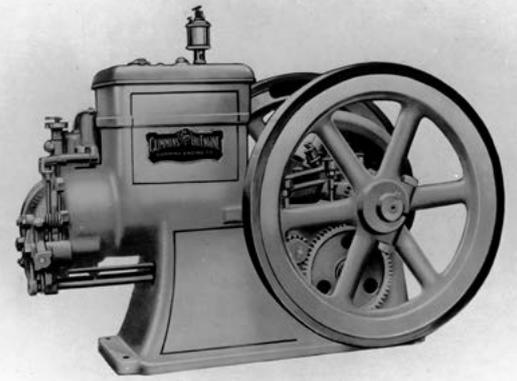


Ian Muller, a 40-year Cummins veteran, is heading up restoration of the Cummins Hvid engine.



Data plate showing the engine, No.315, was built by Cummins in Columbus, Indiana, with a rating of 3 hp at 600 rpm.

DISCOVERED! AUSTRALIA'S OLDEST CUMMINS ENGINE

What is believed to be the oldest Cummins engine in Australia has been recovered after many years powering a milking machine on a dairy farm near Toowoomba in Queensland and then lying idle in a dismantled state due to a failed rod bearing.

A 3 hp engine, it is thought to have been built in the first half of 1922 under a license granted by Robert M Hvid who owned the US patents for the fuel and combustion system.

Clessie Cummins started building the Hvid engines in 1919 for giant American retailer Sears, Roebuck & Co, which sold them to farmers through its mail-order catalogue. This was Clessie's first diesel engine project as joint founder of Cummins Engine Company with banker WG Irwin.

The agreement with Sears was for Cummins to produce 4,500 of the 1.5 and 3 hp compression-ignition 'oil engines' which were horizontal single-cylinder units.

It is thought the Hvid engine discovered near Toowoomba was actually produced after the cessation of the Cummins/Sears agreement. The data plate shows it was No.315 built by Cummins Engine Company in Columbus, Indiana, and squeezed out 3 hp at 600 rpm.

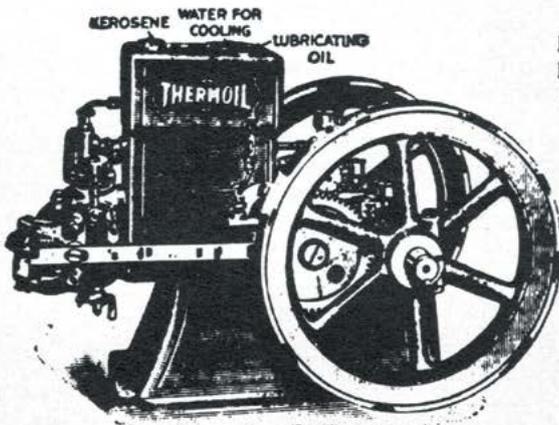
The engine is now in the caring hands of Ian Muller who is preparing it for display at shows. Ian was technical training manager for Cummins South Pacific until his retirement in 2014 after 40 years with the company. His passion for the Cummins Hvid restoration project has seen the engine debut at the 2019 Brisbane Truck Show and the aim is to eventually get it running again.

Defects...frustration.

There were defects with the Hvid design which obviously caused Clessie Cummins a lot of frustration 100 years ago.

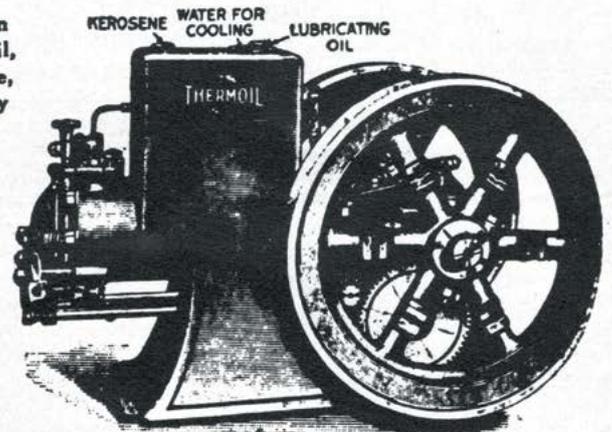
The oil engine operated best on kerosene but advertising said it could be run on old butter, fish oil, crude oil, and just about anything else that would flow and burn.

1½ and 3 Horse-Power Kerosene Engines



Start and Run on Kerosene, Coal Oil, Fuel Oil, Distillate, Crude Oil, or Any Similar Fuel.

Sold on Easy Monthly Payments. See Page 1407.



Prices of 1½ Horse-Power Thermoil Engines.

47D18—1½ Horse-Power Thermoil Engine with 4¼-Inch Pulley, to operate on kerosene, fuel oil or any similar fuel.
 Monthly payment price (\$5.00 with order, \$13.23 per month).....**\$137.30**
 Full amount of cash with order..... **125.00**

47D180—1½ Horse-Power Thermoil Engine with 4¼-Inch Pulley, to operate on crude oil.
 Monthly payment price (\$5.00 with order, \$13.48 per month).....**\$139.80**
 Full amount of cash with order..... **127.50**

Prices of 3 Horse-Power Thermoil Engines.

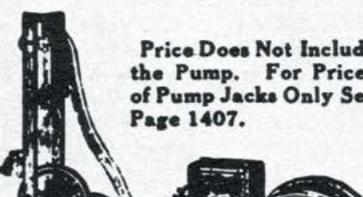
47038—3 Horse-Power Thermoil Engine with 6¼-Inch Pulley, to operate on kerosene, fuel oil or any similar fuel.
 Monthly payment price (\$5.00 with order, \$21.00 per month)..... **\$215.00**
 Full amount of cash with order..... **195.00**

47D380—3 Horse-Power Thermoil Engine with 6¼-Inch Pulley, to operate on crude oil.
 Monthly payment price (\$5.00 with order, \$21.25 per month)..... **\$217.50**
 Full amount of cash with order..... **197.50**

Specifications, 1½ Horse-Power.

Bore—3 inches. Stroke—4½ inches. Type—Four-stroke cycle, throttling governor, water cooled. Speed—600 R. P. M. with reduction of 200 R. P. M. Flywheels—18 in. in diameter; weight, each, 55 pounds. Crankshaft—1½ inches; drop forged, with ¾-inch extension. Shipping weight, 365 pounds. Actual weight, 323 pounds.

Thermoil Pumping Outfits.



Price Does Not Include the Pump. For Prices of Pump Jacks Only See Page 1407.

Simple, Dependable Power.

Thermoil Engines are not an experiment. They operate on a principle that has been in use in the larger size engines for a great many years. We have simply adapted this same principle to the smaller sizes for farm and shop use.

We have sold thousands of these engines for every kind of work, operating on all grades of fuel, where dependable power is required. They are rapidly gaining in popularity, because of their simplicity and economy in the use of fuel.

The Thermoil Engine has no mixing valve, magneto, batteries, coil or electrical ignition of any kind. The simple mechanism on the cylinder head takes the places of all of these parts.

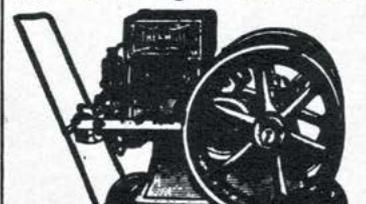
We send an instruction book with each engine which tells all about how it operates, how to start and take care of it, and our guarantee printed on the outside back cover of this catalog protects you absolutely from an unsatisfactory purchase.

Buy one of these wonderful engines and try it on your own work for thirty days under the monthly payment terms as explained on page 1401. If you are not satisfied, write us and we will give you return instructions and return the freight charges and your original remittance, so that you are not out one cent for expense.

Specifications, 3 Horse-Power.

Bore—3½ inches. Stroke—5½ inches. Type—Four-stroke cycle, throttling governor, water cooled. Speed—600 R. P. M. with reduction of 200 R. P. M. Flywheels—22 inches in diameter, weight, each, 124 pounds. Crankshaft—2 inches, drop forged; ¾-inch extension. Shipping weight, 660 pounds. Actual weight, 615 pounds.

Thermoil Engine and Truck.



A page from the Sears, Roebuck & Co catalogue of the early 1920s.

A 1.5 hp engine sold for \$125, or \$137.30 with \$5 down and \$13.23 a month. A 3 hp sold for \$195.

Sears sold the engines as 'Thermoil' kerosene engines on terms of "\$5 down – 30 days trial – 10 months to pay". The farmers took advantage of these terms. They bought the engines, used them for 30 days, returned them and got their down payment returned.

Sears then returned the engines to Cummins. Although most of the returns were runnable, they were all scrapped.

Another problem was that people had trouble starting the engines which didn't have spark ignition. They fired on compression and people did not understand compression ignition. They tried to crank against compression, the same way they started petrol engines.

Cummins sales reached a peak of \$25,000 in December 1920 and then collapsed to less than \$5000 in February 1921. Engines were returned faster than they were shipped. Returns actually amounted to more than 20% of sales.

Cummins benefitted from this experience because it led to the development of a new fuel system independently of what other companies were doing. Through a swirl of innovation and problem solving, Clessie and his team were well on the way to transforming the company from a licensed manufacturer into an originator and builder of its own diesel engines. ■



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