Studebaker
SERVICE BULLETIN

THREE TYPES OF PERFECT CIRCLE PISTON RingSets COVER ALL NEEDS IN SERVICE REPLACEMENTS

please record this article on the Service Bulletin Reference page at the end of the Engine section *of your 1953 Passenger Car Shop Manual and on page 107 of the 2R Series Trucks Shop Manua 1.*

Studebaker parts depots now offer three types of perfect Circle piston ring sets for service installation in all Studtbaktr engines.

The three types of sets art: standard production-type sets, chrout top ring sets, and the new 2" in 1" chrome ring sets recently announced and described by the Parts and Accessorita division.

The differences betretn the three sets art britrly as follows: the standard production type sets art plain iron rings rithout any chrome plating; the chrout top ring sets are the same as the standard except that the contact surfaces of the top ring art solid chrout-plated for extra ring life and prolonged oil control; the 2 in 1 chrout ring sets include the chrome-plated top ring and have, as well, a chrout oil stopper ring consisting of tro steel rails rhich are chrome plated plus a cast-iron separator. A choice of two pressures of ring expander for use rith the oil ring is provided by the dual sets of expanders rhich are included rith each "2 in 1" set.

STANDARD, UNPLATED PISTON RING SETS

Part No.	Size	yodel Application
518102	Standard	All B-cylinder, 169.6
518103	.020" oversize	cu. in. engines with 3"
518104	.030" oversize	bore
522695	.040" oversize	
518114	Standard	All g-cylinder, 245.6
518115	.020" oversize	cu.in. engines with
518116	.030" oversize	3-5/16" bore
522702	.040" oversize	
530975	Standard	All V8-cylinder, 232.6
530976	.020" oversize	cu.in. engines with
530977	.030" oversize	3-3/8" bore
530978	.040" oversize	

In this issue

When TO USE STANDARD PRODUCTION-TYPE UNPLATED RING SETS

Unplated piston ring sets are used primarily to replace rings on a piston or pistons in relatively ner engines which have no history of abnorual oil consumption

CHROME TOP Ring SETS

Part No.	Size	Model Application
527033	Standard	All 6-cylinder 169.6
527035	.020" oversize	cu.in. engines with
527036	.030" oversize	3" bore
527037	.040" oversize	
530015	Standard	All B-cylinder 245.6
530016	.020" oversize	cu.in. engines rith
530017	.030" oversize	3-5/16" bore
530018	.040" oversize	
531664	Standard	All VI-cylinder, 232.6
531685	.020" oversize	cu.in. engines with
531668	.030" oversize	3-3/8" bore
531667	.040" oversize	

(continued on next page)

WHEN TO USE SETS WITH CHROME-PLATED TOP RING

The sets with the chrome-plated top ring will prolong positive oil control under heavy-duty service or in dusty areas as compared with regular, unplated top rings under similar operating conditions.

Chrome-plated rings, due to the hardness of their contact surfaces, may take a little longer to seat in than unplated rings. Therefore, their maximum effectiveness may not be apparent immediately after installation but steady improvement will accompany the initial period of operation.

Chrome-plated top ring sets are recommended for use in new engines or after a rebore job, especially where heavy-duty service is anticipated.

NEW 2 IN I CHROME PISTON RING SETS

Part No.	Size	Model Application
535906	Standard	All B-cylinder, 169.6
535907	.020" oversize	cu.in. engines with
535906	.030" oversize	3" bore
535912	Standard	All B-cylinder, 245.6
535913	,020" oversize	cu.in. engines with
535914	.030" oversize	3-5/16" bore
535909	Standard	All V8-cylinder, 232.6
535910	-020" oversize	cu.in. engines with
535911	.030" oversize	3-3/8" bore

WHEN TO USE 2 IN I CHROME PISTON RING SETS

These sets contain a solid chrome-plated top compression ring and, in addition, an oil ring assembly made up of two chrome-plated steel rails, one cast iron separator or spacer and two complete sets of expander springs, one "Normal" pressure set and one "Hi-pressure" set. Where taper of the bore does not exceed .006", the Normal pressure set of expanders is recommended, whereas the Hi-pressure set is recommended as **more effective in badly worn** bores.

In general, the 2 in 1 chrome piston ring set should be installed in all except new and reb ored engines. They are especially recommended where the engine is a known oil pumper but the bores are not to be reconditioned.

GENERAL INSTALLATION INSTRUCTIONS

Studebaker Perfect Circle solid chrome-plated piston rings are lapped during manufacture to facilitate quick seating and uniform contact.

In all piston ring installations, it is important that the cylinder bore top ridge be removed and any wall surface glazing be broken. Also, pay careful attention to the top piston ring groove condition for excessive wear and ring side clearance. Follow the instructions in this respect given in the instruction sheet accompanying every set of Perfect Circle piston rings. Reconditioning of the top ring groove is important in blowby and oil control and, if required, can be satisfactorily accomplished by use of the Perfect Circle manulathe tool and steel insert equipment available for this purpose.

SPECIAL PRECAUTIONS WHEN INSTALLING 2 IN I CHROME RING SETS

It is important that the oil control ring expander be properly installed in the ring groove so that the gaps of the hard chrome-plated rails are not positioned at a hump of the expander at the time the rings are compressed for installation. Should this happen, the inner points of the rail gap **may dig into the** hump of the expander, resulting in a locking effect and abnormally high unit pressure being exerted at the gap. This localized pressure may cause severe scratching of the cylinder wall during initial operation with resultant scoring of the pistons and cylinder walls. Distribute the oil control ring expander, separator and ring rail gaps as follows:

1. Place expander spring in ring groove with gap positioned above end of piston pin.
2. Install one steel section with gap approximately 90° from spring gap.
3. Install cast iron separator with gap approximately 90° from steel rail gap.
4. Install remaining steel section with gap approximately 180° from gap of first steel rail.

CAUTION: THE GAP IN THE STEEL RAILS AND THE GAP OF THE SEPARATOR MUST NOT LIE OVER OR STRADDLE ANY OF THE HUMPS ON THE EXPANDER SPRING.

CHARGES FOR INSTALLATION OF FORWARD BRAKE SHOE AND LINING KIT- 1953 COMMANDER AND LAND CRUISER MODELS

Please record this article on the Service Bulletin Reference page at the end of the Brakes section of your 1953 Passenger Car Shop manual.

In Passenger Car Service Letter No. 903, August 11, 1953 we provided that Part No.534941 Forward Brake shoe and Lining kit could be installed on 1953 Commander and Land Cruiser

models on a claim basis without prior authorization in the circumstances described in that Letter.

The Letter was reprinted in service Bulletin No. 280, page 2, together with the information that the new lining material used in the kit entered factory production in August 1953, since all 1953 Commander and Land Cruiser models produced since that tire have the new-type lining, we are withdrawing the blanket permission to install the part No. 534941 Forward Brake shoe and Lining kit on a claim basis without prior authorization.

It is reasonable to believe that 1953 Commander and Land cruiser models produced before August, 1953 which now require new brake linings have considerable mileage accumulated and that such lining replacement is the result of normal lining wear and may be charged for as a maintenance item. If there are special cases you feel are exceptions to this, we suggest you write for authorization before installing the Part NO. 534941 Forward Brake shoe and Lining kit on a c lain ***basis.***

CRANKSHAFT REAR MAIN BEARING OIL SEAL- V8

Please record ***this article on the Service Bulletin Reference page at the end of the Engine section of your 1953 Passenger Car Shop Manua l.***

Rear main bearing oil seals on V8 Commander and 3R Series trucks engines are obtained from two sources, victor and Brummer Studebaker Part No. 530311 covers the rear main bearing oil seal manufactured by both companies. Either seal may be furnished by Parts depots when filling orders for Part No. 530311.

The victor rear rain bearing oil seal differs slightly in appearance from the Brummer seal, but can be used interchangeably in pairs. The assembly procedure is the same for the victor seal as for the Brummer seal.

1954 FRAME ASSEMBLIES

Please record ***this article on the Service Bulletin Reference page at the end of the Frame section of your 1953 Passenger Car Shop manual.***

Frames used on 1954 models differ from those on 1953 models as follows:

W-F- Y Frames. Different engine rear crossaeaber which extends outward from frame giving additional support to the body under the front doors.

C - D Frames. Addit ional crossmember added replacing the first two body mounting brackets, Part NO. 531215, member is bolted to frame and **must be** removed for service work on transmission and clutch. This added member provides addit ional support as above.

when present stock is exhausted, 1 9 5 3 frames will no longer be available. special frames for service have been released which will service both 1953 and 1954 models. These **frames** will be furnished less the new crossmembers and will substitute as follows:

new NO.	old NO.	Model and Body style
535469	for 531908	14G & 15G, 4H & 5H- W-F - LHC
535471	for 531909	14G & 15G, 4H & 5H- W-F - RHC
535470	for 532560	4H & 5H - Y - LHC
535472	for 531911	4H & 5H - Y - RHC
535199	**for** 532573*	14G & 15G, 4H & 5H - C
535200	for 533112*	14G & 15G, 4H & 5H - K

• when this substitution is made for 1953 models, 2 pieces Of Part NO. 531215 Frame Body mounting Bracket • ust also be ordered.

.051" MAIN METERING JET FOR COMMANDER V8 CARBURETOR MODELS 6-112 and 6-113

Please record this article on the Service Bulletin Reference page at the end of the Gasoline System section of your 1953 Passenger Car Shop manual.

.051" Main Metering Jets for service use in Stromberg Model 6-112 and 6-113 carburetors are nor available through your parts Depot under Part NO. 533401x5. These slightly richer jets Say, at times, be required to compensate for a lean limit carburetor as evidenced by a hesitation or light miss, generally between 30 and 45 miles per hour, with the throttle held at a more or less constant opening.

Before jet replacement for such condition be sure that the engine is properly tuned and adjusted particularly as regards correct and uniform valve clearances and spark plug gap clearances.

POSTERSHOCKSMOTORISTS TO COOLING SYSTEM ACTION

Mailed with this issue of the service Bulletin is a poster furnished by The Dow Chemical company of Midland, Michigan.

we suggest you display this poster in a service departaent show window or near the customer reception area where all your service

customers will have a good opportunity to see it.

The poster is purposely designed as a "shocker." It is hoped that it will shock car owners into having their cars' cooling systems cleaned and rlushed this spring berore hot weather driving arrives .

The following news release prepared by Dow covers the spring cooling changeover well and may provide your service personnel with some timely reminders "

BACKGROUND INFORMATION FOR GOOD COOLING SYSTEM CARE

Such engine troubles as preignition, sticking valve lifters and increased wear may be due to poor cooling rather than oil failure, the public is being told this spring.

Modern high compression automobiles are more and more dependent on the cooling system for carrying excess heat away from the engine so that lubricants can operate satisfactorily, according to this information.

Automotive authorities are flatly stating that the cooling system is just as important for proper engine function as the lubrication system. Any build-up of rust in the engine block or head, and particularly around exhaust valve parts, acts as insulation causing local hot spots which may make it difficult for the lubricant to function properly.

Facts about these and other engine troubles which occur when the car's cooling system is neglected are being presented to the public to make them conscious of the need for a sound "summerizing" program.

Water, which is an ideal coolant in many ways, is, nevertheless, one of the principal causes of corrosion. The average motorist is familiar with rusting or corrosion of garden tools, water beaters, etc. However, he has paid little attention to the necessity of adding a rust inhibitor to the water which is used in the cooling system of his car.

Antifreeze, whether of the "permanent" or alcohol type, is designed specifically for freeze protection during winter months, when its heat transfer properties are more than satisfactory. However, in the hot summer months it is not as efficient a coolant as water. Furthermore, research engineers have found that the inhibitors are often ineffective alter one winter's use and will no longer protect the cooling system. The arbitrary addition of inhibitors to coolant mixture containing old antifreeze is not recommended because it is impossible to know what amount or what kind to add.

The public is. therefore, advised to make certain that old antifreeze is drained from the system in the spring and that, after flushin, clean water containing a suitable rust inhibitor is added.

Government authorities, oil companies and automobile manufacturers are supporting this nationwide educational campaign. some dealers (approximately one-third, according to a recent survey of over 600 dealers by The Dow chemical company) actually recommend to their customers that they leave antifreeze in their car's cooling system more than one year.

The opinion, "if it looks good it is good," is wrong. A clean flow may represent a coolant whose inhibitors are exhausted and which has left a rust deposit on the walls of the system, these authorities say. Most dealers recognize this and are in accord with this summerizing program.

Most dealers are taking advantage of the fact that summerizing offers them not only an opportunlty to secure lube jobs, but also sales of fan belts, hoses, thermostats, and related items. Not only does it result in increased profits to the dealers, but it lakes for satisried customers.

Materials for servicing cooling systems are available through your regular Studebaker Parts depot. Check your stocks and place your order.

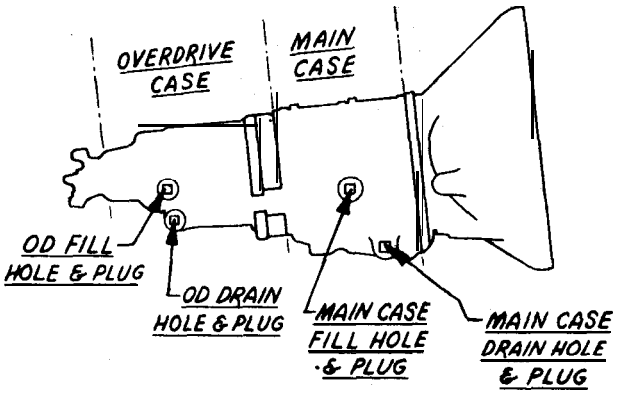
NOW IS THE TIME

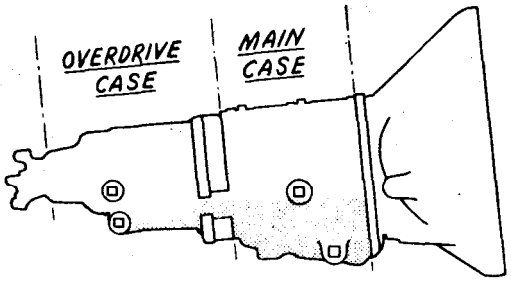
To See That Every

CUSTOMER GETS

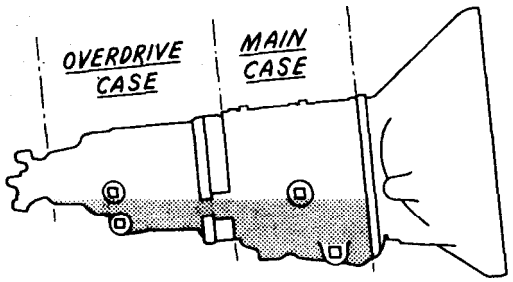
HIS CAR READY

FOR SUMMER





T00 RAP/D FILLING DOES NOT ALLOW ENOUGH TIME FOR L UBRICAN T TO REACH PROPER LEVEL /NOD CASE WHEN MA/N CASE APPEARS 70 BE FULL.



SLOW f/L ıl! ING THROUGH MAIN CASE ALLOWS LUBRICANT 70 REACH CORRECT LEVEL IN BOTH CASES.

REM I ND CUSTOMERS OF

Lubrication

Summer Viscosity OI L
Transmission &
Differential Lube

Cooling System Cleaning
Oil Filter Change
Spark Plug Check

FILL OVERDRIVE TRANSMISSION WITH CARE

Please record *this* ***article on the Service Bulletin Reference #age at*** *the end* ***of the Transmission section of your*** *1953 Passenger Car Shop Manual.*

If the overdrive transmission is operated with insufficient lubricant, there is *the* possibility that damage to the overdrive unit will result.

It is important, therefore, when refilling or adding lubricant to the transmission that certain precautions be observed to be sure that both the main case and the overdrive case are filled to the correct level.

Because the equalizing passage between the main case and the overdrive case is only 1/2 inch in diameter, the lubricant takes time to fill the overdrive case if the main case filler hole only is being used. The colder the lubricant is, of course, the longer it takes to flow into the overdrive case.

To ***f i 11 overdrive equipped transmiss ions,*** remove both the main case and overdrive case filler plugs. Use a slow rate of nozzle flow to prevent splash-back since the internal gear of the overdrive may prevent full entry of some types of lubricant nozzle. Fill the overdrive case until lubricant starts to run out the filler hole. This indicates the overdrive case is filled to the proper level. Insert the overdrive case filler hole plug loosely and fill the main case to proper level. Recheck to see that overdrive case level is up to the filler hole and install both filler plugs securely.

If the main case filler hole only is used, be sure to allow sufficient time for the lubricant to fill the overdrive to the proper level. This is best checked by having the overdrive filler plug out and adding lubricant until it begins to run out the overdrive filler hole. Then plug the overdrive filler hole and continue filling the main case to level.

STEWART-WARNER DIRECTORY

Mailed with this issue of the Service Bulletin is a copy of the 1954 Stewart-Warner Corporation official Listing of Authorized Distributors and Service Stations, both domestic and foreign.

on the first page of the Directory is given a summary of the Stewart-Warner warranty and the method of handling warranty service of Stewart -Warner products.

Distributors are indicated by an asterisk (*) immediately preceding the name.

REAR AXLE RATIO CHANGE - 15G,5H

please record *this article on the Service Bulletin Reference page at the end of the Rear Axle section of your 1953* Passenger Car *Shop Manua 1.*

In Service Bulletin NO. 284, page 8, we printed a list of standard and Optional rear axle ratios of 1954 Studebaker passenger car models. Some dealers have asked that we publish the starting serial numbers on which the 4.27 rear axle entered production as standard on champion custom sedan models with overdrive and the 4.09 rear axle entered production as standard on Commander Land Cruiser sodels with overdrive.

The effective starting serial numbers with which these rear axle ratios became standard are as follows:

1954 2-door and 4-door Champion Custom models with 4.27-l rear axle ratio entered production on overdrive equipped cars effective with Serial NO. G-1297688 (So. Bend) and G-929687 (LOS Angeles).

1954 Commander Land Cruiser models with 4.09-l rear axle ratio entered production on overdrive equipped cars effective with Serial No. 8369944 (South Bend) and 8838927 (Los Angeles).

SEALING GASOLINE TANK FILLER HOUSING - STATION WAGONS

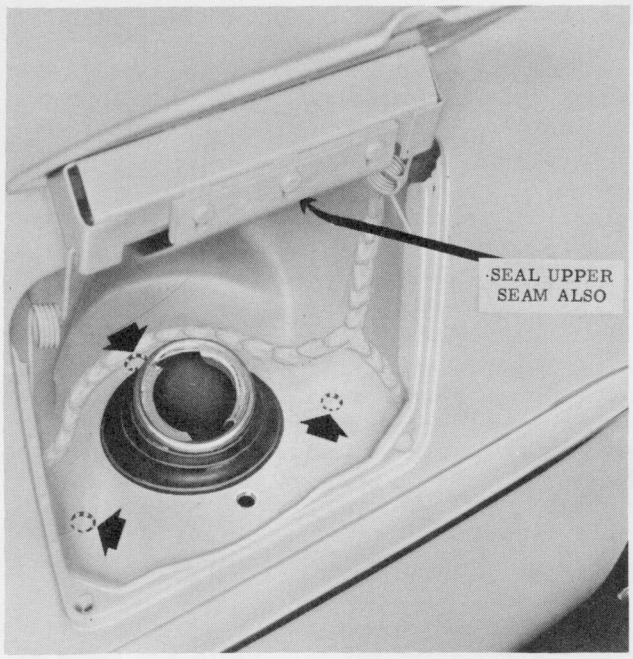
please record this article on the Service Bullentin Reference page at the end of the Body section of your 1953 Passenger Car Shop Manual.

If the event raw gasoline fumes are detected inside the station wagon models, first inspect for leakage at the gasoline gage tank unit, gasoline tank filler connection, and all pipe fittings and connections to the tank. It is also necessaryto inspect the seams and corners (top, bottom, and all sides) of the gasoline tank filler housing. If there are any openings whatsoever in these seams, joints, or corners, spillage resulting from overfilling or the tank may allow fumes to leak into the interior of the station wagon. It is essential that all the seams and corners of the gasoline tank filler housing be sealed airtight as outlined below and that adequate drains be provided to assure drainage of the liquid gasoline and water out or the housing as rapidly as possible.

Sealing Procedure

1. Raise the gasoline filler cover on the fender.

2. Clean the entire inside area of the housing to remove dirt and grease. Also flush the left rear fender from the rear wheel to the rear of the fender to remove any accumulation of dirt and grease. Be sure the two body drains at the rear of the inner fender panel are open.



3. The bottom of the filler housing should have four drain holes as shorn in the drawing. If only one hole is present, use a punch, approximately 18" long, that has been sharpened to a diamond shaped point and punch three additional holes as indicated by the broken outline of the proposed holes.

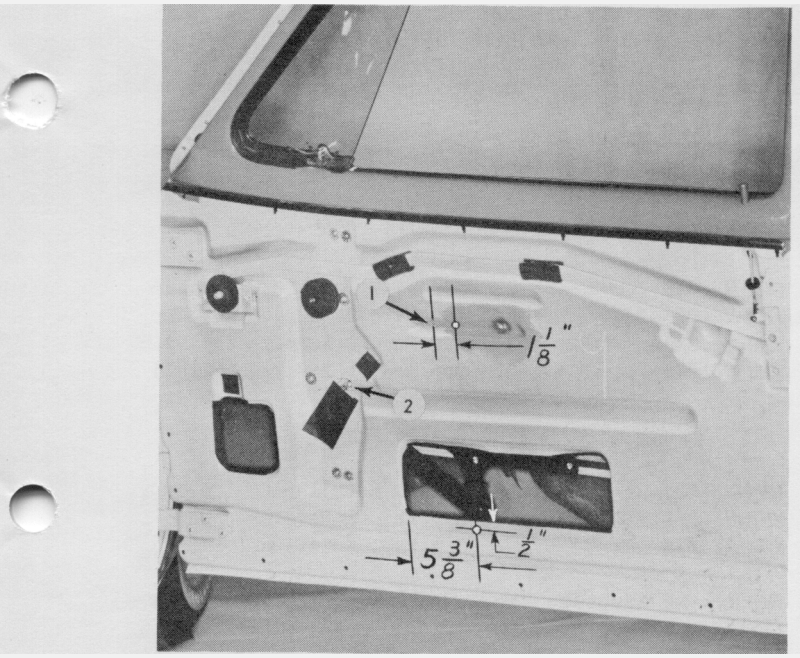
4. Apply a narrow bead of Mortite sealer along the inside of the filler housing against the body and the fender. Seal all Inside corners, cracks, and crevices; top, bottom, and sides of the housing. use a clear plastic sealer, such as windshield glass sealer (Permatex or equivalent) and brushacomplete covering over the Mortite sealer and let it flow out on to the metal approximately 1/4" as a protective covering to the sealing operation.

Mortite Sealer, Part NO. N-0960, is available from your Parts depot; get Permatex or equivalent rrom your local supplier.

ANTIRATTLER INSTALLATION IN FRONT DOORS PROTECTS GLASS AGAINST BREAKAGE - 14G. 15G, 4H, 5H SEDAN AND STATION WAGON MODELS

please record *this article on the Service Bulletin Reference page at the end of the Body sec tion of your 1953 Passenger Car Shop Manual.*

occasionally the inertia of the front door window regulator assembly is sufficient to crack the front door window glass when the door



1. ARM REST FRONT SCREW HOLE 2. STOP SCREW

is slammed shut. This may occur on 1953-1954 Sedans and Land Cruisers and on 1954 Station Wagons.

As a protection against recurrence of such damage, we recommend the installation of the Part No. 306574 Antirattler at the time of Installing the replacement glass.

To guard against the possibility of glass breakage on the other side or the car, we believe a Part No. 306574 Antirattler should be installed in the other front door at the same time. This antirattler is available through your Parts depot.

INSTALLATION OF ANTIRATTLER IN FRONT DOORS OF 1953-1954 LAND CRUISER, SEDAN, AND STATION WAGON MODELS

1. Remove arm rest, hardware and door trim panel.

2. Measure rrom front of the regulator access (large) opening along the top of the lower edge (5-3/8" rearward and 1/2" down). Center punch this location and drill a 9/32" hole through the inner door panel. See illustration.

3. Place the antirattler, Part No. 306574, against the inner door panel and align its lower hole with the 9/32" hole just drilled. The upper end or the antirattler should be placed against the flat section of the inner panel about 1-1/8" to the rear or the front arm rest attaching screw hole (1, in illustration). Center punch this location and drill a 9/32" hole through the inner door panel. See illustrat ion.

4. Install the antirattler on the inside or the inner door panel with the tapered end up. Secure the antirattler to the inner door panel with two screws, Part No. 1095 -#10-6, through the holes drilled and into the tapped holes in the antirattler.

5. Raise and lower the door glass to confirm proper alignment of the regulator arm contact with antirattler during its travel. The regulator mechanism will leave the antirattler at the top when the glass is within 4" of the fully closed position.

Station Wagon (D) Model Only

6. Check the regulator stop action and if the glass, when in its fully lowered position, is below the window opening at the rear install a nut, Part No. 279-#12, on the stop screw (2. in illustration) against the regulator. This will raise the glass at the rear approximately 1/2" If the regulator is equipped with an adjustable stop and the glass position is below the window opening, loosen the cap screw on the adjustable stop and shift it on the lower regulator arm as required to obtain the proper position. Tighten the adjustable stop cap screw securely.

W, F, Y, and D Models

7. Reinstall the door trim panel, arm rest and hardware.

CARBURETOR CHANGES - 15G, 5H

Please record this article on the Service Bulletin Reference page at the end of the Gasoline system section ***of your 1953*** Passenger Car ***Shop manual.***

In response to several requests from the field regarding the starting production serial number of the carburetor changes outlined in Service Bulletin No. 284, page 2 (Champion) and page 5 (Commander), we are printing this information below:

1954 Champion Custom sedan models: Model WE-2190-S Carter carburetor entered South Bend production effective with Engine NO. 1116433 and Los Angeles production with Car Serial No. G-929687. This carburetor differs from the Model WE-2108-Sin that the metering rod is one step leaner. The metering rod used in the WE-2190-S is Studebaker Part No. 534358 (Carter Part NO. 75-917).

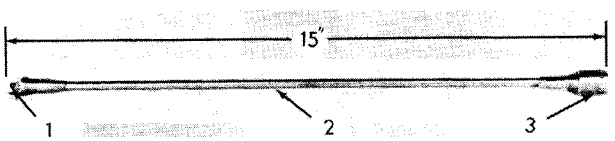
1954 Commander Land Cruiser models: Model WW-6-113 Stromberg carburetor became effective on South Bend with Engine NO. 300436, Los Angeles production with car serial NO. 8838927. This carburetor differs from Model WW-6-112B in that the main setering jet is .047" instead of .049:. All other 1954 Commander models continue to have the .049" main metering jet as standard.

TRUCK SERVICE Information

SOCKET WRENCH EXTENSION FOR INSTALLING REAR CAP SCREWS ON OIL PAN -- 245.6 Cu. In. 6-Cylinder ENGINES

please record this article on page 107 of your 2R Series Trucks Shop Manua 1.

Because of the location of the frame cross-member just beneath the rear cap screws or the oil pan on six-cylinder 245.6 cu.in. engines used in some models of 2R Series and 3R Series trucks, it is dirticult to use 3/8" drive wenches with either the standard or universal socket.



1. 3/8" Drive 2. 1/4" Drill Stock 3. 3/8" DRIVE SOCKET

By cutting a standard 3/8" drive extension in two and welding the pieces on either end or 1/4" drill rod stock so that the overall length is 15", you will find it much easier to remove and Install these oil pan rear cap screws. See illustration.

SPICER POWER TAKE-OFF FOR 3R16, 3R28, 3R17, 3R38 TRUCKS WITH T98 SYNCHROMESH TRANSMISSION

The table belor gives data about the various models of Spicer take-offs for Studebaker 3R16, 3R28, 3R17 and 3R38 model trucks equipped with Warner T98 Synchromesh transmission.

These power take-off units are sold by Spicer through local truck equipment dealers; they are not sold by Studebaker Parts depots.

Spicer MANUFACTURING COMPANY
Toledo, **Ohio**

Model	P.T.O. Rev. to 1000 Eng. RPM High	Low	No. Rev.	Gears	Rotation of P.T.O. Drive Shaft	Spacer
Tru-Stop OR Band TYPE Brake						
GNW-7	618			2	opposite Eng. Rot.	None
HNW-7	1094			a	opposite Eng. Rot.	None
RNW-7	720		576	3	Eng. Rot. & Reverse	23P6
XNW-7	889	372	604	2	Opp.Eng. & Reverse	23P24
Band TYPE Brake Only						
AANW-7	527			1	Engine Rotation	None
XNF-7	889	372	604	1	Opp.Eng. & Reverse	None
KNW-7	625				Opp Eng. Rotation	None

NOTE. --No adapters are required with these porer take-orrs.

KLEEN-CEAL PRODUCTS PROTECT GARAGE FLOORS

Whether your service department floor is concrete or terrazzo, painted or unfinished, you'll find on the enclosed list McGuire Kleen-Ceal preparations that will give it a good, durable protective coating and also make it much easier to keep clean thereafter.

The Kleen-Ceal process properly prepares the surface ror the finish material, which is furnished in seven colors and white.

The enclosed order form gives you all pertinent order data. Send orders direct to McGuire paint Mfg. co., 1620 West Monroe Street, Chicago 12, Illinois.