Instruction Manual

Product Manual & Specifications

AG Dispenser models

AG Mini

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SAFETY INSTRUCTION

EEC Directives and British Standards

To effect the correct application of the safety requirements stated in the EEC Directives and the British Standards, the following standards and/ or technical specification have been used.

- **BS EN ISO 4254-1:2005** – Agricultural machinery – Safety and General Requirements.
- **BS EN 292-1:1991** – Safety of machinery and Basic concepts and general principles for design – Basic terminology, methodology.
- **BS EN 292-2:1991** – Safety of machinery – Basic concepts, general principles for design – Technical principles 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 agricultural and forestry.

Serial number_____

Date_____

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Part no - 1071

AG Mini

IMPORTANT
This manual list should be used in conjunction with the operator's manual. Before starting, removing any parts packed, read the Operators manual.

PRE-DELIVERY CHECK LIST, TO BE COMPLETED BY THE MANUFACTURER AND THE DEALER MANUFACTURER P-D-I

1	Control on/off switch rear cover fitted	
2	Signs and safety stickers labelled.	
3	Overall machine free from oil, rust and in clean condition	
4	Machined groove for wheel retaining cir-clip	
5	Agitator shaft shoulder	
6	Agitator motor screws tight	
7	Agitator correct clearance to bottom and sides of drum	
8	Drum fitting guides to main frame	
9	EVA foam on upper handle	
10	40 A relay on motor circuits	
11	4 gussets on main frame	
12	All nuts and bolts checked before packing	
13	Serial plate holes on drum and serial plate fitted	
14	Motor has matching serial number to serial number on serial plate	
15	Shutter fitted with rubber washer underneath double nut	
16	Shutter stay system	
17	Shutter not in contact with drum	
18	Position 1 – off	
19	Position 2 – machine on	
20	Position 3 – off	
21	Operating noise level minimal (no load)	
22	Charger female socket wiring polarity checked (+ve centre)	
23	Charging system operates correctly, page 6 + 7	
24	Agitator, handle inserts, wheels, cir-clip+ washer & hub caps packed	

Manufacturer P-D-I _____
Date_____

DELIVERY INSPECTION (Dealer)

1	Machine delivered without transport damage	
2	Ensure all pictograms are in place	
3	Machine delivered as per specification by the dealer c/w manual	

PRE-INSTALLATION INSPECTION (Dealer)

1	Check wheels are fitted correctly	
2	Ensure machine operates correctly	
3	Ensue the circuit control box works correctly on the main handle	
4	Ensure the handles are fitted correctly and are in the lowest position	
5	Ensure all guards are all fitted and secure	
6	Run machine and check for smooth operation	
7	Ensure the charging circuit operates correctly, as illustrated on pages 6 + 7	
8	Ensure the charging plug and socket fit correctly	
9	Ensure the green light illuminates, illustrating 'Soft start'	
10	Ensure the red light illuminates to show full charging	
11	Instruct the operator on using the machine and the charging cycle	
12	Endure the operator fully understands the charging cycle	

This machine must not be released for delivery until the inspector has performed the pre-delivery inspection in accordance with the above requirements.

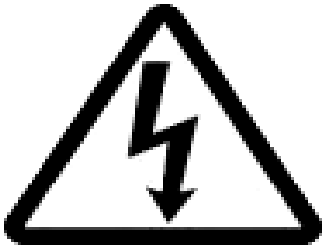
Dealer branch _____

Dealer P-D-I inspector _____

AG thanks you for the purchase and we wish you a safe and productive use of this machine.

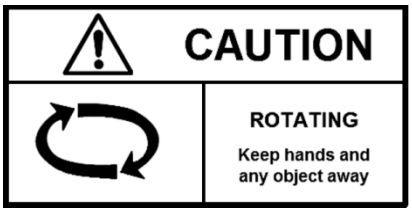
Safety rules and pictogram / label identification

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



Pictogram to indicate, 'ALERT WARNING'.

Pictogram to indicate 'read product manual'



Pictogram to indicate 'Caution – Rotating mechanism- Do not put limbs inside mechanism'

Ensure that safety goggles are worn during use of AG MINI.

Ensure that a dust mask is worn during operation of the AG MINI.

Pictogram to indicate keep clear of the conveyer, product been thrown

1. **Always comply with safety rules as set out in the pictograms, and detailed in this product manual.**
2. **No bystanders allowed in the working area.**
3. **Whatever the type of maintenance that needs to be done on the AG Mini, the Battery must be disconnected.**
4. **Only the operator must operate the AG Mini and must remain in control during the complete working cycle.**
5. **Do not attempt to use the AG MINI if any of the Safety guards have been removed, are damaged or missing.**

Identification of the machine

The AG MINI is identified by the Serial Plate, showing – Product, Year of Manufacture, Serial number and weight.

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Product AG Mini

Year	2009		**Dry Weight**	33	**kgs**
Serial No.	CPSMI 9999		**Capacity**	95	**ltrs**
					m^3
Voltage	12	**DC**	**Charge**	12	**AH**
Pressure		**Bars**	**Volume**		**LPM**

SPECIFICATION

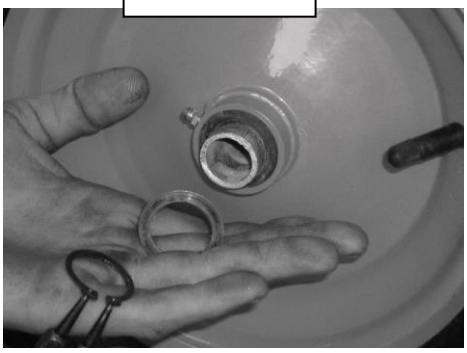
Assembly of the AG Mini

! Practice workshop safety at all times!

! IMPORTANT – DISCONNECT BATTERY BEFORE ASSEMBLY OF AG MINI!

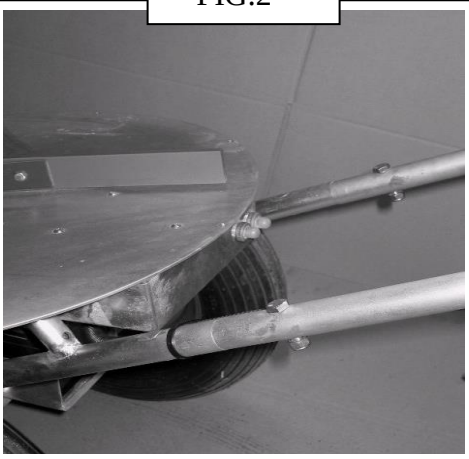
1) – Ensure the AG MINI is placed on the ground in a stable position.
2) – Ensure all guards are fitted correctly before use.

FIG.1



Place the wheel onto the base frame of the machine and then secure by placing the washer and external Cir clip in the order shown. (Fig.1)
Finally fit the wheel cap to ensure the bearings are kept free from foreign materials.

FIG.2



Insert handle bar connecting rods ensuring that the solid end goes towards the bass of the bin.
Fit the handle to the main body and fasten using the nuts and bolts provided.

Charging the AG Mini

Read charger manual provided in the charger box.

FIG.3

1) – Ensure switch is in position 1.
2) – The AG Mini will now require a complete charge before use. Plug in Male jack plug into female. (FIG.3)
3) – The red light should now illuminate on the charger.
4) – When the green light illuminates the battery is fully charged and will continue to "float charge"
5) – The AG Mini can be left on float charge continuously.

Position 1 – OFF

Position 2 – Mini ON

Position 3 - OFF

- Never charge when switch is in any position other than position 1.
- Never charge the AG MINI with any other charger than the unit supplied.
- Never leave the battery flat, always charge battery after use.
- No damage will occur when left on "float charge" i.e. green light.
- Damage may occur very quickly if left flat.

General instructions for the 3 stage battery charger

1) Plug the charger in and switch on.
2) During start up the charger will determine battery status and depending on the result will switch to either **BULK** charge mode (red indicator ON) or FLOAT charge node (green indicator ON) NOTE, when the charger enters float charge mode the battery is 100% fully charged.
3) If neither of the indicators illuminate then unplug the charger , check the fuse in the plug, replace if necessary, plug back in and switch ON.

Operation

First stage–constant current mode. Visual indication: **RED LIGHT ON, GREEN LIGHT OFF.**
Second stage–constant voltage mode. Visual indication: As above.
Third stage–float charge mode. The battery will be maintained 100% charged. Visual indication: **GREEN LED ON, RED LED OFF.**

Note, On power up the charger will appear to be in "float" mode for a short period of time. This is to complete all checks as described in the feature "soft start".

Features

"Soft start" – On power up the system will enter a "soft start" mode. This facility checks for possible faults i.e. reverse battery connection, short circuit etc, before offering maximum charge current.

"Reverse polarity protection" – Prevents damage to the charger if the battery is accidentally connected in reverse, visual indication is by a continuous flashing red indicator.

LED Protocol

Charger status	LED status
Bilk charge mode	Red – static – ON
Float charge mode(charge complete)	Green – static ON
Battery reversal detected	Red – flashing
High temperature detected	Red + green flashing simultaneously
Short circuit	Red + green flashing alternatively
Open circuit	Red + green static simultaneously

OPERATION

Operation and safe use of the AG MINI

! **IMPORTANT:** SAFETY FIRST: Before loading the machine, ensure it is correctly constructed and all guards are in place and secured. DO NOT operate the machine with bystanders present. !

The AG MINI has been designed to bed cubicles with ease and speed, following are some simple guidelines in this booklet will ensure the AG machine is reliable and satisfactory.

DO NOT OVERLOAD THE MACHINE.

DO NOT USE ANY MATERIAL IN THE MACHINE OTHER THAN SPECIFIED BY THE MANUFACTURER.

DO NOT ALLOW STONES OR ROCKS ENTER THE MACHINE WHEN FILLING.

NO BYSTANDERS ALLOWED IN THE WORKING AREA.

ONLY THE OPERATOR MUST OPERATE THE AG MINI.

NEVER LEAVE THE MATERIAL YOU ARE SPREADING INSIDE THE MINI WHEN NOT IN USE.

NEVER USE THE MINI TO CARRY ANY ADDITIONAL OBJECTS

ALWAYS CLEAR THE MATERIAL OUT OF THE BARREL AFTER USE.

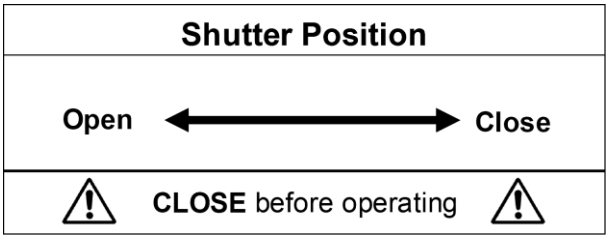
NEVER USE DAMP OR WET MATERIALS.

! DO NOT PULL THE AG MINI OVER STEPS!

Correct use of application lever

Before filling and operating the AG MINI put the application lever (shown by the arrow) in the closed position. Then alter the lever to the position that suits the application amount. Ensure machine is switched off before adjusting.

FIG. 4



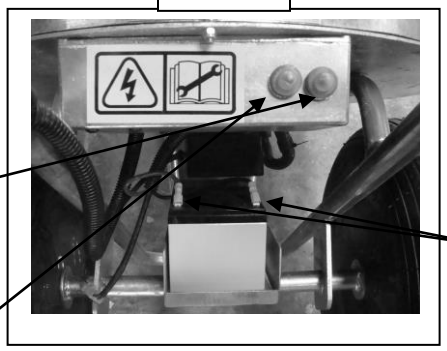
Circuit breakers

FIG 5

BREAKER FUNCTIONS;-

-RIGHT HAND BUTON = BATTERY BREAKER

-LEFT HAND BUTTON = MOTOR BREAKER

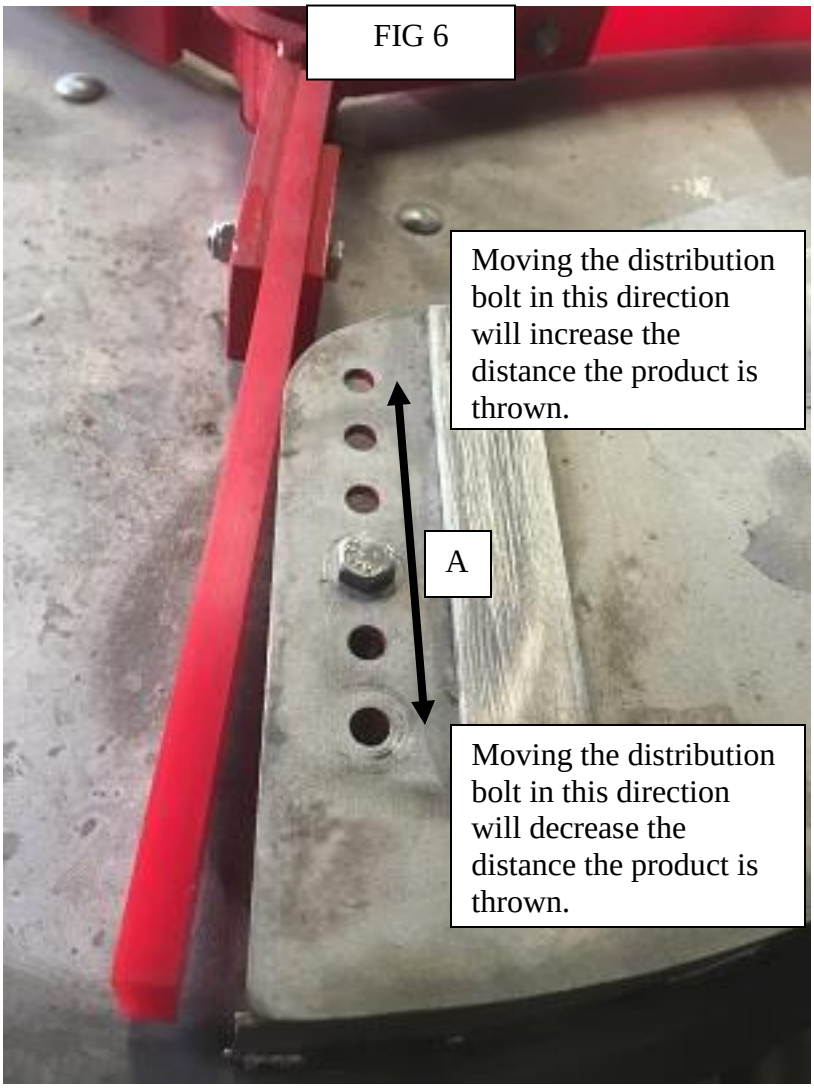


DISCONNECT BATTERY TERMINALS BEFORE MAINTANCE, SHOWN BY THE ARROWS!!!!!!!!

! **IMPORTANT: Machine blockage: In the unlikely event of machine blockage. ALWAYS ensure the AG MINI is switched off and the battery is disconnected. Never attempt to clear blockages by hand; always use a tool of some kind.** !

Varying distance of application

It is also possible to alter the distance the material is distributed. This is shown in figure 6.



Moving distribution bolt (A) from its standard factory setting as shown in Fig 6 will increase or decrease the distance the product will be thrown from the dispenser into the cubicle.

MAINTENANCE

- Clean the machine thoroughly
- Leave fully charged
- Light coating of oil

PLEASE STORE UNDERCOVER!

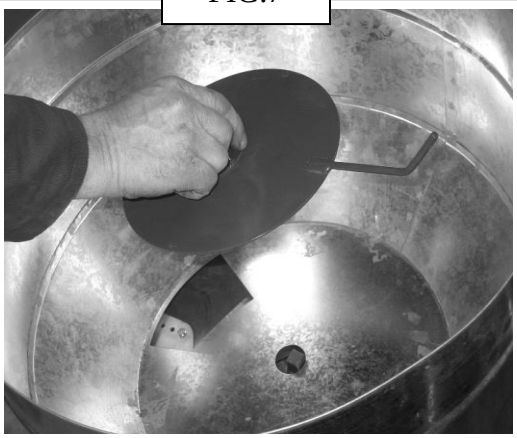
DO NOT FILL AND LEAVE OVER NIGHT!

Removal of drum

When servicing the AG MINI, the following steps may wish to be followed. These steps, if followed, will ensure that the AG MINI is running to its full potential.

DICONNECT BATTERY TERMINALS!!!!

FIG.7



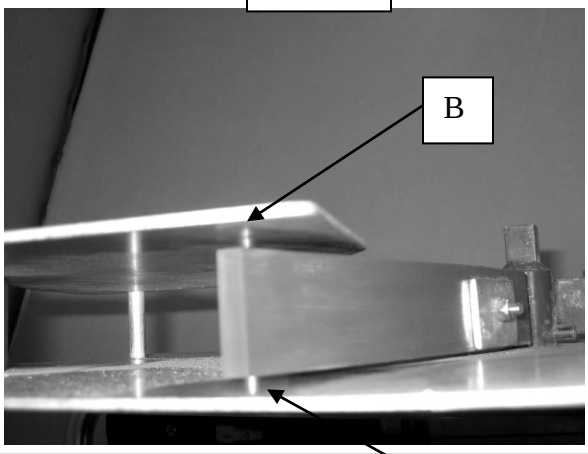
Remove the agitator plate, by simply pulling the plate off the shaft.

FIG.8

Remove the five nuts and bolts positioned around the perimeter of the drum. This will then free away the drum from the base.

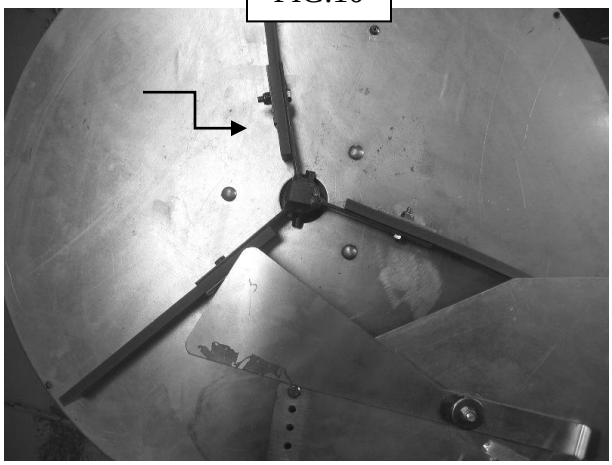
Clearance on distributing vane

FIG.9



Ensure a clearance gap of 3 mm between the distributor arm and the base of the machine shown in Fig 9 (A).
Also ensure there is a gap of 5 mm between the distributor arm and the top plate shown in Fig 9(B).

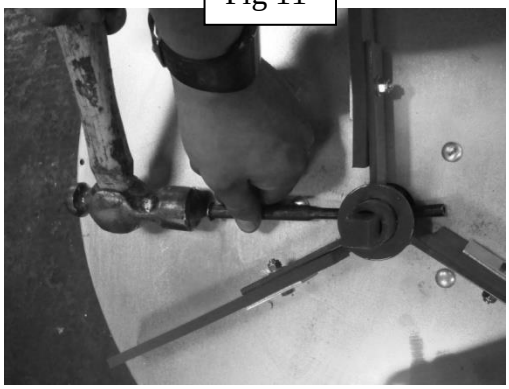
FIG.10



Ensure that the distribution flexible arms are connected on the left hand side of the metal frame of the distribution arms. (Shown on FIG 10)

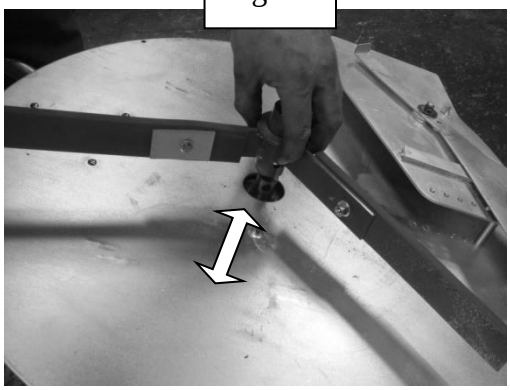
Motor removal

Fig 11



To remove the flicker vane you need to first remove the bin as shown on page 8.

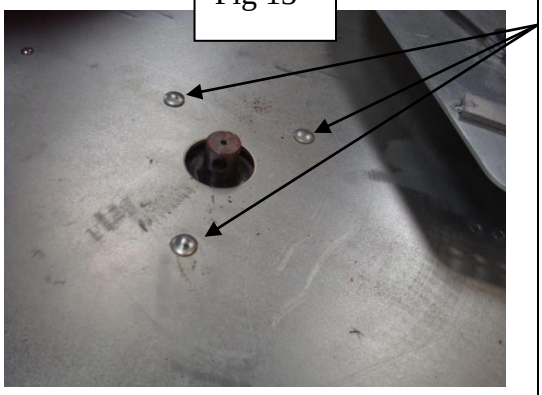
Fig 12



Then taking a punch and hammer you need to remove the roll pin as shown in fig 11

Once the roll pin is removed the vane will pull off as shown in fig 12

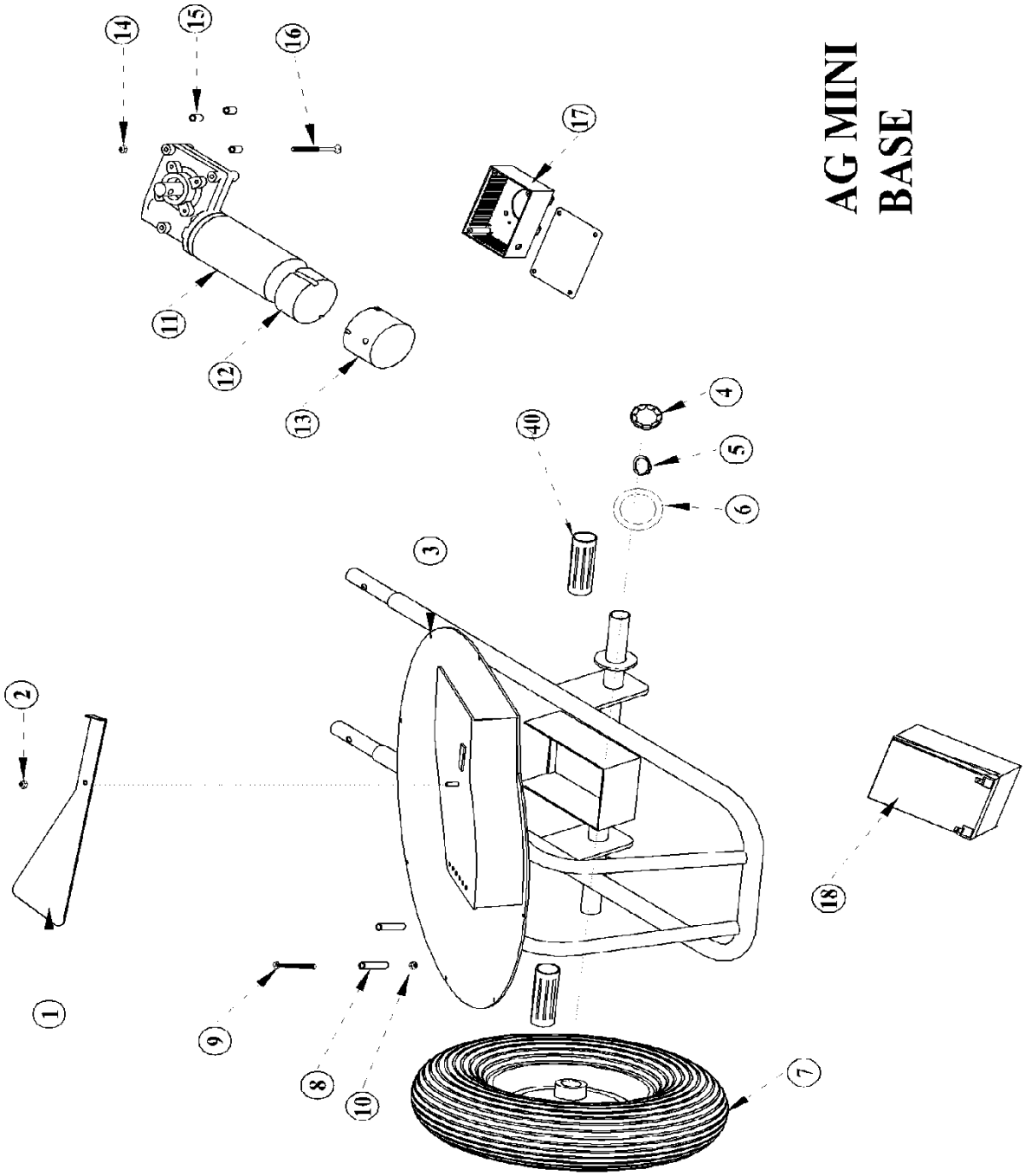
Fig 13

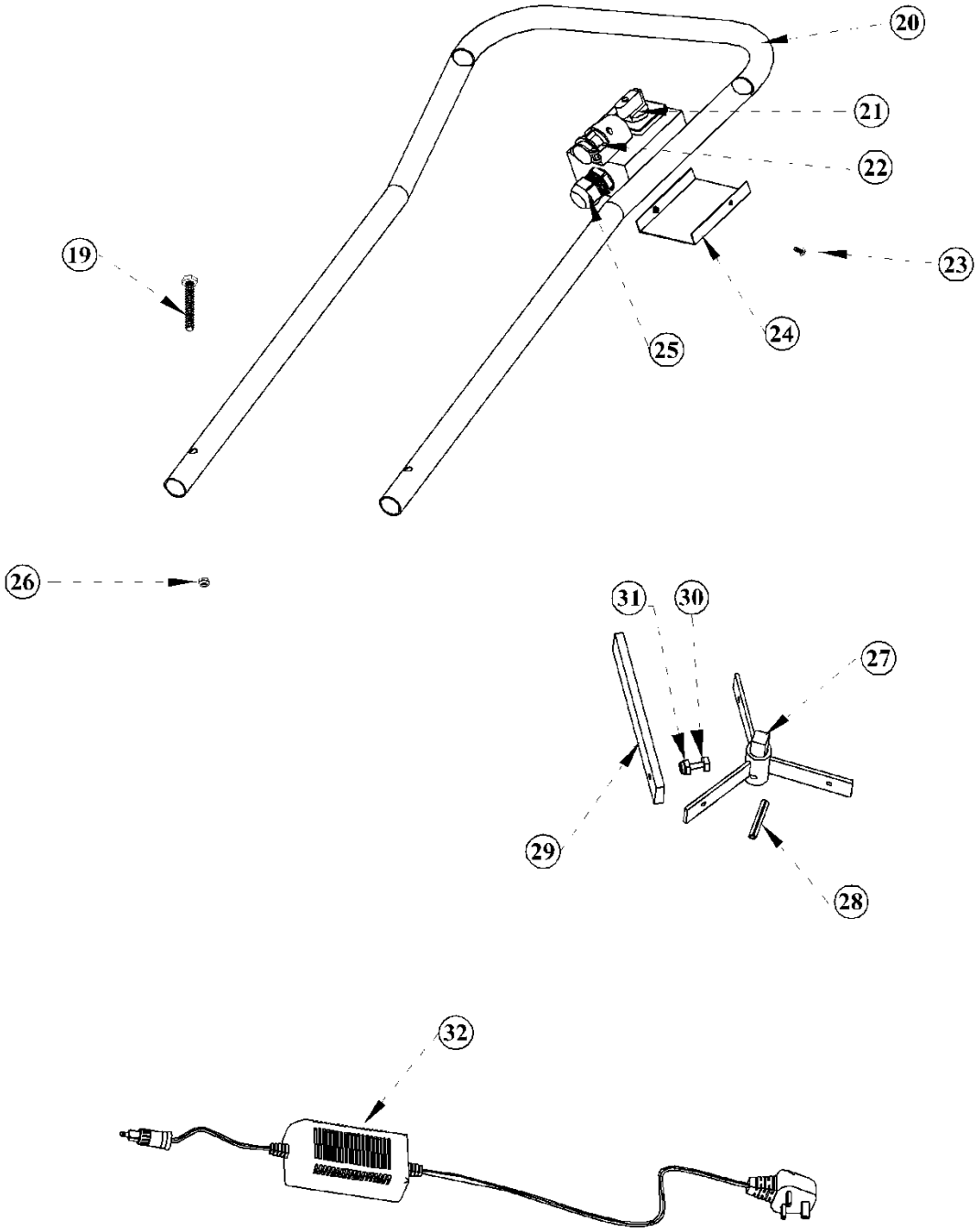


For removal of the gear box you need to remove the three 8mm nuts and bolts as shown in fig 13

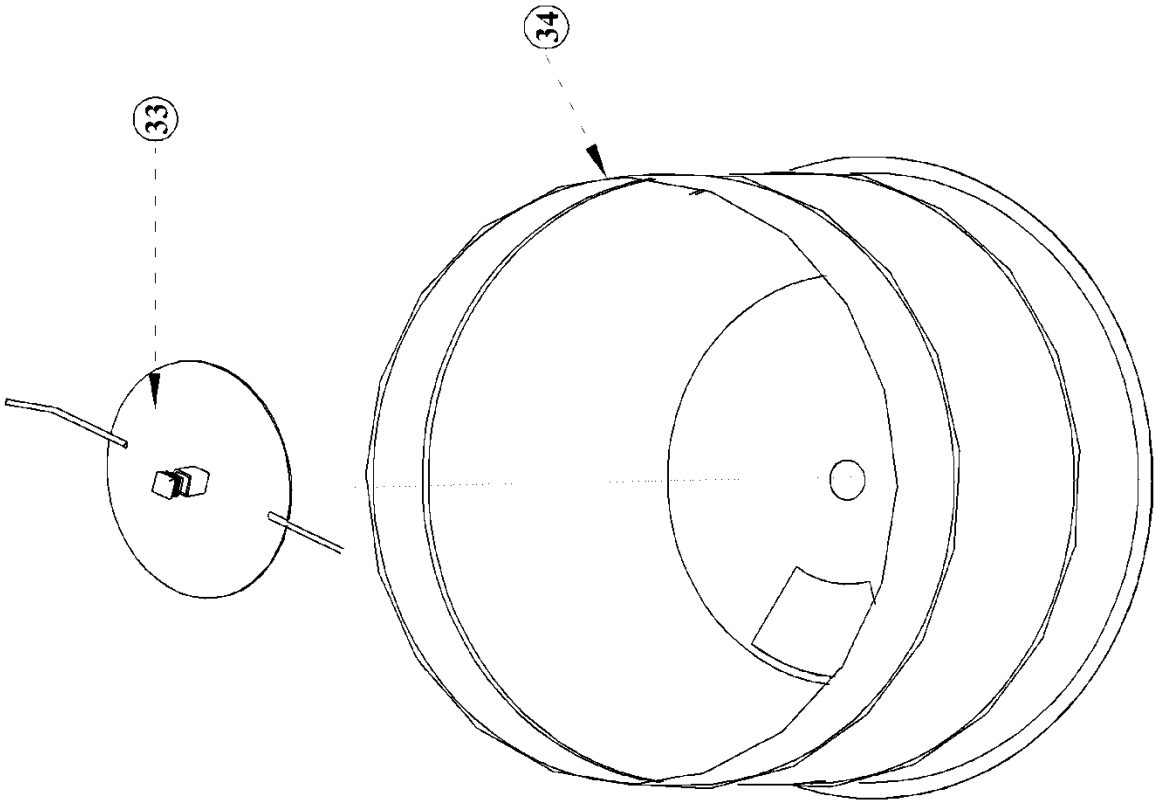
PARTS LIST

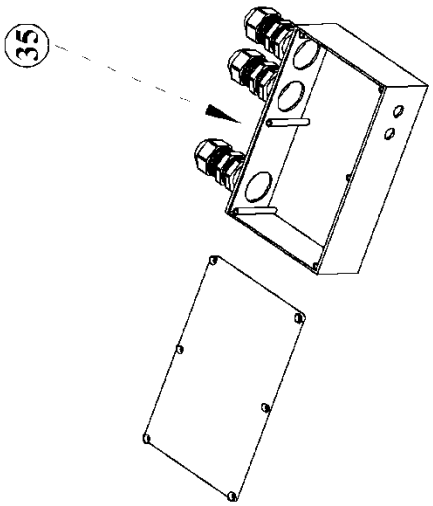
AG Mini parts





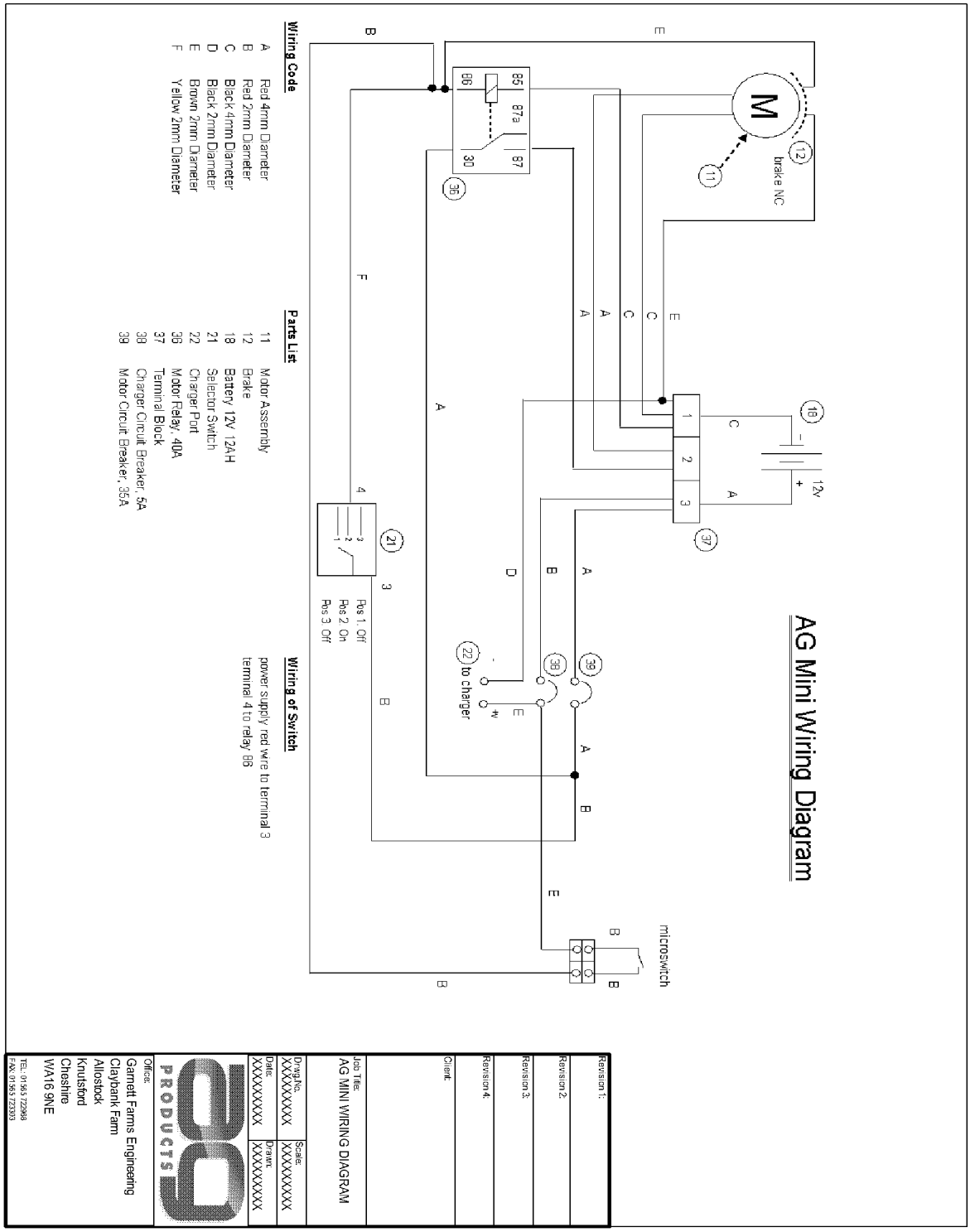
AG MINI HANDLES





AG MINI BIN

AG Mini electrical drawings



Garnett Farms Engineering Limited

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Machine	ITEM NO.	QUANTITY REQURIED	PART NO.	DESCRIPTION
MINI	1	1	MC1-4	APETURE PLATE
MINI	2	1	MC3-01-1	M6 NUT
MINI	3	1	MC1-02-1	BASE
MINI	4	2	MC3-06-1	WHEEL CAP
MINI	5	2	MC3-06-2	WHEEL CIR CLIP
MINI	6	2	MC3-06-3	WHEEL WASHER
MINI	7	2	MC3-06-4	WHEEL
MINI	8	2	MC3-02-02	SPACER
MINI	9	2	MC3-01-5	M8* 60mm BOLT
MINI	10	2	MC3-01-6	M8 NUT
MINI	11	1	MC1-07-1	MOTOR PM50/63-GB4 50:1 C/W CAM ASSEMBLY
MINI	12	1	MC1-07-4	BRAKE
MINI	13	1	MC1-07-2	CAP
MINI	14	3	MC3-01-1	M6 NUT
MINI	15	3	MC3-02-02	SPACER
MINI	16	3	MC3-01-7	M6 * 70mm BOLT
MINI	17	1	MC1-08	N/A
MINI	18	1	MC1-10	BATTERY NP 1212
MINI	19	2	MC3-01-5	M8 * 60mm BOLT
MINI	20	1	MC1-05-1	HANDLES
MINI	21	1	MC3-04-5	CAM SWITCH ASSEMBLY
MINI	22	1	MC3-04-8	CHARGER PORT
MINI	23	2	MC3-01-3	M4* 10mm SCREW
MINI	24	1	MC3-04-9	SWITCH GEAR COVER
MINI	25	1	MC3-02-1	GROMMIT
MINI	26	2	MC3-01-6	M8 NUT
MINI	27	1	MC1-03-1	PU SHAFT
MINI	28	1	MC1-03-3	ROLL PIN 8mm
MINI	29	3	MC1-03-2	PU STRIP
MINI	30	3	MC1-11	M6 * 60mm BOLT
MINI	31	3	MC3-01-1	M6 NUT
MINI	32	1	MC3-04-7	CHARGER YCB4A12
MINI	33	1	MC1-09-1	AGITATOR
MINI	34	1	MC1-01	DRUM
MINI	35	1	MC1-08	CAM ASSEMBLY BOX C/W ITEMS 25,36,37,38,39
MINI	36	1	MC3-04-6	RELAY (40 ampere)
MINI	37	1	MC3-04-1	TERMINAL BLOCK
MINI	38	1	MC3-04-4	CHARGER BREAKER (5 ampere)
MINI	39	1	MC3-04-3	CIRCUIT BREAKER MOTOR/AGITATOR (40 ampere)
MINI		1	MC3-05-4	MACHINE MANUAL