AMERICAN MOTORS & FORD SINGLE PISTON DISC

American Motors
Ford Motor Co.

NOTE – *All American Motors models use Bendix disc brake calipers. Ford Motor Co. models use Bendix, Kelsey-Hayes and Teves disc brake calipers.*

DESCRIPTION

The disc brake assembly consists of a rotor, single piston caliper assembly, two shoe and lining assemblies, a splash shield and an anchor plate. All American Motors models use a sliding type caliper assembly. On this system the caliper assembly is positioned in and slides on machined surfaces on the leading and trailing edges of the caliper anchor plate. All Ford Motor Co. models use a pin slider type caliper assembly. On this system the caliper slides on two locating pins which also act as attaching bolts between caliper and combination anchor plate and spindle.

The cast iron rotor has integrally cast cooling fins between the two braking surfaces. Brake linings are riveted to the brake shoes and insulator gaskets are bonded to the back of each brake shoe.

ADJUSTMENT

SERVICE BRAKES

Disc brakes are self-adjusting. Caliper piston seals are designed to retract pistons just enough to allow brake lining to lightly brush rotor without any drag.

SERVICING

BLEEDING SYSTEM

See Hydraulic Brake Bleeding in this section.

SHOE & LINING INSPECTION

Inspect condition of lining any time wheel and tire is removed. On American Motors vehicles, replace lining when it is worn to within 1/32" of rivet heads. On Ford Motor Co. vehicles, replace lining if worn to less than 1/8" thick.

SHOE & LINING REPLACEMENT

NOTE – *If necessary to replace the shoes and lining on one wheel, they must be replaced on both wheels to maintain equal braking action.*

Removal – 1) Remove sufficient brake fluid from master cylinder to prevent overflow when piston is pushed back into caliper. Raise and support front of vehicle and remove front wheels.

2) On American Motors models, press caliper piston to bottom of piston bore using a screwdriver, or "C" clamp if necessary.

3) On models equipped with a sliding type caliper, remove support key retaining screw using a suitable Allen wrench. Using a soft punch and hammer, remove support key and support spring from anchor plate. Lift caliper assembly out of anchor plate and off rotor.

4) On all Ford Motor Co. models except Escort and Lynx, remove caliper locating pins. Lift caliper assembly from integral spindle/anchor plate and rotor.

5) On Escort and Lynx models, remove caliper anti-rattle spring by applying upward pressure to center of spring until spring tabs are free of caliper holes. Back out caliper locating pins, but do not remove the pins. Lift caliper assembly from knuckle/anchor plate and rotor.

6) On all models, support caliper assembly with a wire hook to prevent damage to brake hose. Remove inner shoe from anchor plate and outer shoe from caliper. On sliding caliper models, note installation position of anti-rattle spring on inner shoe for assembly reference, then remove spring from shoe.

7) On all Ford Motor Co. models except Escort and Lynx, remove and discard locating pin insulators and plastic sleeves inside the insulators. These parts MUST NOT be reused.

Installation – 1) To install, reverse removal procedure and note the following special instructions:

2) On models with pin slider type caliper:
- Seat piston in caliper bore before shoe installation.
- Install new locating pin insulators and plastic sleeves.
- Make sure plastic sleeve flanges straddle caliper housing hole.
- Anti-rattle spring must be installed on inner shoe before shoe is installed in caliper.
- Make sure inner and outer shoes are installed correctly. Shoes are marked for left side (LH) or right side (RH) use.
- Outer shoes have wear indicators which are installed toward front of vehicle.

CAUTION – *Make sure that two round torque buttons are seated solidly in the two holes of outer caliper leg and that the shoe is held tightly against housing by spring clip. If buttons are not seated, a temporary loss of brakes may occur.*

3) On models with sliding type caliper:
- Seat piston in caliper bore before shoe installation.
- Lubricate caliper and anchor plate sliding surfaces.
- Make sure anti-rattle spring is installed properly on inner shoe; looped section of spring away from rotor and tab section in slot of shoe.

4) On all vehicles:

- Make sure master cylinder is full of brake fluid. Fill if necessary.
- Depress brake pedal several times to position caliper and brake shoe on rotor.

ROTOR SERVICING

Lateral Runout – 1) On all models except Eagle, tighten wheel bearing adjusting nut until all end play is removed. On Eagle models, use at least 2 lug nuts to retain rotor.

2) Mount a dial indicator on a pedestal-type stand or on axle splindle with indicator pointer contacting braking surface one inch from edge of rotor.

3) Turn rotor through one complete revolution, checking indicator reading as rotor moves. If runout exceeds specifications, replace or refinish rotor as necessary.

Parallelism – Measure thickness of rotor at four or more points around rotor. Make all measurements at same distance from edge of rotor. If rotor does not meet specifications, replace or refinish rotor as necessary.

AMERICAN MOTORS & FORD SINGLE PISTON DISC (Cont.)

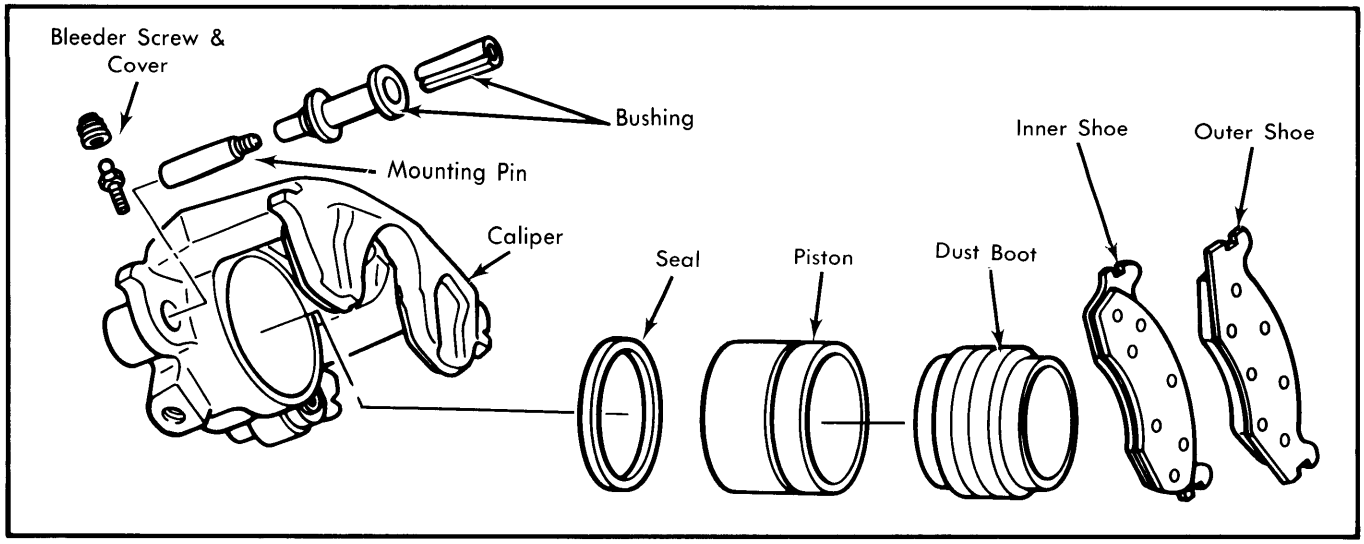

Fig. 1 Exploded View of American Motors Front Sliding Caliper Assembly

REMOVAL & INSTALLATION

BRAKE CALIPER

Caliper removal and installation procedures are same as for brake shoe assembly replacement, except it will be necessary to disconnect brake hose. *See Shoe & Lining Replacement.*

HUB & ROTOR

Removal – 1) Raise and support front of vehicle and remove front wheel. Remove caliper assembly and support out of way to avoid damaging or stretching brake hose.

2) On all models except Eagle, Escort and Lynx, remove grease cap from hub, then remove cotter key, nut lock, adjusting nut and thrust washer from spindle. Remove outer wheel bearing, then pull hub and rotor from spindle.

3) On Eagle, Escort and Lynx models, rotor can be pulled from spindle after caliper has been removed.

Installation – To install, reverse removal procedures and adjust wheel bearings. *See Wheel Bearing Adjustment in WHEEL ALIGNMENT Section.*

OVERHAUL

BRAKE CALIPER

Disassembly – With caliper assembly removed from vehicle, pad interior of caliper with shop cloths. Apply compressed air to fluid inlet port of caliper to remove piston. Remove dust boot from caliper. Using a plastic or wooden tool to prevent scratching caliper bore, remove piston seal from groove in caliper.

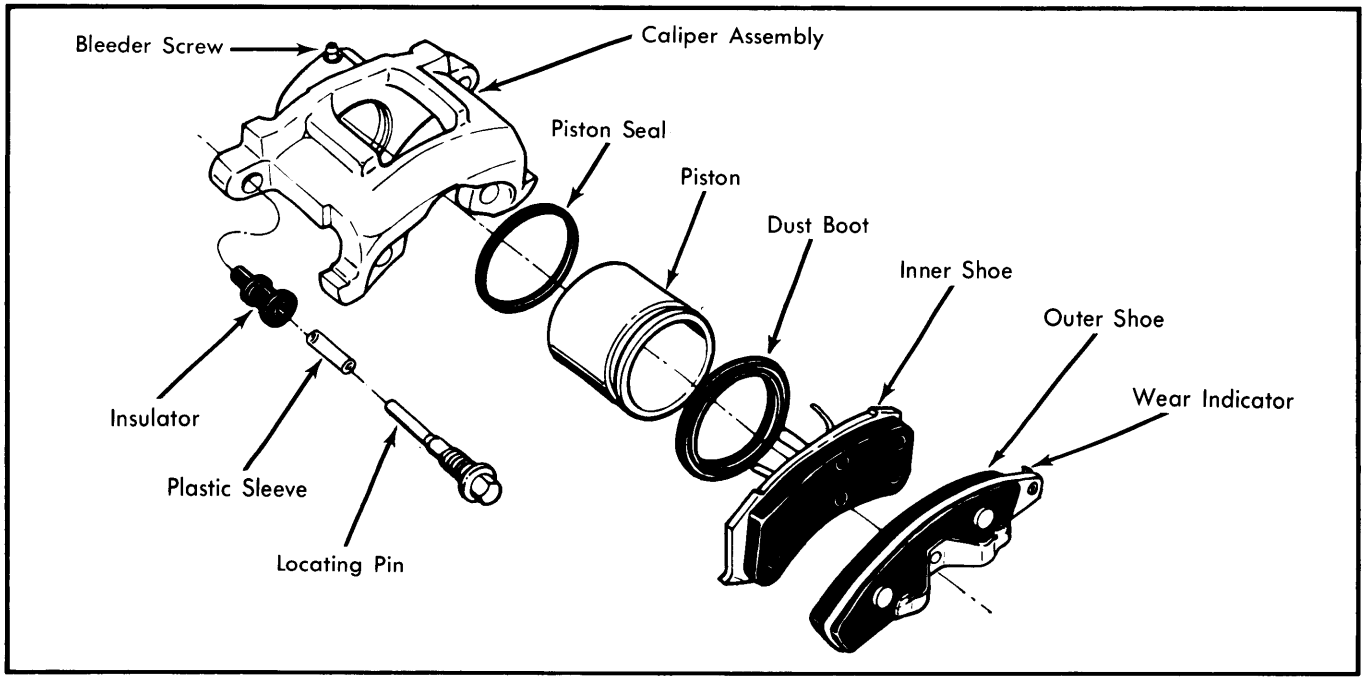

Fig. 2 Exploded View of Ford Motor Co. Front Pin Sliding Caliper Assembly

AMERICAN MOTORS & FORD SINGLE PISTON DISC (Cont.)

NOTE – *If piston is seized and cannot be forced from caliper, lightly tap around piston while applying air pressure. Be careful not to scratch piston bore when removing seal.*

Cleaning & Inspection – Clean all parts with denatured alcohol or clean brake fluid and dry with compressed air. Clean out and dry all grooves and passages with compressed air. Inspect piston and caliper bore for wear, pitting, scoring, nicks or corrosion. Replace components as necessary.

NOTE – *On American Motors vehicles, rust and corrosion may be removed from abutment surfaces of caliper and anchor plate using a wire brush and crocus cloth.*

Reassembly – Apply a film of clean brake fluid to new piston seal and dust boot and install into caliper bore. Coat piston with clean brake fluid and install into caliper bore. Seat dust boot in piston groove.

NOTE – *Spread dust boot over as it is installed.*

DISC BRAKE ROTOR SPECIFICATIONS

Application	Disc Diameter	Lateral Runout	Parallelism	Original Thickness	Minimum Refinish Thickness	Discard Thickness
AMC						
Concord	10.27" ①	.003"	.0005"	.880"	.....	.815"
Spirit	10.27" ①	.003"	.0005"	.880"	.....	.815"
Eagle	11.02"	.004"	.0005"	.880"	.....	.815"
Ford Motor Co.						
Escort & Lynx	9.30"	.003"	.0005"	.945"	.940"	②
Capri & Mustang	9.30"	.003"	.0005"	.870"	.....	.810"
Fairmont & Zephyr	10.08"	.003"	.0005"	.870"	.....	.810"
XR7 & Thunderbird	10.08"	.003"	.0005"	.870"	.....	.810"
Cougar & Granada	10.08"	.003"	.0005"	.870"	.....	.810"
Ford & Mercury	11.08"	.003"	.0005"	1.03"	.....	.972"
Lincoln & Mark VI	11.08"	.003"	.0005"	1.03"	.....	.972"

① – 4-Cylinder engine. 6-Cylinder engine is 10.80".
② – Minimum safe thickness shown on each rotor is .882".

TIGHTENING SPECIFICATIONS

Application	Ft. Lbs.
American Motors	
Anchor Plate Mounting Bolts	80
Adapter Bracket Bolts	55
Caliper Retainer Key Screws	15
Brake Hose-to-Caliper	25
Wheel Attaching Nuts	75
Ford Motor. Co.	
Escort, EXP, LN7 & Lynx	
Caliper Locating Pins	18-25
Brake Hose Attaching Bolt	20-30
Brake Tube-to-Hose Nut	10-18
Wheel Attaching Nuts	80-105
Caliper Bleed Screw	6-15
Hydraulic Tube Connections	10-18
Lincoln, Mark VI, Ford & Mercury	
Caliper Locating Pins	40-60
Brake Hose-to-Caliper	17-25
Brake Tube-to-Hose Nut	10-18
Wheel Stud Nuts	70-115
Splash Shield Nuts	10-15
All Other Models	
Caliper Locating Pins	30-40
Brake Hose-to-Caliper	20-30
Brake Tube-to-Hose Nut	10-18
Splash Shield	9-13