

# SERVICE C

PACKARD DIVISION

OF

STUDEBAKER-PACKARD CORPORATION



## Counselor

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### Cast Dome Cylinder Heads

#### 5540 Models

Beginning with vehicle numbers 5522-4481, 5542-4597, 5547-2596, the cylinder heads on all 320 cu. in. engines used in 5540 models will have cast dome combustion chambers instead of machined domes.

Along with the cast dome cylinder heads, other changes were incorporated such as carburetor, distributor and spark plugs. These changes only pertain to the engines equipped with the cast dome cylinder heads.

The following specifications and adjustments have been changed with the cast dome heads, all other specifications remain as published in the January, 1955, Service Counselor.

MODEL	5540
BODY TYPES	5522-5542-5547
<b>DISTRIBUTOR</b>	
Make and Type	Auto-Lite IBJ-4001 B
Ignition Timing	5°
Vacuum Advance (Maximum) (Crankshaft Degrees)	24° @13 in. Hg.
Governor Advance (Maximum) (Crankshaft Degrees)	32° @ 3500 Eng. R.P.M.
<b>SPARK PLUGS</b>	
Make and Type	Auto-Lite AG-5 Champion N-8
<b>CARBURETOR</b>	
Make and Type	Carter WCFB-2284-S
Float Drop	Pri. 15/32", Sec. 1/2"
Metering Rod No.	75-1170
Economy Step	.078"
Power Step	.0625"
Center Step Tapers	.072"
Main Metering Jet	Pri.—.098" (No. 40 Drill) Sec.—.055" (No. 54 Drill)

The different cylinder heads can be identified as follows:

1. The cylinder head with the machine dome has a casting number "440689", cast above the center exhaust port near the rocker cover gasket flange.

The threaded depth in the cylinder head for the spark plug is 7/16 inches. (Champion H-10 or H-11)

2. The cylinder head with the cast dome has a casting number "440854", cast above the center exhaust port near the rocker cover gasket flange. In the near future the letters "CD" will also be cast with the numbers "440854".

The threaded depth in the cylinder head for the spark plug is 3/4 inches. (Auto-Lite AG5 or Champion N8)

Listed are the carburetor and distributor assemblies used in conjunction with the cast dome cylinder heads, also listed are the details of the assemblies that are different.

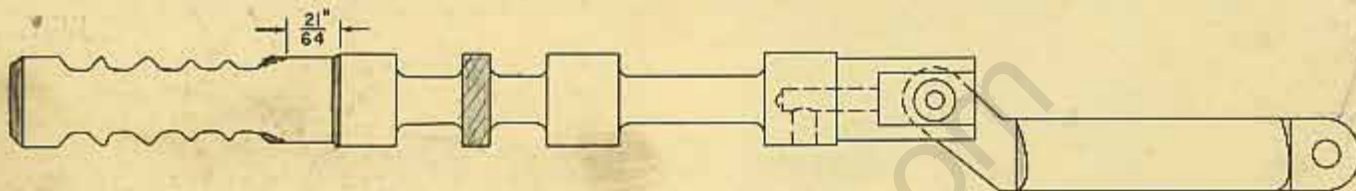
Part No.		
440867	Auto-Lite Distributor Assembly	(IBJ-4001 B)
474149	Distributor Vacuum Chamber	(IAZ-2023 LB)
474152	Distributor Vacuum Chamber Spring	(VC-171)
474150	Distributor Cam & Stop Plate	(IBJ-1021 LA)
474151	Distributor Governor Weight Springs (Set)	(IGB-130 AS)
440868	Motor Carburetor Assembly	(WCFB-2284 S)
474156	Carburetor Metering Rods	(75-1170)
474157	Carburetor Secondary Jets	(120-174)
440794	Spark Plugs (Auto-Lite AG-5)	
472178	Spark Plugs (Champion N-8)	

## Twin Ultramatic Parking Lock Sticking

55th Series

Some difficulty has been experienced in the parking lock release with the Twin Ultramatic transmission. There are two conditions that cause the parking lock to not release.

1. Difficult or unable to move the selector lever from the park position. Providing the linkage is adjusted properly and no outside interference is found, the probable cause is in the manual valve. Remove the manual valve and grind off the rear ramp of the neutral and park detent as indicated by the dotted line on the illustration.



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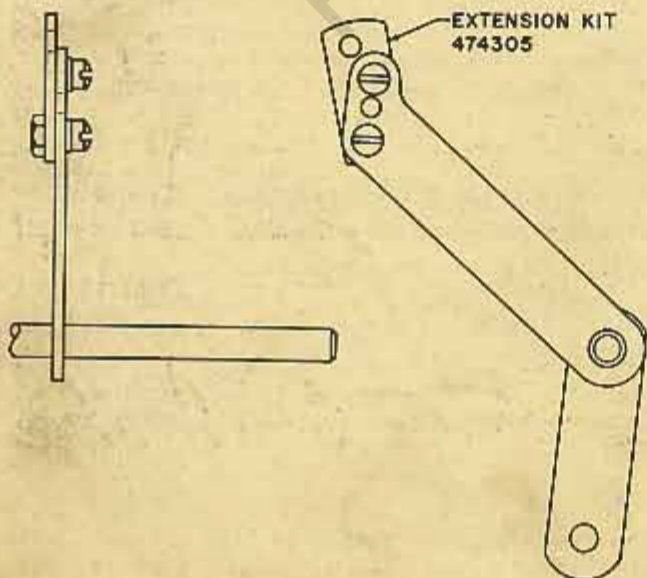
## Carburetor Throttle Control Shaft Lever Extension Kit

55th Series

Unexpected or unwanted kick-down into low range converter when driving at full throttle or near full throttle position may be encountered in some 55th Series Twin Ultramatic Transmissions.

Because of the stack up of tolerances in throttle linkage and adjustments, throttle valve kick-down position is being reached before the carburetor throttle valves are fully open.

Therefore, to take care of the slight variations, the linkage geometry can be changed by installing



2. The selector lever can be moved out of park position but the parking pawl remains engaged. This condition is generally accompanied by a severe "clunk" when starting in low or reverse.

The probable cause is that the surface on the parking lock gear teeth is rough or the pawl is binding on its shaft.

Remove the rear housing and parking lock gear.

Check the pawl for spring tension and for being free on its shaft. Install a new parking lock gear Part No. 474275 which has form ground teeth.

On some rare occasions, it has been difficult to move the selector out of park position when parked on a hill. The new parking lock gear with the form ground teeth will correct the majority of these cases.

an extension on the throttle control cross shaft lever as shown in the illustration.

After installing the extension, readjust the linkage as described on pages 52 and 53 in the Twin Ultramatic Section of your new 55th Series Service Manual.

Part No. 474305 Carburetor Control Cross Shaft Lever Extension Kit is available through your Zone Warehouse.

## Front Support Arm Pivot Pin Bushings

55th Series

Occasionally, rattles develop in the front support arm pivot pins and bushings when the correct caster setting is obtained with the vertical supports centered between the upper and lower support arms.

The threaded type pins and bushings are designed to provide a full bearing or thread contact only on the side which carries the load.

The space on the free side permits tilting the vertical support for caster adjustments and acts as a reservoir for lubricant which works itself around as the load shifts.

Because of the number of reports received of rattles in the front suspension, we are releasing service bushings with smaller pitch diameter, resulting in reduced clearance.

The new bushings are available through your Zone Warehouse as follows:

Part Number 6480148 Suspension—Front Support Pivot Pin Bushing (Upper) Eccentric, 2 required.

Part Number 373262 Suspension—Front Support Pivot Pin (Lower) Bushing, 2 required.

## Twin Ultramatic Transmissions — Stripped

54th and 55th Series

When the present supply of Twin Ultramatic Transmissions (Less Converter) is exhausted for the 54th and 55th Series Cars, the Warehouse will ship transmissions less the bell housings.

Therefore, only two Twin Ultramatic Transmissions will be required to service the 54th and 55th Series cars except the Caribbean (5588).

In using the old bell housing, it will be necessary to install a new bell housing bushing Part No. 410864 and a new seal Part No. 421112 before installing it on the new stripped transmission.

The new transmission assemblies (stripped) are listed as follows:

- 474144 Transmission Assembly (Twin Ultramatic) (Stripped) 5400-01-11, 5540-60.
- 474145 Transmission Assembly (Twin Ultramatic) (Stripped) 5402-06-13-26-31-33, 5580 (except Caribbean 5588)

Because of the limited number of 55th Series Caribbeans being built, stripped assemblies will not be supplied for this model. The assemblies for the Caribbean are listed for your ready reference.

- 474328 Transmission and Bell Housing Assembly (Twin Ultramatic) (Less Converter) 5588
- 470221 Converter Assembly 5588

## Twin Ultramatic Gearshift Indicator Pointer

55th Series

Some difficulty has been encountered in obtaining the desired indicator pointer alignment on the 55th Series Twin Ultramatic gearshift.

A new type pointer clamp, Part No. 472226, is being used in production and is also available for service.

The new type clamp can be installed in place of the present clamp. The pointer is held in position in the new clamp by two Allen set screws.

## Dust Leaks In Trunk Compartment

55th Series Packard

Illustrated in figure 1, is a new wider tail lamp body gasket for the 55th Series Packard models which will greatly reduce dust leaks in the trunk compartment.

When installing the new gaskets, other points should be checked for possible causes of dust leaks and corrected as follows:

1. Remove the lens retainer and lens from the tail lamp assembly. Fill the upper end of the lens center

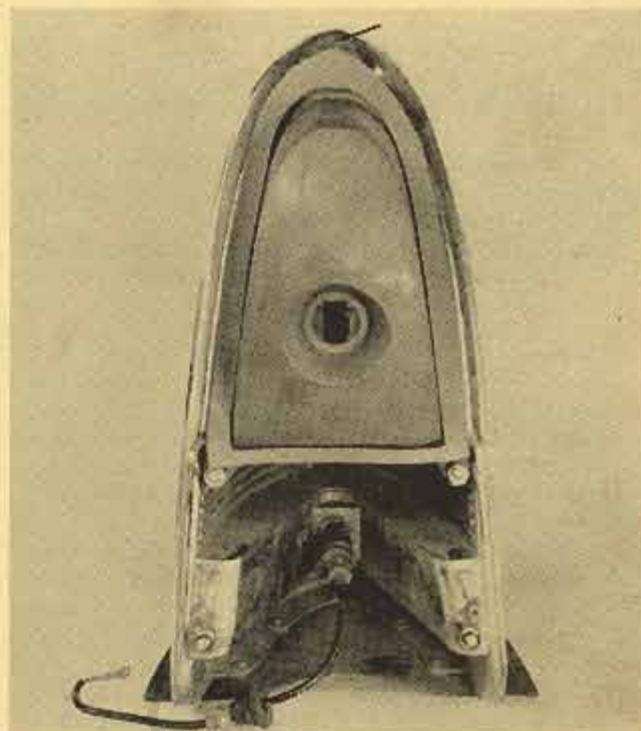


Fig. 1

chrome bar with dum-dum as indicated by the arrow in figure 1. Fill the bar slightly below the top edge of the lens to prevent dust from entering between the lens and the bar. Reinstall the lens and retainer and cement the new gasket to the retainer as shown. Pack some dum-dum around the threaded portion of the four studs.

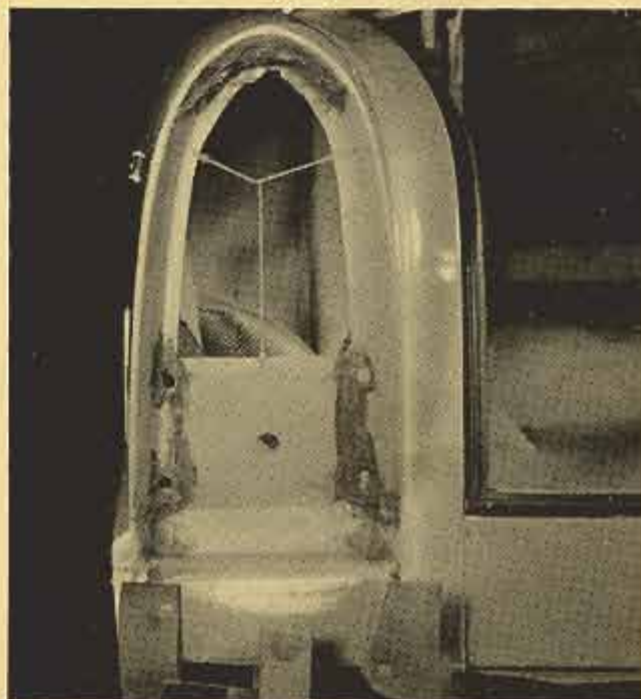


Fig. 2

2. Make sure that the gasket seat flange is smooth and even, see arrow figure 2. Inspect the box section in the fender below the tail lamp opening for pin

holes and seal with dum-dum if necessary. Fill the upper flange of the fender with dum-dum as shown to form a tight seal when the lamp is installed.

Fill all edges of spot welding where pin holes might be found.

3. Place the lamp assembly in the fender and apply a wad of dum-dum over the studs before installing the cupped washers and retaining nuts.

Part No. 6480212, Lamp Rear Assembly to Fender Gasket, is available through your Zone Warehouse.

## Radio Bonding Clips

### 55th Series

Electrical interference noises may be encountered in the radio on early production 55th Series Cars. It generally occurs when the radio is tuned to distant stations.

Production is installing radio bonding clips which ground the hood to the fenders. These clips are available for service and can be installed as follows:

1. Install one clip 2" forward of the left rear hood bumper. The clip snaps over the inner edge of the fender flange that forms the fender drain trough.

2. Install one clip 2" behind the right front hood bumper.

3. It is not necessary to scrape off any paint as the clips have saw teeth to provide a good ground.

The clips are available at the Central Warehouse under Part No. 472146, Radio Bonding Clip (2 required).

## Twin Ultramatic Low Regulator Valve

### 55th Series

A recent change in the low regulator valve has improved the "kickdown" timing, which reduces engine runaway between the time the high range clutch disengages and the low brake engages.

The drilled passage in the valve was increased in size from 1/16" to 3/32" to speed up the release of oil pressure in the top of the low brake thus permitting the brake to engage faster.

If this condition is encountered, inspect the low brake housing cover for distortion (Technical Bulletin 55T-17), check the throttle pressure for proper adjustment (23—26 lbs. at 400 RPM) before installing a new low regulator valve.

Part Number 470008 Transmission Control Low Regulator Valve is available at the Central Warehouse.

## Engine Oil Filler Tube Baffle

### 55th Series

A few reports have been received of oil splashing out of the engine oil filler tube on 55th Series engines, when the breather cap is removed.

This has been corrected in production by adding a baffle inside of the filler tube.

The new tube which has the baffle is available for service under Part No. 476062.

## Service Training Schools

### V-8 Engines

The purpose of the Service Training Schools is to make the Packard Serviceman the most accurate, conscientious craftsman in the automobile business. The ultimate goal is to make every Packard Owner a "satisfied Owner". The best way in which to obtain Packard Owner satisfaction is to give him the best possible performance of his car. This goal can be accomplished by giving the Owner quality workmanship in the servicing of his car so that it will be done right the "first time".

Packard Servicemen in all sections of the country now are attending V-8 Engine Training Schools.



V-8 Engine School—Charlotte, N. C.  
Instructor: Jack Tiller



V-8 Engine School—Atlanta Zone  
Instructors: Bill Hall and Jack Tiller



V-8 Engine School—Syracuse Zone  
Instructors: Hugh Wheeler and Ron Warner