

Subject: TPMS (TIRE PRESSURE MONITORING SYSTEM) WARNING LAMP ILLUMINATED AND A WARNING BUZZER NO DTC - SERVICE TIPS	Bulletin No: 02-002/03
	Last Issued: 12/1/2003

BULLETIN NOTE

This bulletin is being reissued 12-01-2003 to revise APPLICABLE MODEL(S)/VINS and the PROCEDURES.

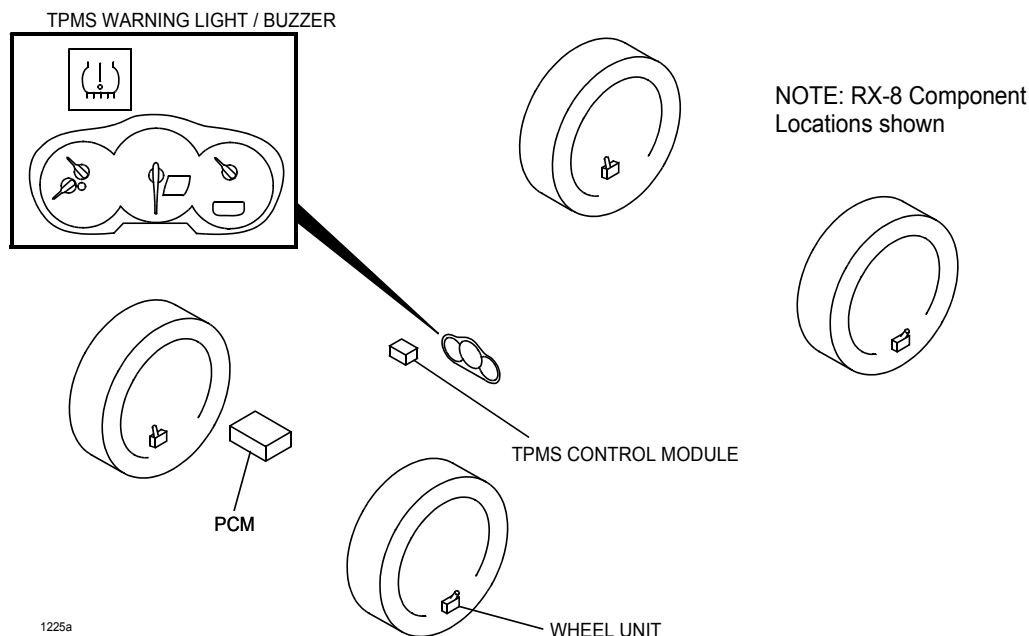
APPLICABLE MODEL(S)/VINS

RX8 (TPMS is standard all models)

Mazda3 (TPMS is optional on some models)

DESCRIPTION

Some Mazda vehicles are now equipped with TPMS (Tire Pressure Monitoring System). This system consists of 4-wheel units, a control module, a warning light and a warning buzzer.



The wheel units are sensors, which are part of the valve stem and are mounted to each wheel. Each wheel unit consists of an internal battery (designed to last up to 10 years), an accelerometer which turns the wheel unit on over 25 km/h (16 mph), a temperature sensor, a pressure sensor and a radio transmitter that sends information to the TPMS control module.

The TPMS control module monitors tire pressure, if tire pressure is too high or too low the TPMS control module will turn on the TPMS warning lamp in the dash and a warning buzzer will sound.

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CAUSES OF A TPMS MIL & WARNING BUZZER

- Aftermarket wheels or factory replacement wheels installed without wheel sensors
- Tire pressures were adjusted with tires hot, light comes on when vehicle is cold. (Tire pressures must always be adjusted cold)
- Low air pressure in any or all wheels {below 179.26 kpa (26 PSI)}
- High air pressure in any or all wheels {above 337.84 kpa (49 PSI)}
- Spare tire installed on vehicle
- Instant Mobility System repair agent or fix-a-flat was used and is clogging a wheel unit

NOTE: The TPMS system can only turn the warning lamp off after the vehicle is driven over 25 km/h (16 mph) until the TPMS warning light turns off.

Example: If you correct tire pressure after repairing a flat tire, or reset tire pressure to the proper range, (such as at PDI to correct high shipping tire pressures), the TPMS warning light will stay illuminated until the vehicle is driven over 25 km/h (16 mph) until the TPMS warning light turns off.

CHANGING TIRES ON WHEELS EQUIPPED WITH TPMS WHEEL UNITS

1. Remove the wheel from the vehicle.
2. Remove the valve stem cap.
3. Remove schrader valve.
4. Un-bolt the TPMS wheel unit (11mm deep socket). Allow the sensor to fall into the wheel.

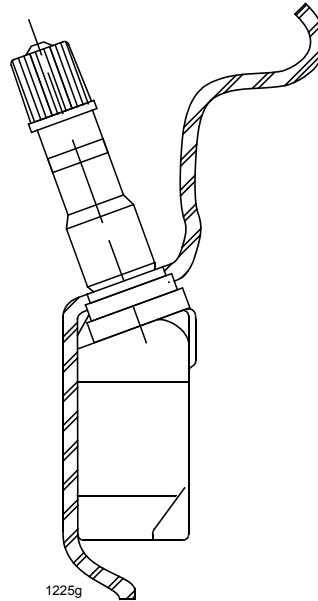
NOTE: This will prevent damage to the sensor while the tire is removed from the wheel with a tire removal machine.

- Remove the tire from the wheel. Recover the TPMS wheel unit and store it in a safe place.

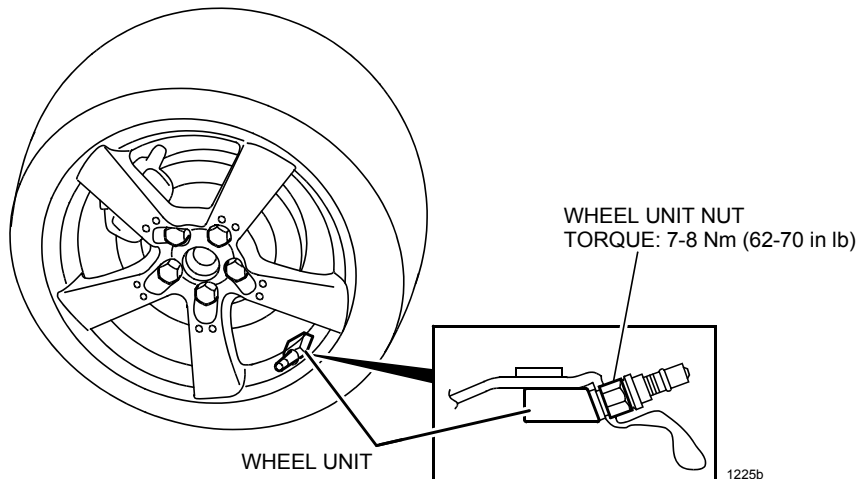
NOTE: RX8 - If IMS (Instant Mobility System) repair fluid was used, be sure to recover the fluid and dispose of it following local waste disposal regulations. Be sure to replace the IMS fluid in the vehicle to prepare for future tire emergencies.

CAUTION: RX8 - If IMS repair fluid was used, be sure to dispose of the old tire and replace it with a new one. The IMS fluid is not compatible with tire patches or plugs, after using IMS fluid, the tire must be disposed of and replaced.

- Place the TPMS wheel unit into the wheel, make sure the seal is fully seated as in the figure below.

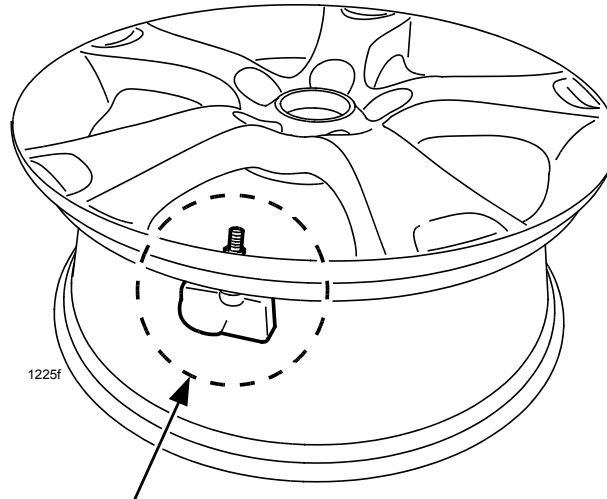


- Install the TPMS wheel unit nut by hand and turn at least 2- full revolutions by hand.
 - Torque the wheel unit nut slowly (approximately 1-turn in 10-seconds) to 7 to 8 NM (62 to 70 in lb).



8. Install the tire to the wheel:

CAUTION: Use care when installing the tire to the wheel with the bar, place the bar on the rim in a location that will not contact the sensor.



USE CAUTION AROUND
SENSOR AREA WHEN
INSTALLING TIRE

9. Seat the tire bead.

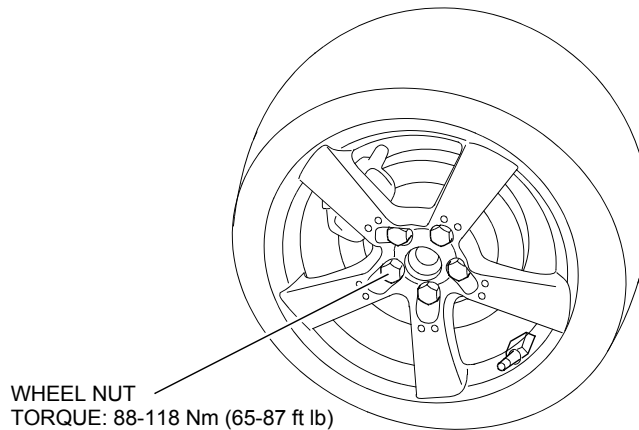
10. Install the schrader valve .

11. Inflate the tire to specifications (see label on driver door).

12. Install the valve stem cap.

13. Install the wheel to the vehicle.

14. Torque all wheel nuts to 88 to 118 NM (65 to 87 ft lb) in a criss-cross pattern.



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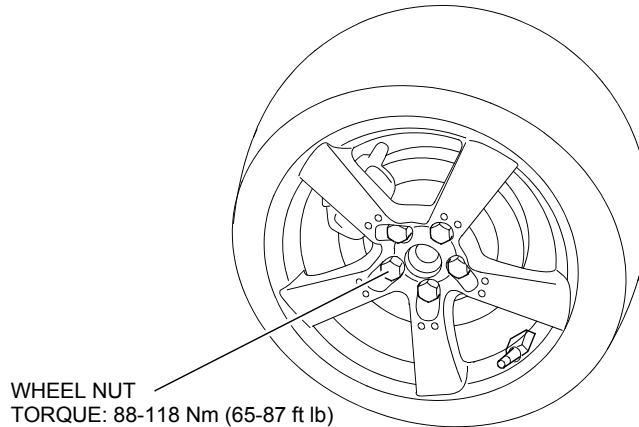
15. Verify that the TPMS system operates properly.

- Drive vehicle over 25 km/h (16 mph) to verify TPMS warning buzzer and light remain off.

WHEEL SWAP

After swapping a wheel or wheels from one vehicle to another, it is necessary to register the ID codes of the new wheel unit(s) to each vehicles TPMS control module.

1. Swap wheel or wheels from one TPMS equipped vehicle to the other.
2. Torque all wheel nuts to 88 to 118 NM (65 to 87 ft lb) in a criss-cross pattern.



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3. Perform Wheel Unit Auto Registration:
 - a. Turn ignition on.
 - b. Turn ignition off.
 - c. Leave vehicle with engine off for more than 15 minutes.
 - d. Drive each vehicle over 25 km/h (16 mph) for more than 10 minutes to register the new ID codes.

AFTERMARKET WHEELS

The TPMS system is a safety system that identifies certain tire pressure concerns to the vehicle operator. In order to change wheels from factory to aftermarket, it is imperative to maintain the proper operation of the TPMS system.

1. Verify that the TPMS wheel units can be mounted on the new wheels:
 - Check for interference between the TPMS wheel unit, tire or wheel. If there is interference, do not install the aftermarket wheels.
 - Check for proper seating and sealing of the TPMS valve stem seal.
 - Check proper fit of the wheel unit and valve stem.
2. If there are no signs of interference or sealing problems with the new wheels, proceed to Install the tires to the wheels, following the instructions above for CHANGING TIRES ON WHEELS EQUIPPED WITH TPMS WHEEL UNITS.
3. Verify all tire pressures are correct. (See label on driver door).
4. Verify that the TPMS system operates properly.
 - Drive vehicle over 25 km/h (16 mph) for 3-minutes to verify TPMS warning buzzer and light remain off.

REPLACING A TPMS WHEEL UNIT

This procedure should be used whenever it is necessary to replace a TPMS sensor.

1. Follow the instructions above for CHANGING TIRES ON WHEELS EQUIPPED WITH TPMS WHEEL UNITS.
2. Verify tire pressure is correct. (See label on driver door).
3. Perform Wheel Unit Auto Registration:
 - a. Turn ignition on.
 - b. Turn ignition off.
 - c. Leave vehicle with engine off for more than 15 minutes.
 - d. Drive vehicle over 25 km/h (16 mph) for more than 10 minutes to register the new ID codes.

SPARE TIRE MAZDA3 & TRUNK MOUNTED SPARE TIRE KIT (RX8-OPTION)

The TPMS system does not include a sensor for the spare tire on the Mazda3 or the accessory trunk mounted spare tire kit available for RX8. This means that the spare tire will not be monitored for tire pressure. The spare tire should be checked at regular services to verify proper pressure and tire condition.

When the spare tire is installed to a wheel of the vehicle, the TPMS system will illuminate the TPMS warning light and the warning buzzer may sound.

When a temporary spare tire is in use, the customer must follow special instructions found in the owner's manual and on the tire sidewall involving speed and distance limitations.