

INSTALLATION - SERVICE INSTRUCTIONS

PART NUMBERS: DESCRIPTION

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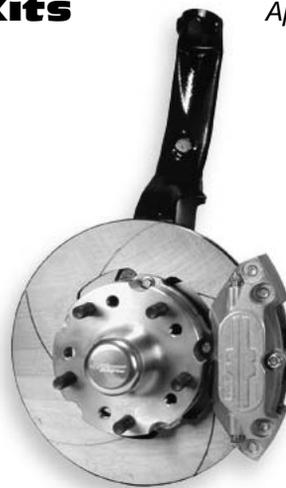
F-Body Front Brake Kits

April 2005

75200.....'93-'00 GM "F" body two piston front disc brake kit.
75250.....'93-'00 GM "F" body four piston front disc brake kit.

PARTS INCLUDED:

2 - 75201.....Front hub/brake hat w/bearings, races and dust caps.
2 - 75004.....Front brake rotor.
2 - 75202.....Spindle shaft with Nut & washer cotter key.
2 - 83100.....Brake caliper (75100 kit).
2 - 81100.....Brake caliper (75150 kit).
4 - 83120.....Brake pad (75100 kit).
4 - 81130.....Brake pad (75150 kit).
1 - 75203.....Caliper bracket (75200 kit).
1 - 75204.....Caliper bracket (75250 kit).
2 - 17187.....Oil seal
1 - 51250.....1/2-20 x 2" long wheel studs
All necessary mounting hardware



PRIMARY APPLICATIONS:

The front brake kits with the integral hub and adaptor are designed for Drag Race applications. The main advantage is the reduction of weight compared to the stock braking system they replace. Several considerations must be taken into account when installing these kits. When the dual piston caliper (81100) kit is used with drum brakes on the rear, **a pressure reducing valve must be installed for front pressure control.** Because of the small front tire contact area compared to the rear large slick contact area, the rear brakes must absorb more of the stopping energy than the front (contrary to a normal street car). A starting point would be 70% of the rear line pressure to the front brakes. This is especially important when using drum brakes on the rear. With discs on both the front and rear the percentage could be higher depending on the weight distribution and tire size **but should still use the pressure reducing valve.** We have a pressure reducing valve, P/N 260-2200, and we recommend its installation with front brakes. The pressure bias should be adjusted with gauges in the front and rear to confirm the pressure differential and then do a stop test. When doing a stop test, for a Drag race car, the front tires should skid equally or slightly after the rear tires.

INSTALLATION OVERVIEW:

- 1) Remove stock brake assembly and spindle shaft from upright. Remove uprights and lower control arm from vehicle.
- 2) Modify uprights and lower control arms per second sheet of these instructions
- 3) Install spindle in uprights and retain with caliper mount bracket. The spindle should be a tight fit in the upright. It may be necessary to remove rust build-up and any nicks with a wire brush or sand paper. Torque the 7/16 fasteners with the self locking nuts 50-60 ft /lbs.
- 4) Re-install lower control arms and uprights.
- 5) If necessary bolt 75004 brake rotors to hubs with supplied 5/16 12 point bolts (Loctite #620 retaining compound required) and torque to 25 ft/lbs. Normally these are pre assembled before shipping.
- 6) Install 1/2-20 wheel studs with AN 960-816 washers (.063 THICK) under heads to avoid damage to threads in the desired bolt pattern (4 1/2" or 4 3/4"). The hub studs must use Loctite sealant. Torque to 60/ft lbs.
- 7) Pack bearings with grease and install the inboard bearing and seal in the hub. Timken Hi-Temperature bearing grease #55-0050, 1 lb can is available from MW.
- 8) Slide hub onto spindle shaft. Install outer wheel bearing, spindle nut and washer and tighten (there should be a noticeable amount of drag on the hub when rotated, then back off to the next available cotter key slot, install cotter pin. Screw on dust cap and tighten (use MW #75099 dust cap socket to avoid marring cap).
- 9) Slide caliper over rotor and bolt to bracket with supplied AN bolts and hard washers and torque to 35 ft/lbs. Check caliper alignment. Parting line of caliper halves should be directly over center of rotor (see diagram A).
- 10) Install brake pads. Remove bridge bolt and bushing, slide pads into caliper then re install bushing and bolt and then tighten.
- 11) Attach brake lines to calipers (fittings and line required are not included with kit) and bleed system starting with caliper furthest from master cylinder. Steel tubular (3/16 X .028" wall stainless) brake lines are recommended for long runs. Teflon stainless can be used in short sections near the caliper. Use only -3 lines and avoid long runs of flexible Teflon/Stainless lines as they expand under pressure and can cause a soft pedal feel.

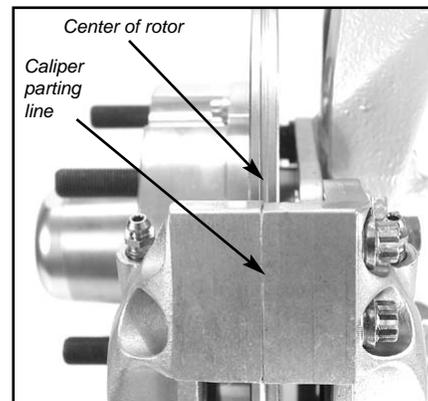


Diagram A

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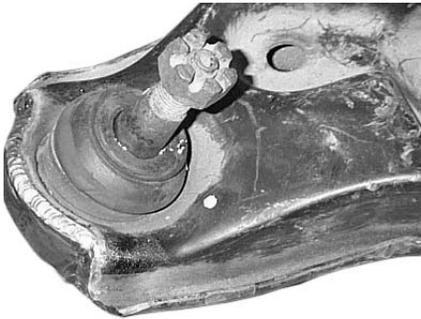
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TORQUE SPECS:

Rotor attachment bolts (5/16-18 12 point bolts) 25 ft/lbs.
Caliper bracket bolts to spindle (7/16-20 hex bolts) 50-60 ft/lbs.
Caliper mounting bolts (3/8-24 AN bolts) 35 ft/lbs.
Wheel stud in hub 60 ft/lbs, with thread lock compound

Lower Control Arm Modifications Required



NOTE: The lower factory control arms must be trimmed and boxed for clearance to the brake rotor. Check clearance thru the entire suspension movement and lock to lock steering range. When vehicle is on jack stands it will appear to have clearance but will interfere when the suspension is bottomed out.



The spindle modifications required for the 75200/75250 brake kits are shown above. The faintly displayed material should be removed. Spindles can also be sent to Mark Williams Enterprises to have these modifications performed. If you have any questions call 303-665-6901, fax 303-665-7021 or e-mail to info@mark-williams.com



MAINTENANCE REQUIREMENTS:

DISC CONDITION Periodically check for rotor warping due to excessive heat (metal smearing). Check the rotor run out with a dial indicator for maximum of .008" for used rotors (.005" new rotor run-out.). Disc thickness can be measured with a micrometer and should be parallel within .002". Check the rotor with a straight edge, it should be flat within .010" Any condition in excess of these values requires disc replacement. We do not recommend re-surfacing the discs.

FASTENER CHECKS Check and torque the disc mounting bolts (25-28 ft/lbs with #620 Green Hi-temperature locking compound applied to clean parts), and caliper mounting bolts (35 ft/lbs no locking compound). Tighten other fasteners to recommended torques.

PAD & CALIPER CONDITION Periodically check brake pads for wear and tapered condition. Do not install new pads on rotors that are warped (saucer shaped), if you do you will not have satisfactory pedal feel and can break the caliper. Pads should be changed when the friction material is down to approx. .200". If you try to run the pads too thin they lose the ability to insulate heat and can cause brake fluid to boil after a run, requiring re-bleeding the system. When pads are changed the entire caliper should be thoroughly cleaned, especially the pistons before they are pushed back into the bores. Calipers should be disassembled periodically and overhauled as per the instructions on service bulletin #44. Racing calipers are susceptible to the dust generated by brake pads and need to be frequently disassembled and cleaned to prevent piston sticking.