

## INSTALLATION OF R-290 TIRE PRESSURE MONITORING SENSOR KIT 2017-PRESENT FORD F-250/350

### INSTALLATION SAFETY PRECAUTIONS

If any installation problems are encountered, please call G&B Specialties for technical assistance before continuing with the installation process.



- Failure to heed to any of the following warnings could result in severe bodily injury and/or equipment damage.
- Read and understand this manual completely before attempting installation of the equipment.
- Installation instructions provided below only address the Rafna railgear equipment. Applicable railway company procedures and policies must be adhered to.
- The road wheels and tires must be installed before the railgear is installed to obtain correct height measurements.
- Do not hit the wheel adapter with any hard objects as this could dent the adapter and cause vibrations when driving. If the adapters do not easily slide onto the hubs, lightly sand the hub and the inside of the adapter.
- Before performing any work under the vehicle or railgear, ensure the engine is turned off and the parking brake is set.
- With the installation of the vehicle road wheels and tires, it is recommended to recalibrate the vehicle's speedometer.

## INSTALLATION OF TIRE PRESSURE MONITORING SENSOR

The following procedure details the installation of the tire pressure sensor on the 19.5" steel wheels provided with the RAFNA Railgear equipment. The hardware required for this installation for one sensor and one wheel is listed in Table 1.

**Table 1: Tire Pressure Monitoring Sensor Installation kit**

| Part Number | Description                         | Qty |
|-------------|-------------------------------------|-----|
| S-201502    | 19.5" x 6.75" Wheel 5.60" Offset    | Ref |
| R-10110A    | OEM Tire Pressure Monitoring Sensor | Ref |
| R-21080     | Valve Stem Adapter                  | 1   |
| R-10056     | Nut                                 | 1   |
| R-10057     | Adapter Grommet                     | 1   |
| R-10058     | Washer                              | 1   |
| R-10059     | Washer                              | 1   |

### Tire Pressure Monitoring Sensor (TPMS)

The OEM TPMS Sensors will be reused but not the OEM valve stems as they are a snap-in style that will not mount to the steel wheels supplied with RAFNA Wheel Modification Kit. A screw-on type valve stem that is secured to the steel wheel with a nut on the outside of the wheel is required and is supplied with this kit and is to be used with the OEM TPMS Sensor.

### Installation of Tire Pressure Monitoring Sensor (TPMS)

1. Remove the OEM sensor assembly from the OEM wheel.
2. Remove the OEM valve stem from the OEM TPMS sensor, by removing the screw securing the valve stem to the sensor, as shown. The valve stem and screw will not be reused. (Figure 1)
3. Remove the nut and rubber grommet from the valve stem adapter supplied with this kit, as shown. The nut and rubber grommet will not be reused. (Figure 2)
4. Assemble the valve stem adapter to the OEM sensor as shown, using the screw supplied with the valve stem adapter. It is recommended that the screw be torqued to 12 in-lbs. (Figure 3 & 4)
5. Assemble the backer washer and adapter grommet to the valve stem adapter as shown. (Figure 3)

6. Attach the TPMS sensor to the 19.5" steel wheel, as shown, using the supplied washer and hex nut. The valve stem hex nut should be torqued to 25-30 in. lbs. This is to maintain the proper operation of the sensor and to maintain an air tight seal with the wheel. (Figure 5 & 6)

### Spare Tire

The OEM spare tire does not contain a tire pressure sensor. An extra OEM sensor will be shipped with this kit if ordered. The same installation process should be followed as in the previous section.

### Tire Inflation

The recommended tire inflation is 85psi.

This is only a recommended inflation pressure. The proper tire pressure should be determined by the operator of the vehicle, depending on vehicle load and operating conditions.

### Programming the TPMS

It will be necessary to reprogram the vehicles computer to read the new sensor.

Contact your local FORD dealer for the correct procedure on reprogramming the TPMS or refer to the vehicle's OEM manual for programming instructions.

### Tire Rotation

When performing a tire rotation as part of the vehicle standard maintenance schedule, it will be necessary to re-set the TPMS so that the vehicles computer knows the location of the moved sensors.

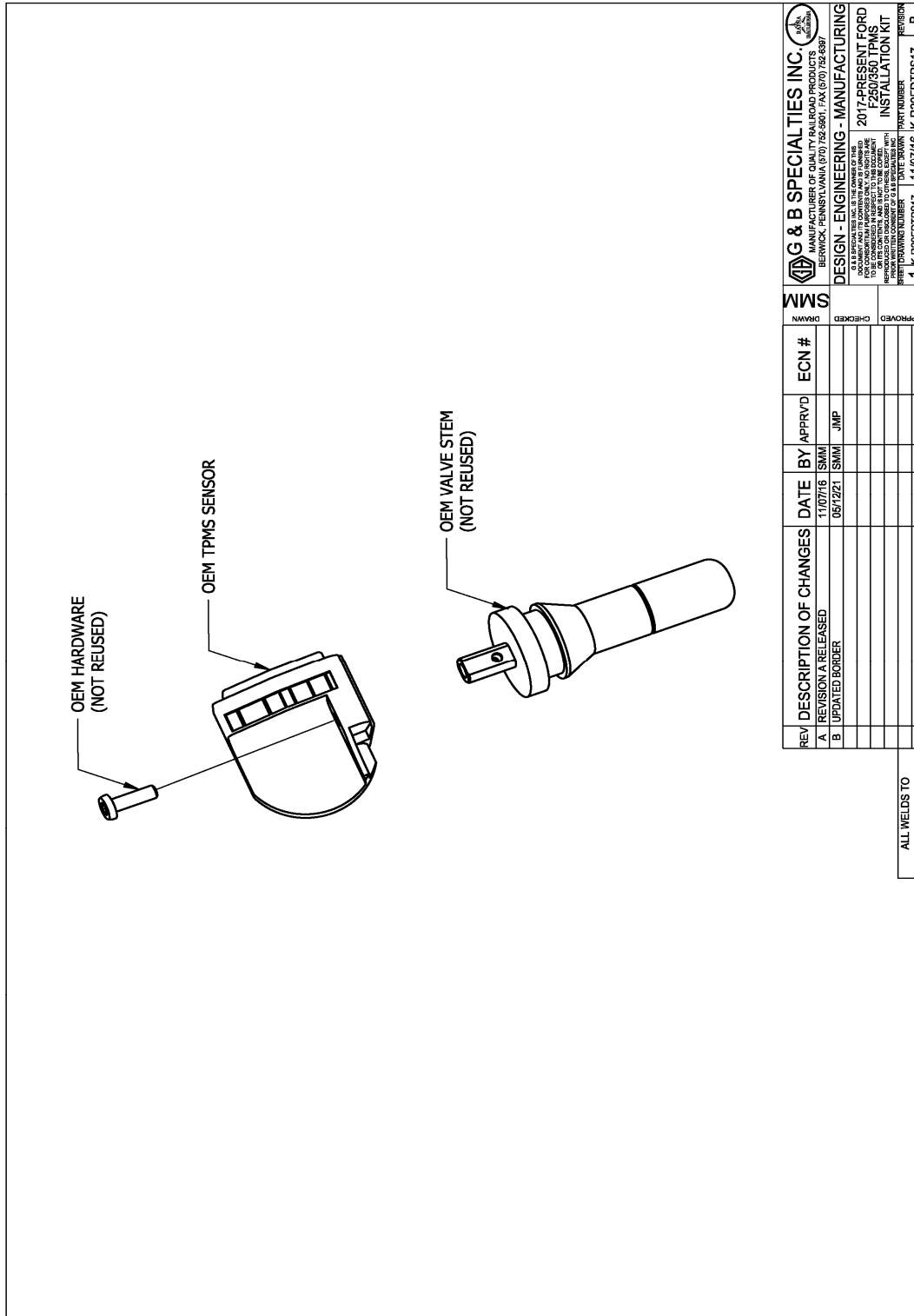


Figure 1

G&B Specialties Inc. 535 West 3<sup>rd</sup> Street, Berwick, PA, USA Tel: (570) 752-5901 Fax: (570) 752-6397  
US Field Service: 570-441-6988; CAN Field Service 570-854-0482; [www.rafna.com](http://www.rafna.com)

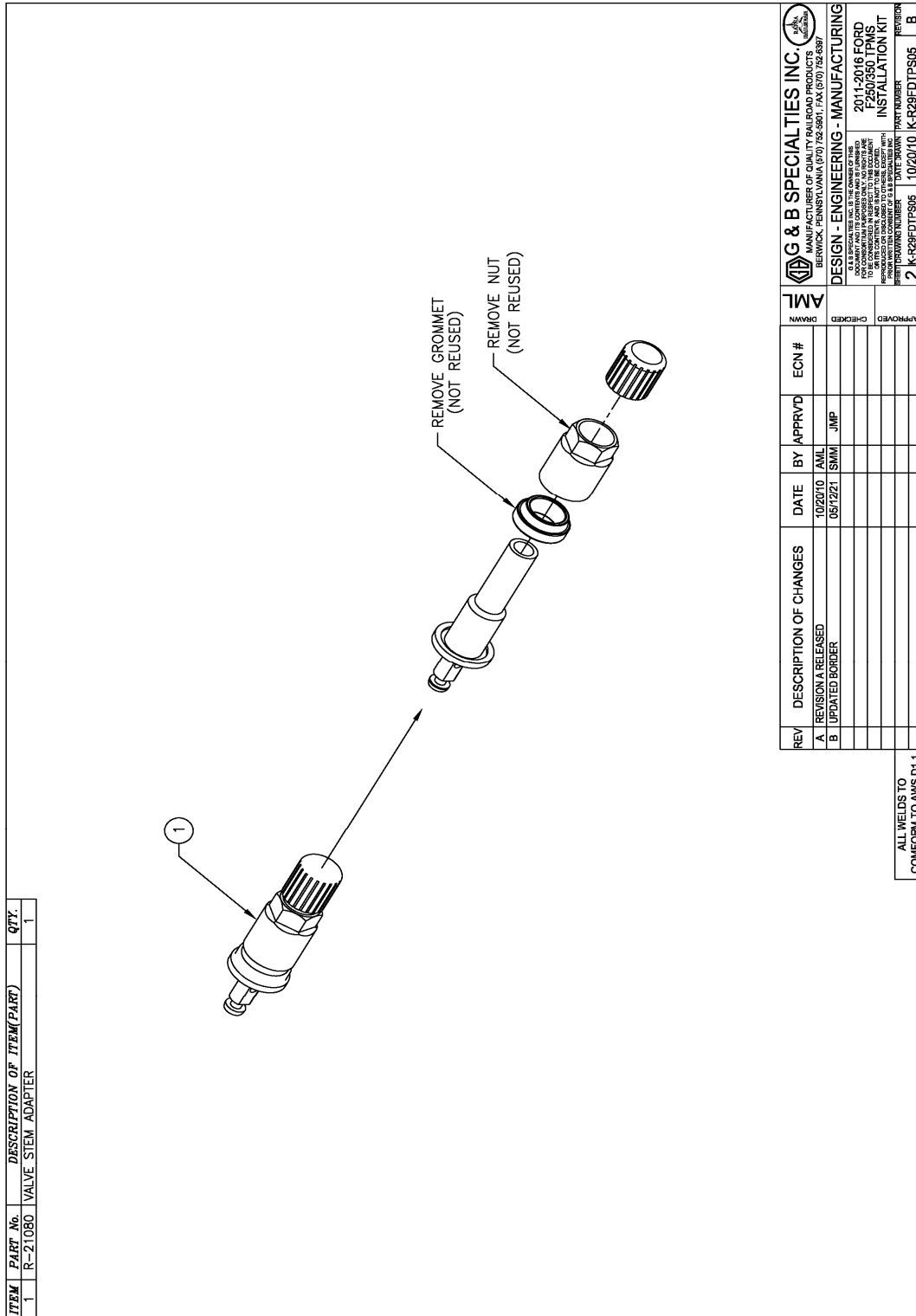


Figure 2

G&B Specialties Inc. 535 West 3<sup>rd</sup> Street, Berwick, PA, USA Tel: (570) 752-5901 Fax: (570) 752-6397  
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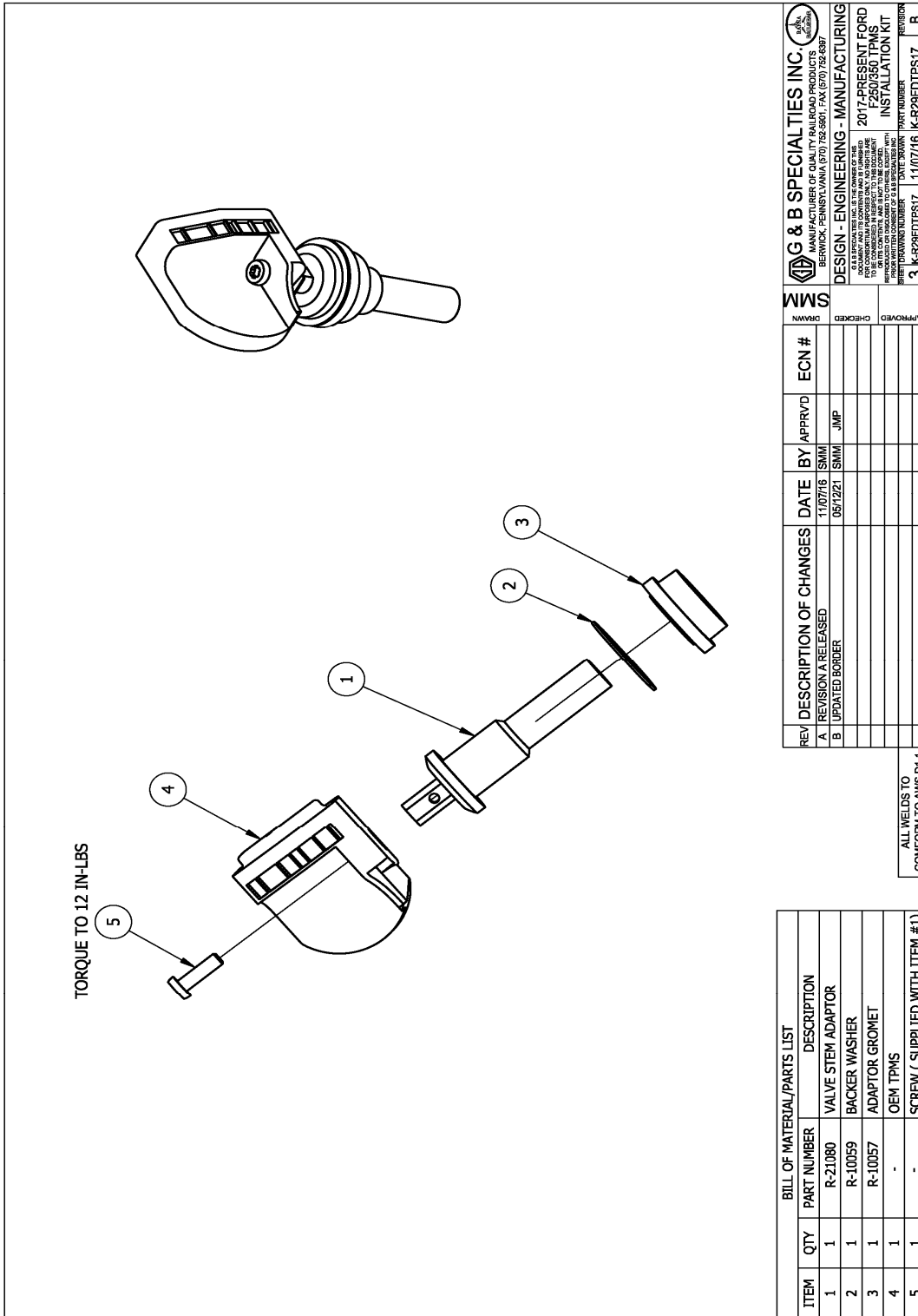


Figure 3

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**Figure 4**  
TORQUE TO 12 IN-LBS



**Figure 5**

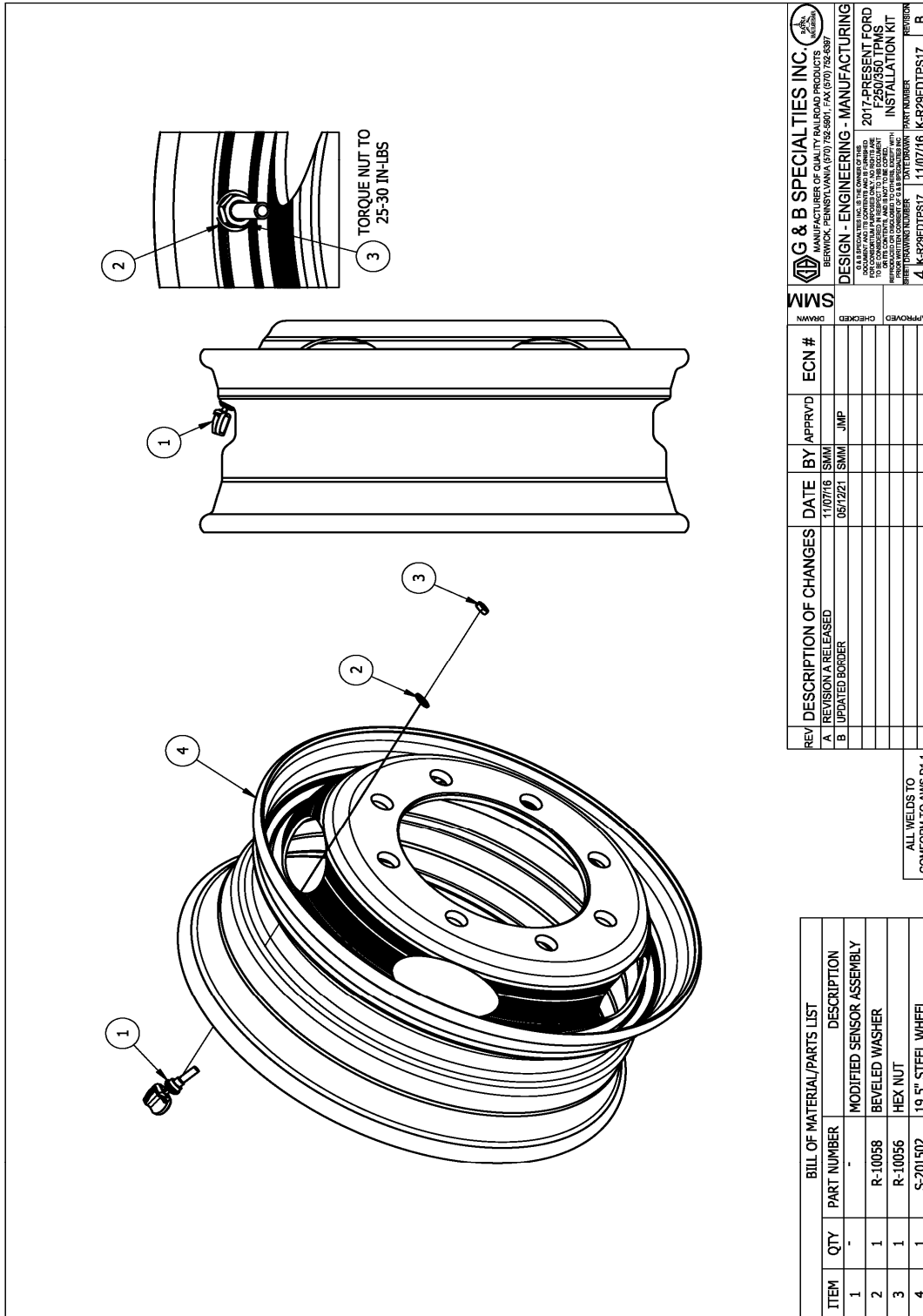


Figure 6