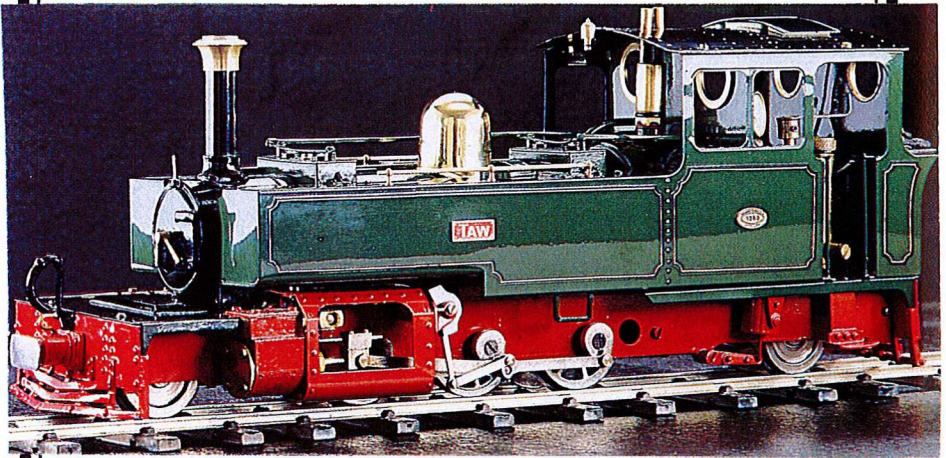


ROUNDHOUSE



Owners Handbook
For the Lynton and Barnstaple Locomotive.

Operating Instructions

Read these instructions carefully before operating the locomotive

The following items are required for running this engine and are not included with the model.

Fuel. Butane gas. see 'Filling the gas tank' page 6

Water. see 'Filling the boiler' page 5

Lubricating oil. see 'Lubrication' page 5

SAFETY PRECAUTIONS

This is a working model locomotive using steam under pressure and highly flammable fuel. Provided it is operated with reasonable care and attention, no problems should arise. Whilst the locomotive is in use, hot gasses are exhausted up the chimney and excess steam frequently blows off through the safety valve even when stationary, so operator and spectators should not bend over the model. As you will appreciate, this is not a toy and is therefore unsuitable for young unsupervised children.

Follow manufacturers recommendations regarding the safe storage of Butane gas canisters.

Always have to hand either a fire extinguisher or wet cloth when operating the model.

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TOOL KIT

The following items are included with your locomotive.

One 60ml bottle of thick grade steam oil for use in the cylinder lubricator.

One 60ml syringe with plastic tube for filling the boiler with water.

One set of spare washers and 'O' rings.

RUNNING IN

All locomotives are test run before leaving the factory, but they will require a certain amount of running in, when new, to overcome initial tightness. It is recommended that the model is run light for the first few hours of operation.

ACCESS TO THE CONTROLS

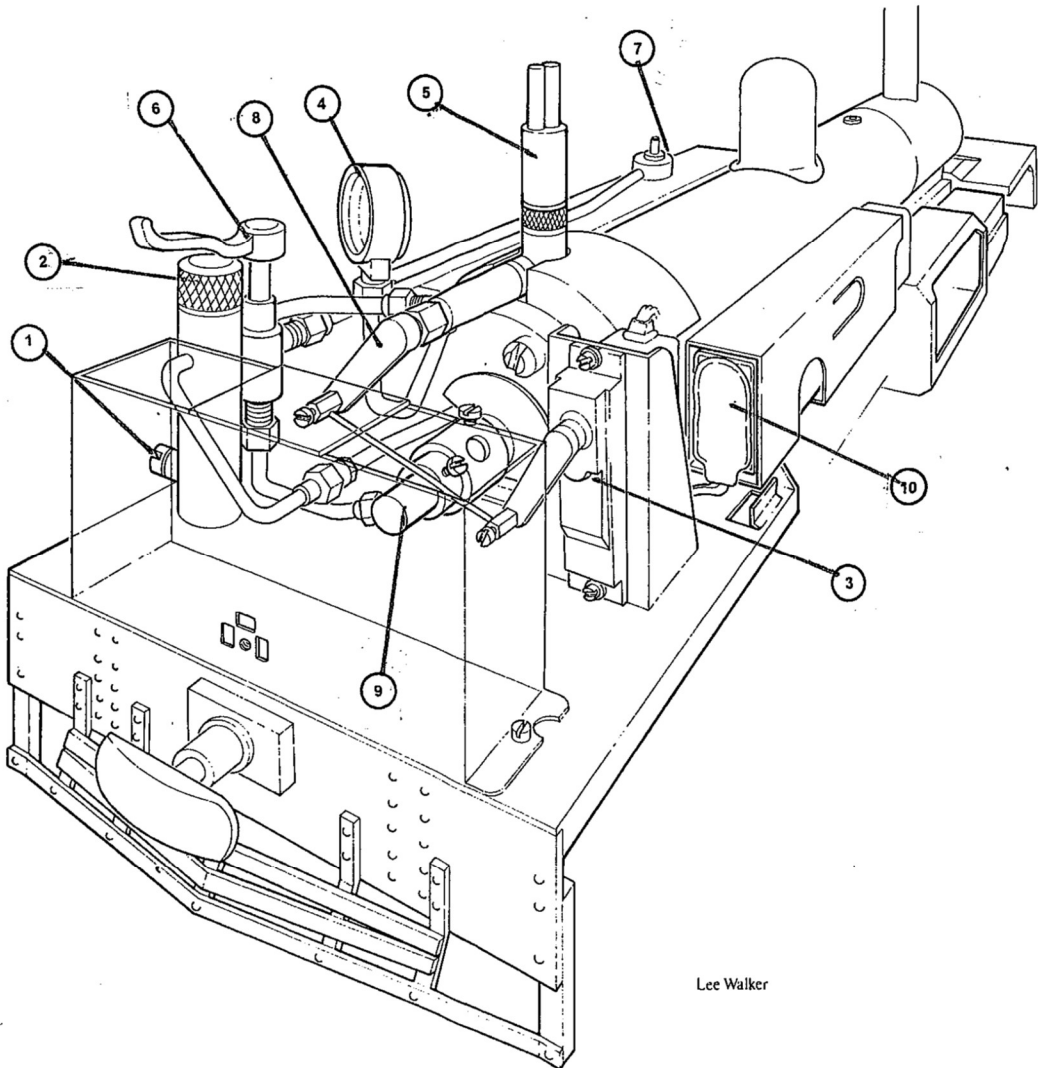
For normal operation, all controls are accessible without the need to remove any part of the locomotive, however, for ease of servicing and to give access to the batteries on a radio controlled model, the complete body is removable.

To remove the body, first locate the two fixing screws. The first is in the bottom centre of the cab back, above the rear coupling. The second is in the front sand box on the top of the boiler. When these are removed the body can be lifted straight up to remove. It is a close fit over the batteries and gas tank. The batteries are housed in a holder on the right hand side of the chassis. Disconnect the clip on the end of the battery holder which can be slid forward out of its holder. Refitting is in the reverse order.

IDENTIFICATION OF PARTS OF THE LOCOMOTIVE

Radio controlled version illustrated

1. Lubricator drain screw.
2. Lubricator filler cap.
3. Steam regulator servo and linkage -Note: this is not fitted on a manual version.
4. Pressure gauge.
5. Safety valve (under cover).
6. Gas regulator.
7. Gas filler valve.
8. Steam regulator.
9. Gas burner.
10. Batteries.



Lee Walker

PREPARING FOR OPERATION

The locomotive must be serviced before being operated. It is important to perform all the following operations.

A damp cloth and/or suitable fire extinguisher should be at hand to smother any fire in case of problems.

1) LUBRICATION

Regular lubrication of all working parts is important and should be carried out before each operating session. There are two types of lubrication required: The external moving linkages and bearings are lubricated with a medium oil such as motor engine oil and the internal steam mechanisms such as cylinders, pistons and valves are lubricated with a special steam oil that is mixed with the steam.

The steam oil is mixed with the steam in the displacement lubricator which is housed in the left hand cab doorway. Remove the knurled cap from the top and the drain screw from the bottom. Any water in the lubricator will run out through the drain tube. Replace the drain screw and refill with the steam oil supplied, then replace the cap.

Take time filling the lubricator, especially when cold as the thick oil takes time to run down and may trap an air bubble.

Both cap and drain screw are fitted with 'O' rings and need only be closed finger tight.

NOTE: Only special steam oil as supplied should be used in the lubricator and under no circumstances should ordinary oil be substituted, or damage may result.

2) FILLING THE BOILER

A syringe and plastic pipe are supplied for filling the boiler.

The boiler is filled with water through a filler plug which is under the brass dome on the boiler. The dome is simply lifted off for access, and the large knurled plug unscrewed by hand. Using the syringe supplied, fill the boiler completely with water.

There has to be a space above the water to allow steam to be raised. Insert the end of the plastic pipe into the boiler and withdraw 30ml of water with the syringe. Replace the safety valve finger tight.

3) FILLING THE GAS TANK

The filling of the gas tank should only be carried out in a well ventilated area, where there are no naked lights or other lighted locomotives close by. Ordinary Butane gas is used (as used in gas cigarette lighters), though for economy, the larger canisters as used for blow lamps etc. are better. The larger canisters require a special adapter to couple up to the filler valve on the locomotive and some brands are supplied with a small plastic adapter which does this job. If however one is not available, a special brass adapter is obtainable from your local garden railway supplier or direct from ROUNDHOUSE.

Mixed gasses (60-40 Butane/Propane) are also available, but these should under no circumstances be used.

USE BUTANE ONLY.

Before attempting to fill the gas tank, make sure that the gas control valve, in the left cab opening, is closed by turning it clockwise.

The filler valve for the gas tank is hidden under the dummy coal load on top of the left hand side tank. Invert the gas canister and place its nozzle over the gas filler valve. Support the tank from underneath and press the canister down. The gas will be heard hissing as it enters the tank and a small amount will escape around the valve. This is quite normal and is the tank venting as the liquid enters. After about 20 to 30 seconds, liquid gas will emerge from the valve showing that the tank is full. Remove the canister immediately.

3) LIGHTING THE BURNER

WARNING: Move the locomotive to another location before lighting. Butane is heavier than air and small pockets of gas can collect around the locomotive during filling.

To light the burner, hold a lighted match or cigarette lighter over the top of the chimney and slowly open the gas regulator by turning it anticlockwise the gas should ignite almost immediately with a pop as the flame travels down the chimney and into the boiler tube. The burner should be audible but not too loud. For the first couple of minutes keep the burner on low. This is important, as until it warms up, the flame will be a little unstable and turning it up too much could cause it to go out. Also, with a completely full tank, liquid gas could be drawn off instead

of vaporised gas, which can also extinguish the flame.

After a couple of minutes, the gas control valve can be opened more to speed up steam raising.

RUNNING THE LOCOMOTIVE

When full working pressure has been reached (about 40psi), the safety valve will start to blow off steam. Steam generation can be controlled by the gas valve in the cab. If the safety valve blows off frequently during running, then too much steam is being produced, which wastes water and gas. Turning down the burner will decrease the amount of steam made. Conversely, if steam pressure is not maintained during a run, then the burner should be turned up. The art of balancing steam generation to the operational requirement by the adjustment of the gas control valve will quickly be learned. The gas tank has a duration of about 25 minutes, though this will vary a little depending on gas valve setting.

The boiler should not be allowed to run dry, but as its duration is longer than that of the gas tank, this should not normally happen. Always remember to refill the boiler when the gas tank is filled.

DRIVING THE LOCOMOTIVE

First, select forward or reverse gear. This is achieved by moving the engine manually in the direction required for one revolution of the wheels, to set the valve gear. NB. it is not possible to operate the valve gear on this model by radio control. Having selected the direction, the steam regulator can now be opened to set the engine in motion. On manual controlled models this is the lever in the cab pointing over to the right. It is moved upwards to open. On radio controlled models it is operated by the left hand lever on the transmitter. To open the regulator, move this lever gently upwards.

The art of fine control will soon be learnt with a little practice.

STORAGE BETWEEN OPERATING SESSIONS

At the end of an operating session, it is good practice to clean the locomotive carefully with a clean soft cloth, and to oil all bright metal parts.

Don not leave fuel or water in the tank or boiler for long periods.

Ensure all controls are closed.

Ensure that radio control equipment is switched off and, if the engine is not to be used for some time, remove all batteries.

TROUBLE SHOOTING & MAINTENANCE

On a working model of this nature, it is important to keep all working parts well lubricated.

STEAM LEAKS

With constant heating up, cooling down and the stresses of hard work, screws etc. can work loose. These can be adjusted with a spanner if steam leaks develop. They should only be tightened just enough to stop the leak, as over tightening will affect the running of the model.

REGULATOR NOT SHUTTING

The steam regulator seat can, after a period of time become worn so that when the lever on the radio control is fully closed, the locomotive still moves. To overcome this, a trimmer is fitted to the transmitter. This is the small lever at the side of the main control lever and is set at the factory to the top of its slot. As wear take place in the regulator, it can slowly be moved down the slot to compensate. When it reaches the bottom it is time to reset it to the top and adjust the linkage between the servo and the regulator in the cab.

RADIO CONTROL

If the radio control gives problems, always check the batteries first and replace if in doubt. AA size batteries are used, four in the locomotive and eight in the transmitter. If problems occur whilst running the locomotive near other r/c engines, check that yours is on a different frequency.

To allow a number of locomotives to operate at the same time in close proximity, a range of crystals are available for different frequencies which can be purchased from any good model shop. Crystals operate in pairs, one in the transmitter and one in the receiver. They are clearly marked with the frequency and either TX or RX. When fitting, ensure that the one marked TX is fitted to the transmitter, and RX to the receiver. Two radio systems are currently in use, 40MHz FM and 27MHz AM. ROUNDHOUSE now only use 27MHz AM sets for USA and CANADA. Ensure that the replacement crystals of the correct type. The receiver is housed at the rear of the cab in the black rectangular box. AM sets are colour coded for frequency, and are supplied with a coloured flag. FM sets do not have a colour code, nor are they supplied with a flag. It is common practice with these sets to attach a marker to the aerial with the frequency or band number marked on in black. For further details of the r/c equipment, refer to the manufacturers literature supplied.

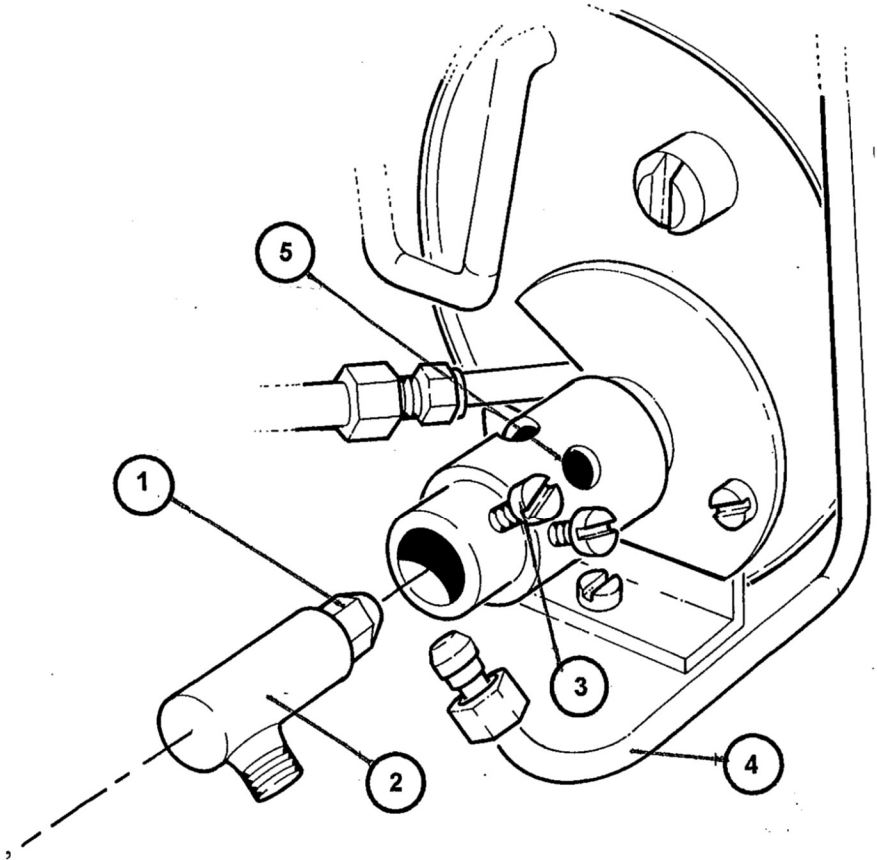
GAS SYSTEM

The gas system is set up at the factory. However, the tiny jet in these units can become blocked by small particles of dirt making the burner difficult to light, operate weakly or fail completely. If any of these occurs, clean out the jet as follows.

Disconnect the gas pipe from the jet using a 2 BA spanner. Slacken the screw retaining the jet block and slide it out to the rear. Remove the jet from the jet block using a 4BA spanner. Wash out the jet in fast evaporating thinners or similar. Blow through the jet from the front, or, if it is badly blocked, pass a fine length of fuse wire through it. Though small, if held up to the light, you can see through the hole to check that it is clear. Reassemble in the reverse order, putting a small amount of PTFE tape around the threads of the jet. Ensure all connections are tight. When repositioning the jet block in the burner, ensure that the front face of the jet is level with the centre of the large air holes in the body.

GAS BURNER

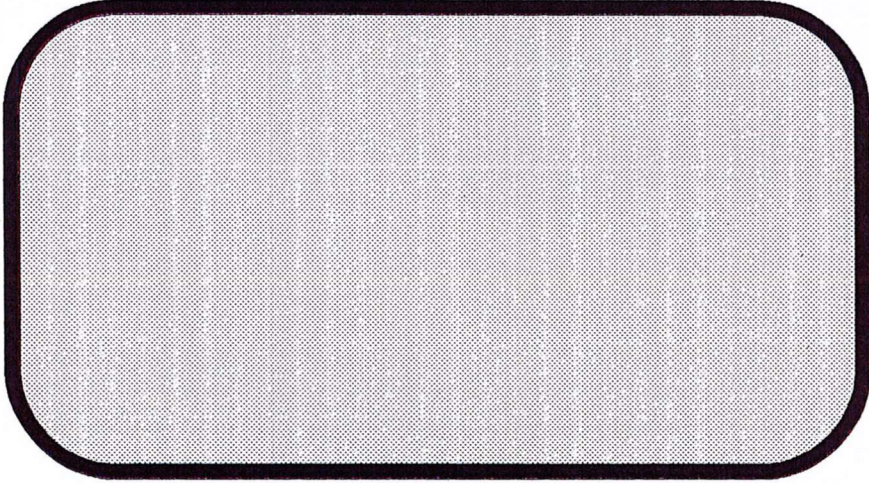
1. Gas jet.
2. Gas jet block.
3. Gas jet retaining screw.
4. Gas pipe.
5. Air holes.



SERVICE AND PARTS

If any problems arise with this model which are not covered in these operating instructions or, spare parts are required, owners should first contact their local dealer.

Your ROUNDHOUSE dealer is:



If your dealer is unable to help, you may contact the factory directly:

ROUNDHOUSE ENG. CO.
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Churchill Road
Wheatley
Doncaster
DN1 2TF
ENGLAND
Telephone 01302 328035
Fax 01302 761312