

**INSTALLATION  
OF TIRE PRESSURE MONITORING SENSOR  
2011 FORD F-250/350**

**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 Industries 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 in order 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.

## **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 Industries 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

<b>Part Number</b>	<b>Description</b>	<b>Qty</b>
S-201502	19.5” x 6.75” Wheel 5.60” Offset	Ref
-	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.
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.
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 secured with a small amount of loctite and torqued to 12 in-lbs.
5. Assemble the backer washer and adapter grommet to the valve stem adapter as shown.

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 24-30 in. lbs.** This is to maintain the proper operation of the sensor and to maintain an air tight seal with the wheel.
7. It is recommended that the speedometer for the vehicle be recalibrated for the 19.5" wheels and tires.

### **Spare Tire**

The OEM spare tire does not contain a tire pressure sensor. An extra OEM sensor will be shipped with this kit. 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**

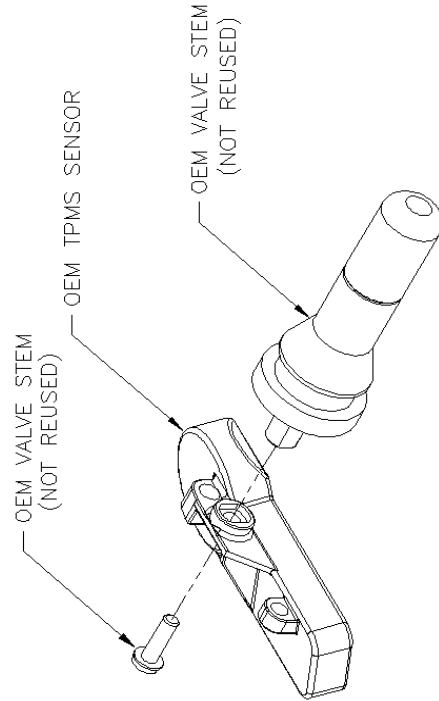
It will be necessary to reprogram the vehicles computer to read the new sensor.


Contact your local FORD dealer for the correct procedure on reprogramming the TPMS or refer to the vehicles 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.

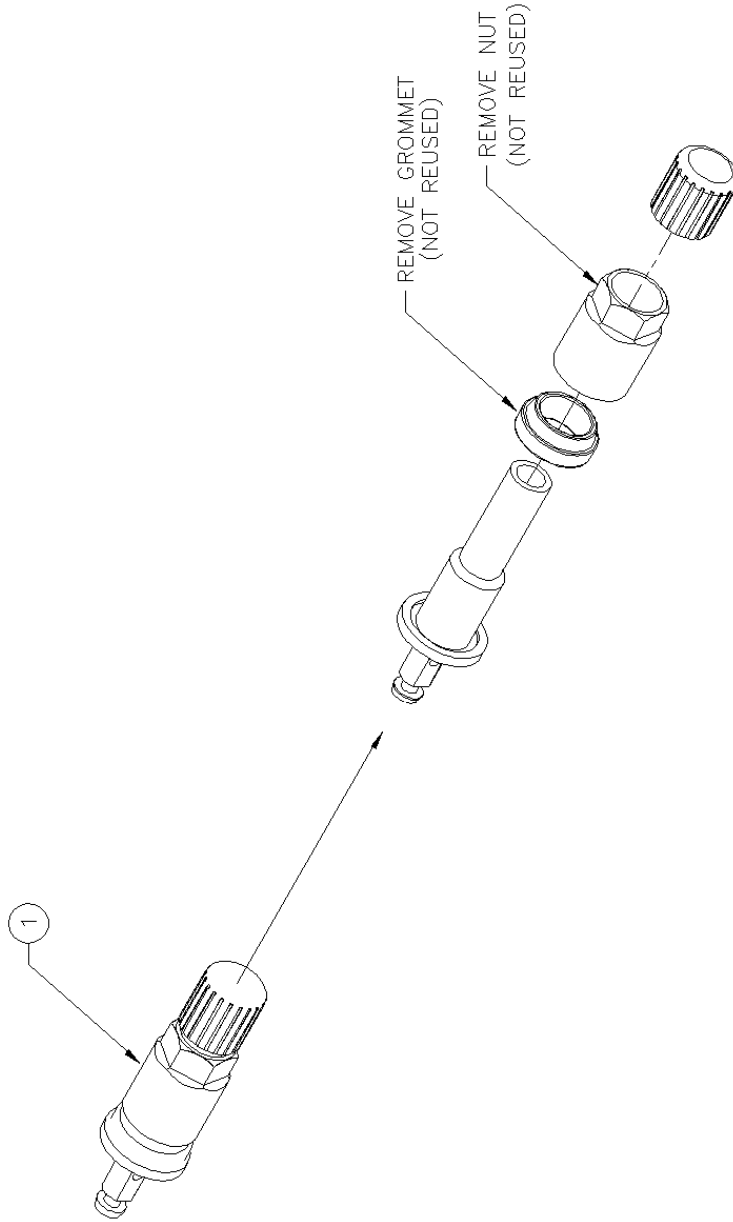
REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	10/20/10	AML	




 <b>G &amp; B SPECIALTIES INC.</b> 535 WEST 3 <sup>RD</sup> STREET, BERWICK, PA, USA 17604 TEL: (570) 752-5901 FAX: (570) 752-6397	
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DRAWING NUMBER K-R29FDTPS05	DATE DRAWN 10/20/10
SHEET 1 of 4	PART NUMBER K-R29FDTPS05
APPROVED AML	CHECKED AML
TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED	FINISH MAX. SURFACE 125% EXCEEDS
BASIC DIMENSION	DECIMALS
6 DECIMALS	2 PLACE
FRACTIONS	3 PLACE
$\pm 1/64$	$\pm .02$
$\pm 1/32$	$\pm .005$
$\pm 1/16$	$\pm .010$
ABOVE 24	$\pm .06$
ANGULAR DIMENSIONS	$\pm 1/2^\circ$

REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	10/20/10	AML	

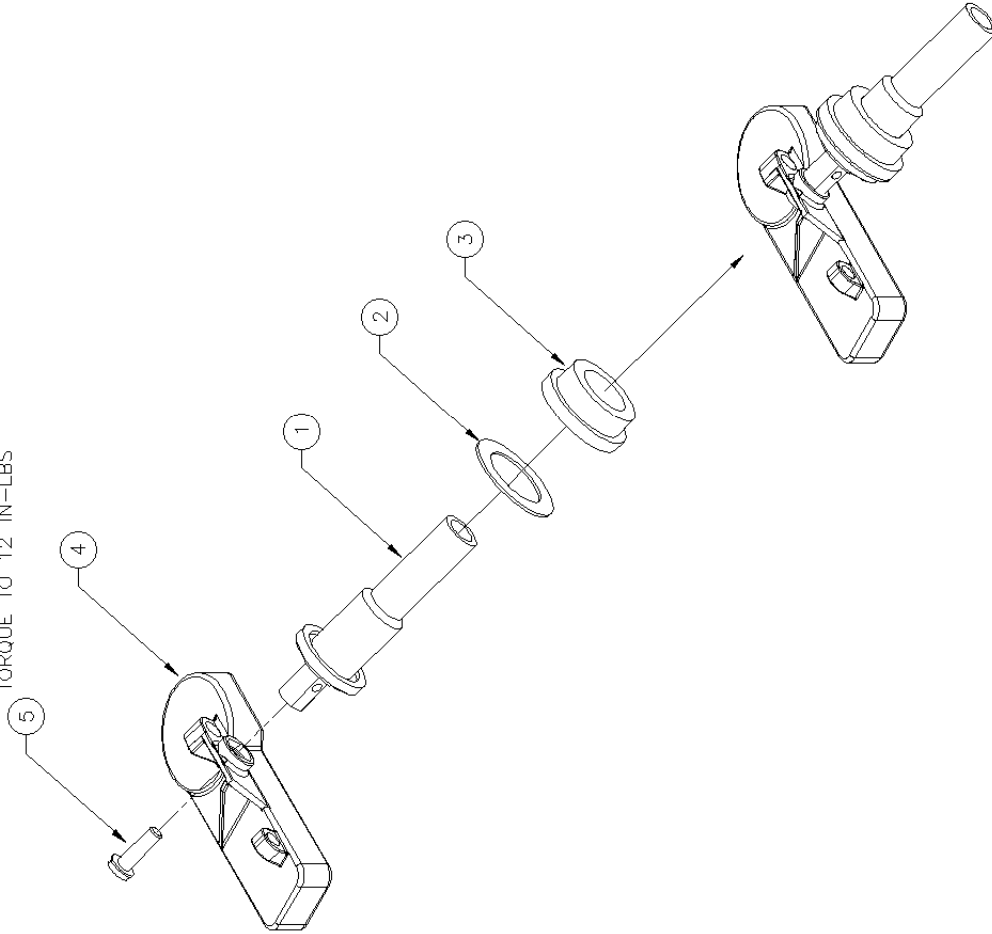
ITEM	PART No.	DESCRIPTION OF ITEM(PART)	QTY:
1	R-21080	VALVE STEM ADAPTER	1



 <b>G &amp; B SPECIALTIES INC.</b> 1000 WABTEC DRIVE BIRMINGHAM, TENNESSEE 37611 (615) 732-2401 FAX (615) 732-4397		<b>DESIGN ~ ENGINEERING ~ MANUFACTURING</b> <small>G &amp; B SPECIALTIES INCLUDES THE OWNER OF THE REGISTERED TRADEMARKS INSTALLATION, FOR PUMP/VALVE APPLICATIONS ONLY. NO RIGHTS ARE GRANTED FOR REPRODUCTION OF THIS DOCUMENT OR FOR THE USE OF THE INFORMATION CONTAINED HEREIN WITHOUT THE WRITTEN CONSENT OF G &amp; B SPECIALTIES INC.</small>	
TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED		FINISH MAX. 125% UNLESS OTHERWISE SPECIFIED	
BASIC DIMENSION	FRACTIONS	DECIMALS	
UP TO .25	2 PLACE	3 PLACE	
2 ABOVE .25	± 1/64	± .02	± .005
6 TO 10 .25	± 1/32	± .03	± .010
ABOVE 24	± 1/16	± .06	± .015
ANGULAR DIMENSIONS		± 1/2°	
DRAWING NUMBER	DATE DRAWN	SHEET	PART NUMBER
K-R29FDTPS05	10/20/10	2 of 4	K-R29FDTPS05
REVISION			A

REV	CHANGE	DATE	BY	APPD
A	DRAWING RELEASED	10/20/10	AML	

TORQUE TO 12 IN-LBS



ITEM	PART No.	DESCRIPTION OF ITEM(PART)	QTY.
1	R-21080	VALVE STEM ADAPTER	1
2	R-10059	BACKER WASHER	1
3	R-10057	ADAPTER GROMMET	1
4	—	OEM TPMS	REF
5	—	SCREW (SUPPLIED WITH ITEM #1)	REF

TOLERANCE ON FINISHED DIMENSIONS UNLESS OTHERWISE SPECIFIED	FRACTIONS	DECIMALS	PLACES
BASIC DIMENSION	6/16ths	±.005	3
ABOVE 24	±.1/32	±.010	
BELOW 24	±.1/16	±.015	
ANGULAR DIMENSIONS		±.1/2°	

APPROVED	CHECKED	DATE DRAWN	SHEET
		10/20/10	3 of 4

DRWING NUMBER	PART NUMBER
K-R29FDTPS05	K-R29FDTPS05

REVISION	REVISION
A	A

G & B SPECIALTIES INC.	
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