1963-73 PEUGEOT

403 (1963-67)
404 (1963-70)
304 (1971-72)
504 (1971-73)

DESCRIPTION

All Peugeot service brakes are hydraulically operated by pressure generated in master cylinder. 504 models are equipped with Girling disc brakes, while 304 models have Girling front disc and Lockheed drum rear brakes. All other models utilize Lockheed drum brakes on all wheels. Disc brakes are actuated by two caliper pistons, front drum brakes by two conventional single-acting wheel cylinders, and rear drum brakes by a single, dual-acting wheel cylinder. 504 and 304 models employ a load actuated compensator that ensures equal pressure distribution between front and rear brakes. Some later models are equipped with Bendix Mastervac vacuum servo units to provide more efficient braking. All models have a master cylinder, either single or dual piston, to develop hydraulic pressure. A parking brake lever is situated between front seats and pivots in a toothed quadrant transmitting braking effort to rear wheels via two cables.

ADJUSTMENT

DISC BRAKES

Disc brakes are self-adjusting, therefore no adjustment in service is required.

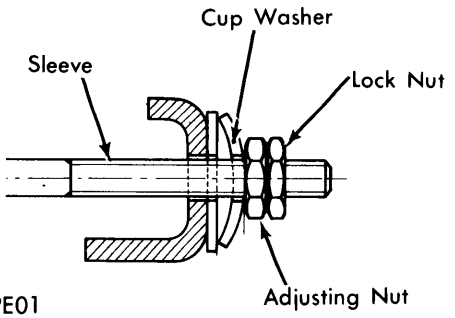
DRUM BRAKES

Raise and support vehicle. Using suitable tool (eight point socket), turn front eccentric in same direction as wheel rotation until wheel is no longer free to turn by hand. Back off eccentric until wheel is again free enough to turn by hand. Repeat this same procedure on rear eccentric. *NOTE — On rear eccentrics, turn in opposite direction of wheel rotation.*

PARKING BRAKE

Raise and support rear of vehicle. Threaded adjustment (rod or sleeve) is located either on center of enclosed propeller shaft, or on rear axle housing. Adjustment is performed by tightening threaded sleeve or rod. Tighten each adjustment until respective wheel is no longer free to rotate by hand. Loosen each adjusting rod or sleeve until wheel rotates freely by hand. After each adjustment is complete, tighten lock nut(s).

NOTE — On 504 models, after adjustment is complete, tighten lock nut so clearance of .060" (1.5 mm) exists between lock nut and flat washer (see illustration).



ADJUSTING NUT & CUP WASHER CLEARANCE

BRAKE COMPENSATOR

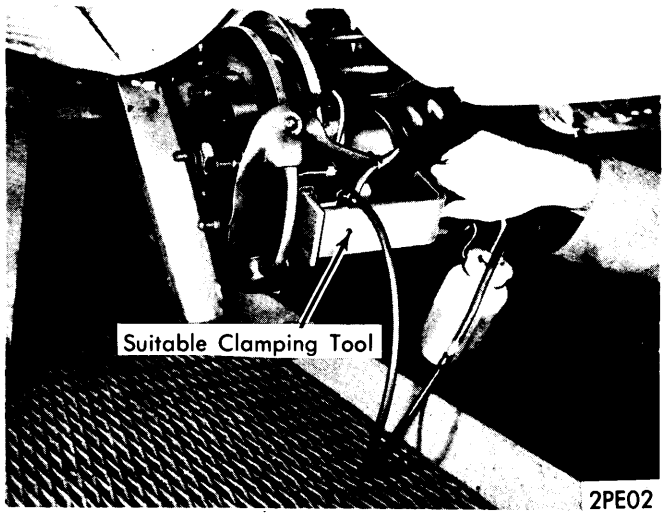
On 504 models, raise and support vehicle. *NOTE — Spare tire should be in trunk and vehicle should have full tank of gas.* On compensator lever (spring end) hang 16 lb. weight to right of existing notch. Using .05" (1.4 mm) feeler gauge inserted between lever and compensating valve, loosen lock nut and adjust screw to obtain tight sliding fit of feeler gauge. With adjustment complete, tighten lock nut. *NOTE — Make sure compensating valve is fully depressed when adjusting screw.* Remove weight and lower vehicle.

BLEEDING SYSTEM

NOTE — Procedures outlined below are factory recommended methods for bleeding front and rear brakes.

All Models (Except 504 Rear Disc) — Fill master cylinder and keep at least half full throughout bleeding operation. Connect bleed tube to bleed fitting and insert free end into container which is half full of brake fluid. Open bleed fitting and depress and release brake pedal slowly. Continue this procedure until all air bubbles have been expelled. On last downward stroke of pedal, tighten bleed fitting. Repeat this procedure on each wheel.

504 (Rear) — Remove friction pads and insert suitable key (8.0803 G) into piston groove. Pump brake pedal until caliper contacts outer face of disc, and key is pinched between outer face of disc and caliper. Pivot piston ⅛ turn until arm of key abuts against angle of brake pad guide. This will free parking brake adjuster device. Remove key and install piston return device (8.0803 E) as shown in illustration. Tighten knurled screw of tool until it collapes piston into its bore. Tighten bleed screw and remove tool. Reinstall key to reposition piston in its original position. Remove key and install disc pads.



SUITABLE TOOL (8.0803 E)

REMOVAL & INSTALLATION

LINING REPLACEMENT (DISC BRAKES)

Removal (504) — Raise vehicle and suitably support with safety stands; remove tires and wheels. Disconnect brake wear indicator electrical lead. Remove friction pad thrust spring, retaining fork mounting bolt, and retaining fork.

1963-73 PEUGEOT (Cont.)

NOTE — On front brakes, if pads are difficult to withdraw, it will be necessary to separate them using a lever placed between the metal lips of brake pads.

Installation — To install new lining, reverse removal procedures noting the following: On rear brakes insert suitable positioning key (8.0803 G) for correct alignment.

LINING REPLACEMENT (DRUM BRAKES)

Removal — Raise vehicle and place safety stands under frame. Remove tire, wheel, and brake drum. Disengage return springs and mounting assemblies. Separate parking brake linkage and strut. Pull lining from wheel cylinder pistons and lift from backing plate. *NOTE — If necessary wheel cylinder can now be removed.* Remove mounting bolts and disconnect hydraulic line. Front cylinder has a steel cross-over tube that can be disconnected or left intact during removal.

Installation — Install wheel cylinder to backing plate and reconnect all hydraulic lines. Attach clutch return springs to new shoes and fit shoes to backing plate with mounting assemblies. Ensure lining is properly fitted and installed. Mount brake drum. Fit tire and wheel then adjust brake pedal and bleed hydraulic system. *NOTE — Hydraulic system only needs bleeding if wheel cylinders were removed or overhauled.*

BRAKE CALIPER

Removal (Front 504) — Mark hub and wheel relationship then remove wheel. Disconnect brake wear indicator lead and union of flexible hose from cylinder body. Plug any open hydraulic lines. Remove two bolts securing caliper and lift off. *NOTE — If difficulty is encountered removing caliper, friction pads will have to be removed.*

Inspection — Using a suitable dial indicator, check rotor deflection. Rotate rotor through one turn and find maximum deflection. Warpage must not exceed .003" (.07 mm); replace as necessary.

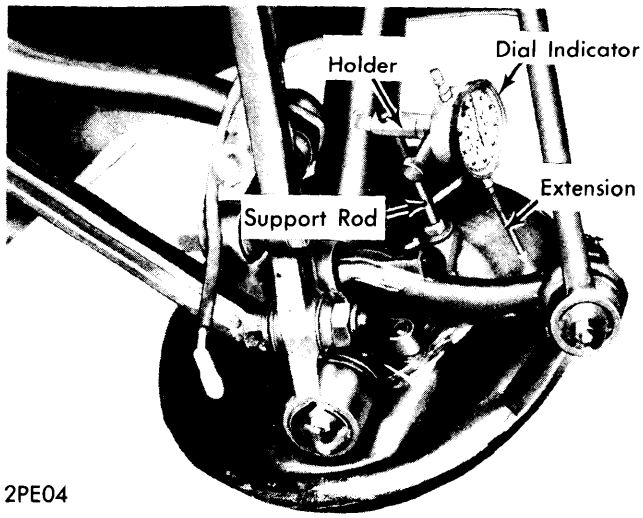
Installation — To install caliper, reverse removal procedure noting the following: Align hub and wheel reference marks and bleed hydraulic system.

Removal (Rear 504) — Raise vehicle and support with safety stands. Mark wheel and hub relationship; then remove wheels. Disconnect brake wear indicator lead, brake fluid line, parking brake cable and outer casing. Remove both caliper mounting bolts and lift off caliper. *NOTE — If difficulty is encountered removing caliper, remove thrust spring, retaining fork and friction pads.*

Installation — Refit caliper using new lock washers. Tighten mounting bolts to 31 ft. lbs. Reconnect brake fluid line and parking brake cable. Perform necessary adjustments on parking brake. Bleed hydraulic system.

BRAKE ROTOR

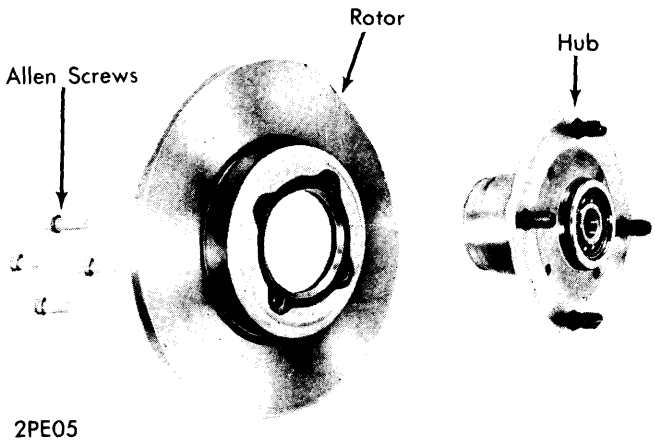
Inspecting (Front 504) — Perform rotor deflection test using suitable dial indicator with adaptors shown in illustration. Calibrate dial so feeler is .984" from outer edge of rotor. Maximum allowable deflection is .003" (.07 mm); replace as necessary.



2PE04

MEASURING ROTOR DEFLECTION

Removal (Front 504) — Remove mounting bolts and allow caliper assembly to be suspended from chassis. It is not necessary to disconnect caliper inlet hose. Remove outer wheel bearing and pull hub and rotor assembly from car. Separate hub and rotor. Carefully clean assembly and inspect wheel bearings for damage or excessive wear; replace as necessary. Check wheel seal and replace if worn.



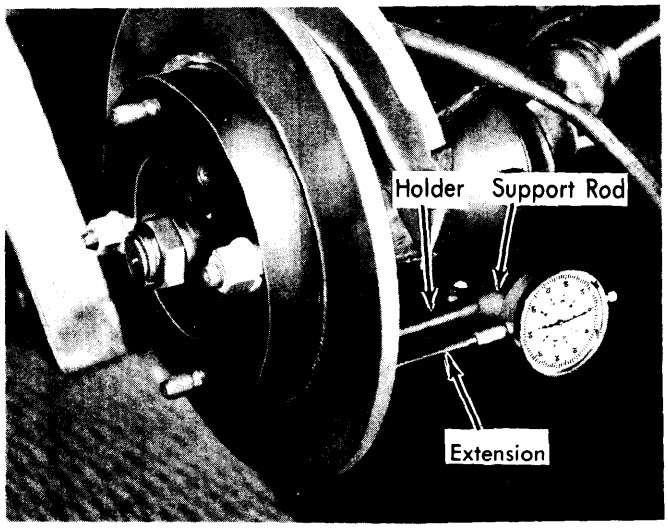
2PE05

SEPARATING ROTOR AND HUB

Installation — Assemble rotor to hub tightening Allen screws to 34 ft. lbs. Refit assembly on steering swivel using a new hub nut. Tighten nut to 7.25 ft. lbs. *See Wheel Bearing Adjustment in WHEEL ALIGNMENT Section.*

Inspecting (Rear 504 Exterior Mounted Rotor) — Using a suitable dial indicator with adaptors shown in illustration, check rotor deflection. Calibrate dial indicator so feeler is .984" (25 mm) from outer edge of rotor. Rotate rotor through one turn and record reading. Maximum allowable deflection is .003" (.07 mm); replace as necessary.

1963-73 PEUGEOT (Cont.)



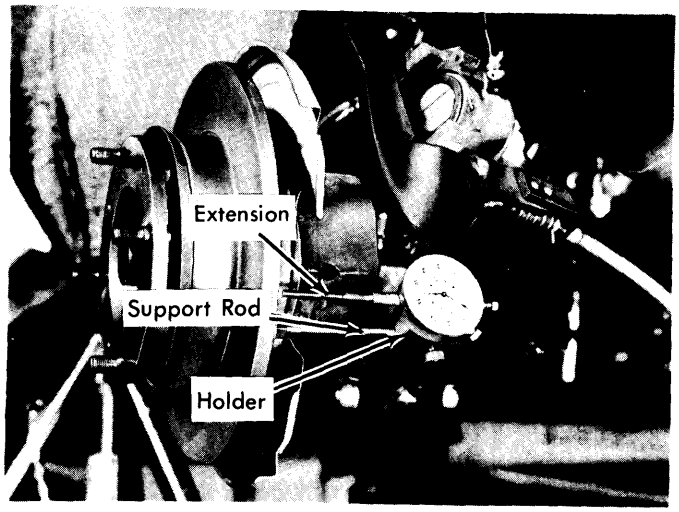
2PE11

DIAL GAUGE POSITION (EXTERIOR MOUNTED ROTOR)

Removal (Rear 504 Exterior Mounted Rotor) – Release flexible hose from its support on rear arm. Disengage brake line from support and retaining clamp from arm. Remove friction pads. Remove caliper mounting bolts and allow caliper assembly to hang from suspension. Remove single securing bolt and rotor.

Installation – To install new rotor, reverse removal procedure noting the following: Ensure rotor is properly seated.

NOTE – Interior mounted rotor deflection test is same as exterior mounted rotor except as shown in illustration.

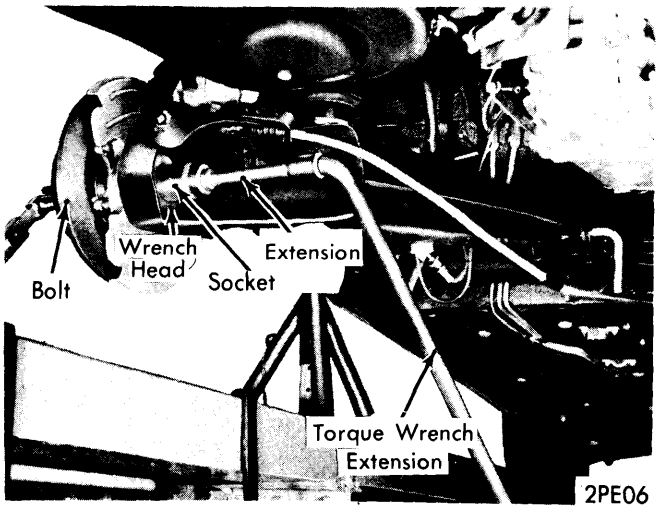


2PE19

DIAL GAUGE POSITION (INTERIOR MOUNTED ROTOR)

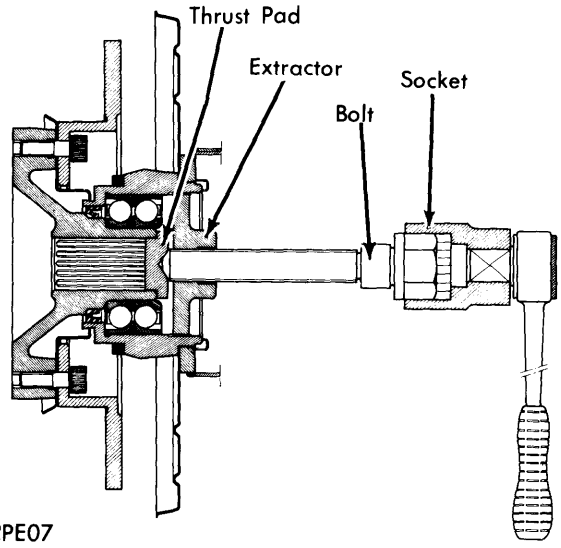
Removal (Rear 504 Interior Mounted Rotor) – 1) Disengage brake hose from rear arm support and parking brake from rear arm. Remove friction pads as previously described. Extract caliper mounting bolts and let caliper hang from suspension.

2) Remove drive shaft. Reposition arm in crossmember yokes and temporarily support there with "J" shaped rod. Remove hub carrier nuts using suitable tool arrangement shown in illustration.



REMOVING HUB CARRIER

3) To separate hub and rotor assembly from position use procedure shown in illustration. Once off vehicle, hub and rotor can be separated.



PULLING HUB & ROTOR

Installation – To install interior mounted rotor and hub assembly, reverse removal procedure.

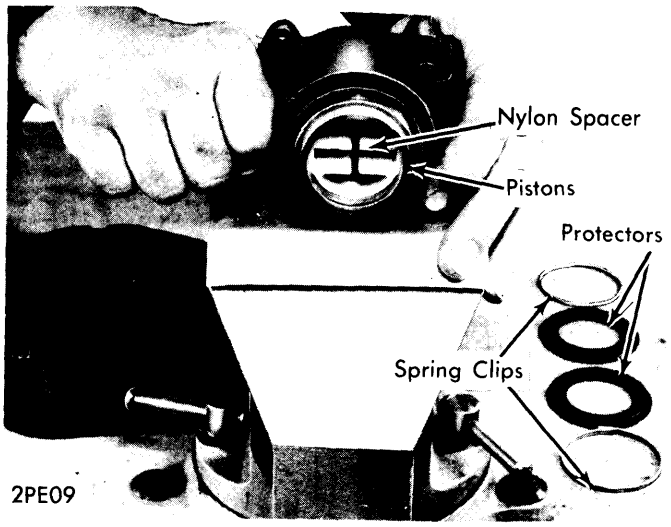
OVERHAUL

BRAKE CALIPER

Disassembly (Front 504) – Clamp assembly in soft jawed vise. Remove thrust spring, retaining fork securing bolt, retaining fork, and friction pads. Return piston using suitable tool (8.0803 E). Remove thrust spring armature and disengage ar-

1963-73 PEUGEOT (Cont.)

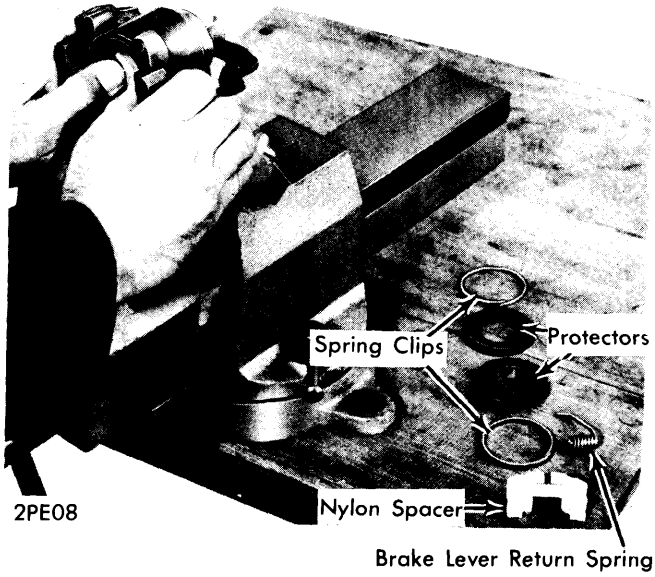
mature from guide grooves in cylinder body. Remove spring clips securing piston protectors and take out protectors. Push both pistons out of cylinder. Extract nylon spacer from piston on armature side. Remove sealing rings from cylinder body. Clean pistons and cylinder body with alcohol. Replace cylinder body if parts are worn, rusted or scored.



REMOVING PISTONS (FRONT)

Disassembly (Rear 504) – Clamp cylinder body in a soft jawed vise. Remove thrust spring, retaining fork, and friction pads. Rotate piston using suitable positioning key (8.0803 G). Turn key until it abuts on friction and pad guide. Using suitable tool (8.0803 E), seat piston. Remove thrust spring from armature and disengage it from grooves in cylinder body. Remove Truarc ring and parking brake return spring. Raise parking brake lever and take out nylon spacer. Remove spring clips holding piston protectors and withdraw protectors. Remove the two pistons by pushing on grooved one. Remove two sealing rings. Carefully clean and inspect cylinder body and piston; replace worn or damaged parts.

Reassembly – Coat new "O" rings with suitable grease and fit into cylinder grooves. Fit pistons with grooves inclined 1/8 turn from verticle. Locate parking brake lever into position. Fit protectors in respective position with thin spring clip on rotor side. Raise parking brake lever to position nylon spacer on piston. Install thrust plate if necessary. Slide parking brake return spring on pivot and attach two ends. Lock spring on pivot with new Truarc ring. Position thrust spring on upper part of armature. After reinstallation bleed hydraulic system.



REMOVING PISTONS (REAR)

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs. (mkg)
Caliper Mounting Bolts	
Front	51 (7.0)
Rear	31 (4.3)
Retaining Fork Bolt	13 (1.8)
Rotor-to-Hub Bolts	34 (4.7)
Hub Carrier Nuts	181 (24.7)
Wheel Stud Nuts	43 (5.9)
Parking Brake Cable Bracket Bolts	7 (0.9)

DISC BRAKE ROTOR SPECIFICATIONS

Application	Disc Diameter In. (mm)	Lateral Runout In. (mm)	Parallelism In. (mm)	Original Thickness In. (mm)	Minimum Refinish Thickness In. (mm)	Discard Thickness In. (mm)
All Models						
Front	10.75 (273.0)	.002 (.050)	.0007 (.017)	.502 (12.8)	.443 (11.2)	.440 (11.1)
Rear	10.75 (273.0)	.002 (.050)	.0007 (.017)	.394 (10.0)	.354 (9.0)	.350 (8.8)