

Questions and Answers For Gas Engine Operators

This is a department for gas engine operators similar to that which we have so successfully carried on for the past few years for those interested in steam. We invite your questions and will give them our best attention. Just tell us your troubles or ask us about any point upon which you desire information. We have secured the services of a competent expert who can handle gas engine queries intelligently and to the complete satisfaction of all concerned.

S. L. B. I have been experting on an engine for a fellow but seem to be up against it, she runs all right as far as that goes but it smokes terribly and of course develops no power. Have tried different grades of gasoline, it is timed right, fair compression and a good spark and have adjusted throttle from too little to too much gasoline, but still she smokes, so please publish some remedy in your magazine.

A. If we were experting that engine we should suspect either too much lubricating oil or a leaky exhaust valve or possibly both. The fact that it develops no power points to some leak and it is possible that the exhaust valve seat is cracked that lets out a good part of the explosive force before combustion is fairly completed. If too much lubricating oil is used the piston should be removed and the explosive chamber washed out clean with gasoline. The cylinder rings and their grooves should also be thoroughly cleaned and then the entire piston surface may be brushed over with a first grade of regular gas engine oil. We, of course, assume that you are correct in your statement that the engine is properly timed as to valves, spark, etc., and that the spark is strong enough to ignite every charge it takes. If the exhaust valve is cracked a new one must be put in, and if the seat is simply corroded then it should be ground to a perfect seat. If the compression pressure is low, not over 20 or 30 lbs., it would develop but little power.

J. E. D. Which is the cheaper in the long run, to run an engine on 6 dry batteries or to put in 8 or 10? Will 8 or 10 batteries run enough longer to pay for the extra batteries put in?

A. Six will give sufficiently current strength to make a good spark and since age alone deteriorates a dry cell we question whether it is policy to use 8 or 10 cells at the same time unless divided into two sets and their service alternated.

H. B. Will you please answer the following questions?

1. What is the difference in power in a 25 horse power automobile engine and a 25 horse power steam threshing engine, if any?

2. Is the exhaust valve opened against any pressure in the cylinder on a hit and miss gas engine? If so, then it must be some waste of power through the exhaust.

3. Could not a thermo-electric battery be devised and used to ignite gas charges in a gasoline engine? The exhaust could probably be used to heat the battery, or has it been tried?

A. If the maximum power capacity of a steam engine were only 25 horse power and an automobile engine could deliver 25 h. p. as its maximum capacity then there would be no difference. Steam power has greater flexibility than gasoline power by reason of increased boiler pressure to be had at the will of the operator. A so-called 25 h. p. steam threshing engine in good condition with a strong and efficient boiler behind it may readily be crowded up to 50 h. p. capacity. This can not be done with a gasoline engine because it will seldom in its best condition develop or deliver power beyond its rated capacity and there is no way to run up the power pressure.

2. Yes, the valve is opened against from 30 to 40 pounds pressure ordinarily. Some power must necessarily be wasted by reason of this.

3. Possibly. Nothing seems impossible in this age. We do not know of its having been tried. If you are familiar with thermo-electric current sources you might invent a valuable adjunct, a revolutionizer as it were, by means of the exhaust heat.

E. B. H. Will you please answer the following questions?

1. What is the power of a 5 x 5 double opposed engine running at 1,000 r.p.m. at 800?

2. Can this engine be run on kerosene if equipped with kerosene carburetor?

3. Does an engine need a water mixer so as to draw in a spray of water when run on kerosene?

4. Would it not assist the evaporation of the charge of mixture to have a pipe on air intake of carburetor so as to draw hot air from around exhaust pipe?

5. Will this engine run a threshing machine as steady as a slow speed engine that has fly wheels and of same power?

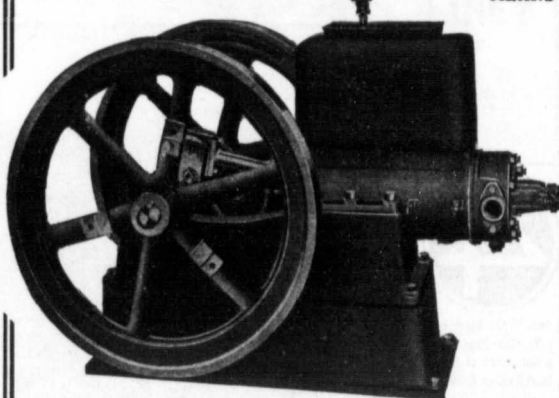
A. Approximately 15 and 12 h. p. respectively.

2. We think so.

3. Not necessarily, but it is considered an advantage by many operators.

4. Yes, it is of advantage.

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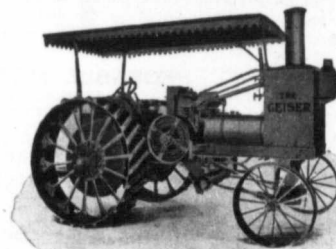
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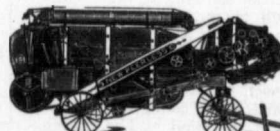
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