

# sisis

World-class turf maintenance equipment

## OPERATING INSTRUCTIONS

### ROTORAKE 602

MACHINE REFERENCE: RR/602

SERIAL NUMBER: .....

CN CODE 8432 2910



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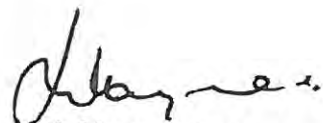
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Company reg no 641526 | Vat No GB 345 9918 12

# EC DECLARATION OF CONFORMITY

We the undersigned

SISIS Equipment (Macclesfield) Limited

Certify that the	Rotorake
Make	SISIS
Type	RR602
Series	1
Conforms to EC Directives and amendments	2006/42/EC
Standard	BS7370
Certificate Number	FS1154

  
J.W. Hargreaves  
Director

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

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

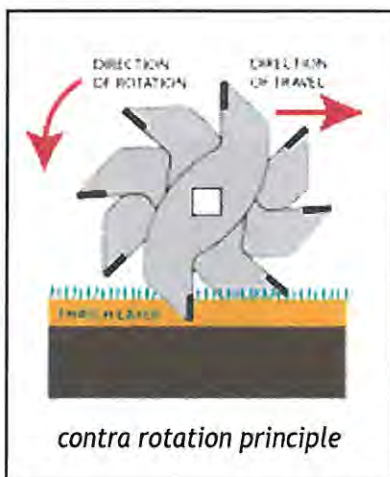
## DESCRIPTION

The name Rotorake has become synonymous with effective thatch removal and control, but the new SISIS ROTORAKE 602 is more than a scarifier.

A superb thatch remover for regular routine use when used at a shallow setting, this powerful, heavy-duty machine also has the capability to work deeper when required. With a maximum working depth of 50mm (2 ins), severe thatch problems, increasingly common with climatic changes and some of the newer species of grasses, can now be controlled. A range of interchangeable blades is available for year-round use.

Even when used at maximum depth the ROTORAKE 602 retains the finesse of the SISIS Auto-Rotorake and leaves a clean cut groove.

The ROTORAKE 602 incorporates the well proven SISIS rotorake contra-rotation principle, whereby the reel rotates at high speed against the direction of travel. The blades therefore cut upwards continuously throwing the thatch forwards rather than pushing it into the surface. The machine is also held to the ground to maintain a regular working depth. The Rotorake 602 also contributes to aeration. The



clean, continuous slits assist water and air absorption through a heavy thatch layer and integration of top dressing is also improved.

Use the SISIS 602 to improve all fine turf areas such as golf greens, bowling greens, cricket squares, lawn tennis courts etc.

The Rotorake 602 can be set up with an integral

seeder attachment, so that it can be used for overseeding worn areas of turf. The RR602S it can perform an overseeding operation using either blades or Rolaspikes reel to create a seed bed, and applying seed at infinitely variable seed rates via the Z-max box.

## FEATURES

Low noise and vibration twin cylinder engine

Scarifies and aerates in one operation

Ability to work at 50mm (2ins) when required

Range of quick interchangeable reels for year round use

Extra durable tungsten carbide tipped blades

600mm (24ins) working width

Quick action lever for height adjustment from working mode to transport

6 speed gearbox to control forward speed. Over centre lever to reel drive with operator presence safety switch

Micro depth adjuster

Front or rear discharge

Easy fit and remove grass collector

Ability to over seed with lateral tine grooves or Rolaspikes reel.

## USING THE ROTORAKE 602

photo 1

Before starting the engine the operator should be familiar with the various control functions.



Before starting the engine ensure that the tines are clear of the ground Photo 1

photo 2

If fitted with seeder ensure seeder drive mechanism is OFF . Photo 2



Move the engine



isolator switch to the ON position. Photo 3.



photo 3  
photo 4

Ensure that the tine drive over entre lever is in the OFF position.

Put the choke (situated at the side of the engine) in the ON position. Photo 4



Move the throttle lever (located on left hand side of the handles) to the half way position. Photo 5



photo 5  
photo 6

Pull the engine recoil starter gently until resistance is felt. Then pull sharply when the engine is running smoothly. Photo 6 Select the required gear on the gear change lever.

The gears are marked R-reverse, N- neutral, 1-2-3-4-5-6, gear 1 being the slowest for-ward and gear 6 the fastest.



Pull the lever on the left hand side of the handles upwards to start moving forwards, whilst holding down the red operator safety control lever, if the operator control lever is released the engine will stop.

Always put the gear lever into the neutral position before releasing the handles.



photo 7

To set the Rotorake 602 to scarify, set the quick set lever to its lowest position, (photo 7) and adjust the micro

adjuster lever until the required depth is achieved. Photo 8



photo 8  
photo 9

The quick set lever can be used to lift the tines out of contact with the turf and return the tines to your preset depth.

The front deflector may be set in several positions to suit conditions and to angle the throw of material in to the grass box. Photo 9



When not using the grass box, the front deflector may be closed and the rear shroud opened to allow the material to be rear ejected for collection.

For light scarifying gears 3/4/5 may be used, but depending on conditions, the deeper you go the lower the forward speed. Again this will depend on ground conditions and operator comfort.



photo 10  
photo 11

The grass box frame may be removed when it is not required



photo 12

Remove the pins on either side of the frame and withdraw the frame from its sockets.



Photos 10, 11, 12



**ROTORAKE 602 SEEDER**

If your Rotorake 602 is fitted with the seeder set the tines to the required depth (a maximum of 20m) and set the lever box to the required amount of seed (photo 13) output and lock the lever by turning the red knob (photo 14) to the lock position. The seed is only distributed



photo 13  
photo 14

when the tines are powered so that at the end of a run the tine drive is turned off so that seed is not distributed whilst turning or transporting.



You may also fit the Rolaspik if you require seed into holes rather than linear slits.

**CHANGING REELS**

The Rotorake 602 has a quick change reel system.

Undo the 3 nuts (13mm spanner) on the bearing at the end of the reel shaft and slide the reels across so that it drops out of its square drive socket. This is always done with the reel shaft clear of the ground.

Caution should be taken when handling reel shafts and Rolaspik reel as the tines will be sharp. It is advisable to wear protective gloves.

Replace the reel in the same way ensuring that the square end is securely located in the socket drive and the bearing bolts are securely re-tightened.

When fitting new blades onto a shaft always ensure that the blades are fitted in the correct rotation (take note how blades are fitted before removing from shaft).

**OPTIONAL INTERCHANGEABLE REELS****THATCH REMOVAL REEL FS1155**

Fitted as standard. Reel of 23 x 2mm heavy-duty thatch removal blades (ref F36560) with 25mm long tungsten tips. The spacing between the blades is 24mm, but variable in increments of 6mm by varying the number of rubber spacers.

**ROLASPIKE REEL FS1158**

Light surface spiker penetrating to a depth of 10mm-25mm. Used to assist in the absorption of water, air and nutrients and ideal prior to fertilising and seeding

**BRUSH REEL FS1157**

Spiral brush for grooming and collecting debris from the surface. Can also be used to raise the grass blades prior to mowing, or for removing sand splash around bunkers.

**SYNTHETIC BRUSH REEL FS 1175**

Stiff bristled brush for grooming synthetic surfaces.

**FAZE-MO REEL FS37536**

Set of 11 blades. Use to control grasses and weeds without the need of pesticides.



**SAFETY NOTES****CAUTION**

This machine is designed to be used ONLY for the scarification or aeration of turf

**NEVER**

Allow any untrained or unauthorised person to use this equipment

**ALWAYS**

use manufacturers genuine guaranteed spare parts and tines. The manufacturer cannot be held responsible for injury or damage caused by non genuine parts.

**EYE PROTECTION**

In dusty, dry or windy conditions it may be necessary to wear eye protection to protect your eyes from flying debris.

The C.E. certificate, working instructions and Warranty ONLY apply to parts supplied by SISIS EQUIPMENT (Macclesfield) LIMITED

If you would like technical advice your SISIS Territory Manager

will be pleased to help, please contact SISIS on  
Tel 01625 503030 Fax 01625 427426 Email  
info@sisis.com  
Web www.sisis.com

Hire purchase, leasing and rental packages are available.

National and international spares and service network.

**SPECIFICATION**

Model reference	RR/602	FS1154
Fitted with Seeder	RR/602S	FS1125
Overall width	87cm	34ins
Working width	60cm	24ins
Length (exc. collector box)	170cm	66ins
Height	102cm	40ins
Weight (excl. seeder)	190kg	418lbs
Weight (inc. seeder)	195kg	430lbs
Engine (B&S) twin petrol	9.6kw	14hp
Wheel/tyre	16 x 6.8	
Approx ground coverage		
(light/medium scarification)	1250m <sup>2</sup> /hr	1500yds <sup>2</sup> /hr
(deep scarification)	750m <sup>2</sup> /hr	900yds <sup>2</sup> /hr



**TINE REEL COMPRESSION TOOL**

The Tine Reel Compression Tool has been designed to make changing the blades on SISIS scarifiers easier. It can be used on all SISIS scarifiers



**SISIS ROTORAKE 602**

1 Remove the worn reel from the machine



2 Remove split pin from square end of shaft and save



3 Remove square bore washer and save

4 Remove old blades and rubber spacers, noting direction of rotation of blades on the shaft (refer to Working Instruction Manual)

5 Rebuild reel using new SISIS blades ensuring you have used the correct number of blades and spacers. (Refer to Working Instruction Manual)



6 Replace square bore washer. Place the Tine Reel Compression Tool over the end of the tine shaft ensuring split pin holes are clear.

7 With the Allen key provided tighten the 2 short screws on to



the shaft



8 Use the Allen key to wind down the 2 long screws until they are in contact with square bore washer.



9 Wind each long screw two or three turns, until the split pin hole appears.



10 Refit split pin and remove compression tool

To order a SISIS Tine Reel Compression Tool, please call the SISIS Sales Dept on 01625 503030, quoting Model Ref: TRCT (FS966)



# PARTS LIST & DRAWINGS

## ROTORAKE 602

MACHINE REFERENCE

RR/602

SERIAL NUMBER

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CN CODE

8432 2910

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SPARES HOTLINE 01625 503030

Website [www.sisis.com](http://www.sisis.com)

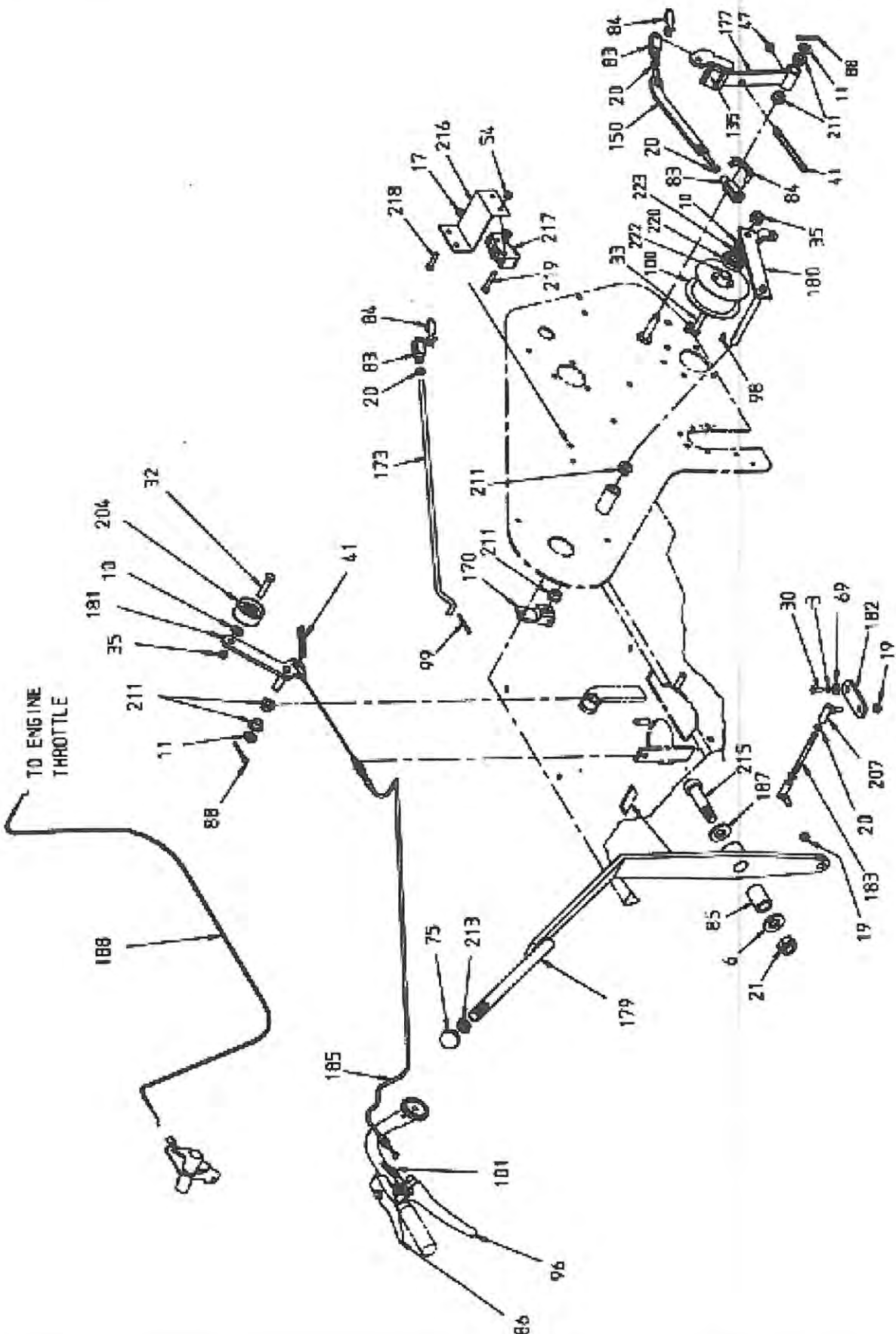


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1	1/1039	setscrew	17	57	20491	handle	2
2	1/1060	spring washer	15	58	20527	angle gearbox	1
3	1/1061	spring washer	8	59	20558	woodruff key	1
4	1/1062	spring washer	5	60	20802	spring washer	4
5	1/1063	spring washer	3	61	21739	rubber bobbin	1
6	1/1065	spring washer	10	62	21440	A section belt	1
7	1/1070	washer	13	63	21063	knob	2
8	1/1071	washer	4	64	21064	rod end	1
9	1/1072	washer	14	65	21150	bearing	3
10	1/1073	washer	6	66	21232	oilite bush	1
11	1/1076	washer	7	67	21279	cap head screw	2
12	1/1082	heavy washer	2	68	1938	grub screw	4
13	1/1094	setscrew	3	69	21552	mud washer	1
14	1/1096	setscrew	4	70	21607	indexing pin	2
15	1/1105	setscrew	7	71	21629	transaxle	1
16	1/1154	setscrew	9	72	21717	plug	2
17	1/1217	nyloc nut	37	73	21722	E clip	2
18	1/1218	nyloc nut	13	74	22412	engine	1
19	1/1220	nyloc nut	39	75	21772	knob	1
20	1/1221	lock nut	12	76	21779	timing belt	1
21	1/1223	nyloc nut	12	77	21780	pulley	1
22	1/1227	lock nut	1	78	21781	pulley	1
23	1/1228	nyloc nut	9	79	21782	nylon washer	2
24	1/1422	setscrew	1	80	21784	key	2
25	1/1669	cap head screw	4	81	22418	bearing	2
26	1/1671	setscrew	1	82	21872	bearing	1
27	1002	woodruff key	1	83	21463	clevis	4
28	1013	key	2	84	21464	clevis pin	4
29	1/1230	lock nut	1	85	8484	oilite bush	1
30	1239	setscrew	1	86	21905	deadmans lever	1
31	1249	setscrew	1	87	21922	rubber mount	4
32	1250	setscrew	1	88	21970	spit pin	4
33	1/11667	bolt	1	89	21974	dome head screw	4
34	1257	bolt	1	90	21986	sel loc pin	2
35	1290	nyloc nut	3	91	22016	zeromax gearbox	1
36	1356	cable tie	10	92	22026	but head screw	17
37	22238	key switch	1	93	22062	grub screw	7
38	1423	mud washer	4	94	22096	button head screw	4
39	1493	inspection ticket	1	95	22103	button head screw	10
40	1601	woodruff key	1	96	22281	drive lever	1
41	1792	spring	2	97	22336	indexing plunger	1
42	22001	cap head setscrew	1	98	22421	woodruff key	1
43	1871	pop rivet	2	99	1040	split pin	2
44	22391	hand knob	1	100	36506	tension roller	1
45	1879	hand knob	1	101	22341	switch grey button	1
46	1933	key	1	102	22343	wheel drive belt	1
47	1947	grease nipple	5	103	22344	A section belt	2
48	1949	setscrew	8	104	22345	chain and split link	1
49	1951	setscrew	4	105	22346	chain and split link	1
50	1952	setscrew	1	106	3051	square washer	2
51	20049	knob	2	107	30716	seeder gear	23
52	1989	grub screw	9	108	30718	seeder spacer	22
53	20016	cable splice	1	109	3171	rubber section	4 mtr
54	20431	nyloc	2	110	34003	warning label	2
55	20171	wheel	2	111	35773	hub	2
56	20189	bearing	2	112	37704	scraper	2

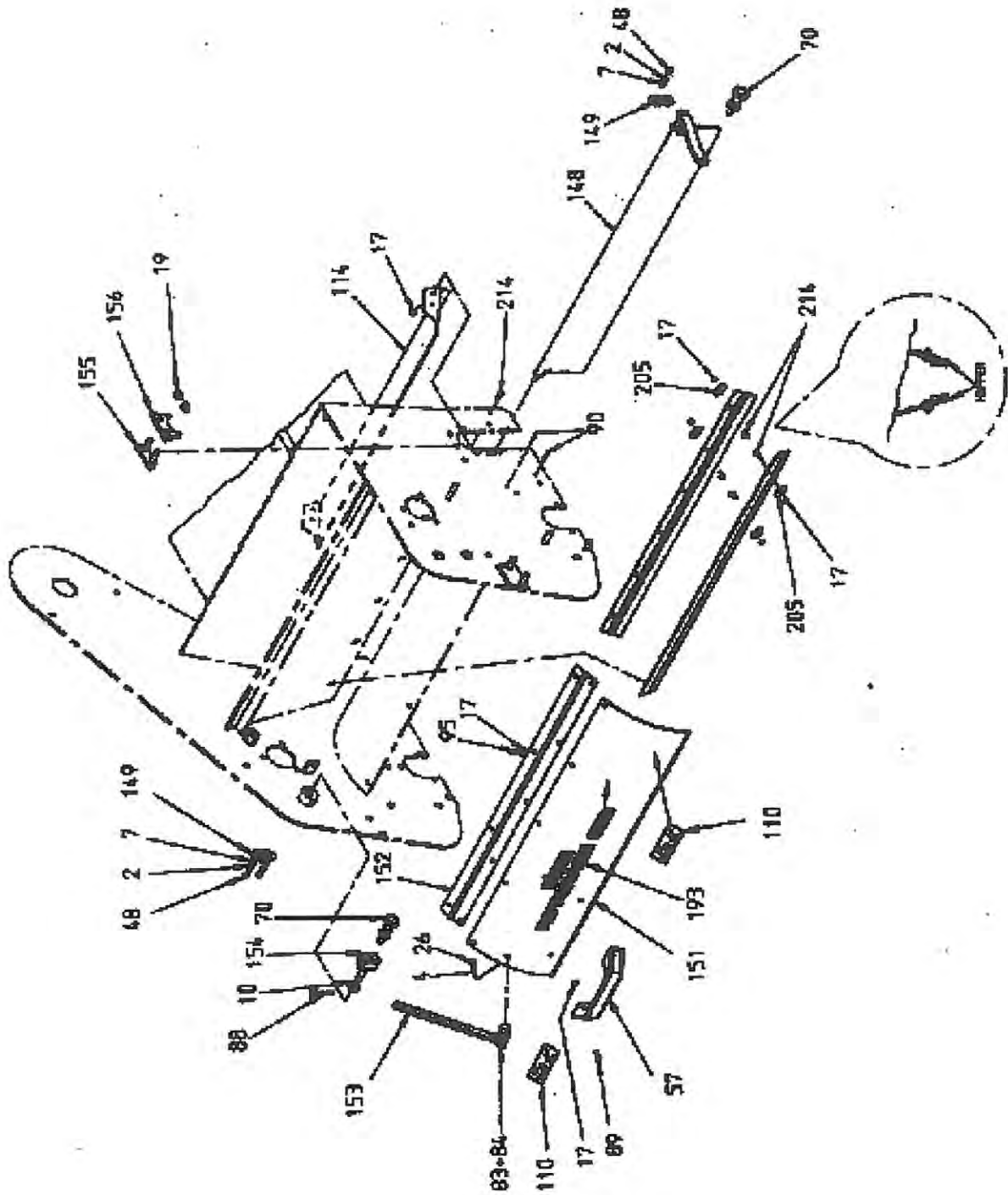
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113	37705	baffle	1	169	37439	inside guard	1
114	37708	box support	1	170	37715	lever	1
115	35993	SISIS decal	1	171	37441	layshaft guard	1
116	36000	name plate	1	172	37442	hopper cover	1
117	36029	pulley	1	173	37726	pull rod	1
118	36030	pulley	1	174	37444	guard support long	5
119	36032	pulley	2	175	37445	guard support seeder	3
120	36106	tine	23	176	37446	lower handle	1
121	36143	spacer	2	177	37449	brake lever	1
122	36147	offset ferrule	1	178	1/1796	bolt	4
123	36169	spacer	2	179	37451	gear lever	1
124	36235	rubber spacer	44	180	37714	pivot arm	1
125	37724	angle bracket	1	181	37453	engine drive arm	1
126	36639	LH upper handle	1	182	37454	gear shift lever	1
127	36640	RH upper handle	1	183	37455	tie rod	1
128	37718	handle shroud	1	184	37728	over centre lever	1
129	37376	choke label	1	185	37457	drive cable	1
130	37400	chassis	1	186	37729	clutch lever	1
131	37401	sprocket	1	187	1/1078	HP washer	1
132	37402	sprocket	1	188	37460	throttle cable	1
133	37403	sprocket	1	189	37461	dead mans stop	1
134	37404	sprocket	1	190	37808	lever	1
135	37405	brake pad	1	191	37463	earth wire	1
136	37406	engine base plate	1	192	37464	chassis earth wire	1
137	37407	end spacer	1	193	37465	machine decal	2
138	37408	threaded spacer	1	194	37466	seed decal	1
139	37409	seeder shaft	1	195	5622	split pin	2
140	37410	tine shaft	1	196	8030	key	1
141	37411	pulley	1	197	8067	grub screw	4
142	37412	pulley	1	198	8068	grub screw	4
143	37413	drive shaft extension	1	199	8123	washer	1
144	37414	layshaft	1	200	8164	setscrew	1
145	37415	tensioner	1	201	8168	key	2
146	37416	tensioner block	1	202	8189	circlip	1
147	37417	belt guide	2	203	8256	hand grip	2
148	37418	curved deflector	1	204	8295	idler pulley	2
149	37419	flap mount	2	205	8303	washer	12
150	37725	push rod	1	206	8360	wheel nut	8
151	37421	front flap	1	207	8485	ball joint	2
152	37422	hinge drilling	2	208	8493	key	1
153	37423	indexing bar	1	209	8638	dome nut	8
154	37424	swivel bracket	1	210	8736	full nut	4
155	37425	seal plate	2	211	8803	flanged bush	6
156	37426	side seal	2	212	HUEO-004-82	cable clip	3
157	37427	hopper brush	2	213	1/1222	half nut	1
158	37684	bearing housing	1	214	22104	button head screw	16
159	37685	stud shaft	1	215	HUFSE860	shoulder bolt	1
160	37430	roller	1	216	37806	switch mount	1
161	37431	RH roller arm	1	217	21748	micro switch	1
162	37432	LH roller arm	1	218	1/1092	setscrew	2
163	37433	scraper rod	1	219	21803	setscrew	2
164	37434	adjusting rod	1	220	8173	bearing	2
165	37435	swivel	1	221	37861	cover	1
166	37436	indexing arm	1	222	38015	bearing spacer	1
167	37437	seeder drive guard	1	223	20452	washer	1
168	37438	RH drive guard	1				



CONTROLS

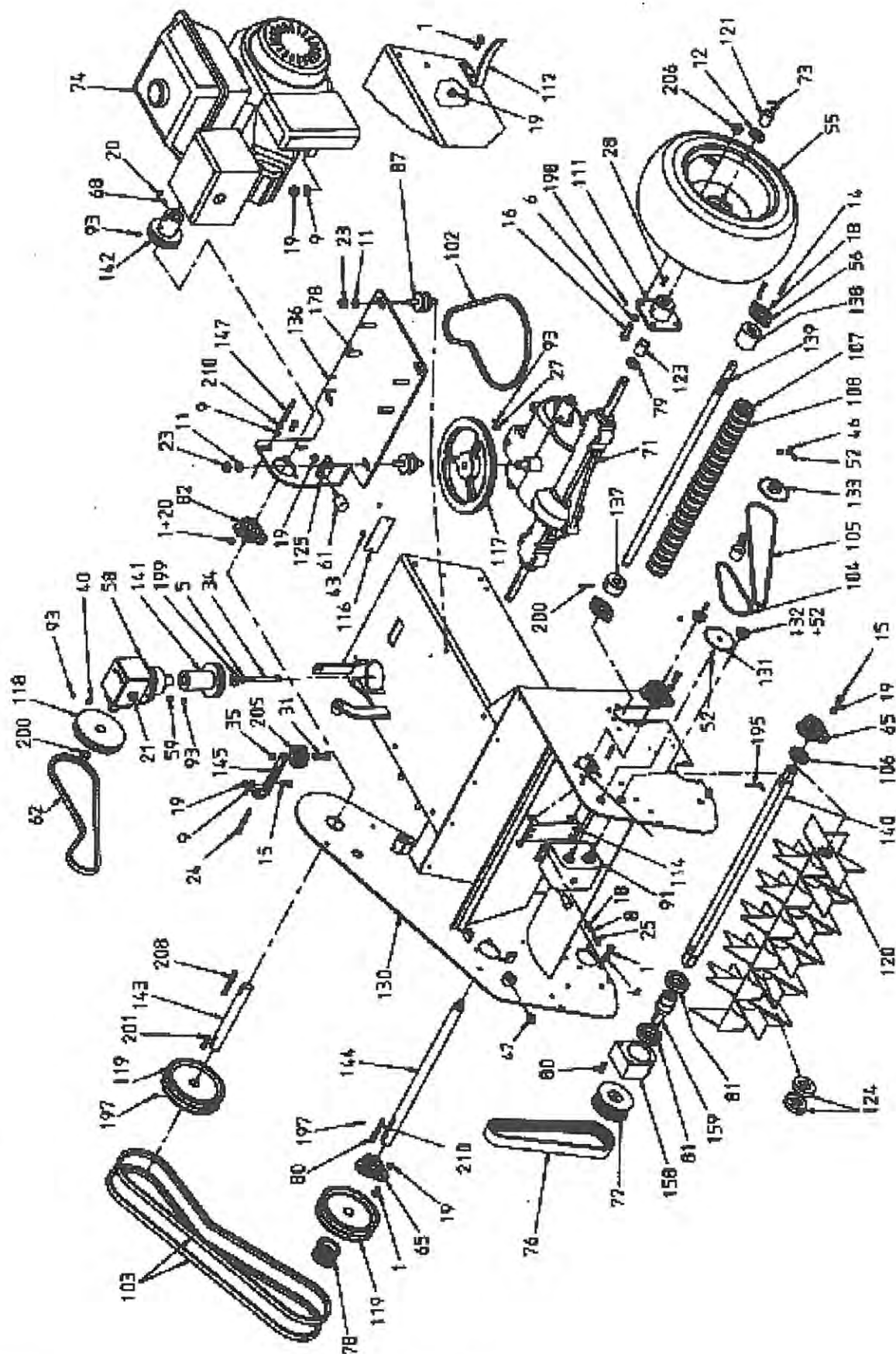


DEFLECTORS

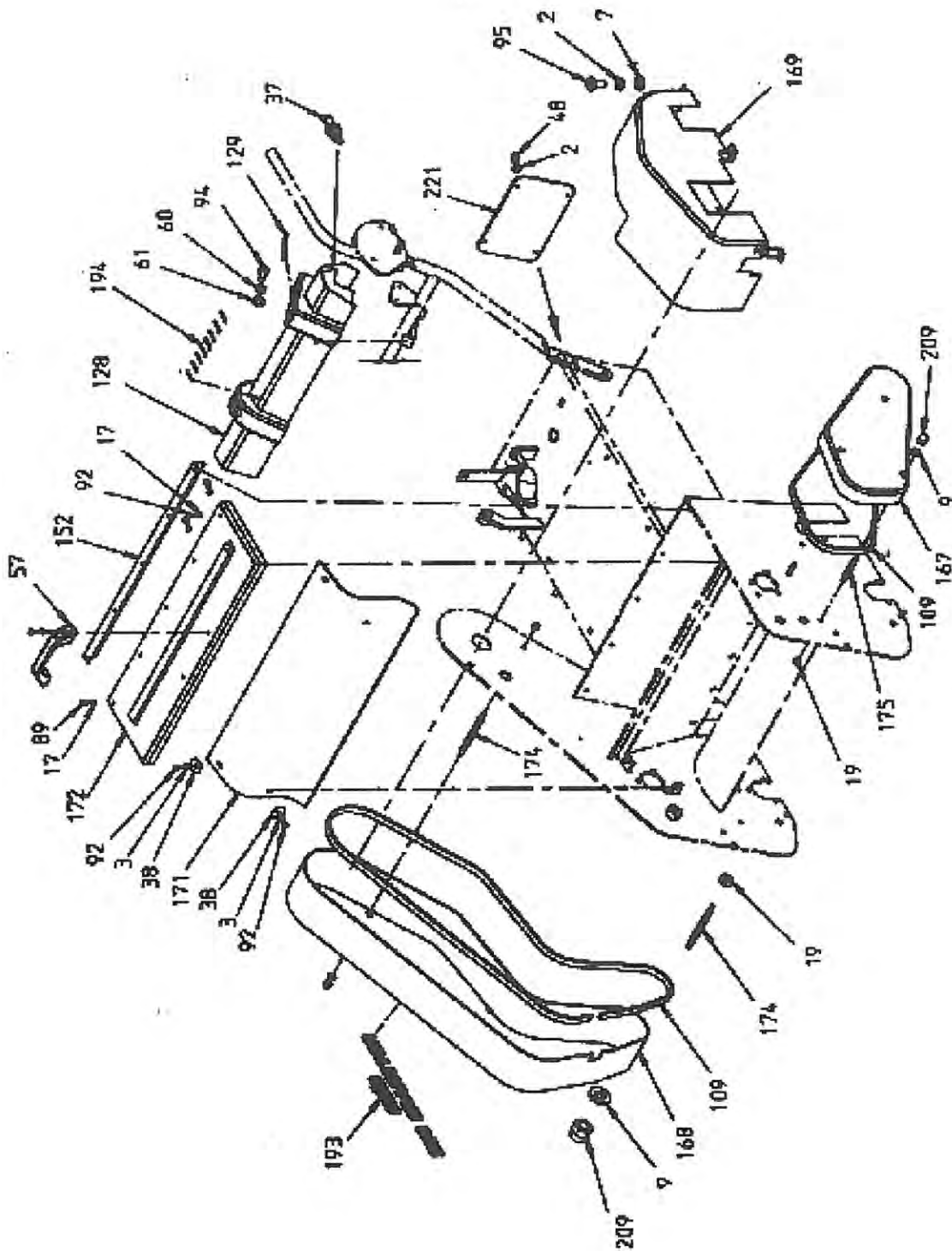




DRIVE

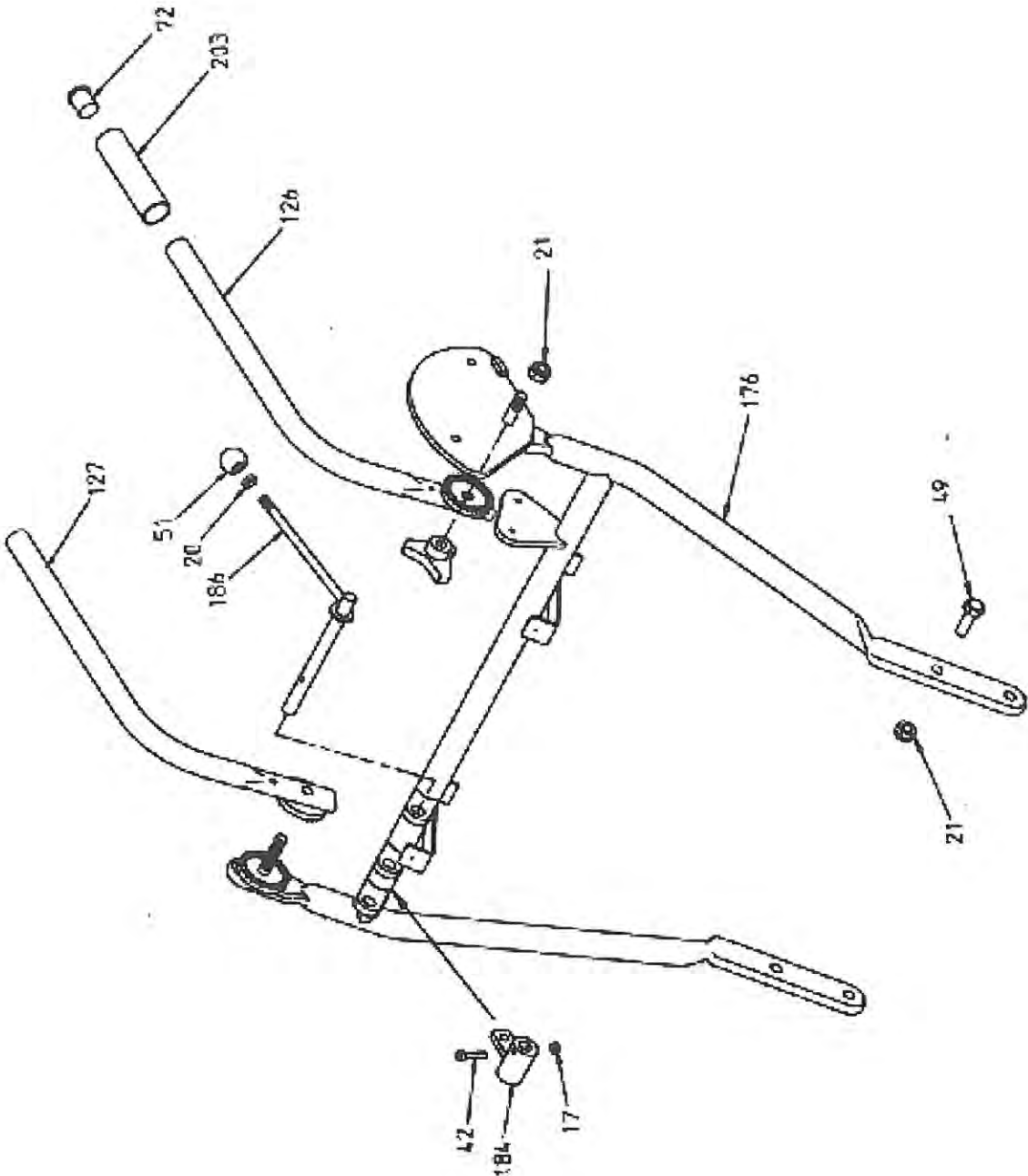


GUARDS

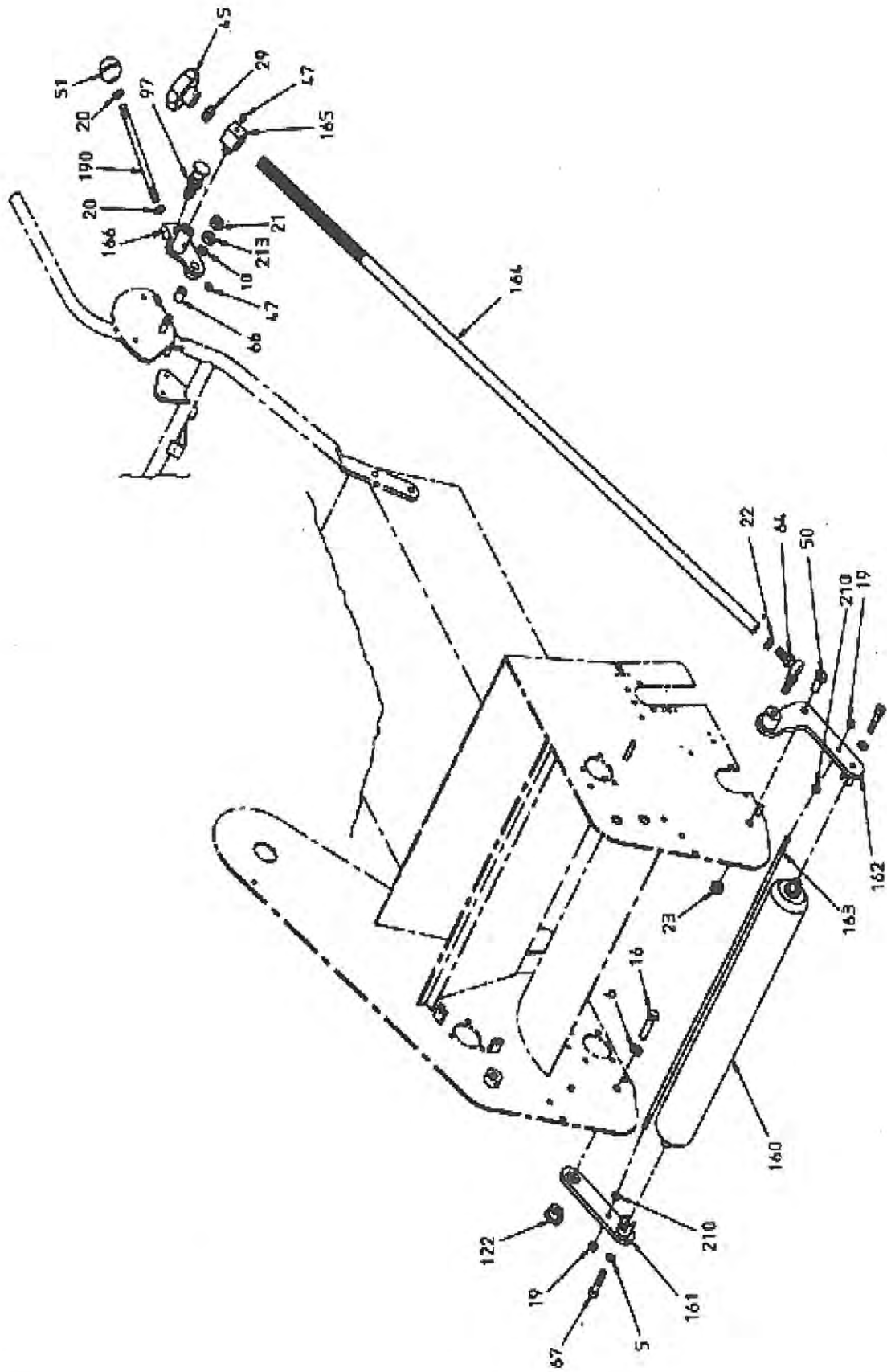




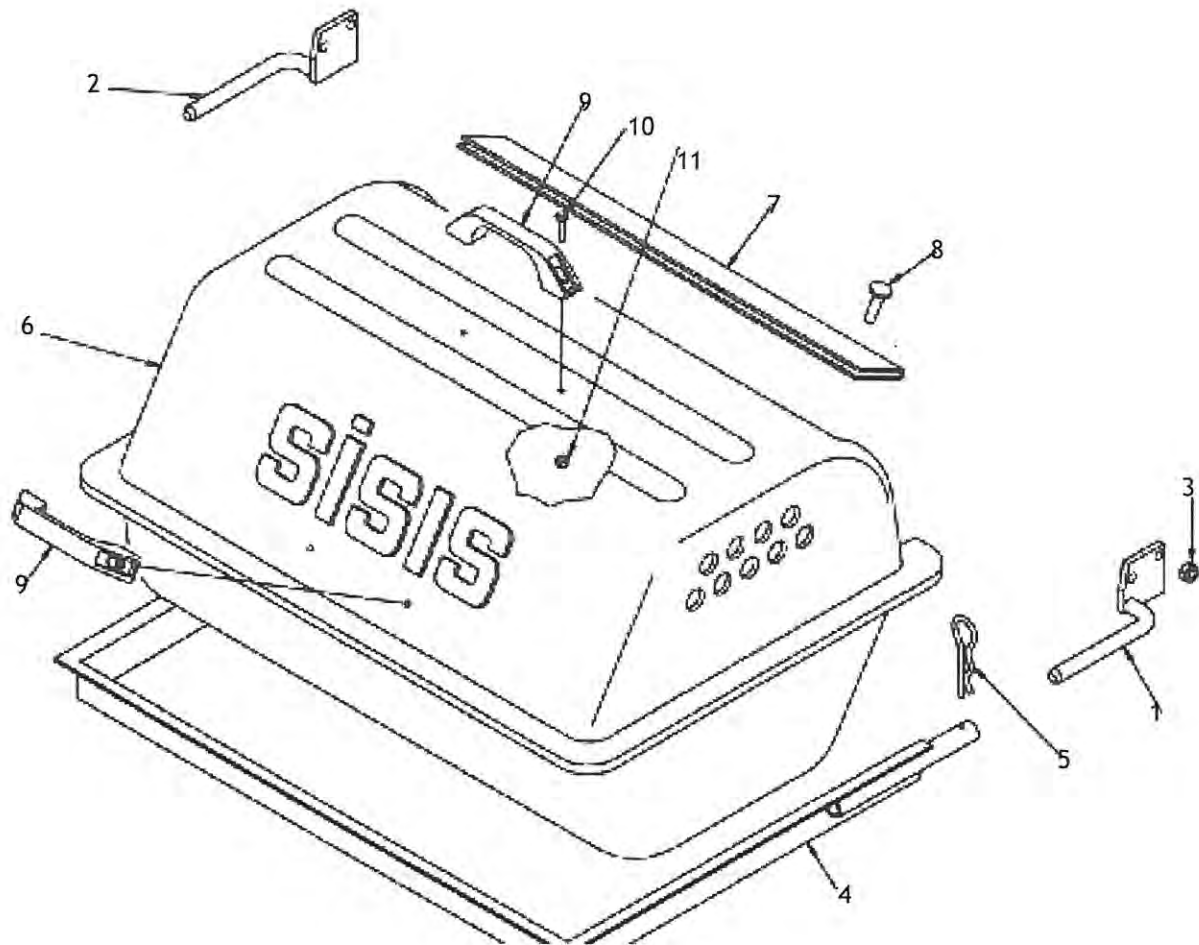
HANDLES



ROLLER

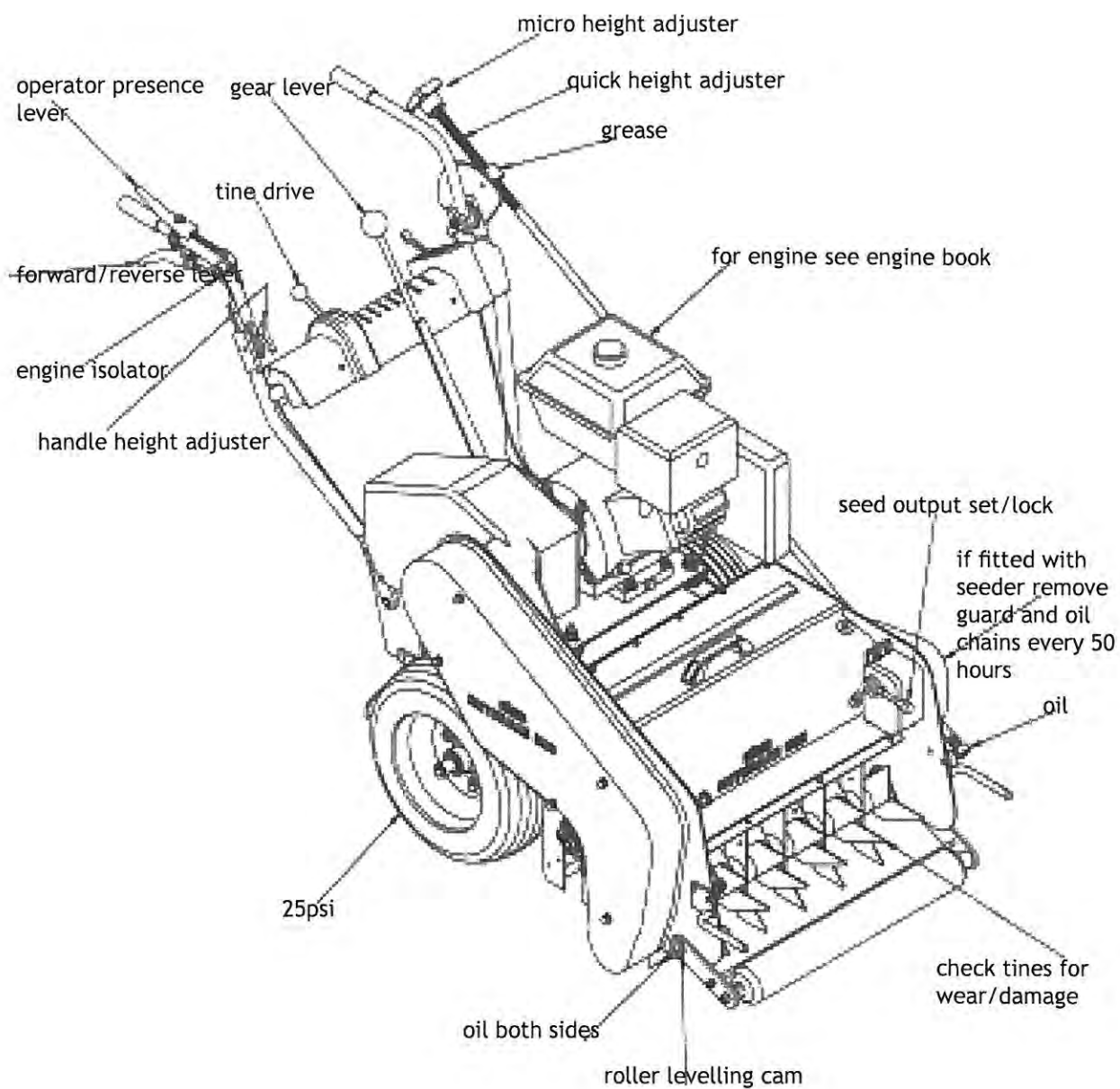


GRASSBOX

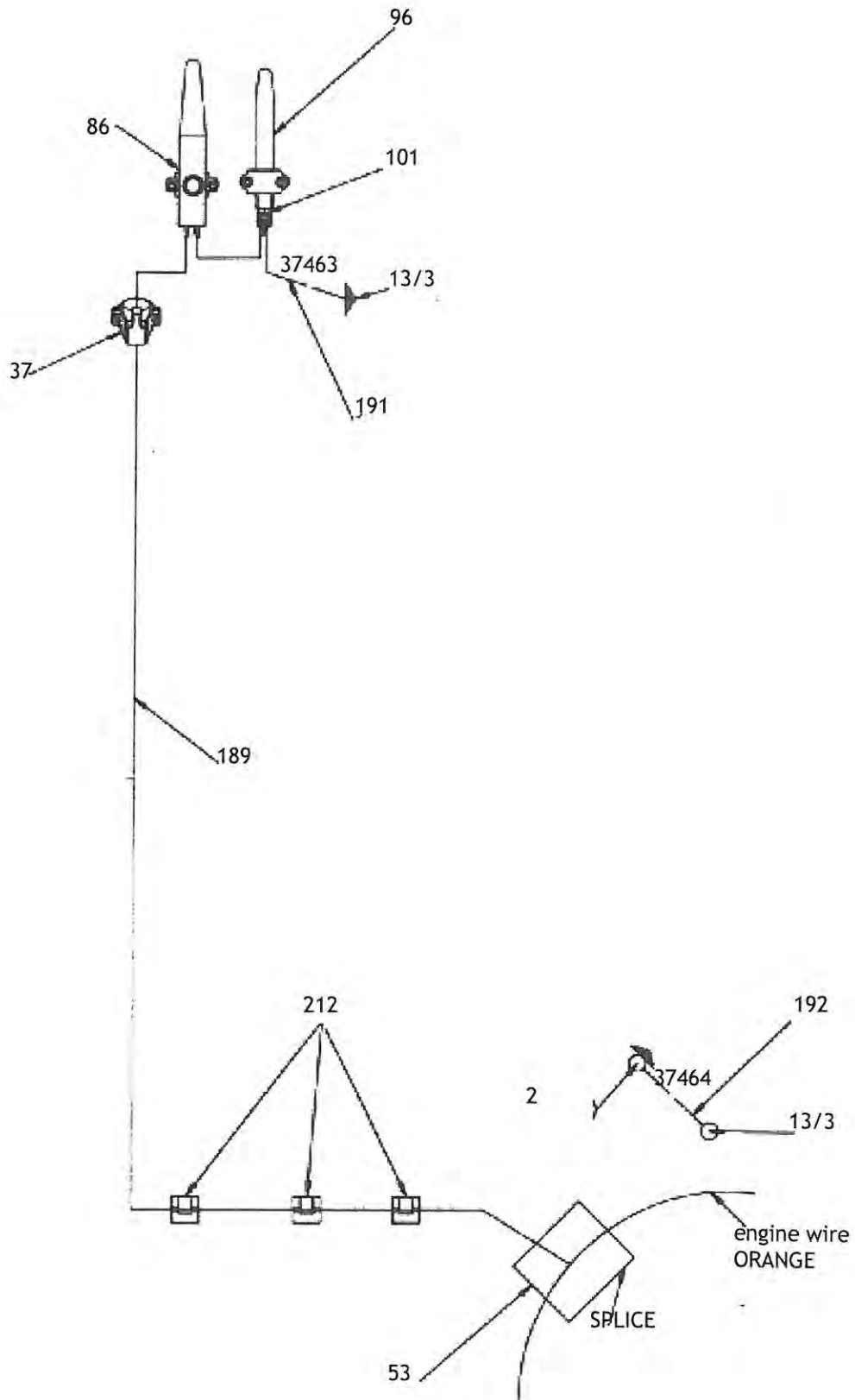


item	part	description	qty	item	part	description	qty
1	37833	frame mount LH	1	7	37790	edging strip	2
2	37832	frame mount RH	1	8	20997	pop rivet	8
3	1/1223	nut	4	9	20491	handle	2
4	37795	grassbox frame	1	10	21149	setscrew	4
5	22465	R clip	2	11	1/1217	nut	4
6	37713	grassbox	1				





ELECTRICS



## NOISE MEASUREMENT REPORT

Sound Power Level Measured	103
Sound Pressure at Operator's ear	89

## VIBRATION LEVELS

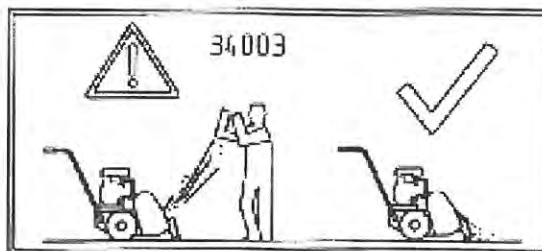
Right Hand	2.8 ms <sup>2</sup>
Left Hand	2.0 ms <sup>2</sup>



DECALS



No 1493



No 34003

**sisis**

No 35993



No 36000

**sisis**  
**ROTORAKE 600 MK2**

No 37465

**R N 1 2 3 4 5 6**  
**| | | | | | | |**

No 37466

