

2008 Ford Mustang

2008 BRAKES Front Disc Brake - Mustang

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Front Disc Brake - Mustang

SPECIFICATIONS

Material

Item	Specification	Fill Capacity
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1-C (US); CPM-1-C (Canada)	WSS-M6C62-A	714 ml (1.5 pt)
High Temperature Nickel Anti-Seize Lubricant XL-2 (US); CXG-2-B (Canada)	ESE-M12A4-A	-
Metal Brake Parts Cleaner PM-4-A or PM-4-B (US); CPM-4 (Canada)	-	-
Silicone Brake Caliper Grease and Dielectric Compound XG-3-A	ESE-M1C171-A	-

GENERAL SPECIFICATIONS

Item	Specification
Brake Disc - 4.0L SOHC and 4.6L (3V)	
Brake disc minimum thickness	28.4 mm (1.118 in)
Brake Disc - 5.4L	
Brake disc minimum thickness	30.0 mm (1.181 in)
Brake Pads - 4.0L SOHC and 4.6L (3V)	
Brake pad maximum taper wear (in any direction)	3.0 mm (0.118 in)
Brake pad minimum thickness	3.0 mm (0.118 in)
Brake Pads - 5.4L	
Brake pad minimum thickness	1.8 mm (0.071 in)

TORQUE SPECIFICATIONS

Description	Nm	lb-ft	lb-in
Bleeder screw	10	-	89
Brake caliper anchor plate bolts	115	85	-
Brake caliper bolt - 5.4L	115	85	-
Brake caliper flow bolt	40	30	-
Brake caliper guide pin bolts	34	25	-
Brake disc shield bolts	20	15	-
Brake flexible hose bracket bolts	20	15	-
Brake tube fittings	17	13	-

DESCRIPTION AND OPERATION

FRONT DISC BRAKE

The front brake disc system consists of the following components:

- Brake caliper anchor plate
- Brake caliper
- Brake disc
- Brake disc shield
- Brake flexible hose

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 disc brake calipers and transferred to the brake pads. The brake pads are then forced against the brake 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.

DIAGNOSTIC TESTS

FRONT DISC BRAKE

Refer to **BRAKE SYSTEM - GENERAL INFORMATION** article.

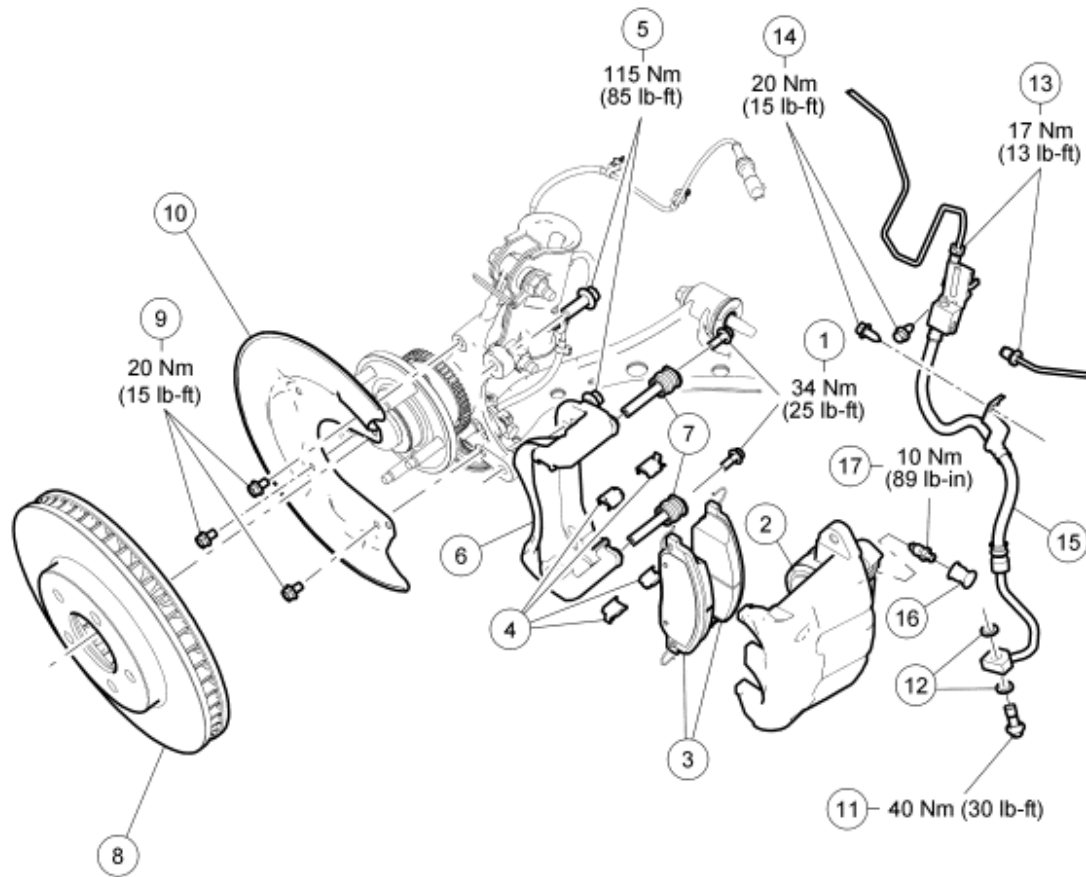
REMOVAL AND INSTALLATION

DISC BRAKE SYSTEM - EXPLODED VIEW

NOTE: **LH shown, RH similar.**

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Fig. 1: Exploded View Of Disc Brake System With Torque Specifications - 4.0L SOHC & 4.6L (3V)
Courtesy of FORD MOTOR CO.

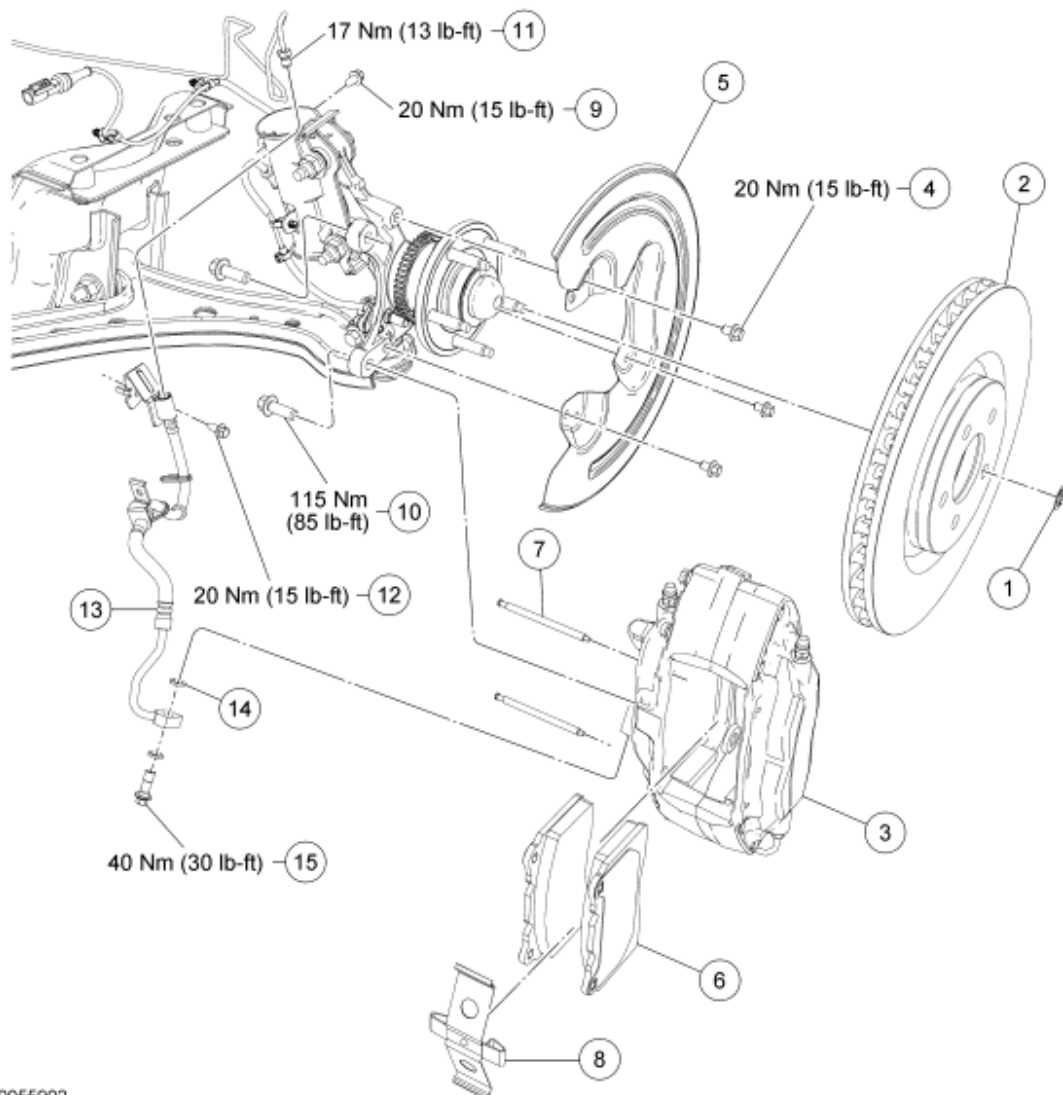
Item	Part Number	Description
1	-	Brake caliper guide pin bolts (2 required) (part of 2B134, also part of 2001)
2	2C357 RH/ 2C358 LH	Brake caliper
3	2001	Brake pads kit
4	-	Spring clips (4 required) (part of 2001)
5	W710233	Brake caliper anchor plate bolts (2 required)
6	2B134	Brake caliper anchor plate
7	-	Guide pins (part of 2B134)
8	1125	Brake disc

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9	W500020	Brake disc shield bolts (3 required)
10	2K004	Brake disc shield
11	W712275	Brake caliper flow bolt
12	W712362	Copper washers (2 required)
13	-	Brake tube fittings (part of 2C296)
14	N802191	Brake flexible hose bracket bolts
15	2078 RH/ 2B557 LH	Brake flexible hose
16	-	Bleeder screw cap (part of 2208)
17	2208	Bleeder screw

NOTE: RH shown, LH similar



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Fig. 2: Exploded View Of Disc Brake System With Torque Specifications - 5.4L

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Courtesy of FORD MOTOR CO.

Item	Part Number	Description
1	383609	Retaining nut
2	1125	Brake disc
3	2B220 RH/ 2B221 LH	Brake caliper
4	W500020	Brake disc shield bolt (3 required)
5	2K004	Brake disc shield
6	2001	Brake pad (2 required)
7	-	Brake pad mounting pin (2 required) (part of 2B164)
8	-	Spring retainer clip (part of 2K583)
9	N802191	Brake hose-to-strut bolt
10	W710233	Brake caliper bolt (2 required)
11	-	Brake tube fitting (part of 2C296)
12	N802191	Brake flexible hose bracket bolt
13	2078 RH/ 2B557 LH	Brake flexible hose
14	W712362	Copper washer (2 required)
15	W712275	Brake caliper flow bolt

NOTE: A revised part, with the same base part number, has been released for the RH brake hose. When installing a new RH brake hose, position the anti-rotation tab on the mounting bracket toward the front of the vehicle and install the bolt with the head toward the rear of the vehicle.

1. For additional information, refer to the procedures.

BRAKE CALIPER - 4.0L SOHC AND 4.6L (3V)

Material

Item	Specification
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1-C (US); CPM-1-C (Canada)	WSS-M6C62-A

REMOVAL

WARNING: Do not use any fluid other than clean brake fluid meeting manufacturer's specification. Additionally, do not use brake fluid that has been previously drained. Following these instructions will help prevent system contamination, brake component damage and the risk of serious personal injury.

WARNING: Carefully read cautionary information on product label. For EMERGENCY

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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 serious 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. Remove the wheel and tire. For additional information, refer to **WHEELS AND TIRES** article.
2. Remove the brake caliper flow bolt and discard the 2 copper washers.

CAUTION: Do not use the caliper sight hole to retract pistons as this may damage the pistons and boots.

3. Remove and discard the 2 brake caliper guide pin bolts and remove the brake caliper.
4. Inspect the brake caliper.
 - If leaks or damaged boots are found, install a new brake caliper.

INSTALLATION

1. Position the brake caliper and install 2 new guide pin bolts.
 - Tighten to 34 Nm (25 lb-ft).
2. Using 2 new copper washers, position the brake flexible hose on the brake caliper and install the brake caliper flow bolt.
 - Tighten to 40 Nm (30 lb-ft).
3. Bleed the brake system. For additional information, refer to **BRAKE SYSTEM - GENERAL INFORMATION** article.
4. Install the wheel and tire. For additional information, refer to **WHEELS AND TIRES** article.

BRAKE CALIPER - 5.4L

Material

Item	Specification
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1-C (US); CPM-1-C (Canada)	WSS-M6C62-A

REMOVAL AND INSTALLATION

WARNING: Do not use any fluid other than clean brake fluid meeting manufacturer's specification. Additionally, do not use brake fluid that has been previously drained. Following these instructions will help prevent system

contamination, brake component damage and the risk of serious 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 serious 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. Remove the wheel and tire. For additional information, refer to **WHEELS AND TIRES** article.
2. Remove the brake pads. For additional information, refer to **Brake Caliper - 5.4L**.
3. Remove the brake caliper flow bolt and discard the 2 copper washers.
 - To install, tighten to 48 Nm (35 lb-ft).
 - Install new copper washers.

CAUTION: Do not remove the bolts securing the 2 caliper halves together. Do not attempt to separate the 2 caliper halves or damage to components may occur.

4. Remove the 2 brake caliper anchor plate bolts and the brake caliper.
 - To install, tighten to 40 Nm (30 lb-ft).
5. To install, reverse the removal procedure.
 - Bleed the brakes. For additional information, refer to **BRAKE SYSTEM - GENERAL INFORMATION** article.

BRAKE PADS - 4.0L SOHC AND 4.6L (3V)

Material

Item	Specification
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1-C (US); CPM-1-C (Canada)	WSS-M6C62-A
Metal Brake Parts Cleaner PM-4-A or PM-4-B (US); CPM-4 (Canada)	-
Silicone Brake Caliper Grease and Dielectric Compound XG-3-A	ESE-M1C171-A

REMOVAL

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WARNING: Do not use any fluid other than clean brake fluid meeting manufacturer's specification. Additionally, do not use brake fluid that has been previously drained. Following these instructions will help prevent system contamination, brake component damage and the risk of serious 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 serious 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. Check the brake fluid level in the brake fluid reservoir.
 - If required, remove fluid until the brake master cylinder reservoir is half full.
2. Remove the wheel and tire. For additional information, refer to **WHEELS AND TIRES** article.

CAUTION: Do not use the caliper sight hole to retract pistons as this may damage the pistons and boots.

CAUTION: Do not allow the brake caliper, brake pads and anchor plate assembly to hang from the brake hose or damage to the hose may occur.

3. Remove and discard the 2 brake caliper guide pin bolts and position the brake caliper aside.
 - Support the brake caliper using mechanic's wire.

CAUTION: Install new brake pads if they are worn past the specified thickness above the metal backing plates. Install new brake pads in axle sets or brake drag/brake pull may occur.

4. Remove the brake pads and discard the 4 spring clips.
5. Inspect the brake caliper.
 - If leaks or damaged boots are found, install a new brake caliper. For additional information, refer to **Brake Caliper - 4.0L SOHC and 4.6L (3V)**.
6. Inspect the brake caliper anchor plate assembly.
 - Check the guide pins and boots for binding or damage.
 - Lubricate the guide pins with the specified grease.
 - Install a new brake caliper anchor plate if it is worn or damaged. For additional information, refer to **Brake Caliper - 4.0L SOHC and 4.6L (3V)**.

INSTALLATION

CAUTION: Protect the piston and boots when pushing the caliper piston into the caliper piston bores or damage to the piston or boots may occur.

1. If installing new brake pads, using a C-clamp and a worn brake pad, compress the brake caliper pistons into the caliper.

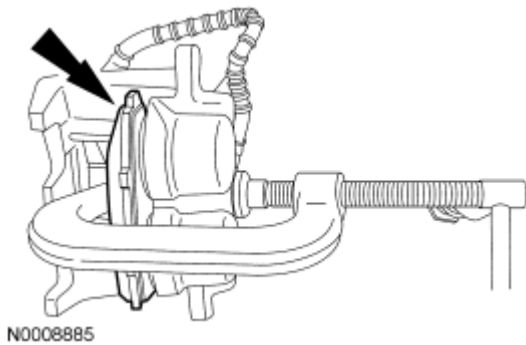


Fig. 3: Compressing Brake Caliper Pistons Into Caliper
Courtesy of FORD MOTOR CO.

CAUTION: Do not allow grease, oil, brake fluid or other contaminants to contact the pad lining material or damage to components may occur. Do not install contaminated pads.

NOTE: Install all the hardware supplied with the brake pad kits.

2. Install 4 new spring clips and the 2 brake pads.
3. Position the brake caliper on the anchor plate and install 2 new guide pin bolts.
 - Tighten to 34 Nm (25 lb-ft).
4. If necessary, fill the brake fluid reservoir with clean, specified brake fluid.
5. Apply the brakes several times to verify correct brake operation.

BRAKE PADS - 5.4L**REMOVAL AND INSTALLATION**

WARNING: Always install new brake shoes or pads at both ends of an axle to reduce the possibility of brakes pulling vehicle to one side. Failure to follow this instruction may result in uneven braking and serious personal injury.

1. Remove the wheel and tire. For additional information, refer to **WHEELS AND TIRES** article.

NOTE: Inspect and install new brake pad mounting hardware as necessary.

- 2. Remove the brake pad mounting pins and spring retainer clip.
 - Remove the brake pads from the caliper assembly.



Fig. 4: Identifying Brake Pad Mounting Pins & Spring Retainer Clip
Courtesy of FORD MOTOR CO.

CAUTION: Do not allow the brake caliper to hang from the brake hose or damage to the hose may occur.

- 3. Remove and discard the 2 brake caliper bolts and position the brake caliper aside.
 - Support the brake caliper using mechanic's wire.
 - To install, tighten new caliper bolts to 115 Nm (85 lb-ft).

CAUTION: Protect the piston and boots when pushing the caliper piston into the caliper piston bores or damage to the piston or boots may occur.

- 4. If installing new brake pads, using a C-clamp and a worn brake pad, compress the brake caliper pistons into the caliper.
- 5. To install, reverse the removal procedure.
- 6. Apply the brake pedal several times to verify correct brake operation.

BRAKE CALIPER ANCHOR PLATE - 4.0L SOHC AND 4.6L (3V)

Material

Item	Specification
Silicone Brake Caliper Grease and Dielectric Compound XG-3-A	ESE-M1C171-A

REMOVAL AND INSTALLATION

- 1. Remove the brake pads. For additional information, refer to **Brake Pads - 4.0L SOHC and 4.6L (3V).**

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NOTE: Clean any residual threadlock compound from the anchor plate threads before installing the bolts.

2. Remove and discard the 2 anchor plate bolts and remove the brake caliper anchor plate.
 - To install, tighten new anchor plate bolts to 115 Nm (85 lb-ft).
3. Inspect the brake caliper anchor plate assembly.
 - Check the guide pins and boots for binding and damage.
 - Replace worn or damaged pins. Lubricate the pins with the specified grease.
 - Install a new brake caliper anchor plate if it is worn or damaged.
4. To install, reverse the removal procedure.

BRAKE DISC

Material

Item	Specification
High Temperature Nickel Anti-Seize Lubricant XL-2 (US); CXG-2-B (Canada)	ESE-M12A4-A
Metal Brake Parts Cleaner PM-4-A or PM-4-B (US); CPM-4 (Canada)	-

REMOVAL

4.0L SOHC and 4.6L (3V) equipped vehicles

CAUTION: Do not allow the brake caliper, brake pads and anchor plate assembly to hang from the brake hose or damage to the hose may occur.

1. Remove and discard the 2 brake caliper anchor plate bolts and position the brake caliper, brake pads and anchor plate aside as an assembly.
 - Support the brake caliper, brake pads and anchor plate assembly using mechanic's wire.

5.4L equipped vehicles

CAUTION: Do not allow the brake caliper assembly to hang from the brake hose or damage to the hose may occur.

2. Remove and discard the 2 brake caliper bolts and position the caliper assembly aside.
 - Support the caliper assembly using mechanic's wire.

All vehicles

3. If equipped, remove and discard the retainer nuts.

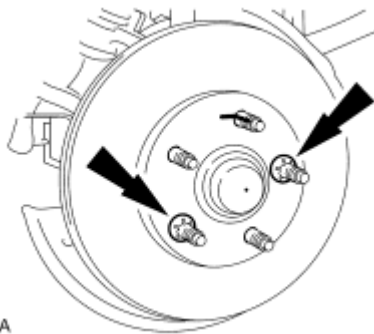


Fig. 5: Identifying Brake Caliper Bolts
Courtesy of FORD MOTOR CO.

4. Remove the brake disc.

INSTALLATION

All vehicles

CAUTION: Do not use an abrasive sanding disc since it will remove paint or other protective finishes from the wheel or metal from the mounting surfaces, adversely affecting corrosion protection and brake disc lateral runout.

1. Remove corrosion from the wheel mounting surfaces, both disc mounting surfaces and hub mounting surfaces.
 - Use brake parts cleaner to clean the brake disc and hub surfaces.
 - Apply anti-seize lubricant to the hub mounting surfaces to prevent future corrosion.
2. Install the brake disc.

4.0L SOHC and 4.6L (3V) equipped vehicles

NOTE: Clean any residual threadlock compound from the anchor plate threads before installing the bolts.

3. Position the brake caliper, brake pads and anchor plate assembly.
 - Install 2 new brake caliper anchor plate bolts and tighten to 115 Nm (85 lb-ft).

5.4L equipped vehicles

4. Position the brake caliper assembly and install 2 new caliper bolts.
 - Tighten the bolts to 115 Nm (85 lb-ft).

BRAKE DISC SHIELD

REMOVAL AND INSTALLATION

- 1. Remove the brake disc. For additional information, refer to **Brake Disc**.
- 2. Remove the 3 bolts and the brake disc shield.
 - To install, tighten to 20 Nm (15 lb-ft).
- 3. To install, reverse the removal procedure.

BRAKE FLEXIBLE HOSE

Material

Item	Specification
High Performance DOT 3 Motor Vehicle Brake Fluid PM-1-C (US); CPM-1-C (Canada)	WSS-M6C62-A

REMOVAL AND INSTALLATION

WARNING: Do not use any fluid other than clean brake fluid meeting manufacturer's specification. Additionally, do not use brake fluid that has been previously drained. Following these instructions will help prevent system contamination, brake component damage and the risk of serious 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 serious 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. Remove the brake caliper flow bolt and discard the 2 copper washers.
 - To install, tighten to 40 Nm (30 lb-ft).
- 2. Disconnect the brake tube fitting from the brake flexible hose.
 - To install, tighten to 17 Nm (13 lb-ft).
- 3. Remove the 2 brake flexible hose bracket bolts and the brake flexible hose.
 - To install, tighten to 20 Nm (15 lb-ft).
- 4. To install, reverse the removal procedure.
 - Bleed the brake system. For additional information, refer to **BRAKE SYSTEM - GENERAL INFORMATION** article.