1962-71 SIMCA

Simca 1000 (1962-67)
Simca 1118 (1969)
Simca 1204 (1969-71)

DESCRIPTION

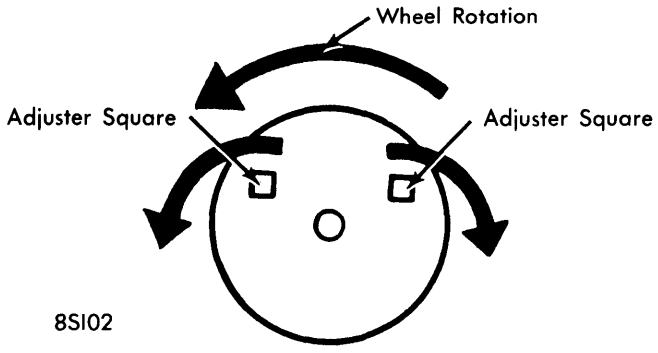
All service brakes on Simca vehicles are hydraulically operated. All models except 1000 Coupe are equipped with front disc and drum rear brakes. 1000 Coupe models use disc brakes on all four wheels. Disc brakes are either floating caliper type or ATE rigid mounted caliper type. Each vehicles brakes are similar, however not identical. A lever operated hand brake is mounted between front seats. When hand brake is actuated cables tighten and rear wheels are locked. The 1204 models incorporate an adjustable brake pressure equalizer. All models use a master cylinder to develop hydraulic pressure. Master cylinders are either single (pre 1968) or dual (after 1968) piston type. Tandem master cylinders employ a pressure loss indicator which is mounted to cylinder output lines and wired to indicator light on instrument panel.

ADJUSTMENT

Disc Brakes – No adjustment required.

SERVICE BRAKE ADJUSTMENT NOTE – Adjustment is designed to compensate for minor lining wear. If adjusting cam must be turned excessively, brake drums should be pulled and lining thickness inspected.

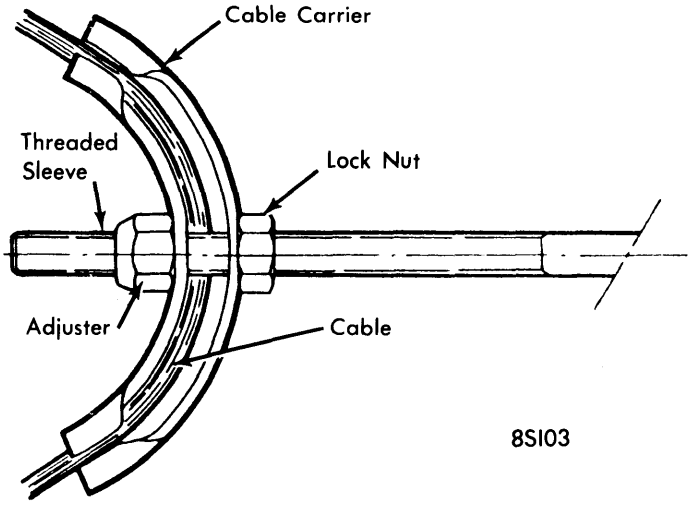
Drum Brakes – Raise rear of vehicle and support under frame with safety stands. Ensure wheels are free to turn. Using suitable wrench, turn adjusting eccentric cam square until tightening is felt. Back off eccentric until wheel is just free to turn. *NOTE – Each brake shoe has its own eccentric.*



BRAKE SHOE ADJUSTMENT

NOTE – Before attempting to adjust hand brake, adjust shoe to drum clearance.

Hand Brake – On all drum brake models begin working under vehicle. Loosen lock nut on adjusting sleeve and tighten equalizer adjustment nut. Brake is correctly adjusted when ratchet lever travel is approximately six serrations. Lock equalizer in place with lock nut when adjustment has been achieved. On models with four wheel disc brakes proceed as follows: Loosen lock nut and turn adjuster until clearance between cam heel and pad is eliminated. Twist adjuster back approximately 2/3 turn. Correct clearance between cam heel and pad is .009" (.25 mm).



PARKING BRAKE ADJUSTMENT

SERVICING

BLEEDING SYSTEM

BRAKE BLEEDING NOTE – If continued bleeding does not produce satisfactory pedal, a leak must exist in hydraulic system.

Manual Bleeding – Fill master cylinder and fit a bleed tube over one wheel cylinder bleed fitting; submerge free end into a half-full container of brake fluid. Repeatedly depress brake pedal until air bubbles stop. Tighten bleed fitting on last downward stroke. Repeat bleeding procedures on remaining wheels.

NOTE – If difficulty is incurred during bleeding process, raise front of vehicle until master cylinder is in horizontal position.

Pressure Bleeding (Tandem Master Cylinders) – Connect pressure bleeder to compensating reservoir of primary circuit when operating on front wheel cylinders or to compensating reservoir of secondary circuit when working on rear wheel cylinders. *NOTE – Secondary circuit has two outlets; one controls clutch.* With approximately 29 psi in bleeder, open screws of both cylinders in one circuit. Leave cylinder open for 1 1/2 to 2 minutes before closing. Drain pressure from tank before disconnecting. Repeat procedures on remaining circuit.

LINING REPLACEMENT (DISC BRAKES)

DISC PAD REPLACEMENT NOTE – Pads must be replaced as a set when they are .217" at thickest point.

Removal (1000 & 1118) – Raise vehicle and place on safety stands. Remove wheels and extract keeper pins. Tip caliper retaining pockets. Remove washers from between pockets and caliper. Lift off caliper assembly and remove pads.

1962-71 SIMCA (Cont.)

Installation – Fit new pads in position, bend down pockets and fit keeper pins. Ensure clearance between pad and yoke is .018". Ensure washers are properly fitted. *NOTE – On models with rear disc brakes, readjust hand brake.*

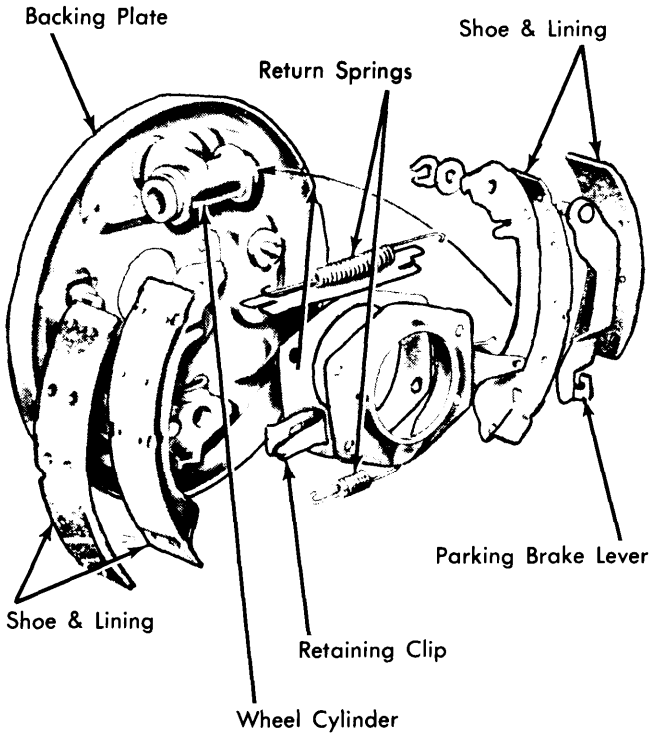
DISC PAD REPLACEMENT NOTE – It is imperative that disc pads be replaced when they reach .078" (2 mm). Pads are replaced as a four pad, two spring set. Never replace only one side.

Removal (1204) – Raise vehicle and place on safety stands. Remove wheel. Using suitable pliers, remove pad retainer dowels. Withdraw cross spring and both friction pads.

Installation – Check position of caliper pistons, if necessary, pistons can be adjusted using suitable pliers (PN 20839). Fully seat pistons in bore using suitable tool (PN 20837) and install friction pads. Fit cross spring and install retaining dowel. After installing wheels depress pedal several times to align piston and pads.

LINING REPLACEMENT (DRUM BRAKES)

Removal – Raise vehicle and place safety stands under frame. Withdraw drum mounting bolt and drum. Extract return springs and retaining clips. Pull shoes from wheel cylinder and lift off vehicle.



DRUM BRAKE ASSEMBLY

Installation – To install drum brake lining, reverse removal procedures and ensure parking brake strut is in position.

REMOVAL & INSTALLATION

BRAKE CALIPER

Removal (1000 & 1118) – Disconnect and plug reservoir outlet. Raise vehicle and remove tire and wheel. Disconnect parking brake controls. Extract two pins and swing caliper retaining pockets away and remove washers. Lift off caliper and pads.

Installation – Fit brake pads in caliper. Position assembled caliper in piston. Rest pockets on brake pads. Fit washers in position. Push caliper and pockets together. *NOTE – Avoid blocking washer.* Install two new keeper pins and reconnect brake lines. Bleed hydraulic system.

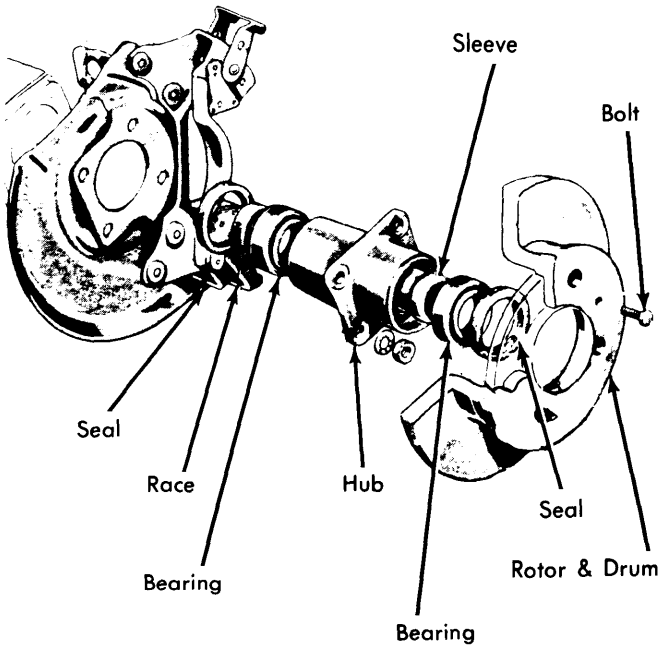
Removal & Installation (1204) – Disconnect hydraulic lines and remove mounting bolts. To install, reverse removal procedures and bleed hydraulic system.

BRAKE ROTOR (DISC)

Removal (1118) – Raise vehicle and suitably support with safety stands. Remove caliper assembly as previously described. Mark hub and rotor relationship. Remove retaining bolt and extract rotor.

Inspection – Check rotor for thickness and warpage. If deep scratches are detected, it is possible to eliminate them by resurfacing rotor. Minimum thickness after regrinding must not be less than .38".

Installation – To install brake rotor, reverse removal procedure ensuring rotor is properly aligned.



DISC REAR BRAKES

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Removal (1204) – Raise vehicle and place on safety stands. Remove wheel and shock absorber. Remove wheel shaft and washer. Remove brake caliper and hook it on suspension arm. Withdraw four bolts mounting brake rotor to wheel hub. Slightly rotate rotor alignment from wheel hub. Insert two screw studs and tighten evenly to remove hub assembly and then rotor.

Installation – Before beginning reinstallation, replace inner grease seal. To install rotor, reverse removal procedures ensuring wheel bearings are properly greased and correctly installed. Torque hub retaining nut to specifications.

BRAKE DRUM

NOTE – From No. C2 5030393 brake drum for front hub or wheel shaft has been modified as follows: Two 6 mm x 1.00 retaining bolts have been replaced by two 8 mm x 1.25 bolts. This modification has made necessary the redesigning of drum (drilling). Front hub and wheel shaft openings have been expanded.

Removal – Raise vehicle and remove tire and wheel. Withdraw drum mounting bolt and pull drum from position. While off, inspect for cracks and distortion. If drum is beyond specifications replace or resurface. Repack inner and outer wheel bearings and replace seal.

Installation – To install drum, reverse removal procedures and tighten wheel bearings. *See Wheel Bearing Adjustment in WHEEL ALIGNMENT Section.*

BACKING PLATE

NOTE – After Engine No. 5.238.040 rear hub and backing plate mounting has been modified. Hub and backing plate are held by four bolts necessitating a suspension arm change. New suspension arms can be fitted to earlier model vehicles.

Removal & Installation – Backing plate can be removed from its position after all necessary brake components have been removed.

MASTER CYLINDER SINGLE PISTON

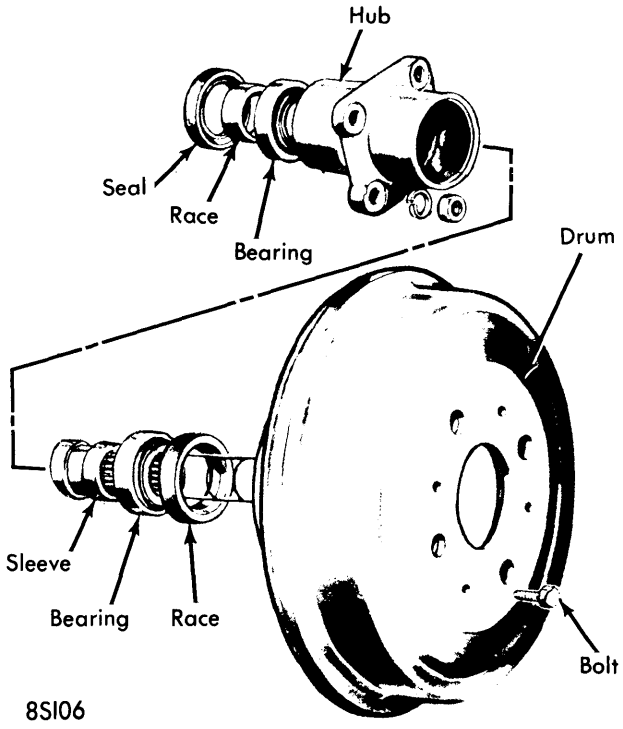
NOTE – Removal and disassembly procedures for 1118 are same as for 1000, however, internal design limits interchanging. Differential pressure valve is replaced in 1118 with a bypass valve.

Removal (1000 & 1118) – Drain hydraulic system and disconnect battery. *NOTE – Pedal support does not have to be removed.* Disconnect stop light switch electrical leads. Separate fluid inlet lines from master cylinder. Remove two bolts holding master cylinder on support. Lift off brake master cylinder.

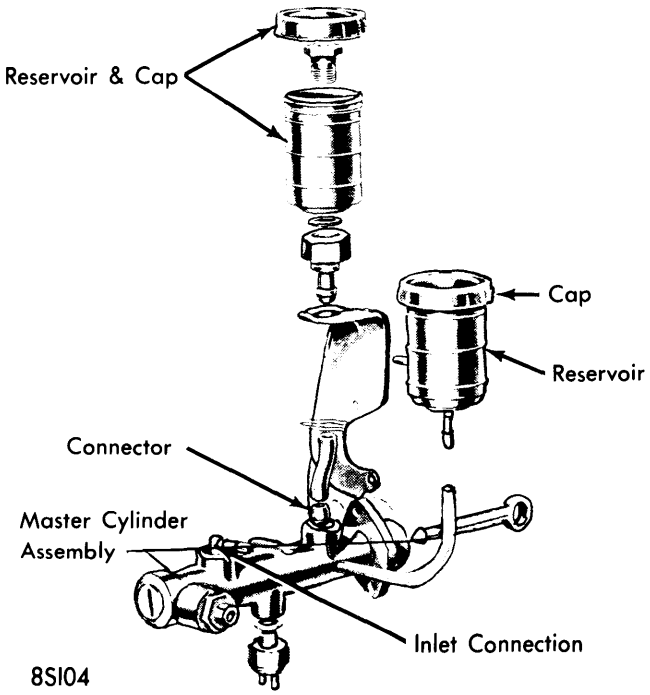
NOTE – On Coupe models master cylinders are identified by a daub of yellow paint. Cylinders are not interchangeable with other models.

Installation – To install, reverse removal procedures and bleed hydraulic system.

NOTE – After 1967 all models came equipped with dual piston master cylinders. System is designed so if one circuit fails the other will compensate to stop vehicle.



BRAKE DRUM & HUB ASSEMBLY (1000 & 1118)



DUAL PISTON MASTER CYLINDER

1962-71 SIMCA (Cont.)

OVERHAUL

BRAKE CALIPER

NOTE — The most common reason for overhauling a brake caliper is "O" ring seepage.

Disassembly — With caliper assembly on bench push on screw and remove piston assembly. Remove "O" ring from its location. Clean all components in a suitable cleaner. Check piston and bore for scratches or deep grooves, replace if severly damaged.

Reassembly — Holding caliper assembly with bore facing downward, insert piston assembly and center it. *NOTE — Markings on end of piston must be toward bleed screw. If caution is ignored, bleeding can not be performed.* Fully seat piston and tighten retaining nut. Fit new dust cap on piston. After reinstalling caliper and pads, bleed hydraulic system.

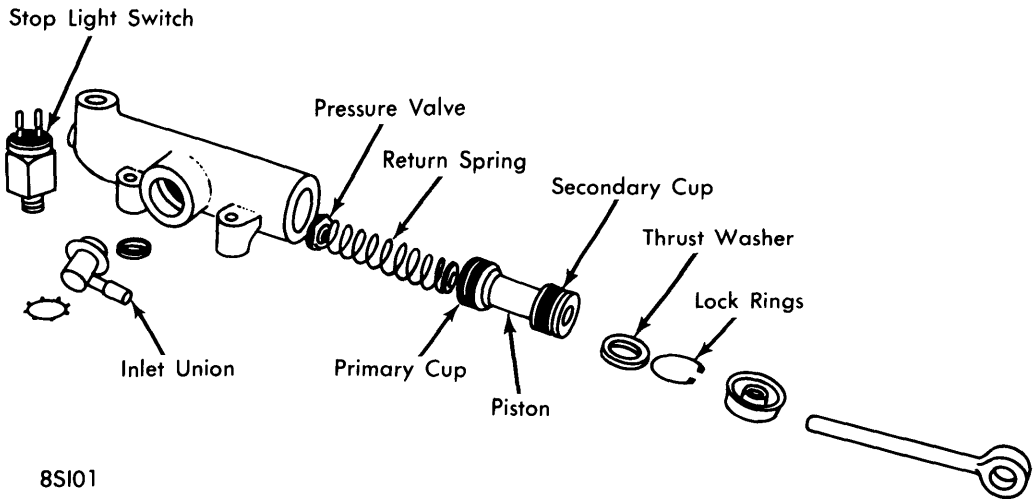
SINGLE PISTON MASTER CYLINDER

Disassembly — With master cylinder removed as previously outlined, begin overhaul. Remove in the following order: Stop light switch, lock rings, thrust washer, piston, secondary cup, primary cup, retaining spring, pressure valve, and inlet connection. Clean all components in suitable cleaner and allow to thoroughly dry. Inspect parts for damage and/or excessive wear, replace as necessary.

Reassembly — Assembly is the reverse of disassembly procedure. After installation, bleed hydraulic system.

TIGHTENING SPECIFICATIONS

Application	INCH Lbs.
Caliper Mounting Bolts	75.6
Drum Retaining Bolt	16.2
Wheel Cylinder Retaining Bolt	14.6
Hose Union	32.5
Four-Way Union-to-Floor	27.6
Parking Brake Cable-to-Underbody	35.8
Front & Rear Wheel Retaining Bolts	100.9
Coupe Models	
Disc Brake Yoke-to-Bracket	73.2
Disc Brake Assembly-to-Stub Axle	76.4



SINGLE PISTON MASTER CYLINDER