TOYOTA
Technical Service Bulletin

Tire Inflation Pressure Compensation and Adjustment

Service Category Suspension

Section Tire/Wheel **Market** USA

Toyota Supports ASE Certification

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2004 – 2011	4Runner	
2007 – 2011	Avalon, Camry, Camry HV, RAV4, Sienna	
2008 – 2011	Corolla, FJ Cruiser, Highlander, Highlander HV, Matrix, Yaris	
2006 – 2011	Land Cruiser, Prius, Tacoma	
2010	Prius PHV	
2005 – 2011	Sequoia, Tundra	
2007 – 2008	Solara	
2009 – 2011	Venza	

TSB REVISION NOTICE

- **December 22, 2009 Rev2:**
  - **Applicability has been updated to include 2010 model year Prius PHV model and 2011 vehicles.**

Any previous printed versions of this service bulletin should be discarded.

TSB REVISION NOTICE

- **May 15, 2009 Rev1:**
  - **Applicability has been updated to include 2010 model year vehicles, and 2009 – 2010 model year Venza.**
  - **Figure 1 has been updated, and Celsius temperatures have been removed from the bulletin.**

Any previous printed versions of this service bulletin should be discarded.

Tire Inflation Pressure Compensation and Adjustment

Introduction

The purpose of this bulletin is to provide a procedure to adjust tire pressure correctly when outside temperature is significantly colder or warmer than shop temperature.

Seasonal temperature change can dramatically alter tire pressure, which can cause the tire pressure warning lamp to illuminate.

NOTE

This bulletin applies to some 2004 – 2007 model year Toyota vehicles with direct TPWS and all 2008 and newer model year Toyota vehicles.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
N/A	Not Applicable to Warranty	–	–	–	–

Tire Pressure vs. Tire Temperature

Tire temperature is dependent on “cold” tire pressure, driving distance and speed, ambient temperature and road surface temperature. As the temperature of the tire changes, air in the tire expands and contracts, changing the tire’s air pressure. The cold tire pressure for all Toyota models will vary and will need to be adjusted accordingly.

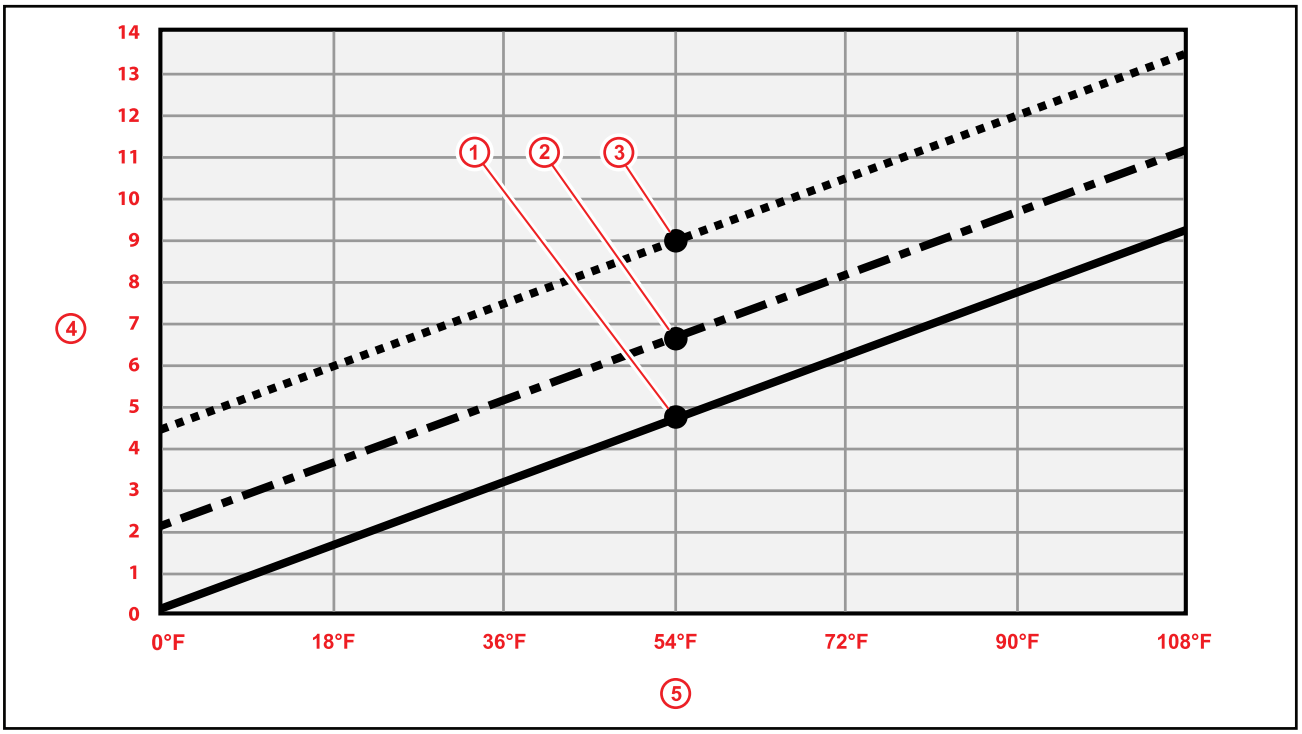
“Cold” tire pressure, as shown on the tire pressure label on our vehicles, is generally considered to be the pressure in a tire that has not been driven in the past 4 hours and has been parked outdoors.

The TPWS **MUST** be initialized with the tire pressure marked on the vehicle placard. Tires are then adjusted according to the information in this bulletin to ensure that the TPWS light does not illuminate unnecessarily.

Tire Inflation Pressure Compensation and Adjustment

Tire Pressure Adjustment

Figure 1. Tire Pressure Chart



1	Example 1: Cold Tires — Car Has Not Been Driven for 4 Hours and Parked Outside
2	Example 2: Warm Tires — Car Has Just Been Driven a Short Distance in Traffic
3	Example 3: Hot Tires — Car Has Just Been Driven for at Least 1 Hour of Highway Driving
4	Tire Pressure Adjustment (psi)
5	Temperature DIFFERENCE Between Seasonable Lowest Temperature and Workshop Temperature

Recommended Tire Pressure Adjustment:

NOTE

Use a high quality accurate tire pressure gauge, and check its accuracy regularly.

- Consider the difference of the air temperature in the workshop and the lowest ambient temperature that may be expected in the next few weeks (especially in winter).
- Use the chart (Figure 1) to compensate for temperature of the tires when adjusting tire pressure.
- Use temperature compensation Example 1 for the spare tire.

Example 1: Temperature Compensation – “Cold” Tires

- The vehicle has been parked overnight outside shop (vehicle has “cold” tires) and tire pressures are set to 31.9 psi.

Tire Inflation Pressure Compensation and Adjustment

Example 1: Temperature Compensation – "Cold" Tires (Continued)

- Workshop temperature is 68°F, and expected lowest ambient temperature in the local area is to be 14°F.
- Subtract the expected lowest temperature (14°F) from the workshop temperature (68°F) = 54°F.
- Using the tire pressure chart (Figure 1), find the intersection of the cold tire line at the point corresponding to 54°F, and read off the value on the tire pressure change axis. In this case it would be about 4.9 psi.
- The tires should be filled to:
  31.9 + 4.9 psi = 36.8 psi

Example 2: Temperature Compensation – "Warm" Tires

- The vehicle has been driven to the shop on surface streets for about 30 minutes (vehicle has "warm" tires) and tire pressures are set to 31.9 psi.
- Workshop temperature is 68°F and expected lowest ambient temperature in your area is to be 14°F.
- Subtract the expected lowest temperature (14°F) from the workshop temperature (68°F) = 54°F.
- Using the Tire Pressure Chart (Figure 1), find the intersection of the warm tire line at the point corresponding to 54°F and read off the value on the tire pressure change axis. In this case it would be about 6.7 psi.
- The tires should be filled to:
  31.9 + 6.7 psi = 38.6 psi

Example 3: Temperature Compensation – "Hot" Tires

- The vehicle has been driven to the shop on the highway for at least 60 minutes (vehicle has "hot" tires) and tire pressures are set to 31.9 psi.
- Workshop temperature is 68°F, and the expected lowest ambient temperature in the area is expected to be 14°F.
- Subtract the expected lowest temperature (14°F) from the workshop temperature (68°F) = 54°F.
- Using the tire pressure chart (Figure 1), find the intersection of the hot tire line at the point corresponding to 54°F, and read off the value on the tire pressure change axis. In this case it would be about 9.0 psi.
- The tires should be filled to:
  31.9 + 9.0 psi = 40.9 psi