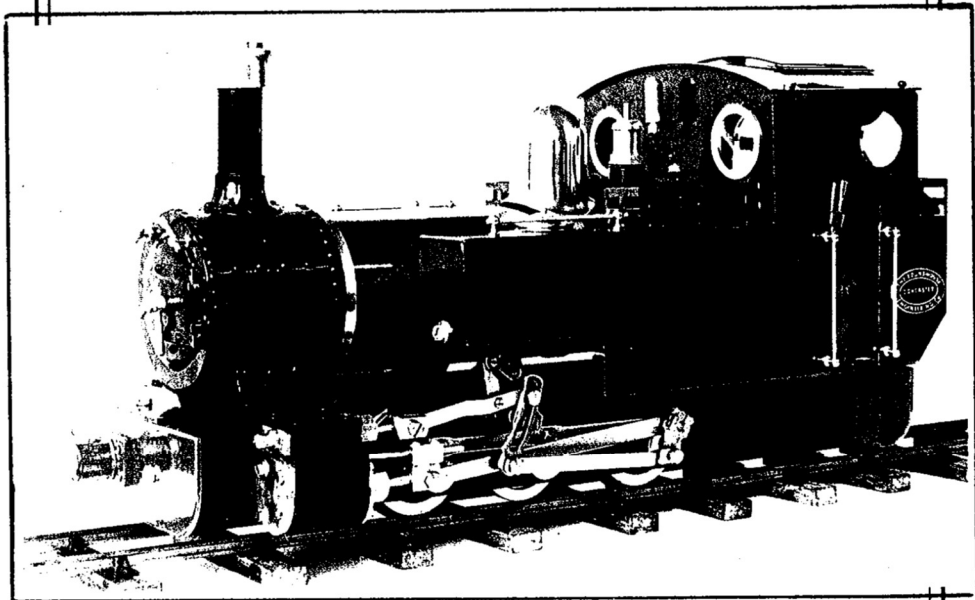


ROUNDHOUSE



Owners Handbook

For Dylan & Lady Anne Locomotives

Operating Instructions

IMPORTANT: These instructions cover all the following models.

Lady Anne, gas fired, Walschaerts valve-gear.

Lady Anne, meths fired, slip-eccentric valve-gear.

Dylan, gas fired, Walschaerts valve-gear.

Dylan, meths fired, slip-eccentric valve-gear.

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, either Methylated Spirit or Butane gas, see "Filling the Fuel Tank" page 7.

Water, see "Filling the Boiler" page 7.

Lubricating oil, see "Lubrication" page 6.

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. Do not operate the model in an enclosed space or in the vicinity of other flammable liquid or material.

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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TOOLKIT

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.

One back to back gauge and one hexagon wrench (Allen key) for setting wheel to gauge.

Meths fired locomotives also include

One 30ml syringe for filling meths tank

One pack (1 yard) of wick material

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.

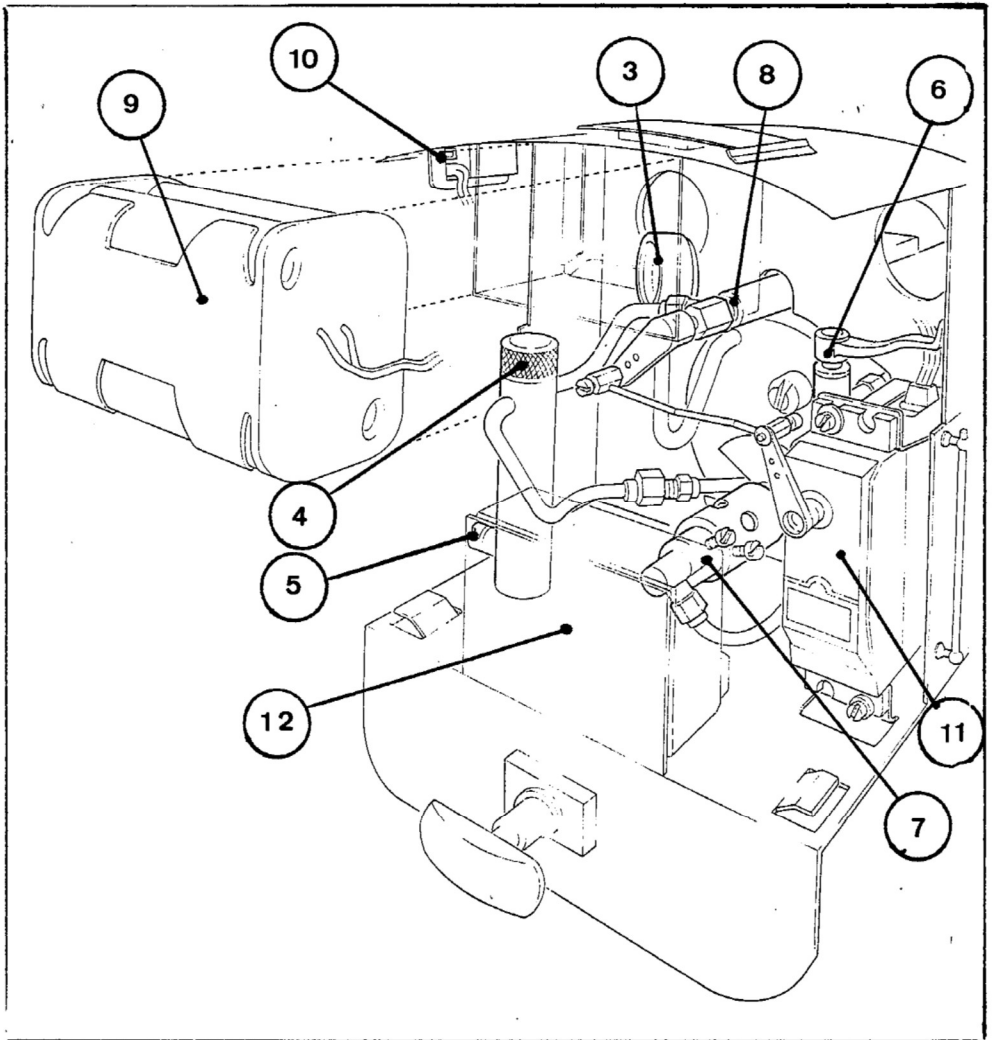
ACCESS TO THE CONTROLS

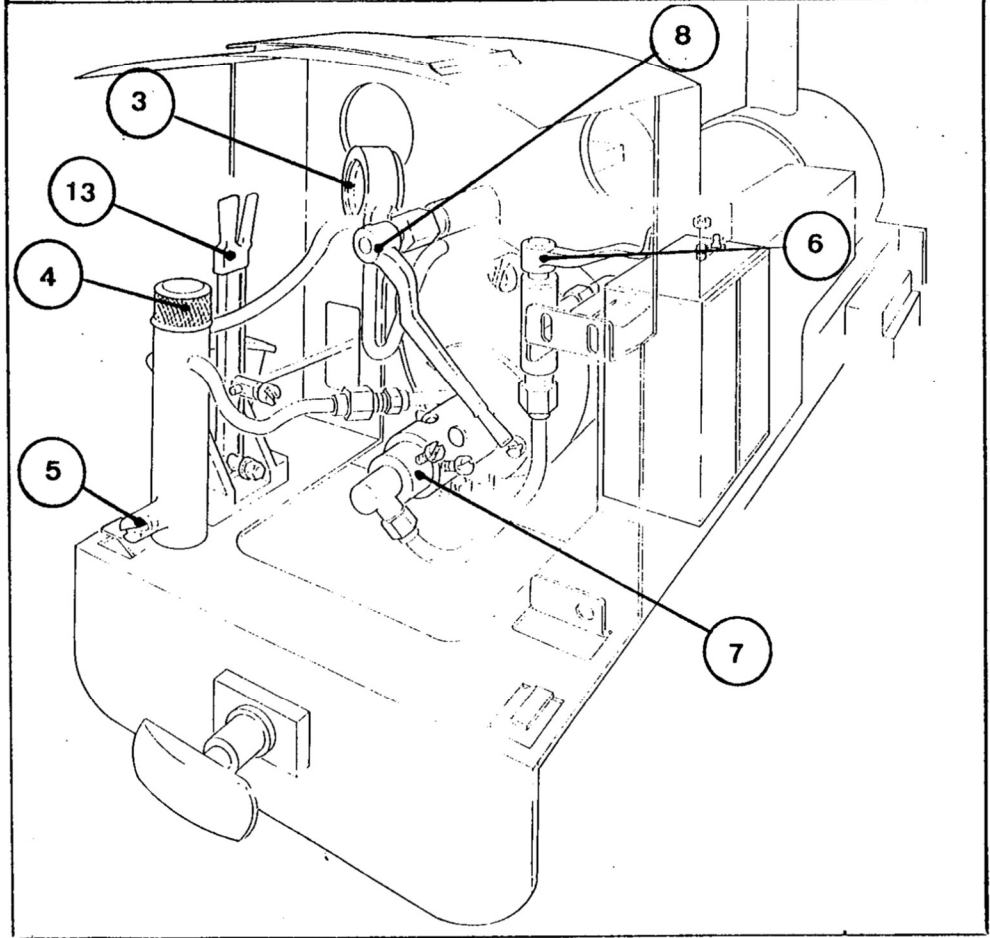
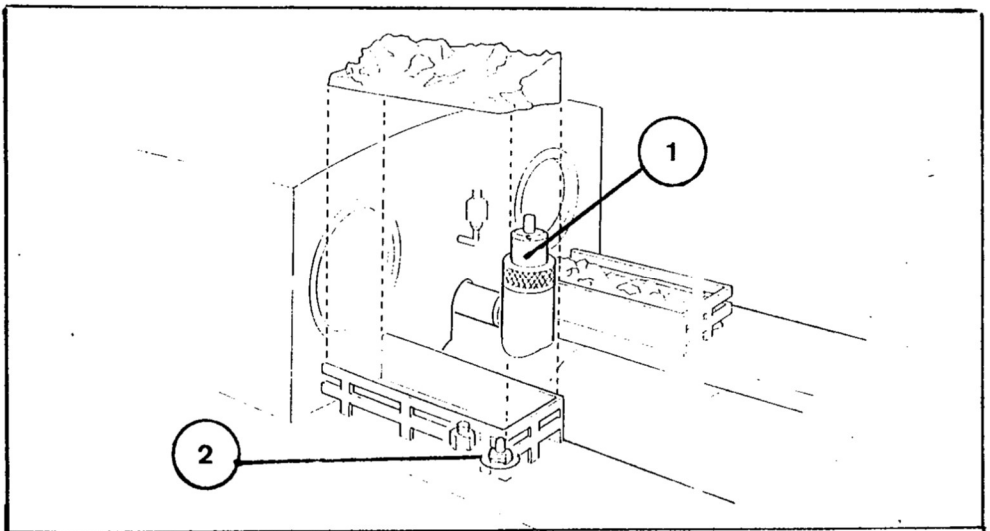
For normal operation, all controls are accessible without the need to remove any part of the locomotive, however, for ease of servicing and to give access to the batteries on a radio controlled model, the cab back is removable.

Spring the rear of the cab roof upwards a little so the small peg at each side just clears the lugs on the cab back. Slide the cab back backwards out of the tabs on the footplate. Re-fitting is in the reverse order.

Identification of Parts of the Locomotive

1/ Safety Valve. 2/ Gas Filler Valve. 3/ Pressure Gauge. 4/ Lubricator Filler Cap. 5/ Lubricator Drain Screw. 6/ Gas Regulator. 7/ Gas Burner. 8/ Steam Regulator. 9/ Battery Holder. 10/ R/C On/Off Switch. 11/ R/C Regulator Servo. 12/ R/C Receiver. 13/ Manual Reversing Lever.





PREPARING FOR OPERATION

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

On meths fired models only, the first job is to remove the meths burner and install the wicks. This job should be undertaken away from any other flammable material and adequate safety precautions should be taken to avoid spillage of Methylated Spirit during the procedure.

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

To remove the burner, first remove the split pin which locates the feed tube to the underside of the centre frame spacer (underneath the loco) then unscrew the 6BA brass screw in the rear buffer beam just below the coupling hook. The burner will now drop out clear of the loco. Cut the wick material supplied into 1" lengths and pack a number of lengths into each tube. The number of lengths will vary depending on the thickness of material supplied, but they should go in firmly but not too tight.

Fill the tank with meths and light the three wicks. The size of the flames can be quite easily adjusted by either packing down (to reduce) or removing a strand (to increase) until a uniform flame size is achieved. A pair of tweezers is ideal for this operation. Aim for even burning flames of about 1" or so in height. The wicks should not be more than 1/8" above the tops of the tubes.

When satisfied that all is burning well, extinguish the flames and replace the burner in the locomotive. It may take two or three test runs of the engine with further adjustments to the wicks before a satisfactory setting is achieved. Aim to have the safety valve just lifting while pulling a light train. Time spent carefully setting the burner will ensure good performance from the model. Once set, the burner will not need removing again unless new wicks need fitting.

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.

On manual control gas fired Lady Anne and Dylan locomotives, the cab back must be removed to gain access to the lubricator.

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 through the steam dome into which the safety valve is screwed. Remove the safety valve and fill the boiler right to the top with clean water. Distilled water is recommended, as sold for use in steam irons or for battery topping up, but clean soft water can be used if this is not available.

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. The use of hot water from a kettle will reduce the time taken to raise steam.

3) FILLING THE FUEL TANK

GAS FIRED LOCOMOTIVES

The filling of the fuel 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 blowlamps etc. are better. The larger canisters require a special adaptor to couple up to the filler valve on the locomotive and some brands are supplied with a small plastic adaptor which does this job. If however one is not available, a special brass adaptor 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 fuel tank, make sure that the gas control valve, in the right cab opening, is closed by turning it clockwise.

The filler valve for the fuel tank is hidden under the dummy coal load on top of the right 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.

METHS FIRED LOCOMOTIVES

With the burner installed in the locomotive, fill the tank using the 30ml syringe supplied through the filler tube in the left hand cab doorway above the lubricator.

The tank holds about 50ml and an overflow pipe is fitted to prevent overfilling.

Note: use good quality methylated spirit. Cheap, re-constituted or reclaimed spirit contains impurities which can impair its efficiency and may cause problems over a period of time. Check with your supplier.

3) LIGHTING THE BURNER

GAS FIRED LOCOMOTIVES

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 anti-clockwise. 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.

METHS FIRED LOCOMOTIVES

The burner is lit from underneath the locomotive and a gas cigarette lighter with a high flame is ideal. Ensure that all three wicks are lit. For ease, a steaming stand or bay can easily be made for the purpose. This is simply a raised piece of track with a section of sleepers missing from the middle which gives access for lighting.

RUNNING THE LOCOMOTIVE

GAS FIRED MODELS

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.

METHS FIRED MODELS

When full working pressure has been reached (about 40psi), the safety valve will start to blow off steam.

Steam generation can only be controlled by the setting of the burner wicks as described in the section "Preparing for Operation". The boiler duration is much greater than that of the meths tank, so it will need topping up during the run. This is done using the 30ml syringe as described in the section "Filling the Fuel Tank".

When all water in the boiler has been used, pressure will drop very quickly (as indicated by the pressure gauge). When this happens, extinguish the fire by blowing down the side of the boiler from above. Do not leave a fire burning under an empty boiler for any length of time or damage may result.

DRIVING THE LOCOMOTIVE MANUALLY

GAS FIRED LOCOMOTIVES

On a manually controlled locomotive, there are three main controls, all of which are housed in the cab.

1) The gas regulator, which should be used to control steam generation as described earlier.

2) The reversing lever. This is in the left hand side of the cab and is moved fully forward for running in a forward direction and fully back to run in the reverse direction. It should be parked in the centre (mid gear) when the locomotive is stationary for any length of time. When in mid gear position, the valve gear is effectively in neutral and the engine will not move under steam power.

3) The Regulator. This is the main steam control valve and regulates the speed at which the engine will run. The regulator handle is situated in the right hand cab doorway and is moved anti-clockwise to open and clockwise to close.

Using the reversing lever, select the desired direction of travel then open the regulator a little. Initially, there will be a certain amount of water in the pipes and cylinders which will exhaust through the chimney and, after a few moments, the engine will move jerkily as this clears. Once the parts have warmed up, the engine will move off steadily and it's speed can be controlled with the regulator. Subsequent starts will be quite smooth once the cylinders etc. have reached their normal operating temperature.

To reverse the locomotive, close the regulator to bring it to a halt, move the reversing lever over and open the regulator again.

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

METHS FIRED LOCOMOTIVES

The Regulator is the main steam control valve and regulates the speed at which the engine will run. The regulator handle is situated in the right hand cab doorway and is moved anti-clockwise to open and clockwise to close.

The slip-eccentric valve-gear is set by moving the model manually in the desired direction for one revolution of the wheels. The direction of running will then be fixed until the operation is done again to reverse it.

The regulator must always be shut before changing direction.

Select the desired direction of travel then open the regulator a little. Initially, there will be a certain amount of water in the pipes and cylinders which will exhaust through the chimney and, after a few moments, the engine will move jerkily as this clears. Once the parts have warmed up, the engine will move off steadily and it's speed can be controlled with the regulator. Subsequent starts will be quite smooth once the cylinders etc. have reached their normal operating temperature.

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

DRIVING BY RADIO CONTROL

GAS FIRED LOCOMOTIVES

On a radio controlled model, speed and direction are controlled by moving the two levers on the transmitter supplied. The left hand lever operates the steam regulator, down for stop, up for go and the right hand lever operates the reversing valve-gear, left for forward, right for reverse and centre for mid gear (neutral).

Switch on the transmitter with the switch in the centre of the front panel. The battery meter above should indicate that the batteries are OK.

Switch on the receiver on the locomotive with the switch under the cab roof in the left hand door opening.

Select the required direction of travel by holding the right hand lever fully over, then open the regulator a little by moving the left hand lever upwards. The locomotive will now move off as described in the manual control section.

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

NOTE:

Always hold the reversing lever fully over in the required direction when the engine is moving.

Always bring the locomotive to a halt by closing the regulator before changing direction.

If an emergency stop is required, simply release the reversing lever, which will spring back to mid gear and halt the train, then close the regulator.

Always switch off the transmitter and receiver when not in use to preserve battery life.

When the batteries are getting low, a poor signal between transmitter and receiver will result and control of the engine will become erratic. The transmitter batteries are housed in the back of the unit under a clip off panel. The receiver batteries are housed under the cab roof.

METHS FIRED LOCOMOTIVES

On a radio controlled model, speed is controlled by moving one of the two levers on the transmitter supplied. The left hand lever operates the steam regulator, down for stop, up for go and the right hand lever is not used.

Switch on the transmitter with the switch in the centre of the front panel. The battery meter above should indicate that the batteries are OK.

Switch on the receiver on the locomotive with the switch under the cab roof in the left hand door opening.

Select the required direction of travel as described in the section "Driving Manually" then, open the regulator a little by moving the left hand lever upwards. The locomotive will now move off as described in the same section.

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

Always switch off the transmitter and receiver when not in use to preserve battery life.

When the batteries are getting low, a poor signal between transmitter and receiver will result and control of the engine will become erratic. The transmitter batteries are housed in the back of the unit under a clip off panel. The receiver batteries are housed under the cab roof.

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 oil all bright metal parts.

Do not leave fuel or water in the tanks and boiler.

Ensure all controls are closed and the valve gear in mid gear on a gas fired model.

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

Periodically, wash of all traces of dirt and old oil from the moving parts with paraffin and apply fresh oil. This will stop the build up of dirt and grit in the motion and will reduce wear on these hard worked parts.

ALTERING WHEEL GAUGE

The wheels are set at the factory for the specified gauge however, for those who wish to alter this to run on other peoples railways or if you change the gauge of your track, they are easily re-set with the tools supplied.

The driving wheels are moveable on their axles and are locked in place by a small grub screw. They should be adjusted so that the gauge supplied will just slip between their inner faces. Ensure that the wheels are evenly spaced relative to each side frame. Do not over tighten the grub-screws. Note that the wheel gauge can be used for either 32mm gauge (SM32) or 45mm gauge ('G' scale) depending on which end is used.

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 and cooling down and the stresses of hard work, screws etc. can work loose, so, it is good practice to check all fixings regularly but remember, never over-tighten.

The cylinders are fitted with 'O' rings in the glands sealing both valve and piston rods. 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 effect the running of the model.

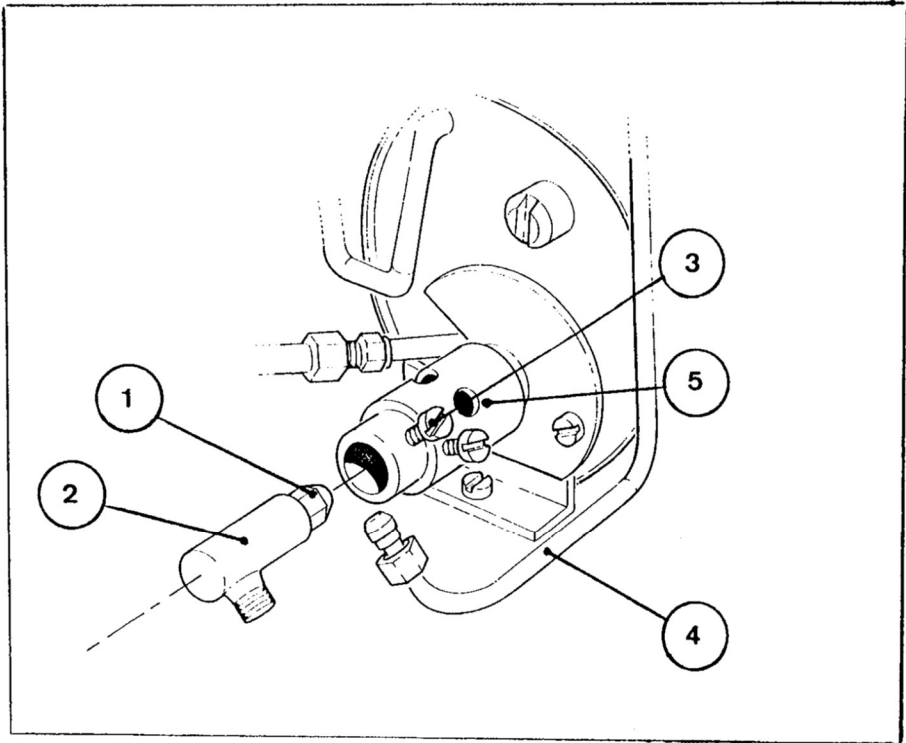
RADIO CONTROL

If radio control gives problems, always check batteries first and replace if in doubt. AA size batteries are used, four in the loco and eight in the transmitter.

GAS SYSTEM

The gas system is set up and tested 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 should happen, clean out the jet as follows.

Disconnect the gas pipe from the jet block using a 2BA 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 the jet in fast evaporating thinner (Cellulose or similar). Blow through the jet from the front or, if it is badly blocked, pass a length of fine fuse wire through it. Re-assemble in the reverse order, putting a small amount of PTFE tape round the threads of the jet. Ensure all connections are tight. When re-positioning 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.



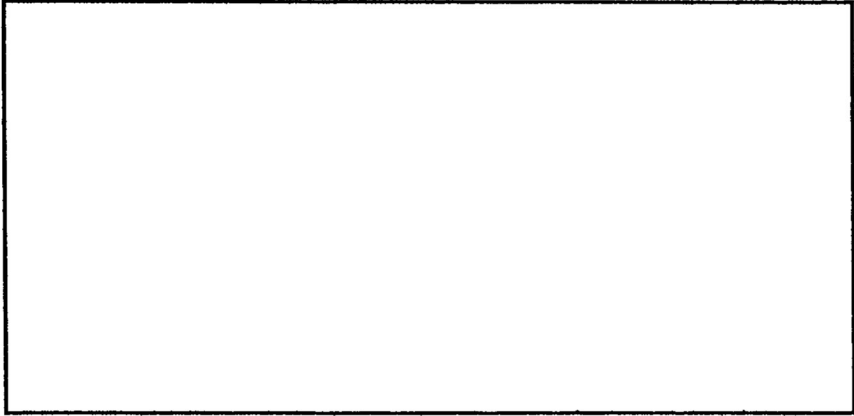
Gas Burner

1/ Gas Jet. 2/ Gas Jet Block. 3/ Gas Jet Block 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:

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