

Studebaker

SERVICE BULLETIN

SEPTEMBER

NO. 267



1952

DISC-TYPE FUEL PUMP FILTER - H, 3H

Please record this article on the Service Bulletin Reference page at the end of the Gasoline System section of your 1951 Passenger Car Shop Manual.

Excessive Clearance Between Bowl Cover and Disc Filter

On Commander V8 models before Serial No. 8265525, where persistent carburetor flooding is encountered and dirt appears to be involved, it is possible that the disc-type filter is not seating properly against the fuel pump bowl cover.

This filter has an inner circular boss and an outer circular flange which mate against the inlet boss and the outer diameter of the recessed portion of the fuel pump bowl cover, respectively. When the bowl cover inner boss and recessed area are normal, the inner boss of the filter will contact the bowl cover inlet cover first, holding the filter outer flange slightly.

As the fuel bowl is tightened against the outer flange of the filter, the inner boss of the filter presses firmly against the bowl cover inlet boss and a firm seat is effected.

In some cases, however, it has been found that the bowl cover inlet boss does not project far enough to assure a firm seating of the filter at this point, clearances of .002" to .008" having been found.

Since the purpose of the firm seat is to force the fuel to travel from the bowl through the filter laminations (spaced at .002"), any clearance between the filter body and the bowl cover greater than .002" constitutes a by-pass, allowing the fuel to travel from the bowl cover inlet directly to its outlet (and into the pump proper) without forcing it through the filter laminations.

To test for this condition: Drop sediment bowl and filter. Hold the filter in a vise by the two knurled nuts. Place a straight edge across the outer flange of the filter. Use feelers to measure the space between the straight edge and the inner flange. If there

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is more than .040" between straight edge and flange, install a Vellumoid gasket as outlined below.

To correct this condition: Install gasket, Part No. 533145, over the bowl cover inlet boss before installing the disc-type filter. This gasket will hold the filter outer flange sufficiently away from its seat in the recessed area of the cover to assure firm seating when the bowl is installed and tightened.

Disc-Type Filter Cleaning

It is always desirable to clean the disc-type filter as it is with any filter. It is necessary periodically to remove dirt and gum collected by the filter to restore full filtering efficiency. If allowed to accumulate excessively, dirt and gum in the filter could lead to a diagnosis of vapor lock. The procedure is as follows:

1. Remove the filter assembly.
2. Loosen the two knurled nuts (do not remove

them). This allows the laminations to be free and loose on the posts.

3. Wash the filter assembly in solvent. Dry thoroughly with compressed air.
4. Retighten knurled nuts to firm finger tightness.
5. Reassemble filter unit in the pump and install pump bowl using a new bowl gasket. Check for leaks at the bowl seat.

DUST, WATER LEAK CORRECTIONS WINDSHIELD - 12GK, 3HK

NOTE.-- Please refer to Service Bulletin No. 266, Page 8 under Dust, Water Leak Corrections - Windshield. Since successful correction of leaks at the windshield depends largely in taking small sections one at a time and making a check of each section before moving on, it is thought advisable to reprint the affected paragraph below. We suggest that you cut out the following paragraph and paste it directly over the first paragraph, righthand column, page 8 of Service Bulletin No. 266.

There are two possible points at which the windshield can leak: (1) between the weatherstrip and glass and (2) between the weatherstrip and body flange. To find the point at which the leak occurs, spray water first across the bottom of the windshield then up each door post and then across the top of the windshield. The procedure must be done slowly, taking a small section at a time and making a check at each section. The point of entry may be at the top of the windshield but the water may follow inside the weatherstrip channel and come out at the bottom of the windshield. Also, water coming out at the right side may actually enter at the left side and follow the weatherstrip to the right side.

NEW TYPE EXTENSION CASE- ALL MODELS EQUIPPED WITH 1952 AUTOMATIC DRIVE

Please record this article on page 50 of your Automatic Transmission Preliminary Shop Manual.

Effective with the following automatic transmission serial numbers, a steel washer is being used on the parking pawl linkage (in place of the fiber washer) as outlined in Service Bulletin No. 264, page 1:

1951-52	Commander -	SCO 133019
1950-51-52	Champion -	SCH 37545
1950	Commander -	SCO 2119R

This will require that any extension case

assembly produced with the steel washer have that washer, or a similar washer of .067" - .071" thickness, reassembled in the linkage in the event of any repair work.

The fiber washer cannot be replaced by a steel washer because of differences in casting.

WRENCH RECOMMENDATIONS FOR V8 ROCKER ARM ADJUSTING SCREWS

Please record this article on the Service Bulletin Reference page at the end of the Engine section of your 1951 Passenger Car Shop Manual.

To prevent possible damage to wrenches, a heavy duty 7/16" end wrench is more suitable than the light weight or thin wrenches for removing and installing Commander V8 rocker arm adjusting screws.

The dimensional tolerances across the flats of the Commander V8 rocker arm adjusting screw hex. head are .428" - .4375". These tolerances conform to recognized standards for 7/16" hex. head screws or nuts. The standard opening of a 7/16" open end wrench of reputable manufacture is .005" over the nominal dimension of .4375".

Since the 7/16" hex. head is normally applied to 1/4" bolt heads and nuts it is recognized that the torque sometimes encountered in turning the 3/8" self-locking adjusting screws may exceed that which is desirable for the relatively small open end wrench. This is particularly true in so-called thin wrenches or the extra-thin tappet wrenches commonly used where lock nuts are involved. The average thickness of the head or open end of a thin type 7/16" wrench is .165" whereas the thickness of a regular or heavy duty end wrench of similar size runs from .225" to .240".

It is common practice among many mechanics to use the heavy duty wrench for Commander V8 rocker arm adjusting screws. Very little difficulty is thus encountered with springing and resultant wearing of the wrench jaws.

DESIGNATION PRINTING ON CHAMPION BRAND SPARK PLUGS

Please record this article on page 73 of your 2R Series Trucks Shop Manual and on the Service Bulletin Reference page at the end of the Electrical System section of your 1951 Passenger Car Shop Manual.

In the near future you will be receiving Champion brand spark plugs on which the designation printing is somewhat different from that on Champion brand spark plugs now in use. There is no change whatever in the construction,

function, or application of the spark plugs nor in the spark plug numbering system.

The printing change involves the use of a slightly larger type face for the brand name and spark plug model number as well as the deletion of the phrase "Reg. U.S. Pat. Off." and the addition between the brand name and spark plug model number of the letter "R" enclosed in a circle.

The differences in the spark plugs used in Studebaker engines are summarized below:

NOMENCLATURE **FOR CHAMPION ENGINES AND COMMANDER-6 ENG.**

Current Style: **CHAMPION J-7**
Reg. U.S. Pat. Off. Made in U.S.A.

New Style: **CHAMPION [®]J-7**
Made in U.S.A.

FOR COMMANDER V-8 ENGINES

Current Style: **CHAMPION H-10**
Reg. U.S. Pat. Off. Made in U.S.A.

New Style: **CHAMPION [®]H-10**
Made in U.S.A.

T TRUCK SERVICE Information

BRAKE SHOE GUIDE PIN AND LOCK FR2 BRAKES - 2R14, 2R15, 2R16A AND 2R17A

Please record this article on page 30 of your 2R Series Trucks Shop Manual.

In some cases the rear brake shoe guide pin spring washer (Part No. 524031), may become unhooked from the pin (Part No. 680512) and lodge between the drum and shoe, thereby scoring the drum.

To eliminate the possibility of this, the guide pin and spring washer have been replaced with a bolt, nut, and cotter pin as shown in

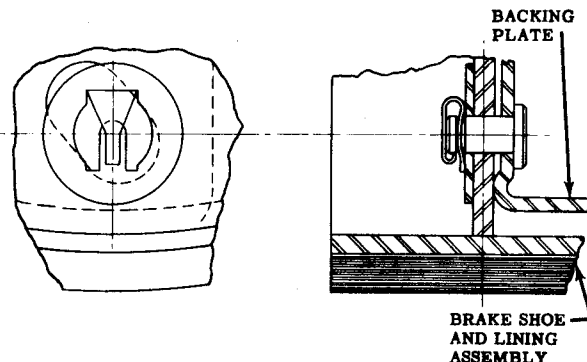


FIG. 1 - OLD TYPE

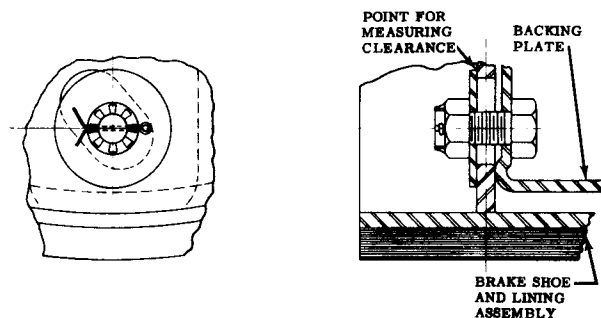


FIG. 2 - NEW TYPE

the drawings above.

IMPORTANT: When servicing FR2 brakes having the new guide bolt, tighten the nut as outlined below. This procedure will also prevent locking the brake shoe to the backing plate.

1. Tighten the nut until the shoe touches the backing plate.
2. Back off the nut one or two castellations to permit insertion of the cotter pin.
3. With a feeler gage, check the clearance between the brake shoe and the flat washer of the guide pin assembly at the point indicated in Fig. 2. The clearance should be between .007" and .014".

The new parts listed below can be substituted for the old type.

PART NO.	PART NAME
681296	Rear brake, shoe guide bolt
262-06	Rear brake, shoe guide bolt nut
3/32"x1"	Cotter Pin

KEEP

AIR CLEANERS

C L E A N

WHEEL RIM AND LOCK RING - 2R15, 2R16A AND 2R17A MODEL TRUCKS

Please record this article on page 225 of your 2R Series Trucks Shop Manual.

To improve the strength of the 20x600, RH5° type wheel assembly, Part No. 675263, used on 2R15, 2R16A and 2R17A model trucks, changes have been made in the metal thickness at the rim center, near the 5° taper, and at the shoulder where the locking ring attaches as shown in Fig. 3.

The locking ring, Part No. 675283, which completes the wheel and rim assembly, also was increased in thickness, and strength added by increasing the curvature of the bend near the rim locking surface.

There is no change in part numbers. Trucks produced after January 31, 1952 should be equipped with the improved wheel.

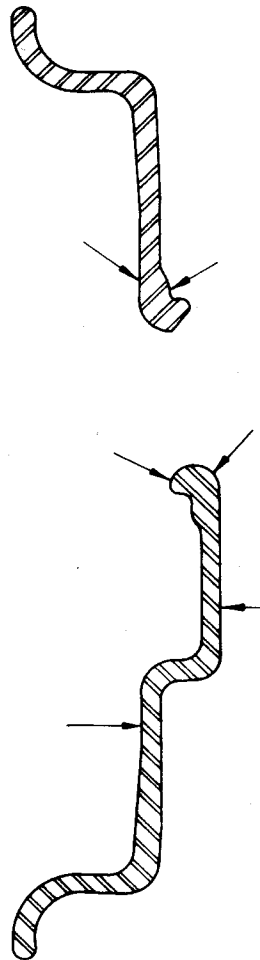


FIG. 3

CLUTCH DRIVEN PLATE - 2R Series Trucks

This article, which includes later information, cancels and supersedes the article in Service Bulletin No. 262, page 8, under the same title. Please record this article on page 49 of your 2R Series Trucks Shop Manual.

The hub of the clutch driven plate has been redesigned to permit the use of a wave washer which maintains a more constant and uniform pressure on the friction discs in the hub of the driven plate, and as a result a more uniform friction lag can be obtained.

A uniform friction lag is important because it dampens power impulses and engine vibrations to a point where they are not transmitted to the transmission and drive line assemblies.

This type of clutch driven plate entered production effective with Engine Nos. 1R-123124, 2R-13404, 4R-43335, and 6R-11096.

Stabilized clutch plates of this type replace the clutch driven plates previously available for service. The part numbers and model applications are:

PART NO.	PART NAME	MODEL APPLICATION
681073	Clutch Driven Plate	2R5, 2R10 and 2R15 equipped with 4-speed transmission
681074	Clutch Driven Plate	2R5, 2R10 equipped with 3-speed or FW/OD transmission
681066	Clutch Driven Plate	2R6, 2R11 equipped with 3-speed, 4-speed, or FW/OD transmission 2R14, 2R16A, 2R17A equipped with 4-speed transmission

REAR AXLE ASSEMBLIES INSPECTION AND CLEANING

Please record this article on page 177 of your 2R Series Trucks Shop Manual.

NOTE.--The article that follows is a reprint of recommendations for cleaning and inspecting rear axles. It was first published by the Fisher-Detroit Axle Company of Detroit.

The outside of axle assemblies should be periodically cleaned and inspected to determine: (1) Cause of any lubricant leaks; (2) Oil seal conditions; (3) Breather operation; (4) To afford a cooler running assembly.

Assemblies can be easily and quickly cleaned using a putty knife to remove deposits of caked dirt. A wire brush may be used to clean a particular part of the assembly when close inspection is advisable.

The cleaning interval should be no longer than the interval of rear axle lubricant changes. The assembly should be thoroughly cleaned and inspected when making seasonal lubricant changes, particularly from light winter to heavy summer grades.

1. Look for lubricant leaks. The source of lubricant leaks can be easily determined if the assembly is clean. Tighten all cap screws and stud nuts to the proper torque. Be sure all drain plugs, bolts and studs are tight in the housing. Replace gaskets if lubricant leaks continue. Be sure mating surfaces are flat and free from burrs and nicks.
2. Inspect oil seals. Clean dirt from around wheel and pinion seals. Thoroughly clean

spindles, sleeves, oil seal wipers and oil slingers at wheel bearing or brake service intervals. This will lengthen oil seal life by reducing the abrasive action of dirt and grit.

2. Inspect the breather for proper operation. Be sure it is not plugged or caked with dirt. Thoroughly clean the housing area around the breather so the assembly can be removed for complete inspection. Oil seal

life, lubricant level and lubricant temperatures depend on breather operation to some extent.

4. Clean housing. Caked dirt on the outer surface of the assembly acts as an insulator and prevents maximum cooling. Scrape dirt from forward and upper sections of the housing and from irregular surfaces of the drive unit. Be sure engine exhaust is directed away from all sections of rear axle housing.

BRAKE BOOSTER AIR CLEANER - 2R14, 2R15, 2R16A, 2R17A

Please record this article on page 30 of your 2R Series Trucks Shop Manual.

Effective with Truck Serial Nos. R16A-38997 and R17A-30443, the brake booster air cleaner has been modified as shown in Fig. 4. The new

type air cleaner is much easier to service since it can be disassembled by removing the hairpin-type retainer. Fig. 5 shows the former type air cleaner for comparison purposes. This air cleaner assembly is interchangeable with that used up to this time.

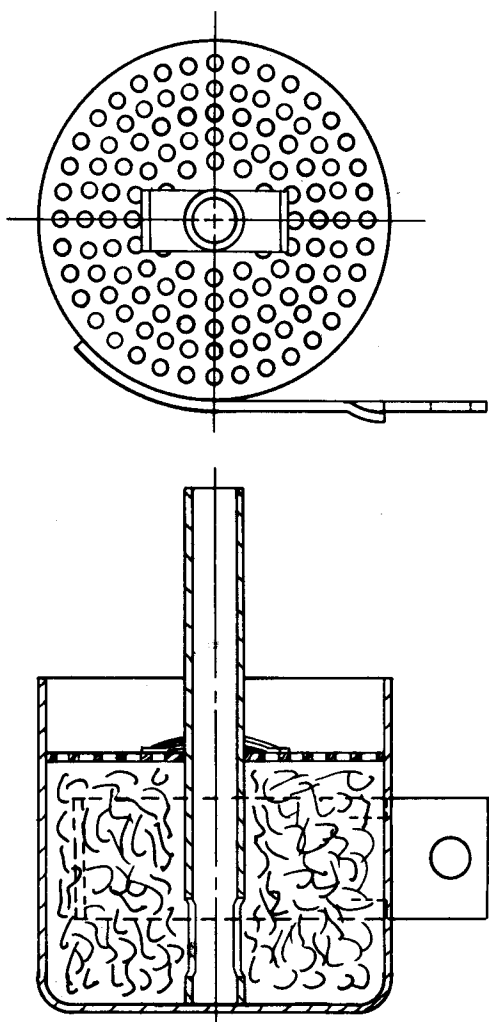


FIG. 4

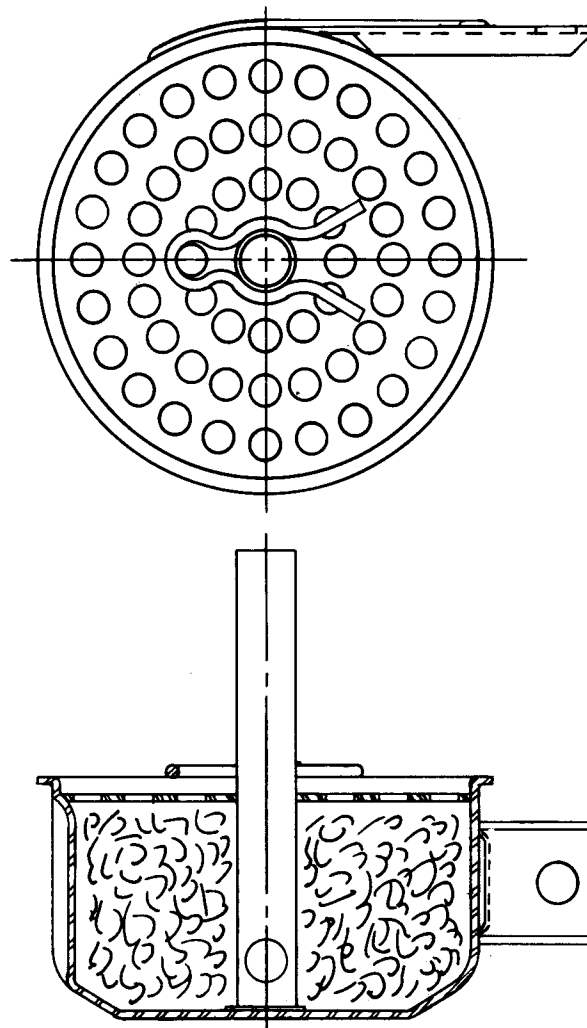
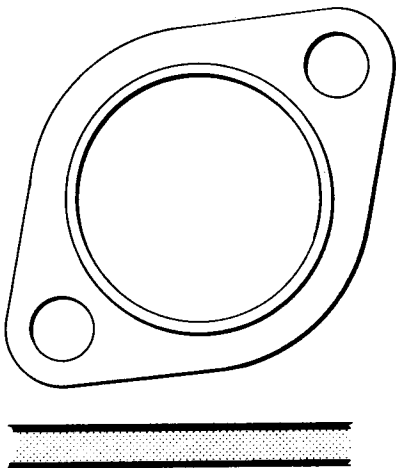


FIG. 5

STEEL-BESTOS EXHAUST GASKETS



THIS IS A TERNEPLATE OR COPPER-ASBESTOS GASKET. ONE PIECE OF ASBESTOS SANDWICHED BETWEEN TWO LEAVES OF THIN COPPER OR TERNEPLATE.

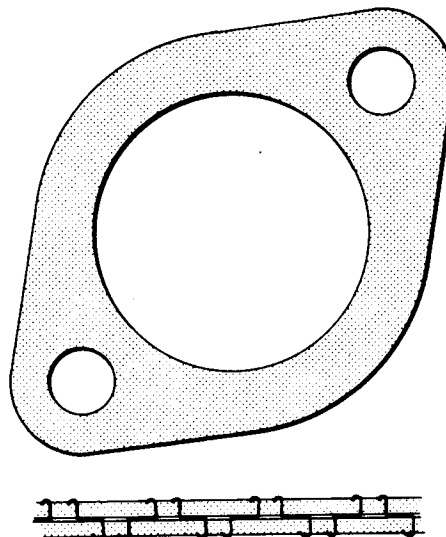
STEEL-BESTOS IS BEST FOR EXHAUST FLANGE GASKET ON SIX CYLINDER IN-LINE ENGINES

Please record this article on page 107 of your 2R Series Trucks Shop Manual and on the Service Bulletin Reference page at the end of the Engine section of your 1951 Passenger Car Shop Manual.

The Steel-Bestos exhaust flange gasket (illustrated at right above) is proved by extreme endurance and breakdown tests to be far superior to the terneplate or copper-asbestos gasket (illustrated at left above) for use in Studebaker six cylinder in-line engines. (Neither of these types of exhaust gasket are used in V-8 engines. The requirements for the V-type engine are quite different.)

This superiority is important because it means that the Steel-Bestos gasket seals better and lasts longer under severe types of in-line engine operations.

Dynamometer tests of 250 continuous hours at 3,300 rpm on in-line engines show that Steel-Bestos exhaust flange gaskets remained in good condition. Conventional gaskets broke into small pieces and partially welded to exhaust



THIS IS A STEEL-BESTOS GASKET. A PIECE OF STEEL IS SANDWICHED BETWEEN TWO PIECES OF ASBESTOS AND STEEL WIRE IS THEN INTERLACED THROUGHOUT THE ASBESTOS.

pipe and manifold after only 200 hours at 3,000 rpm.

After exhaustive mileage tests, Steel-Bestos gaskets used in Studebaker trucks were still in excellent condition, whereas repeated failures were experienced with conventional-type exhaust flange gaskets under less trying conditions.

Installation

It is important when installing exhaust gaskets that the mating flanges be clean and not warped. Be sure to tighten the exhaust pipe-to-exhaust manifold stud nuts evenly to 26-30 ft. lbs. of torque.

Application of Exhaust Flange Gaskets

PART NO.	MODEL APPLICATION
680291	1939 to 1952 Champion Passenger Cars; 1941 to 1952 Trucks with Champion Type Engines
680292	1937 to 1950 Dictator and Commander Passenger Cars; 1937 to 1952 Trucks with Dictator or Commander Type Engines
680847	2R Series Trucks with 3-Stud Exhaust Manifold