

Turbo Boost Graphite Instructions

Supplies needed for proper Graphite application:

- Handheld power drill
- Isopropyl alcohol
- Cotton swabs
- Stainless steel pin or polished axle
- Paper towel or cotton cloth
- Jeweler's loop or other magnification
- Lemon Pledge furniture polish (optional)

Optional Wheel Prep Kit contains several items that will aid in the graphite process!



CAUTION: Graphite is a very fine substance whose particles can quickly become airborne and cause irritation of the lungs. Use proper care when working with graphite, including adequate ventilation and protective gear. Additionally, graphite can be messy. Cover your work surface with newspaper and use isopropyl alcohol to clean the graphite off of surfaces where you don't want it.

Getting the most out of graphite is a several-step process. Known as burnishing, you'll be crushing/embedding graphite into various surfaces, creating a thin layer of graphite. Graphite works best when applied in multiple layers, so you'll repeat these steps several times.

1

If using [Turbo Chucks](#), place the wheel in the chuck to spin it. If not, place a cotton swab in the drill and hold the wheel by hand.



OR



OPTIONAL: For maximum performance, dust the items used to apply graphite with Lemon Pledge furniture polish.



Lightly spray the tip of the cotton swab with Lemon Pledge (optional). Sprinkle the cotton swab tip with graphite. Spin the wheel (or the cotton swab) and press the swab into the outer hub. Run the drill for about 1 minute. Apply more graphite to the cotton swab and repeat 3 - 5 times.

2

Flip the wheel and repeat the above steps for the inner hub. If using a rail riding setup, burnish graphite onto the inner edge of the tread on the **FRONT** wheels only. Burnishing graphite on the edge of the rear wheels will foul the actual tread and lead to an unstable car.

If not using [Turbo Chucks](#) to hold the wheel, burnish the inner hub using the step above (spinning the swab in a drill). For the tread edge, spray a cotton cloth with Lemon Pledge (optional) and sprinkle with graphite; press the tread edge into the cloth and turn the wheel by hand.



OR

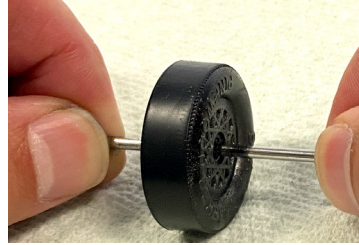


Burnish the edge on the front wheels only

TURBO
DERBY

3

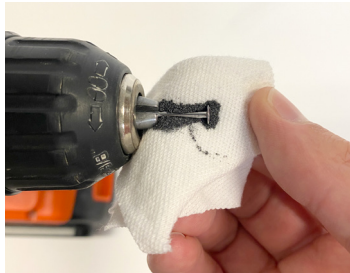
Fill the wheel bore with graphite. Insert a polished stainless steel pin or polished axle into the wheel bore. Gently roll the wheel forward and backward on a towel or similar surface while applying slight downward pressure on the pin. Do this for a minute or two. Repeat this step 3-5 times. This process crushes the graphite and coats the wheel bore.



Do **NOT** apply graphite to the tread, use isopropyl alcohol to remove any graphite from the tread

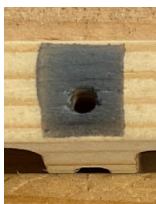
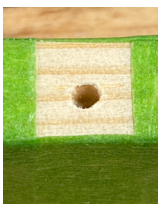
4

OPTIONAL: Lightly dust a soft cloth with Lemon Pledge and sprinkle graphite onto the cloth. Next, insert a polished axle into a drill and turn it slowly while pressing the cloth/graphite to the axle. Do so for 1 minute, 3-5 times; doing so adds a thin film of graphite to the axle.

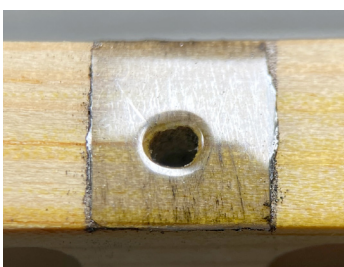


5

Placing graphite on the car body around the axle slots/holes is a good idea. Rub a generous amount of graphite on the bare wood using a cotton swab. You'll want the wood to be as smooth as possible so sanding this area with high-grit paper is beneficial. It's best to sand this area before you paint. When applying the graphite, you will want to cover (masking or painter's tape) the painted area around the wood, so you don't get graphite all over the car. Make several graphite applications; you can't do too much.



OPTIONAL- Coating this area (**before applying graphite**) with several layers of Super Glue™, commonly referred to as CA (Cyanoacrylate), creates a hard surface for the wheel's inner hub to rub against. Combined with a coating of graphite, this reduces the friction generated in this area. To do so, mask off the car so just the wood around the axle hole shows. Next, apply glue around the hole. CA doesn't take long to dry (cure), and a fluid that dramatically speeds up the curing process, known as "activator," can be used. After the glue cures, sand with 400 grit sandpaper to level it out. Next, clean off any dust and add another layer of glue. Repeat this process 2-4 times, sanding with the 400 grit paper once cured. You may need to remask with tape around the hole, as the sanding of



the glue may wear off the tape. Once there is a good layer of glue, sand with increasingly higher grits of sandpaper (i.e., 800, 1000, 1500, 2000, 3000, etc.). Your goal is to create a very smooth and shiny surface. Once done, apply a coat or two of your wheel wax/sealer, making sure to let it haze over, then buff it out.

Finally, finish by applying several coats of graphite using a cotton swab!

6

Once you have assembled the car, adding graphite to the wheels again is good practice. Place a small amount of graphite on the sides of the axle head. Gently tap the wheel to encourage the graphite to find its way under the axle head and into the wheel bore. Turn the car, so the wheel faces the ground and spin the wheel several times. Repeat this process with the inner hub. Apply graphite and tap the wheel to spread the graphite into the inner hub and between the wheel and the car body. Turn the car, so the wheel faces up and spin it several times. A soft bristle paintbrush works well to push graphite under the axle head and onto the inner hub. Add more graphite and repeat.

Graphite will wear and start to lose its effectiveness over several runs. Therefore, always add more graphite after test runs, and if you can re-lubricate during a race, do so!

