

Martin Lishman

Trouble-Dry™ Hot Spot Aeration Spear & Fan

IMPORTANT!

READ THESE INSTRUCTIONS BEFORE USE

A qualified electrician must be used to install this equipment

These instructions apply to the following:

Fan models: FTDS (Standard), FTDEB (Extra), FTDEB/EURO (Extra with Euro Plug) **Spear models:** TDG (Grain), TDR (Oilseed rape)

Complete units: TDS (Trouble-Dry Standard), TDSR (Trouble-Dry Standard with oilseed rape spear), TDEB (Trouble-Dry Extra), TDEB/EURO (Trouble-Dry Extra with Euro Plug), TDERB (Trouble-Dry Extra with oilseed rape spear), TDERB/EURO (Trouble-Dry Extra with Euro Plug and oilseed rape spear)

Inspect the equipment immediately on arrival

Items are packaged to prevent damage during transport but should be examined immediately on arrival. Ensure the metal cap on the top of the fan, and the plastic cooling fan underneath it, are both intact and the cooling fan rotates freely. Check the main fan impeller can rotate freely with no contact between the impeller and the fan casing. If there is any sign of damage to the fan - DO NOT USE IT. Report any damage immediately to your supplier. Damage not immediately reported may not be considered as a warranty claim.

Fan plug

If not supplied with the fan, fit a 13 amp plug to the cable making sure that the correct wiring colour code is followed. **Please note that the 13 amp plug should be fitted with a 3 amp fuse.** If in doubt, consult a qualified electrician.

Extension leads

The fan is fitted with c.3m cable. If an extension lead is to be used it should be multi-stranded 2 core and earth cable, with each core of the following thickness: up to 25 m - 1.25mm; up to 50 m - 2.5mm; up to 100 m - 4.0mm
If in doubt about the type of extension lead to use, consult a qualified electrician.

Make sure the power supply is correct for the fan

Ensure the fan is operating at the correct voltage (230v) and at less than the Maximum Operating Current (shown on the motor plate). Avoid running the fan in free air; only use when fitted to an aeration spear.

Using the aeration spear and fan

Before screwing the spear into the grain attach the handle approximately half way down the spear. Screw the spear into the area of the 'Hot Spot', raising the handle up the spear as necessary. Position the fan in the spear, connect the power supply and switch on.

After aeration, the spear should be removed with care and not left in position without using the fan. Excessive force during removal can break the spiral; the handle should not be extended in any manner to gain additional leverage. We recommend that the tube is screwed in to the grain a little way in order to release the tube before unscrewing it.

Aeration time and area

A minimum of 12 hours aeration is normally required before the fan is switched off and the spear removed. The time required ultimately depends on how wet and hot the grain is. Grain of higher moisture and temperature will take longer. The Trouble-Dry Standard Fan should normally ventilate an area of grain c.2-3m square (up to 15t) around the spear; the Trouble-Dry Extra Fan should ventilate c.4-5m square (up to 35t). These areas should be taken into account when deciding where to position the spear in the grain.

The area ventilated is less if the grain is shallower than 2.4m. To increase the ventilated area, put a circular polythene sheet about 2.4m in diameter around the spear, laid on the surface of the grain. Always remove the polythene when not using the fan.

After the grain has been cooled it should be regularly monitored to check that it does not start to reheat.

Use of the fan with wet oilseed rape, high erucic acid oilseed rape and wood chips

Wet Oilseed Rape

Use of the fan with dry oilseed rape can give excellent cooling results. But it is not recommended to use the fan to ventilate or dry wet oilseed rape. Wet oilseed rape creates high resistance to airflow and the airflow of the fan is insufficient to overcome this and permit sufficient cooling.

High Erucic Acid Oilseed Rape

If the oilseed rape is a variety with high erucic acid content and is both wet and very hot then the rape seed can start to break down and release acid. If the fan is used in these circumstances, the acid will eventually damage the fan impeller. Any adverse consequences of using the fan in these conditions are not covered under warranty.

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Wood Chips

Use of the fan to ventilate woodchips can give excellent cooling results. However, wood chips can emit acid (such as tannic and oxalic acid), especially when wet. Over a period of time, the acid may cause corrosion of the galvanised parts of the fan and aeration spear. It is important to inspect the fan regularly to ensure that corrosion has not taken place. If it has, the affected parts should be replaced immediately. Any adverse consequences of using the spear and fan in these conditions are not covered under warranty.

For preventative insurance against Hot Spots use Martin Lishman Pile-Dry Pedestals® and Fans.
See www.martinlishman.com for further details.

Maintenance and Service

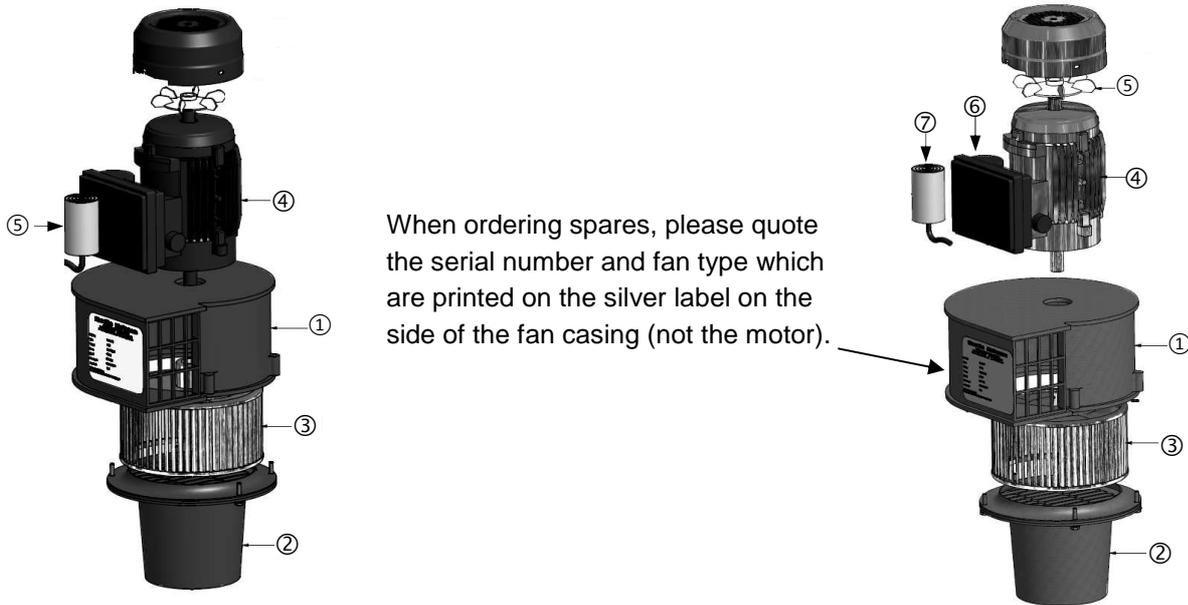
Before turning the fan on, especially after a period of non-use, carry out the following visual checks:

- look for obvious external damage, ingress of foreign objects, build-up of debris on the impeller.

After turning the fan on, listen for the following:

- Non-standard sound (such as excessive bearing noise or uneven running sound) such as might be caused if the impeller has become unbalanced due to a build-up of dust and debris on the impeller.

Do not use the fan if any physical damage is detected. Any build up of dust should be removed from the impeller using an airline. Spare parts, if required, can be selected from the following diagram and list:



FTDS Parts List

Item	Part Number	Description
①	FTDSCASING	Impeller casing
②	FTDSSPIGOT	Inlet assembly
③	FTDSIMPELLER	Impeller
④	FTDSMOTOR	Motor
⑤	FTDSCAPACITOR	Capacitor (inside box)

FTDEB, FTDEB/EURO Parts List

Item	Part Number	Description
①	FTDEBCASING	Impeller casing
②	FTDEBSPIGOT	Inlet assembly
③	FTDEBIMPELLER	Impeller
④	FTDEBMOTOR	Motor
⑤	FTDEBCOOLFAN	Cooling fan
⑥	FTDEBBOX	Connection box
⑦	FTDEBCAPACITOR	Capacitor (inside box)

Warranty

Martin Lishman aeration spears, fans and motors are guaranteed for a period of one year from the date of purchase against mechanical and electrical manufacturing defects. To claim under warranty, the equipment should be returned, at the claimant's expense, to the supplier with a written explanation of the problem. Should there prove to be a defect or malfunction caused by faulty parts or workmanship, it will be repaired or replaced and returned to the claimant without charge. If a warranty claim is rejected, the cost of replacement or repair will be notified to the claimant before any work is carried out.

Any warranty claim will automatically be invalidated if the equipment has been modified or internally tampered with in any way. Damage or faults occurring to the equipment which have been caused by inappropriate use of the equipment or by use not in accordance with these instructions will not be covered under warranty. Whatever the circumstances of use of the equipment, and whatever the operating conditions, it is the responsibility of the user to ensure that the equipment is capable of operating correctly and that all safety regulations are adhered to. Martin Lishman Ltd will not accept any responsibility for any loss or injury arising from misuse of the equipment or any use that is not in accordance with these instructions.

Under no circumstances will Martin Lishman Ltd reimburse any costs associated with a warranty claim if these costs have been incurred without agreement in advance.

Under the terms of warranty for the equipment under no circumstances will liability exceed the cost of replacement or repair. Martin Lishman Ltd will not be liable for any consequential or indirect loss suffered by purchasers or users of the equipment, whether this loss arises from correct or incorrect use of the equipment, defect or malfunction caused by faulty parts or workmanship or in any other way. Non-exhaustive illustrations of consequential or indirect loss are loss of profits, loss of contracts and damage to property.

Full Terms & Conditions available on request

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