2006 BRAKES Rear Disc Brake - Escape & Mariner

2006 BRAKES

Rear Disc Brake - Escape & Mariner

SPECIFICATIONS

GENERAL SPECIFICATIONS

GENERAL SPECIFICATIONS

Item	Specification	
Brake Pad		
Brake pad minimum thickness	3.0 mm (0.118 inch)	
Brake pad maximum thickness variation (pad-to-pad)	2.0 mm (0.079 inch)	
Brake pad maximum taper wear (in any direction)	3.0 mm (0.118 inch)	
Brake Disc		
Brake disc minimum thickness	11.0 mm (0.43 inch)	
Brake disc minimum thickness to machine	11.6 mm (0.45 inch)	
Lubricant		
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1 (Canada CPM-1)	ESA-M6C25-A	
Brake Parts Cleaner PM-4	-	

TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

Description	Nm	lb-ft
Bleeder screw	16	12
Brake caliper guide bolts	35	26
Brake caliper jounce hose flow bolt	35	26
Brake caliper jounce hose bracket bolt	17	13
Brake line fitting nut	15	11

DESCRIPTION AND OPERATION

REAR DISC BRAKE

The rear disc brake system includes the brake caliper, the brake pads and the brake disc. The brake caliper is a single piston floating design. The brake caliper is mounted to the anchor

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plate by the caliper guide bolts. The brake caliper slides, or floats, on the caliper guide bolts. The brake disc is a cast, non-ventilated type disc. When mechanical force is applied by the driver to the brake pedal, the force is converted into hydraulic pressure by the master cylinder. The hydraulic force is directed to the brake calipers and transferred to the brake pads. The brake pads are then forced against the brake disc friction surfaces by the brake caliper pistons. The friction of the brake pads on the brake disc causes the slowing of wheel rotation and the vehicle.

DIAGNOSIS AND TESTING

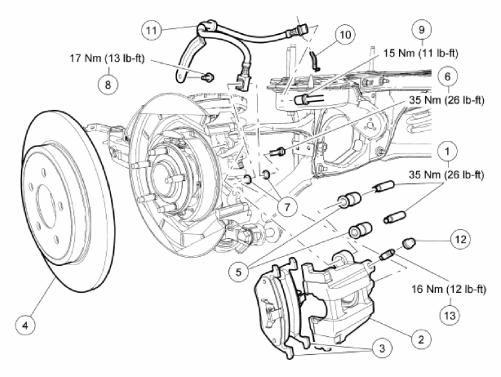
REAR DISC BRAKE

Refer to BRAKE SYSTEM-GENERAL INFORMATION.

REMOVAL AND INSTALLATION

DISC BRAKE SYSTEM - EXPLODED VIEW

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Item	Part Number	Description
1	8171	Brake caliper guide bolts (2 required)
2	2K327 RH/ 2K328 LH	Brake caliper
3	5105	Brake pads
4	2C026	Brake disc
5	9171	Brake caliper guide bolt bushings (2 required)
6	385116-S2	Brake caliper jounce hose flow bolt
7	2179	Copper washers (2 required)
8	W500220	Brake caliper jounce hose bracket bolt

Item	Part Number	Description
9	_	Brake line fitting nut
10	2B223	Brake caliper jounce hose retaining clip
11	2C338 RH/ 2C339 LH	Brake caliper jounce hose
12	2L126	Bleeder screw cap
13	0110	Bleeder screw

Fig. 1: Rear Disc Brake System - Exploded View With Torque Specifications Courtesy of FORD MOTOR CO.

1. For additional information, refer to the appropriate procedures.

BRAKE PADS

A0095511

Removal and Installation

- 1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING & LIFTING**.
- 2. Remove the 2 brake caliper guide bolts.
 - To install, tighten to 35 Nm (26 lb-ft).

CAUTION: Do not allow the brake caliper to hang by the brake caliper jounce hose.

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- 3. Remove the brake caliper and secure the brake caliper to the vehicle.
- 4. Remove the inboard and outboard brake pads from the brake caliper.
- 5. To install, reverse the removal procedure.

BRAKE PADS - HYBRID

Removal and Installation

CAUTION: Do not allow brake fluid to overflow from the master cylinder reservoir. Brake fluid may damage the high-voltage components.

NOTE: The rear brake pads will wear at approximately twice the rate of the front brake pads.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING & LIFTING**.

NOTE: The following steps must be followed to prevent the accumulator from charging and pressurizing the brake system.

- 2. Disconnect the battery. For additional information, refer to **BATTERY, MOUNTING AND CABLES**.
 - Remove the battery junction box (BJB) fuses 24 (50A) and 31 (50A).
- 3. Remove the 2 brake caliper guide bolts.
 - To install, tighten to 35 Nm (26 lb-ft).

CAUTION: Do not allow the brake caliper to hang by the brake caliper jounce hose.

- 4. Remove the brake caliper and secure the brake caliper to the vehicle.
- 5. Remove the inboard and outboard brake pads from the brake caliper.
- 6. To install, reverse the removal procedure.

BRAKE CALIPER

MATERIAL SPECIFICATION

Item	Specification
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1 (Canada	ESA-M6C25-
CPM-1)	A

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Removal and Installation

WARNING: Use of any other than approved DOT 3 motor vehicle brake fluid will cause permanent damage to brake components and will render the brakes inoperative. Failure to follow these instructions may result in personal injury.

WARNING: Carefully read cautionary information on product label. For EMERGENCY MEDICAL INFORMATION seek medical advice. In the USA or Canada on Ford/Motorcraft products call: 1-800-959-3673. For additional information, consult the product Material Safety Data Sheet (MSDS) if available. Failure to follow these instructions may result in personal injury.

CAUTION: Brake fluid is harmful to painted and plastic surfaces. If brake fluid is spilled onto a painted or plastic surface, immediately wash it with water.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING & LIFTING**.

NOTE: Install new copper washers.

- 2. Remove the brake caliper jounce hose flow bolt and discard the 2 copper washers.
 - To install, tighten to 35 Nm (26 lb-ft).
- 3. Remove the 2 brake caliper guide bolts.
 - To install, tighten to 35 Nm (26 lb-ft).
- 4. Remove the brake caliper.
- 5. To install, reverse the removal procedure.
 - Bleed the brake system. For additional information, refer to **BRAKE SYSTEM- GENERAL INFORMATION**.

BRAKE CALIPER - HYBRID

MATERIAL SPECIFICATION

Item	Specification
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1 (Canada	ESA-M6C25-
CPM-1)	A

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CAUTION: Do not allow brake fluid to overflow from the master cylinder reservoir. Brake fluid may damage the high-voltage components.

NOTE: The rear brake pads will wear at approximately twice the rate of the front brake pads.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING & LIFTING**.

NOTE: The following steps must be followed to prevent the accumulator from charging and pressurizing the brake system.

- 2. Disconnect the battery. For additional information, refer to **BATTERY, MOUNTING AND CABLES**.
 - Remove the battery junction box (BJB) fuses 24 (50A) and 31 (50A).

NOTE: Install new copper washers.

- 3. Remove the brake caliper jounce hose flow bolt and discard the 2 copper washers.
 - To install, tighten to 35 Nm (26 lb-ft).
- 4. Remove the 2 brake caliper guide bolts.
 - To install, tighten to 35 Nm (26 lb-ft).

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- 5. Remove the brake caliper.
- 6. To install, reverse the removal procedure.
 - Bleed the brake system. For additional information, refer to **BRAKE SYSTEM-GENERAL INFORMATION**.

BRAKE DISC

Removal and Installation

- 1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING & LIFTING**.
- 2. Remove the brake pads. For additional information, refer to **BRAKE PADS**.
- 3. Remove the brake disc.
- 4. If the brake disc binds on the parking brake shoe and lining, remove the adjustment hole access plug and retract the parking brake shoe and lining by rotating the adjuster.
- 5. To install, reverse the removal procedure.
 - Adjust the parking brake shoe and lining, if necessary. For additional information, refer to **PARKING BRAKE & ACTUATION**.

BRAKE DISC - HYBRID

Removal and Installation

CAUTION: Do not allow brake fluid to overflow from the master cylinder reservoir. Brake fluid may damage the high-voltage components.

NOTE: The rear brake pads will wear at approximately twice the rate of the front brake pads.

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to **JACKING & LIFTING**.

NOTE: The following steps must be followed to prevent the accumulator from charging and pressurizing the brake system.

- 2. Disconnect the battery. For additional information, refer to **BATTERY, MOUNTING AND CABLES**.
 - Remove the battery junction box (BJB) fuses 24 (50A) and 31 (50A).
- 3. Remove the brake pads. For additional information, refer to **BRAKE PADS - HYBRID**.

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- 4. Remove the brake disc.
- 5. If the brake disc binds on the parking brake shoe and lining, remove the adjustment hole access plug and retract the parking brake shoe and lining by rotating the adjuster.
- 6. To install, reverse the removal procedure.
 - Adjust the parking brake shoe and lining, if necessary. For additional information, refer to **PARKING BRAKE & ACTUATION**.

DISASSEMBLY AND ASSEMBLY

BRAKE CALIPER

MATERIAL SPECIFICATION

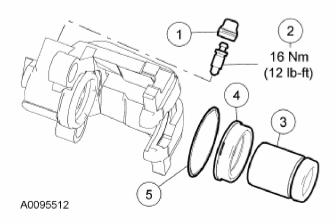
Item	Specification
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1 (Canada	ESA-M6C25-
CPM-1)	A

WARNING: Use of any other than approved DOT 3 motor vehicle brake fluid will cause permanent damage to brake components and will render the brakes inoperative. Failure to follow these instructions may result in personal injury.

WARNING: Carefully read cautionary information on product label. For EMERGENCY MEDICAL INFORMATION seek medical advice. In the USA or Canada on Ford/Motorcraft products call: 1-800-959-3673. For additional information, consult the product Material Safety Data Sheet (MSDS) if available. Failure to follow these instructions may result in personal injury.

CAUTION: Brake fluid is harmful to painted and plastic surfaces. If brake fluid is spilled onto a painted or plastic surface, immediately wash the surface with water.

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Item	Part Number	Description
1	2L126	Bleeder screw cap
2	2208	Bleeder screw
3	2196	Piston
4	2207	Dust boot (part of 2B120 and kit 2221)
5	2A418	Piston seal (part of 2B120 and kit 2221)

Fig. 2: Identifying Brake Caliper Components With Torque Specifications Courtesy of FORD MOTOR CO.

Disassembly and Assembly

- 1. Remove the brake caliper. For additional information, refer to **BRAKE CALIPER** or **BRAKE CALIPER HYBRID**.
- 2. Secure the brake caliper in a vise.
- 3. Remove the brake caliper dust boot.
- 4. Remove the bleeder screw cap.
- 5. Remove the bleeder screw.
 - To install, tighten to 16 Nm (12 lb-ft).

CAUTION: Apply moderate air pressure in short bursts to prevent an uncontrolled release of the piston.

NOTE: Inspect the brake caliper piston and bore for excessive wear, corrosion or pitting. If any of these conditions exist, a new caliper must be installed.

- 6. Remove the brake caliper piston.
 - 1. Place a block of wood between the brake caliper piston and the brake caliper housing.
 - 2. Apply compressed air through the brake caliper jounce hose port to remove the

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piston.

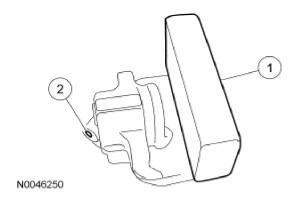


Fig. 3: Identifying Block Of Wood And Brake Caliper Jounce Hose Port Courtesy of FORD MOTOR CO.

7. Remove the dust boot.

CAUTION: Use a plastic or wooden pick to remove the piston seal from the caliper bore. A metal tool may scratch or nick the seal groove, which could result in a seal leak.

- 8. Remove the piston seal using a plastic or wooden tool.
- 9. To assemble, reverse the disassembly procedure.
 - Lubricate the piston seal with clean brake fluid.