

Expert Advice For the Automobile Owner

Queries and Replies Covering Matters of Importance to the Man Who Runs a Car

Each week hereafter we will publish in this column questions and answers regarding automobile and gas engine troubles. We realize that practically every reader of this paper is an owner of either an automobile or a gas engine, and, desiring to serve our readers with practical news as well as news of the day, we have arranged with an expert to handle this column. If you have any troubles with your automobile or gas engine send in your questions regarding them and they will be answered.—The Editor.

Do Not Buy Oil on Price

In purchasing oil for internal combustion engines it is highly essential that you secure an oil that has a very high resistance to heat.

Find out from the manufacturer of a gas engine or automobile the oil most suitable for use in that particular motor, as the best results are generally obtained in this way.

Buy the Oil They Recommend, No

Matter What the Price

The best way to handle oil is to buy an approved, all-steel tank, equipped with the proper pump apparatus.

The same attention should be given to oil and your motor and machinery, as one would give to feeding stock, which will reduce the up-keep in proportion to the care you give.

Having Carbon Trouble

Ques.—I am having continual trouble with carbonization and sooty spark plugs.—A. H.

Ans.—It seems evident that too much lubricating oil and possibly too heavy a mixture of gasoline is used, and our advice would be to cut down the amount of lubricating oil some, watching the results closely. As

colder weather approaches, naturally one should use a little higher test of gasoline. Possibly you are carrying too much lubricating oil in your crank case, so that the connecting rods dip into the oil and throw too much into the cylinder. Remember that too much oil is almost as bad as too little.

Mixed Fuel

Ques.—Are there any advantages to be gained by combining kerosene with gasoline and using the mixture as a fuel?

Ans.—Do not think there are any advantages to be gained by combining the two liquids, kerosene being especially difficult to vaporize unless heated. No trouble may be evidenced with the mixture at first, but gradually the kerosene will settle in the carburetor and completely fill the float chamber. If this is not drained off, poor carburetion will usually result.

Lubricating the Car

Ques.—How often is it necessary to insert lubricant in the crank case and in the gear boxes? Should different lubricants be used for different seasons?

Ans.—The fact that lubricant some-

times work out through the bearings should they be worn, or at the cover should it be loose, makes it impossible to set an arbitrary time for lubrication. Should these be absolutely tight, it is good practice to remove all lubricant from the boxes at the end of every 2,000 miles. Thoroughly wash the gears and case with kerosene. New grease should be used when replacing. Gauges are located at the side of the crank case on most late models to indicate the exact amount of oil in the case. A car in good condition should run at least 100 miles without requiring replenishment of lubricant.

Experts differ as to the grades of oil to use in the different seasons, but if a change is required, it is generally believed that a much thinner oil is required for winter than summer.

Soldering a Water Jacket

If the pressure to be withstood is not too great, a crack in a cylinder water jacket may be repaired by soldering. Some copper sulphate or blue stone is dissolved in water and the sides of the crack are painted with it several times until a coating of copper begins to appear. This surface will retain solder and usually that will make a very satisfactory repair.

Questions of Speed

Ques.—I have a few questions that I would like to ask you. Do you recommend the use of steel piston rings? Will they wear the cylinders? I want to make a racer out of my Ford car, and would like to know if I could have a special crankshaft made that would give a half inch longer stroke? Where could I have such a crankshaft made, and where could I get quick-action cam-shaft? If I lightened the flywheel, wouldn't it give more power?

Ans.—I assume you mean by steel piston rings the ones trade-named "Perfection," which are made of soft steel, 1-16 of an inch thick, four being used in each ring groove of a Ford. I think you will find that all right, as a number of high grade engine manufacturers are using them as regular equipment. You will have to write to some drop forging and machine company to find out about your quick-action cams and long-stroke crank shaft. You will find, though, that it will be impractical, on account of lack of space and also a prohibitive cost, to substitute a differently designed crank shaft in the Ford engine. If you wish to increase the speed, write to one of the special gear companies, as they make a specialty of furnishing high gearing for a Ford differential. Do not attempt to lighten your flywheel other than to remove only such metal as is necessary to obtain a perfect balance. See that all of your connecting rods and pistons are of the same weight. Balance same by removing metal from portions where there will be no dangerous weakening.

Winter Hints

A little more gasoline is required in winter than in summer.

It is a good policy to hang a shield in front of the radiator.

Anti-freeze fluid should be tested for proper gravity—often.

Warm a piece of metal before trying to bend it in winter.

A good priming fluid—half ether and half gasoline.

Use thinner lubricating oils in winter than in summer.

Use tire chains all around on snowy roads.

Anti-freeze solutions follow:

Will not freeze at 15 degrees above zero:

Water 4 gal.

Alcohol 1-2 gal.

Glycerine 1-2 gal.

Will not freeze at 8 degrees above zero:

Water 3 3-4 gal.

Alcohol 5 pints

Glycerine 5 pints

Will not freeze at 10 degrees below zero:

Water 3 gal. 1 pt.

Alcohol 5 pints

Glycerine 5 pints

Will not freeze at 20 degrees below zero:

Water 1 gal. 1 qt.

Alcohol 2 gal. 2 qt.

Glycerine 1 gal. 1 qt.

WEEKLY WEATHER SUMMARY

The weather during this period of seven days ending Saturday, October 30th, was unusually warm, with an average daily excess in temperature as compared with the normal of 12.2 degrees. Partly cloudy weather prevailed throughout the week. The mornings and evenings were mostly cloudy with the bright warm sunshine during the middle of the day. The highest temperature was 72 degrees on Tuesday, 26th, and the lowest was 29 degrees on Monday, 25th, making a weekly range in temperature of 43 degrees. The highest temperature for this week in October from 36 years of record was 79 degrees on October 27,

1891, and the lowest for the same period was 3 degrees below zero on October 24th, 1887. This week was a repetition of the preceding week, no precipitation occurring. There was one clear day and six partly cloudy days. A moderate gale blew Thursday afternoon from the west and a fresh gale began Saturday afternoon and continued all day with an extreme wind velocity of 50 miles an hour from the west.

October Weather Report

The monthly meteorological summary, with comparative data for the month of October, 1915, issued from the Havre office, U. S. Weather Bureau, shows that seasonable autumn temperatures prevailed during the first half of the month and unusually warm weather the latter half, which had an average daily excess in temperature as compared with the normal of 12 degrees. A stormy period occurred the first three days of the month, after which, with the exception of showers on the 10th, no rain fell the rest of the month. The mean temperature for the month was 49 degrees, which is six degrees above the normal. The highest temperature for the month was 82 degrees, on October 22nd, and the lowest was 23 degrees on October 7th. The highest temperature for October for a period of 36 years of record was 89 degrees, on October 7th, 1889, and the lowest for the same period was 16 degrees below zero, occurring October 12, 1881.

The total precipitation was 0.42 inches, being slightly below the normal. The greatest amount of precipitation in 24 consecutive hours was 0.31 inches on the 2nd and 3rd.

There were seven clear days; 15 partly cloudy and 9 cloudy days. The percentage of possible sunshine was 46 per cent. The prevailing wind direction was from the northwest. The highest velocity was 48 miles an hour from the west on the 30th.

C. W. LING.

Observer, Weather Bureau.

He Remained Seated

It was married men's night at the revival meeting.

"Let all you husbands who have troubles on your minds stand up!" shouted the preacher at the height of his spasm.

Instantly every man in the church arose except one.

"Ah!" exclaimed the preacher peering out at this lone individual who occupied a chair near the door.

"You are one in a million."

"It ain't that," piped back this one helplessly as the rest of the congregation gazed suspiciously at him: "I can't get up—I'm paralyzed!"

Response of the railroad companies to the telegram sent by the railroad commission calling attention to the complaints of car shortage, indicates that the companies, while admitting



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that the big crop had gorged the elevators, are certain that the freight is being moved with all celerity possible and that the complaints generally are

not well founded. An inspector who is now in the field making a personal investigation will shortly return here to make a report.



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