



World-class turf maintenance equipment

OPERATING INSTRUCTIONS

HYDRAULIC LITAMINA

MACHINE REFERENCE	HLL/1200
SERIAL NUMBER
CN CODE	9603 350 00



SISIS, Ashbourne Road, Kirk Langley, Derbyshire, DE6 4NJ, England.
Tel: +44 (0) 1332 824 777 | Fax: +44 (0) 1332 824 525 | Email: info@sisis.com | www.sisis.com

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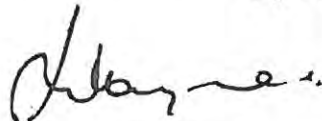
EC DECLARATION OF CONFORMITY

We the undersigned

SISIS EQUIPMENT (Macclesfield) LIMITED

Certify that the	Sweeper
Make	SISIS
Type	Litamina
Series	1200
Conforms to EC Directives and amendments	2006/42/EC
Standard	BS7370

**This certificate applies only to NEW equipment supplied
by SISIS or our authorise dealer**



J.W. Hargreaves
Director

Certificate Number
CEFS709

We want you to obtain the best performance from this machine. If you have any difficulty after reading the following instructions please contact us or your local SISIS Territory Manager or SISIS Dealer.

OPERATION PRINCIPLE

The brush is powered from the tractor PTO shaft (540rpm) through a bevel gear box and a heavy duty belt drive. A fixed brush section, mounted between the rotating brush and the tractor, raises wet leaves and other flat profile refuse, enabling collection by the Litamina. The brush units are easily adjustable enabling precise setting of the sweeper to suit operating conditions.



The Litamina is designed for operation by compact tractors of 16hp and upwards. Tractor front weights can be added to improve steering stability when collection heavy, wet refuse.

A synthetic surface model is also available with a mesh hopper to collect debris and redistribute the sand. Model reference HLL/1200SH.

ATTACHMENT

First pull the bottom link stabiliser arm on to the tractor. ALWAYS USE STABILISER TO ENSURE FULL CONTROL OVER THE MACHINE.

Align the tractor with the Litamina. Fit the hydraulic lift arms (lifting the left hand side arm first) and



secure with the retaining pins. Fit and secure the tractor top link and adjust its length until the top edge of the Litamina is horizontal and parallel with the ground.



Raise the Litamina on the tractor hydraulics and, standing behind the machine, visually check that the top of the frame is horizontal, using the side arm levelling screw as necessary. (Always check that the tractor rear wheels have equal inflation pressures).



Release the pins securing the drop legs, swing the drop legs into the working position and resecure with the pins provided.



Fit the top end of the PTO shaft on to the tractor spline and the other end on to the gearbox spline. IMPORTANT there must be a minimum clearance of 2ins (50mm) between the sliding members of the PTO shaft in their closed position. (See the makers leaflet for information on adjusting the length).



Fit the quick release couplings to the tractor auxiliary hydraulics (flow and return). Work the hydraulic lift lever to ensure that the hopper opens and shuts. Always keep the male and female halves of the quick release couplings clean and free from grit and dirt.

Check that the bevel gearbox is filled with oil (SAE90 or equivalent). Start the tractor and raise the machine just clear of the ground.

With the engine at idling speed, gently engage the PTO drive clutch and visually check that the drive mechanism operates freely.

PTO shaft safety guard restraint system functions correctly.

ADJUSTING THE BRUSH

It is very important to set the brush to suit the surface conditions. If the brush is set too close to the ground wear on the bristles will result. With the sweeper lowered to its operating position, brush adjustment is made by rotating the turn buckle assembly (item no 91) so that the ends of the bristles are in light contact with the surface.



Adjustment should then be made to the front fixed brush section so that it is only in very light contact with the ground.

OPERATION

With the brush rotating and the tractor PTO speed at 540rpm move forward to allow the brushes to throw the material to the rear of the hopper. If the material is being thrown too high, angle the deflector plate downwards slightly and recheck the flow into the hopper.

Never turn too sharply when using the machine. If a tight turn is necessary, always raise the machine on the hydraulics.

DO NOT overload the hopper with wet, heavy materials.

MAINTENANCE

DAILY Walk round inspection check to ensure that all bolts are tight and that the brush bristles are in good condition.

Any deformed or damaged components should be rectified or replaced before using the machine

WEEKLY Conduct a complete machine inspection. Check all pivot points for wear and investigate any excess movement.

Oil the PTO shaft splines and ensure that the

SAFETY

ALWAYS

read the operating instructions carefully and understand the controls before commencing work.

visually check machines for damage or wear to working parts such as blades or tines before starting work

look behind before starting to reverse. watch out for children or pedestrians.

switch off the power before making adjustments or repairs and never lift or carry a machine whilst any parts are moving.

DO NOT

allow any unauthorised person to handle machines in any way at any time.

BE EXTRA CAREFUL

when using petrol or diesel fuel.
DANGER no smoking or naked lights.

NEVER

work on the machine with the hopper in the raised position.

RESPECT

powered machines. always keep hands and feet clear of moving parts and remember that tine cylinders or drums can continue to rotate even after the power unit is switched off.

PTO DRIVES TO TRACTORS

before attaching or adjusting PTO driven implements always stop the engine and disengage the PTO drive.

never operate PTO shafts at extreme angles and take particular care to avoid high linkage lift positions with the PTO in operation (ie at the end of working runs)

many tractors now have multi speed PTO systems. take special care that the PTO speed selected is suitable for the implement being used eg never use 1000rpm on an implement designed for 540rpm.

BE SAFETY CONSCIOUS ALWAYS

SPECIFICATION

model reference	HLL/1500	
overall width	218cm	86ins
overall length	210cm	83ins
working width	156cm	61ins
height	120cm	47ins
weight (unladen)	461kg	1014lbs
hopper capacity	1.8m ³	63.5cu.ft
hopper reference	FS1048	
tipping height clearance	100cm	39ins
PTO	3.49cm 6 spline 540rpm	13/8ins
recommended tractor size (requires front weights)	24kw	32hp
drawbar and wheels towed version	FS1050	
double acting hydraulics	FS1051	

SISIS CONTACT TELEPHONE NUMBERS

Sales	01625 503030	Fax all departments	01625 427426
Email all departments	info@sisis.com	Website	www.sisis.com

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PARTS LIST & DRAWINGS

HYDRAULIC LITAMINA

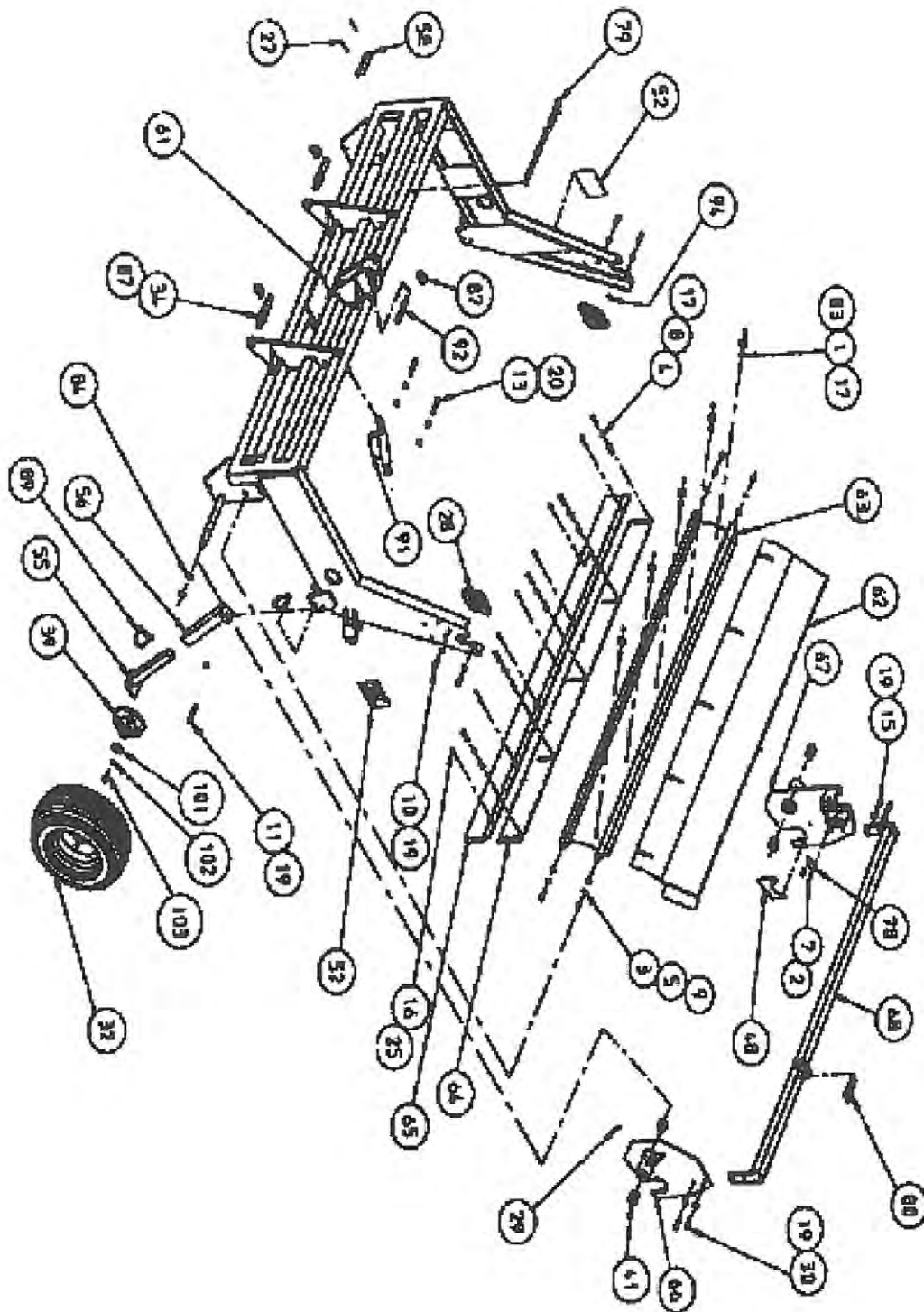
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SPARES HOTLINE 01625 503030
Website www.sisis.com

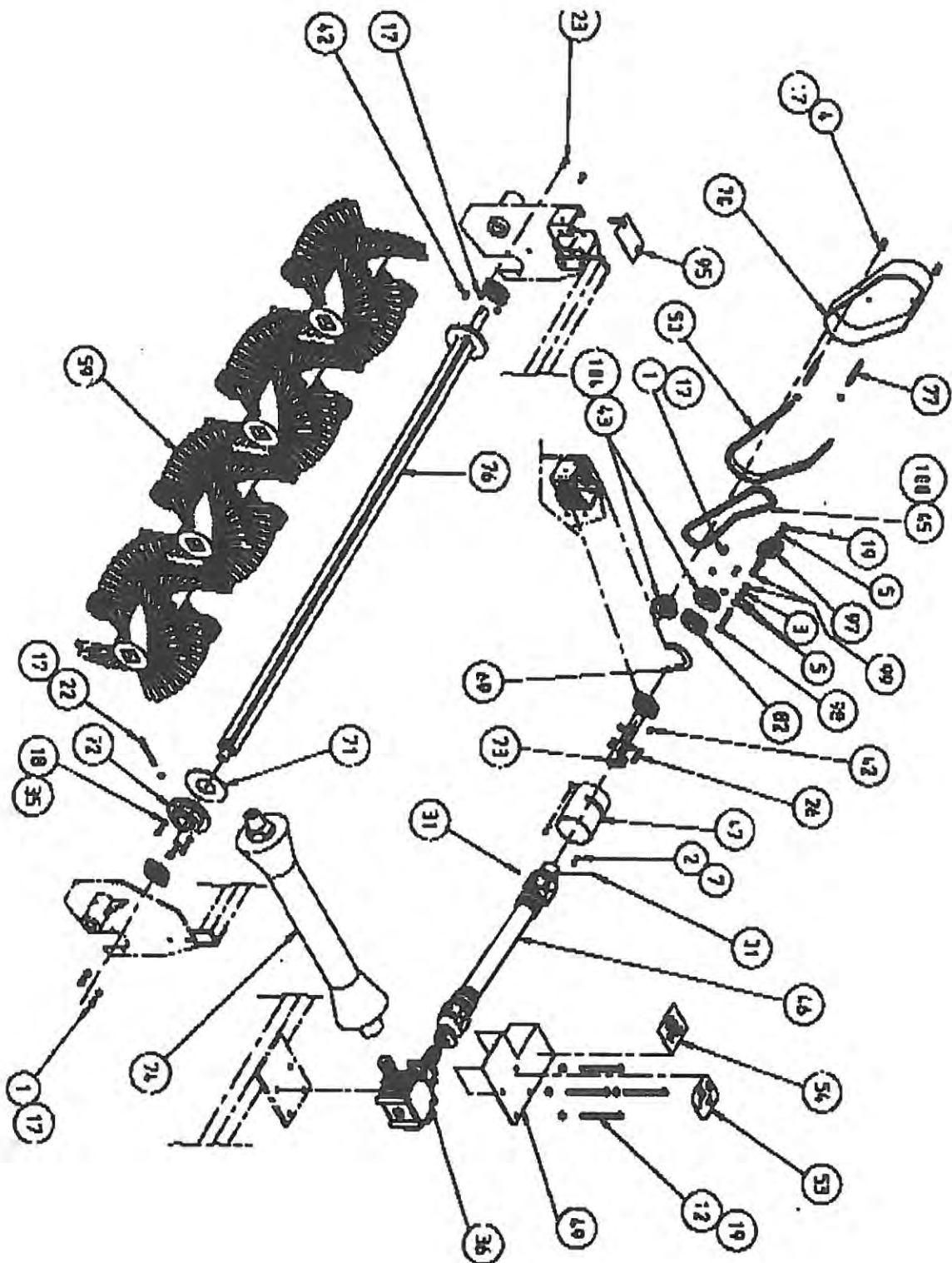
ASSEMBLY

<i>item</i>	<i>part</i>	<i>description</i>	<i>qty</i>	<i>item</i>	<i>part</i>	<i>description</i>	<i>qty</i>
1	1/1039	setscrew	11	58	36000	nameplate	1
2	1/1061	spring washer	2	59	37706	brush	4
3	1/1063	spring washer	6				
4	1/1072	washer	12	61	34454	chassis	1
5	1/1073	washer	8	62	31115	deflector extension	1
				63	31114	deflector	1
7	1/1094	setscrew	2	64	31188	adjuster plate	1
8	1/1110	setscrew	5	65	31038	brush	1
9	1/1117	setscrew	4	66	36730	LH plate	1
10	1/1119	setscrew	4	67	36731	RH plate	1
11	1/1132	setscrew	2	68	31111	top link	1
12	1/1141	bolt	4	69	36943	guard shield	1
13	1/1161	setscrew	4	70	36941	guard	1
14	1/1178	bolt	2	71	36736	clamp plate washer	1
15	1/1203	countersunk screw	2	72	36737	clamp boss	1
16	1/1218	nyloc nut	7	73	36902	drive shaft	1
17	1/1220	nyloc nut	23	74	30510	PTO	1
18	1/1221	half nut	3	75	34493	hose	2
19	1/1223	nyloc nut	15	76	36939	brush shaft	1
20	1/1228	nyloc nut	4	77	36944	guard stud	2
21	1/1231	nyloc nut	4				
22	1/1621	bolt	1	79	36942	decal	1
23	1/1781	countersunk screw	2	80	4121	decal	1
				81	6966	decal	2
25	1095	setscrew	7	82	8032	bearing	4
26	22009	key	1	83	8123	mudguard washer	5
27	1871	pop rivet	2	84	8134	circlip	4
28	1922	bearing	2	85	22076	adaptor	2
29	1947	grease nipple	2	86	8227	dowty washer	4
30	1951	setscrew	3	87	8326	linch pin	3
31	1974	grub screw	2				
32	22420	wheel & tyre	2	89	8436	locking pin	4
33	20325	adaptor	1	90	8468	plug	2
34	20327	mounting pin	2	91	8608	turnbuckle	1
35	20384	cap head screw	3	92	8617	top link pin	1
36	20540	gearbox	1	93	1493	decal	1
37	20766	q/r coupling	1	94	1948	grease nipple	1
38	20793	tee	1	95	36901	stub shaft cover	1
39	22136	hub	2				
40	21467	bush	2	97	22243	tensioner	1
41	21852	oilite bush	4	98	1/1131	setscrew	1
42	22245	key	2	99	1/1222	half nut	2
43	37095	sprocket	2	100	9159	connecting link	1
				101	35835	end washer	2
45	8007	chain	1	102	1/1062	spring washer	2
46	36940	PTO	1	103	1/1105	setscrew	2
47	36900	drive shaft cover	1	104	8153	grub screw	4
48	31177	cover plate	1				
49	31187	PTO guard	1				
50	3171	rubber U section	1 metre				
51	33306	hose	1				
52	33356	decal	2				
53	24045	decal	1				
54	34052	decal	1				
55	34482	outer drop leg	2				
56	34483	inner drop leg	2				
57	34958	ram	2				

DRIVE TRAIN

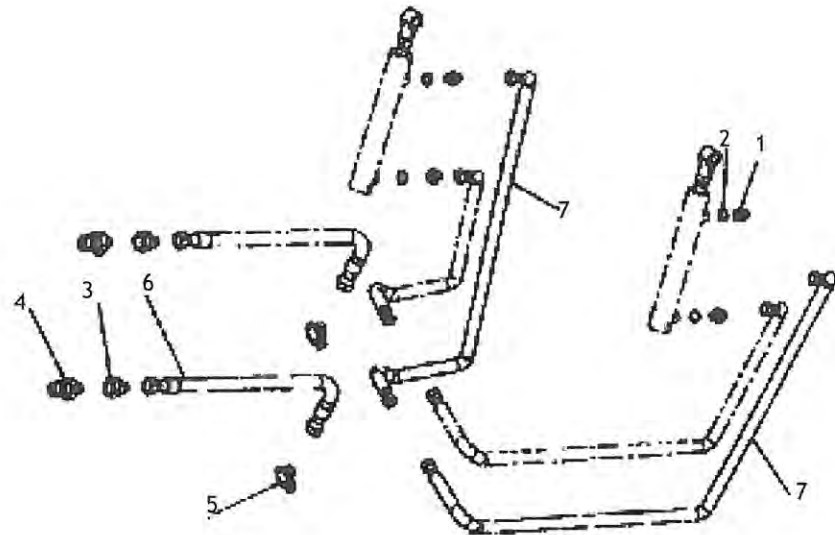


CHASSIS and BRUSH FRAME

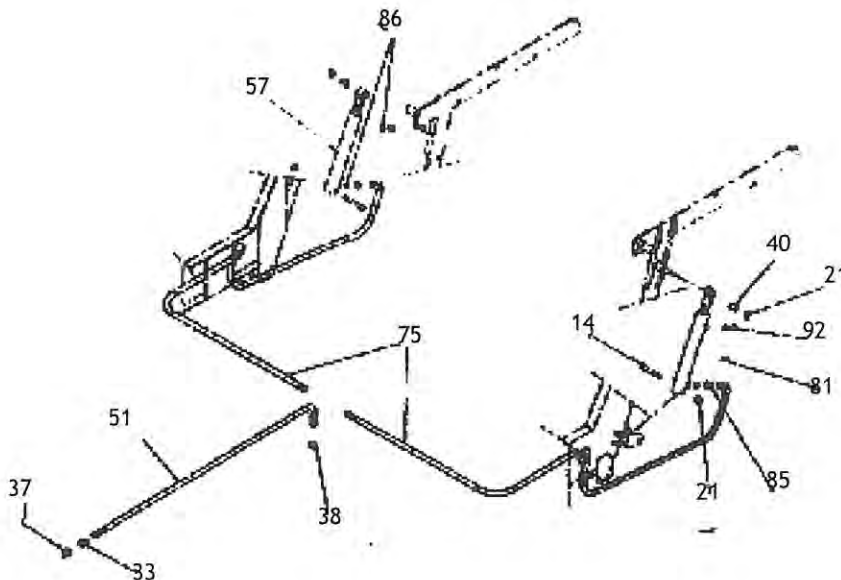


HYDRAULICS DOUBLE ACTION

item	part	description	qty	item	part	description	qty
1	8217	adaptor	2	5	20793	tee	1
2	8227	dowty washer	2	6	33306	hose	1
3	20325	adaptor	1	7	34493	hose	2
4	20766	q/r coupling	1				

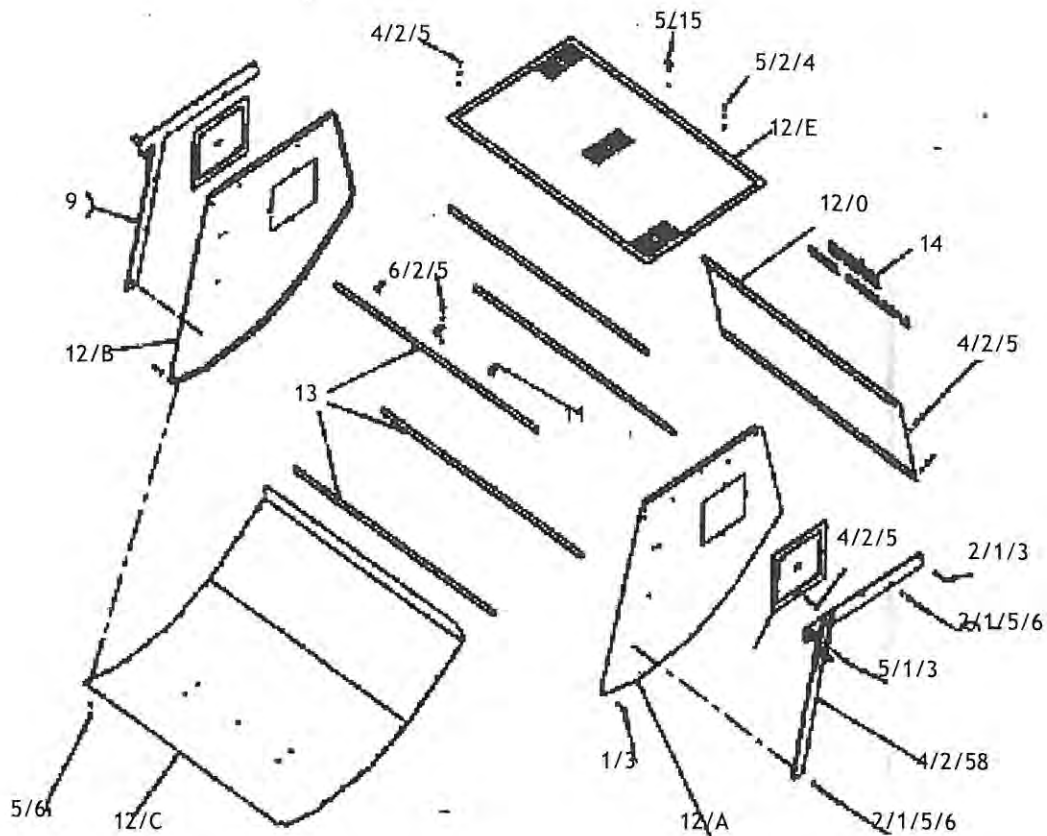


HYDRAULICS SINGLE ACTION



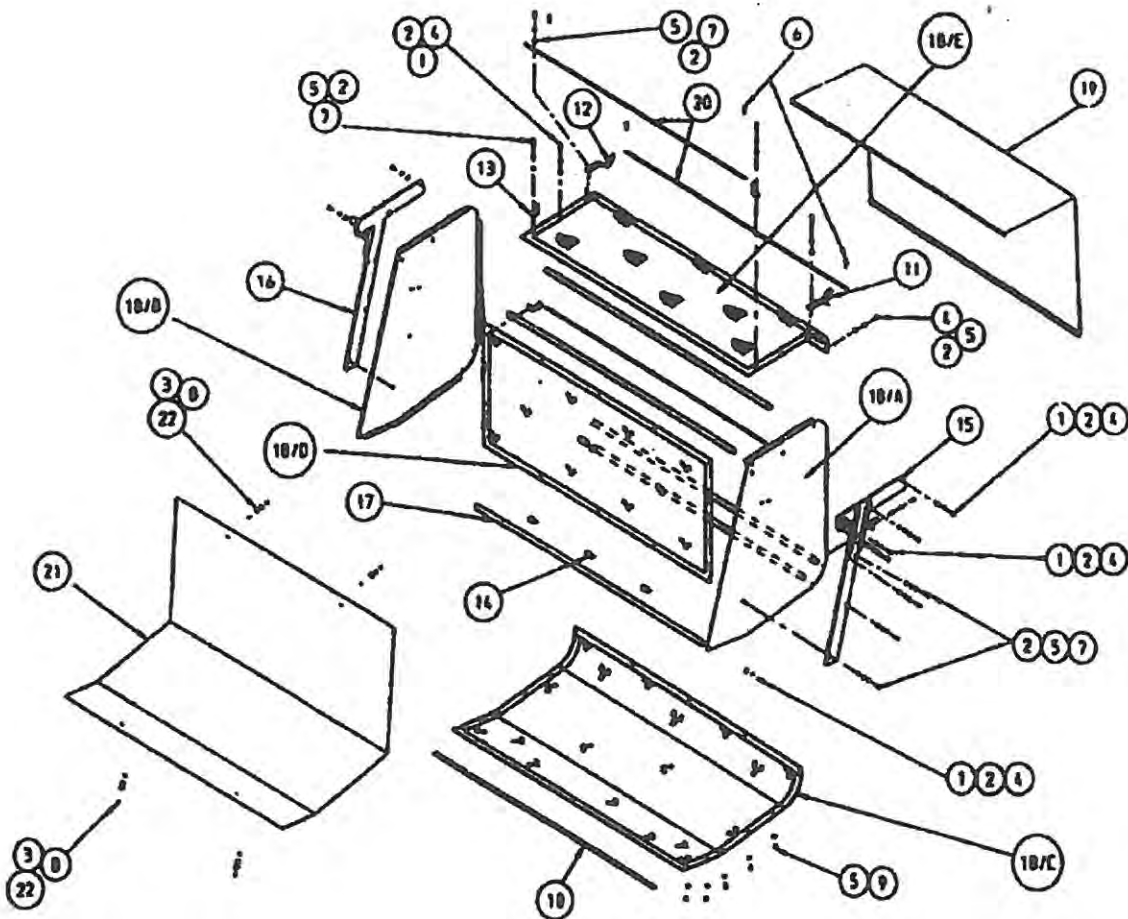
STANDARD HOPPER

item	part	description	qty	item	part	description
1	1/1063	spring washer	10	12	34467	collector assembly
2	1/1073	washer	87	12A	34467/1	LH sideplate
3	1/1117	setscrew	10	12B	34467/2	RH sideplate
4	1/1118	setscrew	29	12C	34467/3	bottom plate
5	1/1223	nyloc nut	70	12D	34467/4	back plate
6	1951	setscrew	19	12E	34467/5	top plate
7	21741	dome hex head	20			
8	34461	LH pivot arm	1			
9	34462	RH pviot arm	1			
10	34494	side panel	2			
11	34534	hook	3			
12	34467	hopper assembly	1			
13	36765	stay bar	5			
14	36789	label	1			
15	HURM217	eye bolt	1			



SAND HOPPER

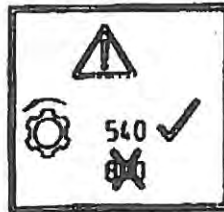
item	part	description	qty	item	part	description
1	1/1063	spring washer	10	18	34927	collector assembly
2	1/1073	washer	48	18A	34921/1	LH sideplate
3	1/1091	setscrew	4	18B	34927/2	Rh sideplate
4	1/1118	setscrew	24	18C	34927/3	bottom plate
5	1/1223	nyloc nut	45	18D	34927/4	back plate
6	1899	R clip	6	18E	34927/5	top plate
7	1951	setscrew	18			
8	21605	wing nut	4			
9	1951	dome head screw	13			
10	3171	U section	1.6 metre			
11	35024	LH roll bracket	1			
12	35025	RH roll bracket	1			
13	35028	bar bracket	4			
14	35030	hook	3			
15	35031	LH pivot arm	1			
16	35302	RH pivot arm	1			
17	34475	bar	5			
18	34927	hopper assembly	1			
19	35027	cover	1			
20	35026	rod	3			
21	35192	insert	1			
22	8303	mudguard washer	8			



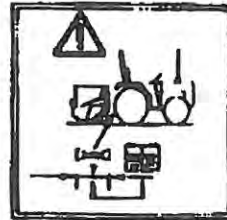
DECALS



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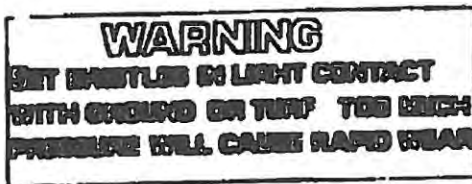
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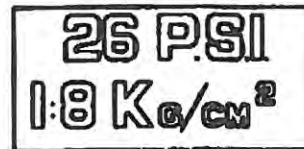
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