

EN

Version 3
January 24

DRAPER[®]

230V SUBMERSIBLE
WATER PUMP

WITH INTEGRAL
FLOAT SWITCH

98917, 98918



**UK
CA** **CE**

1. Preface

These are the original product instructions. This document is part of the product; retain it for the life of the product, passing it on to subsequent holders. Read this manual in full before attempting to assemble, operate or maintain this product.

This Draper Tools manual describes the purpose of the product and contains all the necessary information to ensure its correct and safe use. Following all the instructions and guidance in this manual will ensure the safety of both the product and the operator and increase the lifespan of the product.

All photographs and drawings within this manual are supplied by Draper Tools to help illustrate correct operation of the product.

Every effort has been made to ensure the information contained in this manual is accurate. However, Draper Tools reserves the right to amend this document without prior warning. Always use the latest version of the product manual.

1.1 Product Reference

User Manual for: 230V Submersible Water Pump with Integral Float Switch (150L/min, 400W / 216L/min, 750W)

Stock No: 98917, 98918

Part No: SWP105A110, SWP220

1.2 Revisions

Version 1: June 2019
First release

Version 2: March 2023
General content and formatting update.
Products combined into one manual

As our manuals are continually updated, always ensure that the latest version is used.

Please visit drapertools.com/manuals for the latest version of this manual and the associated parts list, if applicable.

1.3 Understanding the Safety Content of This Manual



WARNING! – Situations or actions that may result in personal injury or death.



CAUTION! – Situations or actions that may result in damage to the product or surroundings.

Important: – Information or instructions of particular importance.

1.4 Copyright © Notice

Copyright © Draper Tools Limited.

Permission is granted to reproduce this manual for personal and educational use **ONLY**. Commercial copying, redistribution, hiring or lending is strictly prohibited.

No part of this manual may be stored in a retrieval system or transmitted in any other form or means without written permission from Draper Tools Limited.

In all cases, this copyright notice must remain intact.

1. Preface	2
1.1 Product Reference	2
1.2 Revisions	2
1.3 Understanding the Safety Content of This Manual	2
1.4 Copyright © Notice	2
2. Contents	3
3. Product Introduction	4
3.1 Scope	4
3.2 Specification	4
4. Health and Safety Information	5
4.1 General Health and Safety Precautions	5
4.2 Additional Safety Information for This Submersible Water Pump	5
4.3 Connection to the Power Supply	6
4.4 Residual Risk	6
5. Identification and Unpacking	7
5.1 Product Overview	7
5.2 Packaging	7
6. Preparation Instructions	8
6.1 Using the Outlet Adaptors	8
6.2 Installation and Placement	8
6.3 Operation Modes and the Float Switch	9
7. Operating Instructions	10
7.1 Switching the Pump On and Off	10
7.2 Pumping Distance and Volume	10
8. Maintenance and Troubleshooting	11
8.1 General Care and Storage	11
8.2 Troubleshooting	12
9. Spares, Returns and Disposal	13
10. Warranty	14
11. Explanation of Symbols	15

3. Product Introduction

3.1 Scope

This product is a water pump designed for submersion within the reservoir and is suitable for transferring clean water only. Fitted with an integral float switch, this pump is suitable for permanent and semi-permanent installations that do not require the pump to be in constant use, for example in locations where it is necessary to maintain a given level of water or for temporary or emergency installations to drain reservoirs of unwanted water.

Clear water pumps are suitable for use in pumping clear water from pools and garden ponds where the water is not muddied by sediment or algae and contains no visible particles. Draper Tools recommends that clear water pumps are used **ONLY** in reservoirs that are completely free from debris.

Part of our core range, this product is suitable for regular use by enthusiasts and tradespersons alike.

Important: This product is **NOT** suitable for continuous use, such as water circulation (water features, etc.). Using it in this way will invalidate your product warranty.

Important: Draper Tools strongly recommends this product is used to lower water levels **ONLY** and **NOT** for completely draining reservoirs.

Important: This product is **NOT** suitable for permanent installation in fish ponds or any other reservoir containing water mixed with chemicals or other acidic contaminants, including salt water.

Where the pump is used temporarily in a fish pond, Draper Tools **STRONGLY** recommends that the fish are removed for the duration of operation or a guard is placed around the pump inlet to prevent fish from being drawn into the mechanism. Guards must not prevent water from being drawn into the pump or obstruct the impeller in any way. **DO NOT** use this product in fish ponds where the fish are small enough to access the impeller.



WARNING! This product is not a toy and must be respected.

Read this manual in full before attempting to assemble, operate or maintain the product, and retain it for later use.

3.2 Specification

Stock No.	98917	98918
Part No.	SWP150IFS	SWP220IFS
Usage	Clear water	Clear water
Rated voltage	220–240V AC	220–240V AC
Rated frequency	50Hz	50Hz
Rated input	400W	750W
Max. particle size	5mm	5mm
Max. duty cycle	4h on, 4h off	4h on, 4h off
Output adaptor apertures (exterior)	32, 25mm	32, 25mm
Max. flow rate	9,000L/h	13,000L/h
Max. head height	8m	8.5m
Max. operating depth	7m	7m
Max. water temperature	35°C	35°C
Min. water level	100–180mm*	100–180mm*
Power cable length	10m	10m
IP rating	IPX8	IPX8
Appliance class	Class I	Class I
Weight	4.3kg	5.1kg

*This is the minimum level of water above the base of the pump at which the pump can safely operate. However, Draper Tools **strongly** recommends that the pump remains completely submerged throughout the entire operation. Operating the pump when it is not submerged may compromise the motor and housing.

Important: Read all the Health and Safety instructions before attempting to operate, maintain or repair this product. Non-compliance with these instructions may result in injury or damage to the user or the product.

4.1 General Health and Safety Precautions

- Observe all standard safety precautions and good practices when working with electrical equipment and water.
- **DO NOT** modify this product in any way and **ONLY** use spare parts supplied by Draper Tools.
- Keep your work environment clear and well-lit, with bystanders at a safe distance.
- Before every use, inspect the product for broken, cracked, loose or corroded parts and leakages.
Important: DO NOT use this product if it is leaking or damaged in any way. **DO NOT** attempt to disassemble a damaged product; contact Draper Tools to discuss repair and replacement options.
- Keep the power cable away from the reservoir and other sources of moisture at all times.
- Keep the power cable away from oil, sharp edges and sources of heat.
- If the supply cord is damaged, it must be replaced by Draper Tools or its authorised service agent in order to avoid a hazard.
- **NEVER** pull on the power cable to disconnect the plug from the socket.
- Use the product only in the manner described in this manual.

4.2 Additional Safety Information for This Submersible Water Pump

- This appliance can be used by children aged eight years and above and by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved.
 - Children must not play with the appliance.
 - Cleaning and user maintenance must not be performed by children without supervision.
- **NEVER** use this product to pump corrosive, flammable or explosive liquids or solvents.
- This is a Class I appliance.
 - This product requires an earth connection to protect against electric shock from accessible conductive parts in the event of a failure of the basic insulation.
 - To reduce the risk of electric shock, avoid contact with earthed objects during use.
 - **DO NOT** allow any person to be in the water during use of this product.
 - This product must be supplied through a residual current device (RCD) with a rated residual operating current of no greater than 30mA.
- **ONLY** connect the pump to a power supply matching the rated voltage of the product.
- This product is **NOT** controlled by a built-in manual power switch and will start up when connected to an active mains power supply if the float switch is above the water level or the pump is in Manual mode.
 - **ALWAYS** ensure that the product is positioned and prepared correctly before switching on the mains power supply.
- Keep hands and loose clothing well away from the impeller while the pump is connected to a mains power supply.
- **NEVER** position the pump beneath the reservoir water inlet.
- **NEVER** pump water in the direction of people or electrical wiring or equipment.
- Where possible, suspend the pump from a rope or chain or stand it on a brick to prevent any debris from the reservoir bed being drawn into the impeller.



CAUTION! NEVER use the power cable for this purpose.

4. Health and Safety Information

- The float switch integrated into this product is **NOT** suitable for continuous use as an ON/OFF switch.
 - Power to the device should be controlled by the mains power connection; the float switch is intended to stop the pump when the operation is complete.
- Ensure that there are no obstructions in the reservoir before switching on the pump.
- **DO NOT** leave this product unattended while it is in use.
 - **DO NOT** use this product with a programmer, timer, separate remote-control system or any other device that switches the product on automatically, or on any circuit that is regularly switched on and off by the utility, as it may pose a hazard if it is switched on unattended.
- **NEVER** run the pump if there is no water passing through it.
- **NEVER** obstruct the outlet as this may severely damage the product.
 - Stop the product **IMMEDIATELY** if you suspect that the outlet or inlet may be blocked or jammed.
- Transport the product using the built-in carry handle **ONLY**.
 - **NEVER** carry the product by the plug or cable.
- **ALWAYS** use, transport and store this product in its upright position.
- **ALWAYS** ensure that the product is switched off, disconnected from mains power and has completely stopped before entering the water and moving or making any adjustments to the product.

4.3 Connection to the Power Supply

This appliance is supplied with an approved plug and cable for your safety. The value of the fuse fitted is marked on the pin face of the plug. Should the fuse need replacing, ensure the substitute is of the correct rating, approved to BS 1363/A and ASTA or BS Kite marked.

ASTA 

BSI 

Replacement of the fuse should only be performed by suitably qualified personnel.

If the power supply cord is damaged, it must be replaced by Draper Tools, an authorised service agent or similarly qualified personnel in order to avoid a hazard.

The damaged or incomplete plug, when cut from the cable, shall be disabled to prevent connection to a live electrical outlet.

This product is Class I[†] and is designed for connection to a power supply matching that detailed on the rating label and compatible with the plug fitted.

If an extension lead is required, use an approved and compatible lead rated for this appliance. Follow all the instructions supplied with the extension lead.

If the plug must be connected in an outside environment, ensure that the outlet or extension lead is suitably designed for outside use.

Important: Always follow the extension lead instructions regarding maximum load while the cable is wound. If in doubt, unwind the entire cable. A coiled extension lead generates heat which could melt the lead and cause a fire.

Important: This product **MUST** be used with a residual current device (RCD), e.g. Draper Stock Nos. 69307 or 89301. **ALWAYS** read the manufacturer instructions for any RCD use. For your safety, if an extension cable is used, the RCD **MUST** be installed at the power outlet and not into the extension lead.

†Earthed: This product requires an earth connection to protect against electric shock from accessible conductive parts in the event of a failure of the basic insulation.

4.4 Residual Risk

The safety instructions in this manual cannot account for all possible conditions and situations that may occur. Exercise common sense and caution when using this product and protect against any additional conceivable risks.

5. Identification and Unpacking

5.1 Product Overview

Carefully remove the product from the packaging and examine it for any signs of damage that may have occurred during shipment. If any part is damaged or missing, do not attempt to use the product. Please contact the Draper Helpline; contact details can be found at the back of this manual.



- (1) Carry handle
- (2) Impeller housing
- (3) Integral float switch
- (4) Mode selector switch
- (5) Motor housing
- (6) Outlet adaptor
- (7) Power cable and plug
- (8) Pump inlet
- (9) Pump outlet

Please visit drapertools.com for our full range of accessories and consumables.

5.2 Packaging

Keep the product packaging for the duration of the warranty period for reference should the product need to be returned for repair.



WARNING! Keep packaging materials out of reach of children. Dispose of packaging correctly and responsibly and in accordance with local regulations.

6. Preparation Instructions

Important: Before using this product, read and understand all the safety information listed in this manual.

WARNING! ALWAYS ensure that the product is switched off, disconnected from the mains and has completely stopped before installing or making any adjustment to the pump.

6.1 Using the Outlet Adaptors

To connect a delivery hose, screw the outlet adaptor (6) into the pump outlet (9) and slide the hose onto the end of the adaptor.

Important: Draper Tools recommends wrapping PTFE tape around the screw thread of the adaptor to ensure an airtight seal with the pump.

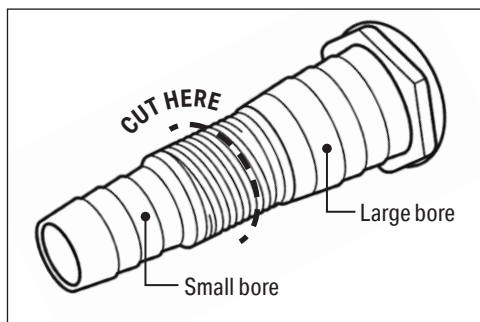


Fig. 1

The hose adaptor can be used with an external diameter of 32mm or 25mm. Check the internal diameter of your layflat hose to determine the adaptor size required. Note that the flow rate is reduced when the 25mm bore is used.

- To use the 25mm diameter, slide a layflat hose onto the end of the adaptor once it is installed onto the pump.
- To use the 32mm diameter without reducing the flow rate, the narrower end of the hose adaptor must be removed.
 - Use a small hack saw to cut through the threaded section of the narrower end of the adaptor, then slide a layflat hose onto the larger grip.

Important: Once this has occurred, the adaptor cannot be used to connect 25mm hoses.

The chosen layflat hose should be secured to the adaptor using a suitable retaining clip.

6.2 Installation and Placement

The pump may only be used to move water containing debris of up to the rated maximum particle size. Ensure that all debris exceeding this size is removed from the reservoir before operation as it may cause significant damage to the impeller and pump.

Important: Draper Tools recommends that clear water pumps are used **ONLY** in reservoirs that are completely free from debris.

Lower the pump into the reservoir by holding the carry handle (1) or by attaching the handle to a rope or chain.

CAUTION! DO NOT use the power cable to lower the pump into the reservoir.

Where possible, tip the pump slightly as it is submerged to force any residual air out from inside the housing and prime the device.

Ensure that the pump is positioned with enough space for the integral float switch (3) to move freely. If the float switch becomes trapped or lodged, it may not lower with the water level, which will cause the pump to continue operating when the water level is too low. The location must also be free from mobile or floating objects, such as plants, that may become trapped in the impeller.

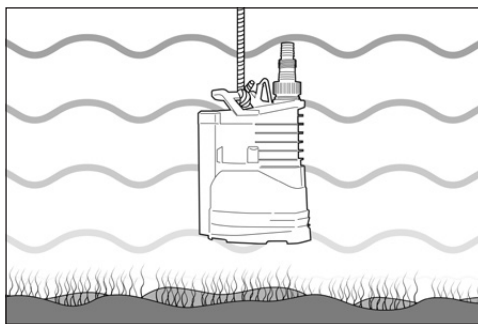


Fig. 2

Important: Where possible, the pump should be placed on a raised, stable and level surface or suspended by the carry handle from a rope or chain to prevent debris being drawn into the impeller. Bricks or other firm platforms may be used to raise the pump from the reservoir bed.

CAUTION! Draper Tool recommends that the pump is submerged at least beyond the rated minimum water level before it is connected to the mains power. This ensures that the motor remains cool during use. **DO NOT** run the pump when it is dry. Using the pump with too little water may cause the motor to overheat and damage the pump casing.

Ensure that the delivery hose is as straight as possible and free from kinks, splits or obstructions. Where the pump is used in a permanent or semi-permanent installation, Draper Tools recommends installing a non-return valve onto the delivery hose.

6.3 Operation Modes and the Float Switch

This product can be set to operate in one of two modes:

- **Auto:**
The integral float switch (3) determines when the pump is switched on and off.
- **Manual:**
The pump continues to operate until the mains power is manually disconnected, regardless of the float switch settings.

Important: This product is not intended for extended periods of continual use.

CAUTION! In manual mode, the pump will continue to operate when the water level drops below the minimum level required by the pump. Monitor the pump at all times and **DO NOT** allow the water level to drop below minimum level required as this may cause the pump to overheat and result in significant damage.

To select a mode, move the mode selector switch (4) upwards or downwards as indicated by the appropriate markings.

When the pump is set to **auto** mode, it operates in the following way:

- When the water level is above the float switch (3) position, the pump will continue to operate.
- When the water level drops below the float switch (3) position, the pump will switch itself off.

To set the float switch position, pinch the two levers together and move them up and down until the appropriate level is indicated.

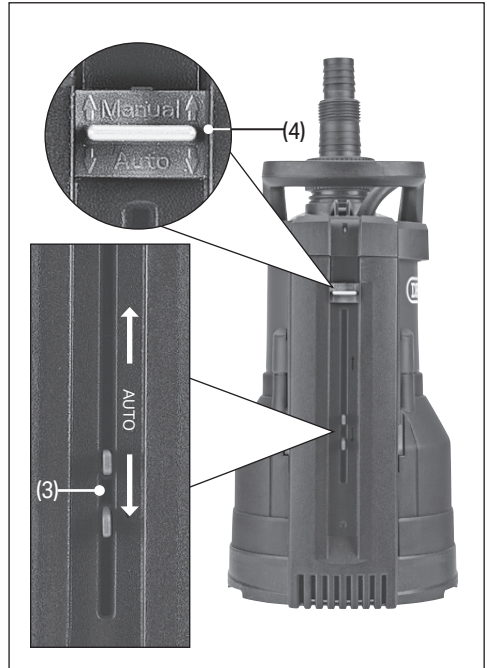


Fig. 3

7. Operating Instructions

Important: Never allow the pump to operate if the water level has dropped below the minimum level required by the product as it may cause it damage.

Damage caused in this way is NOT covered under your warranty.

Important: Ensure that the pump is prepared and positioned correctly **BEFORE** connecting it to mains power.

7.1 Switching the Pump On and Off

Once the pump is correctly positioned, connect it to a mains power supply via an RCD and switch on the power supply.

When **auto** mode is enabled, the pump will begin to operate if the water level is above the position of the integral float switch (3).

The pump will deactivate when the water level drops below the position of the integral float switch. When this occurs, switch off and disconnect the mains power supply.

If the pump is in **manual** mode, it will automatically start when connected to mains power and will continue until it is manually switched off, regardless of the positions of the integral float switch.

The pump is also fitted with a thermal overload that will cause it to stop automatically if its internal temperature becomes too hot. When this occurs, disconnect the pump from mains power, allow it to cool and investigate possible causes of overheating. Once these are resolved, reconnect the pump to the power supply; the pump should start automatically after it has cooled for approximately 20 minutes. If the pump does not start automatically, disconnect it from the power supply and contact Draper Tools for support.

7.2 Pumping Distance and Volume

The maximum horizontal pumping distance and hourly volume of water transferred are directly affected by the working head height.

The term **head** refers to the difference in vertical height between the surface of the water and the highest point to which the water is pumped, regardless of the length of the hose.

As the head increases, the pumping distance and volume decrease more rapidly. The relationship between head and pumping distance varies between pumps.

8. Maintenance and Troubleshooting

Important: ALWAYS ensure that the pump has completely stopped and is disconnected from mains power before attempting any product care. Technical maintenance and servicing may **ONLY** be performed by authorised Draper Tools service agents.

8.1 General Care and Storage

- Periodically flush the pump through with fresh clean water, particularly if it is left in water for extended periods or it has not been used for some time.
- Regularly assess and clean the impeller housing (2) to prevent the build-up of obstructive debris.
 - If the pump is used frequently in water containing debris that is likely to accumulate on the pump body, rinse it thoroughly after every use.
- Clean the outside of the pump with a dry or damp cloth **ONLY**.
 - **DO NOT** use solvents or aggressive chemicals to clean this product as they may damage plastic and insulated parts.
- Ensure that the product is dry before storage.
- Store this product out of direct sunlight and out of reach of children.
- If the product is installed permanently, run the pump at least once a week to prevent seizing and binding within the motor.
- Protect the product from frost.



CAUTION! NEVER allow residual water inside the pump to freeze as this may cause irreparable damage.

8. Maintenance and Troubleshooting

8.2 Troubleshooting

Problem	Possible Cause	Remedy
The pump does not switch on.	The power cable is not connected to the power supply or the power supply is not active.	Check the connection to the power supply.
	The power cable or plug is faulty.	DO NOT continue to use the product. Contact Draper Tools for repair and replacement options.
	The fuse in the plug has blown.	Replace the fuse.
	The residual circuit breaker has tripped.	Investigate the cause, then check and reset the RCD if required.
	The water level is below the position of the integral float switch and the pump is set to auto mode.	Increase the volume of water in the reservoir, lower the position of the pump or lower the position of the float switch.
The pump is operating but is not outputting water.	The water level is below the minimum operating level for the pump.	Increase the water level or lower the pump where possible.
	The inlet is clogged.	Inspect and clean the impeller housing.
	The outlet or hose adaptor is clogged.	Remove the hose adaptor and check it and the pump outlet for obstructions.
	The head height exceeds the capabilities of the pump.	Reduce the vertical distance that the water must be pumped.
	An air bubble has been formed inside the pump.	Remove the pump from the reservoir and resubmerge it at an angle, shaking it as it is lowered to disperse any air trapped within the mechanism.
Water is leaking from the pump or hose.	The hose adaptor o-ring is damaged or missing.	Check and replace the hose adaptor o-ring as necessary. Wrap PTFE tape around the adaptor thread before reassembly.
	The output hose has been punctured.	Check the output hose for signs of splits, kinks and obstructions.
The thermal overload activates and the pump stops	The voltage of the power supply does not match the product rating plate.	Disconnect the product from the power supply and connect it to a suitable outlet.
	The pump is operating in hot water.	Allow the pump and the reservoir to cool before restarting.
	The pump has run dry.	Allow the pump to cool and adjust the water level or pump position as appropriate before restarting.

9. Spares, Returns and Disposal

For spare parts, servicing, and repair and replacement options, please contact the Draper Tools Product Helpline for details of your nearest authorised agent.

Draper Tools will endeavour to hold any spare parts, if applicable, for seven years from the date that it sells the final matching stock item.

Any servicing or repairs carried out by unauthorised personnel or installation of spare parts not supplied by Draper Tools will invalidate your warranty.

Important: ALWAYS drain and clean the product of any water and debris before returning it to Draper Tools or its authorised agent. A charge may be applicable if Draper Tools must clean the product before investigating a fault.

Draper Tools will not service any product that has been used to pump sewage, slurry or other such materials. All returns must be thoroughly cleaned and drained before delivery to Draper Tools or their authorised agent.

At the end of its working life, dispose of the product responsibly and in line with local regulations. Recycle where possible.

DO NOT dispose of this product with domestic waste; most local authorities provide appropriate recycling facilities.



10. Warranty

Draper Tools products are carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, return the complete tool to your nearest distributor or contact Draper Tools directly. Contact information can be found at the back of this manual.

Proof of purchase must be provided.

If, upon inspection, it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This warranty period covers parts and labour for 12 months from the date of purchase. Where tools have been hired out, the warranty period covers 90 days from the date of purchase.

This warranty does not apply to any consumable parts, batteries or normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper Tools repair agent.

In all cases, to make a claim for faulty workmanship or materials within the standard warranty period, please contact or return the product to the place of purchase. Proof of purchase may be required.

If the place of purchase is no longer trading or if you experience any difficulties with your warranty, please contact Customer Services with the product details and your proof of purchase. Contact details can be found at the back of this manual.

If the tool is not covered by the terms of this warranty, repairs and carriage charges will be quoted and charged accordingly.

This warranty supersedes any other guarantees expressed or implied and variations of its terms are not authorised.

Your Draper Tools guarantee is not effective until you can produce, upon request, a dated receipt or invoice to verify your purchase within the guarantee period.

Please note that this warranty is an additional benefit and does not affect your statutory rights.

Draper Tools Limited

11. Explanation of Symbols



Read the instruction manual



Warning!



Rated input (example)



Max. flow rate (example)



Max. head height (example)



Output diameter with and without reducing adaptor



Max. particle size



Warning! Not for use in fish ponds

IPX8

IP rated for continuous submersion of over 1m



Class I appliance



WEEE –

Waste Electrical & Electronic Equipment

Do not dispose of Waste Electrical & Electronic Equipment in with domestic rubbish



European conformity



UK Conformity Assessed

Contact Details

Draper Tools

Draper Tools Limited
Hursley Road
Chandler's Ford
Eastleigh
Hampshire
SO53 1YF
UK

Website: drapertools.com

Email: sales@drapertools.com

Product Helpline: +44 (0) 23 8049 4344

Telephone Sales Desk: +44 (0) 23 8049 4333

General Enquiries: +44 (0) 23 8026 6355

General Fax: +44 (0) 23 8026 0784

Delta International

Delta International BV
Oude Graaf 8
6002 NL
Weert
Netherlands

Please contact the Draper Tools Product Helpline for repair and servicing enquiries.