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# BLAKES LAVAC TAYLORS

## Owners Handbook

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**TAYLORS' PARAFFIN (KEROSENE) COOKERS  
MODELS 028, 029, 030 and 030L**

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MODELS 028, 029, 030 and 030L**

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# 1. INTRODUCTION

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Congratulations on your purchase of a Taylor's Paraffin (Kerosene) Cooker.

Taylor's Paraffin (Kerosene) Cookers are firm favourites with sailors throughout the world, providing their owner with a long and trouble free working life.

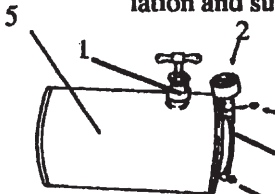
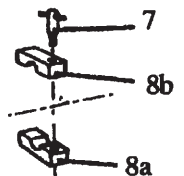




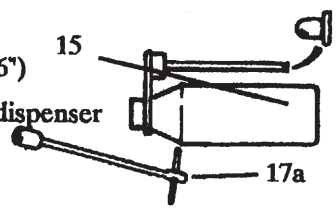
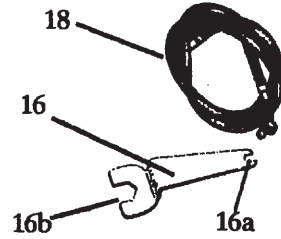


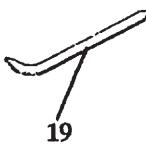

The Taylor's Paraffin (kerosene) Cooker is simple to operate. After pre-heating, fuel is fed into the cooker from a pressure tank. The amount of fuel fed into the burner determines the heat output. Within this handbook you will find information and practical help on installing, running and maintaining your cooker.

**If you require any further help or advice, please contact us either by telephone on 01489 580580, by fax on 01489 580581 or by writing to: Blakes Lavac Taylors Ltd. 13 Harvey Crescent, Warsash, Southampton SO31 9TA**

Over many years, we have taken advice from sailors around the world concerning their requirements for marine equipment and our current range is a result of this ongoing commitment. If you have any comments or helpful hints that you would like to share with us, we would be very pleased to hear from you.

# 2. INSTALLATION KIT PROVIDED WITH COOKER

All Taylor's Cookers are provided with the following parts for installation and subsequent operation.

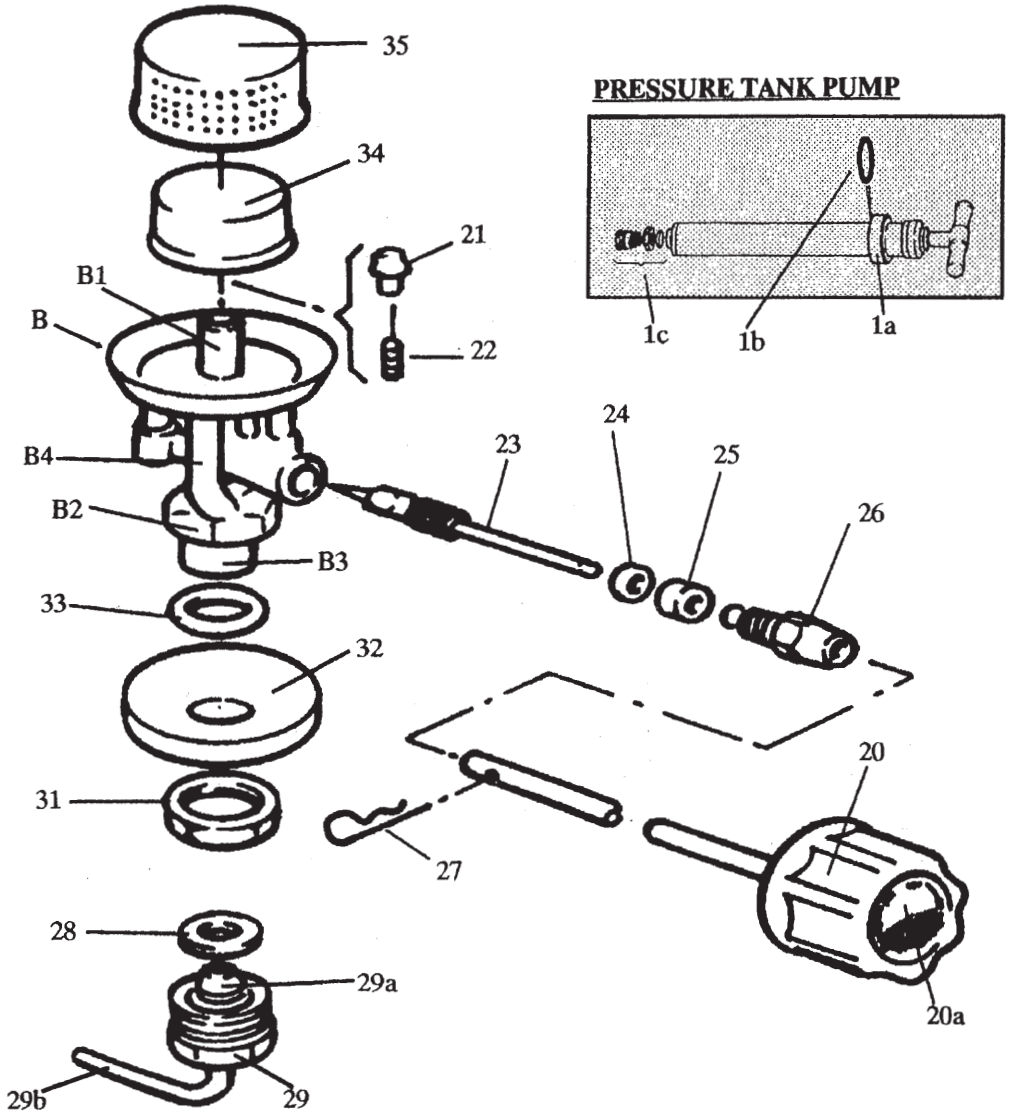
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- 1½ Gallon Pressure tank with integral pump and fixing straps
  - Complete Gimbal set
  - 3 metres of Copper fuel pipe and compression fittings
  - Safety On-off fuel control valve
  - In-line fuel filter
  - Bulkhead coupling (reducing bush 3/16" - 1/4")
  - Flexible fuel line (36")
  - Methylated Spirits dispenser
  - Burner Spanner
  - Burner Jet key
  - Lifter, hob top plate
  - Pan clamps (pair)
  - 1 kit of paraffin burner spares for the 028 and 029 models and 2 kits of paraffin burner spares for the 030 model. Note: the paraffin burner spares kit includes a blanking nut (14) to block off the supply of fuel to an individual burner, at the "T" connection (49), and thereby maintain the fuel supply to other burners.

**Because the nature of an installation varies from owner to owner, certain components are easier to source locally. We therefore feel it is best for you to purchase the following separately, depending on your requirements.**

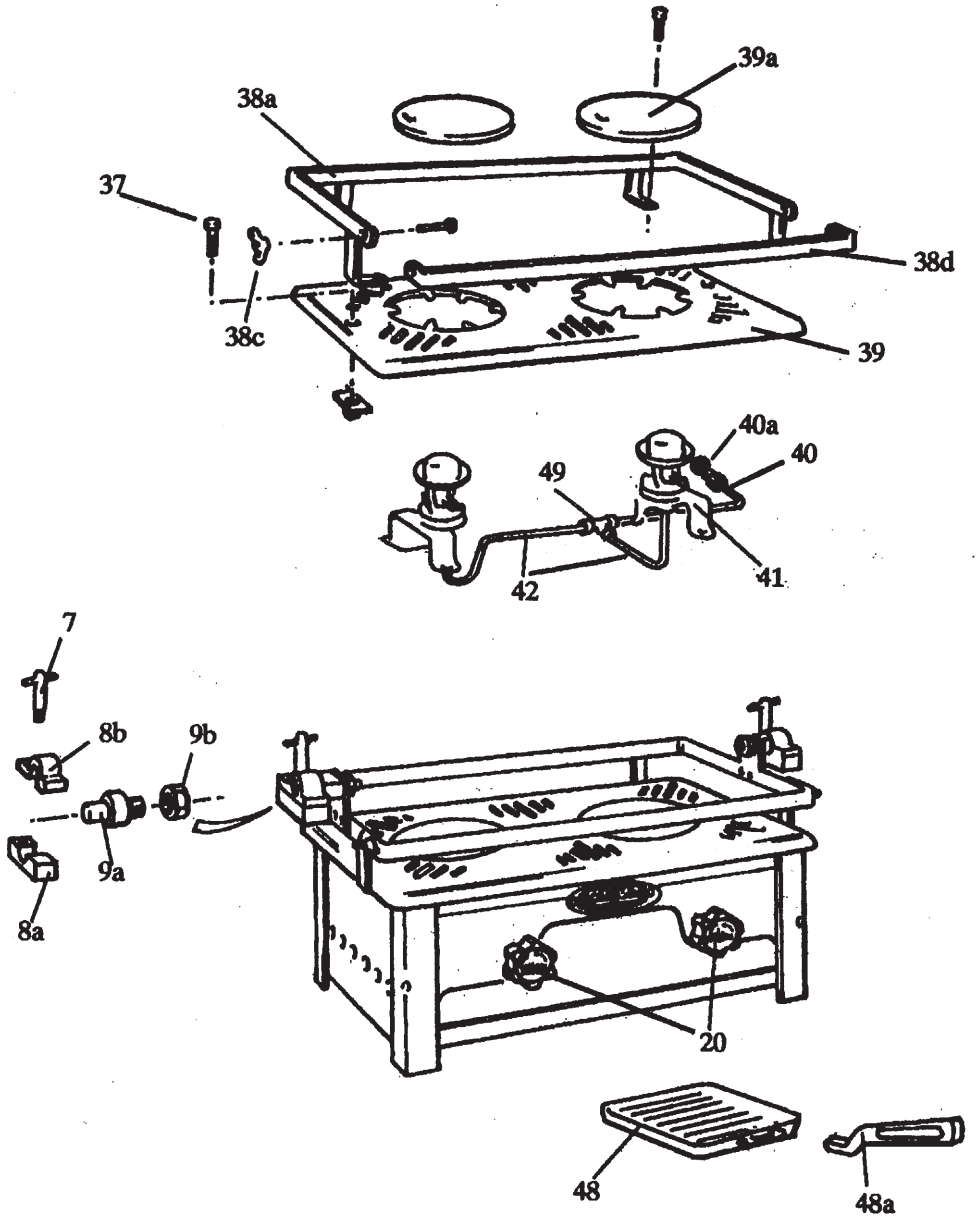
- **Sheet Stainless Steel for extra insulation if required**
- **4 x 6mm (1/4") diameter Stainless Steel securing bolts or screws for securing tank straps1 kit of paraffin burner spares**

# 3. EXPLODED DIAGRAM

## PARAFFIN (KEROSENE) BURNER



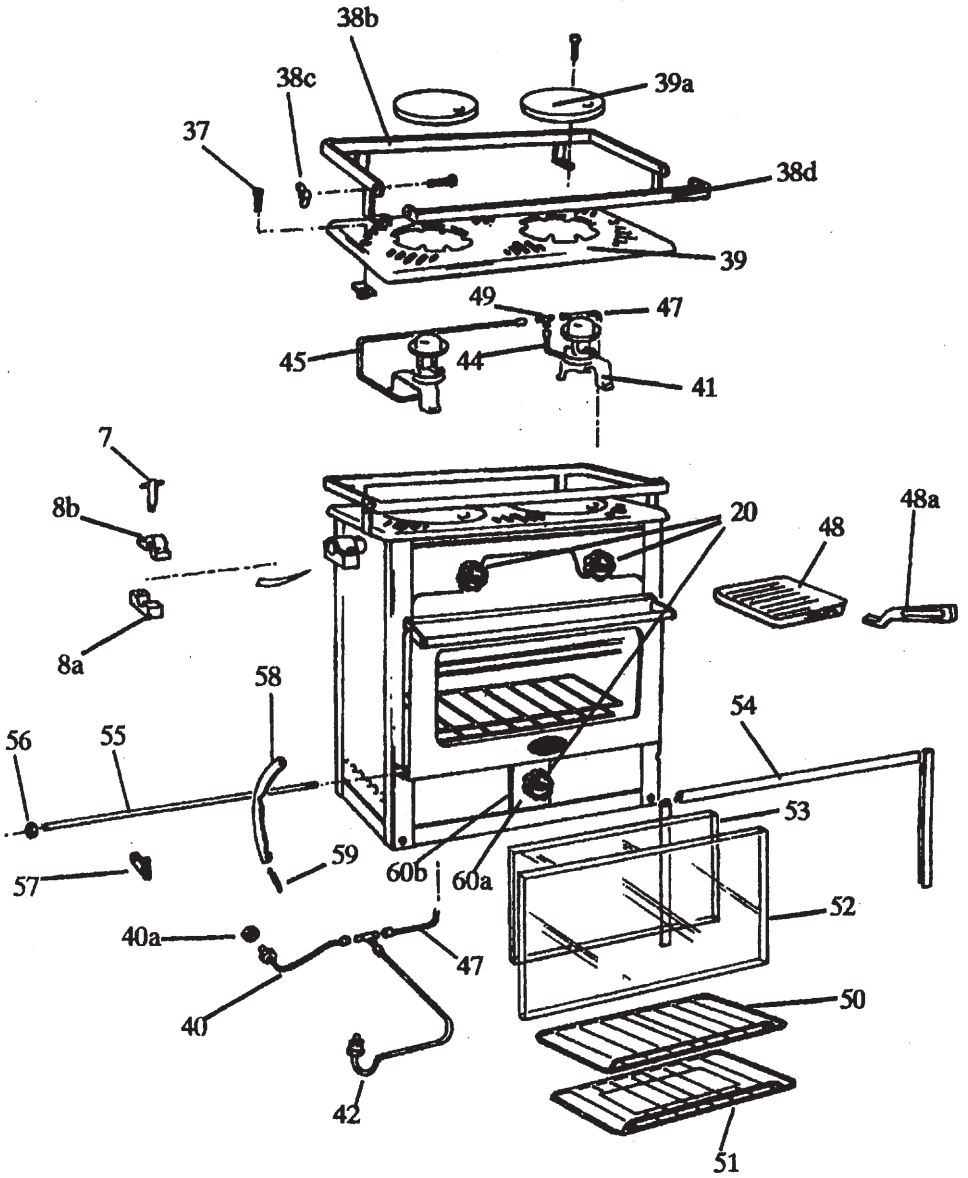
**TAYLORS 028 PARAFFIN (KEROSENE) COOKER**







# TAYLORS 030 PARAFFIN (KEROSENE) COOKER



# 4. SPARE PARTS REFERENCE NUMBERS

HANDBOOK CODE	SPARES CODE	DESCRIPTION
1	CTK3500	COMPLETE PUMP FOR PRESSURE TANK
1a	SEE 1	TANK CAP (INTEGRAL WITH PUMP (1))
1b	ETD3515	TANK CAP (PUMP) 'O' RING
1c	*CTK3596	NON-RETURN VALVE NEW TYPE (COMPLETE)
	CTK3406	NON - RETURN VALVE (OLDER MODELS)
	CTK3592	PUMP LEATHER WASHER
2	CTK3580	PRESSURE GAUGE
3	CTK3585	PRESSURE GAUGE O RING
4a	ETD3550	SIGHT GAUGE TUBE
4b	CTK2855	BRASS COUPLING NUT 3/16" FOR COPPER FUEL LINE
5	*CTK0351	1 1/2 GALLON S/S PARAFFIN PRESSURE TANK & PUMP
6	CTK3560	TANK BRACKETS
7	CTK2425	LOCKING SCREW
8a	CTK2415	GIMBAL BLOCK
8b	CTK2420	LOCKING PLATE
9a	CTK2432	GIMBAL PIN
9b	CTK2435	GIMBAL PIN NUT
10	*CTK1195	COPPER FUEL LINE (3 METRES) 028, 029 & 030
	CTK1150	3/16" COPPER OLIVE FOR COPPER FUEL LINE
	HTD5240	3/16" BRASS OLIVE FOR IN-LINE FUEL FILTER (13)
11	CTK1145	REDUCING BULKHEAD COUPLING 3/16" - 1/4"
12	CTK1155	OFF - ON SAFETY CONTROL VALVE
13	CTK1185	IN - LINE FUEL FILTER
14	HTD5625	1/8" BLANKING NUT TO ISOLATE BURNER AT T CONN (49)
15	CTK1175	METHYLATED SPIRITS DISPENSER
16	HTK5900	BURNER SPANNER
17a	CTK1135	MAIN JET SPANNER
17b	CTK1136	BALANCING JET SPANNER FOR OLDER MODELS
18	CTK1140	36" FLEXIBLE FUEL LINE
	CTK1166	10 1/2" FLEXIBLE FUEL LINE (OLDER MODELS)
19	CTK2615	LIFTER (FOR IRON TOP PLATE 39a)
20,20a	CTK1080	CONTROL KNOB AND SPINDLE WITH LABEL
21	CTK1055	MAIN JET
22	CTK1065	CLEANING NEEDLE
23	CTK1070	CLEANING NEEDLE SPINDLE
24	CTK1080	BRASS PACKING WASHER
25	CTK1075	GRAPHITE PACKING WASHER
26	CTK1085	GLAND PACKING SCREW

HANDBOOK CODE	SPARES CODE	DESCRIPTION
27	CTK1095	SPRING CLIP
28	CTK1125	ALUMINIUM SEALING WASHER
29	CTK1115	CONNECTING NUT
29a,29b		SEE 42,43,44,45
30	CTK1080	BALANCING JET FOR OLDER MODELS
31	CTK1120	CONNECTING LOCK NUT
32	CTK1100	PRE-HEAT CUP
33	CTK1105	FIBRE WASHER
34	CTK1045	INNER CAP
35	CTK1040	OUTER CAP
14 & 2 x (21,22,23,24,25 26,27,28,30,33)	*CTK1082	BURNER SPARES PACK (FOR TWO BURNERS)
ITEMS 21-28,B,33-35	CTK1035	TESTED BURNER COMPLETE
36	*CTG1202	PAN CLAMPS (PAIR)
37		RETAINING SCREW - HOB TOP
38a	*CTK2316	BRASS FIDDLE RAIL - DROP FRONT 028
38b	*CTK2317	BRASS FIDDLE RAIL - DROP FRONT 029/030
38c		WING NUT - DROP FRONT FIDDLE RAIL
38d		DROP FRONT BAR - FIDDLE RAIL
39	CTK2305	VITREOUS ENAMELLED IRON HOB TOP
39a	CTK2310	VITREOUS ENAMELLED IRON HOB TOP PLATE
40a	CTK1030	BACK NUT (FUEL INLET PIPE)
40	*CTK2410	FUEL INLET PIPE
41	CTK2610	TOP BURNER SUPPORT
42	*CTK2390	OVEN BURN FUEL LINE 030: L/H & R/H FUEL LINES 028
43	*CTK2381	L/H BURNER FUEL LINE 029
44	*CTK2385	TOP RIGHT HAND FUEL LINE TO BURNER 029 & 030
45	*CTK2380	TOP L/H FUEL LINE TO BURNER CONNECTION 030
47	*CTK2395	FUEL LINE TO OVEN 030
48,48a	CTK1170	GRILL TRAY & HANDLE
49	CTK2405	EQUAL 3/16" TEE CONNECTOR
50	CTK2330	OVEN SHELF 029 & 030
51	*CTK2581	OVEN SHELF WITH HEAT DEFLECTOR 030
52	CTK2340	OVEN DOOR OUTER GLASS 030
53	CTG1010	OVEN DOOR INNER GLASS 030
54	*CTK1193	OVEN DOOR HEAT SEAL AND FIXINGS (PER SET) 030
55	*CTK2585	OVEN DOOR HINGE ROD
56	CTK2345	HINGE ROD CIRCLIP 030
57	CTK2590	OVEN DOOR HINGE BRACKET
58	CTK2570	OVEN DOOR SIDE ARMS (PAIR) 030
59	CTK2335	OVEN DOOR SPRING 030
60a		OVEN BURNER CONTROL KNOB SUPPORT 030
60b	CTK2375	OVEN BURNER SUPPORT 030

# 5. ON-BOARD SPARES KITS

A complete range of spare parts and on-board spares kits for Taylors paraffin (kerosene) cookers are available, reference numbers for the item numbers on the diagrams in sections 2 and 3 are in section 4.

**Blakes Lavac Taylors Ltd**, the manufacturer of Taylor's Cookers, supply spare parts and kits direct and through the marine trade (chandlers and boat builders). Overseas, spare parts and kits are supplied through appointed agents. If you require spare parts, on-board spares kits or help in locating a local chandler or agent, wherever you are in the world, please contact us direct. Our address and telephone number can be found on the front of this leaflet.

The on-board spares kits for Taylor's Cookers provide the ideal combination of spare parts to help you maintain your Cooker whether ashore or cruising at sea.

<b>NORMAL AND EXTENDED CRUISING ON-BOARD SPARES KITS</b>			
<b>SPARE PARTS</b>		<b>NORMAL CRUISING</b>	<b>EXTENDED CRUISING</b>
<b>DESCRIPTION</b>	<b>REFERENCE NUMBERS</b>	<b>*CTKNORM</b>	<b>*CTKEXTD</b>
* Paraffin burner	CTK1035	1	2
* Paraffin burner spares kit (see section 4 for contents)	*CTK1062	1	2
* Copper Olive 3/16"	CTK1150	2	3
* Brass olive (filter 13)	HTD5240	1	2
* Brass coupling nut 3/16"	CTK2855		1
* 3m Copper fuel pipe 3/16"	*CTK1195		1
* Pump leather washer	CTK3592	1	2
* Non-return valve (new) (1c)	*CTK3596		1
* Pump fill cap "O" ring (1b)	ETD3515		1
Burner wick	CTK1036	1	2

# 6. INSTALLING THE COOKER

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## 6.1. PREPARING THE COOKER RECESS

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For the exact measurements of the cooker recess, please consult the appropriate specifications in section 12. If you intend to gimmel your cooker, make sure that you allow adequate room for it to swing.

No cooker should be installed in contact with other galley cupboards. A good clearance should be allowed all round for air circulation.

**Note: 030 cooker only.** Although the 030 cooker is insulated to ensure maximum efficiency, if you wish to line the cooker recess, we would suggest sheet stainless steel for its ease of cleaning.

## 6.2. SITING THE GIMBAL BLOCKS IN THE RECESS

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(028 only: ensure the gimmel pin (9a) is fixed into the bracket on the fiddle rail (38a)). Fix the gimmel block (8a) to the gimmel pin (9a) with the locking plate (8b) and screw (7) at both ends of the cooker. Lift the cooker into position within the recess. Mark off the position of the gimmel blocks on the sides of the recess. The gimmel blocks (8a) can either be fixed directly to the sides of the cooker recess or fixed on hardwood pads. Remove the gimmel blocks from the gimmel pins and attach them to the recess sides as marked.

The cooker may be prevented from swinging by fitting a small brass barrel bolt to one of the legs. It is suggested that the barrel bolt is attached to a hardwood pad fixed to the side of the recess and that the pad should be sited so that it does not impede the cooker when it swings on its gimbals.

## **6.3. SITING THE FUEL PIPE ENTRY POINT**

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Mount the cooker in the recess on the newly fitted gimbal blocks. Decide the point of entry into the recess for the flexible fuel line (18) and mark. The entry should be to one side of the recess and to the rear. Allow the correct distance to the fuel entry point in the cooker so that the flexible fuel line (18) does not impede the cooker when it swings on its gimbals. Also take care to ensure that all bends in the flexible fuel line (18) are kept to a minimum radius of 102mm (4").

A bulkhead coupling (11) is supplied and should be mounted in the cooker recess at the entry point previously marked. It should be fixed to accept the 3/16" copper fuel pipe (10) on the side facing the fuel tank (5) and the flexible fuel line (18) on the side pointing into the cooker recess.

Remove the cooker from the recess to allow for easier fitting of the bulkhead coupling (11) and the pipework (see section 6.4).

## **6.4. SITING THE FUEL TANK**

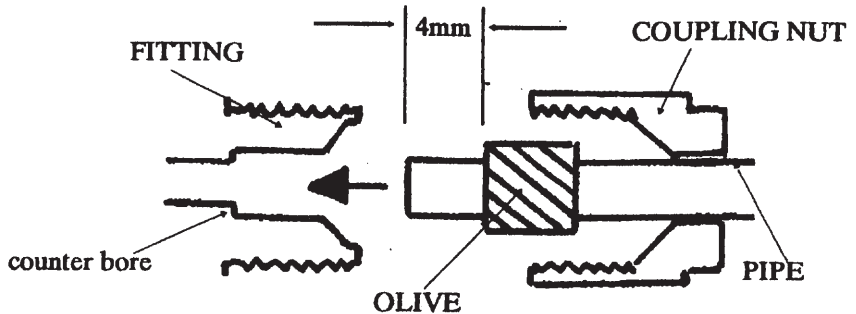
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The fuel pressure tank (5) may be mounted at a convenient position anywhere within the boat - IDEALLY NOT OVER 5m (16') AWAY FROM THE COOKER. The tank height relative to the cooker is not critical because the fuel is pressure fed from the tank. The tank must be rigidly mounted. Straps (6) are provided which are designed to be fixed with 4 bolts or screws at 190mm (7 1/2") centres.

The 3/16" copper fuel pipe (10) is supplied with compression fittings in the safety shut off valve (12), tank T- connection (4b), bulkhead coupling (11) and in-line fuel filter (13). The safety shut off valve (12) should be inserted in the copper fuel pipe (10) in a readily accessible position - ideally within 1m (3') of the heater. The in-line fuel filter (13) should also be fitted.

All the 6 joints in the fuel line (10), ie. at the tank (4b), in-line fuel filter (13), safety control valve (12) and bulkhead coupling (11) use compression fittings.

When assembling the compression fitting (see diagram below), ensure that the copper pipe is cut at right angles and that all swarf and burrs are removed. Slide on the coupling nut and then the olive so that the pipe protrudes 4mm ( $\frac{1}{8}$ " ) from the olive. Push the pipe into the fitting until the end touches the counter bore in the fitting. Tighten the coupling nut gently and then undo to check that the olive has formed evenly around the pipe. Finally reassemble and tighten the coupling nut just enough to prevent leakage. Over tightening the coupling nut will deform the olive and the compression fitting will not seal.



Having completed the pipework, the flexible fuel line (18) can be fixed between the fuel inlet (40) on the cooker and the bulkhead coupling (11). The cooker can then be mounted on its gimbal blocks (8a) ready for commissioning.

## 6.5. FIXING THE FUEL PIPE

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Care must be taken to prevent the fuel pipe (10) vibrating as vibration will cause the pipe to fatigue and eventually fracture. The pipe should be clipped into position at frequent intervals and protected from mechanical damage. One way to protect against damage and vibration is to run the fuel pipe in clear PVC hose and fasten with bulkhead clips or cable ties to the hull structure.

# 7. COMMISSIONING THE COOKER

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## 7.1. PRELIMINARIES

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Close the safety valve (12) and the burner (turn the control knob (20) fully clockwise - refer to section 8.3).

## 7.2. FILLING THE FUEL TANK

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Fill the tank (5) two thirds full with clean paraffin (kerosene). Tighten the tank cap (1a) down fully to seal the tank. Operate the pump (1) and pressurise the tank to 25psi (1.6 BAR)  
INDICATED ON PRESSURE GUAGE (2)

## 7.3. CHECKING THE OPERATING PRESSURE

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Having pressurised the tank (5) leave it for an hour to check that there is no pressure drop within this time. If there is a pressure drop during this period, check all the pipework joints up to and including the safety valve (12) for leakage, using soapy water

Next, open the safety valve (12) to allow air pressure into the cooker.. Check the all the control knobs are still in the fully "closed" position - see section 8.3. Leave again for an hour to check that there is no pressure drop. If there is a pressure drop during this time, check the joints on the flexible fuel line (18) using soapy water. Once it has been established that there are no leaks in the system, the tank (5) may be depressurised by unscrewing the tank cap (1a) on the pump anti-clockwise.



# 8. OPERATING THE COOKER

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## 8.1. LIGHTING THE BURNER

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Follow the procedure described in **sections 7.1 & 7.2**. Use the dispenser (15) provided to fill the preheat cup (32) situated at the burner base with methylated spirits. The preheat cup (32) must be filled as full as possible.

- When the burner is cold, it is possible to fill the cup by removing the burner outer cap at the top and pouring the methylated spirits down the centre tube of the burner.

Light the methylated spirits and allow the contents of the preheat cup (32) to burn.

When the methylated spirit is almost burnt open the burner control knob (20) in an anticlockwise direction, about a 1/4 of a turn (90°).

The burner should operate with a blue flame once all the methylated spirits has gone.

- **WE ADVISE THAT YOU HAVE A LIGHTED MATCH AVAILABLE.** If the methylated spirits has finished burning before the burner control (20) is opened, the burner may be lit by inserting a lighted match into the space between the burner and the burner case and opening the burner control (20) a 1/4 of turn (90°) anti-clockwise.

If the burner does light with a billowing yellow flame the burner has not been sufficiently pre-heated. Close the burner control (20) (by turning fully clockwise) and **ALLOW THE BURNER TO COOL BEFORE ATTEMPTING TO PRE-HEAT AGAIN WITH METHYLATED SPIRITS.**

If the burner does not light properly after 2 or 3 attempts, check that the fuel is penetrating through the main jet (21) and that the cleaning

needle (22) is working correctly. If fuel is not seen to emerge from the main jet (21), please refer to section 10 - Check Points.

### **ALTERNATIVE METHOD OF PREHEATING:**

As an alternative to preheating with methylated spirits, we are suggesting the use of what can be best described as the "do-it-yourself" blow torch. This is a small blow torch fueled by a small can of gas fuel, obtainable from most hardware stores. The flame should be played over sides of brass casting of the burner for about 1.5 - 2 minutes before lighting the burner. If that time is too short you do not have to wait for the burner to cool but can simply close the burner and continue to preheat for a short period with the blow torch. This method also avoids the risk of a methylated spirits spillage at sea. The cost is less than methylated spirits and is now the method we use to light burners for testing.

- **Always ensure that the on-off safety valve (12) is opened before the burner is preheated. Failure to open the safety valve (12) could cause a fracture of the burner gallery (B4).**

## **8.2. ADJUSTING BURNER OUTPUT**

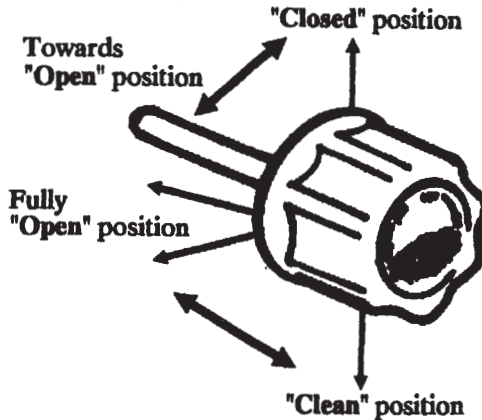
Turn the burner control (20) slowly anti-clockwise until maximum output is achieved. Run the burners at this setting for 5 minutes and then adjust the burner control (20) to give the heat output required.

The flame from the burner should always be coloured blue. White tips to the flame normally indicate that the burner control is set too low or that the main jet (21) requires cleaning.

## **8.3. USE OF THE CLEANING NEEDLE**

The main jet (21) is cleaned simply by opening the burner control (20) fully anti-clockwise to the "clean" position (see diagram overleaf). Underneath the main jet (21) is a cleaning needle (22). The bottom part of the cleaning needle (22) is a rack that is driven by spur gears on

the needle spindle (23). As the burner control (20) is turned fully anti-clockwise to the "clean" position, the cleaning needle (22) will rise through the main jet (21) and remove carbon deposits lodged in the jet orifice. When this happens the flame intensity will decrease but the flame should not extinguish. Do not force the burner control (20) against the stop at the "clean" position as damage may be caused to the spur gears on the control spindle (23). The burner control (20) may now be turned partly clockwise back to its normal "open" position.



## **8.4. EXTINGUISHING THE BURNER**

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To extinguish the burner, turn the burner control (20) fully clockwise until it comes to a stop ("closed" position). Do not force the burner control (20) beyond the "closed" position because damage to the needle spindle (23) seating may result and the burner will leak.

## **8.5. GENERAL RUNNING OF YOUR COOKER**

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### **INITIAL CHECKS**

It is advisable, having run the cooker for 2 to 3 hours to make a further check on the installation to ensure that all connections are leak-proof (see section 7.3).

### **NEW COOKERS**

During the settling-in period there may be, in some cases, the smell of the newness of the cooker burning off and a non-toxic vapour will disperse over a period of time.

### **NEW BURNERS**

The packing screw (26) will need periodic tightening as described at the end of sections 11.2 and 11.4. Note: use end 16a of spanner 16.

### **USE OF THE CAST IRON HOB TOP**

Use the top burners without the top plate lids (39a) for fast boiling and with the top plate lids (39a) for simmering and reflecting heat downwards into the oven or grill area below. If the top plate lids (39a) are in place, it is advisable to reduce the burners from full heat to help prevent the enamel finish on the hob top (39) from discolouring or cracking.

### **DROP FRONT FIDDLE RAIL**

The drop front fiddle rail (38a or 38b) has been designed to allow larger pots and frying pans with low handles to be used. Simply undo the wing nut (37) and drop the fiddle rail bar (38d) to the required height and fix in position by re-tightening the wing nut (37).

## **GIMBALLING OF COOKERS**

The centre of gravity of your cooker will vary depending on the distribution of weight of the cooking utensils used. Ideally the centre of gravity should be kept as low as possible below the gimbal point. For example, with the 029 cooker if the user places large cooking utensils on the hob top and nothing to counterbalance this weight in the oven the centre of gravity will be raised and reduce stability. So, the choice is to, either, leave a heavy pot the oven or, if the oven is little used, to put permanent ballast or weighting at the bottom of the oven.

## **FUEL/AIR PRESSURE**

It will be necessary to periodically repressurise the fuel tank (5) whilst the burners are running. This should be done when the flame intensity decreases - it should not be allowed to drop below 18-20 psi.. It is normal to leave the fuel tank (5) pressurised whilst the cooker is in daily use. If left unattended for any lengthy period the pressure in the fuel tank (5) should be released by un-screwing the tank cap (1a).

On the 030 model the oven burner has a variable heat output and the use of an oven thermometer is recommended. To get the longest working time without repressurising, the fuel tank should contain approximately 5 litres (1 gallon) of fuel and be pressurised to 1.6 bar (25lb psi ). Depending on the number of burners used at any one time, this volume of fuel will give the maximum burning time available from this particular system. If more fuel is contained in the tank there is, of course, less air space and operating time without repressurising is reduced. With less fuel and increased air space a longer working time will be achieved. As a guide to fuel consumption, one burner in the fully "open" position uses approximately one third of a pint (180 mls) of paraffin (kerosene) per hour. So, a gallon of fuel should run 3 burners at full heat for about 8 hours.

## **IMPORTANT - UNATTENDED COOKERS**

If the cooker is not to be used it is recommended that the safety control valve (12) is turned off to reduce the pressure and eliminate the possibility of leaks. It is also recommended that if left unattended for long periods the fuel tank (5) should be depressurised releasing the air from the tank by unscrewing the tank cap (1a).

# 9. SAFETY PROCEDURES

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## **IMPORTANT:**

Simple burners of the "open flame" type, used in this Taylor's model, have been in safe use for many years. Their very simplicity, however, dictates that they must not be confused with the more sophisticated and expensive electric systems now available.

- **THEY SHOULD NEVER BE LEFT TO RUN COMPLETELY UNATTENDED.**

## **EMERGENCY FIRE PROCEDURE**

Attempt to turn the burner(s) off, release the air pressure in the fuel tank (5) by first, closing the safety control valve (12) and then unscrewing the tank cap (1a). In the event of paraffin (kerosene) flowing over the burner and the likelihood of a fire, control the flames by smothering them with a fire blanket or use an approved fire extinguisher which should be installed and readily available as part of the boats standard safety equipment.

- **NOTE: DO NOT** attempt to control the fire by throwing water over the appliance, only smother the flames to extinguish the fire. Also remember that when paraffin (kerosene) is allowed to burn with a yellow flame, it creates considerable smoke and may exaggerate size or the seriousness of the fault which could in turn cause action to be taken that may not be necessary.

# 10. CHECK POINTS

PROBLEM	POSSIBLE CAUSE	SOLUTION
<p>Burner flares up when first lit after pre heat</p>	<p>Insufficient preheating (see section 8.1)</p>	<p>To burn paraffin (kerosene) cleanly, it is necessary to vapourise it with high initial heat. Until you get to know how much methylated spirits is required for adequate preheating it is better to use too much than too little.</p> <p>It is important to let the burner cool if you need to go through the preheat process again. NEVER pour methylated spirits over a hot burner. We suggest that you seriously consider using a small gas blow torch for preheating, as described in section 8.1)</p>
<p>Burner flame slowly reduces</p>	<p>Tank (5) too full or balance of fuel to air too great</p>	<p>If the tank is filled more than about two thirds full, the pressure will drop quite quickly due to lack of air space. During continued use, fuel in the tank will decrease and pressure will drop. The solution is to repressurise to 20-22 psi.</p>
	<p>Carbon build up in burner</p>	<p>Carbon will build in the burner and this can occur quite quickly if inferior - quality fuel is used OR A LOW BURNER SETTING IS USED. Always use the best fuel available. It is a good idea to get into the habit of tapping the base of the burner, while alight, with the handle end of a knife. This will help dislodge carbon which you will see being burnt off in sparks. It is advisable to do this just before shutting the burner off to minimise the risk of carbon solidifying. Carbon can also be removed by removing the burner and soaking in ammonia (see section 11.2). If the burner is totally blocked it should be replaced.</p>
	<p>Balancing jet blocked</p>	<p>Remove the burner and clean balancing jet (30). Suspect dirty fuel ensure the in-line fuel filter (13) is fitted.</p>



<b>PROBLEM</b>	<b>POSSIBLE CAUSE</b>	<b>SOLUTION</b>
<b>Burner smells</b>	<b>Paraffin spillage in the preheating cup (32).</b>	<b>Clean outside of burner and check for leaks.</b>
	<b>Fuel leaks at the gland packing screw (26)</b>	<b>You may find that, due to expansion, when the burner is hot a leak will occur at the gland packing screw (26). This leak will show a vapour or maybe a small flame. This happens particularly when the burner is new as the graphite packing washer (25) not settled in OR conversely when it is worn. Tighten the 26 just enough to stop it (use end 16a of spanner 16). If necessary replace the packing washers (24 &amp; 25).</b>
<b>Irregular burning (burner burns blue one side and yellow the other)</b>	<b>Carbon build-up on the main jet (21). (see section 8.3)</b>	<b>Turn the burner control knob (20) fully anti-clockwise to the "clean" position to operate the cleaning needle (22). Repeat a few times. If this keeps happening, suspect dirty fuel. Strain the fuel and ensure an in-line fuel filter (13) is fitted.</b>
	<b>Burner caps, outer (35) and/or inner (34) not seated correctly</b>	<b>Check that both caps are sitting correctly square with the burner top and not tilted. Clean any carbon deposit on the caps that may have built up.</b>
	<b>Main jet (21) worn or faulty</b>	<b>Replace main jet (21). (see section 11.3)</b>
<b>Burner flame too small</b>	<b>Tank (5) pressure too low</b>	<b>Normal working tank pressure is 20-22 psi but pressure should not be allowed to drop below 12-15 psi.</b>
	<b>Faulty pressure gauge (2)</b>	<b>If the flame is consistently too low, test the pressure gauge (2) against a tyre gauge as it may be overreading thus making the tank pressure too low.</b>
	<b>Carbon build-up in burner</b>	<b>See earlier note in "Burner flame slowly reduces" section.</b>



PROBLEM	POSSIBLE CAUSE	SOLUTION
Burner ruptures	Excessive pressure in fuel line	<p>Replace burner.</p> <p>Note: with a safety control valve fitted in the fuel line, so that the appliance can be separated from its fuel supply, it is very important that this valve is OPEN before preheating starts. If it is left closed the fuel/air between the safety control valve and the burner control valve will expand, possibly to the point of rupturing the burner gallery. The burner will have to be replaced.</p>
	Burner strained through incorrect removal	<p>Replace burner.</p> <p>Note: to remove the burner from a heater, it is necessary to use 2 spanners, one on the connecting nut (29) – having undone the the lock nut (31) – and the other on the burner base B2 (use end 16b of spanner 16). Tempting though it may be, NEVER hold the burner around the body B with your hands while using a spanner on 29 or 31. <b>WORSE STILL – NEVER PASS A SCREW-DRIVER OR SIMILAR TOOL BETWEEN THE FEED PIPES B4 AS THIS WILL FRACTURE THE BURNER BODY AND CAUSE LEAKAGE.</b></p>
No fuel to burner	Not enough fuel/pressure in the tank (5).	Check the fuel & pressure levels, particularly if the boat is occasionally heeling away from the tank exit point (4b).
	Cleaning needle (22) blocking main jet (21)	Check that when you turn the burner control knob (20) anti-clockwise to the "clean" position that the needle can be seen working. If it cannot be seen, remove the main jet and inspect. Replace the cleaning needle (22) if necessary (see section 11.3).
	Balancing jet (30) blocked <b>OLDER TYPE</b>	Remove burner and check the balancing jet (30) – use jet key 17b. <b>MODELS BEFORE JULY 1998</b>
	Dirt in fuel	Check tank and fuel supply line for blockage. Ensure you have fitted an in-line fuel filter (13) in the fuel line (11) from the tank (5).

PROBLEM	POSSIBLE CAUSE	SOLUTION
<p><b>Burner flame surges</b></p>	<p>Balancing jet (30) not in place or worn oversize</p> <p>This applies to older type models before July 1998</p>	<p>Check that the balancing jet (30) is in place, as without it the burner flame can surge to the point at which it goes out. If the jet is missing, replace. If the jet is worn from repeated cleaning, replace. In an appliance using a single burner, such as a heater, it is sometimes possible to substitute the balancing jet (30) by throttling the fuel flow with the safety control valve (12), keeping it just cracked open. This will not work where more than one burner is involved. The flame surges if the burner is more than about 2' from the tank (5). The burner creates more pressure than it can use and vapourised fuel forces liquid fuel back against tank pressure. As the burner demands more fuel, liquid surges back to the burner making the flame surge. Hence the need to make some restriction in the fuel line close to the burner ie. the balancing jet (30).</p> <p>If you have 1/4" fuel pipe and no lock nut (31) on the bottom of the burner you will have an old specification burner and will need to replace the pipework to put in a new burner with the balancing jet (contact Blakes Lavac Taylors Ltd. for details)</p>

# **11. MAINTAINING THE BURNER**

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The amount of maintenance that your cooker requires will depend on the quality of the fuel used. In some parts of the world where the fuel is not of a high quality, the life of a burner may be reduced and it is recommended that an in-line fuel filter (13) is used. In the event of a burner not operating properly or requiring a simple overhaul, it is recommended that you purchase an on-board spares kit and possibly an additional complete burner or two (see sections 4 & 5) to ensure that your cooker is kept in operation and you are able to repair the faulty burner at your leisure.

## **11.1. REMOVING THE BURNER**

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To remove and overhaul a burner is a simple procedure and should not take long.

### **TOP BURNERS (HOB TOP)**

To remove a top burner from its support (41) on the cooker, take off the cast iron top plates (39a) using the plate lifter (19). Next, remove the cast iron hob top (39) complete with fiddle rail (38a or 38b) by removing the two retaining screws (37) on either side.

The top burners are now exposed.

Ensure the system is de-pressurised by unscrewing (anti-clockwise) the tank cap (1a). Remove the spring clip (27) to allow removal of the control knob (20). Hold the burner body with spanner 16 by locating end 16b on the hex part of the burner body B2. First, undo lock nut (31). Second, unscrew the connecting nut (29), once this is completely unscrewed the burner is free to be removed.

### **OVEN BURNER - 030 MODEL**

The control knob (20) will also need removing by pulling out the spring clip (27). Better access is needed to undo the lock nut (31) and connecting nut (29). For this remove the control knob support (60a) by removing the screw. Then hold burner body B2 with spanner 16 (use end 16b) and undo nuts 31 and 29 as described on the previous page to remove the burner from its bracket (60b).

## **11.2. DISMANTLING AND CLEANING**

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Remove the outer burner cap (35).

Use the main jet key (17a) to remove the main jet (21). It is advisable to put grease in the socket of the key (17a) so that the main jet (21) sticks in and can be removed and replaced more easily through the aperture B1.

Turn the control knob (20) fully anti-clockwise to the "clean" position (see section 8.3) thus raising the cleaning needle (22). Remove the cleaning needle (22) using a pair of tweezers or fine pliers.

With the control knob (20) still turned fully anti-clockwise, unscrew (you can use end 16a of the burner spanner 16) the gland packing screw (26). When 26 is fully unscrewed continue to unscrew the control knob (20) anti-clockwise, this action unscrews the cleaning needle spindle (23) from the burner body (B). You should then be able to withdraw the complete assembly. There may be some resistance to the removal of the spindle (23) due to the packing washer (25) having seated in; but having ensured that 23 is fully unscrewed the complete assembly may be withdrawn.

For final dismantling remove the spring clip (27) and the needle spindle (23) will pull out and the remaining components (24, 25 & 26) come apart. These can be inspected, cleaned and where necessary replaced. The burner body B should then be cleaned thoroughly by brushing, where possible, to remove the carbon deposits. Soaking overnight in a solution of household ammonia will also help.

**Reassemble in reverse order:**

- Insert and screw in the needle spindle (23).

- Put the packing washers over the spindle, the brass one (24) first and then the graphite one (25), using grease to assist bedding them in when tightening up.
- Replace the packing screw (26) and tighten. DO NOT OVER TIGHTEN.
- Replace the control knob (20) with the spring clip (27).

Replace and test the cleaning needle (22) and main jet (21) as described in the next section 11.3.

- NOTE: When the burner is used after servicing you may find a small flame will appear from the packing screw (26) area. If this happens, tighten the packing screw (26) just enough to extinguish the flame. This procedure may have to be repeated once or twice until the packing washers (24 & 25) are bedded in.

PLEASE DO NOT be tempted to overtighten the packing screw (26), but just tighten enough to extinguish the flame each time (use end 16a of the burner spanner 16).

## **11.3. CHANGING THE CLEANING NEEDLE**

Remove the outer top cap of the burner (35), main jet (21) and cleaning needle (22) as detailed at the beginning of section 11.2 above. With the cleaning needle removed there will be no clear stops when turning the control knob anti-clockwise. So, first, turn the control knob (20) fully clockwise to the "closed" position (see section 8.3). Then turn the control knob (20) 180° anti-clockwise (this is the "clean" position). To insert the new cleaning needle (22). First, insert the needle end of the new cleaning needle (22) into the end of a matchstick, being careful not to bend the needle (approximately one third of the needle needs to go into the matchstick end). You will notice that the bottom part of the cleaning needle (22) resembles a rack. Using the matchstick to hold the new cleaning needle (22), relocate this rack in the aperture B1 - the serrated edge of the rack should face to your left as you face the burner.

Note: the burner should be oriented with its control knob (20) facing you.

Lower the rack of the new cleaning needle (22) into the aperture B1, take care to turn the control knob slightly backwards and forwards until the rack is taken up by the needle spindle (23). Turn the control knob (20) fully clockwise to the "close" position. This will lower the new cleaning needle (22) into the aperture B1. You are now free to remove the matchstick.

### **CHECK 1:**

First ensure the control knob (20) is full turned clockwise to the "close" position. Re-pressurise the tank (5) and/or TURN ON the safety valve (12) to allow paraffin (kerosene) to reach the burner under pressure. No fuel should leak through past the new cleaning needle (22).

**IF THE FUEL LEAKS PAST THE CLEANING NEEDLE 22 then it will be due to the rack of the cleaning needle (22) not having been located at the correct position on the spur of the needle spindle (23), thus preventing the needle spindle (23) fully closing in its seating in the burner body (B). Repeat the process described in this section to locate the rack of the new cleaning needle (22) correctly.**

**IF FUEL DOES NOT LEAK PAST THE CLEANING NEEDLE (22), replace the main jet (21) and firmly tighten this with the main jet key (17a).**

### **CHECK 2:**

With the fuel supply turned off at the safety valve (12), turn the control knob (20) fully anti-clockwise to the "clean" position. YOU SHOULD SEE the cleaning needle (22) project through the main jet (21). **IF THE CLEANING NEEDLE (22) DOES NOT PROJECT THROUGH, OR CATCHES AND BREAKS ON, THE NIPPLE JET (21) THEN REPEAT THE PROCESS DESCRIBED IN THIS SECTION. REPLACE BOTH THE CLEANING NEEDLE (22) AND THE NEEDLE JET (21) AS THESE WILL BE DAMAGED.**

## 11.4. REPLACING THE BURNER

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Place a new fibre washer (33) over the threaded part of the burner body (B3). With the fibre washer (33) in position push the threaded part (B3) of the burner body first through the pre-heat cup (32) and then through the locating hole in the burner support (fixed to 18). Note: the objective of this operation is to screw the burner connecting nut (29) over B3, sealing the burner to the fuel pipe (29b) as well as fixing the burner to the burner support. To be successful in this operation start with the lock-nut (31) screwed halfway down the outside thread portion of the connecting nut (29).

Place a NEW jointing washer (28) over the nipple of the fuel line (29a). **IT IS ADVISABLE TO CHECK BEFORE DOING THIS THAT THE BALANCE JET (30) IS FULLY SECURED HOME IN THE NIPPLE (29a) - USE THE BALANCE JET KEY (17b).**  
**OLDER TYPE MODELS BEFORE JULY 1998**

With your fingers - to prevent the possibility of cross-threading - screw the connecting nut (29) onto the threaded part (B3) of the burner body. Before tightening 29 onto B3, ensure that the burner is correctly oriented with the control knob (20) in the correct position. To hold the burner body in the correct position locate the burner spanner (16) (use end 16b) on the hexagonal part (B2) of the burner body.

- When removing or replacing a burner, please avoid inserting a screwdriver or similar tool between the upright pillars (B4) of the burner body (B) as a means of loosening or tightening the burner into position. The force exerted in doing this is liable to weaken the brazing where the pillars (B4) are joined to the upper gallery of the burner body (B) **AND CAUSE LEAKAGE WHEN OPERATING WITH FUEL UNDER PRESSURE.**

Holding B2 with 16b tighten the connecting nut (29) with a spanner (7/8") - **DO NOT OVERTIGHTEN AS THIS WILL CUT THROUGH THE JOINTING WASHER (28) AND CAUSE LEAKAGE.**

Now tighten the lock-nut (31) up against the pre-heat cup (32) to seal the fibre washer (33) against the burner body (B). This will prevent leakage of methylated spirits when pre-heating the burner.

- **NOTE:** When the burner is used after servicing you may find a small flame will appear from the packing screw (26) area. If this happens, tighten the packing screw (26) just enough to extinguish the flame. This procedure may have to be repeated once or twice until the packing washer (25) is properly bedded in.

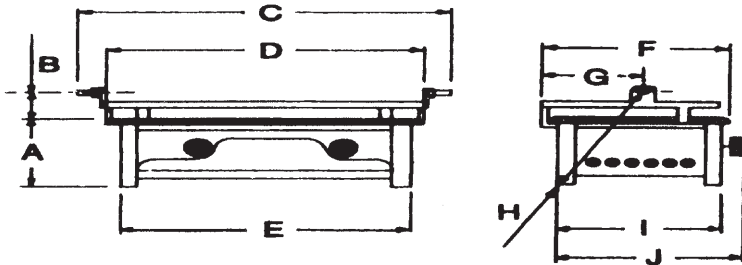
**PLEASE DO NOT** be tempted to overtighten the packing screw (26), but just tighten enough to extinguish the flame each time (use end 16a of the burner spanner 16).



# 12. DIMENSIONS AND SPECIFICATIONS

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## TAYLOR'S PARAFFIN (kerosene) 028 COOKER



### Dimensions

A - 6<sup>1</sup>/<sub>2</sub>" (170mm)

B - 2<sup>3</sup>/<sub>4</sub>" (70mm)

C - 21<sup>1</sup>/<sub>4</sub>" (537mm)

D - 18<sup>1</sup>/<sub>2</sub>" (470mm)

E - 17<sup>1</sup>/<sub>2</sub>" (443mm)

F - 10<sup>3</sup>/<sub>4</sub>" (273mm)

G - 5<sup>3</sup>/<sub>4</sub>" (144mm)

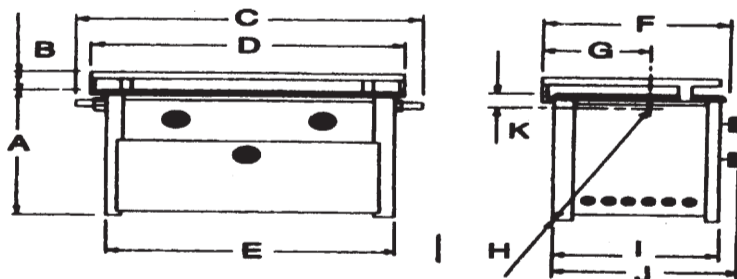
H - 11" (280mm)

I - 10" (255mm)

J - 11<sup>3</sup>/<sub>4</sub>" (285mm)

- \***Pre-Heating Fuel** –  
Methylated Spirits (alcohol) or  
gas torch.
- \***Fuel** – Paraffin (kerosene)
- \***Fuel Consumption** –  
At full heat: 0.2 litres per  
burner per hour
- \***Burner Heat Output**  
Variable
- \***Weight** – 12kg (Cooker  
minus tank and accessories)

# TAYLOR'S PARAFFIN (kerosene) 029 COOKER



## Dimensions

A - 12<sup>1</sup>/<sub>2</sub>" (317mm)

B - 1<sup>3</sup>/<sub>4</sub>" (43mm)

C - 20<sup>1</sup>/<sub>2</sub>" (521mm)

D - 18<sup>1</sup>/<sub>2</sub>" (470mm)

E - 17<sup>1</sup>/<sub>2</sub>" (443mm)

F - 10<sup>3</sup>/<sub>4</sub>" (273mm)

G - 5<sup>1</sup>/<sub>2</sub>" (140mm)

H - 11<sup>1</sup>/<sub>2</sub>" (290mm)

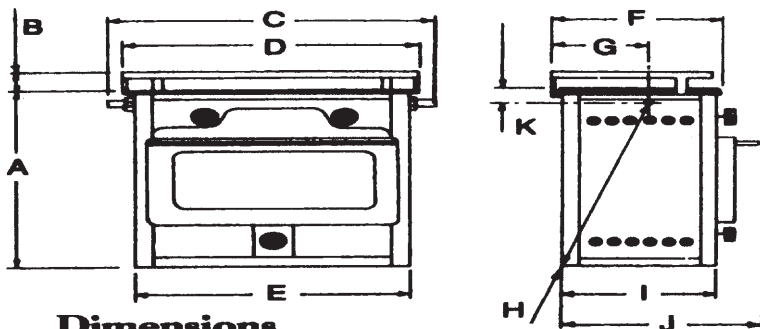
I - 10" (255mm)

J - 11<sup>1</sup>/<sub>4</sub>" (285mm)

K - 2" (51mm)

- \* **Pre-Heating Fuel** —  
Methylated Spirits (alcohol) or  
gas torch.
- \* **Fuel** — Paraffin (kerosene)
- \* **Fuel Consumption** —  
At full heat: 0.2 litres per  
burner per hour
- \* **Burner Heat Output** —  
Variable
- \* **Oven Temperature** —  
maintained in excess of  
300°F (149°C)
- \* **Weight** — 14kg (Cooker  
minus tank and accessories)

# TAYLOR'S PARAFFIN (kerosene) 030 COOKER



## Dimensions

A - 18" (458mm)

B - 1<sup>3</sup>/<sub>4</sub>" (43mm)

C - 20<sup>1</sup>/<sub>4</sub>" (514mm)

D - 18<sup>1</sup>/<sub>2</sub>" (470mm)

E - 17<sup>1</sup>/<sub>2</sub>" (443mm)

F - 10<sup>3</sup>/<sub>4</sub>" (273mm)

G - 6" (154mm)

H - 17<sup>3</sup>/<sub>4</sub>" (446mm)

I - 10" (255mm)

J - 13" (329mm)

K - 1<sup>1</sup>/<sub>2</sub>" (38mm)

## \*Pre-Heating Fuel—

Methylated Spirits (alcohol) or  
gas torch.

## \*Fuel — Paraffin (kerosene)

## \*Fuel Consumption —

At full heat: 0.2 litres per  
burner per hour

## \*Burner Heat Output—

Variable

## \*Oven Temperature —

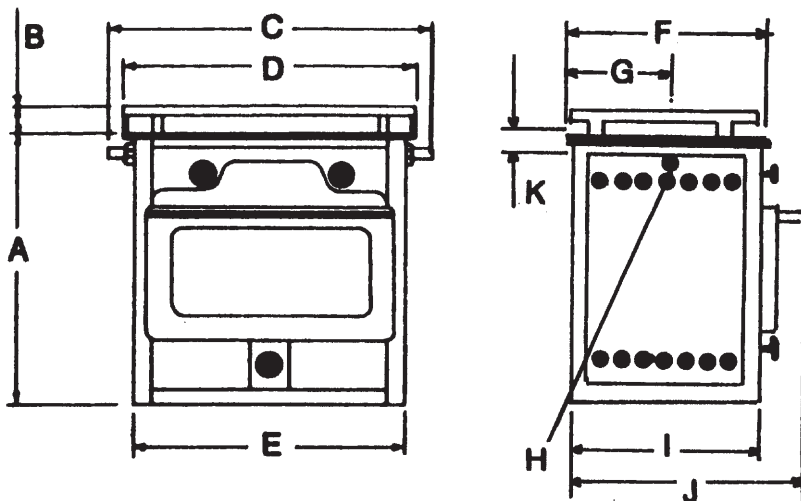
maintained in excess of  
500°F (260°C)

## \*Weight — 22kg (Cooker

minus tank and accessories)

# TAYLOR'S PARAFFIN (kerosene) 030L COOKER

## DIMENSIONS



A - 18 $\frac{1}{4}$ " (464mm)

B - 1 $\frac{3}{4}$ " (45mm)

C - 21" (534mm)

D - 18 $\frac{1}{2}$ " (470mm)

E - 17 $\frac{1}{2}$ " (445mm)

F - 16" (407mm)

G - 8 $\frac{1}{2}$ " (216mm)

H - 18 $\frac{1}{2}$ " (470mm)

I - 15" (381mm)

J - 18 $\frac{1}{4}$ " (464mm)

K - 1 $\frac{1}{2}$ " (39mm)

**Oven Dimensions** (cooking area)  
14" (360mm) Wide  $\times$  15" (380mm) Deep  $\times$  7" (180mm) High

**Weight:** 28kg  
(cooker minus tank and accessories)

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### ***The Lavac Toilets***

#### **ZENITH & POPULAR**

- T/A Model - top action hand pump
- U/D Model - behind bulkhead HP
- 12V Model - electric pump
- 24V Model - electric pump

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### ***The Blakes Toilets***

- The BABY
- The MINOR
- The VICTORY

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### ***Taylor's Gas (L.P.G.) Cookers***

- The 041 Model
- The 043 Model

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### ***Taylor's Paraffin (kerosene) Cookers***

- The 028 Model
- The 029 Model
- The 030 Model
- The 030L Model

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### ***Taylor's Cabin Heaters***

- The 079K Model - kerosene
- The 079D Model - diesel
- The 089D Model - diesel

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# **BLAKES** LAVAC TAYLORS