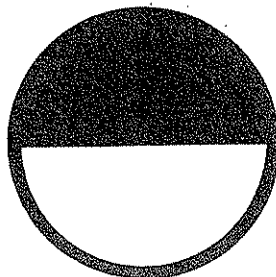
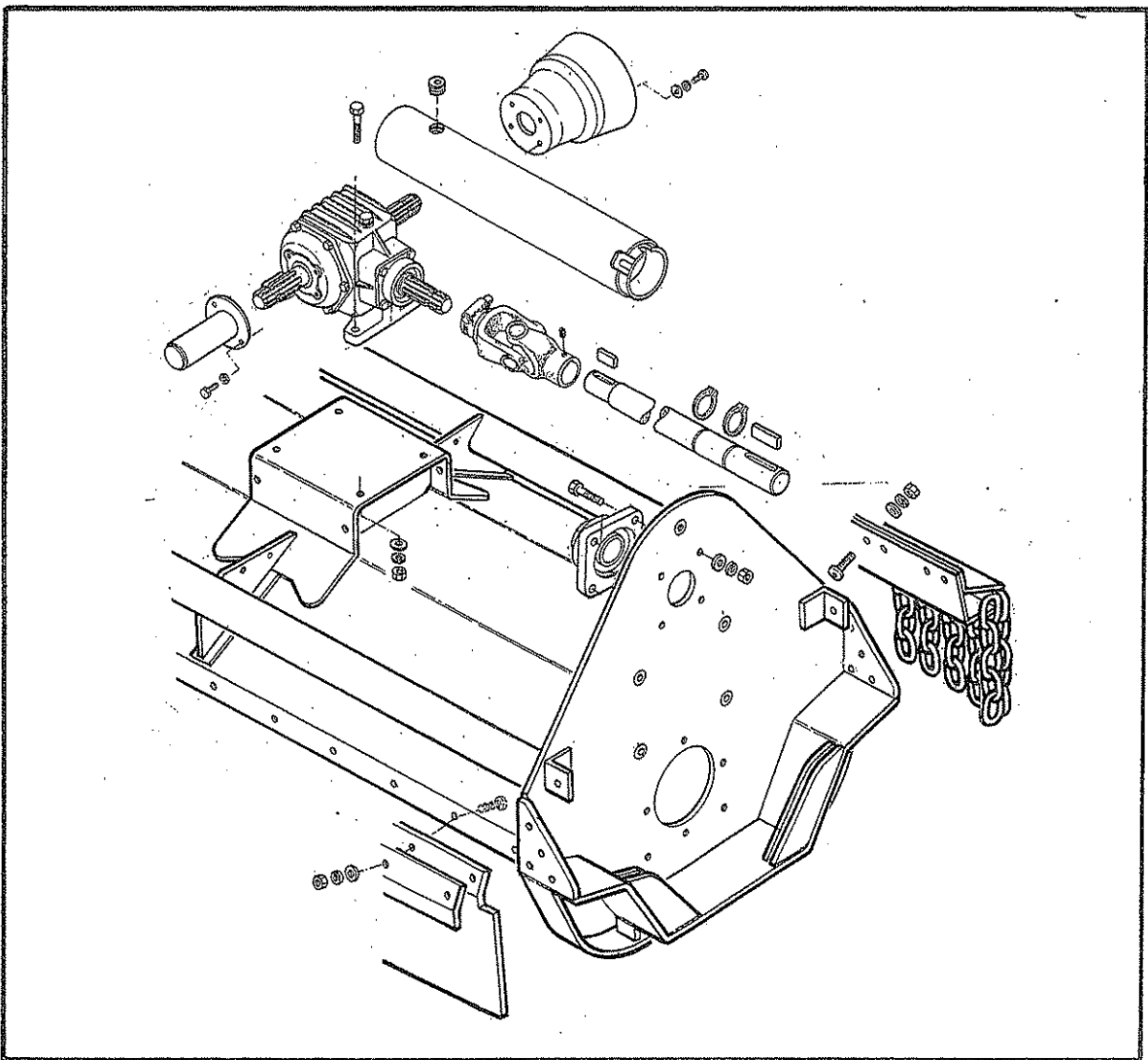


Merlin

HD 180 & 220

Spare parts





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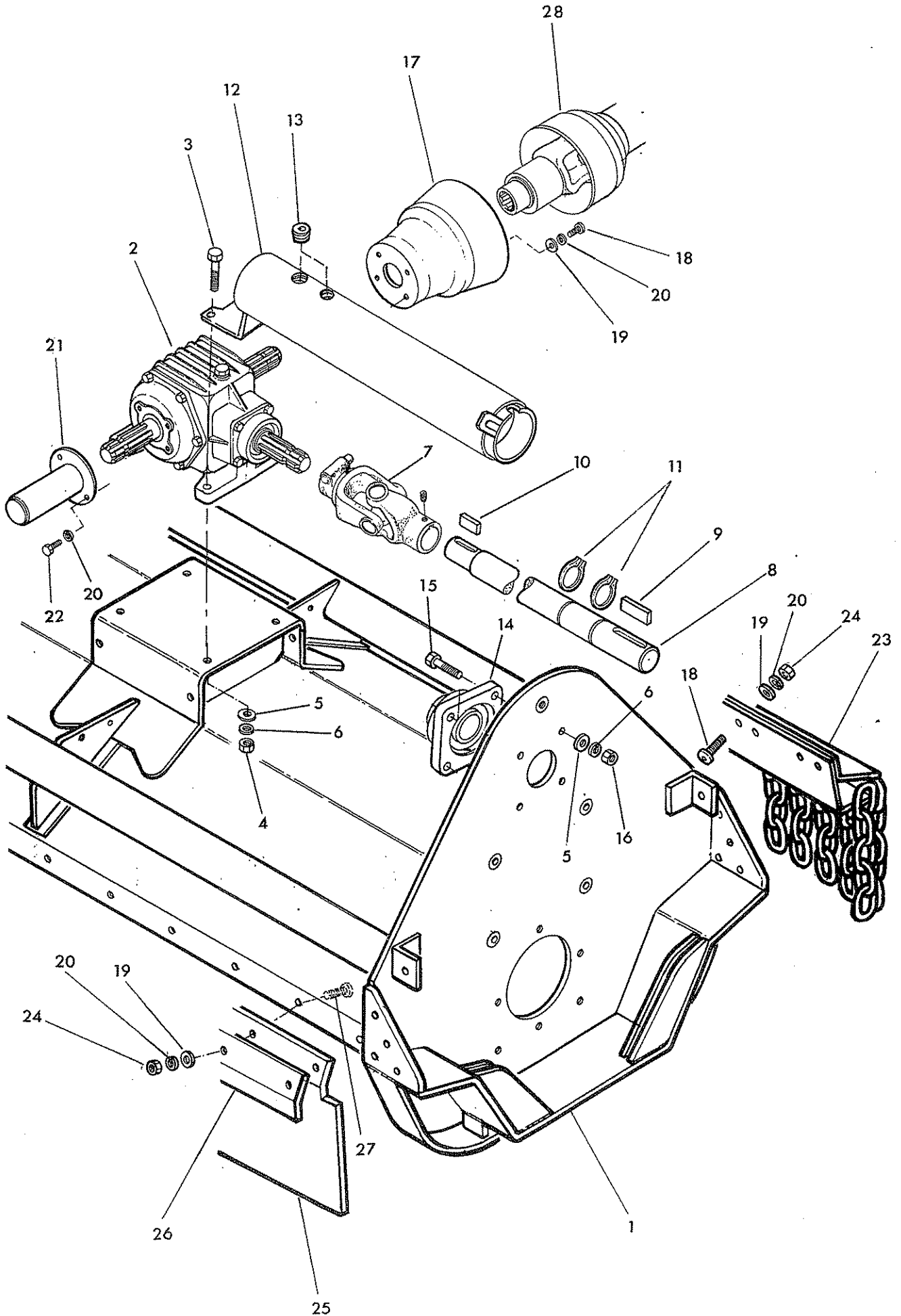
- ***Machine Type***
- ***Serial Number***
- ***Part Number***

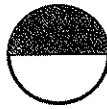
*Design improvements may alter some of the parts listed in this manual –
the latest part will always be supplied when it is interchangeable with an earlier one.*

CASING



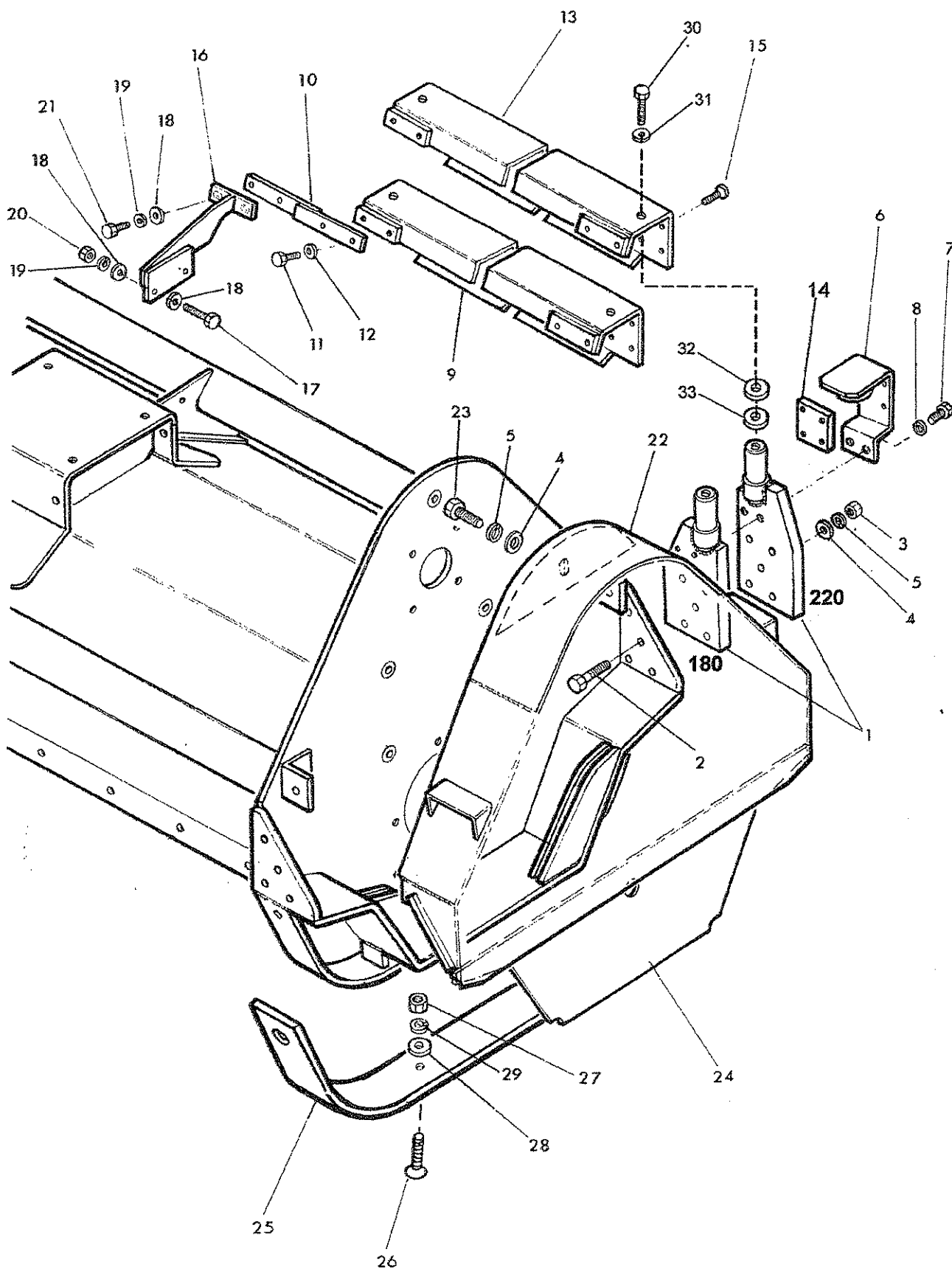
McGraw-Hill





WAGGON

Ref	Part No.	Qty	Description
			CASING ASSEMBLY 180
			CASING ASSEMBLY 220
1	42416.02	1	Casing 180
	42416.01	1	Casing 220
2	04.400.22	1	Gearbox (details see later)
	04.400.23	1	Gearbox - front mount clockwise rotation only (details see later)
3	92 00 030	4	Bolt M12 x 1.25p x 50 long
4	91 00 027	4	Hexagon nut M12 x 1.25
5	91 00 106	8	Plain washer dia 12
6	91 00 206	8	Spring washer dia 12
7	42538.01	1	P.T.O. joint
8	42468.02	1	Drive shaft - 180
	42468.01	1	Drive shaft - 220
9	42527.02	1	Drive key 12 x 8 x 70
10	42527.03	1	Drive key 10 x 8 x 40
11	04 01 240	2	External circlip dia 40
12	42465.02	1	Shaft guard 180
	42465.01	1	Shaft guard 220
13	85 82 035	2	Blanking plug 3/4 BSPT
14	03.008.01	1	Flange bearing
15	92 13 096	4	Bolt M12 x 45
16	91 43 006	4	Self locking nut M12
17	42694.01	1	Gearbox input guard
18	93 00 151	as req	Screw-button head M8 x 30
19	91 00 104	as req	Plain washer dia 8
20	91 00 204	as req	Spring washer dia 8
21	42668.01	1	Through shaft stub guard
22	93 13 034	2	Setscrew M8 x 16
23	42508.02	2	Front chain skirt 180
	42508.01	2	Front chain skirt 220
24	91 13 004	as req	Hexagon nut M8
25	42499.02	1	Rear rubber flap - 180
	42499.01	1	Rear rubber flap - 220
26	42500.02	1	Clamp strip 180
	42500.01	1	Clamp strip 220
27	93 00 152	as req	Screw button head M8 x 35
28	10 26 004	1	P.T.O. shaft 1 3/8 x 6 spline for rear mount and front mount clockwise
	10 26 296	1	P.T.O. shaft 1 3/8 x 6 spline for front mount anti clockwise
	10 26 298	1	P.T.O. shaft 1 3/8 x 21 spline for rear mount and front mount clockwise
	10 26 307	1	P.T.O. shaft 1 3/8 x 21 spline for front mount anti clockwise



CASING (Continued)

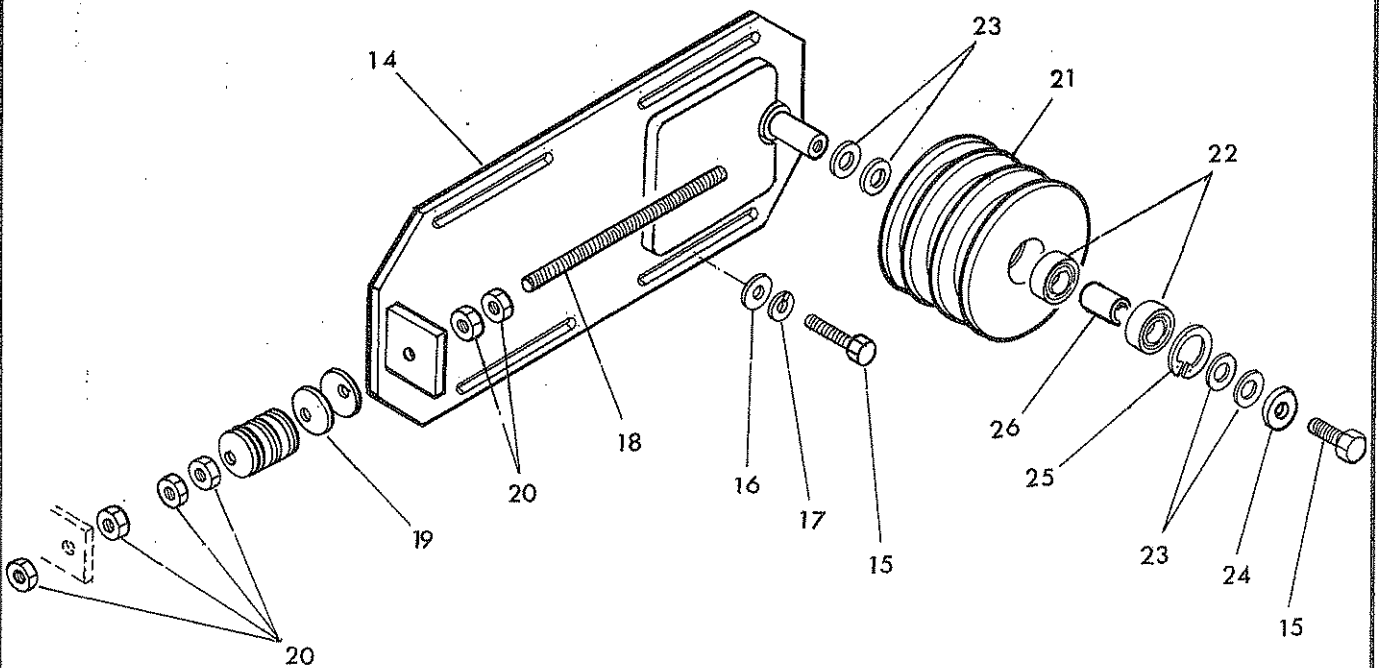
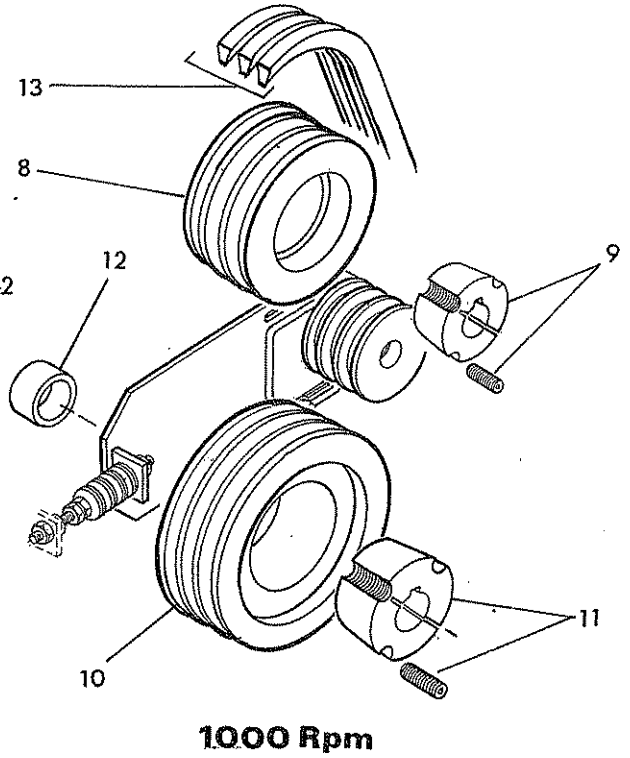
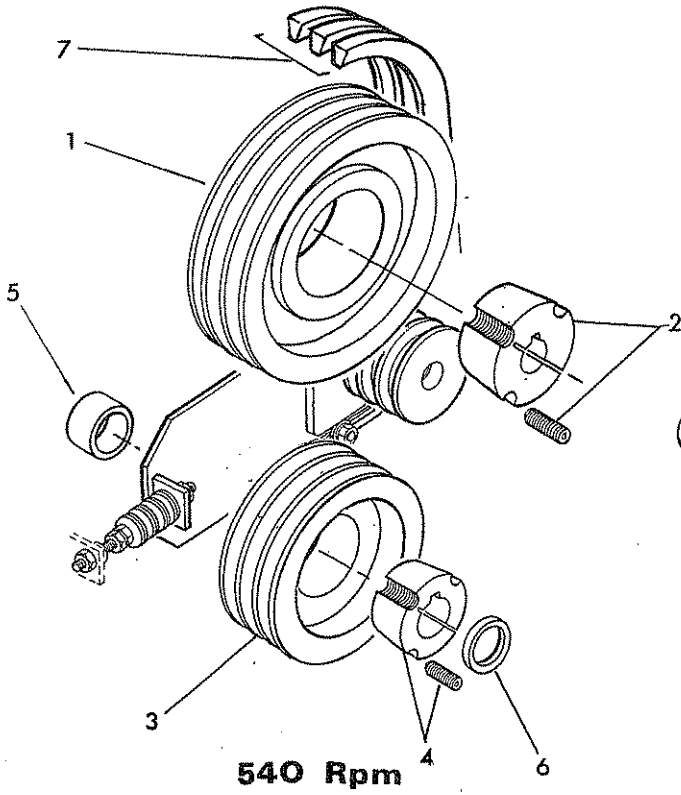
Ref	Part No.	Qty	Description
			CASING ASSEMBLY 180 - continued
			CASING ASSEMBLY 220 - continued
1	42454.01	1	Cylinder rod bracket - 180 & 220
2	92 00 030	4	Bolt
3	91 00 027	4	Hexagon nut
4	91 00 106	5	Plain washer
5	91 00 206	5	Spring washer
6	42666.03	1	* Rod retaining bracket - <i>machines up to 12/03</i>
7	93 13 035	2	* Setscrew - <i>machines up to 12/03</i>
8	91 00 205	2	* Spring washer - <i>machines up to 12/03</i>
	42665.02	1	Cylinder rod guard assembly (180) <i>including:</i>
9	42665.08	1	Rod guard
10	42665.09	1	Extension plate
11	9313034	2	Setscrew
12	9100204	2	Spring washer
13	42665.01	1	Cylinder rod guard (220)
14	42665.04	1	* Guard retaining pad - <i>machines up to 12/03</i>
15	93 33 013	4	* Screw - <i>machines up to 12/03</i>
16	42665.03	1	Guard mounting bracket
17	93 13 054	2	Setscrew
18	91 00 204	4	Spring washer
19	91 00 104	6	Plain washer
20	91 13 004	2	Hexagon nut
21	93 13 034	2	Setscrew
22	42593.01	1	Belt guard - upper
23	93 13 056	1	Setscrew
24	42466.01	1	Belt guard lower
25	42657.01	1	Wear skid
26	93 53 085	8	Screw - countersunk
27	91 13 005	8	Hexagon nut
28	91 00 105	8	Plain washer
29	91 00 205	8	Spring washer
30	93 13 055	1	** Setscrew - <i>machines 12/03 onwards</i>
31	91 00 205	1	** Spring washer - <i>machines 12/03 onwards</i>
32	42666.04	1	** Spacer - <i>machines 12/03 onwards</i>
33	42666.03	1	** Spacer - <i>machines 12/03 onwards</i>

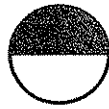
NOTE: Components * are replaced by components ** on machines built after 12/03



HITCH FRAME ASSEMBLY

Ref	Part No.	Qty	Description
			HITCH FRAME ASSEMBLY
1	42417.02	1	Hitch frame - 180 only - Left Rear/Right Front
	42417.03	1	Hitch frame - 180 only - Right Rear/Left Front
	42417.01	1	Hitch frame - 220 only
2	42516.01	2	Hitch pin - lower
3	42515.01	1	Hitch pin - upper
4	04 31 217	3	Linch pin
5	42800.01	1	Top hitch knuckle
6	42509.01	1	Knuckle pivot pin
7	04 45 540	1	Roll pin
8	01 00 109	1	Plain washer
9	42423.01	1	Support bar
10	42418.01	2	Clamp - hitch frame
11	42419.01	8	Slider bearing
12	42445.01	2	Clamp - support bar
13	92 13 086	8	Setscrew
14	91 13 006	18	Self Locking nut
15	91 00 106	26	Plain washer
16	91 00 206	30	Spring washer
17	42656.01	1	Support wheel guard
18	93 13 056	4	Setscrew
19	42424.02	1	Support wheel frame
20	93 43 076	4	Capscrew
21	42446.02	1	Support wheel bracket
22	92 13 247	1	Bolt
23	91 43 007	2	Self Locking nut
24	01 00 106	4	Plain washer
25	01 00 109	1	Plain washer
26	91 13 008	2	Hexagon nut
27	42447.01	2	Support wheel
28	43063.01	2	Slide wheel spindle
29	92 13 227	1	Bolt
30	91 00 105	1	Plain washer
31	91 00 205	1	Spring washer
32	42453.02	1	Mounting bracket - sideshift ram
33	41691.01	1	Pivot pin - sideshift ram
34	91 13 005	1	Hexagon nut
35	92 13 075	1	Bolt
36	85 31 433	2	Hose 3/8 BSP x 63" long
37	60 00 112	2	Adaptor
38	86 50 104	2	Bonded seal
39	92 13 096	8	Setscrew
40	42492.01	1	Sideshift ram assembly - 220 only
	42492.02	1	Sideshift ram assembly - 180 only
41	85 82 054	1	Hose blanking cap 1/2" BSP - <i>not illustrated</i>
42	46505.02	1	Manual holder assembly - <i>comprising of:</i>
	46505.01	1	Literature holder
	46503.01	1	Spacer
	9313043	3	Setscrew
	9143003	3	Self locking nut
	9100103	3	Flat washer





Ref	Part No.	Qty	Description
DRIVE ARRANGEMENT - 540 RPM			
1	42539.08	1	Drive pulley
2	42541.01	1	Taper lock bush
3	04.451.01	1	Driven pulley
4	05.424.17	1	Taper lock bush
5	42526.03	1	Spacer - 15 long
6	42526.04	1	Spacer - 6 long
7	10 20 800	1	Belt set (3)

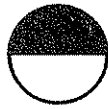
DRIVE ARRANGEMENT - 1000 RPM

8	42539.04	1	Drive pulley
9	72 90 016	1	Taper lock bush
10	42539.03	1	Driven pulley
11	42541.02	1	Taper lock bush
12	42526.03	1	Spacer 15 long
13	10 20 801	1	Belt set (3)

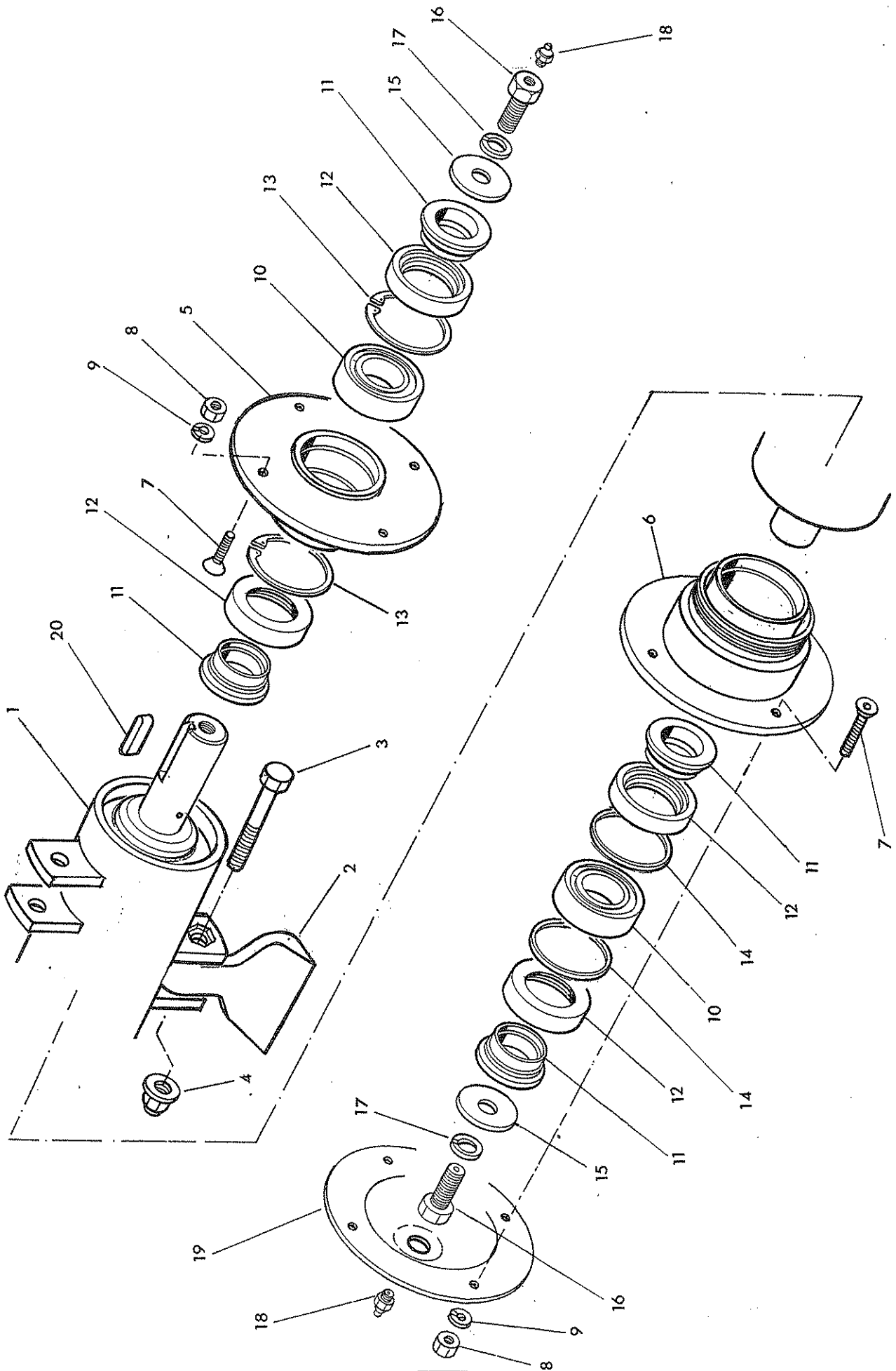
The following items are common to both drive arrangements

14	42467.02	1	Tensioner bracket
15	93 13 056	5	Setscrew M12 x 25
16	91 00 106	4	Plain washer dia 12
17	91 00 206	4	Spring washer dia 12
18	42736.01	1	All thread M12 x 210
19	05.398.02	8	Disc springs
20	91 13 006	6	Hexagon nut M12
21	42630.02	1	Idler pulley
22	01.083.01	2	Bearing
23	42535.01	4	Locating washer
24	05.234.01	1	Washer
25	01.072.02	1	Internal circlip dia 1 7/8"
26	42526.05	1	Bearing spacer

ROTOR ASSEMBLY



McQuay-Norris





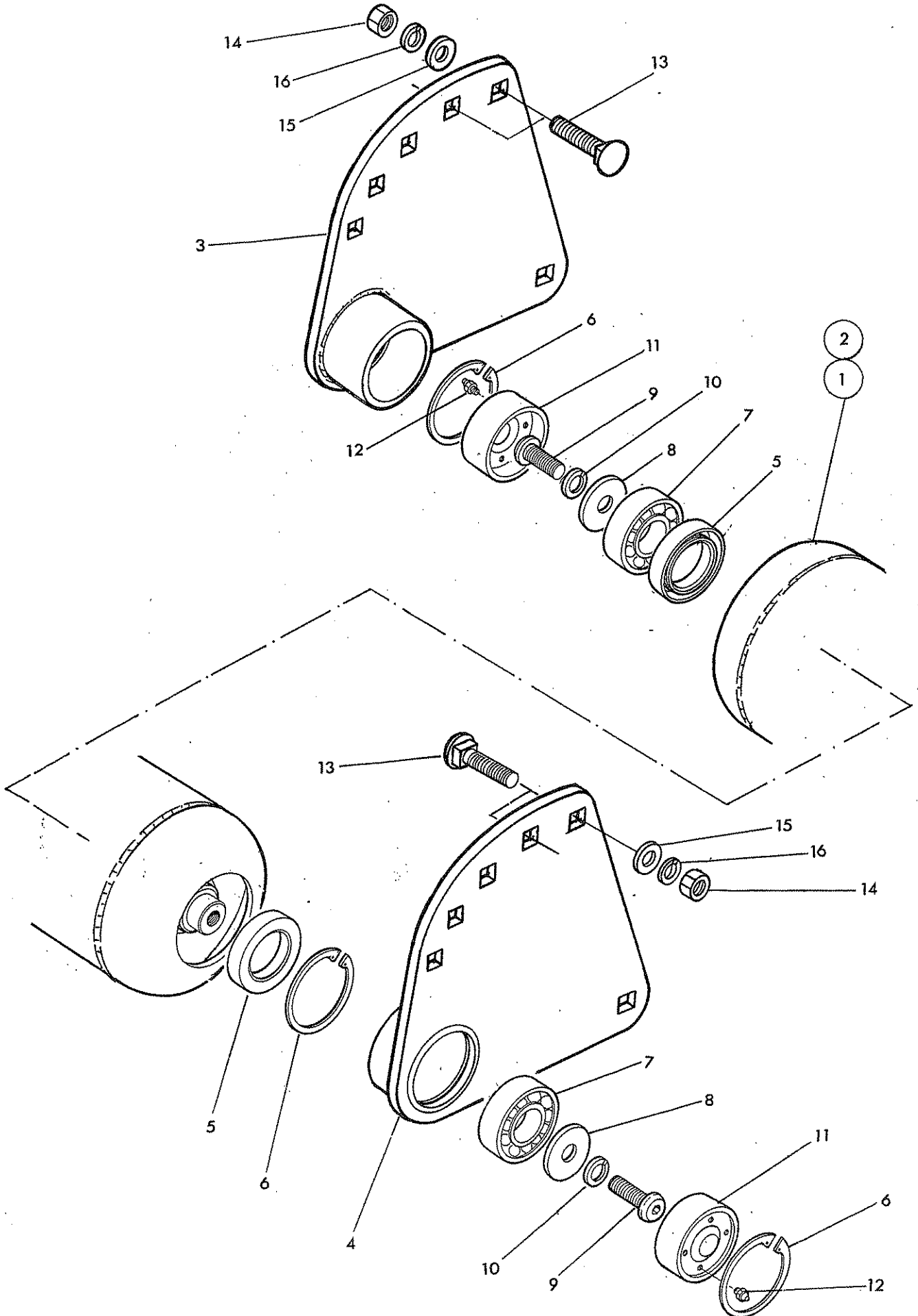
McCormell

Ref	Part No.	Qty		Description
		180	220	
				ROTOR AND BEARING ASSY
	42420.17	1		Rotor assembly - 180 clockwise
	42420.16	1		Rotor assembly - 180 anti clockwise
	42420.19		1	Rotor assembly - 220 clockwise
	42420.18		1	Rotor assembly - 220 anti clockwise
1	42420.02	1		Rotor - 180
	42420.01		1	Rotor - 220
2	10 20 525	20	24	Flail c/w nut & bolt
3	92 00 027	20	24	Special bolt M16 x 1.5p x 95
4	91 00 024	20	24	Special nut M16 x 1.5p
5	42469.02	1	1	Bearing housing - drive end
6	42469.01	1	1	Bearing housing - free end
7	93 53 066	8	8	Screw countersunk M12 x 30
8	91 43 006	8	8	Self locking nut M12
9	91 00 206	8	8	Spring washer - dia 12
10	04.163.04	2	2	Bearing
11	42659.01	4	4	Collar seal
12	06.909.01	4	4	Spacer seal
13	04.11.285	2	2	Internal circlip dia 85
14	42470.01	2	2	Spacer
15	04.252.01	2	2	Shaft washer
16	42662.01	2	2	Special screw M16
17	91 00 207	2	2	Spring washer dia 16
18	05.953.03	2	2	Greaser M10 straight
19	42661.01	1	1	Bearing cover - free end
20	42527.01	1	1	Drive key 14 x9 x65

ROLLER ASSEMBLY



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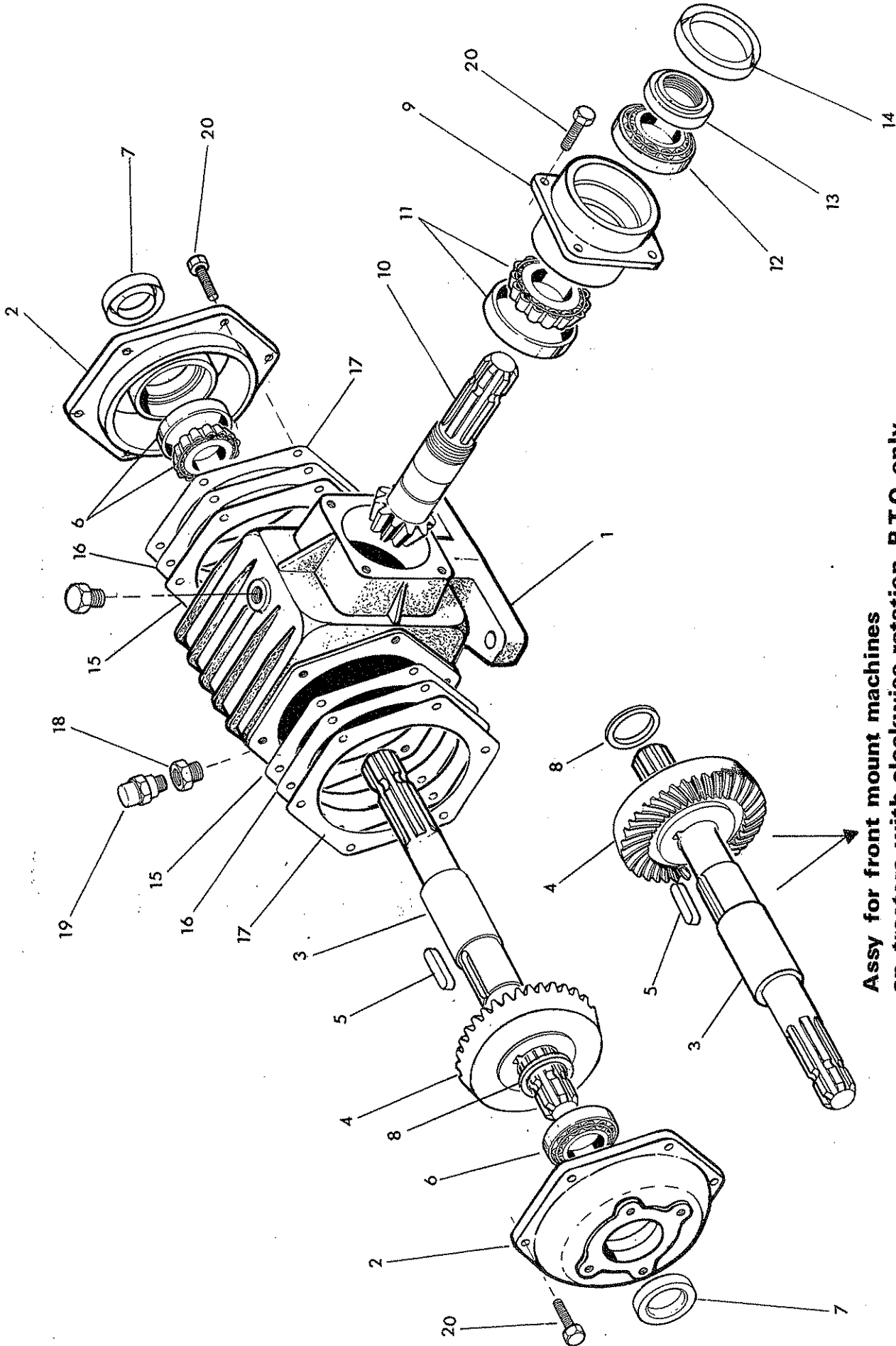
REAR ROLLER ASSEMBLY

REF.	QTY.		PART No.	DESCRIPTION
	180	220		
	1	n/a	42421.02	180 ROLLER ASSEMBLY - <i>comprising of:</i>
	n/a	1	42421.01	220 ROLLER ASSEMBLY - <i>comprising of:</i>
1	1	1	42955.10	ROLLER 180
2	1	1	42955.09	ROLLER 220
3	1	1	42422.01	ROLLER BRACKET - L/H
4	1	1	42422.02	ROLLER BRACKET - R/H
5	2	2	04.164.04	SEAL
6	3	3	0411262	INTERNAL CIRCLIP
7	2	2	42954.01	BEARING
8	2	2	05.234.01	WASHER
9	2	2	9300148	SCREW - BUTTON HEAD
10	2	2	9100206	SPRING WASHER
11	2	2	41851.02	BEARING RETAINER
12	8	8	0901161	GREASER
13	6	6	9293086	COACH BOLT
14	6	6	9163006	SELF-LOCKING NUT
15	6	6	9100106	PLAIN WASHER
16	6	6	9100206	SPRING WASHER

GEARBOX



McCOMBI



Assy for front mount machines
on tractors with clockwise rotation P T O only

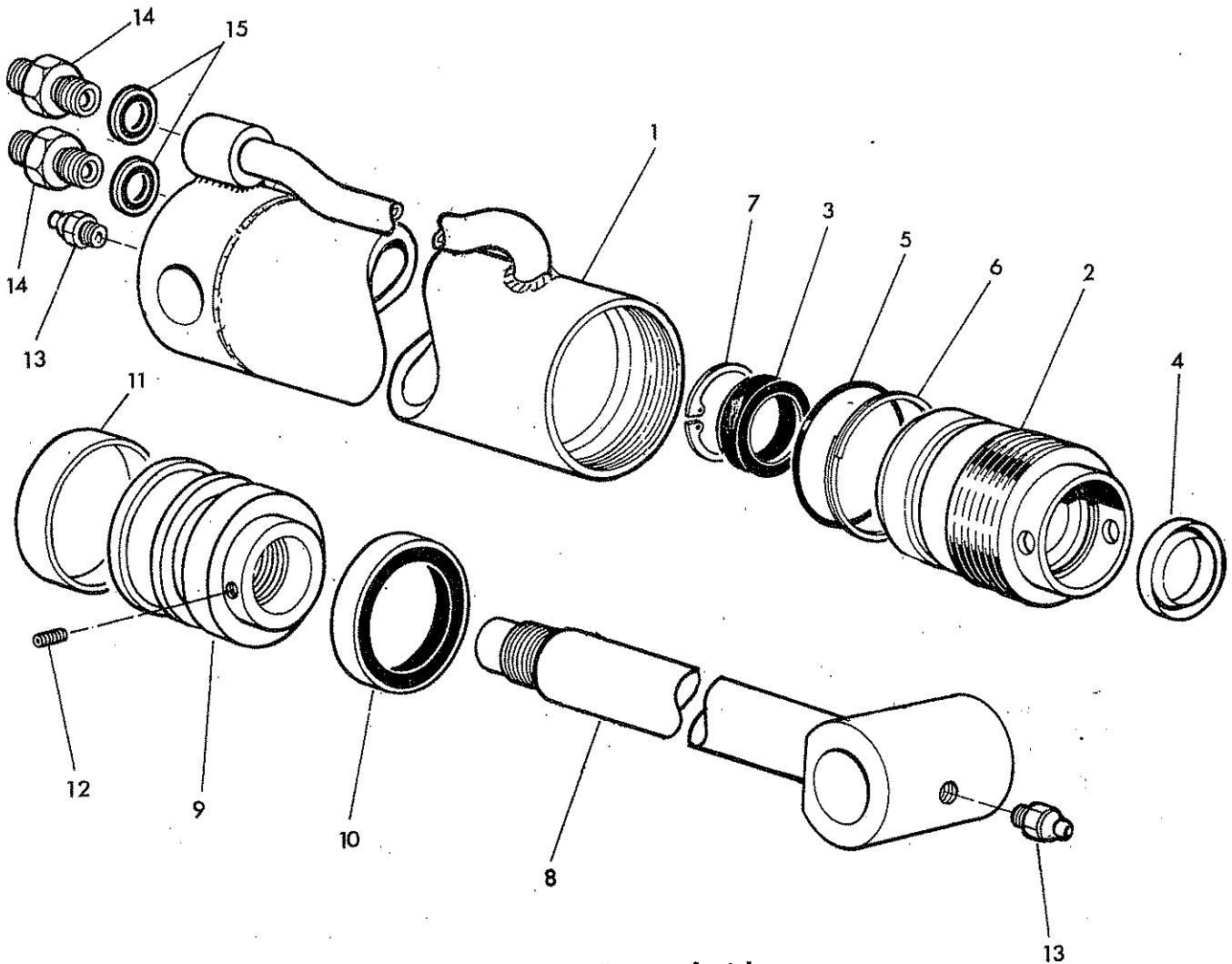


Ref	Part No.	Qty	Description
	04.400.22		GEARBOX ASSEMBLY - General Application
	04.400.23		GEARBOX ASSEMBLY - For front mount machines on tractors with clockwise P.T.O.
1	04.400.10	1	Casing
2	04.400. 8	2	Bearing cover
3	04.400.25	1	Through shaft
4	04.400.11	1	Crown wheel gear
5	05.714.17	1	Key
6	03.781.08	2	Bearing
7	01.410.07	2	Lip seal
8	05.714.10	1	Spacer
9	04.400.05	1	Bearing housing
10	04.400.04	1	Pinion shaft gear
11	04.400.06	1	Bearing
12	04.400.03	1	Bearing
13	03.781.04	1	Pinion locknut
14	03.781.15	1	Lip seal
15	04.400.14	as req	Shim .003"
16	04.400.15	as req	Shim .005"
17	04.400.16	as req	Shim .010"
18	04.400.13	1	Adaptor
19	04.400.12	1	Breather
20	05.264.01	16	Setscrew

SIDESHIFT RAM

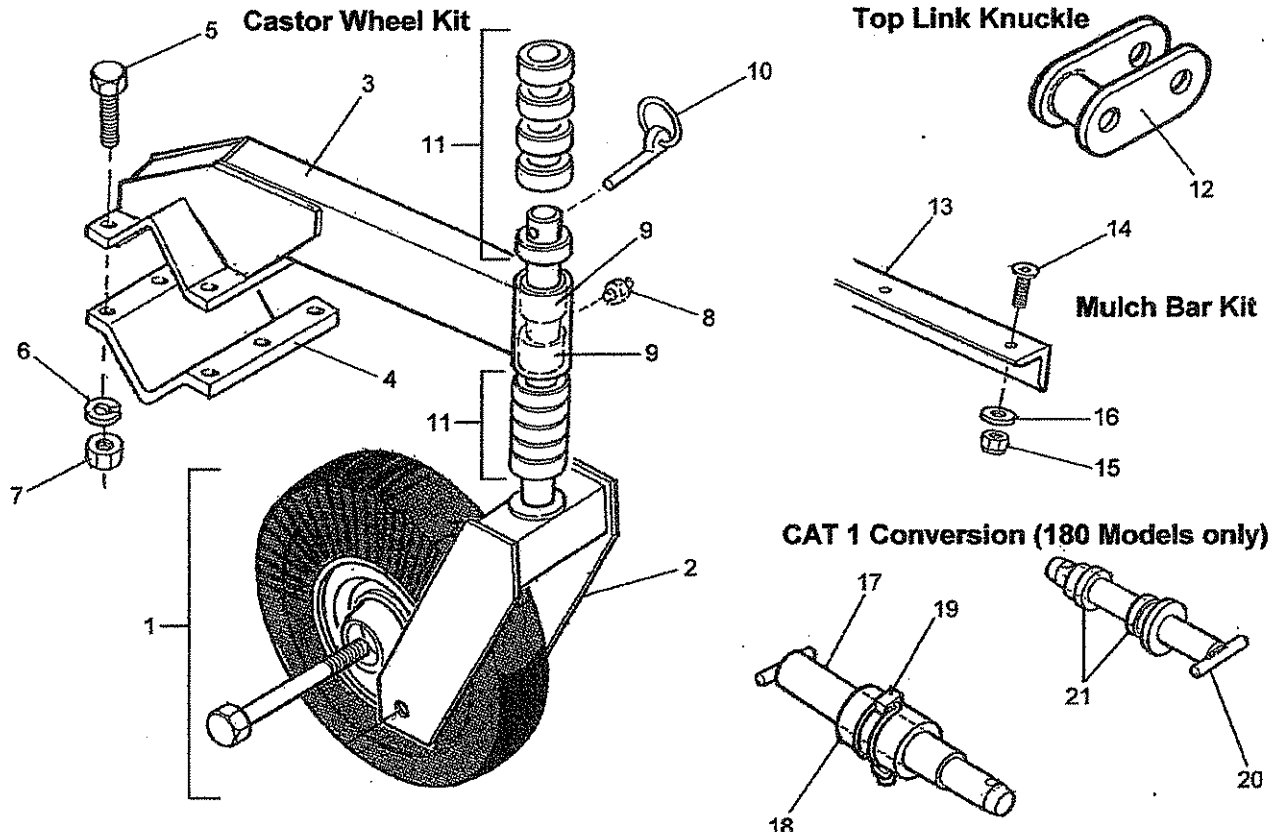


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Ref	Part No.	Qty	Description
	42492.02		SIDESHIFT RAM ASSEMBLY 180
	42492.01		SIDESHIFT RAM ASSEMBLY 220
1	42492.31	1	Barrel
2	71 36 312	1	Gland housing
3	86 29 148	1	Gland seal
4	86 29 149	1	Rod wiper
5	86 00 306	1	O ring
6	86 09 306	1	Anti extrusion ring
7	04 16 240	1	Internal circlip dia 40
8	42492.36	1	Piston rod - 180
	42492.35	1	Piston rod - 220
9	71 20 368	1	Piston
10	86 29 156	1	Piston seal
11	86 29 157	1	Guide ring
12	93 63 023	1	Grub screw M6 x 12
13	09 01 121	2	Greaser 1/8 BSP straight
14	03.028.01	2	Union 3/8 BSP MM restricted
15	86 50 103	2	Bonded seal 3/8 BSP
	86 99 190		SEAL KIT

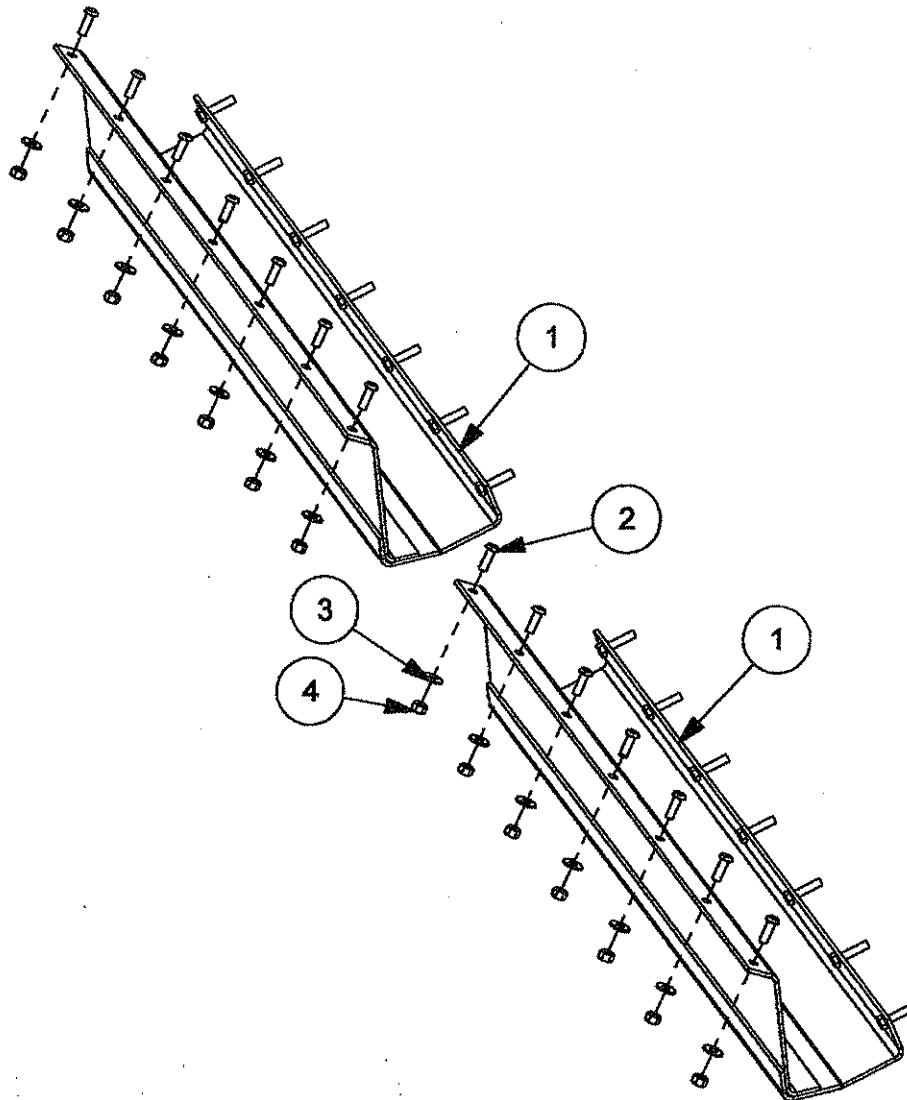
OPTIONAL EXTRAS



REF.	QTY.	PART No.	DESCRIPTION
		1020520	CASTOR WHEEL ASSEMBLY
1	2	1020519	Wheel Assembly - comprising of:
	1	1020531	Tyre & Wheel Rim Assembly
	1	1020532	Wheel Hub Assembly
2	1	42961.02	Wheel Castor
3	1	42961.04	Mounting Bracket
	1	42961.05	Mounting Bracket - <i>opposite hand</i>
4	2	42961.03	Clamp
5	8	9213096	Setscrew
6	8	9100206	Spring Washer
7	8	9113006	Hexagon Nut
8	2	0901121	Greaser
9	4	02.771.10	Bush
10	2	00.372.01	Linch Pin
11	20	07.546.01	Spacer
12	1	42455.01	TOP LINK KNUCKLE
13	1	42763.02	MULCH BAR KIT - 180 Models
	1	42763.01	MULCH BAR KIT - 220 Models
14	<i>as req'd</i>	9300151	Screw - Socket Button Head
15	<i>as req'd</i>	9163005	Self-Locking Nut
16	<i>as req'd</i>	9100105	Plain Washer
		42853.01	CAT 1 CONVERSION - 180 Models only
17	2	42853.10	Lower Hitch Pin
18	2	42853.32	Sleeve
19	2	0431216	Linch Pin
20	1	42853.11	Top Hitch Pin
21	2	42853.34	Flanged Bush

SUCTION THROAT KIT- Merlin180

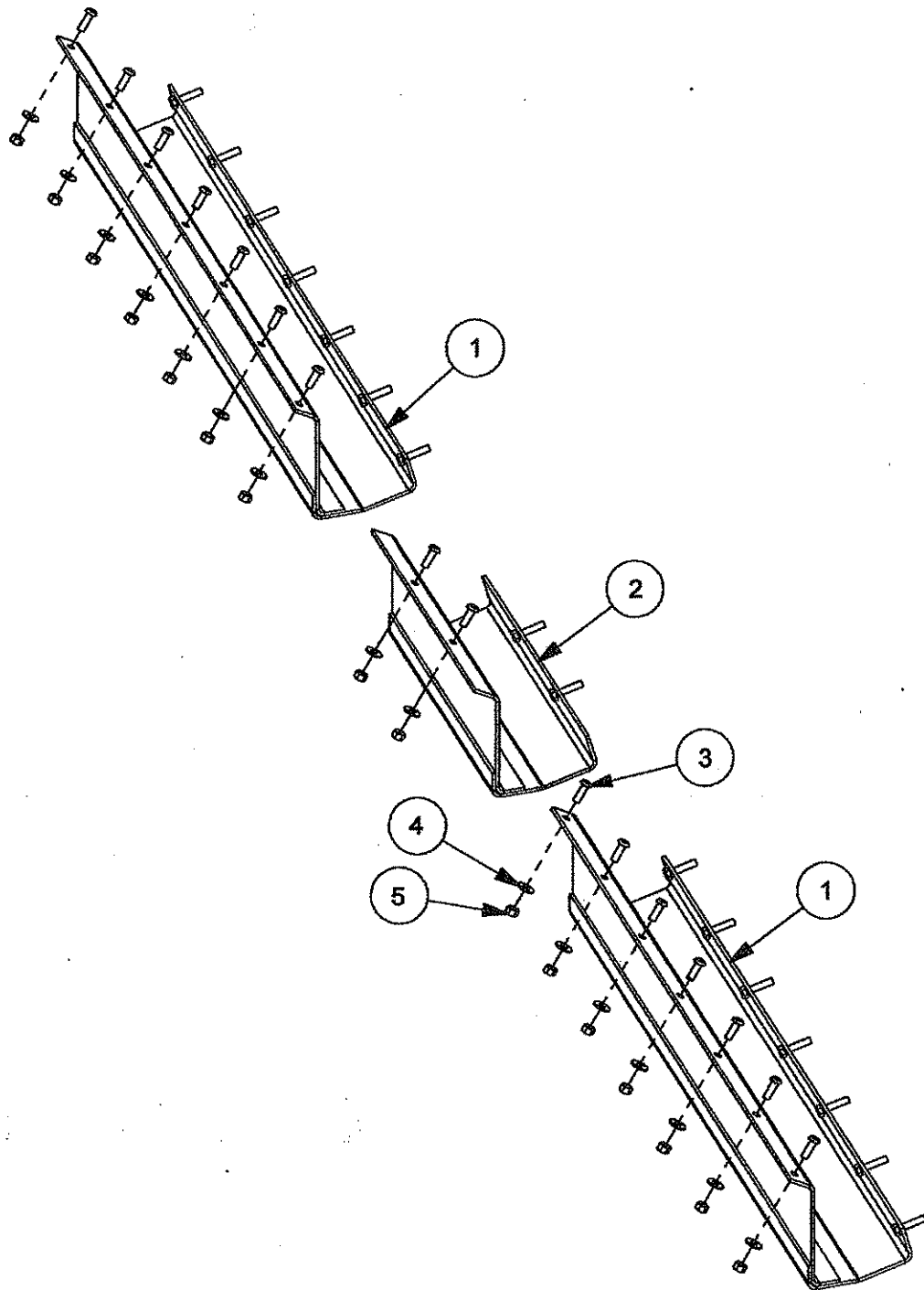
Module:
1020527



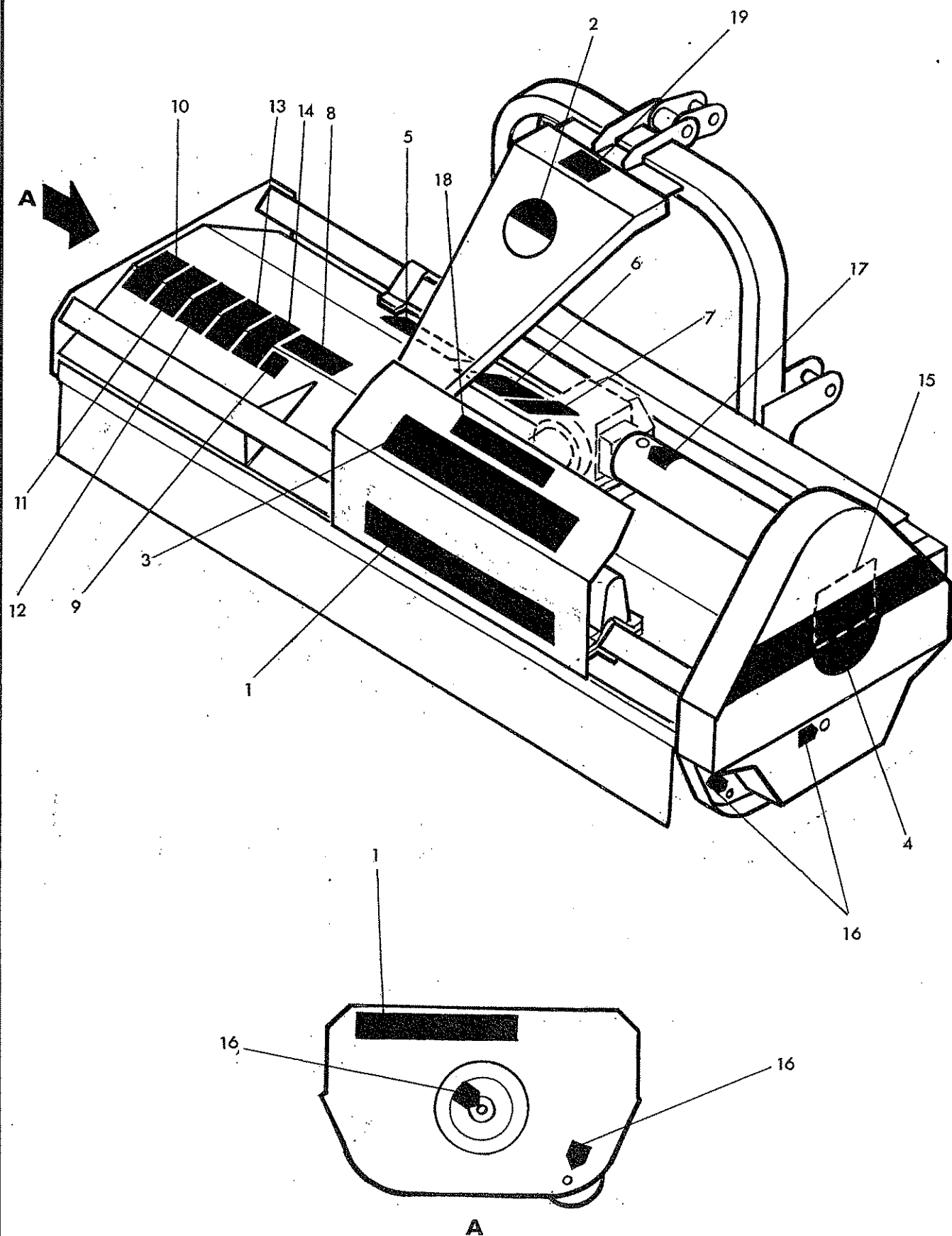
REF.	QTY.	PART No.	DESCRIPTION
		1020527	THROAT KIT ASSEMBLY - 180 Models
1	2	42847.06	Suction Throat
2	14	9300151	Screw - Button Head
3	14	9100104	Flat Washer
4	14	9143004	Self-Locking Nut

SUCTION THROAT KIT- Merlin 220

Module:
1020528



REF.	QTY.	PART No.	DESCRIPTION
		1020528	THROAT KIT ASSEMBLY - 220 Models
1	2	42847.06	Suction Throat
2	1	42847.11	Suction Throat
3	16	9300151	Screw - Button Head
4	16	9100104	Flat Washer
5	16	9143004	Self-Locking Nut



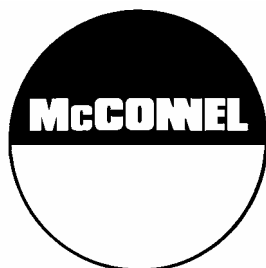


McCONNEL

Ref	Part No.	Qty	Description
STICKERS			
1	12 90 255	2	McConnel
2	12 90 296	1	Logo
3	42543.31	1	Merlin
4	12 90 455	1	Guard stripe
5	71 35 295	1	Tighten check chains
6	09.821.20	1	P.T.O. warning
7	09.811.01	1	540rpm - clockwise
	09.811.04	1	540rpm - anti clockwise
	09.811.02	1	1000rpm - clockwise
	09.811.05	1	1000rpm - anti clockwise
8	71 14 481	1	Bolt tightening schedule
9	09.843.05	1	Lift weight
10	09.821.10	1	Keep bolts tight
11	09.821.17	1	Unsupported machine warning
12	09.821.18	1	Thrown debris warning
13	09.821.08	1	Switch off warning
14	09.821.15	1	Read manual
15	42543.32	1	Belt tension adjust
16	09.810.01	4	Grease point - daily
17	09.810.02	1	Grease point - weekly
18	42543.35	1	MOR 180
	42543.34	1	MOL 180
	42543.37	1	MOR 220
	42543.36	1	MOL 220
19	12 90 392	1	Use McConnel spares

} Depending
on
build

} Depending
on
build



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