DRUM BRAKES

CONTENTS

DESCRIPTION AND OPERATION - DRUM BRAKES

DESCRIPTION OF BRAKE MECHANISM

Wheel Brake Assemblies

Each rear wheel brake assembly uses two brake shoes which are actuated by a single wheel brake cylinder. The center of the brake shoes are held against the backing plate by a hold down pin, spring and retainer. The bottom of the shoes pivot in a support plate, and the top of the shoes rest directly on the wheel brake cylinder push rods. The brake shoes are connected by upper and lower return springs which pull the shoes back to resting position after application. See Figure 5C-40.

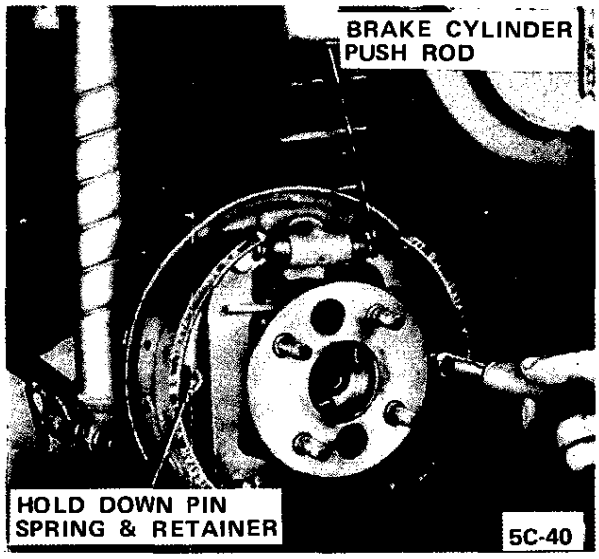


Figure 5C-40 Rear Wheel Brake

Two adjusting eccentrics at each wheel provide individual adjustment for each brake shoe to obtain clearance with. the brake drum. An arrow on the brake backing plate circumference shows direction in which eccentrics must be turned to make adjustment.

A hydraulic wheel cylinder is mounted on the backing plate between the upper ends of the brake shoes and forces the shoes against the drum when pressure is applied on the brake pedal. A lever mounted on each rear shoe is used for applying parking brakes.

Parking Brake Control System

The hand-operated parking brake lever is mounted between the front seats on the propeller shaft tunnel. A pawl is riveted into the parking brake lever and is actuated by a control rod provided with a spring loaded push button. When the parking brake is applied, the parking brake lever is locked by the pawl which engages the teeth on a stop plate. The parking brake is disengaged by pressing the spring loaded push button. See Figure 5C-41.

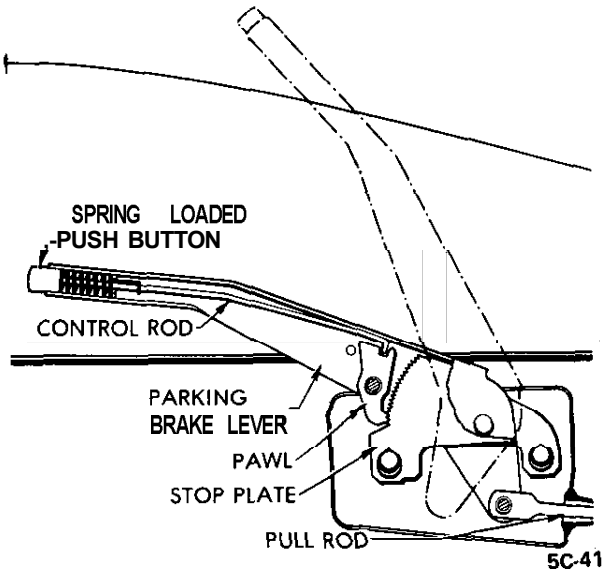


Figure 5C-41 Parking Brake Lever (Opel 1900 and Manta)

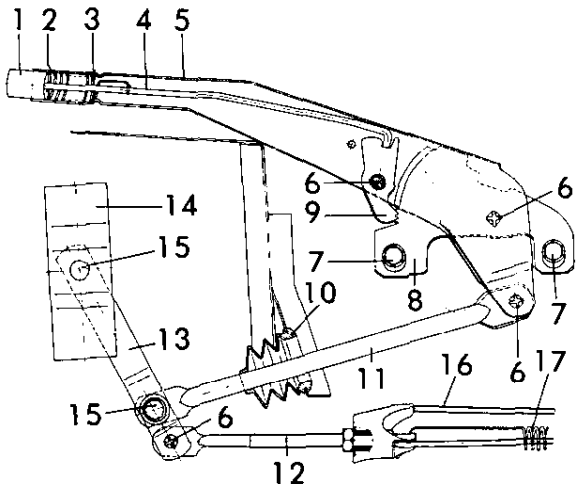
The GT arrangement of the parking brake is, with the exception of the additional transmittal lever at the floor panel, identical with that of the Opel models. The transmittal lever is attached to the propshaft tunnel by means of a mounting support. See Figure 5C-42.

The parking brake lever is connected with the front parking brake pull rod. By means of an equalizer, the front pull rod is connected to the forward portion of a center cable. The center cable is routed rearward through retaining guides and attaches at either end to the lower end of a parking brake lever. See Figure 5C-43. The parking brake levers and struts actuate the rear wheel brakes.

Service Brake Control System

Standard Brakes

The service brake control system is a pedal operated hydraulic system which applies the brakes at all four wheels with equal pedal pressure. The hydraulic system consists of a master cylinder (and attached transparent fluid reservoir) connected by pipes and flexible hoses to a wheel cylinder mounted between the brake shoes at each rear wheel.



1. PUSH BUTTON
2. THRUST SPRING
3. WASHER
4. PAWL CONTRO ROD
5. PARKING BRAKE LEVER
6. RIVET
7. HEX. HEAD BOLT
8. TOOTHED SEGMENT
9. PAWL WITH TWO TEETH
10. RUBBER CAP
11. THRUST ROD
12. PULL ROD
13. TRANSMITTAL LEVER
14. MOUNTING SUPPORT
15. BOLT
16. PARKING BRAKE CABLE
17. RETURN SPRING

5C-42

Figure 5C-42 Parking Brake Lever (GT)

A mechanically-operated stop light switch is mounted on a bracket just forward of the brake pedal on the GT and just rearward of the brake pedal on the Opel 1900 and Manta. With brake pedal released, the switch plunger is fully depressed against the switch actuating lever. See Figures 5C-45 and 5C-46. Any time the stop light switch fails, the stop lights will stay on at all times.

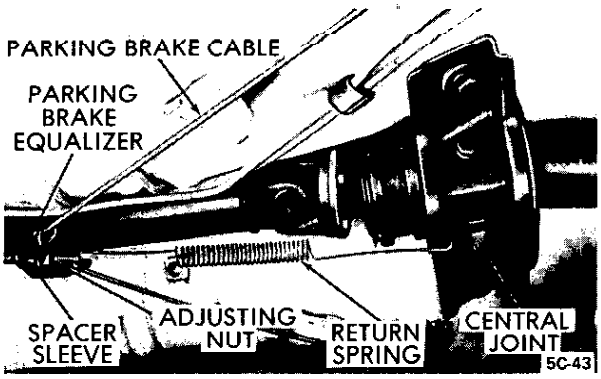


Figure 5C-43 Parking Brake Equalizer (Opel 1900 and Manta)

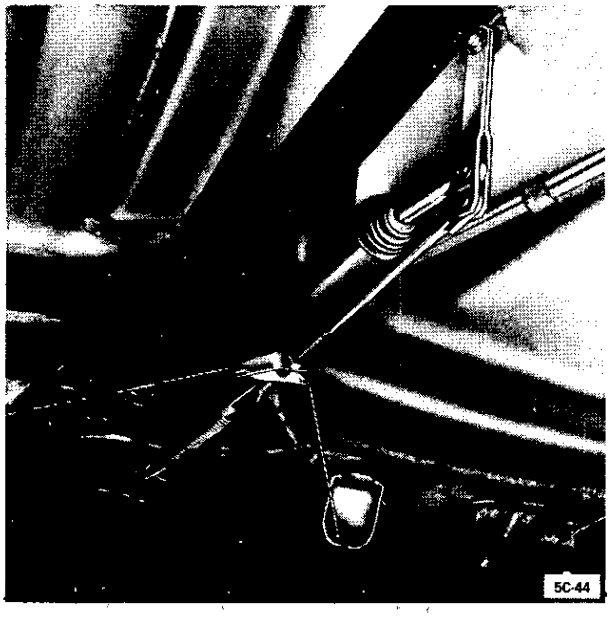


Figure 5C-44 Parking Brake Equalizer (GT)

The brake pedal on the GT is suspended from a pivot shaft. The pivot shaft inserts through the support bracket which is mounted on the cowl. The pedal is stopped in "off" position by the thrust rod coming in contact with the support plate on the cowl. The thrust rod (master cylinder push rod) connects directly into the brake pedal providing no pedal height adjustment. See Figure 5C-45.

OPERATION OF HYDRAULIC SERVICE BRAKE

A dual master cylinder, equipped with one (1) static pressure valve - for rear brake circuit - and used along with a power booster, is used on all models.

Each rear wheel cylinder contains two pistons and two rubber cups which are held in contact with the pistons by a central coil spring. The wheel cylinder

Figure 5C-45 Brake and Clutch Pedal Arrangement - GT

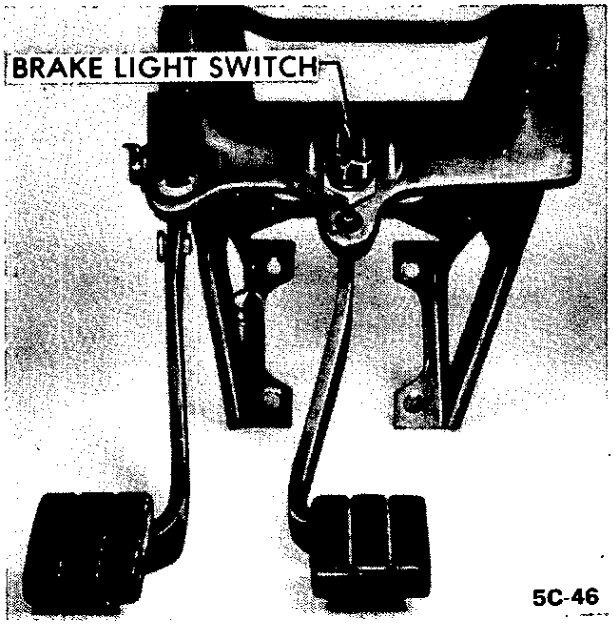


Figure 5C-46 Brake Light Switch - Opel 1900 and Manta

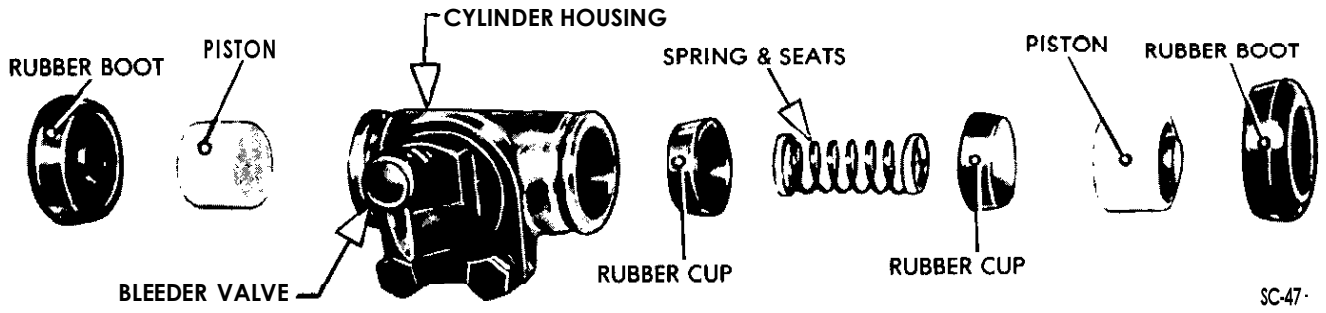


Figure 5C-47 Wheel Cylinder Exploded View

cups are of a special heat resisting rubber. The inlet port for brake fluid is located between the pistons so that when fluid pressure is applied, both pistons move outward in the wheel cylinders. The pistons impart movement to the brake shoes of the rear wheel brakes by bearing directly against the ends of the shoes. Rubber boots enclose both ends of the cylinder to exclude foreign matter. A valve for bleeding brake pipes and wheel cylinder is located in the back of the cylinder casting and extends through the brake backing plate assembly. See Figure 5C-47.

DIAGNOSIS
BRAKE TROUBLE DIAGNOSIS CHART

CAUSE \ SYMPTOM	EXCESSIVE BRAKE PEDAL TRAVEL	BRAKE PEDAL TRAVEL GRADUALLY INCREASES	EXCESSIVE BRAKE PEDAL EFFORT	EXCESSIVE BRAKING ACTION	BRAKES SLOW TO RESPOND	BRAKES SLOW TO RELEASE	BRAKES DRAG	UNEVEN BRAKING ACTION (SIDE TO SIDE)	UNEVEN BRAKING ACTION (FRONT TO REAR)	SCRAPING NOISE FROM BRAKES APPLICATION	BRAKES SQUEAK DURING	BRAKES SQUEAK DURING STOP	BRAKES CHATTER (ROUGHNESS)	BRAKES GROAN AT END OF STOP	BRAKE TELL-TALE GLOWS DURING STOP
LEAKING BRAKE LINE OR CONNECTION	X	XX								X					XX
LEAKING WHEEL CYLINDER OR PISTON SEAL	X	XX		X					X						X
LEAKING MASTER CYLINDER	X	XX													X
AIR IN BRAKE SYSTEM	XX									X					XX
CONTAMINATED OR IMPROPER BRAKE FLUID					X	X	X								X
LEAKING VACUUM SYSTEM			XX		X										
RESTRICTED AIR PASSAGE IN POWER HEAD			X		XX	X									
DAMAGED POWER HEAD			X	X	X	X	X								
WORN OUT BRAKE LINING - REPLACE			X	X					X	X	X	X	X	X	
UNEVEN BRAKE LINING WEAR - REPLACE AND CORRECT	X			X					X	X	X	X	XX	X	X
GLAZED BRAKE LINING - SAND LIGHTLY			XX						X	X		X	X		
INCORRECT LINING MATERIAL - REPLACE			X	X					X	X			X	X	
CONTAMINATED BRAKE LINING - REPLACE				XX					XX	XX	X	X	X	X	
LININGS DAMAGED BY ABUSIVE USE - REPLACE			X	XX					X	X	X	X	X	X	
EXCESSIVE BRAKE LINING DUST - REMOVE WITH AIR			X	XX					XX	XX		X	XX	X	
HEAT SPOTTED OR SCORED BRAKE DRUMS OR ROTORS				X					X	X		X	X	XX	X
OUT-OF-ROUND OR VIBRATING BRAKE DRUMS													X	XX	
OUT-OF-PARALLEL BRAKE ROTORS														XX	
EXCESSIVE ROTOR RUN-OUT														X	
INCORRECT WHEEL CYLINDER SIZES			X	X					X	X					
WEAK OR INCORRECT BRAKE SHOE RETENTION SPRINGS				X		X	XX		X	X	XX	X	XX		
BRAKE ASSEMBLY ATTACHMENTS - MISSING OR LOOSE	X						X		X	X	X		X	X	X
INSUFFICIENT BRAKE SHOE GUIDE LUBRICANT						X	X		X	X	XX	XX			
RESTRICTED BRAKE FLUID PASSAGE OR STICKING WHEEL CYLINDER PISTON		X	X		X	X	X		X	X					
BRAKE PEDAL LINKAGE INTERFERENCE OR BINDING			X		X	XX	XX								
IMPROPERLY ADJUSTED PARKING BRAKE							X								
DRUMS TAPERED OR THREADED											XX				
INCORRECT FRONT END ALIGNMENT									XX						
INCORRECT TIRE PRESSURE									X	X					
INCORRECT WHEEL BEARING ADJUSTMENT	X										X			X	
LOOSE FRONT SUSPENSION ATTACHMENTS									X		XX			X	X
OUT-OF-BALANCE WHEEL ASSEMBLIES														XX	
OPERATOR RIDING BRAKE PEDAL	X	X	X				X			X					X
STICKING WHEEL CYLINDER OR CALIPER PISTONS			X			X	X	X	X						

XX - INDICATES MORE PROBABLE CAUSE(S) X - INDICATED CAUSES

5C-48

Figure 5C-48 Brake Trouble Diagnosis Chart

MAINTENANCE AND ADJUSTMENTS

BRAKE ADJUSTMENT

Preliminary Checks

1. Depress brake pedal firmly. If pedal travels to within two inches of toeboard and has a hard feel, brake shoes require adjustment or relining. However, if pedal has a spongy feel, brake system needs bleeding.

2. Remove one rear drum if lining is worn nearly to rivets. Reline both rear brakes (drum brakes only).

3. Check fluid level in master cylinder reservoir and add fluid if necessary.

4. Fully release parking brake lever and place transmission in neutral.

5. Pull on both ends of rear brake cable a number of times to make sure that cables operate rear brake shoes freely and do not bind in conduits. Check for free movement of cable in brake cable sheave and check brake cable spring for tension. Replace a weak or broken cable spring.

Pedal Height Adjustment

Brake pedal height can be adjusted by first removing the nut and lock tab from the brake pedal to clevis attaching bolt and then by turning the head of the bolt and rotating the eccentric until there is approximately 1/4 of an inch play in the brake pedal. See Figures 5C-49 and 5C-50. Replace lock tap and nut. If one of the tabs on lock tap breaks replace lock tab.

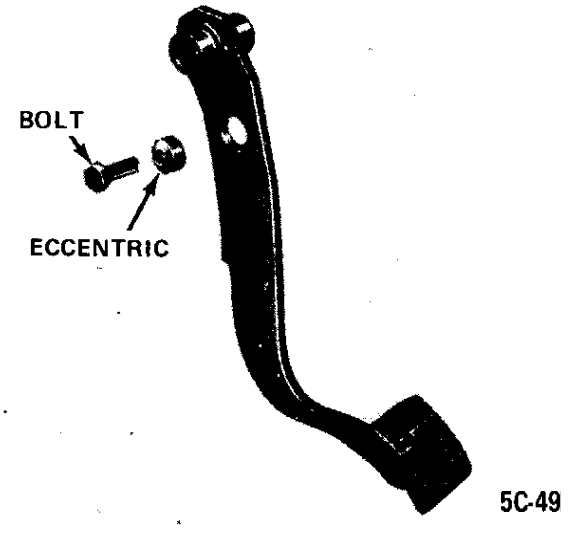


Figure 5C-49 Brake Pedal Attaching Bolt and Eccentric

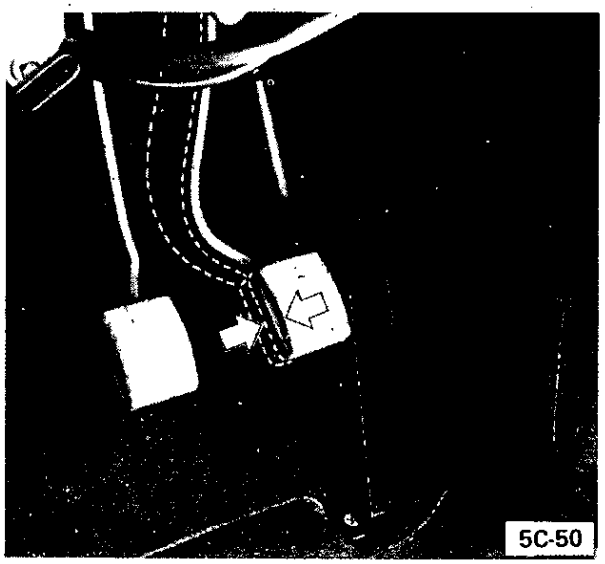


Figure 5C-50 Brake Pedal Height Adjustment

If binding does occur, take pedal assembly apart and clean. Check for broken parts. Lubricate and replace.

Adjustment at Wheels

At each rear wheel brake assembly there are two (2) brake shoes, and **each** brake shoe has an individual adjustment eccentric. Therefore, each shoe must be adjusted separately by turning its adjustment eccentric which is mounted on the brake backing plate. Arrows on backing plate circumference show direction in which eccentrics should be turned to get brake shoe-to-drum contact. See Figure X-51.

When adjusting front brake shoe of rear brakes, turn wheel forward. When adjusting rear brake shoe of rear wheel brakes, turn wheel rearward. Adjust as follo ws:

1. Raise car and support in a safe manner so that all wheels clear ground. Prior to wheel brake adjustment, check that all brake drums rotate freely.

2. Revolve drum in forward direction and turn front brake shoe eccentric in direction of arrow until brake shoe contacts brake drum. See Figure 5C-49, then turn eccentric in opposite direction until brake drum is **just** free to **turn.** Adjust rear brake shoe in the same **way but** revolve brake drum in backward direction.

3. Remove car jacking and support equipment, and road test car for brake performance.

Disc brakes do not require adjustment.

Parking Brake Adjustment

Adjustment of parking brake cable is necessary whenever the rear brake cables have been

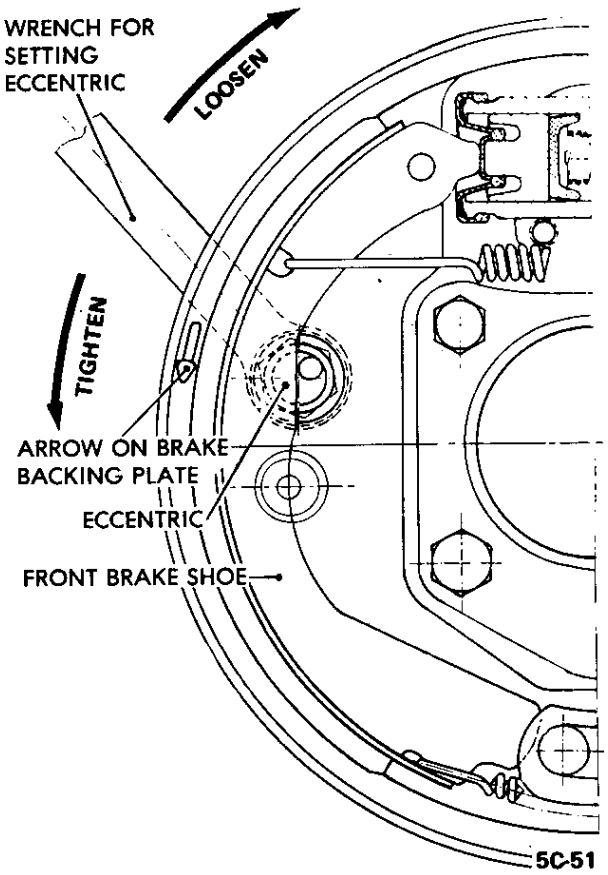


Figure 5C-51 Rear Wheel Brake Adjustment

disconnected, or when cables have been stretched through extended use. Need for parking brake adjustment is indicated if the service brake operates with good reserve, but the parking brake handle can be engaged, more than eight ratchet clicks under heavy pressure.

After making certain that service brakes are in good adjustment, adjust parking brake mechanism as follows:

1. Fully release parking brake lever; check parking brake cable for free movement.

2. Loosen equalizer nut or adjusting nut, depending upon whether. tension is to be increased or decreased on cable.

3. Pull parking brake lever up by three (3) clicks. In this position, adjust equalizer with adjusting and lock nuts so that rear brakes just begin to bind. Take care that rear brake action is equal on both rear wheels. In case of unequal brake action, apply lubricant to equalizer and brake cable.

4. After adjustment, tighten lock nut. Be certain that equalizer is in horizontal position. Check operation of parking brake. If parking brake adjustment does not result in proper brake action, inspect linings on both rear wheels for possible replacement.

Filling Brake Master Cylinder Reservoir

The master cylinder reservoir must be kept properly filled to insure adequate reserve and to prevent air from entering the hydraulic system. However, because of expansion due to heat absorbed from brakes and from engine, master cylinder must not be overtilled.

The plastic brake fluid reservoir is attached to the master cylinder which is located under the hood on the left side of the cowl.

Thoroughly clean reservoir cover before removal to avoid getting dirt into reservoir. Remove cover and add fluid as required to bring level up to "MAX." marked on reservoir.

Use Delco Supreme No. 11 Hydraulic Brake Fluid or equivalent.

Do not use shock absorber fluid or any other fluid which contains mineral oil. Do not use a container which has been used for mineral oil. Even a trace of mineral oil will cause swelling and distortion of rubber parts in the hyrdaulic brake system.

Bleeding Brake Hydraulic System

A bleeding operation is necessary to remove air whenever it is introduced into the hydraulic brake system. Since air is compressible and hydraulic fluid is not, the presence of air in the system is indicated by a springy, spongy feeling of the brake pedal accompanied by poor braking action.

Air will be introduced into the hydraulic system if the brake pedal is operated when the fluid is too low in master cylinder reservoir. Air will also enter the system whenever any part of hydraulic system is disconnected.

It will be necessary to bleed both hydraulic systems if air has been introduced through low fluid level or by disconnecting brake pipes at master cylinder. If brake pipe is disconnected at any wheel cylinder, then that wheel cylinder only need be bled. If pipes are disconnected at any fitting located between master cylinder and wheel cylinders, then the wheel cylinder(s) served by the disconnected pipe must be bled.

Sequence for Bleeding Wheel Cylinders or Calipers

It is advisable to bleed one wheel cylinder or caliper

at a time to avoid getting fluid level in reservoir dangerously low. The correct sequence for bleeding is bleed the wheel cylinder or caliper nearest the master cylinder first in either circuit.

Do not perform bleeding operation while any brake drum is removed.

Bleeding Wheel Cylinder or Caliper

1. Check fluid level, in reservoir and refill, if necessary. Level must be brought up to "MAX" mark on plastic reservoir.

2. Clean all dirt from around respective bleeder valve, and then remove cap.

3. Push bleeder hose over bleeder valve, placing other end of hose in a glass jar. Bleeder hose should always be used to avoid getting fluid on linings.

4. Hold pressure on brake pedal and crack open the bleeder valve to allow air (and,or) brake fluid to flow out of the system. Allow pedal to travel to the floor. Close bleeder valve. Release pedal and repeat this procedure at each wheel cylinder in the circuit until all air is removed. Frequently check reservoir fluid level. Allowing fluid to be emptied will draw air into the system.

5. Remove bleeder hose and install cap.

6. When bleeding operation is completed, make sure that fluid level is brought up to "MAX" marking on reservoir, then install cover.

7. Discard the brake fluid deposited in glass jar during bleeding operation.

Flushing Brake Hydraulic System

It is recommended that both brake system circuits be thoroughly flushed whenever the master cylinder is replaced or if there is any doubt as to the grade of fluid in the system.

Flushing of the brake system is performed in the same manner as the bleeding operation except that fluid is forced through the lines and wheel cylinder until it emerges clear in color. Approximately one half pint of brake fluid is required to flush the hydraulic system thoroughly.

When flushing is completed, make certain the master cylinder reservoir is filled to the proper level.

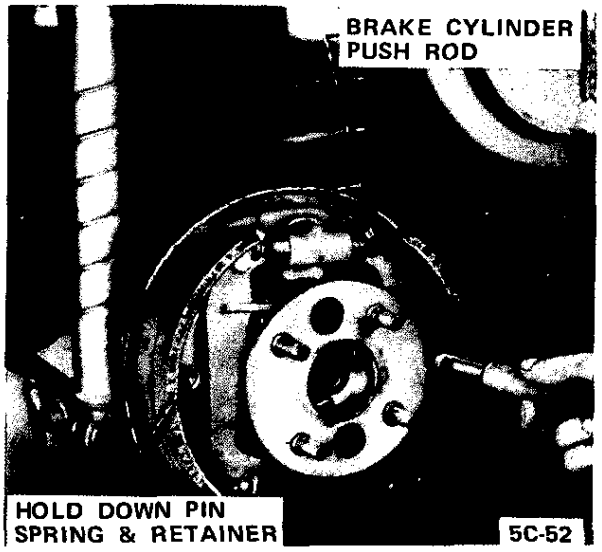


Figure 5C-52 Rear Drum Brake Assembly

MAJOR REPAIR

REPLACE OR RELINE BRAKE SHOES (DRUM BRAKES)

Removal and Inspection

1. Jack up car in safe manner and support adequately.

2. Remove wheel and drum assembly.

3. Remove upper and lower brake shoe return springs.

4. Remove retaining pins and springs, as shown in Figure 5C-52.

5. Clean all dirt out of brake drum. Inspect drums and replace or recondition if required.

6. Blow all dirt from brake assemblies and inspect for any unusual condition.

7. Carefully pull lower edges of wheel cylinder boots away from cylinders and note whether interior is wet with brake fluid. Fluid at this point indicates leakage past piston cup, requiring overhaul or replacement of wheel cylinder.

8. Inspect all brake pipe and hose connections for evidence of fluid leakage. Tighten any leaking connection, then apply heavy pressure to brake pedal and recheck connections.

9. Inspect backing plate for oil leak past rear wheel bearing oil seals. Correct any leak by installation of new seals.

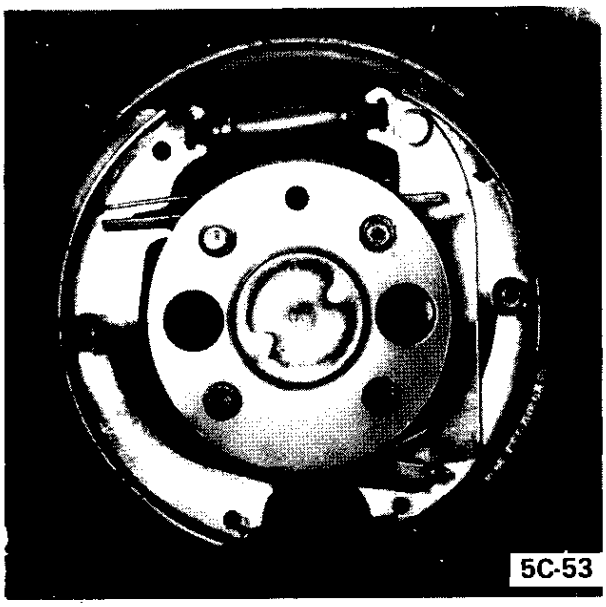


Figure 5C-53 Rear Brake Assembly

10. Check all backing plate attaching bolts to make sure they are tight. Using line emery cloth, clean all rust and dirt from shoe contact surfaces on plate. See Figure 5C-53.

Relining Brake Shoes

If old brake shoes are to be relined, inspect shoes for distortion and for looseness between the rim and web; these are causes for discarding any shoe. If shoes are serviceable, be governed by the following points in installing new linings:

1. Remove old rivets by drilling them out. Punching out rivets will cause distortion of shoe rim. Care must also be taken to support shoes properly while drilling.

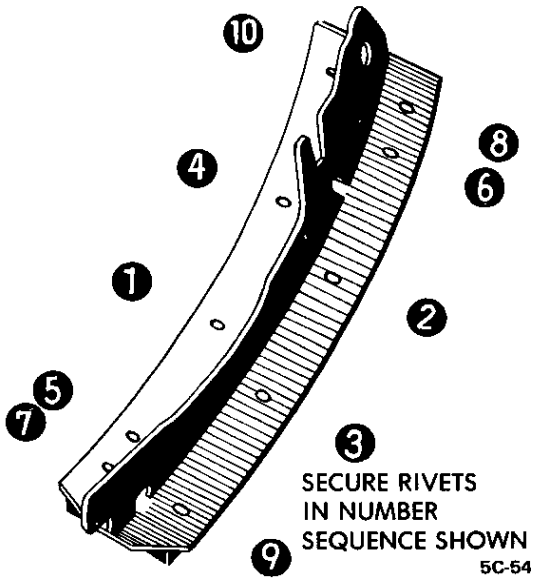


Figure 5C-54 Brake Lining Riveting Sequence

2. Thoroughly clean brake shoes and remove all burrs around rivet holes.

3. Use Opel brake lining or equivalent. Install in place and rivet in sequence shown in Figure 5C-54. Keep hands clean while handling brake lining. Do not permit oil or grease to come in contact with lining.

Installation and Adjustment

1. If any hydraulic connections were disturbed, bleed hydraulic system. If new parts were installed in brake system, flushing of hydraulic system is recommended.

2. Adjust rear wheel brakes.

3. Adjust parking brake.

4. Check fluid level in master cyliner and add fluid if necessary.

5. Check brake pedal for proper feel and for proper return.

6. Remove jacks and road test car for proper brake action. Brakes must not be severely applied immediately after installation of new brake shoes or linings. Severe application may permanently injure new linings and may score brake drums. When linings are new, they must be given moderate use for several days until burnished.

INSPECTING AND RECONDITIONING BRAKE DRUMS

Whenever brake drums are removed, they should be thoroughly cleaned and inspected for cracks, scores, deep groves, and out-of-round. Any of these conditions must be corrected since they can impair the efficiency of brake operation and also can cause premature failure of other parts.

Cracked, Scored or Grooved Drum

A cracked drum is unsafe for further service and must be replaced. Welding a cracked drum is not recommended.

Smooth up any slight scores by polishing with tine emery cloth. Heavy or extensive scoring will cause excessive brake lining wear and it will be necessary to rebore in order to true up the braking surface.

If the brake linings are slightly worn and drum is grooved, the drum should be rebored just enough to

remove grooves, and the ridges in the lining should be lightly removed with a lining grinder.

If brake linings are more than half worn, but do not need replacement, the drum should be polished with fine emery cloth but should not be rebored. At this stage, eliminating the grooves in drum and smoothing the ridges on lining would necessitate removal of too much metal and lining, while if left alone, the grooves and ridges match and satisfactory service can be obtained.

If brake linings are to be replaced, a grooved drum should be rebored for use with oversize linings. A grooved drum, if used with new lining, will not only wear the lining but will make it difficult, if not impossible, to obtain efficient brake performance.

Out-of-Round Drum

An out-of-round drum makes accurate brake shoe adjustment impossible and is likely to cause excessive wear of other parts of brake mechanism due to its eccentric action. An out-of-round drum can also cause brake pulsation. Maximum permissible drum runout is .004". A drum that has more run-out than this should be rebored. Runout can be accurately checked by using an inside micrometer fitted with proper extension rods.

When measuring a drum for run-out, take measurements at open and closed edges of machined surface and at right angles to each other.

Turning Brake Drums

If a brake drum is to be turned, enough metal should be removed to obtain a true, smooth braking surface. Measure brake drum diameter; standard drum inner diameter is 9.060". Drums may be turned to an oversize of .030". If maximum inner diameter after turning exceeds 9.090", brake drum will have to be replaced. Removal of more metal will affect dissipation of heat and may cause distortion of the drum.

1. Remove rear wheels and drums.

2. Mount brake drum on brake drum lathe and turn drums as necessary, within limits.

3. After turning, check drum diameter. Inner diameter not to exceed 9.090.

4. A newly-bored drum should always have center contact with brake shoes. For this reason, arc grind linings to .010" under drum radius, or to .020" under drum diameter.

5. Clean and install drums and wheels.

BRAKE WHEEL CYLINDER OVERHAUL

1. Remove wheel, drum, and brake shoes. Be careful not to get grease or dirt on brake lining.

2. Disconnect brake pipe or hose from wheel cylinder and cover opening with tape to prevent entrance of dirt. Remove wheel cylinder from backing plate.

3. Remove boots, pistons, cups, and spring from cylinder. Remove bleeder valve.

4. Discard rubber boots and piston cups. Thoroughly clean all other parts with hydraulic brake fluid or Declene. Do not use anti-freeze, alcohol, gasoline, kerosene, or any other cleaning fluid that might contain even a trace of mineral oil.

5. Inspect pistons and cylinder bore for scores, scratches, or corrosion. Light scratches may be polished with crocus cloth. Do not use emery cloth or sandpaper. Slight corrosion may be cleaned with tine steel wool. If scratches or corroded spots are too deep to be polished satisfactorily, the cylinder should be replaced since honing is not recommended.

6. Dip internal parts in brake fluid and reassembly wheel cylinder. When installing piston cups, use care to avoid damaging the edges.

7. If the rear wheel backing plate is removed: Always install new paper gaskets one on each side • on the backing plate. Prior to installation, lightly coat paper gaskets with chassis lubricant. Torque backing plate to rear axle housing bolts to 43 lb.ft. and wheel brake cylinder to backing plate bolts to 5 lb.ft. Install wheel cylinder on brake backing plate and connect brake pipe or hose.

8. Install brake shoes, drum, and wheel, then flush and bleed hydraulic system.

9. Adjust brakes, then road test car for brake performance.

CAUTION: *This brake backing plate to rear axle fastener is an important attaching part in that it could affect the performance of vital components and systems, and/or could result in major repair expense. It must be replaced with one of the same part number or with an equivalent part, if replacement becomes necessary. Do not use a replacement part of lesser quality or substitute design. Torque values must be used as specified during reassembly to assure proper retention of this part.*

REPLACING BRAKE PIPES

Any brake pipe assembly which is needed must be made up from service bulk tubing and fittings. All brake pipes must be made of tin or copper coated wrapped steel tubing with the ends double lap flared.

Never use copper tubing because copper is subject to fatigue cracking which would result in brake failure.

To make up a brake pipe assembly, proceed as follows:

1. Procure the recommended tubing and fittings of the correct size. (Outside diameter of tubing is used to specify size.)

2. Cut tubing to length. The correct length may be determined by measuring the old pipe using a cord and adding 1/8" for each double lap flare.

3. Double lap flare tubing ends, using a suitable flaring tool such as J-8051. Follow the instructions included in the tool set. Make sure fittings are installed before starting second flare.

4. Bend pipe assembly to match old pipe.

SPECIFICATIONS

BRAKE SPECIFICATIONS

Torque Specifications

Use a reliable torque wrench to tighten the parts listed to insure proper tightness without straining or distorting parts. These specifications are for clean and lightly-lubricated threads only; dry or dirty threads produce increased friction which prevents accurage measurement of tightness.

Part	Name	Torque Lb.Ft.
Nut	Brake Hose to Front Wheel Brake Cylinder	22
Bolt	Brake Backing Plate to Steering Knuckle (Upper Bolts)	22
Bolt	Brake Backing Plate to Steering Knuckle and Steering Arm (Lower Bolts)	47
Bolt	Backing Plate to Rear Axle Housing	43
Nut	Master Cylinder Actuator Rod to Brake Pedal	5
Bolt	Wheel Brake Cylinder to Brake Backing Plate	5

General Specifications

Operating Mechanism, Service Brakes	Hydraulic
Parking Brakes	Lever and Cables
Operation of Service Brakes Independent of Parking Brakes	Yes
Wheel Brakes, Service	Front and Rear
Parking.	Rear Only
Brake Pedal Height Adjustment	None
Static Pressure in Hydraulic System When Brakes are Released - Drum Brakes	4 psi Min.
Static Pressure in Hydraulic System to Rear Brakes Only - Disc Brakes	4 psi Min.
Brake Master Cylinder (for Drum Brakes) Bore	13/16
Wheel Cylinder Size - Rear - All	5/8
Approved Hydraulic Brake Fluid	GM or Delco Supreme No. 11
Fluid Level in Reservoir	Fill to "Max." Level
Brake Drum Rebore, Maximum Allowable Inside Diameter	9.090
Max. Allowable Out-of-Round	.004
Rear Brake Drum Size. New	9.060