

OPERATOR'S SAFETY AND SERVICE MANUAL



Red Band FS200 Floor Planer / Scabbler



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FS200 FLOOR PLANER / SCARIFIER

EC Declaration of Conformity (Static Machines)

We declare under our sole responsibility that the product(s)

FLOOR SCARIFER

To which this relates is in conformity with the following directives;

Supply of Machinery (Safety Regulations) 1992 (SI 1992/3073)

Supply of Machinery (Safety) (Amendment) 1994 (SI 1994/2063)

Safety of Machinery BS EN292-1&2 1991, BS EN 294 1991, BS EN 294
1993, BS EN 418 1992, BS EN 457 1992, BS EN 563 1993, BS 614 1965
BS EN 1033 1996, BS 5378 1980

89/392/EEC Machines Directive

93/44/EEC & 93/68/EEC Amendment to Machines Directive

This equipment must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the above mentioned directive.

Certified by : *Alan Newton*
Red Band UK Ltd

FS200 FLOOR PLANER / SCARIFIER

SAFETY INSTRUCTIONS

- 1) Construction equipment may only be operated by persons :-
 - a – are at least 18 years old.
 - b – are physically and mentally fit for the job.
 - c – have been instructed in the use of this equipment and proved their ability for the job to their employer.
 - d – may be expected to carry out the job they are charged with carefully
- 2) Floor scarifiers may only be used for scarifying work in the construction industry. Both the manufacturers and the engine / motor manufacturer's operating instructions and these safety instructions have to be observed.
- 3) The persons charged with the operation of floor scarifiers have to be made familiar with the necessary safety measures relating to the machine. In case of extraordinary uses the employer shall give necessary additional instructions.
- 4) It is possible that this floor scarifier exceeds the admissible sound level of 89dB(A). According to the rules for the prevention of accidents regarding of noise, the employees have to wear ear protection if the sound level reaches 89dB(A) or more.

OPERATION

- 1) When operating an electric scarifier particular care must be taken to ensure all cables and plugs are in good order. No unqualified personnel must remove control panels. Only qualified electricians should wire the machine or any accessories.
- 2) The functioning of operating levers or elements is not to be influenced or rendered ineffective.
- 3) During operation the operator may not leave the control elements.
- 4) The operator has to stop the engine of the floor scarifier before going on breaks. The machine has to be placed such that it cannot turn over.
- 5) Stop engine before filling fuel tank, do not allow fuel to come in contact with the hot parts of the machine or spill on to the ground.
- 6) Do not smoke or handle open fire near this machine.

- 7) The tank lid must fit tightly. Shut off fuel cock, if available when stopping the engine. For long distance transports of the machine operated by fuel or fuel-mixtures, the fuel tank has to be drained completely. *ATTENTION!! Leaky fuel tanks may cause explosions and must therefore be replaced immediately. ATTENTION!! Exhausts are hot, do not touch them.*
- 8) Do not operate machinery in areas where explosions may occur.
- 9) Make sure that sufficient fresh air is available when operating scarifiers with combustion engines in enclosed areas, tunnels and deep trenches.
- 10) During operation keep your hands, feet and clothes away from moving parts of the floor scarifier. Wear safety shoes, and eye protection glasses in case of trench operation where falling sand stones may be ejected.
- 11) When working near the edges of breaks, pits, slopes, trenches and platforms, floor scarifiers are to be operated such that there is no danger of their turning over or dropping in.
- 12) When travelling backwards the operator has to guide the floor scarifier laterally by its guide handle so that he will not be squeezed between the handle and a possible obstacle. Special care is required when working on uneven ground or when compacting coarse material. Make sure of a firm stand when operating the machine under such conditions.
- 13) Floor scarifiers are to be guided such that hand injuries caused by solid objects are avoided.
- 14) Floor scarifiers have to be guided such that their stability is guaranteed.

SAFETY CHECKS

- 1) Floors scarifiers may only be operated with all safety devices installed.
- 2) Before starting operation, the operator has to check all control and safety devices function properly.
- 3) In case of defects of the safety devices or other defects reducing the operational safety of the floor scarifier, the supervisor has to be informed immediately.
- 4) In case of defects jeopardizing the operational safety of the floor scarifier, the machine has to be stopped immediately.

- 5) As soon as maintenance and repair jobs have been completed all safety devices have to be reinstalled properly.

TRANSPORT

- 1) During transport, loading and unloading of floor scarifier by means of lifting devices, appropriate slinging means or hooks have to be used on the lifting points provided for this purpose on the vibrating plate.
- 2) The load-carrying capacity of the loading ramps has to be sufficient and the ramps have to be secure such that they cannot turn over. Make sure that no one can be endangered by machines turning over by slipping or by moving machine parts.
- 3) When being transported on vehicles, precautions have to be taken that floor scarifiers do not slip or turn over.

LIFTING

Machine weight can be found on the Serial No. plate, *it is too heavy for one person to lift!* The lifting hook positions are clearly marked – USE THEM!

MAINTENANCE CHECKS

According to the conditions and frequency of use, floor scarifiers have to be checked for safe operation at least once a year by skilled technicians, such as those found at the manufacturer's service depots and have be repaired if necessary.

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Routine Maintenance Safety Warning

Changing Cutter Drums

Always ensure machine is turned off

Always ensure:-

Electric - plug is removed from power source

Petrol - spark plug cap is removed from spark plug

Remove sideplate screws – check for wear

Pull off sideplate

Remove brush or drum

Changing Cutters

Stand drum vertically, remove screws and nuts and then sideplate

Remove flail shafts, as always check for wear. (We recommend that you replace flail shafts every cutter change)

Fit new cutters, spacers and flail shafts

Always offset cutters on each shaft to ensure even cutting face

Replace cover plate and screw and ensure nuts are tight

General Maintenance (8 operating hours / daily)

V belt – check tension of v-belts and adjust as necessary

Engine – check oil level

Machine – clean the machine, this may be necessary more often if using the machine to remove tar based material

Fasteners – check all fasteners are secure

Flail shafts – check condition and replace if necessary

Dust flap – check condition of dust flaps and replace if necessary

Belt guard – check belts and guard condition

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Machine Specifications

	FS200-P Petrol		FS200 - E 110V	FS200 - E 220V
Manufacture	Honda	Manufacture	AEG	AEG
Model	GX160	Frame size	90	90
Air filter	Cyclonic	Voltage	110 / 1 / 50	220 / 240 / 3 / 50
Engine speed	3600 rpm	Full load current	28 amps	13.1 amps
Cutter speed	1800 rpm	HP	3 hp	3 hp
Weight	49 kg	KW	2.2 kw	2.2hp
Height	98 cm	Cable	4.0 mm ²	1.5 mm ²
Width	36 cm	Max cable length	10 m	30 m
Length	120 cm	Control gear	Moeller	Moeller
Acoustic emissions idle	104 dB (A)	Engine speed	2800 rpm	2800 rpm
Acoustic emissions under load	94 dB (A)	Cutter speed	1800 rpm	1800 rpm
Vibration idle	8.9 m/s ²	Weight	49 kg	49 kg
Vibration under load	9.8 m/s ²	Height	98 cm	98 cm
		Width	36 cm	36 cm
		Length	120 cm	120 cm
		dB (A)	91	91
		Vibration idle	8.9 m/s ²	8.9 m/s ²
		Vibration under load	9.8 m/s ²	9.8 m/s ²

Product Specification	
Working width	8" / 200mm
Distance between wall – right	105mm
Distance between wall – left	40mm
Diameter of dust extraction tube	2" / 50mm

Warranty

- We warrant that the product is free from defects in materials and workmanship.
- If such a fault is found within six months from date of purchase from an approved dealer, the company will replace free of charge all failed components.
- Any failed unit must be returned carriage paid to the factory for inspection.
- The warranty does not cover failure attributable to wear and tear, accidental damage, site or operator misuse or lack of maintenance.
- We will not accept units under warranty that third parties have attempted to repair or disassembled.

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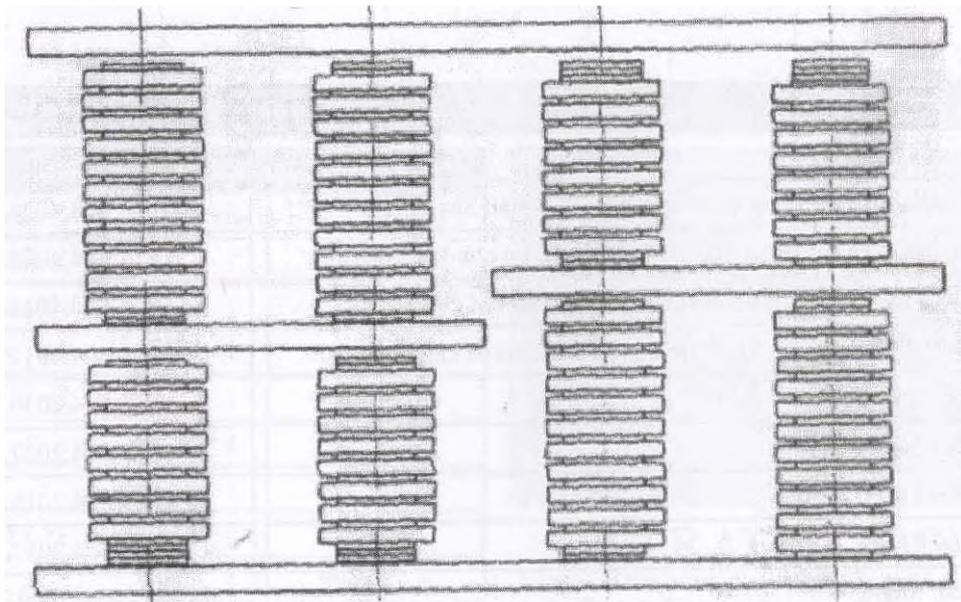
Drum Setup and Usage

Always ensure the drum is correctly balanced, this will increase operator comfort and improve life and performance of the cutters.

By taking a shallow depth of cut and taking two quick passes, rather than one deep pass, cutter life is increased dramatically.

By frequently replacing low cost items, i.e. shafts and washers, drum life can be extended.

Always stagger TCT cutters as shown below when using TCT cutters and washers.



To avoid imbalance the shafts must always have the same number of cutters and spacers. Axial play must be at least 2.5mm to 5mm.

When fitting milling cutters on the flail shafts, all blades must face in the moving direction.

Tolerance of the TCT cutters, drum and spacers may cause the recommended number of spacers to vary slightly.

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Problem	Cause	Solution
Electric Unit		
Unit running slow	Voltage drop	Check power supply Check generator specification Check cable length & spec.
Unit won't run	Fuse blown Power disconnected Cable damaged Other	Check fuses Check plug Check cable Refer to motor manual
Petrol Unit		
Engine won't start	No fuel Engine switched off Gas in air filter	Refuel Switch on Remove air filter cover, crank engine
Common Problems		
Cutter wearing unevenly	Cage set too low Material build up Cutters too tight	Raise cage Clean cutters & cage Remove one or more cutters/spacers
Machine jumps on floor	Cage lowered too far RPM too low	Adjust height level Reset throttle
V belt wearing rapidly	Pulley misaligned Wrong belt Belt rubbing on surface	Adjust pulley Replace Adjust height on machine
Uneven cut	Wear on rear or front wheels Wear on front axle Handle assembly out of line	Replace wheels Replace axle/bushes Line up

Red Band FS200-P and FS200-ED Spare Parts List

Please order by Bin number

Bin	Description	Part ref
VB30	Drum c/w flail shafts	
FS03	End plate c/w bolts	504-2035-1
VB25	10mm flail shaft	507-1001-1
VB26	12mm flail shaft	507-1001-6
FS06	Drive shaft	513-1000-1
FS07	Drive bush	514-1000
FS08	Bearing 6006	979-1000-18
FS09	Circlip 30	977-1010-30
FS10	Circlip 55	977-1010-55
FS11	Bearing housing	512-1000
FS12	End plate	511-1055-2
FS13	Cover	511-1030-2
FS15	Bearing housing	512-1002
FS16	Shaft spacer 8mm	109-1033-7
FS17	Shaft spacer 6mm	109-1033-11
FS18	Pulley spacer 5/6mm	506-1007
FS19	Bearing 6303	979-1000-12
FS20	Circlip 47	977-1000-47
FS21	Woodruff key	979-9021
FS22	Castle nut	979-1020-1
FS23	Castle washer	979-1022-17
FS24	Drive pulley	518-1006
FS25	Drive belt SPZ722	967-1010-722
FS26	Engine pulley	518-1002-1
FS27	Belt guard	518-1001-1
FS28	Guard bracket	
FS29	Front wheel assy	530-1004
FS30	Rear wheel	905-1000
FS31	Pivot axle	515-1007-12
FS32	Fork joint	516-1006
FS33	Rod 10 x 10	516-1000-2
FS34	Spring lever	516-1002-2
FS35	Handgrip	510-1016-1
FS36	Handle stop	516-1001-2
FS37	Knob assy	907-1001-1
FS38	Handle	510-1020-1
FS39	Engine clamp plates 'p'	510-1011-4
FS40	Starter assy 110V (FS200E)	501-2003-110
FS41	Capacitor (FS200E)	970-1083-1
FS42	Rotary switch (FS200E)	501-2003-3
FS42A	Rotary switch knob (FS200E)	
FS43	Contact (FS200E)	501-2003-1
FS44	Circuit breaker (FS200E)	501-2003-6
FS45	Stop button (FS200E)	501-2003-4
FS46	Bracket adaptor (FS200E)	501-2003-12
FS47	Contact (FS200E)	501-2003-14
FS48	Motor pulley 'e' 24mm	518-100501
FS49	Drive belt 'e' SPZ687	967-1010-687
FS50	Dust flap	511-1022-240
FS51	Flap bar	511-1021-240
FS52	Motor Plate (FS200ED)	
FS53	Motor Plate (FS200E)	
VB30	Drum c/w TCT flails & spacers	
VB05	TCT flail set (76)	

VB08 Spacer set (100)

FS200 - ED Starter Parts

ME12 110V Starter Assy
ME15 110V Contactor
ME22 110V Overload (19 – 25a)
ME23 Starter Enclosure

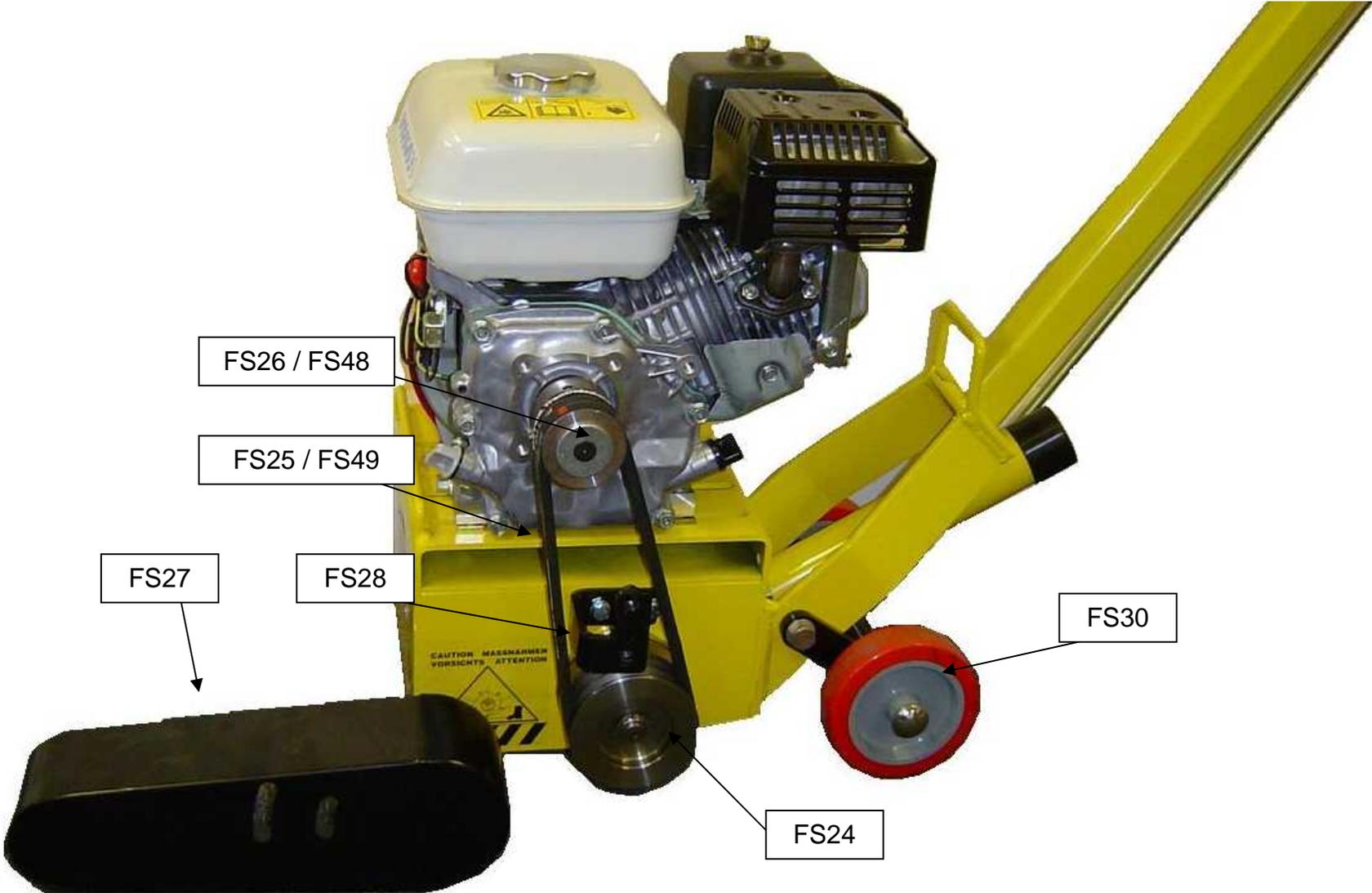
FS200 - ED Motor Parts

ME40 Run Capacitor 50uf
ME41 Run Capacitor 40uf
ME42 Start Capacitor 180uf
ME43 Relay SE1
ME44 Fan
ME45 Fan Cover
ME46 Motor Feet Set
ME47 Terminal Box Base
ME48 Terminal Box Lid

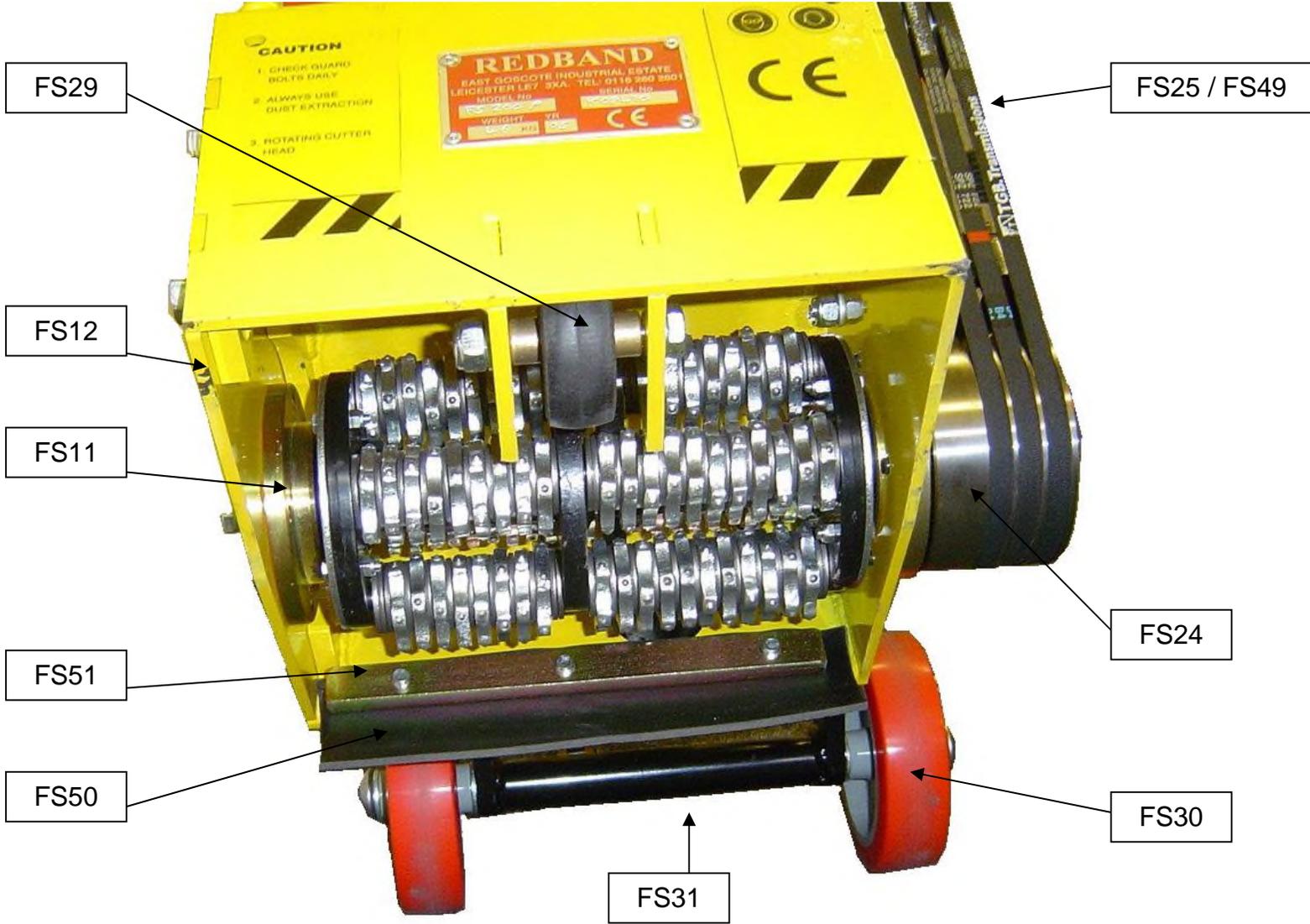
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Drive Shaft Assembly

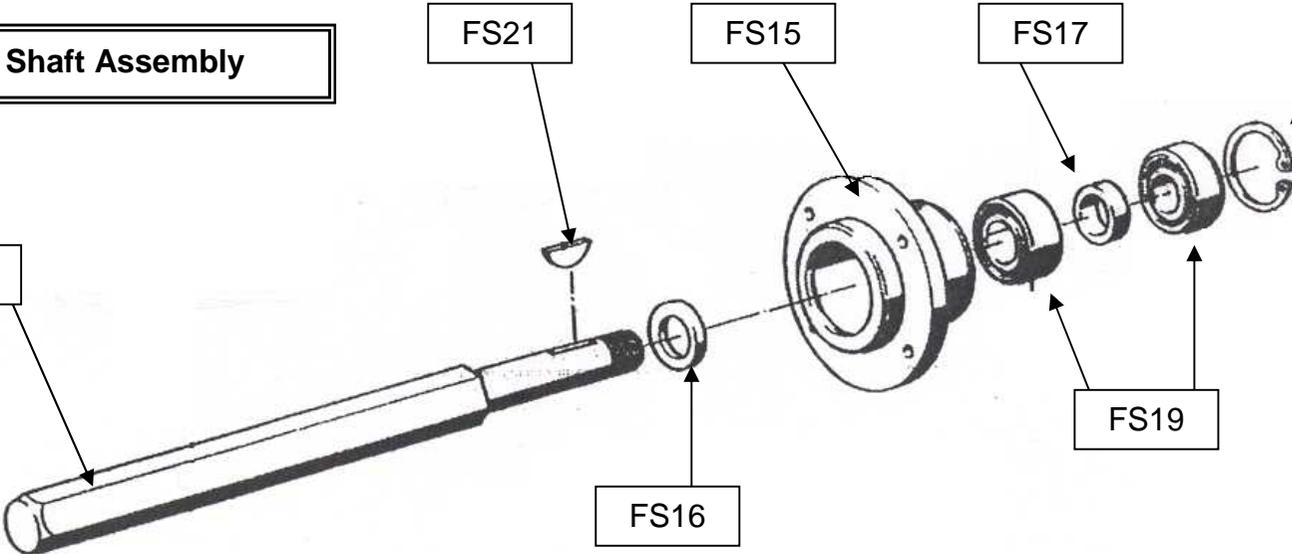
FS06

FS21

FS15

FS17

FS20



FS16

FS19

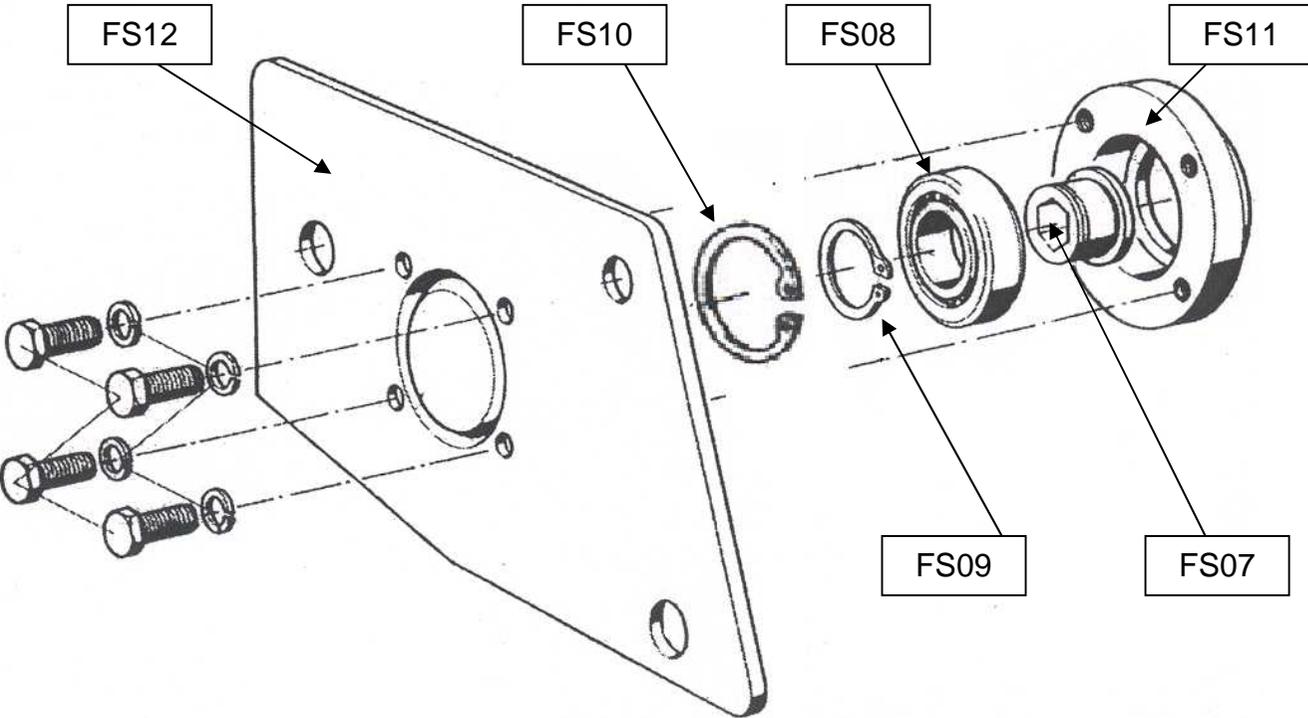
Bearing Housing Assembly

FS12

FS10

FS08

FS11

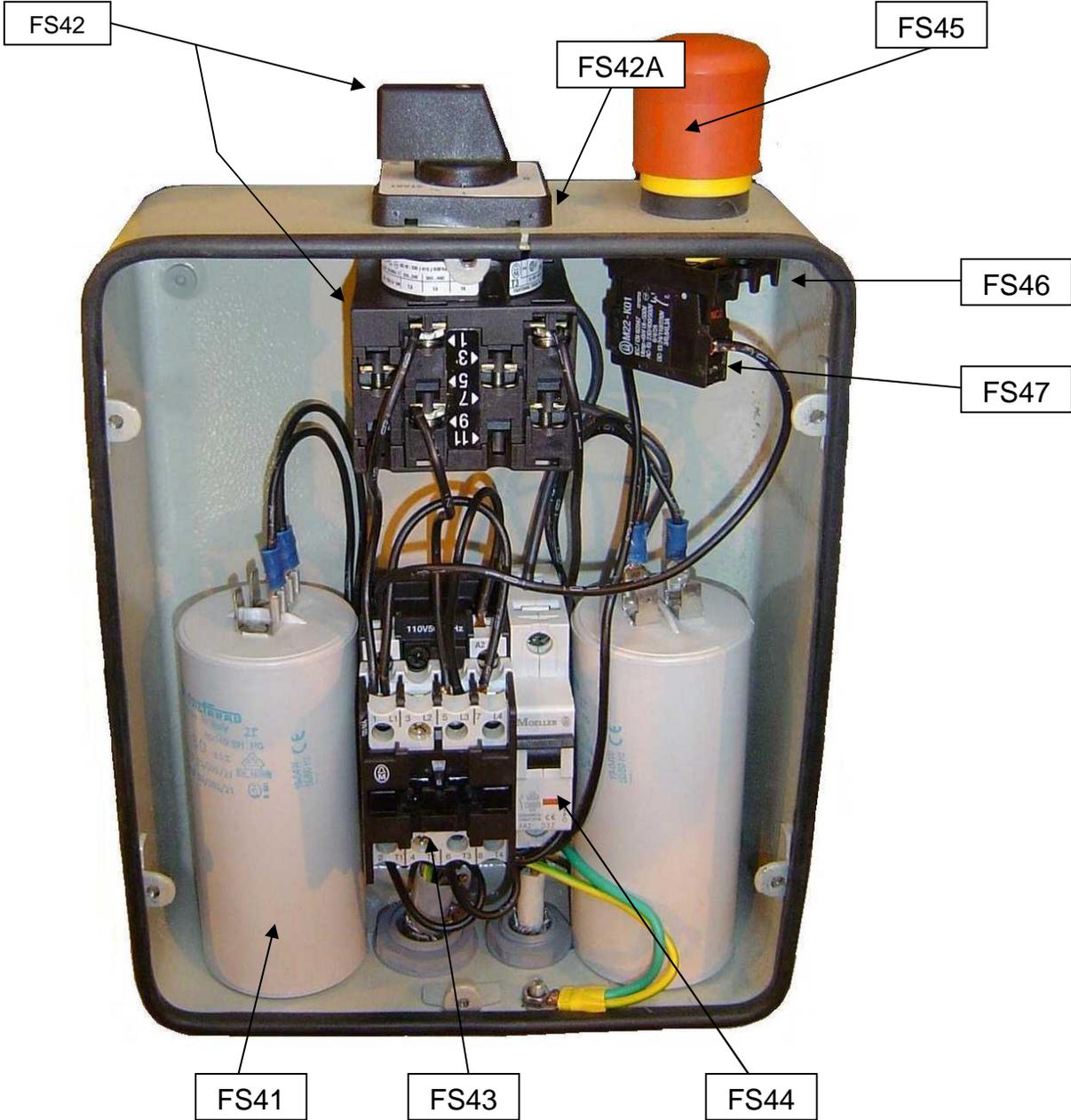


FS09

FS07

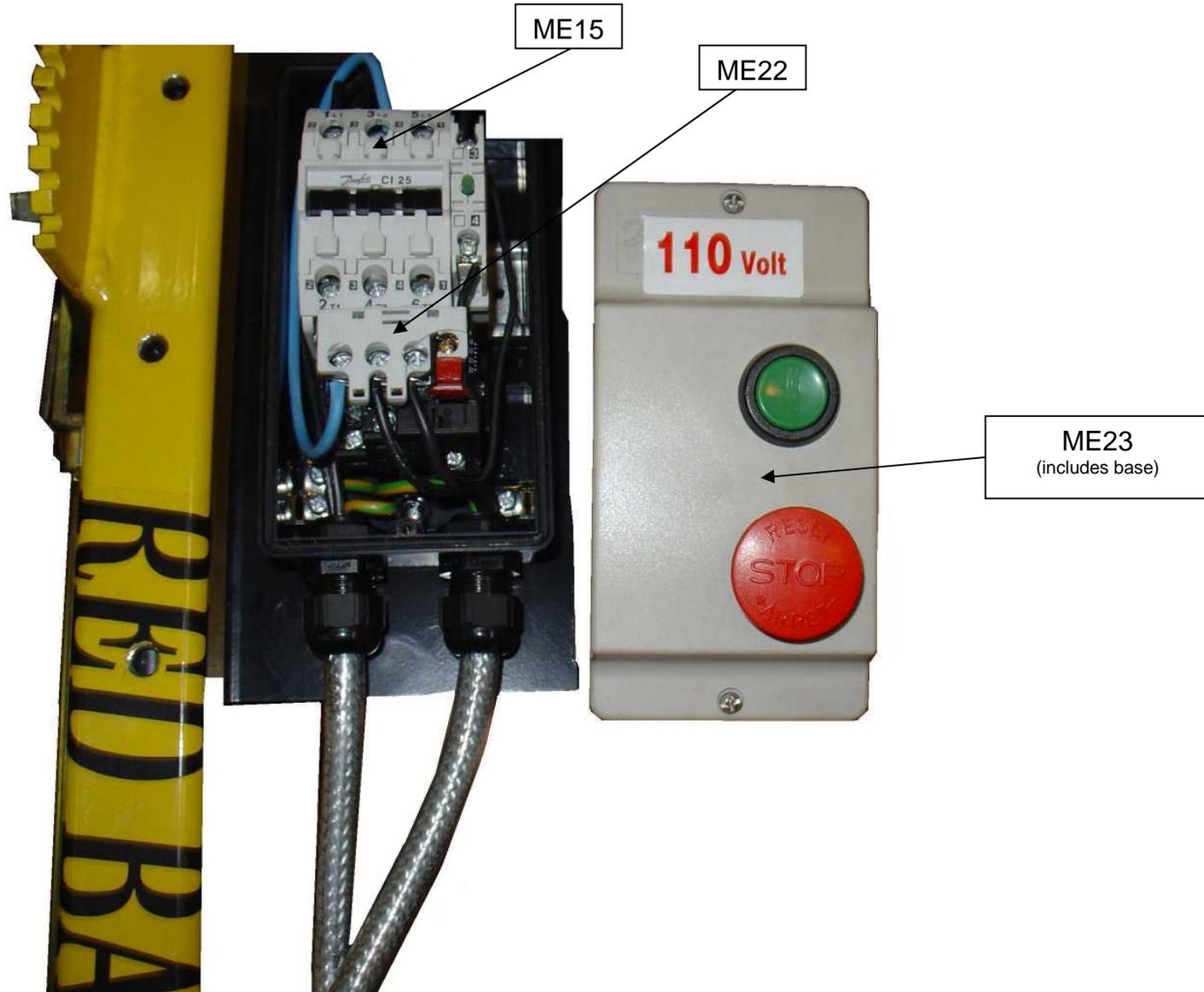
FS200-E Moeller

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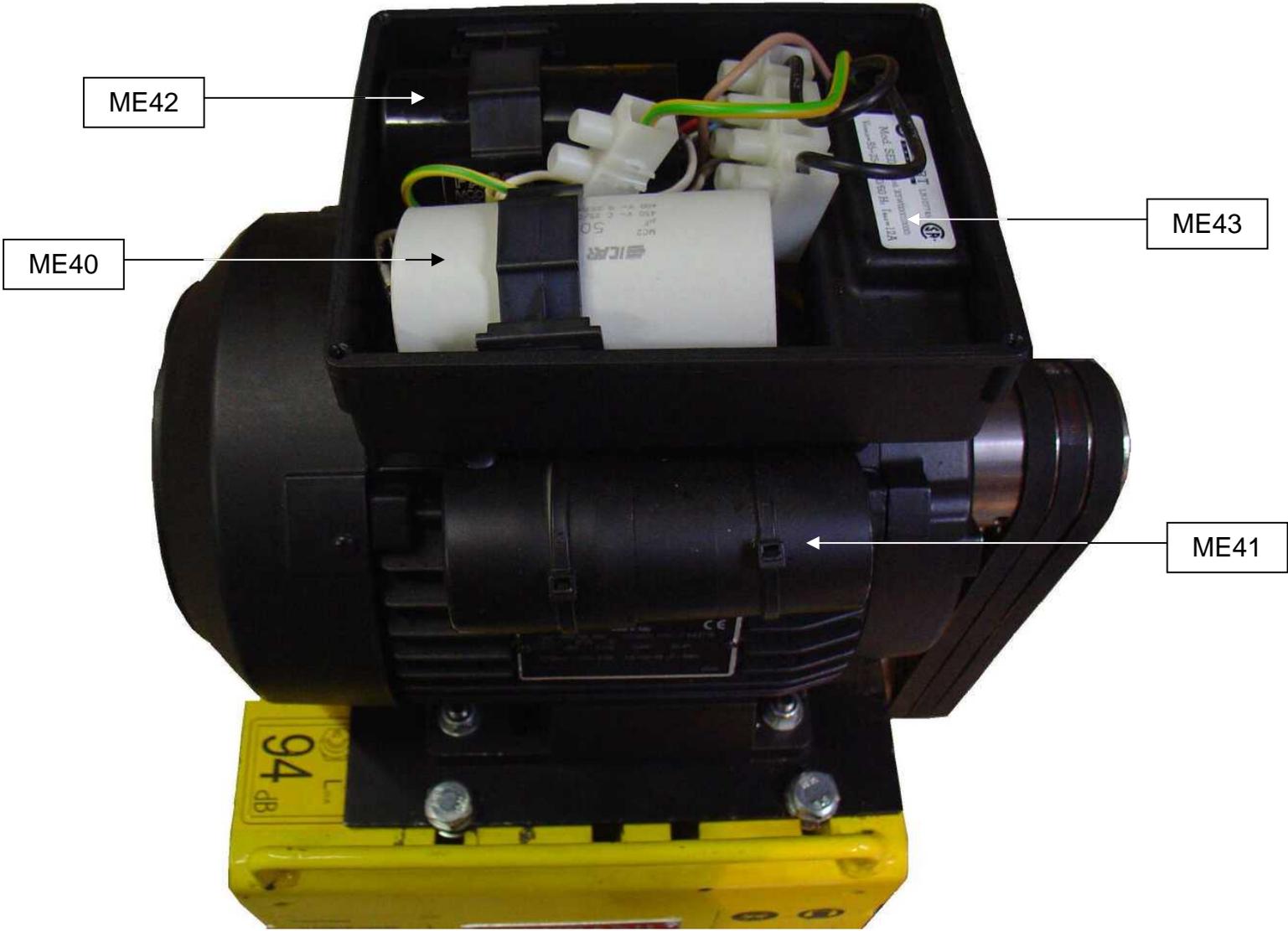


FS200-ED Starter

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VB05



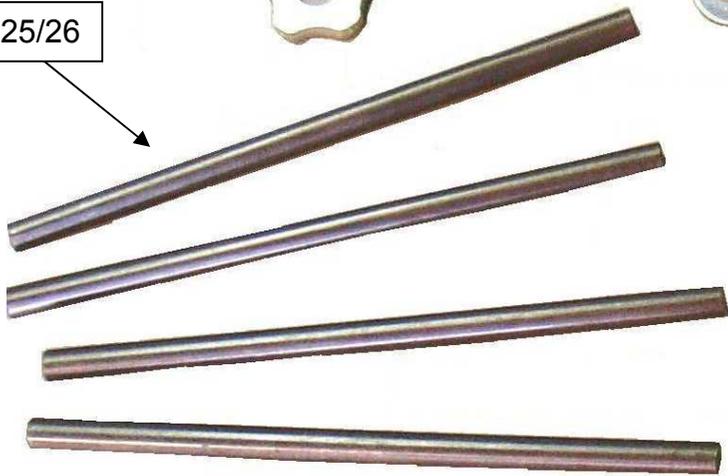
VB08



VB15



VB25/26



VB30

