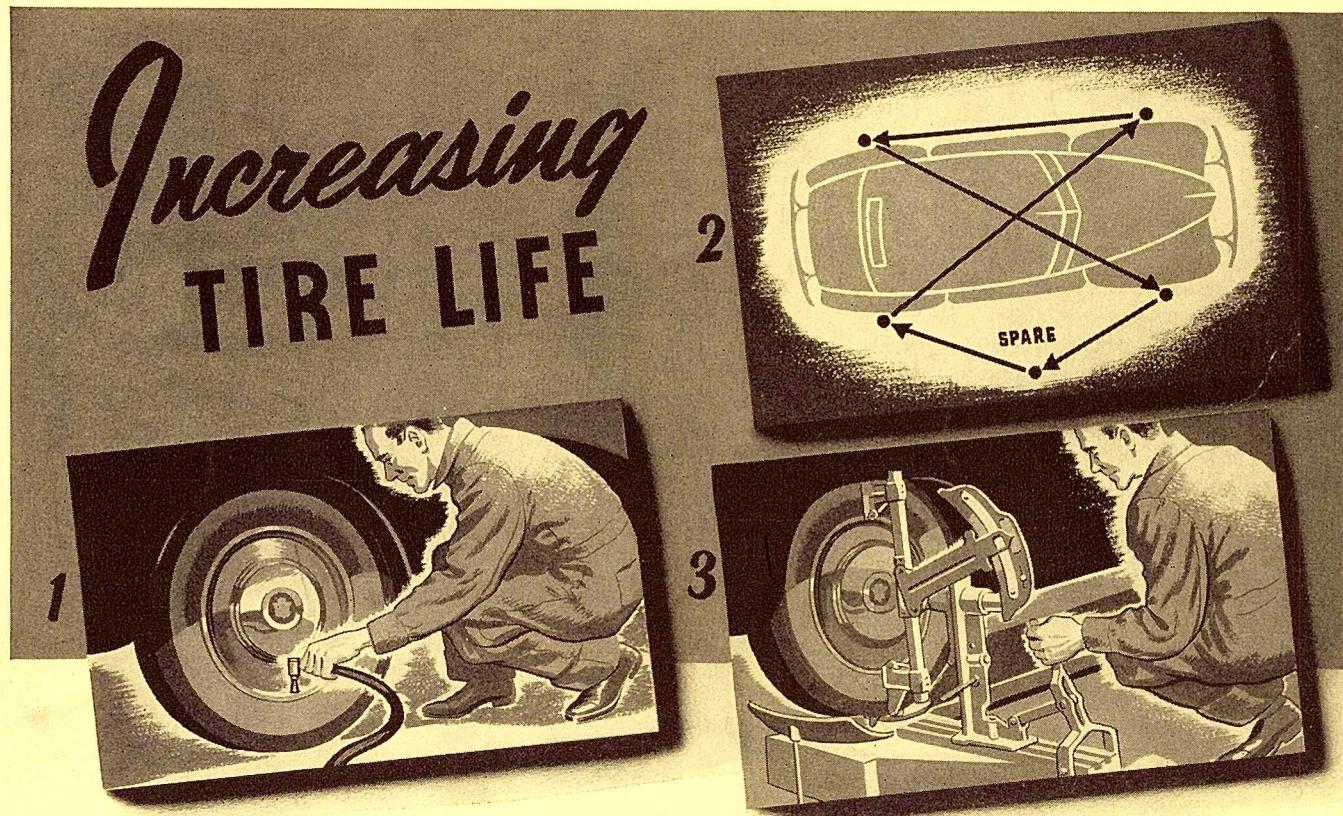


The CADILLAC SERVICEMAN

Volume XVI, Number 1

January-February, 1942



SINCE THE START of the war, there has been a remarkable change in the attitude of the average car owner toward use and maintenance of his automobile. Quite properly, conservation has become the keynote and owners can be persuaded to drive their cars in such ways and to purchase such service work as will contribute to conserving fuel and replacement units made of critical materials.

The foremost item of all requiring conservation is rubber; not alone because supplies of crude rubber have been cut off largely by the war, but because the rubber still available must be used for our mechanized war equipment. For these reasons, every Cadillac Serviceman should be prepared to promote rubber conservation by giving owners advice on all phases of the problem and by selling those maintenance operations which prevent excessive wear of tires.

Driving Habits

The most important single item in making tires give full mileage is proper driving habits. These, of course, are strictly up to the individual driver, and bad habits of long standing often cannot readily be corrected. Nevertheless, the Serviceman should know what constitutes good and bad driving from this standpoint, and should be prepared to discuss tire-conserving driving with all of his customers.

Briefly, owners should be cautioned against rapid starts, fast acceleration, high touring speeds, sudden stops, taking curves or corners at high speed, bumping curbs or hitting chuck holes, stones, or breaks in the pavement.

Correct Inflation

Maintaining tires at the proper inflation pressures is fundamental to securing maximum tire life. Both under-inflation and excessive over-inflation take their toll of needless wear.

A certain degree of over-inflation, however, is not only permissible but in

the interest of conserving rubber through prolonged tire life, it is now even advisable. In fact tire manufacturers have already inaugurated a national campaign to standardize tire pressures and to educate the public to the use of slightly higher tire pressures than were previously recommended.

For those of your owners who want to take advantage of this means of prolonging tire life and who are willing to sacrifice a slight decrease in the car riding comfort, it is permissible to use tire pressures that are two or three pounds higher than those recommended in the Shop Manuals and Owner Manuals.

Particular care must be taken, however, to caution owners of the larger series cars not to exceed the two or three pound over-inflation recommended, especially on their front tires; otherwise, steering characteristics may be affected unfavorably.

Rotating Wheels

Most Servicemen are familiar with the
(Continued on page 5)

Lacquer and Enamel Finishes Now Used Instead of Chrome

AS ALL SERVICEMEN probably know, car manufacturers have been restricted in the use of chrome for car part finishes in all cases with the exception of bumpers and bumper guards. To conform with these restrictions, Cadillac has produced an entirely new line of cars in which lacquer and enamel are used to finish parts that were previously chrome-plated.

Cadillac engineers and artists spent much time and effort in selecting the right finishes and the proper colors for the affected parts, with the result that the new cars not only present an appearance equal to the first 42-Series cars, but many believe that the present finishes add materially to the beauty and dignity of the new Cadillac cars.

No Mechanical Changes

Although the appearance of the new cars has been changed, no mechanical changes are incorporated.

To help Servicemen distinguish between the two series, all cars on which chrome was used extensively for finish on appearance parts will be referred to as the "42A" Series. All cars on which lacquer and enamel are used in place of chrome on appearance parts will be referred to as the "42B" Series.

A complete list of both the "42A" and the "42B" Series is shown below:

Series	Wheelbase	Starting Engine Number
42A-61	126"	5,380,001
42A-62	129"	8,380,001
42A-63	126"	7,380,001
42A-60S	133"	6,380,001
42A-67	139"	9,380,001
42A-75	136"	3,380,001
42B-61	126"	5,386,001
42B-62	129"	8,386,001
42B-63	126"	7,386,001
42B-60S	133"	6,386,001
42B-67	139"	9,386,001
42B-75	136"	3,386,001

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Emergency Express Charge Added to Each Shipment

EFFECTIVE January 20, 1942, the Rail-way Express Agency is making a new emergency charge of 10¢ on each express shipment. This additional charge is made on each shipment and not on each package in the shipment.

Parts Managers should accordingly consider the routing they specify on small orders and take advantage of the lower parcel post charges whenever advisable.

All Previous Sales Records Broken By Lubrication Plan Sales During 1941

ONCE MORE Cadillac Servicemen have smashed all previous records in the number of Cadillac Lubrication Agreement and Lubri-Plans sold nationally. During 1941 a grand total of 30,608 Lubrication Agreements and Lubri-Plans were sold. Surely such a record is worth boasting about.

Those distributors and dealers who set up these remarkable records for 1941 not only secured a great volume of business for themselves during last year, but they are also the ones in the best position to stand off the effects of the car sale restrictions during 1942 because they have the greatest possible number of "regular" customer contacts. Then, too, they have the largest number of owners who have already been sold on the benefits of Cadillac Lubrication plans and it will

thus be much simpler for them to obtain "repeat" sales when present plans expire.

In order to give due credit to those distributors who contributed most in establishing the national record for 1941, these leaders are shown in the two groups below.

Leading Distributors

In the first group are listed those distributors who have sold Lubrication plans at the rate of 25% to 5-year cars or better. The second group shows those distributors who have increased their sales in 1941 over 1940 by 30% or more. Distributors listed in either of these groups should be proud of the records they established during 1941 and should determine to exert still more effort to keep among the leaders for 1942.

By % to 5-Year Cars

Distributor	Lubrication Agreements and Lubri-Plans	% of 5-Year Cars
1,000 and Up		
San Francisco	2,418	37.1
Chicago	3,488	32.2
Philadelphia	1,117	27.1
Boston	1,461	26.8
Los Angeles	2,715	26.6
New York	2,541	25.3
500 to 1,000		
Buffalo	588	33.7
Pittsburgh	669	29.2
Cleveland	608	23.9
200 to 500		
Houston	494	47.7
Rochester	403	41.8
Baltimore	398	36.8
Minneapolis	337	31.4
Seattle	288	26.5
Atlanta	324	25.1
100 to 200		
Nashville	134	43.9
Louisville	198	41.9
Spokane	104	32.9
Allentown	128	30.1
Tulsa	172	29.5
Richmond	123	29.5
Wilmington, Del.	156	29.2
W. Springfield	178	28.9
St. Paul	137	28.9
Phoenix	126	26.3
50 to 100		
Saginaw	81	37.7
Atlantic City	98	35.8
Kingston	58	33.3
Norwich, Conn.	74	27.5
Wheeling	70	27.1
Reno	74	25.0
25 to 50		
Hazleton	34	40.5
Cedar Rapids	32	31.7
Albuquerque	43	25.3

By Increase Over 1940

Distributor	12 Mo. 1941	12 Mo. 1940
Brooklyn	1,186	714
Jacksonville	530	397
St. Louis	444	271
Dallas	304	177
Kansas City	292	193
Cincinnati	262	198
Portland, Ore.	259	128
Toledo	148	111
Akron	143	90
Albany	141	106
New Orleans	140	92
Bridgeport	128	81
Hackensack	125	71
Syracuse	105	81
Oklahoma City	89	44
Canton	71	54
Davenport	67	14
South Bend	63	47
Wichita	61	42
Omaha	59	35
Lima	59	38
Utica	51	32

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1942 Front Fender Baffles

REPLACEMENT front fenders supplied by the Cadillac Parts Department for 42-Series cars are furnished without the baffle or dust shield plate which extends down just behind the wheel.

Whenever a new fender is installed, the baffle on the old one should be removed and transferred to the new one. In the event that the baffle also is damaged, new baffles should be ordered along with the new fenders.

Lubrication Agreements and Lubri-Plans Are Good Customer Insurance Policies

DURING 1941 A SERVICE SURVEY was conducted in several large metropolitan areas to determine just which owners contributed the most to our total service volume. Surprising as it seemed, it was found that the owners of current series cars contributed by far the greater portion of the total customer service business.

With the sale of new cars completely restricted at the present time, therefore, servicemen are losing their best source of new customers and consequently they are apt to lose a large portion of their service business unless extra effort is put forth immediately to particularly hold on to *all* 41 and 42-Series owners, and as many owners of older series cars as possible, to make sure that they patronize authorized service stations regularly.

Making Regular Customers

There are many factors which contribute to the making of regular customers. Not the least among these are prompt and courteous attention, good workmanship, fair prices, kept promises, etc. However, the best means that Servicemen have of bringing owners into the service station regularly are the Cadillac Lubrication Agreement and the Cadillac Lubri-Plan.

Come Back Regularly

Owners of these plans will come back to the authorized service station regularly without any follow-up, whereas owners

who do not have such a plan require constant follow-up to keep them from drifting away to competition. Too much emphasis, therefore, cannot be laid upon the effort that should be put forth in selling as many Lubrication Plans as possible in 1942.

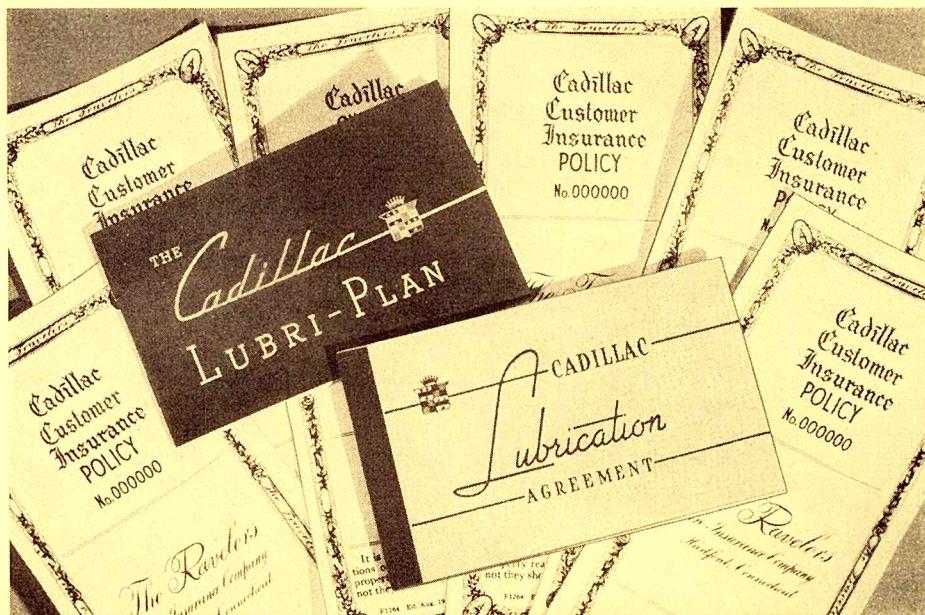
Sold to New Car Owners

In reviewing the Lubrication plan sales for 1941, we again find that by far the greater number of these plans were sold to owners of new cars. With no new car owner prospects in sight for 1942, therefore, Servicemen will have to rely more than ever before on "repeat" sales, and sales to owners who do not have a plan at the present time.

Over 30,000 Lubrication Agreements and Lubri-Plans were sold during 1941 and there is no reason why every one of these owners cannot be sold a "repeat" plan, if they are correctly approached on this subject when their present plan expires.

Your sales promotion effort in making a "repeat" sale should start immediately when the last coupon in the present book is used. In this way a definite step can be taken to once more tie the owner in with the authorized service station for another 12-month period.

Besides the economy of the plans, you can point out to owners that by the regular inspections made possible with his frequent contacts at the service station,



The Cadillac Lubrication Agreement and the Cadillac Lubri-Plan are good "Customer Insurance Policies." Every plan sold insures you against the loss of a regular customer

Shop Manual Corrections

SINCE the distribution of the 1942 Shop Manual some two months ago, many sharp-eyed Servicemen have been checking up on the editor and have discovered several items that require correction. Please mark these changes in your personal copy of the Shop Manual.

On page 11, the Series 67 gasoline tank capacity is incorrect. The correct capacity is 20 gallons, which is correctly given on page 141.

The body styles, as listed on page 18, are correct and complete, but some of the style numbers are incorrect. The correct style numbers appear in the 1942 Body Parts List, announced elsewhere in this issue.

The illustration of the disassembled front wheel mechanism on page 116 is incorrect in that it shows the type of brake seal that is used on 41-Series cars. The 42-Series brake seal is explained and illustrated on pages 39 and 40 of the October, 1941 "Serviceman".

The Bulb Data Chart on page 148 lists incorrectly the bulbs for the dome light and quarter light. Both of these should be changed to "15 candlepower, double-contact, Mazda No. 88".

you can forestall many costly major repairs and at the same time add many miles of trouble-free driving to his car.

Customer Insurance Policies

Another way of looking at the Lubrication Agreement and the Lubri-Plan is that they represent "Customer Insurance Policies" which insure you against the loss of regular customers. The only "premium" that you pay to obtain this policy is the little effort required to sell one of these plans to an owner. Surely this is but a small price to pay for a policy which provides such guaranteed benefits.

If Cadillac Servicemen throughout the country are to do their part in developing the maximum amount of customer business to help make up for the lost car sales volume, they should not overlook the importance of selling as many Lubrication Agreements and Lubri-Plans as possible.

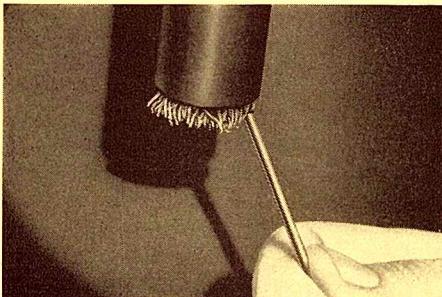
Do Your Part

Do your part during the present emergency by resolving *now* to endeavor to sell a Cadillac Lubrication Agreement or a Lubri-Plan to every one of your customers who does not have one at the present time and also to make sure that a "repeat" sale is made every time a present Lubrication Agreement or Lubri-Plan expires.

Body Quarter Drain and Door Drain Filters Are Now Available for Service Installation

ON ALL Cadillac Three-Window Sedans recently shipped from the factory, the drain tubing for the rear quarter window is fitted with a fibrous dust filter inserted in the lower end of the tubing. This filter consists of fibrous material bound together like the coarse bristles of a brush into a cartridge or cylinder $\frac{3}{4}$ " in diameter and $1\frac{1}{2}$ " long.

This filter assembly may be secured for installation in earlier Sedans of the 42 or 41-Series, if local dust conditions make this installation advisable. The filters are available from the factory Parts Division under Part No. 4076372, which includes



The filter may be removed from the tube by a hooked rod

removed to clean silt or sediment from the drain tubing, this can be done by inserting a hooked wire between filter and inside of drain tubing and pulling filter out.

(Continued on page 5)

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Easy Identification Marks On Service Differentials

THREE different service differential replacement assemblies having the 3.77 to 1 gear ratio are now in active use and carried by our Parts Department. In order that Servicemen and Partsman may have no difficulty in identifying or classifying these three assemblies, their part numbers, uses and identification markings are given below:

Differential assembly 3506424 is used on 41-61, 62, 63 and 60S, and on 42-61, 62, 63, 60S (except commercial cars) equipped with standard transmission. This assembly is identified by a daub of green paint on the carrier. It has no stamped marking.

Red Paint

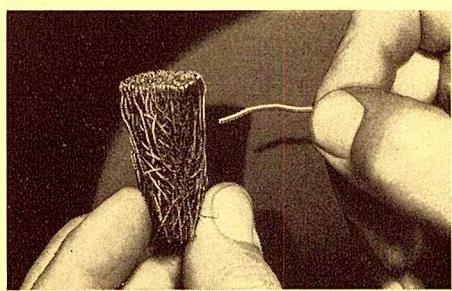
Differential assembly 3506573 is used on 41-67 and 75, and 42-67 and 75 cars (except commercial cars) with Hydramatic transmission and these same cars when equipped with a standard transmission with an economy axle. This unit can be identified in two ways: first, by a daub of red paint on the carrier and by a stamped number "7".

Differential carrier 1097325 now supersedes 3503747 and is used on 37-50 and 60; 38-50, 60, 60S; 39-50, 61, 60S, and 40-50, 52, 62 and 60S (except commercial). It has a daub of blue paint on the carrier and the differential case and is stamped with the numerals "377".

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Wanted

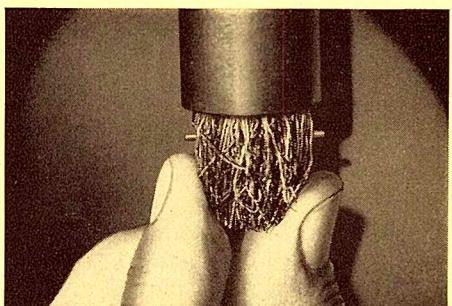
A 40-52 4-Door Sedan Body, in good condition. Please communicate direct with Mr. Whiteleather, Cadillac Oldsmobile Co., 225 Walnut Ave., N. E., Canton, Ohio.



Insert curved wire through filter before installing filter in drain tube

the filtering cartridge and a curved rust-proof wire retainer.

Installation of the filter assembly is accomplished by inserting the wire spring retainer through the cartridge until the ends of the wire protrude about $\frac{1}{8}$ " from each side, as shown in the illustration.



The filter may be easily inserted in the drain tube by pinching the tube slightly

Then filter and retainer are pushed up into the end of the drain tubing with the ends of the wire retainer curved downwards so as to engage the sides of the rubber drain tubing.

The filter should be pushed up far enough to clear the end of the drain by approximately $\frac{1}{2}$ ". It may be necessary to pinch the rubber tubing slightly 90° from the retainer wire ends to permit installation.

In the event that the filter must be

Hard Shifting on '41 Series May Be Quickly Remedied

A FEW CASES of sticking in high or low gear have been reported on 1941 Series cars equipped with standard type transmissions. This is usually caused by improper adjustment of the shift control levers and rods, or the presence of gummed lubricant between the second and high gear shifter shaft and the low and reverse gear shifter tube.

If either of these two conditions is present, there is a tendency for the shifter tube and shifter shaft to move simultaneously when shifting from one gear to another, thus making the transmission try to force itself into one gear while coming out of another gear. This may cause the interlock mechanism to lock both shifting levers, making it difficult or impossible to shift out of gear.

Move Levers By Hand

In some cases where there is misadjustment, in conjunction with binding or sticking, the transmission may be in gear even though the control lever is in neutral. When this occurs it is necessary to raise the hood and manipulate the shifter levers by hand to return the transmission to neutral.

Quite often when this shifting difficulty is caused by gummed lubricant, it can be easily remedied by lubricating the inner end of the shift control lever thoroughly with penetrating oil, making sure that the oil is forced between the spring washer and the low and reverse shifter tube. If this does not correct the condition, the complete shifting mechanism should be disassembled and cleaned and any scored surfaces should be honed off with a fine stone.

After the parts have been installed in the car, be sure that the transmission levers and rods are properly adjusted according to instructions given in the Shop Manual.

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1942 Body Parts List Mailed

THE 42-Series Body Parts List was completed in the latter part of January and copies were forwarded to Distributors and Dealers in sufficient time to reach them by February 2, at which time the new books become effective.

The new book does not contain any listings for enameled or lacquered "42B" Series parts that replace chrome plated parts used on the "42A" Series cars. A supplementary list covering these parts will be released later.

Parts Manager Weds Parts Manager

AFTER ACHIEVING a record equalled by a few men in the service field, Miss Nellie Sowders, Parts Manager for the Standard Auto Co., of Louisville, Ky., for the past 25 years, decided to retire from the automobile business and take up the assignment of "home maker" for Mr. Harold Johnson, Parts Manager of the Hoosier Cadillac Co., Indianapolis, Ind.

During her long term of service Miss Sowders has earned a national reputation in a field dominated by members of the male sex. The efficiency with which she operated her department was surpassed only by the neat, orderly and immaculate manner in which the department was kept.

Cupid Interrupts

Miss Sowders' reign of service, however, was interrupted by cupid in the form of a Cadillac District Parts and Service Manager who, traveling between Louisville and Indianapolis, managed to arrange a meeting with Mr. Johnson who soon persuaded Miss Sowders to change her name to Mrs. Johnson.

Consequently Louisville lost a Parts Manager, Indianapolis gained a "spare" Parts Manager and Mr. Johnson gained a wife who promised to keep the pantry cupboards well stocked with "fast moving" items.

We join Mr. and Mrs. Johnson's many friends in extending our best wishes to the newlyweds.

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New Toe-In Recommendations Improve Steering Control

AS A RESULT of a number of tests recently made by Cadillac engineers, in conjunction with other automotive engineers and equipment manufacturers, it has been found that better steering and longer tire life could be obtained if toe-in were set at 0 instead of at any previously recommended setting.

The findings of these engineers were so conclusive and the results to be gained were so beneficial that effective immediately the recommended toe-in setting for all Cadillac and La Salle cars is 0" to $\frac{1}{16}$ " when measured on the service floor with the car standing still.

Scuff-Board

When measuring toe-in on a "scuff-board" a 0" toe-in setting exists when identical readings are obtained on the "scuff-board" with the car going over it forward then backward.

Servicemen should change all copies of the Cadillac Shop Manual accordingly.

Craftsmen Notice

BECAUSE of the restriction on the manufacture of new cars it was found necessary to suspend the Cadillac Certified Craftsmen's League activity.

All the records will be kept intact, however, and should this activity again be resumed, full credit will be granted to members for all work previously done in this training program.

Increasing Tire Life

(Continued from page 1)

fact that tire wear is different on front and rear wheels, due to the different demands made on the wheels and tires by the steering action at the front and the driving forces applied to the rear wheels.

Because of these differences, it has long been known that tire life could be increased by interchanging tires from front to rear, and at the same time by changing them from the right to the left side of the car to reverse the direction of rotation.

For several years now, Cadillac has recommended that tires be rotated left to right and front to rear every 4,000 miles. In addition, those cars equipped with a good spare tire should include the spare tire in the rotation in the manner indicated in the diagram on page 1.

Some service stations have had this tire interchanging program in effect for some time now with excellent results. Those who have not stressed it before should do so now and should make every effort to sell regular tire rotation to all of their service customers.

Wheel Alignment

Properly aligned front wheels are essential to long tire life, or, stated differently, misaligned front wheels cause exceedingly rapid tire wear.

It is suggested that wheel alignment be checked on every Cadillac car every 5,000 or 6,000 miles, in order that misalignment can be promptly detected and corrected.

It is necessary that the caster, camber and toe-out on turns be correct to avoid excessive tire wear, but these items seldom require attention. On the other hand, the correct toe-in setting is vital to tire life and may require attention more frequently. (See article at left for new recommendations on toe-in setting.)

Wheel Balancing

The importance of correct wheel balance from the standpoint of satisfactory and safe car operation is universally known. It is equally true that wheel unbalance has a decidedly unfavorable effect on tire life, leading to excessive cupping and irregular wear.

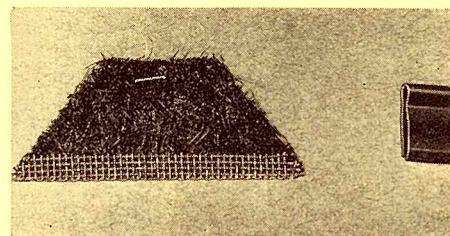
Servicemen should, accordingly, be on the alert for any indications of irregular wear and should balance front and rear wheels, as well as correct wheel alignment whenever need for such work is indicated.

Drain Filters Available

(Continued from page 4)

In addition, dust filters are also available for the door bottom drain hole on all 42 and 41-Series bodies of those cars operating in dusty areas to prevent dust or cold air from gaining entrance.

These filters are flat, broad, and triangular in design, as shown in the photograph, and are composed of fibrous material which is stapled and crimped to a fine mesh wire screening. They are available from the Parts Department under Part No. 4138571, and the retaining clip which is required for installation carries Part No. 4138572.

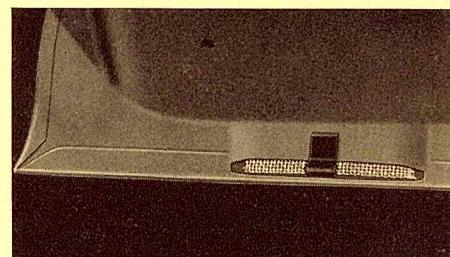


The door drain filter is triangular in design and is held in place by a retainer clip

Installation is made by pinching the retainer clip onto the center of the wide bottom edge of the filter.

Then with the screen side of the filter toward the inside of door, insert the filter up into the drain hole so that the clip engages the lip of the drain outlet, as shown in the illustration. Install filter so that its lower edge is flush with the bottom edge of the drain, otherwise it might be obstructed by the door bottom weather-strip.

This filter may be removed for cleaning simply by reversing the installation operations.

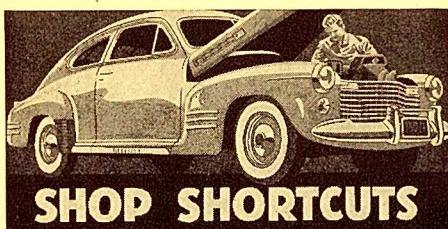


When properly installed the filter should be flush with the bottom edge of the drain

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For Sale

Two NEW parts bins, 3' wide, 7' high and 1' deep with 84 compartments. Price is \$36.50 each, net, F.O.B. Grand Rapids, Michigan. Anyone interested communicate direct with the Eberts Cadillac Co., Weston at Sheldon, Grand Rapids, Michigan.



IN THE NOVEMBER "Shop Shortcut" column, Servicemen were asked to submit their ideas on the procedure for removing rear wheels and tires from the 42-Series cars.

Numerous letters were received and, after considerable checking and study, the judges have decided that Mr. George Guest, of the Valley Cadillac Corp., Rochester, New York, sent in the safest and most practical suggestion. So to Mr. Guest goes our check for \$5.00 for his suggestion.

Mr. Guest recommends that first the axle housing be raised up and set on 18-inch horses and then the bumper be jacked up sufficiently high to clear the fender from the wheel. When raising the bumper, it is suggested that a block of wood approximately 4" x 4" x 12" be used on top of the jack pad to cut down the jack travel and to protect the finish of the bumper.

Other Practices

Several of the other letters received brought to light two practices which should be stopped at once. These are jacking up cars and supporting them by horses placed under the frame sidebars in front of the axle housing, and jacking cars up at the frame X member.

Since the first practice often results in damaged gasoline lines and the second practice is apt to cause personal injury because of improper support of the car, Servicemen would do well to discontinue these methods of jacking up the rear end of the car, and follow Mr. Guest's method.

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Correction

THE FAST idle screw adjustment for the Carter carburetor used on 42-Series engines was incorrectly given on page 45 of the November, 1941 "Serviceman", and on page 2 of the write-up that accompanied General Service Letter No. GS-399.

The correct setting of the fast idle screw is with .045" clearance between the throttle stop screw and the carburetor casting stop. This correction should be made in your copy of the literature mentioned above.

Lowered Octane Ratings of Passenger Car Fuels Bring New Performance Problems to Servicemen

EFFORTS to conserve anti-knock materials have already led to a reduction in the octane rating of both premium and regular grades of gasoline for passenger car use and it seems at the present time that further reductions in octane ratings are probable. This situation will of necessity change the customer's conception of satisfactory car performance, because present day high compression Cadillac engines rely upon the use of higher octane fuels for peak efficiency.

Servicemen, however, can do much to help owners overcome any objections from the use of these lower octane fuels by making the following recommendations.

Recommendations

The first thing is to make sure that the engine is properly tuned and that there is not an excessive deposit of carbon in the combustion chambers. Servicemen, however, should not retard the spark from the recommended settings inasmuch as the Cadillac engine is so designed that any variation from the recommended setting will result in too great a loss of power, performance and economy.

The next recommendation to be followed in the case of those owners of 40 and previous series cars who have been using a regular fuel, is that they use premium fuels which have a higher octane rating and thereby are free from ping.

For owners of 41 and 42 series cars, as well as for all previous model owners who cannot secure sufficient relief by using premium fuels, it will be necessary to reduce the compression ratio of the engine.

Reduce Compression Ratio

In case it is necessary to reduce the engine compression ratio to obtain satisfactory operation with the use of lower octane rated fuels, this can be done according to the following table:

	Reduction in Compression Ratio
One .020" shim	.3
Two .020" shims	.6
One additional head gasket	1.2

For example, if it were necessary to reduce the compression ratio on a 42-Series Cadillac car from 7.25 to 1 to 6.95 to 1, one .020" shim would be required under each cylinder head.

A good rule to follow in determining the reduction in compression ratio that is required is to remember that approximately .1 points in compression ratio is equivalent to 1.0 points in octane rating. In other words, if the octane rating of the premium gasoline available locally were reduced from 80 to 77, this three points

drop could be compensated for by a .3 reduction in the engine compression ratio, requiring one shim.

If the octane rating of a regular fuel drops from 76 to 70, this six points drop could be compensated for by a .6 reduction in the engine compression ratio, requiring two shims under each cylinder head.

Precautions

When installing shims, or adding extra head gaskets, it is well to remember the following points:

1. All gaskets and shims must be thoroughly coated with Cadillac Perfect Seal Gasket Paste to insure tight combustion chambers.

2. If one shim is to be installed under each head, it may be placed either above or below the head gasket.

3. If two shims are to be added, one should be placed below and the other above the head gasket.

4. Not more than two shims should be added under each head. If the compression ratio cannot be lowered sufficiently with two shims, two cylinder head gaskets should be used without any shims.

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Two Speedometer Cable Kits Fit All Recent Series Cars

SERVICEMEN and Partsmen alike will be interested to know about the new speedometer cable repair kits which have recently been made available. The new kits include the speedometer cable core and both end pieces. In addition, a small staking tool for attaching end pieces to the cable core is included in each kit.

There are only two kits required to cover most cars from the 350-Series through the 1942 Series. Kit, Part No. 846893, covers the 350; 35-50, 36-50 and 60 cars, while Kit, Part No. 846890, covers all cars from the 37-Series through the 1942 Series with the exception of the 37-90 Series cars.

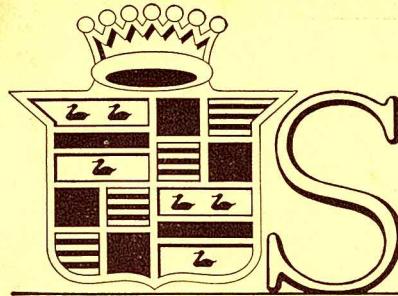
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Body Bulletin Mailed

FISHER BODY SERVICE NEWS Issue No. 2 of Volume No. 5, was mailed out to all distributors and dealers on December 16, at the time of mailing of General Service Letter No. GS-406.

"Fisher Body Service News", Issue No. 3 of Volume 5, is being mailed out with this issue of the Serviceman.

"Fisher Body Service News", Issue No. 1 of Volume 5, does not apply to Cadillac cars and will not be sent to Cadillac dealers.



Lewis
The CADILLAC
SERVICEMAN

Volume XVI, Number 3

May-June, 1942

Many Cadillac Accessories Still Available

THE LARGE NUMBER of letters received at the Factory from owners inquiring whether or not certain Cadillac accessories are still available indicates that many owners, as well as many servicemen, are unfamiliar with the true facts of the situation. While it is true that a few Cadillac accessories have not been available at certain times in the past, at the present time almost every item in the large Cadillac accessory line is available for sale.

The more important accessories now available in substantial quantities are Dash Heaters for the 1941 series cars, Automatic and Dash Heaters for the 1942 series cars, Seat Covers for both the 1941 and 1942 series cars, and the 1942 series Radios.

Sell Heaters Now

The temporary shortage of heaters for 1942 series cars opens up a large potential market for the sale of automatic and dash type heaters for these cars. Even though it is now the off season for heater sales, it will be found that many owners will be anxious to have a heater installed in their cars while heaters are still available.

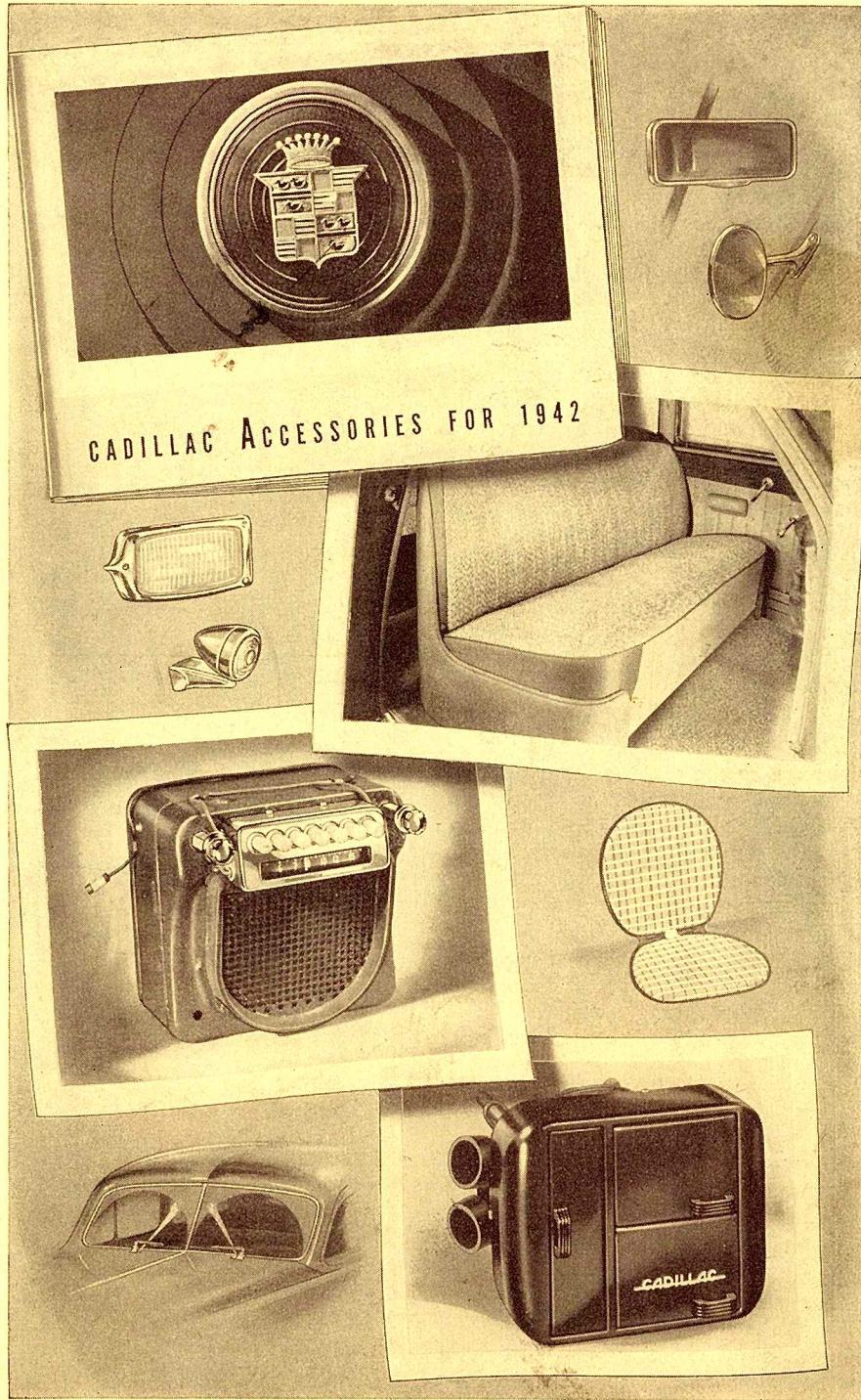
Perhaps the most popular and timely accessory for the Spring and Summer season is the Cadillac Custom-built Seat Cover. To develop sales on this item, Seat Covers should be displayed on the service floor where they can be inspected by owners. Repeat sales as well as sales to owners who do not have Seat Covers should be solicited at every opportunity.

With owners forced to keep their cars over a long period of time, they are anxious to keep the interiors neat and attractive and you will find many prospects for this aid to summer driving comfort.

Seat Covers Give Cooler Ride

Woven of strong, Sea Breeze material and reinforced with leatherette, the Cadillac Custom-built Seat Covers represent the ultimate in durability and appearance. Besides insulating the passengers of the car from the heat absorbing upholstery, these Seat Covers permit the circulation of air around the passengers' bodies, thereby giving a cooler and more comfortable ride.

Furthermore, the ease with which passengers can get in and out of a car equipped with Seat Covers adds much to their desirability. Not only



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Shock Absorber Service Will Help Prolong Car Life

By H. B. SMITH, Merchandising Manager, Delco Shock Absorbers, United Motors Service

NOW THAT CAR owners are paying more attention to keeping their tires inflated to recommended pressures to conserve them for greater mileage, it is more than ever essential to keep the shock absorbers in good operating condition.

It is obvious that an under-inflated tire absorbs more road shocks than a properly-inflated one. It is also obvious that an over-inflated tire does not take up much of the shock of minor bumps but passes it on to the shock absorbers.

Consequently, the commendable desire to save tires and conserve rubber—and at the same time enjoy comfortable driving—gives timely point and emphasis to selling shock absorber service more aggressively. Certainly the conservation of tires is not the only reason for keeping shock absorbers in good condition—but it does dramatize the need.

Ride Easier

Even the layman understands that before the development of hydraulic shock absorbers, road shocks were absorbed by the car springs only. With the introduction of hydraulic shock absorbers, engineers gave more thought to the comfort of the passengers. They increased the flexibility of car springs and developed individual coil springs for the front wheels and on some cars also for the rear wheels. With hydraulic shock absorbers that would control both up and down car body movement, the engineers were able to adapt this softer springing to the automobile, making the cars ride easier and handle easier on the road.

Thus, today, it might be said that the easier riding the car, the more work the shock absorbers must do, and to continue doing this work they must be kept in good operating condition. So, in a sense, in selling shock absorber service, you are selling riding comfort.

What are the main selling points for shock absorber service? The danger and possible added expense, not to mention the absence of riding comfort, with inoperative or faulty shocks, is an effective argument the station operator can use in selling periodic refilling and replacement of bushings and absorbers.

Improper Action

Improperly functioning shock absorbers can be extremely dangerous and result in:

1. Poor Riding: An inoperative shock absorber or one needing fluid does not give proper control of body movement. This results in continuous up and down movement of car body or short jerky movement which tires passengers quickly

on long trips and causes aching necks and backs.

2. Excessive Tire Wear: Rear wheels bouncing or dancing over bumps spin while in the air, causing the rubber to scuff when they again contact the ground. There is also a loss of traction, resulting in lower gas mileage.

3. Front Wheel Shimmy: Broken or inoperative shock absorbers increase front wheel shimmy and wheel tramp which is annoying and dangerous.

4. Body Sway: Body sway becomes worse when shock absorbers do not operate. The car body swings excessively to one side on curves, with consequent danger of turning over, especially while traveling at high speeds.

5. Steering Wheel Fight or Whip: Shock absorbers should dampen the jar a front wheel receives upon hitting a sharp bump. Inoperative shock absorbers do not do this and the jar is transmitted to the steering wheel and the driver's hands. This results in dangerous and tiring driving.

6. High Speed Vibration: High speed vibration is caused by the wheels leaving the ground, which builds up oscillation and results in terrific vibration at high speeds.

7. Spring Breakage: When shock absorbers do not operate, an additional strain is placed on the car springs. They have a

free, uncontrolled movement which can result in a broken spring.

8. Noisy Operation: Worn link bushings or broken links cause rattles. Broken or inoperative shock absorbers can also cause noise which is very annoying to the driver.

It does not require any great knowledge of shock absorbers to perform a thorough job of external servicing. A service station operator or dealer can learn to inspect and service a shock absorber in forty-five minutes.

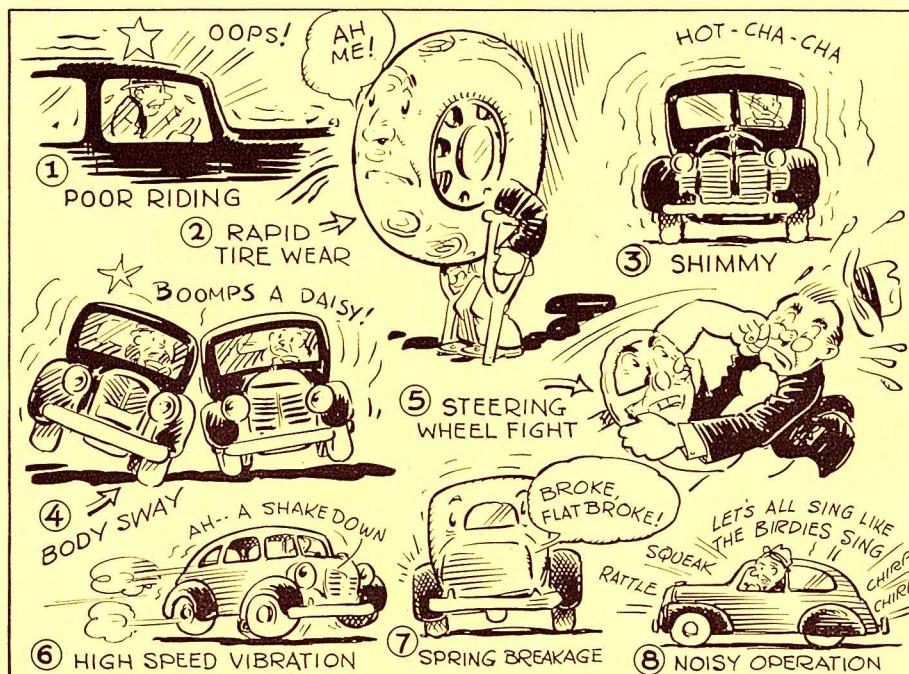
Service Operations

What are the main service operations most often required? When checking cars on the lift, servicemen should be on the watch for:

1. Empty or low fluid level and leakage.
2. Worn or broken links or bushings.
3. Broken, noisy or inoperative absorbers.

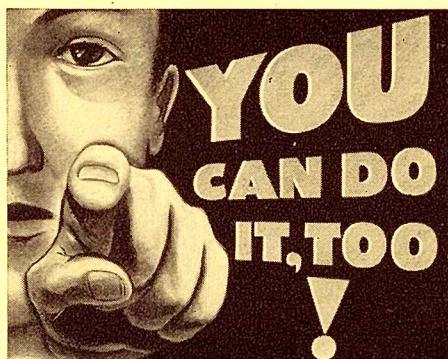
Empty or low fluid level is most important because car owners think that since the fluid is sealed in the unit, leakage is impossible. While leakage is not a common occurrence, leaks may develop in the arm and lever type at points where the arm shaft passes through the shock absorber body. Packings are used to prevent leakage around the shaft. However, if the fluid level falls below the top of the shaft, the top portion of the packing

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Courtesy of "BRAKE SERVICE"

Illustrated above are eight ways in which improperly functioning shock absorbers can shorten car life and cause discomfort to passengers.



WITH ALMOST 10,000 Cadillac Servicemen throughout the country there should be an abundance of ideas, some good, some not so good and perhaps some brilliant, on ways and means of increasing parts and service volume.

In order for these ideas to be of the most value, however, it is necessary that they be brought to the attention of all servicemen. Everyone, therefore, is invited to submit to the Cadillac Factory Service Department any idea or plan which he believes will help develop the sales of parts, accessories and service.

Proven By Tests

All plans and ideas submitted should have proven themselves by actual tests and wherever possible they should be accompanied by facts and figures showing the results obtained from them.

All ideas accepted for publication in the Serviceman or used in any way whatsoever by the Factory, will earn a \$10 award for the first person who submits the idea or plan.

Here is a good opportunity for everyone to do his bit in helping maintain Cadillac service for the duration and at the same time earn a substantial reward and national recognition for himself.

An Illustration

As an illustration of the kind of ideas wanted, here is one received from Mr. H. G. Kruse, Service Manager of the Forest Cadillac-Olds Company at St. Louis.

In an endeavor to increase his service volume during the usual slow months of February and March, Mr. Kruse went through his owner follow-up records and made a list of all Cadillac owners whose cars had accumulated more than 25,000 miles.

To these owners Mr. Kruse sent a special letter suggesting that the owners bring their cars in for inspection of the valves and piston rings so as to be sure the cars were operating as economically as possible.

In response to this letter, sixty-three owners brought their cars in during the months of February and March for piston ring jobs. In addition to this, a consider-

Extend Time Limitations on All Service Plans

MANY LETTERS have been received from owners inquiring about the time limitations on Cadillac Lubrication Agreements, Lubri-Plans and Mileage Extension Plans.

In keeping with the government imposed restrictions on tires and gasoline, these owners are naturally trying to hold down the number of miles they use their cars. Since all agreements under which they have purchased lubrication or other services, have mileage and time clauses, they are anxious in regard to their agreements being honored after the stipulated times expire.

In order to cooperate in this national emergency, therefore, the time limitations on Lubrication Agreements, Lubri-Plans, Service Contracts and Mileage Extension Plans should be waived in favor of the straight mileage limitations.

Paid In Advance

These owners paid in advance for certain services and it is good business that they be allowed to obtain these services over an extended period of time. In fact, as a gesture of good will, it may be a good idea to write a letter to all owners having any of these plans, advising them of your willingness to cooperate in extending the time limitations because of present conditions.

It should be remembered that the prime purpose of all of these plans is to maintain regular owner contacts and this point should be given preference over any strict application of time limitations.

able number of valve grinding jobs and motor tune-up jobs were obtained.

So to Mr. H. G. (Bud) Kruse, of St. Louis, goes our check for \$10.00 for the first idea submitted for this column.

Congratulations!



Mr. H. G. Kruse, Service Manager, Forest Cadillac-Olds Co., St. Louis, Mo.

Shock Absorber Service

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may become dry. This will cause shrinkage, resulting in leakage of the fluid. The packing is normally lubricated by the fluid and does not become dry when shock absorbers are kept filled.

Refilling shock absorbers should be a periodic service. Car owners never ask for this service. Service operators should remind car owners that such service is necessary if new car shock absorber efficiency is to be expected.

Simple Tests

But to get back to a few practical and simple tests for the service man to determine the approximate condition of a customer's shock absorbers.

Inasmuch as it is the function of the absorber to control spring action, a quick check to determine resistance can be made by bouncing each corner of the car. If the absorber is in need of service, the car will continue to rock after the weight exerted to depress it is released.

A more positive check which can be made on rear shock absorbers, is to disconnect the shock absorber arm and move it through a complete stroke to determine resistance. Irregular resistance, or moving easily part of the way, but with definite resistance for the remainder of the stroke, indicates low fluid level. Complete lack of resistance or too much resistance may indicate a broken or inoperative shock absorber.

Links, bearings and bushings in the arms of the shock absorber should be checked for excessive wear. This can be done by moving to determine side-play, tightness of bushings or wear in link pins.

Excessively leaking shock absorbers, indicated by fluid on the outside of the unit, should be replaced. Refilling will effect only a temporary correction, as internal pressure will soon empty the chamber.

Worn internal parts or loose outside connections may cause the absorber to be noisy.

Equipment

The equipment needed to perform external shock absorber service—at least on Delco Shock Absorbers—is extremely simple. United Motors Service has a kit which provides all necessary tools and parts to render complete external shock absorber service—and at a low cost.

Certainly the tool equipment to render shock absorber service is low in cost—and the business available as large as the ingenuity and business ability of the serviceman.

Here is an Opportunity for Cadillac Servicemen to Serve Their Country on the "Home Front"

WAR PRODUCTION BOARD

WASHINGTON, D. C.

April 20, 1942

IN REPLY REFER TO:

Bureau of Industrial Conservation
Room 1205 - Detroit Bank Building
Detroit, Michigan

Cadillac Motor Car Division
General Motors Corporation
Detroit, Michigan

Gentlemen: Attention: Mr. George W. Otto

Our War Production Industries throughout the country are vitally in need of many scrap and salvage materials, such as lead, rubber, steel, brass, copper, rags and paper, all of which can be reprocessed and used in the manufacture of innumerable War products. A large supply of these kinds of materials must be made available at once if our War production schedules are to be met.

We are convinced that much of this scrap material can be obtained from automobile dealers' service stations throughout the country, and we are certain they will cooperate whole-heartedly in this program if requested.

We believe, however, that these organizations are not fully aware of the seriousness of the situation, and the amount of good they can do by getting scrap materials into the proper channels. We are, therefore, asking your assistance in bringing this matter directly to their attention.

Of particular value to this program are discarded batteries and tires, worn out and obsolete parts, parts from wrecked cars, out-dated tools and equipment -- in fact, anything made of the materials previously mentioned. Gathering and disposing of these materials through the regular channels would be a most helpful and patriotic contribution to the War effort.

Will you please convey this message to your dealers?



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Very truly yours,
John D. McGillis
John D. McGillis
Executive Secretary for Michigan
General Salvage Section
Bureau of Industrial Conservation

The above letter needs no explanation. Do your part by gathering up and selling all scrap and salvage materials around the service station as well as at home.

Accessories Available

(Continued from front page)

will Seat Covers prolong the life of the upholstery in the car but they will also reduce wear and tear on passengers' clothing.

Get behind the sale of Cadillac Sea Breeze Seat Covers and watch your accessory sales volume go up.

Other Accessories

Other Cadillac accessories that should not be overlooked include Day-Nite Mir-

rors, Hinge Mirrors, Back-up Lights, Auxiliary Lights, White Trim Rings, Chrome Trim Rings, Windshield Washers, No-Rols, Polishes, etc., all of which are available in ample quantities. (Because of manufacturing restrictions, the Factory has not been able to ship all orders recently for Cadillac Wheel Locks.)

Display as many Cadillac accessories as possible on the service floor where owners can see them and do not pass up any opportunity of demonstrating to owners how Cadillac accessories can add to their driving comfort and safety.

Wheel Lock Key Codes Should Be Recorded

AS ANNOUNCED in the March-April, 1942, issue of the Serviceman, the recently developed Cadillac Wheel Locks are furnished with only one key because of restrictions established by the War Production Board. This makes it necessary that a record of the key code number be made at the time each set of Wheel Locks is sold in order that a duplicate key may be made up if the owner loses or misplaces his original key.

Perhaps the best place to record the key code number of these locks is on the Owner Identification Card. Other places where these numbers should be posted include the engine record card and the service history file.

Also when Wheel Locks are sold over the counter, the parts clerk should endeavor to obtain the owner's name and the engine number of the car on which the locks are to be installed. In this manner a permanent record can be made of the key code number in the event this owner requires a duplicate key.

When ordering single lock cylinders for Wheel Locks from the factory, it is necessary that the key code number be furnished so the lock can be made up to match the locks on the other wheels. Orders received at the factory without this information will be held up until the key code number is furnished.

Check Wheel Wrenches

It has also been found that in some instances there is not sufficient clearance around the wheel nuts after installation of the Wheel Locks to permit the proper use of the Wheel Nut Wrench furnished in each car. Each time a set of Wheel Locks is installed, servicemen should check the wrench in the car and if necessary grind a small amount of metal off the head of the wrench to give the proper clearance. The commercial type of wrenches used by mechanics, however, may be used on the Wheel Locks without interference.

Key Code Numbers

The locking cylinders for the Cadillac Wheel Locks carry "N" series key code numbers, information for which is not included in your Briggs and Stratton Code Book.

In order that Servicemen may have the necessary information to make keys for the Wheel Locks, a list of key codes applying to the "N" series was distributed with Parts and Accessory Bulletin No. 330. Additional copies of the key code sheets are available through the Factory Service Department.