National SB engine in South Africa

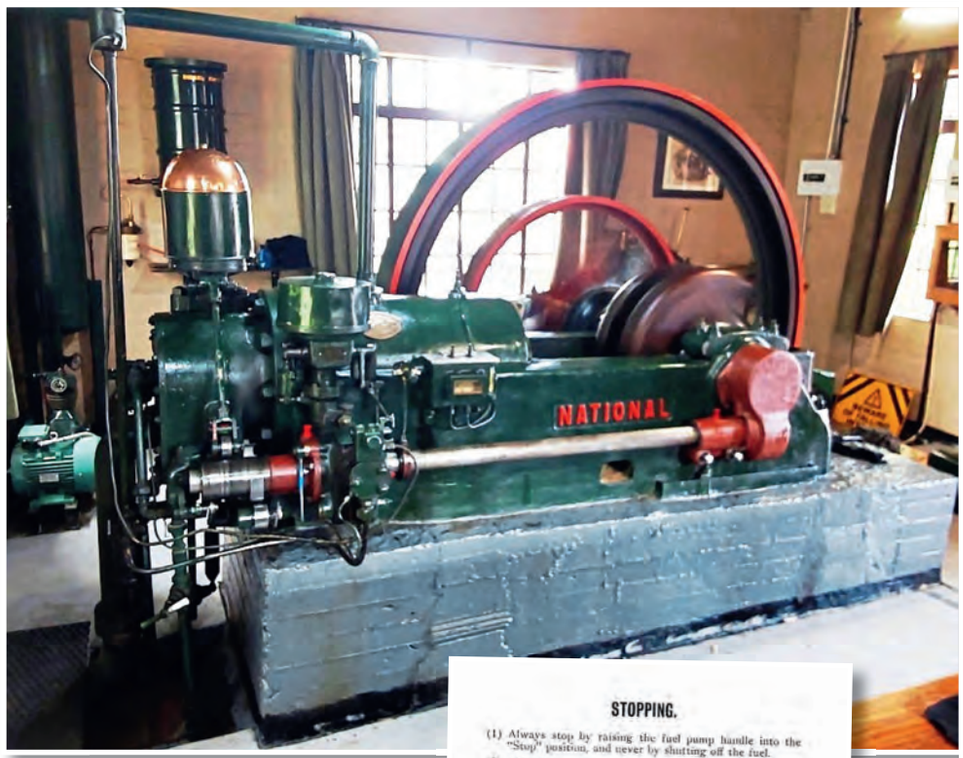
By Andy Selfe

This 42bhp National SB type engine, serial number 106312, is located in the bar at Sandstone Heritage Trust in the Eastern Freestate of South Africa and has recently been repaired after a serious failure where the camshaft seized in the housing below the governor at the cam end, causing the skew gear to break the housing at the crank end. A new casting was made for the cam end and fitted with a bronze bush (the original was steel-on-cast-iron) and the rear casing fixed with Metalock. We had it running over the weekend on the occasion of the Cherry Festival.

I asked about recharging the compressed air cylinder with the engine as we couldn't work out how this could be done; there doesn't seem to be a cam or follower to open the air valve on the compression stroke. The instruction sheet for a similar engine is attached and no mention is made of charging the cylinder with the engine. Could this be the case? If anyone can help on this matter we would like to hear from you, contact in the first instance via the Editor please. ●



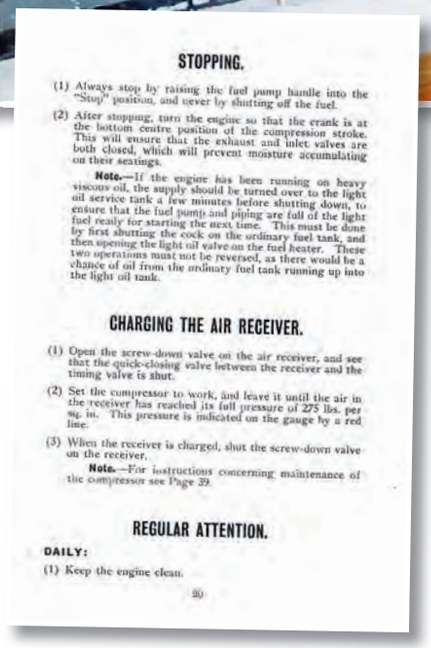
The maker's brass plate.



The now-running engine is seen here in action.



The new camshaft etc.



STOPPING.

(1) Always stop by raising the fuel pump handle into the "Stop" position, and never by shutting off the fuel.

(2) After stopping, turn the engine so that the crank is at the bottom centre position of the compression stroke. This will ensure that the exhaust and inlet valves are both closed, which will prevent moisture accumulating on their seatings.

Note.—If the engine has been running on heavy viscous oil, the supply should be turned over to the light oil service tank a few minutes before shutting down, to ensure that the fuel pump and piping are full of the light fuel ready for starting the next time. This must be done by first shutting the cock on the ordinary fuel tank, and then opening the light oil valve on the fuel heater. These two operations must not be reversed, as there would be a chance of oil from the ordinary fuel tank running up into the light oil tank.

CHARGING THE AIR RECEIVER.

(1) Open the screw-down valve on the air receiver, and see that the quick-closing valve between the receiver and the timing valve is shut.

(2) Set the compressor to work, and leave it until the air in the receiver has reached its full pressure of 275 lbs. per sq. in. This pressure is indicated on the gauge by a red line.

(3) When the receiver is charged, shut the screw-down valve on the receiver.

Note.—For instructions concerning maintenance of the compressor see Page 29.

REGULAR ATTENTION.

DAILY:

(1) Keep the engine clean.

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The instruction sheet for recharging the air vessel by the engine, but no details are given how it works.