INSTALLATION - SERVICE INSTRUCTIONS

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Mark Williams Enterprises

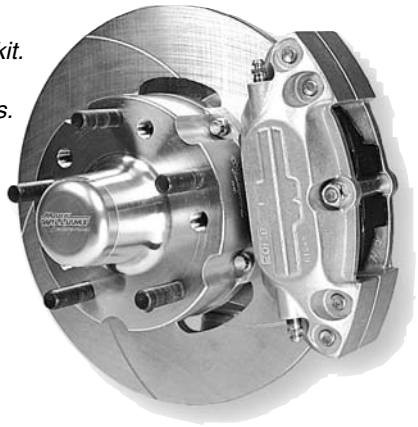
'82-92 Camaro Front Brake Kit

PART NUMBERS: **DESCRIPTION**

75850.....'82-'92 Camaro/Firebird four piston front disc brake kit.

PARTS INCLUDED:

2 - 75801.....Front hub/brake hat w/bearings, races and dust caps.
2 - 75004.....Front brake rotor.
2 - 83100.....Brake caliper.
2 - 81100.....Brake caliper.
2 - 75813.....Caliper bracket.
4 - 75804.....Caliper bracket spacers
2 - 19753.....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.*

1) Remove stock brake assembly from spindle. Remove spindles from vehicle.
2) Modify spindles according to the instructions below. Spindles may also be sent to Mark Williams Ent. for required modifications.
3) Re-install spindles.
4) Install caliper mounting brackets with supplied 3/8-24 and 3/8-16 Torx flat head bolts, lock nuts and washers. 75804 spacers must be in place and positioned correctly between bracket and spindle. Torque to 40 ft/lbs
5) Bolt 75004 brake rotors to hubs with supplied 5/16-18 12 point bolts (Loc-Tite recommended) and torque to 25 ft/lbs.
6) Pack bearings with grease and install seal in hub.
7) Install 1/2-20 wheel studs in the desired bolt pattern (4 1/2" or 4 3/4") in the hub, must have washers under heads of stud to avoid damage to threads in hub.
8) Slide hub onto spindle shaft. Install spindle nut and tighten (there should be a slight amount of drag on the hub when rotated) then install cotter pin. Push on dust cover.
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 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.

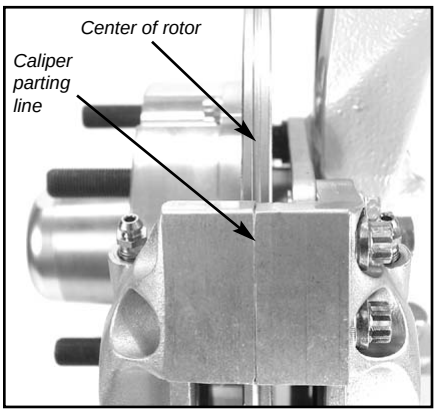


Diagram A

TORQUE SPECS:

Rotor attachment bolts (5/16-18 12 point bolts) 25 ft/lbs.
Caliper bracket bolts to spindle (3/8 Torx bolts) 40 ft/lbs.
Caliper mounting bolts (3/8-24 AN bolts) 35 ft/lbs.

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***MAINTENANCE REQUIREMENTS**:*

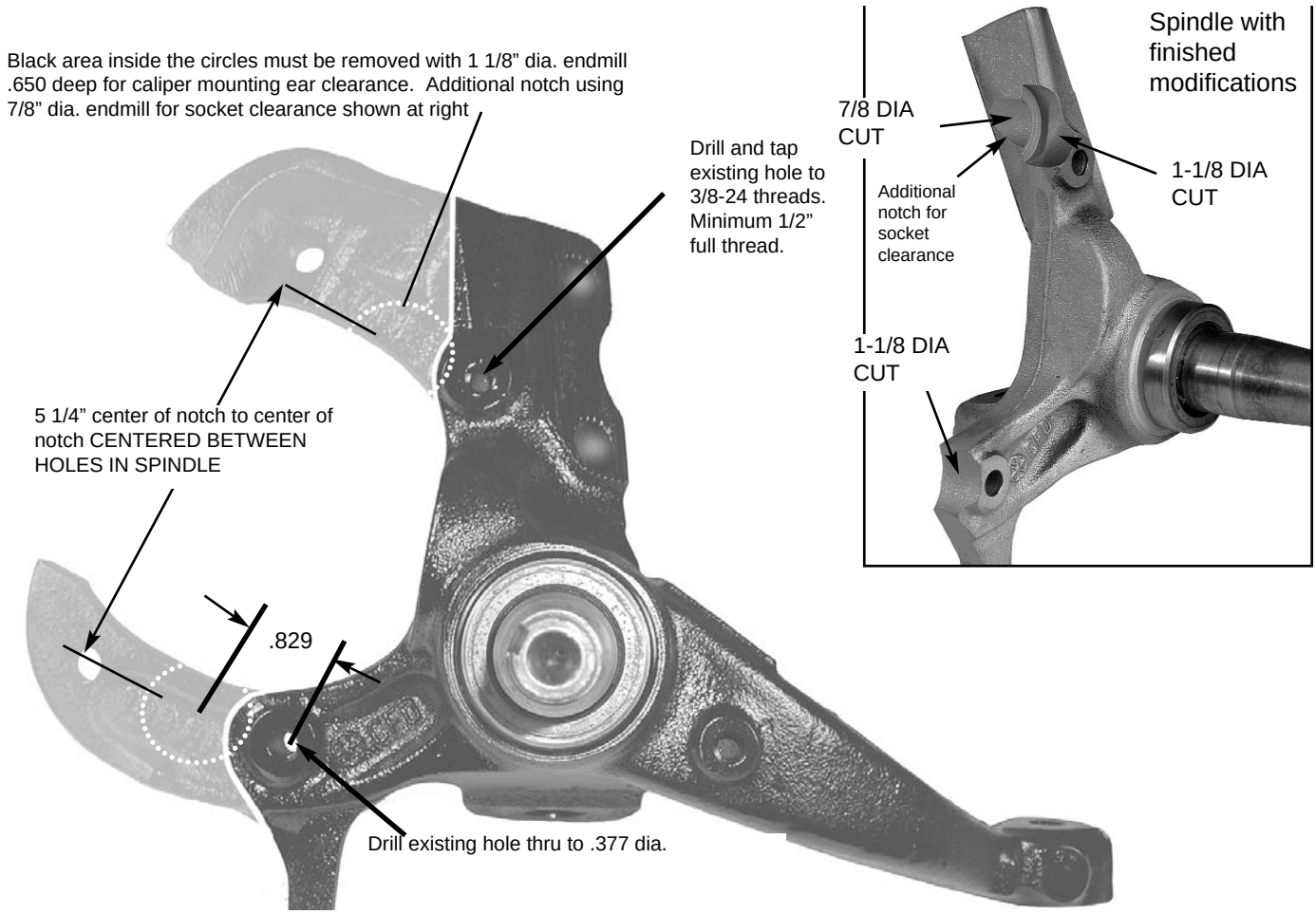
***DISC CONDITION** Periodic check of rotor warping due to excessive heat (metal smearing). Check the rotor run out with a dial indicator for maximum of .008" for used rotors (.005" new rotor run-out.). Disc thickness can be measured with a micrometer and should be parallel within .002". Check the rotor 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 loose 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 dissembled and cleaned to prevent piston sticking.*

SPINDLE MODIFICATION:

Cut the stock caliper mounting ears off of the spindle. On The wheel mounting face of the spindle, modify the caliper bracket mounting holes. Drill and tap the hole nearest the strut with a 3/8-24 thread 0.750" deep. Drill the other hole 0.377" through. Clearance the back side of the spindle so the caliper will clear. Clearance notches are required to clear the mounting ears of the MW calipers (see page 2)



The spindle modifications required for the 75850 brake kits are shown above. The faintly displayed material should be removed. The black area inside the dotted circle must be removed for caliper ear clearance. 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@markwilliams.com