



THE TOOL COMPANY

PRESSURE WASHERS

■ STOCK Nos. 68583
68638

■ PART Nos. PW2111A
PW2121A

• INSTRUCTIONS •

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS TOOL.



GENERAL INFORMATION

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the tool itself.

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

Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.



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DECLARATION OF CONFORMITY

We
Draper Tools Ltd. Hursley Road, Chandler's Ford, Eastleigh, Hampshire.
SO53 1YF. England.

Declare under our sole responsibility that the product:

Stock Nos:- 68583 & 68638.

Part Nos:- PW2111A & PW2121A.

Description:- Pressure Washers.

To which this declaration relates is in conformity with the following directive(s)
98/37/EC, 73/23/EEC & 89/336/EEC.

JOHN DRAPER
Managing Director

22/01/2002



SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

Stock No.	68583	68638
Part No.	PW2111A	PW2121A
Working pressure	90Bar (1305PSI)	120Bar (1740PSI)
Max. flow pressure	110Bar (1595PSI)	150Bar (2175PSI)
Flow rate	7.5L/min (450L/Hr)	8L/min (480L/Hr)
Max. water temp.	40°C (104°F)	40°C (104°F)
Motor	1800W - 230V/50Hz	2100W - 230V/50Hz
Sound pressure level	79db(A)	79db(A)
Sound power level	85db(A)	85db(A)
Weight	6.3kg	18.5kg

NOTE: Pressure washer must not be used in the upright position.



Automatic control with total stop device, saving electricity and extending the life of pump/motor.

The total stop device automatically deactivates the high pressure cleaner every time the trigger is released.



GUARANTEE

Draper Tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship for a period of 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase.

Should the tool develop any fault, please return the complete tool to your nearest authorized warranty repair agent or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England. Telephone: (023) 8026 6355.

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

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.








Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the 12 month period.

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

Draper Tools Limited.

POWER SUPPLY

CONNECTING YOUR MACHINE TO THE POWER SUPPLY: (230V)

To eliminate the possibility of an electric shock your machine has been fitted with a BS approved, non rewirable moulded plug and cable which incorporates a fuse, the value of which is indicated on the pin face of the plug. If the plug is marked with the  symbol and the fuse needs replacing, an  approved BS1362 fuse must be used of the same amp rating. If the plug is not  marked, a fuse with the  symbol,  BS Kitemark, or both  and  BS Kitemark, of the same amp rating should be used.

The fuse cover is detachable, never use the plug with the cover omitted. If a replacement fuse cover is required, ensure it is the same colour as that visible on the pin face of the plug (i.e. red). Fuse covers are available from your Draper Tools stockist.


If the fitted plug is not suitable, it should be cut off and destroyed. *The end of the cable should now be suitably prepared and the correct type of plug fitted. See below.

*WARNING:

A plug with bare flexible wires exposed is hazardous if engaged in a live power socket outlet.

WARNING: THIS APPLIANCE MUST BE EARTHED (PW2121A):

The mains lead is coloured Green and Yellow - Earth, Blue - Neutral and Brown - Live. As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green and yellow must be connected to the terminal in your plug marked with the letter 'E' or by the earth symbol  or coloured green or green and yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black or blue.

The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red or brown.

WARNING: THIS APPLIANCE IS DOUBLE INSULATED (PW2111A):

Blue - Neutral, Brown - Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black or blue.

The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red or brown.

EXTENSION LEAD CHART:

Extension lead sizes shown assure a voltage drop of not more than 5% at rated load of tool.

Ampere rating (on Name plate)	3	6	10	13
Extension cable length (Metres)	Wire Size mm ²			
7.5	0.75	0.75	1.0	1.25
15	0.75	0.75	1.0	1.5
22.5	0.75	0.75	1.0	1.5
30	0.75	0.75	1.25	1.5
45	0.75	0.75	1.5	2.5

Draper Tools recommends the use of an RCD (Residual Circuit Device) in conjunction with this product: Draper Stock No.57779.



GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

WARNING:

Please read the following instructions carefully, failure to do so could lead to serious personal injury. When using electric tools, basic safety precautions, including the following, should always be followed to reduce the risk of fire, electric shock and personal injury. Read all these instructions before operating this product and save these instructions.

IMPORTANT:

Draper Tools Limited recommends that this machine should not be modified or used for any application other than that for which it was designed. If you are unsure of its relative applications do not hesitate to contact us in writing and we will advise you.

1. KNOW YOUR POWER TOOL

Read and understand the owner's manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

2. KEEP WORK AREA CLEAN

Cluttered areas and benches invite accidents. Floors must not be slippery due to oil or sawdust.

3. AVOID DANGEROUS ENVIRONMENTS

Do not use power tools in damp or wet locations, or expose them to rain. Keep work area well lit. Provide adequate space surrounding the work area. Do not use in environments with a potentially explosive atmosphere.

4. KEEP CHILDREN AWAY

All visitors should be kept a safe distance from work area.

5. STORED TOOLS

When not being used, all tools should be stored in a dry, locked cupboard and out of the reach of children.

6. WEAR PROPER CLOTHING

Do not wear loose clothing, neckties or jewellery (rings, wristwatches) to catch in moving parts. NONSLIP footwear is recommended. Wear protective hair covering to contain long hair. Roll long sleeves above the elbow.

7. USE SAFETY GOGGLES (Head Protection)

Wear CE approved safety goggles at all times. Normal spectacles only have impact resistant lenses, they are NOT safety glasses. Also, use face or dust mask if application is dusty and ear protectors (plugs or muffs) during extended periods of operation.

8. NOISE LEVELS

Some types of machines may have high noise levels when working. In such cases ear protection must be worn.

9. VIBRATION LEVELS

Hand held power tools produce different vibration levels. You should always refer to the specifications and relevant Health and Safety guide.

10. DUST EXTRACTION

If your tool is fitted with a dust extraction fitting, always ensure that it is connected and being used with a dust extractor. Vacuum cleaners can be used if suitable for the material being extracted.

11. PROTECT YOURSELF FROM ELECTRIC SHOCK

When working with power tools, avoid contact with any earthed items (e.g. pipes, radiators, hobs and refrigerators, etc.). If you are using a power tool in extreme conditions (e.g. high humidity or generating metal dust), always use an RCD (residual current device) at the power socket.

12. STAY ALERT

Always watch what you are doing and use common sense. Do not operate a power tool when you are tired or under the influence of alcohol or drugs.

13. WHEN WORKING OUT OF DOORS

Only use extension leads designed for that purpose.

14. ACCESS TO MAINS SOCKET

If a stationary machine is fitted with a moulded plug and cable, the machine should not be positioned so that access to the mains socket is restricted.

15. DISCONNECT POWER TO THE TOOL

When not in use, before servicing and when changing accessories such as cutters, etc.

16. AVOID ACCIDENTAL STARTING

Make sure the switch is in the OFF position before plugging the machine into the power supply.

17. NEVER LEAVE MACHINE RUNNING UNATTENDED

Turn power off. Do not leave machine until it comes to a complete stop.

18. DO NOT ABUSE THE CORD

Never carry the tool by the power cable or pull it from the socket. Keep the power cable away from heat, oil and sharp edges.

19. NEVER STAND ON TOOL

Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted. Do not store materials above or near the tool, so that it is necessary to stand on the tool to reach them.

20. CHECK DAMAGED PARTS

Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be repaired properly or replaced by an authorized service centre unless otherwise indicated in this instruction manual. Have defective switches replaced by an authorized service facility. Do not use the tool if the switch does not turn it on and off.

21. KEEP GUARDS IN PLACE

And in working order.

22. MAINTAIN TOOLS WITH CARE

Keep tools sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories. All extension cables must be checked at regular intervals and replaced if damaged. Always keep the hand grips on the tool clean, dry and free of oil and grease.

23. USE RECOMMENDED ACCESSORIES

Consult the owners manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

24. REMOVE ADJUSTING KEYS AND WRENCHES

Form a habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.

25. SECURE WORK

Use clamps or a vice to hold work. This frees both hands to operate the tool.

26. DO NOT OVERREACH

Keep proper footing and balance at all times.

27. USE RIGHT TOOL

Do not force the tool or attachment to do a job for which it was not designed.

28. DO NOT FORCE TOOL

It will do the job better and safer at the rate for which it was designed.

29. DIRECTION OF FEED

Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

30. WHEN DRILLING OR SCREWING INTO WALLS

Always make sure there is no danger of hitting any hidden power cables, water or gas pipes in the wall.

31. HAVE YOUR TOOL REPAIRED BY A QUALIFIED PERSON

This electric tool is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

IMPORTANT NOTE:

Residual Risk. Although the safety instructions and operating manuals for our tools contain extensive instructions on safe working with power tools, every power tool involves a certain residual risk which can not be completely excluded by safety mechanisms. Power tools must therefore always be operated with caution!



ADDITIONAL SAFETY INSTRUCTIONS

Never direct the water jet towards persons or animals. The water jet is very powerful and could cause a serious injury.

The pressure washer must be continuously run with water. Running dry may cause serious damage to the internal components.

Do not store the pressure washer in cold places to protect the machine from freezing conditions.

Always ensure when storing the machine that all the water is drained from the washer to reduce risk of corrosion.

Do not use the pressure washer in an enclosed area where ventilation may be restricted, never cover the pressure washer whilst in use.

For your own safety do not use the pressure washer during rain or a thunderstorm and avoid directing the water jet at the pressure washer or power supply.

When moving the pressure washer use the handle provided. Do not pull the pressure washer using the high pressure lance hose or mains supply cable.

When you have finished using the pressure washer switch the machine 'OFF' and disconnect from the power supply, turn 'OFF' the water supply. Now discharge any remaining pressure in the high pressure hose by pulling the lance trigger, now disconnect the water supply.

Only use the pressure washer for small domestic areas for example, cleaning cars, walls, patios etc.

Clean the nozzle after each use, prior to storage.

When using an extension lead, use a 13amp minimum, 25M maximum cable, unwound fully to avoid problems.

Ensure the water supply is sufficient and constant. Some outside outlets are spurs from washing machine supply, which when switched 'ON' will pull down the level below minimum.

Do not drop the lance, especially on the tip.

Do not operate the washer in any other position than the horizontal one.

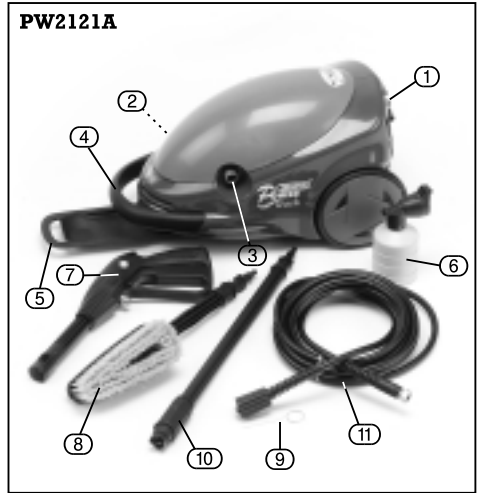
Do not drop the pressure washer. They can be heavy so be prepared.

GETTING TO KNOW YOUR PRESSURE WASHER



PW2111A

- ① ON/OFF switch
- ② Water inlet connection
- ③ High pressure outlet
- ④ Carry handle
- ⑤ Foam bottle
- ⑥ Trigger
- ⑦ Lance
- ⑧ High pressure hose
- ⑨ Fixed brush
- ⑩ Cleaning pin



PW2121A

- ① ON/OFF switch
- ② Water inlet connection
- ③ High pressure outlet
- ④ Carry handle
- ⑤ Extendible handle
- ⑥ Foam bottle
- ⑦ Trigger
- ⑧ Fixed brush
- ⑨ Cleaning pin
- ⑩ Lance
- ⑪ High pressure hose

NOTE: Both these machines are designed to be operated in the horizontal position only.

UNPACKING: After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the pressure washer and contact the dealer from whom it was purchased.

The packaging materials (plastic bags, polystyrene etc..) must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

ASSEMBLY

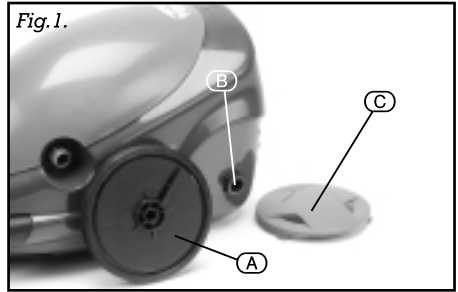
NOTE:

Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

FITTING THE TRANSPORT WHEELS

(Fig.1.)(PW2121A only):

This requires the wheels (A) to be located and locked into aperture (B). The wheel will be heard to click when fitted correctly. The hub cap (C) will clip over the wheel face for an aesthetic finish.

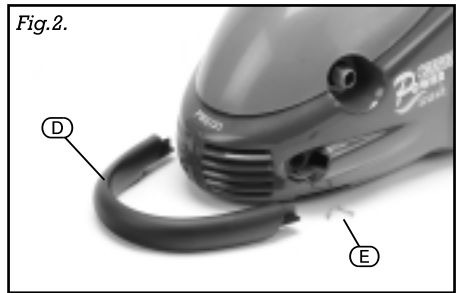


FITTING THE TRANSIT HANDLE

(Fig.2.)(PW2121A only):

Insert handle (D) into the locating slots at the front of the machine.

Secure in place using the two screws (E) provided. Do not over tighten the screws as this may damage the housing.



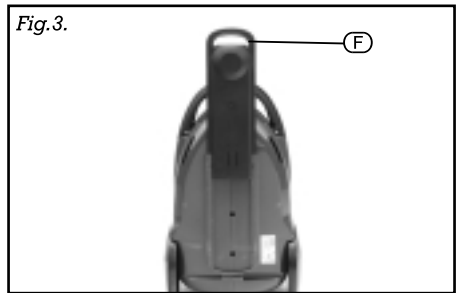
FITTING ADJUSTABLE HANDLE

(Fig.3.)(PW2121A only):

Locate handle (F) into the slots on the underside of the machine.

This handle slides down completely for storage.

NOTE: The machine should not be lifted by this handle, purely pulled along.



NOTE:

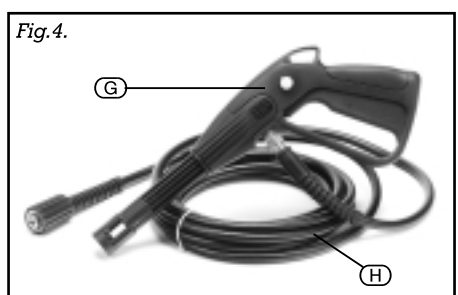
This assembly is the same for both the PW2111A and PW2121A. For the purposes of these instructions the PW2121A has been illustrated.

ASSEMBLING THE HOSE, TRIGGER AND LANCE (Fig.4.):

Attach the trigger (G) to the high pressure hose (H) with the threaded section.

NOTE: Take care not cross the threads or damage them by excessive tightening.

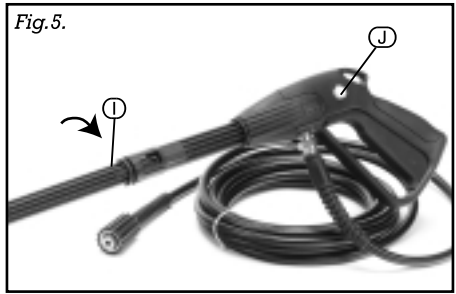
Ensure a good connection to avoid water leaks.



ASSEMBLY

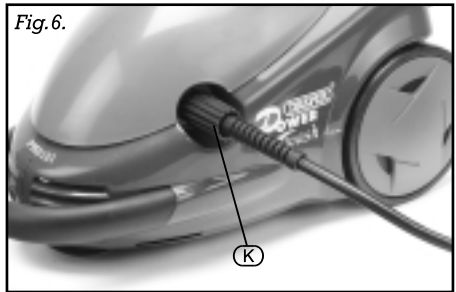
Connect the lance (I) to the trigger assembly by pushing in the bayonet fitting and turning anti-clockwise 45° to lock in place.

NOTE: The trigger lock (J) is applied by sliding the button through the handle to the left and released by sliding the button to the right.



Fit the high pressure hose (K) onto the threaded outlet on the nearside of the machine.

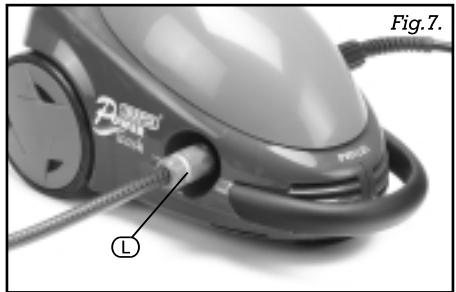
Ensure a tight connection is made and take care not to cross the threads.



ATTACHING THE WATER SUPPLY (Fig.7.):

To attach the pressure washer to the water supply a push fit hose connector (L) will be required (Draper Stock No.55196). Ensure the connector is correctly fitted to the hose and that a 'click' is heard when attaching to the machine. The inlet is located on the off side of the machine.

NOTE: Max. water temp: 40°C.



USING THE DETERGENT BOTTLE (Fig.8.):

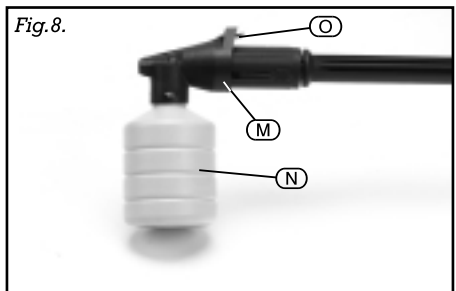
Pass the nozzle of the lance into the detergent bottle connection (M).

The bottle locates with a click.

To release, lift the tab (O) and pull the bottle away.

To fill the detergent bottle (N) turn and pull the bottle out from the nozzle.

NOTE: For detergents available please refer to the optional accessories (Page 11).



OPERATION AND USE

NOTE:

Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

ON/OFF SWITCH (Fig.9.):

The ON/OFF switch (P) can be located at the rear of the machine.

In the "O" position the machine is switched OFF.

In the "I" position the machine is switched ON.

Note: Do not run the motor "DRY, and ensure the machine is switched "OFF" prior to plugging in.

These pressure washers are designed to be used in the horizontal position only.

To operate the pressure washer correctly carry out the following steps:

- Turn switch off
- Plug in the pressure washer
- Connect and turn on the water supply
- Pull the trigger to bleed the air out of the system
- Whilst the trigger is pulled switch on the pressure washer
- When the air is purged release the trigger

ADJUSTING THE JET (Fig.10.):

It is possible to adjust the pressure washer lance to produce a variety of jet patterns. The nozzle when set fully open will produce a wide fan type jet which is best for cleaning larger areas quickly.

When set fully closed a fine needle jet is produced at a much higher pressure.

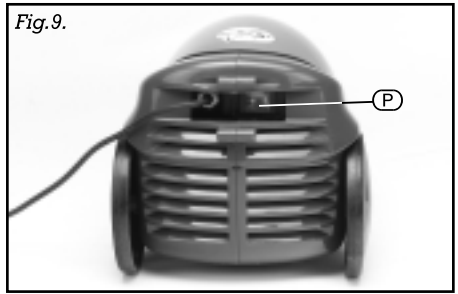
It is possible to vary the spray pattern any position between the two.

Turn (Q) clockwise to open, anti-clockwise to close.

CLEANING THE NOZZLE (Fig.11.):

This should be carried out regularly with the machine disconnect from the power and prior to storage. Avoid putting the lance down on the tip as it will block easily. To unblock the nozzle use pin (R) provided.

Fig.9.



The machine is now ready for use. Ensure that during use the jet is not aimed at people, animals, electrical equipment or the pressure washer.

After use:

- Switch off and unplug the pressure washer
- Switch off the water supply
- Pull the trigger to release and drain the pressure
- Disconnect the hose connection
- Disassemble the lance, trigger and hose from the machine
- Drain all remaining water and store away safely

Fig.10.

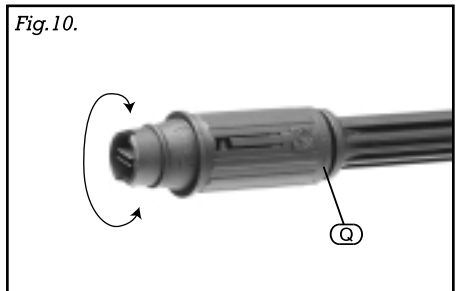
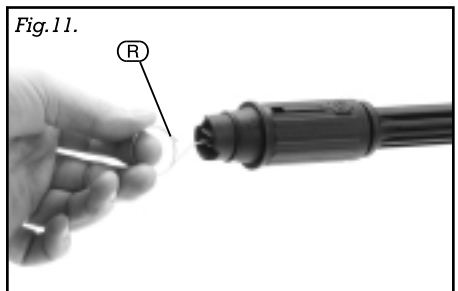


Fig.11.





OPERATION AND USE

TOTAL STOP DEVICE:

These pressure washers are fitted with the TOTAL STOP DEVICE. This will cause the motor to start and stop when the trigger is activated, unlike standard washers where the motor would run continuously.

This device reduces the amount of water and electricity used and the amount of wear and tear on the machines components. Also this helps cut down on the amount of noise emitted during use.

OPTIONAL ACCESSORIES

Stock No.	Description	Item
68669	Replacement Lance for PW2111A	
68710	Replacement Lance for PW2121A	
34449	Fixed Head Washing Brush	
34450	Rotating Brush	
34451	Pipe/Drain Cleaner Ideal for cleaning and clearing blocked drains, both indoors and outdoors	
34452	Sandblasting Attachment Kit Combination of powerful water jet and grit (not supplied) provides more effective method of cleaning	
68642	Detergent Spray Attachment	
34455	180mm Lance Extension	
34456	1500mm Lance Extension	
34649	Vehicle Wash and Wax Shampoo 1L	
34648	High Foam Traffic Film Remover 1L	
34706	Vehicle Wash and Wax Shampoo 5L	
34664	High Foam Traffic Film Remover 5L	
61225	Trolley Kit for PW2111A	

TROUBLE SHOOTING

Trouble	Possible Cause	Remedy
Motor pulsing.	Air in the system.	See the section on bleeding (see page 9).
Pump fails to start.	Plug fuse blown. Cable damaged. Thermal overload tripped.	Replace fuse. Have the cable replaced by a repair agent. Wait 30 minutes for machine to cool down before re-operating.
Pump starts/stops with the trigger operation.	Correct operation of the total stop device.	Nothing.
Bad spray pattern.	Nozzle blocked.	Unblock nozzle (see page 9).
Poor pressure.	Water leaks.	Check and tighten all the connections.



NOTES



NOTES



THE TOOL COMPANY

DRAPER TOOLS LIMITED,

Hursley Road, Chandler's Ford, Eastleigh, Hants. SO53 1YF. U.K.

Helpline: (023) 8049 4344.

Sales Desk: (023) 8049 4333.

General Enquiries: (023) 8026 6355.

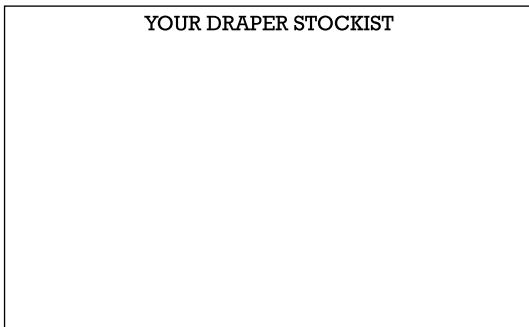
Fax: (023) 8026 0784.



<http://www.draper.co.uk>

e-mail: sales@draper.co.uk

YOUR DRAPER STOCKIST



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