

OIL COOLING AS AID TO EFFICIENCY

Installation of Small Radiator and Pump System Suggested

After twenty years of automobile engine building it appears that the engineers and designers still fail to realize that proper cooling depends as much upon the lubrication oil as it does on the water circulation system, says the Los Angeles Sunday Times. Yet to come right down to facts, "internal cooling" by the action of the oil thrown up on the piston and cylinder walls may be more important than "external cooling" of the water jackets.

In recent years the power developed by engines of a given size has been constantly increased with consequent increase in the amount of heat which must be carried away by the cooling system. Yet in practically all cases the only thing that has been done to meet this increase has been to use more efficient radiators and better designed water jackets. The fact that the temperature of the oil is much higher than formerly has been ignored, or at least the only attempt made to meet it has been the use of a heavier oil.

The increase in the oil temperature is due primarily to the use of a higher compression in the attempt to gain greater efficiency. Other contributing factors are the fuels of high heat value, the use of aluminum pistons of great heat conductivity and the general tendency toward higher engine speed.

To try and meet this problem of oil temperature merely by increasing the viscosity of the oil is a poor expedient even if the specifications concerning "flash" and "fire" are improved at the time same. Too viscous an oil means the absorption of some power in friction and greatly adds to the difficulty in starting when cold, and although a heavier and better grade of oil may stand up and do the work, it does not help internal cooling.

The water is cooled by a scientifically constructed radiator—why not cool the oil in the same way, instead of letting it lay in the hot crank case? The arrangement could be simple indeed. A dry pump system such as been used in racing engines, with two pumps, a small oil radiator and a two-gallon tank would be all the equipment necessary. Here the hot oil would be taken from the pump by the return pump and sent through the oil radiator and into the tank. A filter might also be installed in the system and clear cool oil, with practically no waste could always be going into the engine.

The oil radiator need not be bulky or heavy, for it can be constructed of flat copper tubes, and placed behind the water radiator, fastened to its shell, where it can get full benefit of the air blast from the fan. And so we have a simple outfit. The tremendous advantages which are unquestionable, and yet its possibilities have so far been entirely overlooked by our army of automobile engineers. The nearest they have come to anything fine on the bottom of the crank case, which is certainly not sufficient to meet the conditions prevailing. A real oil cooling and filtering system is badly needed, and the gain in efficiency economy and durability of the power plant will more than make up for the slight additional expense involved.

People who go to the movies—and that includes nearly everybody—should be interested in the following advertisement in the Wayne, Arkansas Progress: If the lady who stuck her gum on she may have the gum. If the gum won't come off she can have the pants too.

THINGS EVERY CAR OWNER SHOULD KNOW

ADJUST ANTI-GLARE

Some of the light diffusers or devices intended to redirect the rays of light are designed to be effective only when in a certain fixed position. Vibration may so loosen the glass in the rim that the glass will be permitted to creep around, in which case the whole scheme fails. Not all headlights have means for anchoring the glass permanently, so it is a matter for the owner's attention to see that the glasses are properly fastened in place. If screws are used it might do to insert a lock washer under each one.

TRANSMISSION NOISE

A humming noise in the transmission case is very likely due to an excess of heavy grease. The case should never be more than two-thirds full, and oil is the proper lubricant, not grease. It is axiomatic that a noise in the gearbox means faulty lubrication somewhere.

INSPECT THE LEVEL

When the oil pressure gauge on the instrument board registers less pressure than it should, or if it fails to show any pressure, it is high time to inspect the oil level in the engine, for the chances are ten to one that the oil level is low—much too low. The pressure gauge should not be used in lieu of the oil level indicator on the engine. To do so would be poor policy. But if the gauge does show a lowered pressure it is giving a warning that should be acted on immediately.

TRUCK TIRES

For the who drives a big heavy car the possibilities of truck pneumatics are worth consideration. These are now available in large passenger car sizes, and they are much heavier than corresponding passenger car casings, insuring longer mileage at comparatively slight advances in cost.

HOME MADE TONGS

It is possible to make a pair of tongs that are convenient for removing nuts, etc., from the mud pan by flattening the ends of two pieces of No. 9 wire each 30 inches long. Five inches from the end a hole is drilled through each wire and through these holes a bolt is thrust and fitted with a nut. This completes the tongs which will be found invaluable for picking small objects out of the mud pan or from around the motor.

CLEANING TERMINALS

Corroded terminals are one of the most frequent causes of ignition trouble, and it is not generally known that the best agent for cleaning them is a strong solution of washing soda. After the corrosion has been removed and the terminals dried, grease the parts well with cup vaseline.



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WRENCH ADAPTERS

Some speed wrenches have sockets so deep that a small screw sinks all the way into the socket. Place a couple of nuts of the right size in the socket and they act as shims to obviate the trouble.

CLEARLY ABSURD

A Frenchman learning English said to his tutor: "English is a queer language. What does this sentence mean: 'Should Mr. Noble, who sits for this constituency, consent to stand again and run, he will in all probability have a walkover?'"

MELTING LADLE

For the car owner who does a lot of his own work, a very useful melting ladle may be made from an old piston. One of the wrist pin bosses is plugged up and in the other a metal bar is welded to form a handle.

DON'T BE A LOBSTER

(Thrift Magazine.)

We frequently hear used in a slang way, "He is a regular lobster." Now there may be more truth than slang in the expression, because there are a lot of human lobsters in the world. A lobster when left high and dry among the rocks has not enough energy to work his way back to the sea, but waits for the tide to bring the sea to him. If it does not come he stays right where he is and dies, too lazy to put forth any effort himself. Many men are stranded on the rocks of business. Instead of putting forth their own energies they are waiting for some grand friendly billow of good fortune to set them afloat.

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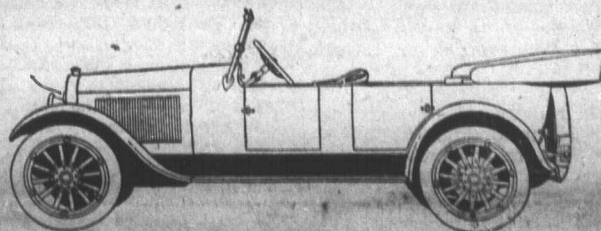
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