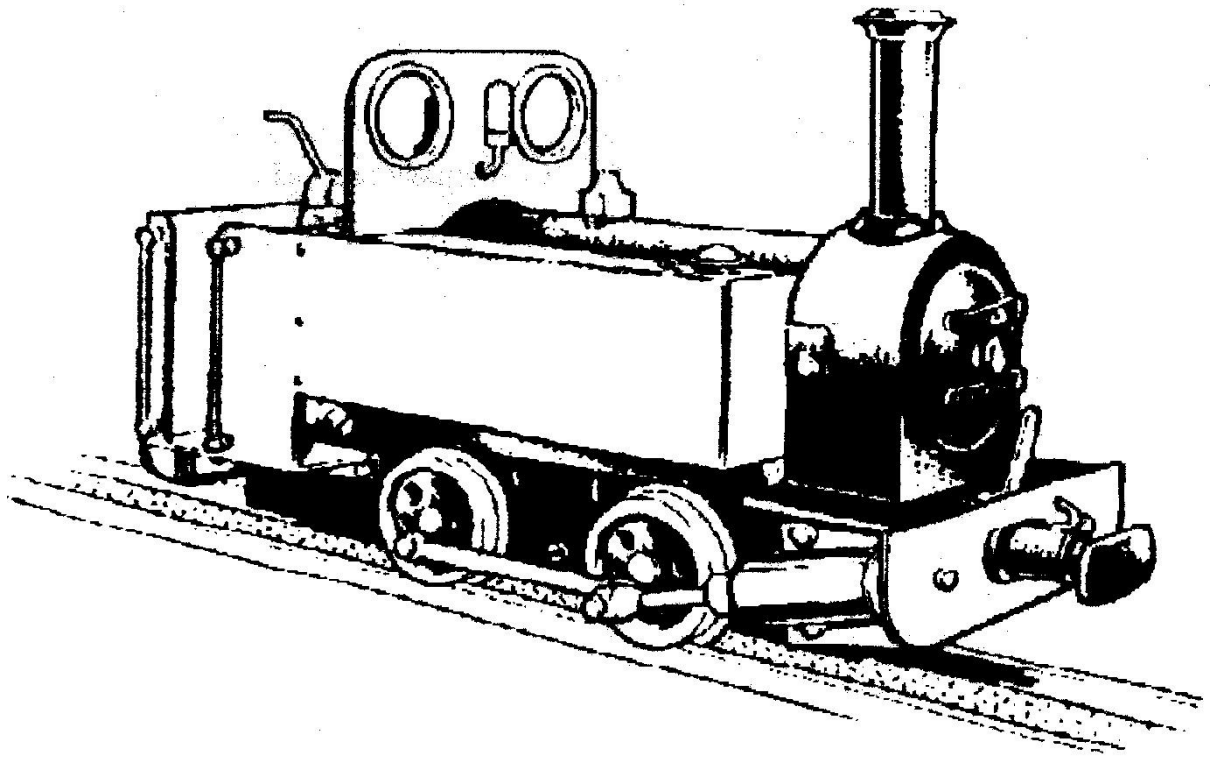
I.P. ENGINEERING

0-4-0 Live Steam

Locomotive

JANE



Instruction Manual

JANE LOCOMOTIVE

Jane is the first in a range of live steam locomotives manufactured by I.P. Engineering. It utilises conventional designs, components and manufacturing techniques, making Jane an easy and reliable locomotive.

By the nature of its style, care has to be taken when handling the locomotive. You are advised to pick Jane up only by the buffer beams. Do not attempt to tilt the locomotive whilst either in steam or whilst there is fuel in the tank.

Please read the safety and operating instructions prior to operating the engine. Jane is designed to be a working steam locomotive and is not intended for use by children.

Safety

~ Be aware that many parts of the locomotive become extremely hot in operation.

~ Never stand over or put your hand over the chimney or safety valve whilst the locomotive is in operation or raising steam.

~ Never fill the locomotive fuel tank near any exposed flame or hot item which could cause a fire hazard.

~ Use only coloured methylated spirit as fuel and store fuel canisters in accordance with the instructions on them.

~ Be aware that methylated spirit has a non visible flame in bright light – i.e. spilt fuel can be hazardous.

~ Do not leave excessive fuel in the locomotive tank as it could slowly spill or produce hazardous vapours.

~ Have a fire extinguisher or wet cloth to hand when operating the locomotive.

~ Care should be taken to supervise any children or animals that may be nearby.

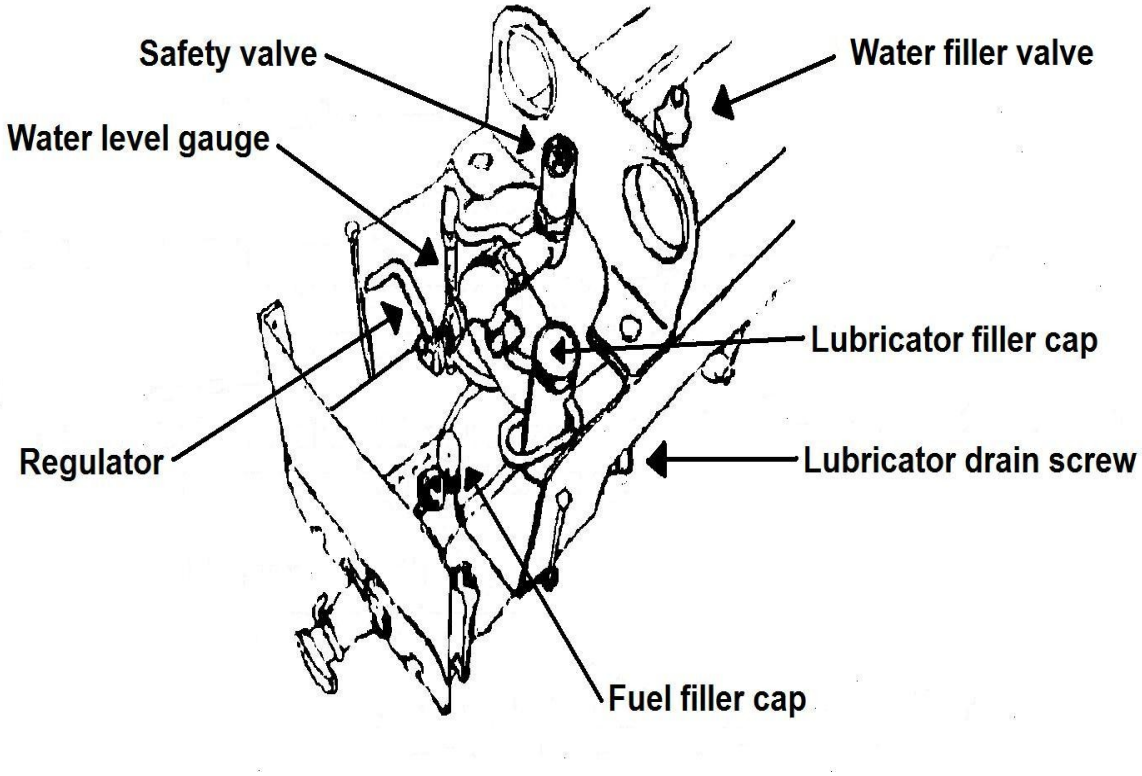
TRACK GAUGE

The locomotive is supplied to operate on either 32mm or 45mm gauge track.
The locomotive is not adjustable between gauges.

PREPARING THE LOCOMOTIVE FOR USE

Familiarize yourself with the controls and lubrication points on the locomotive.

Look under the locomotive and check the wicks are still in place. Using light oil, lubricate the axle bearings and coupling rod cranks.
Remove the lubricator filler cap and the lubricator drain screw to allow the water to drain from the lubricator. Refit the drain screw and refill the lubricator with thick steam oil. It is best to slowly fill down one side of the lubricator, thereby allowing air to escape on the other. The finished oil level should be around the centre of the pipe passing through the lubricator.

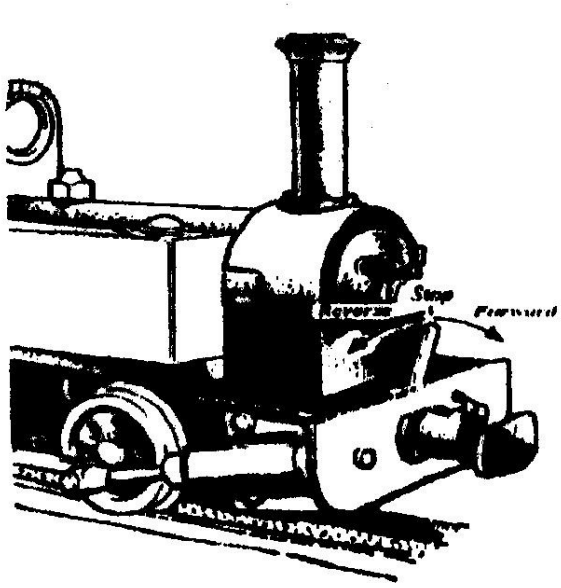


Soft water must be used in the boiler; generally tap water is hard and not suitable. Distilled water used for steam irons or battery top ups is commercially available and suitable. To fill the boiler either unscrew the safety valve and fill, or use the small syringe supplied and the water filler valve. To do this fill the syringe with water insert the nozzle squarely on to the filler valve located on the boiler top and squeeze the syringe – do not apply unnecessary force to the locomotive.

Repeat the operation until the water level in the gauge is 2 to 3mm from the top of the glass. To ensure the gauge is giving a true reading of the water level, push the loco back and forth to create a wave in the water. The air space left in the boiler is essential. If the optional water pump / bottle is used, the hose should be held in to the filler valve and pump trigger repeatedly squeezed until the required water level is achieved.
Lift off the filler cap and fill the fuel tank with approx. 15cc of methylated spirits. This should be of good quality and be coloured to prevent confusion with water. If filling with a syringe fit a small length of plastic pipe to the end, and for safety, do not use this syringe for water.
Without tipping the locomotive, light the three wicks of the locomotive. A long taper or a gas lighter are useful for this. Many operators of meths fired locomotives make themselves a simple stand supporting the buffer beams a few centimetres higher and arrange a mirror beneath the wicks. This eases the lighting procedure and the wicks can be checked for being alight. Ensure the steam regulator and reversing valve are shut. Supervise the raising of steam pressure which will take five to ten minutes. Ensure the safety valve lifts. When the safety valve lifts, the locomotive is ready for driving.

OPERATING THE LOCOMOTIVE

With a full head of steam in the boiler rotate the forward and reverse valve located at the front of the locomotive to suit the required direction. Gently open the regulator valve in the cab (anti-clockwise) and the locomotive will move. Be prepared for hot oily water to shoot out of the chimney and to be ready to partially close the regulator.
Speed should be controlled by adjusting the regulator.
To reverse the direction of the locomotive, close the regulator and rotate the reversing valve the opposite way. Open the regulator and the locomotive will propel in the other direction.



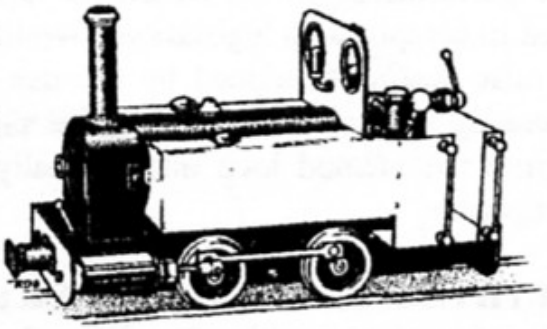
Keep watching the water level in the gauge glass and never let it drop below 3mm from the bottom of the glass. Water can be added at any time during operation by using the water filler valve.
The fuel should run out before the water, in which case the performance will slowly die. If the water runs out before the meths the locomotive performance will die quickly and the burner will still be alight. If this happens blow the burner out immediately by blowing hard on to the top of the boiler and leave the engine to cool prior to refilling with water. Meths can be added at any time during the run, provided that it is carefully filled in to the tank and spillage will not happen.
At the end of a run shut the regulator and reversing valve to prevent any oil being sucked back in to the boiler.
Re-service the oil, water & fuel prior to the next run.

MAINTENANCE

No regular maintenance is essential. With cleaning the locomotive, keep a look out for loose screws etc. and tighten as necessary.
Should the regulator valve gland leak then gently tighten the gland nut until the leak is cured. Do not over tighten the gland nut as it will impair operation of the valve.
The position of the regulator handle can be set to your preference. With a small screwdriver, slacken the handle fixing screw, rotate the handle upon the shaft and re-tighten the screw.
The piston rod is supplied with a non packing gland. Should the gland bearing wear due to service then the gland may be packed with PTFE tape (the white sealing tape used by plumbers). If using PTFE tape, unscrew the gland nut, gently twist the tape to form a string and wrap this around the rod several times. Refit the gland nut over this packing, the gland should just be tight enough to seal i.e. a slight drag should be felt but it must not be too tight.

JANE 4-4-OT

Jane is a great value engine! Included are features such as a water level gauge and a water top up system. With the meths firing system. She can be kept in steam for a long time. Available for 32 or 45-mm gauges and in a choice of green or maroon colour schemes.



The most important characteristic is that the locomotive is very controllable and will haul a considerable load up hill and down dale! A half cab gives ready access to the controls and gives a quarry loco looks to Jane.

Dimensions: length 290 mm (11 1/2") Width 125 mm (5") Height 163 mm (6 1/2")

JANE locomotive meths fired manual control 32-mm gauge.
£250.00 **Please specify colour.**

JANE locomotive meths fired manual control 45-mm gauge.
£250.00 **Please specify colour.** .

Optional items for you to personalise your Jane

Spare wick material and lubricator '0' rings
£1.60

Service kit, spare gaskets. Seals, gauge glass etc.
£6.58

Turned and polished brass dome, fits over fill valve
£7.99

Decorative cylinder covers - pair, painted black
£3.95

Water bottle pump for top up valve
A useful method for filling hot engines whilst in steam.
£5.50

Optional cab assembly.
This replaces original weather shield but
Still giving ready access to all of the controls
Please specify maroon or green **£25.00**