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BuzzBar

TREE LIMB CUTTER

Operator and Parts Manual



McCONEl

IMPORTANT

VERIFICATION OF WARRANTY REGISTRATION

(Applies to UK Machines only)



UK 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 (UK Machines)

| |
|--|
| 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) Power Arm Mounted Tree Limb Cutter

.....

Product Code BB23

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: May 2005

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Notes

A series of horizontal dotted lines for writing notes, spanning the width of the page.

SPECIFICATIONS

BUZZBAR TREE LIMB CUTTER

Power Arm mounted
38 hp hydraulic motor
Power transfer via Micro-V belts
7'6" (2.25m) cutting width
4 x 26" (650 mm) diameter cutting blades
Blade speed 2200 rpm
Relief valve setting 2250 psi/155 bar
Oil flow requirement 90 litres/min

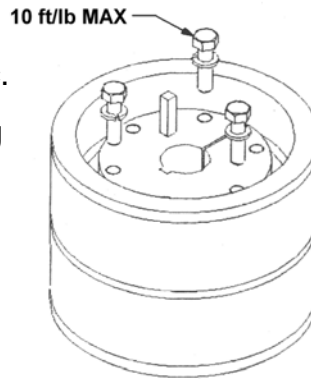
Maximum Tractor PTO speed:

410 rpm for 125 litres/min system (65 HP)
510 rpm for High Power system (54 HP)
740 rpm for Piston system (75 HP)

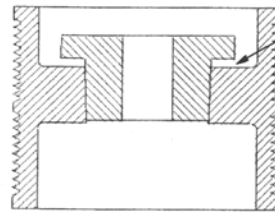
ASSEMBLY

BUZZBAR HEAD SHEAVE INSTALLATION

1. Make sure the bushing and bore of the sheave are free of dirt, paint, metal chips, etc.
2. Insert cap screws and lockwashers engaging only 2 or 3 threads.
3. With the key in the keyway, slide the loosely assembled unit on to the shaft and position for good belt alignment. Shimming under the pulley may make it easier to position.
4. Carefully tighten cap screws alternately and progressively until tapers are seated. (About 5ft-lb)
5. Check sheave alignment and runout (wobble)
6. Continue careful alternate and progressive tightening of cap screws to 10 ft-lb. Maximum torque should be achieved on each individual bolt only two times.



DO NOT USE LUBRICANTS TO INSTALL BUSHINGS. USE OF LUBRICANTS MAY CAUSE SHEAVE BREAKAGE.



NOTE: THERE WILL BE A GAP BETWEEN THE BUSHING AND SHEAVE AFTER SCREWS ARE TIGHT.

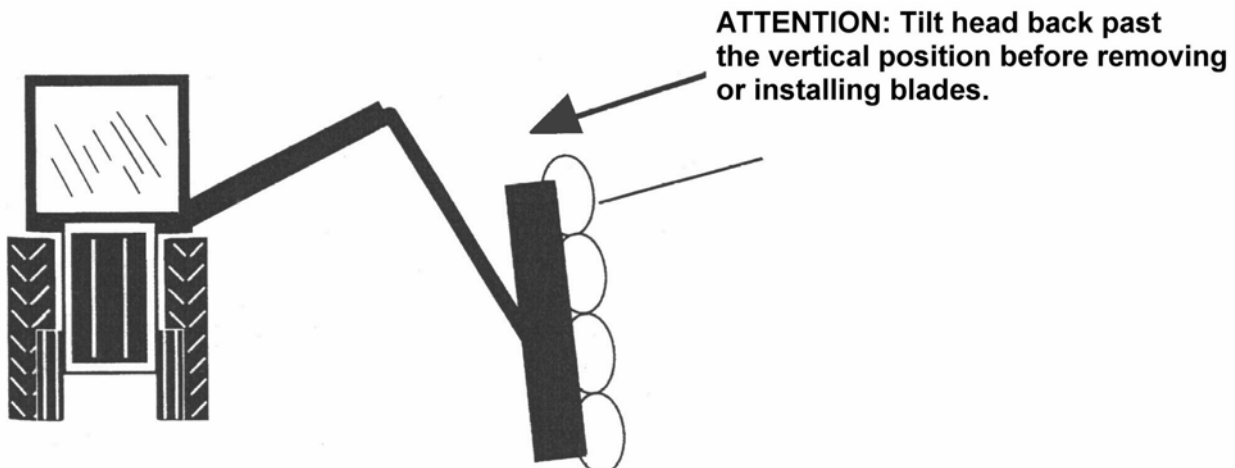
BLADES INSTALLATION

CAUTION



ALWAYS USE GLOVES WHEN HANDLING THE BLADES!

Before removing or installing blades, ensure that the head is leaned back past the vertical position. Failure to observe this can result in the blades coming off suddenly on removal of the bolts.



START UP PROCEDURE

1. Read all safety instructions. Decals on the BuzzBar and Power Arm warn you of particular and multiple hazards. Read and ensure you understand all safety messages before you operate the machine. Keep all decals clean and readable. Replace lost or damaged decals.
2. Before operating, read all the safety and operating instructions in the Operator's Manuals for the Tractor, Power Arm and BuzzBar.
3. Ensure drain line hose from hydraulic motor is connected back to the tank and that the hydraulic tank has been filled and the BuzzBar unit properly assembled. The unit can then be started up.

NOTE:

Make sure that no materials, tools, or jacks have been left under the machine. Make sure the front and rear of the machine is adequately guarded to prevent any foreign objects from being thrown by the machine. **All other workers should be kept a safe distance from the unit before the machine is started.**

4. Start the tractor and idle at a slow engine speed until oil is being pumped.
5. Run the machine for 5 minutes. While the tractor is idling, blocked, wearing protective clothing and eye protection, **CAREFULLY** check for leaks in hydraulic fittings, hoses and ports by using a **piece of cardboard, DO NOT USE YOUR HAND!** If any are found stop the tractor immediately and correct any leaking connections. Stop the unit and check the oil level in the hydraulic tank. If required add oil. (*Refer to Hydraulic Tank filling section of your Power Arm Operator's Manual for details*).
6. Increase engine speed gradually to give normal PTO shaft speed (410,510 or 740 – refer to Specifications on page 1) and turn Head on by moving the Rotor Control to the 'Start' position. **Keep all persons WELL CLEAR of BuzzBar as the blades can THROW OBJECTS with great velocity for a considerable distance - KEEP CLEAR. ENSURE CORRECT BLADE ROTATION.**
7. With the area well clear of any ground and overhead obstructions, work each Ram on the machine one at a time, several times through full movement range, to expel any air that may be in the Hoses and Rams and to check clearances and hose runs.
8. Check the fluid level in the Hydraulic Tank again and add oil if required. As the air has been forced out of the Rams and Hoses, it goes into the Hydraulic Tank and reduces the oil level. Check your Operator's Manual for the proper level and type of oil to be used. Repeat steps 7 and 8 until the fluid level in the machine has stabilized. Failure to do these steps may result in air in the hydraulic circuit and irregular operation of the machine.

**NEVER TAKE RISKS – WHEN IN DOUBT CONTACT YOUR LOCAL DEALER OR
McCONNEL'S DIRECT FOR FURTHER INFORMATION ON YOUR MACHINE!**

BASIC TROUBLE SHOOTING GUIDE FOR FIRST START UP.

Electrical solenoid valve does not work – check wiring, possible faulty switch, possible faulty solenoid.

Pump is making noise – check for obstruction in suction hose and tank suction assembly, check alignment of pump driveshaft.

Rams will not raise – hoses from ram incorrectly connected to valve bank, pump not supplying oil.

Rams raise slowly – hoses from ram incorrectly connected to valve bank, work port reliefs on valve bank set too low -replace as required.

Machine slows down or stops completely – the filter may be clogged, replace.

DO NOT ALLOW THE PUMP TO CONTINUE WORKING IF THE BLADES DO NOT TURN - OVERHEATING AND SERIOUS DAMAGE TO THE PUMP CAN BE CAUSED IN A VERY SHORT TIME IF STARVED OF OIL!

OPERATION

CAUTION



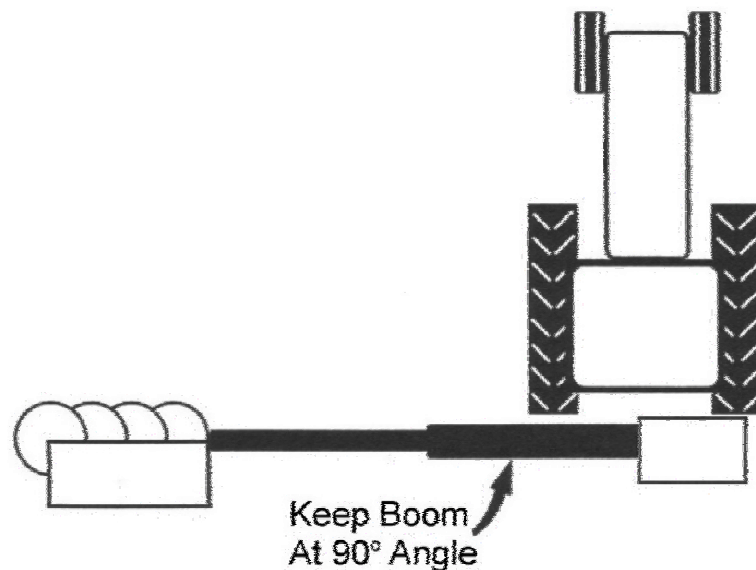
ALWAYS USE HEARING PROTECTION WHEN WORKING WITHIN 100 METRES OF THIS MACHINE!

CAUTION



FIT SUITABLE PROTECTION TO CAB ROOF & SIDES TO ENSURE OPERATOR SAFETY!

- Do not operate while people are in the vicinity.
- This saw is rated for material up to 4" (10 cm) diameter.
- Suggested cutting speed for the BuzzBar is 1st and 2nd gear.
- Slow down for thick, dense or hard material.
- Always cut with boom positioned perpendicular (straight out) from the tractor. Cutting with the boom swung forward or back will cause the blades to warp from 'raking' through the cuts. Avoid 'arm breakback' through overloading.



- For maximum blade life, do not allow the blades to contact hard items such as the ground or metal objects.
- If belts start to slip, tension soon. The more the belts slip the looser they will become.
- Grease bearings weekly.
- Check belt tension daily.
- When cutting maximum diameter material use the 'Master' Blade - *this is the blade that is driven directly by the hydraulic motor* - to reduce wear/slip.

MAINTENANCE

BLADES

For best performance have blades set and sharpened when they begin to dull. Blades can be 'touched up' with a grinder or file between sharpenings.

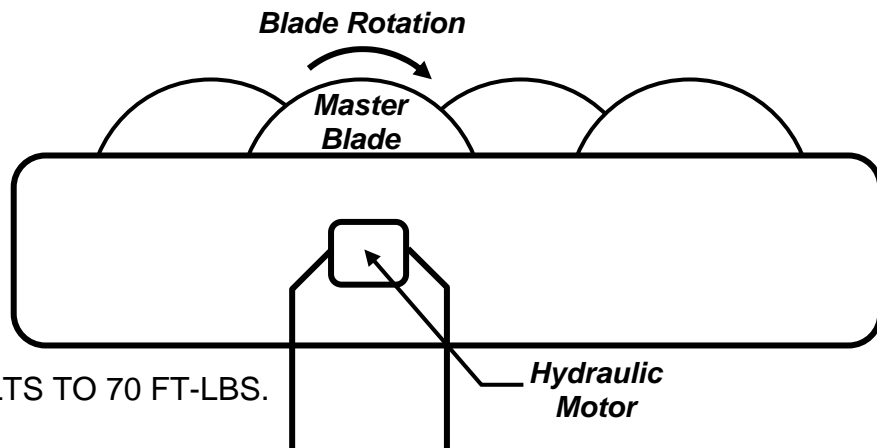
To extend the life of the blade, remove resin accumulations. (When resin builds up, the blades will 'burn' in the cut, causing the blades to overheat and warp). When cutting some types of trees, blades will need to be cleaned every few hours.

To remove the resin, use oven cleaner or lacquer thinner with a Scotch-Brite pad or steel wool. Apply these products carefully since many of them will remove paint from your BuzzBar. Always follow manufacturer's instructions for safe use.

NOTE



Blades should turn clockwise when viewed from the top.



TIGHTEN BLADE BOLTS TO 70 FT-LBS.

LUBRICATION

Grease each spindle with one pump of high quality lithium grease weekly. More than one pump is unnecessary and will cause extra grease to spill from the relief.

Grease fittings are located in front of the machine, just above the blades.

MAINTENANCE

BELT TENSIONING

Belt Tension Adjustment (see illustration below) –TENSION CENTRE BELT FIRST.

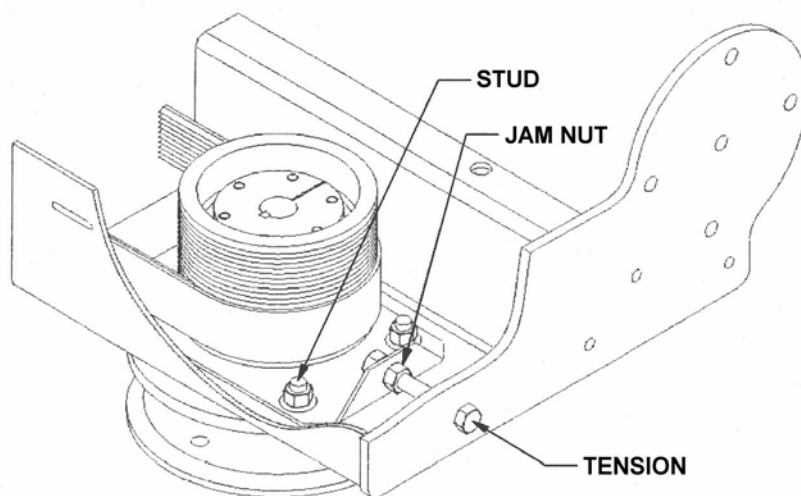
- Loosen nuts on the 4 studs and the jam nut.
- Use a hand wrench or socket to tension the belts.
- Once the belts begin to tighten small adjustments will produce large changes in tension.
- Tension Belts to 15-20 lb. (7-9 kg) of force for 5/16 inches (8mm) deflection.
- Tighten nuts on studs and jam nut to hold tension.

WARNING

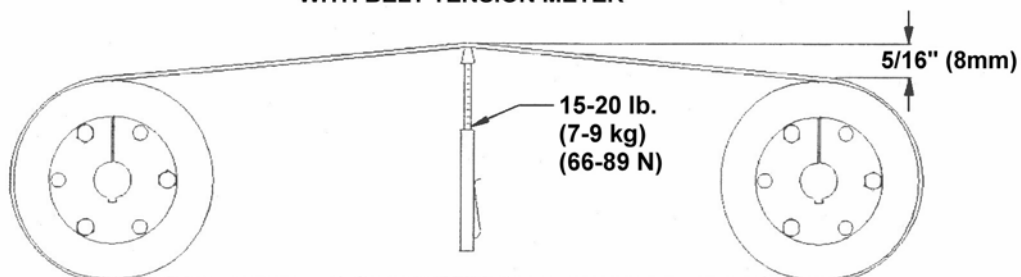


**Never use power or air equipment to tighten belt!
This could cause damage to belt, sheave, shaft and bearings.**

BELT TENSION ADJUSTMENT



MEASURE FORCE AND DEFLECTION
WITH BELT TENSION METER



For best performance...

USE ONLY McCONNEL SERVICE PARTS

To be assured of the latest design improvements purchase your 'Genuine Replacements' from the Original Equipment Manufacturer: McCONNEL LIMITED through your local Dealer or Stockist.

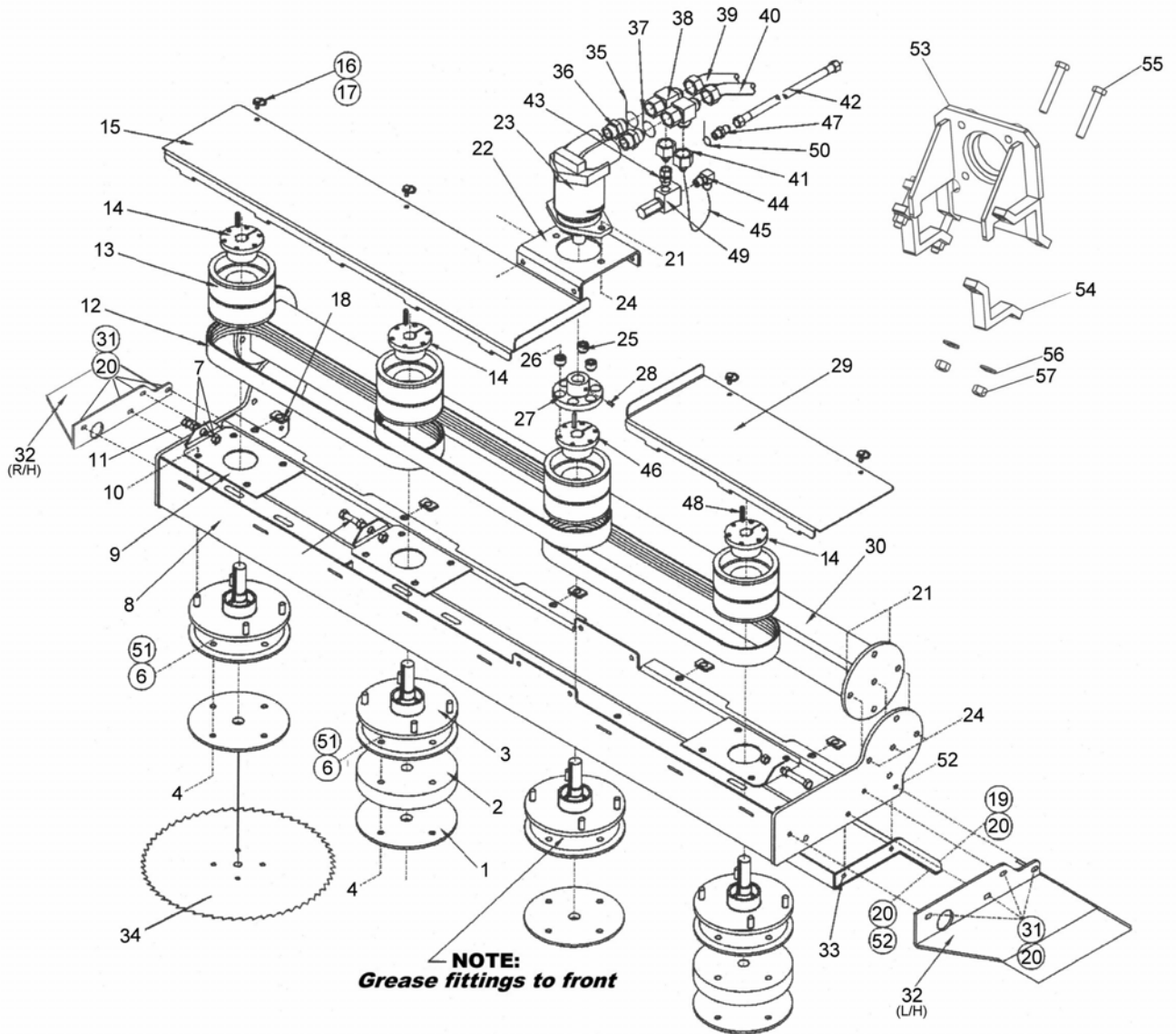
Always quote:

- **Machine Type**
- **Serial Number**
- **Part Number**

Design Improvements may have altered some of the parts listed in this manual – The latest part will always be supplied when it is interchangeable with an earlier one.

BUZZBAR ASSEMBLY

**MODULE:
02974203**



NOTE: Drain hose from motor MUST be connected back to the tank.

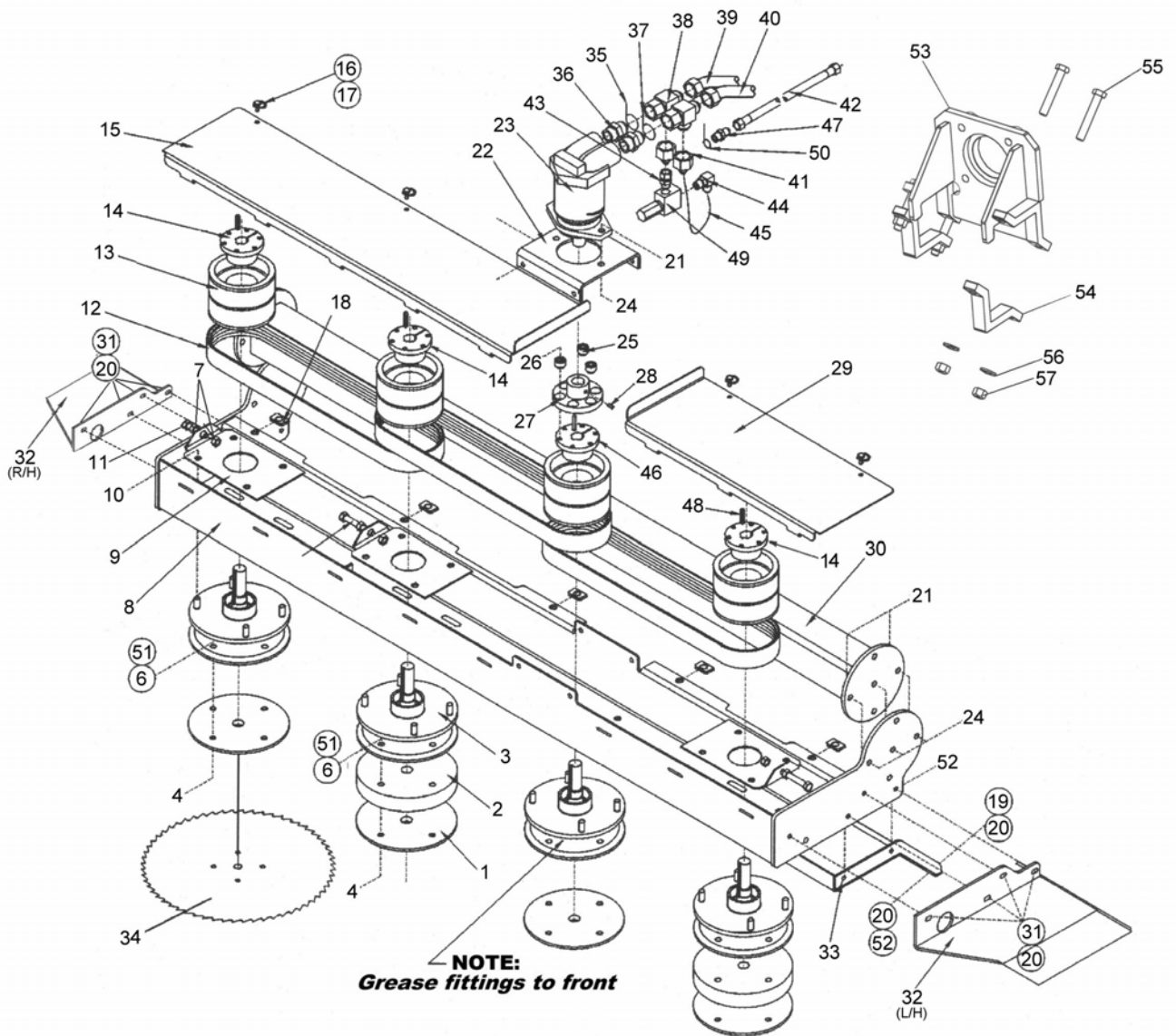


| REF. | QTY | PART No. | DESCRIPTION |
|------|-----|-----------------|--|
| | | 02974203 | BUZZBAR ASSEMBLY |
| 1 | 4 | 02974237 | END CAP |
| 2 | 2 | 02974238 | BLADE SPACER |
| 3 | 4 | 02974235 | HUB ASSEMBLY |
| 4 | 8 | 02974659 | BOLT |
| 5 | 8 | 02974658 | BOLT |
| 6 | 16 | 02976017 | SLOT NUT |
| 7 | 6 | 00001200 | HEX NUT |
| 8 | 1 | 02974209 | 4 BLADE SAW BODY |
| 9 | 3 | 02974225 | TENSION ADJUST BRACKET |
| 10 | 16 | 00750614 | NUT |
| 11 | 3 | 002521 | BOLT |
| 12 | 3 | 02974241 | BELT MICRO-V |
| 13 | 4 | 02974239 | SHEAVE |
| 14 | 3 | 02974240 | QD BUSHING |
| 15 | 1 | 02974206 | BELT COVER - LONG |
| 16 | 5 | 02975441 | STUD - QUICK RELEASE |
| 17 | 5 | 02975440 | RETAINER - QUICK RELEASE |
| 18 | 5 | 02975439 | RECEIVER- QUICK RELEASE |
| 19 | 6 | 00011400 | BOLT |
| 20 | 12 | 00011100 | FLAT WASHER |
| 21 | 6 | 00001800 | LOCKNUT |
| 22 | 1 | 02974216 | PLATE - MOTOR MOUNT |
| 23 | 1 | 8301295 | MOTOR PISTON |
| 24 | 8 | 00749130 | BOLT |
| 25 | 3 | 02964620 | INSERT - RUBBER GROMMET |
| 26 | 3 | 00999314 | BOLT |
| 27 | 1 | 02974245 | MOTOR COUPLING |
| 28 | 1 | 02957001 | SETSCREW |
| 29 | 1 | 02974205 | BELT COVER -SHORT |
| 30 | 1 | 02974215 | HITCH TUBE |
| 31 | 13 | 00023100 | BOLT |
| 32 | 1 | 02974207 | BUMPER - LEFT HAND |
| | 1 | 45917.01 | BUMPER - RIGHT HAND |
| 33 | 1 | 02974212 | REAR SHIELD |
| 34 | 4 | 02975600 | SAW BLADE PACK (<i>Ship Unmounted</i>) |
| 35 | 1 | 02968894 | TIE - RED |
| 36 | 2 | 02957622 | HYDRAULIC ADAPTOR |
| 37 | 1 | 02968896 | TIE - ORANGE |
| 38 | 2 | 02970466 | HYDRAULIC TEE ADAPTOR |
| 39 | 1 | 02975437 | HOSE TIE - RED |
| 40 | 1 | 02975437 | HOSE TIE - ORANGE |
| 41 | 2 | 02969464 | HYDRAULIC ADAPTOR |
| 42 | 1 | 02972981 | HOSE |
| 43 | 1 | 02975438 | HYDRAULIC ADAPTOR |
| 44 | 1 | 02962213 | HYDRAULIC ADAPTOR |
| 45 | 1 | 02158800 | HOSE |

con'd...

BUZZBAR ASSEMBLY

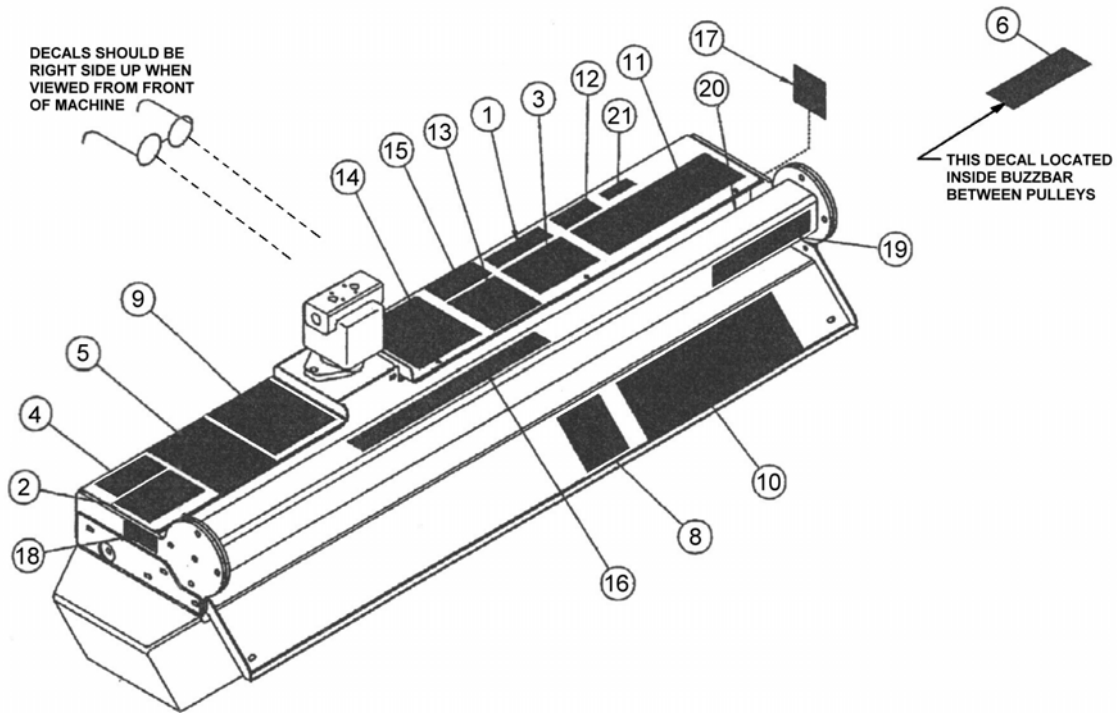
**MODULE:
02974203**



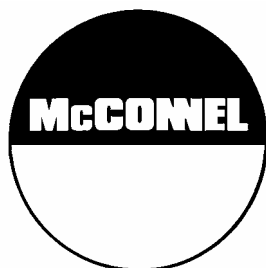
NOTE: Drain hose from motor MUST be connected back to the tank.

| REF. | QTY. | PART No. | DESCRIPTION |
|------------------------|------|-----------------|--|
| | | 2974203 | BUZZBAR ASSEMBLY - continued |
| 46 | 1 | 02975434 | QD BUSHING - MODIFIED |
| 47 | 1 | 00696800 | HYDRAULIC ADAPTOR |
| 48 | 4 | 02669600 | KEY |
| 49 | 1 | 02975964 | RELIEF MANIFOLD |
| 50 | 1 | 02968895 | TIE - BLUE |
| 51 | 16 | 000026 | COTTER PIN |
| 52 | 14 | 0142003 | LOCKNUT |
| | | 45851.29 | BUZZBAR MOUNTING KIT |
| 53 | 1 | 45851.01 | BUZZBAR MOUNTING BRACKET |
| 54 | 2 | 7198332 | CLAMP |
| 55 | 4 | 9213207 | BOLT M16 x 100 |
| 56 | 4 | 9100107 | FLAT WASHER M16 |
| 57 | 4 | 9143007 | SELF-LOCKING NUT M16 |
| Not illustrated | | | BUZZBAR HYDRAULIC FITTINGS & HOSES |
| | 2 | 8581233 | ADAPTOR 1" BSP.F x 1.5/16M <i>Hose to Junction Bracket.</i> |
| | 1 | 8581134 | ADAPTOR 1/2" BSP.F x 3/4 JIC <i>Drain Hose to Junction Bracket (If drain already fitted to Power Arm).</i> |
| | 1 | G3812120 | ADAPTOR 1/2" x 5/8" BSP M <i>If connecting Drain Hose to new drain line without Junction Bracket.</i> |
| | 2 | 8581256 | ADAPTOR 1" BSP.x 1.5/16 MM <i>If connecting Hose to Hose without Junction Bracket.</i> |
| | 1 | 8581351 | BLANKING PLUG 5/8" BSP <i>For use when removing BuzzBar from Power Arm.</i> |
| | 1 | G3812119 | BLANKING CAP 5/8" BSP <i>For use when removing BuzzBar from Power Arm.</i> |
| | 2 | 05.433.03 | BLANKING PLUG 1" BSP <i>For use when removing BuzzBar from Power Arm.</i> |
| | 1 | 8581338 | ELBOW 5/8" BSP M/F 90 <i>If required into Tank.</i> |
| | 1 | 00999588 | HOSE SLEEVE <i>Hose protection.</i> |
| | 1 | 8581318 | ADAPTOR 5/8" BSP MM <i>To connect Drain Hoses.</i> |
| | 1 | 10.007.65 | HOSE 5/8" FS/FS 5500 <i>Drain Hose - if not already fitted.</i> |
| | 1 | 10.008.35 | HOSE 5/8" FS/F 90 2500 <i>Drain Hose - if not already fitted.</i> |
| | 1 | 8650104 | BONDED SEAL 1/2" <i>For connecting Adaptors 8581134 & G3812120.</i> |
| | 2 | 8581245 | ADAPTOR 1" BSP ELBOW 45 <i>If required at Hose Junction Bracket.</i> |

Please use
to prevent
contamination
of Hoses / Oil



| REF. | PART No. | QTY | LEVEL | DESCRIPTION |
|------|------------|-----|----------------|-----------------------|
| 1 | 00758194 | 1 | WARNING | V-Belt Pinch |
| 2 | 00769736 | 1 | WARNING | Use/Repair Shields |
| 3 | 00769737 | 1 | DANGER | Cutting Blades |
| 4 | 02925100 | 1 | CAUTION | GenuineParts |
| 5 | 02958241 | 1 | DANGER | Operator Safety |
| 6 | 02962764 | 1 | DANGER | Pinch Point |
| 7 | 00756004 | 1 | DANGER | Guard Missing |
| 8 | 02965262 | 1 | DANGER | Leak/Hose Burst |
| 9 | 02967827 | 1 | DANGER | Multihazard Rotary |
| 10 | 00757139 | 1 | LOGO | Alamo By Terrain King |
| 11 | 02974998 | 1 | LOGO | Buzzbar |
| 12, | D138 | 1 | DECAL | Blade Rotation |
| 13 | 02975158 | 1 | WARNING | Hearing Protection |
| 14 | 02975170 | 1 | DANGER | Foot/Leg Contact |
| 15 | 02975515 | 1 | WARNING | Disconnect Solenoid |
| 16 | 02975516 | 1 | CAUTION | No Hitch Post Here |
| 17 | 02975514 | 1 | ----- | Pitch Adjust |
| 18 | <i>nfs</i> | 1 | ----- | Serial Plate |
| 19 | 1458392 | 1 | REFLECT | Red Reflector |
| 20 | 1458393 | 1 | REFLECT | Yellow Reflector |
| 21 | 02961134 | 1 | ----- | Patent Pending |



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