

Standard Torch System

The Bullfinch Standard Torch System consists of a range of torch handles and interchangeable fittings including burners, that can be assembled in various combinations as shown. They are available as individual items and some are available as assembled kits. All items are for use with the Liquefied Petroleum Gases propane and butane (LPG).

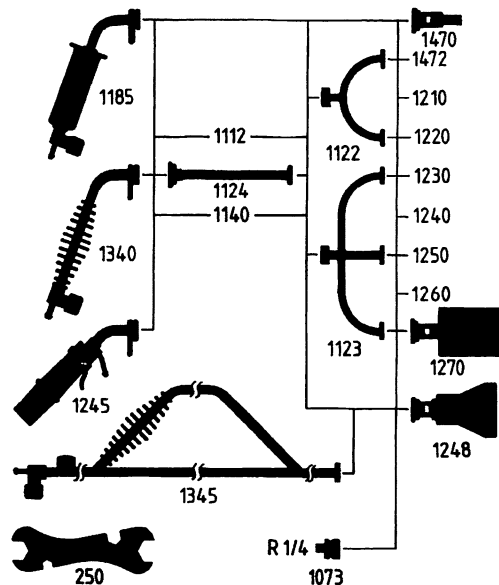


Fig. 1

Technical Data

Burner No.	Jet Ref.	g/h propane (g/h butane)			Min. Cyl. kg	kW propane (kW butane)		
		0.35 bar	1 bar	2 bar		0.35 bar	1 bar	2 bar
1470	DB	13 (11)	22 (19)	31	0,18 (0,15)	0,32 (0,26)	0,43	
1472	AB	32 (28)	54 (47)	76	0,45 (0,38)	0,75 (0,65)	1,06	
1210	6B	56 (48)	94 (81)	133	0,8 (0,7)	1,3 (1,11)	1,9	
1220	18B	109 (94)	181 (156)	256	1,5 (1,3)	2,5 (2,14)	3,6	
1230	30B	195 (168)	325 (281)	460	2,7 (2,3)	4,5 (3,86)	6,4	
1248	16B	-	181 (156)	256	-	2,5 (2,14)	3,6	
1240	55B	361	601	850	13	5,0	8,4	
1250	90B	544	907	1283	19	7,6	12,6	
1260	150B	852	1420	2008	47	12,0	19,6	
1270	250B	1404	2340	3309	47	19,6	32,5	

Note: Pressures above 1 bar are unlikely to be obtained from butane cylinders and may be much lower than 1 bar in cold conditions. All data are approximate and for guidance only.

The normal operating pressure of the system is 1 bar (15 psi) but in operation, the gas pressure may be varied between 0.35 to 2 bar. (5 to 30 psi).

Warning; Prolonged operation of the fishtail burner No. 1248 on reduced gas rate can overheat the burner and damage it. Take care when using the fishtail burner with the No. 1245 torch handle as extended operation with the idling flame can cause overheating and damage to the burner.

Operation of the Standard Torch System

- The equipment should only be used in accordance with the instructions and any local or national regulations.
- Do not point torch towards face or other persons or flammable objects.
- DO NOT USE LEAKING, DAMAGED OR MALFUNCTIONING EQUIPMENT.**
- Always use the torch in a well ventilated area or out of doors. Provide 22 cm² (3.4 in²) of free ventilation for each 1 kW of burner power.
- Always ensure that the burner receives a supply of clean air for combustion.
- Do not use the torch near combustible materials. (Certain materials such as plastics, paints and solvents can give off harmful or flammable vapours when heated).
- Take precautions to protect yourself and others from accidental burns. Wear safety glasses or protective goggles, and gloves.
- Do not hang a lit torch on the cylinder.
- Always place your work on refractory (fire) brick; never on concrete or ordinary brick.
- Always stand the cylinder on a level surface when it is connected to the torch.
- **DO NOT ALLOW CHILDREN OR ANY OTHER INEXPERIENCED PERSONS TO HANDLE THE EQUIPMENT.**
- **NEVER ATTEMPT TO MODIFY THE EQUIPMENT AND ALWAYS USE APPROVED ACCESSORIES AND SPARES.**

CAUTION: The Gas cylinder is under pressure and the gas is extremely flammable. Keep out of reach of children.

Assembly of equipment

Before assembling the equipment ensure that all the connection joints are clean and free from damage. Connect the torch handle to a high pressure regulator using a suitable length of orange coloured 4.8 mm bore high pressure rubber hose to BS 3212/2. The hose should be secured with suitable hose clips. A fixed pressure regulator set to 1 bar (15 psi) or a variable pressure regulator 0.35 to 2 bar (5 to 15 psi) should be used. The Bullfinch Bijou or Tinyreg range of regulators are suitable for most cylinders with screwed connections. When fitting a burner, extension tube or adaptor to the handle, ensure that the sealing washer is in position. **Never** use a burner, extension tube or adaptor without a sealing washer or if the washer is damaged as this may cause gas leaks. Tighten burner, extension tube or adaptor (hand tight plus 1/8 turn) with the Bullfinch No. 250 spanner (11/16 BS or 5/8 Whit.), burners, extension tubes and adaptors all have right hand threads. Kits come already assembled and ready for connection to the gas supply. No. 1073 Adaptor is for use when connecting burners to a manifold system.

Connection to the gas supply

The Standard Torch System will operate on either propane

or butane. The choice of gas and cylinder size is determined by the operating conditions, i.e. the larger burners can only operate continuously from the larger cylinders. Butane is unsuitable for use in cold weather and is unable to supply higher operating pressures. Check that the cylinder valve is turned off. Connect the assembled equipment to a propane cylinder by screwing the regulator to the outlet connection of the cylinder with Bullfinch spanner No. 250 (3/4 BS or 11/16 Whit). It should be noted that propane regulators have left hand threads. For butane regulators with clip-on connections please consult your dealer. Check that all connections are spanner tight and that the torch control valve is closed, open the cylinder valve and check all joints for leaks with a leak detecting fluid or a soap solution.

NEVER look for leaks with a naked flame.

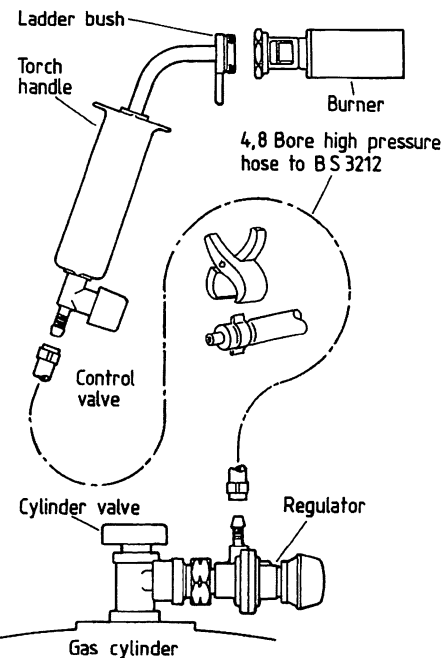
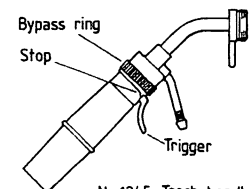


Fig. 2

Basic operation

The control valve can be used to control the flow of gas but is normally used in the fully open position. A variable regulator should be fitted to control the flow of gas. For the No. 1245 torch handle the flow of gas is controlled by the trigger. The bypass ring should be turned fully clockwise to allow the trigger to rest as far forward as possible. This will prevent gas passing the trigger.



No. 1245 Torch handle

Fig. 3.

To light the burner: Open the control valve slightly to allow a small flow of gas (for the No. 1245 torch, turn the bypass ring slightly in an anti-clockwise direction) and apply a light to the edge of the burner, ignition may be delayed until air has been purged from the system, particularly on newly assembled systems using the smaller burners. When the burner is lit the control valve can be fully opened and the flow of gas adjusted by means of the regulator (if variable) For the No. 1245 torch, the bypass ring can be turned to a position that prevents the gas supply being closed off altogether when the trigger is released, allowing the torch to burn with an idling flame. This allows the torch to be left alight between operations. The operational flame is achieved by pulling the trigger.

To shut off the torch: After use the gas should first be turned off at the cylinder and the flame allowed to burn out, the torch control valve can then be closed. **DO NOT FORCE.** For the No. 1245 torch, the bypass ring should be turned fully clockwise to its stop. Allow the torch to cool by using the hanging hook, keep away from combustible materials.

Disassembly and storage

DO NOT STORE OR TRANSPORT YOUR TORCH ATTACHED TO THE GAS CYLINDER. To disconnect, shut off the cylinder valve and disconnect the regulator from the cylinder using a suitable spanner.

If you are in any doubt about the operation of your torch or equipment please consult your dealer.

Servicing and maintenance

The Standard Torch System should be regularly checked and maintained in a clean condition. Check all connections for tightness and test for leaks each time the equipment is used.

The following diagram shows parts of the Standard Torch System that can be serviced and also the spare parts that are available.

Never attempt to service a pressure regulator; it cannot be reassembled without the use of special tools.

After fitting a spare part check that there are no gas leaks and that the equipment operates correctly.

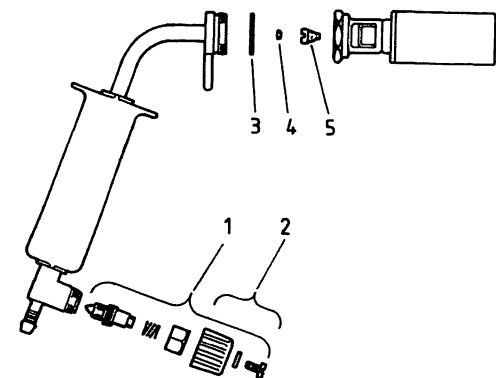


Fig. 4

Sealing washer: Replace if damaged or worn. Pull out old washer and push new one into place by hand. Check that it is located flat and secure in the connection.

Jet: Remove from rear of burner with a screw driver for cleaning or replacement. Clean with compressed air or a solvent. Never clean a blocked jet with wire, it will damage the jet and affect the performance of the burner. Renew jet if necessary. Protect the sealing surfaces of the jet and burner base from dirt and damage.

Filter gauze: Replace if damaged or blocked. Remove from the rear of the jet with the aid of a pin, insert new filter by hand and push into position with the blade of a screw driver.

Hose and clips: Renew hose if it becomes worn or damaged. Use only 4.8 mm bore orange coloured hose marked BS 3212/2. **DO NOT USE ANY OTHER TYPE OF HOSE.** (LPG can damage some rubber or plastic materials). To replace, remove clips and cut hose away from connections (care should be taken to avoid damage to connections). Refit new hose by placing clips over each end of hose, then pushing hose over the connections. Tighten the clips (the hose is designed to be a tight fit over the connections and wetting the end with water will make assembly easier. Do not use any other lubricant or the security of the hose could be reduced).

Control valve: Should be serviced if excessive force becomes necessary to shut off the valve.

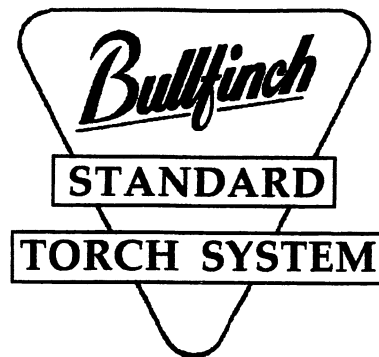
- 1 Remove the knob screw, washer and valve knob.
- 2 Remove cap nut with 5/8 AF spanner (right hand thread).
- 3 Unscrew and inspect the valve needle. Renew if the cone is damaged or the 'O' ring seal is worn. Lightly lubricate the 'O' ring seal with a molybdenum disulphide grease before reassembly.
- 4 Clear the valve body of any dirt or swarf.
- 5 Reassemble the valve needle fully, followed by the valve spring and the cap nut, tighten cap nut firmly but without force. Refit valve knob, screw and lock washer.

Spare parts:

Ref.	Cat. No.	Description
1	SP 100 A	Standard control valve components
2	SP 100 B	Valve Knob Assembly
3	SP 1210 AK	Sealing washer (burner)
4	SP 1210 F	Filter gauze
5	-	Jet (see technical data)
-	SP 1125 F	Sealing washer (adaptor No. 1122/1123)

Spare parts and accessories are available through your local Bullfinch stockist. If you experience any difficulty in obtaining them or you require advice on Bullfinch equipment please contact us.

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INSTRUCTIONS FOR THE ASSEMBLY, USE AND SERVICING OF:-

HANDYMAN'S TORCH KIT

No. 110P Propane only

STANDARD TORCH KIT

No. 140P Propane only

TORCH HANDLE No. 1185

TORCH HANDLE No. 1245

TORCH HANDLE No. 1340

EXTENDED TORCH HANDLE No. 1345

BURNER No. 1470

BURNER No. 1472

BURNER No. 1210

BURNER No. 1220

BURNER No. 1230

BURNER No. 1240

BURNER No. 1250

BURNER No. 1260

BURNER No. 1270

For LPG (P) at high pressure
0,35 to 2 bar (5 to 30 psi)

FISHTAIL BURNER No. 1248

For LPG (P) at high pressure
1 to 2 bar (15 to 30 psi)

READ INSTRUCTIONS BEFORE USE