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# McCONEL

## DITCH CLEANER

Machines 06/14 onward

### Operation & Parts Manual



# IMPORTANT

## VERIFICATION OF WARRANTY REGISTRATION



### Dealer Warranty Information & Registration Verification

It is imperative that the selling dealer registers this machine with McConnel Limited before delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register machines; log onto <https://my.mcconnel.com> and select 'Machine Registration' which can be found in the 'Warranty' section of the site. **Confirm to the customer that the machine has been registered by completing the verification form below.**

|  |                                 |
|--|---------------------------------|
| <b>Registration Verification</b>   | Serial No. <input type="text"/> |
| Dealer Name: .....   |                                 |
| Dealer Address: .....  |                                 |
| Customer Name: .....   |                                 |
| Date of Warranty Registration: ...../...../..... Dealer Signature: ..... |                                 |

### Note to Customer / Owner

Please ensure the section above has been completed and signed by the dealer to verify your machine has been registered with McConnel Limited.

**IMPORTANT:** During the initial 'bedding in' period of a new machine it is the customer's responsibility to regularly inspect all nuts, bolts and hose connections for tightness and re-tighten if required. New hydraulic connections occasionally weep small amounts of oil as the seals and joints settle in – where this occurs it can be cured by re-tightening the connection – *refer to torque settings chart below*. The tasks stated above should be performed on an hourly basis during the first day of work and at least daily thereafter as part of the machine's general maintenance procedure.

CAUTION: DO NOT OVER TORQUE HYDRAULIC FITTINGS AND HOSES

### Torque Settings for Hydraulic Fittings

| Hydraulic Hose Ends |         |        | Port Adaptors with Bonded Seals |         |        |
|---------------------|---------|--------|---------------------------------|---------|--------|
| BSP                 | Setting | Metric | BSP                             | Setting | Metric |
| 1/4"                | 18 Nm   | 19 mm  | 1/4"                            | 34 Nm   | 19 mm  |
| 3/8"                | 31 Nm   | 22 mm  | 3/8"                            | 47 Nm   | 22 mm  |
| 1/2"                | 49 Nm   | 27 mm  | 1/2"                            | 102 Nm  | 27 mm  |
| 5/8"                | 60 Nm   | 30 mm  | 5/8"                            | 122 Nm  | 30 mm  |
| 3/4"                | 80 Nm   | 32 mm  | 3/4"                            | 149 Nm  | 32 mm  |
| 1"                  | 125 Nm  | 41 mm  | 1"                              | 203 Nm  | 41 mm  |
| 1.1/4"              | 190 Nm  | 50 mm  | 1.1/4"                          | 305 Nm  | 50 mm  |
| 1.1/2"              | 250 Nm  | 55 mm  | 1.1/2"                          | 305 Nm  | 55 mm  |
| 2"                  | 420 Nm  | 70 mm  | 2"                              | 400 Nm  | 70 mm  |



# WARRANTY POLICY

## WARRANTY REGISTRATION

All machines must be registered, by the selling dealer with McConnel Ltd, before delivery to the end user. On receipt of the goods it is the buyer's responsibility to check that the Verification of Warranty Registration in the Operator's Manual has been completed by the selling dealer.

### 1. LIMITED WARRANTIES

- 1.01. *All mounted machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months, unless a different period is specified.*  
*All Self Propelled Machines supplied by McConnel Ltd are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 12 months or 1500 hours. Engine warranty will be specific to the Manufacturer of that unit.*
- 1.02. *All spare parts supplied by McConnel Ltd and purchased by the end user are warranted to be free from defects in material and workmanship from the date of sale to the original purchaser for a period of 6 months. All parts warranty claims must be supported by a copy of the failed part invoice to the end user. We cannot consider claims for which sales invoices are not available.*
- 1.03. *The warranty offered by McConnel Ltd is limited to the making good by repair or replacement for the purchaser any part or parts found, upon examination at its factory, to be defective under normal use and service due to defects in material or workmanship. Returned parts must be complete and unexamined. Pack the component(s) carefully so that any transit damage is avoided. All ports on hydraulic items should be drained of oil and securely plugged to prevent seepage and foreign body ingress. Certain other components, electrical items for example, may require particular care when packing to avoid damage in transit.*
- 1.04. *This warranty does not extend to any product from which McConnel Ltd's serial number plate has been removed or altered.*
- 1.05. *The warranty policy is valid for machines registered in line with the terms and conditions detailed and on the basis that the machines do not extend a period of 24 months or greater since their original purchase date, that is the original invoice date from McConnel Limited.*  
*Machines that are held in stock for more than 24 months cannot be registered for warranty.*
- 1.06. *This warranty does not apply to any part of the goods, which has been subjected to improper or abnormal use, negligence, alteration, modification, fitment of non-genuine parts, accident damage, or damage resulting from contact with overhead power lines, damage caused by foreign objects (e.g. stones, iron, material other than vegetation), failure due to lack of maintenance, use of incorrect oil or lubricants, contamination of the oil, or which has served its normal life. This warranty does not apply to any expendable items such as blades, belts, clutch linings, filter elements, flails, flap kits, skids, soil engaging parts, shields, guards, wear pads, pneumatic tyres or tracks.*
- 1.07. *Temporary repairs and consequential loss - i.e. oil, downtime and associated parts are specifically excluded from the warranty.*
- 1.08. *Warranty on hoses is limited to 12 months and does not include hoses which have suffered external damage. Only complete hoses may be returned under warranty, any which have been cut or repaired will be rejected.*
- 1.09. *Machines must be repaired immediately a problem arises. Continued use of the machine after a problem has occurred can result in further component failures, for which McConnel Ltd cannot be held liable, and may have safety implications.*
- 1.10. *If in exceptional circumstances a non McConnel Ltd part is used to effect a repair, warranty reimbursement will be at no more than McConnel Ltd's standard dealer cost for the genuine part.*



- 1.11. *Except as provided herein, no employee, agent, dealer or other person is authorised to give any warranties of any nature on behalf of McConnell Ltd.*
- 1.12. *For machine warranty periods in excess of 12 months the following additional exclusions shall apply:*
  - 1.12.1. *Hoses, exposed pipes and hydraulic tank breathers.*
  - 1.12.2. *Filters.*
  - 1.12.3. *Rubber mountings.*
  - 1.12.4. *External electric wiring.*
  - 1.12.5. *Bearings and seals*
  - 1.12.6. *External Cables, Linkages*
  - 1.12.7. *Loose/Corroded Connections, Light Units, LED's*
  - 1.12.8. *Comfort items such as Operator Seat, Ventilation, Audio Equipment*
- 1.13. *All service work, particularly filter changes, must be carried out in accordance with the manufacturer's service schedule. Failure to comply will invalidate the warranty. In the event of a claim, proof of the service work being carried out may be required.*
- 1.14. *Repeat or additional repairs resulting from incorrect diagnosis or poor quality previous repair work are excluded from warranty.*

***NB Warranty cover will be invalid if any non-genuine parts have been fitted or used. Use of non-genuine parts may seriously affect the machine's performance and safety. McConnell Ltd cannot be held responsible for any failures or safety implications that arise due to the use of non-genuine parts.***

## **2. REMEDIES AND PROCEDURES**

- 2.01. *The warranty is not effective unless the Selling Dealer registers the machine, via the McConnell web site and confirms the registration to the purchaser by completing the confirmation form in the operator's manual.*
- 2.02. *Any fault must be reported to an authorised McConnell Ltd dealer as soon as it occurs. Continued use of a machine, after a fault has occurred, can result in further component failure for which McConnell Ltd cannot be held liable.*
- 2.03. *Repairs should be undertaken within two days of the failure. Claims submitted for repairs undertaken more than 2 weeks after a failure has occurred, or 2 days after the parts were supplied will be rejected, unless the delay has been authorised by McConnell Ltd. Please note that failure by the customer to release the machine for repair will not be accepted as a reason for delay in repair or submitting warranty claims.*
- 2.04. *All claims must be submitted, by an authorised McConnell Ltd Service Dealer, within 30 days of the date of repair.*
- 2.05. *Following examination of the claim and parts, McConnell Ltd will pay, at their discretion, for any valid claim the invoiced cost of any parts supplied by McConnell Ltd and appropriate labour and mileage allowances if applicable.*
- 2.06. *The submission of a claim is not a guarantee of payment.*
- 2.07. *Any decision reached by McConnell Ltd. is final.*

## **3. LIMITATION OF LIABILITY**

- 3.01. *McConnell Ltd disclaims any express (except as set forth herein) and implied warranties with respect to the goods including, but not limited to, merchantability and fitness for a particular purpose.*
- 3.02. *McConnell Ltd makes no warranty as to the design, capability, capacity or suitability for use of the goods.*
- 3.03. *Except as provided herein, McConnell Ltd shall have no liability or responsibility to the purchaser or any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by the goods including, but not limited to, any indirect, special, consequential, or incidental damages resulting from the use or operation of the goods or any breach of this warranty. Notwithstanding the above limitations and warranties, the manufacturer's liability hereunder for damages incurred by the purchaser or others shall not exceed the price of the goods.*
- 3.04. *No action arising out of any claimed breach of this warranty or transactions under this warranty may be brought more than one (1) year after the cause of the action has occurred.*

#### **4. MISCELLANEOUS**

- 4.01. McConnel Ltd may waive compliance with any of the terms of this limited warranty, but no waiver of any terms shall be deemed to be a waiver of any other term.*
- 4.02. If any provision of this limited warranty shall violate any applicable law and is held to be unenforceable, then the invalidity of such provision shall not invalidate any other provisions herein.*
- 4.03. Applicable law may provide rights and benefits to the purchaser in addition to those provided herein.*

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*McConnel Limited*





*For Safety and Performance...*

**ALWAYS READ THE BOOK FIRST**

**McCONEL LIMITED**

**Temeside Works  
Ludlow  
Shropshire  
England**

**Telephone: 01584 873131  
[www.mcconnel.com](http://www.mcconnel.com)**

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**USE ONLY GENUINE McCONNEL SERVICE PARTS**

*To be assured of the latest design improvements purchase your  
'Genuine Replacements' from the 'Original Equipment Manufacturer'*

**McCONEL LIMITED**

*Order through your local Dealer or Stockist*

#### **NOISE STATEMENT**

*The equivalent daily personal noise exposure from this machine measured at the operators' ear is within the range 78 – 85 dB, these figures apply to a normal distribution of use where the noise fluctuates between zero and maximum. The figures assume that the machine is fitted to a tractor with a 'quiet' cab with the windows closed in a generally open environment. We recommend that the windows are kept closed. With the cab rear window open the equivalent daily personal noise exposure will increase to a figure within the range 82 – 88 dB. At equivalent daily noise exposure levels of between 85 – 90 dB ear protection is recommended – it should be used if any window is left open.*

#### **SAFETY FIRST**

**MACHINE SAFETY DECALS MUST BE KEPT IN CLEAN READABLE CONDITION AT ALL TIMES;  
Any safety decals that are missing, damaged or illegible must always be replaced immediately.  
McConnel have a policy of providing replacement safety decals and manuals free of charge.**





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## GENERAL INFORMATION

Read this manual before fitting or operating the machine or accessory. Whenever any doubt exists contact your local dealer or the McConnel Service Department for assistance.

**Only use 'Genuine McConnel Parts' on McConnel machinery and equipment.**

DEFINITIONS: *The following definitions apply throughout this manual;*

### **DANGER**

**DANGER:** Alerts to a hazardous situation which will result in death or serious injury if not observed carefully.

### **WARNING**

**WARNING:** Alerts to a hazardous situation which could result in death or serious injury if not observed carefully.

### **CAUTION**

**CAUTION:** Alerts to a hazardous situation which could result in damage to the machine and/or equipment if not observed carefully.

### **NOTICE**

**NOTICE:** Specific or general information considered important or useful to emphasise.

**LEFT HAND (LH) & RIGHT HAND (RH):** *These terms are applicable to the machine when fitted to the tractor and viewed from the rear; these terms also apply to tractor references.*

### **SERIAL PLATE**

*All machines are equipped with a serial number plate containing important information relating to the machine including a unique serial number used for identification purposes.*

*Note: Images in this manual are provided for instruction and informational purposes only and may not show components in their entirety. In certain instances images may appear different to the actual machine; where this occurs the general procedure will be basically the same. E&OE.*

## **MACHINE & DEALER INFORMATION**

Record the serial number of your machine on this page and always quote it when ordering parts. Whenever information concerning the machine is requested remember to also state the make and model of tractor to which the machine is fitted.

Machine Serial Number:

Installation Date:

Machine Model Details:

Dealer Name & Branch:

Dealer Address:

Dealer Telephone No:

Dealer Email Address:





This machine has the potential to be extremely dangerous, in the wrong hands it can kill or maim. It is therefore imperative that the owner, and the operator of this machine, read the following section to ensure that they are both fully aware of the dangers that do, or may exist, and their responsibilities surrounding its use.

The operator of this machine is responsible not only for their own safety but equally for the safety of others who may come into the close proximity of the machine, as the owner you are responsible for both.

### POTENTIAL SIGNIFICANT DANGERS ASSOCIATED WITH THE USE OF THIS MACHINE:

- ▲ *Being hit by debris thrown by rotating components.*
- ▲ *Being hit by machine parts ejected through damage during use.*
- ▲ *Being caught on a rotating power take-off (PTO) shaft.*
- ▲ *Being caught in other moving parts i.e.: belts, pulleys and cutting heads.*
- ▲ *Electrocution from Overhead Power Lines (by contact with or 'flashover' from).*
- ▲ *Being hit by cutting heads or machine arms as they move.*
- ▲ *Becoming trapped between tractor and machine when hitching or unhitching.*
- ▲ *Tractor overbalancing when machine arm is extended.*
- ▲ *Injection of high pressure oil from hydraulic hoses or couplings.*
- ▲ *Machine overbalancing when freestanding (out of use).*
- ▲ *Road traffic accidents due to collision or debris on the road.*



## **BEFORE USING THIS MACHINE YOU MUST:**

- ▲ *Ensure you read all sections of the operator handbook.*
- ▲ *Ensure the operator is, or has been, properly trained to use the machine.*
- ▲ *Ensure the operator has been issued with and reads the operator handbook.*
- ▲ *Ensure the operator understands and follows the instructions in operator handbook.*
- ▲ *Ensure the tractor front, rear and side(s) are fitted with metal mesh or polycarbonate guards of suitable size and strength to protect the operator against thrown debris or parts.*
- ▲ *Ensure tractor guards are fitted correctly, are undamaged and kept properly maintained.*
- ▲ *Ensure that all machine guards are in position, are undamaged, and are kept maintained in accordance with the manufacturer's recommendations.*
- ▲ *Ensure flails and their fixings are of a type recommended by the manufacturer, are securely attached and that none are missing or damaged.*
- ▲ *Ensure hydraulic pipes are carefully and correctly routed to avoid damage by chaffing, stretching or pinching and that they are held in place with the correct fittings.*
- ▲ *Always follow the manufacturer's instructions for attachment and removal of the machine from the tractor.*
- ▲ *Check that the machine fittings and couplings are in good condition.*
- ▲ *Ensure the tractor meets the minimum weight recommendations of the machine manufacturer and that ballast is used as necessary.*
- ▲ *Always inspect the work area thoroughly before starting to note obstacles and remove wire, bottles, cans and other debris.*
- ▲ *Use clear suitably sized warning signs to alert others to the nature of the machine working within that area. Signs should be placed at both ends of the work site. (It is recommended that signs used are of a size and type specified by the Department of Transport and positioned in accordance with their and the Local Highways Authority guidelines).*
- ▲ *Ensure the operator is protected from noise. Ear defenders should be worn and tractor cab doors and windows must be kept closed. Machine controls should be routed through proprietary openings in the cab to enable all windows to be shut fully.*
- ▲ *Always work at a safe speed taking account of the conditions i.e.: terrain, highway proximity and obstacles around and above the machine.*
- ▲ *Extra special attention should be applied to Overhead Power Lines. Some of our machines are capable of reach in excess of 8 metres (26 feet) this means they have the potential to well exceed, by possibly 3 metres (9' 9"), the lowest legal minimum height of 5.2 metres from the ground for 11,000 and 33,000 volt power lines. It cannot be stressed enough the dangers that surround this capability, it is therefore vital that the operator is fully aware of the maximum height and reach of the machine, and that they are fully conversant with all aspects regarding the safe minimum distances that apply when working with machines in close proximity to Power Lines. (Further information on this subject can be obtained from the Health & Safety Executive or your Local Power Company).*
- ▲ *Always disengage the machine, kill the tractor engine, remove and pocket the key before dismounting for any reason.*
- ▲ *Always clear up all debris left at the work area, it may cause hazard to others.*
- ▲ *Always ensure when you remove your machine from the tractor that it is left in a safe and stable position using the stands and props provided and secured if necessary.*

## WHEN NOT TO USE THIS MACHINE:

- ▲ *Never attempt to use this machine if you have not been trained to do so.*
- ▲ *Never uses a machine until you have read and understood the operator handbook, are familiar with, and practiced the controls.*
- ▲ *Never use a machine that is poorly maintained.*
- ▲ *Never use a machine if guards are missing or damaged.*
- ▲ *Never use a machine on which the hydraulic system shows signs of wear or damage.*
- ▲ *Never fit, or use, a machine on a tractor that does not meet the manufacturer's minimum specification level.*
- ▲ *Never use a machine fitted to a tractor that does not have suitable front, rear and side(s) cab guarding made of metal mesh or polycarbonate.*
- ▲ *Never use the machine if the tractor cab guarding is damaged, deteriorating or badly fitted.*
- ▲ *Never turn a machine cutting head to an angle that causes debris to be ejected towards the cab.*
- ▲ *Never start or continue to work a machine if people are nearby or approaching - Stop and wait until they are at a safe distance before continuing.*
- ▲ *Never attempt to use a machine on materials in excess of its capability.*
- ▲ *Never use a machine to perform a task it has not been designed to do.*
- ▲ *Never operate the tractor or machine controls from any position other than from the driving seat, especially whilst hitching or unhitching the machine.*
- ▲ *Never carry out maintenance of a machine or a tractor whilst the engine is running – the engine should be switched off, the key removed and pocketed.*
- ▲ *Never leave a machine unattended in a raised position – it should be lowered to the ground in a safe position on a level firm site.*
- ▲ *Never leave a tractor with the key in or the engine running.*
- ▲ *Never carry out maintenance on any part or component of a machine that is raised unless that part or component has been properly substantially braced or supported.*
- ▲ *Never attempt to detect a hydraulic leak with your hand – use a piece of cardboard.*
- ▲ *Never allow children near to, or play on, a tractor or machine under any circumstances.*

## ADDITIONAL SAFETY ADVICE

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### TRAINING

Operators need to be competent and fully capable of operating this machine in a safe and efficient way prior to attempting to use it in any public place. We advise therefore that the prospective operator make use of relevant training courses available such as those run by the Agricultural Training Board, Agricultural Colleges, Dealers and McConnel.

### WORKING IN PUBLIC PLACES

When working in public places such as roadsides, consideration should be paid to others in the vicinity. Stop the machine immediately when pedestrians, cyclists and horse riders etc. pass. Restart only when they are at a distance that causes no risk to their safety.

### WARNING SIGNS

It is advisable that any working area be covered by suitable warning signs and statutory in public places. Signs should be highly visible and well placed in order to give clear advanced warning of the hazard. Contact the Department of Transport or your Local Highways Authority to obtain detailed information on this subject. The latter should be contacted prior to working on the public highway advising them of the time and location of the intended work asking what is required by way of signs and procedure. – *'Non-authorised placement of road signs may create offences under the Highways Act'*.

### SUGGESTED WARNING SIGNS REQUIRED

***"Road works ahead"*** warning sign with a supplementary ***"Hedge cutting"*** plate. ***"For 1 mile"*** or appropriate shorter distance may be added to the plate.

***"Road narrows"*** warning sign with supplementary ***"Single file traffic"*** plate.

White on blue ***"Keep right"*** arrow sign on rear of machine.

### USE OF WARNING SIGNS

- ▲ *On two way roads one set of signs is needed facing traffic in each direction.*
- ▲ *Work should be within 1 mile of the signs.*
- ▲ *Work only when visibility is good and at times of low risk e.g.: NOT during 'rush-hour'.*
- ▲ *Vehicles should have an amber flashing beacon.*
- ▲ *Ideally, vehicles should be conspicuously coloured.*
- ▲ *Debris should be removed from the road and path as soon as practicable, and at regular intervals, wearing high visibility clothing and before removing the hazard warning signs.*
- ▲ *Collect all road signs promptly when the job is completed.*

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Although the information given here covers a wide range of safety subjects it is impossible to predict every eventuality that can occur under differing circumstances whilst operating this machine. No advice given here can replace 'good common sense' and 'total awareness' at all times but will go a long way towards the safe use of your McConnel machine.

---

## FLOWS & PRESSURES – For Reliable Working

| Ditch Cleaner Model           |             | Early Power Arm Models |              |
|-------------------------------|-------------|------------------------|--------------|
| <b>HIGH SPEED VERSION</b>     |             | PA50,52,53,59          | PA55 - 7700T |
| Maximum continuous flow       | - 100 L/min | 540 PTO MAX            | 430 PTO MAX  |
| Maximum continuous speed      | - 500RPM    |                        |              |
| Maximum continuous pressure   | - 210 Bar   |                        |              |
| <b>STANDARD SPEED VERSION</b> |             | PA50,52,53,59          | PA55 - 7700T |
| Maximum continuous flow       | - 125 L/min | 540 PTO MAX            | 540 PTO MAX  |
| Maximum continuous speed      | - 320RPM    |                        |              |
| Maximum continuous pressure   | - 210 Bar   |                        |              |

| Ditch Cleaner Model           |             | Current Power Arms – Builds ►11/16 |  |
|-------------------------------|-------------|------------------------------------|--|
| <b>HIGH SPEED VERSION</b>     |             | 55, 60, 1000 Series                | 65, 70, 75, 85* Series                           |
| Maximum continuous flow       | - 100 L/min | 540 PTO MAX                        | 430 PTO MAX                                      |
| Maximum continuous speed      | - 500RPM    |                                    | * Cross Port Relief Kit required for 85HP Models |
| Maximum continuous pressure   | - 210 Bar   |                                    |  |
| <b>STANDARD SPEED VERSION</b> |             | 55, 60, 1000 Series                | 65, 70, 75, 85* Series                           |
| Maximum continuous flow       | - 125 L/min | 540 PTO MAX                        | 540 PTO MAX                                      |
| Maximum continuous speed      | - 320RPM    |                                    | * Cross Port Relief Kit required for 85HP Models |
| Maximum continuous pressure   | - 210 Bar   |                                    |  |

| Ditch Cleaner Model           |             | Current Power Arms – Builds 11/16 ► |  |
|-------------------------------|-------------|-------------------------------------|--|
| <b>HIGH SPEED VERSION</b>     |             | 55, 60, 1000 Series                 | 65, 70, 75, 85* Series                           |
| Maximum continuous flow       | - 100 L/min | 430 PTO MAX                         | 600 PTO MAX                                      |
| Maximum continuous speed      | - 500RPM    |                                     | * Cross Port Relief Kit required for 85HP Models |
| Maximum continuous pressure   | - 210 Bar   |                                     |  |
| <b>STANDARD SPEED VERSION</b> |             | 55, 60, 1000 Series                 | 65, 70, 75, 85* Series                           |
| Maximum continuous flow       | - 125 L/min | 540 PTO MAX                         | 760 PTO MAX                                      |
| Maximum continuous speed      | - 320RPM    |                                     | * Cross Port Relief Kit required for 85HP Models |
| Maximum continuous pressure   | - 210 Bar   |                                     |  |

|  |                             |
|--|-----------------------------|
| <b>OPERATING CONDITIONS FOR HIGH SPEED &amp; STANDARD MACHINES</b> |                             |
| Return line pressure   | - 2 Bar min to 20 Bar max** |
| Maximum drain line pressure  | - 5 Bar                     |
| Optimum Viscosity  | - 35 – 200cSt               |
| Optimum temperature  | - 40 - 70°C                 |
| Fluid Cleanliness  | - NAS 9/ ISO 18/15          |

**\*\* For machines without an electric rotor reversing control or without hydraulic piston pumps, a 'Back Pressure Kit' should be fitted or motor life will be seriously reduced.**

## FITTING

The Rotary Ditcher/Cleaner can be fitted only to Power Arm machines equipped with hydraulic slewing/breakaway action.

The procedure for fitting the units is as follows;

### Flailhead Removal

- Disconnect the flailhead hoses on both sides of the hose junction bracket.
- Unbolt the hose junction bracket from the angling jaw plate.
- Unbolt the flailhead from the mounting tube and remove together with the hoses and the junction bracket - *plug or cover the ends of the hoses to prevent access of contaminants during storage.*

### Fitting of Ditcher/Cleaner Unit

- Bolt the Ditcher/Cleaner to the dipper arm ensuring that the top plate is horizontal when the angling ram is approximately half extended - *i.e. at the mid-point of its stroke.*

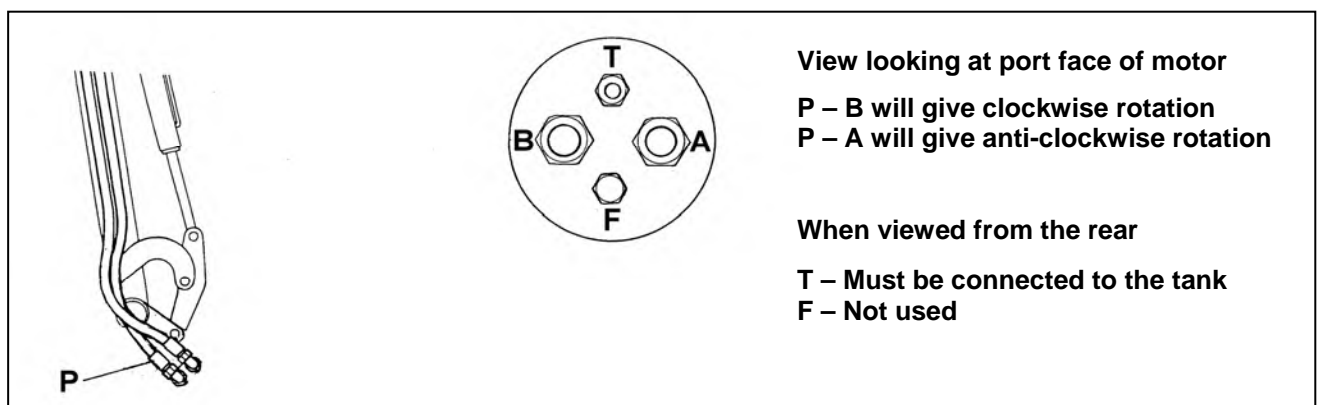
On machines with piston hydraulics connect 'T' connection to the drain line on the machine or connect motor drain line as supplied in the kit (*see below*).

### Using Drain Line Supplied with the Kit

- If using the drain line supplied with the kit the hose guards should be removed from the Power Arms and the  $\frac{3}{8}$ " BSP drain hose from the Ditcher/Cleaner secured alongside, and attached to, the existing Power Arm hoses using the hose ties supplied.

Note: - *Ensure that that sufficient 'slack' is allowed for over the arm pivots to permit the hoses to flex properly.*

- Refit hose guards.
- Fit drain line to hydraulic oil tank in accordance with Power Arm manual or seek advice from our Service team.
- Connect the motor drain hose.
- Connect up the 1" BSP hoses to the existing flail hoses using the 1" BSP union provided to give the rotation of cut required – *see diagram below.*



## **BACK PRESSURE KIT - *Hydraulic Gear pump machines with cable operated rotor controls only***

### **NOTICE**

Hydraulic Gear Pump Machines with Electric Rotor Controls or Hydraulic Piston Machines DO NOT require a Back Pressure Kit.

A Back Pressure Kit is provided to prevent the motor from becoming 'starved' of oil during normal operation and whilst stopping and starting. The kit must be fitted in the return line hose from the motor and normally fits directly onto the motor control valve. This installation is as follows:

- Disconnect the tank return from the rotor control valve. Fit the back pressure valve and reconnect the tank return.
- Disconnect the pressure hose from the pump, fit the 1" BSP 'T' piece to the pressure port adaptor and reconnect the pressure hose.
- Complete the installation by joining the back pressure valve and the pressure line 'T' using the ¼" hose provided.

### **NOTICE**

*This installation allows the operator to select opposite rotation to clear a blockage.*

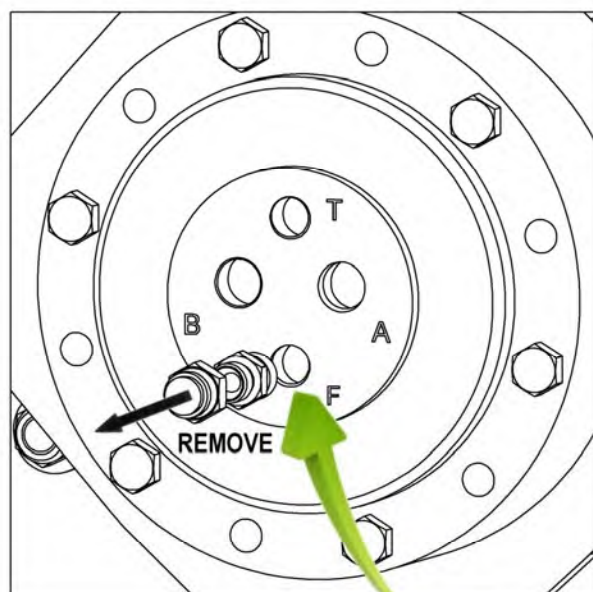
### **⚠ CAUTION**

**On reverting back to hedge cutting / mowing THE BACK PRESSURE KIT MUST BE REMOVED**

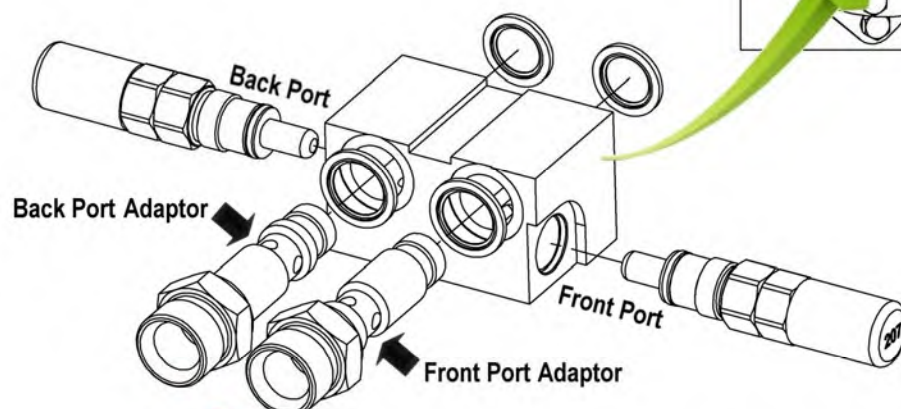
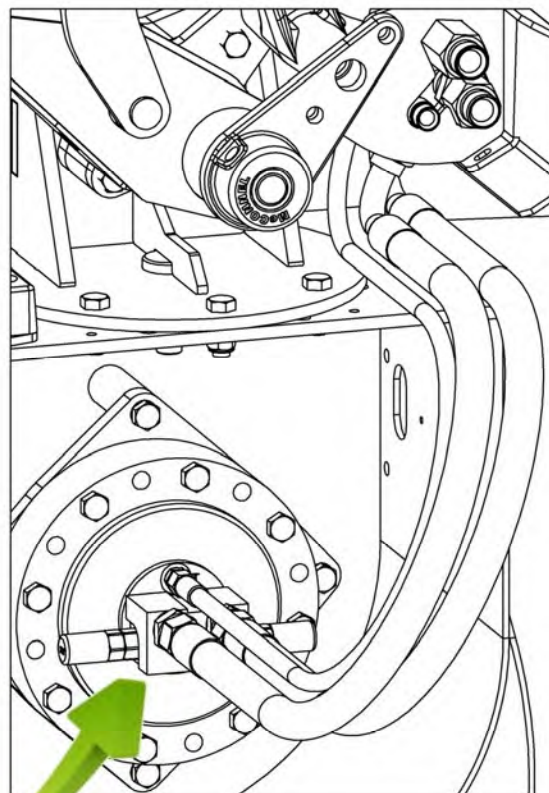


## CROSS PORT RELIEF VALVE KIT (Option)

Required for units fitted to Power Arms with 85HP hydraulic system.



REPLACE WITH  
O-Ring Seal 8600908  
& Drain Plug 8581587



ENSURE CORRECT ADAPTOR IS FITTED TO THE CORRECT VALVE PORT  
CROSS DRILLED PORTS IN ADAPTOR MUST ALIGN WITH RELIEF VALVE

## OPERATION

---

### Read the Book First

Before attempting to operate this machine it is imperative that both the owner and operator has read, and fully understood, not only this manual but also that of any machine it is attached to, and that they are fully conversant with all operation and safety aspects surrounding its use.

- Check all nuts and bolts are tight and that the 1" BSP hose connections give the desired rotation of cut when the lever is operated such: -

|                         |                                  |                                     |
|-------------------------|----------------------------------|-------------------------------------|
| <b>Upward Cutting</b>   | <b>= Clockwise Rotation</b>      | } <i>When viewed from the front</i> |
| <b>Downward Cutting</b> | <b>= Anti-clockwise Rotation</b> |                                     |

*If found to be opposite to above the 1" BSP hoses must be interchanged at the jointing union.*

- Examine the ditch for obstacles and dangerous materials e.g. metal, wire, glass, large stones etc. and remove before commencing.

## ADJUSTMENTS

### Approach Angle

The Ditch Cleaner can be rotated on its mounting plate to give 5 approach angles to the ditch - this is achieved by removing the 3 mounting bolts enabling the main body to be pivoted about its central spindle to the required position.

### Cutters

The double-edged blades and paddles can be adjusted to allow cutting with either a clockwise or anti-clockwise rotation - if using single-edged blades an opposite hand set of blades will be needed if it is required to cut with the opposite rotation.

### Blades

The double-edged blades, which are slotted, pivot about the outer mounting bolt to allow for rotation of cut. For anti-clockwise cutting action (*when viewed from the front*) the blade is pivoted clockwise to the limit of the slot and visa-versa.

Blade options include:

Double edged blade (*Part No. 41.216.01*) – Good cutting performance in harder soils

Single edged blade (*Part No. 41936.01*) – L/H Standard Duty – good throwing performance.

Single edged blade (*Part No. 41936.02*) – R/H Standard Duty – good throwing performance.

Single edged blade (*Part No. 41936.03*) – L/H Heavy Duty – good throwing performance.

Single edged blade (*Part No. 41936.04*) – R/H Heavy Duty – good throwing performance.

**NOTE: Blades should be fitted in sets of 3 and be of similar weight in order to maintain rotor balance.**

### Paddles

The function of the paddles is to aid the excavation of material from the cutting area. There are 2 possible positions available for mounting the paddles; the correct position will depend on the direction of cut – whichever the direction, the paddles should always be fitted with the paddle face leading and the paddle body sloping backwards from the rotation of cut.

### Spoil Deflector

The spoil deflector consists of two sections, the first is fixed whilst the second pivots to allow a choice of 8 positions to control and guide the direction of thrown spoil. The adjustments allow the angle of cut and the outboard destination of the spoil to be selected for both right and left hand mounted machines. To deflect the spoil inboard a reverse chute and blade kit is available.

## MAINTENANCE

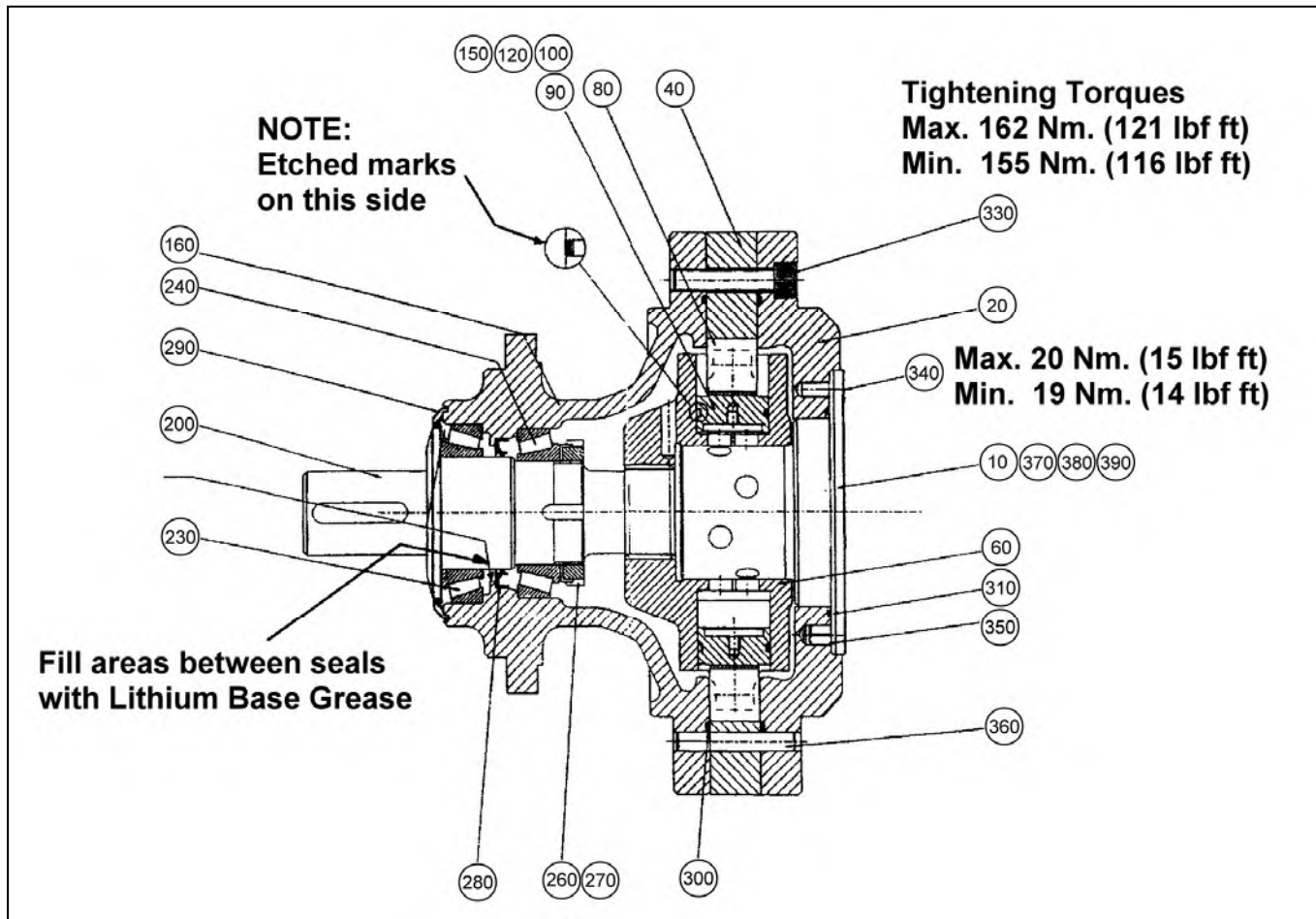
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### **Ditch Cleaner Shaft Seal Replacement** *(refer to diagram on following page)*

1. Slacken evenly, the eight bolts (*item 330*) to release the output housing from the torque unit. NOTE THE ORIENTATION OF THE HOUSING TO THE TORQUE UNIT.
2. Carefully lift off the output housing taking care not to disturb the rotor in the torque unit when disengaging the spline drive.
3. Unlock washer (*item 270*) and release the nut (*item 260*) which holds the bearing under pre-load, remove both.
4. Supporting the housing (*item 160*) press the shaft out from the splined end. This will remove the cone of the inner bearing (*item 240*) from the shaft.
5. Remove from housing the bearing cone from the inner bearing (*item 240*).
6. Remove the shaft seal (*item 280*).
7. Clean all parts thoroughly.

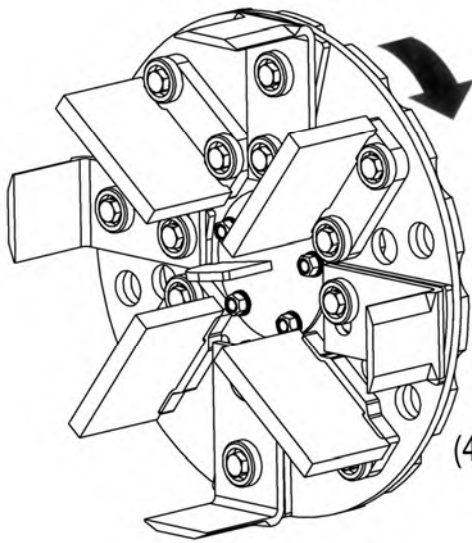
### **Re-Assembly**

1. Press a new shaft seal (*item 280*) carefully and squarely into the output housing (*item 160*).
2. Press the bearing cup from the inner bearing (*item 240*) back into its bore in the housing, taking care to ensure it faces the correct way.
3. Fill the area between the end of the housing and the shaft seal with lithium based grease as stated on the attached assembly drawing.
4. Holding the keyed end of the shaft (*item 200*) vertically in a vice, lower the output housing onto it so that it sits squarely on the outer bearing (*item 230*).
5. Warm slightly, the inner bearing cone to help with assembly, then press it on to the shaft until it sits in the cone, ensuring that the bearing is installed the correct way.
6. Re-fit the locking tab and the locking nut and tighten the unit to 24-lbf ft.
7. Re-fit the locking tab. If the tab does not line up with any slot in the nut, tighten the nut to line up a tab with a slot in the nut.
8. Spin the housing to ensure the bearings are seated correctly and that there is no end play on them.
9. Check the 'O' ring (*item 300*) in the housing face is O K, then lower it onto the torque unit, taking care to align the splines correctly and that the output housing to the torque unit orientation is as it was before stripdown.
10. Re-fit and tighten evenly, the eight bolts (*item 330*). Check regularly during tightening that the shaft is free to rotate, thus ensuring that the alignment of the output housing and torque unit is correct.
11. Tighten the eight bolts to the recommended torque setting *(see diagram on following page)*.

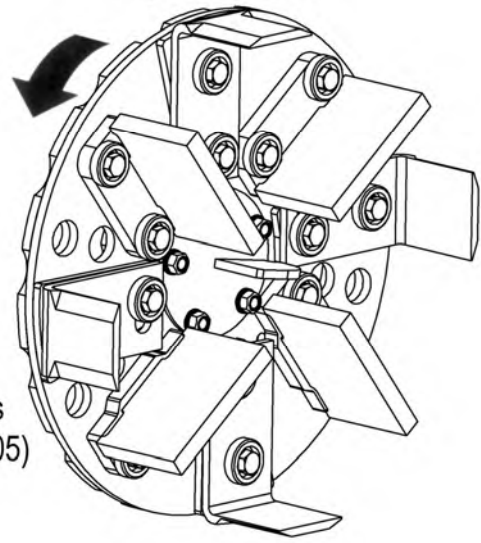


## Blade Mounting Directions

**Left Hand Build**

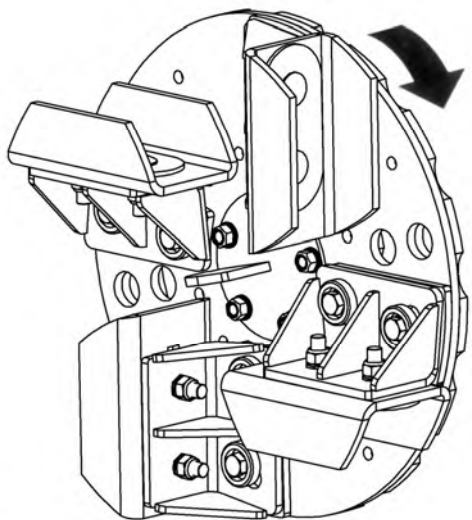


**Right Hand Build**

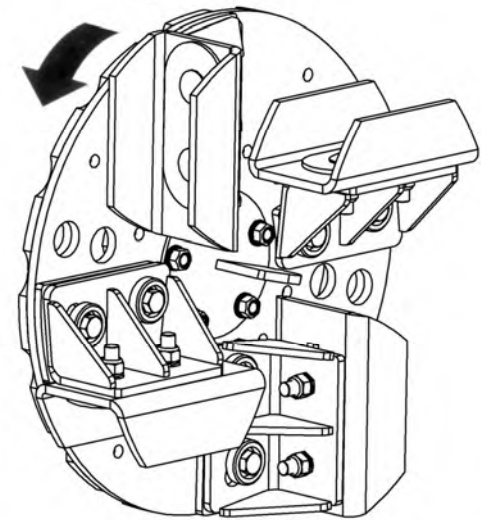


Blades & Paddles  
(41.216.04 & 41936.05)

**Left Hand Build**



**Right Hand Build**



Cutting Blades  
(41936.11)

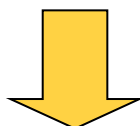
## PARTS SECTION



### McConnel Generic Parts Manual

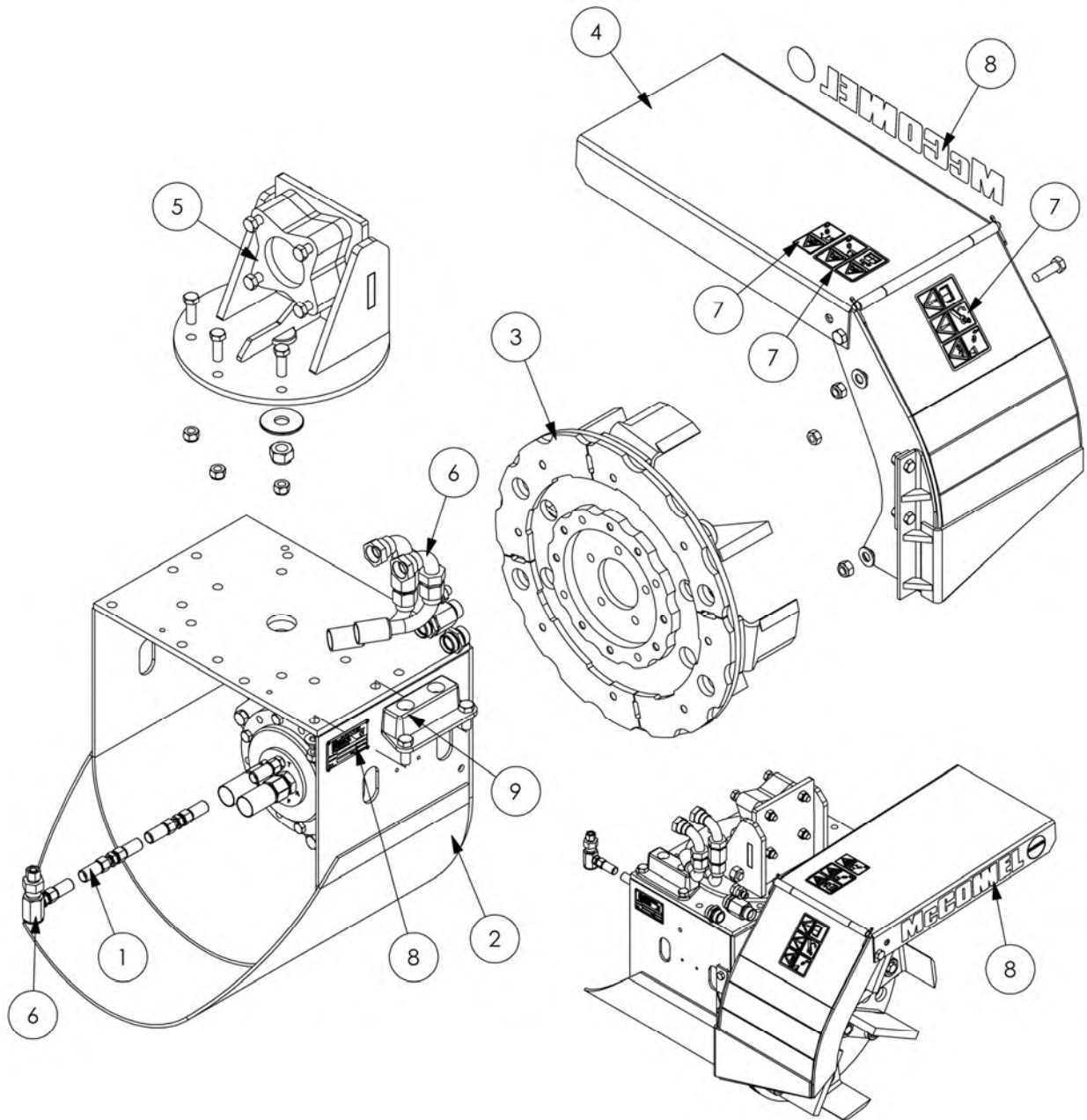
*Generic parts manuals should be used as a general guide to the components used on the machine; to ensure accurate parts information for a specific machine please refer to the 'Interactive Parts Database' on our website which identifies the exact components used on the machine when it was manufactured based on the machine's unique serial number.*

*Direct access can be gained using the web address or QR code below.*  
<http://www.mcconnel.com/support/product-support/interactive-parts-database/>

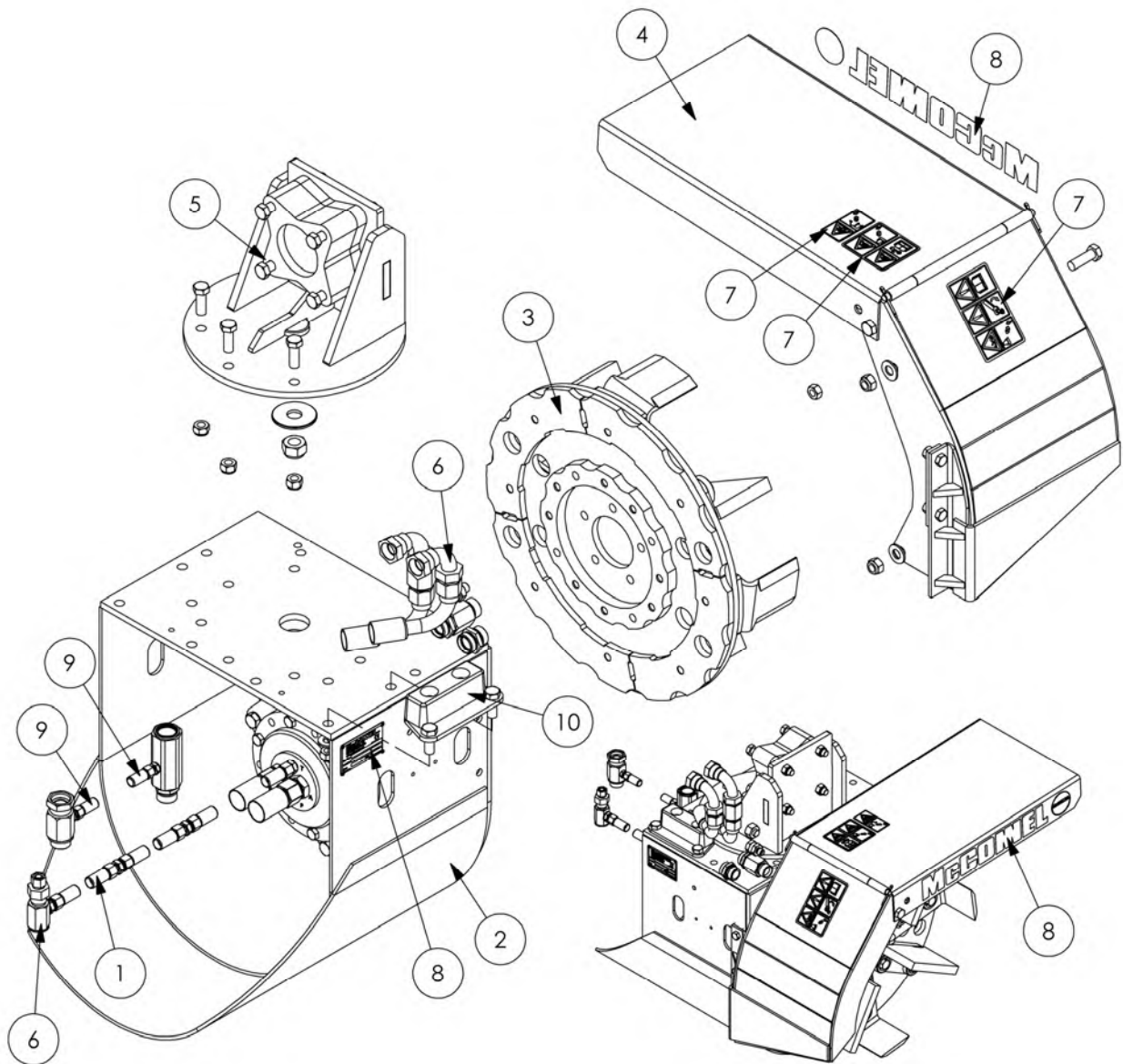


*Design improvements may have altered some of the parts listed in this manual; latest parts will always be supplied if they are interchangeable with earlier ones.*

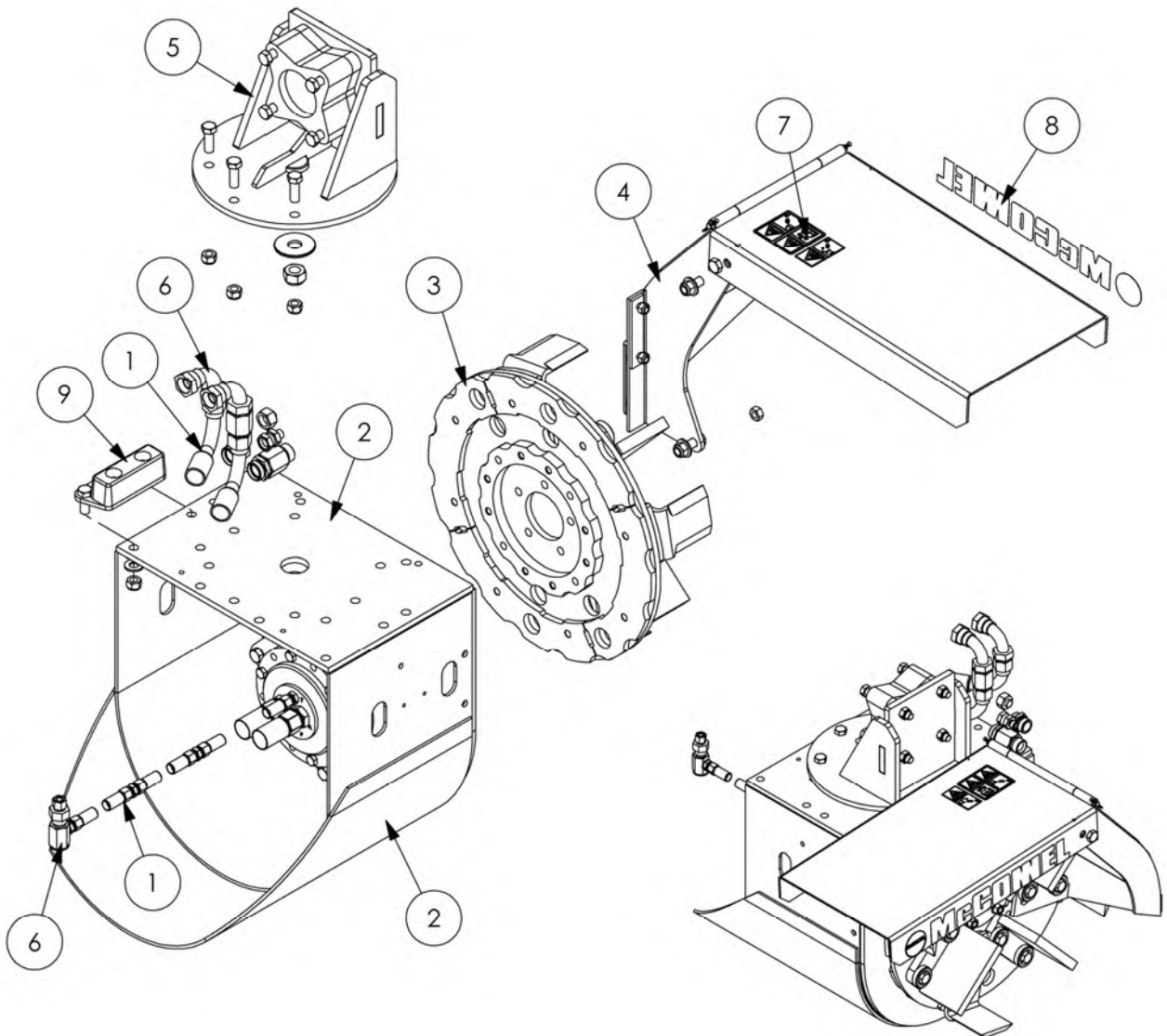




| REF. | QTY. | PART No.       | DESCRIPTION                                    |
|------|------|----------------|--|
|      |      | <b>6600900</b> | <b>ROTARY DITCHER (STD. SPEED) - L/H build</b> |
|      |      | <b>6600904</b> | <b>ROTARY DITCHER (HIGH SPEED) - L/H build</b> |
| 1    | 1    | 23067.03       | HOSE KIT                                       |
| 2    | 1    | 6600701        | MOTOR MODULE - STD. SPEED                      |
|      | 1    | 6600702        | MOTOR MODULE - HIGH SPEED                      |
| 3    | 1    | 6600769        | CUTTING DISC/BLADE ASSEMBLY                    |
| 4    | 1    | 6600770        | MANUAL CHUTE LH (WIDE)                         |
| 5    | 1    | 6600735        | MANUAL ROTATION MODULE                         |
| 6    | 1    | 6600745        | HYDRAULIC INST'N MODULE (STD. SPEED)           |
|      | 1    | 6600746        | HYDRAULIC INST'N MODULE (HIGH SPEED)           |
| 7    | 1    | 6600760        | DECAL KIT - INSTRUCTIONS/WARNINGS              |
| 8    | 1    | 6600762        | DECAL KIT                                      |
| 9    | 1    | 6600736        | BUMP STOP KIT                                  |

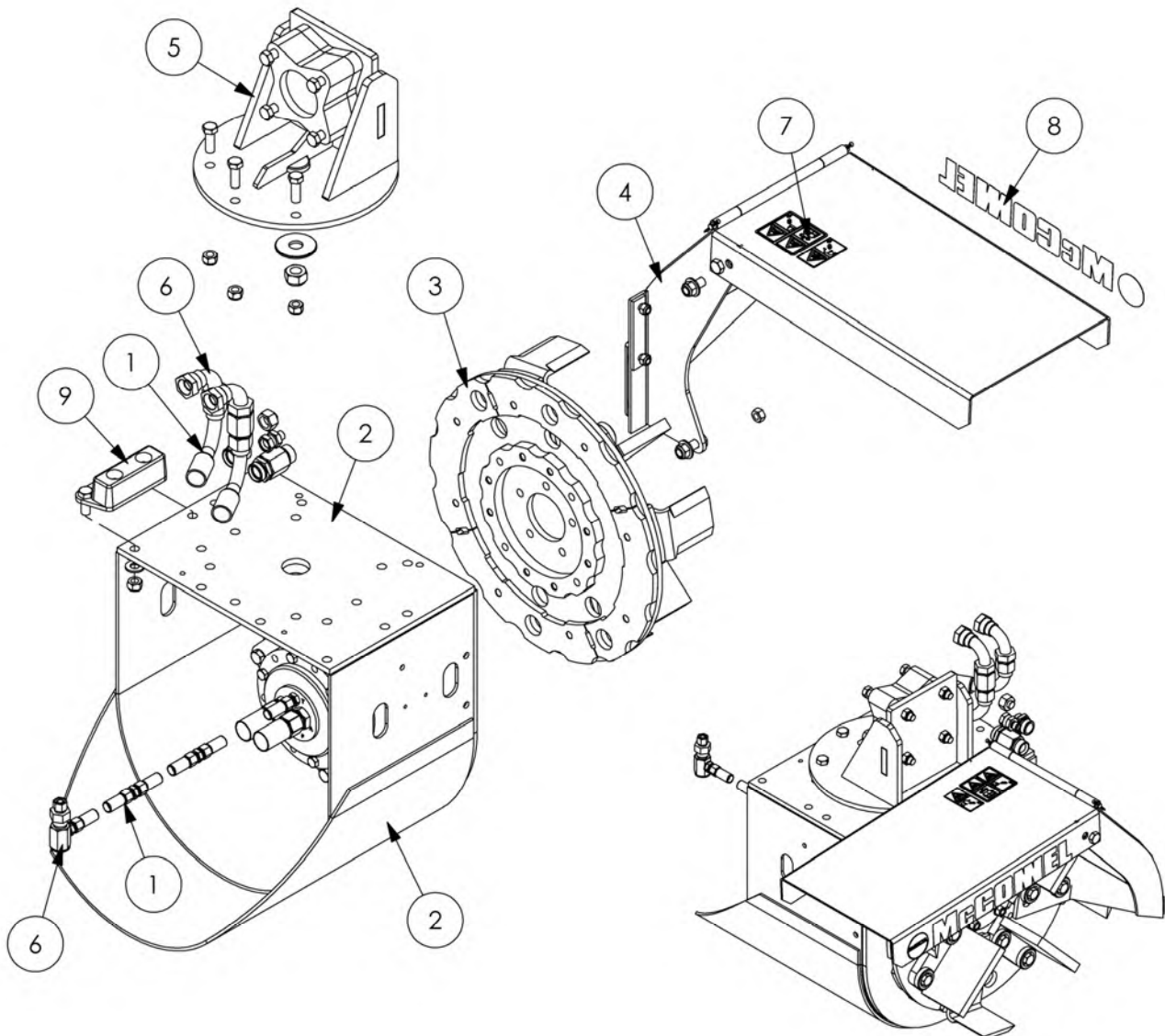


| REF. | QTY. | PART No.       | DESCRIPTION                                    |
|------|------|----------------|--|
|      |      | <b>6600901</b> | <b>ROTARY DITCHER (STD. SPEED) - L/H build</b> |
|      |      | <b>6600905</b> | <b>ROTARY DITCHER (HIGH SPEED) - L/H build</b> |
| 1    | 1    | 23067.03       | HOSE KIT                                       |
| 2    | 1    | 6600701        | MOTOR MODULE - STD. SPEED                      |
|      | 1    | 6600702        | MOTOR MODULE - HIGH SPEED                      |
| 3    | 1    | 6600769        | CUTTING DISC/BLADE ASSEMBLY                    |
| 4    | 1    | 6600770        | MANUAL CHUTE LH (WIDE)                         |
| 5    | 1    | 6600735        | MANUAL ROTATION MODULE                         |
| 6    | 1    | 6600745        | HYDRAULIC INST'N MODULE (STD. SPEED)           |
|      | 1    | 6600746        | HYDRAULIC INST'N MODULE (HIGH SPEED)           |
| 7    | 1    | 6600760        | DECAL KIT - INSTRUCTIONS/WARNINGS              |
| 8    | 1    | 6600762        | DECAL KIT                                      |
| 9    | 1    | 42949.01       | BACK PRESSURE VALVE KIT                        |
| 10   | 1    | 6600736        | BUMP STOP KIT                                  |

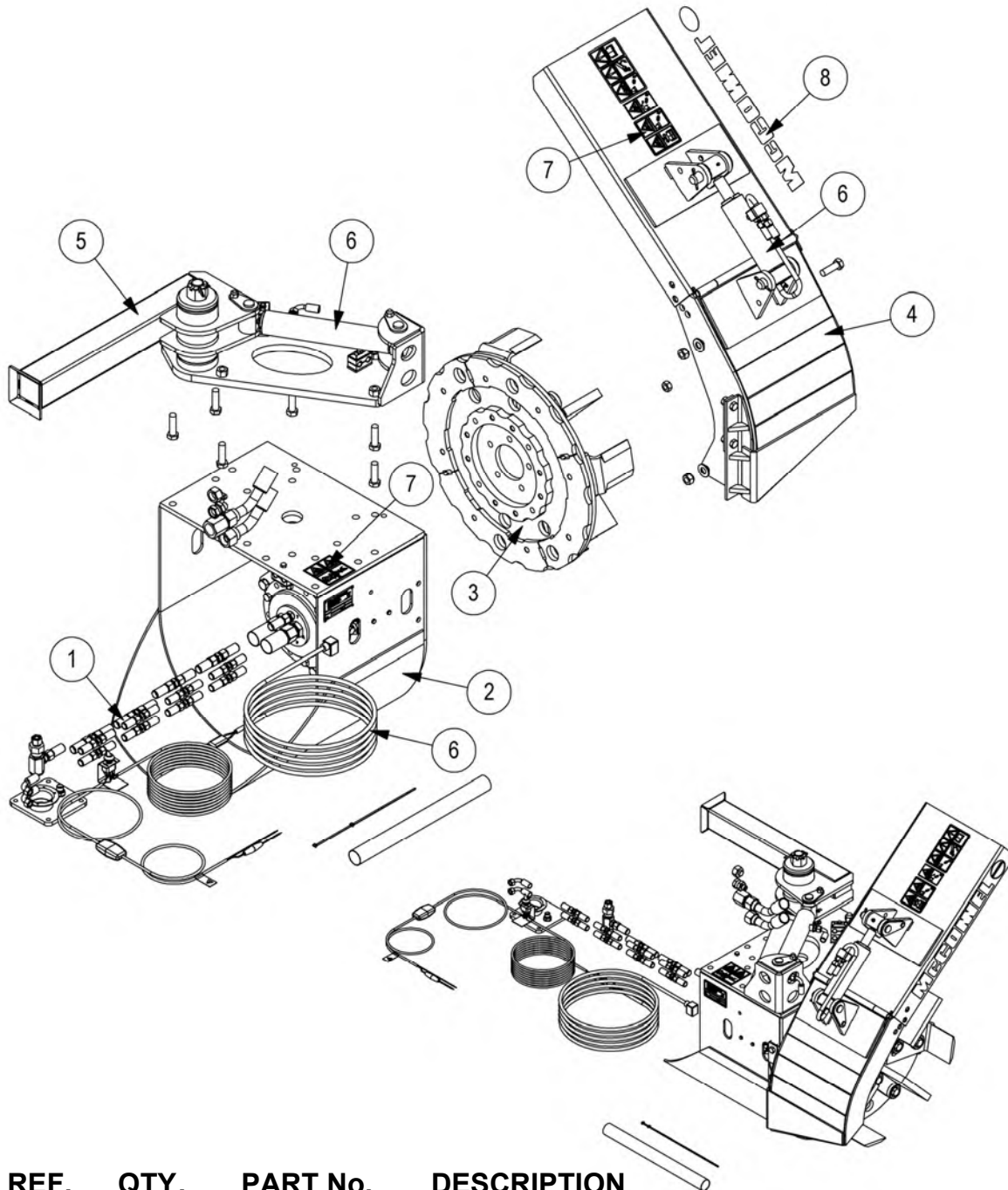


| REF. | QTY. | PART No.       | DESCRIPTION                                    |
|------|------|----------------|--|
|      |      | <b>6600902</b> | <b>ROTARY DITCHER (STD. SPEED) - R/H build</b> |
|      |      | <b>6600906</b> | <b>ROTARY DITCHER (HIGH SPEED) - R/H build</b> |
| 1    | 1    | 23067.03       | HOSE KIT                                       |
| 2    | 1    | 6600701        | MOTOR MODULE - STD. SPEED                      |
|      | 1    | 6600702        | MOTOR MODULE - HIGH SPEED                      |
| 3    | 1    | 6600769        | CUTTING DISC/BLADE ASSEMBLY                    |
| 4    | 1    | 6600771        | MANUAL CHUTE RH (WIDE)                         |
| 5    | 1    | 6600735        | MANUAL ROTATION MODULE                         |
| 6    | 1    | 6600745        | HYDRAULIC INST'N MODULE (STD. SPEED)           |
|      | 1    | 6600746        | HYDRAULIC INST'N MODULE (HIGH SPEED)           |
| 7    | 1    | 6600760        | DECAL KIT - INSTRUCTIONS/WARNINGS              |
| 8    | 1    | 6600762        | DECAL KIT                                      |
| 9    | 1    | 6600736        | BUMP STOP KIT                                  |

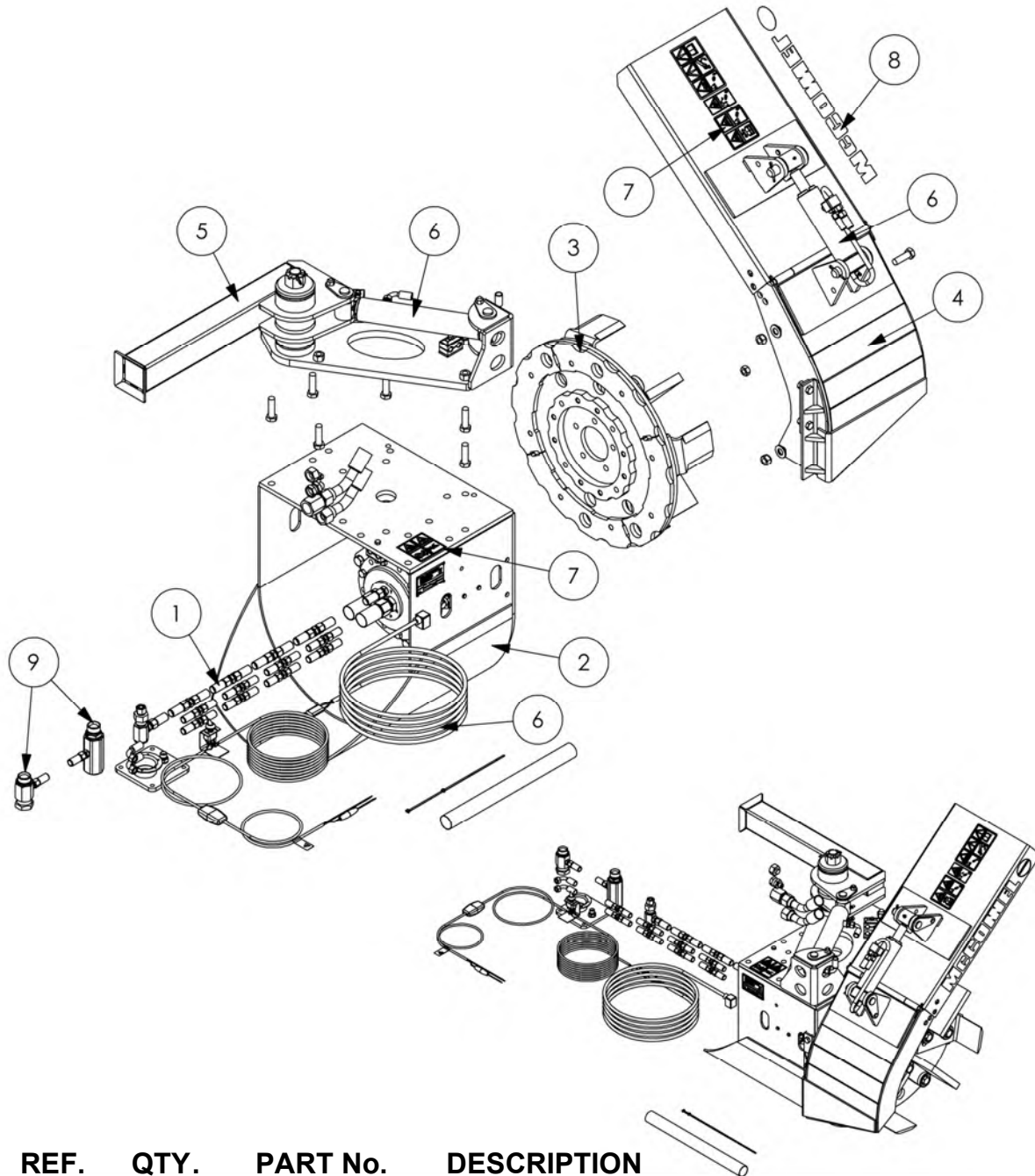




| REF. | QTY. | PART No.       | DESCRIPTION                                    |
|------|------|----------------|--|
|      |      | <b>6600903</b> | <b>ROTARY DITCHER (STD. SPEED) - R/H build</b> |
|      |      | <b>6600907</b> | <b>ROTARY DITCHER (HIGH SPEED) - R/H build</b> |
| 1    | 1    | 23067.03       | HOSE KIT                                       |
| 2    | 1    | 6600701        | MOTOR MODULE - STD. SPEED                      |
|      | 1    | 6600702        | MOTOR MODULE - HIGH SPEED                      |
| 3    | 1    | 6600769        | CUTTING DISC/BLADE ASSEMBLY                    |
| 4    | 1    | 6600771        | MANUAL CHUTE RH (WIDE)                         |
| 5    | 1    | 6600735        | MANUAL ROTATION MODULE                         |
| 6    | 1    | 6600745        | HYDRAULIC INST'N MODULE (STD. SPEED)           |
|      | 1    | 6600746        | HYDRAULIC INST'N MODULE (HIGH SPEED)           |
| 7    | 1    | 6600760        | DECAL KIT - INSTRUCTIONS/WARNINGS              |
| 8    | 1    | 6600762        | DECAL KIT                                      |
| 9    | 1    | 42949.01       | BACK PRESSURE VALVE KIT                        |
| 10   | 1    | 6600736        | BUMP STOP KIT                                  |

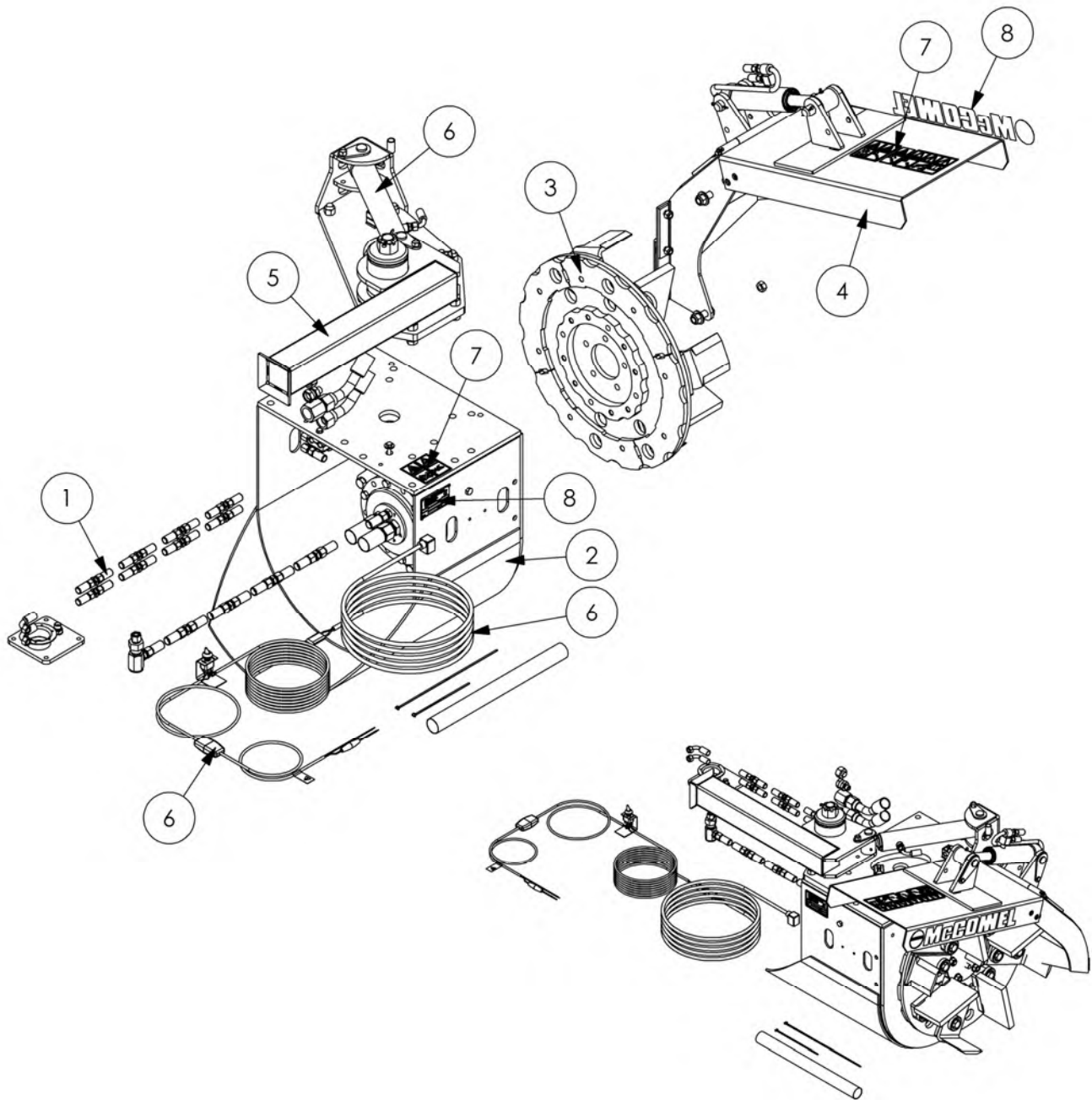


| REF. | QTY. | PART No.       | DESCRIPTION                                    |
|------|------|----------------|--|
|      |      | <b>6600940</b> | <b>ROTARY DITCHER (STD. SPEED) - L/H build</b> |
|      |      | <b>6600944</b> | <b>ROTARY DITCHER (HIGH SPEED) - L/H build</b> |
| 1    | 1    | 23067.02       | HOSE KIT                                       |
| 2    | 1    | 6600701        | MOTOR MODULE - STD. SPEED                      |
|      | 1    | 6600702        | MOTOR MODULE - HIGH SPEED                      |
| 3    | 1    | 6600769        | CUTTING DISC/BLADE ASSEMBLY                    |
| 4    | 1    | 6600764        | HYDRAULIC CHUTE LH (WIDE)                      |
| 5    | 1    | 6600733        | HYDRAULIC ROTATION MODULE LH                   |
| 6    | 1    | 6600743        | HYDRAULIC INST'N MODULE (STD. SPEED)           |
|      | 1    | 6600744        | HYDRAULIC INST'N MODULE (HIGH SPEED)           |
| 7    | 1    | 6600761        | DECAL KIT - INSTRUCTIONS/WARNINGS              |
| 8    | 1    | 6600762        | DECAL KIT                                      |

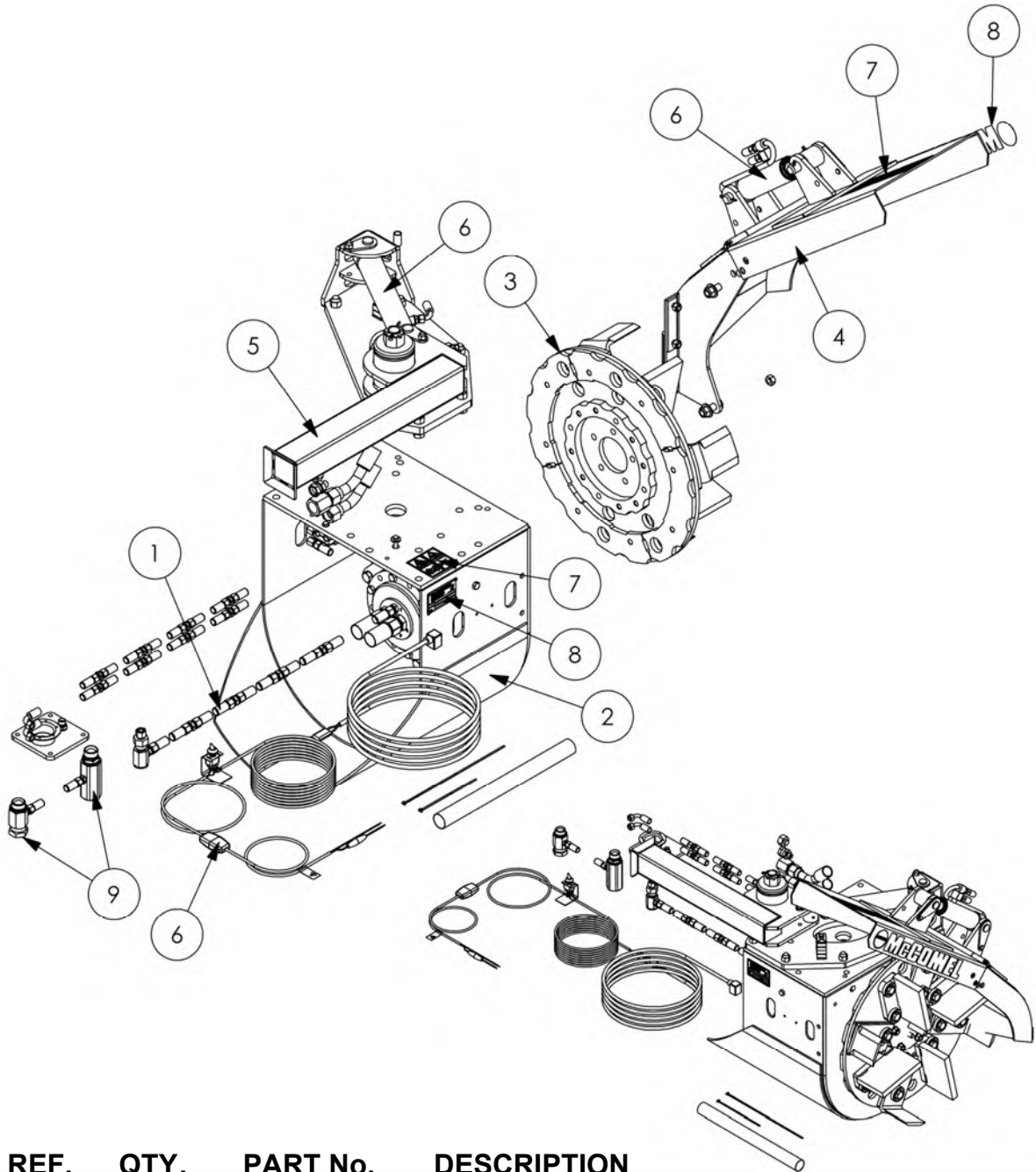


| REF. | QTY. | PART No.       | DESCRIPTION                                    |
|------|------|----------------|--|
|      |      | <b>6600941</b> | <b>ROTARY DITCHER (STD. SPEED) - L/H build</b> |
|      |      | <b>6600945</b> | <b>ROTARY DITCHER (HIGH SPEED) - L/H build</b> |
| 1    | 1    | 23067.02       | HOSE KIT                                       |
| 2    | 1    | 6600701        | MOTOR MODULE - STD. SPEED                      |
|      | 1    | 6600702        | MOTOR MODULE - HIGH SPEED                      |
| 3    | 1    | 6600769        | CUTTING DISC/BLADE ASSEMBLY                    |
| 4    | 1    | 6600764        | HYDRAULIC CHUTE LH (WIDE)                      |
| 5    | 1    | 6600733        | HYDRAULIC ROTATION MODULE LH                   |
| 6    | 1    | 6600743        | HYDRAULIC INST'N MODULE (STD. SPEED)           |
|      | 1    | 6600744        | HYDRAULIC INST'N MODULE (HIGH SPEED)           |
| 7    | 1    | 6600761        | DECAL KIT - INSTRUCTIONS/WARNINGS              |
| 8    | 1    | 6600762        | DECAL KIT                                      |
| 9    | 1    | 42949.01       | BACK PRESSURE VALVE KIT                        |

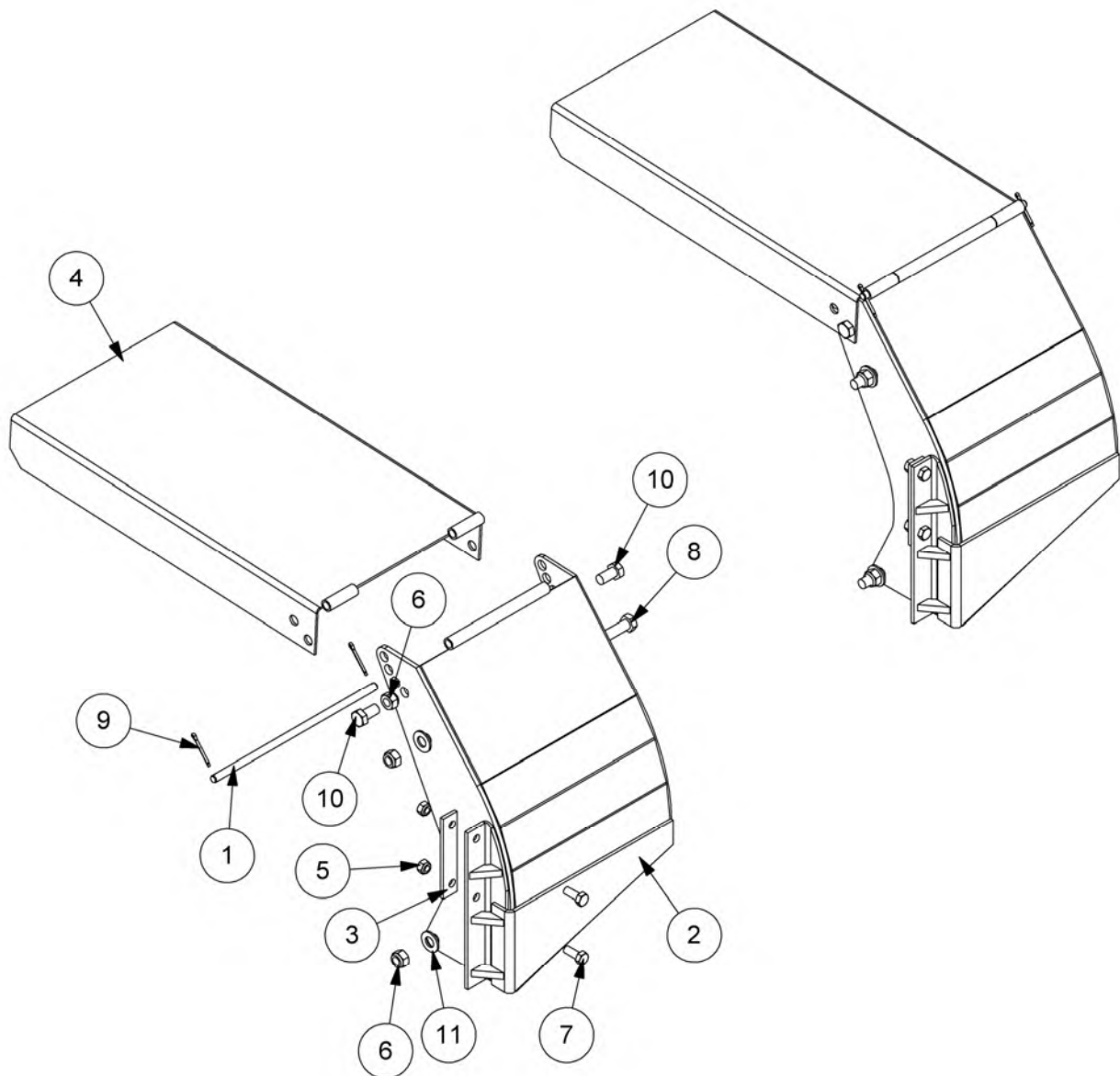




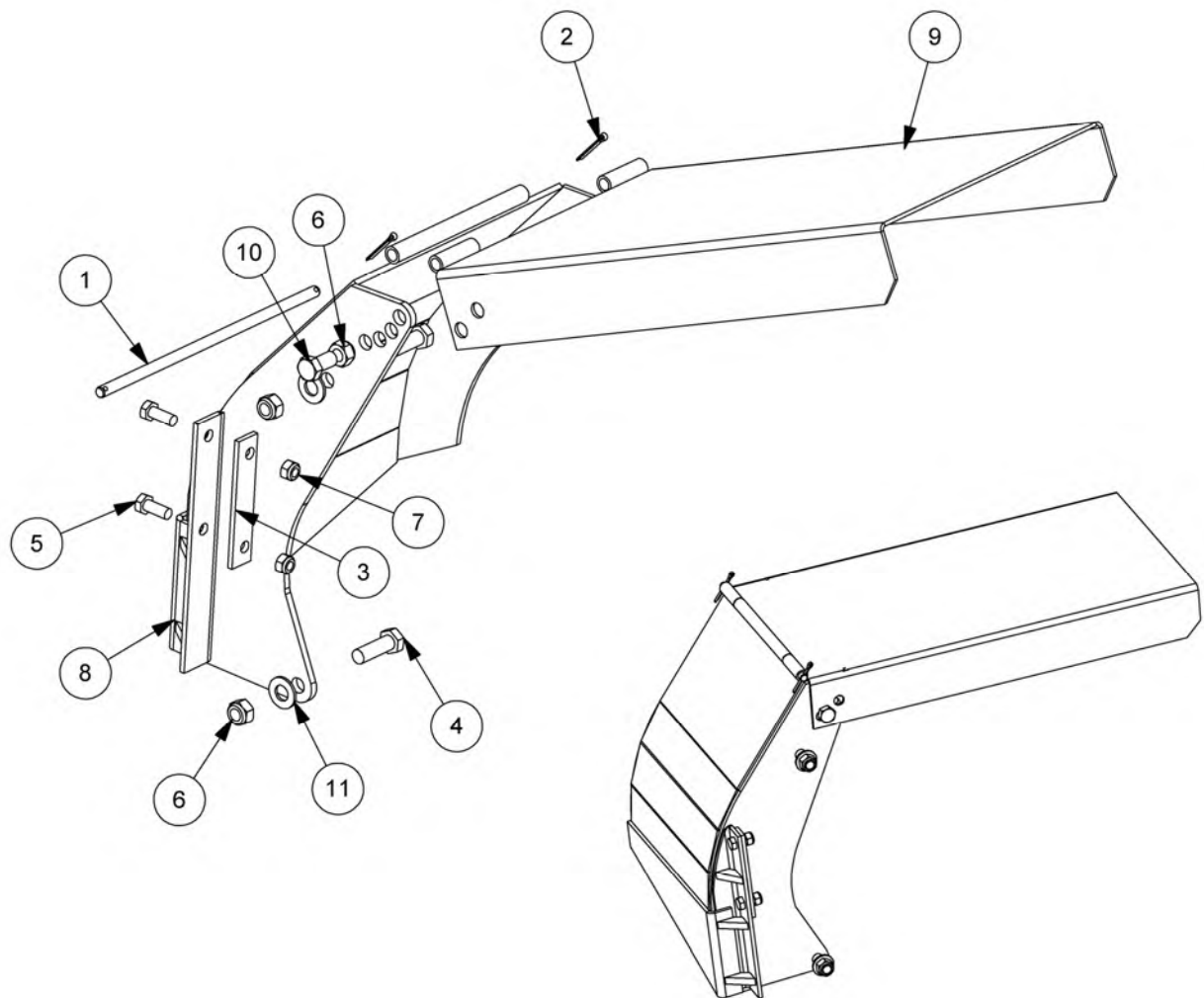
| REF. | QTY. | PART No.       | DESCRIPTION                                    |
|------|------|----------------|--|
|      |      | <b>6600942</b> | <b>ROTARY DITCHER (STD. SPEED) - R/H build</b> |
|      |      | <b>6600946</b> | <b>ROTARY DITCHER (HIGH SPEED) - R/H build</b> |
| 1    | 1    | 23067.02       | HOSE KIT                                       |
| 2    | 1    | 6600701        | MOTOR MODULE - STD. SPEED                      |
|      | 1    | 6600702        | MOTOR MODULE - HIGH SPEED                      |
| 3    | 1    | 6600769        | CUTTING DISC/BLADE ASSEMBLY                    |
| 4    | 1    | 6600766        | HYDRAULIC CHUTE RH (WIDE)                      |
| 5    | 1    | 6600734        | HYDRAULIC ROTATION MODULE RH                   |
| 6    | 1    | 6600743        | HYDRAULIC INST'N MODULE (STD. SPEED)           |
|      | 1    | 6600744        | HYDRAULIC INST'N MODULE (HIGH SPEED)           |
| 7    | 1    | 6600761        | DECAL KIT - INSTRUCTIONS/WARNINGS              |
| 8    | 1    | 6600762        | DECAL KIT                                      |



| REF. | QTY. | PART No.       | DESCRIPTION                                    |
|------|------|----------------|--|
|      |      | <b>6600943</b> | <b>ROTARY DITCHER (STD. SPEED) - R/H build</b> |
|      |      | <b>6600947</b> | <b>ROTARY DITCHER (HIGH SPEED) - R/H build</b> |
| 1    | 1    | 23067.02       | HOSE KIT                                       |
| 2    | 1    | 6600701        | MOTOR MODULE - STD. SPEED                      |
|      | 1    | 6600702        | MOTOR MODULE - HIGH SPEED                      |
| 3    | 1    | 6600769        | CUTTING DISC/BLADE ASSEMBLY                    |
| 4    | 1    | 6600766        | HYDRAULIC CHUTE RH (WIDE)                      |
| 5    | 1    | 6600734        | HYDRAULIC ROTATION MODULE RH                   |
| 6    | 1    | 6600743        | HYDRAULIC INST'N MODULE (STD. SPEED)           |
|      | 1    | 6600744        | HYDRAULIC INST'N MODULE (HIGH SPEED)           |
| 7    | 1    | 6600761        | DECAL KIT - INSTRUCTIONS/WARNINGS              |
| 8    | 1    | 6600762        | DECAL KIT                                      |
| 9    | 1    | 42949.01       | BACK PRESSURE VALVE KIT                        |

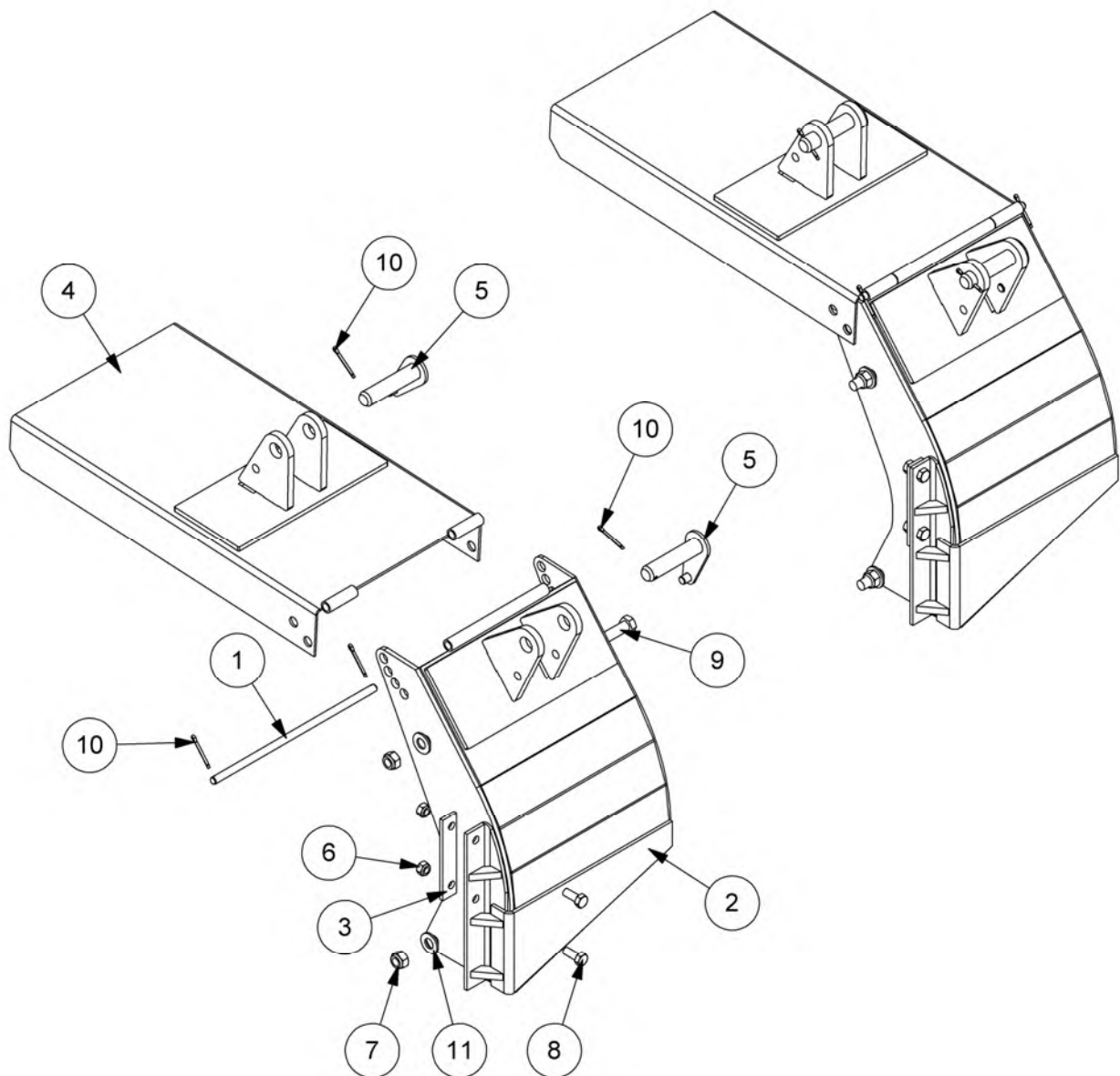


| REF. | QTY. | PART No.       | DESCRIPTION                     |
|------|------|----------------|---------------------------------|
|      |      | <b>6600770</b> | <b>MANUAL CHUTE - L/H Build</b> |
| 1    | 1    | 41.212.03      | DEFLECTOR PIVOT PIN             |
| 2    | 1    | 41928.13       | CHUTE (MANUAL) LH               |
| 3    | 1    | 41928.4        | SPACER                          |
| 4    | 1    | 41929.05       | DEFLECTOR (WIDE)                |
| 5    | 2    | 9163006        | NYLOC NUT                       |
| 6    | 2    | 9163007        | NYLOC NUT                       |
| 7    | 2    | 9313066        | SETSCREW                        |
| 8    | 2    | 9313107        | SETSCREW                        |
| 9    | 2    | 9501406        | SPLIT PIN                       |
| 10   | 2    | 9313067        | SETSCREW                        |
| 11   | 2    | 100106         | FLAT WASHER                     |

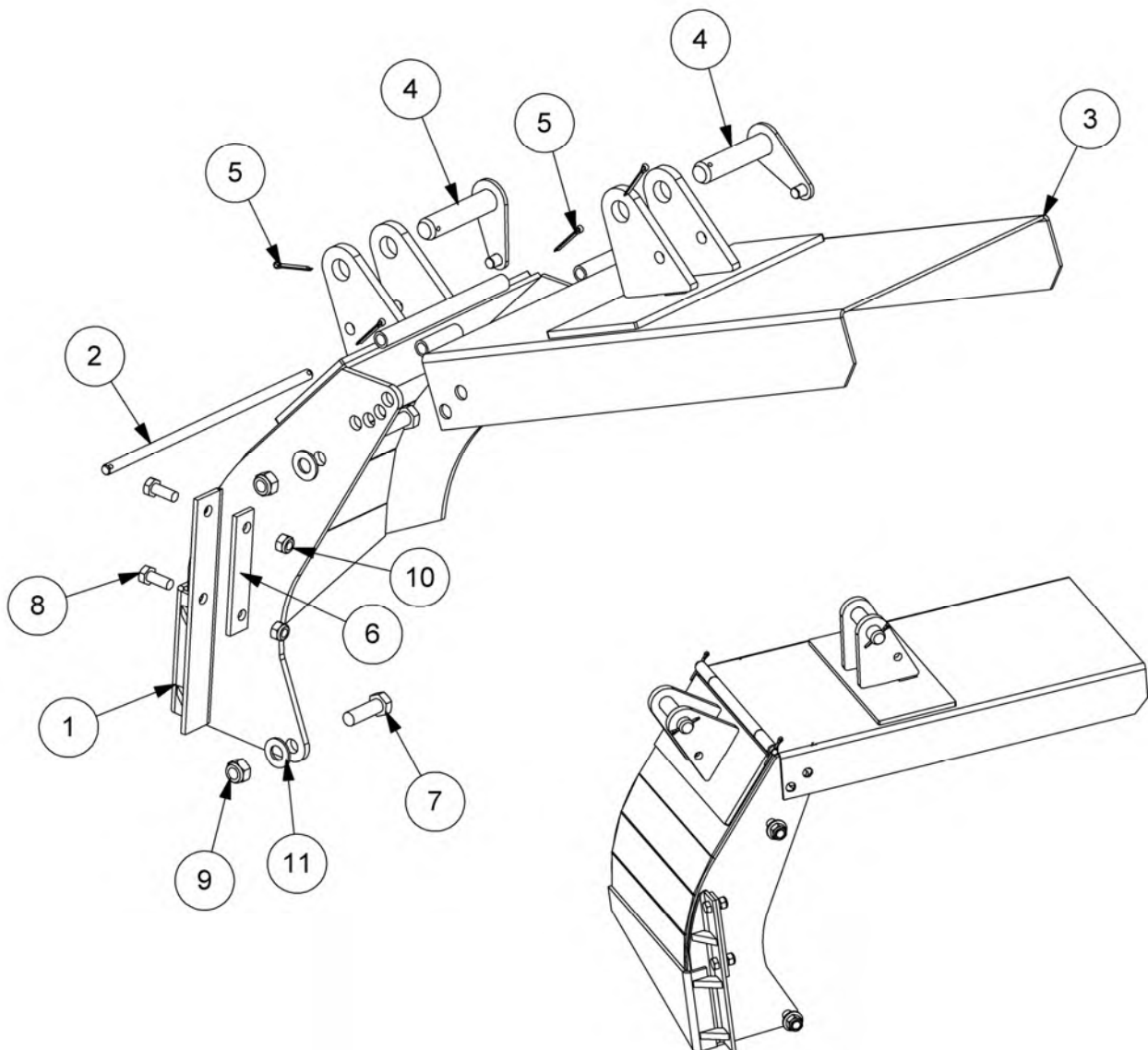


| REF. | QTY. | PART No.       | DESCRIPTION                     |
|------|------|----------------|---------------------------------|
|      |      | <b>6600771</b> | <b>MANUAL CHUTE - R/H Build</b> |
| 1    | 1    | 41.212.03      | DEFLECTOR PIVOT PIN             |
| 2    | 2    | 9501406        | SPLIT PIN                       |
| 3    | 1    | 41928.40       | SPACER                          |
| 4    | 2    | 9313107        | SETSCREW                        |
| 5    | 2    | 9313066        | SETSCREW                        |
| 6    | 4    | 9163007        | NYLOC NUT                       |
| 7    | 2    | 9163006        | NYLOC NUT                       |
| 8    | 1    | 41928.14       | CHUTE (MANUAL) RH               |
| 9    | 1    | 41929.05       | DEFLECTOR (WIDE)                |
| 10   | 2    | 9313067        | SETSCREW                        |
| 11   | 2    | 0100106        | FLAT WASHER                     |

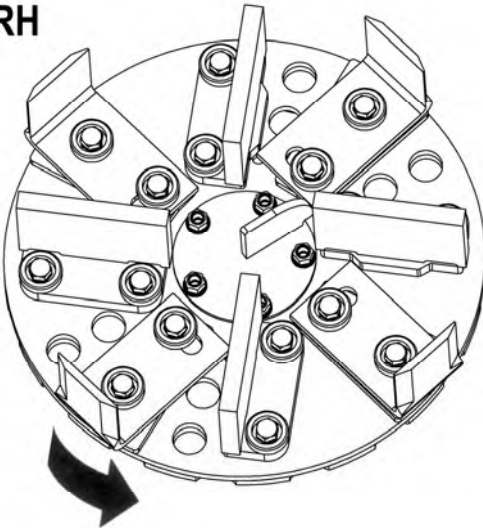
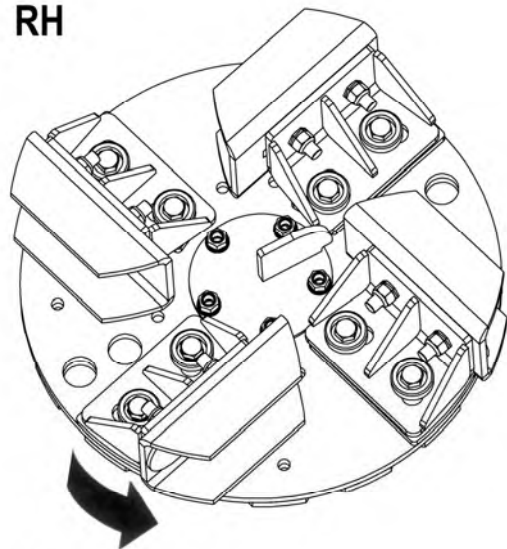
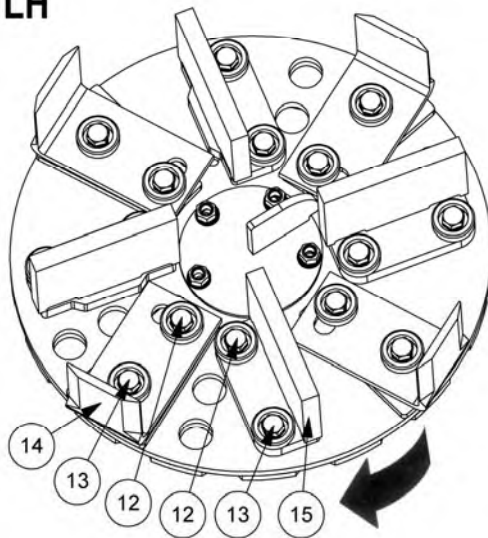
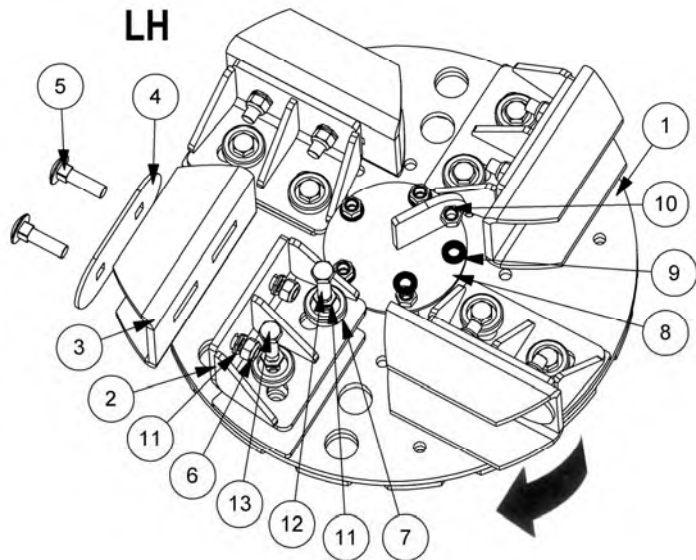




| REF. | QTY. | PART No.       | DESCRIPTION                        |
|------|------|----------------|------------------------------------|
|      |      | <b>6600764</b> | <b>HYDRAULIC CHUTE - L/H Build</b> |
| 1    | 1    | 41.212.03      | DEFLECTOR PIVOT PIN                |
| 2    | 1    | 41928.05       | CHUTE (HYDRAULIC) LH               |
| 3    | 1    | 41928.40       | SPACER                             |
| 4    | 1    | 41929.04       | DEFLECTOR (WIDE)                   |
| 5    | 2    | 7192024        | PIN                                |
| 6    | 2    | 9163006        | NYLOC NUT                          |
| 7    | 2    | 9163007        | NYLOC NUT                          |
| 8    | 2    | 9313066        | SETSCREW                           |
| 9    | 2    | 9313107        | SETSCREW                           |
| 10   | 2    | 9501406        | SPLIT PIN                          |
| 11   | 2    | 0100106        | FLAT WASHER                        |



| REF. | QTY. | PART No.       | DESCRIPTION                        |
|------|------|----------------|------------------------------------|
|      |      | <b>6600766</b> | <b>HYDRAULIC CHUTE - R/H Build</b> |
| 1    | 1    | 41928.06       | CHUTE (HYDRAULIC) RH               |
| 2    | 1    | 41.212.03      | DEFLECTOR PIVOT PIN                |
| 3    | 1    | 41929.04       | DEFLECTOR (WIDE)                   |
| 4    | 2    | 7192024        | PIN                                |
| 5    | 2    | 9501406        | SPLIT PIN                          |
| 6    | 1    | 41928.40       | SPACER                             |
| 7    | 2    | 9313107        | SETSCREW                           |
| 8    | 2    | 9313066        | SETSCREW                           |
| 9    | 2    | 9163007        | NYLOC NUT                          |
| 10   | 2    | 9163006        | NYLOC NUT                          |
| 11   | 2    | 0100106        | FLAT WASHER                        |

**RH****RH****LH****LH**

| REF. | QTY. | PART No.       | DESCRIPTION                          |
|------|------|----------------|--------------------------------------|
|      |      | <b>6600769</b> | <b>CUTTING DISC / BLADE ASSEMBLY</b> |
| 1    | 1    | 41.209.05      | CUTTING DISC                         |
| 2    | 4    | 41936.12       | BLADE SUPPORT                        |
| 3    | 4    | 41936.11       | CUTTING BLADE                        |
| 4    | 4    | 41936.10       | BLADE CLAMP PLATE                    |
| 5    | 8    | 9293127        | COACH BOLT                           |
| 6    | 8    | 9163007        | NYLOC NUT                            |
| 7    | 16   | 41.231.01      | COLLAR                               |
| 8    | 1    | 41.232.01      | DEFLECTOR - CENTRE                   |
| 9    | 5    | B001015        | NORDLOCK WASHERS                     |
| 10   | 5    | 05.968.06      | SELF LOCKING NUT (THIN)              |
| 11   | 24   | 9100507        | LOCKING WASHER(PAIR)                 |
| 12   | 8    | 0211186        | UNF BOLT                             |
| 13   | 8    | 0211166        | UNF BOLT                             |
| 14   | 4    | 41.216.04      | CUTTING BLADE                        |
| 15   | 4    | 41936.05       | PADDLE                               |

## BLADE OPTIONS

**McCONNEL**

Module(s): 41936.01 / .02 / .03 / .04 / .05 / .11, 41.216.01, 41.216.04

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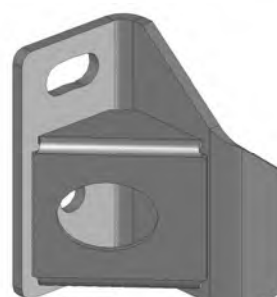
**L/H Standard Duty Single Edged Blade**  
(Part No. 41936.01)



**R/H Standard Duty Single Edged Blade**  
(Part No. 41936.02)



**L/H Heavy Duty Single Edged Blade**  
(Part No. 41936.03)



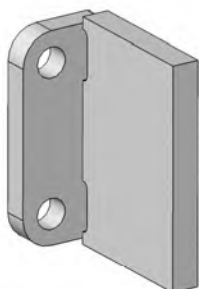
**R/H Heavy Duty Single Edged Blade**  
(Part No. 41936.04)



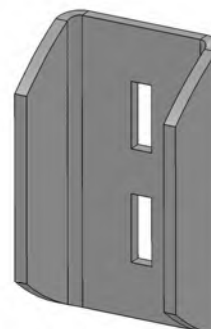
**Double Edged Blade**  
(Part No. 41.216.01)



**Double Edged Blade**  
(Part No. 41.216.04)



**Paddle**  
(Part No. 41936.05)



**Cutting Blade**  
(Part No. 41936.11)

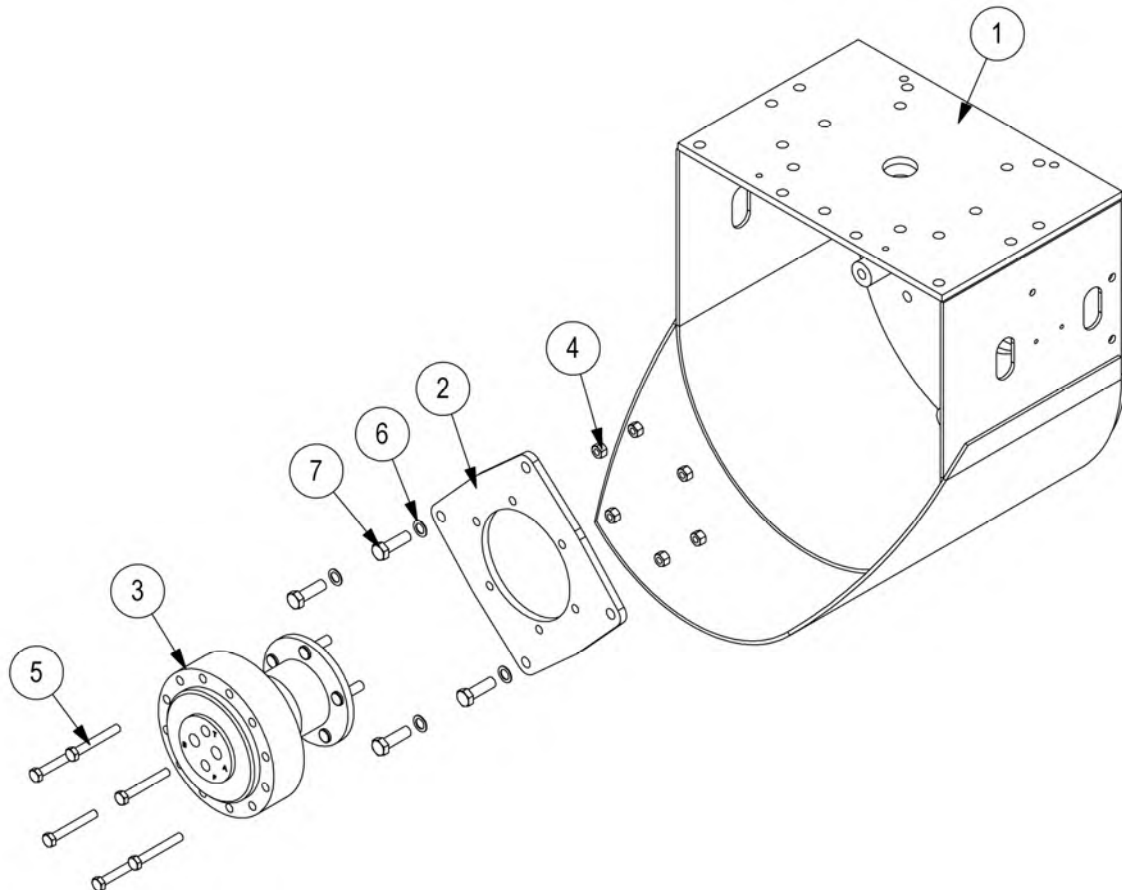
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# MOTOR MODULES (STD. & HIGH SPEED)

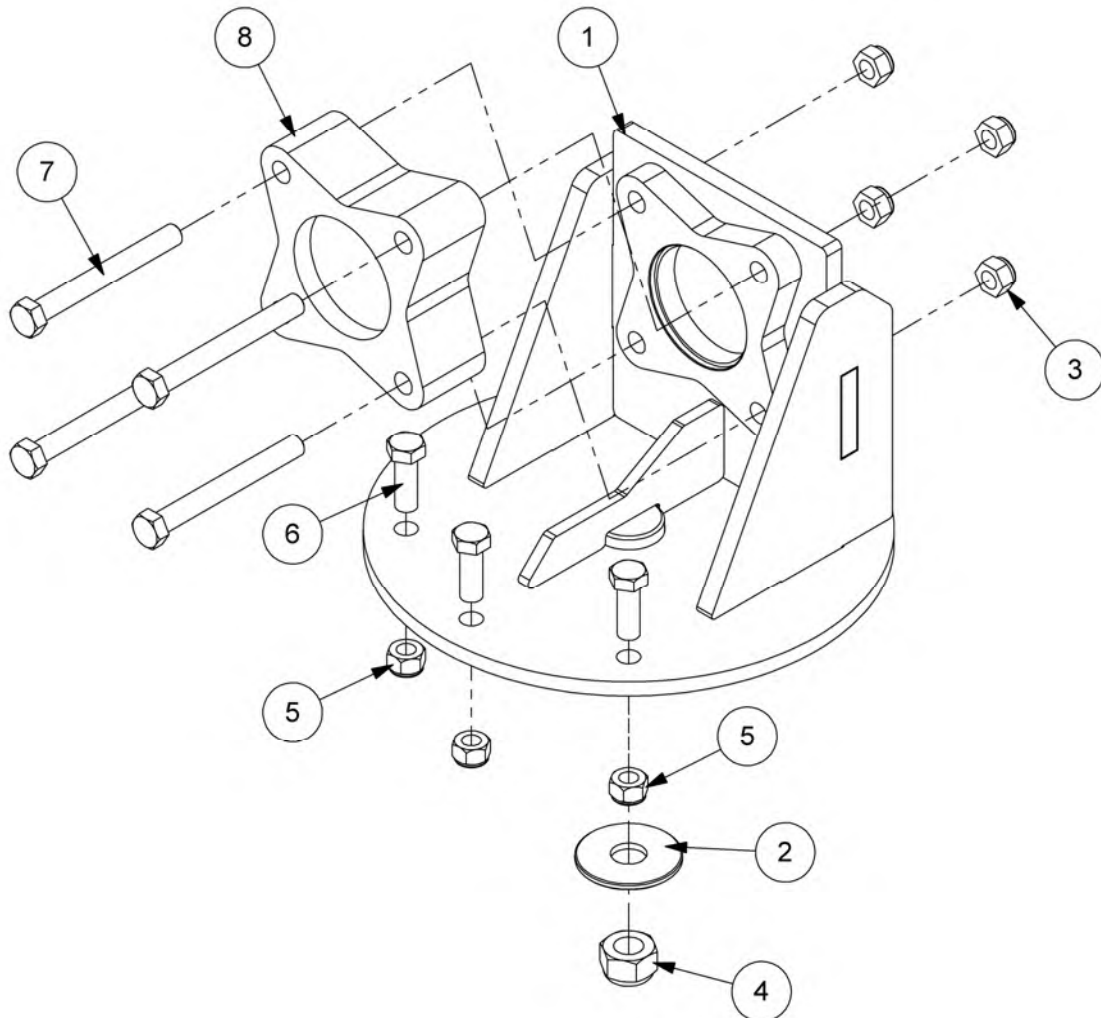
Module(s): 6600701, 6600702

**McCONNEL**

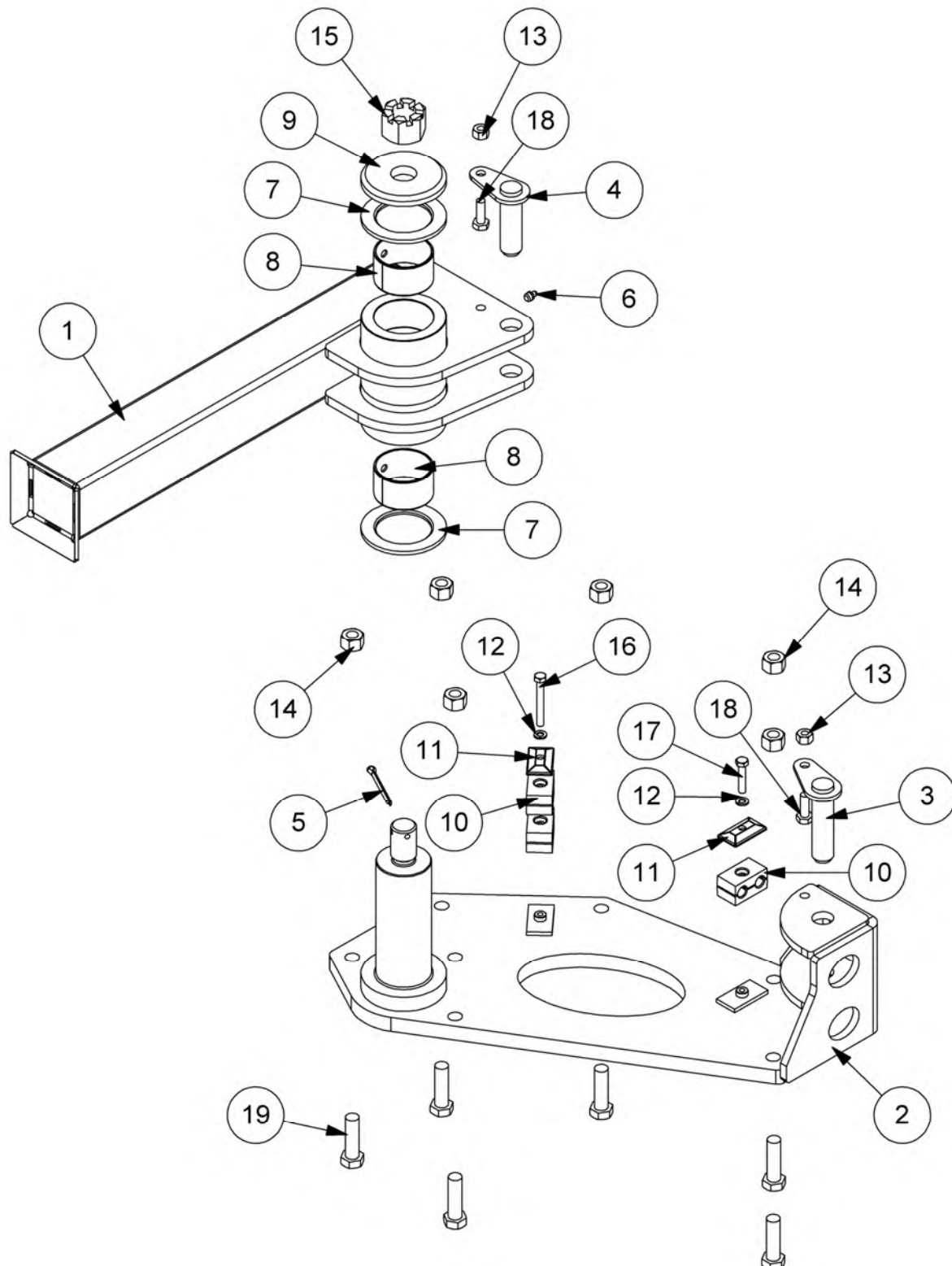


| REF. | QTY. | PART No.       | DESCRIPTION                      |
|------|------|----------------|----------------------------------|
|      |      | <b>6600701</b> | <b>MOTOR MODULE (STD. SPEED)</b> |
| 1    | 1    | 41.208.02      | MAIN HOUSING                     |
| 2    | 1    | 41927.01       | ADAPTOR PLATE                    |
| 3    | 1    | 8301289        | MOTOR (390cc)                    |
|      | 5    | 48063.36       | WHEEL STUD                       |
|      | 1    | 8699245        | SEAL KIT                         |
| 4    | 6    | 9163006        | NYLOC NUT                        |
| 5    | 6    | 0211366        | BOLT                             |
| 6    | 4    | 05.283.04      | SHAKEPROOF WASHER                |
| 7    | 4    | 9313107        | SETSCREW                         |

| REF. | QTY. | PART No.       | DESCRIPTION                      |
|------|------|----------------|----------------------------------|
|      |      | <b>6600702</b> | <b>MOTOR MODULE (HIGH SPEED)</b> |
| 1    | 1    | 41.208.02      | MAIN HOUSING                     |
| 2    | 1    | 41927.02       | ADAPTOR PLATE                    |
| 3    | 1    | 8301298        | MOTOR (200cc)                    |
|      | 5    | 48063.36       | WHEEL STUD                       |
|      | 1    | 8699245        | SEAL KIT                         |
| 4    | 6    | 9163006        | NYLOC NUT                        |
| 5    | 6    | 9213186        | BOLT                             |
| 6    | 4    | 05.283.04      | SHAKEPROOF WASHER                |
| 7    | 4    | 9313107        | SETSCREW                         |



| REF. | QTY. | PART No.       | DESCRIPTION                   |
|------|------|----------------|-------------------------------|
|      |      | <b>6600735</b> | <b>MANUAL ROTATION MODULE</b> |
| 1    | 1    | 41.210.02      | MOUNTING BRACKET              |
| 2    | 1    | 41.214.01      | WASHER                        |
| 3    | 4    | 0141006        | UNF CLEVELOK NUT              |
| 4    | 1    | 9163009        | NYLOC NUT                     |
| 5    | 3    | 9163007        | NYLOC NUT                     |
| 6    | 3    | 9313097        | SETSCREW                      |
| 7    | 4    | 0211446        | UNF BOLT                      |
| 8    | 1    | 7190453        | HEAD SPACER                   |



# HYDRAULIC ROTATION MODULES

**McCONNEL**

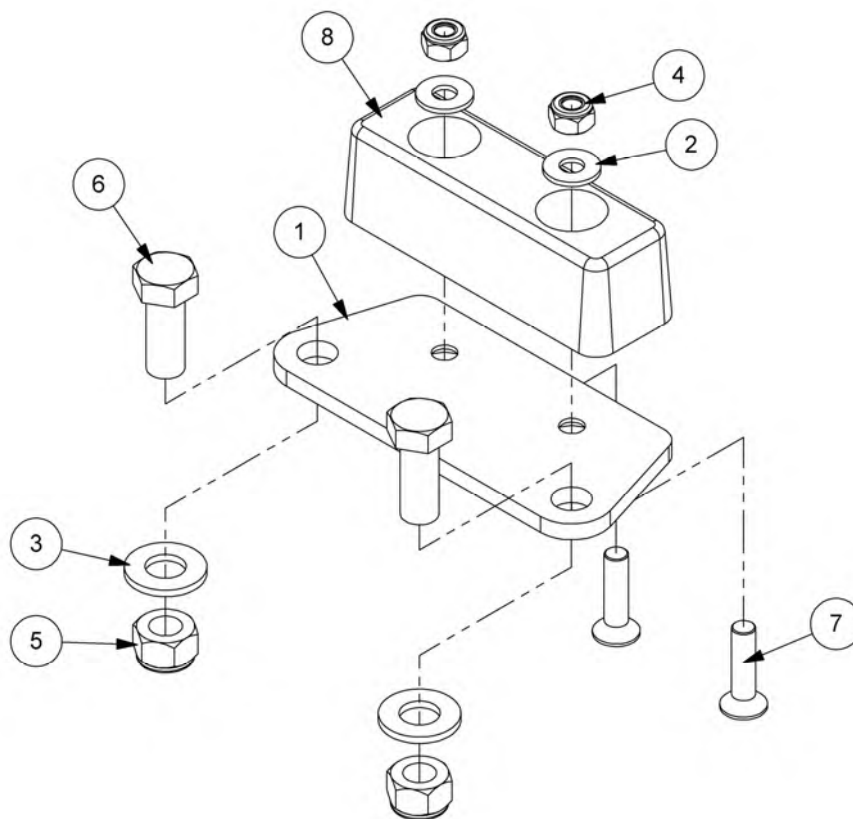
Module(s): 6600733 (Illustrated), 6600734

| REF. | QTY. | PART No.       | DESCRIPTION                             |
|------|------|----------------|---|
|      |      | <b>6600733</b> | <b>HYD. ROTATION MODULE - L/H Build</b> |
|      |      | <b>6600734</b> | <b>HYD. ROTATION MODULE - R/H Build</b> |
| 1    | 1    | 22628.01       | MOUNTING BRACKET                        |
| 2    | 1    | 22629.01       | ROTATOR BRACKET - L/H Build             |
|      | 1    | 22629.02       | ROTATOR BRACKET - R/H Build             |
| 3    | 1    | 41267.03       | PIN                                     |
| 4    | 1    | 41691.06       | PIN                                     |
| 5    | 1    | 05.284.27      | SPLIT COTTER                            |
| 6    | 1    | 0901121        | GREASE NIPPLE                           |
| 7    | 2    | 21135.02       | THRUST WASHER                           |
| 8    | 2    | 21649.02       | GLACIER BUSH                            |
| 9    | 1    | 22204.01       | RETAINING WASHER                        |
| 10   | 3    | 7193065        | HOSE CLAMP (PAIR)                       |
| 11   | 2    | 7193066        | CLAMP PLATE                             |
| 12   | 2    | 9100204        | SPRING WASHER                           |
| 13   | 2    | 9163005        | NYLOC NUT                               |
| 14   | 6    | 9163007        | NYLOC NUT                               |
| 15   | 1    | 9183010        | SLOTTED NUT                             |
| 16   | 1    | 9213134        | BOLT                                    |
| 17   | 1    | 9213084        | BOLT                                    |
| 18   | 2    | 9313065        | SETSCREW                                |
| 19   | 6    | 9313117        | SETSCREW                                |

## BUMP STOP KIT

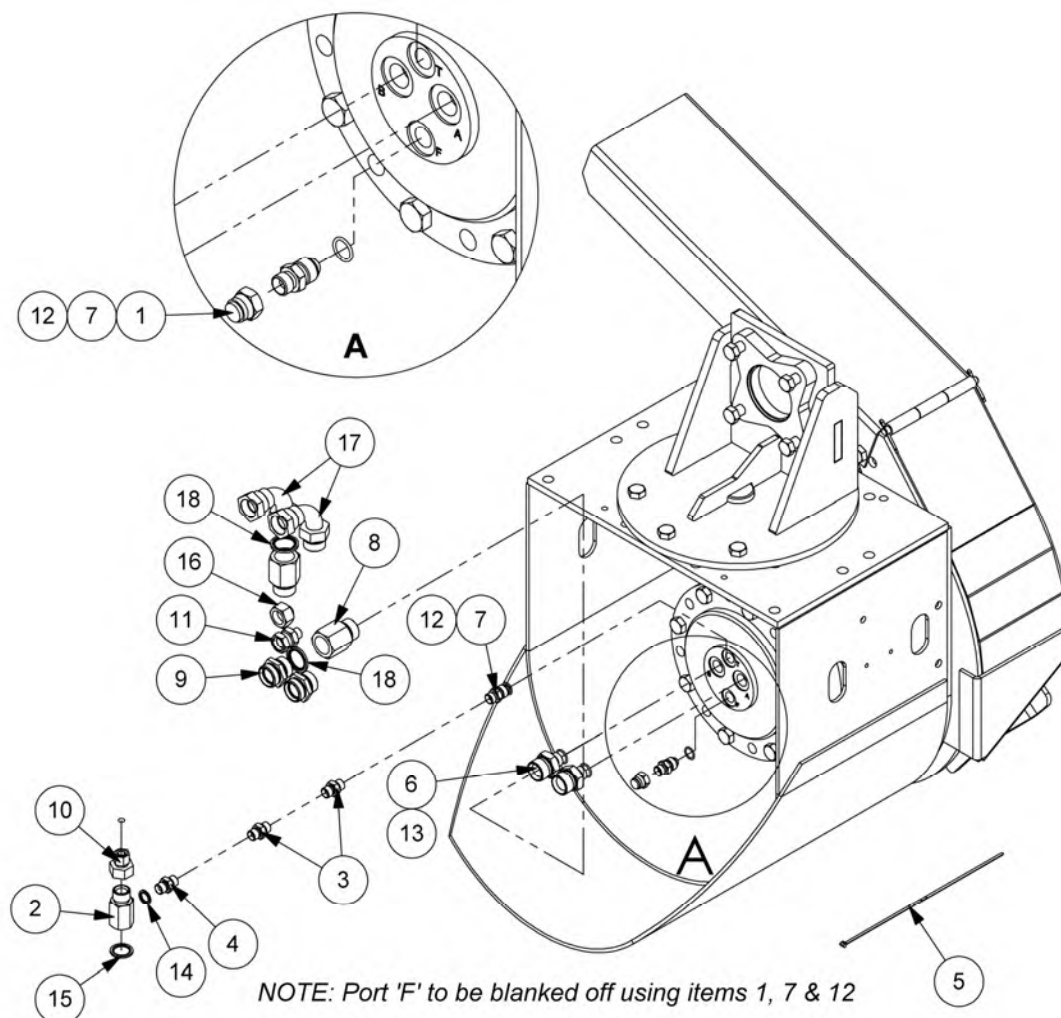
Module(s): 6600736

**McCONNEL**



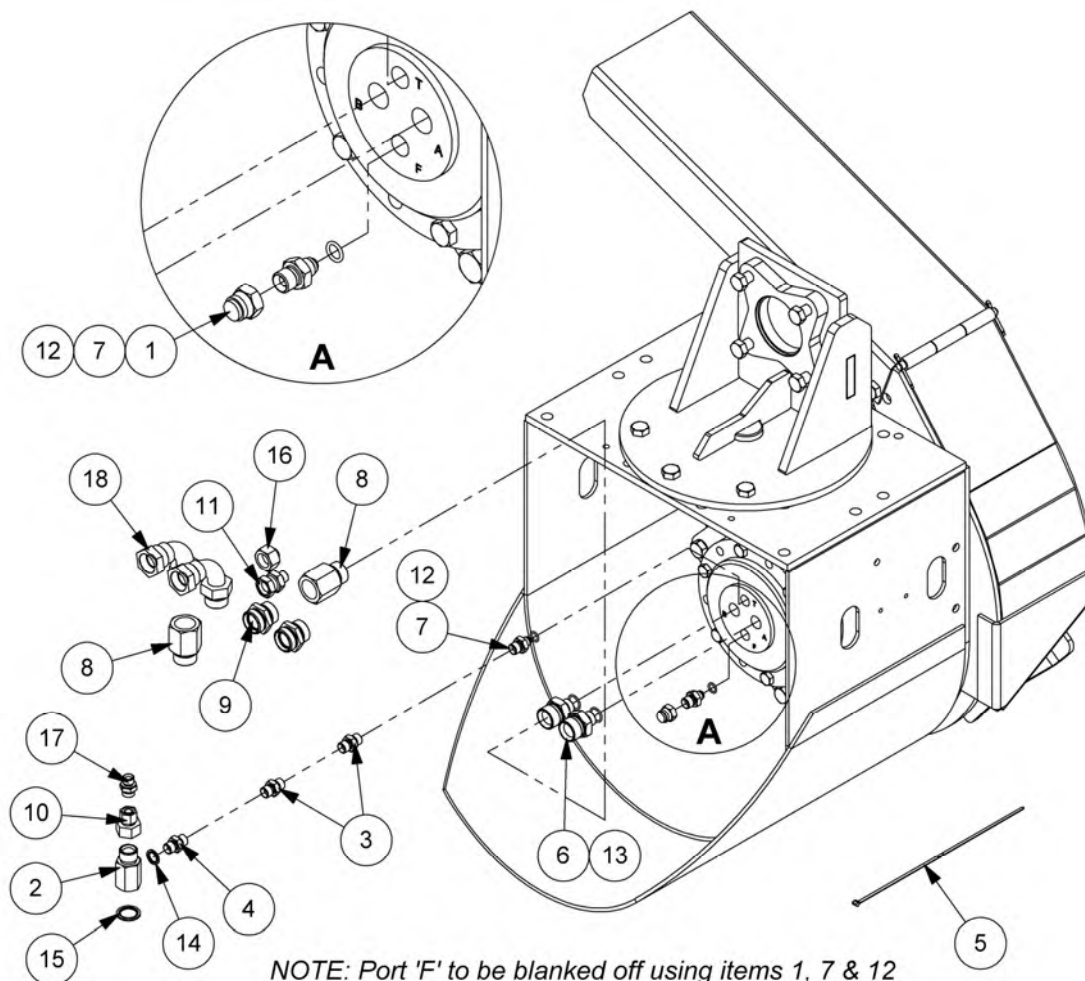
| REF. | QTY. | PART No.       | DESCRIPTION          |
|------|------|----------------|----------------------|
|      |      | <b>6600736</b> | <b>BUMP STOP KIT</b> |
| 1    | 1    | 41928.44       | BUFFER STOP PLATE    |
| 2    | 2    | 9100105        | FLAT WASHER          |
| 3    | 2    | 0100106        | FLAT WASHER          |
| 4    | 2    | 9163005        | NYLOC NUT            |
| 5    | 2    | 9163007        | NYLOC NUT            |
| 6    | 2    | 9313087        | SETSCREW             |
| 7    | 2    | 9353085        | CAPSCREW             |
| 8    | 1    | T7879          | BUFFER RUBBER        |

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| REF. | QTY. | PART No.       | DESCRIPTION                          |
|------|------|----------------|--------------------------------------|
|      |      | <b>6600745</b> | <b>HYDRAULIC INSTALLATION MODULE</b> |
| 1    | 1    | 05.433.04      | BLANKING CAP                         |
| 2    | 1    | 41.217.01      | ADAPTOR                              |
| 3    | 2    | 05.124.01      | ADAPTOR                              |
| 4    | 1    | 6000113        | ADAPTOR                              |
| 5    | 10   | 7196045        | HOSE TIE                             |
| 6    | 2    | 8581331        | ADAPTOR                              |
| 7    | 2    | 8581170        | ADAPTOR                              |
| 8    | 2    | 8581241        | EXTENSION ADAPTOR                    |
| 9    | 2    | 8581387        | ADAPTOR                              |
| 10   | 1    | 8581432        | SWIVEL ADAPTOR                       |
| 11   | 1    | 8581544        | SWIVEL ADAPTOR                       |
| 12   | 2    | 8600908        | O RING                               |
| 13   | 2    | 8600910        | O RING                               |
| 14   | 1    | 8650103        | BONDED SEAL                          |
| 15   | 1    | 8650106        | BONDED SEAL                          |
| 16   | 1    | G3812119       | BLANKING CAP                         |
| 17   | 2    | 8581264        | SWEPT ADAPTOR 90°                    |
| 18   | 2    | 8650108        | BONDED SEAL                          |

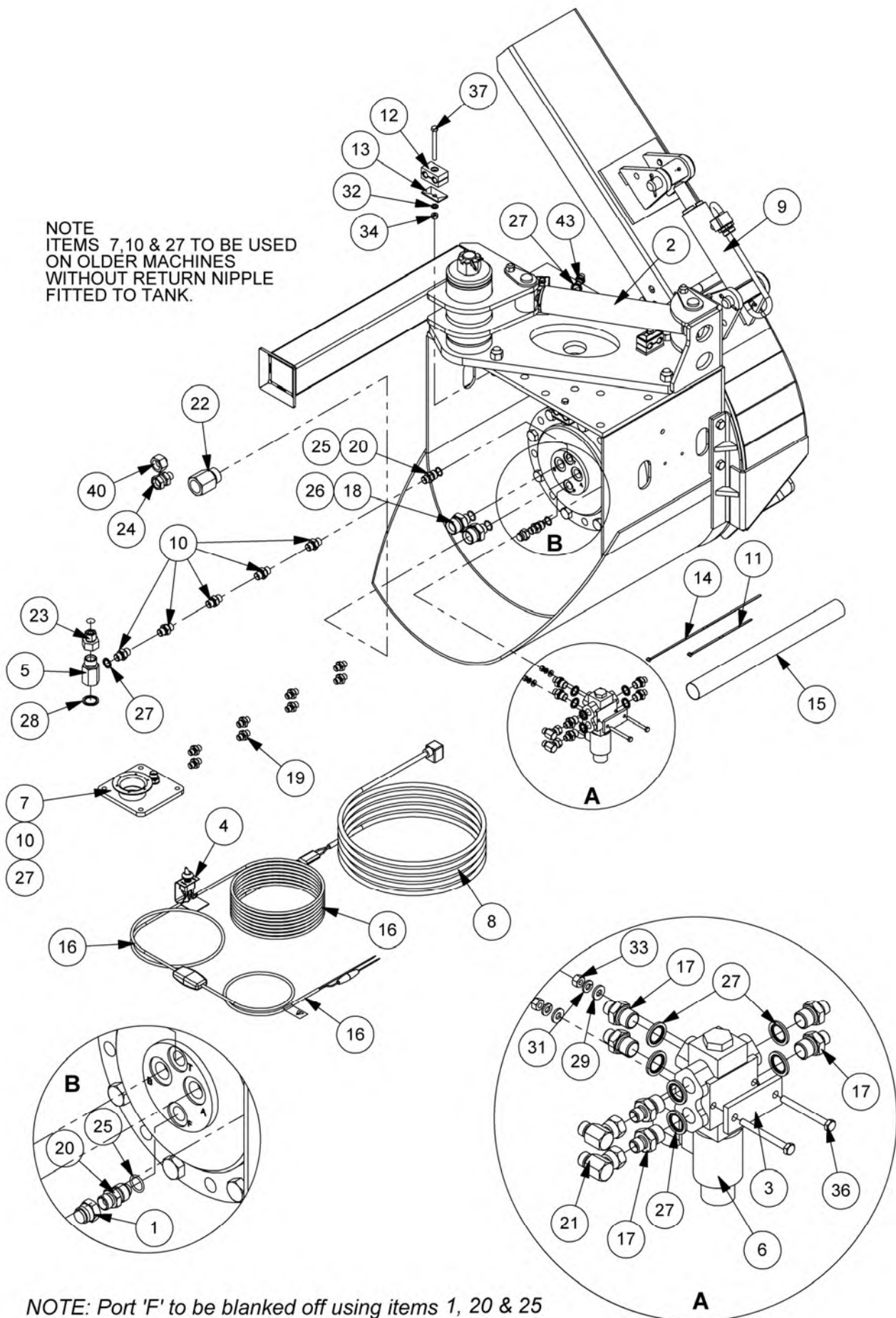




NOTE: Port 'F' to be blanked off using items 1, 7 & 12

| REF. | QTY. | PART No.       | DESCRIPTION                          |
|------|------|----------------|--------------------------------------|
|      |      | <b>6600746</b> | <b>HYDRAULIC INSTALLATION MODULE</b> |
| 1    | 1    | 05.433.04      | BLANKING CAP                         |
| 2    | 1    | 41.217.01      | ADAPTOR                              |
| 3    | 2    | 05.124.01      | ADAPTOR                              |
| 4    | 1    | 6000113        | ADAPTOR                              |
| 5    | 10   | 7196045        | HOSE TIE                             |
| 6    | 2    | 8581331        | ADAPTOR                              |
| 7    | 2    | 08.955.06      | ADAPTOR                              |
| 8    | 2    | 8581241        | EXTENSION ADAPTOR                    |
| 9    | 2    | 8581387        | ADAPTOR                              |
| 10   | 1    | 8581432        | SWIVEL ADAPTOR                       |
| 11   | 1    | 8581544        | SWIVEL ADAPTOR                       |
| 12   | 2    | 8600906        | O RING                               |
| 13   | 2    | 8600910        | O RING                               |
| 14   | 1    | 8650103        | BONDED SEAL                          |
| 15   | 1    | 8650106        | BONDED SEAL                          |
| 16   | 1    | G3812119       | BLANKING CAP                         |
| 17   | 1    | G3812368       | ADAPTOR                              |
| 18   | 2    | 8581264        | SWEPT ADAPTOR 90°                    |





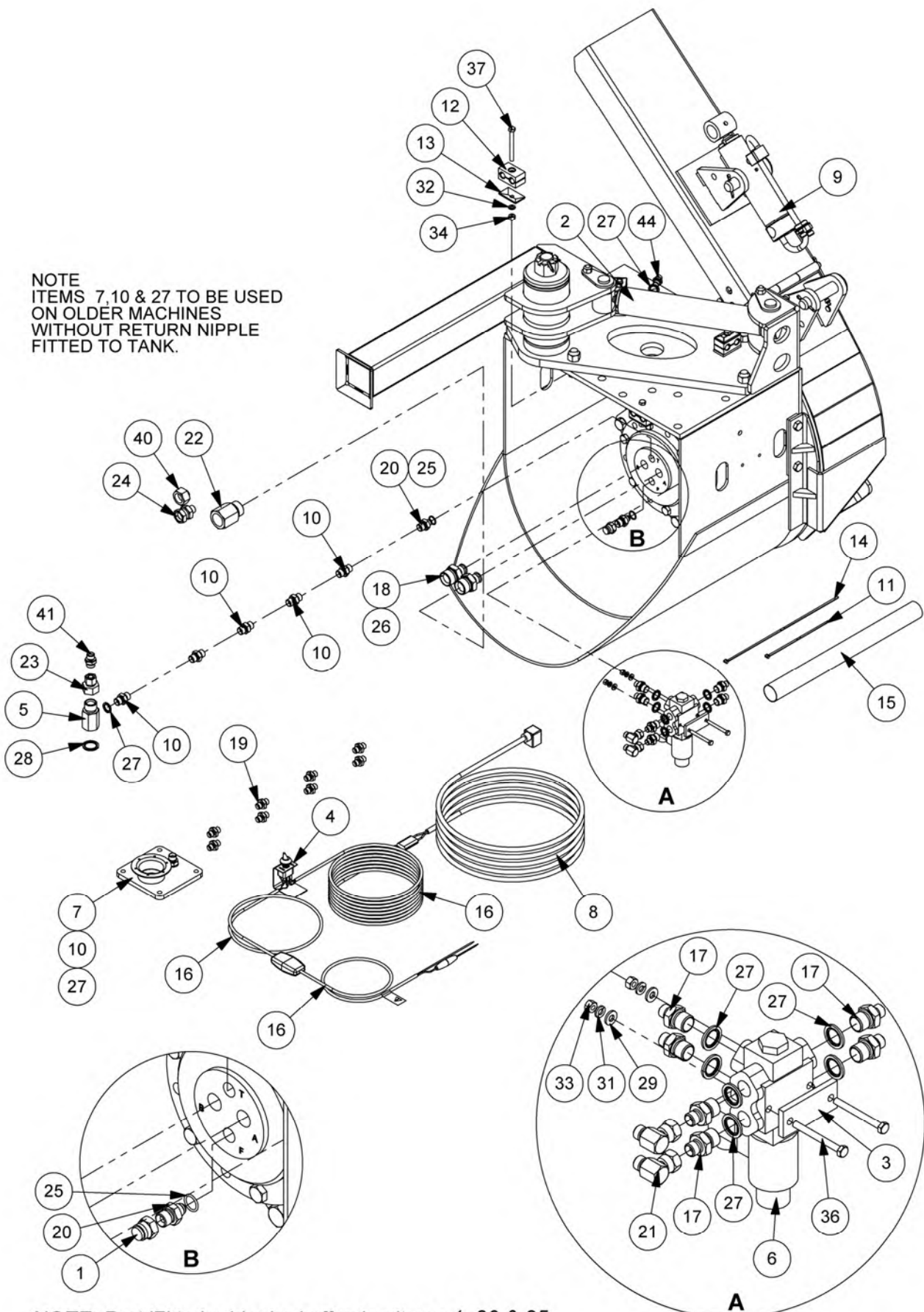
## HYDRAULIC INST'N MODULE (STD. SPEED)

**McCONNEL**

Module(s): 6600743

| REF. | QTY. | PART No.       | DESCRIPTION                          |
|------|------|----------------|--------------------------------------|
|      |      | <b>6600743</b> | <b>HYDRAULIC INSTALLATION MODULE</b> |
| 1    | 1    | 05.433.04      | BLANKING CAP                         |
| 2    | 1    | 7560355        | HYDRAULIC RAM                        |
| 3    | 1    | 21546.01       | SPACER                               |
| 4    | 1    | 21556.01       | SWITCH BRACKET                       |
| 5    | 1    | 41.217.01      | ADAPTOR                              |
| 6    | 1    | 41605.01       | DIVERTER VALVE                       |
| 7    | 1    | 43175.02       | COVER PLATE                          |
| 8    | 1    | 43177.43       | LOOM - DIVERTER EXTENSION            |
| 9    | 1    | 43377.03       | HYDRAULIC RAM                        |
| 10   | 6    | 6000113        | ADAPTOR                              |
| 11   | 8    | 7135084        | CABLE TIE                            |
| 12   | 2    | 7193065        | HOSE CLAMP (PAIR)                    |
| 13   | 2    | 7193066        | CLAMP PLATE                          |
| 14   | 10   | 7196045        | HOSE TIE                             |
| 15   | 1    | 7213005        | HOSE ARMOUR                          |
| 16   | 1    | 8402208        | SWITCH KIT                           |
| 17   | 6    | 8581115        | ADAPTOR                              |
| 18   | 2    | 8581331        | ADAPTOR                              |
| 19   | 8    | 8581169        | ADAPTOR                              |
| 20   | 2    | 8581170        | ADAPTOR                              |
| 21   | 2    | 8581190        | ADAPTOR ELBOW 90°                    |
| 22   | 1    | 8581241        | EXTENSION ADAPTOR                    |
| 23   | 1    | 8581432        | SWIVEL ADAPTOR                       |
| 24   | 1    | 8581544        | SWIVEL ADAPTOR                       |
| 25   | 2    | 8600908        | O RING                               |
| 26   | 2    | 8600910        | O RING                               |
| 27   | 10   | 8650103        | BONDED SEAL                          |
| 28   | 1    | 8650106        | BONDED SEAL                          |
| 29   | 2    | 9100103        | FLAT WASHER                          |
| 30   | 1    | 9100105        | FLAT WASHER                          |
| 31   | 2    | 9100203        | SPRING WASHER                        |
| 32   | 2    | 9100204        | SPRING WASHER                        |
| 33   | 2    | 9163003        | NYLOC NUT                            |
| 34   | 2    | 9163004        | NYLOC NUT                            |
| 35   | 1    | 9163005        | NYLOC NUT                            |
| 36   | 2    | 9213123        | BOLT                                 |
| 37   | 1    | 9213164        | BOLT                                 |
| 38   | 1    | 9213124        | BOLT                                 |
| 39   | 1    | 9213165        | BOLT                                 |
| 40   | 1    | G3812119       | BLANKING CAP                         |
| 41   | 1    | 7193063        | PIPE CLAMP(PAIR)                     |
| 42   | 1    | 7193064        | CLAMP PLATE                          |
| 43   | 2    | 8130103        | ADAPTOR RESTRICTOR                   |

NOTE  
ITEMS 7, 10 & 27 TO BE USED  
ON OLDER MACHINES  
WITHOUT RETURN NIPPLE  
FITTED TO TANK.



NOTE: Port 'F' to be blanked off using items 1, 20 & 25

## HYDRAULIC INST'N MODULE (HIGH SPEED)

**McCONNEL**

Module(s): 6600744

| REF. | QTY. | PART No.       | DESCRIPTION                          |
|------|------|----------------|--------------------------------------|
|      |      | <b>6600744</b> | <b>HYDRAULIC INSTALLATION MODULE</b> |
| 1    | 1    | 05.433.04      | BLANKING CAP                         |
| 2    | 1    | 7560355        | HYDRAULIC RAM                        |
| 3    | 1    | 21546.01       | SPACER                               |
| 4    | 1    | 21556.01       | SWITCH BRACKET                       |
| 5    | 1    | 41.217.01      | ADAPTOR                              |
| 6    | 1    | 41605.01       | DIVERTER VALVE                       |
| 7    | 1    | 43175.02       | COVER PLATE                          |
| 8    | 1    | 43177.43       | LOOM - DIVERTER EXTENSION            |
| 9    | 1    | 43377.03       | HYDRAULIC RAM                        |
| 10   | 6    | 6000113        | ADAPTOR                              |
| 11   | 8    | 7135084        | CABLE TIE                            |
| 12   | 2    | 7193065        | HOSE CLAMP (PAIR)                    |
| 13   | 2    | 7193066        | CLAMP PLATE                          |
| 14   | 10   | 7196045        | HOSE TIE                             |
| 15   | 1    | 7213005        | HOSE ARMOUR                          |
| 16   | 1    | 8402208        | SWITCH KIT                           |
| 17   | 6    | 8581115        | ADAPTOR                              |
| 18   | 2    | 8581331        | ADAPTOR                              |
| 19   | 8    | 8581169        | ADAPTOR                              |
| 20   | 2    | 08.955.06      | ADAPTOR                              |
| 21   | 2    | 8581190        | ADAPTOR ELBOW 90°                    |
| 22   | 1    | 8581241        | EXTENSION ADAPTOR                    |
| 23   | 1    | 8581432        | SWIVEL ADAPTOR                       |
| 24   | 1    | 8581544        | SWIVEL ADAPTOR                       |
| 25   | 2    | 8600908        | O RING                               |
| 26   | 2    | 8600910        | O RING                               |
| 27   | 10   | 8650103        | BONDED SEAL                          |
| 28   | 1    | 8650106        | BONDED SEAL                          |
| 29   | 2    | 9100103        | FLAT WASHER                          |
| 30   | 1    | 9100105        | FLAT WASHER                          |
| 31   | 2    | 9100203        | SPRING WASHER                        |
| 32   | 2    | 9100204        | SPRING WASHER                        |
| 33   | 2    | 9163003        | NYLOC NUT                            |
| 34   | 2    | 9163004        | NYLOC NUT                            |
| 35   | 1    | 9163005        | NYLOC NUT                            |
| 36   | 2    | 9213123        | BOLT                                 |
| 37   | 1    | 9213164        | BOLT                                 |
| 38   | 1    | 9213124        | BOLT                                 |
| 39   | 1    | 9213165        | BOLT                                 |
| 40   | 1    | G3812119       | BLANKING CAP                         |
| 41   | 1    | G3812368       | ADAPTOR                              |
| 42   | 1    | 7193063        | PIPE CLAMP(PAIR)                     |
| 43   | 1    | 7193064        | CLAMP PLATE                          |
| 44   | 2    | 8130103        | ADAPTOR RESTRICTOR                   |



## Module(s): 42949.01

RETURN TO  
TANK & FILTER



**BACK PRESSURE VALVE KIT****McCONNEL**

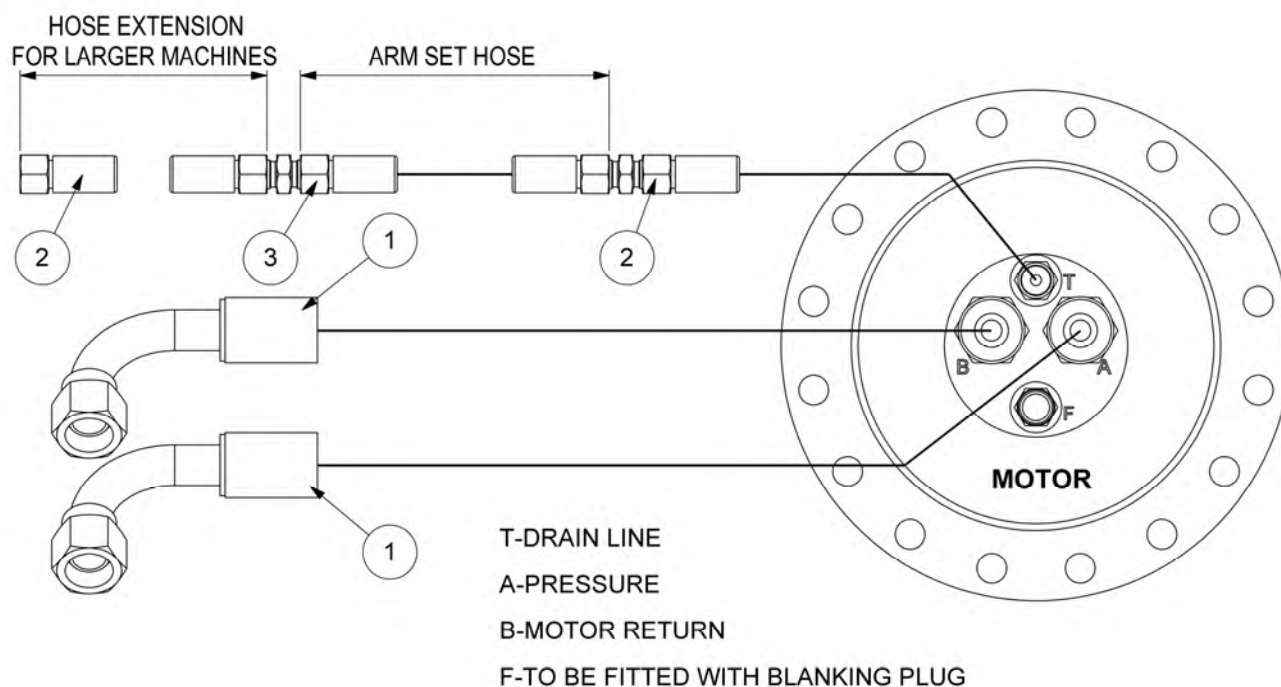
Module(s): 42949.01

| REF. | QTY. | PART No.        | DESCRIPTION                    |
|------|------|-----------------|--------------------------------|
|      |      | <b>42949.01</b> | <b>BACK PRESSURE VALVE KIT</b> |
| 1    | 1    | 42949.31        | VALVE BODY                     |
| 2    | 1    | 42949.32        | PISTON                         |
| 3    | 1    | 8600402         | O RING                         |
| 4    | 1    | 8609402         | AE RING                        |
| 5    | 2    | 8106027         | SPRING                         |
| 6    | 1    | 8600403         | O RING                         |
| 7    | 1    | 8609403         | AE RING                        |
| 8    | 3    | 8650108         | BONDED SEAL                    |
| 9    | 1    | 42949.33        | ADAPTOR                        |
| 10   | 1    | 30.052.76       | ADAPTOR                        |
| 11   | 1    | 10.001.08       | HOSE - 1/4" BSP FS/FS x 400mm  |
| 12   | 1    | 04.056.33       | ADAPTOR TEE                    |
| 13   | 1    | 05.290.01       | BONDED SEAL                    |

# HYDRAULIC HOSE KIT

**McCONNEL**

Module(s): 23067.03



| REF. | QTY. | PART No.        | DESCRIPTION                  |
|------|------|-----------------|------------------------------|
|      |      | <b>23067.03</b> | <b>HYDRAULIC HOSE KIT</b>    |
| 1    | 2    | 21268.21        | HOSE - 1"BSP FS/F90 x 1100mm |
| 2    | 2    | 8511243         | HOSE - 3/8"BSP FS/FS x 42"   |
| 3    | 1    | 8511433         | HOSE - 3/8"BSP FS/FS x 300"  |

**REF. QTY. PART No. DESCRIPTION****HYDRAULIC HOSE KIT**

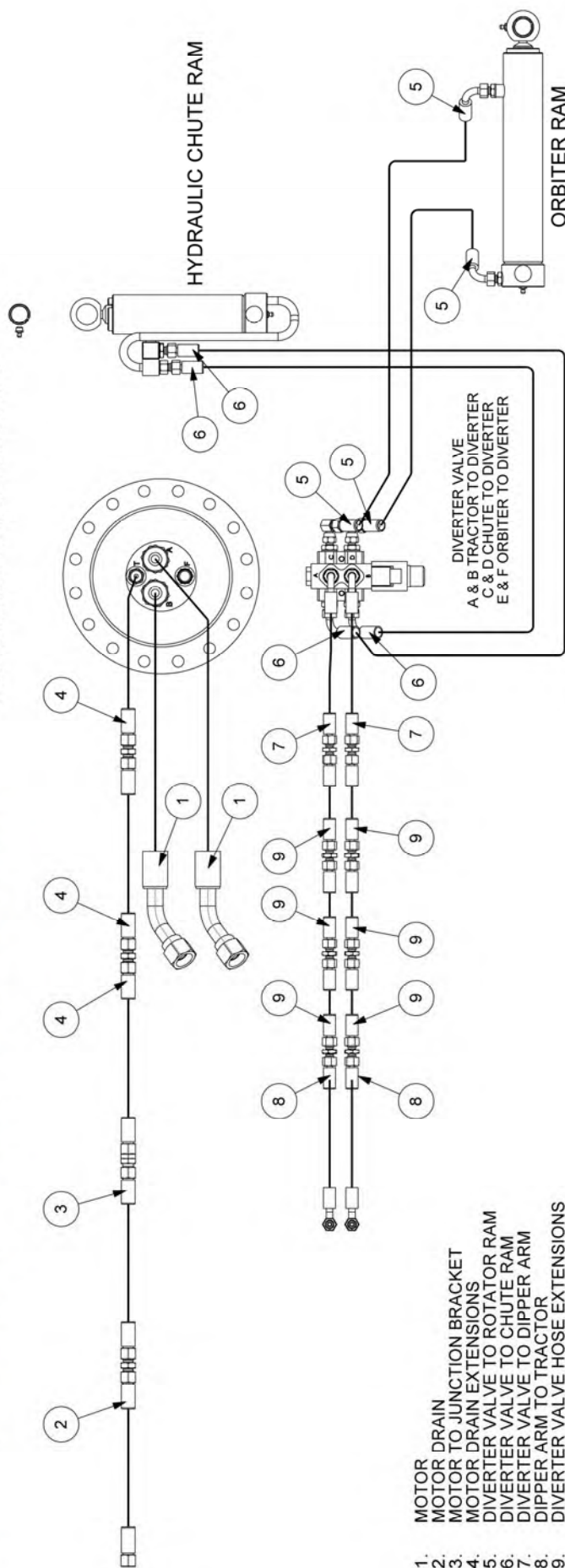
|   |   |           |                                 |
|---|---|-----------|---------------------------------|
| 1 | 2 | 21270.29  | HOSE - 1" BSP FS/F135 x 1900mm  |
| 2 | 1 | 10.003.70 | HOSE - 3/8" BSP FS/FS x 6000mm  |
| 3 | 1 | 10.003.32 | HOSE - 3/8" BSP FS/FS x 2200mm  |
| 4 | 3 | 10.003.20 | HOSE - 3/8" BSP FS/FS x 1000mm  |
| 5 | 2 | 10.002.21 | HOSE - 1/4" BSP FS/F90 x 1100mm |
| 6 | 2 | 10.002.25 | HOSE - 1/4" BSP FS/F90 x 1500mm |
| 7 | 2 | 10.002.47 | HOSE - 1/4" BSP FS/F90 x 3700mm |
| 8 | 2 | 10.002.70 | HOSE - 1/4" BSP FS/F90 x 6000mm |
| 9 | 6 | 10.001.20 | HOSE - 1/4" BSP FS/FS x 1000mm  |

T-DRAIN LINE

A-PRESSURE

B-MOTOR RETURN

F-TO BE FITTED WITH BLANKING PLUG

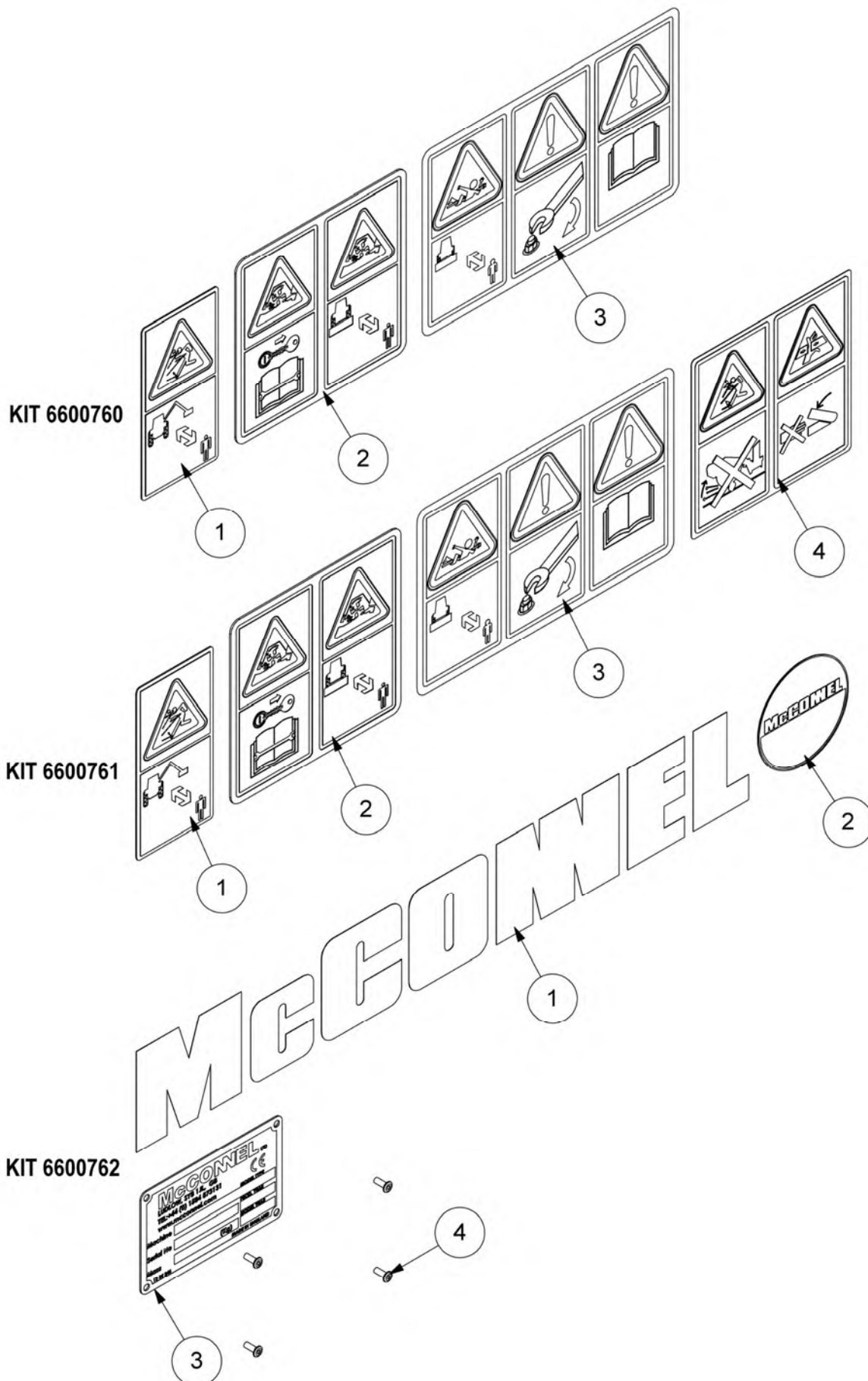




# DECAL KITS

Module(s): 6600760, 6600761, 6600762

**McCONNEL**



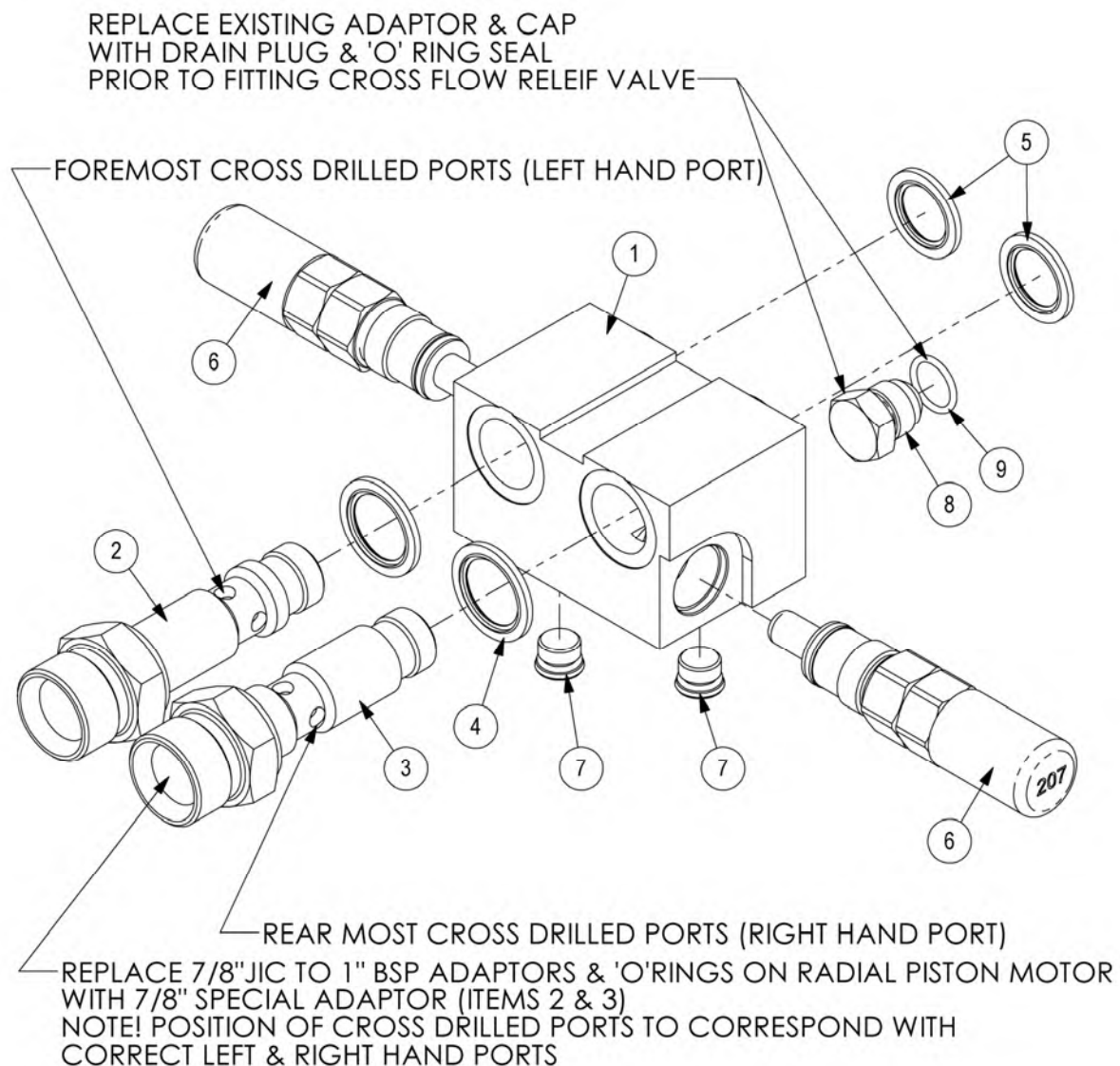
**DECAL KITS****McCONNEL**

Module(s): 6600760, 6600761, 6600762

| REF. | QTY. | PART No.       | DESCRIPTION                              |
|------|------|----------------|--|
|      |      | <b>6600760</b> | <b>DECAL KIT - INSTRUCTIONS/WARNINGS</b> |
| 1    | 1    | 09.821.04      | DECAL - DANGER THROWN DEBRIS             |
| 2    | 1    | 09.821.31      | DECAL - COMBINED EURODECAL               |
| 3    | 1    | 09.821.34      | DECAL - COMBINED EURODECAL               |

| REF. | QTY. | PART No.       | DESCRIPTION                              |
|------|------|----------------|--|
|      |      | <b>6600761</b> | <b>DECAL KIT - INSTRUCTIONS/WARNINGS</b> |
| 1    | 1    | 09.821.04      | DECAL - DANGER THROWN DEBRIS             |
| 2    | 1    | 09.821.31      | DECAL - COMBINED EURODECAL               |
| 3    | 1    | 09.821.34      | DECAL - COMBINED EURODECAL               |
| 4    | 1    | 09.821.26      | DECAL - ORBIT HEAD                       |

| REF. | QTY. | PART No.       | DESCRIPTION                 |
|------|------|----------------|-----------------------------|
|      |      | <b>6600762</b> | <b>DECAL KIT - BRANDING</b> |
| 1    | 1    | 1290255        | DECAL - MCCONNEL (BLACK)    |
| 2    | 1    | 1290742        | DECAL - MCCONNEL ROUNDEL    |
| 3    | 1    | 1335246        | SERIAL No. PLATE            |
| 4    | 4    | 7103230        | POP RIVET                   |



| REF. | QTY. | PART No.       | DESCRIPTION                        |
|------|------|----------------|------------------------------------|
|      |      | <b>6600765</b> | <b>RELIEF VALVE KIT</b>            |
| 1    | 1    | 8132331        | RELIEF VALVE MANIFOLD              |
| 2    | 1    | 8581656        | ADAPTOR CROSS DRILLED (BACK PORT)  |
| 3    | 1    | 8581657        | ADAPTOR CROSS DRILLED (FRONT PORT) |
| 4    | 2    | 8650106        | BONDED SEAL                        |
| 5    | 2    | 8650105        | BONDED SEAL                        |
| 6    | 2    | 8125095        | RELIEF VALVE (207 BAR)             |
| 7    | 2    | 23242.05       | ZERO LEAK PLUG                     |
| 8    | 1    | 8581587        | JIC SOLID PLUG                     |
| 9    | 1    | 8600908        | O RING                             |



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