



Supaturf



SUPATURF TFS25

OPERATOR MANUAL

VITAX LTD



Vitax Limited
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UK & EC DECLARATION OF CONFORMITY

Herewith we declare that the machinery described below is in accordance with the relevant health and safety requirements of “The Secretary of State” and “The EC Council Directives” concerned with the supply of machinery compatibility. No alterations are to be made to the machine without the prior consultation and approval of Vitax Limited otherwise this Declaration may become invalid. This equipment must be commissioned, used and maintained strictly in accordance with the operating and maintenance instructions issued with the machine. Operators must be trained in accordance with the recommendations given in the operating and maintenance instructions issued with the machine.

Description of machine:	SUPATURF TFS25
Machine Serial number:	As per the build sheet (<i>supplied</i>)
Date of supply:	As per invoice date
Relevant EC Council Directives:	Machinery Directive 2006/42/EC and Subsequent amendments.
Relevant Secretary of State act:	The Supply of Machinery (<i>Safety</i>) Regulations 2008.

Issued on 7th May 2021 by *A. Gurney* on behalf of Vitax Ltd.

Signed - *A. Gurney*

Position of signatory: - *Operations Director*

INTRODUCTION

IMPORTANT - PLEASE READ THIS MANUAL BEFORE USE

This is essential if you are to learn how to operate this equipment correctly. Failure to do so could result in personal injury or equipment damage.

This manual should be considered a permanent part of the equipment and should remain with the machinery if sold on.

INTENDED USE/DISCLAIMER

The Supaturf TFS25 (the 'TFS25') is designed for use as a line marker. The intended use is for line marking of sports fields or applying turf dyes using the spray boom accessory. Use in any other way is considered as contrary to the intended use. The manufacturer accepts no liability for damage or injury resulting from misuse and these risks must be borne solely by the user.

The TFS25 should only be operated, serviced and repaired by persons familiar with its characteristics and acquainted with the relevant safety features (accident prevention).

RECOMMENDED PRODUCT LIST FOR SUPATURF TFS25 LINE MARKERS

Marking Liquids:

Supa Stadia AF, Supa Stadia ECO, Supa Stadia, Stadia, Stadia Colours, Sport, Briteline Plus, Supaturf RTU and Greenit.

Cleaning Liquids:

SupaFLUSH and clean water.

Material Safety Data Sheets for all of the above products are available on request.

SECTION 1 - INTRODUCING THE TFS25 LINE MARKERS

Thank you for choosing the TFS25 battery operated spray line marking machine.

Your machine is the culmination of years of research and field trials. It provides a no compromise, build quality, combined with a rugged but simple design that ensures ease of maintenance and ultimate usability. All Supaturf machines are manufactured in England to a high, professional grade quality.

The TFS25 is capable of operating for up to 5 hours (approx. 15 pitches) on a single overnight charge of its battery. Please note that these timings have been measured under test conditions in our research and development facility using equipment operating at optimum performance. With proper maintenance and operation you can expect to achieve these results throughout the life of your battery.

SECTION 2 - MACHINE SET UP

Please refer to the back of this manual to see the illustrations of the TFS25, and consult this when reading this manual.

Your machine is supplied fully assembled and tested in its transit packaging. First it is advisable to check that you have everything that you need to start spraying. You should have received:

- Supaturf TFS25 line marker
- Battery charger unit
- 100ml bottle of SupaFLUSH cleaner
- Envelope containing this manual, and quality control check sheet

To remove the TFS25 from the box, two people are required to lift the machine from its packaging. All you need to do to start spraying is to unfold the handlebars and secure them at the height required. There are 3 fixing positions available. Select the required position and tighten the hand wheel fastener. There is a tank stop fitted to the handle bar that is secured with tape, this needs to be removed before operation.

There may well still be some charge in your battery, but it is advisable to charge the unit overnight before proceeding. Your machine has been supplied with crocodile clips for the charging unit. The crocodile clips can be connected directly to the battery, taking care to connect the correct colour crocodile clip to the corresponding colour terminal on the battery.

NOTE: The plastic pump and battery cover needs to be removed whilst the machine is on charge.



Ensure the connection is secure and plug the charger into a convenient mains socket. Turn on the mains power and leave to charge, see the instructions supplied with the charger for further information on the use of the charger. When the unit is fully charged, disconnect the charge unit from the mains and disconnect the charge unit from the handlebar plug. Activate the on/off switch located on the handlebar. The pump should be heard to work.

WARNING:

Always charge the battery in a well-ventilated area. Never charge the battery in a closed container (see battery care section on page 8 for further information).

SECTION 3 - USING THE TFS25

Note: SECTION 9 gives training checklist for new operatives.

Once the machine has been set up as detailed in SECTION 2 you can mark out your pitch without delay. First you will need to choose which marking liquid you wish to use (see SECTION 5). Dilute the liquid to the desired concentration and thoroughly mix the marking liquid with the water using the specially marked tank/drums supplied with the machine. Dilution rates are recommended for each product - please stay within these guidelines.

WARNING:

To avoid splashing of line marking liquid into eyes, eye protection and gloves should be used whilst handling and pouring line marking materials. In the event of spillage, refer to the Material Safety Data Sheet for the line marking material being used.

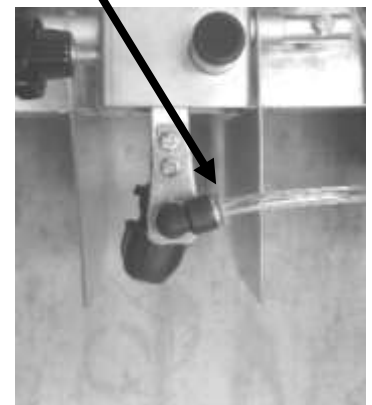
Filling the Tank/Drum

Unscrew the tank/drum cap, and pull out the 10mm tubing so the neck is clear. It is recommended that a funnel be used to make pouring into the tank/drum easier. The pre-mixed marking liquid can then be poured into the tank/drum to the desired level (the maximum capacity is 12.5 litres). Once completed, the 10mm tube can be put back into the neck of the tank/drum, and the cap screwed back into place.

As a guide, a typical football pitch with a 700 metre linear line would require approximately 7-8 litres of diluted liquid for a single pass, walking at an average speed of 2 mph.

It may be necessary to purge any trapped air through the system. This can be done in the following way. Once the tank/drum has been filled with the required amount of diluted marking liquid, switch the machine on for 10 to 20 seconds (ensuring a suitable container is available to capture the spray liquid if necessary). After this time the spray should become solid with no air in the system and the spray pattern should be steady with no 'fluttering' evident. If not then there is still air in the system that will need to be purged via the separation point on the 6mm tube, located near the spray arm.

Hold the connector between your fingers with one hand and push the tube into the connector with the other, whilst holding the blue spring loaded plastic end back, pulling on the 6mm pipe at the same time. This will disconnect the pump outlet tube from the spray arm. Switch on the machine and allow the liquid to run out of the outlet tube. Again a suitable container should be used to catch the liquid. Once the air has been exhausted (allow 15 to 20 seconds to ensure that all air has been expelled) switch off the machine. Reconnect the pump outlet tube to the in-line 6mm connector. This is done by pushing the pipe back into the connector.



Line Width Adjustment

The width of the line is adjusted by raising or lowering the spray arm until the desired width is obtained. This is adjusted by unscrewing the hand wheel on the spray arm clamp and adjusting the height and spray nozzle position as required. The TFS25 is also supplied with a marking shield, which is also adjustable (see fig3 on page 13), and can be used to help define a line.

Marking your First Lines

IMPORTANT

To familiarise yourself with the operation of the machine it is worthwhile to use a suitable area where the operation can be rehearsed. The spray nozzle is connected to an instant shut-off valve, which is activated by the pressure generated as soon as the pump starts working. As soon as the switch is switched to the on position, a fan of liquid will come from the spray nozzle and as soon as the switch is switched to the off position the fan will stop instantly without drips.

The pitch to be lined out should be planned and possibly stringed out in advance (or similar) and the TFS25 should be adjusted to your satisfaction prior to use. When spraying, you should walk at a consistent pace and ensure that you do not step on the line after it is sprayed, as this may result in a series of white footprints. This might require a bit of practice.

Marking circles

The wheels of the TFS25 are configured so the front wheels are inset by about a half wheel width compared to the back wheels, and with the simple addition of an in-line eyelet on the front wheel, marking centre circles has been made easier.

When spraying lines at 90 degrees to recently sprayed lines it is advisable to stop the machine when its wheels are just in front of the existing line and “walk” the wheels over the line to avoid the wheels becoming contaminated with marking liquid that hasn’t dried. As a guide you could expect Supaturf line marking liquids to dry within 15 to 20 minutes in direct hot sunshine but this could take considerably longer subject to prevailing weather conditions. It is best to be cautious.

Note: When the machine is on site and not in use, do not leave the machine unattended. Ensure the machine is not left on a slope, as it is not fitted with a parking brake.



WARNING:

If the machine is going to be lifted onto a vehicle after line marking for use at another site, the tank/drum should be emptied and the machine lifted by two people. Alternatively loading ramps may be used to ensure the operator's safety.

SECTION 4 - MAINTAINING YOUR TFS25

It is vitally important that your TFS25 is thoroughly cleaned after every usage to ensure the long life of the spraying components of the machine. It is recommended that Supaflush be used to further aid the cleaning of the machine.

Always clean the TFS25 after use and follow these simple steps to ensure your machine is as clean as possible.

1. Empty leftover product out of the tank/drum.
2. Fill the additional empty tank/drum with a minimum of 3 litres of clean water.
3. Transfer the filling tube from the 'paint drum' to the 'clean water drum'.
4. Turn the machine on, making sure all residue is collected in a bucket, and leave running until the lines run clear.
5. To make sure the lines and system are cleaned thoroughly, repeat step 2, using 3 litres of water and adding 50mls of Supaflush. This allows the Supaflush cleaner to wash through the pump and spray nozzle assembly.

Note: In the event of a frost, do not leave water/marking fluid in the tank and pump. Always use eye protection and gloves when using Supaflush cleaner. In the event of spillage, refer to the Supaflush Material Safety Data Sheet. Dispose of waste water through the appropriate channels.

WARNING:

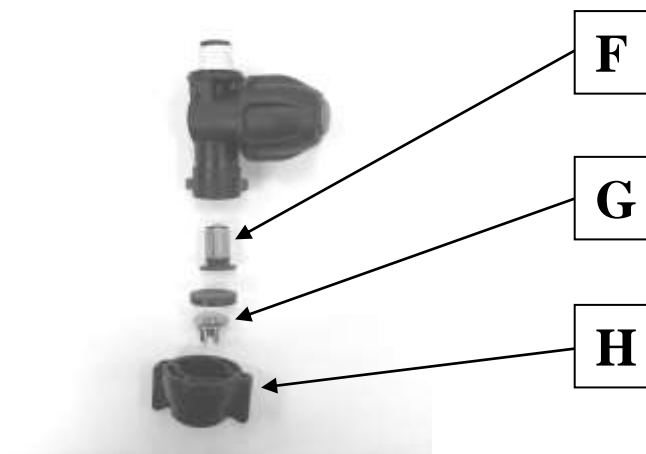
Solvent based material should never be used to wash the machine or tank, as this has the potential to create an explosive environment.

Replacement of spray nozzle and/or filter:

Spray nozzles and filters are consumable items and need to be cleaned or replaced on a regular basis. The timing of this depends upon the amount of usage, but as a general guide, we would expect the average user to clean the filter every month, or as necessary, and replace it every 3-6 months. Replace the spray nozzle when the spray pattern is damaged. Spray nozzles should be replaced at least once every 3-6 months.

Replacement is a simple process. Look at the exploded diagram in the inset illustration. The filter is item marked **F** and the spray nozzle is the item marked **G**. To access the nozzle, turn the nozzle cap (**H** in the inset illustration) one half turn anti-clockwise. The filter, sealing washer and nozzle can now be removed and replaced if required. Re-assembly is a simple reversal of this process.

Part code - 00350



Replacement of the in-line blade fuse:

If, for whatever reason the pump draws too much power, the in-line fuse will blow at 5 amps to protect the wiring loom. The fuse is located in the wiring loom, attached to the plastic shroud. Open the fuse cover and pull out the fuse. Replace if necessary.

WARNING:

Always replace the fuse with the same rated 5-amp blade fuse. Check wiring loom for signs of wiring insulation damage.

Battery Care

GENERAL BATTERY SAFETY MEASURES

Always charge the battery in a well-ventilated area. Never charge the battery in a closed container. Do not attempt to open the battery casing. In the unlikely event of the battery leaking and sulphuric acid electrolyte coming into contact with skin or clothing, wash off immediately with water.

Should the electrode come into contact with skin or clothing, wash off immediately with copious amounts of water and consult a doctor. The battery should be regularly checked for cracks/damage to the casing and if any damage is found, always replace the battery. Always dispose of used batteries through appropriate collection or recycling channels.

The battery on the TFS25 is a 12Volt, 18 amp/hour battery. This notation relates to the amount of power the battery can store on a single charge, and the longer the battery will last when in use.

These batteries are kept at peak condition if they are recharged before they are fully discharged. It is not a problem if fully discharged occasionally, but it should not be the norm if you want to gain the longest life possible from the battery.

Note: Charge the battery at least every 3 months, even when not in use.

The TFS25 battery units have an operational life of approximately 200 to 500 charge cycles. Depending on your rate of usage, you will be able to approximate the life of your battery. Always put your battery on charge until the charge complete light has lit on the charger unit, regardless of the level of charge required.

Pump Care

The pump unit used on the TFS25 is exclusive to Supaturf machines and has been specifically designed for this application. They will not require any internal maintenance as long as the machine is properly cleaned after every use. The pumps are self-priming and will not be damaged by short periods of dry running.

If you experience any problems with the pump, it is recommended that you return the unit to the factory for inspection.

SECTION 5 – LINE MARKING LIQUIDS

Supaturf line marking liquids have been specially formulated to be applied through spray markers, helping the end user to produce the longest lasting sports line there is to date.

The particle size of the suspended solids within marking liquids is critical to the effective running of the pump and spray parts on the TFS25 machine. For this reason it is recommended that only Supaturf line marking liquids are used as they have been specially formulated to provide optimum performance. Supaturf white spray marking liquids come in 7 grades:

- Supastadia AF
- Supastadia ECO
- Supastadia
- Stadia
- Sport
- Briteline Plus
- Supaturf RTU

All liquids can be diluted to achieve the desired quality of line and for example, the Supastadia can be diluted up to 8:1 with water, although a 4:1 rate is more typically used, whilst our super concentrated Supastadia ECO can be diluted up to 20:1 for over marking.

Note: For best results when mixing, always add the line marking liquid to water.

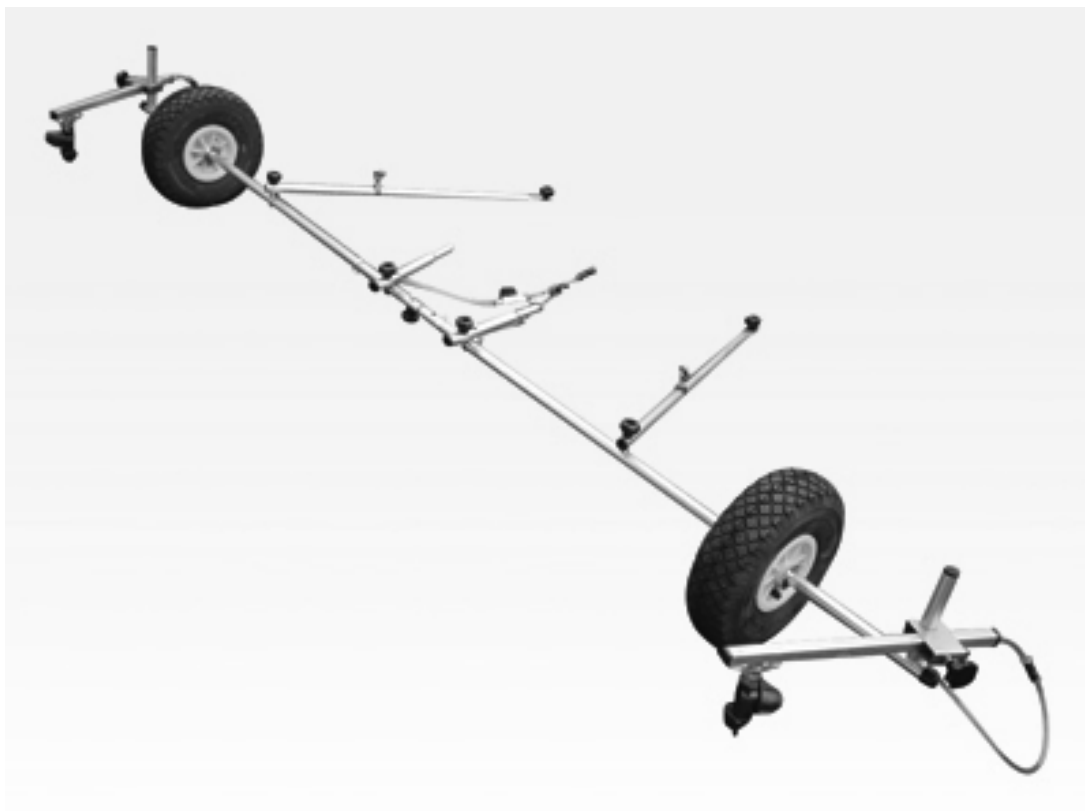


SECTION 6 - ACCESSORIES

The TFS25 has a range of accessories which include:

The Athletics marker (02018)

Utilising the original spray arm, this attachment allows three lines to be marked in one pass, making athletics tracks a lot quicker and easier to mark out. The spray arms are fully adjustable, enabling a variety of different track widths to be sprayed.



Spare Parts

A full range of spares are available for the TFS25. These are illustrated on pages 14 & 15. When ordering, please use the order code stated in the box shown.

SECTION 7 – TFS25 STORAGE

Before long-term storage of any TFS25, the machine should be thoroughly cleaned both internally and externally (for cleaning see SECTION 4, page 7 - Maintaining your TFS25). After cleaning, the machine should be checked for any frame damage or rusting. Any damaged part/s should be replaced. When your TFS25 is not being used and is in storage over winter or summer, the battery must be fully charged before storage. After every period of 3 months in storage, the battery should be fully charged again. This will ensure maximum battery life.

Note: Always store your TFS25 in a dry damp-free environment.

SECTION 8 – SUPATURF TFS25 SPECIFICATION

Weights and dimensions:

TFS25 (boxed) 30.0kg

Box dimensions 100cm x 63.5cm x 60cm

Statistics:

Tank/Drum capacity	12.5 litres
Pump specification	Shurflo SUK 0105
Electrical system	12 volt
TFS25 battery	12 volt 18 amp hour cyclic use battery
Chargers rated at either	1.5 amp output
Chassis - tubing	Triple galvanised (flo-coat) tube
Machine length	77cm
Machine width	61cm
Machine height (handlebar upright)	103cm
Fuse rating	5 amp blade fuse

SECTION 9 – OPERATOR’S TRAINING CHECK LIST

Before using a Supaturf TFS25 machine, refer to the section below to ensure the machine performance is optimised and to check the user is competent with the machine.

Familiarisation:

- Working of the machine controls (section 3)
- Understanding of the Material Safety Data Sheets for recommended products used with the machine.
- Operator's safety and caution information contained in this manual is understood.
- Operational Features (section 3).
- How to switch the machine on and off.
- How to raise and lower the spray nozzle assembly for desired line width.
- How to safely mix line marking liquids (section 3).
- How to mark your first lines.
- How to fill and empty the tank - including lifting on and off a transport vehicle.
- Cleaning procedures after use (section 4).
- Recommended safety equipment that should be worn when cleaning the machine after use (section 4).
- How to clean the machine after use.
- How to clean nozzles and filters after use.
- Routine maintenance.
- Battery condition check (see battery care section and safety instructions for battery handling).
- Frame condition check.

Trouble Shooting Guide Pictures:

Figure 1



Figure 1 shows the location of the 5-amp blade fuse with the fuse cover on. The 5-amp blade fuse is translucent and can be easily checked to confirm whether the fuse has been damaged.

Figure 2

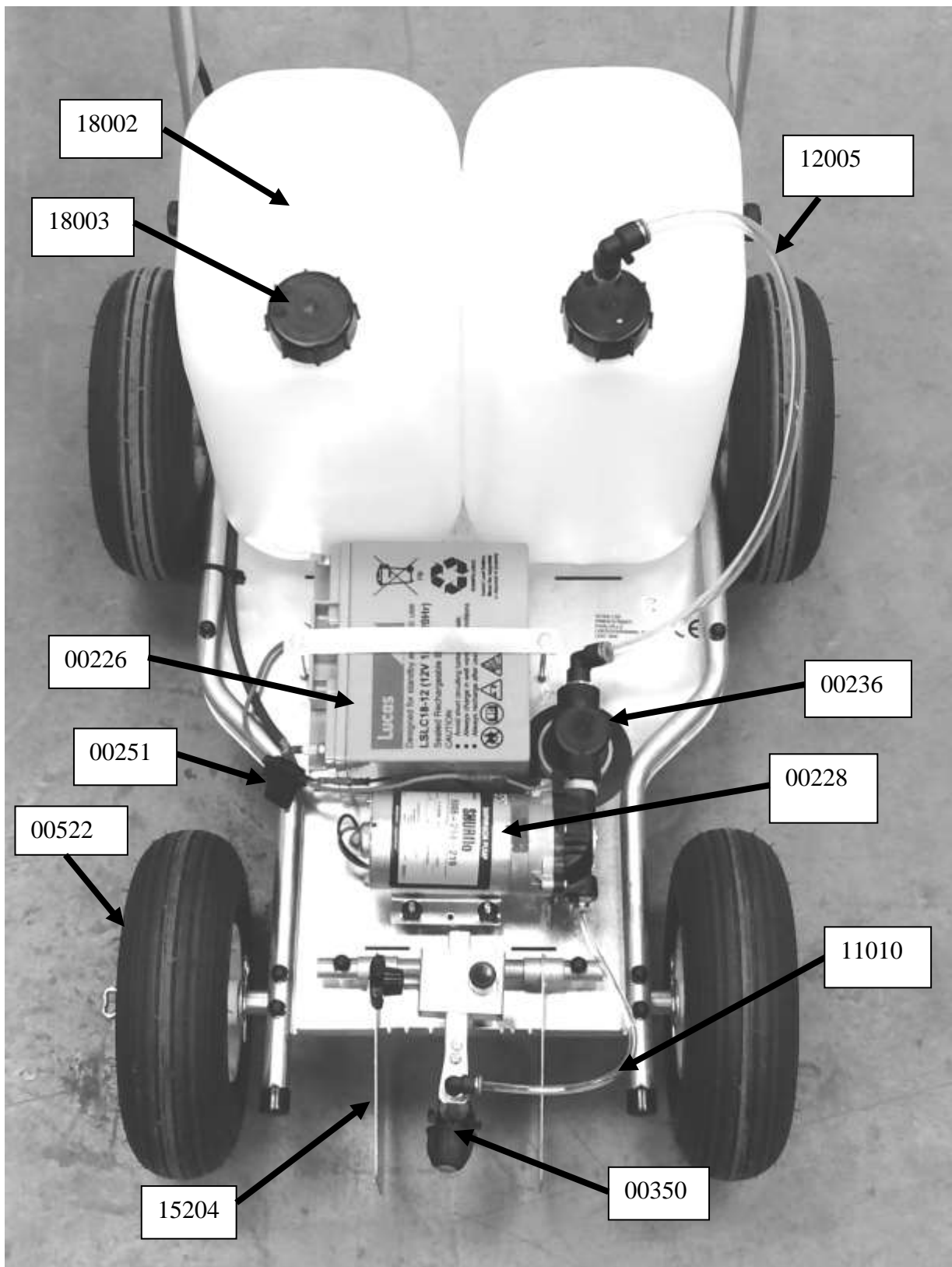


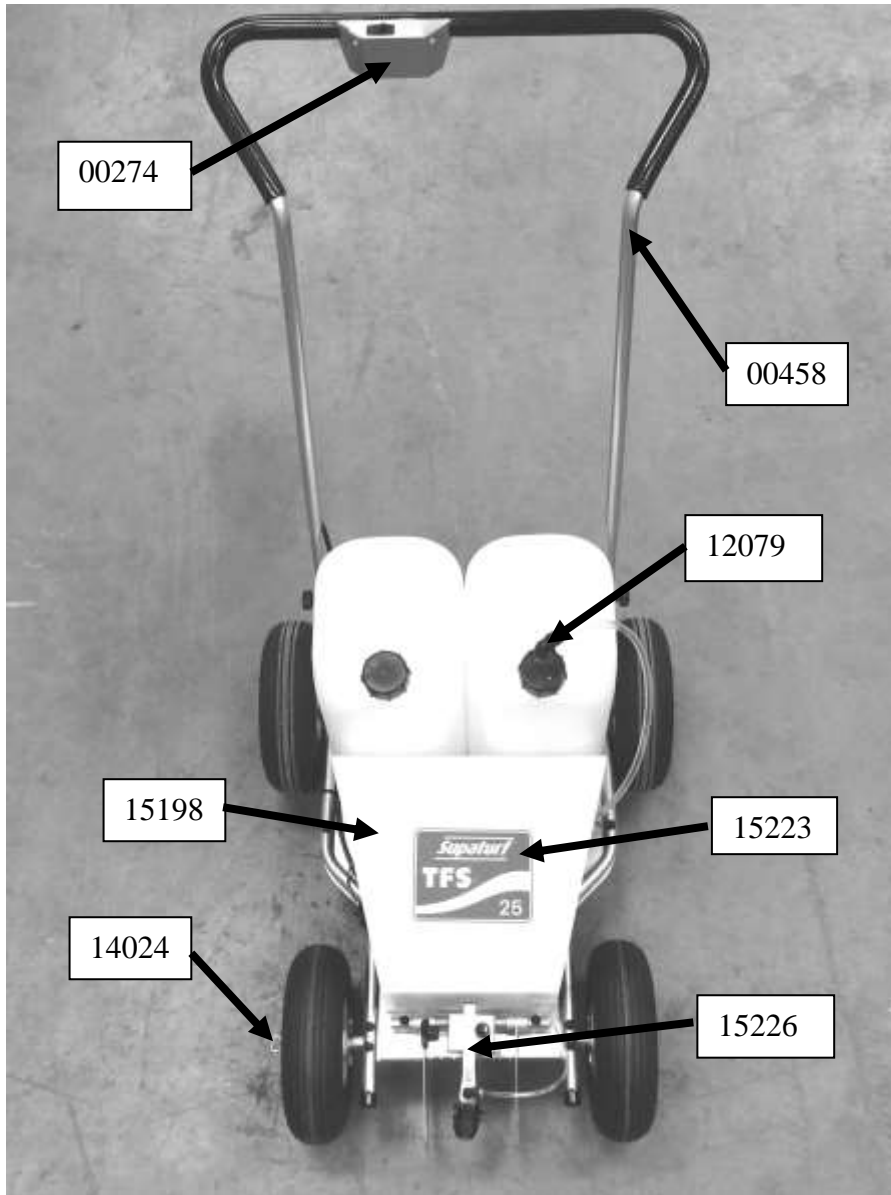
Figure 2 shows the TFS25 switch bracket removed and exposed bullet connectors.

Figure 3

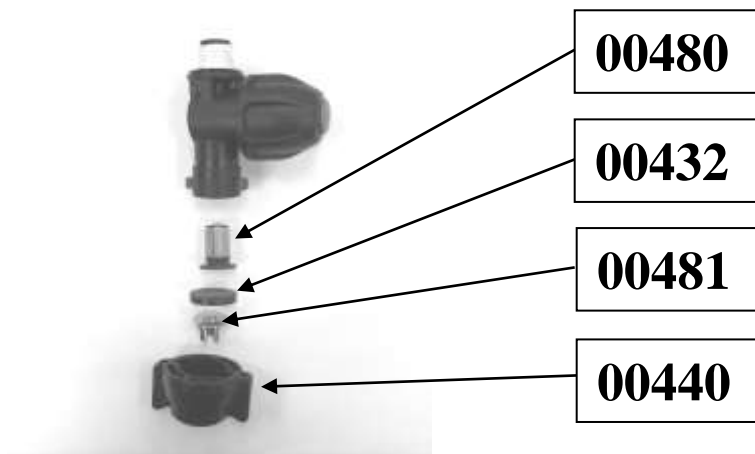


Figure 3 shows the in-line 6mm tube connector used to disconnect the pump outlet pipe from the spray arm assembly.





Part code complete - 00350





WWW.SUPATURF.CO.UK

Visit our website for more information on our range of line marking machines and line marking liquids. Also available are informational videos offering demonstrations of Supaturf line marking machines and some trouble shooting guides.

ONLINE SPARE PARTS SERVICE

Comprehensive ranges of spare parts for all Supaturf line marking machines are available. If you require spare parts for your machine, visit the website where you will find a complete listing for each machine.

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