

# Chevy<sup>®</sup> Disc Swap for Dana 30's and 44's

BY CLAY MCGUILL

Yes, it's true... Brand X parts can be used to upgrade your early Bronco! This modification is one of the most popular upgrades available for early Broncos for three main reasons-it's easy, it's cheap, and it works.

It's easy because it's a bolt-on for both the Dana 30 front axles found under 1966-'70 EB's and the larger Dana 44 found under 1971-1977's - even an average driveway mechanic can do it. No cutting, welding, or fabrication is required. (Just a teensy bit of grinding.) Keep in mind that the newest early Bronco is nearly 30 years old, and changes may have been made to your truck somewhere along the way - adjust parts and procedures accordingly. This article assumes you have general mechanical knowledge and some experience working on your truck, plus basic tools and a little common sense. If you lack any of these, do yourself a favor and take your Bronco to a shop that knows what they're doing. Please.

It's cheap because it can be done with all used, junkyard parts-usually for around \$300 or less (depending on the greed of your local salvage yards.) Obviously, using new or rebuilt parts will increase the price- but then, these ARE your brakes we're talking about here-might as well not take chances with your safety. How much is peace of mind worth to you?

It works because both Ford and Chevy used Dana axles under most of their 4x4's-(so did Dodge, Jeep, and International Harvester, but that's another story) and even though the Dana 30 and 44 use different size knuckles, the 6 bolt pattern for the 2 different spindles is the same-so swapping drums for discs really is as easy as unbolting the drum brake spindles from the outer knuckle and bolting on the disc spindles. The Chevy disc spindles will accept '76-'86 Ford Bronco/F150

hubs, bearings and rotors (honest), which keeps your wheel lug pattern the same and allows you to keep your existing wheels, and the Chevy caliper fits perfectly over the Ford rotor. Chevy 4x4's are plentiful and cheap in salvage yards, and replacement parts (bearings, seals, etc) are available at any parts store. Ford DID put disc brake Dana 44 front axles under 1976-'77 Broncos, but they are hard to come by and usually command a high price when they are found. By all means, if you happen to stumble across one cheap, snatch it up...but assuming you're not that lucky, read on.

The stock drum brakes on Broncos are OK, as long as the Bronco stays stock. When you start adding the unsprung, rotating mass of larger wheels and tires, more horsepower from an EFI 5.0 or built 351W, or a few hundred pounds of rollcage, custom bumpers, trail gear and compound the problem by taking more and more radical lines through your favorite rock garden, they don't have a prayer. Power assist helps, but discs are the way to go for shedding that heat built up on long downhill runs, holding your truck as it teeters on the edge of that rock face, or having a firm, dependable pedal even if you've just forded 100 yards of 4 foot deep freezing river.

First, you need to round up the parts-this way, if you're driving your drum-brake Bronco, you can keep driving it while you go junkyard-hopping.

## PARTS LISTING

**From a 1972-'76(or early '77) 4x4 Chevy or GMC 1/2 or 3/4 ton pickup, Blazer, or Suburban, grab:**

(2) Spindles (2) Caliper brackets/backing plates (2) Calipers (1 LH, 1 RH). It doesn't matter what shape they're in, use them as cores at a parts store for rebuilt, loaded (pads, bushings) ones.

**From a 1976-,86 4x4 Ford Bronco/F150 pickup, get:**

(2) Rotors (2) Hubs (New hubs and rotors can be purchased as assembled units, saves time.)

**At your friendly local parts place, ask for: (for a Chevy)**

(Part #'s are NAPA unless otherwise specified) (2) Caliper hoses #4136761 (4) Caliper bolts #82204 (4) Caliper bushings - (2) Inner #82302, (2) Outer #82303 (If you're getting new or rebuilt "loaded" calipers, they should come with these) (1 set) Brake pads #TS-728A-M (Again, "loaded" calipers will have these already.) (2) Banjo bolts #82703 (7/16-20x1 1/16") (2) Spindle bearings #B2110 (2) Spindle bearing seals #19965 (4) Wheel bearings (2) Inner #BR37, (2) Outer #BR35

Also, you'll need a Master Cylinder for a '76 Ford F-250 2wd 390ci Camper Special. This master cylinder will bolt right into your Bronco (brake lines and all) and gives the additional fluid volume needed for the front disc calipers.

**While you're there, pick up:**

(2) 7/16"-20 x 1" bolts (2) 1 π " fender washers (2) 3" x 1/16" O-rings (2) 5/8"-20 x 3/8" nuts

## REMOVAL AND REPLACEMENT PROCEDURES

Got all the parts? Good. Now;

Grab your Ford, Haynes, or Clymer's shop manual for specific instructions and torque values.

Park the Bronco on a level surface and set the parking brake.

Jack up the front axle, and set jackstands under the frame. (Do NOT work under a truck supported by just a jack!).

Remove the front wheels and tires. (Well, duh.)

Remove the lock rings that retain

the hub and drum to the spindle, then remove the hub/drum assembly.

Use a tubing wrench to remove the brake line from the wheel cylinder, then unbolt cylinder from backing plate.

Remove the 6 nuts (some knuckles have bolts) that retain the backing plate and spindle to the knuckle, pull the backing plate off, then persuade the spindle to come off with a rubber mallet. (It's not going to just slide off the studs. That'd be too easy.)

If you did the smart thing and bought all new bearings and seals, grease the new bearings well with hi-temp disc brake wheel bearing grease and install them into the disc spindle now. If you did the cheap thing, you get to (carefully!) pound the old bearings and races out of the drum spindle, clean them, re-grease them, THEN install them along with the seals into the disc spindle. Making sure you've got all the bearings and seals installed correctly (refer to your handy manual), place the Chevy disc spindle over the 6 studs on the knuckle.

Slide the disc brake backing plate/caliper bracket over the studs and torque down the nuts to 60 ft-lbs or so (manual again) in a star pattern. Spread some wheel bearing grease on the spindle and ease the hub/rotor assembly on.

Install the greased outer wheel bearing and retaining nut, adjust until there is no play in the wheel bearings, then install the washer and locknut. Torque to 80 ft-lbs (yep, use the manual). You'll notice the hub is just about flush with the end of the axleshaft-

leaving no room for the retaining snap ring. Thread the 7/16"-20 x 1" bolts and fender washers you picked up at the parts store into the end of the axle shaft-they will keep the hub from walking off. Tighten securely.

Before you mount the caliper, you'll need to grind or file the back of the knuckle (where the caliper will be) just a little bit to allow the caliper to slide over as the pads wear. Don't go crazy here, just a little will do.

Make sure the caliper is assembled correctly (pads, bushings, banjo hose fitting and bronze washers), then bolt it onto the backing plate/caliper mount. Torque the mounting bolts to 20-25 ft-lbs (check the manual). Install the new flexible brake hose to the banjo fitting on the caliper, then to the axle hard line. Use the 5/8"-20 x 3/8" nut to secure the hose to the axle line clamp. (You wondered what those nuts were for, didn't you?)

Remove the old master cylinder (use a tubing wrench to prevent rounding off the brake line fittings, and keep the old cylinder for the core charge), bench-bleed the new F-250 master cylinder to remove any air bubbles trapped in it, and install it, taking care to not cross-thread or strip the brake line fittings.

Now, grab somebody (wife, kid, pizza delivery guy) and have them pump the brake pedal while you open and close the bleeder screws on each wheel to bleed the brake system. (Open bleeder-pedal down. Close bleeder-pedal up.) Start with the RR, then the LR, then RF, then LF. Make sure the

reservoir is full of NEW (not old, used grungy nasty) brake fluid and thoroughly bleed the ENTIRE brake system-keep running fresh new fluid through the system until all the old fluid and air bubbles are flushed out of each and every bleeder screw. Don't let the master cylinder run dry or you'll have to do it all over again. (This tends to annoy wives and pizza delivery guys. Kids don't mind, though.)

Once that's all done, the pedal's firm, you've checked for any leaks or binding parts and are SURE everything has been tightened securely, go ahead and put the wheels and tires back on, lower the truck down off of the jacks, and check the fluid level in the master cylinder again once the vehicle is level. If everything still seems OK, it's time for a test drive. Do NOT - I repeat do NOT- blast off down the street! Use your head and try the brakes in the driveway. Then try them again. Then try them in reverse. Go a little faster and try them. (See the pattern here?) Try them a few times on the street, listening and feeling for anything that seems strange (grinding, rubbing, wheels falling off-things like that) then go for a little cruise around the neighborhood before heading out on the highway. Take it easy on the new brakes for a week or so of normal driving to let them break in. It wouldn't hurt to re-check all the bolts after a few hundred miles, just to make sure-better to find a loose bolt in your driveway than out in the middle of nowhere. 🚗



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