



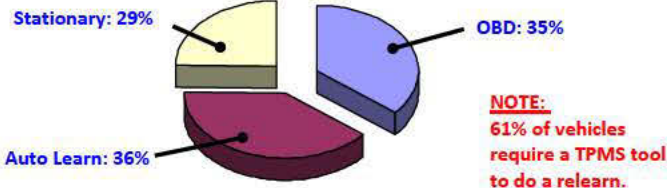
RELEARN TYPES:

After TPMS Sensor replacement the **NEW sensor ID's MUST be programmed to the BCM**. Each TPMS Sensor has a unique serial number which must be registered to vehicle for proper system function.

Stationary – This method requires that you place the vehicle into LEARN MODE. Reference the relearn procedure that is on the tool for the vehicle being worked on. Once in LEARN MODE, use the Tech 400SD tool to ACTIVATE each of the TPMS sensors. The vehicle typically responds to the sensor activation with a horn honk.

OBD – This method is simpler. Get sensor ID's using the Tech 400SD Tool. Activate and decode each sensor. Connect the Tech 400SD to the OBD II port. Write ID's to the control module by following instructions on the screen.

Auto Learn – Some vehicles learn new sensor ID's by simply driving. After tire rotation or new sensor install, drive the car until the TPMS light turns off.



THREE MAIN SENSOR TYPES:

- **Clamp in** – has a nut, valve core and service pack – needs to be serviced each time the tire is changed, or when the sensor is damaged.
- **Snap in** – mounts like a traditional rubber valve stem, has a valve core – need to be aware of this style of TPMS Sensors when servicing tires to prevent damage. Valve stem can be replaced.
- **Banded** – Primarily of Ford vehicles, located directly opposite the rubber valve stem. Band and cradle often require service or replacement.



	Toyota Camry	Toyota Corolla	Ford Fusion	Honda Accord	Nissan Altima	Honda Civic	Chevrolet Malibu	Chevrolet Cruze	Chevrolet Impala	Hyundai Sonata
Stationary			X				X	X	X	
OBD	X	X		X	X	X				X
Auto										

	Toyota Prius	Nissan Sentra	Volkswagen Jetta	Hyundai Elantra	Ford Focus	Nissan Versa	Maada 3	Suzuki Outback	Kia Soul	Chevrolet HRV
Stationary					X					X
OBD	X	X		X		X		X	X	
Auto			X				X			

ESTIMATED NUMBER OF VEHICLES WITH TPMS SENSORS:

Year	Units Sold	Market Coverage	Vehicles w/ Sensors installed
2012	13,800,000	100%	13,800,000
2011	12,600,000	100%	12,600,000
2010	11,024,374	100%	11,024,374
2009	10,431,504	100%	10,431,504
2008	13,245,687	100%	13,245,687
2007	16,154,010	70%	10,607,807
2006	16,561,482	20%	3,399,437
2005	16,997,182	20%	3,398,931
2004	16,913,361	10%	1,691,336
Estimated No. of vehicles with TPMS			80,199,076
Estimated No. of TPMS sensors in service			320,796,304

COMMON SENSOR MECHANICAL ISSUES:

- ✓ Corrosion due to incorrect component replacement.
- ✓ Corrosion from operation without dust cap.
- ✓ Stem breakage due to use of "long neck" air chucks.
- ✓ Damage from driving with a flat tire.
- ✓ Damage from solvents or tire sealants.
- ✓ Flat or dead Battery.



KEY POINTS:

- Since 2008, ALL passenger cars and light trucks have Direct TPMS.
- More than 300 million TPMS Sensors on the road.
- Corrosion and mechanical damage have been the leading cause for sensor malfunction.
- Next, dead batteries will drive very high repair volume.
- The sensor batteries cannot be replaced.
- A dead sensor battery means a FLASHING LIGHT on the dash.

- 40% of TPMS Sensors have batteries at least 5 years old.
- 15% of TPMS Sensors have batteries at least 7 years old.
- By 2016, 13.5 million TPMS sensors will be replaced each year.
- Sensors are made in batches and are installed in sets, if one has a dead battery the others will soon fail.
- 61% of vehicles with TPMS require a TPMS tool to service and program.