



VOL. 17, NO. 19

OCTOBER 1, 1943

CENTER  
SPREAD

### THE SOCIETY OF AUTOMOTIVE ENGINEERS SAYS THIS ABOUT THE WINTER WARTIME MOTORIST:

Service restrictions on mileage and speed can have adverse effects on motor vehicle equipment unless maintenance practices are modified to meet the change in operating conditions.

In general, operators who use up their ration in starting, short trip service will have to exercise greater care to avoid damage to their vehicles than operators who give their cars

enough sustained operation to get the engine thoroughly warmed and to give the battery a substantial charge. The problem presented is, of course, more serious in RATION than in maintenance, since the latter is a continuous process.

#### The Engineering Experts Warn:

##### The Cooling System

Complete loss of essential transportation will be the result of failure to have the cooling system completely serviced and protected from freezing temperatures.

##### The Electrical System

Low temperatures and shorter winter days place added work on the entire electrical system. This, added to the slow wartime driving causes batteries to lose their charge and subjects them to possible freezing and complete extinction.

##### The Engine

Excess crankcase sludge, rusty spark plugs, dirty air, oil and gasoline filters, gasoline, low operating temperature, improperly regulated valves, all cause performance and very wasteful use of wartime gasoline and oil and rapid wear out of vital engine parts.

For economical wartime winter driving requires free flowing lubricants, maximum protection in running parts. Winterizing now will help keep the car and conserving gas and reducing wear on hardwearing engine.

**Wheels—Brakes**  
Misalignment to front wheels and the deficiency in brake efficiency is noticeable while operating at slow wartime speeds. Servicing your car now will ensure the war to a minimum and give added Winter Driving.

Will be rolling from the production line is not known. It, therefore, is impossible to predict in advance the final of ice, snow, sleet and rain all work together to deteriorate a path.

#### Your Packard Dealer Protects:

The results of wartime driving have caused a revision in the time of doing, and a change in many of the maintenance operations a car requires to keep it in good condition.

Now, it is not a question of how little can be done to keep the car running good until trade-in time. But what must be done to assure essential transportation until the war is over and car production is resumed.

There are very definitely certain maintenance operations that must be done on a regular basis, as always; but that work that must be done to be sure of adding life to the car can only be determined through careful inspection.

For your convenience we are bringing to your attention, as is customer services which owners know must be performed on their cars. Mileage is their choice.

We feel certain you will not hesitate to have this work done immediately.

Now, we are here just as all shops are, and we may not be able to do just what you want it; but we will make satisfactory arrangements your convenience and give you your car during your presence. These important units will establish the need for doing work which the car's satisfactory operation will depend on.

Come in and have the seasonal preparation work done now a major inspection at this time we will work out satisfactory or at a mutually convenient time.

FRONT COVER

When Winter Winds Blow on Wartime Driving Conditions...



... a new type of car care is necessary

## WARTIME WINTER MAILING FOLDER

BACK PAGE

7 reasons why  
PACKARD  
isn't building  
motor cars

Packard-built engines are lighter all over the world... in seven different kinds of fighting craft. That gives you some idea of the volume and quality of Packard car production. Packard will continue this "all out" production without any break until the end of the war. This means that you will get one car after another. When the time comes, Packard will be ready to build more cars than ever... and better cars than ever, thanks to lessons learned in building fighting engines for the high speed precision conditions on a mass-production basis.

Buy War Bonds and Keep on Buying Them!

### FOR Easy STARTING AND Trouble-free WINTER DRIVING—

- Close and adjust carburetor for maximum mileage.
- Close and adjust spark plug and distributor points—for quick starting.
- Test battery and check voltage regulator—to assure winter starting.
- Close fuel pump access—for free flow of gasoline.
- Close and seal air cleaner—for better gas mixture.
- Check condition of valves and set standard—to reduce valve sticking.
- Set ignition timing—to take full advantage of present gasoline.
- Flush out and seal cooling system—to protect and freeze.
- Connect heater and install winter foot—for your comfort.

See & Light  
10000  
LARGE ONLY

Super Light  
10000  
LARGE ONLY

Protect the finish—  
—have a Packard  
Blue Coral Treat-  
ment.

See & Light  
10000  
Super Light  
10000

See Longer "See Life"  
—switch test and check  
—test wheel alignment.

See & Light  
10000  
Super Light  
10000

See Easy Starting  
—Change transmission  
all to winter grade.

See & Light  
10000  
Super Light  
10000

See Easy Starting  
—Change all filter oils  
—Change all filter oils  
—Change all filter oils

HOMETOWN PACKARD COMPANY  
106 MAIN ST. HOMETOWN STATE

This will give you a good idea of what the new winter war-time mailing piece is like. Notice the authoritative statement of requirements on page 2 and the friendly approach on page 3. Page 4 tells what Packard is doing on war work and the insert tailors the piece to your requirements. (See back page).

Actual samples of the piece in three colors will be sent out but in the meantime, you can be working out your prices and get all set for the mailing. The piece folds to fit a standard No. 10 envelope and you can be getting these addressed by using your own envelope. The piece is unusual and we feel sure, after discussing it with several distributors that it will do a real job for you. We suggest a staggered mailing. Mail Monday and Wednesday over a two-week period. Price with envelopes 2 1/4 cents each. Without envelopes 1 3/4 cents each. Imprinting extra.



## CRANKCASE SLUDGE

As the weather becomes colder you will find increasing indications of sludge in the oil drained from engine crankcases.

Most sludge is caused by the presence of water in the oil, and the water develops from the condensation of moisture in the crankcase. In normal driving the crankcase ventilating system disposes of this moisture—the efficiency of the system increasing with the car speed. When the car is driven only at low speeds the ventilation is not as efficient, and the sludge collection will increase rapidly, particularly in cold weather.

Naturally the collection of sludge is harmful. It may block the oil passages and the screen, and may cause rust and corrosion in the engine. If it plugs the return holes in the oil rings a bad overoiling condition will result. If the car *should* be driven fast the contaminated oil may cause serious bearing trouble.

Even in pre-war driving, there were always certain slow driven cars which developed the sludge condition. Present day driving has greatly increased the proportion of such cars and sludge has become a general problem.

The holder of an "A" book cannot change his driving conditions, but there are two helpful steps which can be taken.

1. The motor should be protected in cold weather so as to approach summer operating temperatures as closely as possible.
2. The oil in the crankcase should be changed frequently.

It is no longer safe to use the 1000 mile period as the only guide in making crankcase oil changes because this mileage may be spread over a period of several months. It has become general practice to recommend oil changes every 1000 miles or 60 days, whichever comes first.

This is a safe procedure during warm weather, and in many cases it is satisfactory during cold weather. There are some cars, however, which are driven under such unfavorable conditions that a bad sludge condition may develop in less than 60 days. In cases like this a maximum of 30 days between changes should be recommended. The condition of the oil which

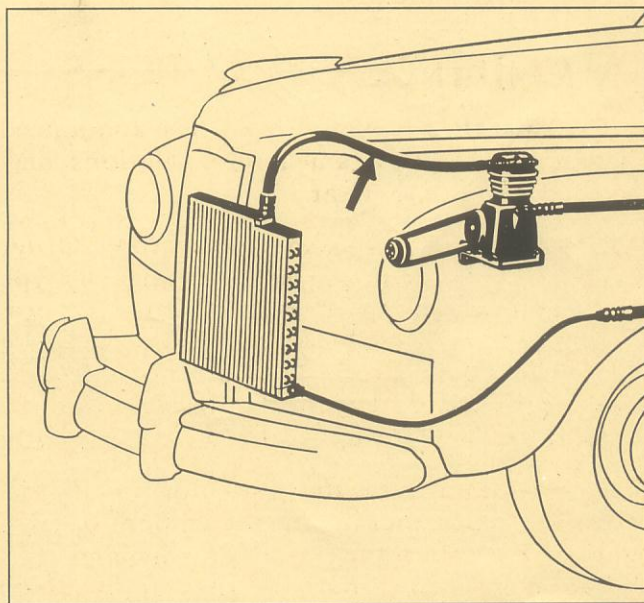
is removed should be your guide in advising your customer.

*Note*—Sludge is not always caused by water. When cars are driven hard and oil temperatures are high there is a sludge condition which may be caused by dirty of "broken down" oil. This, however, is not our present problem.

## SERVICING AIR CONDITIONER UNITS REFRIGERANT LEAKAGE

In checking for refrigerant leaks in Clipper installations pay particular attention to the high pressure gas line running from the compressor to the condenser, forward of the radiator.

This line passes over the steel arch which forms the upper portion of the radiator core cradle and in some cases it will be found that the tube bears tightly against the cradle. When this is the case any "rock" in the motor must be taken by the portion of the line between the compressor and the cradle, and the load on the connection at the compressor will be greatly increased. The connection may develop a leak.



Arrow Indicates Contact Point

This condition can be corrected by heating the cradle at the point where the contact occurs (after removing the line) and driving it down with a hammer far enough to provide a clearance. The movement of the motor will then be taken up by the full length of the line.



## AIR CONDITIONERS IN COLD WEATHER

If desired, the air conditioning system can be kept in operation during cold weather.

On the other hand, it is a simple matter to disconnect the compressor belt. When this is done the compressor does not operate during the period when it is not being used.

The removal of the compressor belt is not important as far as the slow driven, city operated car is concerned, but the benefit derived from removing the belt increases with the car speed.

The fan belt, particularly, is heavily loaded at the higher speeds, and its life will be increased if the compressor is disconnected on cars driven at higher than city speeds.

There is a further step which can be taken on all air conditioned cars. The system can be "pumped down" so that the refrigerant is stored in the receiver tank. This eliminates the possibility of leakage in the lines. When this is done the compressor belt should also be disconnected.

When the air conditioner is put into service in the spring it should be of course checked for leaks, and you should make sure that the compressor carries the proper amount of oil.

## ANTI-FREEZE SOLUTIONS

The War Production Board has announced that ethylene glycol anti-freeze solutions may be used in passenger cars.

The purpose of this modification of Order L-51 is to permit the reuse of permanent type anti-freeze which has been saved from the preceding winter. Such an anti-freeze may be diluted to an extent that it could not safely be used, and it would have to be discarded unless it could be brought up to the proper strength.

The modification order does not specify that there will be an increase in the amount of ethylene glycol produced and the demand will undoubtedly be greater than the supply. You will, we believe, wish to obtain as much as you can procure.

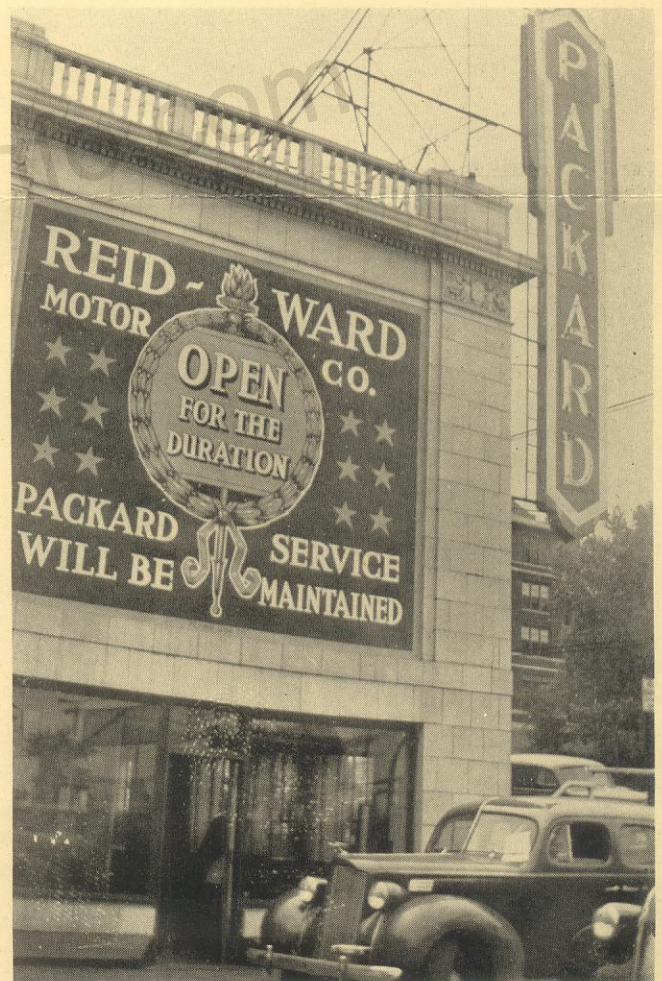
Your first responsibility will be to see that your regular customers are taken care of, and that those who have saved their permanent anti-freeze are given the opportunity to have it checked and brought up to the proper strength if an addition is necessary.

We suggest that you review the article in the Service Letter of May 15, 1943, particularly with regard to the use of a reinhibitor. Used anti-freeze may have lost some of its non-corrosive property and the reinhibitor supplied by the ethylene glycol manufacturer should be used to prevent any corrosive action.

Do not confuse the strengthening of the solution, which simply lowers its freezing point, with the addition of the reinhibitor, which does not affect the freezing point at all.

## KANSAS CITY

Kansas City has made excellent use of the "Open for the Duration" poster. They have reproduced it on their building in a space about 15 feet high and 18 feet wide. By locating it next to their neon sign and adding their firm name they are doing a real job of telling their customers of their faith in the future.



Taking time now to create confidence in your firm on the part of your customers will mean added profits both now and after the war.



## FOR *Easy* STARTING AND *Trouble-free* WINTER DRIVING—

- Clean and adjust carburetor—for maximum mileage.
- Clean and adjust spark plugs and distributor points—for quick starting.
- Test battery and check voltage regulator—to assure winter starting.
- Clean fuel pump screen—for free flow of gasoline.
- Clean and recoil air cleaner—for better gas mixture.
- Check condition of valves and set standard—to reduce valve sticking.
- Set ignition timing—to take full advantage of present gasoline.
- Flush out and seal cooling system—to protect anti-freeze.
- Connect heater and install winter front—for your comfort.

Six & Eight

**\$00<sup>00</sup>**

LABOR ONLY

Super Eight

**\$00<sup>00</sup>**

LABOR ONLY

*Protect the finish  
—have a Packard  
Blue Coral Treat-  
ment.*

Six & Eight

**\$00<sup>00</sup>**

Super Eight

**\$00<sup>00</sup>**

*For Longer Tire Life*

- Switch tires and check front wheel alignment.

*For Safe Driving*

- Check brake lining, adjust and add fluid.

Six & Eight

**\$00<sup>00</sup>**

LABOR ONLY

Super Eight

**\$00<sup>00</sup>**

LABOR ONLY

*For Easy Shifting*

- Change transmission oil to winter grade.

*For Easy Starting*

- Flush engine oil pan and add winter oil.

*For  
Assuring Clean Oil*

- Change oil filter element if over 6000 miles.

Six

**\$00<sup>00</sup>**

Eight

**\$00<sup>00</sup>**

Super Eight

**\$00<sup>00</sup>**

REPRODUCTION OF INSERT FOR SERVICE MAILING PIECE