

Blackstone Engine No. 106883

Prospect Hill Museum, South Australia

It didn't go first time!

Some members of the AHMRC would have seen this engine over the years, sitting in a shed with other engines all in a very sorry state or repair, at the Prospect Hill Museum.

It is the story of the Blackstone S/N 106883 6 1/2 HP, made early in 1914 and shipped to Clutterbocks South Australian Agents, where it was sold to Mr. Harry Grivell - Market Gardener at Verdun in 1914.

It was last used about 1952 and in early 1970 it was given to the Prospect Hill Museum by Harry's son Jeff Grivell and his son in law Dick Ramsdale.

When I first saw the Blackstone, Easter weekend 2010 in a shed at the Museum, I regret that I failed to take a photograph of its condition. The fuel system consisted of various plastic tubes which appeared to have from a used cattle drench pack.

Under the crankshaft where the oil had collected, it had congealed to a mass,

similar to tar. The cooling system consisted of a 44 gallon drum connected to the engine with poly pipe and plastic fittings.

It had dust and oil covering covering the engine which had accumulated during its working life pumping water from the Onkaparinga River, plus the odd years sitting in the shed, was thick and greasy.

I approached the Committee who ran the museum to see if something could be done about it. The answer was, "Can you do it?" I was then told despite its appearance the engine was a "runner".

Keeping this in mind I went to work to clean it and found the piston and conrod had been removed sometime in 1955 to have new rings and gudgeon fitted. A search of the museum failed to find them, but it was remembered the missing items were removed for safe keeping by a former Committee Member along with the brass escucheons.

This person readily returned the items and appeared pleased that someone was prepared to try to get the engine running once more.

To help with the cleaning process a local farmer with a tractor with front forks, lifted the engine and flywheels from its large base. They were put to one side standing on 3 truck axel stands.

The fuel tank, now exposed was the first thing to clean out as it was nearly half full of thick oily sludge. About 10L was removed, then to dry the tank a fire was built in it.

This was partly successful and produced a huge amount of smoke which, had there been a passer by - would have thought the shed was alight!

With a cleaned out tank the serious business of cleaning commenced.

The accumulated dry grease was softened up with a degreaser before it was scrubbed with a rotary brass buff fitted to an angle grinder. Eventually the base had been scrubbed down along with the engine back to the flywheels. To finish the engine the flywheels had to be removed, so it was decided to paint the base, refit the engine, then remove the flywheels.



However before this was done a small fuel tank of approximately 5L was made and fitted inside the base. This enables the fuel to remain fresh and clean.

With flywheels removed the cleaning recommenced and eventually the engine was ready for painting. By this time work had been going on for 10 months, when the Committee asked if it could be running for the Easter weekend 2011.

Painting was finished, the flywheels refitted and an inventory of parts required to finish it was made. The list included:

Cooling tank, Copper pipe and fittings for the fuel system, brass caps for the oil points and inspirator and vertical blowlamp. Whilst these were being put together the engine was pin striped.



One week before Easter the engine was reassembled, timing checked, blowlamp lit and vapour chamber heated up. With the temperature right and three helpers swinging the flywheels, we tried to start it for the first time in 16 years - BUT - nothing.....*except some white smoke.*

After an hour my helpers faded away, one with the words "it must be the vapour chamber, check the heater coils".

I hadn't checked these previously as I always had in my mind that there couldn't be much wrong with these as it ran 16 years ago.

It took nearly 2 weeks and a lot of heat to get the top plug out, but the bottom one refused to budge, so I had to resort to a drill and a hacksaw blade. The removal of the plugs revealed, no bottom coil and a top coil full of gunk.



With the top coil cleaned up and a new bottom of coil of Termimesh, another attempt was made to start it, but this time there wasn't any smoke.

"It must be the vapour valve!" - was the advice.

This was removed and a new one made from a Valiant AP5 valve, and refitted the following weekend. Then more swinging on the flywheels, when my assistant Mark said he detected an air leak somewhere around the Vapour Chamber. All bolts and nuts were retensioned, then with more turning of the flywheels we ended up exhausted with no smoke coming from the exhaust.

"The problem must be too much pressure loss around the rings. It needs to be honed", was the advice.

Another week went by before we could get back to it with a large hone.

The piston was removed and the bore was given a 15 minute honing, then was refitted.

The blowlamp was fired up and the vapour chamber was reheated. As I was putting the tools away my assistant Mark started to turn the flywheels backwards.

When the piston came up to reverse compression smoke came out of the exhaust, so the wheels were pulled in the correct direction when there was a slight "puff" and away she went.

It was a great day for all of us at the Museum and had I done all of this before, then it too may have fired up "First Time".

Ray Bailey