1968-72 KELSEY-HAYES (FORD MOTOR CO.) SINGLE PISTON DISC

Continental Mark III & IV (1969-72)
Ford, All Models Except Pinto (1968-72)
Lincoln Continental (1970-72)
Mercury, All Models (1968-72)

DESCRIPTION

Single piston, floating caliper ventilated disc type, actuated by hydraulic system. Disc (rotor) is fixed to front wheel hub. Anchor plate is bolted to spindle arm, and caliper is attached to anchor plate by two spring steel stabilizers (Some models use a single spring stabilizer). Caliper slides on two guide pins attached to stabilizers. Single cylinder bore contains piston with molded rubber dust boot which seals cylinder bore and returns piston to released position. Rubber piston seal provides seal between cylinder and piston. Outboard shoe and lining assembly is attached to to caliper by two pins and spring clips; inboard shoe and lining attaches to end of piston by two hold-down clips. A proportioning valve provides balanced braking action between front and rear brakes. Ford, Mercury, Continental Mark III & IV, Lincoln Continental and Thunderbird also have a metering valve in the hydraulic line to the front brakes.

ADJUSTMENT

No adjustments are required on brakes. Disc brakes are self-adjusting.

SERVICING

Bleeding System

See "Hydraulic Brake Bleeding" in this section.

Lining Replacement

BRAKE LINING NOTE - New brake shoes are used on all Kelsey-Hayes single piston disc brakes. The inboard shoe has been shortened for increased clearance at anchor plate. The outboard shoe has increased lining area.

Removal - Remove caliper from hub and rotor (see "Brake Caliper - Removal" below). Slide inner brake shoe outward until clear of hold-down spring, then remove shoe. Slide two outer shoe retaining clips off retaining pins and remove pins from shoe. Remove shoe from caliper. Remove caliper guide pins, stabilizer attaching bolts, stabilizer, and caliper guide pin insulators from anchor plate.

Installation - Reverse removal procedure, making sure that caliper guide pins are free of oil, grease and dirt, and that inner brake shoe ears are on top of anchor plate bosses and under hold-down springs. Install new stabilizers and caliper guide pin insulators.

REMOVAL & INSTALLATION

Brake Caliper

Removal - Remove wheel and tire from hub and rotor assembly. Disconnect brake line from caliper. Remove safety wire from caliper to spindle attaching bolts and remove bolts. Lift caliper assembly off hub and rotor.

Installation - Position caliper assembly on rotor and mount on spindle. Install attaching bolts and torque to specification (upper bolt must be tightened first). Install safety wire securing bolts and twist ends five times. Install new copper washer on each side of brake hose connector and position caliper. Install attaching bolt and torque to specification. Bleed brake system and centralize differential valve. Check master cylinder fluid level. Pump brake several times to actuate piston seal and position shoe and lining assemblies.

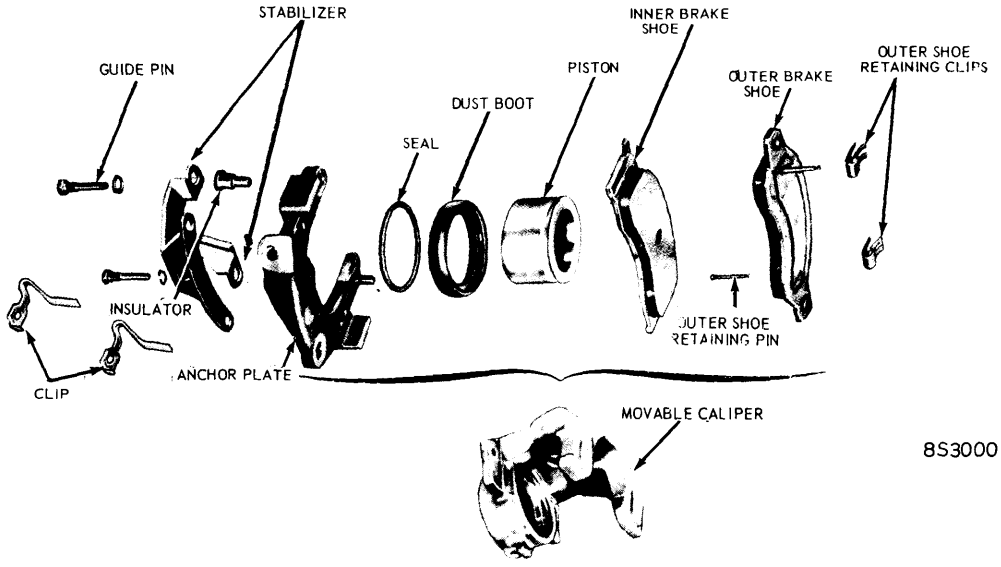
Brake Rotor

Removal - Remove caliper assembly from spindle and rotor (do not disconnect hydraulic line). Hang caliper from car frame with hook so that brake hose is not under strain. Place clean cardboard between linings to prevent piston from coming out of bore. Remove grease cap from hub. Remove cotter pin, nut lock, adjusting nut, and flat washer from spindle. Remove hub and rotor assembly from spindle.

Installation - Reverse removal procedure, making sure that wheel bearings are adjusted to specifications and grease in hub is clean and adequate.

Rotor Splash Shield

To remove splash shield, caliper and hub and rotor assemblies must be removed (not necessary to disconnect hydraulic lines). Remove three splash shield bolts. Remove shield and gasket. To install, reverse removal procedure (straighten shield if bent).



KELSEY-HAYES (FORD MOTOR CO.) CALIPER ASSEMBLY (TYPICAL)

1968-72 KELSEY-HAYES (FORD MOTOR CO.) SINGLE PISTON DISC (Cont.)

OVERHAUL

Metering And/Or Proportioning Valve

Valve is serviced as an assembly and is never adjusted or overhauled.

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
Caliper Guide Pins	25-35
Caliper to Spindle Bolts ①	
1968-70 Ford, Mercury, Meteor, Thunderbird	
Upper	110-140
Lower	90-120
1968-70 Fairlane, Montego, Falcon, Mustang, Cougar	
Upper	110-140
Lower	55-75
1968-69 Continental Mark III	
Upper	130-140
Lower	110-120
1970-71 Continental Mark III, Lincoln	
Upper	110-140
Lower	90-120
1971 Torino, Montego, Mustang, Cougar	
Upper	110-140
Lower	55-70
1972 Torino, Montego, Thunderbird, Continental Mark IV	
Upper & Lower	90-120
1972 Mustang, Courgar	
Upper	110-140
Lower	55-75
1971-72 All Other Models	
Upper	110-140
Lower	90-120
Caliper Stabilizer to Anchor Plate	8-11
Bleeder Screw	6-15
Brake Tube Fitting Nuts	10-15
Wheel Lug Nuts (All 5-Lug Wheels)	70-115
(All 4-Lug Wheels)	55-85

① – The upper bolt must be tightened first. Use new bolts.

BRAKE DISC SPECIFICATIONS

Parallelism – All Exc. 1972 Thunderbird, Mk. IV, Torino, Montego	.0007"
1972 Thunderbird, Mk. IV, Torino, Montego	.0005"
Runout – 1968-69	.002"
1970	.003"
1971 Torino, Montego, Mustang, Cougar	.002"
All Other Models	.003"
1972 Mustang, Cougar	.002"
All Other Models	.003"
Surface, Micro-Inches	15-80
Minimum Thickness	①

① – Rotor thickness after refinishing limited to minimum dimension to be found marked on each rotor.

Brake Caliper

Disassembly - Follow procedure outlined in "Lining Replacement - Removal". To remove piston, apply air pressure to caliper fluid port, (tap lightly around piston if it is seized). Remove dust boot from caliper and piston seal from cylinder.

Reassembly - Apply film of clean brake fluid to new piston seal and install in cylinder bore. Set new dust boot flange squarely in caliper bore outer groove. Coat piston with specified fluid (C6AZ-19542-A) and install piston in cylinder bore. Spread dust boot over piston while installing. Seat dust boot in piston groove. Follow procedure outlined in "Lining Replacement - Installation".

Rotor

Rotunda Disc Brake Lathe FRE-1466-B, is only recommended tool to be used to refinish rotors. Resurfacing procedure provided with tool must be adhered to.

Lining Rotor Clearance - Lining to rotor clearance should be 0.000-0.010" (All Models).

DISC BRAKE LINING SPECIFICATIONS

Lining Thickness	
1968 Ford, Mercury	.436"
All Other Models	.362"
1969-71 Ford, Meteor, Mercury, Mark III, Thunderbird, Lincoln	.394"
All Other Models (Outer)	.333"
(Inner)	.362"
1972 Ford, Mercury, Meteor, Lincoln	.394"
Cougar, Mustang (Outer)	.333"
(Inner)	.362"
All Other Models (Outer)	.273"
(Inner)	.370"
Lining Wear Limit (From Top of Rivets) Max	.030"
Width	
1968 Ford, Mercury	1.90"
All Other Models	1.84"
1969-71 Ford, Meteor, Mercury, Mark III, Thunderbird, Lincoln (Outer)	2.27"
(Inner)	2.03"
All Other Models (Outer)	1.80"
(Inner)	1.84"
1972 Ford, Mercury, Meteor, Lincoln (Outer)	2.27"
(Inner)	2.03"
Cougar, Mustang (Outer)	1.80"
(Inner)	1.84"
All Other Models	1.80"
Length	
1968 Ford, Mercury	5.36"
All Other Models	4.82"
1969-71 Ford, Meteor, Mercury, Mark III, Thunderbird, Lincoln (Outer)	7.38"
(Inner)	5.36"
All Other Models (Outer)	6.82"
(Inner)	4.90"
1972 Ford, Mercury, Meteor, Lincoln (Outer)	7.38"
(Inner)	5.36"
Cougar, Mustang (Outer)	6.82"
(Inner)	4.90"
All Other Models (Outer)	6.40"
(Inner)	4.46"