



Operators Manual & Parts List

TRIDECK

**16000TDR
20000TDR**

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Disclaimer

While every effort has been made in the production of this manual to ensure that the information contained herein is full and correct, Major assumes no responsibility for errors or omissions.

Major reserves the right to modify the machinery and the technical data contained within the manual without prior notice.

Further to this, Major assumes no liability for any damages which may result from the use of the information contained within this manual.

Contents

Introduction

Thank you	1
Safety Aspects	1
Intended use	1
Register Your Product and Warranty Online	1
Tractor Requirements	2

Safety

Hazards associated with operating Grass Cutting Machinery	2
Operating Safely	3
Workstation	4
Regulations for use of the transmission	4
PTO Shaft Safety	4
Driving Safely on Public Roads	5
Inspections before Use	6
Starting Regulations	6

Product Identification

Machine Serial Numbers	7
Product Specifications	7
EEC certificate of conformity for machines	8
Machine Safety Labels	9
Key to Main Parts	10
Blade Rotation	11
Blade system	12
Drive-line gearboxes	12

Operating the Machine

Attaching machine to the Tractor	13
Transport Position	14
Operating the Machine/Mowing	15
Warnings	16
Manual override	18

Maintenance

Machine storage	19
PTO Shaft Maintenance	19
Transmission Bolts	20
Roller <i>(if applicable)</i>	20
Replacement of wear parts	20
Clearing out a blockage	20
Wing shafts alignment <i>(if applicable)</i>	20
Troubleshooting	21
Lubrication schedule	23
Wheel Nuts	23
Belt Adjustment	24
Belt Removal & Fitting	24
Taper Bush Installation	25
Taper Bush Removal	25

Spare Parts

TDR Spare Parts	26
Axles	32
Hose Assemblies	36
Blades	38
PTO Shafts	43
Gearboxes	43

Introduction

Thank you

We appreciate having you as a customer and wish you many years of safe and satisfied use of your machine.

Safety Aspects

This manual is an important part of your machine and should remain with the machine when you buy it. Reading your operator's manual will help you and others avoid personal injury or damage to the machine. Information given in this manual will provide the operator with the safest and most effective use of the machine. Only competent and skilled persons who have fully read and understood this operator's manual are allowed to operate this machine.

Sections in your operator's manual are placed in a specific order to help you understand all the safety messages so you can operate this machine safely. You can also use this manual to answer any specific operating or servicing questions.

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Please read all the information carefully to avoid injury and machine damage. Should any questions arise regarding the information given in this booklet, please contact your local MAJOR dealer or MAJOR.

The operator is solely responsible for the safe use and maintenance of the machine. The machine must only be operated by a competent and skilled person. Setting up and adjustment must only be carried by the operator. Do not let a third party person to adjust or modify the machine in any way.

Intended use

This machine is a grass cutting machine and designed for cutting grass. Moreover, it must only be used with a suitable tractor (see "Product Specifications" section of this booklet) and driven by an adequate drive-line of the tractor PTO. All other use is strictly prohibited. Major will not be held responsible for any loss or damage caused due to a misuse of the machine.

Register Your Product and Warranty Online

To register your product through the Internet, simply go to the Support section on www.major-equipment.com. Completing the information, either online or with the product warranty card, will ensure the customer that their product receives all post sales service and important product information.

This machine is warranted for 12 months. No warranty is given where the machine is being used as a hire machine. Warranty is against faulty workmanship or parts.

Warranty covers parts only. All parts must be returned to the manufacturer. No warranty can be considered unless parts are returned. All replacement parts will be supplied on a chargeable basis until warranty has been accepted.

Tractor Requirements



Attaching the machine to the tractor will influence the stability and manoeuvrability of the tractor. Please consult your tractor manual for limitations on weight and towing ability of the tractor.

It is the operator's responsibility to ensure that the tractor is suitable for the machine. Always consult your tractor's manual for any further information required.

Recommended Horse Power requirements for the particular models are provided in the "Product Specification" section of this booklet. Using excessive power can affect the quality of cut and/or may damage the machine.

Tractors which are not suitable for the operation can sustain damage due to the weight and power requirements of the machine. Always observe the weight of machine provided in the "Product Specification" section of this booklet, compare this with the guidelines from the tractor manual and ensure that the tractor can lift the machine safely.

The machine is designed to be attached by means of a 3 point linkage connection or can be trailed (specific models). The position of the machine can be adjusted by manual or hydraulic top link.

Winged models require at least one hydraulic spool with 1/2" female quick release connection for a single acting ram/rams.

Road light kit requires a 12V 7 pin socket.

Safety

The operator's manual also explains any potential safety hazards whenever necessary in special safety messages that are identified with the word, CAUTION, and the safety-alert symbol



Hazards associated with operating Grass Cutting Machinery

Shear Hazard

Shear hazards are created when the edges of two objects move toward or next to each other closely enough to cut relatively soft material. This can include the parts of the machine under hydraulic control when operating from transport to mowing position. Note, the wing units are designed to float independently of the centre deck & are free to move within operating limits.

Crush Hazard

Bystanders can be injured when machine is lowered into mowing position. Winged machines have crush points around the hinge areas & between the wing & main body. Always use transport locking bars when not in use (winged models only).

Rotating Blade Hazard

All persons are at risk if they place their hands or feet under the machine when it is raised from the ground when the blades are in motion.

Pinch Hazard

Pinch points are created when two objects move together, with at least one of them moving in a circle. This hazard is common in power transmission devices such as Belt Drives, Gear Drives & Rollers. Ensure all guarding is present.

Wrap Hazard

Any exposed, rotating machine component is a potential wrap point. Injuries usually occur when loose clothing or long hair catch on and wrap around rotating parts such as PTO shafts or Drive shafts on the machine. Ensure all guarding is present.

Free-wheeling parts Hazard

The heavier a revolving part is, the longer it will continue to rotate after power is shut off. This characteristic is called 'free-wheeling.' Blades, and various other components, drive shafts etc., will continue to move after power is shut off - often for several minutes. Injuries occur when:

- Operators shut off equipment, and attempt to clean or adjust a machine before components have completely stopped moving.
- Shear bolt protection device in PTO shaft shears & the mowing parts are still spinning but the primary PTO shaft is stationary. Operator awareness is the key to safety around freewheeling parts. Never raise the machine while the blades are still rotating.

Thrown objects Hazard

Machines throw material as a natural part of doing their job. Foreign objects, such as stones, sticks and other debris, may be taken into this equipment and expelled at tremendous speed. These objects are contained by the sides of the machine and by the rear/front rollers / guards / chain guards / rubber skirts depending on model of your machine. Ensure bystanders are clear from the machine & cannot be hit with debris expelled from the machine. Bystanders or animals in the path of thrown objects could be seriously injured. Never operate machine with decks raised from the ground as this makes the front/rear protection redundant.

Hydraulic Hazard (if applicable)

Hydraulic systems store considerable energy. Careless servicing, adjustment, or replacement of parts can result in serious injury. High pressure blasts of hydraulic oil can injure eyes or other body parts. The following precautions are crucial:

- Make certain the hydraulic pump is turned off.
- Lower attached equipment to the ground.
- Confirm that load pressure is off the system.

A pinhole leak in an hydraulic hose is a serious hazard. A leak may not be visible, and the only sign may be a few drops of fluid. Never inspect hydraulic hoses with your hands, because a fine jet of hydraulic fluid can pierce the skin.

Slips, Trips and Falls Hazard

Slips and falls often result from:

1. Slippery footing on the ground
2. Cluttered steps and work platforms.

The potential for slips and falls can be greatly reduced by using good judgement and practicing good housekeeping on and around equipment.

Noise Hazard

Please note that the machine is normally used outdoors and that the position of the operator is seated in the driving seat of the tractor. It is advisable to consult the prescriptions listed in tractor operator and maintenance manuals.

The acoustic pressure at a distance of 2.6m from the centre of the machine and at a height of 2.0m, with the implement operating in a no load condition can reach 90 dBA. In a loaded condition & a PTO rate of 540 (1000) RPM the value can reach 97dBA. Higher rate of PTO input will result in higher noise levels. Always wear hearing protection.

Operating Safely

This MAJOR machine is designed to operate at a PTO rate which is stated in the Product Specifications part of this booklet. Ensure tractor PTO output is set at a correct RPM rate. This MAJOR machine must only be used for purposes outlined in the Intended Use section of this booklet. All other use is strictly prohibited.



Users should become thoroughly familiar with the contents of this manual before using, servicing and mounting the implement to the tractor and all other pertinent operations. Never wear jewellery, loose clothing such as ties, scarves, belts, unbuttoned jackets or dungarees with open zips which could become caught up in moving parts.



Always wear approved garments complying with accident prevention provisions such as non-slip shoes, ear muffs, goggles and gauntlets. Wear a jacket with reflecting stickers if the implement is used near public highways.



Consult your retailer, the Labour Health Service or your nearest equivalent authority for the information about the current safety provisions and specific regulations with in order to ensure personal safety.



ALWAYS DISENGAGE PTO, SWITCH OFF THE TRACTOR ENGINE AND ENGAGE THE PARKING BRAKE BEFORE MAKING ADJUSTMENT TO THE MACHINE.



NEVER PLACE LIMBS UNDER THE MACHINE WHILE ROTOR(S) ARE TURNING. ROTOR(S) CAN REMAIN TURNING FOR UP TO 1 MINUTE AFTER DISENGAGING PTO.

Workstation

The operator must remain seated while working the machine. If the machine is a winged unit and the wings need to be raised/lowered the operator must not leave the tractor. Always ensure the PTO has been turned off and the parking brake applied before leaving the tractor cab or carrying out maintenance.



NEVER OPERATE THE HYDRAULICS WITH THE TRACTOR SWITCHED OFF

Regulations for use of the transmission

The transmission to the gearboxes is protected throughout the machine by both PTO shafts and bolt down covers. All guarding should be kept efficient and in good condition. If the condition is poor, the guarding should be renewed before the implement is used.



UNLESS IT IS CORRECTLY PROTECTED THE TRANSMISSION COULD CAUSE DEATH SINCE IT CAN CATCH ON PARTS OF THE BODY OR CLOTHING

Ensure retaining chains are correctly anchored on all PTO shafts, preventing them from turning. Ensure drive line can turn easily within the shield. Keep spline grooves clean and greased so that PTO shaft can connect easily. Besides being described in this booklet, the method by which the PTO shaft is connected to the tractor must be checked out with the instructions in the tractor manufacturer's manual.

PTO Shaft Safety

Maximum PTO input is specified in the Product Specifications section of this booklet. Contact your nearest dealer or a specialised retail outlet if the PTO must be replaced with a longer one, since this must belong to the same power category and possess the same characteristics. An unsuitable PTO could easily break.

Driving Safely on Public Roads

Check the local Highway Code regulations before driving the tractor on public highways with an implement attached. Check the reflectors, hazard flashers and/or projecting load indicators are installed when required and efficient. These indicators must be installed correctly and easily seen by the drivers of other vehicles.

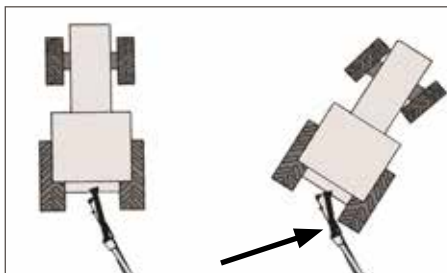
Bystanders must not be allowed to lean against or climb onto the machine during transport or while working. Do not allow bystanders to ride on the machine.



Maximum transport speed of the implement is limited to 25-30km/h depending on the model of the machine (observe safety labels on the machine).

Trailed Machines only

The shaft must not reach the end of the tube or project from this. Ensure the PTO does not bottom when turning



General safety instructions

Precautions to be taken while working with the machine:

1. Do not operate the machine when you are tired or under the influence of alcohol or any other intoxicant;
2. Before starting mowing, make sure that the area is clear of people or animals.
3. Before starting adjusting the machine, it is mandatory to disconnect the PTO, to turn off the engine of the tractor, apply handbrake and wait for the turning parts to become still and placed on the ground.
4. It is mandatory to read all the safety requirements and the operator's manual of the machine.
5. If you are not sure how to use the machine, please contact the manufacturer or the dealer.

Inspections before Use



Always disengage PTO, Switch off tractor engine and engage the parking brake before making adjustments to the machine.

1. With the whole machine as level as possible, check the oil level in all gearboxes. Top up if required through the oil filler plug. The correct level is at the oil level plug.
2. Grease all lubrication points as outlined in the Maintenance section of this booklet.
3. Check parts for wear.
4. Check the blade mounting bolts are tight.
5. Ensure the gearbox shaft nuts are tight and retained in place by split pin.
6. Check tightness of all nuts, bolts and pins.
7. Ensure safety guards and flaps are in place at all times where fitted. If these become worn or missing, replace them immediately with new ones.
8. Due to the corrosive nature of grass when cut, wash down the machine when finished mowing, especially when the machine is being stored for a long period of time.

Starting Regulations



Always check that any imminently dangerous conditions have been eliminated before using the machine. Ensure all guarding is present & the operator is fully aware of the operations of the machine.



Always ensure the pins lock the PTO shaft yoke ends onto the spline shafts on both the tractor and the implement. An unlocked shaft could slip out of position, causing notable mechanical damage and serious injury to both operator and bystanders.

Product Identification

Machine Serial Numbers

If you need to contact MAJOR or your MAJOR dealer for information on servicing or spare parts, always provide the product model and serial numbers. Model and Serial number can be found on the Serial Plate located on the machine.

We suggest that you record your machine details below:

Model No: _____

Serial No: _____

Date of Purchase: _____

Dealer Name: _____

Dealer Telephone: _____

MAJOR EQUIPMENT INTL. LTD. BALLYHAUNIS, CO. MAYO, IRELAND TEL: +353 (0) 9496 30572 EMAIL: info@major-equipment.com			CE
MAJOR EQUIPMENT LTD (UK) MAJOR IND. ESTATE, HEYSHAM, LANCs, LA3 3JJ, UK TEL: +44 (0) 1524 850501 EMAIL: ukinfo@major-equipment.com			Serial Number/Seriennummer _____
MAJOR EQUIPMENT INTL LTD POSTBUS 29, NL-7700 AA DEDEMSVAART, NEDERLAND TEL: +31 (0) 6389 19585 EMAIL: euinfo@major-equipment.com		Model/Modell _____	Year of manufacture/Baujahr _____

Product Specifications

The machine is propelled by using a 6 spline 1-3/8" PTO shaft (provided with the machine).

Model	TDR16000	TDR20000
Working Width	4.9m	6.1m
Overall Width	5m	6.24m
Transport Length	3.66m	3.66m
Transport Width	2.50m	2.50m
Transport Height	2.37m	3m
Wing Float	25° down/10° forward/back/90° up	
Cutting Height	12 - 150mm	
Blade tip speed	4569 m/min	4569 m/min
Power (HP)	65-90	75-100
Rotors	8	10
Tyre Pressure	40psi	50 psi
Weight	2260kg	2675kg

EEC certificate of conformity for machines

(conforming to Directive 2006/42/EC)

Name of Manufacturer: Major Equipment Ltd
Address: Coolnaha, Ballyhaunis, Co. Mayo, Rep of Ireland

Tel. +353949630572
Fax +353949630788

declares in sole responsibility that the product:

Machine description and function: Rotary mower with vertical axes cutting heads which cuts grass so it can be subsequently picked up.

Model: Trideck (TDR)


Type: _____

Serial number: _____

Technical file compiled by: Alex Kolchanov (c/o Major Equipment Ltd)

- **THE SUPPLY OF MACHINERY (SAFETY) REGULATIONS 2008.**
- **S.I. No. 299 of 2007**, Safety, Health and Welfare at Work (General Application) Regulations 2007 (Ireland).
- **Health & Safety at Work, etc. Act 1974 (c.37) (UK).**
- **EN ISO 14121-1: 2007** 'Safety of machinery. Principles for risk assessment'.
- **EN 745** - Agricultural Machinery - Rotary Mowers and Flail Mowers - Safety.
- **EN ISO 13857** - Safety of machinery: Safety distances to prevent hazard zones being reached by upper and lower limbs.

I hereby certify on behalf of Major Equipment Int. Ltd., that this machine when properly installed and operated correctly, complies with all the essential Health & Safety requirements of all legislation referred to above.

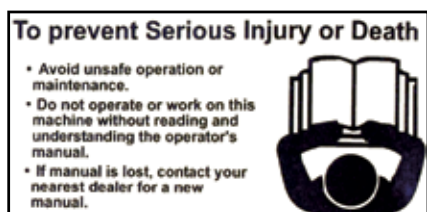
Signed: 
Date: 14/11/2018
Name: John Murphy
Position: Managing Director

Place: Coolnaha, Ballyhaunis, Co. Mayo, Rep of Ireland

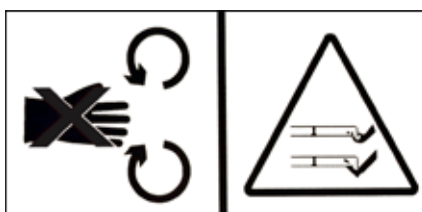
Machine Safety Labels

The machine safety labels shown in this section are placed in important areas on your machine to draw attention to potential safety hazards.

On your machine safety labels, the words DANGER, WARNING, and CAUTION are used with this safety alert symbol. DANGER identifies the most serious hazards.



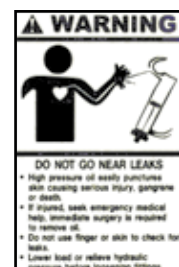
To avoid injury, read the manual



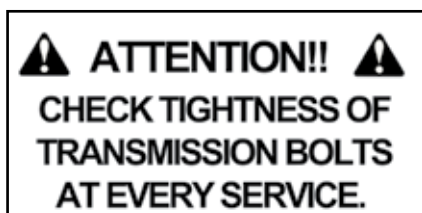
Rotating blade hazard



PTO entanglement hazard - keep clear of PTO drives.



High oil pressure hazard



Check tightness of the transmission bolts



Do not engage drive while in transport position



Grease points



Maximum PTO input



Moving parts



PTO/Drawbar warning



Check wheel nuts daily



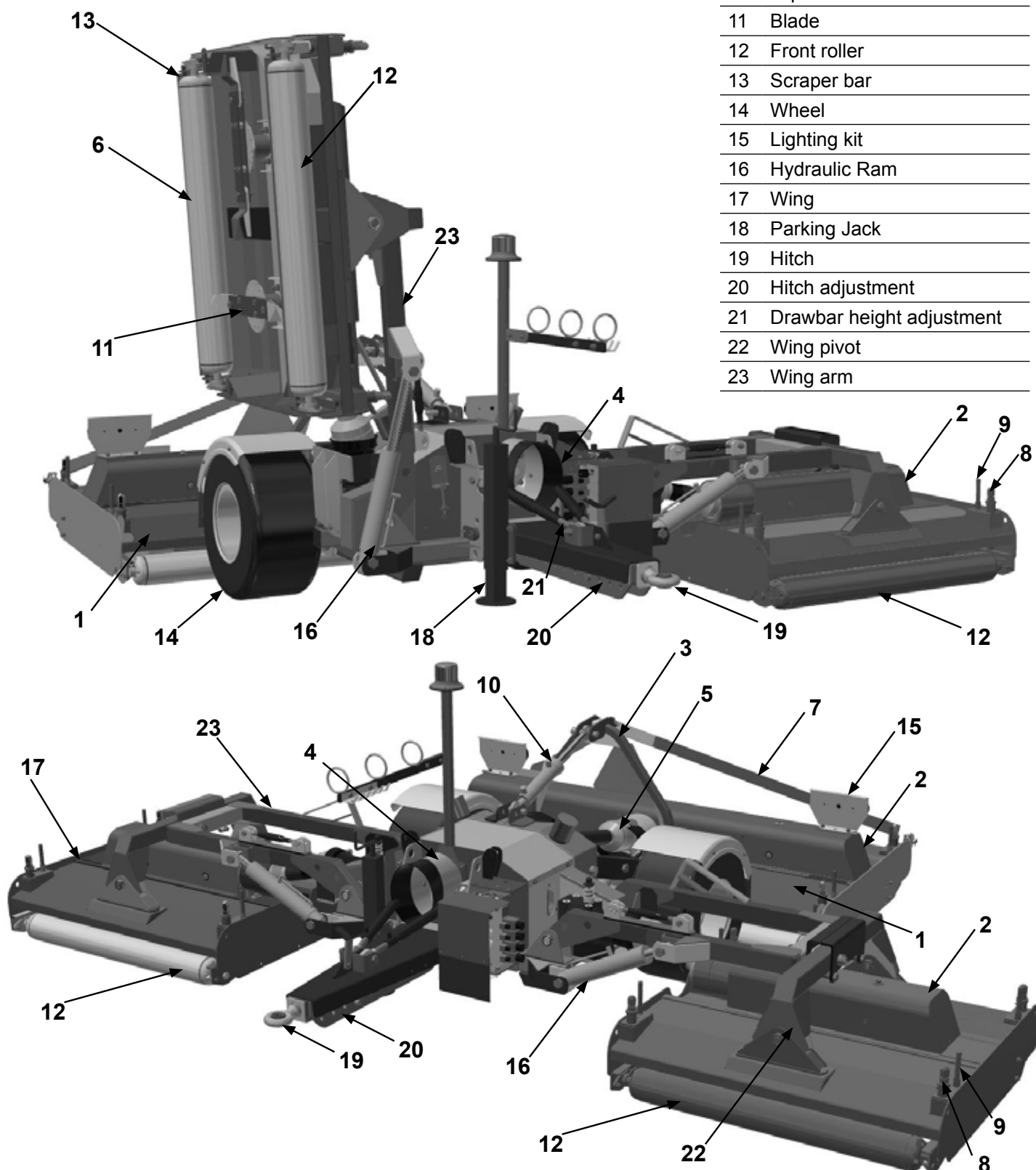
Max speed



Belt tension

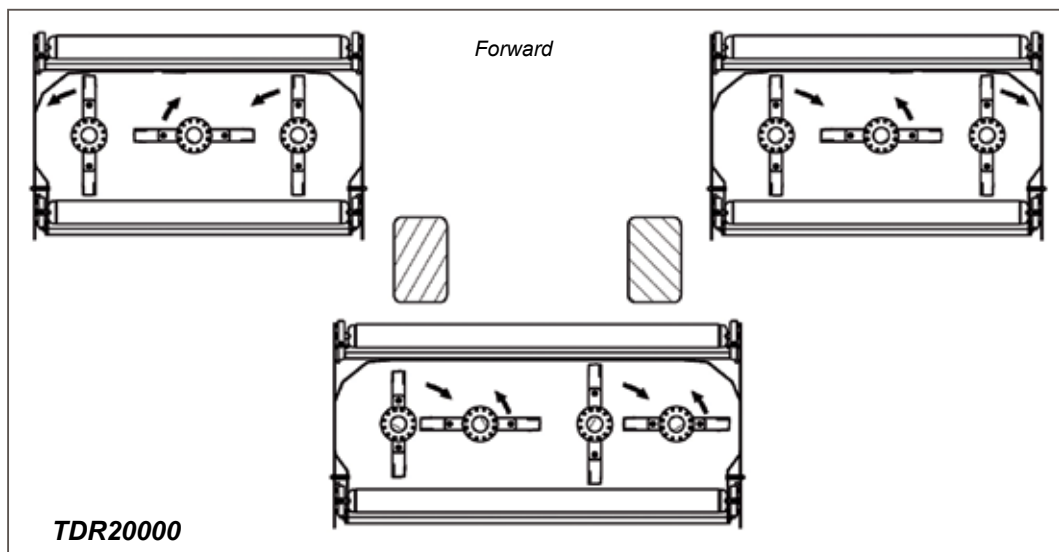
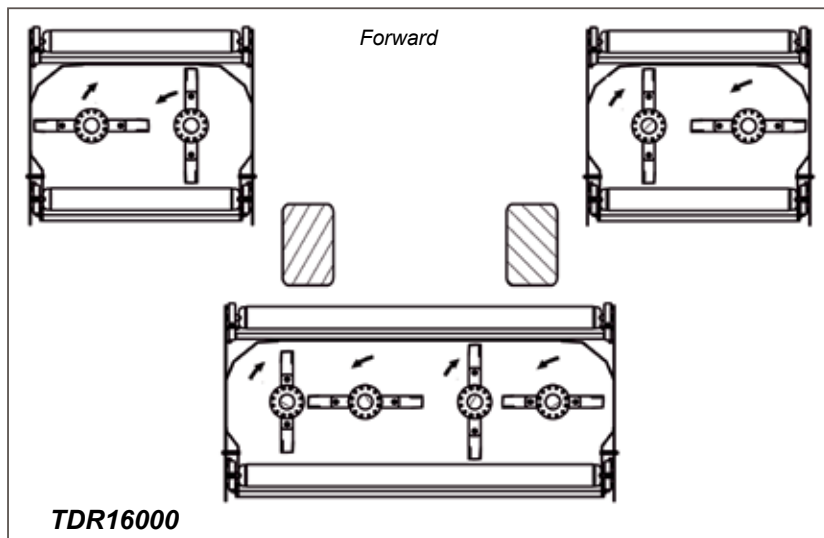
Key to Main Parts

1	Body
2	Drivetrain cover
3	A-Frame
4	Gearbox PTO cover
5	PTO shaft
6	Rear roller
7	Strap
8	Roller height adjuster rod
9	Roller height indicator
10	Top Link
11	Blade
12	Front roller
13	Scraper bar
14	Wheel
15	Lighting kit
16	Hydraulic Ram
17	Wing
18	Parking Jack
19	Hitch
20	Hitch adjustment
21	Drawbar height adjustment
22	Wing pivot
23	Wing arm



Blade Rotation

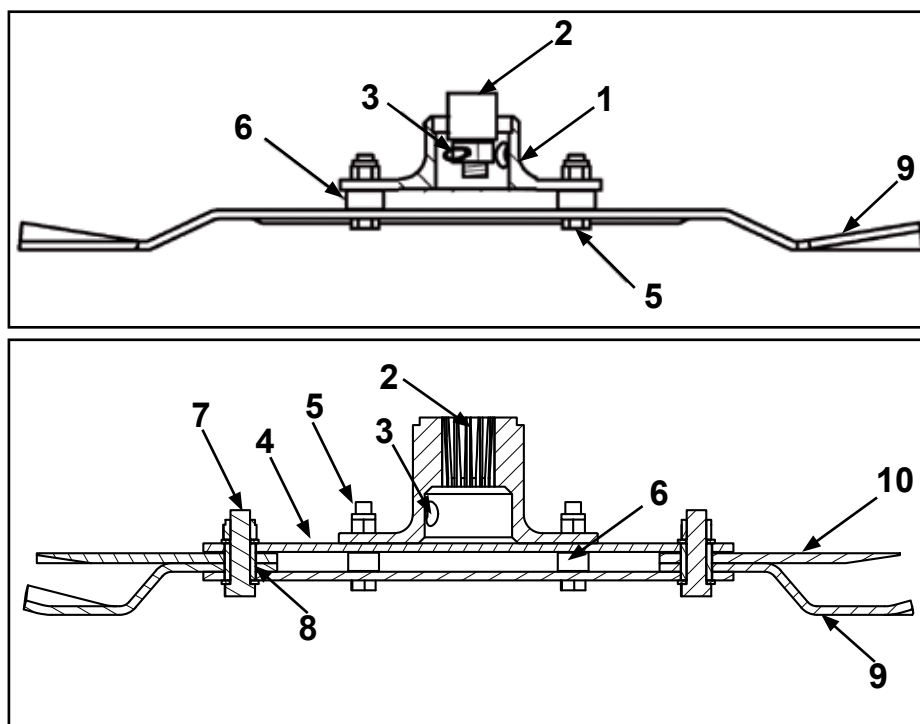
Blade rotation viewed from underside



Blade system

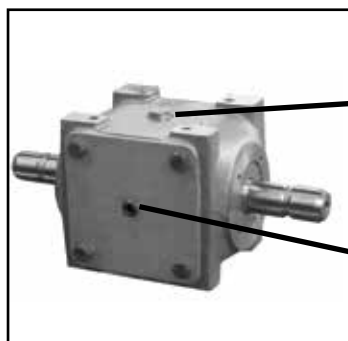
Full breakdown of the blade assembly is provided in the Spare Parts section of this booklet

1 Blade mount	7 Blade pivot bolt
2 Gearbox output shaft	8 Blade pivot bush
3 Gearbox split pin	9 Blade
4 Blade back	10 Overlap Blade
5 Blade back bolt	
6 Blade back spacer	



Drive-line gearboxes

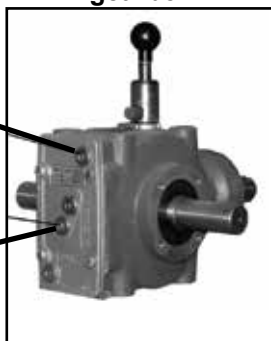
Primary gearbox



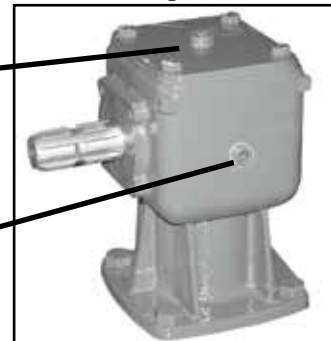
Oil filler
plug

Oil level
plug

Wing selector
gearbox



Rotor gearbox



Oil filler
plug

Oil level
plug

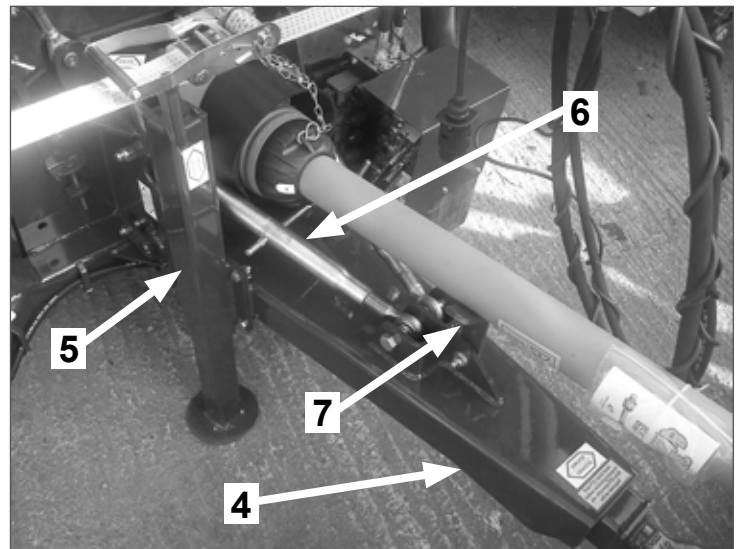
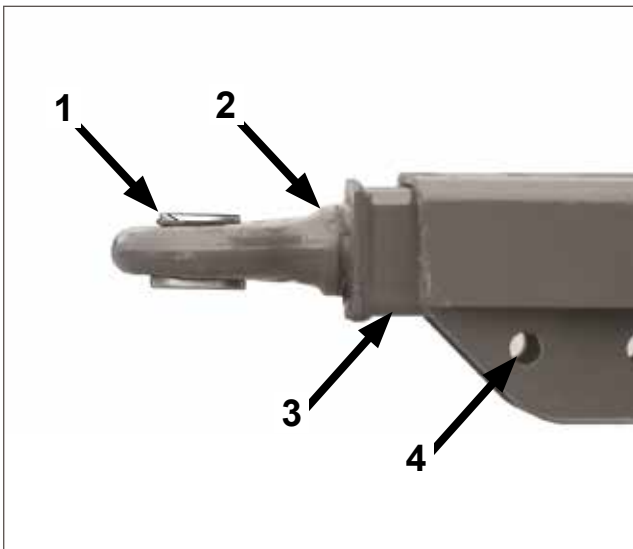
Operating the Machine

Attaching machine to the Tractor



ALWAYS OPERATE ON LEVEL GROUND WHEN HITCHING/UNHITCHING THE IMPLEMENT. THIS WILL PREVENT DANGEROUS MOVEMENT. NEVER ALLOW ANYONE TO STAND BETWEEN THE TRACTOR AND THE MACHINE.

1. Reverse the tractor, connect the hitch & secure in position with correct size drawbar pin
2. Ensure that the circlip is on top as shown below
3. Ensure the tractor brake is applied
4. Adjust the level of the drawbar until the main body is level.
5. Connect the hydraulic connections to the tractor.
6. Fit the PTO shaft & secure the PTO cover chains.
7. Raise the parking jack.
8. **Adjust drawbar instead of cutting PTO shaft.**
9. Fold the PTO stand down



1	Circlip
2	Hitch
3	Adjustable drawbar
4	Drawbar lateral adjustment
5	Parking jack
6	Drawbar height adjustment
7	PTO stand

Transport Position



Before raising the machine wait until the transmission and the blades are completely still.
During the transport of the machine it is recommended that the PTO shaft is disconnected.

1. Check machine is hitched to the tractor as described. Ensure the tractor parking brake is applied
2. Ensure moving parts become still then transform the machine into transport position by hydraulic control
3. During the transport and any time the machine shall be raised, the raising device shall be adjusted to assure that the machine is at least 250mm over the ground.



Transport Speed should not exceed 30 km/h.



Transport Position



Mowing Position

Operating the Machine/Mowing



Never place limbs under the machine while rotors are turning. Rotors can remain turning for up to 1 minute after disengaging PTO.

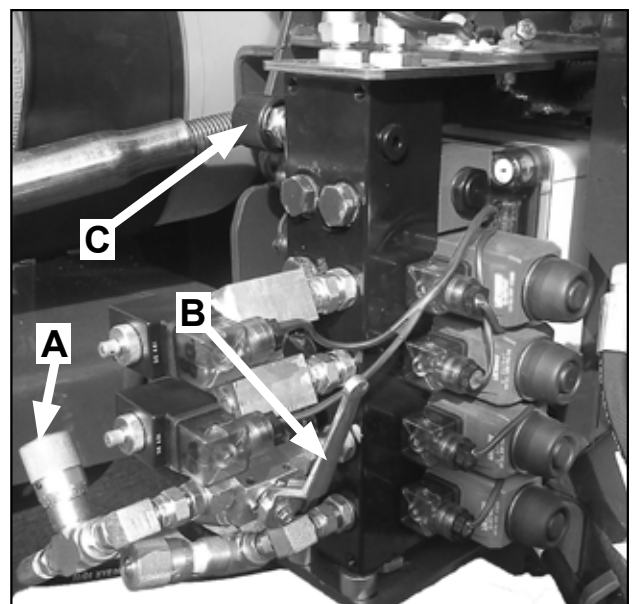
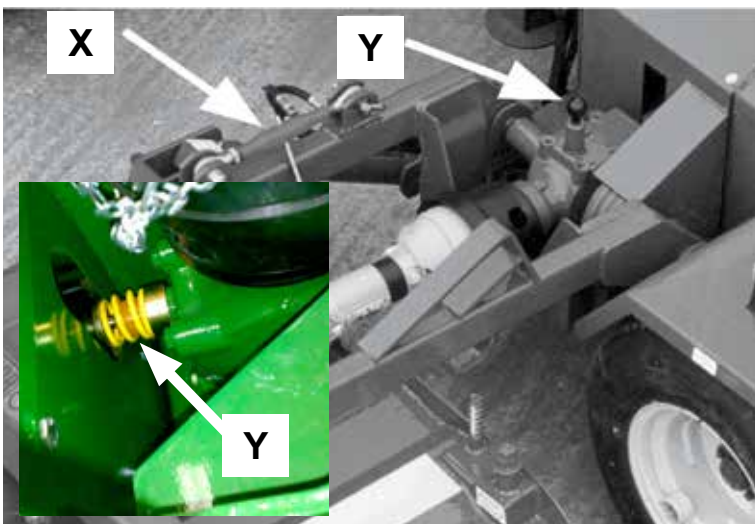


While operating this machine the PTO input rate should not exceed the RPM stated in the Product Specifications section of this booklet. Always operate on level ground when connecting/disconnecting the implement. This will prevent dangerous movement.



Never allow anyone to stand between the tractor and the machine. Ensure the machine is attached correctly to the tractor as previously described. Always start up the tractor PTO at a low RPM. Build up to operating speed, select a suitable forward gear & proceed to cut grass.

1. Hitch the machine as outlined in the previous section. Ensure bystanders are clear from the machine & cannot be hit with debris expelled from the machine.
 2. Locate the Parking Jack on its side under the PTO shaft on the stub provided
 3. Check PTO shaft is fully engaged on tractor PTO splines.
 4. Unlock hydraulic arms supporting the rear deck, taking care not to stand between mainframe and rear deck.
 5. Ensure cutting decks are lowered to the ground.
 6. Place wing locking clamps in position 'X' as shown in the photo below.
 7. Wing PTO drive will engage automatically selector knob 'Y'.
 8. Start up the tractor PTO at a low RPM.
 9. Build up to operating speed, select a suitable forward gear & proceed to cut grass. NOTE: The Selector knob is fitted with a spring 'Y' in order to auto stop wing rotors when raised.
 10. Tighten both the Top Link Tap 'B' & Lower Link Arm tap 'A' to lock the rear deck when raised for transport.
- NOTE: This machine is factory set to operate with 'open centre' hydraulic systems. When connecting to tractors with 'closed centre' hydraulics, the Pilot valve spool knob 'C' must be closed (screwed 'in').



Warnings



ENSURE FREE FLOW RETURN IS CONNECTED.
MINIMUM OIL FLOW IS 30 L/MIN.

Never place limbs under the machine while rotors are turning. Rotors can remain turning for up to 1 minute after disengaging.

Always disengage PTO, switch off tractor engine and engage the parking brake before making adjustments to the machine.

When using the machine with one or both wings in the raised position, ensure the drives to the wings are disengaged.

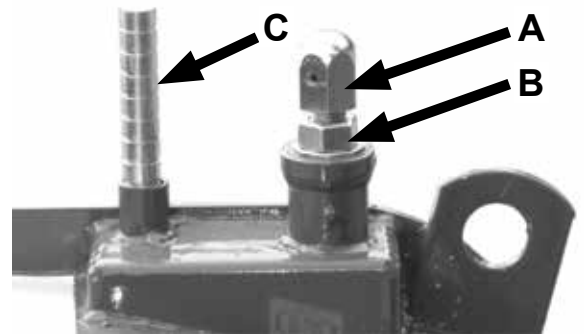
Ensure that rotors are still before raising/lowering wings and rear deck.

DO NOT lower wings while PTO is in motion as damage can occur to the wing input gearbox.

Adjusting the Rollers

- Slacken the Height adjuster stop lock nuts (B) and
- Adjust the roller adjuster (A) to obtain the desired cutting height.
- Tightly close the lock nut (B) again to keep the rollers in this position.
- Roller height can be seen on the Height Indicator (C)

NOTE: IT IS IMPORTANT TO HAVE ROLLERS LEVEL AFTER ADJUSTMENT



Remote Control

For your comfort this machine can be operated via a remote control.

NOTE: Please see the separate Remote Control Operator's Manual (provided with the machine) for more information and troubleshooting.

The following operations can be carried out by using the remote control:

1. Left wing Up, Left wing Down / Float



By keeping this key pressed, the left wing rises up. By releasing the key, the left wing stops.



By keeping this key pressed, the left wing goes down and floats the same time. By pressing the key again, descent and floating stop. A red LED light indicates that the action is active (see diagram below).

2. Rear deck UP, Rear deck DOWN/ Float



By keeping this key pressed, the rear deck goes up. By releasing the key, the rear deck stops.



By keeping this key pressed, the rear deck goes down and floats the same time. By pressing this key again, descent and float stop. A red LED light indicates that the action is active.

3. Right Wing UP, Right Wing DOWN/Float



By keeping this key pressed, the right wing rises up. By releasing the key, the right wing stops.



By keeping this key pressed, the right wing goes down and floats the same time. By pressing the key again, descent and floating stop. A red LED light indicates that the action is active.

4. Rear deck top link block, Rear deck top link transport



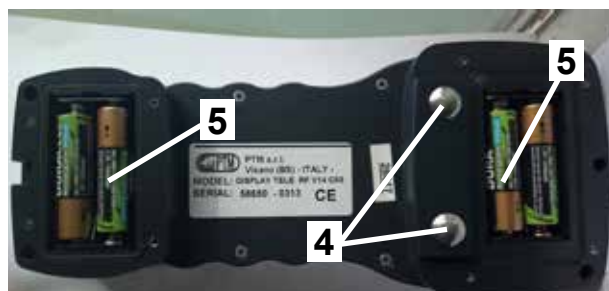
By keeping this key pressed the rear deck top link blocks. By releasing this key, the rear deck top link unblocks.



By keeping this key pressed the rear deck goes up/down. By releasing the key, the rear deck stops moving.



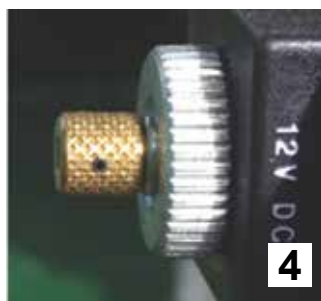
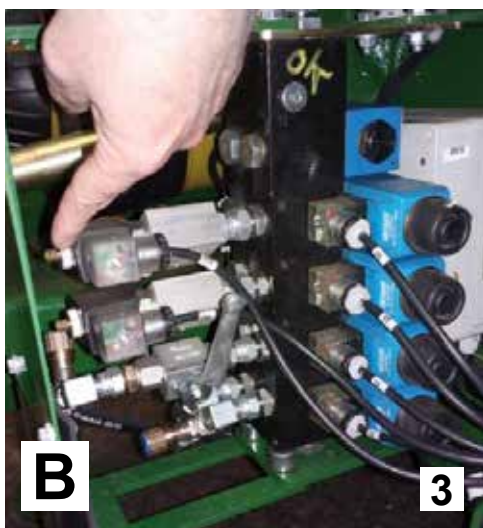
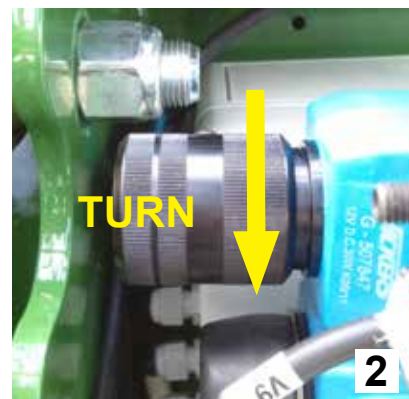
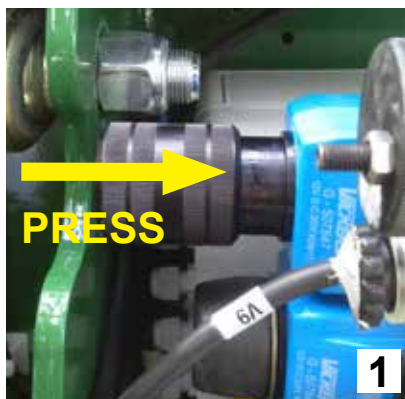
1	Remote Control
2	Base 12V charging unit
3	Plug
4	Charge connectors
5	Batteries



Manual override

In the event of Manual Override, in order to lower wings, please follow this procedure:

1. Turn off remote control (Disconnection is not necessary);
2. Press the black tap in and turn it clockwise (A);
3. Turn the screw anti-clockwise until fully open (B);
4. Press the button fully (C).



- | | |
|---|---|
| 1 | Press the knob in and turn |
| 2 | The knob will lock in this position |
| 3 | Top screw (shown) - right wing.
Bottom screw - left wing. |
| 4 | This shows the normal position, threaded in. |
| 5 | This shows the manual override position with the thread out.
IMPORTANT: The check will not work in this position & this should be used for maintenance purposes only. Manual override should not be used when operating the machine normally. |
| 6 | Button shown will make the wing go down.
Button on the opposite side will raise the wing. |

Maintenance

In order to keep your Major machine in a good working order it is necessary to conduct maintenance on a regular basis. Only competent and skilled persons who have fully read and understood this operator's manual are allowed to carry out maintenance on this machine. It is important to replace worn parts immediately with genuine Major spare parts. These parts are manufactured to the same specification as the machine and will provide the best result. Genuine Major spares can be obtained from MAJOR or your local MAJOR dealer.

All maintenance checks and operations must be carried on a firm level ground. The machine must always be disconnected from the tractor before any cleaning, lubricating and servicing operations can be carried out. If works must be carried out under the machine, ensure that the props, jacks, stands, hoists or cranes are capable of supporting the machine securely.

If emergency operations are required whilst the machine is connected to the tractor, switch off the engine of the tractor, remove the key from the ignition, engage the parking brake and disengage the PTO. An example of such emergency situation is the complete blockage of the machine in the field. To clear out the blockage follow the safety steps described above and clear out the blockage. Ensure there are no ropes, twines or wires wrapped around the rotors.

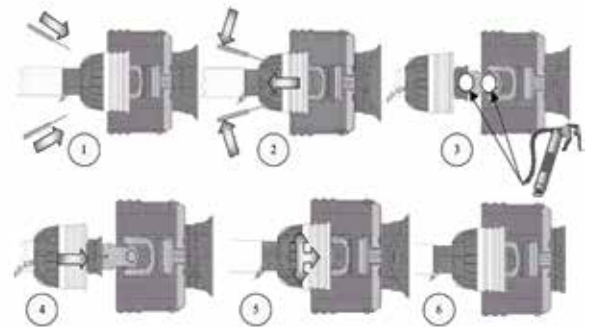
Machine storage

To prolong the life of your machine it is recommended to store it in a dry environment. Prior to parking the machine for storage, wash the machine thoroughly, especially underneath, and ensure that there is no grass or debris left on the machine. Lubricate all pivot points with EP2 type grease. Check for oil leaks and fix these if required. Any parts of the machine with damaged paint/galvanised surface must be painted.

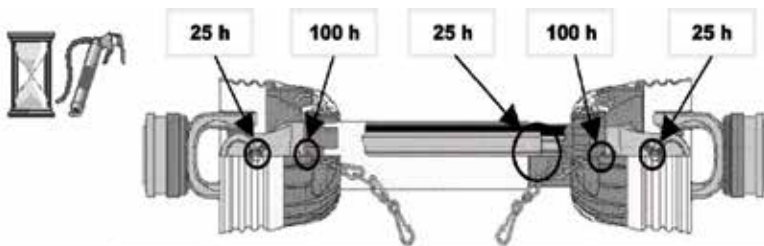
PTO Shaft Maintenance

Guard Removal and Yoke End Greasing

1. Prise back locking tabs
2. Pull back PTO Guard
3. Grease points as shown
4. Push Guard into position
5. Click into place
6. Tie check chain



PTO Greasing Intervals



Shearbolt Replacement (if applicable)

1. Slide yoke shield back.
2. Drive out sheared bolt with hammer and punch.
3. Align holes and install new shear bolt. (Use only genuine MAJOR replacement shear bolts)
4. Slide yoke shield securely in place



Always fit PTO shaft with the shearbolt/slip-clutch end connected to the machine as directed on the PTO guarding.

Transmission Bolts

All nuts and bolts in the transmission including Rubber couplings, Star Drives, PTO Shafts and Gearboxes should be checked for tightness after mowing at the following intervals:

1st 50 Acres

1st 100 Acres

1st 250 Acres

And every 250 acres thereafter.

Roller *(if applicable)*

Check the condition of the rollerend (stub axle) at the end of every season. Roller shaft (stub) must be able to rotate freely and without excessive play. If necessary, remove the roller assembly and adjust the tightness of the bearings.

Replacement of wear parts

Blades, blade backs, blade bushing, blade bolts and nuts must be checked on a regular basis for wear and deflection. MAJOR recommends to visually check the blade assemblies every 40 hours of operation. This interval may change depending on the operational conditions.

Replace any damaged or worn parts immediately, failure to do so can result in blade breakages and can cause damage to the equipment or injuries to the operator and others nearby.

Blunt blades must be sharpened or replaced, failure to do so will result in a poor quality cut and excessive use of power from your tractor.



If the machine is equipped with wheels, wheel nuts must be checked daily. Air pressure within pneumatic tyres must be maintained at 2 Bar. Solid wheels must be checked for wear and damage and if necessary replaced immediately.



ENSURE BLADE ROTATION AND TIMING IS CORRECT AFTER SERVICING TRANSMISSION.



Pay attention when servicing or detaching components from the machine. Subassemblies and parts e.g. blade assemblies, gearboxes, rollers, guards, skids, wheels etc. can weigh up to 100 kilograms individually and must be supported adequately before fully detaching from the machine.

Clearing out a blockage



Always wear appropriate PPE when clearing out blockages.

If blockage of blades occurs proceed as follows:

1. Set the machine into transport position (including the top links);
2. Park the tractor on level ground, switch off the engine and remove the key from the ignition;
3. Apply a handbrake and disconnect the PTO shaft;
4. Using a pressure washer clear out the excess material built up around the blades. If the pressure washer is not available use your hand to remove the grass from around the blades, bearing in mind that there might be wires wrapped up around the rotors.

Troubleshooting

Fault	Cause	Remedy
Machine is getting blocked	Material too high or too much material	Reduce the ground speed but maintain required rpm from the PTO input
	Grass is too wet	Stop and wait until grass is dried
	Worn or dull blades	Sharpen or replace blades
Leaves a streak of uncut or partially cut grass	Blades dull or bent	Sharpen or replace blades
	Carrier RPM too low	Use correct PTO speed
	Field conditions are so wet that the tractor tyre is pushing grass into mud	Too wet to mow. Stop operation and wait until grass is drier
	Ground speed too fast	Reduce ground speed by shifting to a lower gear
	Possible build-up materials under mower	Clean mower
	Blades mounted incorrectly (cutting edge against direction rotation)	Change blades so that cutting edge is facing correct rotation.
Material discharges from mower unevenly; bunches of material along with swath	Material too high and/or too much material	Reduce ground speed but maintain the recommended RPM at tractor PTO or make two passes over material. Raise mower for the first pass and lower to desired height for the second and cut a 90 degree angle to first pass
Gearbox overheating	Low on lubricant	Fill to proper level
	Improper type lubricant	Replace with proper lubricant
	Excessive grass / debris build-up around gearbox	Remove grass, etc from machine
Blade/bullets is scalping ground	Mower too low	Raise mower-reset wheels
	Field is ridged	Cut field at a different angle
	Field is too wet	Stop and wait until it is dried
Mower will not cut.	Shear bolt sheared	Install new shear bolt
Blades/bullets wear too fast	Cutting in sandy conditions	Increase cutting height
	Cutting in rocky conditions	Increase cutting height
	Blades hitting ground	Increase cutting height
Mower seems to require excessive power	Advancing into grass too rapidly	Reduce forward travel speed
	Hitting ground	Raise mower and reset wheels
	Worn or dull blades	Sharpen or replace blades
	Tractor not large enough	Use larger horsepower tractor
Excessive vibration	Check gearbox bolts	Tighten if loose
	Check for loose nuts on blades	Tighten if loose
	Blade broken	Replace blades, in set
	New blade or bolts matched with worn blade or bolts	Replace blades or bolts in sets
	Drivelines not phased correctly. Implement and tractor yokes must be in line	Phase the driveline. Replace if necessary
Noisy machine	Worn bearing	Replace bearings
	Low oil in gearbox	Check level and add oil
	Loose Parts	Check all bolts are fully tightened
	Wrong PTO rpm rate	Check PTO rate & adjust as necessary
	Rotors bent / broken	Replace bent or missing blades
	Bent PTO shaft	Check PTO shafts are aligned correctly
		Check output shaft on gearboxes are not bent
		Check driveline between gearboxes is aligned.

Gearbox leaking	Damaged oil seal	Replace seal
	Bent shaft	Replace oil seal and shaft
	Shaft rough in oil seal area	Replace or repair shaft
	Oil seal installed incorrectly	Replace seal
	Oil seal not sealing in the housing	Replace seal or use a sealant on outside diameter of seal
	Oil level too high	Drain oil to proper level
	Hole in gearbox	Replace the gearbox
	Gasket damaged	Replace gasket
	Bolts loose	Tighten bolts

Lubrication schedule

Use EP2 type grease or equivalent.

Use oil which conforms to 85W/140 standards.

	Grease points	Initially	25 hours	40 hours	80 hours	400 hours
All PTO Shaft Yoke Ends		●	●			
PTO tubes		●		●		
Hydraulic Ram pivots	8				●	
Roller	12			●		
Roller height adjuster	2 x 12				●	
Main drive bearings	2			●		
Wing pivot	6				●	
Drawbar pivot	2				●	
Wing arm pivots	4				●	
Axle pivot	2				●	
Axle	2				●	
Rear deck lift hydraulic rams	2				●	
Check oil levels in the gearboxes	11/13				●	
Replace oil in gearboxes	11/13					●

Wheel Nuts

Wheel nuts should be torqued to 240Nm. Do not overtighten nuts as damage can occur.

Belt Adjustment

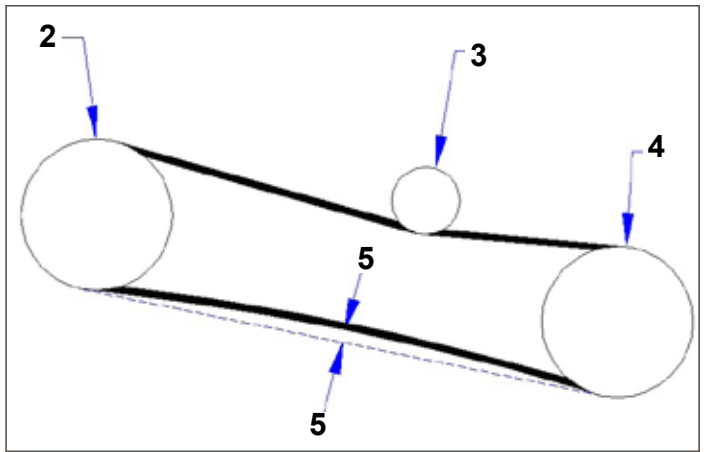
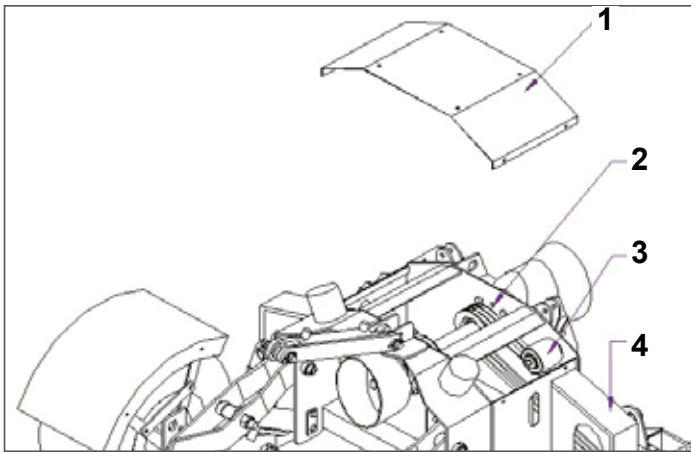
Check belt tension routinely. Remove cover by slackening the retaining bolts. Measure the belt deflection. If the deflection is more than 12mm then adjust

- Slacken the Idler Mounting Bolt.
- Tighten the belt using the tensioner
- Tension until deflection is 12mm



When the drive has been operating under load for a short period (2 to 3 hours) check and ensure that the belts remain at the appropriate tension.

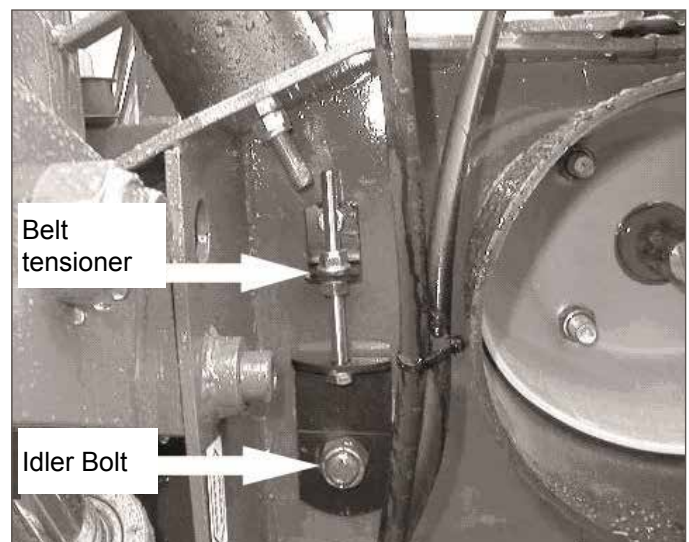
1	Vee belt pulley cover
2	Driver pulley
3	Idler pulley
4	Gearbox pulley
5	Deflection



Belt Removal & Fitting

Check belt tension routinely.

- Remove cover by slackening the retaining bolts
- Loosen Idler Rollers
- Slacken Bolts on front bearing
- Slacken Grub Screws on front & rear bearing
- Remove 6 shaft coupling bolts
- Slide split shaft forward to remove belts & add new ones
- Replace Shaft & tighten coupling bolts
- Tighten bolts on Bearing
- Tighten Grub Screw on front & rear bearings
- Tension Belt
- Tighten Idler Rollers
- Replace Top Cover



Taper Bush Installation

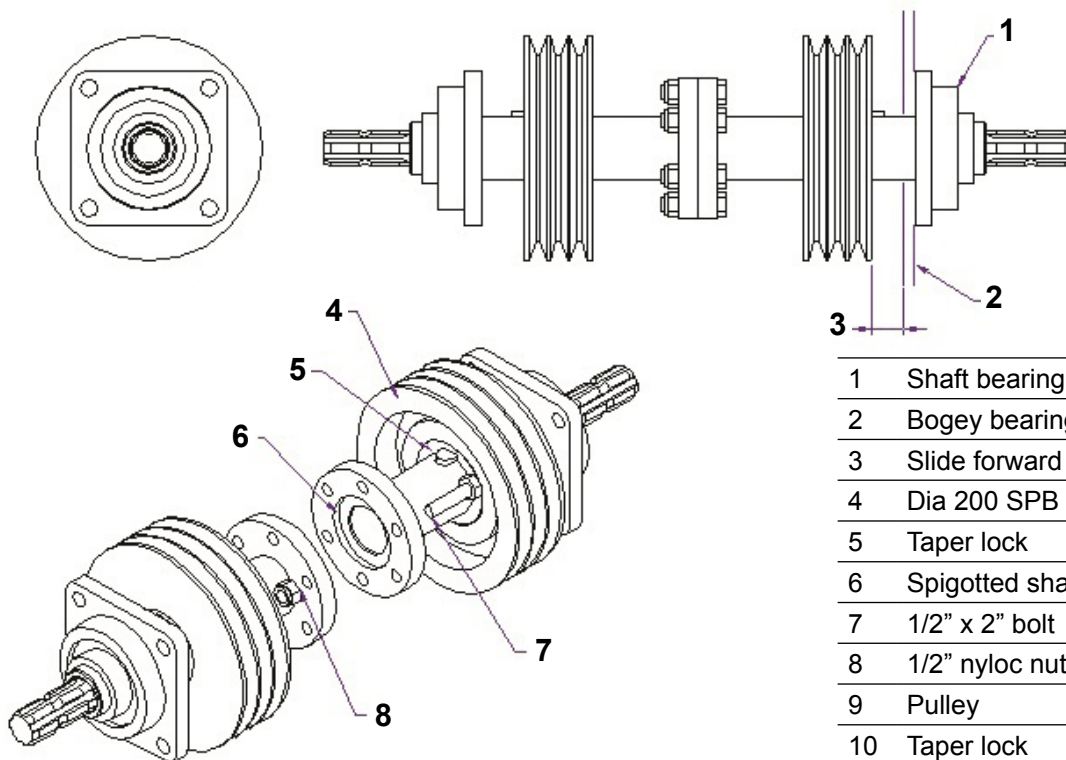
1. Clean & degrease the bore and taper surfaces of the bush and the tapered bore of the pulley. Insert the bush and the tapered bore of the pulley. Insert the bush in the pulley hub and line up the holes (half thread holes must line up with half straight holes).
2. Lightly oil the grub screws and screw them in, do NOT tighten yet.
3. Clean & degrease the shaft. Fit pulley with taper bush on shaft & locate in desired position.
4. When using a key it should first be fitted in the shaft keyway.

NOTE: There must be a top clearance between the key and the keyway in the bore

5. Using a Hexagon wrench, gradually tighten the grub screws to 48 Nm.

When the drive has been operating under load for a short period (half to 1 hour) check and ensure that the screws remain at the appropriate tightening torque.

6. In order to eliminate the ingress of dirt, fill all empty holes with grease.

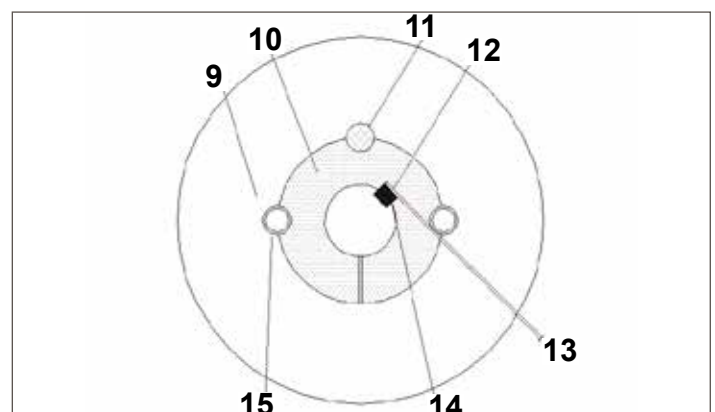


1	Shaft bearing
2	Bogey bearing mount
3	Slide forward
4	Dia 200 SPB pulley
5	Taper lock
6	Spigotted shaft (Male & Female)
7	1/2" x 2" bolt
8	1/2" nyloc nut
9	Pulley
10	Taper lock
11	Jacking off hole
12	Keyway clearance
13	Gap
14	Key
15	Clamping holes (grub screw)

Taper Bush Removal

1. Slacken & remove the screws, after oiling, point and thread into the jacking off hole in the bush
2. Tighten screw until the bush is loose in the hub and pulley is free on the shaft
3. Remove pulley bush assembly from shaft.

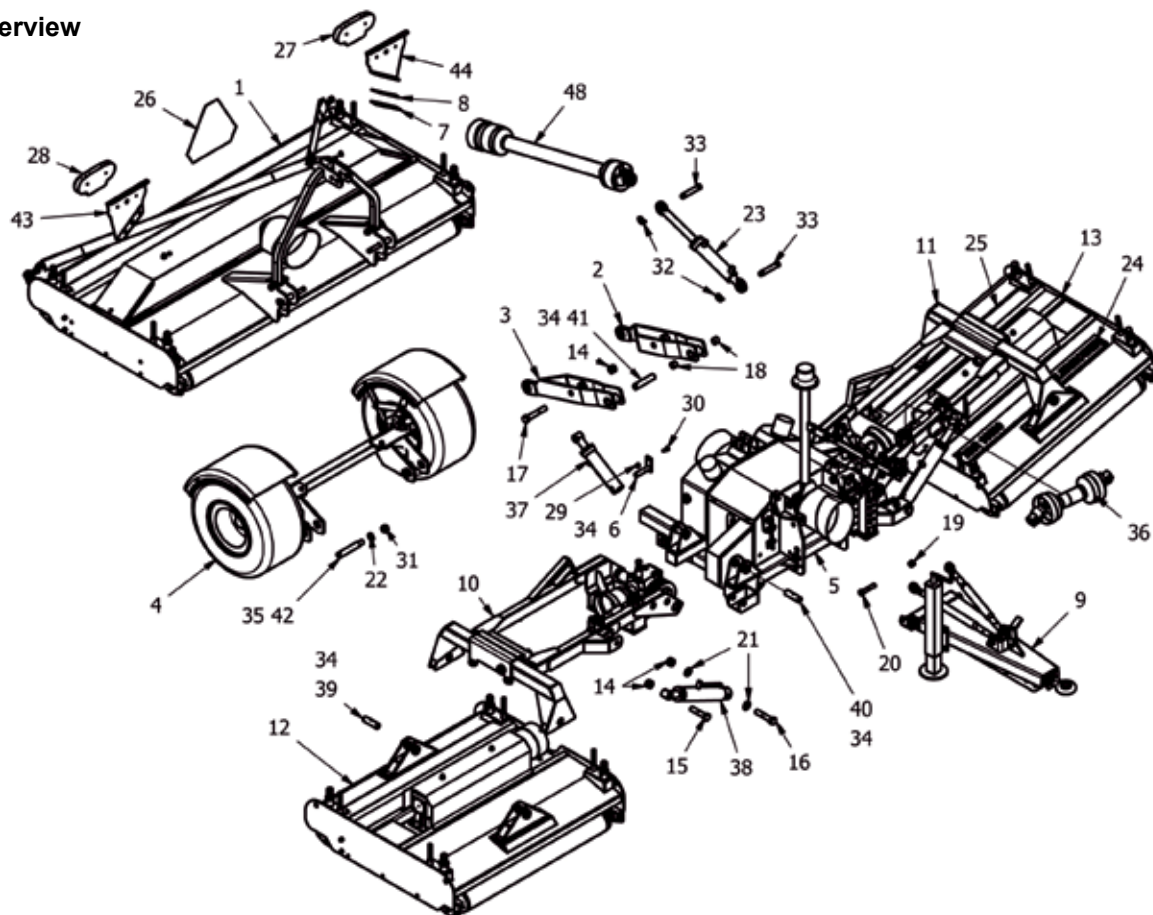
IMPORTANT There must be a top clearance between the key and the keyway in the bush, If the top of the Key interferes with the taper bush then the bush will not tighten correctly & will loosen again over a short period of time.



Spare Parts

TDR Spare Parts

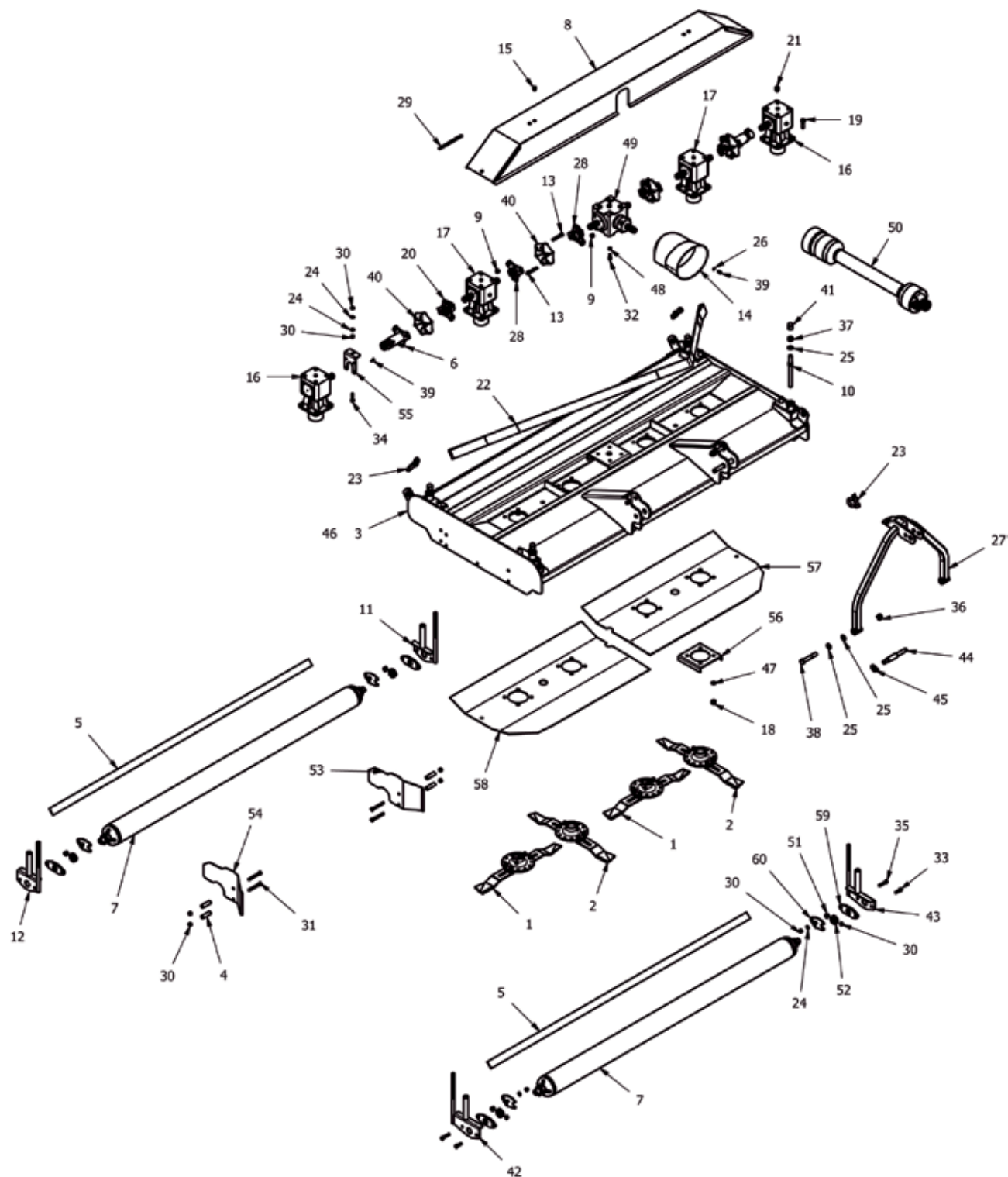
TDR Overview



Item	Part No	Description	Qty
1	84SB-GA1	8400 SWING BLADE MOWER	1
2	TD-CARML	16ft REAR ARM (LH)	1
3	TD-CARMR	16ft REAR ARM (RH)	1
4	TDA-16AXGA	16ft AXLE ASSEMBLY	1
5	TDA-GA1	TDR BOGEY ASSEMBLY	1
6	TDA-RPIN	REAR RAM PIVOT PIN	2
7	TDC-LIT5	LIGHT SUPPORT	2
8	TDC-LIT6	LIGHT BUFFER	2
9	TDD-GA1	TRI-DECK DRAWBAR	1
10	TDP-GA1	WING PIVOT ASSY (RH)	1
11	TDP-GA1L	WING PIVOT ASSY (LH)	1
12	TDW-GA16	16ft WING ASSEMBLY (RH)	1
13	TDW-GA16L	16ft WING ASSEMBLY (LH)	1
14	1F	1" FINE NYLOC NUT	6
15	1x412FBZP	1"x4 1/2" FINE BOLT	2
16	1x5FBZP	1"x5" FINE BOLT	2
17	1x6FBZP	1"x6" FINE BOLT	2
18	20DX16	DIA 1 1/4" BUSHx1"	4
19	34F	3/4" FINE NYLOC NUT	2
20	34x4FBZP	3/4"x4" FINE BOLT	2
21	FW1	DIA 1" FLAT WASHER	8
22	FWM24	M24 FLAT WASHER	2
23	G3924_B	TOP LINK RAM	1

24	Gras-057	TDR 16000 ROLLERMOWER	2
25	Gras-057C	TDR 20000 ROLLERMOWER	2
26	Gras-128	SLOW MOVING VEHICLE	1
27	LED-837-LH	LIGHT KIT (LH) 88164	1
28	LED-837-RH	LIGHT KIT (RH) 88164	1
29	M12	M12 NYLOC NUT	2
30	M12x30SZP	M12x30 SET BOLT	2
31	M24	M24 NYLOC NUT	2
32	S3546	LINCH PIN DIA 9.5	2
33	S81	CAT 2 PIN DIA 25.4x110mm	2
34	S849	GREASE NIPPLE M6 STR	12
35	S868	GREASE NIPPLE M6x90	2
36	T50-TDR	TDR WING PTO SHAFT	2
37	TRI-ARM_B	AXLE RAM	2
38	TRI-WRM3_B	WING RAM	2
39	TDA-1P	PIVOT PIN (112)	4
40	TDA-1P2	ARM PIVOT PIN (112)	4
41	TDA-1T	PIVOT PIN (155)	2
42	TDA-APP	AXLE PIVOT PIN	2
43	TDC-LIT4	LIGHT BRKT	1
44	TDC-LIT4H	LIGHT BRACKET	1
48	T501060ENC12RW6	FIXED SLIP CLUTCH 1200 Nm	1

TDR Rear Deck (8400GR)



Item	Part No	Description	Qty
1	725-FBL	725 FIXED BLADE (Anti_Clk)	2
2	725-FBR	725 FIXED BLADE (Clk)	2
3	84RM-FAB	8400 BODY	1
4	84RM-RDT	DEFLECTOR TUBE	4
5	84RM-SB1	8400 SCRAPER	2
6	GM84-55L	8400 DRIVE TUBE (LONG)	2
7	GM84-ROL	8400 ROLLER	2
8	GM84/COV	GEARBOX COVER	1
9	12F	1/2" FINE NYLOC NUT	24

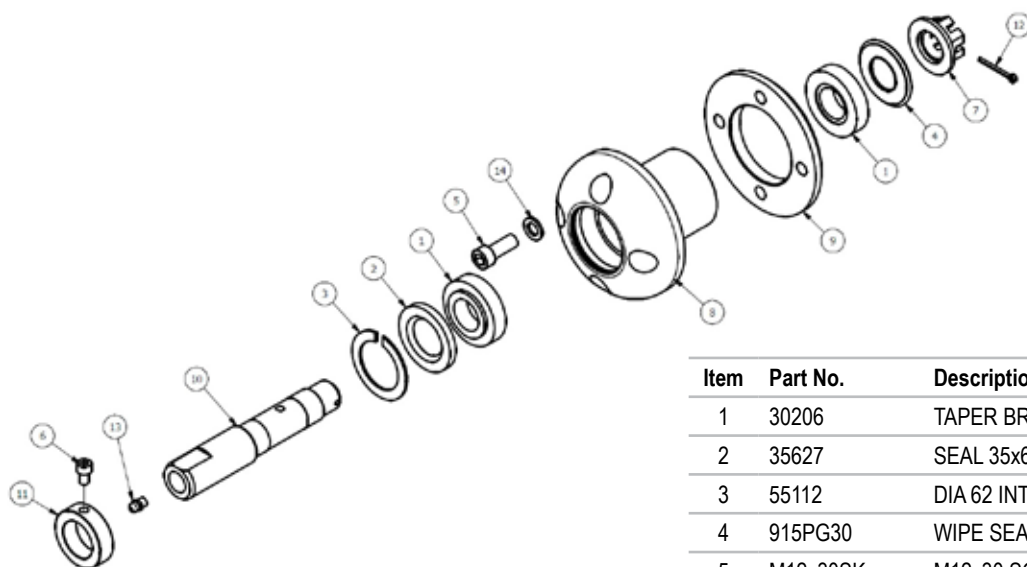
10	12FTHRAS	THREADED HEIGHT ADJUSTER	4
11	12GMRA2L	HEIGHT ADJUSTER (LH)	1
12	12GMRA2R	HEIGHT ADJUSTER (RH)	1
13	12x3FSKS	1/2"x3" FINE SOCKET HEAD 12.9	24
14	190.000.545	PTO GUARD (EXTENDED OVAL)	1
15	199099	DIA 15-17mm INSERT	2
16	LF205H	6 SPLINE "L" BOX RATIO 1.92	2
17	LF205TH	6 SPLINE "T" BOX RATIO 1.92	2
18	5/8F	5/8" FINE NYLOC NUT	16
19	58x2FBZP	5/8"x2" FINE BOLT	16

TDR Rear Deck (8400GR)

20	60CSD	60mm STAR DRIVE	2
21	8-6-7-00161	3/8" VALVE BREATHER	5
22	8GMSTRP	8400 RM STRAP (3530mm)	1
23	EW29A	5/8" "D" SHACKLE	3
24	FWM12	M12 FLAT WASHER	8
25	FWM20	M20 FLAT WASHER	8
26	FWM8	M8 FLAT WASHER	4
27	GM2	STANDARD A-FRAME	1
28	GM84DRV	6 SPLINE STAR DRIVE	4
29	LS002	ANTI VIBRATION RUBBER	7
30	M12	M12 NYLOC NUT	16
31	M12x100BZP	M12x100 BOLT	4
32	M12x30SZP	M12x30 SET BOLT	4
33	M12x40BZP	M12x40 BOLT	4
34	M12x50SZP	M12x50 SET BOLT	2
35	M12x60BZP	M12x60 BOLT	4
36	M20	M20 NYLOC NUT	2
37	M20HEX	M20 PLAIN NUT	4
38	M20x120BZP	M20x120 BOLT	2
39	M8x16SZP	M8x16 SET BOLT	8
40	NT55A	RUBBER COUPLING	4
41	RM-M20C	ROLLER ADJUSTER CAP NUT	4

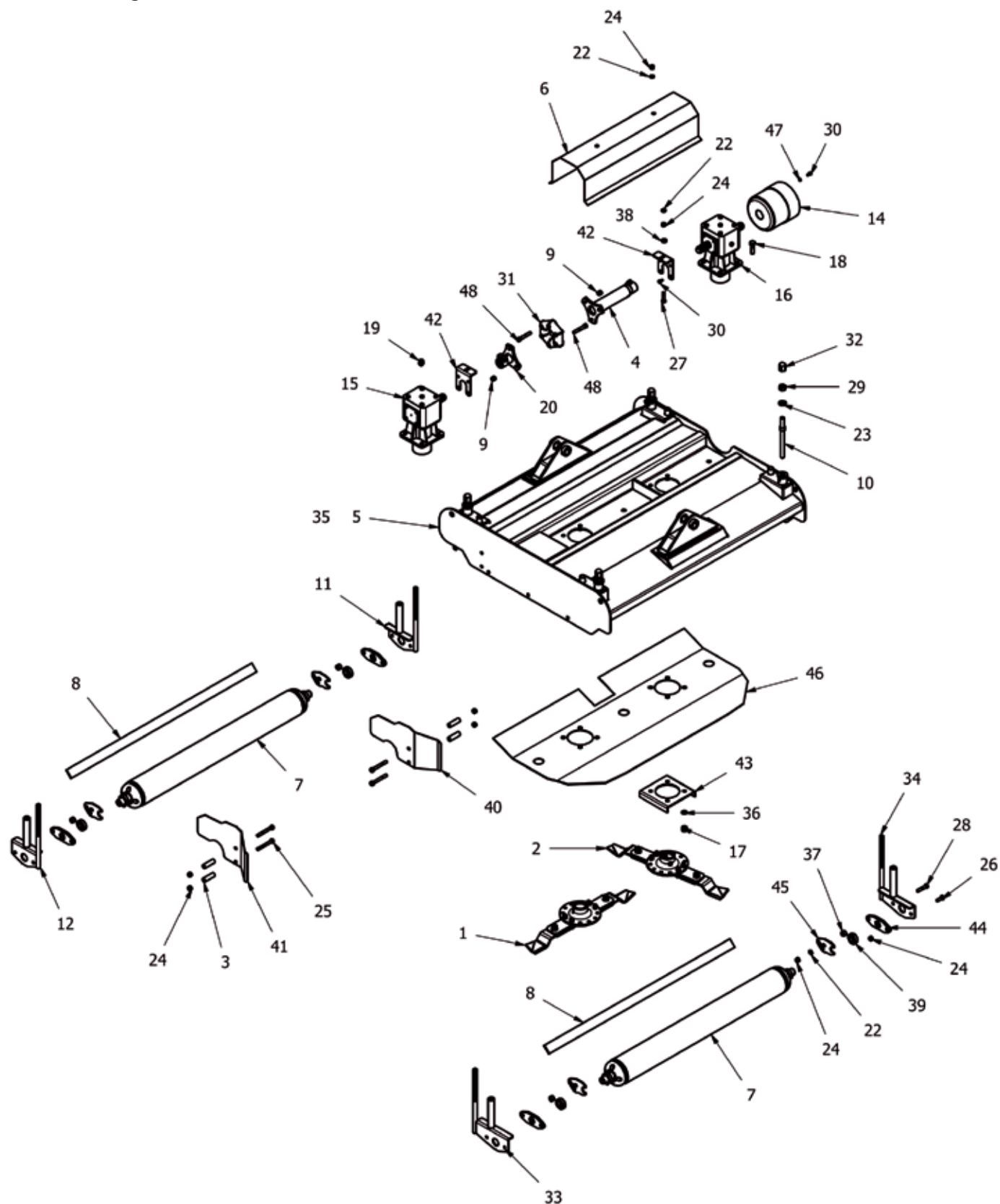
42	RMORA-1	OFFSET HEIGHT ADJUSTER (RH)	1
43	RMORA-2	OFFSET HEIGHT ADJUSTER (LH)	1
44	S15707	CAT 1/2 LINK PIN	2
45	3546	LINCH PIN DIA 9.5	2
46	849	GREASE NIPPLE M6 STR	4
47	SW58	5/8" SPRING WASHER	16
48	SWM12	M12 SPRING WASHER	4
49	T27A	6 SPLINE "T" BOX RATIO 1.92	1
50	T500810ENC12RW6	FIXED SLIP CLUTCH 1200 Nm	1
51	12T-BBS	BLADE BACK SPACER	4
52	RM-RSN3	SHAFT COLLAR DIA 35	4
53	84RM-RD1	REAR DEFLECTOR	1
54	84RM-RD1H	REAR DEFLECTOR	1
55	9TGT-CB	GEARBOX COVER BRKT	2
56	GM6-4F	GEARBOX REINF"	4
57	GM84-USC	UNDERSIDE COVER	1
58	GM84-USCH	UNDERSIDE COVER	1
59	RM-RSN2	ROLLER MOUNT	4
60	RM-RSN4	SCRAPER MOUNT	4

Roller End Assembly



Item	Part No.	Description	Qty
1	30206	TAPER BRG 62x30x17.25	2
2	35627	SEAL 35x62x7	1
3	55112	DIA 62 INT CIRCLIP	1
4	915PG30	WIPE SEAL	1
5	M12x30SK	M12x30 SOCKET HEAD SCREW	4
6	M8x12SK	M8x12mm SOCKET HEAD 12.9	1
7	RM-04NUT	NUT-WASHER WELDMENT	1
8	RM-04REH	ROLLER END HOUSING	1
9	RM-04REP	ROLLER END PLATE	1
10	RM-04RES	ROLLER END SHAFT	1
11	RM-RSN3	SHAFT COLLAR DIA 35	1
12	S1500	SPLIT PIN 1/8"x1 1/2"	1
13	S851	GREASE NIPPLE M8x1.25 STR	1
14	SWM12	M12 SPRING WASHER	4

TDR16000 Wing



Item	Part No	Description	Qty
1	725-SBL	725 SWING BLADE (Anti_Clk)	1
2	725-SBR	725 SWING BLADE (Clk)	1
3	84RM-RDT	DEFLECTOR TUBE	4
4	9GTD	DRIVE TUBE (302mm)	1
5	TDW-FAB1	16ft WING (RH)	1
6	TDW-GARD	16ft WING GUARD	1

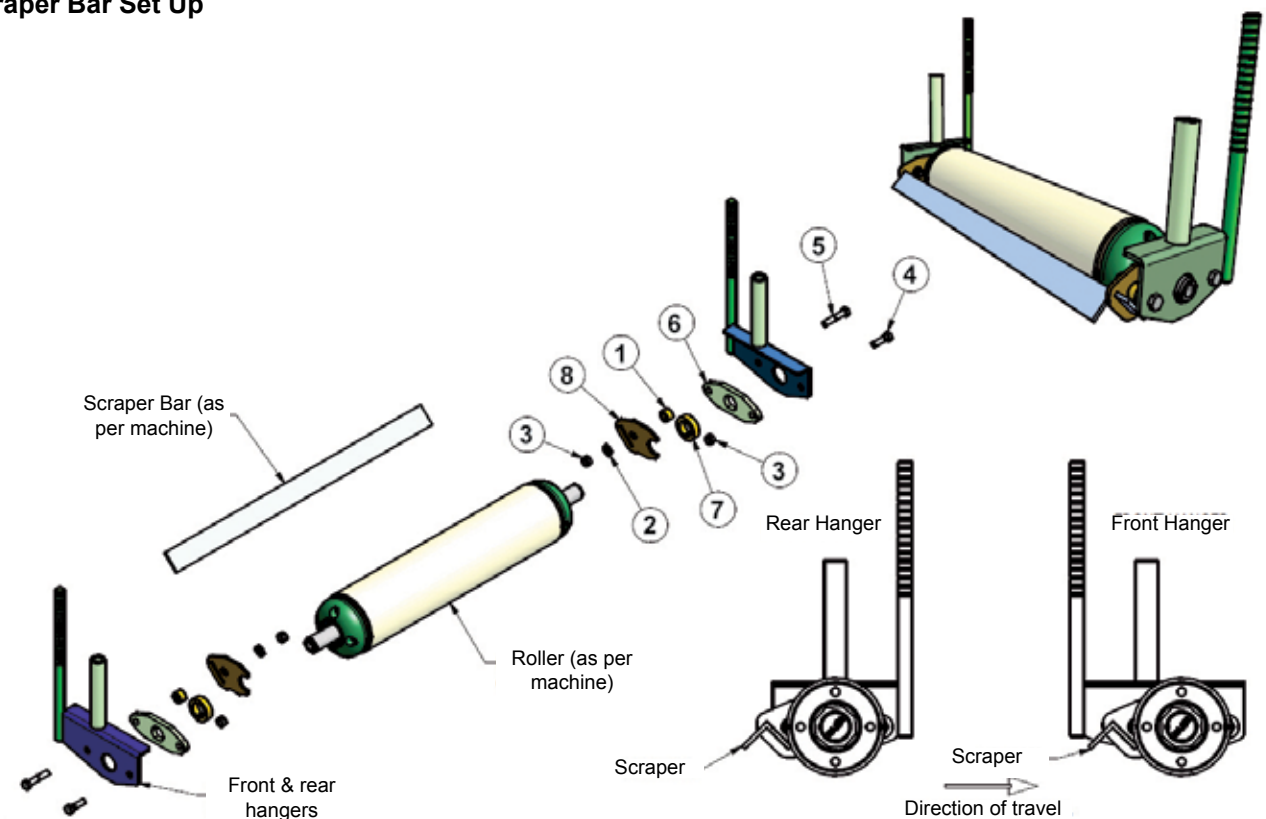
7	TDW-ROL	16ft TDR ROLLER	2
8	TDW-SB16	16ft SCRAPER	2
9	12F	1/2" FINE NYLOC NUT	6
10	12F-THRA	THREADED HEIGHT ADJUSTER	4
11	12GMRA2L	HEIGHT ADJUSTER (LH)	1
12	12GMRA2R	HEIGHT ADJUSTER (RH)	1
14	190660-1	GUARD (COVER 660/BASE 661)	1

TDR16000 Wing

15	205871	6 SPLINE "L" BOX RATIO 1.47	1
16	205873	6 SPLINE "T" BOX RATIO 1.47	1
17	58F	5/8" FINE NYLOC NUT	8
18	58x214FBZP	5/8"x2 1/4" FINE BOLT	8
19	8-6-7-00161	3/8" VALVE BREATHER	2
20	8SM-18	6 SPLINE STAR DRIVE	1
22	FWM12	M12 FLAT WASHER	8
23	FWM20	M20 FLAT WASHER	4
24	M12	M12 NYLOC NUT	16
25	M12x100BZP	M12x100 BOLT	4
26	M12x35BZP	M12x35 BOLT	4
27	M12x50SZP	M12x50 SET BOLT	2
28	M12x60BZP	M12x60 BOLT	4
29	M20HEX	M20 PLAIN NUT	4
30	M8x16SZP	M8x16 SET BOLT	8
31	NT55A	RUBBER COUPLING	1
32	RM-M20C	ROLLER ADJUSTER CAP NUT	4
33	RMORA-1	OFFSET HEIGHT ADJ. (RH)	1
34	RMORA-2	OFFSET HEIGHT ADJUSTER (LH)	1

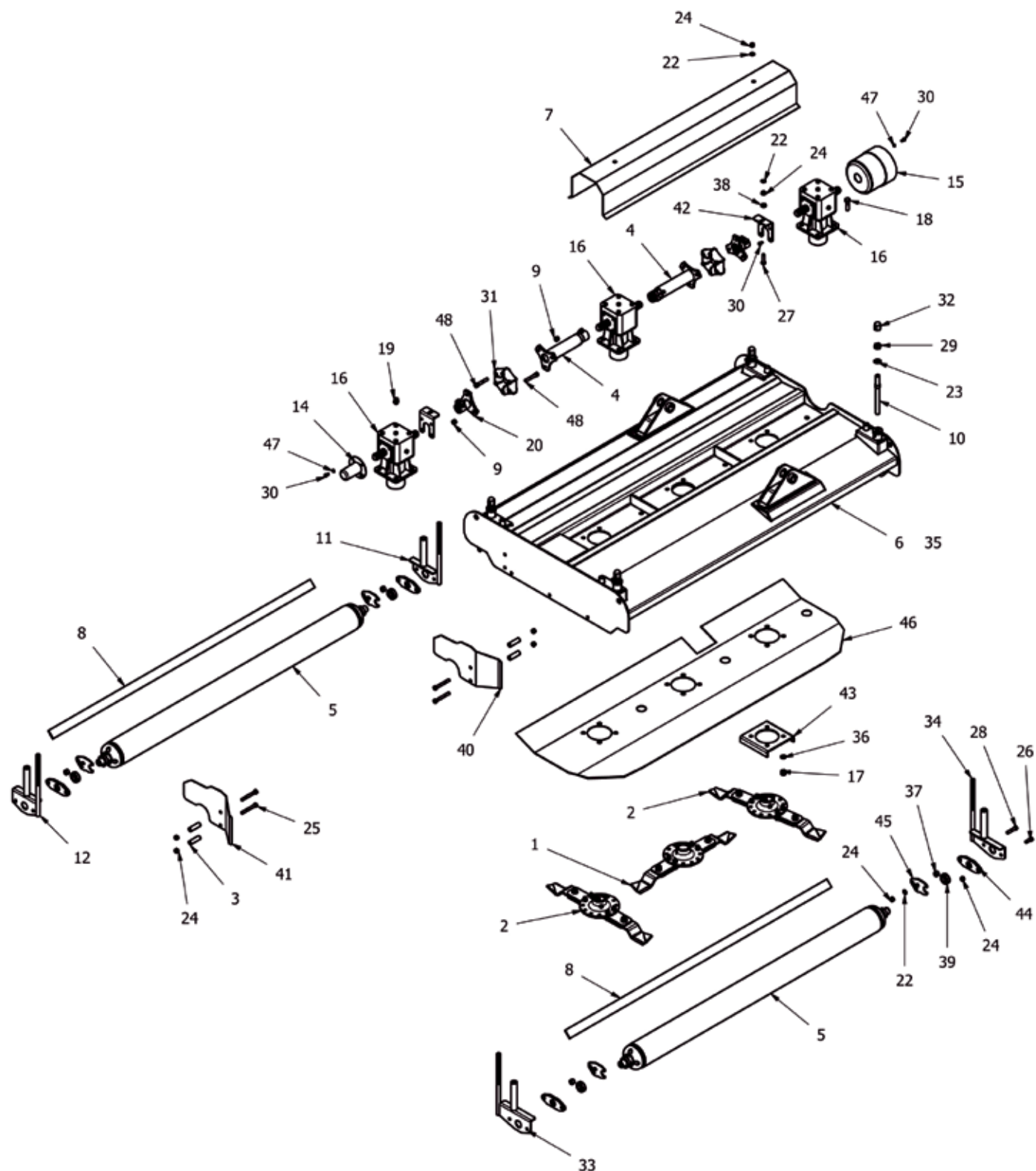
35	S849	GREASE NIPPLE M6 STR	4
36	SW58	5/8" SPRING WASHER	8
37	12T-BBS	BLADE BACK SPACER	4
38	8SM9-3	BLADE BACK SPACER	2
39	RM-RSN3	SHAFT COLLAR DIA 35	4
40	84RM-RD1	REAR DEFLECTOR	1
41	84RM-RD1H	REAR DEFLECTOR	1
42	9TGT-CB	GEARBOX COVER BRKT	2
43	GM6-4F	GEARBOX REINF"	2
44	RM-RSN2	ROLLER MOUNT	4
45	RM-RSN4	SCRAPER MOUNT	4
46	TDW-USC1	16ft UNDERSIDE COVER	1
47	FWM8	M8 FLAT WASHER	4
48	12x3FSKS	1/2"x3" FINE SOCKET HEAD 12.9	6

Scraper Bar Set Up



Item	Part No	Description	Qty
1	12T-BBS	BLADE BACK SPACER	2
2	FWM12	M12 FLAT WASHER	2
3	M12	M12 NYLOC NUT	4
4	M12x40BZP	M12x40 BOLT	2
5	M12x60BZP	M12x60 BOLT	2
6	RM-RSN2	ROLLER MOUNT	2
7	RM-RSN3	SHAFT COLLAR DIA 35	2
8	RM-RSN4	SCRAPER MOUNT	2

TDR20000 Wing



Item	Part No	Description	Qty
1	725-SBL	725 SWING BLADE (Anti_Clk)	1
2	725-SBR	725 SWING BLADE (Clk)	2
3	84RM-RDT	DEFLECTOR TUBE	4
4	9GTD	DRIVE TUBE (302mm)	2
5	TDW-20RL	20ft TDR ROLLER	2
6	TDW-FAB2	20ft WING (RH)	1
7	TDW-GARD2	20ft WING GUARD	1
8	TDW-SB20	20ft SCRAPER	2

9	12F	1/2" FINE NYLOC NUT	12
10	12F-THRA	THREADED HEIGHT ADJUSTER	4
11	12GMRA2L	HEIGHT ADJUSTER (LH)	1
12	12GMRA2R	HEIGHT ADJUSTER (RH)	1
14	190592	PTO HAT	1
15	190660-1	GUARD (COVER 660/BASE 661)	1
16	205873	6 SPLINE "T" BOX RATIO 1.47	3
17	58F	5/8" FINE NYLOC NUT	12
18	58x214FBZP	5/8"x2 1/4" FINE BOLT	12

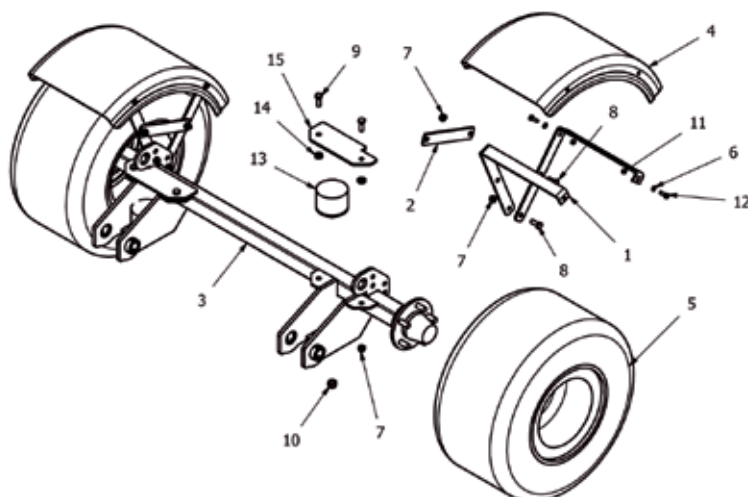
TDR20000 Wing

19	8-6-7-00161	3/8" VALVE BREATHER	3
20	8SM-18	6 SPLINE STAR DRIVE	2
22	FWM12	M12 FLAT WASHER	8
23	FWM20	M20 FLAT WASHER	4
24	M12	M12 NYLOC NUT	16
25	M12x100BZP	M12x100 BOLT	4
26	M12x35BZP	M12x35 BOLT	4
27	M12x50SZP	M12x50 SET BOLT	2
28	M12x60BZP	M12x60 BOLT	4
29	M20HEX	M20 PLAIN NUT	4
30	M8x16SZP	M8x16 SET BOLT	10
31	NT55A	RUBBER COUPLING	2
32	RM-M20C	ROLLER ADJUSTER CAP NUT	4
33	RMORA-1	HEIGHT ADJUSTER (RH)	1
34	RMORA-2	HEIGHT ADJUSTER (LH)	1
35	S849	GREASE NIPPLE M6 STR	4

36	SW58	5/8" SPRING WASHER	12
37	12T-BBS	BLADE BACK SPACER	4
38	8SM9-3	BLADE BACK SPACER	2
39	RM-RSN3	SHAFT COLLAR DIA 35	4
40	84RM-RD1	REAR DEFLECTOR	1
41	84RM-RD1H	REAR DEFLECTOR	1
42	9TGT-CB	GEARBOX COVER BRKT	2
43	GM6-4F	GEARBOX REINF"	3
44	RM-RSN2	ROLLER MOUNT	4
45	RM-RSN4	SCRAPER MOUNT	4
46	TDW-USC2	20ft UNDERSIDE COVER	1
47	FWM8	M8 FLAT WASHER	6
48	12x3FSKS	1/2"x3" SOCKET HEAD 12.9	12

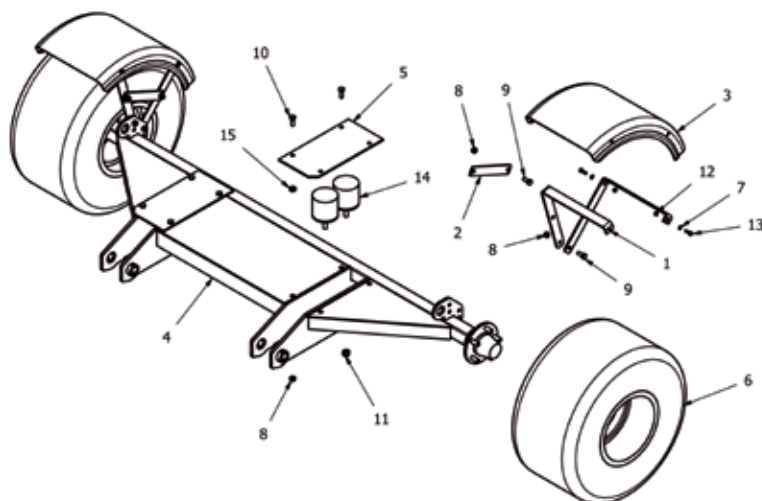
Axles

TDR16000 Axle



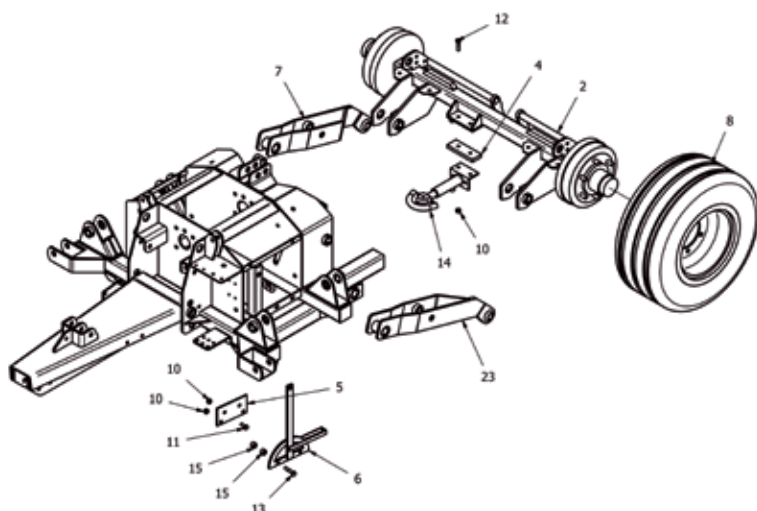
Item	Part No	Description	Qty
1	TD-MGD1	MUDGUARD MOUNT	4
2	TD-MGD3	MUDGUARD TIE	2
3	TDA-1601	16ft AXLE	1
4	TDA-MGRD	WHEEL MUDGUARD	2
5	26120012	DIA 650x320mm	2
6	FWM8	M8 FLAT WASHER	8
7	M12	M12 NYLOC NUT	12
8	M12x30SZP	M12x30 SET BOLT	8
9	M12x35BZP	M12x35 BOLT	4
10	M16	M16 NYLOC NUT	2
11	M8	M8 NYLOC NUT	8
12	M8x25BZP	M8x25 BOLT	8
13	MOT75	DIA 105x75 BUFFER	2
14	8SM9-3	BLADE BACK SPACER	4
15	TDA-AP6	AXLE CAP	2

TDR20000 Axle



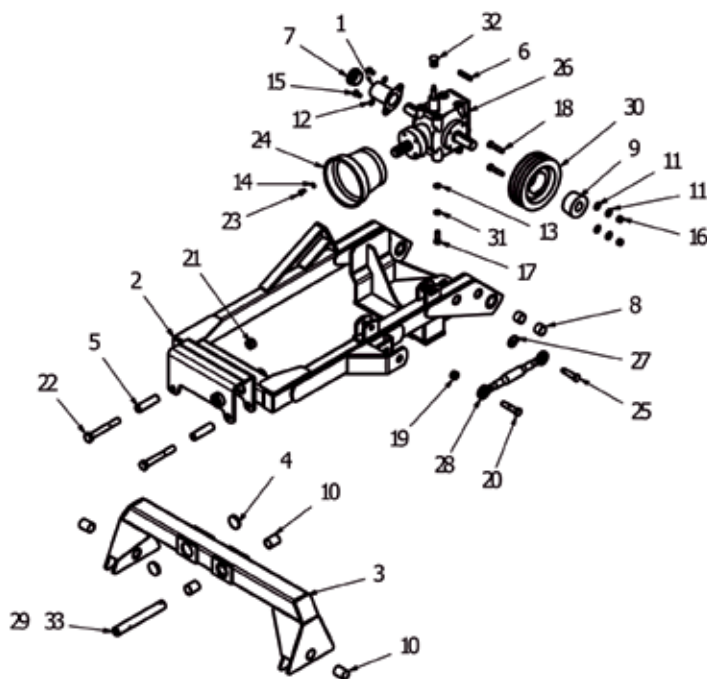
Item	Part No	Description	Qty
1	TD-MGD1	MUDGUARD MOUNT	4
2	TD-MGD3	MUDGUARD TIE	2
3	TDA-MGRD	WHEEL MUDGUARD	2
4	TDA20N01	20ft AXLE	1
5	TDA20N10	BUFFER COVER	2
6	3605512	DIA 695x345mm	2
7	FWM8	M8 FLAT WASHER	8
8	M12	M12 NYLOC NUT	16
9	M12x30SZP	M12x30 SET BOLT	8
10	M12x35BZP	M12x35 BOLT	8
11	M16	M16 NYLOC NUT	4
12	M8	M8 NYLOC NUT	8
13	M8x25BZP	M8x25 BOLT	8
14	MOT10	DIA 105x100 BUFFER	4
15	8SM9-3	BLADE BACK SPACER	8

TDR Braked Axle Option



Item	Part No	Description	Qty
2	TDA-167001	16ft BRAKED AXLE	1
3	TDA-167003	CHAIN LINK MOUNT	2
4	TDA-167006	BRAKE RAM SPACER	1
5	TDA-167008	BRAKE MOUNT	1
6	TDA-167009	HAND BRAKE	1
7	TDA-167050	16ft (BRAKED) REAR ARM (RH)	1
8	30115145	DIA 720x275mm	2
9	CL12-1	1/2" CHAIN LINK	3
10	M12	M12 NYLOC NUT	6
11	M12x30SZP	M12x30 SET BOLT	2
12	M12x50BZP	M12x50 BOLT	2
13	M12x60BZP	M12x60 BOLT	2
14	QV70	STD TANKER BRAKE RAM	1
15	12T-BBS	BLADE BACK SPACER	4
23	TDA-167050-H	16ft (BRAKED) REAR ARM (LH)	1

TDR Wing Pivot Assembly

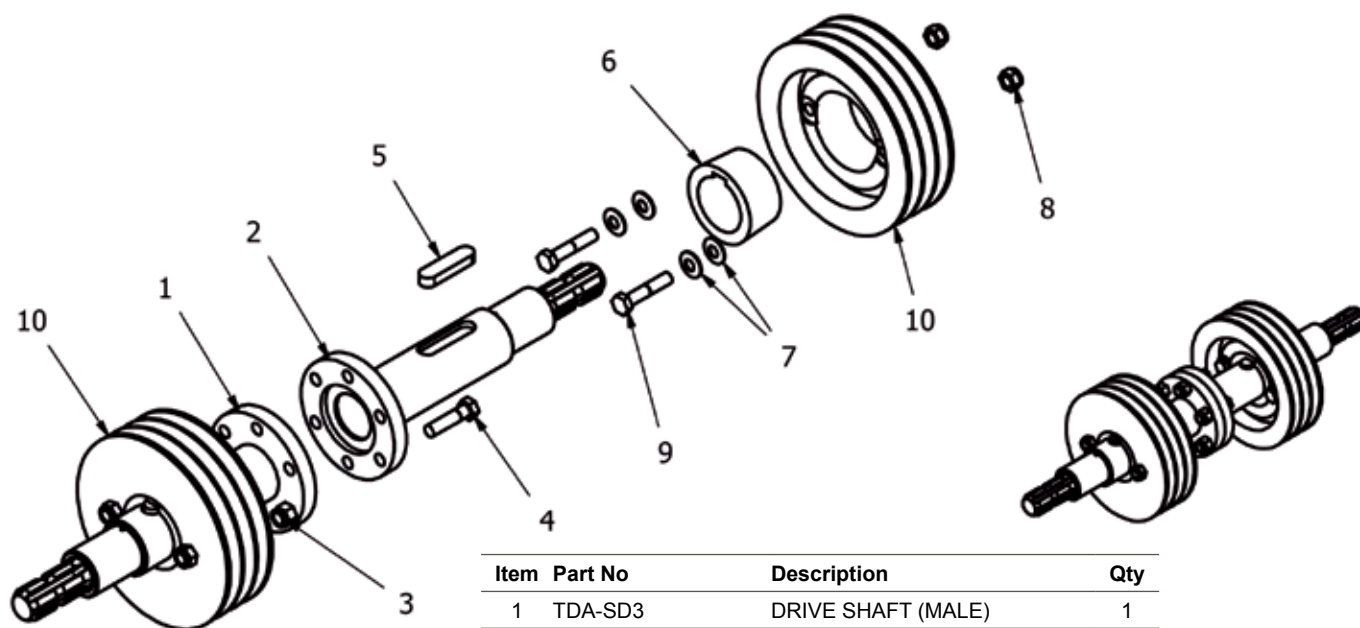


Item	Part No	Description	Qty
1	TDC-PTO1	PTO HAT	1
2	TDP-FAB1	WING PIVOT ARM (RH)	1
3	TDP-FAB2	WING PIVOT BEAM	1
4	TDP-GA1B	NYLON SPACER	2
5	TDP-GA1C	BOLT SPACER	2
6	10x08x65	10x8 PARALLEL KEY	1
7	111070	DIA 50.5-54mm INSERT	1
8	20DX16	DIA 1 1/4" BUSHx1"	4
9	2517-35	2517 35mm BORE	1
10	8SM14	DIA 1 1/4" BUSHx1 3/4"	4
11	D281215	DISC SPRING 28x12x1.5	4
12	FWM10	M10 FLAT WASHER	2
13	FWM12	M12 FLAT WASHER	4
14	FWM8	M8 FLAT WASHER	4
15	M10x20SZP	M10x20 SET BOLT	2
16	M12	M12 NYLOC NUT	2
17	M12x40BZP	M12x40 BOLT	4
18	M12x60BZP	M12x60 BOLT	2

19	M16	M16 NYLOC NUT	1
20	M16x75BZP	M16x75 BOLT	1
21	M20	M20 NYLOC NUT	2
22	M20x150BZP	M20x150 BOLT	2
23	M8x16SZP	M8x16 SET BOLT	4
24	NT20A	PTO GUARD (RND)	1
25	S15010	CAT 0 PIN DIA 16x54mm	1
26	S2061258076	SELECT "T" BOX RATIO 2.58	1
27	S37	LINCH PIN DIA 6	1

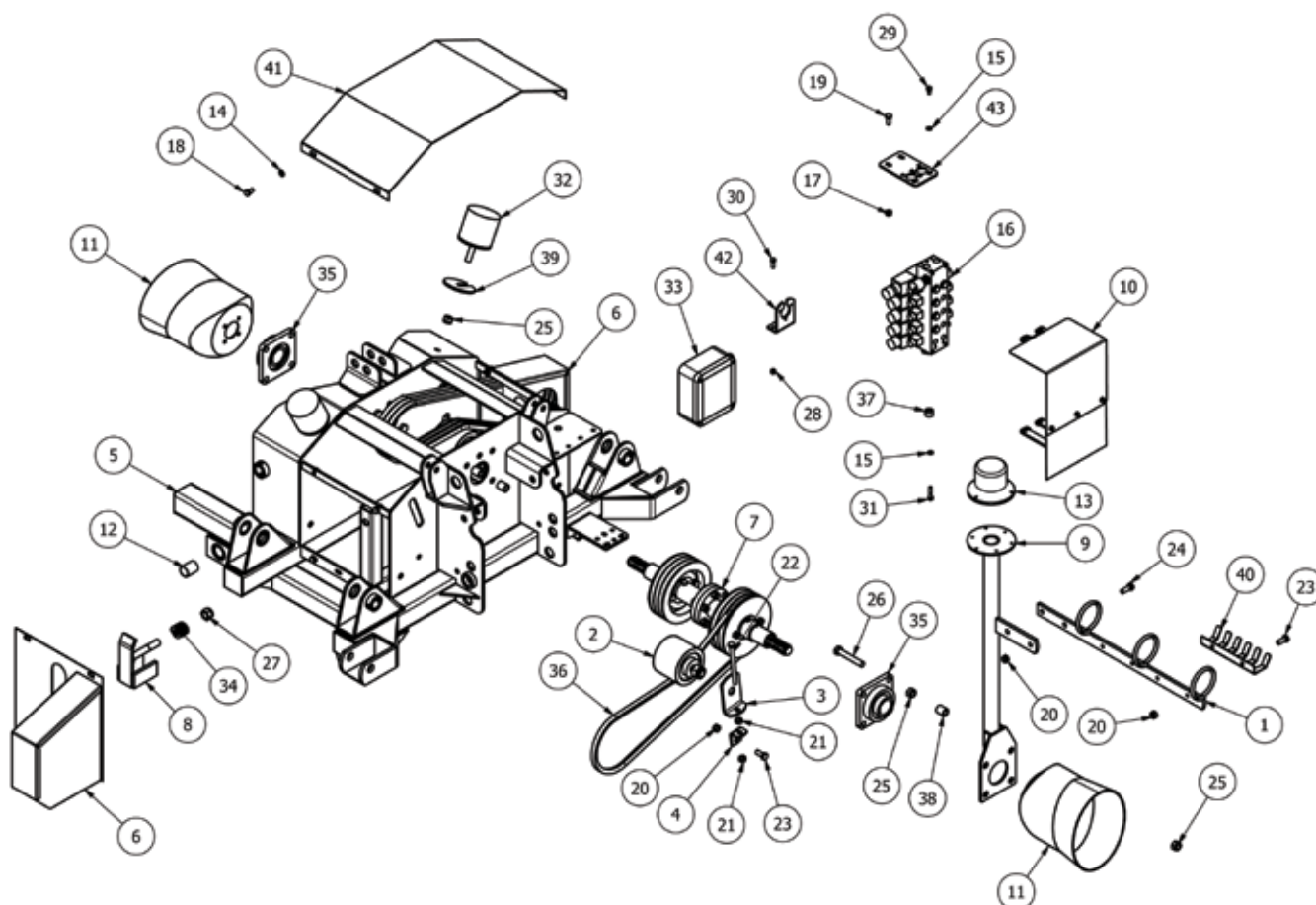
28	S4418-A	CAT 0 TOP LINK	1
29	S849	GREASE NIPPLE M6 STR	1
30	SPB-200C	SPB 200 TRIPLEX PULLEY	1
31	SWM12	M12 SPRING WASHER	4
32	TDKP-31	WAIST KNOB	1
33	TDP-GA1A	PIVOT PIN (250)	1

TDR Drive Shaft Assembly



Item	Part No	Description	Qty
1	TDA-SD3	DRIVE SHAFT (MALE)	1
2	TDA-SD7	DRIVE SHAFT (FEMALE)	1
3	12F	1/2" FINE NYLOC NUT	6
4	12x2FBZP	1/2"x2" FINE BOLT	6
5	18x11x70	18x11 PARALLEL KEY	2
6	2517-60	2517 60mm BORE	2
7	D281215	DISC SPRING 28x12x1.5	8
8	M12	M12 NYLOC NUT	4
9	M12x60BZP	M12x60 BOLT	4
10	SPB-200C	SPB 200 TRIPLEX PULLEY	2

TDR Bogey Assembly

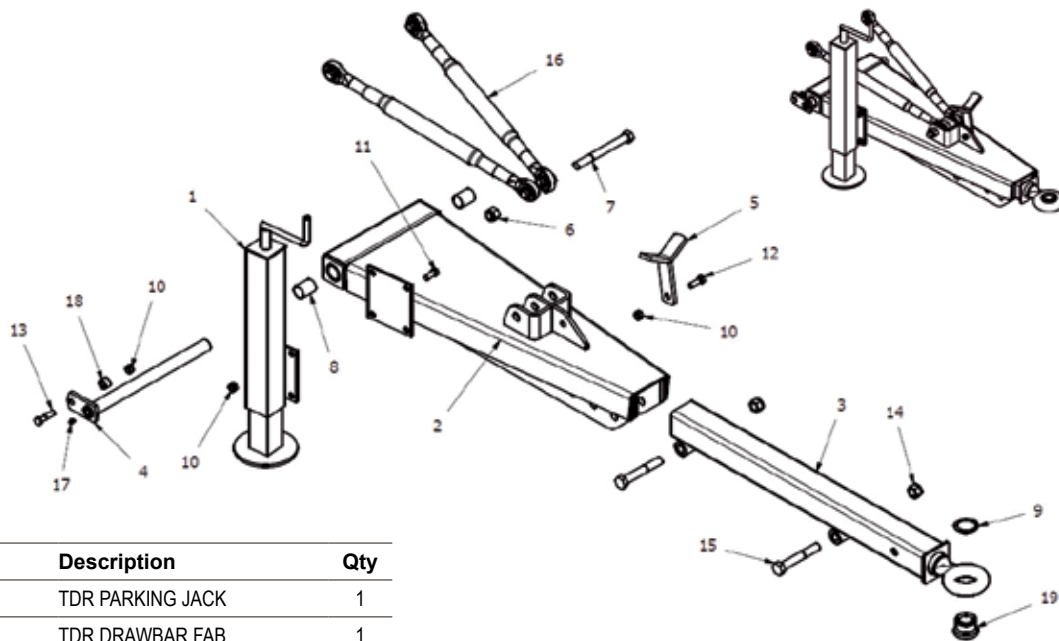


TDR Bogey Assembly

Item	Part No	Description	Qty
1	2TKBC-2	CABLE LOCATION BAR	1
2	TD-ID101	IDLER ROLL ASSEMBLY	2
3	TD-ID201	IDLER ADJUSTER	2
4	TD-ID202	IDLER ANCHOR	2
5	TDA-FAB1	TDR BOGEY FAB	1
6	TDA-GARD	PULLEY GUARD	2
7	TDA-SDGA	DRIVE SHAFT ASSEMBLY	1
8	TDA-SPAJ	STRIKE PLATE ADJUSTER	2
9	TDC-LIT10	TDR BEACON STAND	1
10	TRI-HYD-CV-GA	VALVE COVER ASSY	1
11	190.000.545	PTO GUARD (EXTENDED OVAL)	2
12	8SM14	DIA 1 1/4" BUSHx1 3/4"	4
13	DA49800101	LED BEACON	1
14	FWM10	M10 FLAT WASHER	8
15	FWM8	M8 FLAT WASHER	6
16	GCVB5-2	VICKERS 5 BLOCK ver 2	1
17	M10	M10 NYLOC NUT	6
18	M10x20SZP	M10x20 SET BOLT	8
19	M10x25SZP	M10x25 SET BOLT	2
20	M12	M12 NYLOC NUT	6
21	M12HEX	M12 PLAIN NUT	4
22	M12x150SZP	M12x150 SET BOLT	2

23	M12x30SZP	M12x30 SET BOLT	4
24	M12x35BZP	M12x35 BOLT	2
25	M16	M16 NYLOC NUT	18
26	M16x100SZP	M16x100 SET BOLT	8
27	M20	M20 NYLOC NUT	2
28	M8	M8 NYLOC NUT	2
29	M8x16SZP	M8x16 SET BOLT	3
30	M8x25BZP	M8x25 BOLT	2
31	M8x40BZP	M8x40 BOLT	3
32	MOT10	DIA 105x100 BUFFER	2
33	RC-TDR-BASE	REMOTE CONTROL BOX	1
34	TDA-SPS	STRIKE PLATE SPRING	2
35	UCF210 (MSF50)	DIA 50mm FLANGE BRG	2
36	XPB1800	XPB BELT x1800mm	6
37	12T-BBS	BLADE BACK SPACER	3
38	84RM-SBOB	OVERLAP BLADE BUSH	8
39	8T19	BUFFER SPACER	2
40	TA-HCM04	CABLE MOUNT	1
41	TDA-AGRD	BOGEY TOP COVER	1
42	TDH-MP2	HYD PLUG MOUNT	1
43	TDH-MP3	VALVE TOP (VICKERS)	1

TDR Drawbar Assembly

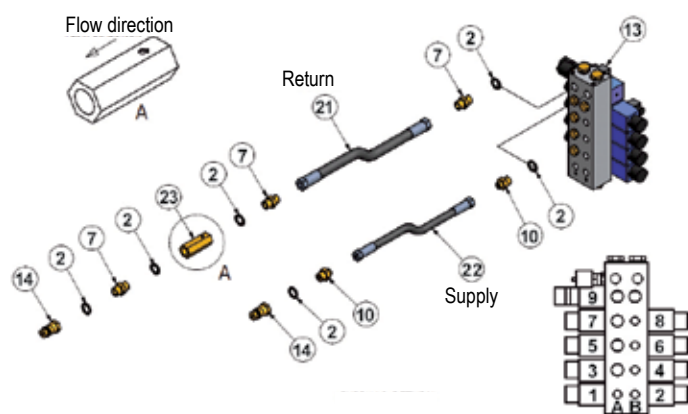


Item	Part No	Description	Qty
1	12GMJK	TDR PARKING JACK	1
2	TDD-FAB1	TDR DRAWBAR FAB	1
3	TDD-HTE	DRAWBAR HITCH EYE	1
4	TDD-PIN	DRAWBAR PIVOT PIN	1
5	TDD-SS	TDR PTO STAND	1
6	34F	3/4" FINE NYLOC NUT	1
7	34x7FBZP	3/4"x7" FINE BOLT	1
8	8SM14	DIA 1 1/4" BUSHx1 3/4"	2
9	AGC2	DIA 50 EXT HEAVY CIRCLIP	1
10	M12	M12 NYLOC NUT	6
11	M12x30SZP	M12x30 SET BOLT	4

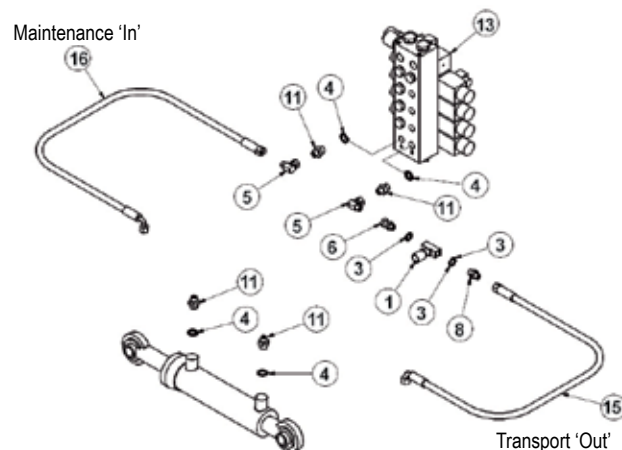
12	M12x35BZP	M12x35 BOLT	1
13	M12x50BZP	M12x50 BOLT	1
14	M20	M20 NYLOC NUT	2
15	M20x130BZP	M20x130 BOLT	2
16	S300-A	CAT 1-1 TOP LINK	2
17	S849	GREASE NIPPLE M6 STR	2
18	12T-BBS	BLADE BACK SPACER	1
19	TDD-TEB	TOE EYE BUSH	1

Hose Assemblies

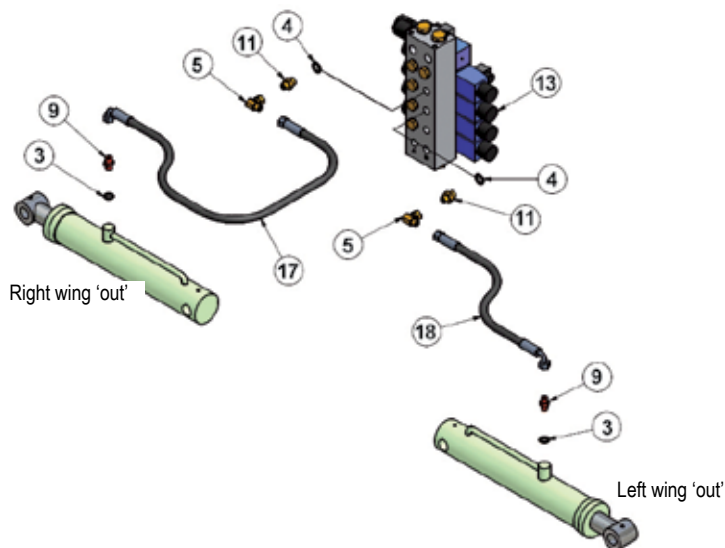
Supply & Return Hose Assembly



Top Link Hose Assembly

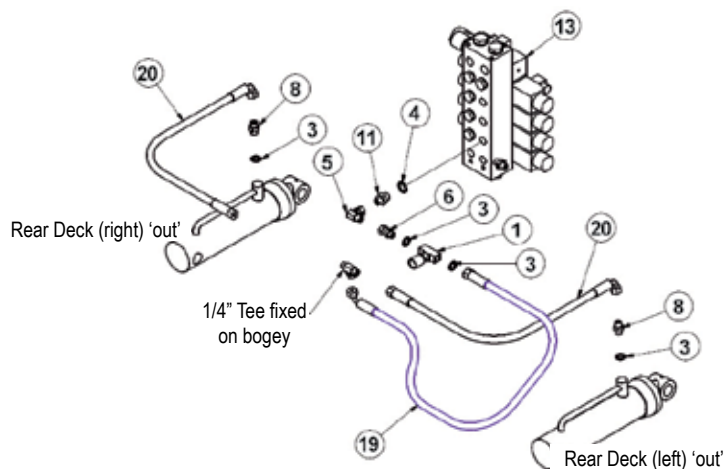


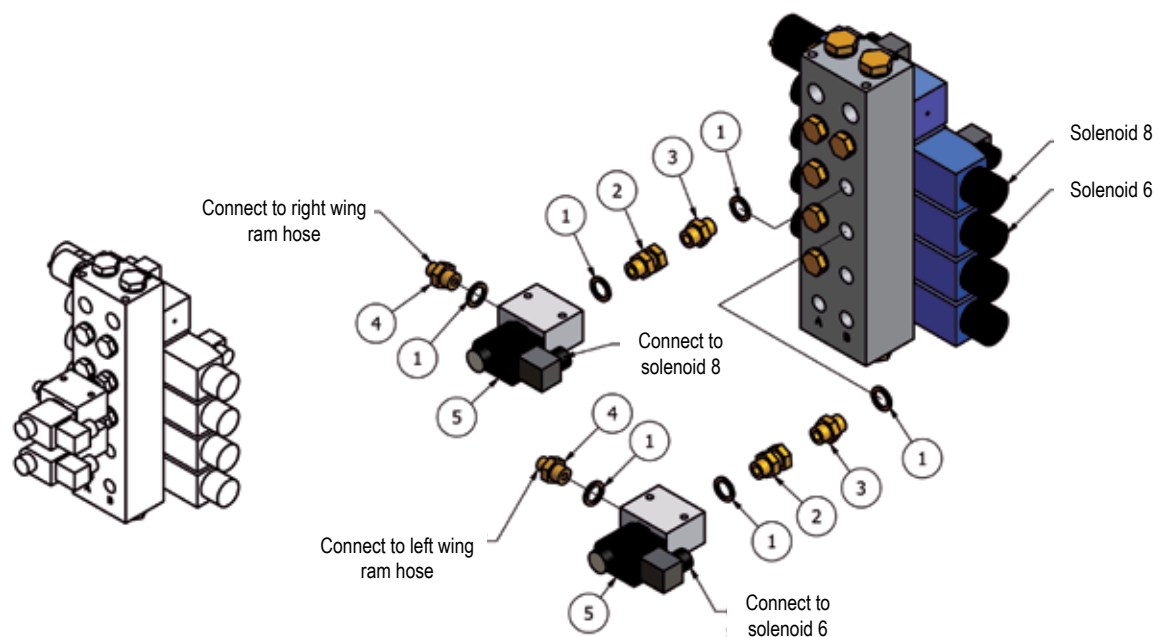
Wing Ram Hose Assembly



Item	Part No	Description	Qty
1	201011	1/4" 1251 NEEDLE VALVE (BLUE)	2
2	EDOW12	1/2" DOWTY WASHER	6
3	EDOW14	1/4" DOWTY WASHER	8
4	EDOW38	3/8" DOWTY WASHER	7
5	EFM9014	1/4" F/M ELBOW	5
6	EMF14	1/4" M/F CONNECTOR	2
7	EMM12	1/2" M/M CONNECTOR	3
8	EMM14	1/4" M/M CONNECTOR	4
9	EMM14RV	1/4" M/M RESTRICTOR (DIA 1mm)	2
10	EMM3812	1/2-3/8" M/M CONNECTOR	2
11	EMM3814	3/8-1/4" M/M CONNECTOR	7
12	EMMMT14	1/4" M/M/M CONNECTOR	1
13	GCVB5	VICKERS 5 BLOCK	1
14	QRM12	1/2" QUICK RELEASE MALE	2
15	TDR-HOSE-A	1/4"x1900mm Str to Block 90	1
16	TDR-HOSE-B	1/4"x2130mm Str to Block 90	1
17	TDR-HOSE-C	1/4"x1720mm Str to Block 90	1
18	TDR-HOSE-D	1/4"x1090mm Str to Block 90	1
19	TDR-HOSE-E	1/4"x1220mm Str to Block 90	1
20	TDR-HOSE-F	1/4"x430mm Str to Block 90	2
21	TDR-RETURN	1/2"x2800mm Str to Str	1
22	TDR-SUPPLY	3/8"x2800mm Str to Str	1
23	VUR03C	1/2" CHECK VALVE	1

Rear Deck Ram Hose Assembly

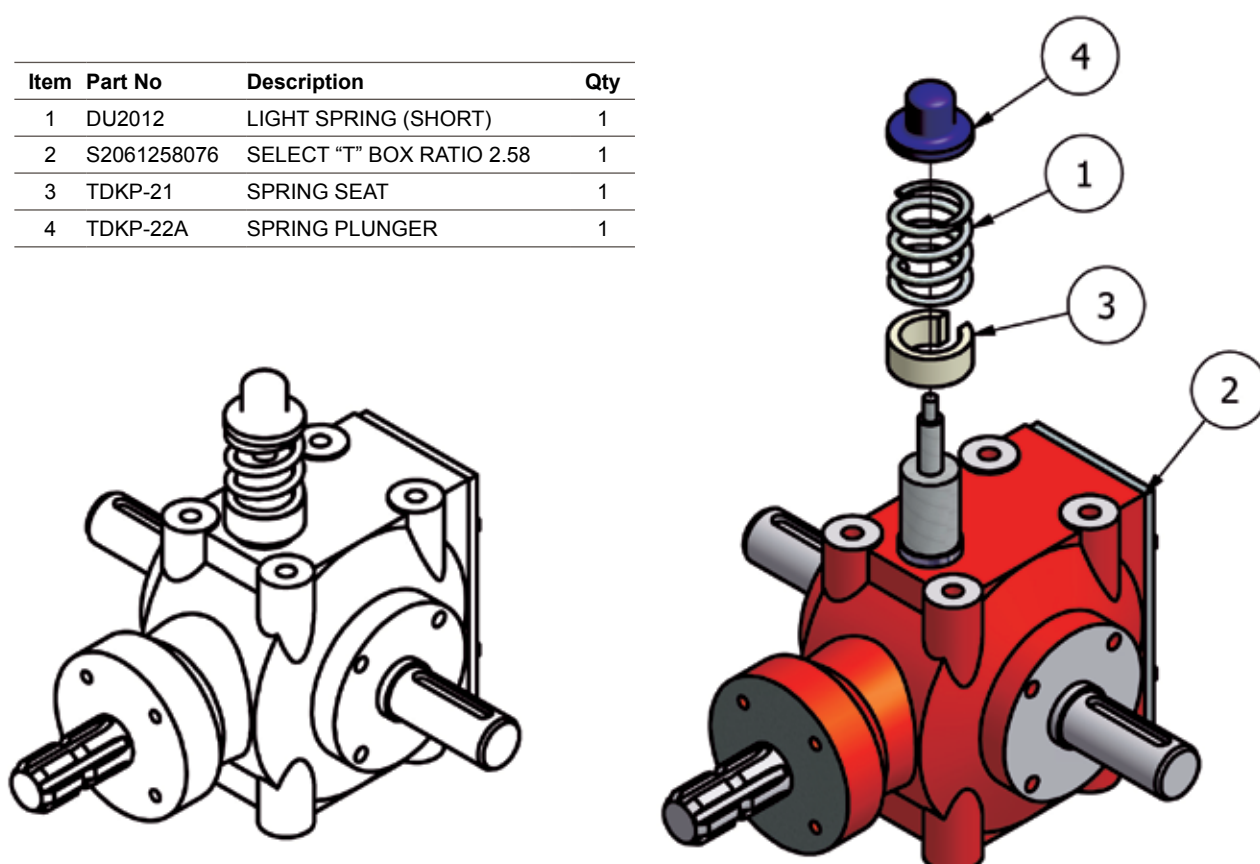




Item	Part No	Description	Qty
1	EDOW38	3/8" DOWTY WASHER	6
2	EMF38	3/8" M/F CONNECTOR	2
3	EMM38	3/8" M/M CONNECTOR	2
4	EMM3814	3/8-1/4" M/M CONNECTOR	2
5	SDC08-2-DG3B-38	Part No. SVP08NC-R001	2

TDR Spring Knob (option)

Item	Part No	Description	Qty
1	DU2012	LIGHT SPRING (SHORT)	1
2	S2061258076	SELECT "T" BOX RATIO 2.58	1
3	TDKP-21	SPRING SEAT	1
4	TDKP-22A	SPRING PLUNGER	1



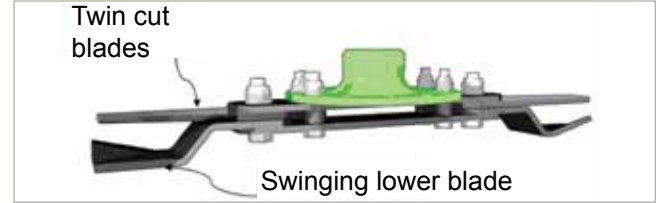
Blades

SWINGING BLADE SYSTEM



Standard system on: TDR Models

MULCHING BLADE SYSTEM



Optional system on: TDR Models

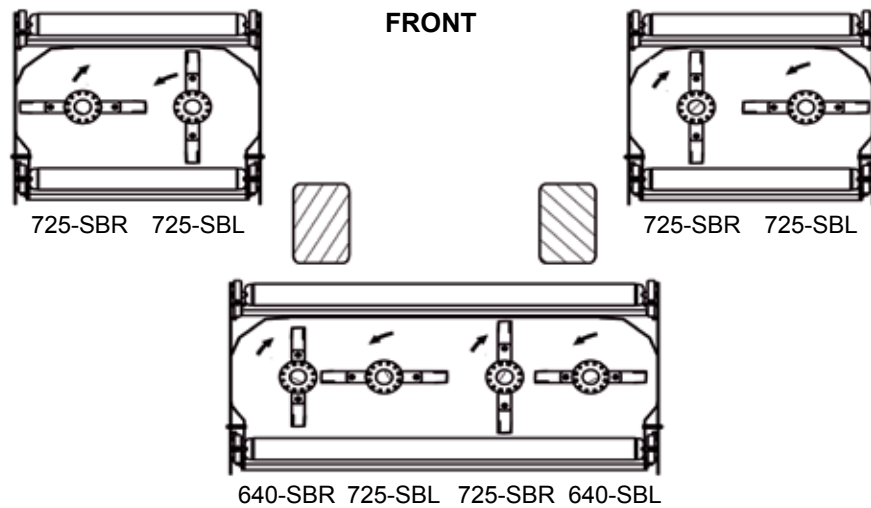
FIXED BLADE SYSTEM



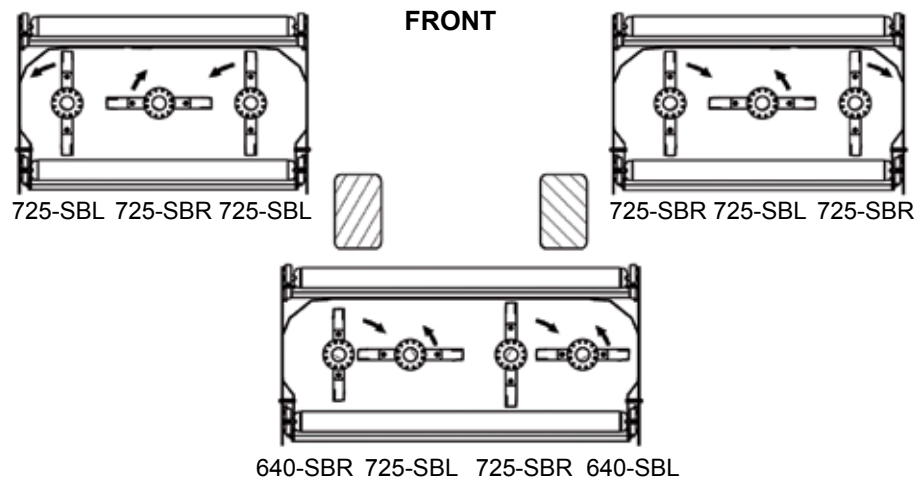
Optional system on: TDR Models

BLADE ROTATIONS

TDR16000 Blade Systems



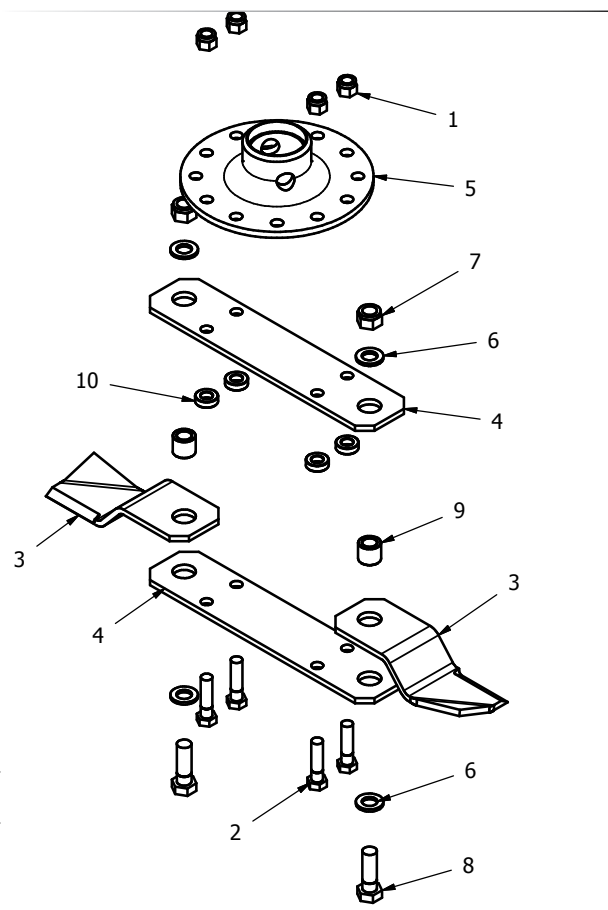
TDR20000 Blade Systems



NOTE: Please have the serial number of your machine to hand when ordering blades to ensure you get the correct parts.

SWINGING BLADE SYSTEMS - Standard system on TDR Models

640-SBL - 640 Swing Blade (Anti Clockwise)



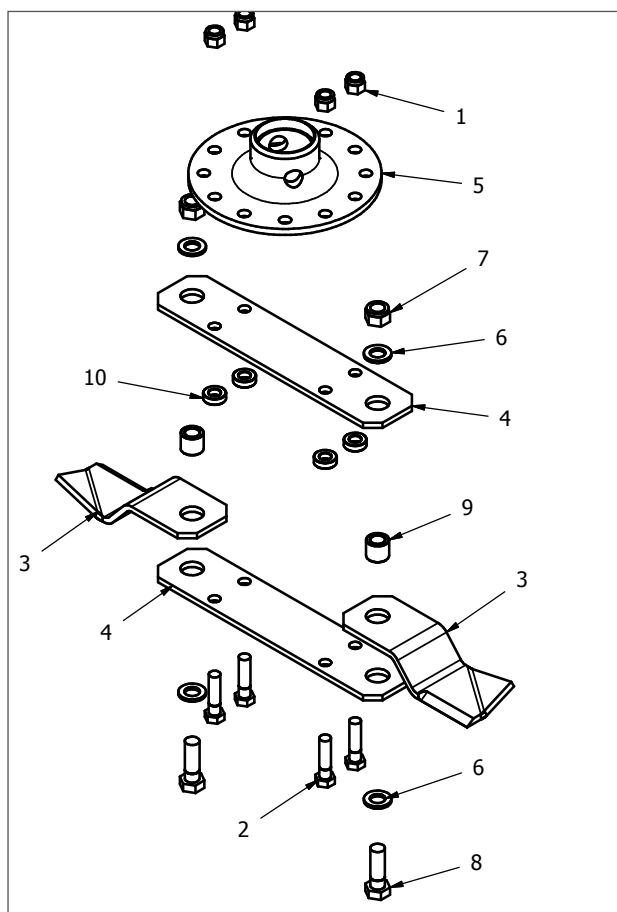
MACHINE QTY

TDR16000 1

TDR20000 1

Item	Part No	Description	Qty
1	1/2F	1/2" Nyloc Nut	4
2	12x2FBZP	1/2"x2" FINE BOLT	4
3	84RM-SB01	SWING BLADE (Anti-Clk)	2
4	84RM-SBB	BLADE BACK (285 CTR)	2
5	DF-BMP	BLADE MOUNT	1
6	FWM16	M16 FLAT WASHER	4
7	M16	M16 NYLOC NUT	2
8	M16x50BZP	M16x50 BOLT	2
9	84RM-SBBB	BLADE BUSH	2
10	8SM9/3	BLADE BACK SPACER	4

640-SBR - 640 Swing Blade (clockwise)



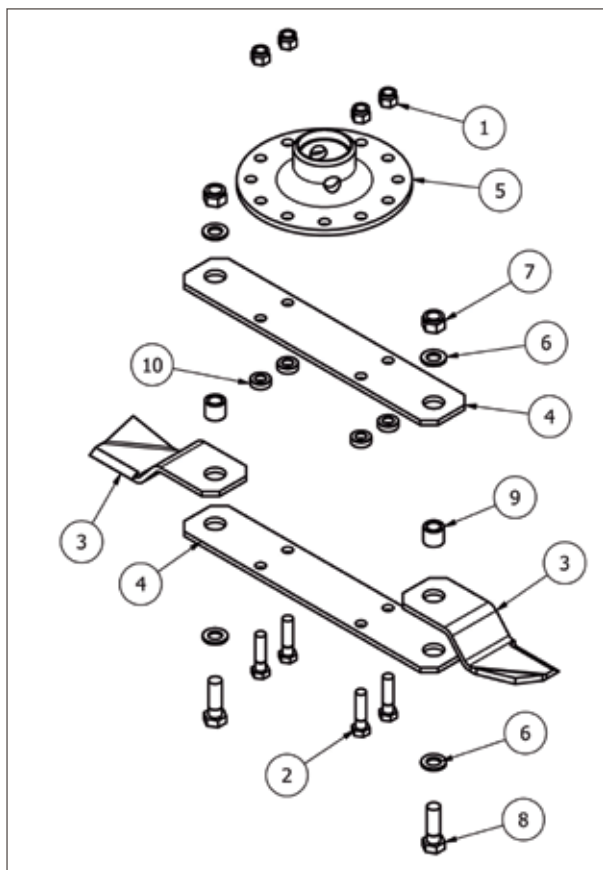
MACHINE QTY

TDR16000 1

TDR20000 1

Item	Part No	Description	Qty
1	1/2F	1/2" Nyloc Nut	4
2	12x2FBZP	1/2"x2" FINE BOLT	4
3	84RM-SB02	SWING BLADE (Clk)	2
4	84RM-SBB	BLADE BACK (285 CTR)	2
5	DF-BMP	BLADE MOUNT	1
6	FWM16	M16 FLAT WASHER	4
7	M16	M16 NYLOC NUT	2
8	M16x50BZP	M16x50 BOLT	2
9	84RM-SBBB	BLADE BUSH	2
10	8SM9/3	BLADE BACK SPACER	4

725-SBL - 725 Swing Blade (Anti Clockwise)



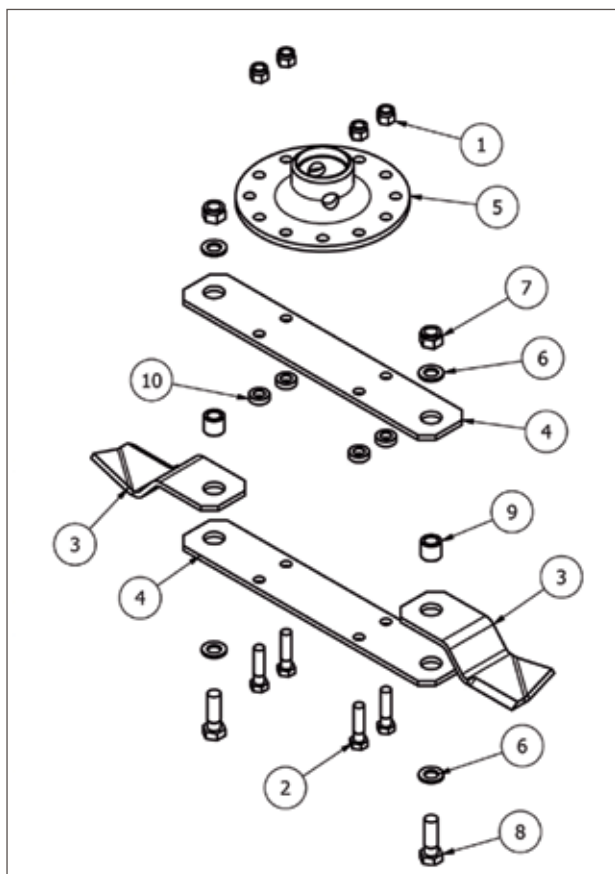
MACHINE QTY

TDR16000 3

TDR20000 4

Item	Part No	Description	Qty
1	1/2F	1/2" Nyloc Nut	4
2	12x2FBZP	1/2"x2" FINE BOLT	4
3	84RM-SB01	SWING BLADE (A Ck)	2
4	84RM-SBB2	BLADE BACK (370 CTR)	2
5	DF-BMP	BLADE MOUNT	1
6	FWM16	M16 FLAT WASHER	4
7	M16	M16 NYLOC NUT	2
8	M16x50BZP	M16x50 BOLT	2
9	84RM-SBBB	BLADE BUSH	2
10	8SM9/3	BLADE BACK SPACER	4

725-SBR - 725 Swing Blade (Clockwise)



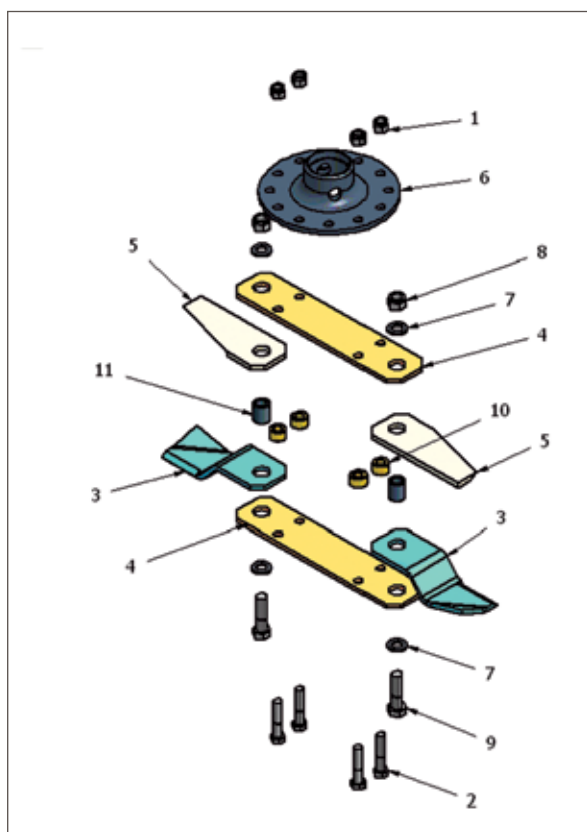
MACHINE QTY

TDR16000 3

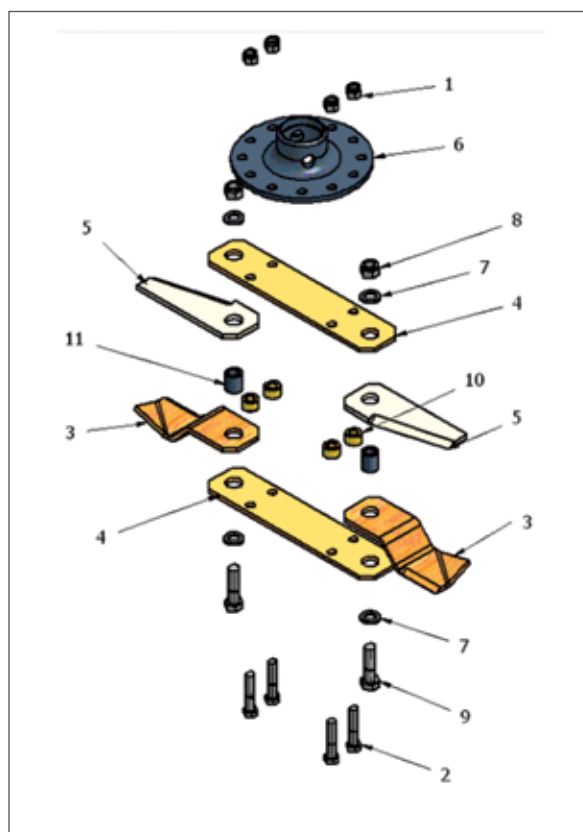
TDR20000 4

Item	Part No	Description	Qty
1	1/2F	1/2" Nyloc Nut	4
2	12x2FBZP	1/2"x2" FINE BOLT	4
3	84RM-SB02	SWING BLADE (Ck)	2
4	84RM-SBB2	BLADE BACK (370 CTR)	2
5	DF-BMP	BLADE MOUNT	1
6	FWM16	M16 FLAT WASHER	4
7	M16	M16 NYLOC NUT	2
8	M16x50BZP	M16x50 BOLT	2
9	84RM-SBBB	BLADE BUSH	2
10	8SM9/3	BLADE BACK SPACER	4

Anti Clockwise Mulching Blade



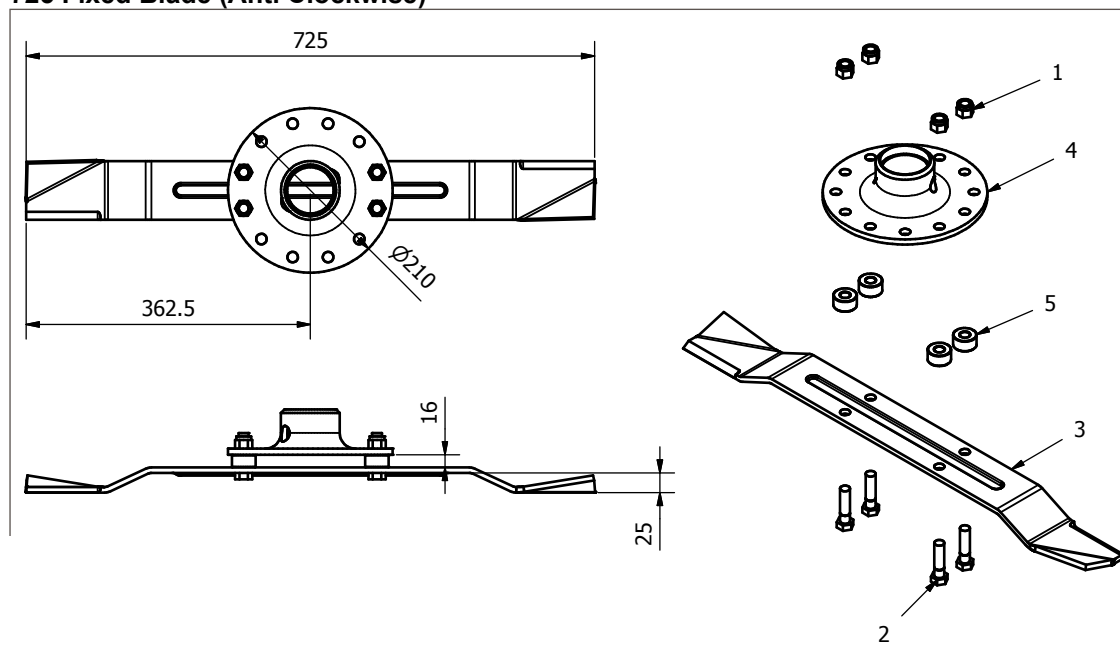
Clockwise Mulching Blade



Item	Part No	Description	Qty per rotor
1	1/2F	Nyloc Nut	4
2	12X212FBZP	Bolt	4
3	84RM-SB01	Swing Blade (Anti Clock)	2
	84RM-SB02	Swing Blade (Clock)	2
4	84RM-SBB	Blade Back (285 ctr)	2
	84RM-SBB2	Blade Back (370 ctr)	2
5	84RM-SBOL	Overlap Blade	2
6	DF-BMP	Mounting Plate	1
7	FWM16	Washer	4
8	M16	Nyloc Nut	2
9	M16X60BZP	M16 X 60 Bolts Plated	2
10	12T-BBS	Spacer	4
11	84RM-SBOB	Overlap Bush	2

FIXED BLADE SYSTEMS - Optional system on: 6300, 8400, 11000, 15000 & TDR Models

725 Fixed Blade (Anti Clockwise)

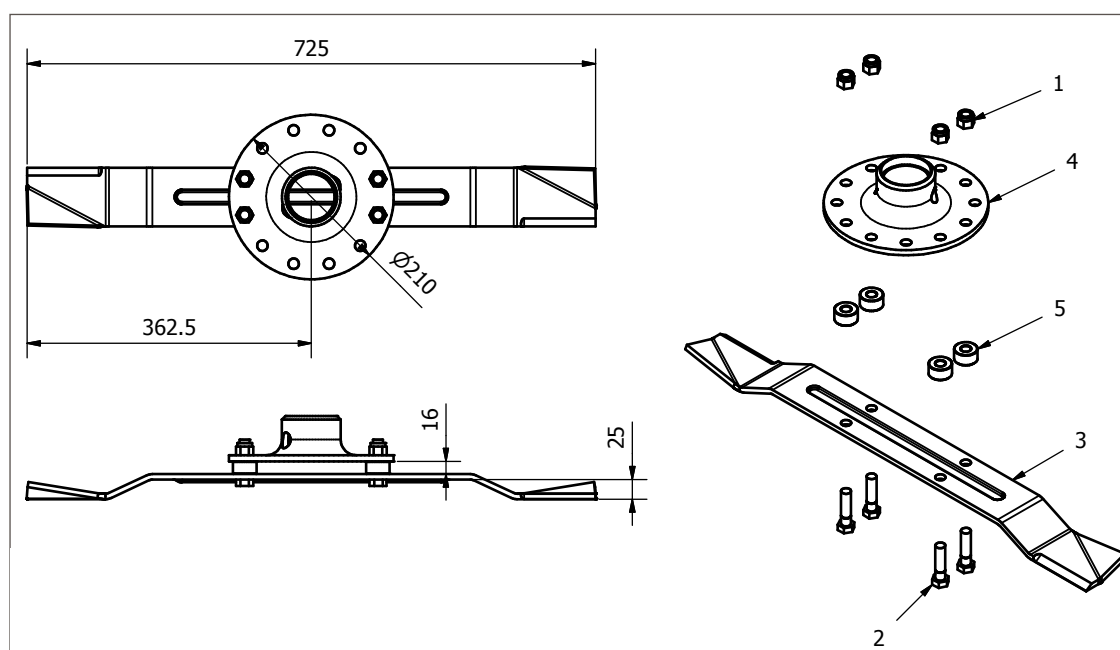


MACHINE
TDR16000
TDR20000

QTY
2 OFF
3 OFF

Item	Part No	Description	Qty
1	12F	1/2" FINE NYLOC NUT	4
2	12x2FBZP	1/2"x2" FINE BOLT	4
3	8FM8-1L	8400 BLADE (Anti-Clk)	1
4	DF-BMP	BLADE MOUNT	1
5	84RM-BSB	BLADE SPACER BUSH	4

725 Fixed Blade (Clockwise)



MACHINE
TDR16000
TDR20000

QTY
2 OFF
3 OFF

Item	Part No	Description	Qty
1	12F	1/2" FINE NYLOC NUT	4
2	12x2FBZP	1/2"x2" FINE BOLT	4
3	8FM8-1R	8400 BLADE (Clk)	1
4	DF-BMP	BLADE MOUNT	1
5	84RM-BSB	BLADE SPACER BUSH	4

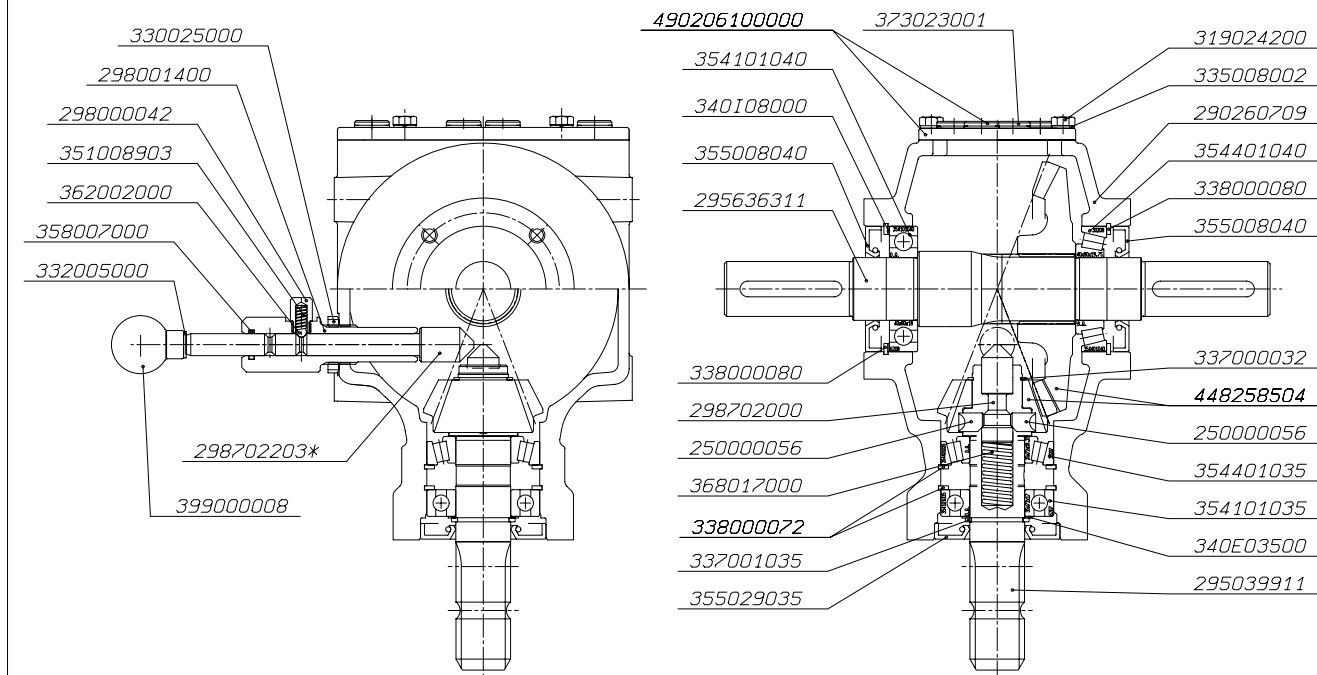
PTO Shafts

MACHINE	PART NO:	DESCRIPTION:
TDR PRIMARY / 12000 & 18000 R.MOWER	V601210CEC02RW6	V60 SHAFT WIDE ANGLE / SLIP CLUTCH
16000 / 20000 TDR WING	T500350F132132	T50 SHAFT STANDARD
TDR20000 REAR DECK	T501060ENC12RW6	T50 SHAFT SLIP CLUTCH
6000/6300/8000/8400/TDR16000 REAR DECK	T500810ENC12RW6	T50 SHAFT SLIP CLUTCH

Gearboxes

Machine	Gearbox
6000,8000,12000, 12000GR3PTL, TDR16000	LF205
6300, 8400	LF205H
18000, TDR's,	LF205T
6300, 8400	LF205TH
TDR wing	S2061

S2061258076 Gearbox



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