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RM180 & RM240 ROLLER MOWERS

Operator & 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 within 7 days of delivery to the end user – failure to do so may affect the validity of the machine warranty.

To register a machine go to the McConnel Limited web site at www.mcconnel.com, log on to '**Dealer Inside**' and select the '**Machine Registration button**' which can be found in the Service Section of the site. Confirm to the customer that the machine has been registered in the section below.

Should you experience any problems registering a machine in this manner please contact the McConnel Service Department on 01584 875848.

Registration Verification

Dealer Name:
Dealer Address:
Customer Name:
Date of Warranty Registration:/...../..... Dealer Signature:

NOTE TO CUSTOMER / OWNER

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

EC DECLARATION OF CONFORMITY

*Conforming to EEC Machinery Directive 98/37/EC**

We,

McCONNEL LIMITED,

Temeside Works, Ludlow, Shropshire SY8 1JL.

Declare under our sole responsibility that:

The product (type) TRACTOR MOUNTED ROTARY MOWER

Product Code RM18, RM24

Serial No. & Date Type

Manufactured by the above company/*

(insert business name and full address if not stated above)*

Complies with the required provisions of the Machinery Directive 98/37/EC, * previously Directive 89/392/EEC as amended by Directives 91/368/EEC, 93/44/EEC and 93/68/EEC.

The machinery directive is supported by;

- BS EN ISO 12100:2003 Safety of Machinery. This standard is made up of two parts; Part 1 Terminology, methodology, Part 2 Technical Specifications.
- BS EN 1050 Safety of machinery - Principles of risk assessment.
- and other national standards associated with its design and construction as listed in the Technical File.

The Machinery Directive is fully implemented into UK law by means of the Supply of Machinery (Safety) Regulations 1992 (SI 1992/3073) as amended by The Supply of Machinery (Safety) (Amendment) Regulations 1994 (SI 1994/2063).

Signed John Frank

on behalf of McCONNEL LIMITED

Responsible Person

Status: Chief Design Engineer

Date: April 2003

Read The Book First

It is important that all operators or fitters that work with this machine have read and fully understood all aspects of this manual before attempting to operate or maintain the machine – the safety of yourself and others should be paramount at all times.

Always Use Genuine Parts

McConnel Genuine Parts are designed and tested specifically for use on our machines - the use of non-genuine parts is not advisable as this can affect both the performance and warranty on the machine.

Parts Ordering

When ordering parts please quote the following information:

- *Machine Model & Specification.*
- *Machine Serial No.*
- *Make & Model of tractor to which the machine is fitted.*
- *Dealer Order Number.*

This information will speed up the ordering process and ensure that the correct parts for the machine are ordered.

Parts can be ordered direct by:

Telephone: 01584 876888

Fax: 01584 876463

Email: parts@mcconnel.com

Online: www.mcconnel.com

We continually strive to better our products in both performance and value through a continual programme of re-design and testing – where applicable, if an existing part has been superseded by an updated version, the latter will always be supplied.

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1. GENERAL INFORMATION

1.1 This operation and maintenance manual is intended for the professional user. It is mandatory to follow these instructions in order to prevent events which could endanger the operator's and other people's safety, apart from the correct functioning of the shredder. In case of doubt, do not experiment, call McConnell after-sales service instead, or the specialised McConnell dealer.

1.2 Identifying the machine

Each shredder is fitted with an identification plate: both the data necessary to identify the model and the serial number to order spare parts or after-sales service are stamped on the plate.

It is strongly recommended to use genuine spare parts to avoid altering the technical features of the mower. McConnell is not responsible for any damage or injuries to people due to unauthorised modifications or the use of non-genuine spare parts.

This machine is in conformity with the following provisions of law:

Directive Machine 89/392/CEE and following additions: 91/368/CEE, 93/44/CEE and 93/68/CEE;

Regulations UNI EN 292/1 and 292/2 (machinery safety).

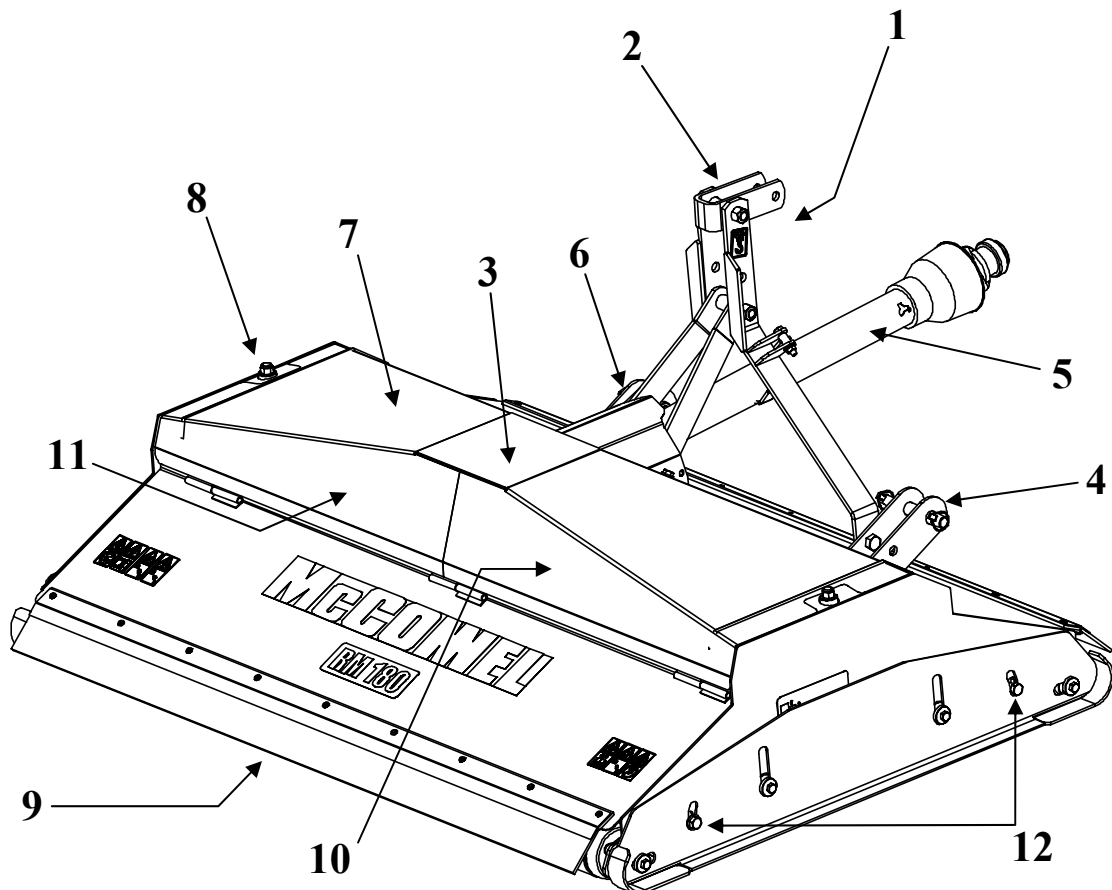
2 TECHNICAL FEATURES

2.1 General Description

The RM180 & RM240 Rotary Finishing Mower, from now on also called the machine, has been designed for turf and grass maintenance in areas such as parks and playing fields. Its light weight and low power requirement means it is best suited to small tractors. Any other use is considered improper and the manufacturer disclaims all responsibility for any consequential injuries to people or for damage to the machine caused by improper use or failure to adhere to the safety and maintenance information provided.

Technical names

1. 3 Point Linkage (upper)
2. Top Link
3. Gearbox
4. 3 Point Linkage (lower)
5. Power Take Off (PTO) Shaft
6. Driveline Shields/Guarding
7. Pulley Shields/Guarding
8. Roller Height Adjustment
9. Full Width Rollers
10. Belt Tension Adjuster Screw
11. Belt Transmission
12. Adjustment Locking Screws



TECHNICAL SPECIFICATIONS

	RM180	RM240
Width of Cut	1860mm	2460mm
Min. Tractor Power req'd	25kw / 32hp	30kw / 40hp
PTO Speed (<i>max</i>)	540 rpm	540 rpm
Weight	540 kg	646 kg
Tractor Attachment	Cat.1& Cat. 2	Cat.1& Cat. 2
No. of Blades Spindles	3	4
Height of Cut (<i>min / max</i>)	12mm / 90mm	12mm / 90mm
Overall Width	2020mm	2620mm
Length	1520mm	1520mm
Blade Tip Speed	86m/s	86m/s
Blade Overlap	38mm	38mm

SAFETY RULES

General safety rules:

- It is mandatory to read and follow instructions for the use and maintenance of the machine before carrying out any operation or attempting to move with the machine.
- Improper use or an incorrect move may seriously damage things and people.
- Both the operator and the maintenance fitter must know the mower well, especially regarding dangers resulting from improper use or incorrect repairs.
- Before starting, checks on tractor and mower, must be carried out as regards: functionality, road safety, accident prevention rules.
- Even when using the mower correctly, stones or other objects may be thrown a long distance. Therefore nobody must stand within the danger area. Special attention must be paid when working near roads or buildings.
- Always use tractors with cabs.
- The condition of Blades and all Guards must be checked before beginning the daily work - they must be replaced if damaged or missing.
- During checks or repairs, make sure nobody could start the machine by mistake.
- Never wear loose or fluttering clothes.
- Never carry passengers on the tractor.
- Never carry passengers on the machine.
- Never connect the power takeoff with the engine running.
- Never approach the machine until Blade rotation has completely stopped.
- Do not enter the working zone of the PTO shaft. It is dangerous to approach the rotating parts of the machine.
- Keep the PTO shaft guard in good order.
- Before starting check the surrounding area for the likely presence of children and/or animals.
- Do not stand or allow others in the range of the operation of the machine.
- The PTO shaft must be assembled and disassembled only with the engine stopped and the starting key removed.
- Before connecting the power takeoff, check that the speed and the rotational direction correspond to those of the machine.
- Before leaving the tractor with the mower attached, proceed as follows:
 1. Disconnect the power takeoff,
 2. Put the machine steadily on the ground (with the hydraulic lift)
 3. Apply the hand brake and, if the ground is steeply sloping, wedge the tractor.
 4. Take out the starting key.
- Immediately replace any safety sign, or any missing or damaged decal.

Safety Rules concerning Road Traffic

- In transport, reduce speed, especially on bumpy roads. The very weight of the machine may render driving difficult and damage the machine itself.
- Check that the levers that operate the hydraulic lift are locked, to avoid lowering of the machine during transport.

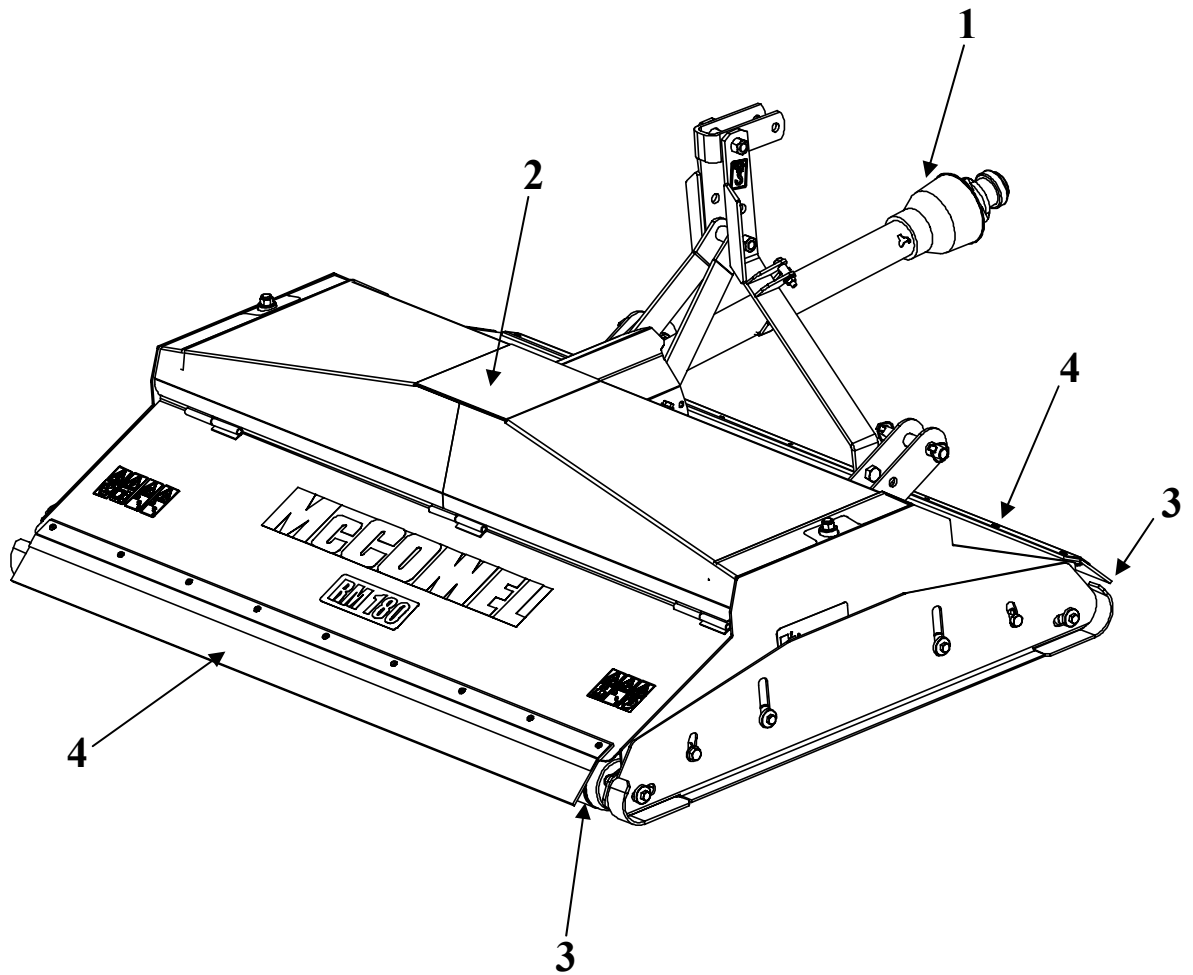
- When driving on public roads, respect all road rules in force.
- Never transport the mower with the Blades moving, even for short distances.

Safety Rules during use

- Pay special attention when working with the machine, not to touch fixed objects, such as road drains, walls, shafts, kerbs, guard rails, tracks etc. This could cause breakage of the Blades, which would be thrown at very high speed.
- If wires, ropes or chains should get entangled in the Blades, stop immediately to prevent damage or a dangerous situation; stop the machine and the tractor and remove the starting key. Put working gloves on, clear the entanglement with the aid of pliers or shears. Do not try to disentangle by inverting the rotational direction of the Blades.
- Do not use the machine when vibration is evident, as this would cause breakage and serious damage. Find the cause of the vibration and eliminate it.

MACHINE GUARDS

1. PTO Shaft Guarding
2. Belt/Pulley Guard
3. Front & Rear Rollers
4. Front & Rear Rubber Skirts



INSTALLATION AND HANDLING INSTRUCTIONS

Lifting and Unloading.

To handle the machine, use an elevator with a lifting capability suitable to the weight of the machine.

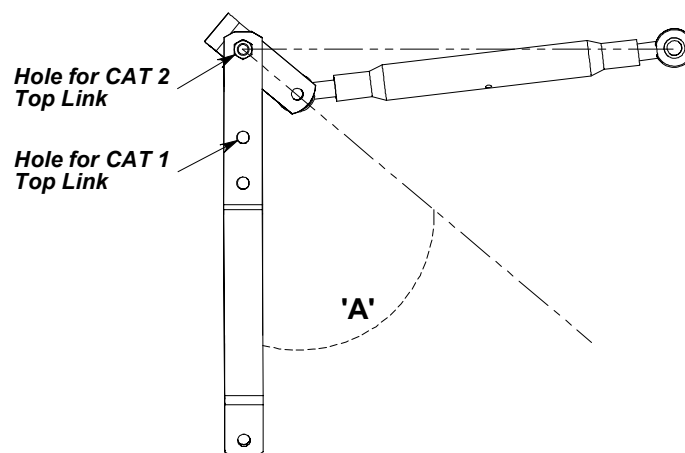
Attaching and Detaching the Machine.

Before attaching the machine to the tractor for use it is mandatory to:

- Visually check the condition of the machine in general.
- Ensure all guards are fitted correctly and are in good condition.
- Ensure Blades are fitted correctly and are in good condition.
- Grease bearings and any other part as indicated by a decal.
- Check that the number of revolutions and the rotational direction of the PTO correspond to the requirement of the machine.

To Attach the Machine:

- With the tractor and machine on firm level ground, back the tractor up to the machine so that the Lower Draft Links are in alignment with the machines Lower Lift Pins
- Place tractor in park, switch off engine and remove key.
- Connect the tractor and Stabiliser Bars to the Lower Lift Pins.
- Lock the parallel links of the power lift with the relative chains and rods on the tractor to prevent the coupled machine from moving in a horizontal direction.
- Fit the Driveline to the power take off on the tractor making sure it has seated in the correct position and that it is free to turn and fixed with the relative latches, both on the tractor and on the machine.
- Connect the Top Link and adjust as necessary to achieve alignment with the ground. With both tractor and mower on firm level ground adjust the top link to give an angle at 'A' of approx. 45° so that the mower, sitting on its rollers, is able to follow ground undulations behind the tractor, both up and down - *Refer to diagram below.*



- Detachment of the machine is a reversal of the above procedure.

FITTING THE PTO SHAFT - Driveline Length Check Procedure

WARNING:

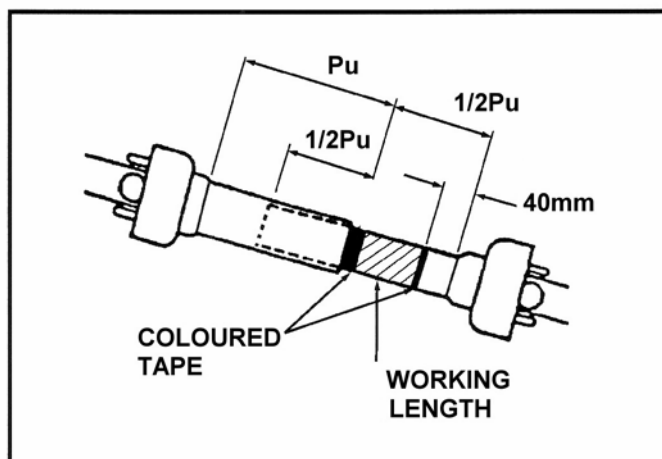
A loose shaft could slip off resulting in personal injury or damage to the machine. When attaching PTO yoke to tractor PTO shaft ensure that the spring activated locking collar slides freely and that the locking balls are seated in the groove on PTO shaft.

NOTE: QS-lock is fully engaged if collar can be rotated freely.

WARNING:

Before operating mower –
Check to make sure the driveline will not 'bottom out' or become disengaged.

- Disengage the driveline from the tractor PTO shaft.
- Slide the driveline together until it 'bottoms out' solidly. Extend shaft 40mm, then apply coloured tape level with outer tube shield – *this shows minimum shaft length*.
- Slide driveline apart until $\frac{1}{2}$ PU length of inner shaft shield is exposed (*see diagram below*), apply coloured tape level with outer tube shield as before – *this then indicates maximum shaft length*.
- Re-attach driveline to tractor PTO shaft.



Driveline in maximum extended position

With the **PTO not turning**, (disengaged), slowly drive the tractor with mower attached through the most severe terrain conditions expected and watch shaft movement. The end of the outer shield should always be located between the tape markers.

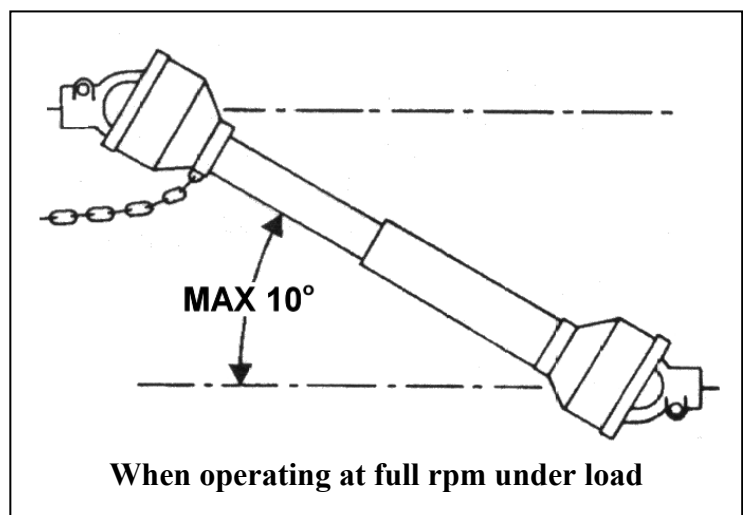
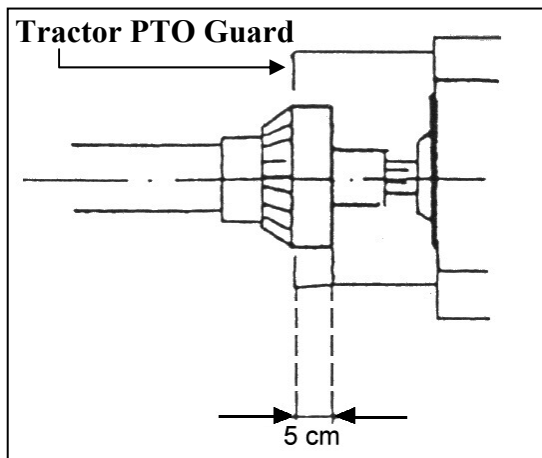
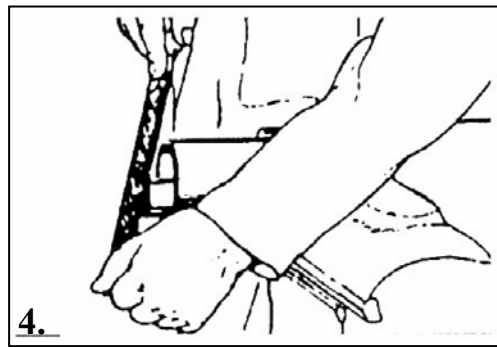
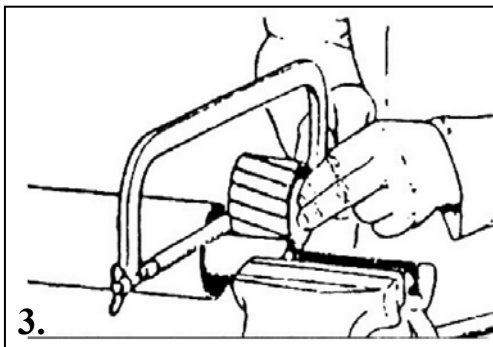
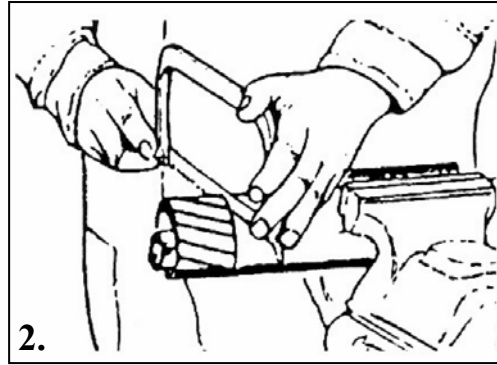
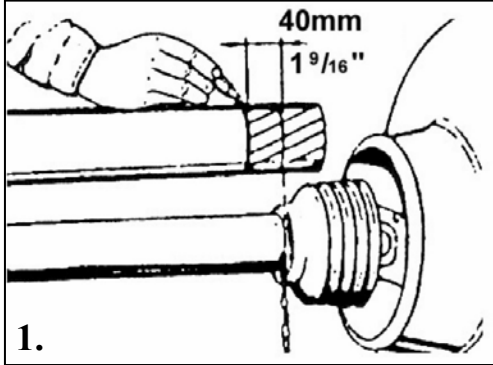
Check position which places driveline at maximum extended length and at minimum compressed length – *the minimum compressed length should always maintain 40mm (1-9/16") clearance, if not shorten as described in the following page.*

If driveline cannot be shortened and still maintain $\frac{1}{2}$ PU dimension engagement when at maximum extended length, then the operator should be aware of it, so that the operator can recognise the terrain conditions that might cause problems (avoiding possible damage by disconnecting driveline from tractor) and cross the terrain in a different manner. If driveline is shortened, re-apply the coloured tapes and re-check length, as above.

See special instructions for rough terrain operation.

PTO SHAFT – Length Adjustment

1. Shorten outer plastic tube to 40mm less than shortest envisaged PTO shaft length.
2. Remove the marked tube – *ensure a square cut*.
3. Remove same length from inner plastic tube and metal shaft profiles (inner & outer).
4. De-burr all edges and remove swarf to ensure smooth operation.

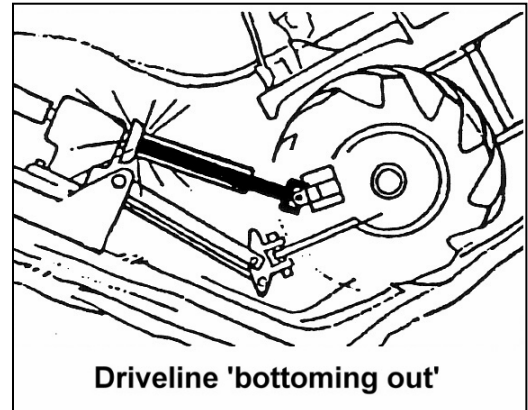


SPECIAL INSTRUCTIONS FOR ROUGH TERRAIN OPERATIONS

When crossing ditches with steep banks or manoeuvring up sharp inclines it is possible to 'bottom out' the driveline that connects the tractor PTO to the gearbox on the mower.

NOTE:

To 'bottom out' means that the inner shaft has penetrated into the outer housing to its maximum depth until the assembly becomes solid – it can shorten no more. See diagram opposite.



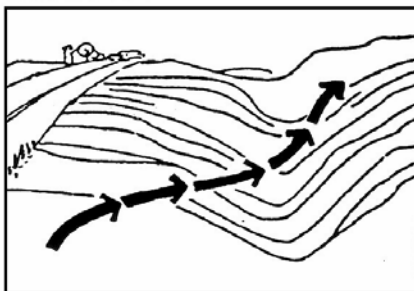
If this happens, it can cause serious damage to the tractor PTO by pushing the PTO into the tractor through the support bearings or downward onto the PTO shaft, breaking it off.

WARNING:

Either failure can allow the driveline to come loose from the tractor which could cause bodily injury to the operator or others in the vicinity in addition to expensive damage to the tractor and/or mower.

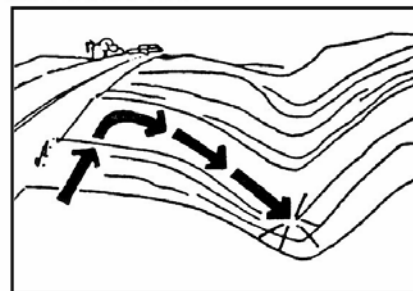
If you have a condition where your tractor will be manoeuvring up a steep incline whilst the mower remains on flat ground or coming down the opposite incline, you have a potential problem. The correct preventative measure is to cross this type of terrain at an angle – refer to diagrams below. This will reduce the angle between the tractor and the mower.

CORRECT



Approach ditch at angle

INCORRECT



DO NOT approach ditch straight on

Tractor Stability

Due to the design of Mowers and the work they do, it is essential to ensure tractor stability in order to eliminate any risk of imbalance or overturning.

Lift the machine and check that it does not mount up, if imbalance is detected it should be counteracted by the fitting of suitable ballast weights.

Parking

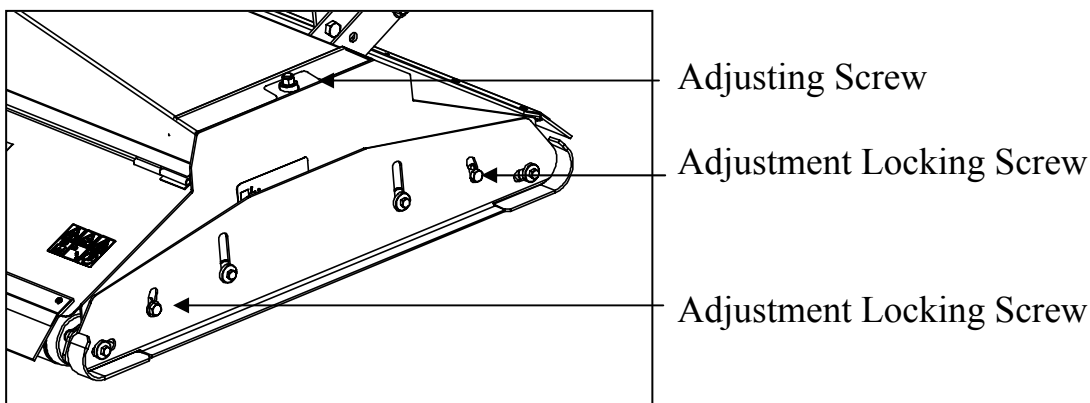
Parking of the tractor and machine should be in a safe place away from risk on a firm, flat surface with the mower lowered to the ground to prevent rolling over or falling. Never park up and leave the machine raised. Remove the tractor key before leaving the tractor and machine.

ADJUSTMENT AND SETUP

Cutting Height Adjustment

Adjustment to the cutting height is achieved by means of raising or lowering the front and rear rollers. The procedure for adjusting the cutting height is as follows:

- With the mower coupled to the tractor, raise the mower with the power lift to a position that will enable adjustment of the rollers.



- Turn off the tractor engine, engage the parking brake, remove and pocket the key.

CAUTION:

Ensure that no part of your body is under the machine at any time as the machine will be unpropped.

- Working on one side of the mower at a time, slacken the height adjustment locking screws and adjust roller height with the top adjustment screw, retighten locking screws when correct height has been achieved (*refer to decal on machine*). Repeat procedure for other side. Ensure adjustments made are the same for both sides of the mower.

NOTE

For easiest roller height adjustment: -

To raise cutting height – raise mower clear of ground to adjust.

To lower cutting height – adjust with mower on the ground - *you are then lowering the weight of the rollers or deck, not raising the weight.*

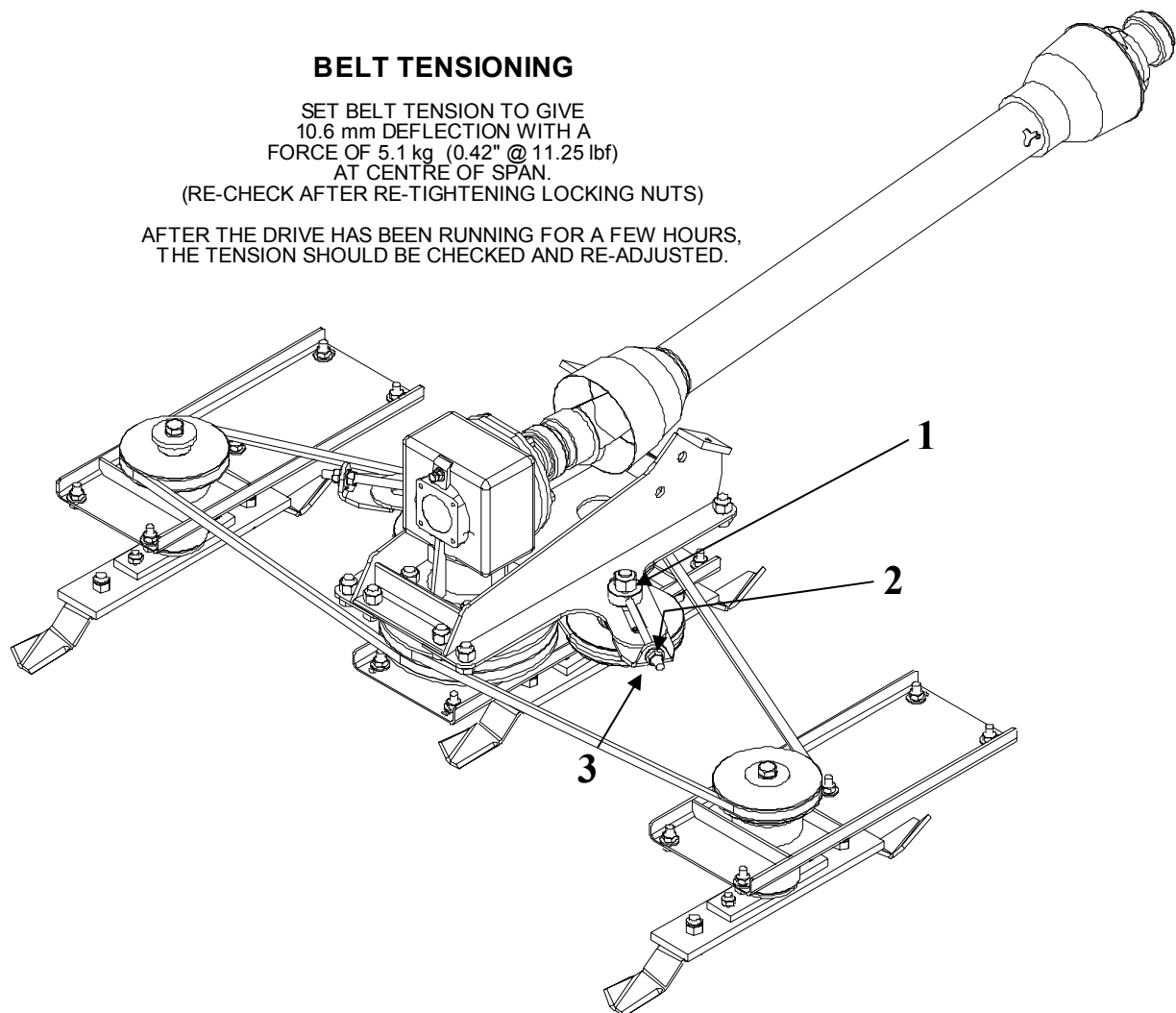
Belt Adjustment

The two belts are adjusted independently as follows:

- Slacken locknut **1** only sufficient enough to allow the pulley to move in the slot.
- Back off locknut **2**.
- Tension belt by adjustment of nut **3** to correct deflection – *see note below*.
- Re-tighten all locking nuts, and re-check belt tension.

NOTE:

It is important to pull the belt ‘around’ by hand as it is being tensioned to allow the belt to ‘creep’ on the drive pulley – tightening the belt without pulling it round will over tension the belt between drive and centre pulley causing premature failure of the belt.



USE AND OPERATION

Starting

Before using the machine ensure that you, and all other operators, have read and fully understood this entire manual, and that you are familiar with all aspects relating to correct use of this mower with the emphasis on safety.

Before beginning work:

- Check oil level in Gearbox before starting.
- Check all parts for signs of wear or deterioration, replace if worn or damaged.
- Ensure all Guards are in position and in good condition.
- Check PTO rpm and rotational direction corresponds to machine – *refer to Gearbox decal for details.*
- Always engage PTO at low engine rpm to avoid damage to Gearbox and Belts.

Working

- Adjust the machines cutting height to suit the type of work to be done and the materials to be cut.
- Work at a speed to suit the materials to be cut and the degree of chopping required – *optimum speed range is from 3 to 8 km/h (2-6 mph)*
- Start tractor and raise mower before engaging PTO, allow mower to achieve working speed and lower onto material to be cut.
- After a short distance mowing, check that the grass is being cut to the desired height.

Stopping

- Lower machine to the ground.
- Disconnect the PTO.
- Stop the tractor, apply handbrake and remove the key. If the ground is sloping block tractor wheels.

Transport Position

During transportation of the machine ensure the following:

- Observe all road transport regulations and display all necessary warning signs.
- Reduce speed especially on bumpy or uneven roads as the weight of the machine may render driving difficult and damage the machine itself.
- Always disengage the PTO.

MACHINE MAINTENANCE

All maintenance, cleaning, and repair operations must be carried out with the machine firmly lowered to the ground and detached from the tractor, or with the PTO disconnected, engine off, and the starting key removed.

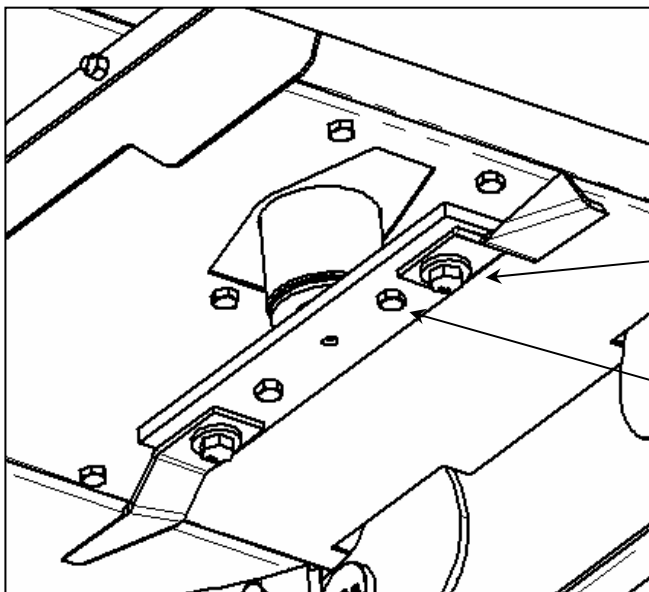
Initial Checks

After the first two hours of operation from new – or after the fitting of new belts – check the belt tension. Check the level of the oil in the gearbox after the first 10 hours of operation – *the level is correct when it reaches the lower edge of the plug hole at the side of the housing*. If ‘top up’ with oil is required, pour it through the fill hole after having unscrewed the vent plug. Refit the fill plug and the vent plug on completion of this operation.

REGULAR MAINTENANCE

Every 8 hours of work

- Ensure the nuts that fix the Blades to the Rotors are firmly torqued.
- Grease the PTO Shaft.
- Ensure Blades are in good condition, replace worn or damaged blades (in pairs) immediately; *The replacement of blades requires the mower to be raised, and supported in position, with strong, suitable stands.*



Check blade pivot bolts and nuts are tightened to correct torque settings.

Ensure blade carrier bolts/nuts are tight.

Refer to Torque Setting Chart on next page for tightening details.

- Check Gearbox Oil level – Top up if required using **SAE 90EP** oil - *fill to level hole on side of gearbox.*

Every 4 Weeks

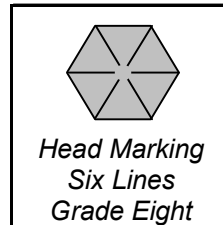
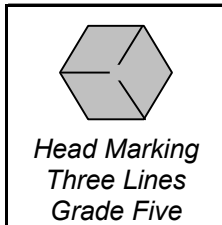
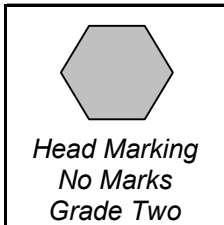
- Grease Roller Bearings (4 off) - *this should be done slowly using 1 ‘shot’ of grease only to avoid blowing out the seals.*
- Grease Roller Adjuster Slides – *1 each side, inside of cover.*
- Remove plastic plug at top of adjuster screws and run oil around adjuster threads, replace plugs.

TORQUE SETTINGS FOR FASTENERS

The Chart below lists the correct tightening torque for fasteners. The Chart should be referred to when tightening or replacing bolts in order to determine the grade of bolt and the correct torque except where specific torque values are assigned in the text of this manual.

Recommended torque is quoted in Foot-Pounds and Newton-Metres within this manual. The equation for conversion is 1 Nm. = 1.356 ft. lbs.

TORQUE VALUES FOR IMPERIAL BOLTS



NOTE:
The values in the chart apply to fasteners as received from the supplier, dry or when lubricated with normal engine oil. They DO NOT apply if special graphited, molydisulphide greases, or other extreme pressure lubricants are used. This applies to both UNF and UNC coarse threads.

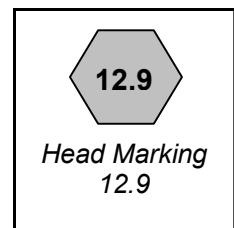
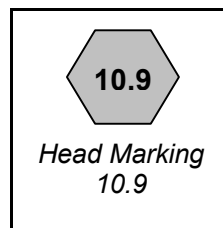
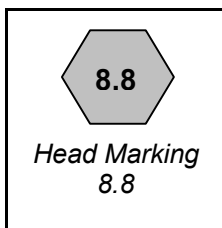
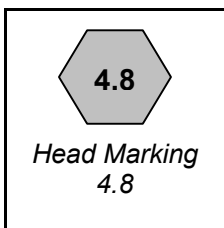
Bolt Dia.
1/4"
5/16"
3/8"
7/16"
1/2"
9/16"
5/8"
3/4"
7/8"
1"
1-1/8"
1-1/4"
1-3/8"
1-1/2"

Value (Dry)	
ft.lb.	Nm.
5.5	7.5
11	15.0
20	27.0
32	43.0
50	68.0
70	95.0
100	135.0
175	240.0
175	240.0
270	360.0
375	510.0
530	720.0
700	950.0
930	1250.0

Value (Dry)	
ft.lb.	Nm.
9	12.2
18	25.0
33	45.0
52	70.0
80	110.0
115	155.0
160	220.0
280	380.0
450	610.0
675	915.0
850	115.0
1200	1626.0
1550	2100.0
2100	2850.0

Value (Dry)	
ft.lb.	Nm.
12.5	17.0
26	35.2
46	63.0
75	100.0
115	155.0
160	220.0
225	305.0
400	540.0
650	880.0
975	1325.0
1350	1830.0
1950	2650.0
2550	3460.0
3350	4550.0

TORQUE VALUES FOR METRIC BOLTS.



Bolt Dia.
6mm
8mm
10mm
12mm
14mm
16mm
18mm
20mm
22mm
24mm
27mm
30mm

Value (Dry)	
ft.lb.	Nm.
4.5	6.1
11	14.9
21	28.5
37	50.2
60	81.4
92	125.0
125	170.0
180	245.0
250	340.0
310	420.0
450	610.0
625	850.0

Value (Dry)	
ft.lb.	Nm.
8.5	11.5
20	27.1
40	54.2
70	95.0
110	150.0
175	240.0
250	340.0
350	475.0
475	645.0
600	810.0
875	1180.0
1200	1626.0

Value (Dry)	
ft.lb.	Nm.
12	16.3
30	40.1
60	81.4
105	140.0
165	225.0
255	350.0
350	475.0
500	675.0
675	915.0
850	1150.0
1250	1700.0
1700	2300.0

Value (Dry)	
ft.lb.	Nm.
14.5	20.0
35	47.5
70	95.0
120	160.0
190	260.0
300	400.0
410	550.0
580	790.0
800	1090.0
1000	1350.0
1500	2000.0
2000	2700.0

Spare Parts Section

MAIN ASSEMBLY – RM180 Model

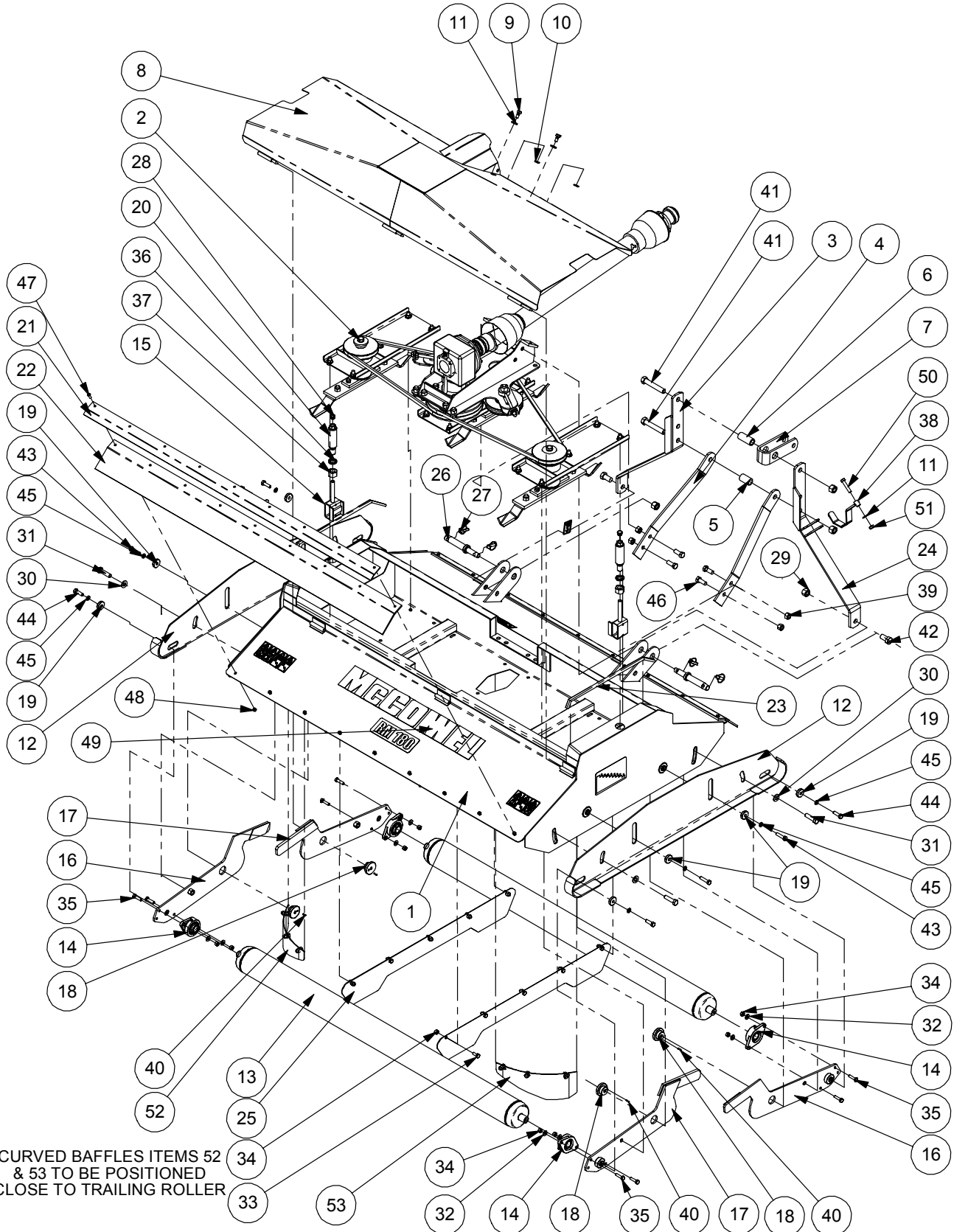
MODULES:

1057901 – RM180 Rear Mount (500 RPM)

1057902 – RM180 Front Mount (500 RPM)

1057903 – RM180 Front Mount (1000 RPM)

RM180 Rear Mount version illustrated



CURVED BAFFLES ITEMS 52 & 53 TO BE POSITIONED CLOSE TO TRAILING ROLLER


MAIN ASSEMBLY – RM180 Model

REF.	QTY.	PART No.	DESCRIPTION
		1057901	RM180 MOWER ASSEMBLY - 500 RPM REAR MOUNT
		1057902	RM180 MOWER ASSEMBLY - 500 RPM FRONT MOUNT
		1057903	RM180 MOWER ASSEMBLY - 1000 RPM FRONT MOUNT
1	1	21003.03	6' DECK ASSEMBLY (Mk II)
2	1	21031.02	DRIVE MODULE - <i>RM180 Rear Mount 500 RPM Models</i>
	1	21031.03	DRIVE MODULE - <i>RM180 Front Mount 500 RPM Models</i>
	1	21031.07	DRIVE MODULE - <i>RM180 Front Mount 1000 RPM Models</i>
3	1	46091.05	A FRAME - L/H
4	2	46091.02	HITCH TIE
5	1	46091.03	TOP HITCH SPACER
6	1	00766542	BUSHING
7	1	00757949	TOP LINK
8	1	21016.01	6' COVER - <i>500 RPM Front & Rear Mount Models</i>
	1	21016.03	6' COVER - <i>1000 RPM Front Mount Models Only</i>
9	2	21044.01	CAPTIVE SCREW
10	2	21044.02	CAPTIVE WASHER
11	3	9100106	FLAT WASHER
12	2	21018.01	SIDESKID
13	2	21019.01	ROLLER
14	4	46092.01	FLANGE BEARING UNIT
15	2	21020.01	ADJUSTING SLIDE ASSEMBLY
16	2	21020.07	STRAIGHT ROLLER SIDEPLATE
17	2	21020.03	OFFSET ROLLER SIDEPLATE
18	4	21020.10	TAPPED BOSS
19	8	21020.12	WASHER PLATE
20	2	21020.43	SHORT ADJUSTING NUT
21	2	21038.02	SKIRT PLATE
22	2	21038.01	RUBBER SKIRT
23	2	21035.01	RUBBER EDGING
24	1	46091.06	A FRAME - R/H
25	2	21037.01	BAFFLE PLATE
26	2	21158.01	LOWER LINK PIN
27	4	0431217	LINCH PIN
28	2	43358.02	PLASTIC BUNG
29	4	9143008	SELF-LOCKING NUT

MAIN ASSEMBLY – RM180 Model

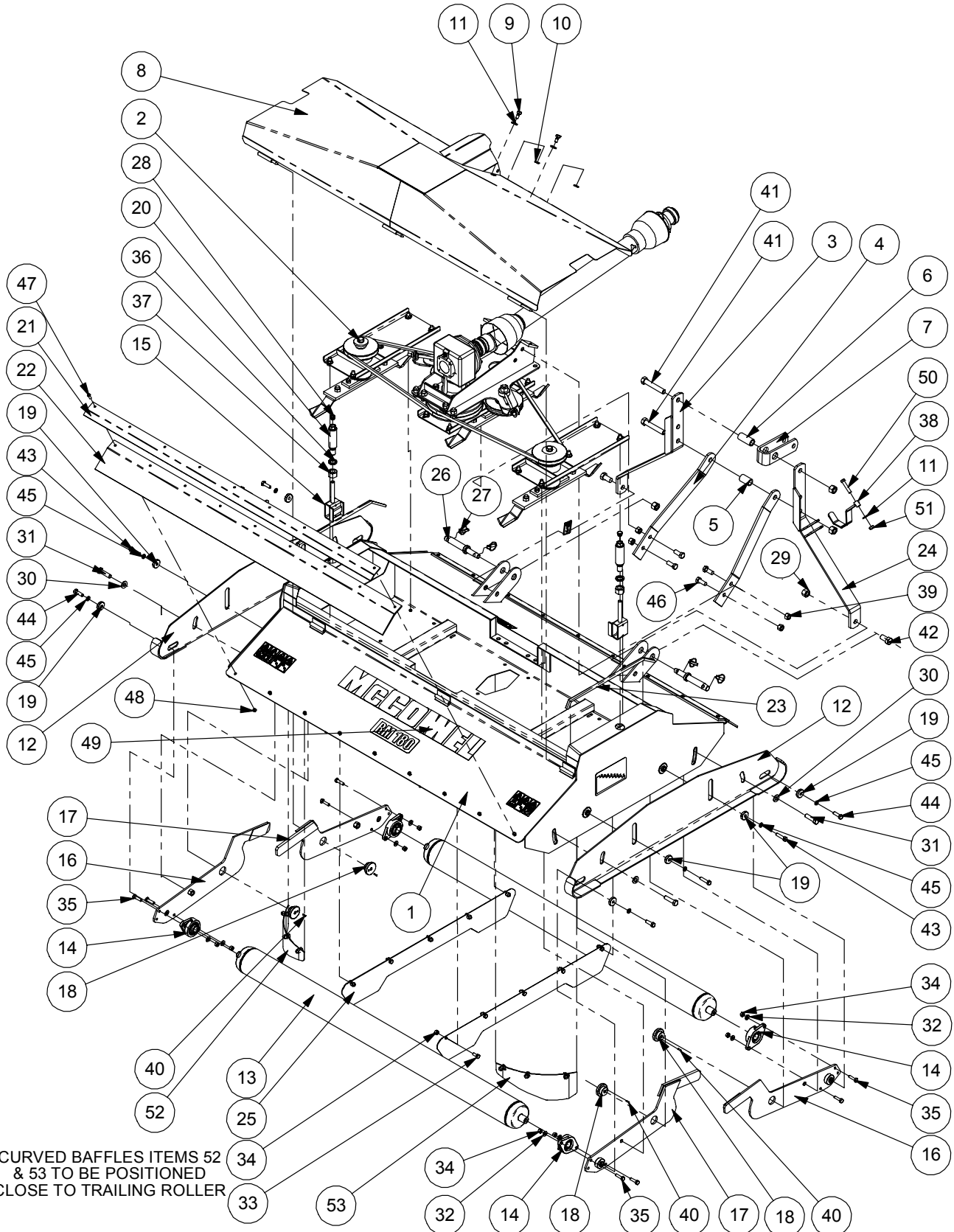
MODULES:

1057901 – RM180 Rear Mount (500 RPM)

1057902 – RM180 Front Mount (500 RPM)

1057903 – RM180 Front Mount (1000 RPM)

RM180 Rear Mount version illustrated



CURVED BAFFLES ITEMS 52 & 53 TO BE POSITIONED CLOSE TO TRAILING ROLLER

**MAIN ASSEMBLY – RM180 Model**

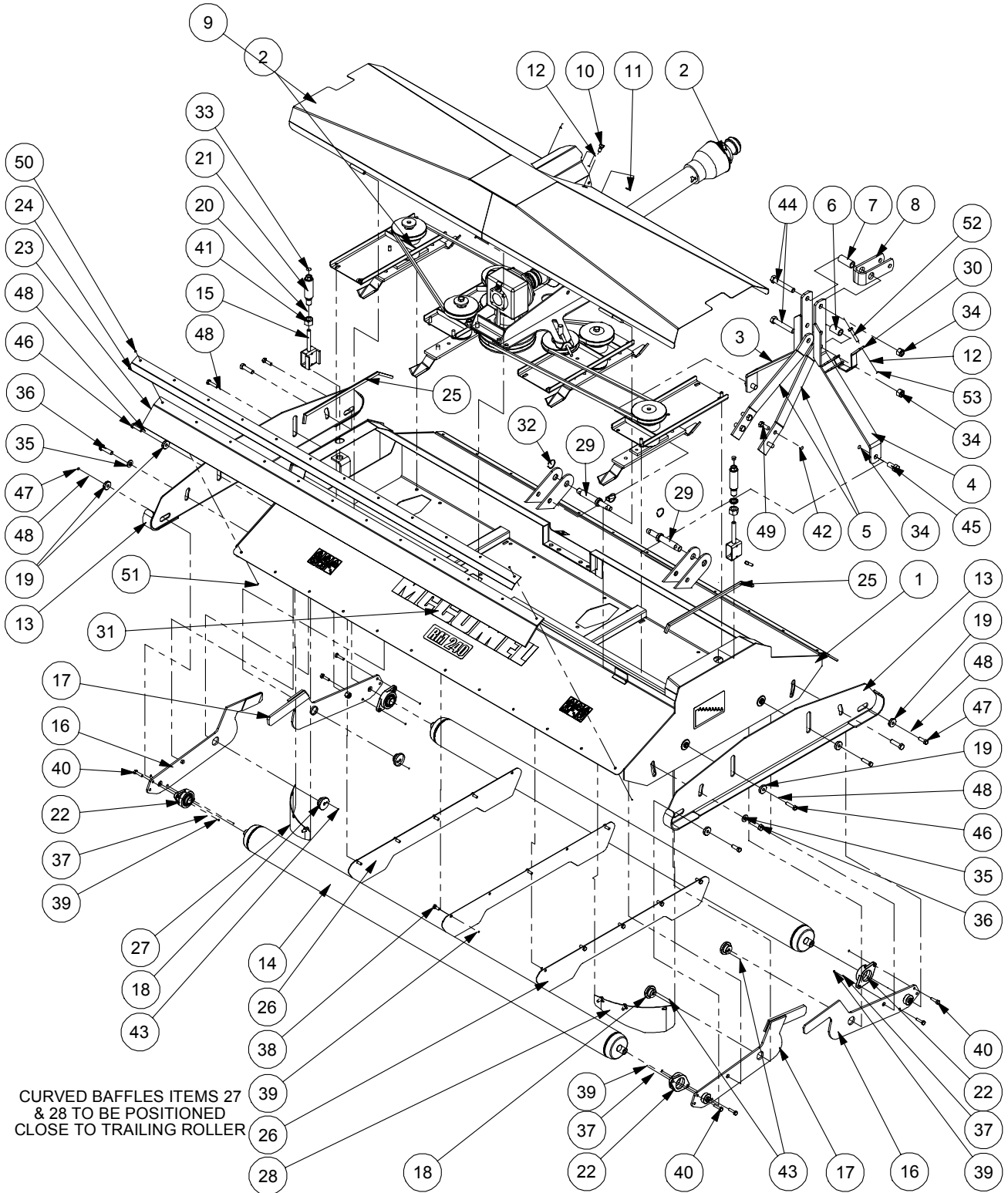
REF.	QTY.	PART No.	DESCRIPTION
		1057901	RM180 MOWER ASSEMBLY - 500 RPM REAR MOUNT
		1057902	RM180 MOWER ASSEMBLY - 500 RPM FRONT MOUNT
		1057903	RM180 MOWER ASSEMBLY - 1000 RPM FRONT MOUNT
30	4	9100107	FLAT WASHER
31	4	9213127	BOLT
32	8	9100105	FLAT WASHER
33	16	9313055	SETSCREW
34	24	9143005	SELF-LOCKING NUT
35	8	9213085	BOLT
36	2	21020.15	THRUST WASHER
37	2	9143009	SELF-LOCKING NUT
38	1	21159.02	PTO SUPPORT
39	4	9143007	SELF-LOCKING NUT
40	4	0425516	SPRING DOWEL
41	2	9213248	BOLT
42	2	9313088	SETSCREW
43	4	9213106	BOLT
44	4	9213086	BOLT
45	8	9100206	SPRING WASHER
46	4	9313087	SETSCREW
47	18	9300151	BUTTON HEAD SCREW
48	18	9143004	SELF-LOCKING NUT
49	1	21048.01	DECAL MODULE
50	1	9313126	SETSCREW
51	1	9143006	SELF-LOCKING NUT
52	1	21003.72	BAFFLE - L/H
53	1	21003.73	BAFFLE - R/H

MAIN ASSEMBLY – RM240 Model

MODULES:

- 1057908 – RM240 Rear Mount (500 RPM)
- 1057909 – RM240 Front Mount (500 RPM)
- 1057910 – RM240 Front Mount (1000 RPM)

RM240 Rear Mount version illustrated



**MAIN ASSEMBLY – RM240 Model**

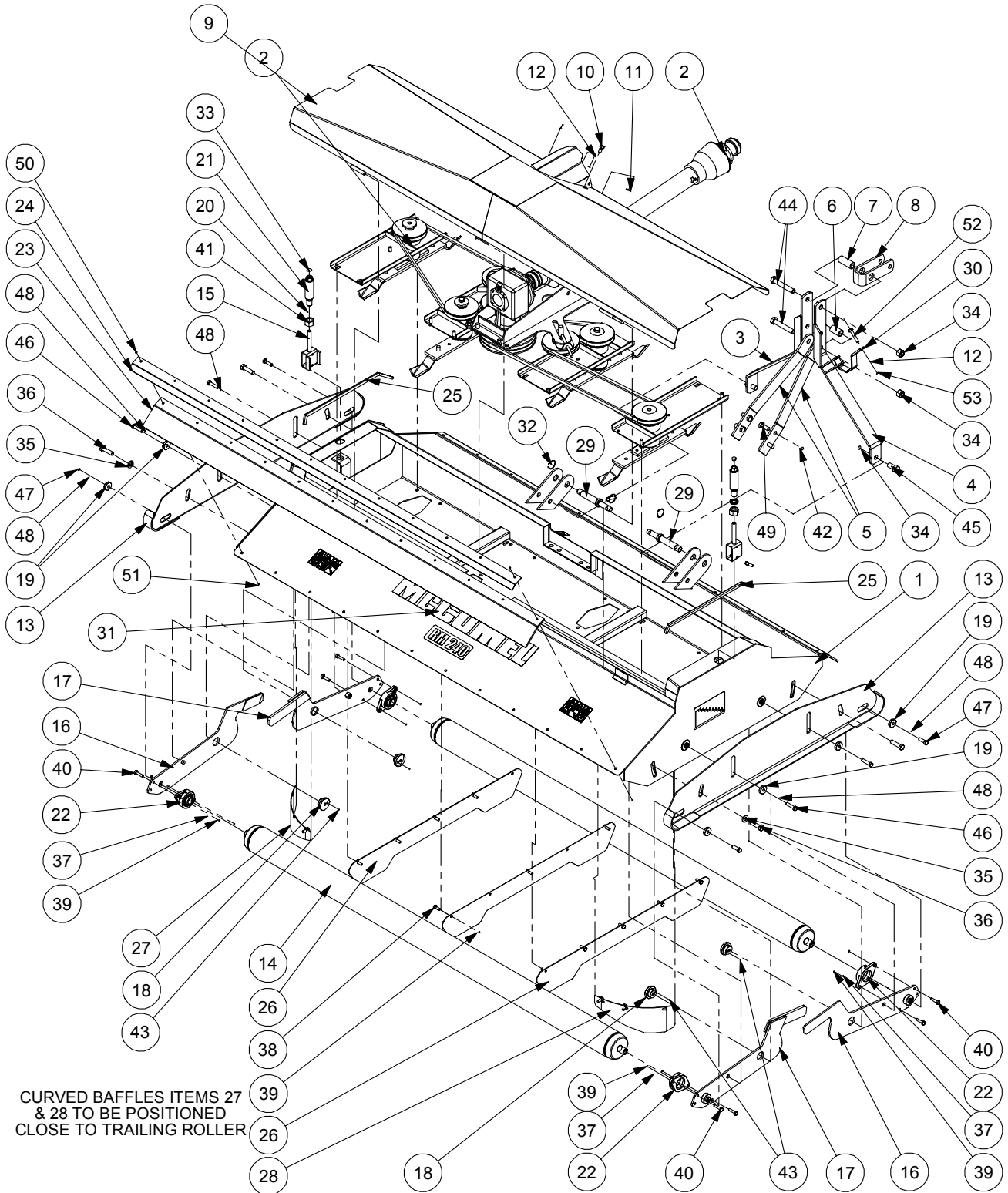
REF.	QTY.	PART No.	DESCRIPTION
		1057908	RM240 MOWER ASSEMBLY - 500 RPM REAR MOUNT
		1057909	RM240 MOWER ASSEMBLY - 500 RPM FRONT MOUNT
		1057910	RM240 MOWER ASSEMBLY - 1000 RPM FRONT MOUNT
1	1	21003.04	8' DECK ASSEMBLY
2	1	21031.05	DRIVE MODULE - <i>RM240 Rear Mount 500 RPM Models</i>
	1	21031.06	DRIVE MODULE - <i>RM240 Front Mount 500 RPM Models</i>
	1	21031.08	DRIVE MODULE - <i>RM240 Front Mount 1000 RPM Models</i>
3	1	46091.05	A FRAME - L/H
4	1	46091.06	A FRAME - R/H
5	2	46091.02	HITCH TIE
6	1	46091.03	TOP HITCH SPACER
7	1	00766542	BUSHING
8	1	00757949	TOP LINK
9	1	21016.02	8' COVER - <i>500 RPM Front & Rear Mount Models</i>
	1	21016.04	8' COVER - <i>1000 RPM Front Mount Models Only</i>
10	2	21044.01	CAPTIVE SCREW
11	2	21044.02	CAPTIVE WASHER
12	3	9100106	FLAT WASHER
13	2	21018.01	SIDESKID
14	2	21019.02	ROLLER
15	2	21020.01	ADJUSTING SLIDE ASSEMBLY
16	2	21020.07	STRAIGHT ROLLER SIDEPLATE
17	2	21020.03	OFFSET ROLLER SIDEPLATE
18	4	21020.10	TAPPED BOSS
19	8	21020.12	WASHER PLATE
20	2	21020.15	THRUST WASHER
21	2	21020.43	SHORT ADJUSTING NUT
22	4	46092.01	FLANGE BEARING UNIT
23	2	21038.03	RUBBER SKIRT
24	2	21038.04	SKIRT PLATE
25	2	21035.01	RUBBER EDGING
26	3	21037.01	BAFFLE PLATE
27	1	21003.72	BAFFLE - L/H
28	1	21003.73	BAFFLE - R/H
29	2	21158.01	LOWER LINK PIN

MAIN ASSEMBLY – RM240 Model

MODULES:

- 1057908 – RM240 Rear Mount (500 RPM)
- 1057909 – RM240 Front Mount (500 RPM)
- 1057910 – RM240 Front Mount (1000 RPM)

RM240 Rear Mount version illustrated



CURVED BAFFLES ITEMS 27
& 28 TO BE POSITIONED
CLOSE TO TRAILING ROLLER

**MAIN ASSEMBLY – RM240 Model**

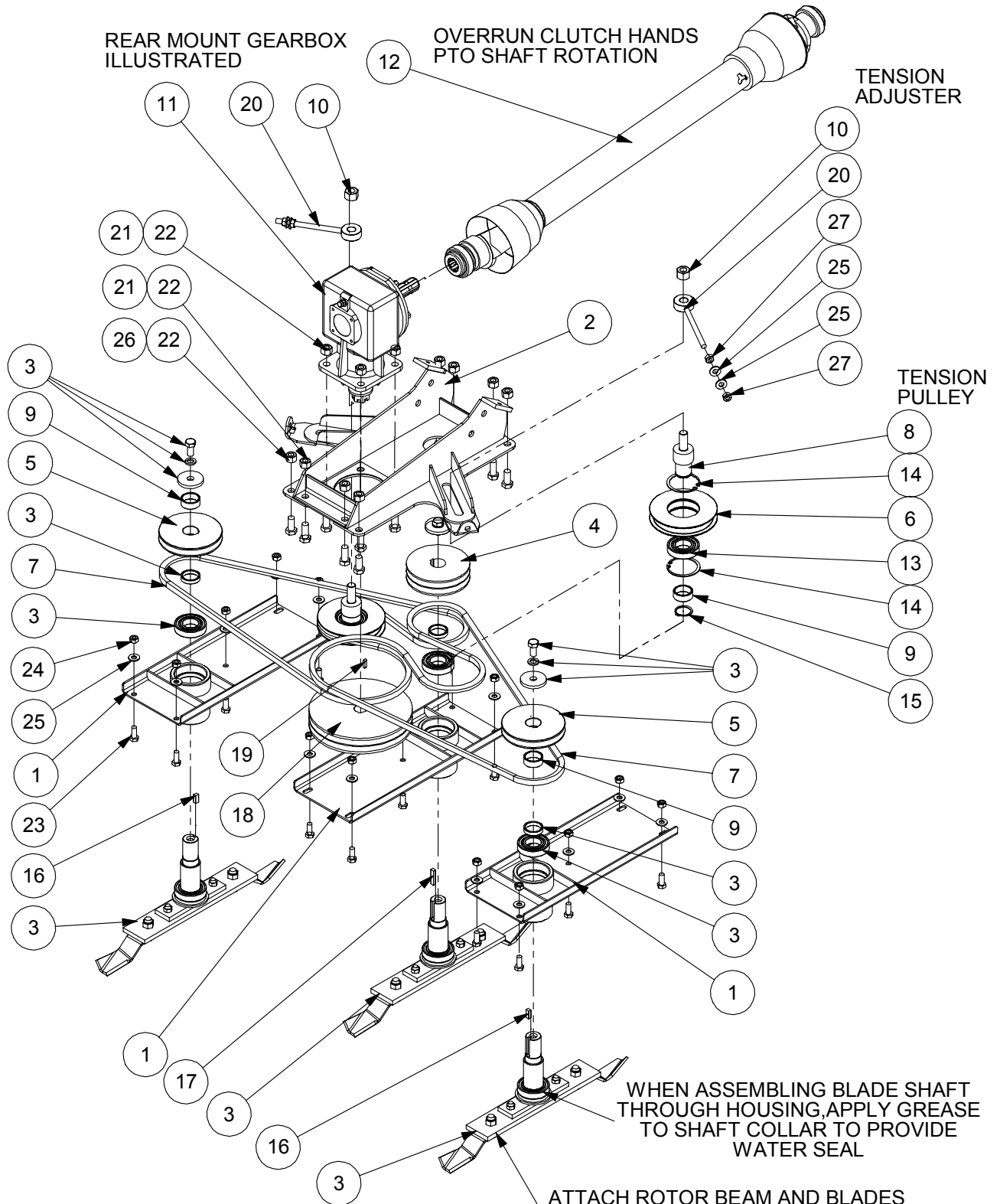
REF.	QTY.	PART No.	DESCRIPTION
		1057908	RM240 MOWER ASSEMBLY - 500 RPM REAR MOUNT
		1057909	RM240 MOWER ASSEMBLY - 500 RPM FRONT MOUNT
		1057910	RM240 MOWER ASSEMBLY - 1000 RPM FRONT MOUNT
30	1	21159.02	PTO SUPPORT
31	1	21048.02	DECAL
32	4	0431217	LINCH PIN
33	2	43358.02	PLASTIC BUNG
34	4	9143008	SELF-LOCKING NUT
35	4	9100107	FLAT WASHER
36	4	9213127	BOLT
37	8	9100105	FLAT WASHER
38	21	9313055	SETSCREW
39	29	9143005	SELF-LOCKING NUT
40	8	9213085	BOLT
41	2	9143009	SELF-LOCKING NUT
42	4	9143007	SELF-LOCKING NUT
43	4	0425516	SPRING DOWEL
44	2	9213248	BOLT
45	2	9313088	SETSCREW
46	4	9213106	BOLT
47	4	9213086	BOLT
48	8	9100206	SPRING WASHER
49	4	9313087	SETSCREW
50	24	9300151	BUTTON HEAD SCREW
51	24	9143004	SELF-LOCKING NUT
52	1	9313126	SETSCREW
53	1	9143006	SELF-LOCKING NUT

DRIVE ASSEMBLY – RM180 Model

MODULES:

- 21031.02 – RM180 Rear Mount (500 RPM)
- 21031.03 – RM180 Front Mount (500 RPM)
- 21031.07 – RM180 Front Mount (1000 RPM)

RM180 Rear Mount illustrated



**DRIVE ASSEMBLY – RM180 Model**

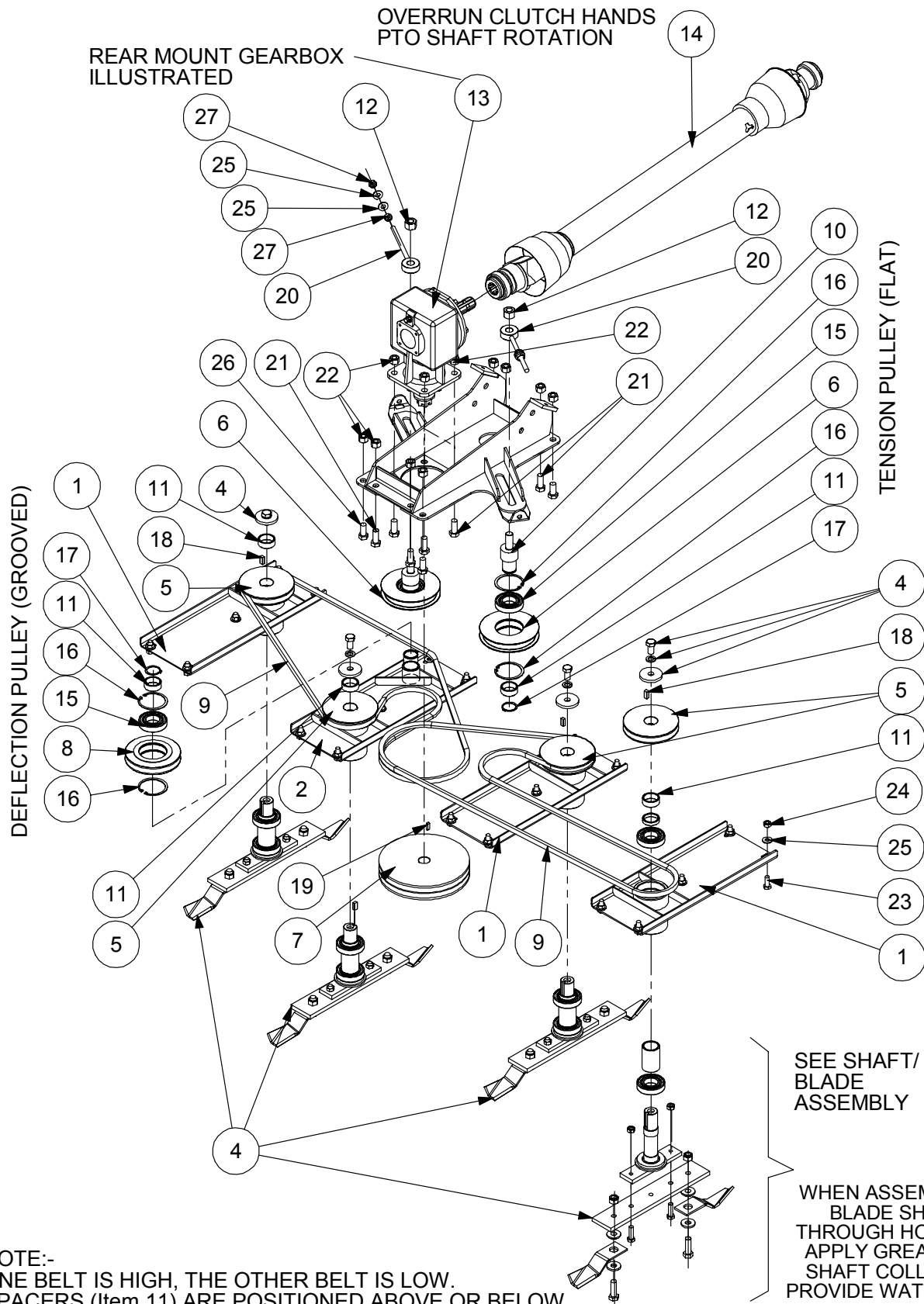
REF.	QTY.	PART No.	DESCRIPTION
		21031.02	RM180 DRIVE ASSEMBLY - 500 RPM REAR MOUNT
		21031.03	RM180 DRIVE ASSEMBLY - 500 RPM FRONT MOUNT
		21031.07	RM180 DRIVE ASSEMBLY - 1000 RPM FRONT MOUNT
1	3	21024.01	BEARING FABRICATION
2	1	21017.01	GEARBOX MOUNTING PLATE
3	3	21025.21	SHAFT BLADE ASSEMBLY
4	1	21028.02	DRIVEN PULLEY
5	2	21028.03	DRIVEN PULLEY
6	2	21028.04	TENSION PULLEY
7	2	21032.01	WEDGE BELT
8	2	21029.31	TENSIONER SHAFT
9	4	21028.31	SPACER TUBE
10	2	9143008	SELF-LOCKING NUT
11	1	21030.02	GEARBOX - <i>Rear Mount 500 RPM Models</i>
	1	21030.03	GEARBOX - <i>Front Mount 500 RPM Models</i>
	1	21030.04	GEARBOX - <i>Front Mount 1000 RPM Models</i>
12	1	21040.01	PTO SHAFT - <i>Rear Mount Models</i>
	1	21040.02	PTO SHAFT - <i>Front Mount Models</i>
13	2	0600014	BALL BEARING
14	4	0411280	INTERNAL CIRCLIP
15	2	0401240	EXTERNAL CIRCLIP
16	2	21025.37	KEY
17	1	21025.33	KEY
18	1	21028.05	DRIVE PULLEY - <i>500 RPM Models</i>
	1	21028.08	DRIVE PULLEY - <i>1000 RPM Models</i>
19	1	21025.39	KEY
20	2	21025.03	TENSION ADJUSTER
21	8	9313087	SETSCREW
22	12	9143007	SELF-LOCKING NUT
23	15	9313066	SETSCREW
24	15	9143006	SELF-LOCKING NUT
25	19	9100106	FLAT WASHER
26	4	9313077	SETSCREW
27	4	9113006	NUT

DRIVE ASSEMBLY – RM240 Model

MODULES:

- 21031.05 – RM240 Rear Mount (500 RPM)
- 21031.06 – RM240 Front Mount (500 RPM)
- 21031.08 – RM240 Front Mount (1000 RPM)

RM240 Rear Mount illustrated



NOTE:-
 ONE BELT IS HIGH, THE OTHER BELT IS LOW.
 SPACERS (Item 11) ARE POSITIONED ABOVE OR BELOW PULLIES, AS REQUIRED, TO ALIGN BELT RUNS.

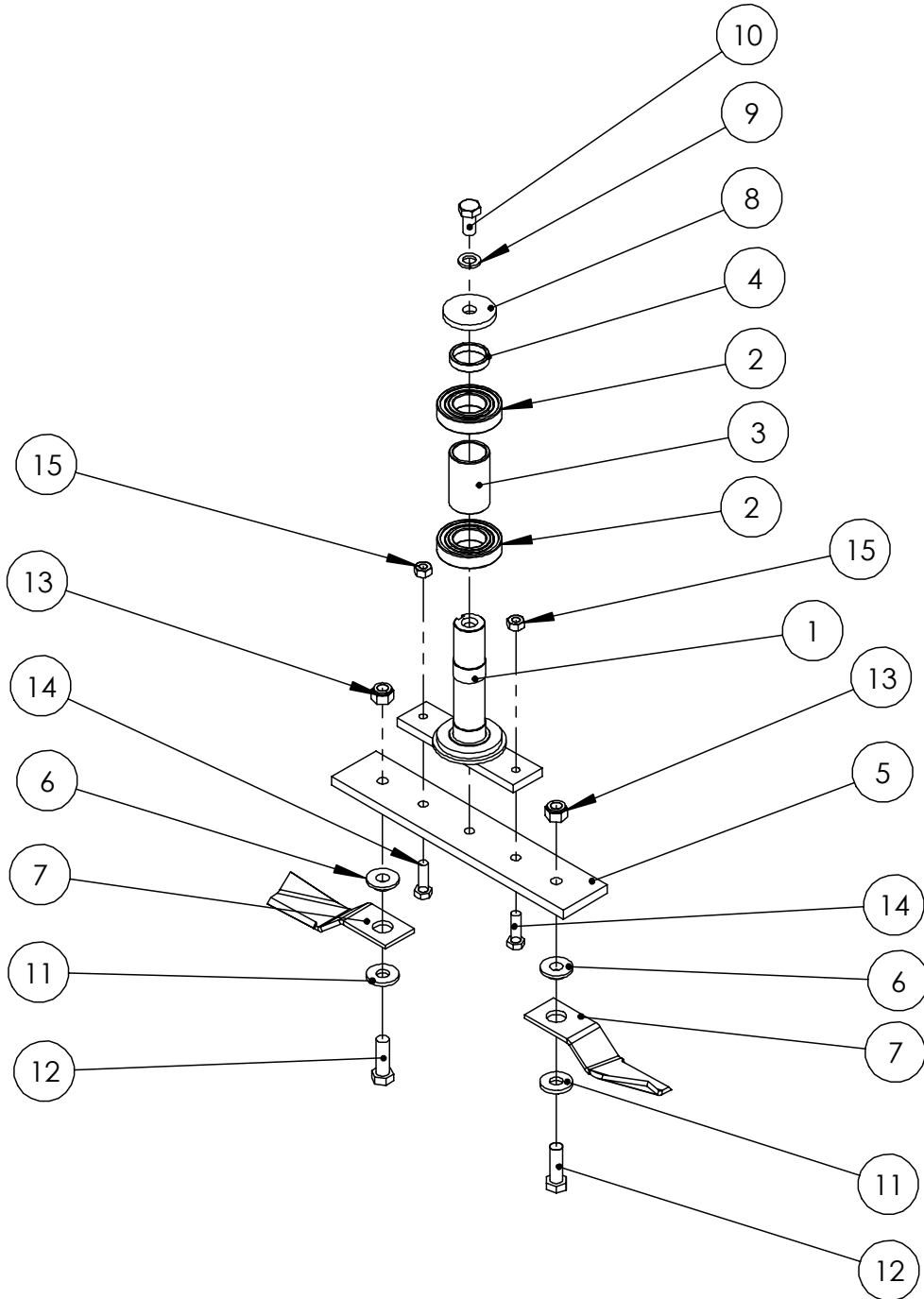
**DRIVE ASSEMBLY – RM240 Model**

REF.	QTY.	PART No.	DESCRIPTION
		21031.05	RM240 DRIVE ASSEMBLY - 500 RPM REAR MOUNT
		21031.06	RM240 DRIVE ASSEMBLY - 500 RPM FRONT MOUNT
		21031.08	RM240 DRIVE ASSEMBLY - 1000 RPM FRONT MOUNT
1	3	21024.01	RM BEARING FABRICATION
2	1	21024.02	RM BEARING FABRICATION
3	1	21017.02	GEARBOX MOUNTING PLATE
4	4	21025.21	SHAFT BLADE ASSEMBLY
5	4	21028.03	DRIVEN PULLEY
6	2	21028.04	TENSION PULLEY
7	1	21028.05	DRIVE PULLEY - <i>500 RPM Models</i>
	1	21028.08	DRIVE PULLEY - <i>1000 RPM Models</i>
8	1	21028.06	DEFLECTION PULLEY
9	1	21032.02	WEDGE BELT
10	2	21029.31	TENSIONER SHAFT
11	7	21028.31	SPACER TUBE
12	2	9143008	SELF-LOCKING NUT
13	1	21030.02	GEARBOX - <i>500 RPM Rear Mount Models</i>
	1	21030.03	GEARBOX - <i>500 RPM Front Mount Models</i>
	1	21030.04	GEARBOX - <i>1000 RPM Front Mount Models</i>
14	1	21040.01	PTO SHAFT - <i>Rear Mount Models</i>
	1	21040.02	PTO SHAFT - <i>Front Mount Models</i>
15	3	600014	BALL BEARING
16	6	411280	INTERNAL CIRCLIP
17	3	401240	EXTERNAL CIRCLIP
18	4	21025.37	KEY
19	1	21025.39	KEY
20	2	21025.03	TENSION ADJUSTER
21	8	9313087	SETSCREW
22	12	9143007	SELF-LOCKING NUT
23	20	9313066	SETSCREW
24	20	9143006	SELF-LOCKING NUT
25	24	9100106	FLAT WASHER
26	4	9313077	SETSCREW
27	4	9113006	NUT

ROTOR SHAFT/BLADE ASSEMBLY

MODULE:

21025.21 – All models



**ROTOR SHAFT/BLADE ASSEMBLY**

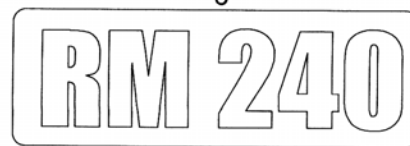
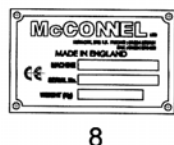
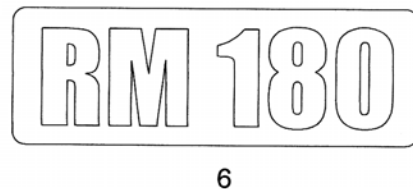
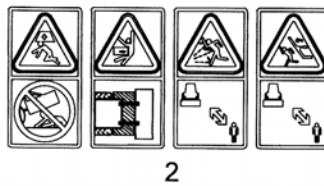
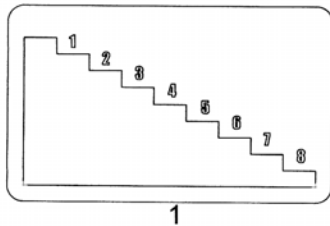
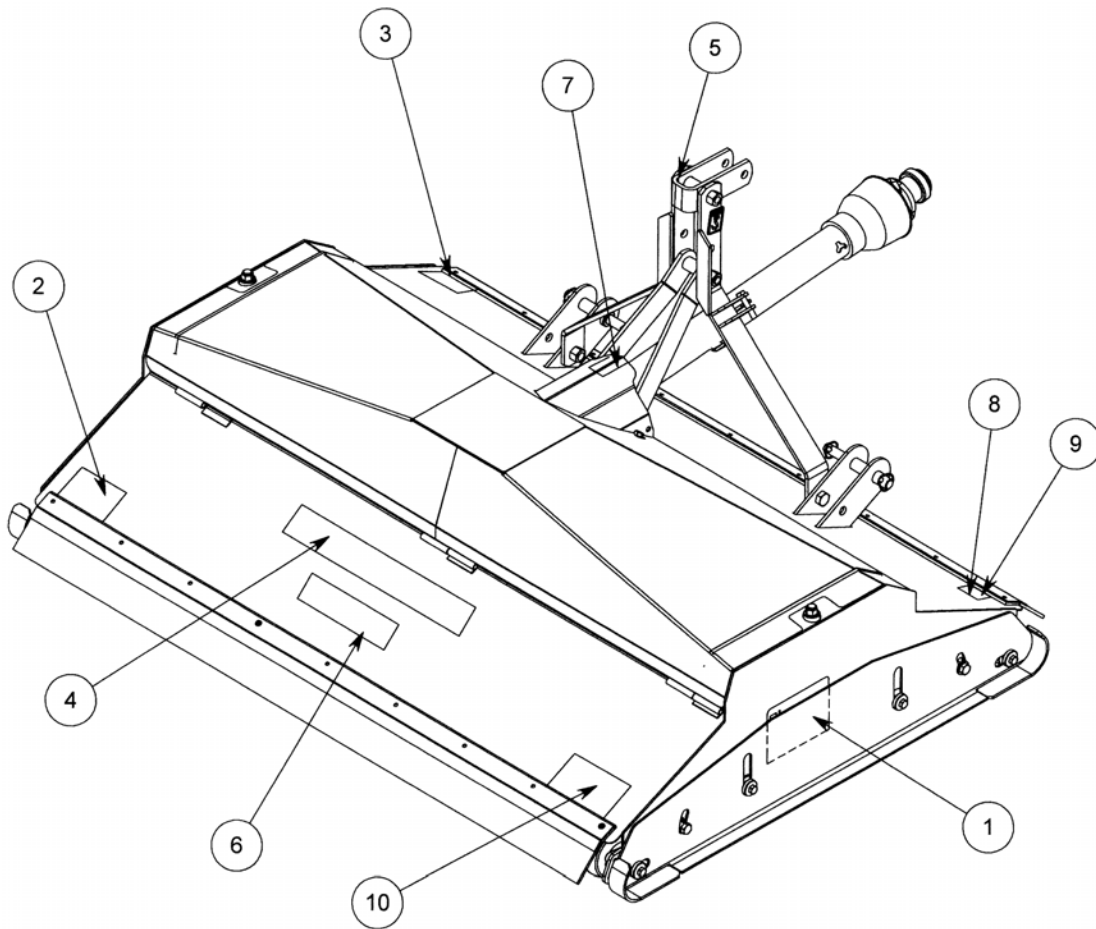
REF.	QTY.	PART No.	DESCRIPTION
		21025.21	ROTOR SHAFT & BLADE ASSEMBLY
1	1	21025.01	ROTOR SHAFT ASSEMBLY
2	2	600014	BALL BEARING
3	1	06.782.01	BEARING SPACER
4	1	21025.34	PULLEY SPACER
5	1	21025.32	ROTOR BEAM
6	2	06.237.02	COLLAR
7	2	06.208.02	BLADE (CCW)
8	1	04.252.01	WASHER
9	1	9100207	SPRING WASHER
10	1	9313067	SETSCREW
11	2	06.236.01	WASHER
12	2	05.839.06	BOLT
13	2	05.948.17	NUT
14	2	9313086	SETSCREW
15	2	9143006	SELF-LOCKING NUT

MACHINE DECALS

MODULES:

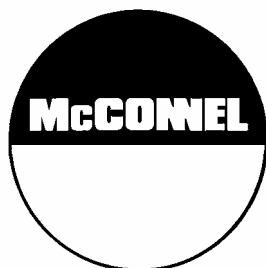
21048.01 – RM180

21048.02 – RM240



**MACHINE DECALS**

REF.	QTY.	PART No.	DESCRIPTION
		21048.01	RM180 DECAL KIT
		21048.02	RM240 DECAL KIT
1	2	21048.31	DECAL - CUTTING HEIGHT
2	1	09.821.29	COMBINED EURODECAL
3	1	09.821.34	COMBINED EURODECAL
4	1	09.843.04	DECAL - 750 Kg
5	1	1290527	DECAL - McCONNEL
6	1	21048.32	DECAL - RM180
	1	21048.33	DECAL - RM 240
7	1	09.811.04	DECAL - 540 MAX ACW
	1	09.811.02	DECAL - 1000 MAX ACW
8	1	1335246	SERIAL No. PLATE- McCONNEL
9	4	7103230	POP RIVET
10	1	09.821.30	EURODECAL ROTARY



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