

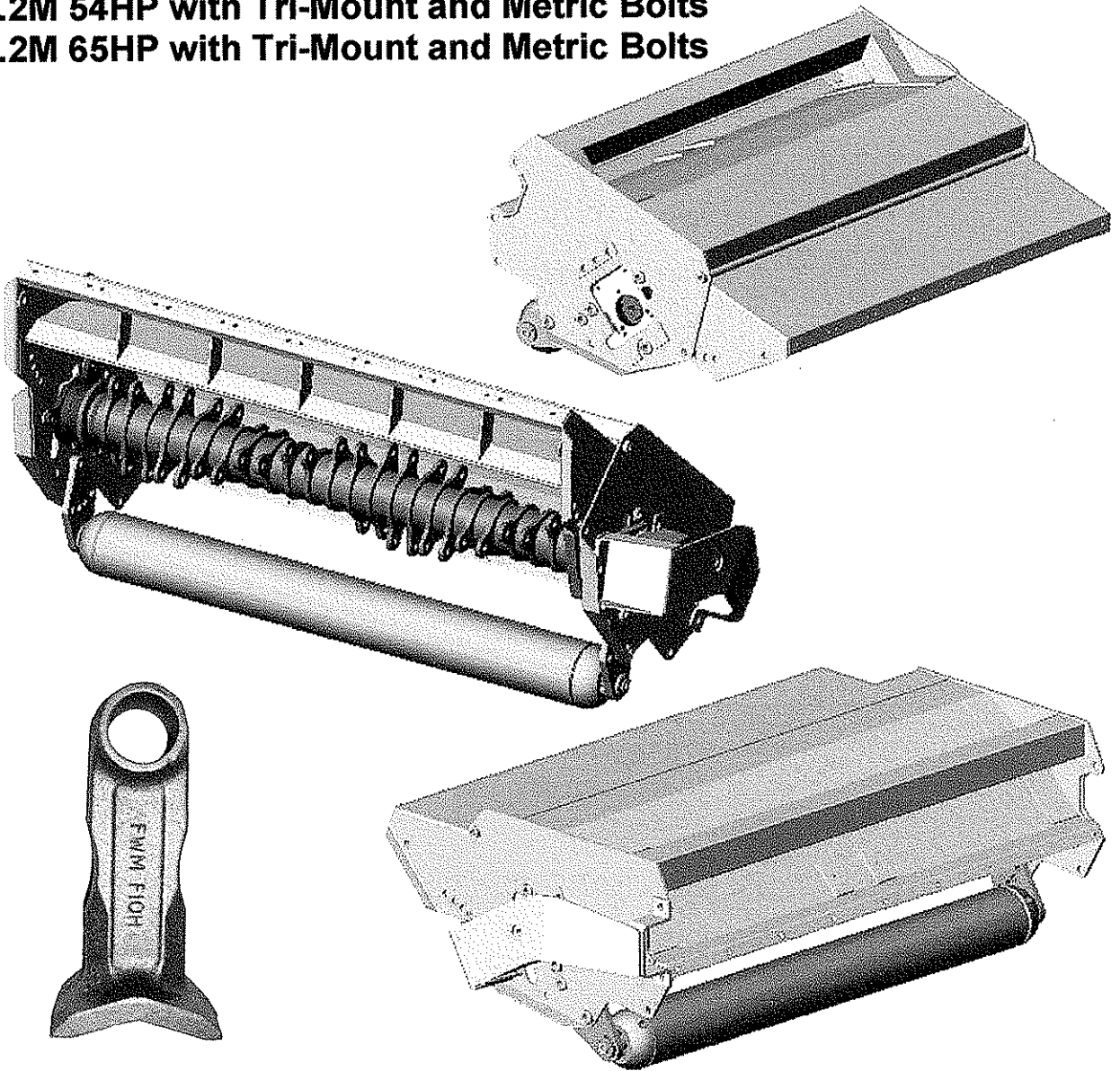
Publication 420
April 2002 (Issue3 Oct.2004)
Part No. 41570.20



TUFFCUT FLAILHEAD

Operation & Parts Manual

1.2M 45HP with Tri-Mount and Metric Bolts
1.2M 54HP with Tri-Mount and Metric Bolts
1.2M 65HP with Tri-Mount and Metric Bolts



McCORMICK

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) Hydraulic Arm Mounted Flailhead.....

Product Code BD12, BD16, F110, F112, F115, F012, F016.....

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: January 2005

READ THE BOOK FIRST

It might save hours and pounds later !

When ordering spare parts always quote

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

Factory re-built service exchange units of the major hydraulic components are available from your Dealer

NOISE

The equivalent daily personal noise exposure from this machine, measured at the operators' ear, is within the range 78 – 85 DB.

These figures apply to a normal distribution of use where the noise fluctuates between zero and maximum. The figures assume that the machine is fitted to a tractor with a quiet cab with the windows closed in a generally open environment. We recommend that the windows are kept closed.

With the cab rear window open the equivalent daily personal noise exposure will increase to a figure within the range 82 – 88 DB.

At equivalent daily noise exposure levels of between 85 and 90 DB, ear protection is recommended, it should be used if any window is left open.



Notes

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

GENERAL INFORMATION

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

Use only McConnel Genuine spare parts on McConnel equipment and machines.

DEFINITIONS The following definitions apply throughout this manual:

WARNING

An operating procedure, technique etc., which can result in personal injury or loss of life if not observed carefully.

CAUTION

An operating procedure, technique etc., which can result in the damage of either machine or equipment if not observed carefully.

NOTE

An operating procedure, technique etc., which is considered essential to emphasise.

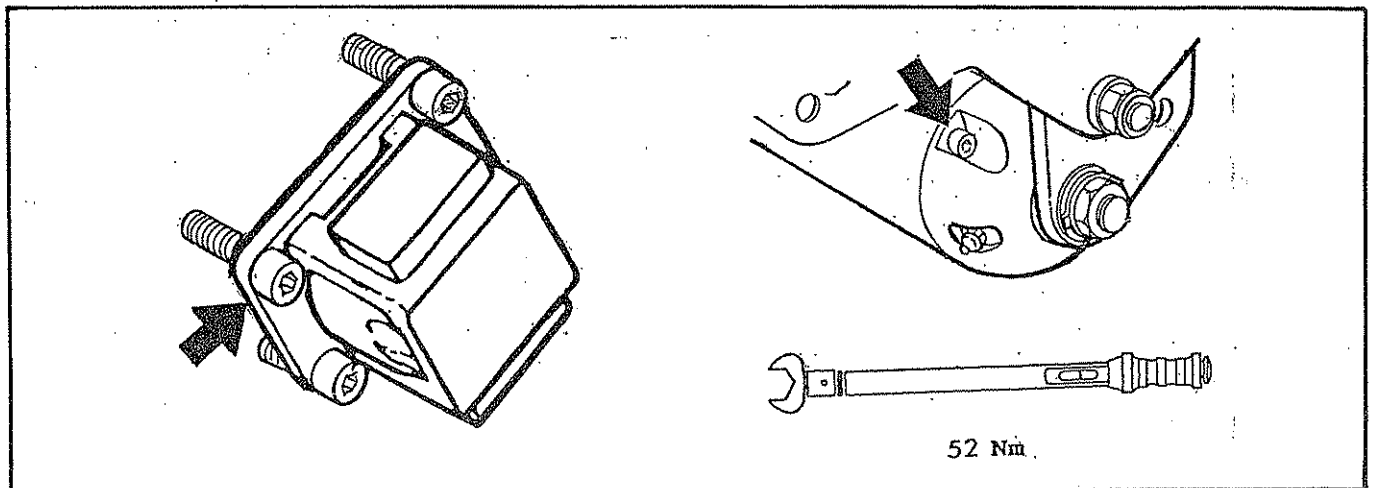
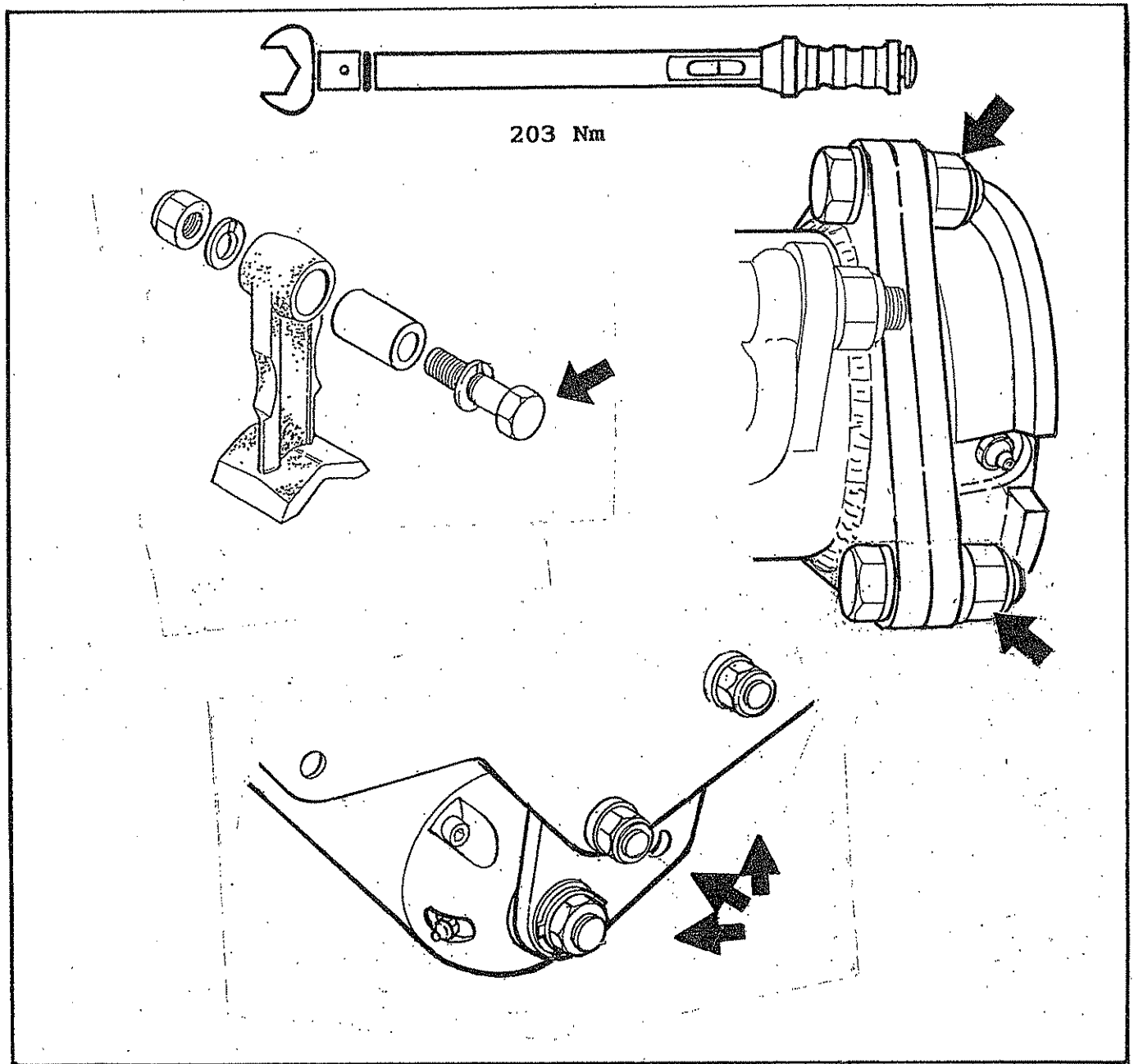
LEFT AND RIGHT HAND

This term is applicable to the machine when fitted to the tractor and viewed from the rear. This also applies to tractor references.

Record the serial number of your machine on this page and always quote this number when ordering spares. Whenever information concerning the machine is requested remember to also state the type of tractor to which it is fitted.	
MACHINE SERIAL NUMBER	INSTALLATION DATE
MODEL DETAILS	
DEALERS NAME	
DEALERS TELEPHONE NUMBER	

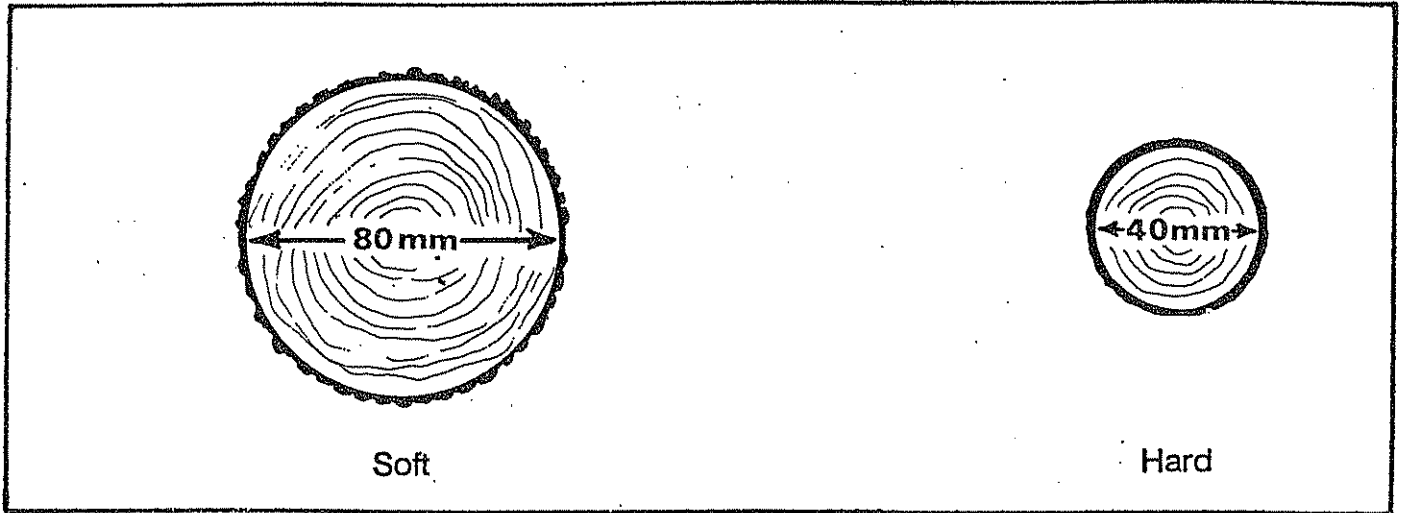
PRE OPERATIONAL CHECKS

Check:- All bolts are tight and that the torque figures are correct for the specific locations shown below.

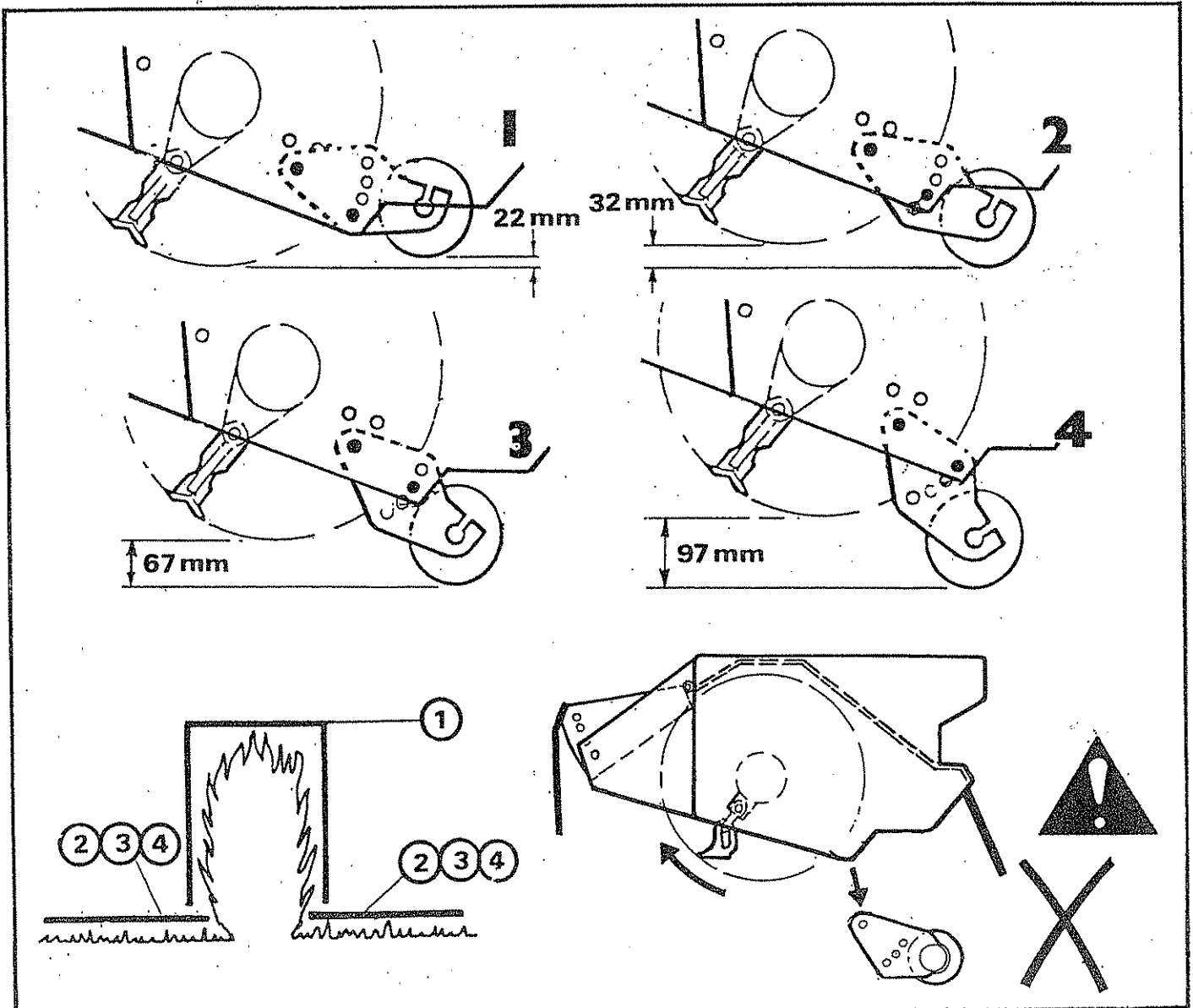


OPERATION

MATERIAL THICKNESS CUTTING LIMITATIONS

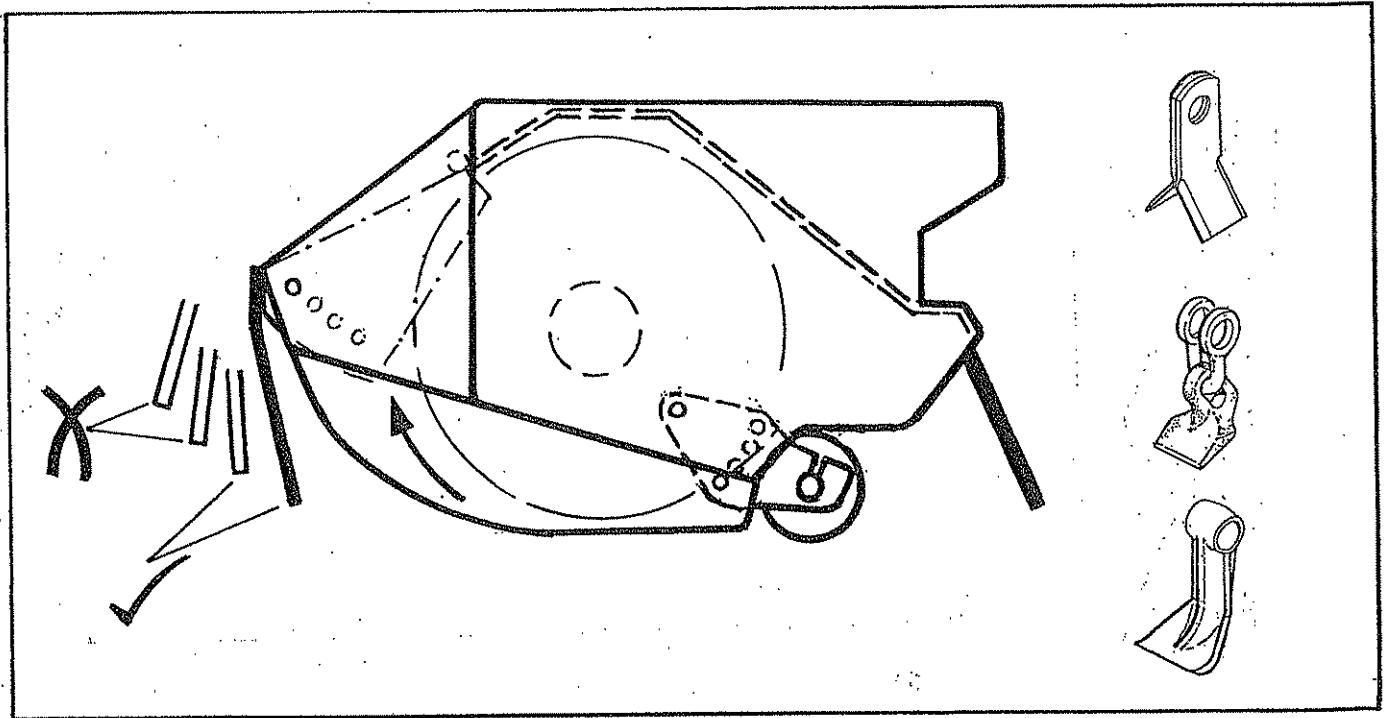


ROLLER POSITION



FLAILHEAD ARRANGEMENT

MOWING - with grass or universal head



When mowing the rotor must always cut with an upwards rotation.

When mowing the roller must always be set below the level of the skid or the rotor if skids are not fitted i.e. in positions 2 - 6.

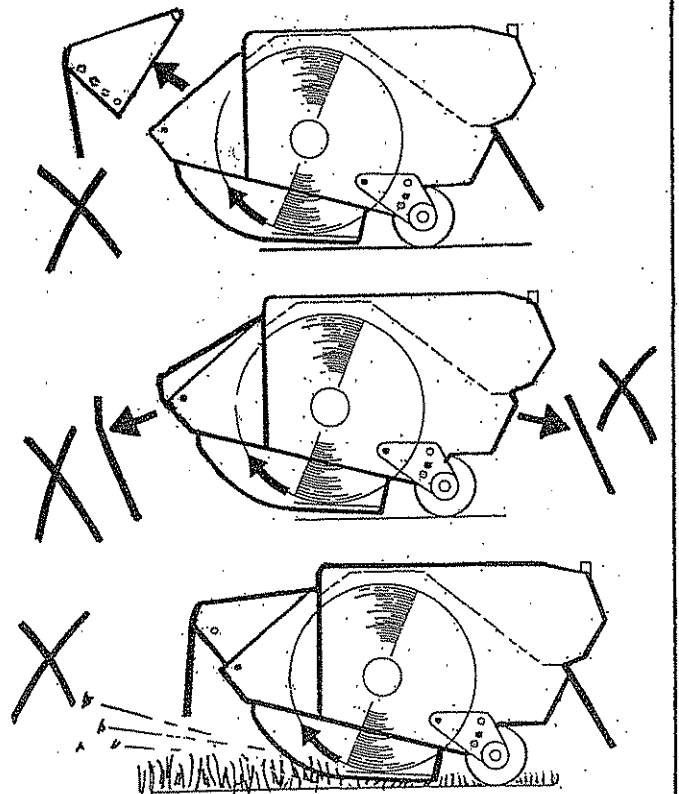
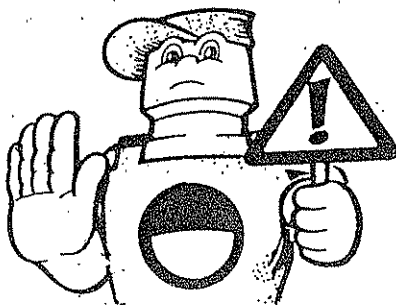
The front hood has four adjustment positions for height. The lowest possible position which allows the material to be cut to enter the head should always be used.

WARNING

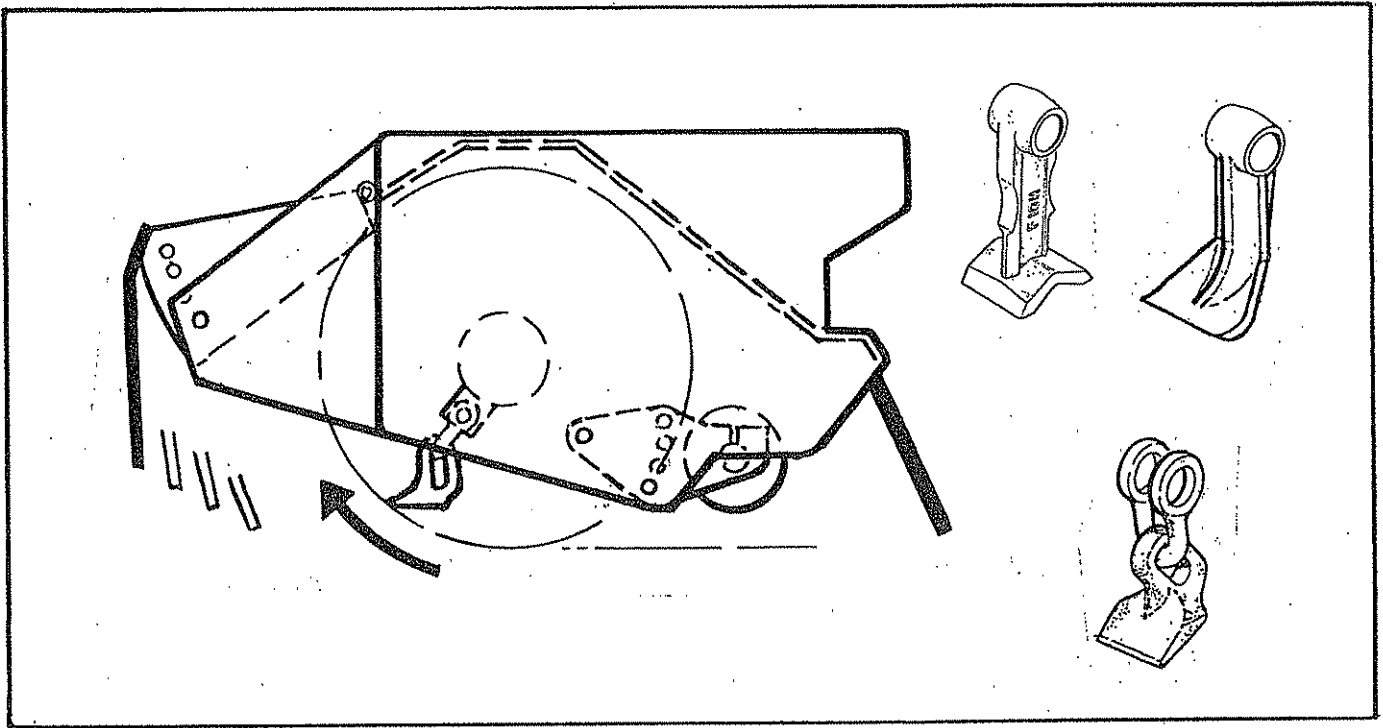
Raising the front hood increases the possibility of debris escaping. Never operate the machine with the front hood set any higher than is absolutely necessary.

WARNING

Do not remove any guarding under any circumstance during operation.



HEDGE CUTTING - Average working conditions with hedge or universal head.



For the best finish the rotor should cut with an upwards rotation.

The roller should be set slightly above the rotor i.e. in position 1.

On universal heads the front rubber flaps and skids if fitted, may be removed to aid the entry of the material to be cut into the flail head.

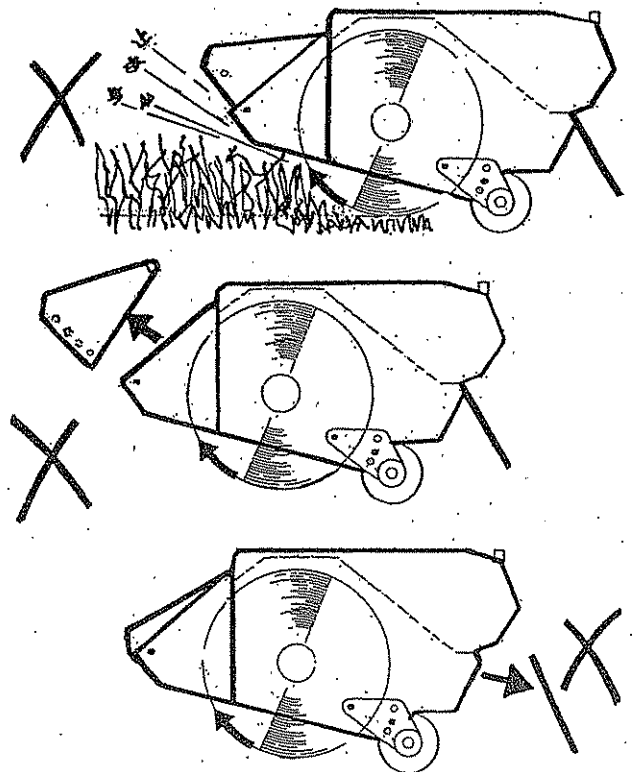
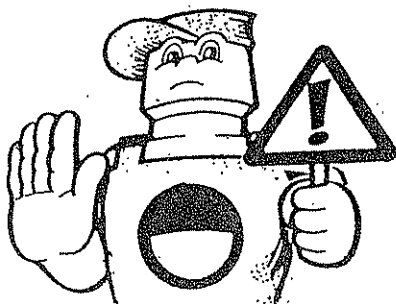
The front hood has four adjustment positions for height. The lowest position which allows the material to be cut to enter the flail head should always be used.

WARNING

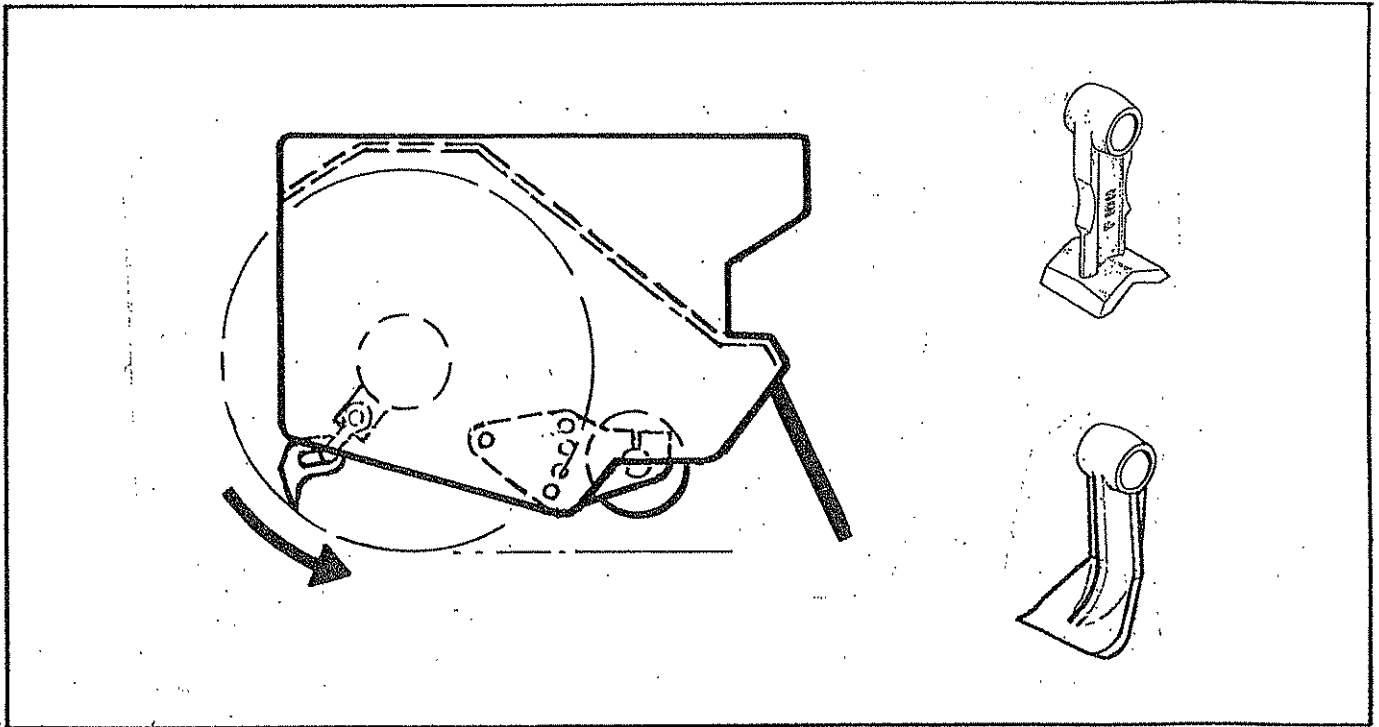
Raising the front hood increases the possibility of debris escaping. Never operate the machine with the front hood set any higher than is absolutely necessary.

WARNING

Do not remove any guarding under any circumstance during operation.



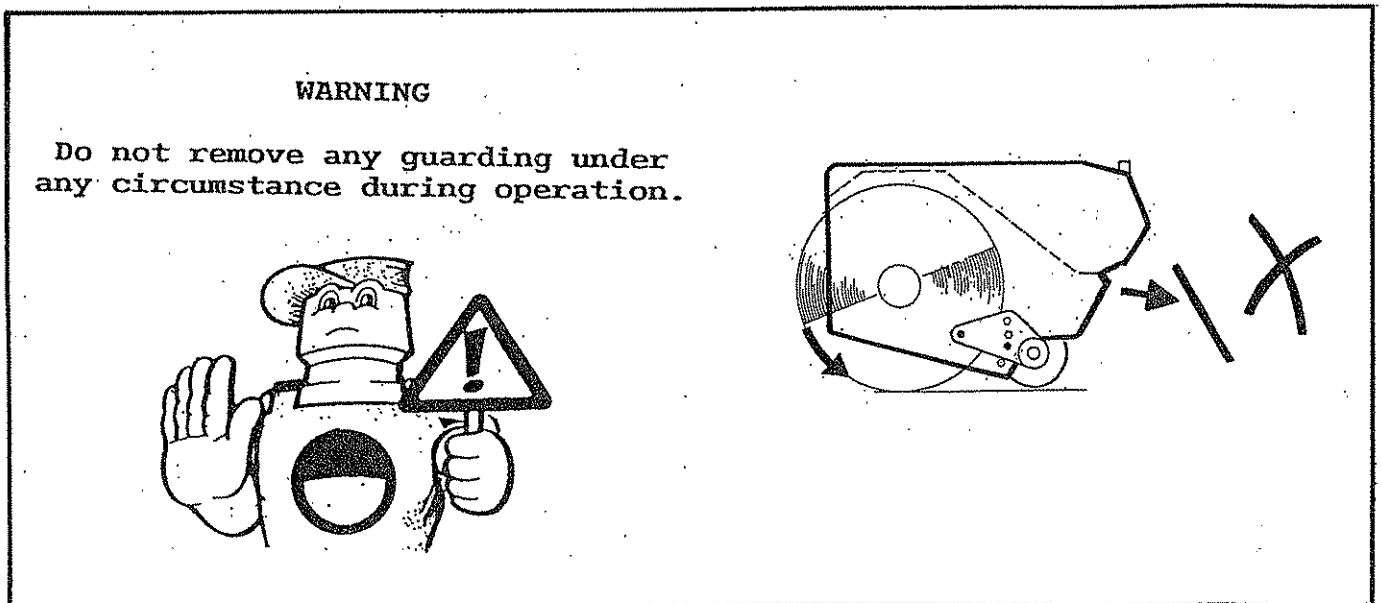
HEDGE CUTTING - Heavy duty working conditions with hedge head.



Where the size of the material to be cut makes it necessary for the front hood and carrier plates to be removed to allow the rotor to cut, the rotor must always cut with a downwards rotation.

This will result in a poorer finish and require more power than when cutting upwards.

The roller should be set slightly above the rotor i.e. in position 1



FLAILHEAD

Frequently inspect the rotor assembly for damaged or missing flails. Bolts and nuts securing the flails to the rotor should be regularly checked and kept tight. The correct torque setting for these locknuts is 203 Nm (150 lbf/ft.). Use only the correct flail bolt and locking nut. Check the flail pivot bushes for possible damage or wear. They do not require oil.

Do not attempt to run the rotor with flails missing. Im-balance will cause severe vibration and can rapidly damage the rotor shaft bearings. As an emergency measure if a flail is broken off or lost, remove another on the opposite side of the rotor to retain balance. Always replace flails in opposite pairs and never match up a new flail with a re-sharpened one which will of course be lighter.

Blunt flails absorb a lot of power and leave an untidy finish to the work. They should be sharpened on a grindstone or with a portable grinder periodically.

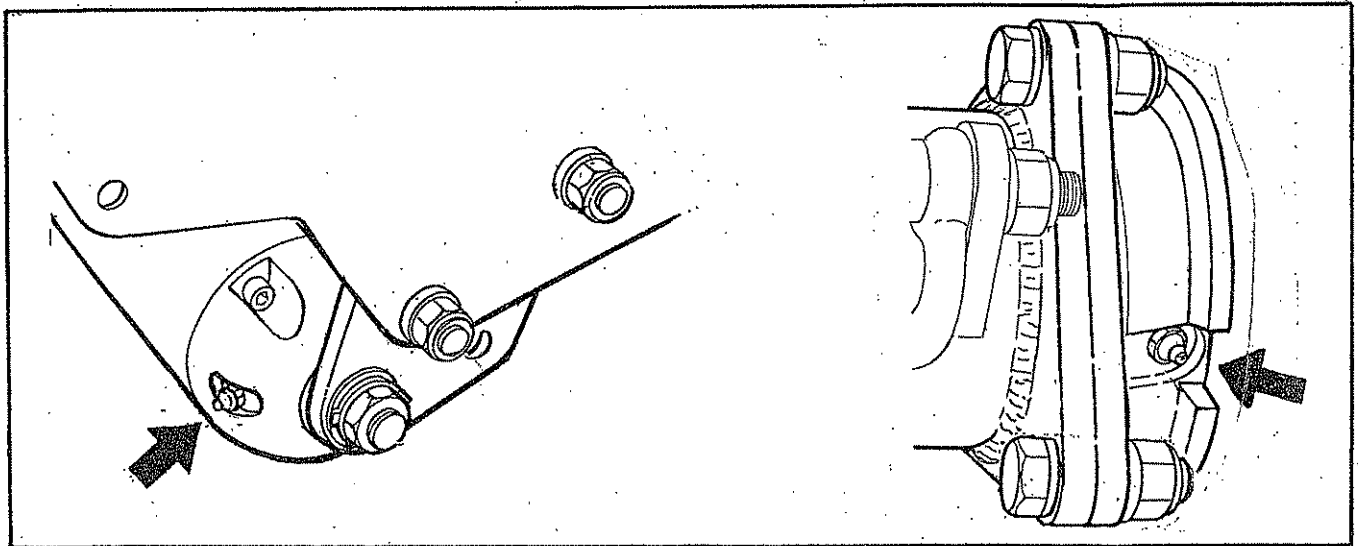
Wear protective gear when sharpening flails.

Ensure that the bearing housings and hydraulic mounting nuts and bolts are kept tight. They should be checked during servicing.

LUBRICATION

General

Grease daily all points shown.





For best performance...

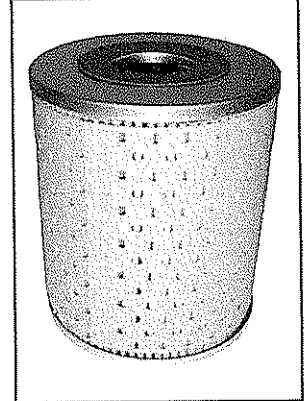
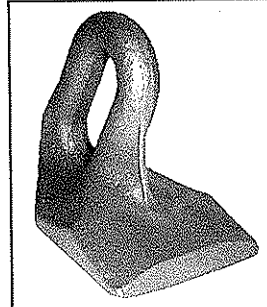
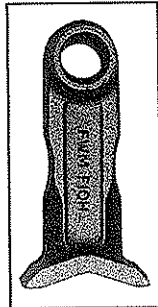
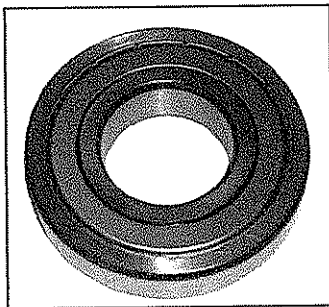
USE ONLY McCONNEL SERVICE PARTS

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.



Genuine Parts ~ Quality Service

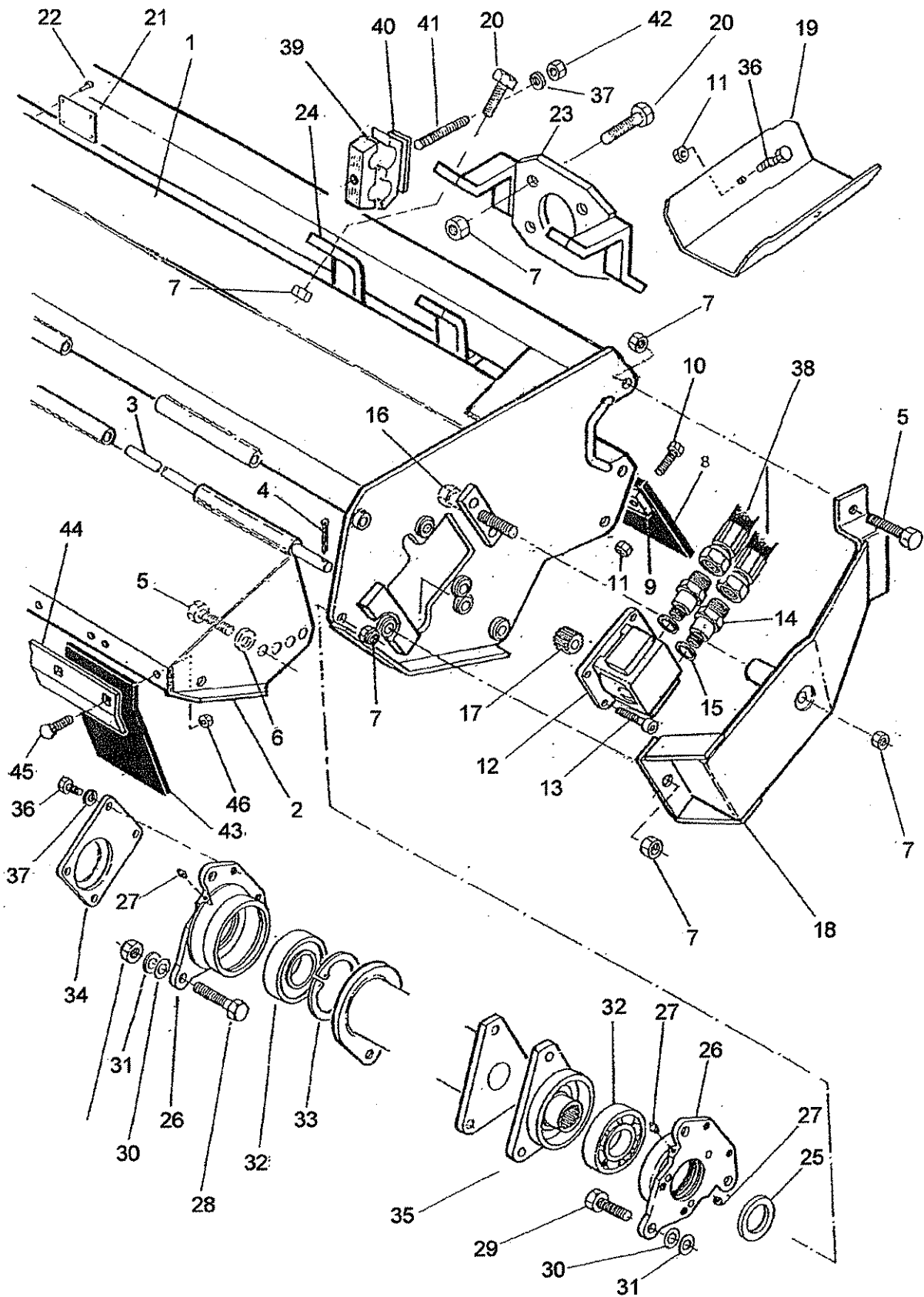




TUFFCUT BUILD VERSIONS

MODULE PART No.	FLAILHEAD MODEL DESCRIPTION	MOTOR HP / LOCATION	FLAIL TYPE FITTED	FLAIL PART No.
7375801	TUFFCUT FLAIHEAD - R/H	45HP OUTBOARD	CAST D/E F10	7314366
7375802	TUFFCUT FLAIHEAD - L/H	45HP OUTBOARD	CAST D/E F10	7314366
7375803	TUFFCUT FLAIHEAD - R/H	45HP INBOARD	CAST D/E F10	7314366
7375804	TUFFCUT FLAIHEAD - L/H	45HP INBOARD	CAST D/E F10	7314366
7375805	TUFFCUT FLAIHEAD - R/H	45HP OUTBOARD	CAST S/E F10	7390329
7375806	TUFFCUT FLAIHEAD - L/H	45HP OUTBOARD	CAST S/E F10	7390329
7375807	TUFFCUT FLAIHEAD - R/H	45HP INBOARD	CAST S/E F10	7390329
7375808	TUFFCUT FLAIHEAD - L/H	45HP INBOARD	CAST S/E F10	7390329
7375809	TUFFCUT FLAIHEAD - R/H	45HP OUTBOARD	FORGED D/E F10	41391.01
7375810	TUFFCUT FLAIHEAD - L/H	45HP OUTBOARD	FORGED D/E F10	41391.01
7375811	TUFFCUT FLAIHEAD - R/H	45HP INBOARD	FORGED D/E F10	41391.01
7375812	TUFFCUT FLAIHEAD - L/H	45HP INBOARD	FORGED D/E F10	41391.01
7375813	TUFFCUT FLAIHEAD - R/H	45HP OUTBOARD	UNIV. CAST BOOT	7190462
7375814	TUFFCUT FLAIHEAD - L/H	45HP OUTBOARD	UNIV. CAST BOOT	7190462
7375815	TUFFCUT FLAIHEAD - R/H	45HP INBOARD	UNIV. CAST BOOT	7190462
7375816	TUFFCUT FLAIHEAD - L/H	45HP INBOARD	UNIV. CAST BOOT	7190462
7375817	TUFFCUT FLAIHEAD - R/H	45HP OUTBOARD	GRASS F10G	7190315
7375818	TUFFCUT FLAIHEAD - L/H	45HP OUTBOARD	GRASS F10G	7190315
7375819	TUFFCUT FLAIHEAD - R/H	45HP INBOARD	GRASS F10G	7190315
7375820	TUFFCUT FLAIHEAD - L/H	45HP INBOARD	GRASS F10G	7190315
7374801	TUFFCUT FLAIHEAD - R/H	54HP OUTBOARD	CAST D/E F10	7314366
7374802	TUFFCUT FLAIHEAD - L/H	54HP OUTBOARD	CAST D/E F10	7314366
7374803	TUFFCUT FLAIHEAD - R/H	54HP INBOARD	CAST D/E F10	7314366
7374804	TUFFCUT FLAIHEAD - L/H	54HP INBOARD	CAST D/E F10	7314366
7374805	TUFFCUT FLAIHEAD - R/H	54HP OUTBOARD	CAST S/E F10	7390329
7374806	TUFFCUT FLAIHEAD - L/H	54HP OUTBOARD	CAST S/E F10	7390329
7374807	TUFFCUT FLAIHEAD - R/H	54HP INBOARD	CAST S/E F10	7390329
7374808	TUFFCUT FLAIHEAD - L/H	54HP INBOARD	CAST S/E F10	7390329
7374809	TUFFCUT FLAIHEAD - R/H	54HP OUTBOARD	FORGED D/E F10	41391.01
7374810	TUFFCUT FLAIHEAD - L/H	54HP OUTBOARD	FORGED D/E F10	41391.01
7374811	TUFFCUT FLAIHEAD - R/H	54HP INBOARD	FORGED D/E F10	41391.01
7374812	TUFFCUT FLAIHEAD - L/H	54HP INBOARD	FORGED D/E F10	41391.01
7374813	TUFFCUT FLAIHEAD - R/H	54HP OUTBOARD	UNIV. CAST BOOT	7190462
7374814	TUFFCUT FLAIHEAD - L/H	54HP OUTBOARD	UNIV. CAST BOOT	7190462
7374815	TUFFCUT FLAIHEAD - R/H	54HP INBOARD	UNIV. CAST BOOT	7190462
7374816	TUFFCUT FLAIHEAD - L/H	54HP INBOARD	UNIV. CAST BOOT	7190462
7374817	TUFFCUT FLAIHEAD - R/H	54HP OUTBOARD	GRASS F10G	7190315
7374818	TUFFCUT FLAIHEAD - L/H	54HP OUTBOARD	GRASS F10G	7190315
7374819	TUFFCUT FLAIHEAD - R/H	54HP INBOARD	GRASS F10G	7190315
7374820	TUFFCUT FLAIHEAD - L/H	54HP INBOARD	GRASS F10G	7190315
7376800	TUFFCUT FLAIHEAD - L/H	65HP OUTBOARD	CAST D/E F10	7314366
7376801	TUFFCUT FLAIHEAD - R/H	65HP OUTBOARD	CAST D/E F10	7314366
7376802	TUFFCUT FLAIHEAD - L/H	65HP OUTBOARD	CAST S/E F10	7390329
7376803	TUFFCUT FLAIHEAD - R/H	65HP OUTBOARD	CAST S/E F10	7390329
7376804	TUFFCUT FLAIHEAD - L/H	65HP OUTBOARD	FORGED D/E F10	41391.01
7376805	TUFFCUT FLAIHEAD - R/H	65HP OUTBOARD	FORGED D/E F10	41391.01
7376806	TUFFCUT FLAIHEAD - L/H	65HP OUTBOARD	FORGED BOOT	7190462
7376807	TUFFCUT FLAIHEAD - R/H	65HP OUTBOARD	FORGED BOOT	7190462
7376808	TUFFCUT FLAIHEAD - L/H	65HP OUTBOARD	GRASS F10G	7190315
7376809	TUFFCUT FLAIHEAD - R/H	65HP OUTBOARD	GRASS F10G	7190315

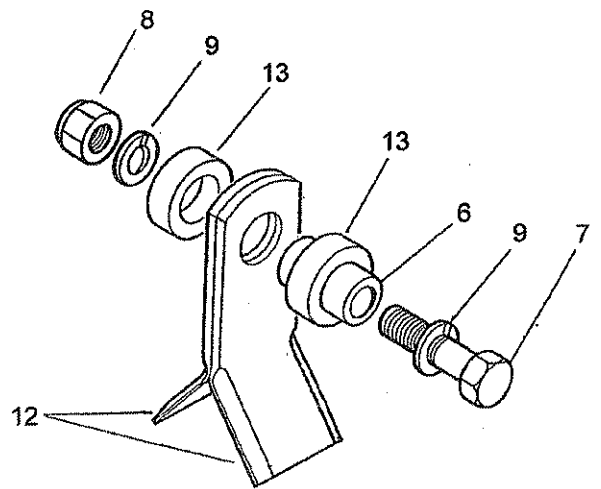
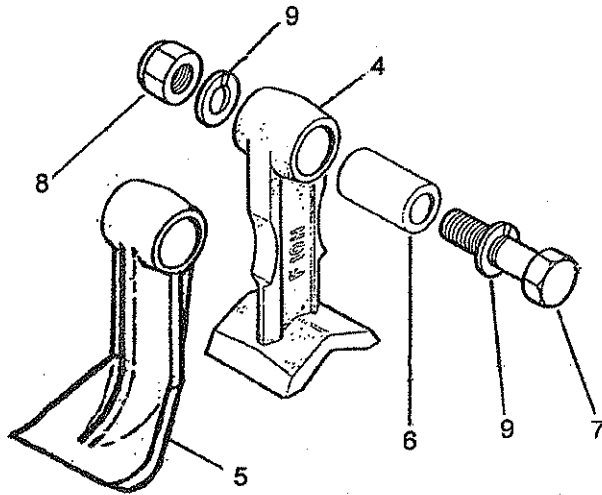
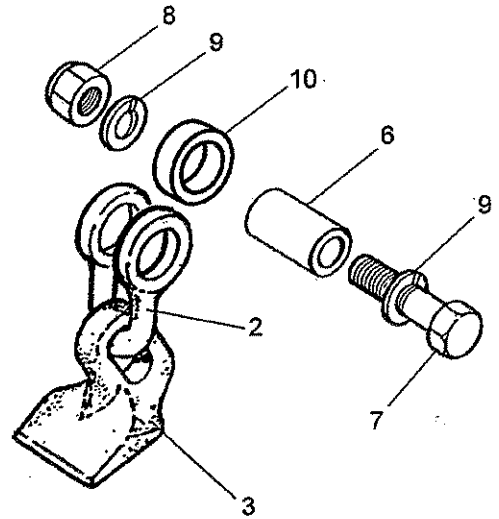
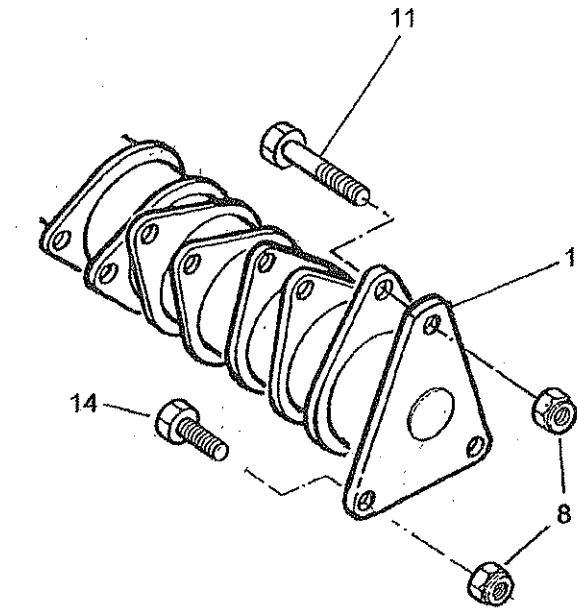
FLAILHEAD CASING



FLAILHEAD CASING

REF.	QTY.	PART No.	DESCRIPTION
1	1	45244.01	CASING
2	1	45265.01	FRONT HOOD
3	1	45269.01	PIVOT PIN - HOOD
4	1	9501406	SPLIT PIN
5	4	30.073.25	SPECIAL BOLT
6	2	0100106	PLAIN WASHER
7	21	9100028	SPECIAL SELF LOCKING NUT
8	1	7190314	REAR FLAP
9	1	7190313	CLAMP STRIP
10	9	9313065	SETSCREW
11	11	9143005	SELF LOCKING NUT
12	1	8301303	MOTOR - 45HP Models
	1	8301302	MOTOR - 54HP Models
	1	8301304	MOTOR - 65HP Models
13	4	9300144	CAPSCREW
14	2	8581136	ADAPTOR
15	2	8650106	BONDED SEAL
16	1	9200034	SPECIAL BOLT
17	1	43390.02	DRIVE COUPLING
18	1	43486.02	MOTOR COVER - R/H
	1	43486.01	MOTOR COVER - L/H
19	1	7198333	HOSE TRAY
20	8	12.714.75	SPECIAL BOLT
21	1	1335246	SERIAL No. PLATE
22	4	7103230	POP RIVET
23	1	7198330	CLAMP PLATE
24	2	7198322	CLAMP
25	1	7190015	MOTOR LOCATING WASHER
26	2	7190261	BEARING HOUSING
27	4	0901121	GREASER
28	5	9200025	SPECIAL BOLT M16 x 1.5p x 50
29	1	9200031	SPECIAL BOLT M16 x 1.5p x 60
30	as req'd	8121043	SHIM .016"
31	as req'd	8121004	SHIM .024"
32	2	0600018	BEARING
33	1	7190022	INTERNAL CIRCLIP
34	1	7190292	COVER PLATE
35	1	43389.01	DRIVE HUB
36	6	9313045	SETSCREW
37	4	9100205	SPRING WASHER
38	2	8501256	HOSE 3/4" BSP x 1900mm LONG - 45HP Models
	2	8501254	HOSE 1" BSP x 1900mm LONG - 54/65HP Models
39	1	7190148	CLAMP (PAIR) - 45HP Models
	1	7193063	CLAMP (PAIR) - 54/65HP Models
40	1	06.418.05	CLAMP PLATE
41	1	04.282.09	STUD
42	1	9113005	PLAIN NUT
	2	05.433.03	PLUG c/w CONE - 54/65HP Models (not illustrated)
		7290375	FRONT FLAP KIT
43	8	7290053	FLAP
44	1	7190304	CLAMP STRIP
45	16	9293054	BOLT - CUP SQUARE
46	16	9143004	SELF LOCKING NUT
		8699236	SEAL KIT

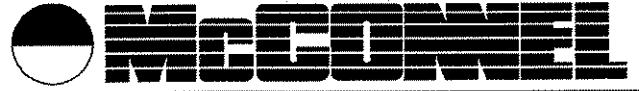
ROTOR AND FLAILS



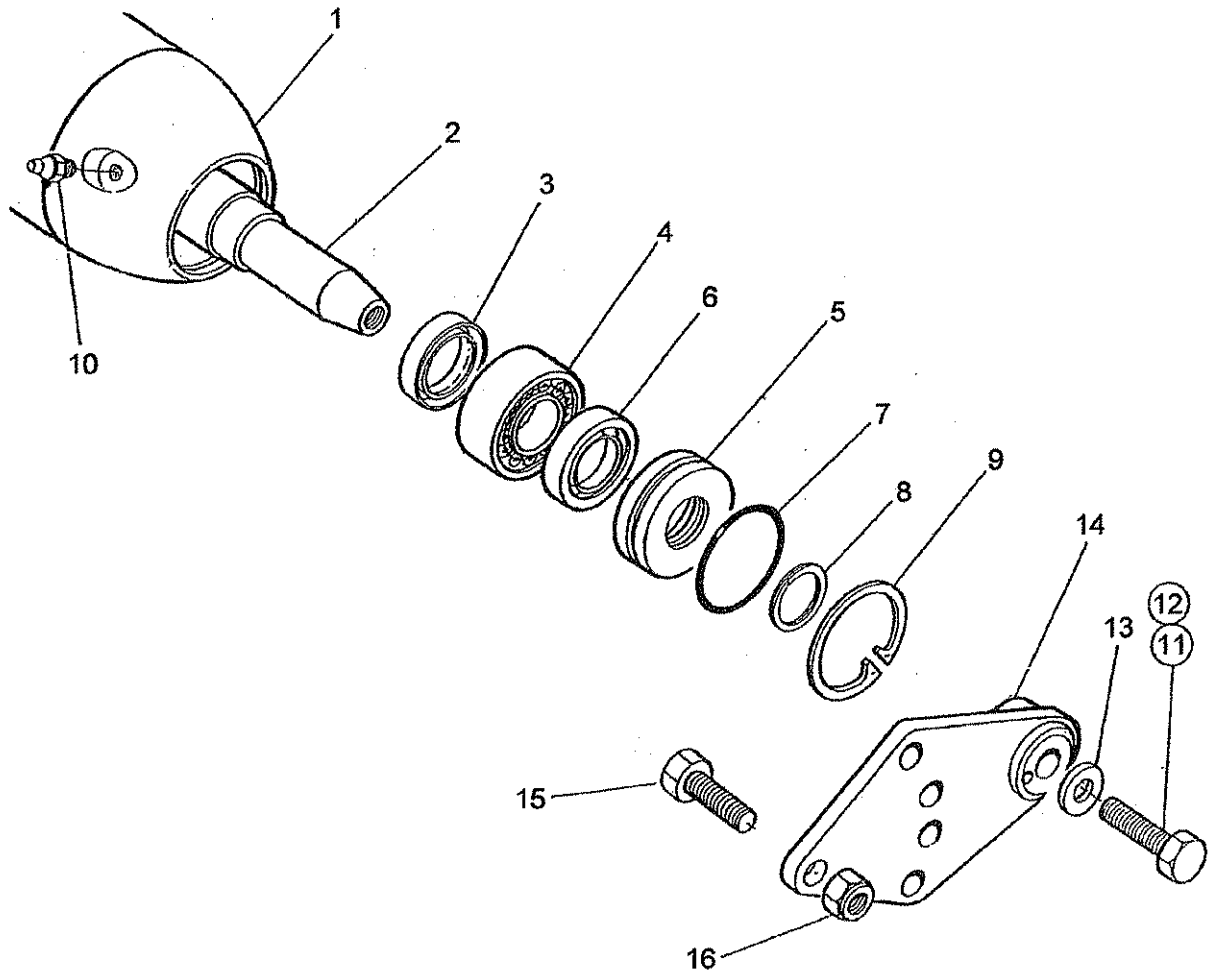
**ROTOR AND FLAILS**

REF.	QTY.	PART No.	DESCRIPTION
1	1	43391.01	ROTOR
2	24	7190106	SHACKLE
3	24	7190462	FLAIL
4	24	7314366	FLAIL F10 - CAST
	24	41391.01	FLAIL F10 - FORGED
5	24	7390276	FLAIL - ALTERNATIVE SINGLE EDGED
6	24	7314223	PIVOT BUSH
7	23	7390025	SPECIAL BOLT M16 x 1.5p x 83 LONG
8	26	9100028	SPECIAL SELF LOCKING NUT M16 x 1.5p
9	48	0100206	SPRING WASHER 5/8" DIA.
10	24	7190172	SPACER
11	1	7390026	SPECIAL BOLT M16 x 1.5p x 95 LONG
12	48	7190315	FLAIL
13	48	7190010	SPACER
14	2	9200028	SPECIAL BOLT M16 x 1.5p x 45 LONG

ROLLER ASSEMBLY



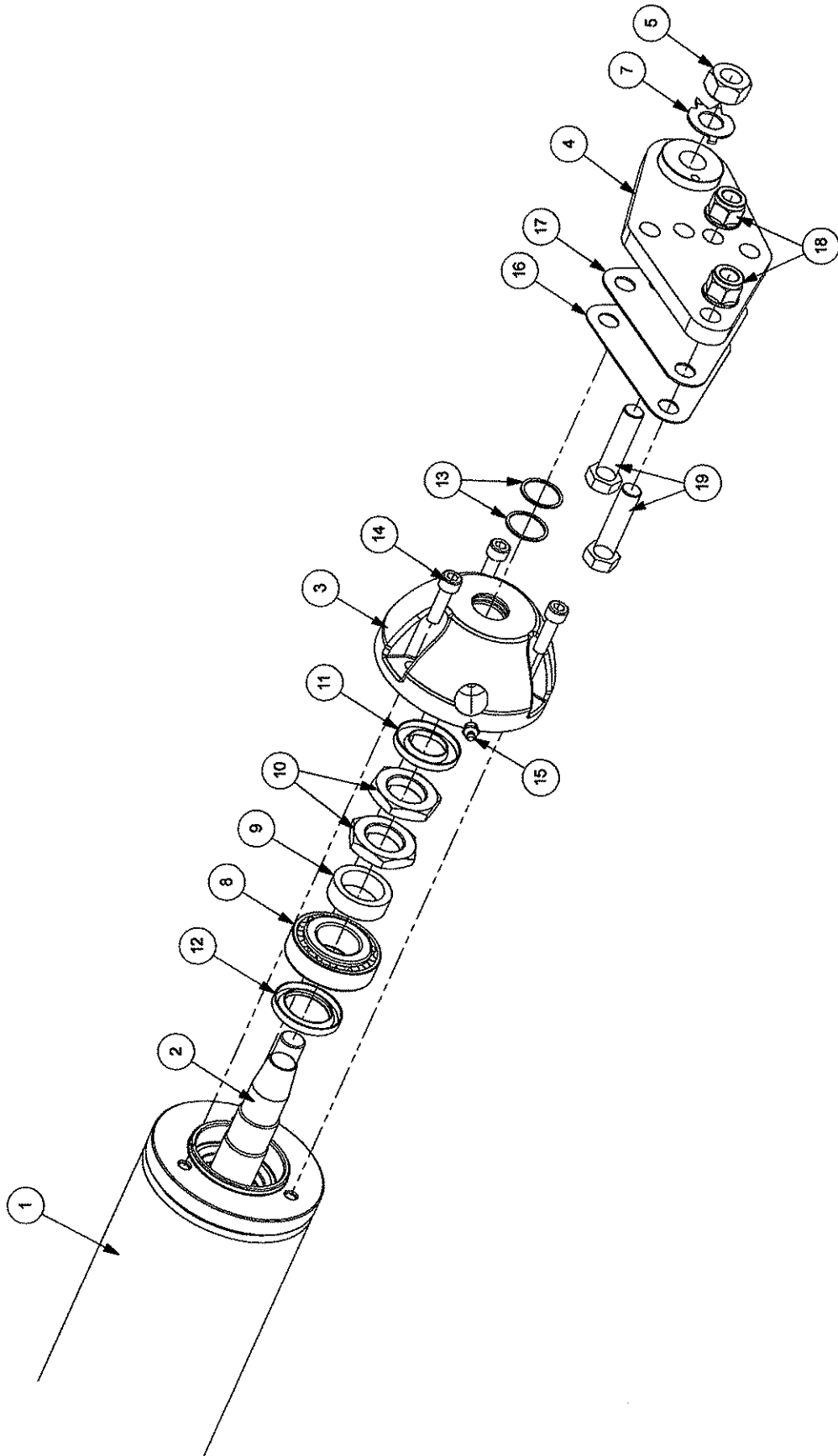
Module:
42241.25



**ROLLER ASSEMBLY**

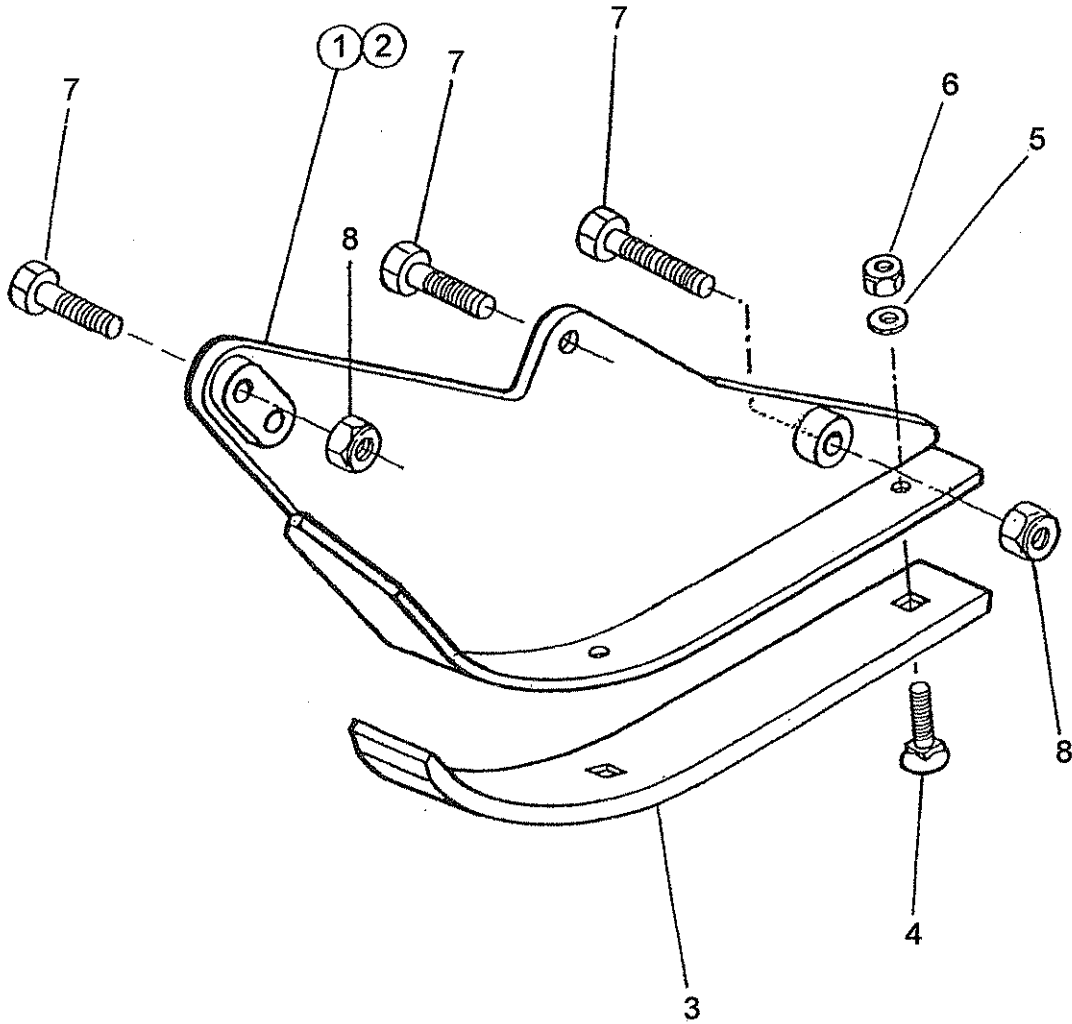
REF.	QTY.	PART No.	DESCRIPTION
		42241.25	ROLLER ASSEMBLY
1	1	42241.10	ROLLER
2	1	42242.04	ROLLER AXLE
3	2	8629181	SEAL
4	2	0600099	BEARING
5	2	7390011	SEAL CARRIER
6	2	8629125	SEAL
7	2	8600422	'O' RING
8	2	0412120	SPRING RING
9	2	0411262	CIRCLIP - INTERNAL
10	2	0901121	GREASER 1/8" BSP - STRAIGHT
11	1	9300150	SPECIAL SETSCREW M12 x 30 - LEFT HAND
12	1	9300149	SPECIAL SETSCREW M12 x 30 - RIGHT HAND
13	2	42503.02	SPECIAL WASHER
14	2	42246.03	ROLLER BRACKET
15	4	9113107	BOLT M16 x 50
16	2	9143007	SELF LOCKING NUT M16

Module:
42241.29



**ROLLER ASSEMBLY – 65HP Build**

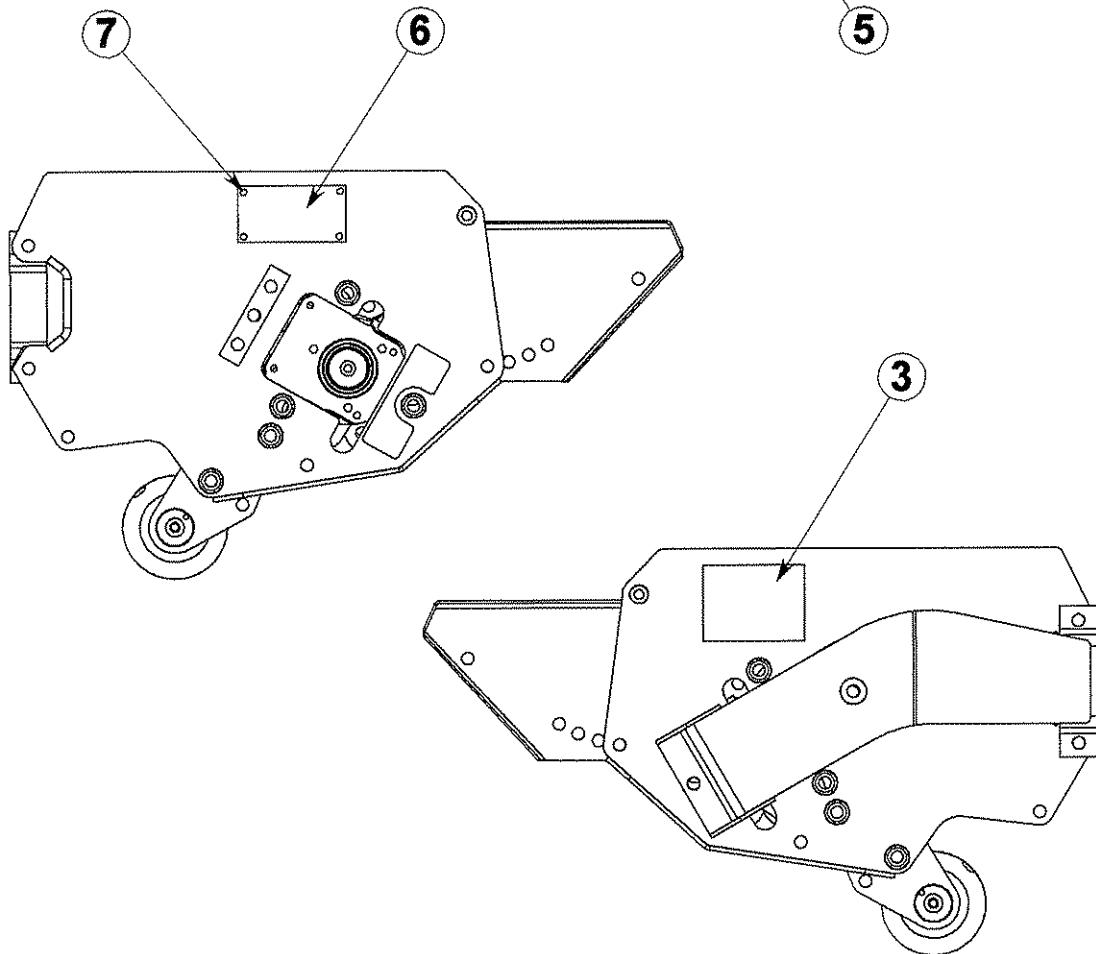
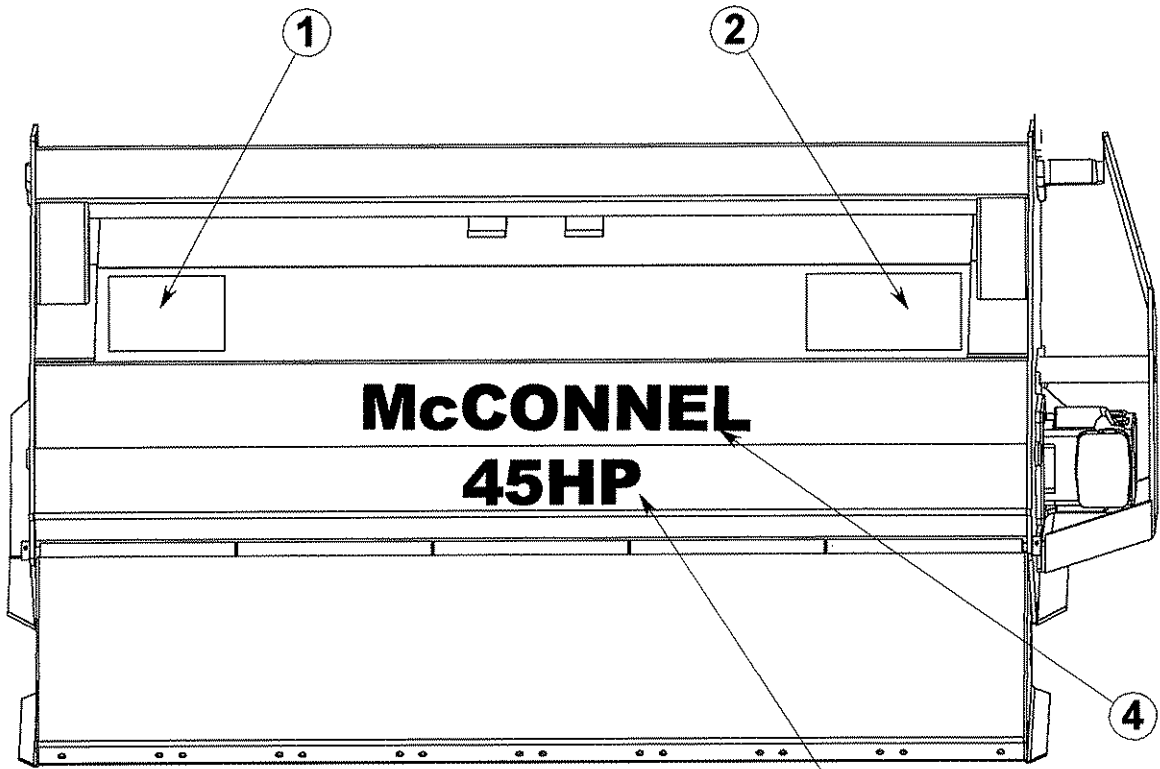
REF.	QTY.	PART No.	DESCRIPTION
		42241.29	ROLLER ASSEMBLY
1	1	42241.01	ROLLER - 1.2m
2	1	42242.01	ROLLER AXLE - 1.2m
3	2	42243.01	ROLLER END CAP
4	2	42246.03	ROLLER BRACKET
5	1	9100026	NUT - L/H
6	1	9113008	NUT - R/H (<i>not illustrated</i>)
7	2	7190023	TAB WASHER
8	2	0600105	TAPER ROLLER BEARING
9	2	42245.01	SPACER
10	4	42244.01	LOCKNUT
11	2	8629125	ROTARY LIP SEAL
12	2	8629213	ROTARY LIP SEAL
13	4	0412120	SPIROLOX RING
14	6	9343075	CAPSCREW
15	2	0901121	GREASE NIPPLE
16	<i>as req'd</i>	42257.05	SHIM - 1.2mm
17	<i>as req'd</i>	42257.06	SHIM - 2.0mm
18	4	9100024	SELF-LOCKING FLANGE NUT
19	4	9200024	BOLT



**SKID KIT – *Optional Extra***

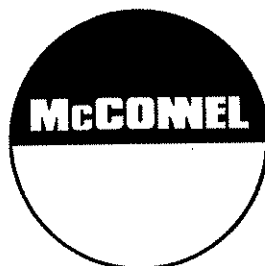
REF.	QTY.	PART No.	DESCRIPTION
		7352251	SKID KIT
1	1	42436.01	SKID - L/H
2	1	42436.02	SKID - R/H (<i>not illustrated</i>)
3	2	7290391	WEAR SKID
4	6	6012034	TINE BOLT 7/16" UNC
5	6	0100104	PLAIN WASHER 7/16" UNC
6	6	0142004	SELF LOCKING NUT 7/16" UNC
7	6	30.073.25	SPECIAL BOLT M16 x 1.5p x 40
8	6	9100028	SPECIAL SELF LOCKING NUT M16 x 1.5p

DECALS



**DECALS**

REF.	QTY.	PART No.	DESCRIPTION
1	1	1290462	DECAL - FLAIL WARNING
2	1	1290341	DECAL - FLAIL GUARDING
3	1	1290392	DECAL - FLAIL PARTS INFORMATION
4	1	1290255	DECAL - McCONNEL NAME
5	1	1290509	DECAL - 45HP
	1	1290508	DECAL - 54HP
	1	1290491	DECAL - 65HP
6	1	1335246	SERIAL No. PLATE
7	4	7103230	POP RIVETS 1/8"
8	1	09.810.01	DECAL - GREASING
9	1	1290571	DECAL - QUEENS AWARD



McConnel Limited, Temeside Works, Ludlow, Shropshire SY8 1JL. England.
Telephone: 01584 873131. Facsimile: 01584 876463. www.mcconnel.com