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Fig. 4: Locating Parking Brake Lever Adjuster Screw
Courtesy of VOLVO CARS OF NORTH AMERICA.

SERVICING

MEASURING BRAKE DISC LATERAL RUN-OUT

Front

1. Remove brake caliper from caliper mounting.
2. Install clamp ring on hub with wheel nuts.
3. Make sure that contact surfaces on brake disc and clamp ring are clean.
4. Tighten bolts hand tight, then tighten across to 80 ft. lbs. (110 N.m).
5. Install measurement tool set bracket. Attach bracket to caliper mounting with mounting bolts. See **Fig. 5**.
6. Brake disc maximum lateral run-out must not exceed specifications. See **BRAKE SPECIFICATIONS**.
7. Remove test equipment.
8. If brake disc maximum lateral run-out is out of limits, it must be returned if you have a turning tool available or be replaced.

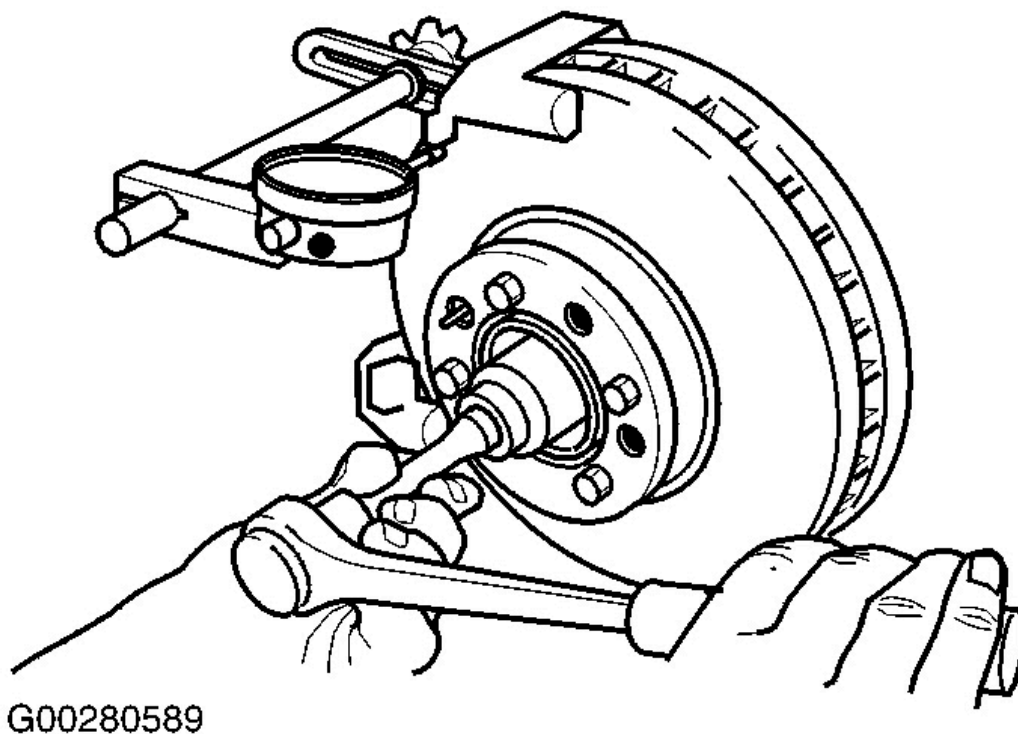


Fig. 5: Measuring Brake Disc Lateral Run-Out (Front Disc Shown; Rear Similar)
 Courtesy of VOLVO CARS OF NORTH AMERICA.

Rear

1. Remove brake caliper from rear axle.
2. Install clamp ring on hub with wheel nuts.
3. Make sure that contact surfaces on brake disc and clamp ring are clean.
4. Tighten bolts hand tight, then tighten across to 80 ft. lbs. (110 N.m).
5. Install measurement tool set bracket. Attach bracket to caliper mounting with mounting bolts.
6. Brake disc maximum lateral run-out must not exceed specifications. See **BRAKE SPECIFICATIONS**.
7. Remove test equipment.
8. If brake disc maximum lateral run-out is out of limits, it must be returned if you have a turning tool available or be replaced.

MEASURING HUB LATERAL RUN-OUT

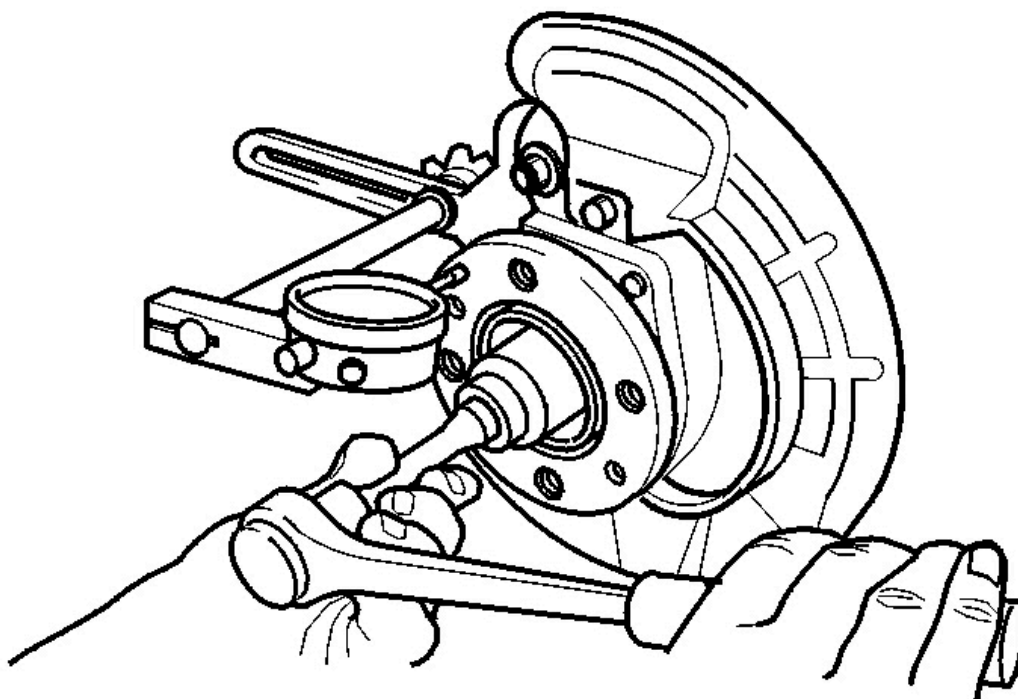
Front& Rear

1. Remove brake caliper and brake pads.
2. Clean hub flange carefully. Remove rust with steel blade and steel brush.

3. Install measurement equipment. See **Fig. 6**.

NOTE: Make sure that bracket is not lying against driveshaft gaiter.

4. For front, use M8 bolts, washers and nuts when installing measurement tool bracket to front brake caliper mounting hole. For rear use the bolts included in the measurement tool set when installing measurement tool bracket to the rear brake caliper mounting hole.
5. Put the test gauge point against the hub flange.
6. Rotate hub gently. Use a wheel wrench as an aid on the front hub.
7. Note test gauge run-out. Hub lateral run-out must not exceed specifications. See **BRAKE SPECIFICATIONS**. Replace hub if maximum lateral run-out exceeds.
8. Replace hub.
9. Install brake disc on hub, lining up marks. Tighten locating pin and bolt to 71 INCH lbs. (8 N.m).



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Fig. 6: Measuring Hub Lateral Run-Out (Front Hub Shown; Rear Similar)
Courtesy of VOLVO CARS OF NORTH AMERICA.

REMOVAL & INSTALLATION

FRONT DISC PADS

NOTE: DO NOT operate brake pedal while pads are removed.

Removal

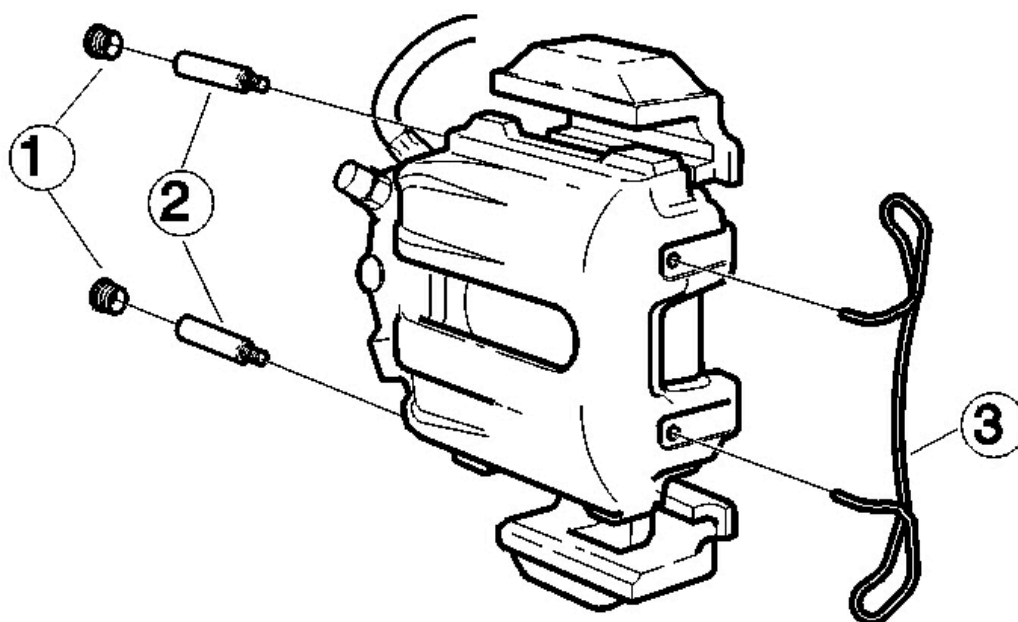
1. Remove brake caliper retaining spring (3) carefully to avoid deforming it. See **Fig. 7**.
2. Remove brake caliper protective caps (1) from the 2 locating pins (2). See **Fig. 7**. Remove both locating pins using a 7 mm hexagonal socket.
3. Remove brake pads.
4. Suspend brake caliper from a steel wire in front spring to avoid damaging hose.

NOTE: Do not depress brake pedal while brake pads are removed.

5. Clean brake pad contact surfaces in brake caliper and on caliper mounting.

NOTE: If dirt guard is damaged, dirt may have penetrated into the cylinder and so the brake caliper needs to be overhauled.

6. Check piston dirt guard. If dirt guard looks worn, replace it as a precautionary measure. If dirt guard is damaged, overhaul brake caliper.



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Fig. 7: Removing Front Brake Caliper
Courtesy of VOLVO CARS OF NORTH AMERICA.

Inspection

2000 Volvo S70

1999-2000 BRAKES Disc - S70, V70 & V70 XC

1. Check brake disc friction surface.
2. If brake disc shows signs of being warped, check its lateral run-out. See **MEASURING DISC BRAKE LATERAL RUN-OUT** under SERVICING.
3. If brake disc shows signs of major wear, variations in thickness, etc., replace it . See **FRONT DISC ROTOR**.

Installation

1. Check locating pin rubber bushings. Replace as necessary.
2. Grease locating pin with silicon grease and insert them in rubber bushings. Pin should slide easily into bushings.
3. Push piston back in cylinder on brake caliper.
4. Check that dirt guard is positioned correctly.
5. Install new brake pads and install brake caliper.
6. Tighten locating pins to specification. See **TORQUE SPECIFICATIONS**. Install protective caps.
7. Install retaining spring.
8. Install wheel and bleed brakes. See **BLEEDING BRAKE SYSTEM**.

FRONT DISC

Removal

1. Remove wheel.
2. Remove brake caliper retaining spring (3) carefully so as not to deform it. See **Fig. 7**.
3. Remove protective caps (1) from the two locating pins (2).
4. Remove both locating pins, using 7 mm hexagonal socket.
5. Remove brake caliper carefully from mounting so as not to damage brake hose.
6. Remove brake pads.

NOTE: Do not depress brake pedal while brake pad is removed.

7. Hang brake caliper from a steel wire from the front spring so as not to damage hose.

CAUTION: Manufacturer recommends using NEW brake caliper mounting bolts.

8. Remove and discard both brake caliper mounting bolts and remove mounting.
9. Remove locating pins (and bolt on earlier models).
10. Remove brake disc.

Inspection

1. Make sure that hub flange is clean. Remove rust with a steel blade and steel brush.
2. Check hub.
3. If hub is damaged, measure hub lateral run-out. See **MEASURING HUB LATERAL RUN-OUT**

2000 Volvo S70

1999-2000 BRAKES Disc - S70, V70 & V70 XC

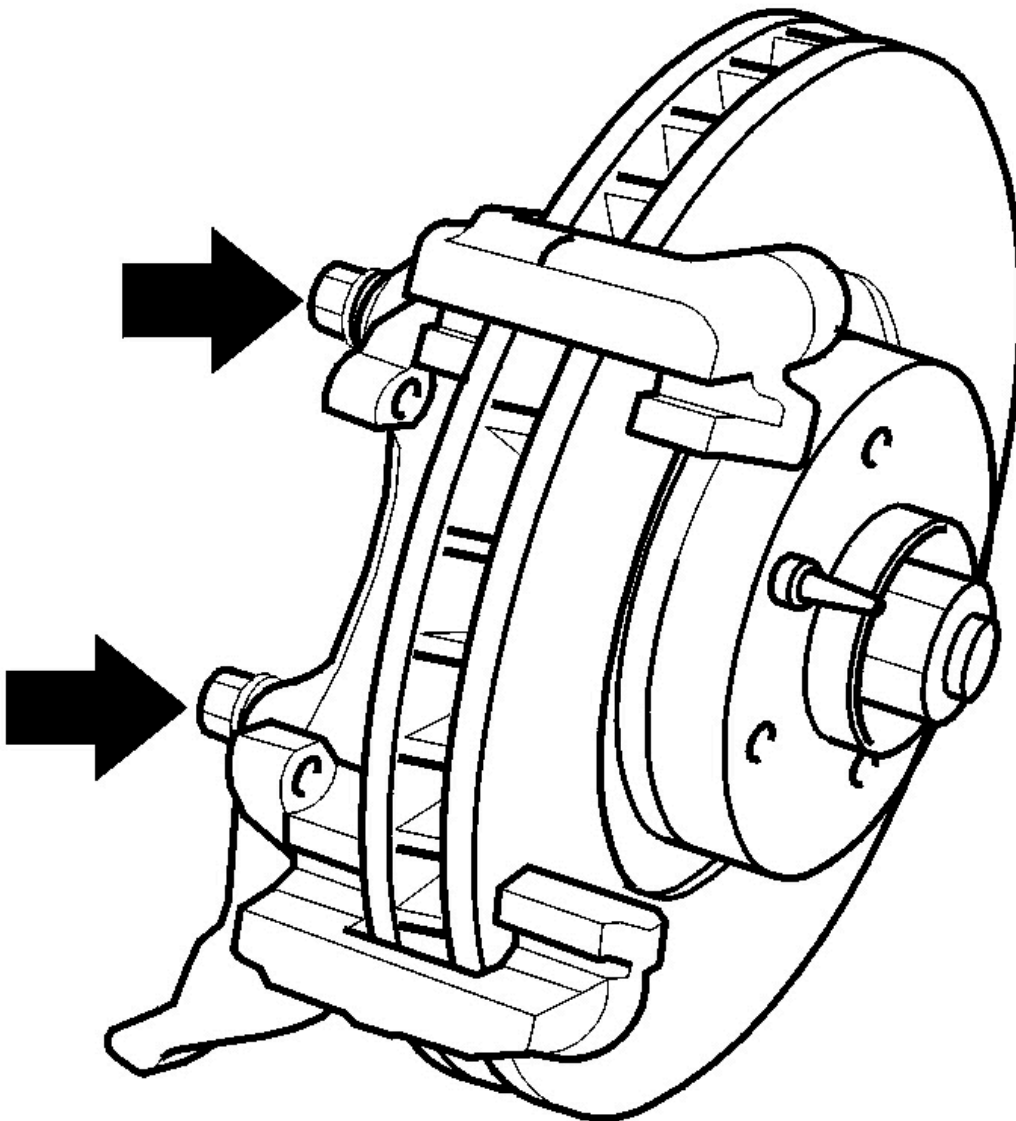
under SERVICING.

Installation

1. Install new brake disc. Tighten locating pins (and bolt) to specification. See **TORQUE SPECIFICATIONS**. See **Fig. 8**.

CAUTION: Manufacturer recommends using NEW brake caliper mounting bolts.

2. Install caliper mounting with NEW mounting bolts. Tighten both mounting bolts to specification. See **TORQUE SPECIFICATIONS**.
3. Check locating pin rubber bushings. Replace as necessary.
4. Grease locating pins with silicon grease and insert them in rubber bushings. Pin should slide easily into bushings



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Fig. 8: Identifying Front Caliper Mounting Bolts
Courtesy of VOLVO CARS OF NORTH AMERICA.

REAR DISC PADS

NOTE: DO NOT operate brake pedal while pads are removed.

Removal

1. Raise and support vehicle. Remove wheels. Knock out split pins using a .12" (3 mm) mandrel.
2. Remove retaining spring.

2000 Volvo S70

1999-2000 BRAKES Disc - S70, V70 & V70 XC

3. Remove brake pads and shims.

Inspection

1. Clean brake pad contact surfaces in brake caliper and on caliper mounting.
2. Check piston dirt guard. If dirt guard looks worn, replace it as a precautionary measure. If dirt guard is damaged, overhaul brake caliper. See **BRAKE CALIPER** under OVERHAUL.
3. Check brake disc friction surface.
4. If brake disc shows signs of being skew, check its lateral run-out. See **MEASURING DISC BRAKE LATERAL RUN-OUT** under SERVICING.
5. If brake disc shows signs of major wear, variations in thickness, etc., replace it. See **BRAKE SPECIFICATIONS**.
6. Press pistons back with a poly-grip. Take care to avoid damaging dirt guard.
7. Check that dirt guard is positioned properly.

Installation

1. Grease shim on both sides with a thin layer of silicone grease.
2. Install shim towards brake pad rear plates.
3. Install brake pads.
4. Install one split pin and retaining spring first, then the other split pin.

REAR DISC

Removal

1. Remove wheel.
2. Push out split pins with a .12" (3 mm) mandrel.
3. Remove retaining spring.
4. Remove brake pads and shims. Use puller if brake pads will not come out easily. See **Fig. 9**.

CAUTION: Manufacturer recommends using NEW brake caliper mounting bolts.

5. Remove and discard both caliper mounting bolts and remove brake pipe from clips. If removing LH brake caliper you will also need to remove the brake pipe three-way connector mounting bolt.
6. Remove brake caliper.
7. Hang brake caliper on a steel wire in the spring so as not to damage brake pipe.
8. Undo parking brake adjusting screw until brake disc can be removed. Access the adjusting screw by turning the brake disc until the adjustment hole is centrally over the adjusting screw which sits between the brake shoes.
9. Unscrew locating pin and remove brake disc.