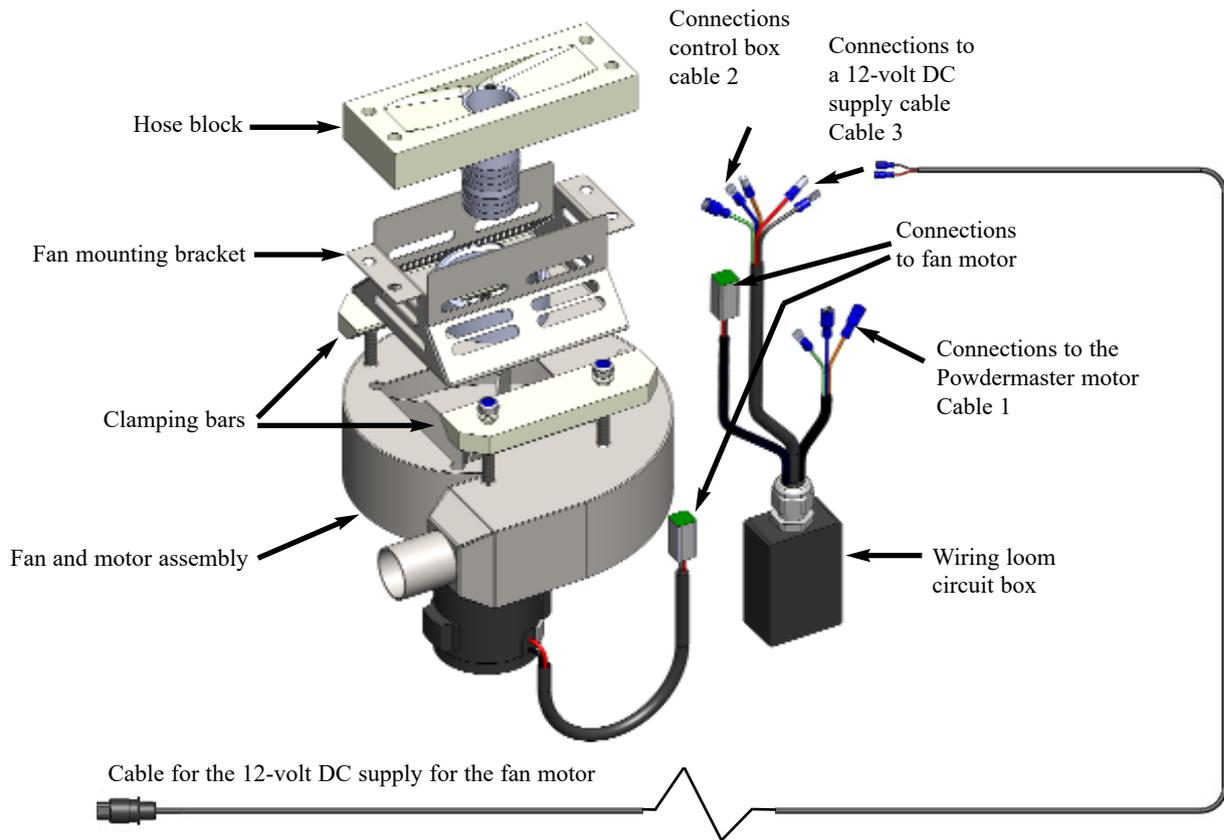




Powdermaster Blower Attachment USER MANUAL

For Digital and PWM Powdermasters

The blower kit consist of: -



Wiring connection

DIGITAL POWDERMASTER		NON DIGITAL POWDERMASTER	
Powdermaster motor	Wiring loom box cable 1	Powdermaster motor	Wiring loom box cable 1
Brown	Brown	Red	Brown
Blue	Blue	Black	Blue
Green Yellow	Green Yellow		Green Yellow Not Connected
Control box cable	Wiring loom box cable 2	Control box cable	Wiring loom box cable 2
Brown	Brown	Red	Brown
Blue	Blue	Black	Blue
Green Yellow	Green Yellow		Green Yellow Not Connected
12-volt DC supply for fan motor	Wiring loom box cable 3	12-volt DC supply for fan motor	Wiring loom box cable 3
Red	Red	Red	Red
Black	Black	Black	Black

The Powdermaster blower attachment is supplied as a kit that can be easily fitted to the Powdermaster applicator. A wiring loom is included that enables the electrical connections to be made via a switching control circuit to synchronise the operation of the blower with the Powdermaster. The fan power supply is completely independent of the applicator. The fan does not draw power from the applicator

Fan operation

The wiring loom circuit box monitors the Powdermaster operation and enables the fan only when dosing is taking place. When dosing stops or pauses the fan will continue to run for a few seconds to allow product to clear after which it will halt until dosing restarts. The wiring loom circuit box also monitors the fan power supply, if this is not correctly connected the Box will disable dosing to prevent a build up of product. The Box also monitors how hard the fan is working to clear product from the system, in the event that the system becomes overloaded the fan will continue to attempt clearance for a few seconds and then shut down operation. If this happens dosing will also be disabled.

The fan will only activate if :-

The separate fan supply is correctly connected, the fan is not blocked and dosing has been selected at the applicator control box.

The applicator will only dose if:-

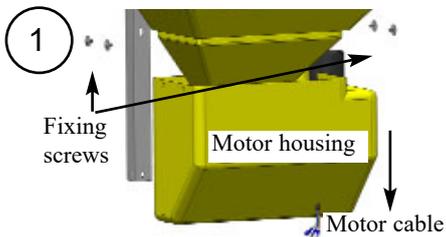
The fan is ready to operate and dosing is selected at the applicator control box.

If dosing is disabled because the fan is not running the digital applicator controller will show a "Check Flow" message on the display.

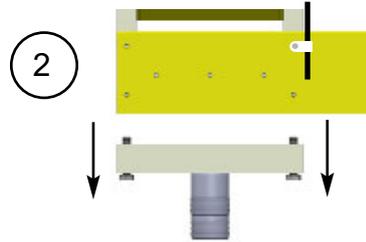
If the fan has been disabled because the system is blocked the fan MUST be disconnected either at the fan power connection or at the fan itself for at least 60 seconds before it can be reactivated.

Blower kit fitting instructions - **Disconnect the power lead from the control box before carrying out the following**

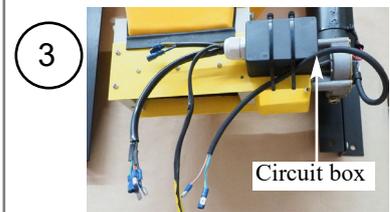
The following instructions apply to both digital and non digital Powdermasters. Refer to the wiring connection table on previous page for information on the wiring loom connections.



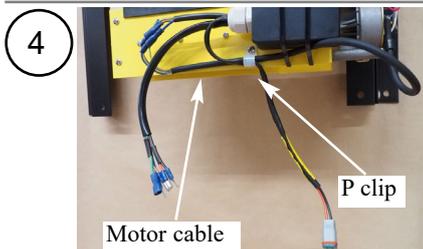
Disconnect the cable coming from the controller and remove the motor housing passing the motor cable through the hole in the cover.



Remove the existing hose block from the feed rotor assembly.



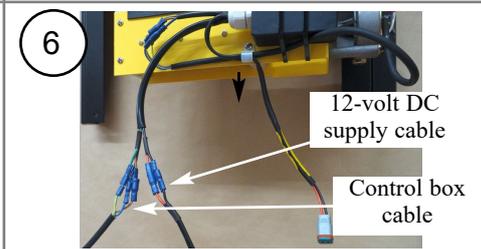
Use the tie wraps provided to attach the wiring loom circuit box to the feed rotor bracket Feeding the cable from the powdermaster motor through the tie wraps.



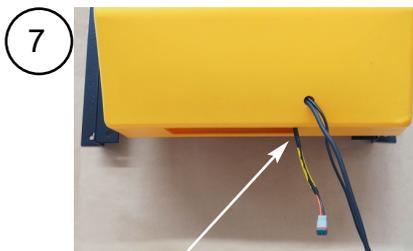
Attach the motor cable to the short lead from the circuit box. Use the P clip provided to secure this cable and the cable with the 2 pin socket fitted to the bracket.



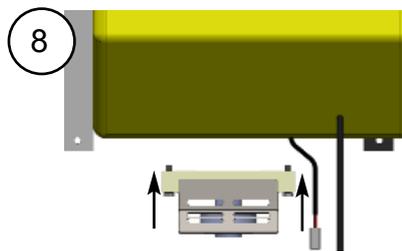
Take the existing cable from the control box and the supplied 12-volt DC cable for the fan motor and feed them through the cable hole in the cover.



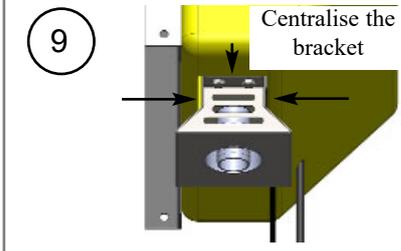
Connect the two wiring loom connections to the control box cable and 12-volt DC supply fan motor cable.



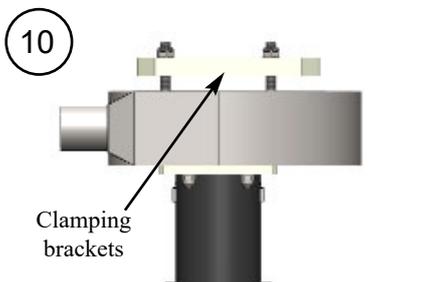
Refit the motor housing, Dress the wiring loom 2 pin socket for the fan motor out through cut out for the hose block.



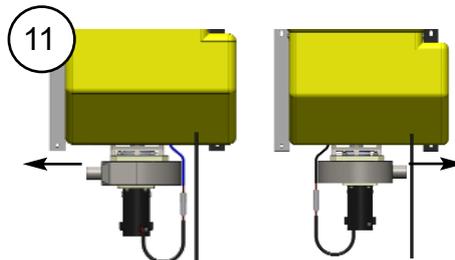
Position the fan mounting bracket and new hose block together and bolt in place of the hose block that was removed.



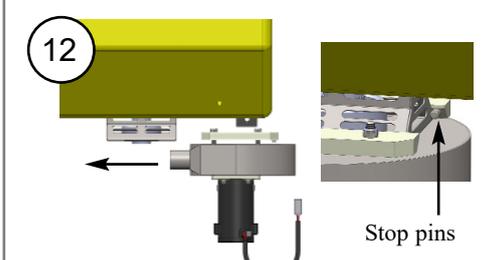
Align the motor housing so the outlet is centralised about the fan mounting bracket and push the housing up fully while tightening the fixing screws.



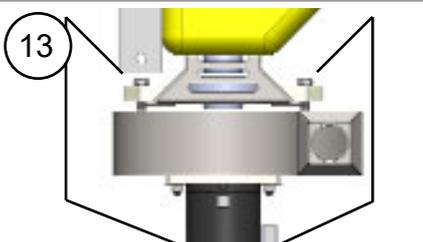
The clamping rails are loosely fitted to the fan assembly these allow the fan assembly to be slid onto the mounting bracket.



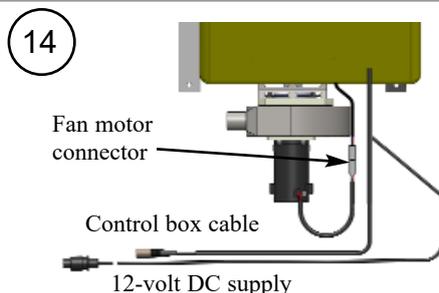
The fan assembly can be fitted so that the outlet is pointing either to the left or the right. Decide which way suits you best before sliding it onto the bracket.



Slide the fan assembly onto the bracket until the stop pins in the clamping bars hit the mounting bracket.

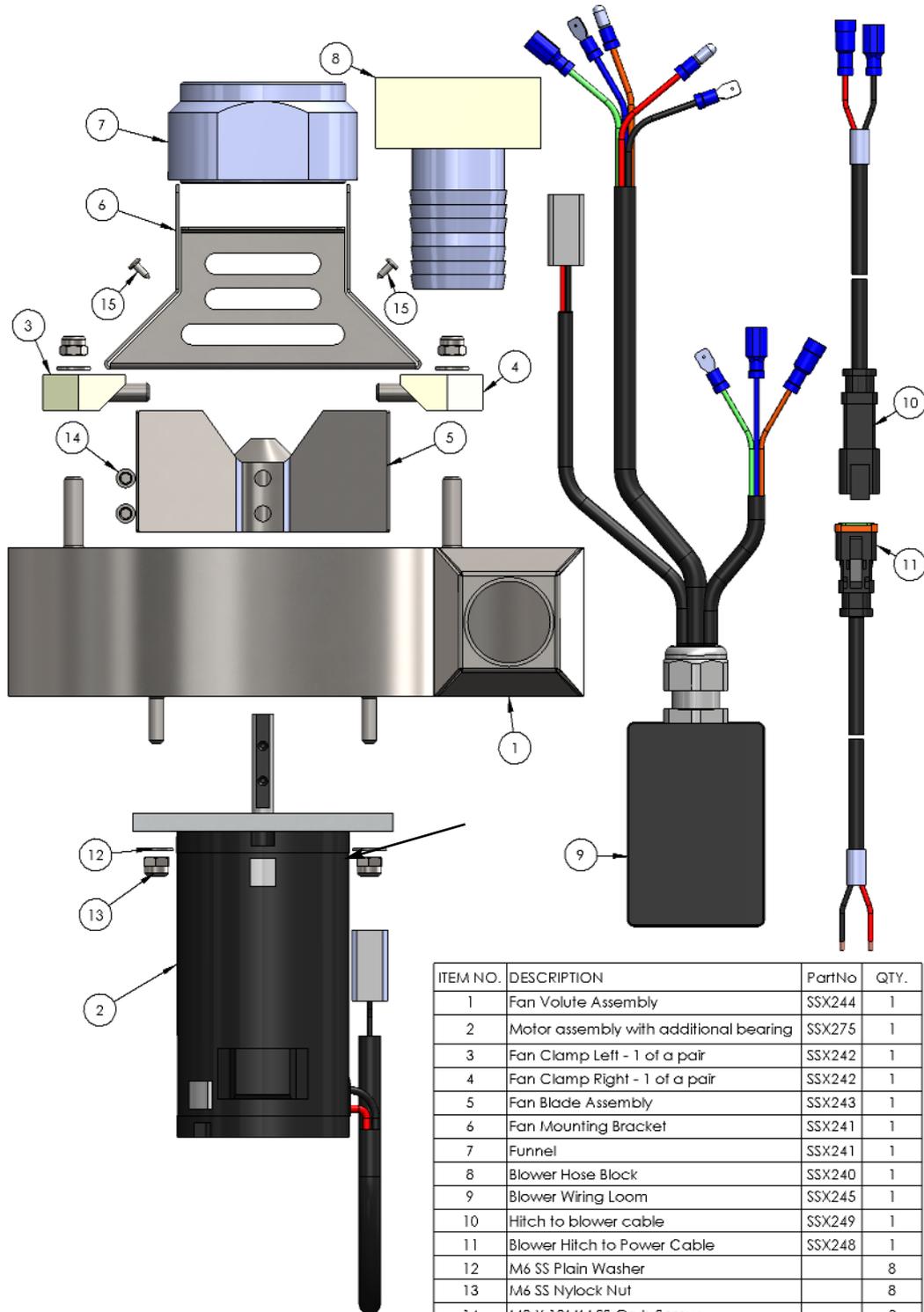


Evenly tighten the clamping bars down onto the bracket so that the fan assembly is firmly held in place.



Connect the wiring loom 2 pin socket to the fan motor 2pin plug. Connect the 12-volt DC supply for the fan motor to a fused 12-volt supply. Plug control box cable into the control box

Powdermaster Blower Fan Assembly Parts List



ITEM NO.	DESCRIPTION	PartNo	QTY.
1	Fan Volute Assembly	SSX244	1
2	Motor assembly with additional bearing	SSX275	1
3	Fan Clamp Left - 1 of a pair	SSX242	1
4	Fan Clamp Right - 1 of a pair	SSX242	1
5	Fan Blade Assembly	SSX243	1
6	Fan Mounting Bracket	SSX241	1
7	Funnel	SSX241	1
8	Blower Hose Block	SSX240	1
9	Blower Wiring Loom	SSX245	1
10	Hitch to blower cable	SSX249	1
11	Blower Hitch to Power Cable	SSX248	1
12	M6 SS Plain Washer		8
13	M6 SS Nylock Nut		8
14	M8 X 10MM SS Grub Screw		2
15	No.8X12MM SS Self Tapping Screw		2

Tools Required:-

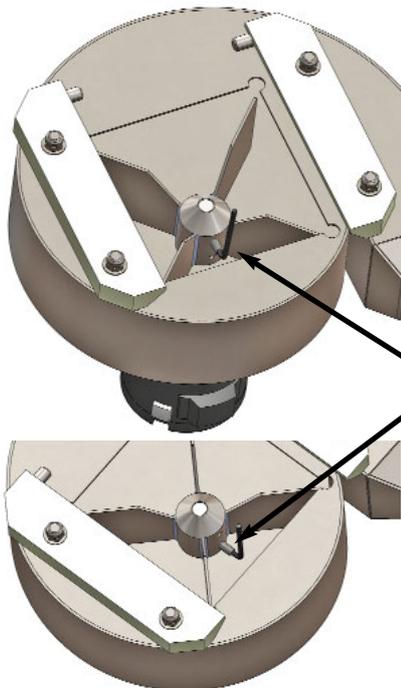
- 4mm L Shape Hex Key
- 10mm socket/spanner
- 1/4in flat blade screwdriver
- Thread locking fluid (*Refer to note below on Thread locker*)

Use a thread locker that is designed for locking and sealing of threaded fasteners, which require normal disassembly with standard hand tools. **DO NOT USE GLUE!**

For example: -

- LOCTITE® Purple Threadlocker (Loctite 222)
- LOCTITE® Blue Threadlocker (Loctite 242)
- 3M™ Scotch-Weld™ Threadlocker TL42
- typical cure time 24 hours*

Removing the fan



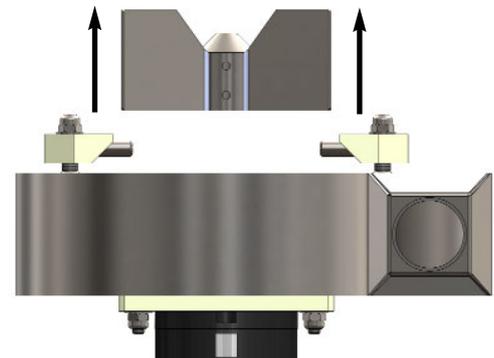
Using the 4mm L shape hex key loosen the two M8 grub screws holding the fan blade to the motor shaft.

There are two locator holes in the flat of the motor shaft that the grub screws locate in.

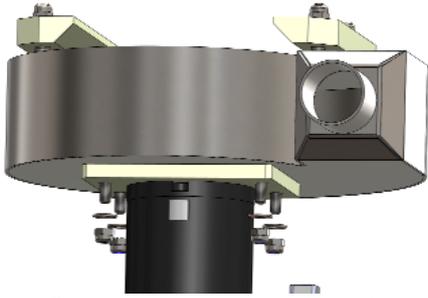
Thread locking fluid is used on the grub screws so they will be tight to undo.

Loosen the grub screw several turns so they are protruding from the fan boss clear of the motor shaft.

Although the fan is a close fit on the motor shaft it will slide upwards through the opening in the fan volute.

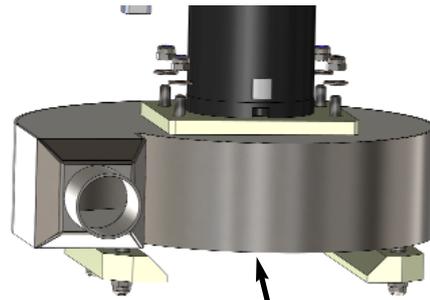


Removing the motor



Using a 10mm socket/spanner remove the 4 M6 nylock nuts holding the motor assembly onto the volute. Note the position of the "P" clip securing the cable so that it goes back on the same stud. Note the position of the motor cable in relation to the volute so that you can refit it in the same orientation.

Fitting new motor



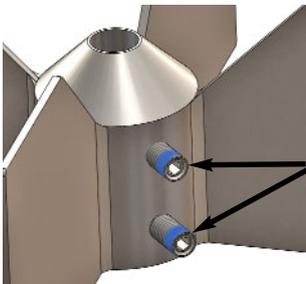
The new motor assembly includes the new motor mounting plate which has a bearing pressed into it. Fit the motor assembly over the M6 studs on the volute and refit the M6 washers and M6 nylock nuts, replacing the "P" clip securing the cable in the same location that it came from.

Before fully tightening the M6 nuts make sure the motor shaft is central in the hole of the volute.

Using a 10mm socket/spanner tighten the nut fully.

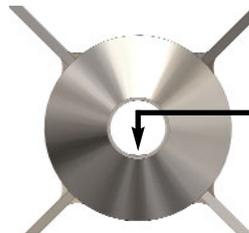


Refitting the fan



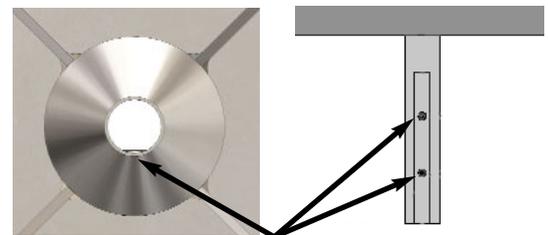
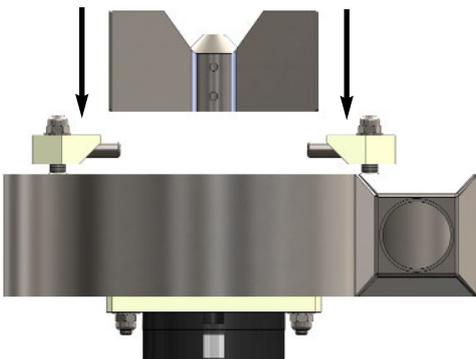
With the M8 grub screws protruding from the boss apply a small amount of thread locking fluid to them.

The tool end not the end that locks onto the shaft.



Screw the M8 grub screws further into the boss until you can just see them coming into the centre hole and back off the lower screw by 1/2 turn.

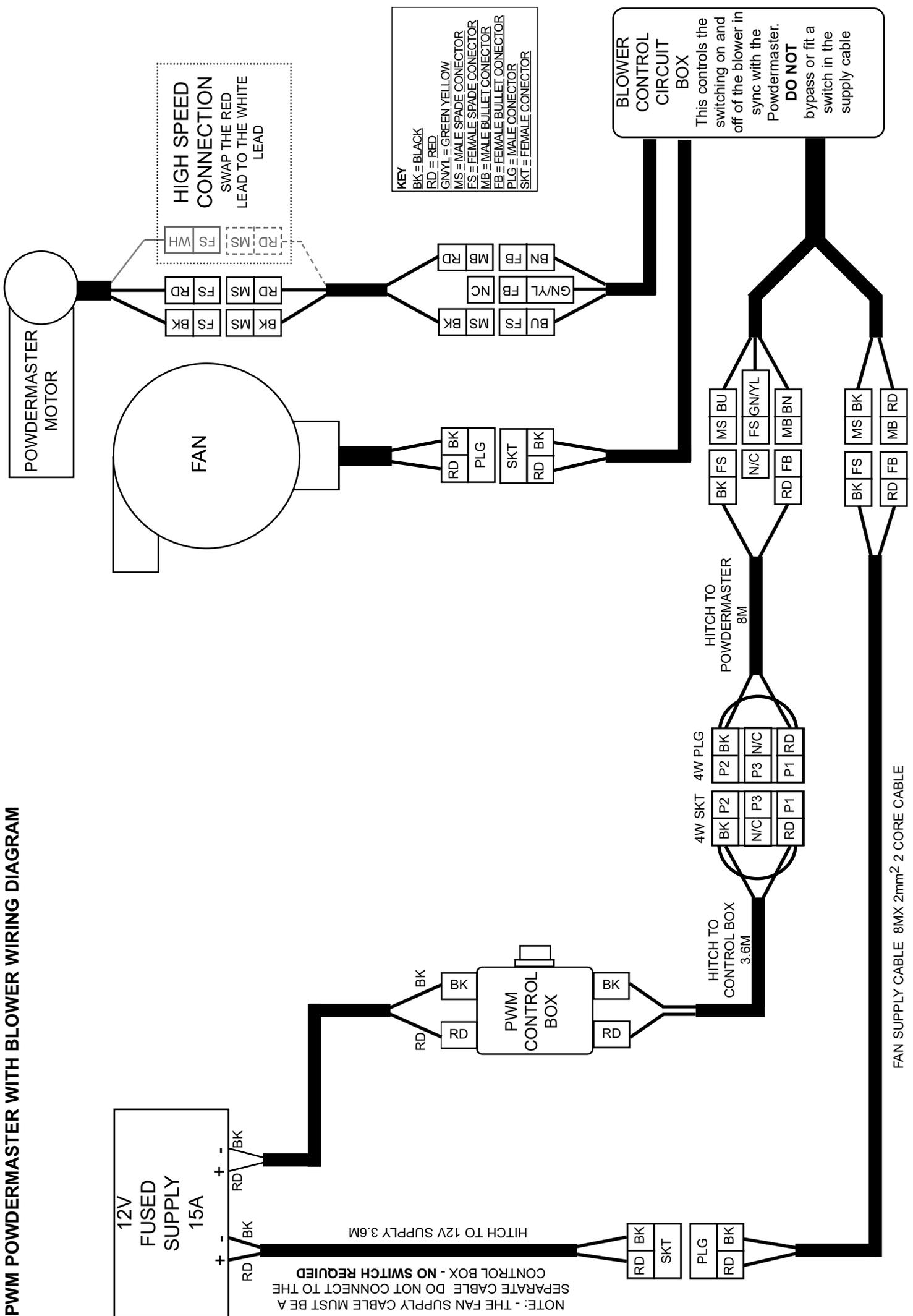
Before fitting the fan smear a thin film of grease on the motor shaft. Slide the fan down through the opening in the fan volute onto the shaft with the grub screws 90 degrees to flat on the motor shaft.



To locate the M8 grub screws in the locator holes slide the fan down on to the shaft applying a light pressure on the top screw with the 4mm hex key and you will be able to feel when it is in line with the top locator hole.

Tighten both M8 grub screws just enough to make sure each is in the locator holes before tightening both screws fully.

PWM POWDERMASTER WITH BLOWER WIRING DIAGRAM



TECHNICAL DATA

Supply Voltage
Current consumption
Fuse rating
Output signal to motor
Capacity of the hopper
Output range

POWDERMASTER

12V/DC (10.6V DC to 16.4V/DC)
2.8A
5A
PWM approx 1.4 KHz
50 kg or 80kg
50g to 2000g per minute

BLOWER

12V/DC (10.6V DC to 16.4V/DC)
11.5A
15A

WARRANTY

Provided installation is carried according to these instructions a warranty of 1 year from date of delivery applies. This covers faulty manufacture only and does not cover wear and tear through normal use or mechanical or chemical damage that has occurred to parts through misuse or unauthorised attempts to repair the unit. In the case of faulty manufacture, claims are limited to repair of the unit and its return to the customer.