Scarebird 1960-1972 MOPAR A Body 9” Drum to Disc Front Brake Conversion

The following steps, tips and observations are based on my experience doing this conversion on my 1965 Plymouth Valiant Signet which came with factory 9” drum brakes. Many of the same parts and steps may apply to the 10” based drum brakes but please refer to official Scarebird documentation for your particular model vehicle and brake application.

There are a couple of items that could be considered optional for this conversion such as installing all new steel brake lines front and back as I did but it seemed like a reasonable approach considering everything else brake-wise was being updated. Also note I updated the master cylinder to the dual reservoir type along with rerunning the new steel lines front and back BEFORE doing the disk brake conversion. I tested this setup pretty good, checking for leaks and overall braking ability before swapping to disks. I don't like to introduce too many variables at once.

Parts

I sourced most of my parts online at RockAuto.com and at my local NAPA store. RockAuto has some great promotions from time to time but keep in mind that sometimes different items may be filled from different warehouses which will entail added shipping costs and can somewhat negate your savings. Overall I feel I got very good pricing from RockAuto.

Scarebird Parts	Scarebird Adapter
	

PARTS LIST

ITEM	Manufacturer	Part. NO.	Price	Notes
Rotor	BECK/ARNLEY	802496	$9.44	Wagner closeout RockAuto
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Caliper Non Loaded LH	NAPA	TBD	$16.00	NAPA Generic Part No.
Caliper Non Loaded RH	NAPA	TBD	$16.00	NAPA Generic Part No.
Brake Hose	Raybestos	BH36959	$6.34	Wagner closeout RockAuto
Brake Hose	Raybestos	BH36960	$6.34	Wagner closeout RockAuto
Wheel Studs	Dorman	610156 (610-156)	$8.60	RockAuto qty.10
Lug Nuts	Dorman	611160 (611-160)	$19.70	RockAuto qty. 10
Master Cylinder '71 Dodge Dart	A-1 CARDONE	101516M (10-1516M)	$25.50	RockAuto price includes core
Dist block for M/C	Inline Tube		$55.15	
Steel Brake Line front and back	NAPA	Generic part	$50.00	NAPA
brake connectors,unions, brake fluid, tools, etc.	NAPA		$50.00	NAPA Aprox. pricing
Scarebird Adpaters	**Scarebird**	**9” adapters**	**$121.00**	**$105 + $16 Shipping**
Redrill Rotors for 4” bolt pattern	Local Machine Shop		$20.00	Labor only
Shipping			$50.00	S&H on RockAuto and other parts. Cost approximate.
		TOTAL	**$508.72**	

Disassembly

At a minimum secure your back tires with wedges or as I did put the whole car in the air. At the front it is recommended that you jack up the car and place jack stands under the lower control arm's outer ends to relieve stress on the lower two bolts of the brake backing plates.

Remove wheel and dustcap from drum. Remove cotter pin and hardware that holds the outer bearing in place. Remove drum. You may need to release a little tension on the drum at the adjusting screw hidden behind the brake adjusting hole in the back of the assembly.

Spray penetrating oil on the four bolts that hold on the brake backing plate. Spray a little on the hardline connection to the flex hose. Remove the rest of the drum hardware. I had to remove some of the springs and what not to get everything to give but eventually it fell off in pretty much one piece. Try to save the little sponge gaskets that are sandwiched between the backing plate and spindle. If they are too destroyed to recycle I've seen that others recommend making your own from the same material that can be found at a craft store. I placed a carb vacuum plug over the end of the steel brake line fitting to keep it closed off and free of debris until time for reconnecting.

Remove the four final bolts that hold on the backing plate. The bottom two are held on with some kind of locking nut and will require a bit of torque to get loose. Remove the backing plate and start cleaning! I hit everything with a wire wheel on the end of a cordless drill and probably helped the car loose a few pounds of grime it had accumulated over the last forty plus years.

Parts Preparation

Hubs

The factory hubs do not come with long enough wheel studs to allow the rotors to be mounted properly and still fit on your rims. Longer wheel studs must be installed. But first the existing and sometimes original studs need to be removed.

Scarebird doc says the “Best way to do this is to take the hub to a machinist or friend with a knurl swedge cutter. Cut the swedge enough to remove the drum itself... Another way to do this is to center punch the head of the stud from the inside, then pilot drill and then drill off just the head of the stud with a 1/2" or 5/8" drill bit. Or simply cut off the stud at the base of the drum with a cutoff wheel.”

I took a chance on my particular drums as I couldn't see any visible sign of the “swedge” so with a half pound sledge I took a slightly robust wack at the first stud and saw that it was easily moving down through the hole out the back of the drum. With the complete drum/hub assembly cushioned on a folded up card board box on my garage floor I slowly rotated and “wacked” each stud some what mildly, rotated and continued on it's neighbor until all of the studs fell through. The grooves left behind in the hub appeared to be in pretty good shape, ready for the new wheel studs to be pressed in. I simply used a large socket over the top of the wheel stud, a washer followed by a lug nut and ratched the lugnut to slowly pull the studs into the hubs. The Dormans I bought have just a little bit wider knurl diameter than stock so they fit pretty snug.

NOTE: This was on my driver's side drum. The passenger side was another story as the original studs had already been replaced at some point in their life with something a little wider.

Finally, there are spacer rings included in the Scarebird kit that must be fit over the top of the hub and provide for a snuger fit of the rotor once placed on the hub. I simply tapped mine in place with a ball-peen and a large flat headed screwdriver slowly working my way around until the ring would go no more.

New Dorman stud on top, original on bottom	*New studs installed in the hub. The machinist shaved a little off the surface of the hub for me to ensure a flusher fit with the rotor.*
	

Rotors

The Beck/Arnley rotors made for a Chevrolet Caprice application come with 5 on 4.5” bolt pattern and must be re-drilled to keep with our 5 on 4” small bolt pattern mopar wheels. I took the rotors along with one of the hubs to a local machine shop and they drilled them out for me with a wide enough hole to allow the complete shoulder of the wheel stud to fit firmly in the rotor. My cost was $20.00. Others quoted me upwards to $60.00. Scarebird includes a template you can use if you want to try and redrill the rotors yourself.

Hub re-drilled with the 5 x 4” bolt pattern

Calipers

Fitting the calipers was by far my biggest challenge. The Scarebird documentation calls for test fitting the caliper and then removing any additional material from them if there is interference with the spindle. My first set of calipers simply would not fit regardless of how much grinding I did. Mark at Scarebird was very helpful in giving me a few tips but eventually I just determined that the first set of promo calipers I got from RockAuto were simply too wide at the cylinder and would take forever to grind down to the right size. I went to NAPA, bought a set of generic calipers and with very little grinding they fell right into place. Scarebird's conclusion was that the cheapo calipers were probably some Chinese imports, made with poor quality steel so they beef up the size of the cast to compensate. Lesson learned.

	
The little bump in the highlighted area needs to be removed with a grinder.	*Picture of the CCS (Cheap Chinese Sh!$) caliper that gave me such a headache and was eventually replaced by the NAPA part on the left.*

Brake Hoses

This part was simple. The flexible brake lines are for a Cadillac application and come with a large steel mounting bracket that needs to be removed. A hacksaw made quick work of it for me.

Unadulterated brake hose on the bottom. *Modified one on the top*	
	

Assembly

1. Install Scarebird adapters onto the spindle using the same bolts, washers and nuts that you removed. Don't forget the little gasket thing like I did in the first picture.
2. Place hub on spindle, install outer bearing and retainer nut. You may not want to tighten everything up at this point since you should do some basic fitting first and may need to remove parts.
3. Place rotor on hub and fix it in place with 3 or more lug nuts and ensure it is flush to the hub, spins freely and doesn't wobble.
4. Test fit caliper to the Scarebird adapter. This is where you will know whether you need to do any grinding or not on the caliper itself. You may have to install/remove/grind several times until you get it right.

Scarebird adapter installed on driver's side.	*Rotor installed on spindle.*
	

	
Rotor installed onto the hub and held in place with three lug nuts.	*Caliper w/ pads installed and tested for proper fitting.*

From here everything is pretty straight forward. Repack your bearings with clean grease. Install new bearings if you feel inclined. Install flexible brake hose and attach it to the frame with the included hardware and finally ensure it doesn't bind with anything when turning the wheels side to side.

If using 14” factory steel wheels like I did, test fit the wheels and make sure there is no rubbing when you rotate them. On one side my factory 14” x 4.5” steely fit no problem. On the other side I needed to remove a little extra material from the outside of the brake caliper.

Top off your master cylinder reservoir with new brake fluid and bleed the brakes as per your preferred method.