

Lately I've been getting more and more emails asking for custom gauge options. It seems that our Dakota Digital gauge install in the Wicked Woody project sparked quite a bit of interest. So, this article is going to showcase another affordable option for those of you that want a little something different to stare at on your dash. I'll use the more common 1973-1985 cluster housing as our base.



## Custom Gauge Install with Aurora Gauges

BY RYAN HART,

As many of you know, the openings in the stock cluster housing aren't the right size for the more readily available after-market gauges. So what do we do? For this type of upgrade, we opted to install one of the Overlay panels that we picked up from BJ's Off-Road. To install this overlay panel will require drilling out part of the stock cluster housing (i.e.: make SURE you want to do this upgrade, as you will be ruining your cluster housing in the



process!). The aluminum panel comes in several varieties (we chose 2 large + 4 small gauge openings), has a brushed finish and is almost a perfect fit. Due to the age of the clusters the overlay panel may not fit perfect at first, but with a little cutting and / or grinding, it'll fit the bill nicely. For gauges, we picked up a set of Aurora Instruments custom gauges with a 3-3/8" Tach and Speedo, and 2-1/16" gauges for oil, fuel, temp and battery.

Alright, let's get to work! The first step will be to disconnect the battery and remove the cluster housing (for simplicity sake, we will assume you have already removed and labeled all wires / vacuum lines before getting to this step; if you need help in this area, email me and I can walk you through the steps). Once the cluster is out and disconnected we can begin disassembly. On the back of the cluster there are screws holding the circuit board and

gauges to the housing, which all need to be removed. You won't be reusing the board or gauges, but don't toss them out just yet! You can usually recoup a little of your money by selling them to other FSJ owners or on Ebay. With the circuit board and



gauges out, we need to remove the stock plastic lenses. These are held on by plastic tabs on the back which can be melted off or tapped out with a small hammer. Two of mine had already fallen off, so I just broke the third and removed the remnants. This leaves us with the empty / bare housing, and that brings us to the fun part: mocking



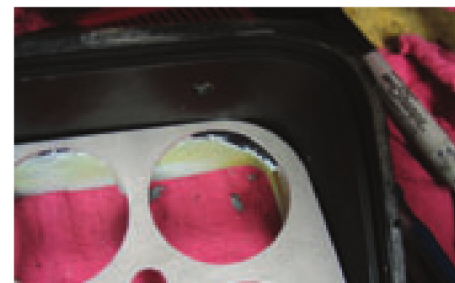
up the overlay panel!

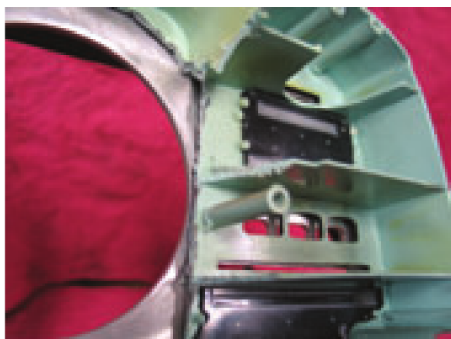
Take the overlay panel and set it over the stock housing. You'll see some of the areas you will need to cut out from the housing, while others will become clear once you install the gauges and do the final

trim. I used a sharpie marker and drew lines where I needed to cut. Note that you will be marking and cutting more than once, so take your time and cut a little at a time. I used a Dremel tool with a flexible



arm and cut-off blades to remove the portions of the stock housing (it's hard to get to some of the places without the flexible arm). Oh, and I recommend doing this outside as the smoke generated from the melting plastic "can" set off your smoke detectors (ask my wife how we know that!). The cutting goes pretty fast, and the plastic tends to bubble up as it melts. No worries, as once it cools you can use a screw driver to pop the excess loose. Remember to test fit the overlay panel every few cuts to





make sure you are on the right track and not removing too much material. Once all the areas are trimmed, you can now install the gauges on the overlay and test-fit to see where the final trimming needs to be.

After the trimming is finished, it is time to install the overlay permanently to the housing. One drawback to using the overlay is that the bottom three screws that



hold the housing to the dash are blocked. You can either use Velcro in this area or not attach them (I prefer the Velcro on the dash & back of the housing). For attachment you have a few options: epoxy, Velcro or 3M double sided emblem tape. Epoxy is messier, but will hold the best. Velcro can come loose in hotter temps. The 3M tape is the easiest and seems to last longer than Velcro, so that's the route I chose.

Now to the gauges! As mentioned earlier, I chose to run the Aurora Instruments gauges on this project. In addition to being VERY affordable (6-piece set is around \$300), they also have a growing reputation for quality and they are able to be customized. What? Did I say customized??? Yep, you read right! The gauges come in a basic form and have TONS of options. You can select the color of the outer trim bezel (black, chrome or gold), the color and style of needle pointers (three needle styles and unlimited color choices, or you can paint to match), and you can even change the background face plate. Now here is where it gets interesting. The Aurora website has several awesome design options. First, you

can go to their website and use their internet-based EZ Template system where you can select your font, background, colors, etc., and when finished they will print it out and mail it to you pre-installed on your gauges. Second, you can go to their website and select from one of the several thousand backgrounds that were designed by other customers, and have those printed and mailed. The third option is a downloadable template that you can use on your home computer and make new templates whenever you want, printing them on your own printer. These gauges give you the ultimate flexibility in design, and they give you something no other gauge does: the opportunity to change the look of your dash without having to change the actual gauges! Due to the easily removable trim ring and glass, you can also change the



look of your gauges on the fly by changing any of your options without having to uninstall the gauge. Also, the needles and trim rings are removable and you can change those any time you like as well. The gauges are easy to install with screw-lock rings on the back, and they include all required sending units. In addition to great customizing options, Aurora™ gauges are also incredibly easy to calibrate using their easy "One Touch" programming system, which will have your gauges accurate and ready for the road in no time! This is a great feature for those of you with gear changes and larger wheels / tires!

Shown (left) are a few backgrounds that I've designed, just to show you how easy and limitless your options are. I threw together an AMC-style background that took all of 10 minutes to design, as well as downloaded a design that someone else created on their website. The last one is an attempt to keep my wife happy with yet another FSJ parts purchase! You can take any photo or design and incorporate it into your gauges. Any time you want, for about \$2 on your own computer or about \$25 through their printer service, you can completely change the feel of your rig.

Once you have your gauges assembled, it's time to drop them into the overlay panel. Installation with these gauges is very easy, as they slip into the openings and are held in place with plastic screw-lock rings. With all gauges installed, you will need to cut off the stock wiring con-







nectors and connect them to the new gauges. You can either use your factory service manual for wire routing or you can visit [www.oljeep.com](http://www.oljeep.com) and download your wiring diagram. After the wires are routed correctly, you can install the gauge panel into the dash. The final step is to install the supplied sending units into the stock locations. That's it! All-in-all, you're looking at around a three hour endeavor from start to finish (longer if you haven't done this kind of Dremel work or wiring work before). Overall though, I'd say this is something the average beginner could tackle in a decent Saturday. The best part about this upgrade (besides having a new, killer one-of-a-kind set of gauges) is that when you get tired of your dash after a few years (which most of us do), you can simply change the faces and needles for a completely new look. No other gauge gives you that freedom.

FOR MORE INFO...

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