HARD CHARGER
Eddie Rosa’s 9-Second Dodge

PLUS:
- Aerospace Brake Install
- The Latest in Valvetrain
- Dave Morgan’s Ten Chassis Mistakes
A couple months ago we covered an install of AJE Engineering's suspension system on our 1970 Maverick. Overkill Fabrications out of West Covina, California handled the task, where they were able to adapt the kit under our car, cut out a lot of unnecessary metal (dropping over 100 lbs.), and opened up the shock towers so we could finally install some large-tube headers. It eliminated the stock front suspension configuration and basically bolted in where the stock components go, replacing the shock/coil spring/upper control arm assembly with racing coil over struts. In the place of our lame, sloppy steering box, now sits a Flaming River Pinto-style steering rack.

With the coil overs hung in the wheelwells, we still couldn't make the Mav a roller without brakes.

Most Fox Body Mustang fanatics are familiar with this setup, it’s Aerospace’s famous AC-220 front brake kit. It turns out this setup is also what you need for those running AJE’s k-member and suspension conversion.

Hawk Brake Pads

One thing we thought was cool when we started looking into the Aerospace kit was the pads that are included. In most Aerospace’ kits you can find Hawk Performance brake pads. We have heard great things from racers that use these and it’s a nice addition to the whole racing package.

The discs in the AC-220 kit are drilled for heat dissipation and are of a single layer steel design. Because they are designed for racing, they are fairly thin compared to street-type rotor, they can warp if you drive them a lot in stop and go traffic. To ensure long life of the whole setup, it is not recommended to use these on the street simply due to the potential warpage that can occur with these thin, lightweight brake discs.

The dust caps feature a screw-on, o-ringed design that every racer loves for some reason. It’s simply a cool feature and it looks good sticking through a set of lightweight race wheels.

Dust Caps

The discs

Hawk Brake Pads

411

Behind the Lens: The Author

Written by Jake Amatisto

The 411

The disc

Dust Caps

The discs

June 2010
And after you lock up a drum going 120 plus, you’ll never want to run front drums again.

With the coil overs hung in the wheelwells, we still couldn’t make the Mav a roller without brakes—of course. Luckily for us, finding the perfect setup for our car was easy. A couple years ago we sent our factory Maverick spindle to Aerospace Components and they were able to provide the necessary wheel bearings needed to adapt some of their lightweight race brakes to the project. Since then, we decided to use the aforementioned strut assembly, which featured a fox body style spindle—a different setup than what we were previously running.

The calipers are carved billet aluminum for great looks with low mass, and have a 4-piston design.

We noticed the bolts that come in the Aerospace kit were a bit too long for our AJE spindle. This is because the factory fox spindle is thicker in that area. After tapping the bracket, using red Loctite, and finally securing the caliper bracket with a nylock nut, we trimmed the excess.

The first step in getting the brakes on the Mav was threading in the lug studs, which were included in the kit. We had to make sure that we threaded them into the right holes, as the aluminum hubs feature a large and small pattern. We’ll be honest, we actually didn’t pay attention to this on the first side we installed (with red Loctite!) and we almost “burst into flames of anger and cursing” when we went to put on the wheel and it wouldn’t fit. Lesson learned.

Speaking of red Loctite, once the hubs were threaded we made sure to use the red stuff on all the bolts to make sure the setup will never vibrate loose.

Drums vs Discs

We were able to use ProMedia’s shipping scale to weigh both the stock rear drums and the new discs from Aerospace and were able to score around ten pounds per side. As you can see, the stock drums (for an early 70s Ford) weigh about 21 pounds, whereas the Aerospace pieces only weigh in at 12 pounds. The rotors from the brake kit are only 0.32 thick, this means that they are designed for quick stops after a quarter-mile blast, not stop-and-go traffic. If you do drive with these on the street, expect to be replacing warped rotors and pads often. Like the fronts, the rears feature a billet, 4-piston caliper setup that is a definite improvement over stock disc or drum assemblies. These also shine nicely from behind a set of drag wheels, however, street driving with these is not recommended.
So we found ourselves on the hunt for a brake system once again.

Rear Discs
We also opted to run a set of Aerospace's rear brakes on our Ford Maverick project. After upgrading to an 8.8 rearend with 9-inch ends, Aerospace had the right setup to adorn the ends of our axle. Notice the brake hats have multiple patterns, this is not only to save weight, but also to fit various applications.

In order to fasten the caliper bracket to the spindle correctly, it is recommended that you use a tap to cut threads into the spindle before you bolt it together. This was the most tedious out of all the steps—patience is a much-needed attribute when doing this.

We're a fan of new hardware, but the AC-220 kit doesn't come with the spindle nut or retainers, and neither does the AJE kit, so we picked up some new pieces from the local auto parts store and were pleasantly surprised when we saw they were zinc coated. These are typically all greasy, and when you can get some new ones for ten bucks, why use the old stuff?

Before installing the grease seal, we made sure to check the caliper-to-rotor clearance, making sure the caliper was centered. Included are some thin washers that allow you to adjust the position, if necessary. In this photo, we were showing a friend how easy it is to drop in the Hawk brake pads.

We peaked from behind our Mickey Thompson race wheels you can see the cool Aerospace caliper. Yes we know the wheels need a good polish job.

In Gardena, California. The operation is run by PSCA Limited Street racer Craig Williams and engine builder Chris Pack. After the Maverick had some chassis work and the AJE suspension installed at Overkill, Pack towed the car to their shop where we could mock up the engine, and work on some various things, one of which included setting up the brakes. There, we were able to use Williams' tools to install the Aerospace brakes and make our Super Smaverick a roller once again.

When we started tinkering with this project a few years ago, we were running some terribly stock (and fading) drums at all four corners. This was something that we were very anxious to get rid of since it was the stock front drum brakes that locked up and caused our original Maverick (which we built in Race Pages throughout '04-06) to go into a 360-degree spin-out at California Speedway—a crash that ended up being the last hoorah for that car. Ever since we locked up the drum and piled the “Super Smaverick v1.0” into the wall, the braking system has been the first thing on the list of upgrades when we do a project. Now, we’re not saying that you can’t race and stop effectively with drum brakes, because we know guys still do, but why run something that is so susceptible to fading and wear? And after you lock up a drum going 120 plus, you’ll never want to run
We have had such great luck with Aerospace brakes over the last ten years in terms of install ease and customer service.

front drums again. Rear drum brakes are a more common thing in drag racing, but when you can adapt a setup like the one from Aerospace to just about any rear axle, why would you? You are taking a chance with drum brakes, take it from us—invest in some discs.

We also opted for the rear disc brake setup for our Mav. After removing the stock 8-inch rearend from under the car in '08, we went with the road less-traveled and built-up an 8.8 rear from a 1990 Ford Mustang. Race Cars & Stuff hacked off the factory control arm brackets, welded on the leaf perches, and added some additional bracing to strengthen the whole housing. At each end, we hung Aerospace’s 4-piston brakes and were able to drop a total of 22 lbs. compared to the stock rear drums.

If you have a Maverick or another early Ford with drums all around, expect to drop about 60 lbs. by going with Aerospace discs at all four corners. Not only is this a great way to shed some weight, but also, the increased stopping power is a must, and another thing to think about is the potential for better quarter-mile times due to less rotational mass. That is something that we rarely see addressed in race brake articles. Because the discs and hubs rotate, this reduction in rotating mass is much more effective than static weight. Reducing un-sprung, rotational weight is exponentially more effective than reducing non-rotational; in other words, a few ounces of rotating mass has a greater effect on your car’s performances. Even if very slim, this reduction in mass is worth something to the hardcore drag racer.

In just a few hours we were able to install the Aerospace brake kit on our Maverick and it was so easy, we couldn’t be more satisfied. We will also now feel confidence of having four piston calipers under our feet when we mash the “whoa pedal.”

Rollin’...

With the Aerospace discs hung on all four corners and the project on the ground once again, they next time you read about this fiendish Maverick we’ll hopefully be dropping in the freshly-dyno’d small-block. Wheels up action and hasty stops are on the horizon for this beast.

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