



Tire Screw Installation Procedures

Weld Racing recommends 3/8" hex washer headed grade 8 tire screws in two different sizes. 1/4" dia. X 5/8" long is recommended for the 45 degree entry in the shell radius. 1/4" dia. x 3/4" long is recommended the 90 degree entry where the screw head rests on the rolled rim lip. Please take the time to thoroughly review these installation procedures before proceeding with the installation.

If you are installing tire screws into a wheel that has not previously utilized sheet metal screws, follow Steps 1 – 9.

- **Step 1.** Have a trained and authorized person dismount the tires from the wheels.
- **Step 2.** The first thing that needs to be determined is how many tire screws your application will require. Due to the many variables involved, the answer to this question is ultimately in the hands of the end user. **Remember: Tire screws are NOT intended to be an alternative to bead-lock wheels. Double beadlocks should be used in place of tire screws on vehicles that can exceed 200 mph in the quarter mile or 150 mph in the eighth mile.** If you are totally at a loss, refer to the table on the right for typical examples based on 1/8th mile ET's. Once you decide how many tires screws your application will require, the next step is to layout both sides of the wheel so you know where to start drilling the holes. Pictured in **Figure 1** is a tire screw diagram to assist in visualizing the screw locations. Alternate the screw holes between 45 and 90 degrees. Orient the holes in pairs opposite each other to ease balance and improve the appearance. Index the inside rim shell holes with the outside rim shell holes

1/8th Mile ET	# of screws per side of the rim
7.51 or slower	6
6.51 - 7.50	8
5.51 - 6.50	12
4.75 - 5.50	16
faster than 4.75	Double Bead Lock Recommended

- **Step 3.** Once both sides of the wheel are marked for hole placement, use a center punch to dimple the rim so that the 1/8" pilot drill has a good place to bite into. This will reduce the chance of the drill bit walking around on you and scarring up your wheel in the process. Make sure that the holes line up with the bead section of the tire in order to ensure that the screw penetrates into the steel cords. (See **Figure 2**). Final drill the holes to 13/64" maximum.
- **Step 4.** Using a countersink tool, lightly deburr the hole on the inside portion of the wheel. This step is necessary to prevent sharp metal fragments from causing problems or cutting your hands.
- **Step 5.** Have the tires mounted by a trained and authorized person. **Before installing tire screws into your new tires, first inflate the tires to their operating pressure and check the circumference of each tire.** If there is a mismatch between the two tires, you can return your tire(s) in order to find a matching set. Once you install tire screws into the tires, you will not be able to return them.
- **Step 6.** Inflate the tires to 25 psi.
- **Step 7.** Apply blue Loctite 242 to the screws, then install them. Do not over tighten the screw. Turn the screw into the tire until the head of the screw contacts the rim, and then give the screw an additional 1/8 of a turn. Always use new tire screws. The tire screw threads become slightly damaged when piercing into the steel cords within the tire. Therefore it is strongly recommended to never use a tire screw more than once. Once the screws have been installed, inspect the wheel/tire interface to make sure that the tire is still seated on the rim. If the screw does not penetrate the tire bead and pushes the tire away from the rim, remove the screws and repeat the mounting procedures. Allow 30 minutes for the Loctite to cure at 70 degrees F before using the wheels. Cold temperatures increased the cure time substantially.
- **Step 8.** After both sides of the tires are screwed to the rim and the tire bead appears to be seated on the rim, reduce the tire air pressure to its operating pressure and again inspect the wheel/tire interface to make sure that the tire is still fully seated on the rim. If the tire is not completely seated on the rim, remove all screws and repeat the tire mounting/screwing procedures.
- **Step 9.** The final step is to balance the wheel and tire assembly. Weld Racing wheels are lug centric so be sure to balance them from the bolt circle with a lug adapter on the balancer. Balancing from the hub bore will give poor results.

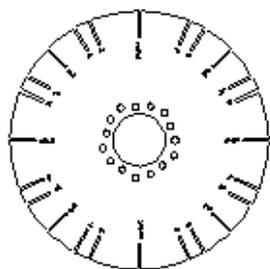


Figure 1

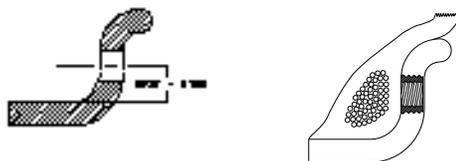


Figure 2 (90 degree shown)



Pro Race wheel example photo