Component Procedures: Brake Pad

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Parts and Labor (itype_189)

Parts

Qualifier	Part #	Name	Price	Note
Front Pads	92230269	Front Pads	0.00	
Rear Pads	92230273	Rear Pads	0.00	

Labor

Operation	Qualifier Path	Skill	Std Hrs	Wty Hrs
Remove & Replace	Brake Components > Brakes, R&R > Front Pads	B	1.3	0.0
Remove & Replace	Brake Components > Brakes, R&R > Front Pads >?		0.3	0.2
Remove & Replace	Brake Components > Brakes, R&R > Front Pads >?		0.2	0.2
Remove & Replace	Brake Components > Brakes, R&R > Front Pads >?		0.1	0.2
Remove & Replace	Brake Components > Brakes, R&R > Front Pads >?		0.2	0.2
Remove & Replace	Brake Components > Brakes, R&R > Front Pads >?		0.2	0.2
Remove & Replace	Brake Components > Brakes, R&R > Front Pads >?		0.4	0.2
Remove & Replace	Brake Components > Brakes, R&R > Rear Pads	B	1.3	0.0
Remove & Replace	Brake Components > Brakes, R&R > Rear Pads > ?		0.3	0.2
Remove & Replace	Brake Components > Brakes, R&R > Rear Pads > ?		0.2	0.2
Remove & Replace	Brake Components > Brakes, R&R > Rear Pads > ?		0.1	0.2
Remove & Replace	Brake Components > Brakes, R&R > Rear Pads > ?		0.2	0.2
Remove & Replace	Brake Components > Brakes, R&R > Rear Pads > ?		0.2	0.2
Remove & Replace	Brake Components > Brakes, R&R > Rear Pads > ?		0.4	0.2

Specifications Quick Reference (itype_439)

Quick Specifications
- item

Brake Pad and Rotor Burnishing (Article 10598)

Burnishing the brake pad s and brake rotor s is necessary in order to ensure that the braking surfaces are properly prepared after service has been performed on the disc brake system .
This procedure should be performed whenever the disc brake rotors have been refinished or replaced, and/or whenever the disc brake pad s have been replaced.
- Select a smooth road with little or no traffic.
- Accelerate the vehicle to 48 km/h (30 mph).
- Using moderate to firm pressure, apply the brakes to bring the vehicle to a stop. Do not allow the brakes to lock.
- Repeat steps 2 and 3 until approximately 20 stops have been completed. Allow sufficient cooling periods between stops in order to properly burnish the brake pads and rotors.

Front Disc Brake Pads Replacement (LFX) (Article 10619)

Removal Procedure
- Inspect the fluid level in the brake master cylinder reservoir .
- If the brake fluid level is midway between the maximum full point and the minimum allowable level, no brake fluid needs to be removed from the reservoir before proceeding.
- If the brake fluid level is higher than midway between the maximum full point and the minimum allowable level, remove brake fluid to the midway point before proceeding.
- Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
- Remove the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation .
- Install a C-clamp against the outer brake pad and the rear of the brake caliper body.
- Slowly tighten the C-clamp until the brake caliper pistons are compressed into the brake caliper bores.
- Using a backup wrench on the brake caliper guide pin, remove the lower brake caliper guide pin bolt (1).
Click for full-size image
- Discard the brake caliper guide pin bolt.
- Rotate the brake caliper upward and support with heavy mechanics wire or equivalent.
- Remove the outer brake pad (1). Click for full-size image

- Remove the inner brake pad (2).
- Remove the brake pad springs (1). Click for full-size image

Installation Procedure

- Inspect the brake caliper guide pins, seals and brake pad springs for damage and/or corrosion. Refer to Front Disc Brake Mounting and Hardware Inspection .
- Clean the brake pad spring contact points on the brake caliper bracket of any corrosion or debris.
- Install the brake pad springs (1). Click for full-size image
- Install the outer brake pad (1). Click for full-size image
- Install the inner brake pad (2).
- Rotate the brake caliper to the installed position.
- Using a backup wrench on the brake caliper guide pin, install a new brake caliper guide pin bolt (1) and tighten to 27 Nm (20 lb ft) . Click for full-size image
- Install the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation .
- With the engine OFF, gradually apply the brake pedal to approximately 2/3 of its travel distance.
- Slowly release the brake pedal.
- Wait 15 seconds, then repeat steps 9 and 10 until a firm brake pedal apply is obtained. This will properly seat the brake caliper pistons and brake pads.
- Fill the brake master cylinder reservoir to the proper level. Refer to Brake Master Cylinder Reservoir Filling .
- Burnish the brake pads and rotors. Refer to Brake Pad and Rotor Burnishing .

Rear Disc Brake Pads Replacement (LFX) (Article 10634)

Removal Procedure

- Inspect the fluid level in the brake master cylinder reservoir .
- If the brake fluid level is midway between the maximum full point and the minimum allowable level, no brake fluid needs to be removed from the reservoir before proceeding.
- If the brake fluid level is higher than midway between the maximum full point and the minimum allowable level, remove brake fluid to the midway point before proceeding.
- Raise and support the vehicle. Refer to Lifting and Jacking the Vehicle .
- Remove the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation .
- Install a C-clamp against the outer brake pad and the rear of the brake caliper body.
- Slowly tighten the C-clamp until the brake caliper pistons are compressed into the brake caliper bores.
- Using a backup wrench on the brake caliper guide pin, remove the lower brake caliper guide pin bolt (1). Click for full-size image
- Discard the brake caliper guide pin bolt.
- Rotate the brake caliper upward and support with heavy mechanics wire or equivalent.
- Remove the inner brake pad (1). Click for full-size image
- Remove the outer brake pad (2).
- Remove the brake pad springs (1). Click for full-size image

Installation Procedure

- Inspect the brake caliper guide pins, seals and brake pad springs for damage and/or corrosion. Refer to Rear Disc Brake Mounting and Hardware Inspection .
- Clean the brake pad spring contact points on the brake caliper bracket of any corrosion or debris.
- Install the brake pad springs (1). Click for full-size image
- Install the inner brake pad (1). Click for full-size image
- Install the outer brake pad (2).
- Rotate the brake caliper to the installed position.
- Using a backup wrench on the brake caliper guide pin, install a new brake caliper guide pin bolt (1) and tighten to 27 Nm (20 lb ft) . Click for full-size image
- Install the tire and wheel assembly. Refer to Tire and Wheel Removal and Installation .
- With the engine OFF, gradually apply the brake pedal to approximately 2/3 of its travel distance.
- Slowly release the brake pedal.
- Wait 15 seconds, then repeat steps 9 and 10 until a firm brake pedal apply is obtained. This will properly seat the brake caliper pistons and brake pads.
- Fill the brake master cylinder reservoir to the proper level. Refer to Brake Master Cylinder Reservoir Filling .
- Burnish the pads and rotors. Refer to Brake Pad and Rotor Burnishing .

Brake Pad Inspection (Article 10587)

- Inspect the disc brake pads at regular intervals, or whenever the tire and wheel assemblies are removed from the vehicle. Click for full-size image
- If replacement is necessary, always replace disc brake pad s in axle sets.
- Inspect both edges of the disc brake pad friction surfaces (3). The highest rate of wear normally occurs at the trailing edge of the disc brake pads.
- Inspect the thickness of the disc brake pads (3) in order to ensure that they have not worn prematurely. The disc brake pad wear should be approximately even per axle set.
- Both front and rear disc brake pads have integral, audible wear sensors (1). When the disc brake pad wear reaches the minimum allowable thickness, the wear sensor contacts the disc brake rotor (2). The wear indicator will then produce an audible, high-pitched warning noise during wheel rotation.
- Replace the disc brake pads when the friction surface (3) is worn to within 2.0 mm (0.080 in) of the mounting plates.
- Replace the disc brake pads if any have separated from the mounting plates.
- Inspect the disc brake pads friction surfaces for cracks, fractures, or damage which may cause noise or otherwise impair disc brake performance.