

DRAPER®

INSTRUCTIONS FOR

12V Power Packs

Stock Nos.40135, 40134, 40133
Part Nos.PP12VLD, PP12VC/B, PP12VB/HD

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



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GENERAL INFORMATION

Read all these instructions before operating this product and save these instructions.

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 product 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:- **40135, 40134, 40133.**
- Part Nos:- **PP12VLD, PP12VC/B, PP12VB/HD.**
- Description:- **Power Packs.**

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

With reference to:
 EN61000-6-3:2001, EN61000-6-1:2001, EN55014-1:2000+A1:2001, EN61000-3-2:2000,
 EN61000-3-1:1995+A1:2001, BSEN61558-2-6:1997, BSEN61558-1:1997+A1:1998+A11:2003

J.N. Draper
 Chairman

18/07/2006

- The sealed lead-acid battery in this appliance has a normal working life of many years. When the battery expires, it should be removed from the appliance for recycling.
- Please contact your local solid waste authority for recycling information.
- **WARNING:**
Battery must be charged for 24 hours prior to first use.
- **CAUTION:**
This appliance has a sealed lead acid battery that should be kept at full charge. Recharge when first received, immediately after each use, and every three months if not used. Immediately charge when the unit has been incorrectly overdischarged. Do not operate the unit while charging. Failure to do this may cause the battery life to be reduced greatly.

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
 - Contact your local authority for details of collection schemes in your area.
- In all circumstances:
- Do not dispose of power tools with domestic waste.
 - Do not incinerate.
 - Do not abandon in the environment.
 - Do not dispose of WEEE* as unsorted municipal waste.



- **HEALTH AND SAFETY FOR BATTERIES**
General: Do not put in fire or mutilate - cells may burst or release toxic materials.
Do not short circuit cells, may cause burns.
- **DISPOSAL**
Do not mutilate batteries, corrosive electrolyte will be released.
Do not incinerate - danger of explosion and release of toxic fumes.
Do not dispose of batteries or cells in a charged condition.

* Waste Electrical & Electronic Equipment.

- **WARNING:** Please read the following instructions carefully, failure to do so could lead to serious personal injury.
- **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.
- **WARNING - RISK OF EXPLOSIVE GASES**
- **WORKING IN THE VICINITY OF A LEAD-ACID BATTERY IS DANGEROUS, BATTERIES GENERATE EXPLOSIVE GASES DURING NORMAL BATTERY OPERATION. FOR THIS REASON, IT IS OF UTMOST IMPORTANCE, IF YOU HAVE ANY DOUBT, THAT EACH TIME BEFORE USING THE POWER PACK, YOU READ THIS MANUAL AND FOLLOW THE INSTRUCTIONS.**
- To reduce risk of battery explosion, follow these instructions and those published by the battery manufacturer and manufacturer of any equipment you intend to use in the vicinity of the battery. Review warning marks on all these products and on the engine.
- When working near a lead-acid battery, someone should be within range of your voice, close enough to come to your aid.
- Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing or eyes.
- Wear complete eye, hand and clothing protection. Avoid touching eyes when working with batteries.
- If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eyes, immediately flood eye with cool, clean running water for at least 15 minutes and get medical attention immediately.
- **NEVER** smoke or allow a spark or flame in vicinity of battery or engine.
- Be extra cautious to reduce risk of dropping a metal tool onto a battery. It could spark or short circuit the battery or, any other electrical part possibly causing an explosion.
- When working with a lead-acid battery, remove personal metallic items such as rings, bracelets, necklaces and watches. A lead-acid battery can produce a short-circuit current high enough to weld a ring, or the like to metal, which may cause severe burns.
- Use the battery charger for charging "lead-acid batteries only". Do not use for charging dry-cell or Ni-Cad batteries that are commonly used with home appliances. For example, radios, torches etc. These batteries may explode and cause injury to persons and damage to property.
- **NEVER** charge or boost a frozen battery.
- **NEVER** allow clamps to touch one another or to contact the same piece of metal to prevent arcing.
- Ensure the power pack is switched off prior to connecting/disconnecting of the vehicle battery.
- Do not use the charger in damp or wet conditions.
- Keep out of reach of children.
- Do not submerge in water.
- Do not operate near flammables such as petrol, paraffin, or thinners etc.
- If the charger receives a sharp blow or is otherwise damaged in any way, do not disassemble. Have it checked by a qualified service person. Return to source.
- The battery must be removed from the appliance before it is scrapped.
- The appliance must be disconnected from the supply mains when removing the battery.
- The battery must be disposed of safely.
- This appliance is for use on 12V circuits only.
- Do not use in high temperatures.
- Before connecting the power pack, ensure the main switch is in the 'off' position.
- If incorrect polarity is indicated, disconnect immediately and rectify.
- Prior to initial use charge for 24 hours.
- Do not use the power pack while charging.

RECHARGEABLE BATTERIES:

- The battery must be removed from the appliance before it is scrapped.
- The appliance must be disconnected from the supply mains when removing the battery.
- The battery must be disposed of safely
- Do not use non-rechargeable batteries.
- Charge the battery using the specified charger under the charging conditions specified.

Charging the battery under any other conditions may cause the battery to overheat, emit hydrogen gas, leak, ignite or burst.

- Do not place the battery near a device that may cause sparks (such as a switch or a fuse). The battery may generate flammable gas when charged, so remember to keep the battery away from fire to prevent sparks from igniting or causing explosion.
- Do not place or store the battery in a vehicle in hot weather, under direct sunlight, or near a source of heat. Use and storage of the battery in these conditions may cause battery leakage, fire or bursting.
- Damage and deterioration of battery characteristics may occur if the battery is dropped.
- Do not charge the battery in the inverted position.
- Do not carry the battery by hanging it from the terminal or the cable, as it may cause damage to the battery.
- Turn off the switch of the circuit when connecting the battery to a charger or load.
- Batteries tend to lose a part of their capacity due to self-discharge during shipment and storage, recharge the batteries before you use them and after purchase or long-term storage in order to restore their full capacity.
- Do not continue discharging to the point where the voltage drops below the recommended discharge cut-off voltage.

If a storage battery that was discharged below the recommended discharge cut-off voltage is recharged, the storage battery may generate heat which could deform it or cause condensation to form moisture from inside the battery.

Discharging below the recommended voltage may also accelerate the deterioration of the battery's performance characteristics.

- Avoid overdischarge, and charge the battery immediately after discharge.
- Unsatisfactory storage conditions may cause deterioration in battery performance, shorten service life and could cause rust to form on the terminals.
- Do not allow metallic objects to touch or bridge the terminals especially jewellery. Failure to observe the precautions may cause the battery to overheat, emit hydrogen gas, leak, ignite or burst.
- Do not throw the battery into fire or heat the battery. The battery may burst or generate a toxic gas if placed in contact with fire.
- Do not attempt to disassemble, remodel or destroy the battery, as it may cause the battery leakage, fire or bursting, and could also create sulphuric acid spills from the battery resulting in possible burns to personnel and damage to the immediate environment.

- Do not continue to charge the battery beyond the time specified in the instructions. If the battery is not fully charged even after being charged for a longer time than specified, discontinue charging and remove the battery from the charger. Charging for a longer time than specified may cause the battery to leak, ignite, or burst.
- Do not discharge the batteries beyond the maximum values indicated on the battery. If the battery is discharged beyond the maximum values, it may leak, ignite or burst.
- Keep the batteries beyond the reach of children.
- Wear gloves when handling batteries.
- Do not apply organic solvents such as paint thinner, petrol or liquid detergents to the battery. If these are brought into contact with the battery case, it may crack, causing leakage.
- The battery contains electrolyte (diluted sulphuric acid) a very toxic substance. If the battery leaks and the liquid inside spills on the skin or clothing, immediately wash it off with plenty of clean water. If the liquid splashes into eyes, immediately flush the eyes with plenty of clean water and consult a doctor. Sulphuric acid will burn skin and in the eyes may cause loss of eyesight.
- Store the battery in a stable position so as to keep the terminals of the battery away from any metallic or other conductive material (including items that may fall or drop onto the battery).

Protect the battery from rain. If the terminals of the battery come into contact with water, they may corrode.

As a general rule, keep the battery in an upright position. When storing the battery, disconnect it from the charger and keep it in a place where the temperature is low. Do not store in direct sunlight or temperatures exceeding 60°C.

If the battery is stored for a year or longer without being charged, its service life may be shortened. Store the battery after fully charging it, otherwise its service life may be shortened.

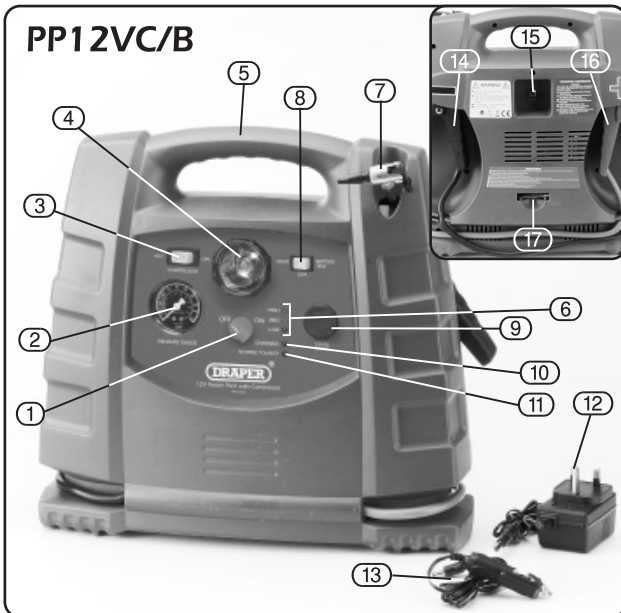
- Use/recharge the battery regularly. The battery gradually deteriorates during storage and consequently its decreased capacity may be irreversible even after recharging.
- **Used batteries are recyclable. When returning used batteries, insulate their terminals with adhesive tape if no residual electricity in used batteries may cause fire or explosion.**
- **This battery is fully recyclable and should be accepted at any location that accepts common automotive batteries. Contact your national/local authority or municipal waste centre for details.**

BATTERY CHARGERS:

- Before charging, read the instructions.
- For indoor use. Do not expose to rain.
- Disconnect the supply before making or breaking the connections to the battery.
- **WARNING:** Explosive gases. Prevent flames and sparks. Provide adequate ventilation before charging.
- Do not charge non-rechargeable batteries.
- During charging the battery must be placed in a well ventilated area.



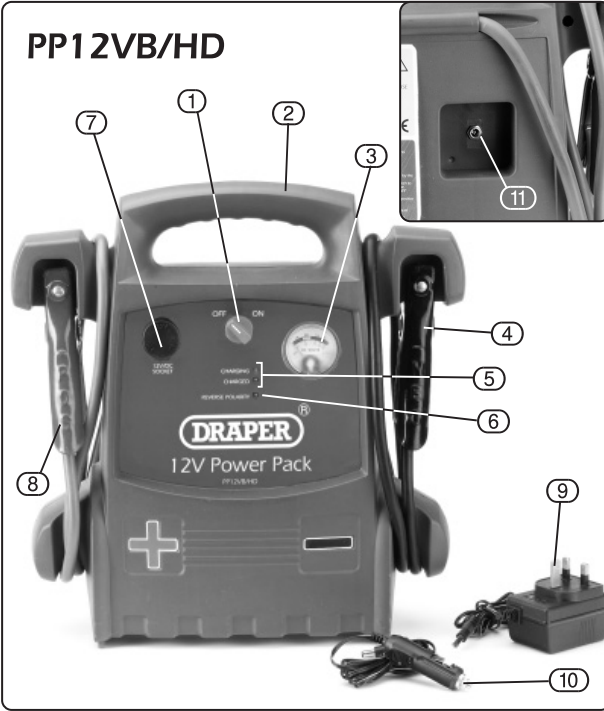
- ① Power Output On/Off Switch (Jump Start).
- ② Worklight On/Off Switch/Battery Test Switch.
- ③ Negative (-) Black Battery Cable & Clamp.
- ④ Worklight.
- ⑤ Transport Handle.
- ⑥ Positive (+) Red Battery Cable & Clamp.
- ⑦ 12V \equiv Output (Max. 180W).
- ⑧ Battery Status Indicators.
- ⑨ Integral Battery Recharge Indicator.
- ⑩ Inverse Polarity Warning Indicator.
- ⑪ AC/DC Transformer Charger.
- ⑫ DC Charger Lead.
- ⑬ Charger Connection Jack (Female).



- ① Power Output On/Off Switch (Jump Start).
- ② Compressor Pressure Gauge.
- ③ Compressor On/Off Switch.
- ④ Worklight.
- ⑤ Transport Handle.
- ⑥ Battery Status Indicators.
- ⑦ Air Line with Valve Connector.
- ⑧ Worklight On/Off Switch/Battery Test Switch.
- ⑨ 12V \equiv Output (Max. 180W).
- ⑩ Integral Battery Recharge Indicator.
- ⑪ Inverse Polarity Warning Indicator.
- ⑫ AC/DC Transformer Charger.
- ⑬ DC Charger Lead.
- ⑭ Negative (-) Black Battery Cable & Clamp.
- ⑮ Charger Connection Jack (Female).
- ⑯ Positive (+) Red Battery Cable & Clamp.
- ⑰ 1 x Nozzle (Black Plastic) for Inflatables.
1 x Nozzle (Needle Type*) for Footballs etc.

* Needle valves stores inside plastic nozzle.

PP12VB/HD



- ① Power Output On/Off Switch (Jump Start).
- ② Transport Handle.
- ③ Battery Status Volt Meter.
- ④ Negative (-) Black Battery Cable & Clamp.
- ⑤ Integral Battery Recharge Indicators.
- ⑥ Reverse Polarity Warning Indicator.
- ⑦ 12V \equiv Output (Max. 180W).
- ⑧ Positive (+) Red Battery Cable & Clamp.
- ⑨ AC/DC Transformer Charger.
- ⑩ DC Charger Lead.
- ⑪ Charger Connection Jack (Female).

- **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 product 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.

- **RECHARGING POWER PACKS (FIGS.1&2):
PP12VLD & PP12VC/B (FIG. 1)**

Charge the integral battery for 24hrs after initial receipt of the product. To check the integral battery's status position the worklight switch to the battery test position. Turn the power output (jump start) switch (A) to the ON position. The battery status indicator will show red for low, amber for medium or green for high. Turn switch (A) back to the OFF position.

- **NOTE:** The power output (jump start) switch must remain in the OFF position throughout the recharge process.

To recharge the battery via the 230V~/12V= transformer charger, connect the charger to the power pack before connecting to the supply mains. The charge indicator (B) will illuminate. The unit may require up to 16hrs if heavily discharged, however 8hrs is the average recharge time. Do not leave the unit on charge unattended or for periods exceeding 48hrs.

To recharge the battery via the 12V= charger lead, connect the lead to the power pack before connecting to the cigarette lighter socket (we recommend the vehicle be running during this period to avoid flattening the battery). The charge indicator (B) will illuminate. Recharge for 1 to 2hrs.

Disconnect the charging means before checking the battery status.

PP12VB/HD (FIG.2)

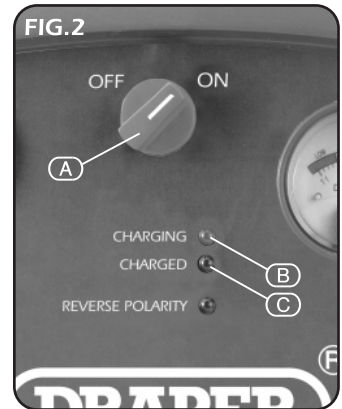
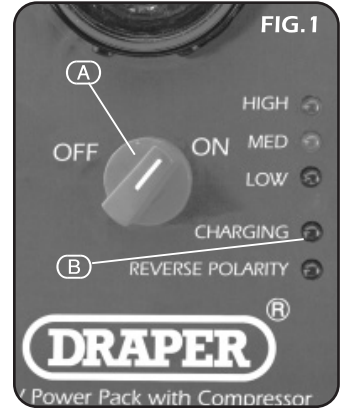
Charge the integral battery for 24hrs after initial receipt of the product. To check the integral battery's status turn the power output (jump start) switch (A) to the ON position. The battery status indicator will display the voltage and indicate low, medium or fully charged. Turn switch (A) back to the OFF position.

- **NOTE:** The power output (jump start) switch must remain in the OFF position throughout the recharge process.

To recharge the battery via the 230V~/12V= transformer charger, connect the charger to the power pack before connecting to the supply mains. The charge indicator (B) will illuminate. The unit may require up to 16hrs if heavily discharged, however 8hrs is the average recharge time. Do not leave the unit on charge unattended or for periods exceeding 48hrs. Upon completion the charge indicator (B) will extinguish and indicator (C) will illuminate to confirm the integral battery is fully recharged.

To recharge the battery via the 12V= charger lead, connect the lead to the power pack before connecting to the cigarette lighter socket (we recommend the vehicle be running during this period to avoid flattening the battery). Recharge for 1 to 2hrs.

Disconnect the charging means before checking the battery status.



- **JUMP STARTING (FIGS.3&4):**

PP12VLD, PP12VC/B & PP12VB/HD

Refer to the General Safety Instructions for information regarding the handling of lead acid batteries etc.

For 'Maintenance' type lead acid batteries remove the cell caps to monitor the electrolyte levels prior to commencing. The level of the electrolyte should be up to the indicator on the battery (approx. 5 to 10mm above the top of the plates). This must be checked and adjusted.

- **NOTE:** This is not applicable for 'Maintenance Free' type batteries.

When topping up the electrolyte use only distilled or de-ionised water. **DO NOT** use tap water. It is advisable to check the electrolyte density (specific gravity) to make certain the acid to water ratio is sufficient.

Clean the battery terminals to allow an optimum conductive connection between the battery and power pack.

It is advisable to measure the battery voltage for signs of deep discharge. Discharging the battery to 20% or less of its full charge capacity is known as 'deep discharge'. Unless specifically designed for deep discharge cycles this practice will significantly reduce the life of the battery.

Do not attempt to use the power pack on a vehicle with a deep discharged battery.

The power pack shall not be used on large ampere-hour batteries as this may cause damage or injury.

- **WARNING:**

Explosive gases. Prevent flames and sparks. Provide adequate ventilation during use.

Refer to the appliance/vehicle manufacturer's literature for specific instructions on jump starting. If it is necessary to disconnect the battery, some information (e.g. radio presets and security code) may require re-entry. Disconnecting the battery can also trigger the anti-theft alarm/immobiliser. Contact the manufacturer for detailed information.

All the power packs are equipped with an audible and visible polarity inversion warning. In the event the positive (+) and negative (-) connections are incorrectly made, e.g. power pack positive (+) red clamp to battery negative (-) terminal and power pack negative (-) black clamp to battery positive (+) terminal, this must be rectified immediately to avoid damage or possible injury.

Engine cranking requires a large amount of current. The engine that requires starting must be in a good mechanical condition as prolonged cranking is not possible. When attempting to crank vehicles equipped with larger capacity batteries or in severe climates it will be necessary to pre-charge the vehicle battery for approximately 15 minutes before attempting a jump start.

- **NOTE:** When starting diesel engines, to prevent damage to the glow plugs which would otherwise result, pre-heat the plugs before starting the engine.

- **NOTE:** This appliance will only help jump start a vehicle with a functioning engine and serviceable battery.

- **WARNING:** Due to the sensitive nature of vehicle electronics you **MUST** ensure that you refer to the vehicle manufacturers handbook **BEFORE** you use the product, as the jump start procedure can vary from vehicle to vehicle.



- The following instructions are a guideline **ONLY** and will not suit every vehicle
Always carry out the following checks before connecting the power pack to the battery.
 - ENSURE the vehicle ignition and ALL ancillary equipment i.e. lights, radio etc are switched OFF.
 - ENSURE the vehicle battery is rated at 12 volts and that the battery is not damaged in anyway.
 - ENSURE THE VEHICLE IS IN NEUTRAL WITH THE PARKING BRAKE APPLIED.

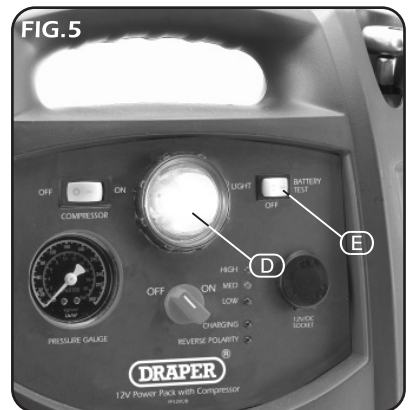


The battery terminal not connected to the chassis has to be connected first. The other connection is to be made to the chassis, remote from the battery and fuel line. The power pack is then to be switched on.

Make sure that no bystanders are near the battery, before cranking the engine.

- **NOTE:** Should the vehicle refuse to start within 6 seconds, do not persist. Allow the power pack to cool for 5 minutes before attempting to start the vehicle again. Should this recommendation not be followed, damage may occur.
After cranking, switch off the power pack. Then remove the chassis connection and then the battery connection.
Recharge the power pack after use.
- **NOTE:** The power pack when connected to the vehicle battery will display the current charge status until the power pack is switched on.

- **WORKLIGHT (FIG.5):**
PP12VLD & PP12VC/B
- When using the power pack in poorly lit conditions the worklight (D) can be utilised. To illuminate position switch (E) to the on position.



- **COMPRESSOR (FIG.6):**
PP12VC/B

- For inflating tyres, extend the air hose fully out of the housing and connect to the tyre valve. Push down firmly and lock in place by moving lever (F) 90°. The gauge (G) will indicate the current tyre pressure.
- Position switch (H) to activate the compressor observing the gauge. When the desired pressure is achieved switch off the compressor and disconnect the air line. Store the air line back down inside to the housing to avoid damage.

- **NOTE:** There are two adapters supplied (clipped on the rear housing) which will allow the compressor to be used with air bed, footballs and other inflatable items. Select the appropriate adapter and push the threaded end into the air hose connector. Securely lock in place.

- **WARNING:**

Do not over inflate the object as damage may occur. Do not use the compressor for more than 10 minutes at any time. If the desired pressure is not obtained within this time, allow the unit to cool for 15 minutes before re-using.



- **12V DC POWER OUTLET (FIG.7):**

PP12VLD, PP12VC/B & PP12VB/HD

- The power pack can be used to run 12V DC appliances with a rating not exceeding 180W (15 amps). Remove the rubber protection cover (I) and insert the cigarette adapter plug of the appliance.
- **NOTE:** The 12V feed is permanent therefore remove the plug of the appliance when not in use and replace the rubber cover.



Regular inspection and cleaning reduces the necessity for maintenance operations and will keep your tool in good working condition. The appliance must be correctly ventilated during tool operation.

All servicing and maintenance not listed in this manual must be carried out by an approved Draper service agent (see back cover for contact details).

- **WORKLIGHT BULB REPLACEMENT (FIG.8):**

With a small flat blade screwdriver gently lever the worklight lens surround (J) away from the housing. Take note of the two locating tabs, taking caution not to damage them while removing the surround. The lens locates into the rear of the surround.

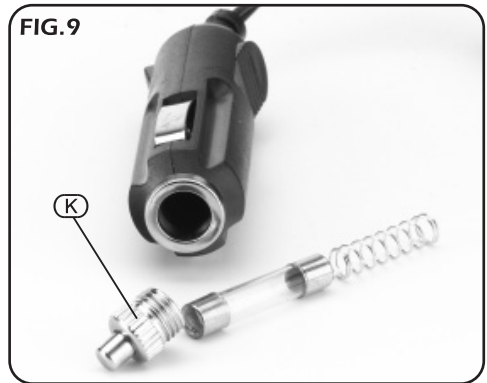
Unscrew the bulb anti-clockwise and replace with one of a matching rating (12V 6W) and type (Edison screw) - Draper Stock No.41306.



- **12V \rightleftharpoons CHARGER LEAD FUSE REPLACEMENT (FIG.9):**

Carefully remove the knurled metal section (K) which is spring loaded. Remove the fuse and replace with one of a matching rating (5A) and type (glass) - Draper Stock No.41307.

- **NOTE:** Do not lose the spring located behind the fuse.



Stock No.	Description
77723	230V~/12V \rightleftharpoons Transformer Charger

For more details please refer to your local Draper Stockist.



Class II construction
(Double insulated).



For indoor use only.



Automatic overload protection.



Isolating transformer.



Do not dispose of WEEE*
as unsorted municipal waste.



* Waste Electrical & Electronic Equipment.

SPECIFICATION

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

Stock No	40135	40134	40133
Part No	PP1 2VLD	PP1 2VC/B	PP1 2VB/HD
Recommended Maximum Capacity:			
Petrol	1600cc	2000cc	3000cc
Diesel	1500cc	1800cc	2400cc
Output:			
Voltage	12V =	12V =	12V =
Amperage:			
Starting	300A	300A	400A
Peak	600A	700A	900A
Worklight6W6W	N/A
Compressor Output:			
PSI	N/A	0-260	N/A
Bar (kPa x 100)	N/A	0-21	N/A
Weight	4.162kg	7.070kg	8.180kg
Integral Battery:			
Type	Valve Regulated	Valve Regulated	Valve Regulated
	Lead Acid Sealed Battery	Lead Acid Sealed Battery	Lead Acid Sealed Battery
Voltage	12V =	12V =	12V =
Capacity	9Ah	12Ah	17Ah
Charger:			
Input:			
Voltage	230V~50Hz	230V~50Hz	230V~50Hz
Output:			
Voltage	12V =	12V =	12V =
Amperage	450mA	450mA	450mA
Construction	Class II	Class II	Class II

WARNING: EXPLOSIVE GASES. PREVENT FLAMES AND SPARKS. PROVIDE ADEQUATE VENTILATION DURING CHARGING.

GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

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

A proof of purchase must be provided with the tool.

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 period covering parts/labour is 12 months from the date of purchase. This guarantee does not apply to 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 warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

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 months period.

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

Draper Tools Limited.

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YOUR DRAPER STOCKIST

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