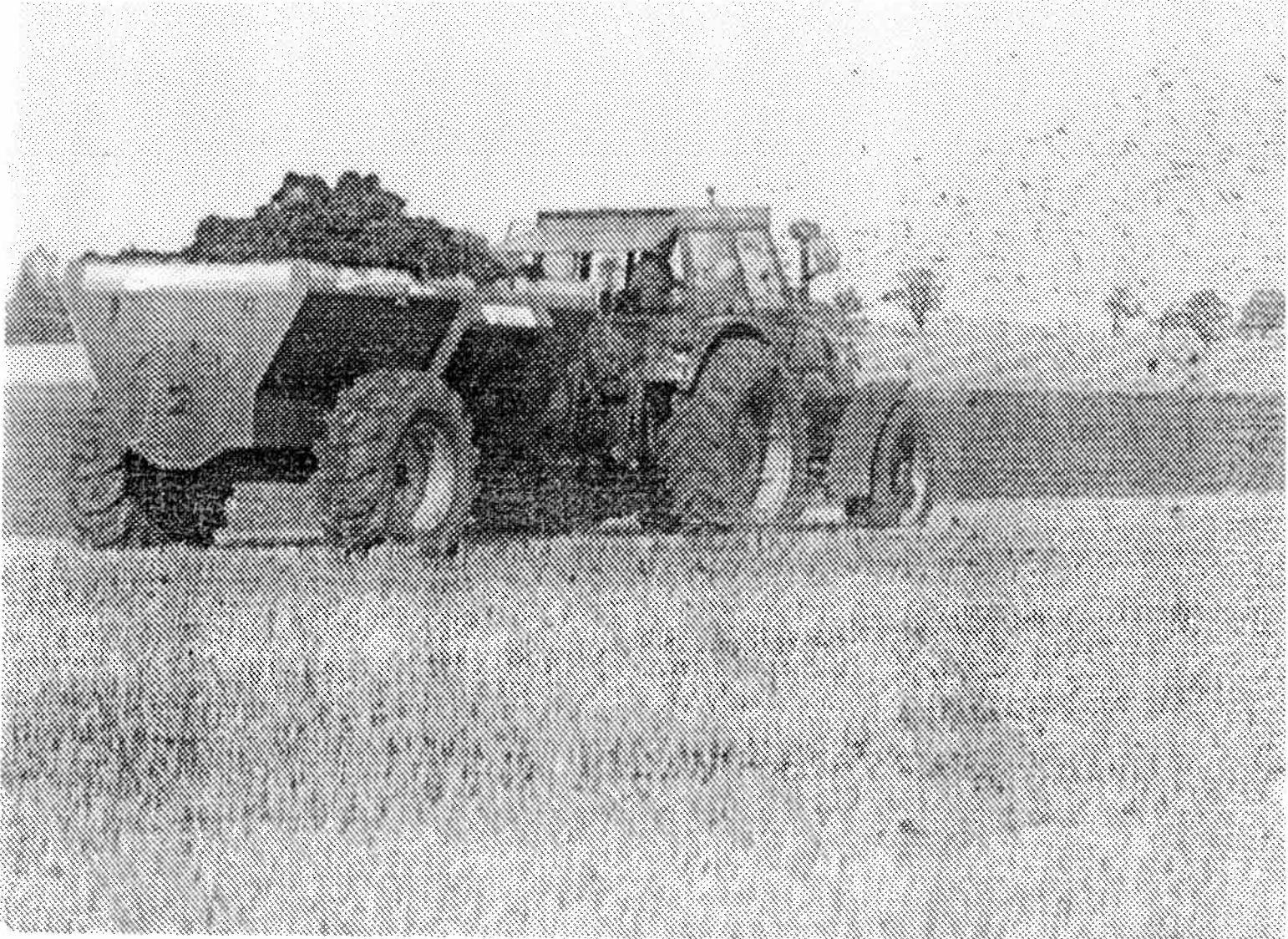


POWERSPREAD 630 & 730

OPERATORS MANUAL & PARTS LISTING.



Shelbourne
REYNOLDS

Shelbourne Reynolds Engineering Ltd
Stanton

Bury St Edmunds
Suffolk IP31 2AR
England

Telephone: 01359 250415 (Stores direct 01359 251231)

Fax. No: 01359 250464 (Stores direct 01359 252031)



THE QUEEN'S AWARD FOR
TECHNOLOGICAL ACHIEVEMENT



THE QUEEN'S AWARD FOR
EXPORT ACHIEVEMENT

OPERATORS / PARTS MANUAL

CONTENTS

Section 1	INTRODUCTION
1.1	Foreword
1.2	Improvements and changes
1.3	Service Parts
1.4	Machine Identification
1.5	Warranty
Section 2	SAFETY PROCEDURES
2.1	Accident prevention
2.2	Before starting the machine
2.3	The machine in the field
2.4	Leaving the machine
Section 3	SPECIFICATION AND DESCRIPTION
Section 4	TRANSPORTATION AND SPREADER ATTACHMENT
4.1	Attaching spreader to tractor
4.2	Connection of hydraulic hoses for discharge door ram
4.3	Connection of hydraulic hose for brake ram
4.4	Braking system and handbrake
Section 5	FIELD OPERATION AND SPREADING
5.1	General spreading information
5.2	Loading the Powerspread
5.3	Discharge rate
5.4	Foreign objects
5.5	Door opening
5.6	Semi solid materials/Lagoon scrapings
5.7	Solid materials
5.8	Shear bolt protection
5.9	"Break-Away" paddles
5.10	Spread pattern
Section 6	ADJUSTMENTS AND MAINTENANCE
6.1	Setting impeller blades
6.2	Drive chain tensioning
6.3	Shear bolts
6.4	Washing down the Powerspread
6.5	Tyre pressures
6.6	Hardware and fixings
Section 7	LUBRICATION
Section 8	PARTS LISTING

1.1 FOREWORD

This manual will assist the operator to set, operate and service the Shelbourne Reynolds Powerspread 630 and Powerspread 730 to give safe, efficient and optimum spreading throughputs. It should be read carefully before putting the machine to work. Later sections illustrate and list all relevant spare parts.

The Powerspread 630 manure spreader has a capacity dependent on material of up to 8 tonnes and the Powerspread 730 up to 9 tonnes.

The machine has been designed to spread all types of material from thin slurry, to the heaviest farmyard manure.

As with all machinery, routine maintenance is a necessary condition for long life and it will repay the operator to read this manual and to follow the operating and maintenance instructions carefully.



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.

When ordering service parts always quote the model, serial number and machine number.

1.4 MACHINE IDENTIFICATION

The serial and machine numbers of the Powerspread 630 and Powerspread 730 spreaders are located on the left hand side of the main drawbar beam.

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

GENERAL

1. 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 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 the original purchaser and you shall be deemed to have paid for the equipment.

USE AND MAINTENANCE

2. 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 use you should contact the dealer.)
3. Our liability under this warranty is dependent upon your making the equipment and facilities available, for inspection and testing.
4. In this warranty the expression, "defective product" means any part of the equipment you have purchased which shows evidence of a defect in the materials, design (due regard being given for the state of the art at the time we designed it) or Shelbourne Reynolds' workmanship.

Wearing parts, such as chain tension blocks, are excluded. Parts not manufactured by Shelbourne Reynolds, for example wheels and tyres, are also excluded.

OUR OBLIGATIONS

5. 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 THE DEFECT WITHIN SEVEN DAYS OF THE DAY ON WHICH IT IS DISCOVERED AND YOU MUST NOT USE THE EQUIPMENT AFTER DISCOVERY. FAILURE TO OBSERVE EITHER OF THESE OBLIGATIONS WILL INVALIDATE THE WARRANTY AS IS APPLIES TO THAT DEFECT. Any defective products replaced must be returned to SRE for inspection.

NO ADMISSION

6. 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 circumstance be deemed an admission that it was defective.

LIMITATIONS

7. This warranty shall not apply to products made up in accordance with customer originated designs.
8. 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.
9. 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 including delay in field work, expense incurred for labour, additional or substitute material, rental whatsoever and whether caused by our negligence, the negligence of our employees or agents or otherwise) which arises out of or in connection with the use of the goods by you.
10. Time of repair is not of the essence.
11. No person or persons are authorised to alter, modify or enlarge this warranty on behalf of Shelbourne Reynolds.

continued

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

13. 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.

IMPORTANT NOTES

14. The chassis and wheel equipment are designed to carry the maximum load of the model of Powerspread supplied; as stated on the specification plate. The fitting of "greedy boards" around the top of the hopper which enable weight loadings in excess of those specified will invalidate the warranty and Shelbourne Reynolds liability.

YOUR STATUTORY RIGHTS ARE UNAFFECTED.

2.1  ACCIDENT PREVENTION

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

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

ALL WARNING INSTRUCTIONS MUST BE OBEYED.

THE FOLLOWING LABELS ON THE MACHINE MUST AT ALL TIMES BE KEPT CLEAN AND LEGIBLE.

"WARNING : - OPERATOR MUST NOT WORK AT THIS MACHINE WHEN IN MOTION. "

"WARNING : - RISK OF FLYING OBJECTS
KEEP WELL CLEAR. "

 CAUTION

In addition to the following list, this symbol will appear throughout this manual whenever your safety is involved.

PRECAUTIONS -

2.2 BEFORE STARTING THE MACHINE

1. Read the manuals thoroughly.
2. Check that all guards are properly secured.
3. Ensure that no person is working on or inside the machine.
4. Check that all observers are clear of the machine.

2.3 THE MACHINE IN THE FIELD

5. Do not permit anyone to ride on the Powerspread or climb on the machine when the spreader is in operation.
6. Always stop the engine and apply the handbrake on the tractor before removing or opening any guards or clearing a blockage in the spreader.
7. NEVER allow anyone to walk alongside the right hand side of the machine whilst operating, or injury from flying objects may occur.
8. Be aware that small stones and other similar hard objects can be thrown further than manure. Care should be taken when working near highways, public footpaths, buildings, etc...
9. Always replace all guards after making any adjustments or lubricating the machine. Replace or repair any damaged or missing guards immediately.
10. Do not work around the machine in loose clothing that might get caught in moving parts.
11. Keep hands away from moving parts.
12. Keep children away from and off the machine at all times.

2.4 LEAVING THE MACHINE

13. Park the machine on reasonably level ground.
14. Apply the tractor's parking brake.
15. Stop the tractor's engine before leaving the cab.
16. When unhooking the spreader apply the machine's parking brake before moving the tractor away.

2.5 SERVICING THE POWERSPREAD

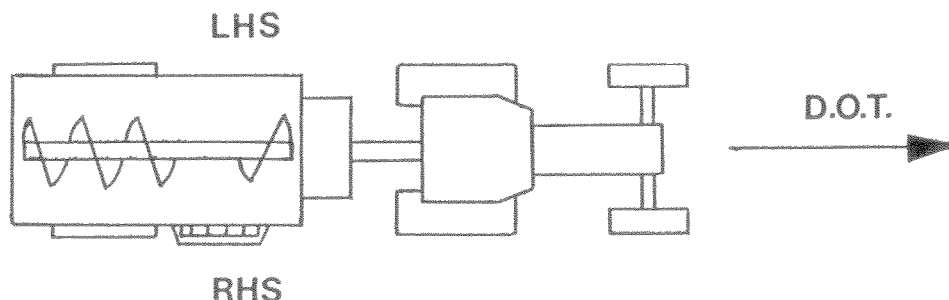
17. Stop tractor engine and apply handbrake before performing any adjustments or lubrication and before opening or removing any guard.
18. Always re-install all safety guards on completion of servicing.

2.6 SPREADER ATTACHMENT AND TRANSPORTATION

19. Follow the procedure described further through this manual for spreader attachment and detachment.
20. Follow the section on loading the Powerspread and ENSURE THAT THE MACHINE IS NOT OVERLOADED. The specification plate on the left hand side of the drawbar beam will state the safe maximum working weights and loads.
21. When towing the loaded Shelbourne Reynolds Powerspread on the highway, ensure that material cannot over-flow or spill out of the hopper.
22. When towing the Powerspread, ensure that the p.t.o. shaft and hydraulic hoses are attached correctly and not able to interfere with the ground or foul any moving parts.

SECTION 3 S P E C I F I C A T I O N & D E S C R I P T I O N

RIGHT AND LEFT HAND OF THE MACHINE AS TERMED IN THE MANUAL IS AS VIEWED WHEN IN THE DRIVERS SEAT.



THE SHELBOURNE REYNOLDS POWERSPREAD 630 AND POWERSPREAD 730

FEATURES

BENEFITS

Patented centre discharge auger causes minimum movement of manure.

High rates of discharge.

Contra feeding auger provides boiling action.

Material well broken in hopper

Break back paddles.

Maximum protection against inadvertent inclusion of stones and foreign objects.

Six paddles every revolution of auger.

Provides an even feed to the impeller.

Vertical centre lift door.

Allows an even discharge of manure at any door setting, utilising the total impeller width.

Overshot impeller.

Provides a fine even spread at widths of up to 14 metres.

Slurry deflectors.

Give an even slurry spread pattern.

Shear bolts fitted.

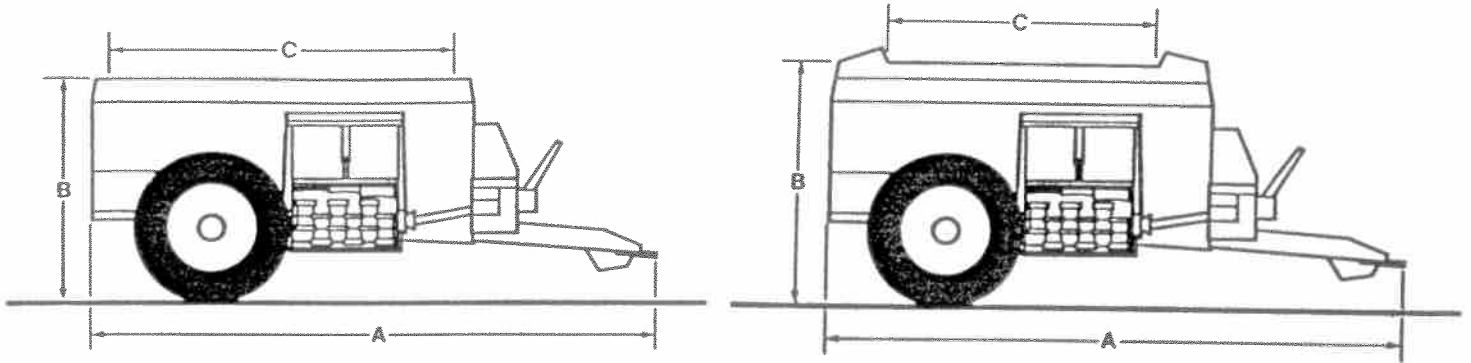
For maximum protection of the drives.

Variable pitch auger flights.

Enable a wide range of manure and slurry to be spread.

TECHNICAL SPECIFICATIONS:

Sizes and weights are as follows:-



	<u>POWERSPREAD 630</u>	<u>POWERSPREAD 730</u>
Capacity(litres)	6250	7250
Capacity(tonnes)	up to 8	up to 9
Length (A)	5410mm	5410mm
Width	2365mm	2410mm
Loading height (B)	2035mm	2225mm
Opening length (C)	3350mm	2900mm
Opening width	1826mm	1826mm
Tyre size	16.5/85-28 10 ply	18.4-26 12 ply
PTO speed	540rpm	540rpm
Recommended size of tractor	70-90 hp	70-90 hp
Unladen weight	2700kg	2955kg
Spread width	8-14 m	8-14 m
Door size	955mm	955mm
Door operation	Double acting hydraulic ram	

Optional Extras on Powerspread 630;

- slurry canopy (KIT-02604)
- larger 18.4-26 12 ply tyres
- brake relief kit (for use when brakes are not connected direct to tractor brake line i.e. when brakes are connected into tractor spool valves) See section 4.4

Optional Extras on Powerspread 730;

- larger 21.3-24 10 ply tyres
- brake relief kit (for use when brakes are not connected direct to tractor brake line i.e. when brakes are connected into tractor spool valves) See section 4.4

4.1 ATTACHING SPREADER TO TRACTOR

The Powerspread is only supplied with a 50mm diameter ring hitch as the drawbar loading is too high for use on a tractor drawbar. The machine should only be used on the automatic pick up hitch of the tractor.

A parking jack is not supplied with the spreader but a shoe is welded to the underside of the drawbar. This enables the automatic pick up hitch hook to easily move under the drawbar lug when attaching the spreader.

The PTO is equipped with a standard 1 3/8" six spline suitable for all 540 rpm tractor PTO shafts. The length of shaft may have to be adjusted to cater for your particular tractor/Powerspread combination.

With the Powerspread attached to the tractor and parked in the straight ahead position, slide the PTO shaft apart and connect the respective ends to the tractor and Powerspread. Lay the shafts side by side and make sure they have at least 150mm of distance between the end of the shaft and the adjacent joint.

Shaft lengths can be adjusted by sawing off equally a proportion of tube from the inner and outer PTO tube together with a corresponding amount off the plastic protection tubes. The tubes should always have at least 300mm overlap whilst operating.

If necessary check the length of the shafts by steering the tractor into a full lock in one direction and seeing that the shafts do not "bottom."



Make sure the tractor 540 P.T.O. speed is selected at all times.



Ensure that the tractor link arms do not foul the P.T.O.

4.2 CONNECTING THE DOOR RAM HYDRAULIC HOSES

The hydraulic hoses are equipped with 1/2" quick release coupling ends as standard, and the Powerspread requires a double acting supply to raise and lower the discharge door.

If couplings are not compatible, change to suitable connections for the required application.

If the tractor is fitted with a flow control valve, adjust to minimum flow rate.

Having pushed the hose ends into the tractor spool valves, ensure that the hoses do not hang down and obstruct the tractor lift arms or any moving parts.

SECTION 4 (continued)

4.3 CONNECTING THE BRAKE HYDRAULIC HOSE

The Powerspread flexible hydraulic brake pipe is fitted with a quick release female coupling to suit the ISO standard tractor brake system.

Having pushed the hose end into the tractor spool valve, ensure that the hose does not hang down and obstruct the tractor lift arms or any moving parts.

4.4 THE POWERSPREAD BRAKING SYSTEM AND HANDBRAKE

In order to comply with the Health & Safety Executive code of practice on trailer braking together with the Construction and Use Regulations, the Powerspread is fitted with brakes, which must be coupled to the tractor when travelling.

Ideally the spreader should be connected directly to the tractor braking system, as will be the case on all modern tractors. However, earlier tractors without this facility can be fitted with a trailer braking kit which enables this direct connection to be made. This ensures that when the tractor brakes are applied, the brakes on the Powerspread are also brought into operation, usually slightly in advance of the tractor brakes.

IMPORTANT NOTE

A Shelbourne Reynolds brake relief kit must be used if the brakes are to be operated through the spool valves at the rear of the tractor due to the excessive pressures released by the valves.

(The part number of this kit is KIT-02602)



AT ALL TIMES WHEN THE MACHINE IS IN MOTION, EITHER TRAVELLING OR WORKING, THE HYDRAULIC BRAKE LINE MUST BE CONNECTED.

The parking brake is applied by pulling the lever towards the tractor. WHEN THE MACHINE IS TO BE DISCONNECTED FROM THE TRACTOR THE PARKING BRAKE MUST BE APPLIED BEFORE DISCONNECTION, EVEN ON LEVEL GROUND. The parking brake must be released prior to towing the machine, after re-connection to the tractor.

When the machine is attached to the the tractor the cable must be connected between the tractor and the parking brake lever such that, should the machine become inadvertently detached from the tractor, the spreader brakes would be automatically applied.

OPERATING THE SHELBOURNE REYNOLDS POWERSPREAD.

Read this manual carefully before operating the spreader in the field.

To get optimum performance from your Shelbourne Reynolds Powerspread the operator should keep to the following procedures of operation.

5.1 GENERAL

The machine is designed to run at 540 rpm PTO speed. Spreading should be done in straight line bouts, avoiding spreading while turning corners as this will cause vibration in the PTO drive.

5.2 LOADING THE POWERSPREAD

Always close the door before loading the Powerspread. The machine should be loaded from the left hand side with any suitable system. All free flowing muck/slurry must not be overfilled or the material will be discharged over the side during transport.

If thin slurries are to be spread, then the correct setting of the discharge deflectors above the door is required. (See settings for deflector paddles - Section 6.10)

When travelling on the highway the Powerspread should not be overloaded and when carrying thin slurries allow sufficient room at the front of the spreader to prevent "forward surge" and consequent over-spill if emergency braking should be required.

A Shelbourne Reynolds optional extra canopy kit is available for the Powerspread 630 to also prevent this over-spill when carrying slurry. The kit part number is KIT-02604

While loading dry straw or clamp manure precautions should be taken if large slabs or lumps, particularly from the front of feeding troughs, are encountered.

Always endeavour to slide these down the side into the hopper and do not position them directly onto the top of the auger as this may cause bridging and will cause high start up power requirement.

Where possible, break down such slabs or lumps when loading the spreader to avoid this occurring and also help improve spreader discharge rates.

When spreading sugar beet factory sludge (waste lime) and like materials, the machine should not be filled above the top of the auger flights.

SECTION 5 (continued)

5.3 DISCHARGE RATE

The machine is designed with a single speed auger so that with the door wide open a reasonably fast discharge rate can be obtained. This is particularly useful when large loads are being spread, and therefore the quicker the unloading time the better.

For a finely shredded spread with a low discharge rate the door opening will be small. The auger still transports the manure to the discharge position at the same speed though, and the resultant "bottle-neck" of material causes a "boiling up" effect. This helps break down the manure further before it is finally ejected onto the impeller blades and discharged.

IMPORTANT NOTE

Some manure types are not suited to this method, especially if they are already tightly packed or layered before loading. In these cases the door should be opened wide to allow fast ejection and the forward speed of the tractor increased to achieve a suitable spread rate on the field.

The discharge or spread rate of the Powerspread depends very much on the type of material being spread. For a given material it will be found that there is an ideal door position for maximum throw of the material and maximum shredding of the manure. It is recommended that the standard PTO speed of 540 rpm is used at all times and the discharge rate varied according to the door opening and the forward speed of the tractor. A further variant is the amount of overlap between each run which, in most cases, will average 6m (20ft).

5.4 FOREIGN OBJECTS

If during the spreading, a knocking sound is heard or sparks are seen coming from the impeller, then there will be a foreign object such as a stone in the machine. Open the discharge door wide to allow the object to be thrown out. If the object is not cleared immediately, stop the machine and stop the tractor and investigate.

5.5 DOOR OPENING

As a general rule it is better in heavy straw manure to open the door wide when starting the machine running, and then closing the door to give the desired spread rate and shredding capabilities.

The opposite applies with thin slurry, as a very small door opening will be required (possibly as low as 25mm / 1"). When spreading slurry the machine should be running at the correct 540 rpm PTO speed before the door is opened. The door should be opened slowly, watching the door indicator and the spread width to gauge a satisfactory spread rate. The door opening will depend completely on the type and consistency of the material being spread and the spread rate desired by the operator.

5.6 SPREADING SEMI-SOLID MATERIALS / LAGOON SCRAPINGS

Start with discharge door closed, engage PTO gently at low engine rpms and gradually and positively bring up to 540 rpm. At the same time move forward at the required speed and then immediately open the hydraulic door to the required position on the indicator. This position will depend on the type of consistency of the material being spread, and the operator's judgement of spread rate and pattern. It may be that this type of material will cause partial blockage of the discharge door, (also when the auger flights are not fully covered the discharge rate will reduce), therefore it may be necessary to increase the door opening for the last part of the load.

See notes in section 5.10 on spread pattern for adjustment of deflector paddles.

5.7 SPREADING SOLID MATERIALS

When spreading solid material open the hydraulic door to the required position on the indicator. This position will depend completely on the type and consistency of the material being spread, and the operator's judgement of spread rate and pattern.

Then engage the PTO gently at lower engine rpms, gradually and positively bring up to 540 rpm and at the same time move forward at the required speed.

In order to achieve higher discharge rates when spreading unrotted, compressed material, the material should be broken up when loading into the machine. The use of 4 in 1 buckets should be avoided; always use manure forks.

When clearing stockyards the areas around the feed troughs will be compacted and so breaking up the manure with the loader forks will speed up the spreader discharge rates.

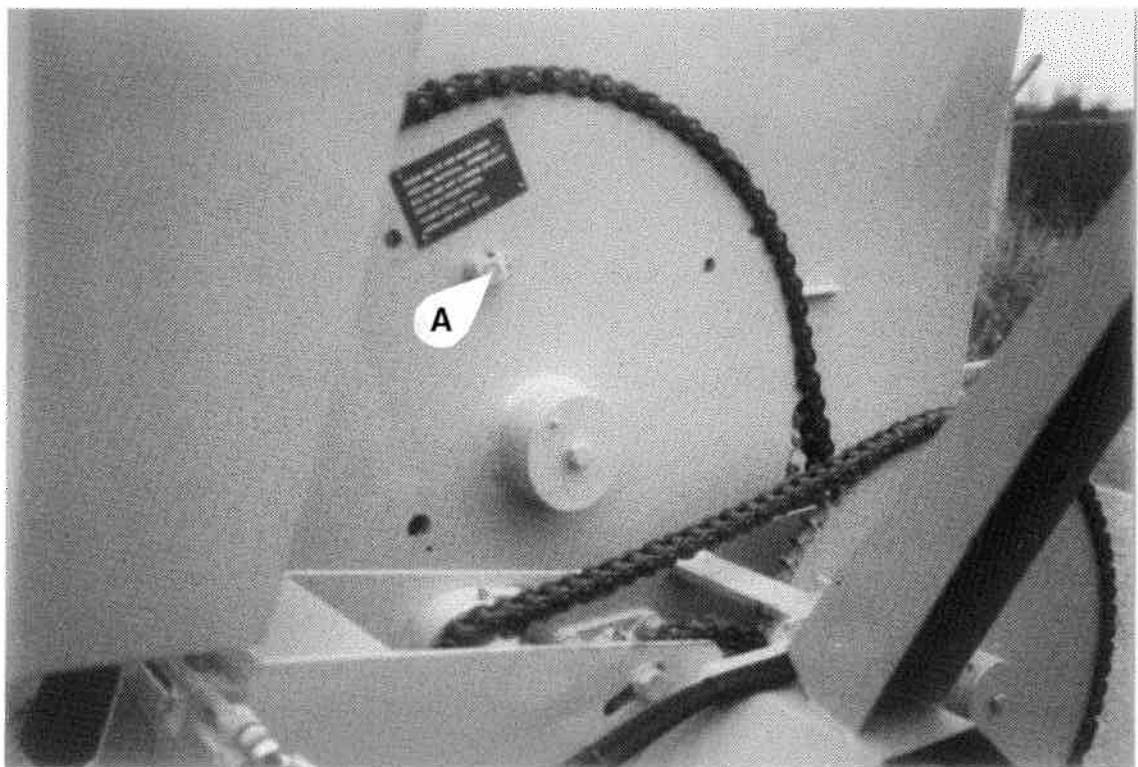
SECTION 5 (continued)

5.8 SHEAR BOLT PROTECTION

To prevent damage to the Powerspread by foreign objects, a shear bolt protection is provided on both the impeller and auger drives. If the machine encounters an obstruction and shears a bolt, stop the tractor and the machine immediately.

Attempt to remove the object by (a) opening the door fully and trying to locate the foreign object or (b) by looking in from the top of the hopper and locating the object in the auger.

Fig. 1



To change the auger drive shear bolt, (item A as shown in Fig. 1), stop the engine on the tractor, manually reverse the drive by turning the impeller round in a reverse direction until the shear bolt holes are aligned, then insert a new shear bolt. Continue reversing to dislodge the foreign object caught up in the Powerspread auger.

The shear bolts on the Powerspread are made from special material. Normal commercially available bolts are not strong enough.

The shear bolts must be genuine Shelbourne Reynolds service parts. If not, the company will not consider any claim made under the warranty and no liability shall be attached to the company.

Powerspread auger shear bolt	605115 01
Powerspread impeller shear bolt	605123 01

Occasionally check the machine for build up of foreign materials such as plastic baling twine wrapped around the auger core. Normally this causes no problems but should not be allowed to build up too much as it will impair the performance of the auger. From time to time cut the twine and remove it.

Always keep the side of the hopper clean, never allow a build up of material or this will obstruct the feed of material to the auger.

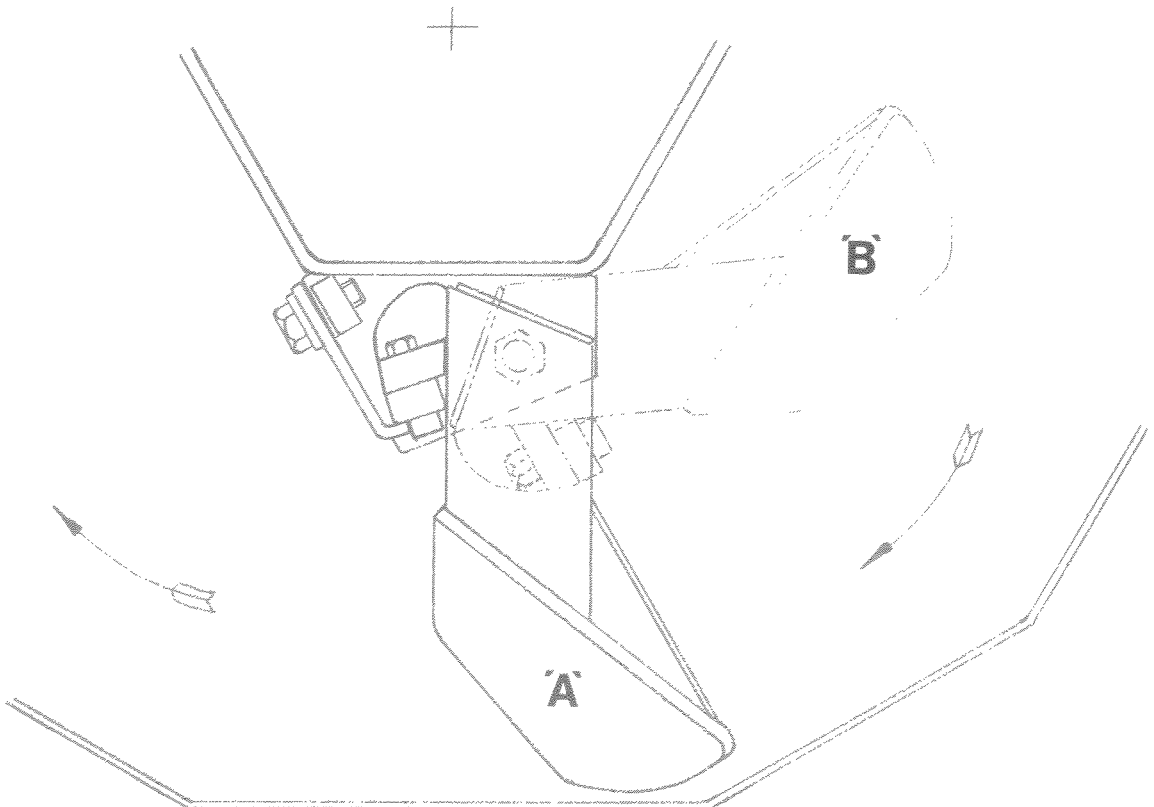
The Powerspread impeller is equipped with replaceable wear plates. Being double serrated edged, when one edge is worn the blades can be reversed.

5.9 BREAK AWAY PADDLES

Under normal operating conditions the paddle blades remain in the fixed upright position, (position [A] shown in Fig. 2), due to the tension of the spring plate acting on the catch plate. This plate is designed to have four wearing edges.

Under abnormal operating conditions (i.e. large stones or other foreign bodies in with the manure), the paddles may strike a foreign object and will "break back" into the position [B] shown in Fig. 2, therefore reducing the risk of damage to the body, door or impeller.

Fig. 2



Even with all the paddles broken away, the load of manure can still be discharged, all be it at a slightly reduced rate.

A cam plate is fitted allowing each spring paddle to be tripped back into position by hand.

The two set screws that hold down the spring plate can be unscrewed a few turns if the cam plate alone is not sufficient to allow the paddle to be reset.

LOCKING THE BREAK AWAY PADDLES

Where there is no danger of the inclusion of stones in the manure the paddles can be locked so that they are more difficult to break away.

To do this a keep plate (SRE part no. 606421 01), is fitted on top of the spring plate using longer set screws (SRE part no. HSS-0318), and this is done to each of the six paddles.

The paddles should only be fixed when it is found necessary e.g. working in very solid manure. Ensure no stones or foreign objects are put into the Powerspread.

Note: if the Powerspread is damaged by stones or foreign objects with the paddles fixed, then warranty will be invalidated.

5.10 SPREAD PATTERN

The patented adjustable impeller flights or deflectors, have been designed to give you the optimum spread pattern to suit your conditions when spreading slurry.

Each flight can be adjusted separately along the pivoting bar by loosening the coach bolts and rotating the flight on the bar. The flights are then adjustable together by operating the spring lever into any one of three positions; the lower two positions are for spreading slurry and the top position for spreading manures.

IMPORTANT NOTE

After adjusting the flights to a suitable place, care should be taken so when the spring lever is in its top position, the deflector flights do not obstruct the door ram when the door is raised and lowered.

See Fig. 3 and Fig. 4 which show the Powerspread discharge door with flights in the top position and flights in the middle position.

Fig. 5 shows a suitable spread pattern for spreading slurry which is obtained by adjusting the deflector flights as described.

Fig. 3

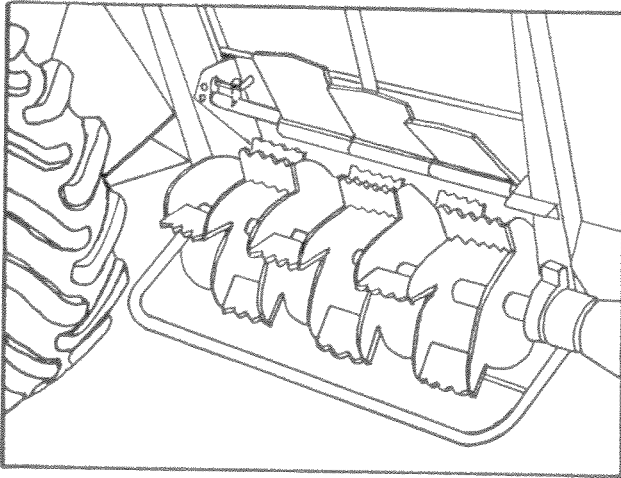
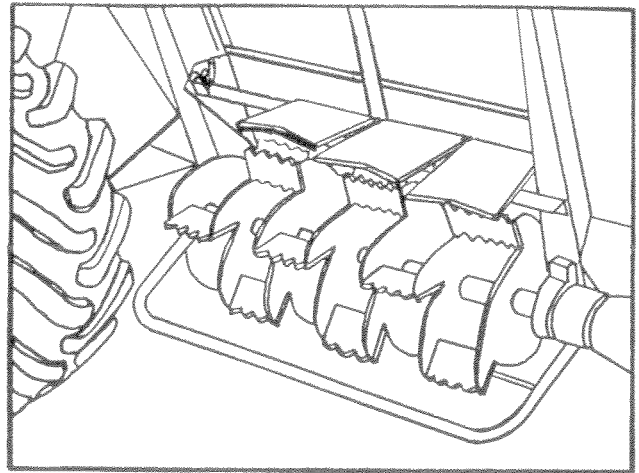


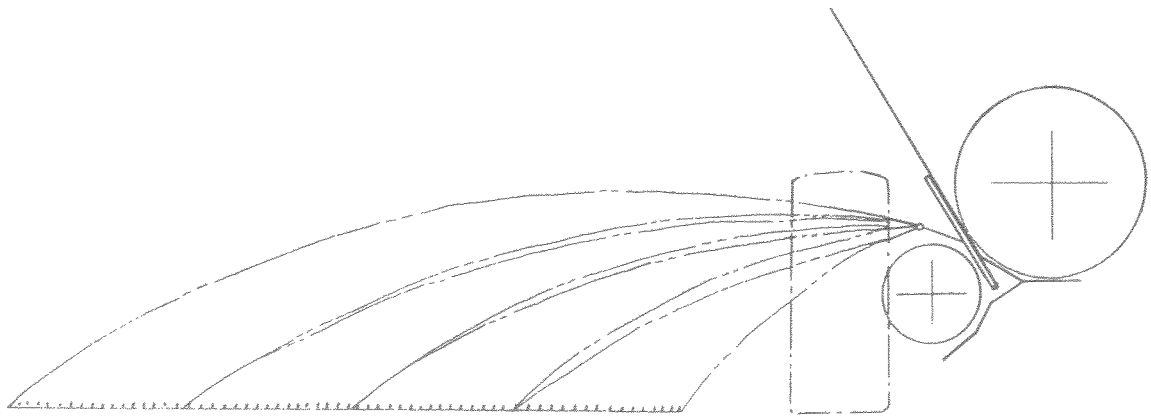
Fig. 4



Flights in the top position

Flights in the centre position

Fig. 5



Flights set to give a good band of spread when using slurry

SECTION 6 ADJUSTMENTS AND MAINTENANCE

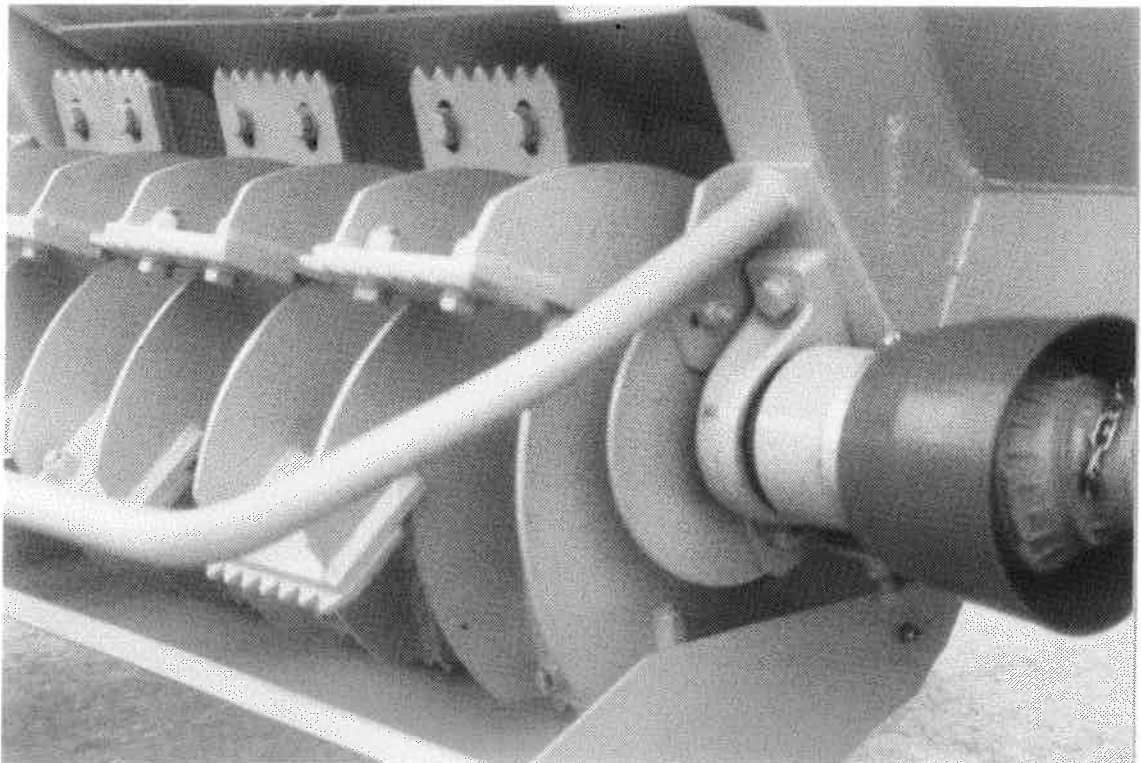


NEVER CARRY OUT ANY ADJUSTMENTS OR MAINTENANCE WHEN THE TRACTOR ENGINE IS RUNNING AND NEVER USE THE SPREADER UNLESS ALL GUARDS ARE SECURELY FITTED.

6.1 IMPELLER BLADE ADJUSTMENT

Impeller blades are attached to the impeller through an adjustable slot and the blades should be adjusted to give approximately 5mm (3/16") clearance between the tip of the blades and the outside face of the discharge door when closed. Fig.6 shows the impeller blades bolted to the discharge rotor section.

Fig. 6



The smooth blades should protrude approximately 2mm (5/64") further than the teeth on the serrated blades.

As the impeller blades wear they can be adjusted outwards so as to maintain spreading capability.

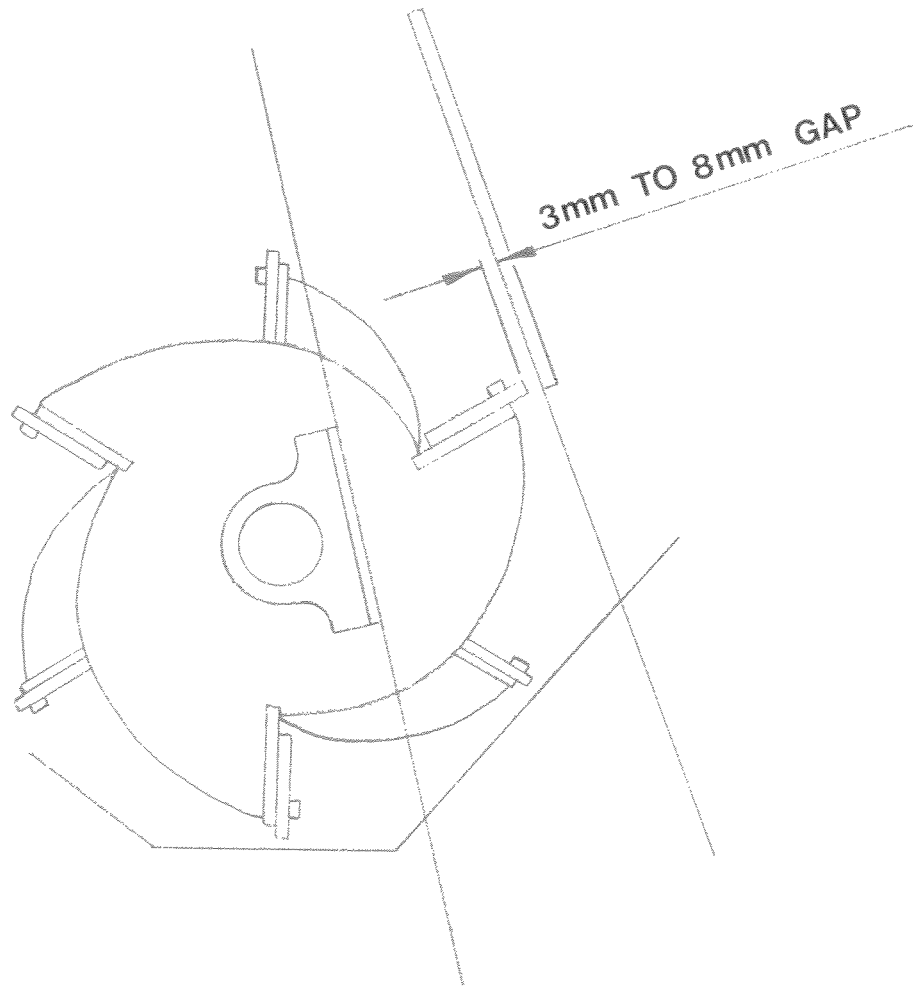
When correctly adjusted there should be a 3mm to 8mm gap between the top of the blades and the door (at their closest point). This can best be checked with the door partially open (see Fig. 7).

When blades are fully worn on one edge they can be turned over and the second edge can be used.

Failure to adjust the impeller blades on a regular basis will impair the performance of the Powerspread.

SECTION 6 (continued)

Fig. 7



6.2 DRIVE CHAIN TENSIONING

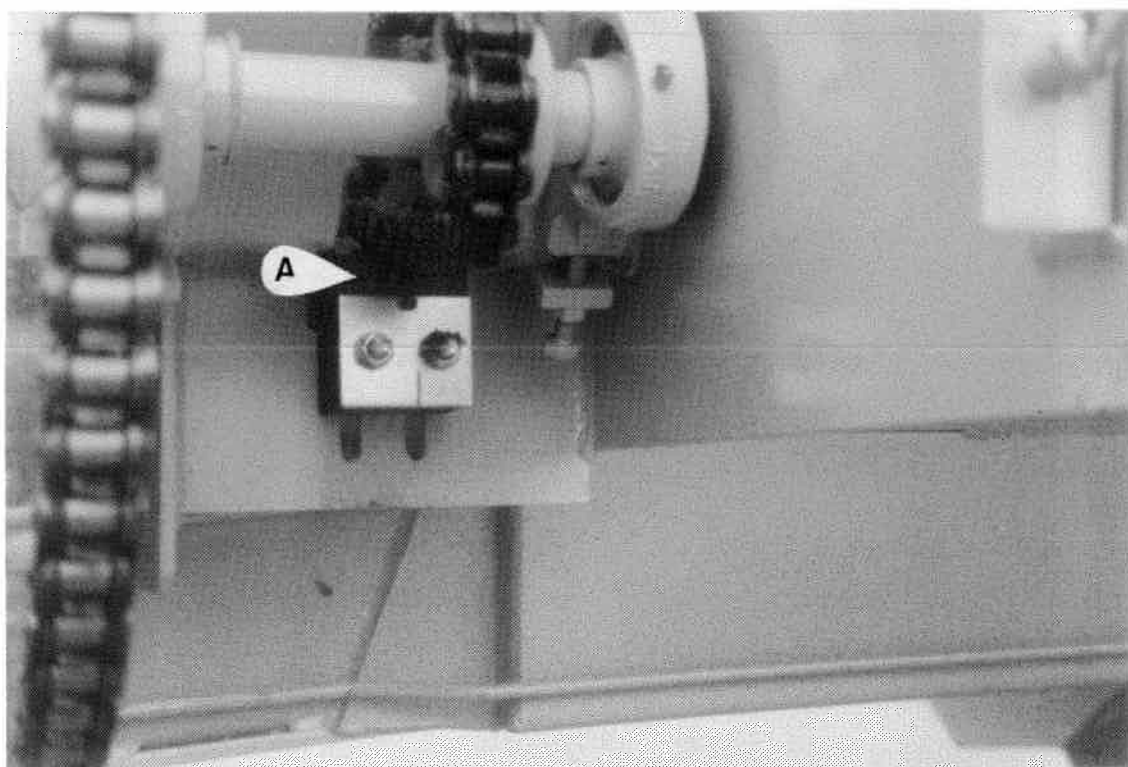
All three chains in the drive system are equipped with tension adjusting facilities. Adjust the chains periodically so as to receive good performance and life from the Powerspread chain drive system.

The tension of the final drive chain to the auger is initially set at the factory by inserting packers under the plummer block bearings.

When required, further adjustment of the chain is made by sliding the wooden block tensioner, (item A in Fig. 8), upwards under the chain. This periodic adjustment should cover the life of the chain but if required, additional packers for the plummer block bearings are available to increase the distance between sprockets.

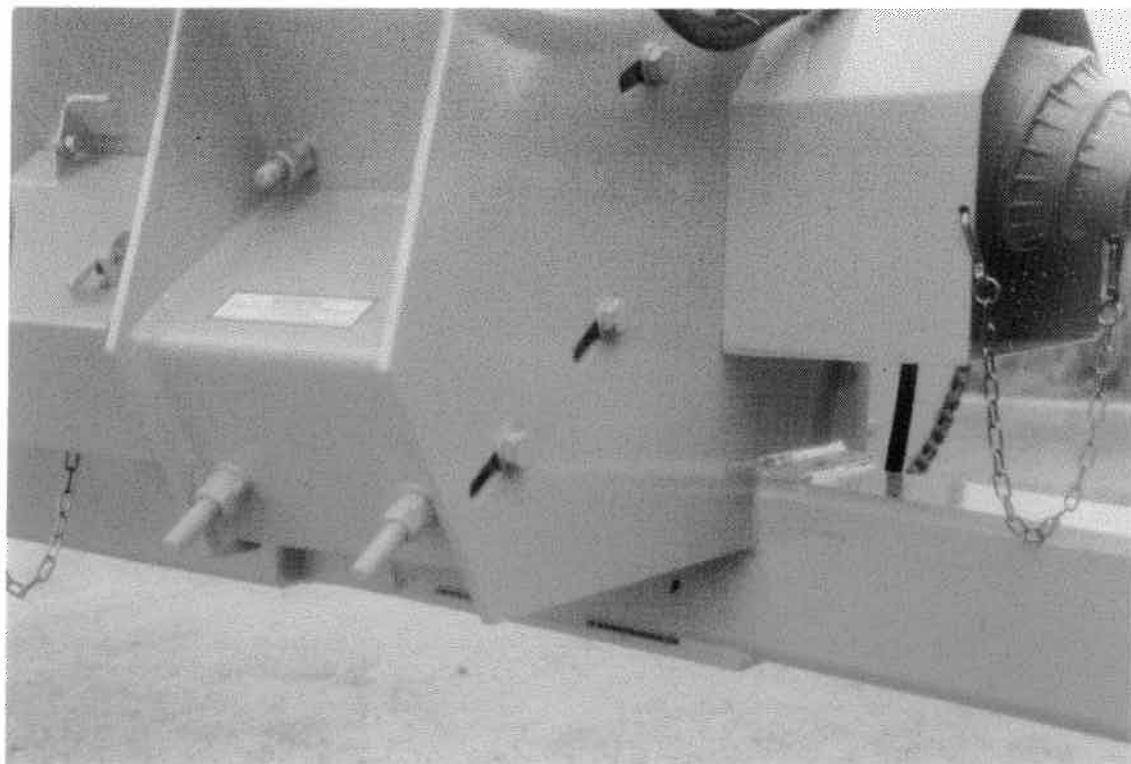
The part number for these shim plates is 607010 01

Fig. 8



Tensioning of the other 2 chains is done using the adjustment screws on the right hand side of the machine, (see Fig. 9).

Fig. 9



SECTION 6 (continued)

Ensure after adjustment that sprockets are in line and paralalled to each other; this can be checked using a straight edge across one sprocket onto the next.

6.3 SHEAR BOLTS

Shear bolts are provided on the impeller and auger drive; always ensure that these bolts are kept tight. Make sure the shear bolt bushes are in good condition and free from wear, as this can affect the safety of the Powerspread.

6.4 WASHING INSTRUCTIONS

Wash down the Powerspread frequently. Protect the body by touching up damaged paintwork immediately. If storing the Powerspread for a length of time ensure all drive chains and wearing parts are well lubricated.

6.5 TYRE PRESSURES

Check tyre pressures occasionally :

Powerspread 630

16.5/85-28 10 ply = 33 psi (2.28 bar)

Powerspread 730

18.4 -26 12 ply = 38 psi (2.58 bar)

23.1 -26 12 ply = 38 psi (2.58 bar)

6.6 HARDWARE AND FIXINGS

Check all hardware and fixings after the first 10 hours of work, then after this every 50 hours work. Pay particular attention to wheel nuts and bolts securing bearings.

SECTION 7

L U B R I C A T I O N

- a) Lubricate sliding tubes of P.T.O. shaft every 25 hours with good quality moly-disulphide grease.
- b) Grease nipples on P.T.O. shaft every 10 hours.
- c) Grease every 50 hours or once a working week.
 - 1. Rotor rear bearing.
 - 2. Rotor front bearing.
 - 3. Impeller rear bearing.
 - 4. Impeller front bearing.
 - 5. P.T.O. drive shaft bearing front.
 - 6. P.T.O. drive shaft bearing rear.
- d) Lubricate all chains with thick grease or chain lubricant (Rocol chain and drive spray) as and when necessary.
- e) Oil ram pivot pins.
Oil guard latches and hinges
- f) Pack wheel hubs with grease once a year.

POWERSPREAD PARTS MANUALMachine Identification

The Powerspread machine and serial identification numbers are engraved on a plate on the left hand side of the drawbar beam.

Record serial, machine and any kit option numbers in the space below ;

POWERSPREAD SERIAL NUMBER _____

POWERSPREAD MACHINE NUMBER _____

OTHER KIT OPTIONS _____

Ordering Spare Parts

To ensure that you order the correct part from your SRE dealer please use the following procedure.

ALWAYS QUOTE THE MACHINE AND SERIAL NUMBERS WHEN ORDERING.

Refer to the first page of this parts list section (machine assemblies), listing all the sub assemblies.

The appropriate assemblies part number (in the top left corner) will match the machine number from the Powerspread identification plate.

Use the following sub assembly numbers and descriptions to find the area of the machine that your part is required, i.e. if you need a part which is fitted to the impeller, your part will be in the discharge rotor assembly parts list.

Having decided which sub-assembly your part should be under, use the number beside that sub-assembly description, (which will begin with 6090__ __), to find the parts listing of the sub-assembly further on in the manual. The number will be printed in the top left hand corner, the sub-assemblies are in numerical order.

Having found the correct parts list, you will find the corresponding drawing by either looking at the facing page or progressing through the manual to the next drawing. The drawings indicate the components by item numbers which you will find are repeated in the left hand side of your parts listing, and therefore referring to the correct part.



Shelbourne Reynolds Engineering Limited



ASSY NUMBER: 60900 01 ASSY DESCRIPTION: POWERSPREAD 630 ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	609000 01	AXLE & WHEELS SUB ASSY	1				
2	609008 01	BODY & FRAME SUB ASSY	1				
3	609001 01	HANDBRAKE SUB ASSY	1				
4	609006 01	AUGER SUB ASSY	1				
5	609005 01	AUGER FIXING KIT SUB ASSY	1				
6	609002 01	IMPELLER SUB ASSY	1				
7	609003 01	DOOR & RAM SUB ASSY	1				
8	609004 01	MAIN DRIVES SUB ASSY	1				
9	609009 01	GUARDS & FIXTURES SUB ASSY	1				
10	609007 01	DOOR HYDRAULICS SUB ASSY	1				
11	609011 01	BRAKE HYDRAULICS SUB ASSY	1				

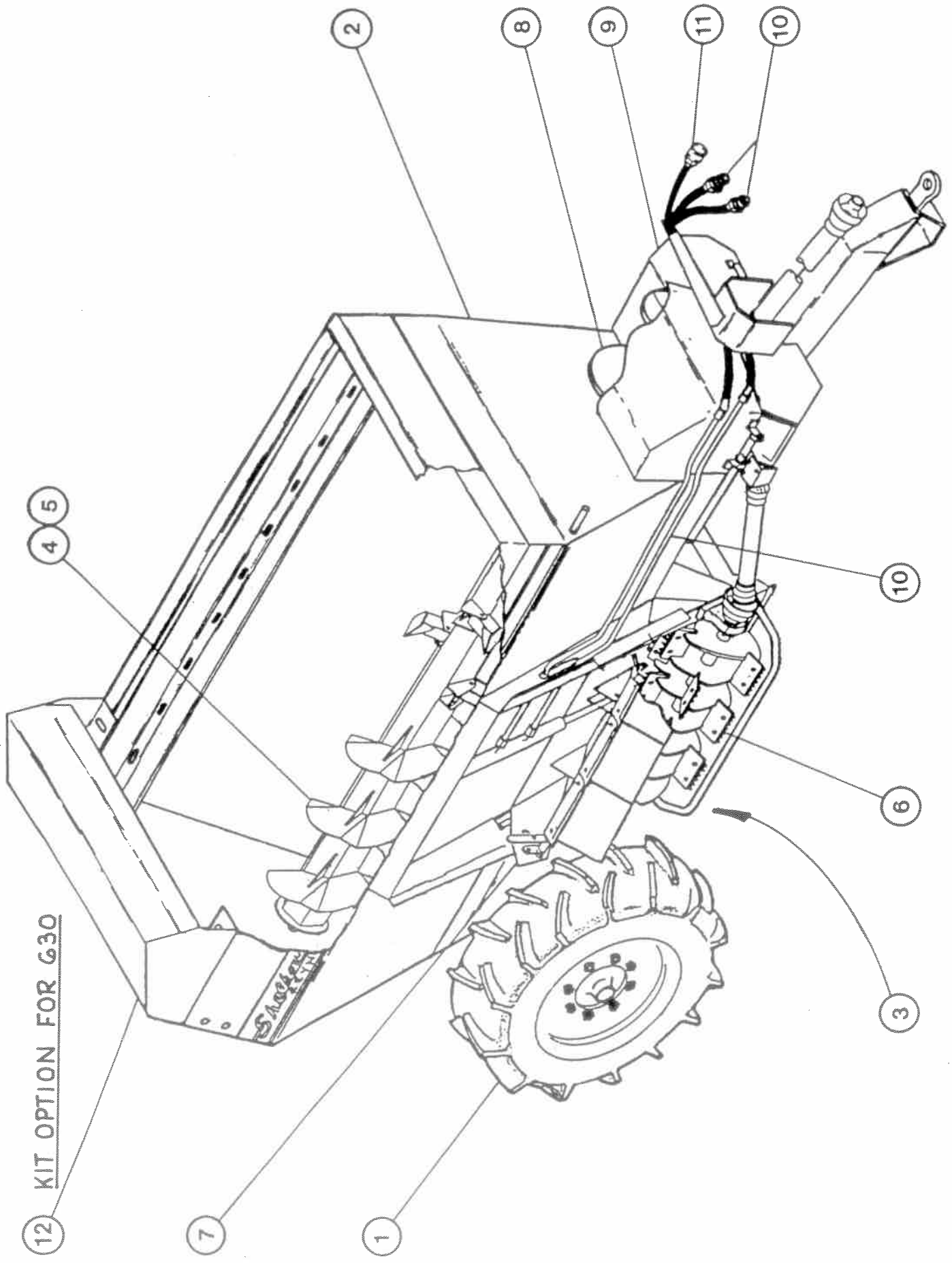


Shelbourne Reynolds Engineering Limited



ASSY NUMBER: 609900 02 ASSY DESCRIPTION: POWERSPREAD 730 ASSY

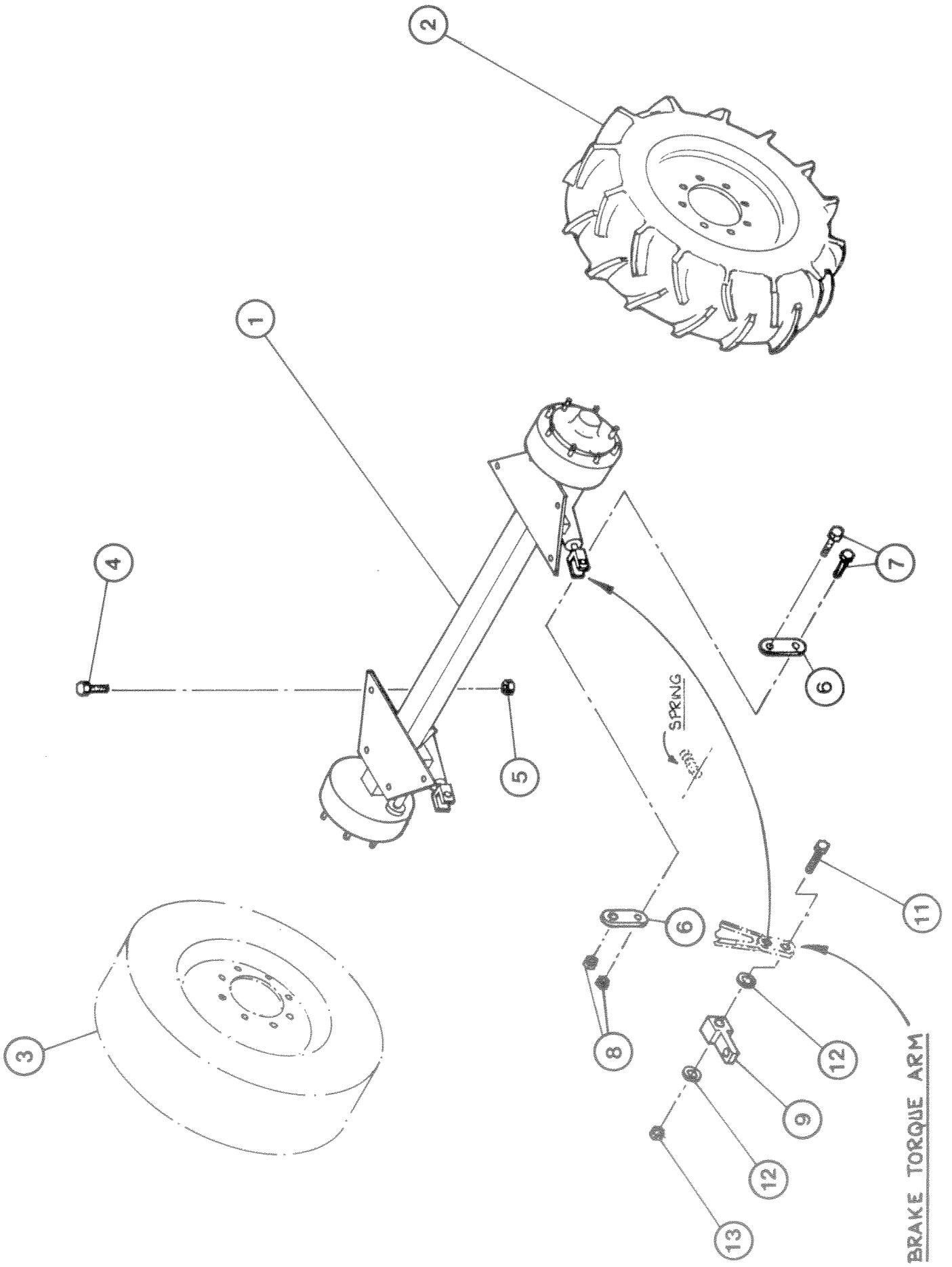
ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	609000 01	AXLE & WHEELS SUB ASSY	1				
2	609008 01	BODY & FRAME SUB ASSY	1				
3	609001 01	HANDBRAKE SUB ASSY	1				
4	609006 01	AUGER SUB ASSY	1				
5	609005 01	AUGER FIXING KIT SUB ASSY	1				
6	609002 01	IMPELLER SUB ASSY	1				
7	609003 01	DOOR & RAM SUB ASSY	1				
8	609004 01	MAIN DRIVES SUB ASSY	1				
9	609009 01	GUARDS & FIXTURES SUB ASSY	1				
10	609007 01	DOOR HYDRAULICS SUB ASSY	1				
11	609011 01	BRAKE HYDRAULICS SUB ASSY	1				
12	609010 01	EXTENSION SIDES SUB ASSY	1				



KIT OPTION FOR G30

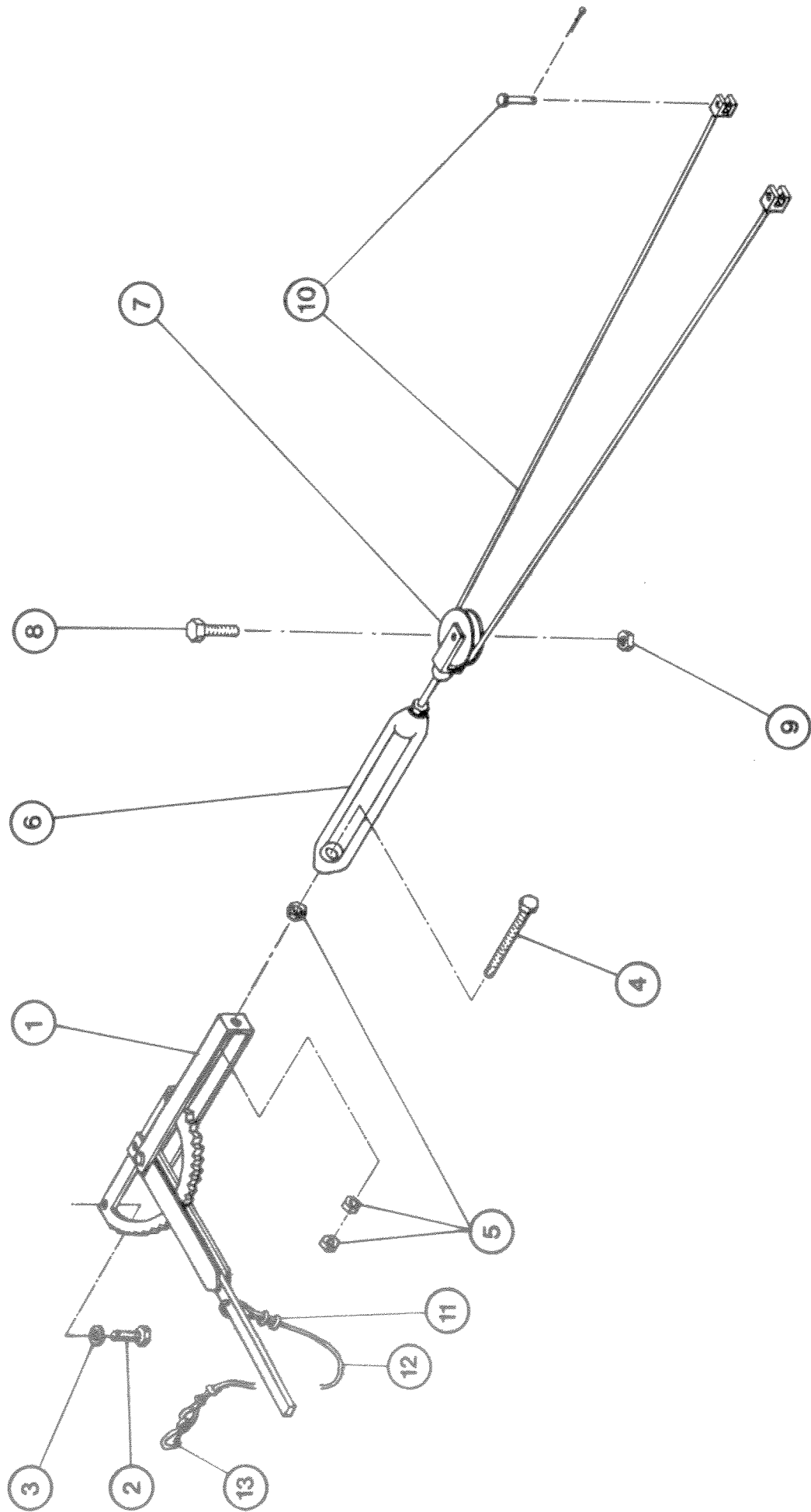
Shelbourne Reynolds Engineering Limited

ASSY NUMBER: 609000 01		ASSY DESCRIPTION: AXLE SUB ASSY - POWERSPREAD					
ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	607037 01	AXLE WELD ASSY (FOR SERIAL NO.88103 & DOWN)	1				
OR							
1a	590445 01	AXLE WELD ASSY (FOR SERIAL NO.88104 & UP)	1				
2a	WHL-02801	L.H.WHEEL & TYRE 630 ONLY 16.5/85-28	1				
2b	WHL-02601	L.H.WHEEL & TYRE 18.4-26	1				
2c	WHL-02402	L.H WHEEL & TYRE 21.3-24	1				
3a	WHL-02800	R.H.WHEEL & TYRE 630 ONLY 16.5/85-28	1				
3b	WHL-02600	R.H.WHEEL & TYRE 18.4-26	1				
3c	WHL-02403	R.H.WHEEL & TYRE 21.3-24	1				
4	HSS-0318	BOLT	8				
5	NUT-0271	NUT	8				
6	590153 01	BRAKE RAM PLATE	4				
7	HSS-0265	SETSCREW	4				
8	NUT-0269	NUT	4				
9	590062 01	BRAKE LINK PIVOT	2				
10							
11	HSS-0210	SETSCREW	2				
12	WSH-0015	WASHER	4				
13	NUT-0265	NUT	2				



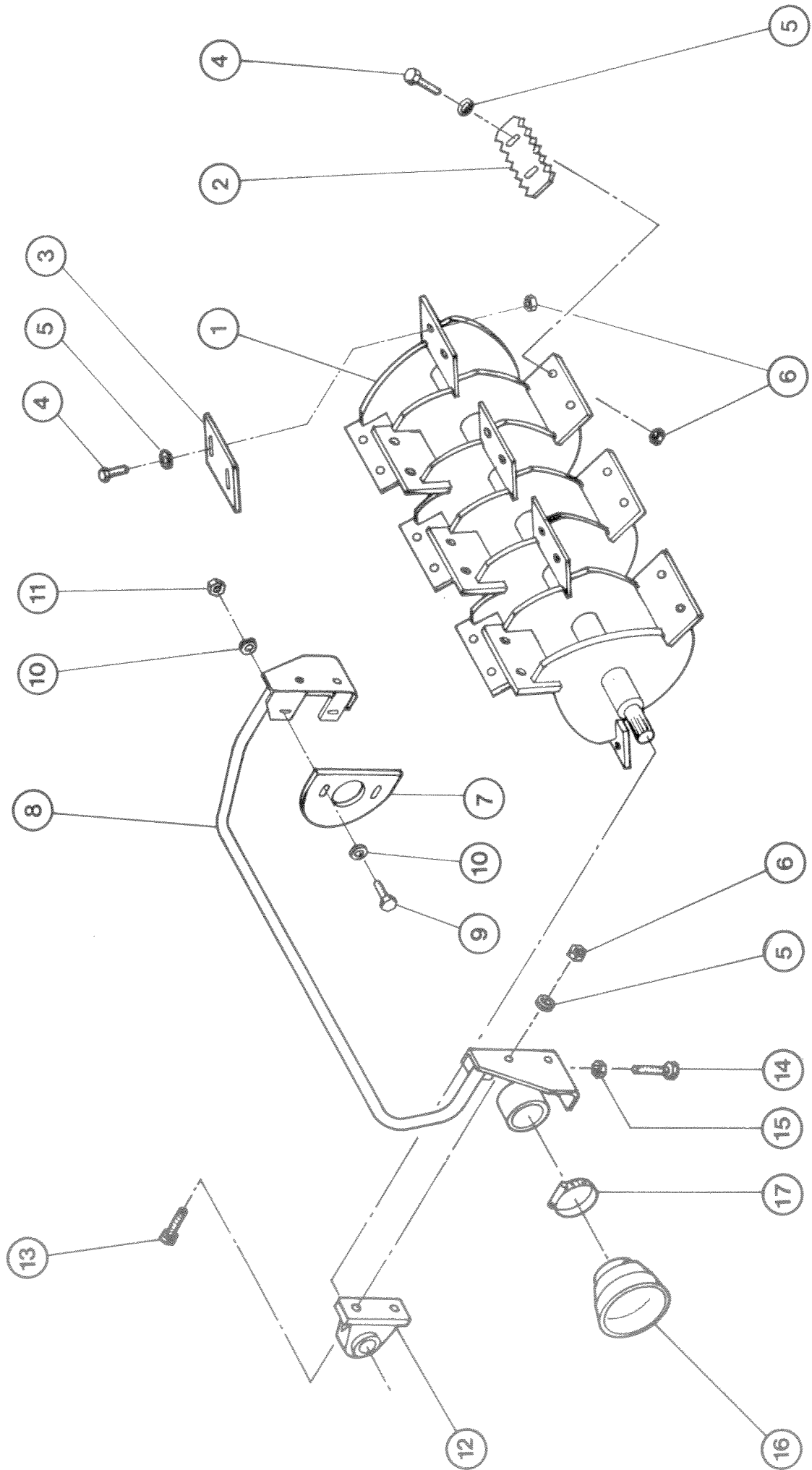
ASSY NUMBER: 609001 01 ASSY DESCRIPTION: HANDBRAKE SUB ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	590222 01	HANDBRAKE LEVER ASSY	1				
2	HSS-0238	SETSCREW	2				
3	WSH-0065	WASHER	2				
4	HSSA10680	SETSCREW	1				
5	NUT-0167	NUT	3				
6	590060 01	PULLEY CLEVIS W/ASSY	1				
7	590101 01	NYLON PULLEY	1				
8	BLT-2252	BOLT	1				
9	NUT-0269	NUT	1				
10	590072 01	CABLE ASSY	1				
11	WRP-02040	WIRE ROPE CLAMPS	4				
12	WRP-00040	CABLE	3.6m				
13	WRP-03000	SNAP HOOK	1				



ASSY NUMBER: 609002 01 ASSY DESCRIPTION: DISCHARGE ROTOR SUB ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	604984 01	IMPELLER WELD ASSY	1				
2	604682 01	IMPELLER BLADE (SERRATED)	12				
3	590152 01	IMPELLER BLADE (SMOOTH)	6				
4	HSS-0317	SETSCREW	36				
5	WSH-0024	WASHER	40				
6	NUT-0271	NUT	40				
7	590165 01	BEARING PROTECTION PLATE	2				
8	601861 01	IMPELLER GUARD W/ASSY	1				
9	HSS-0194	SETSCREW	4				
10	WSH-0015	WASHER	4				
11	NUT-0265	NUT	4				
12	BRG-25540	BEARING	2				
13	BLT-2314	BOLT	4				
14	HSS-0320	SETSCREW	2				
15	NUT-0380	NUT	2				
16	PTO-00901	PLASTIC CONE SHROUD	1				
17	CLP-00585	JUBILEE CLIP	1				





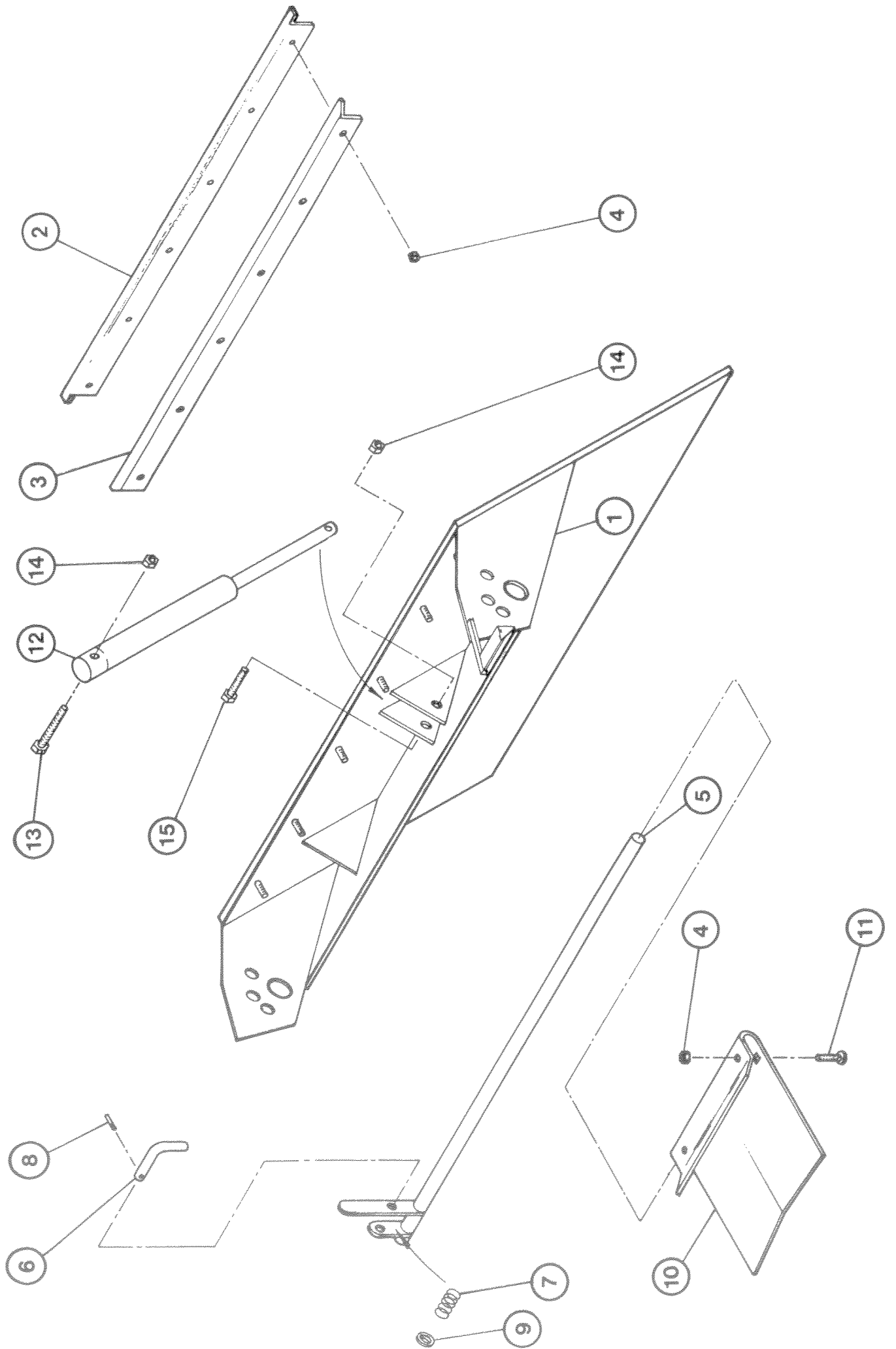
Shelbourne Reynolds Engineering Limited



ASSY NUMBER: 609003 01

ASSY DESCRIPTION: DISCHARGE DOOR SUB ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	601802 01	DISCHARGE DOOR W/ASSY	1				
2	606545 01	TOP DOOR SEAL	1				
3	601829 01	SEAL CLAMP PLATE	1				
4	NUT-0265	NUT	12				
5	604992 01	DOOR LEVER	1				
6	605085 01	HANDLE	1				
7	SPGC32021	SPRING	1				
8	PIN-1775	ROLL PIN	1				
9	WSH-0024	WASHER	1				
10	605018 01	DEFLECTOR PADDLE	3				
11	BLTF10323	COACH BOLT	6				
12	590114 01	DOOR RAM	1				
13	BLT-2330	BOLT	1				
14	NUT-0271	NUT	2				
15	BLT-2313	BOLT	1				

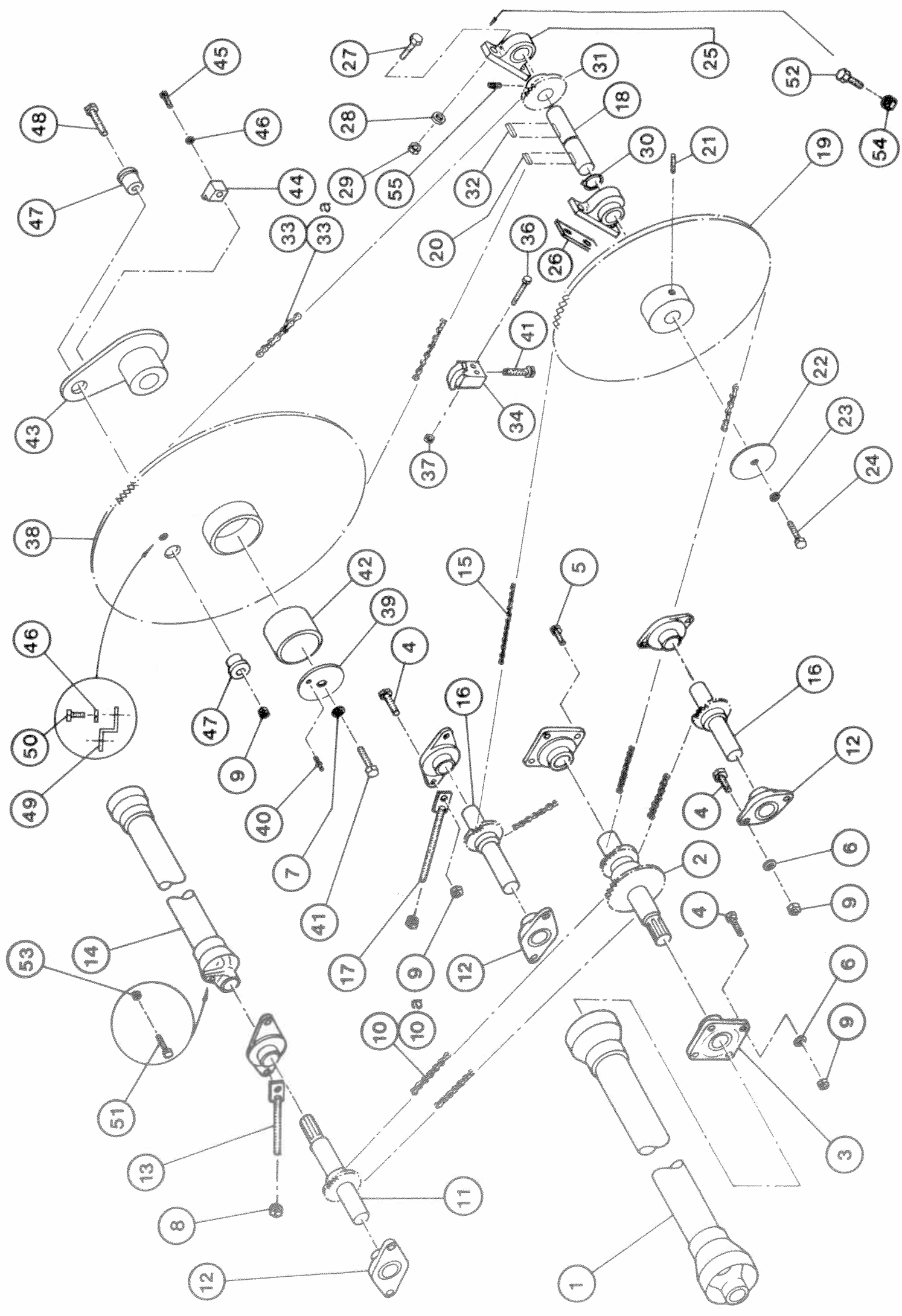


ASSY NUMBER: 609004 01 ASSY DESCRIPTION: DRIVE SUB ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	PTO-13001	PTO SHAFT C/W GUARD	1				
2	604720 01	INPUT DRIVE LAY SHAFT	1				
3	BRG-24541	BEARING	2				
4	HSS-0319	BOLT	4				
5	HSS-0318	BOLT	16				
6	WSH-0024	WASHER	10				
7	WSH-0070	WASHER	3				
8	NUT-0180	NUT	15				
9	NUT-0271	NUT	19				
10	CHN-02580	CHAIN	1				
10a	CHN-02500	CONNECTING LINK					
11	604712 01	IMPELLER LAY SHAFT	1				
12	BRG-24542	BEARING	6				
13	604771 01	TENSION ADJUSTER-SHORT	2				
14	PTO-14001	PTO SHAFT C/W GUARD	1				
15	CHN-02581	CHAIN	1				
16	604739 01	LAP SPROCKET LAY SHAFT	2				
17	604771 02	TENSION ADJUSTER-LONG	2				
18	604747 01	AUGER DRIVE LAY SHAFT	1				
19	604909 01	SPROCKET	1				
20	K2012045	KEY	1				
21	SCW-4600	GRUB SCREW	2				
22	604917 01	RETAINING WASHER	1				
23	WSH-0061	WASHER	1				
24	HSS-0194	SETSCREW	1				
25	BRG-24543	BEARING	2				
26	607010 01	SHIM PLATE	4				
27	BLT-2255	BOLT	4				
28	WSH-0018	WASHER	4				
29	NUT-0269	NUT	4				
30	CIR-1220	CIRCLIP	1				

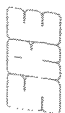
ASSY NUMBER: 609004 01 (CONTINUED) ASSY DESCRIPTION: DRIVE SUB ASSY- (CONTINUED)

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
31	604895 01	SPROCKET	1				
32	K1212045	KEY	1				
33	CHN-03280	CHAIN	1				
33a	CHN-03200	CONNECTING LINK	1				
34	590203 01	CHAIN TENSION BLOCK					
35							
36	BLT-2212	BOLT	2				
37	NUT-0265	NUT	2				
38	604674 01	SPROCKET	1				
39	601489 01	AUGER ENDCAP	1				
40	NIP-00600	GREASE NIPPLE	1				
41	HSS-0322	SETSCREW	2				
42	601152 01	BUSH	1				
43	606596 01	SHEAR BOLT HUB W/ASSY	1				
44	602701 01	RETAINING BLOCK	1				
45	HSS-0152	SETSCREW	1				
46	WSH-0058	WASHER	2				
47	604925 01	SHEAR BOLT BUSH	2				
48	BLTA16504	AUGER DRIVE SHEAR BOLT	6				
49	602728 01	RETAINING CLIP	1				
50	HSS-0140	SETSCREW	1				
51	605123 01	IMPELLER DRIVE SHEAR BOLT	5				
52	HSS-0265	ADJUSTER SETSCREW	4				
53	NUT-0263	NUT	5				
54	NUT-0170	NUT	4				
55	SCW-4602	GRUBSCREW	2				





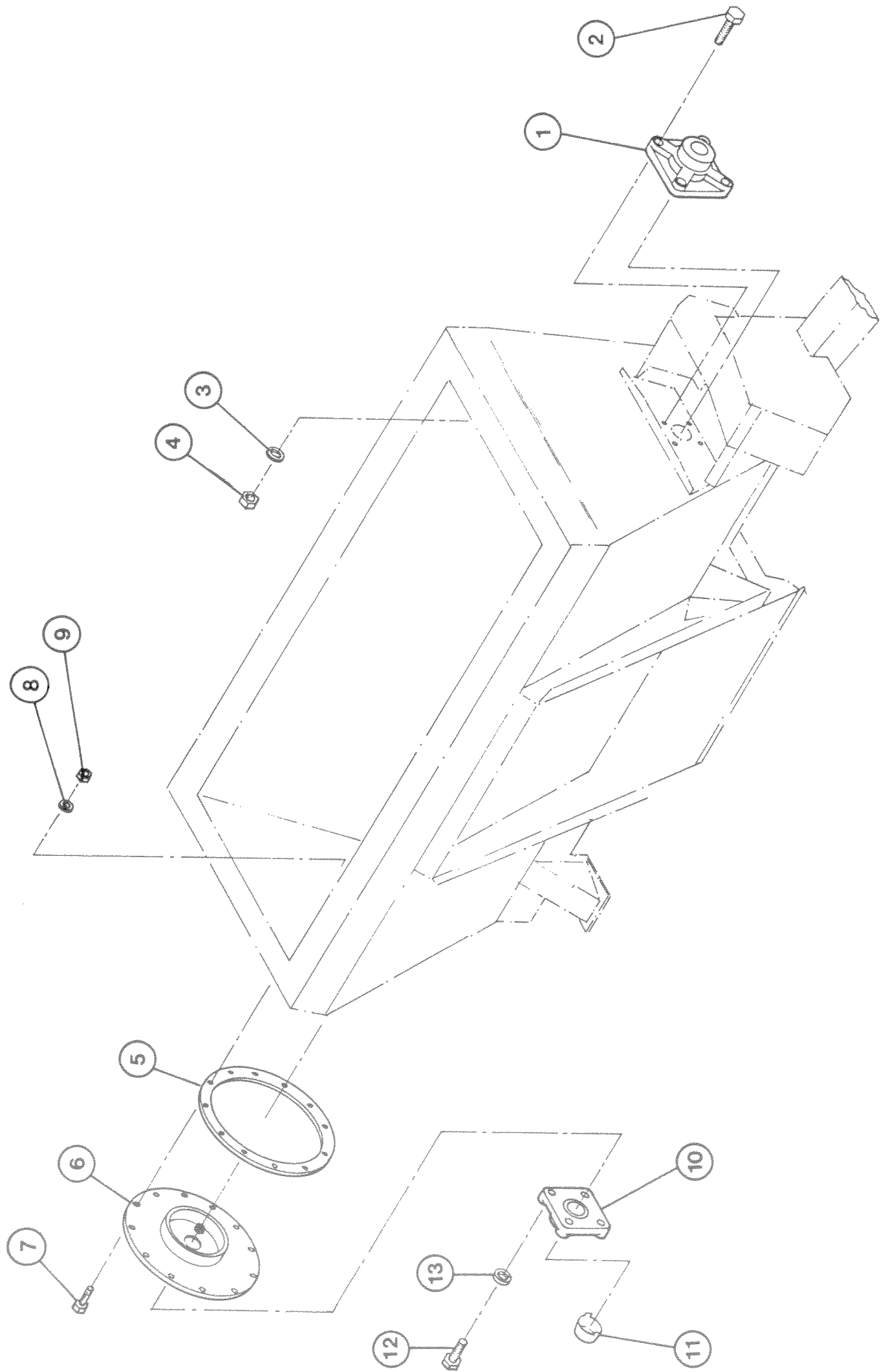
Shelbourne Reynolds Engineering Limited



ASSY NUMBER: 609005 01

ASSY DESCRIPTION: AUGER FIXING KIT

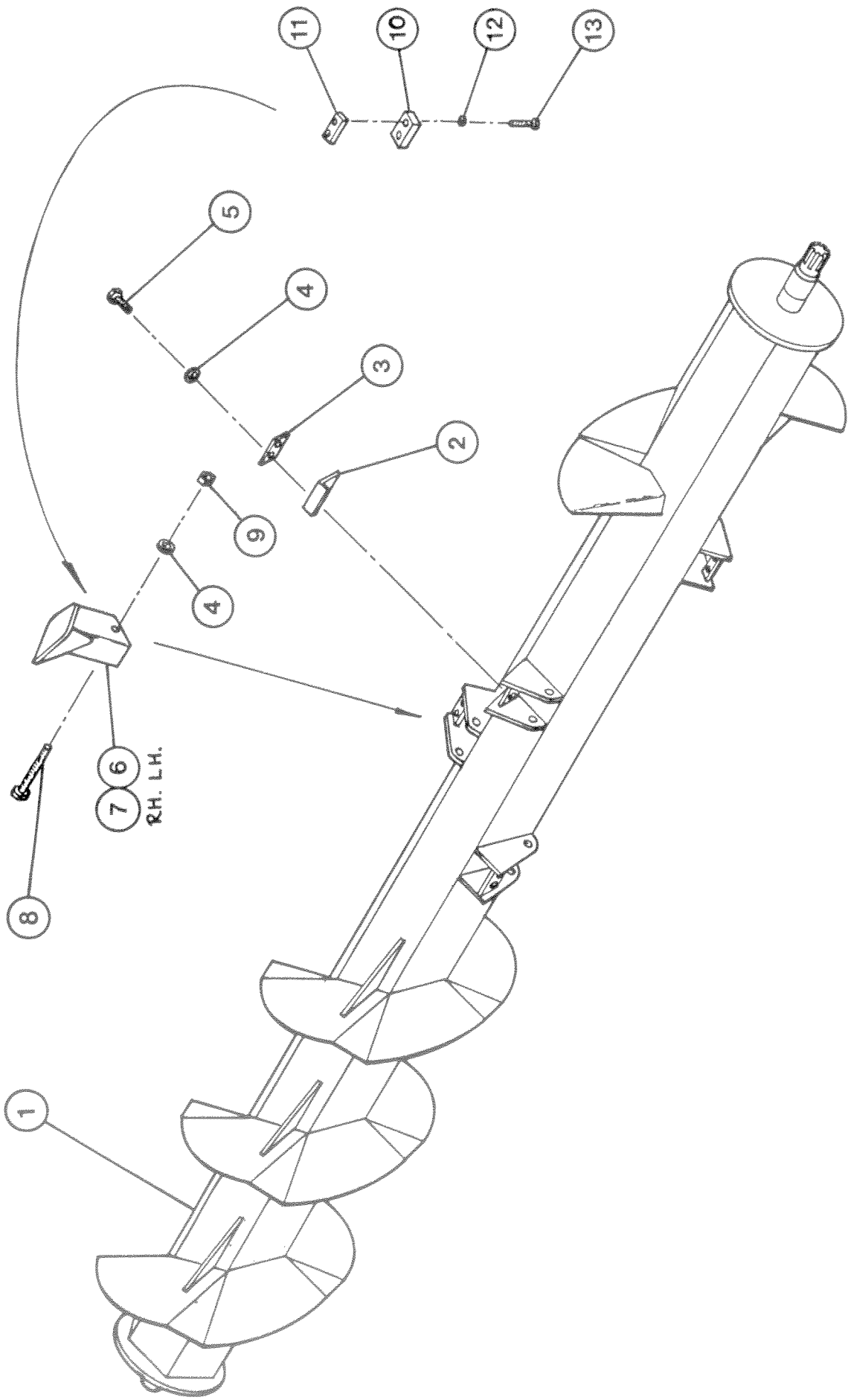
ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	BRG-27540	FRONT-END BEARING	1				
2	BLT-2365	BOLT	4				
3	WSH-0030	WASHER	4				
4	NUTA02200	NUT	4				
5	604852 01	AUGER PLATE GASKET	1				
6	604763 01	AUGER REAR PLATE	1				
7	HSS-0241	SETSCREW	12				
8	WSH-0018	WASHER	12				
9	NUT-0269	NUT	12				
10	BRG-26040	REAR-END BEARING	1				
11	BRG-96000	BEARING CAP	1				
12	HSS-0318	SETSCREW	4				
13	WSH-0070	WASHER	4				

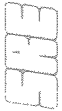


ASSY NUMBER: 609006 01

ASSY DESCRIPTION: AUGER SUB ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	601799 01	AUGER WELD ASSY	1				
2	606081 01	PADDLE SPRING PLATE	6				
3	606138 01	SECURING PLATE	6				
4	WSH-0070	WASHER	12				
5	HSS-0317	SETScrew	12				
6	606162 02	PADDLE BLADE L. H.	3				
7	606162 01	PADDLE BLADE R. H.	3				
8	BLTA16680	BOLT	6				
9	NUT-0271	NUT	6				
10	606103 01	CATCH PLATE	6				
11	606146 01	CLAMP PLATE	6				
12	WSH-0061	WASHER	12				
13	BLT-2191	BOLT	12				





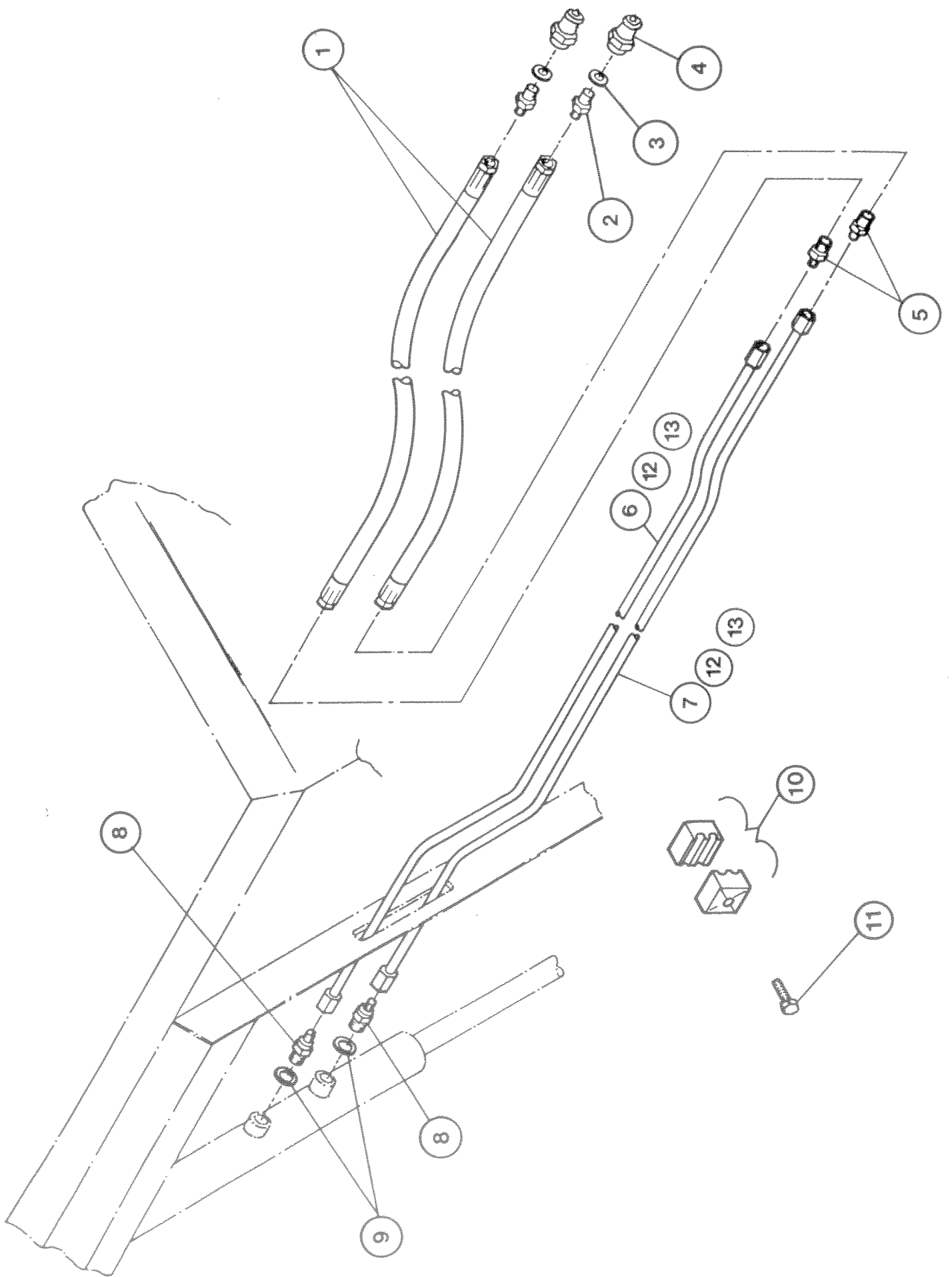
Shelbourne Reynolds Engineering Limited

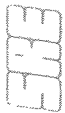


ASSY NUMBER: 609007 01

ASSY DESCRIPTION: DOOR RAM HYDRAULICS SUB ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	HHBC30005	FLEX HOSE	2				
2	HMA-0055	ADAPTOR	2				
3	WSH-1015	WASHER	2				
4	COU-0162	Q-R COUPLING	2				
5	FIT-0047	STUD COUPLING	2				
6	590139 01	TUBE	1				
7	590139 02	TUBE	1				
8	HPTD01005	STUD COUPLING	2				
9	WSH-1010	WASHER	2				
10	HCPD01000	HYD. PIPE CLAMP	4				
11	SCW-0083	SCREW	4				
12	FIT-0056	OLIVE	4				
13	FIT-0051	NUT	4				

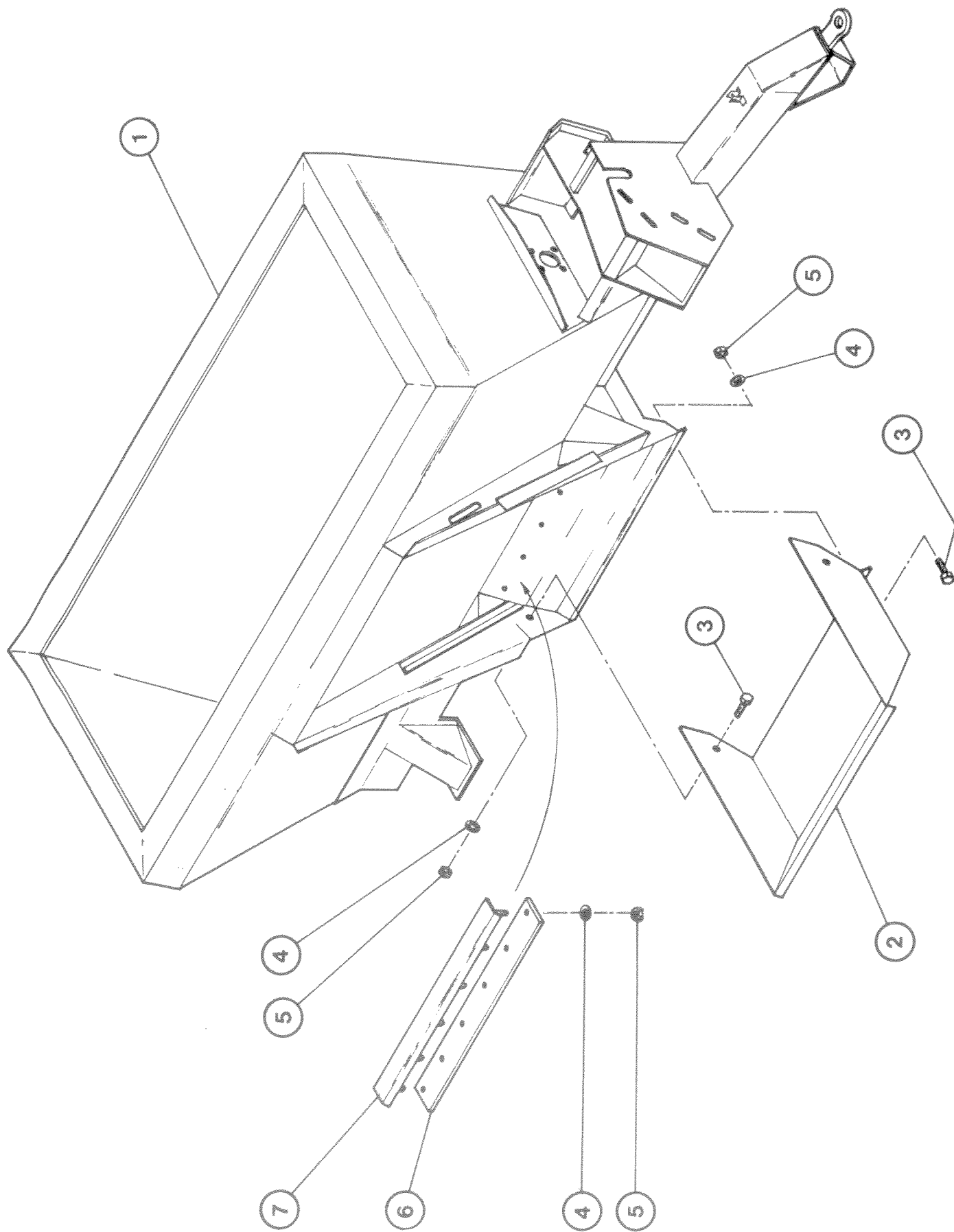




ASSY NUMBER: 609008 01

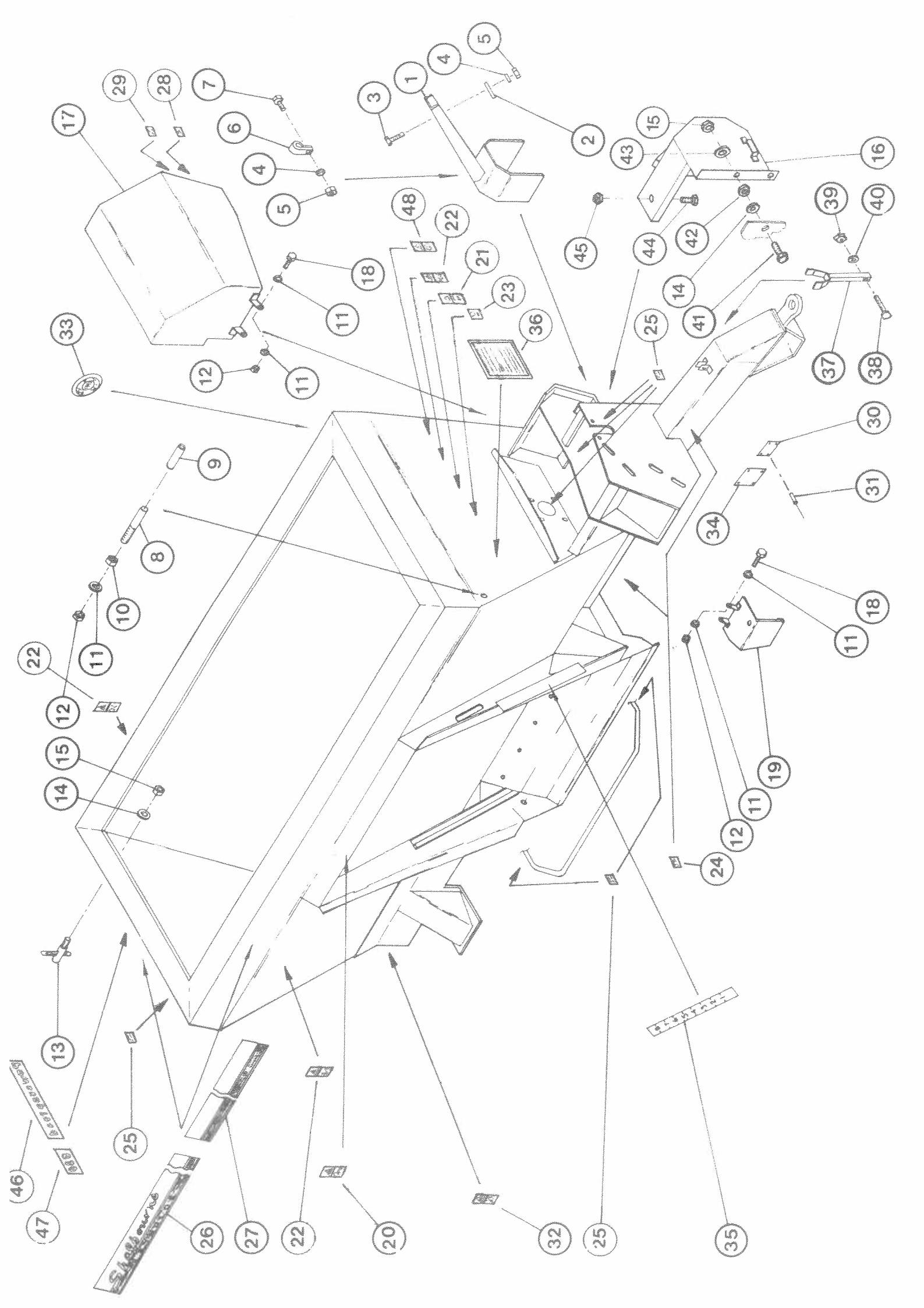
ASSY DESCRIPTION: MAIN BODY SUB ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	606448 01	POWERSPREAD WELD ASSY	1				
2	605298 01	ANTI-DRIP TRAY	1				
3	HSS-0145	SETSCREW	7				
4	WSH-0012	WASHER	13				
5	NUT-0263	NUT	13				
6	605328 01	BOTTOM DOOR SEAL	1				
7	605336 01	DOOR SEAL KEEP PLATE	1				



Shelbourne Reynolds Engineering Limited

ASSY NUMBER: 609009 01		ASSY DESCRIPTION: FIXTURES & GUARDS SUB ASSY					
ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	605131 01	HOSE SUPPORT/PTO GUARD	1	37	590189 01	PTO SHAFT SUPPORT ARM	1
2	607029 01	PIPE CLAMP	2	38	BLT-2197	BOLT	1
3	HSS-0096	SETSCREW	2	39	NUT-0265	NUT	1
4	WSH-0009	WASHER	18	40	WSH-0015	WASHER	1
5	NUT-0260	NUT	15	41	HSS-0250	SETSCREW	1
6	CLP-0031	" P" -CLIP	1	42	NUT-0370	HALFNUT	3
7	HSS-0084	SETSCREW	13	43	190119 04	SPACER DISC	4
8	590141 01	GUARD REST PIN	1	44	HSS-0238	SETSCREW	4
9	HOS-1000	PLASTIC SLEEVE	1	45	NUT-0170	NUT	1
10	NUT-0164	NUT	0.03	46	590480 01	EMBLEM-POWERSPREAD	1
11	WSH-0012	WASHER	1	47	590481 01	EMBLEM-630	1
12	NUT-0263	NUT	5	OR	590482 01	EMBLEM-730	1
13	PIN-05191	DROPLK PIN	5	48	610257 01	EMBLEM-READ MANUAL	1
14	WSH-0018	WASHER	2				
15	NUT-0269	NUT	6				
16	601853 01	LOWER CHAIN GUARD	6				
17	601845 01	UPPER CHAIN GUARD	1				
18	HSS-0145	BOLT	1				
19	605026 01	IMPELLER PTO GUARD	4				
20	590477 01	EMBLEM-WARNING	1				
21	610250 01	EMBLEM-WARNING	1				
22	590479 01	EMBLEM-DO NOT ENTER...	3				
23	590475 01	EMBLEM-MAX' PTO SPEED...	1				
24	127075 12	EMBLEM-10 HOURS GREASE	2				
25	127075 16	EMBLEM-50 HOURS GREASE	6				
26	191981 01	EMBLEM-SHELBOURNE 3 CLR	3				
27	590000 01	EMBLEM-EXTENSION 3 CLR	2				
28	590478 01	EMBLEM-SHEAR BOLTS-AUGER	1				
29	590474 01	EMBLEM-SHEAR BOLTS-IMPELLER	1				
30	134024 05	IDENTIFICATION PLATE	1				
31	POP-0006	POP RIVET	1				
32	590476 01	EMBLEM-NO STEP	8				
33	TNF-0005	EMBLEM-SILVER MEDAL	1				
34	590145 01	MACHINE INFO PLATE	1				
35	604968 01	EMBLEM-DOOR CALIBRATION	1				
36	590188 01	EMBLEM-OPERATION PROC.	1				





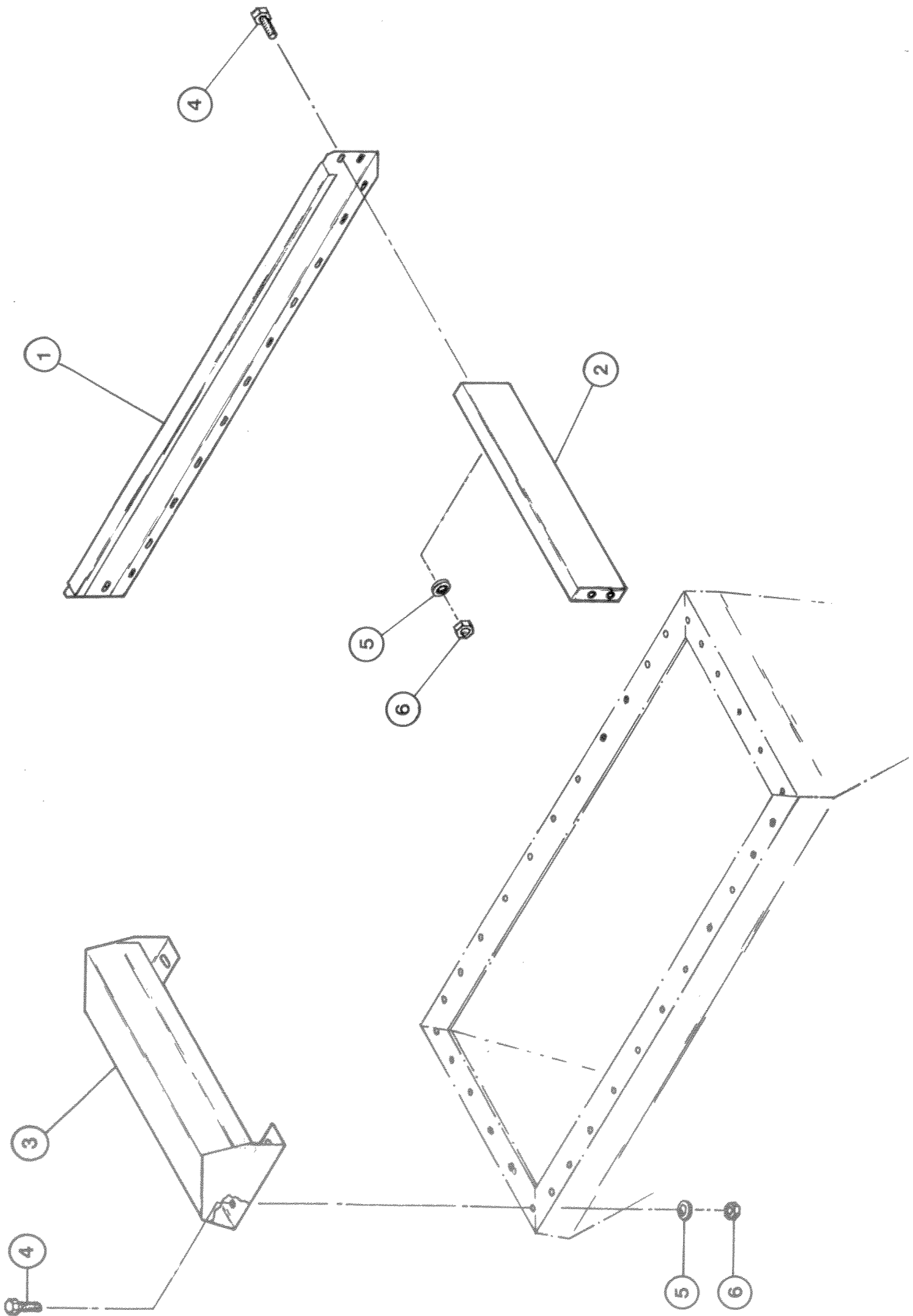
Shelbourne Reynolds Engineering Limited



ASSY NUMBER: 609010 01

ASSY DESCRIPTION: SIDE EXTENSIONS SUB ASSY - 730 ONLY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	590155 01	SIDE EXTENSION PLATE	2				
2	590156 01	END EXTENSION PLATE	2				
3	590157 01	SLURRY CANOPY	2				
4	HSS-0238	SETSCREW	60				
5	WSH--0018	WASHER	120				
6	NUT-0269	NUT	60				





Shelbourne Reynolds Engineering Limited



ASSY NUMBER: 609011 01

ASSY DESCRIPTION: BRAKE RAMS HYDRAULIC SUB ASSY

ITEM	PART NO	DESCRIPTION	QTY	ITEM	PART NO	DESCRIPTION	QTY
1	HHBC32005	FLEX HOSE	1				
2	FIT-0047	STUD COUPLING	3				
3	590140 01	TUBE	1				
4	FIT-0060	TEE FITTING	1				
5	RP-100330	TUBE	1				
6	RP-100610	TUBE	1				
7							
8	HHBC03005	FLEX HOSE	2				
9	FIT-0056	OLIVE	8				
10	FIT-0051	NUT	8				
11	HMA-0055	ADAPTOR	1				
12	WSH-1015	DOWTY WASHER	1				
13	HQR-10007	HYD. Q. R. COUPLING	1				
14	FIT-1000	HYD. PIPE CLAMP	5				
15	SCW-0083	SCREW	5				
16	HALAA0305	HYDRAULIC ELBOW	2				

