



# CARBON



# WELCOME

To a New Driving Experience  
With E2 Carbon Fiber Wheels

Any questions can be directed to our Customer Service Department at  
[www.esecarbon.com](http://www.esecarbon.com) or by calling (877) 213-8662 ext.12.

It is recommended that you use a licensed installation facility to install E2 Wheels.  
Failure to do so could result in damage to your vehicle, wheels, or yourself.

Rev A, 8/10/222 Approved by MC



# ESE CARBON WHEEL INSTALLATION GUIDE

For ESE Carbon E2 Wheels with ESE provided shank-style lug nuts and washers ONLY. It is recommended that you use an ASE certified facility to install your E2 Wheels. Failure to do so could result in damage to your vehicle, wheels, or yourself.

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1a. Confirm Wheel Size

- 1 Prior to mounting tires on your new E2® wheels, perform a visual inspection. Confirm the wheel size, number of bolt holes, bolt pattern and offset. Next, consult the ESE Carbon Tire Mounting & Balancing Guide. After the tires are mounted and balanced, test fit the E2 wheel to the hub to confirm clearance of brake calipers, other brake hardware, etc. When installing new wheel hardware, an impact wrench should never be used to torque lug nut hardware and may damage the lugs or studs and may cause damage to the wheel.

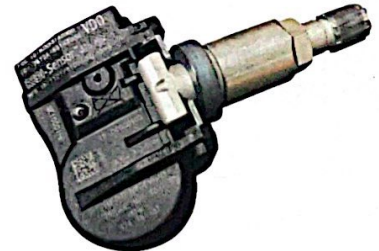


1b. Brake Calipers

- 2 Do not exceed the axle load rating or tire diameter specified by your vehicle manufacturer.
- 3 Use only the ESE Carbon provided shank-style lug nuts and washers to ensure safe installation. Check that the thread on the new lug nuts matches that of the threads on the vehicle's studs. The provided shank-style nut comes with a custom washer specially designed to function with carbon fiber composite wheels. This washer may or may not be affixed to the nut. Ensure that the washer is installed between the nut and the composite laminate. Failure to install the provided lug nuts and washers may prevent proper tightening and cause loosening, excessive vibration, and ultimately wheel separation during driving and will void the warranty.

- 4 ESE recommends that new accessory valves and/or TPMS sensors be installed by a licensed, authorized service center. Please note that the re-use of existing accessory valves may result in air leaks.
- 5 Wheels must sit flat against the vehicle's hubs. Prior to installation, remove any rust and dirt from the mounting surface of hubs and brake rotors. The use of aftermarket spacers with E2 wheels is prohibited & will void the wheel warranty.
- 6 Some vehicles may require modification to wheel studs (if equipped). While this modification can be performed by the owner (**basic overview included with installation guide: Replacing Wheel Studs 4 Steps**), it is not recommended. ESE recommends that the owner have a licensed, authorized service center perform installation.
- 7 Always tighten lug nuts to the recommended torque of the vehicle manufacturer. Install lug nuts first by hand, then use a torque wrench to tighten the lug nuts to the manufacturer's recommended torque in a star pattern (see right).

Over-torquing can result in stripped lug nuts, broken wheel studs or brake rotor distortion.



4a. TPMS Sensor



7a. Proper Lug Tightening: Cross Pattern

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## POST INSTALLATION

- 1** Check that tires do not contact any part of the body or the suspension system. **(When checking the front wheels, turn the steering wheel all the way left and right.)** Listen for signs of any grinding or rubbing.
- 2** Before driving, always check the air pressure in the tires. For correct tire pressure, consult your owner's manual or placard on the driver's side door jamb. Tire pressure should be checked once a week, early in the morning before the vehicle has been driven. The heat of the day and/or driving more than a few miles will cause an incorrect cold pressure reading.
- 3** The lug nuts can become loose during the first 100 miles after the wheels are fitted or rotated. Use a torque wrench to make sure the nuts are at the recommended torque. It is recommended that torque is checked after the first 5 miles of driving and again after 50 to 100 miles.

## CLEANING AND MAINTENANCE:

Using a soft cloth with a mild soap and water, finishing with a wax or sealant is recommended when caring for your E2 wheels. Hard or coarse brushes, chemical-based cleaners or acidic sprays are not recommended and may cause damage to the wheel's clear coat, voiding the warranty. Note that many drive-through and self-serve car washes offer wheel cleaner options that rely on acid wash chemicals. These are very damaging to wheel finishes and should be avoided entirely.

## REGARDING WHEEL DAMAGE:

"Curb-Rash" is defined as damage caused by the wheel being rubbed along a curb or other stationary surface. Minor surface damage may be repairable and should be addressed by a member of ESE's technical service group. Damage that has impacted layers below the clear coat may render the wheel irreparable. If this is determined to be the case, the wheel should be taken out of service and replaced immediately to avoid possible damage to the vehicle or passenger injury. For information regarding wheel damage coverage, please consult your ESE warranty.

**Use of wheels for racing or track applications will void any warranties.**

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# ESE CARBON TIRE MOUNTING & BALANCING GUIDE

For the installation of tires onto ESE Carbon E2 Wheels.

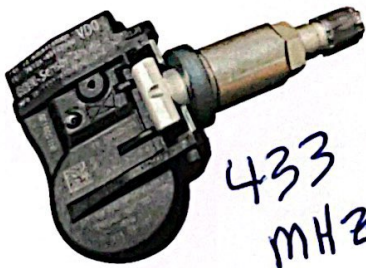
It is recommended that you use an ASE certified facility to install E2 Wheels.

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1. E2 wheel



2. TPMS Sensor

- 1 Prior to mounting tires on your new E2® wheels, perform a visual inspection. Confirm the wheel size, number of bolt holes, bolt pattern and offset. Ensure that the tire sizes are sized appropriately for the wheels.
- 2 (Optionally) Install TPMS sensors on the wheels. ESE recommends that new accessory valves and/or TPMS sensors be installed by a licensed, authorized service center. Please note that the re-use of existing accessory valves may result in air leaks. **433 MHz**
- 3 Install the tires using a touchless tire changer or a center-clamp (leverless) style machine such as the Hunter TC39 to avoid damage to the composite wheel. Follow the instructions provided by the manufacturer of the tire machine, taking care to avoid damage to the composite wheels.
- 4 After mounting tires, they should be balanced. Improper wheel balance can cause vibration during driving. It can also cause uneven tire wear and puts undue stress on your shocks, wheel bearings and wheel assemblies. It is advisable to have the wheels aligned by a trained professional automotive shop.

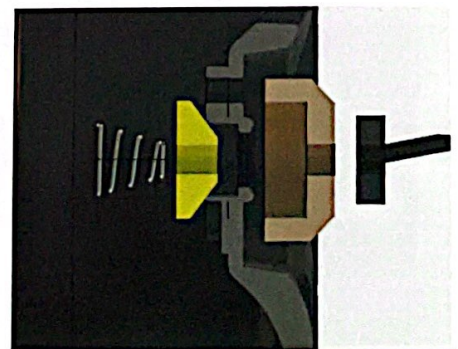
When balancing, the use of a rear locating cone (see below) is required. Additionally, on the front of the wheel, the lock nut bearing surface must reach over the protrusion of the metal backing plate installed on each E2 wheel and tightened on the laminate face. The wheel with backing plate should be "sandwiched" between the cone and lock nut during balancing to avoid any potential issues. "Front coning" should be avoided.



3. Center-clamp tire changer



4a. Balancing Machine



4b. Rear cone balancing setup