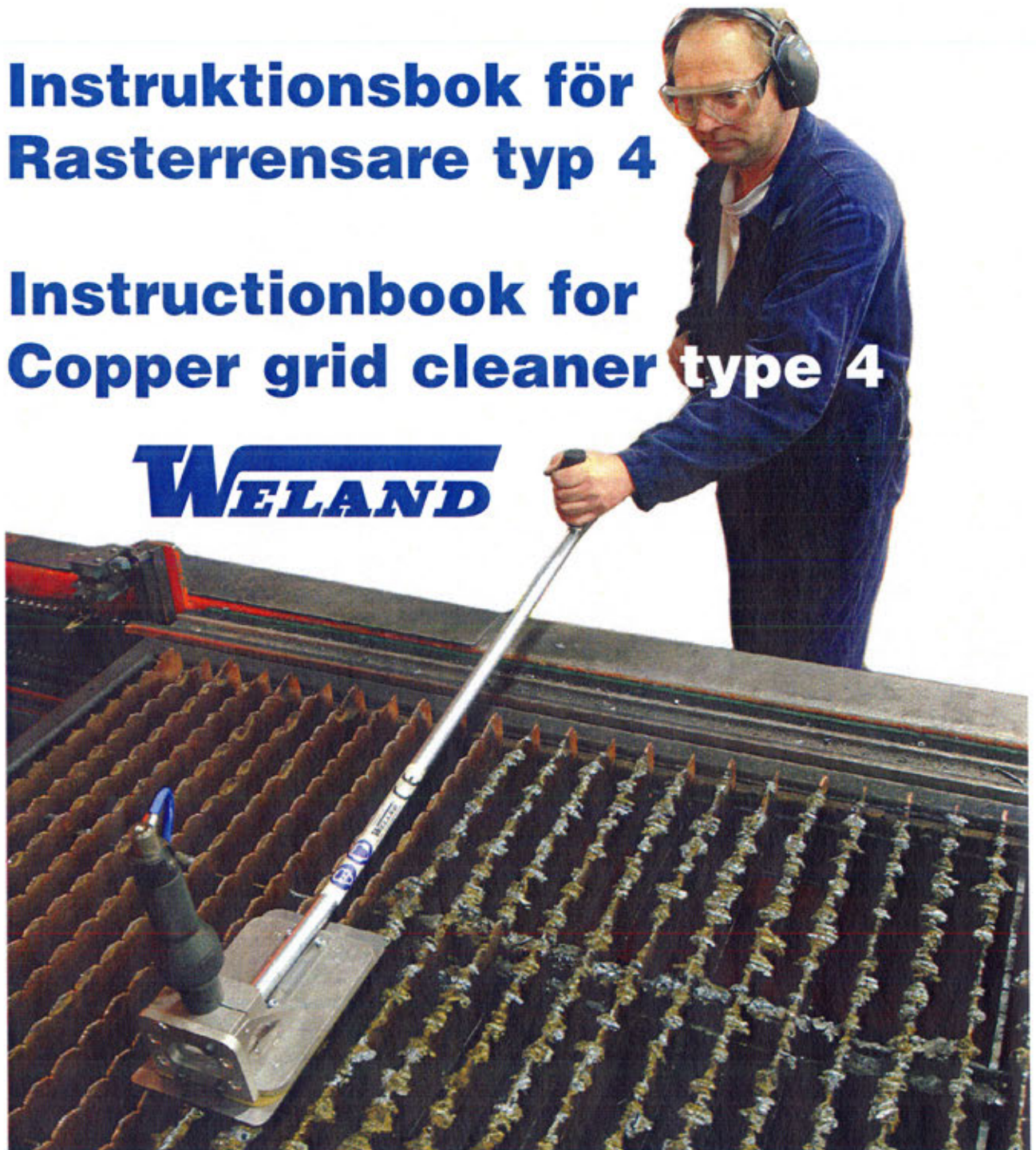


# Instruktionsbok för Rasterrensare typ 4

# Instructionbook for Copper grid cleaner type 4

**WELAND**



Raster med slagg  
Copper grid with slag



Rensning pågår  
Cleansing



Rensat raster  
Cleansed copper grid

## Cutting Grid Cleaner

### Technical data

<b>Type</b>	<b>Cutting Grid Cleaner Type 4</b>
<b>Engine No</b>	<b>8097, Pat. # 0203315-5</b>
<b>Manufacturing No</b>	_____
Working Medium	Dry and clean compressed air
Working pressure	6 bar = 600 kPa (6 kgf / cm <sup>2</sup> )
Air consumption	
Idling approximately	8 l / s
Rec. Min. hose size min.	6.3mm (1 / 4")
Connection	1 / 4 ° BSP
Frequency approximately	120 Hz
Vibration level:	Below 2.5 m / s <sup>2</sup>
Noise Level:	82 dBA
Weight:	6 Kg

### **General description**

Simple and easy to use cleaner for profile cutting machines, where slag build up on the cutting grids must be removed. Used along the length of the cutting grids it is an ideal preventative maintenance tool.

Suitable for cutting grids up to 3mm thick.  
(For larger sizes, contact Weland AB)

The machine is equipped with cleaning function.

### **NOTE:**

**IMPORTANT!** Please read the instructions book before the machine is used.

**WARNING!** - The machine can be hazardous to work with if the instructions on care not strictly adhered to.

Ear ad Eye protection must be used when operating the grid cutting machine.

**EC declaration of conformity according to EC Machinery  
Directive 2006/42/EC, Section 2A**

We  
Weland AB  
Smedjegatan 8  
33 328 Smålandsstenar.  
Sweden

Declare under sole responsibility that the product: Cutting Grid Cleaner  
With machine code: 8097

Type of equipment Air pressure cutting grid cleaner for laser machines.  
Model. Typ4  
Machine No. 8097  
Machine Name Cutting Grid Cleaner

Is manufactured in conformity with Council Directive relating to machinery, 2006/42/EC  
with special reference to the section 1 of the essential health and safety in the design of  
machines.

The following corresponding standards  
EN ISO 14 121 Safety of machinery - Principles for risk assessment.  
EN ISO 12100-1 Safety of machinery - Basic terminology, methodology.  
EN ISO 12100-2 Safety of machinery - Technical principles.

Smålandsstenar 2010-08-19

Weland AB



Jonas Welandsson  
CEO

## User Instructions.

### Connection.

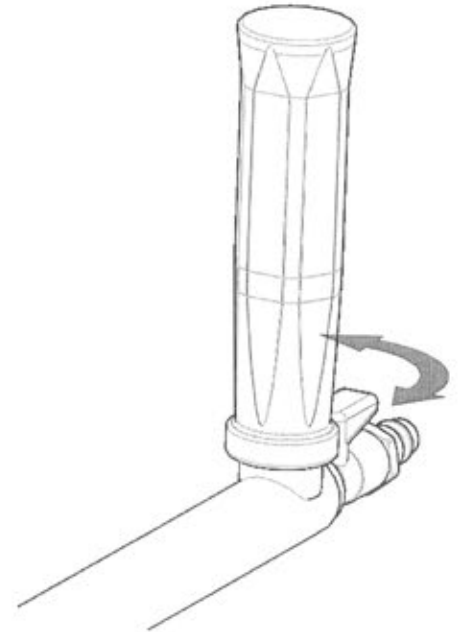
The machine is connected with 3/8" tubing - the appropriate length to suit existing compressed air network.  
The hose is connected on the handle end (at the tap) with a 1/4" nipple.

### ON/OFF

Place the machine over the cutting grid and turn the tap to the on position.

The machine should NOT be idled unnecessarily.

To temporarily stop and when not in use, the machine should be depressurized by turning the tap to the OFF position (tap pointing along the length of the tube) or the air should be disconnected.



### Operation

The machine fork must be placed over a cutting grid, and then moved backwards and forwards until all the slag is clear. When current cutting grid is clear move along to the next until all cutting beds are clear.

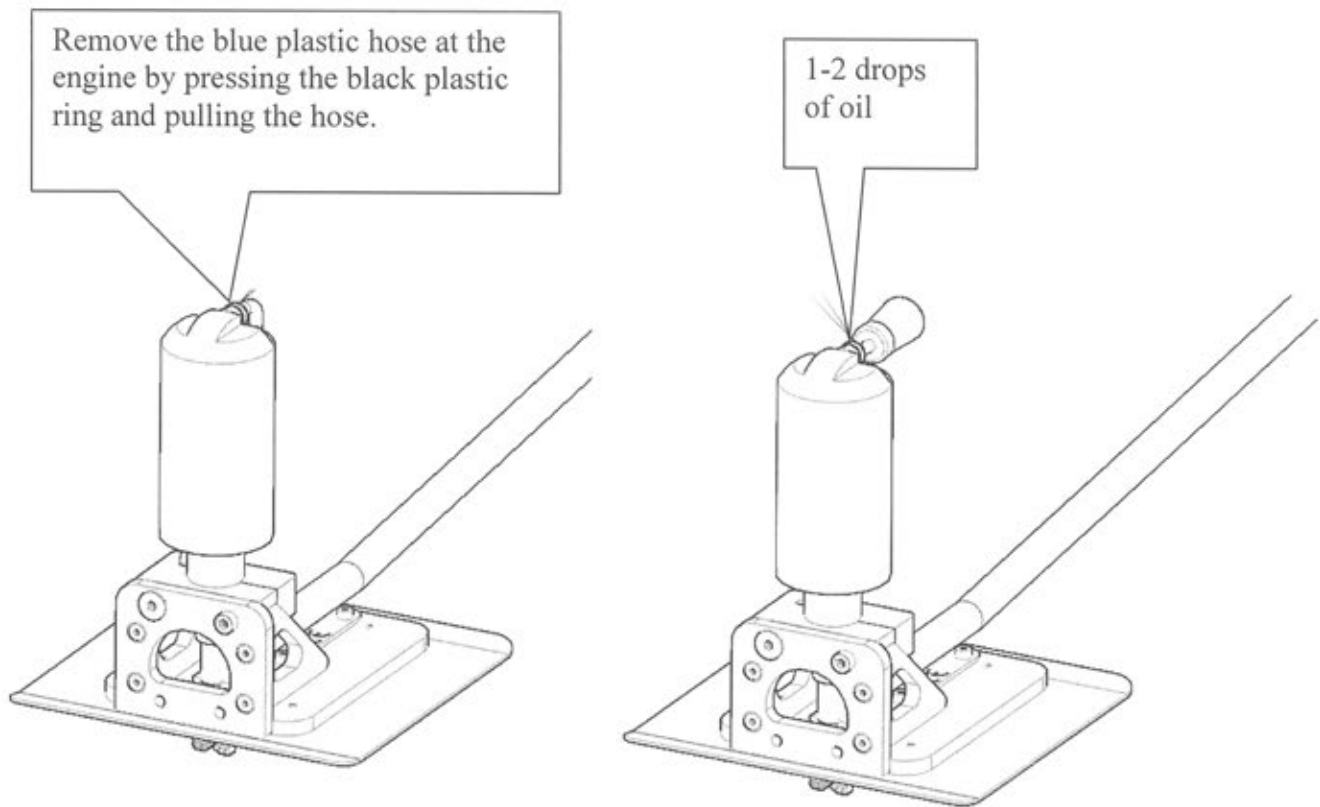
Be careful! Do not push or ram the machine onto the cutting grid. The machine will clean by moving forward or backwards along the cutting grid - do not force by pulling faster than is needed to travel.

## Maintenance Instructions

**IMPORTANT!** Before repairs or service begins, make sure that machine is NOT connected to the air pressure system. Repairs or service must never be started with the machine running or when a risk of harm exists.

### *Lubrication*

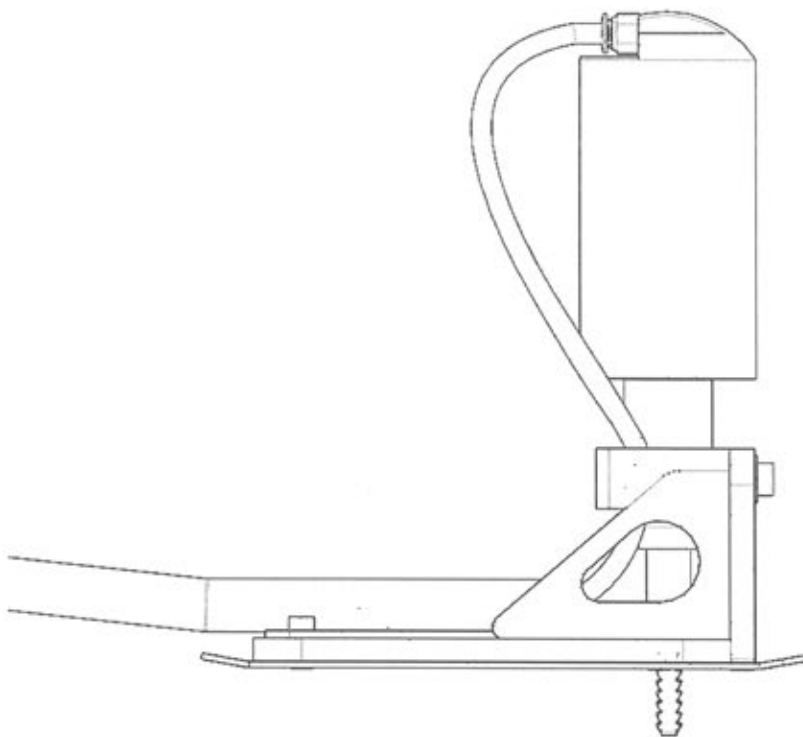
The motor must be lubricated after approximately 8 hours of operation. Remove the blue plastic hose at the engine by pressing the black plastic ring and pulling the hose. Pour 1-2 drops of good quality hydraulic oil into the clutch, re attach hose into the connector and test.



## Control of the fork.

The fork should always be free in its guide. This can easily be checked by shutting off the air valve with the engine running and observing if the fork moves in relation to the base plate. The Fork should protrude from the base plate approximately 34mm.

Make sure the fork is not worn out or broken.



## Repair Instructions

### When replacing the fork

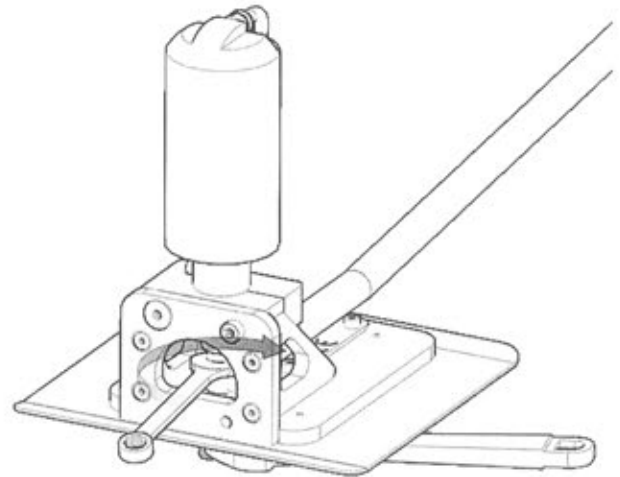
1st Unplug the machine from the compressed air network.

2nd Loosen the nut / clamp ring on the engine (see spare parts list 43-01).  
Use the wrench Nr14 and hold the fork with the proper tools.

3rd Pull out the fork / shaft (see spare parts lista1) from the nut / clamp sleeve.

If you can remove the shaft - unscrew the nut / clamp sleeve completely

4th Insert the fork holder in the nut/compression ring as far as possible. Tighten the nut.  
Make sure the fork is perpendicular to working direction.



### The repair / maintenance of compressed air motor.

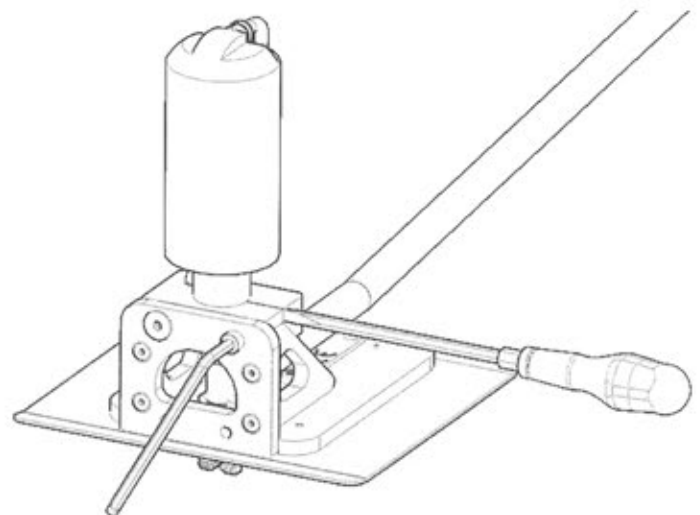
1st Unplug the machine from the compressed air network.

2nd Remove fork (see above).

3rd Loosen the hose connection on top of the engine (see lubrication).

4th Loosen "Screw Clamp for engine" and pry into the groove with a broad-bladed screwdriver.

5th Lift the engine from the stand.



*The repair / maintenance of motor*

Threaded connections between the different parts are locked with Loctite and can, in necessary, be heated to 200° c to ease disassembly.

Great cleanliness should be taken when the engine is disassembled / assembled. Check that all parts especially all O rings and springs are intact and well lubricated and not worn. See exploded view of the air motor.

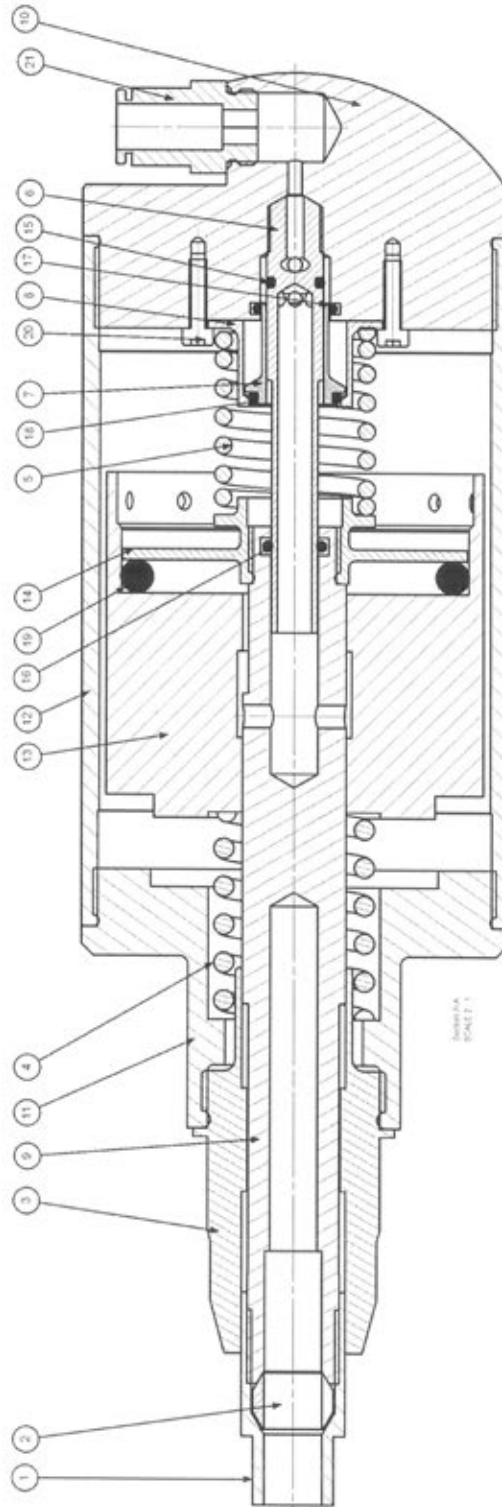
Make sure all the moving parts move freely.

When re assembling, a small amount of non-hardening thread lock should be used. (Loctite 245 or similar.) Apply to all threads.

NOTE: Check that the fork moves freely in its housing.



*Exploded view*  
**AIRMOTOR**  
**43-XX**

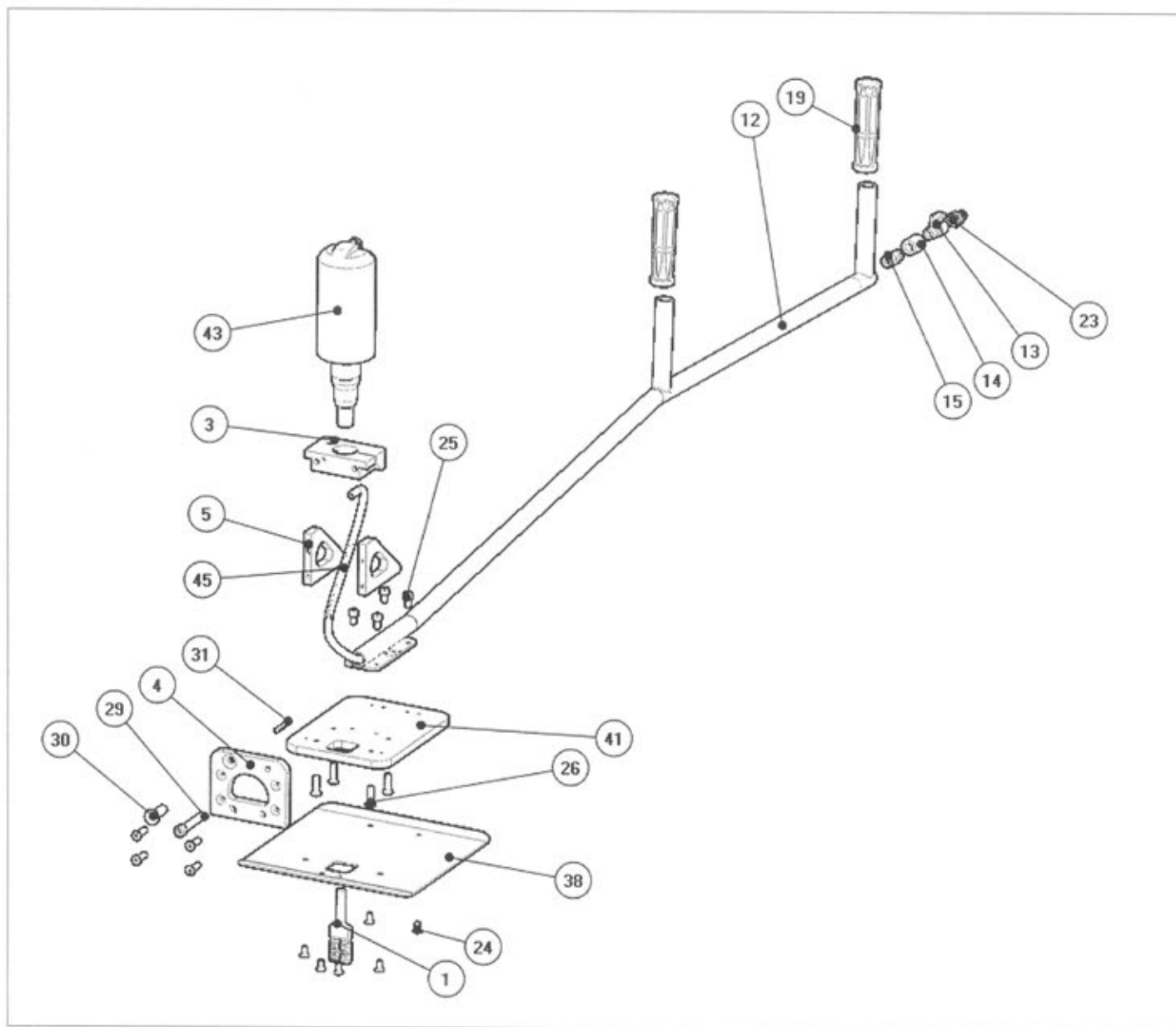


*Spare parts list***AIRMOTOR**

<b>Item no:</b>	<b>Detail:</b>	<b>Quantity:</b>
43-01	Nut	1
43-02	Compression ring	1
43-03	Body front	1
43-04	Balance Spring anterior	1
43-05	Return spring	1
43-06	Inlet	1
43-07	Shuttle	1
43-08	Spring Seat	1
43-09	Punch Piston	1
43-10	Body rear	1
43-11	connection part	1
43-12	body central part	1
43-13	Body Balance	1
43-14	Drive Flat	1
43-15	O-ring 7.1 x 1, 6	1
43-16	O-ring 7.66 x 1, 78	1
43-17	O-Ring 11.11 x 1, 78	1
43-18	O-ring 12.42 x 1, 78	1
43-19	O-Ring 49.2 x5, 7	1
43-20	Allen screw	1
43-21	Hose Connection	1

Spare parts list

## COPPER GRID CLEANER



Spare parts list

**COPPER GRID CLEANER**

<b>Item no:</b>	<b>Pieces:</b>	<b>Name:</b>
1	1	Fork
3	1	Motor bracket
4	1	End plate
5	2	Support plate
12	1	Handle
13	1	Mini ball valve
14	1	Crane attachment
15	1	Straight coupling
19	2	Plastic Handle
23	1	Coupling
24	6	Allen screw
25	4	Allen screw
26	8	Allen screw
29	1	Allen screw
30	2	hex bolts
31	1	Pin
38	1	Wear plate
41	1	Base plate
43	1	Engine
45	1	TPU Hose