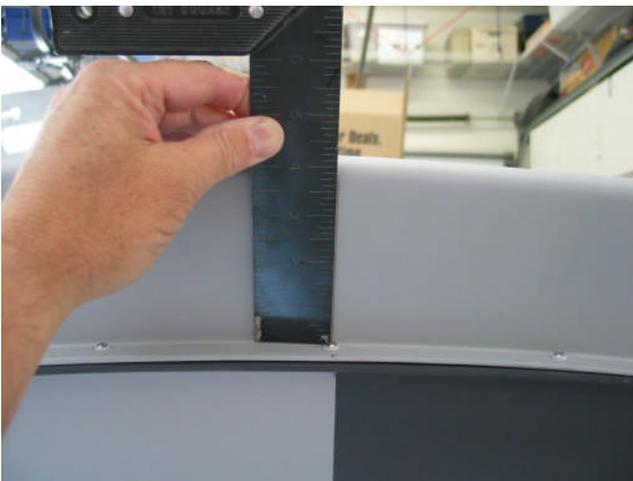


## Installing a 3<sup>rd</sup> Brake Light in your Car!

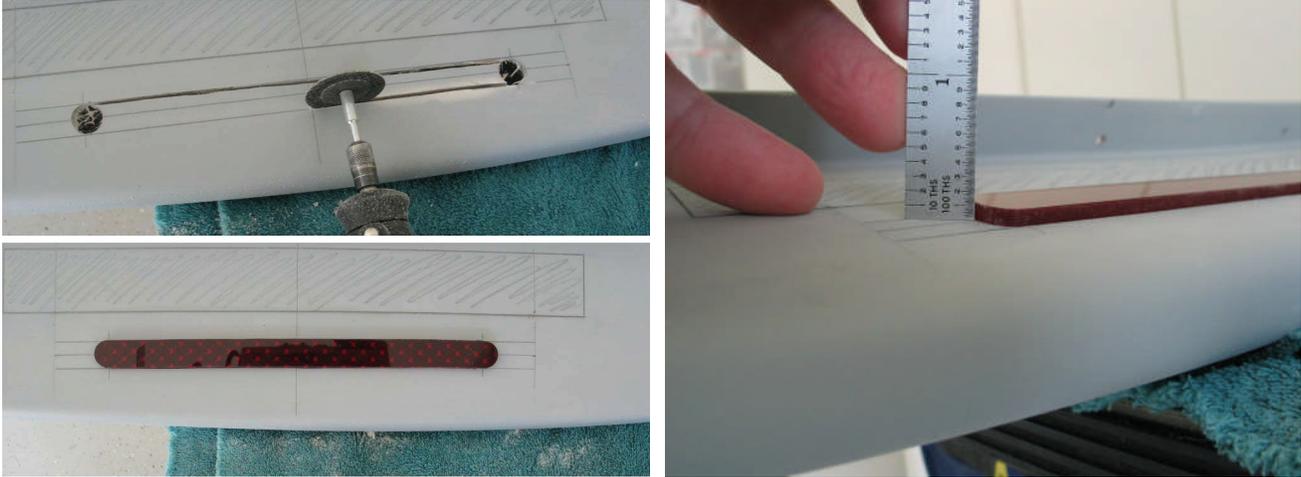
I'm a little paranoid about safety when driving my car around and with a Daytona Coupe, the large spoiler in back creates a blind spot for the driver. I knew from the start that I wanted to install a 3<sup>rd</sup> brake light but I had to be careful with the rear tail of the Daytona as it also has to contain an opening to vent built up air from inside the car. I wasn't sure how much room I'd have to install a light along with the vent cut out since the inside of the spoiler tapers off as you go higher so the size of the light housing has to be small. Fortunately I found a great flush mount LED lamp from Watson Street Works – [www.watsons-streetworks.com](http://www.watsons-streetworks.com) – that had only a 1.5" flange mount and about a 1" tall housing. With a 4" tall spoiler that left me with 2.5" of space to insert a 1.25" opening for the air exhaust. LED stands for Light Emitting Diodes - which are solid state devices with no filaments to degrade over time – that project a very strong light with very low current (see the gauge of the wire?). The kit comes complete with a bond in acrylic lens, mounting hardware, aluminum housing with LED array and complete instructions.



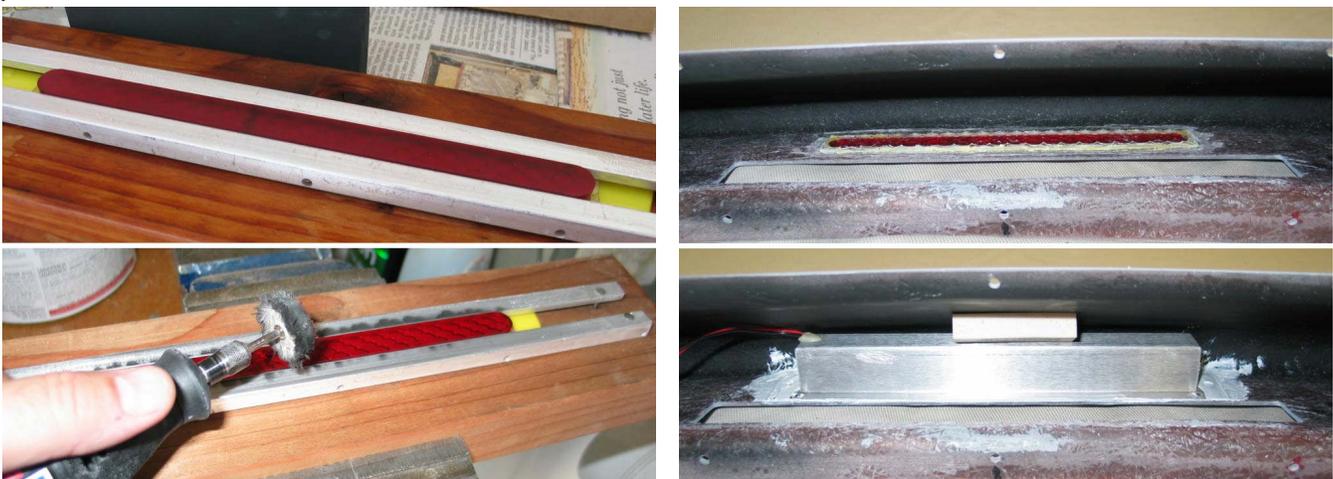
The first step was to layout the position of both openings in the spoiler. I started by determining the center line of the spoiler against the centerline of the car. After removing the spoiler I sketched out the approximate locations for both the light and the vent until the placement looked right. I compared the placement of the vent to some vintage photo's to make sure I had the proper size and location right. I then verified the light housing would fit above it in the spoiler – remember the spoiler comes to a tip so the inside space decreases as you go up!



Using the lens as a template I drilled two undersized holes at either end – undersized is better as it's always easier to sand off a tad more than to glass back in to fill a gap. Then using a Dremel Tool to cut inside the template line, a rough opening was created. Through hand sanding with a small block of wood and some 150 grit paper I slowly worked the opening to accept the lens with a slight interference fit. The lens body is .250" tall and after installation I still had approximately .120" protruding past the fiberglass. The neat thing about Watson's design is the lens is made to be sanded down flat to the body so from all appearances it blends into the lines of the car. The instructions have you mounting the lens into the car and then sanding to the cars contour but since the spoiler is fiberglass I didn't want to do that much sanding of the lens in fear of also sanding too much fiberglass away and causing the surface to groove and ripple. I decided to do most of the contouring off the spoiler until I got to within striking range of where I needed to be.



In my stock of miscellaneous parts, I was lucky enough to find some angle aluminum that had a thickness of about .100" so I was able to cobble together a fixture to hold the lens stable while I sanded it smooth to the surface of the guides. I started with 220 grit in order to take off a lot of material quickly. Be careful if your using a power sander as the lens will melt from the heat if you hold it in place for long. Once I got it down far enough to the guides, I started to wet sand using increasing grits of sandpaper on a wooden block ending with 1000. I then used a buffing wheel to re-polish the lens back to its original clear condition. I ended up dry fitting and sanding the lens so it fit the spoiler with only about .015" protruding above the body line. My plan is to leave enough height on the lens so after paint – which adds thickness to the body – it will be close enough that a little light sanding and polishing will blend it into the body line.



Using a two part plastic epoxy, the lens was then mounted into the spoiler and allowed to cure overnight. After testing the LED assembly (always better to verify the LED's works before you mount it) it was fastened into place using 3M "paintable" silicone adhesive. I used paintable silicone so I could spray the inside of the spoiler flat black and have it stick to ALL the surfaces. I also wanted silicone to give me a weather tight seal but still allow for easy removal with a knife if I ever needed to replace the LED assembly or lens in the future. A simple gum eraser was used to hold the housing tight to the spoiler surface while the silicone cured overnight



The final result speaks for itself. If you can picture the spoiler being painted red, the 3<sup>rd</sup> brake light will be close to invisible until you step on the brake and then voila! a clear indication of my intent to slow down with a lot of class in the overall presentation.