This may combine with unfavourable dynamic forces!
-  Beware of falling objects. Stand clear of the machine whilst chopping of bales is taking place.

As an option a 'Top knife kicker' can be fitted to the top of the auger flight, this is particularly useful when chopping round bales. It adds an additional blade to the top of the auger, which is mounted at a 40 degree angle, this helps keep the core of the bale moving at the top of the mixing chamber.



## CHOPPING ROOT CROPS

The Powermix II can be used to chop and incorporate a wide variety of root crops such as potatoes, sugar beet, fodder beet and carrots. The only way to successfully chop these ingredients down to a safe size that will not present a choking hazard is to chop them as a batch. Adding 500kg of sugar beet to the top of a mix will just result in the beet bobbing around the mixer suspended in the mix but not being chopped.

Always add the roots first, it is generally necessary to chop at least 1.5 tonnes at a time in order to get enough roots in the bottom of the tub to cover the second blade on the auger. It should be possible to chop down 1.5t of beet in 15 minutes. If this is the correct amount for the ration then you can proceed with loading the rest of the ration once the beet is chopped. If you require less than 1.5 t for the ration then it will be necessary to unload some of the beet before loading the remaining ingredients.

The optional blade type retarders, described on the previous page, will accelerate the chopping of root crops, if the contents are filled to a level above the top retarder blade.

Due to soil contamination chopping root crops invariably decreases blade life. This means that sharpening will be required every 1 to 2 months (see section 6.1).



There is a high risk of severe injury from falling onto the knives. Refer to section 2.9 in this manual and fix proprietary ladders before entering the machine. Remember that the floor of the machine will be very slippery, particularly if wet and or polished with use. Approach the task with caution.

## 4.6 AUGER SPEEDS & DRIVE CONFIGURATIONS

### SINGLE AUGER MACHINES

Most single auger machines (9m<sup>3</sup>-13m<sup>3</sup>), are specified with a single speed drive system, this provides an auger speed of 20.34 rpm, when the PTO shaft speed of the tractor is at 540 rpm.

This speed is ideal for the majority of mixing and chopping situations.

If the tractor has the facility to switch the PTO shaft speed to 1000 rpm, this may be used to provide an auger speed of 37.67 rpm, and can be employed to speed up the chopping of dry fibrous material such as baled straw and small batches of root crops. The fast auger speed is also used to clear material from the auger flight, once feeding is complete.


Operating the machine using the faster auger speed will increase the horsepower requirements. It is not recommended this is used if the total weight in the tub exceeds 2000kg.




As an option, single auger machines can be fitted with a 2-speed gearbox. With this, 3 auger speeds are available:

The 20.9 & 37.7 rpm auger speeds can be used as described above. The difference is that the 2 speeds are possible with only one tractor PTO shaft speed of 1000 rpm.

The slow auger speed of 11.30 rpm is useful for re-starting the machine after a mix has laid dormant for a number of hours. With some mixes the material settles, and in some cases hardens, which increases the power required to start the machine.

As the auger is rotating slower in this mode, the horsepower required to drive the machine is reduced; this also means it is possible to drive the machine using a smaller tractor than usual say (50-60 hp). The slow auger speed is not recommended for chopping material, it is only suitable for certain mixing applications.

Please note: Running the machine at 540 rpm PTO input speed, and with the gearbox lever, positioned to  is not a drive option. If this set-up is used the shearbolt is liable to break.

PTO INPUT SPEED	LEVER POSITION	AUGER SPEED
540 RPM		11.30 RPM
1000 RPM		20.90 RPM
1000 RPM		37.70 RPM




*Shelbourne*  
REYNOLDS

613978 01



## TWIN AUGER MACHINES

All Twin auger machines (16m<sup>3</sup>-22m<sup>3</sup>), are specified with 2-speed drives. With this, 3 auger speeds are available:

PTO INPUT SPEED	LEVER POSITION	AUGER SPEED
540 RPM		10.02 RPM
1000 RPM		18.57 RPM
1000 RPM		33.40 RPM

*Shelbourne*  
REYNOLDS


613847 01

The 18.57 auger speed is suitable for the majority of mixing and chopping situations. The fastest 33.40 rpm auger speed, as with the single auger machine, can be employed to speed up the chopping of dry fibrous material, and small batches of root crops, as well as being used to clear material from the auger flight, once feeding is complete.

Operating the machine using the faster auger speed will increase the horsepower requirements. It is not recommended this is used, if the total weight in the tub exceeds 3500kg.

Likewise, the slow auger speed of 10.02 rpm is useful for re-starting the machine after a mix has settled for a number of hours.

As the auger rotates slower in this mode, the horsepower required to drive the machine is reduced, which means it is possible to drive the machine using a smaller tractor than usual say (90-100 hp). The slow auger speed is not recommended for chopping material, it is only suitable for certain mixing applications.

Please note: Running the machine at 540 rpm PTO input speed, and with the gearbox lever, positioned to  is not a drive option. If this set-up is used the shearbolt is liable to break.

## 4.7 SHEARBOLT REPLACEMENT

In the event of overload the shear bolt in the PTO shaft will break and drive will cease. Should this occur stop the tractor and clear the blockage. Remove the PTO shaft from the tractor and replace the bolt with the appropriate size and grade (see Below). The shear bolt is located in the machine end of the PTO shaft. You will find spare bolts in the magazine on the front of the transmission guard or conveyor-mounting frame, an emblem stating the correct shearbolt part number should be located next to the shearbolt magazine.

Fit the new shear bolt, replace the PTO shaft and resume operation as gently as possible.

### Single auger machine complete with single speed drive kit

605123 01 M8x50, Grade 10,9 shearbolt  
NUT-0263 M8 Nut

### Single auger machine complete with 2-speed drive kit

BLTA07320 M7x50, Grade 8.8 shearbolt  
NUT-0162 M7 Nut

### Twin auger machine complete with 2-speed drive kit

BLTA08350 M8x55, Grade 8.8 shearbolt  
NUT-0263 M8 Nut

Please note: Fitting a shearbolt, different to the size and grade recommended would invalidate the warranty for the machine.

## 4.8 FEEDING

Please follow the below procedure:

1. When chopping and mixing is complete move the machine to the feed area. Adjust the conveyor if necessary.
2. Start the machine running.
3. Now open the door slowly and wait for the feed out to settle before further adjustment.
4. Move forward in the lowest gear possible, until an optimum speed and door opening is found.



Avoid shock loads to the machine whilst moving. It may result in damage to the load cells.



Traverse sloping ground with extreme caution, the dynamic effects of mixing may reduce stability.



In narrow feed passages with barrier type feeds, be careful not to trap the heads of animals between the machine and the barriers on both sides of the feed passage.

The feed door is operated hydraulically and is either controlled directly by the tractor auxiliary lever, by a lever on the spool valve or by a switch on the electrically operated hand set, depending on the hydraulic control system supplied.

Slow feeding out will result from insufficient chopping time, or by having blunt or incorrect configuration of knives fitted.

## SECTION 5

## CONVEYOR AND OTHER FEED OUT DEVICES

### 5.1 FRONT CHAIN & SLAT CONVEYOR

The sideways movement of the conveyor is possible with the operation of the conveyor side shift cylinder, situated underneath the conveyor.

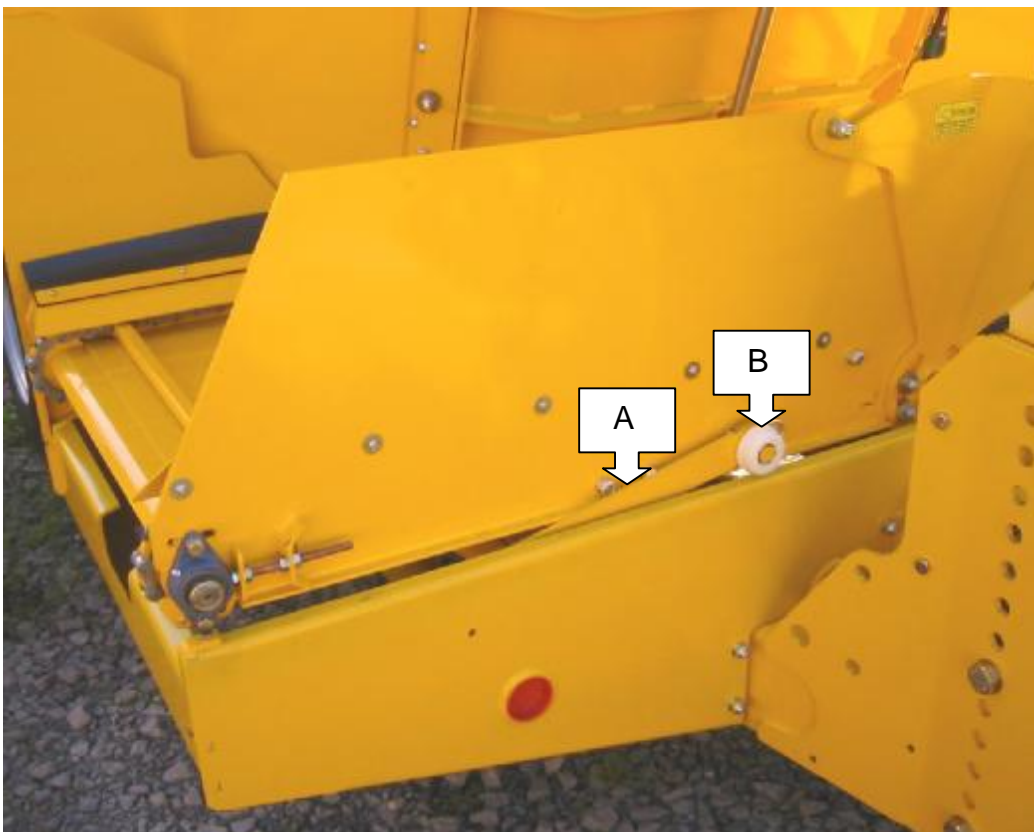
The control of this cylinder is either by the central lever of the valve block, by a switch on the control hand set, or directly by the tractor auxiliary lever, depending on the hydraulic control system supplied.

Adjusting the flow control knob on the valve block can alter the speed of the conveyor's hydraulic motor. If the conveyor is plumbed directly to the tractor, the speed may be altered via the tractors hydraulic system.

The direction of rotation of the conveyors may also be altered via the hydraulics.

As the conveyor moves sideways it is possible to predetermine the movement and height of the conveyor in 2 different ways:

1. The removal of the jacks (A) results in a sideways traverse of up to 600mm(2') feeding at a height of 800mm (2'7") from the ground.
2. When the jacks (A) are fixed to the roller shaft (B) it results in a 425mm (1'5") sideways traverse before the conveyor lifts to a height of anything between 800mm (2'7") and 1470mm (4'10") from the ground.

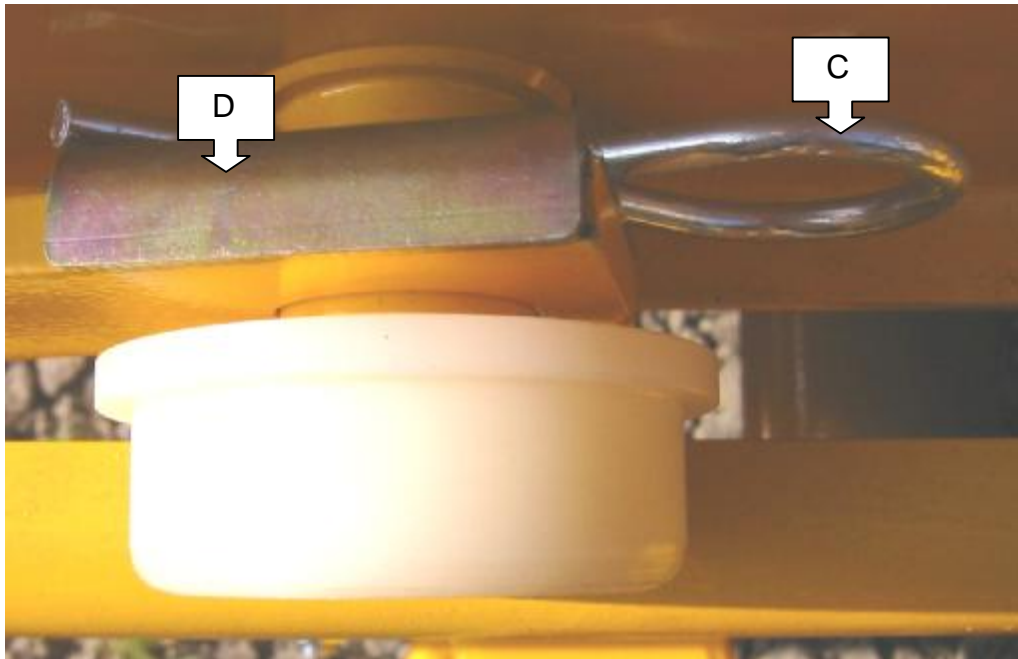


Beware of rotating and moving parts. Stand clear whilst operating.



Beware of rotating and moving parts, injury may occur if there is contact between the conveyor and your animals.

The jacks are fixed by R clips (C), and a locking plate (D). The removal of the R clips (C) and rotation of the plates (D) permit the removal of the jacks (B).



## 5.2 FRONT RUBBER BELT CONVEYOR

The operation of the rubber belt conveyor is similar to the chain & slat conveyor. The exception is that it is possible to have each individual belt running in opposite directions, this allows the feed to be conveyed to the left and right simultaneously. This is due to the fact that this conveyor has 2 hydraulic motors. This function is achieved by fitting KIT-03495, and allows the motors hydraulic hoses to be reversed via quick release couplings.

The maximum feed height is lower for the belt type conveyor, as the diamond pattern imprint is less aggressive than the slats, and so it is unable to feed material at such a steep angle.

The rubber belt conveyor will throw material further from the end of the conveyor as the motor speed is faster than the chain & slat version.

The movement & height of the rubber belt conveyor is as follows:

1. The removal of the jacks results in a sideways traverse of up to 600mm(2') feeding at a height of 800mm (2'7") from the ground.
2. When the jacks are fixed to the roller shaft it results in a 370mm (1'3") sideways traverse before the conveyor lifts to a height of anything between 800mm (2'7") and 1370mm (4'6") from the ground.

### 5.3 SIDE DELIVERY OPTION

The side door is fitted with a rubber flap, it covers the feed gate to prevent direct access to the revolving auger and blades, and is a requirement for safety reasons. It also helps to deflect the feed downward into a neat row.

The side door is also equipped with an adjustable bottom chute (A), which will allow feed to be deflected into a trough with a maximum height of 720mm (2'4").



Beware of rotating and moving parts. Stand clear whilst operating.

## SECTION 6:

## MAINTENANCE AND STORAGE

### 6.1 SHARPENING THE KNIVES

After a period of operation or after corrosion has taken place, it will be necessary to sharpen the knives. This period will depend upon the materials that make up the load. A small angle grinder is probably the most practical tool to use. Sharpen the blades on the side that is already ground flat, with the wheel running towards the blade, move lightly along the blade, being careful to maintain the edge angle without discolouring the blade material.

When changing the blades, always grease the fixing screws to ease future maintenance.



There is a high risk of severe injury from falling onto the knives. Refer to section 2.9, 'Accident prevention when servicing the machine', before entering the machine. Remember that the floor of the machine will be very slippery, particularly if wet and or polished with use. Approach the task with caution.

### 6.2 CHAIN OILER MAINTENANCE

The system requires clean simple mineral engine oils to work effectively. Commonly used oils include SAE30 grades to APIcc/cd specification. Avoid multipurpose, universal, or oils with high EP packages. The additives in some oils can separate under pressure and deposit onto the metering valves, which will reduce efficiency and in some cases preventing oil flow. – If In doubt please order OIL-0044 from your SRE dealer.

The reservoir is supplied with an internal paper element filter. Although only clean oil should be used, the filter ensures that contaminants do not enter the system. The filter can be changed as part of normal service schedules. Ensure that the reservoir is removed from the system and thoroughly cleaned when changing filters to prevent dirt & water ingress. Never allow water to enter the reservoir, as the oil will emulsify.

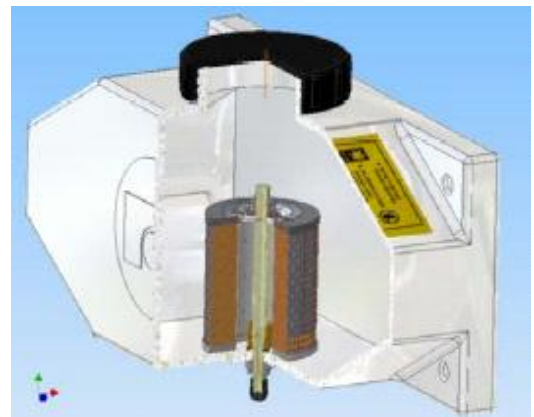
Ensure when refilling the reservoir from empty that air is not introduced into the pump line. The push-on PVC nitrile hose must be removed from the pump in order to bleed the line. When oil appears re-install the feed tube to the pump.

The oil is fed to the chains via 4mm OD flexible tube, regularly ensure that these lines are not damaged.

The cam can be adjusted to increase or decrease the overall system oil consumption. There are 8 settings on the cam. Setting '1' offers a shorter cam throw, therefore lower pump spring pressure.

Setting '8' offer a longer cam throw, which compresses the spring further, which increases the line pressure / overall oil output.

It is recommended that the cam is set to 5.



### 6.3 DOOR SEAL MAINTENANCE (EXPRESS ONLY)

If it is required that the door seal is liquid tight then periodic adjustment of the door seal may be necessary.

Firstly, slacken all the seal clamping coach bolts around the door. Grease the face of the seals and close the door. Tighten the bolts.

Simple adjustment of these bolts will cause the seal to swell and seal the door where necessary.

Grease the door cam plates and rollers regularly to prevent premature wear.

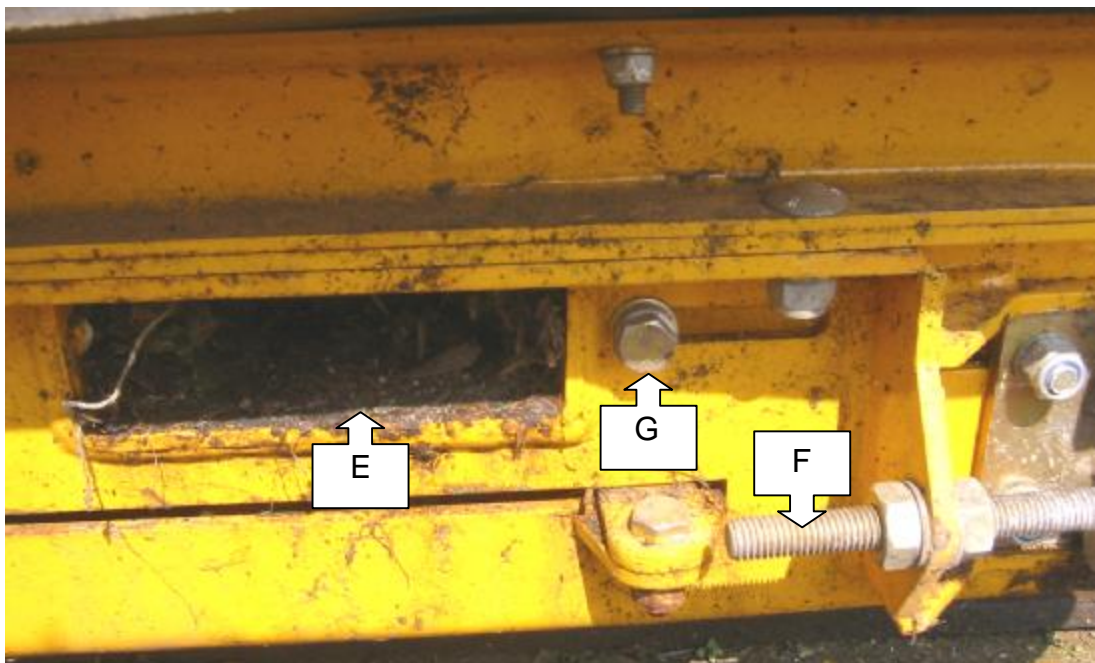
### 6.4 FRONT RUBBER BELT CONVEYOR MAINTENANCE

It is important that the rubber belt conveyor is regularly cleaned to prevent a build up of material on the drive and idle rollers, which would cause the belt to mis-track.

There are 2 channels on each conveyor pan (E), these allow any material, which has entered the underside of the belt to escape, and must be cleaned regularly.

The belts are tensioned using the stud adjuster (F). It is essential that the roller scraper is also adjusted when the belts are tensioned. - Loosen bolt (G), move the internal scraper plate so that it just scrapes the idle roller, finally tighten bolt (G) to secure.

– The channel on the conveyor shown below requires cleaning, and if left would cause the belts to mis-track.



Ensure the conveyor's roller bearings are regularly greased, as they are working in a very high contamination environment.



See section 2.9 – Accident prevention when servicing the machine, before undertaking any of the maintenance procedures.



## TRACKING THE RUBBER BELT CONVEYOR

If the belts are mis-tracking please follow the procedure stated below:

1. Clean material from the channel shaped troughs thoroughly, ensure there is NO debris on the idle & drive rollers. The scraper plates may need to be adjusted to clear any material from the rollers.
2. Check that the drive roller is parallel to the idle roller, this can be done by measuring the thread of the stud adjuster, they should be an identical length each side of the conveyor.
3. Track the belts as described below:

### Rules:

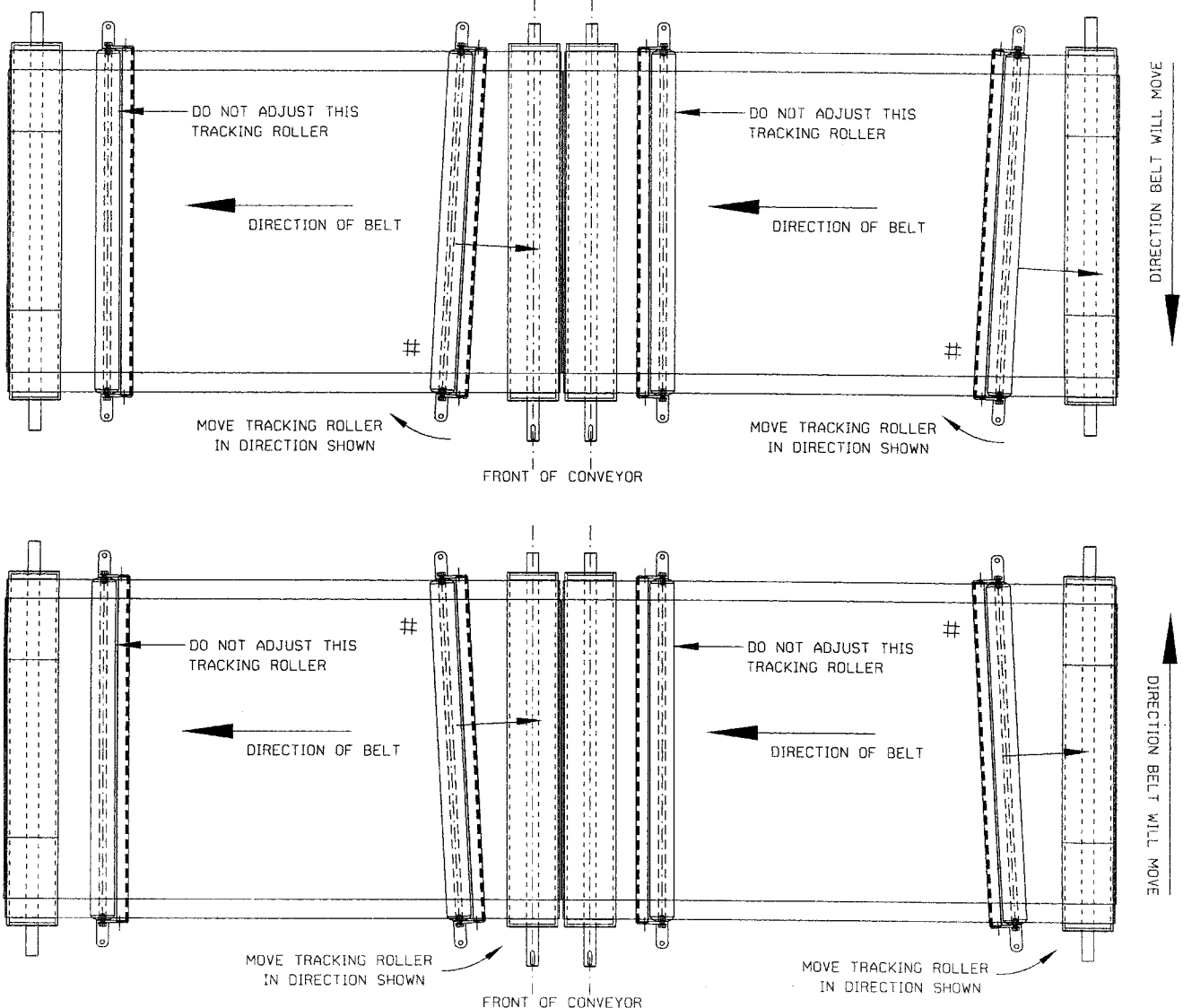
The belt will run in the direction of the perpendicular line of the tracking roller.

Or

A belt, will get a side deviation of the first contact spot '#', between the belt & roller.

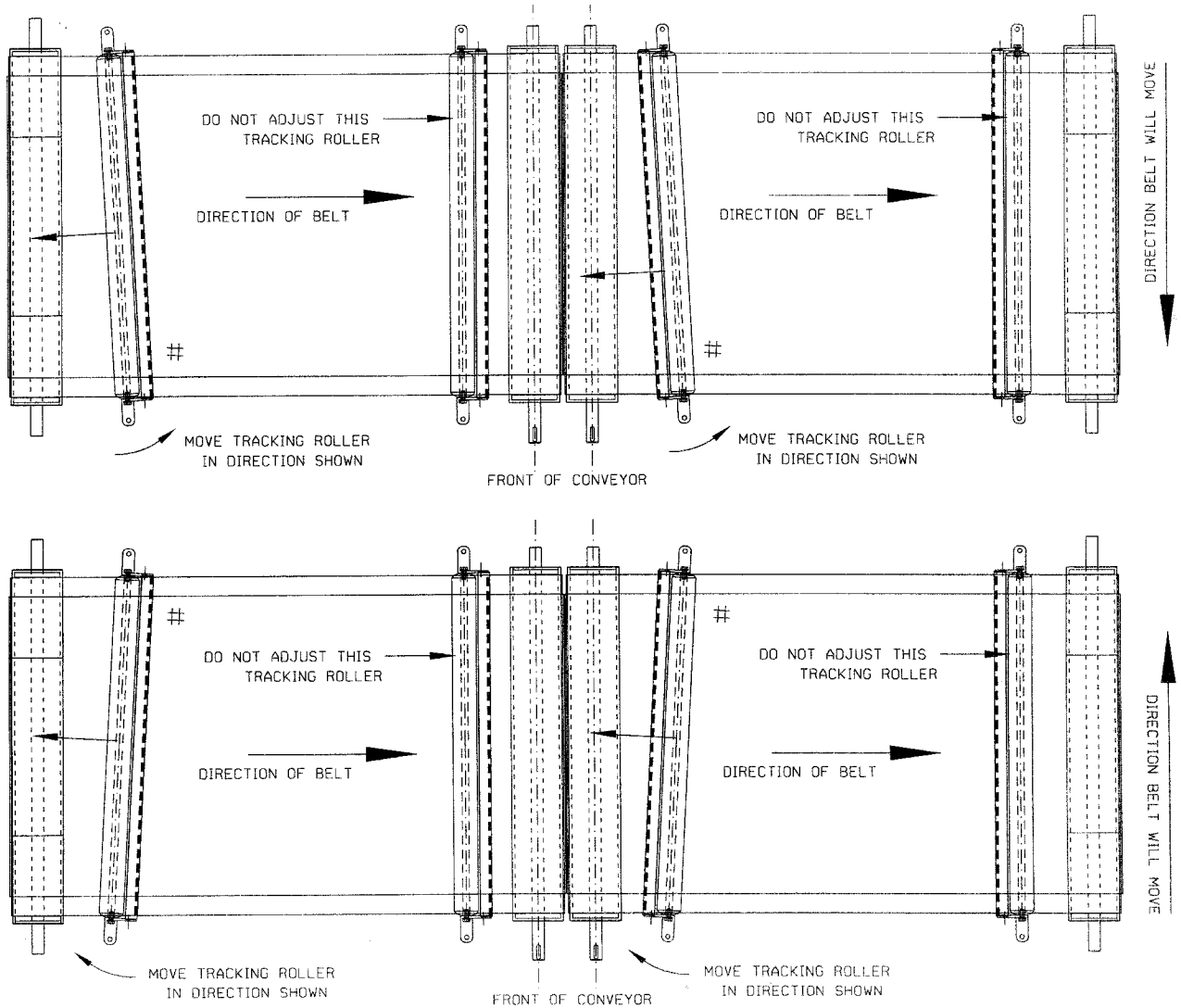
Run the belt in the direction shown, and adjust only the tracking rollers marked with a '#' to move the belt. Only small adjustments are required to move the belt.

View of conveyor is looking from above – i.e. tracking rollers are underneath.



Once the conveyors are running centrally in the direction shown on the previous page, reverse the conveyors and track the belt as shown below:

View of conveyor is looking from above – i.e. tracking rollers are underneath.



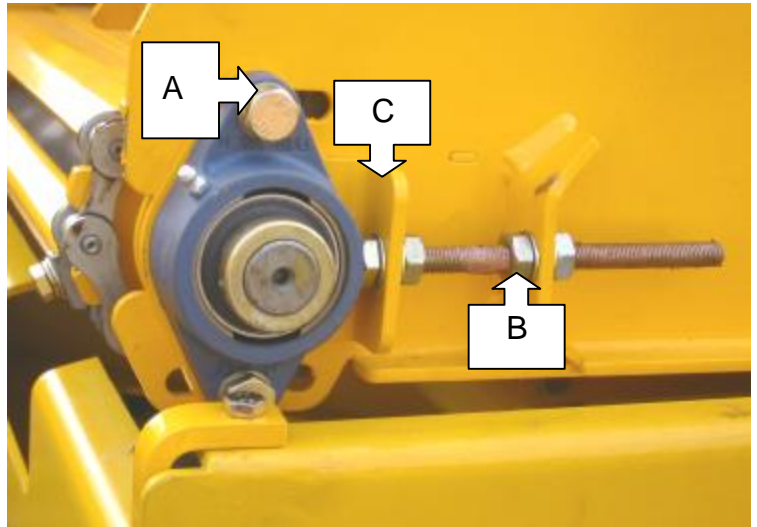
Once the conveyors are running centrally in the direction shown above, reverse the conveyors, to check that the conveyors are still running centrally in the other direction. The conveyors should now be tracked, but may require very fine adjustment.

## 6.5 FRONT CHAIN & SLAT CONVEYOR MAINTENANCE

Periodically check the chain tension, if the chains are too slack, it may cause the slat to interfere with the conveyor frame. This will ultimately cause a failure.

Simply slacken the two bolts that affix the bearings (A).

Use the plain nuts (B) on the adjustment screws to move the tension plate (C). Ensure that the idle shaft is square to the frame and parallel with the drive shaft. Finally tighten bolts (A), and plain nuts (B).



It is important to regularly clean the conveyor system to prevent a build up of material, and prevent contamination.

Ensure the conveyor's roller bearings are regularly greased, as they are working in a very high contamination environment.

## 6.6 CHECKING TYRE PRESSURES & WHEEL NUTS

The Powermix is fitted with either Goodyear 340/65R18 FS24 wheel & tyre assemblies.

Ensure tyre pressure is 6 bar (87 psi).

Or

Bandenmarkt 305/55R22.5 Kargo-Radial TL wheel & tyre assemblies

Ensure tyre pressure is 7 bar (102 psi).

Check wheel nuts frequently – Tighten to 271 Nm (200 lb/ft).



See section 2.9 – Accident prevention when servicing the machine, before undertaking any of the maintenance procedures.

## 6.7 RECOMMENDED PERIODIC MAINTENANCE



See section 2.9 – Accident prevention when servicing the machine, before undertaking any of the maintenance procedures.

### WEEKLY

1. Grease the power shaft.
4. Check the oil level of the chain oiler reservoir. Replenish with Cirkan C 100-grade oil (OIL-0044) or equivalent.
5. Check belt tracking on front belt type conveyor, re-track if necessary, clean thoroughly.
6. Check chain tension on front chain & slat conveyor, clean thoroughly.
7. Lubricate bearings on conveyor assemblies.
8. Check tyre pressures.
9. Check wheel nuts.

### MONTHLY

1. Remove the chain guard and inspect the chain tension to ensure that it has not worn or stretched beyond the travel of the tensioner.  
Remove 2 links and add a half link (CHN-04410) if required.
2. Check chain, ensure the chain is well oiled, and that the oiling system is applying enough lubricant. Adjust cam and check oiling system if required.
3. Remove the level plug from the gearbox and check the level of oil. Replenish with Mobilube S.H.C Synthetic lubricant.  
Replace gearbox oil after first 20 hours of service.
4. Check weigh cell bolts.
5. Check axle-fixing bolts.

### ANNUALLY

1. Replace the oil in the gearbox with Mobilube SHC synthetic oil. Use only genuine Shelbourne Reynolds parts to ensure longevity and performance.
2. Change the filter in chain oiler reservoir.

## 6.8 STORAGE

1. Clean the machine thoroughly.
2. Apply rust inhibitor or oil, to all the wearing surfaces.