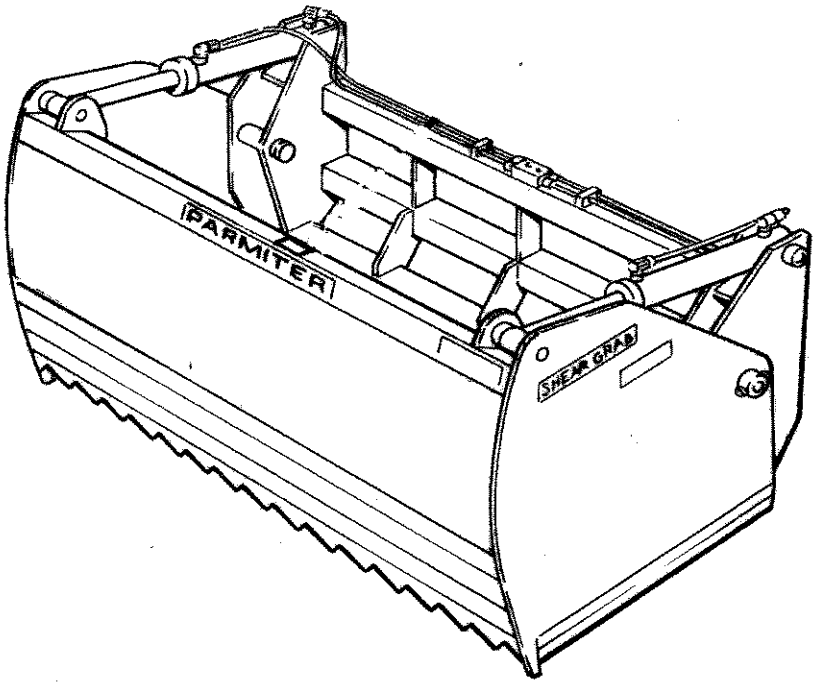
2163 0075

SHEAR GRAB Range

PARTS MANUAL



Shelbourne PARMITER

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EC DECLARATION OF CONFORMITY

We, Shelbourne Reynolds Engineering Ltd.
Of : Stanton, Bury St Edmunds
Suffolk, IP31 2AR, England

Hereby declare that the product :

Parmiter Produced **SHEAR GRAB**

MODEL	SERIAL NUMBER SERIES
SG100	GS10 1001 - GS10 2999
SG150	GS15 3001 - GS15 3999
SG200	GS20 4001 - GS20 5999
SG250	GS25 6001 - GS25 7999
SG300	GS30 8001 - GS30 8999
SG350	GS35 9001 - GS35 9999
SG380	GS38 3001 - GS38 4999
SG400	GS40 1200 - GS40 2999

Shelbourne Produced

Make **Shear Grab** Model _____ Serial no _____

Conforms to the Essential Health & Safety Requirements of **EEC Directive 89/392/EEC,** as amended by **91/368/EEC,93/44/EEC,** and **93/68/EEC.**

To effect the correct application of the safety requirements stated in the EEC Directives, the following standards and / or technical specification has been used :

BS EN 292-1 : 1991 Safety of machinery - Basic concepts, general principals for design - Basic terminology, methodology.

BS EN 292-2 : 1991 Safety of machinery - Basic concepts, general principals for design - Technical principals and specifications.

BS EN 294 : 1992 Safety of Machinery - Safety distances to prevent danger zones being reached by the upper limbs.

BS 5401 : 1990 Guide to information content and presentation of operators manuals provided for tractors and machinery for agriculture and forestry.

Date of issue : _____

Place of issue : **Stanton, England**

Name and Job Function of Authorised Person :

Keith Shelbourne
Chairman
Managing Director

Signature _____

„Dear Customer,

Thank you for purchasing a Shelbourne Parmiter Shear Grab.

Shelbourne Parmiter have produced this product manual in line with the relevant essential Health and Safety regulations to help you achieve the very best from your machine, without harm to yourself. You should be aware that any other person operating your machine with your permission must be given adequate guidance and information to allow him, or her, to use the machine safely.

Where as every effort has been made to ensure that the Shear Grab conforms to Shelbourne Parmiter's policy of quality, the machine cannot be expected to withstand abuse caused by misuse and negligence by the operator.

INTRODUCTION

The Shear Grab is designed to both cut and hold blocks of silage and then used to unload into stable feeding arrangements. It can be obtained with either plain (P) or a serrated (S) front cutting blade. Although both types will cut grass silage the serrated blade has been found to give a cleaner clamp face when used with maize silage.

CONTENTS

SPECIFICATION

MODEL	CAPACITY	DIMENSIONS	UNLADEN WEIGHT
EXPORT ONLY SG 100 NR	309 kg (0.5 m^3)	0.81m Wide 0.76m High 0.80m Deep	280 kg (616 lbs)
SG 100	393 kg (0.64 m^3)	1.05m Wide 0.76m High 0.80m Deep	320 kg (704 lbs)
SG 150	512 kg (0.83 m^3)	1.37m Wide 0.76m High 0.80m Deep	350 kg (770 lbs)
SG 200	512 kg (0.83 m^3)	1.37m Wide 0.76m High 0.80m Deep	370 kg (814 lbs)
SG 250	633 kg (1.03 m^3)	1.71m Wide 0.76m High 0.80m Deep	460 kg (1012 lbs)
EXPORT ONLY SG 300 (2 Rams)	748 kg (1.22 m^3)	1.90m Wide 0.80m High 0.80m Deep	570 kg (1250 lbs)
SG 350	755 kg (1.23 m^3)	2.02m Wide 0.76m High 0.80m Deep	590 kg (1298 lbs)
SG(S) 380	1138kg (1.85 m^3)	1.78m Wide 1.06m High 0.98m Deep	585 kg (1287 lbs)
SG(S) 400	1292kg (2.10 m^3)	2.02m Wide 1.06m High 0.98m Deep	640 kg (1408 lbs)

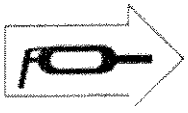
NOTE: Capacity and Volume is based on silage at 615 kilos/m^3 30% dry matter

SAFETY RULES AND PICTOGRAM / LABEL IDENTIFIACTION

Whenever possible, warning pictograms (labels with no words), or warning labels are used both on the machine near the area of danger and in the product manual near the relevant instructions.

Pictogram to indicate "Sharp Blade"

Pictogram to show "Alert Warning"

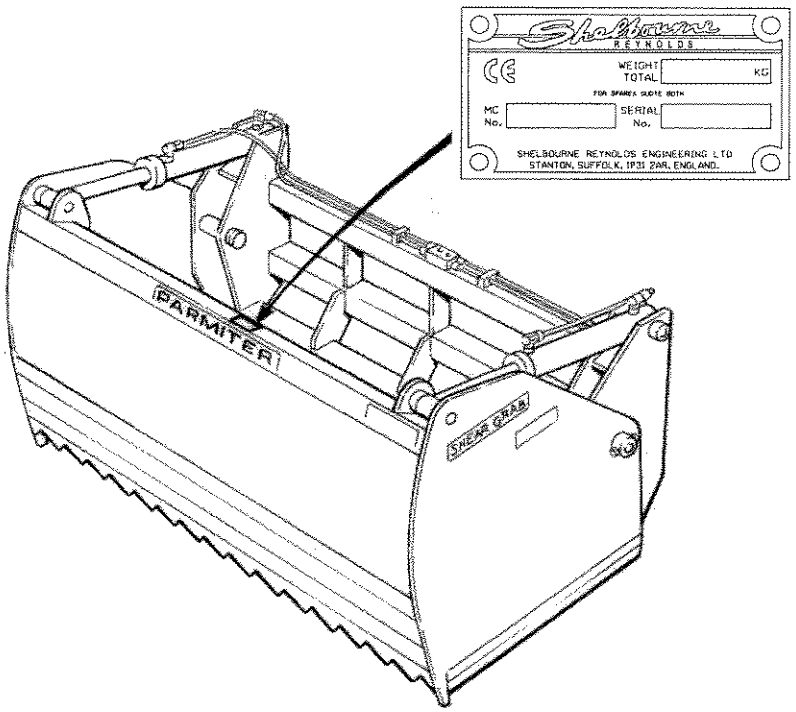


Pictogram to show "Lubrication Points"

1. Always comply with safety rules as set out in the pictograms, and detailed in this product manual.
2. Keep Shear Grab closed at all times, except during maintenance of the blades, and when working.
3. The Shear Grab must be used by the operator only, who will remain in the Prime Mover Vehicle (Tractor, or Material Handler) during the complete working cycle.
4. No bystanders must be allowed in the working area.
5. Whatever the type of maintenance that needs to be done on the Shear Grab, the Prime Mover Vehicle's engine must be stopped.

IDENTIFICATION OF THE MACHINE

The Shear Grab is identified by a makers plate located on the cutting frame as shown below.



HANDLING OF THE SHEAR GRAB

If the Shear Grab has to be moved, it is recommended that four slings are used being wrapped around the cross box section of the rear support in each corner and the top box section on the cutting frame.

PREPARATION FOR WORK OF THE SHEAR GRAB

1. Before fitting the Shear Grab to the Prime Mover Vehicle, check that the combined weight of the Shear Grab and the heaviest Silage load does not exceed the manufactures recommended safe loading of the front axle, wheels and tyres.

IMPORTANT If the Shear Grab mounting brackets are to be welded to the rear frame of the Shear Grab, it is absolutely vital that the welding is carried out by a Professional Welder. The material to be welded must be pretreated and the final welds checked carefully.

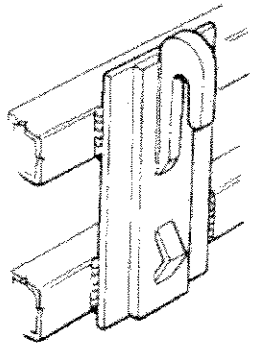


Fig. 1. Welded Bracket

2. The Shear Grab requires a third double acting service on the Prime mover Vehicle, operating art a minimum pressure of 136 Bar (2000 PSI), a maximum pressure of 205 Bar (3000 PSI), and a minimum oil flow of 23 L/Min (5 Gal/Min).

NOTE: For some export markets the SG 250, 300 and 350 can be supplied with 115 dia. Rams, in case the minimum pressure is 118 Bar (1740 PSI).

Connect the hydraulic services to the Shear Grab, using good quality double braid hoses, and slowly operate the hydraulic controls to ensure that the hydraulic pipes are correctly connected. Check visually, from a distance, that there are no oil leaks.

3. Open the Shear Grab to the maximum opening.

Remove the guards and carefully, wearing heavy duty gloves, sharpen ALL of the cutting blades. Even though the machine is new, the blades lose their sharpness during their time through the factory and transportation. See maintenance chapter for full sharpening details.

4. When driving with the Shear Grab, always keep the Grab closed, and as low as possible.

5. Check again for loose fittings, snagged, or chafing hydraulic hoses.

The machine is now ready for use.

SAFE USE OF THE MACHINE

1. Fully open the Shear Grab, and raise it to the height where the cutting frame blade edge is just above, and clear of the block to be cut.

2. Level the Shear Grab, and drive squarely into Silage Clamp.

3. With the Shear Grab support frame fully against the silage face, close the cutting frame.

4. Roll the Grab back a few degrees to clear the remaining silage, then lift and reverse the machine out, clear off the silage face.

CAUTION
Note that it is vital that the cutting frame is fully closed before pulling back from the silage face.

5. It is recommended that you start at one side of the clamp and work across the face. In this way a clean wall will be created with minimum wastage.

6. When finished, close the Grab before parking, and carefully put the loose hydraulic hoses into the bucket, away from the ground.

ADJUSTMENTS OF THE SHEAR GRAB

There are no adjustments to be made to the Shear Grab

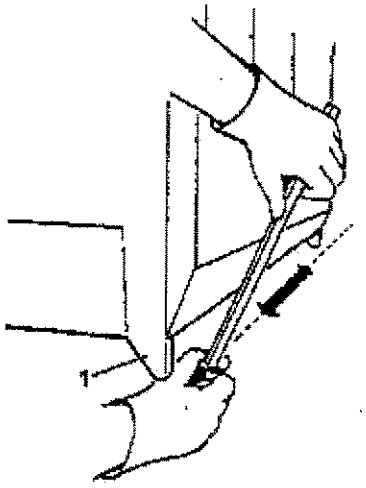
MAINTENANCE OF THE MACHINE

DAILY

1. Check blades for sharpness and damage. Although the blades are of high quality Blade steel, they must have regular attention or the performance of the machine will suffer.

Before work is done on the blades, first fully open the cutting frame and put on a pair of heavy duty gloves.

Normally, only a few moments of filing will maintain the edge, but if the edge has serious nicks or burrs, then a heavy duty file must be used to repair the damage. (See Fig. 2)



FILING THE BLADES Fig. 2

IMPORTANT	Note that a rotary grinder must not be used as it would generate excessive heat and destroy the temper of the steel.

2. Check hydraulic hoses and fittings for signs of wear and chafing.

WEEKLY

1. Grease all pivots, locations illustrated by Pictograms on machine

2. Check all tines are tight (see replacement of wearing parts)

LONG TERM STORAGE

a) Clean the machine thoroughly and paint over any bare surfaces.

b) Grease hydraulic ram rods.

c) Grease all cutting blades.

d) Completely close the Shear Grab to protect the blades.

REPLACEMENT OF WEARING PARTS

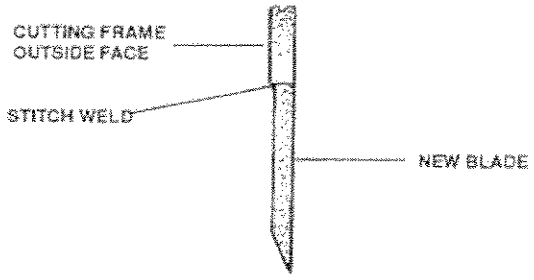


Fig. 3

1. If blade is irreparably damaged, it must be replaced. To replace, grind the stitch welds away. Clean away old welds to present a flat surface for the new blades. Check that the blade is the right way round, see fig 3, and stitch weld to new blade in place. Check all the time that it is square and true.

2. When the tines wear they must be replaced, after fitting new tines tighten the nut up to 470 lbs/ft (640 Nm) for the straight tine and 310 lbs/ft (420 Nm) for the drop tine.

3. Cutting frame side plate tips (Ref. 1. Fig 2). If these have been bent, or worn out, they must be rebuilt with weld, and re-sharpened with a grinder.

POSSIBLE DANGEROUS USE OF THE MACHINE

1. The Shear Grab must not be used to carry personnel, or animals.

2. The Shear Grab is a very strong machine with high cutting power, but it must not be used as a mobile guillotine around the farm.

3. It must be clearly understood that this machine is designed to cut and carry animal feed. If it is used as a standard grab to carry or cut out manure, timber, etc, the blades will be irreparably damaged and the machine will fail to function.

   Damage in this manner will invalidate the warranty.

PARTS ILLUSTRATIONS

SHEAR GRAB 100 SERIES

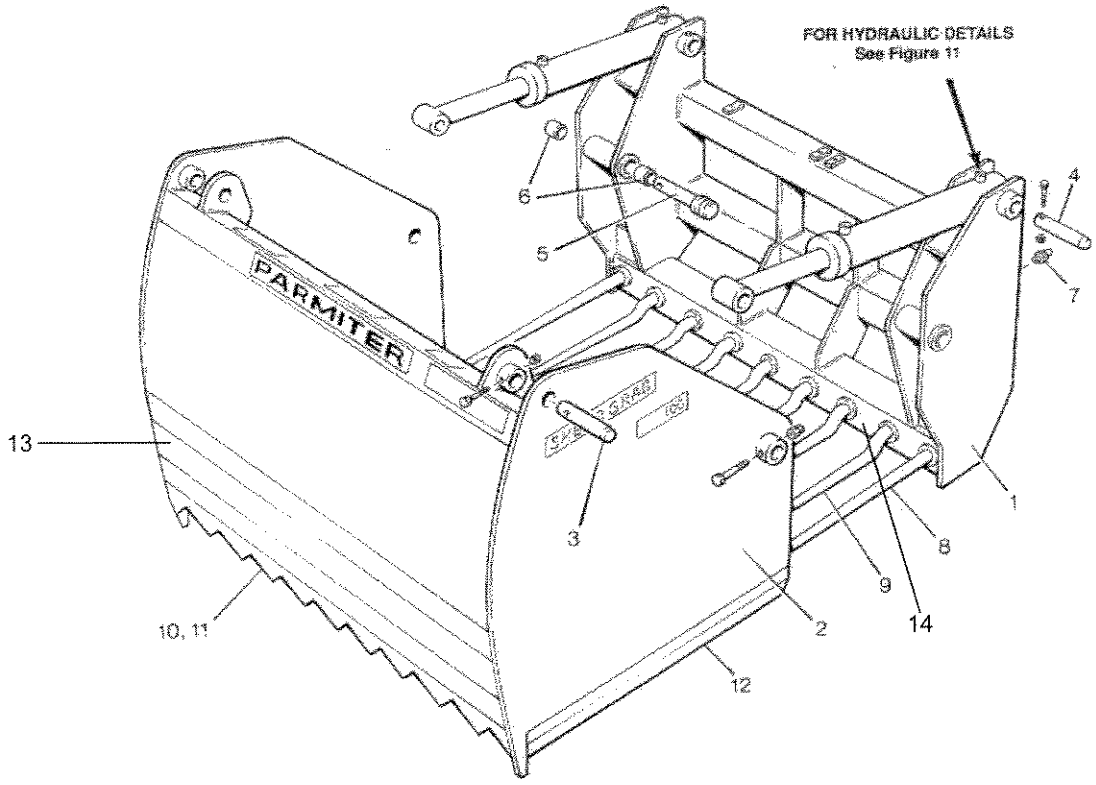


Fig. 4

PART LIST

Item No.	Part No.	Description	Quantity SGS	Quantity SGP
1	4310-0127	Support Frame W.A	1	1
2	4310-0287	Serrated Cutting Frame W.A	1	
	4310-0128	Plain Cutting Frame W.A		1
3	3904-2019	Pin, Standard Headless, 30 dia	2	2
4	3904-2015	Pin, Standard Headless, 30 dia	2	2
5	3901-1208	Pin, Standard Headless, 40 dia	2	2
6	2117-4040	Glacier Bush, 40 x 40	4	4
7	2061-3001	Grease Nipple, M10 Straight	2	2
8	2161-5129	Tine, Conus 2	2	2
	NUTF14280	Nut (for above Tine)		
9	2161-5139	Tine, Cranked Conus 1	7	7
	NUTF14200	Nut (for above Tine)		
10	2160-2024	Blade, Plain		1
11	4301-0161	Blade, Serrated	1	
12	2160-2020	Blade, Plain	2	2
13	3310-0067	Blade Carrier	1	1
14	4310-0012	Tine Beam	1	1

SG 100 NARROW ASSEMBLY
(export only)

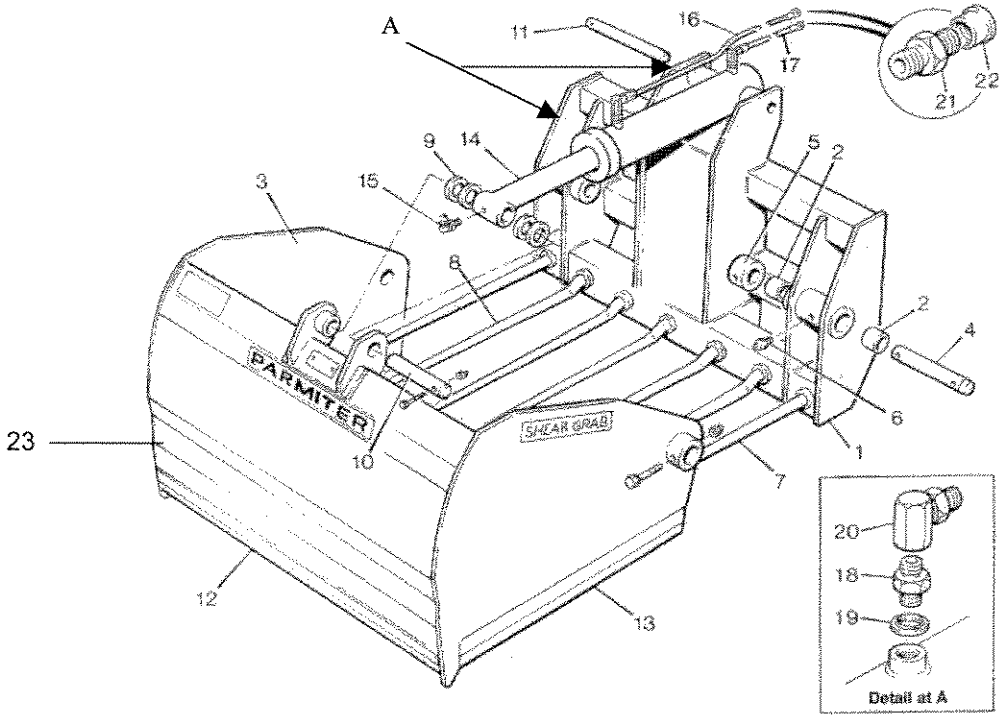


Fig. 5

PART LIST

Item No.	Part No.	Description	Quantity
1	4310-0092	Support Frame W.A	1
2	2117-4040	Glacier Bush	4
3	4310-0091	Cutting Frame W.A	1
4	3310-0165	Pin, 40 dia	2
5	3151-3203	Standard Boss	3
6	2061-3001	Grease Nipple, M10 Straight	3
7	2161-5129	Straight Tine, Conus 2	2
8	2161-5139	Drop Tine, Conus 1	5
9	2070-8061	Plain Washer, M30	4
10	3904-2014	Standard Pin, 30 dia x 178 Long	1
11	3904-2032	Headless Pin, 30 dia	1
12	2160-2027	Front Blade	1
13	2160-2020	Side Blade	2
14	2131-1066	Hydraulic Ram, D.A. – Metric	1
15	2061-3005	Grease Nipple	1
16	2131-8124	Hose, M18 STF x STF x 1500 Long	1
17	2131-8111	Hose, M18 STF x STF x 1250 Long	1
18	2130-4060	Adapter, M18, M/M	2
19	2130-7501	Sealing Washer, M18	2
20	2130-4068	Adapter, M18 x 90°, M/F	2
21	2130-4055	Adapter, 3/8" BSP x M18, M/M	2
22	2172-7806	Red Cap	2
23	3310-0163	Blade, Carrier	1

SHEAR GRAB 200 SERIES

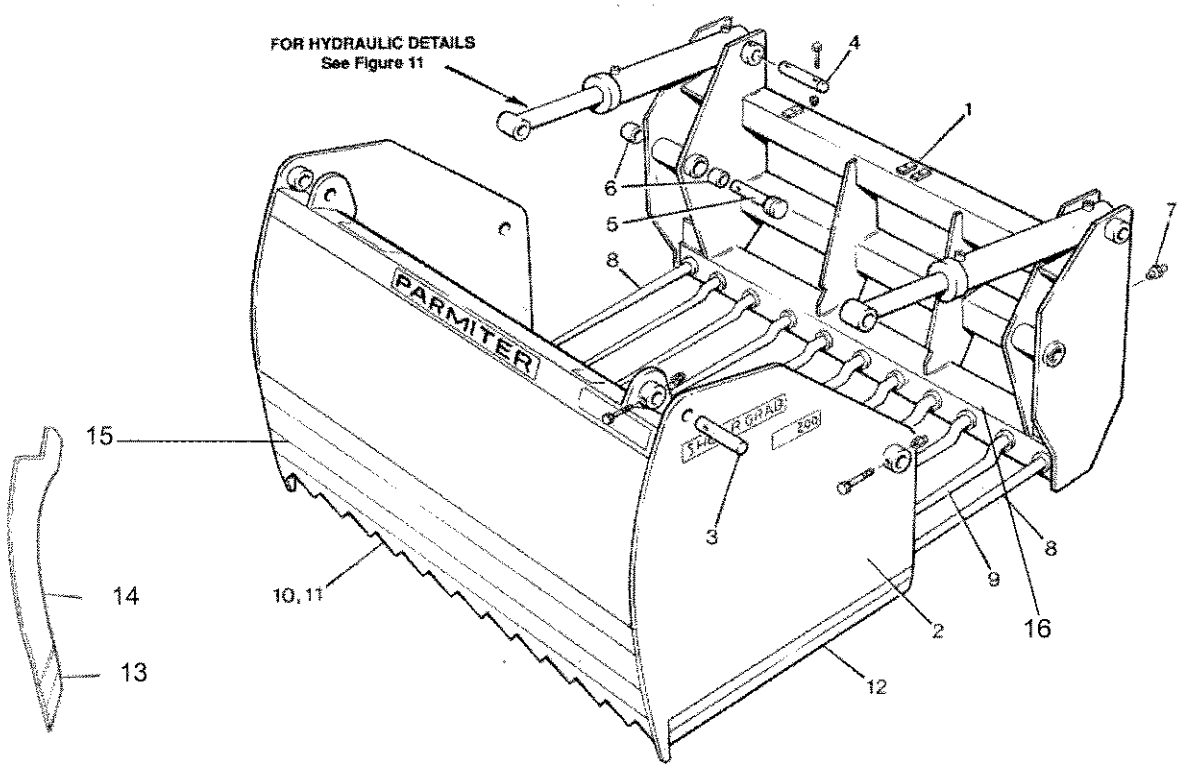


Fig. 6

PART LIST

Item No.	Part No.	Description	Quantity SGS	Quantity SGP
1	4310-0133	Support Frame W.A	1	1
2	4310-0291	Cutting Frame Serrated	1	
	4310-0288	Cutting Frame Plain		1
3	3904-2019	Pin, Standard Headless, 30 dia	2	2
4	3904-2015	Pin, Standard Headless, 30 dia	2	2
5	3901-1208	Pin, Standard Headed, 40 dia	2	2
6	2117-4040	Glacier Bush, 40 x 40	4	4
7	2061-3001	Grease Nipple, M10 Straight	2	2
8	2161-5129	Tine, Conus 2	2	2
	NUTF14280	Nut (for above Tine)		
9	2161-5139	Tine, Cranked Conus 1	9	9
	NUTF14200	Nut (for above Tine)		
0	2160-2034	Blade, Plain		1
11	4310-0162	Blade, Serrated	1	
12	2160-2020	Blade, Plain	2	2
13	2160-2021	Centre Blade	2	2
14	3310-0222	Blade Carrier Support	2	2
15	3310-0238	Blade, Carrier	1	1
16	4310-0138	Tine Beam	1	1

SHEAR GRAB 250 SERIES

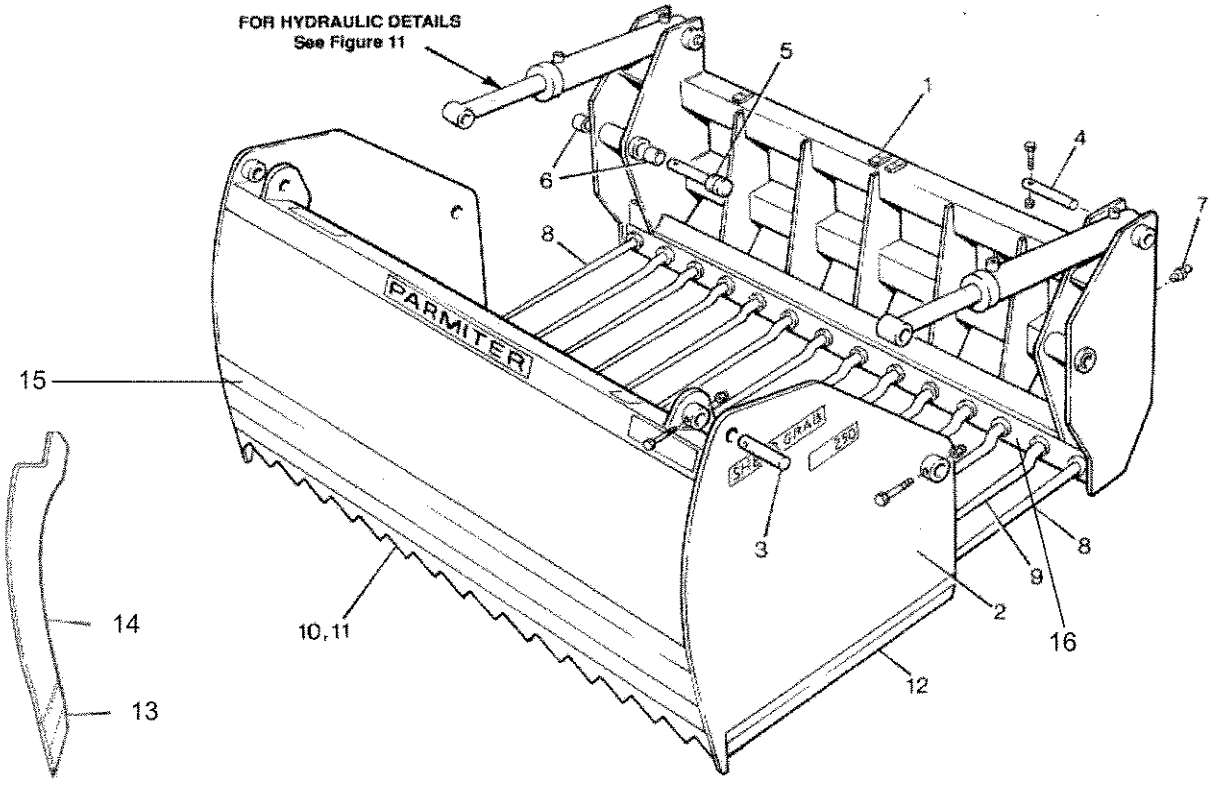


Fig. 7

PART LIST

Item No.	Part No.	Description	Quantity SGS	Quantity SGP
1	4310-0140	Support Frame W.A	1	1
2	4310-0295	Cutting Frame Serrated	1	
	4310-0292	Cutting Frame Plain		1
3	3904-2032	Pin, Standard Headless, 30 dia	2	2
4	3904-2017	Pin, Standard Headless, 30 dia	2	2
5	3901-1212	Pin, Standard Headed, 40 dia	2	2
6	2117-4040	Glacier Bush, 40 x 40	4	4
7	2061-3001	Grease Nipple, M10 Straight	2	2
8	2161-5129	Tine, Conus 2	2	2
	NUTF14280	Nut (for above Tine)		
9	2161-5139	Tine, Cranked Conus 1	12	12
	NUTF14200	Nut (for above Tine)		
10	2160-2035	Blade, Plain		1
11	4310-0163	Blade, Serrated	1	
12	2160-2020	Blade, Plain	2	2
13	2160-2021	Centre Blade	3	3
14	3310-0222	Blade Carrier Support	3	3
15	3310-0236	Blade, Carrier	1	1
16	4310-0145	Tine Beam	1	1

SG 300 (2 RAMS) LOW PRESSURE
(export only)

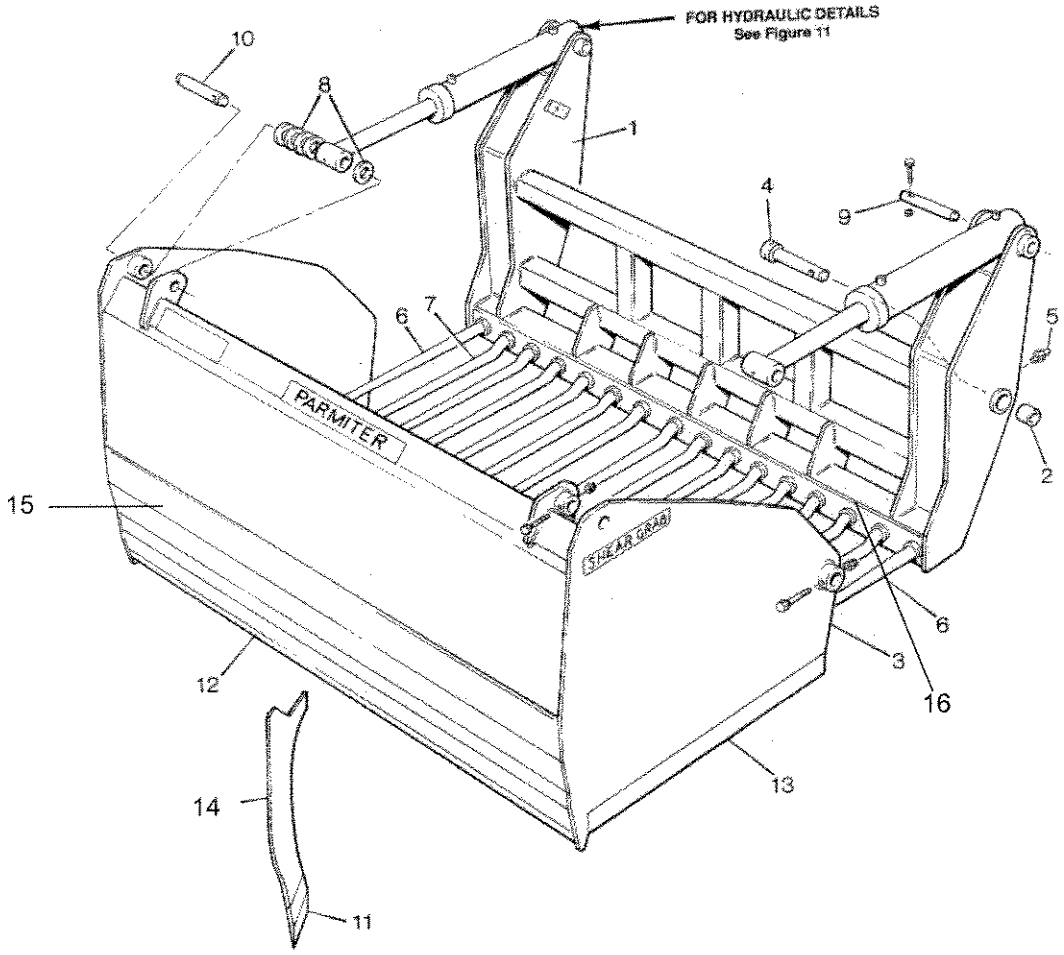


Fig. 9

PARTS LIST

Item No.	Part No.	Description	Quantity SGS	Quantity SGP
1	4310-0323	Support Frame W.A	1	1
2	2117-4040	Glacier Bush	4	4
3	4310-0329	Cutting Frame Serrated	1	
	4310-0360	Cutting Frame Plain		1
4	3901-1212	Standard Pin, 40 dia	2	2
5	2061-3001	Grease Nipple, Straight M10	4	4
6	2161-5129	Straight Tine, Conus 2	2	2
	NUTF14280	Nut (for above Tine)		
7	2161-5139	Drop Tine, Conus 1	14	14
	NUTF14200	Nut (for above Tine)		
8	2070-8061	Plain Washer, M30	10	10
9	3904-2032	Standard Pin, 30 dia	2	2
10	3904-2014	Standard Pin, 30 dia	2	2
11	2160-2021	Centre Blade	4	4
12	2160-2022	Front Blade	1	1
13	2160-2023	Side Blade	2	2
14	3310-0022	Blade Carrier Support	4	4
15	3310-0195	Blade Carrier	1	1
16	4310-0106	Tine Beam	1	1

SHEAR GRAB 350 SERIES

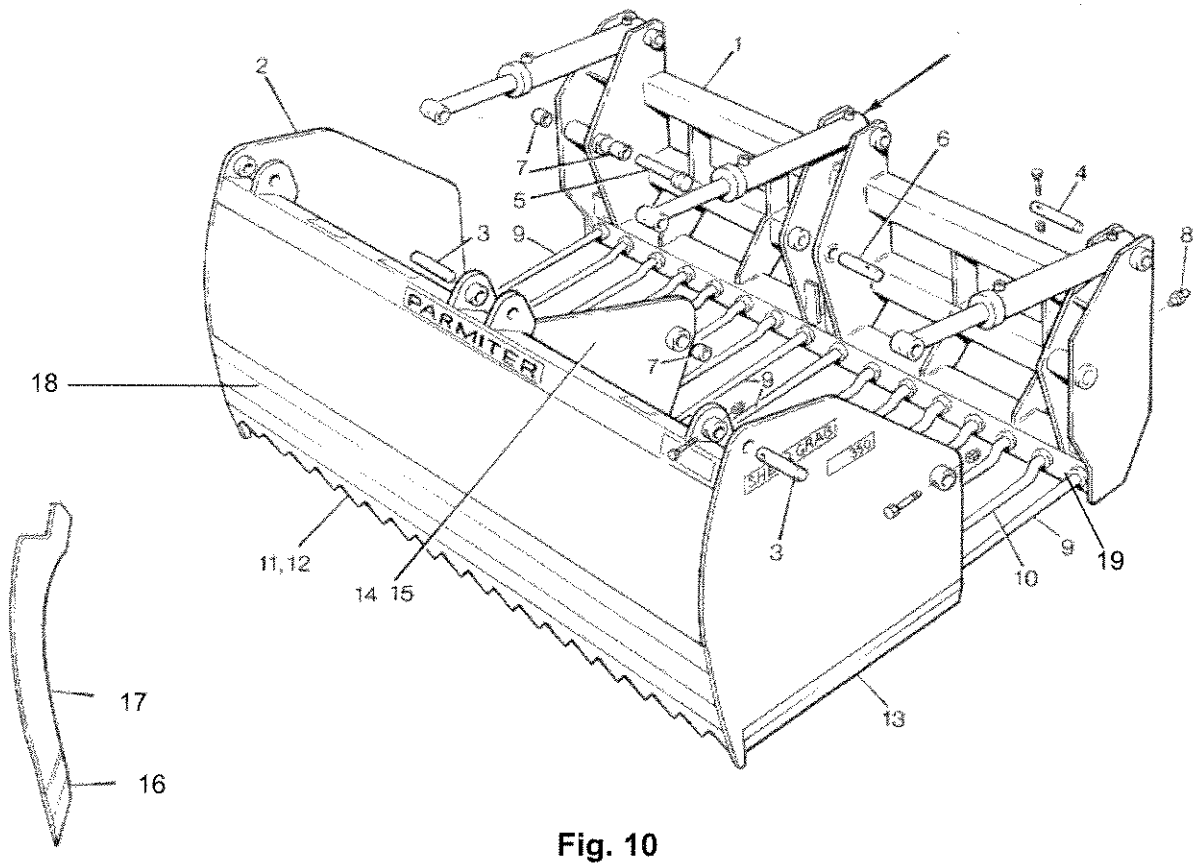


Fig. 10

PART LIST

Item No.	Part No.	Description	Quantity	
			SGS	SGP
1	4310-0104	Support Frame W.A	1	1
2	4310-0303	Cutting Frame Serrated	1	
	4310-0300	Cutting Frame Plain		1
3	3904-2032	Pin, Standard Headless, 30 dia	3	3
4	3904-2017	Pin, Standard Headless, 30 dia	3	3
5	3901-1212	Pin, Standard Headed, 40 dia	2	2
6	3310-0198	Headless Pin, 40 dia	1	1
7	2117-4040	Glacier Bush, 40 x 40	5	5
8	2061-3001	Grease Nipple, M10 Straight	8	8
9	2161-5129	Tine, Conus 2	4	4
	NUTF14280	Nut (for above Tine)		
10	2161-5139	Tine, Cranked Conus 1	12	12
	NUTF14200	Nut (for above Tine)		
11	2160-2031	Blade, Plain		1
12	4310-0164	Blade, Serrated	1	
13	2160-2020	Blade, Plain	2	2
14	2160-2032	Blade, Centre Cut	1	1
15	2160-2033	Blade, Centre Cut, Rear	1	1
16	2160-2021	Centre Blade	2	2
17	3310-0222	Blade Carrier Support	2	2
18	3310-0195	Blade Carrier	1	1
19	4310-0106	Tine Beam	1	1

SHEAR GRAB 380 SERIES

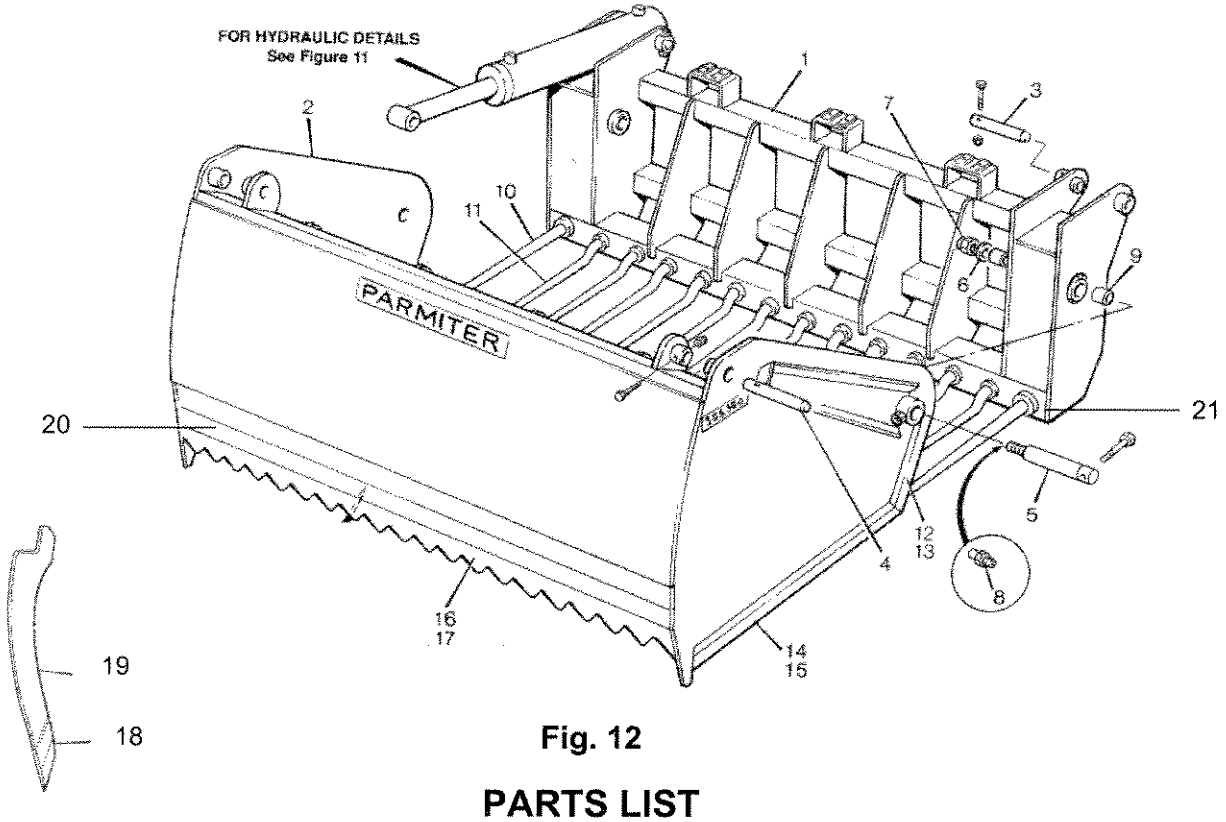


Fig. 12

PARTS LIST

Item No.	Part No.	Description	Quantity SGS	Quantity SGP
1	43100364	Support Frame W.A. (Uprated model)	1	1
		From Serial No. 253923 Onwards		
	43100365	Support Frame W.A. (Uprated model)	Austrian model	
		From Serial No. 253923 Onwards	only	
	4310-0325	Support Frame W.A.	1	1
2	4310-0330	Cutting Frame Serrated	1	
	4310-0343	Cutting Frame Plain		1
3	3310-0320	Pin, 30 dia	2	2
4	3310-0321	Pin, 30 dia	2	2
5	3310-0322	Pivot Pin	2	2
6	2070-7061	Washer, M24	2	2
7	2037-6700	Locknut, M24	2	2
8	2061-3001	Grease Nipple, M10 Straight	2	2
9	2117-4040	Glacier Bush	4	4
10	2161-5164	Tine, Straight	2	2
11	250022 01	Tine, Cranked (Uprated model)	12	12
		From Serial No. 253923 Onwards		
	2161-5187	Tine, Cranked	12	12
12	2160-2076	Side Blade, Short LH	1	1
13	2160-2074	Side Blade, Short RH	1	1
14	2160-2075	Side Blade, Long LH	1	1
15	2160-2073	Side Blade, Long RH	1	1
16	4310-0280	Serrated Blade Assembly	1	
17	3310-0278	Plain Blade		1
18	2160-2021	Centre Blade	4	4
19	3310-0260	Blade Carrier Support	4	4
20	3310-0286	Blade Carrier	1	1
21	250028 02	Tine Beam (Uprated model)	1	1
		From Serial No. 253923 Onwards		
	4310-0265	Tine Beam	1	1

SHEAR GRAB 400 SERIES

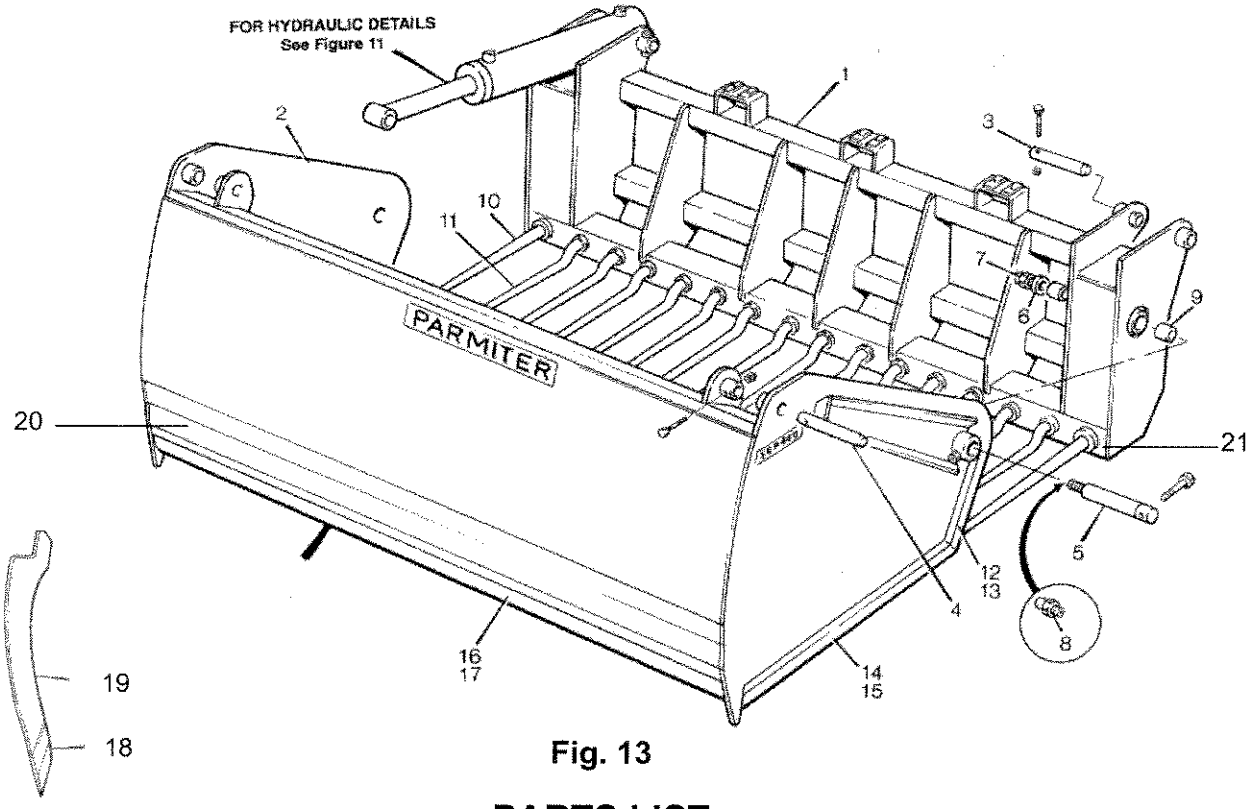
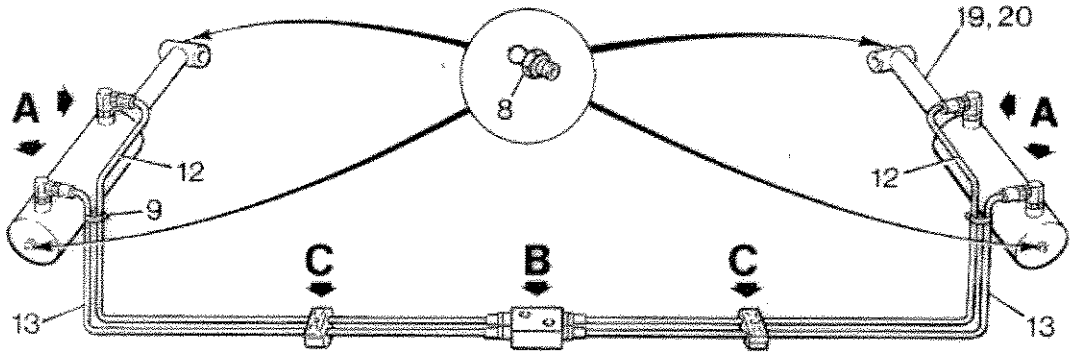


Fig. 13

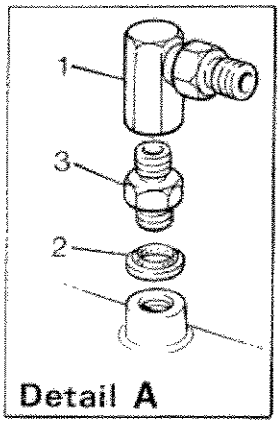
PARTS LIST

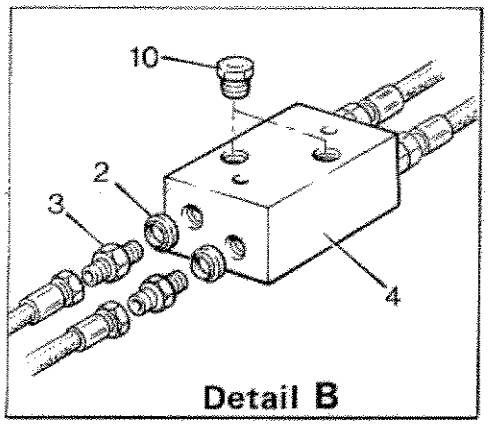
Item No.	Part No.	Description	Quantity SGS	Quantity SGP
1	43100366	Support Frame W.A. (Uprated model)	1	1
		From Serial No. 198923 Onwards		
	43100367	Support Frame W.A. (Uprated model)	Austrian model	
		From Serial No. 198923 Onwards	only	
	4310-0326	Support Frame W.A.	1	1
2	4310-0345	Cutting Frame Serrated	1	
	4310-0338	Cutting Frame Plain		1
3	3310-0320	Pin, 30 dia	2	2
4	3310-0321	Pin, 30 dia	2	2
5	3310-0322	Pivot Pin	2	2
6	2070-7061	Washer, M24	2	2
7	2037-6700	Locknut, M24	2	2
8	2061-3001	Grease Nipple, M10 Straight	2	2
9	2117-4040	Glacier Bush	4	4
10	2161-5164	Tine, Straight	2	2
11	250022 01	Tine, Cranked (Uprated model)	14	14
		From Serial No. 198923 Onwards		
	2161-5187	Tine ,Cranked	14	14
12	2160-2076	Side Blade, Short LH	1	1
13	2160-2074	Side Blade, Short RH	1	1
14	2160-2075	Side Blade, Long LH	1	1
15	2160-2073	Side Blade, Long RH	1	1
16	4310-0164	Serrated Blade Assembly	1	
17	2160-2031	Plain Blade		1
18	2160-2021	Centre Blade	4	4
19	3310-0260	Blade Carrier Support	4	4
20	3310-0195	Blade Carrier	1	1
21	250028 01	Tine Beam (Uprated model)	1	1
		From Serial No. 198923 Onwards		
	4310-0219	Tine Beam	1	1

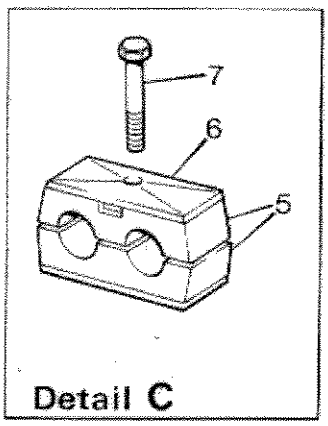
HYDRAULIC ASSEMBLY

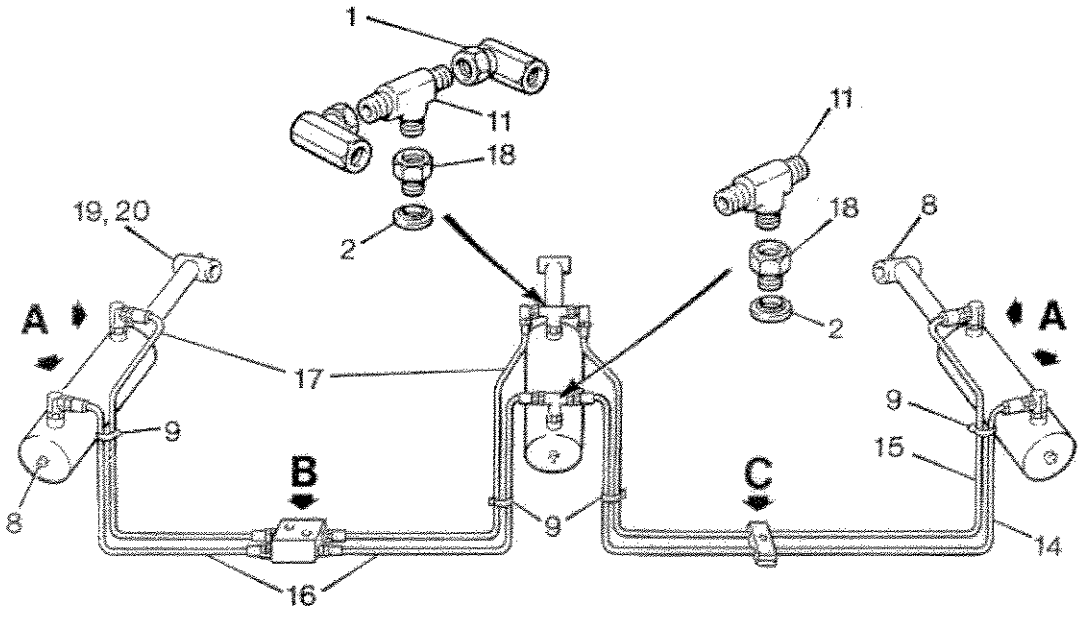


TYPICAL HYDRAULIC LAYOUT, SERIES SG100, SG200, SG250, SG300LP, SG380 AND SG400









TYPICAL HYDRAULIC LAYOUT, SERIES SG300 AND SG350

Fig. 11

HYDRAULIC ASSEMBLY

PARTS LIST

Item No	Part No.	Description	Quantity
1	2130-4068	Adaptor, M18 x 90^0 M/F	4
2	2130-7501	Sealing Washer, M18	8
3	2130-4060	Adaptor, M18 M/M	8
4	3310-0290	Manifold Block	1
5	2131-3054	Clamp Paired	A/R
6	2131-3055	Cover Plate	A/R
7	2012-6109	Bolt	A/R
8	2061-3001	Grease Nipple	4
9	2170-1001	Cable Tie, 750 long	A/R
	2170-1005	Cable Tie, 200 long	A/R
10	2170-9099	Blanking Plug 3/8 BSP	2
11	2130-5033	Tee M18, M/M/M	2
12	2131-8107	Hose, M18, STF x STF x 1000 long (SG100)	2
	2131-8127	Hose, M18, STF x STF x 1175 long (SG200)	2
	2131-8128	Hose, M18, STF x STF x 1325 long (SG250)	2
	2131-8131	Hose, M18, STF x STF x 1675 long (SG300 LP)	2
	2131-8124	Hose, M18, STF x STF x 1500 long (SG380 & SG400)	2
13	2131-8125	Hose, M18, STF x STF x 675 long (SG100)	2
	2131-8126	Hose, M18, STF x STF x 850 long (SG200)	2
	2131-8107	Hose, M18, STF x STF x 1000 long (SG250, SG380 & SG400)	1
	2131-8111	Hose, M18, STF x STF x 1250 long (SG300 LP)	2
14	2131-8107	Hose, M18, STF x STF x 1000 long (SG350)	1
15	2131-8129	Hose, M18, STF x STF x 1600 long (SG350)	1
16	2131-8130	Hose, M18, STF x STF x 450 long (SG350)	2
17	2131-8115	Hose, M18, STF x STF x 750 long (SG350)	2
18	2130-4069	Adaptor M18, M/F	2
19	2131-1038	Ram, (SG100 & SG200)	2
	2131-1066	Ram, (SG250 & SG350)	A/R
	2131-1085	Ram, (SG300 LP)	2
	250020 01	Ram, (SG380 & SG400 Uprated model)	2
		From Serial No. 198923 Onwards	
	2131-1227	Ram, (SG380 & SG400)	2
20	2131-2020	Seal Kit for Ram 2131-1038	A/R
	2131-2067	Seal Kit for Ram 2131-1066	A/R
	2131-2085	Seal Kit for Ram 2131-1085	A/R
	2131-2115	Seal Kit for Ram 2131-1227 & Ram 250020 01	A/R