



## TGS TYRE GUIDE



TOYOTA  
GIBALTAR STOCKHOLDINGS LTD

**BRIDGESTONE**

 **MICHELIN**  
A better way forward

 **DUNLOP**

 **GOODYEAR**

This tyre guide aims to provide you with general information on factory tyres fitted to our stock vehicles, spare tyres offered with the vehicles and the specialist tyres for use in sand, mud and snow.

TGS are appointed manufacturers agents for Bridgestone and Michelin and carry a very large and varied stock of specialised tyres for the range of Toyota 4x4 vehicles stocked in Gibraltar.



**Tread Wear Indicator(TWI)**  
 A device, such as a triangle or a small Michelin Man icon, located where the tread meets the sidewall. It indicates the location of the raised wears in between the tyre tread channels.

**Profile**  
 The height of the tyre sidewall as a percentage of the width.

**Wheel size**  
 The diameter of the tyres inner rim, in inches.

**Speed rating**  
 Indicates the max speed for the tyre at full load. (see table on page 11)

**Width**  
 This is the width of the tyre expressed in millimetres or inches.

**Radial**

**Load rating**  
 Indicates the maximum load carrying capacity per tyre. (see table on page 11)

265/65R17 112S

**Additional information**

**Arrows**  
 Some tyres are 'directional', and designed to perform better when driven in a specific direction (clockwise or counter-clockwise). Such tyres will have an arrow showing which way the tyre should rotate when the vehicle is moving forwards. It is important NOT to put a 'clockwise' tyre on the left hand side of the car or a 'counter-clockwise' tyre on the right hand side.

- KEY:**  
 H/T = Highway terrain  
 M+S = Mud and Snow  
 A/T = All Terrain  
 M/T = Mud Terrain  
 TL = Tubeless  
 TT = Tube Type

# TGS TYRE GUIDE

**Bridgestone Dueler HIT 683 II**  
Size: 245/70R17  
Vehicle: Prado TX

**Bridgestone Dueler AT 693 II**  
Size: 245/75R17  
Vehicle: Suitable for all Land Cruiser 200 Series

**Bridgestone Dueler HIT 840**  
Size: 255/70R15  
Vehicle: Suitable for all TGS Hilux RHD

**Bridgestone Dueler HIT 840**  
Size: 265/65R17  
Vehicle: Prado TXL

**Michelin XZY**  
Size: 7.50R16  
Vehicle: Suitable for all Land Cruiser 70 Series

**Michelin XS**  
Size: 7.50R16  
Vehicle: Suitable for all Land Cruiser 70 Series

**Michelin XZL**  
Size: 7.50R16C  
Vehicle: Suitable for all Land Cruiser 70 Series

**Dunlop SP Qualifier TG21**  
Size: 7.50R16C  
Vehicle: Suitable for all Land Cruiser 70 Series

**Goodyear Wrangler AT/S**  
Size: 205R16C  
Vehicle: Suitable for all Land Cruiser 70 Series

**Bridgestone R623**  
Size: 195R15C  
Vehicle: Hiace

**Goodyear Excellence**  
Size: 195/65R15  
Vehicle: Corolla



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#### Technical information

Size: 245/70R17  
Load rating: 108 = 1000kg  
Speed rating: S = 112mph/180km/h  
Vehicle: Prado TX  
Terrain: All-terrain

#### Description

The Dueler H/T, with a load rating of 1000kg, will more than compensate for the load required to be carried combined with smooth on-road capability. Suitable for light off-road use as well.



#### Technical information

Size: 245/75R17  
Load rating: 112 = 1120kg  
Speed rating: H = 130mph/210km/h  
Vehicle: 200 Series  
Terrain: All-terrain

#### Description

The Dueler A/T 693 II comes standard on all TGS 200 Series models. Excellent wear resistance and enhanced on-road driving performance complement optimum off-road traction. The Dueler 693 II offers robust off-road capability, smooth on-road comfort and all-terrain versatility.



# Bridgestone Dueler H/T 840

## Technical information

Size: 255/70R15 / 265/65R17

Load rating: 112 = 1120kg

Speed rating: S = 112mph/180km/h

Vehicle: TGS Hilux RHD / Prado TXL

Terrain: All-terrain

## Description

The Dueler H/T 840 is an on-road tyre that gives superb handling, high-speed stability and a comfortable ride. It also handles light off-road conditions easily, comfortably and reliably thanks to its rugged construction and versatile tread pattern.





### Technical information

Size: 7.50R16  
Load rating: 122 = 1500kg  
Speed rating: L = 75mph/120 km/h  
Vehicle: 70 Series  
Terrain: All-terrain

### Description

The Michelin XZY is a rugged tyre designed for traction both on- and off-road. High mileage and excellent resistance to damage. This tyre is best suited when fitted to the Land Cruiser 79 Pick-Up because it offers a high load rating and provides excellent resistance to cuts from stones or other sharp materials.



### Technical information

Size: 7.50R16  
Load rating: 108 = 1000kg  
Speed rating: N = 87mph/140 km/h  
Vehicle: 70 Series  
Terrain: Sand

### Description

The Michelin XS has been specially developed to improve vehicle flotation and traction in sand and desert conditions. The design and arrangement of the tread blocks greatly reduce the risk of digging in. The XS provides maximum flotation on sand as well as good mobility. The tyre can also withstand heavy loads at low pressure.

When driving through deep sand you should deflate your tyres to increase the tyre's footprint, giving more area to spread the weight of the vehicle around and get better traction. Watch your ground clearance though as this will be reduced.

Make sure you re-inflate your tyres immediately when you reach firmer ground.

It is important when the vehicle is fitted with sand tyres to consider taking or to have access to either a manual air pump or a 12 volt air compressor in order to be able to re-inflate the tyres after driving in sand.





# Michelin XZL

## Technical information

Size: 7.50R16C  
Load rating: 116 = 1250kg  
Speed rating: N = 87mph/140 km/h  
Vehicle: 70 Series  
Terrain: Mud

## Description

This tyre is designed to perform most specifically in the mud. However, they generally perform well in other conditions such as on the rocks, as well as in loose gravel and in the softer, constantly changing terrain of wooded trails. This is because mud tyres are usually designed from a softer compound with wider gaps between large lugs, which grab onto anything it can hook one of its lug edges around. Mud tyres are especially effective when deflated. Drawbacks of the Mud Terrain tyre are they perform poorly on the highway especially in the rain where the wide lug pattern results in less of a tyre footprint on the road. Mud tyres also tend to wear quicker than an all-terrain or a general purpose tyre, if used extensively on tarmac.

It is important when the vehicle is fitted with mud tires to consider taking or to have access to either a manual air pump or a 12 volt air compressor in order to be able to re-inflate the tyres after driving in mud or soft ground.



# Dunlop SP Qualifer TG21

## Technical information

Size: 7.50R16C  
Load rating: 112 = 1120kg  
Speed rating: R = 106mph/170 km/h  
Vehicle: 70 Series  
Terrain: All-terrain

## Description

The SP Qualifer is a multi-purpose tyre which shows outstanding durability on gravel, sand, dirt and bush. The tyre also features a sidewall protector rib which provides excellent cut resistance.



**GOODYEAR**

**Technical information**

Size: 205R16C

Load rating: 110 = 1060kg

Speed rating: S = 112mph/180 km/h

Vehicle: TGS Hilux LHD

Terrain: All-terrain

**Description**

The Wrangler is a distinctive multi-purpose tyre capable of handling varied terrain applications. This tyre has deep circumferential and wide lateral grooves for superior traction on- and off-road. Note that there are many tyres and patterns available in this size, but few are equal to this high load rating which makes this the perfect tyre for a TGS Hilux Pick-Up.

Goodyear Wrangler AT/S



**BRIDGESTONE**

**Technical information**

Size: 195R15C

Load rating: 106 = 950kg

Speed rating: R = 106mph/170km/h

Vehicle: Hiace

Terrain: On-road

**Description**

The Bridgestone R623 has good water clearance properties along with a smooth ride and good wear rates.

Bridgestone R623



**GOODYEAR**

**Technical information**

Size: 195/65R15

Load rating: 91 = 615kg

Speed rating: H = 130mph/210km/h

Vehicle: Corolla

Terrain: On-road

**Description**

Highly developed tyre offering good water clearance capability combined with strength and durability.

Goodyear Excellence

TOYOTA  
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The majority of tyres carry coded markings on them, which correspond to their load carrying and maximum speed capabilities.

The load index is a numerical code associated with the maximum load a tyre can carry (see load index table) at the speed indicated by its speed symbol (see Speed Symbol table) under service conditions specified by the tyre manufacturer.

For example, the diagram on page 2 shows 112S:

112 = Load Index (112 equates to a weight of approximately 1120kg (2470lbs))

S = Speed symbol (S equates to a speed of approximately 180km/h (113mph)).

## LOAD INDEX

Load index	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81
Load per tyre (kg)	250	257	265	272	280	290	300	307	315	325	335	345	355	365	375	387	400	412	425	437	450	462
Load per tyre (lbs)	551	567	584	600	617	640	661	677	695	717	738	761	783	805	827	853	882	908	937	963	992	1019

Load index	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103
Load per tyre (kg)	475	487	500	515	530	545	560	580	600	615	630	650	670	690	710	730	750	775	800	825	850	875
Load per tyre (lbs)	1047	1074	1102	1135	1168	1201	1235	1279	1323	1356	1389	1433	1477	1521	1565	1609	1653	1709	1764	1819	1874	1929

Load index	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
Load per tyre (kg)	900	925	950	975	1000	1030	1060	1090	1120	1150	1180	1215	1250	1285	1320	1360	1400	1450	1500	1550	1600	1650
Load per tyre (lbs)	1984	2039	2094	2149	2205	2271	2337	2403	2470	2536	2601	2679	2756	2833	2910	2999	3087	3197	3306	3418	3528	3638

## SPEED SYMBOL

Speed symbol	J	K	L	M	N	P	Q	R	S	T	H	V	W	Y	VR	ZR
Speed (km/h)	100	110	120	130	140	150	160	170	180	190	210	240	270	300	>210	>240
Speed (mph)	62	68	75	81	87	93	100	105	113	118	130	149	162	180	130	149

# TYRE AND WHEEL MAINTENANCE

The following instructions for checking tyre inflation pressure should be observed:

The pressure should only be checked when the tyres are cold.

In order to obtain an accurate cold tyre inflation pressure reading your vehicle has to have been parked for at least 3 hours and not have been driven for more than 1.5km or 1 mile since.

Always use a tyre pressure gauge.

The appearance of a tyre can be misleading. Besides, tyre inflation pressures that are even just a few bar or psi off can degrade ride and handling.

Do not bleed or reduce tyre inflation pressure after driving.

It is normal for the tyre inflation pressure to be higher after driving.

Be sure to reinstall the tyre valve caps.

Without the valve caps, dirt or moisture could get into the valve core and cause air leakage. If the caps have been lost, have new ones put on as soon as possible.

## CAUTION

Keep your tyres properly inflated. Otherwise, the following conditions may occur and cause an accident resulting in death or serious injuries.

Low tyre pressure (under inflation) can result in the following:

- Excessive wear
- Uneven wear
- Poor handling
- Possibility of blowouts from an overheated tyre
- Poor sealing of the tyre bead
- Wheel deformation and/or tyre separation

High tyre pressure (over inflation) can result in following:

- Poor handling
- Excessive wear
- Uneven wear
- A greater possibility of tyre damage from road hazards

## CHECKING AND REPLACING TYRES.

### Tread Wear Indicator (TWI)



### Checking your tyres.

Check the tyre's tread for the Tread Wear Indicators. If the indicators show, replace the tyres. The location of the Tread Wear Indicators is shown by the "TWI" or "Δ" marks or a Michelin logo moulded on the sidewall of each tyre.

The tyres on your Toyota have built-in Tread Wear Indicators to help you know when the tyres need replacement. When the tread depth wears to 1.6mm (0.06in.) or less, the indicators will appear. If you can see the indicators in two or more adjacent grooves, the tyre should be replaced. The lower the tread, the higher the risk of skidding.

### Replacing your tyres.

When replacing a tyre, use a tyre of the same size and construction, and the same or greater load capacity as the originally installed tyres. Also, all the tyres must be the same brand and have the same tread patterns.

Using any other size or type of tyre may seriously affect handling, ride, speedometer/odometer calibration, ground clearance, and clearance between the body and tyres or snow chains.

## CAUTION!

Observe the following instructions. Otherwise, an accident may occur resulting in death or serious injuries.

- Do not mix radial, bias belted, or bias-ply tyres on your vehicle, as this may cause dangerous handling characteristics resulting in loss of control.
- Do not use tyres other than the manufacturer's recommended size, as this may cause dangerous handling characteristics resulting in loss of control.
- Do not use tyres of different brands, sizes, construction or tread patterns, as this may cause dangerous handling characteristics resulting in loss of control.



### Never use second-hand tyres on your Toyota.

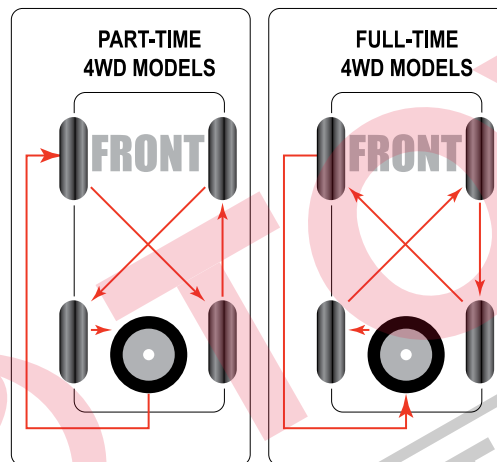
Using tyres whose previous history is unknown is a risk.

Toyota recommends all four tyres, or at least both front or rear tyres are replaced as a set.

### Rotating tyres.

When a tyre is replaced, the wheel should always be balanced. An unbalanced wheel may affect vehicle handling and tyre life. Wheels can get out of balance with regular use and should therefore be balanced occasionally.

When replacing a tubeless tyre, the air valve should also be replaced with a new one.



To equalize tyre wear and help extend tyre life, Toyota recommends that you rotate your tyres approximately at the following intervals:

#### Part-time 4WD models

Every 10000km (6000 miles)

#### Full-time 4WD models

Every 5000km (3000 miles)

However, the most appropriate timing for tyre rotation may vary according to your driving habits and road surface conditions.

When rotating tyres, check for uneven wear and damage. Abnormal wear is usually caused by incorrect tyre pressure, improper wheel alignment, out-of-balance wheels, or severe braking.

## REPLACING WHEELS

### When to replace your wheels

If you have wheel damage such as bending, cracks or heavy corrosion, the wheel should be replaced. If you fail to replace a damaged wheel, the tyre may slip off the wheel or cause loss of handling control.

### Wheel selection

When replacing wheels, care should be taken to ensure that the wheels are replaced by ones with the same load capacity, diameter, rim width, and offset. Correct replacement wheels are available at your Toyota dealer. A wheel of a different size or type may adversely affect handling, wheel and bearing life, brake cooling, speedometer/odometer calibration, stopping ability, headlight aim, bumper height, vehicle ground clearance, and tyre or snow chain clearance to the body and chassis. Replacement with used wheels is not recommended as they may have been subjected to rough treatment or high mileage and could fail without warning. Also, bent wheels which have been straightened may have structural damage and therefore should not be used. Never use an inner tube in a leaking wheel which is designed for a tubeless tire.

### CAUTION!

Observe the following instructions. Otherwise, an accident may occur resulting in death or serious injuries.

- Do not use wheels other than the manufacturer's recommended size, as this may cause dangerous handling characteristics resulting in loss of control.
- Do not use wheels of different brands, sizes and types, as this may cause dangerous handling characteristics resulting in loss of control.

### Aluminium wheel precautions

- When installing aluminium wheels, check that the wheel nuts are tight after driving your vehicle the first 1600km (1000 miles).
- If you have rotated, repaired or changed your tyres, check that the wheel nuts are still tight after driving 1600km (1000 miles).
- When using tire chains, be careful not to damage the aluminium wheels.
- Use only Toyota wheel nuts and wrench designed for your aluminium wheels.
- When balancing your wheels, use only Toyota balance weights or equivalent and a plastic or rubber hammer.
- As with any wheel, periodically check your aluminium wheels for damage. If damaged, replace immediately.

### Remember to CHECK your spare tyre regularly!

If you get a puncture and your spare is unusable, it will not do you much good at all.

### Tyre size and pressure information

For further information please refer to the owner's manual.



### **Maintaining correct Tyre Pressures**

There are three main reasons why maintaining the right tyre pressure is important.

#### **Safety.**

- Tyres that are under inflated can overheat.
- Over inflated tyres can lead to poor vehicle handling on the road.

#### **Economy.**

- Over or under inflated tyres suffer more damage than those with the correct pressure and need to be replaced more regularly.
- Vehicles with under-inflated tyres have increased rolling resistance that require more fuel to maintain the same speed.

#### **Environment.**

- Correct tyre pressures help to maintain optimum fuel efficiency. This can equate to lower Co2 emissions coming from your vehicle than those with incorrect tyre pressures.

Look for the tyre pressure recommended for your vehicle in your vehicle hand book or within the technical

information usually found on the inside of your vehicle's front right hand door or fuel tank flap.

#### **Check for External Damage**

Cuts, lumps and bumps are often caused by an impact between the tyre and an object in the road. If your tyre has any of these symptoms then you must have the tyre checked as quickly as possible by a tyre specialist, as this sort of damage can result in sudden tyre failure.

Emergency braking can sometime leave your tyres with a 'flat spot'. This can be another reason for premature tyre removal. It is always recommended to have your tyres checked if the vehicle has been involved in an emergency manoeuvre like sudden and heavy braking. If you have any concern or doubt about the condition of your tyres, please ask a specialist for advice as soon as possible.

#### **Wheel alignment**

Incorrect alignment can result in rapid irregular tyre wear and can even affect the handling and safety of the vehicle.

Wheel alignment can be affected by driving against a kerb, hitting a pothole in the road or by excessive wear to steering or suspension components. Alignment of wheels

and tyres to the specification required by your vehicle is an important way to guarantee a smooth ride and to get the most out of your tyres.

The direction and angle at which tyres are set are both important. Wheel alignment or 'tracking' involves checking the direction and angle against vehicle manufacturers' specifications. These are often described as toe in, toe out, positive camber or negative camber.

"Toe-in" refers to whether the front of the tyres are closer or further apart than the rear of the tyres. Different types of vehicles need different toe-in/out settings to allow for the way that wheels pull either towards each other or apart.

"Camber" is the inward or outward tilt of a tyre. The camber is set by the vehicle manufacturer, and can be affected by potholes in the road and may need to be adjusted periodically.

It's worth keeping an eye out for unusual wear on your tyres, such as premature wear on the inside or outside shoulder, which could be caused by an incorrect camber setting.

#### **Wheel balancing**

Wheels that are not balanced generally produce a vibration that is uncomfortable to drive in and results in premature wearing of suspension and steering components, rotating parts and tyres.

Correctly balanced wheels help to eliminate vibration and avoid premature wear caused by an imbalance in the rotating wheel and tyre assembly.

The first sign that your wheels may be out of balance is when your steering wheel starts to wobble above a certain speed.

A driver may not always sense an imbalance at the steering wheel. It could be present but dampened by the vehicle weight. This is why balancing is equally important for both front and rear wheels.

As a result of wheel balancing, you should notice a smoother ride and better wear from your tyres, again saving you time and money.

# TYRE RELATED ACCESSORIES

## HEAVY DUTY TUBELESS REPAIR KIT



Our heavy-duty tubeless tyre repair kit contains everything a driver needs to solve the problems of punctures when off the beaten track. Complete with directions on its use, the kit contains special tools to clean and prepare the punctured area, plus a range of plugs and sealant designed to make successful reinflation an easy option.

### Contents:

- Solid zinc alloy "T" handle construction.
- Replacement insertion tool.
- Lubricant.
- Trim knife.
- 20 repair cords.

## MANUAL AIR PUMP WITH MANOMETER

This powerful "stirrup style" manual air pump is suitable for inflating tyres.



### Features:

- Pressure gauge reading up to 10bar.
- Rugged metallic construction with wooden handle.
- Folding foot plate.
- 1m hose.
- Locking Schrader tyre connector with adaptor for small valves.

## PORTABLE AIR COMPRESSOR KIT

This portable unit includes a 6m air line hose with quality fittings, a generous wiring loom with heavy duty battery clips, plus all the necessary fittings to inflate tyres, mattresses, sporting goods, etc.

The kit includes a handy VDO pressure gauge with leather pouch and incorporates a pressure switch making this unit ideal for situations which require a quick burst of air - ideal for clearing gas jets, dusty electronics, etc.

The portable air compressor kit weighs no more than 6kg, and comes in a durable, polypropylene carry case.



## TYRE LEVERS

These are an essential accessory when you need to change an inner tube within a tyre. Tyres that have an inner tube are only found on the Land Cruiser 70 series within the TGS model range. The tyre levers are sold in pairs.



## 12 VOLT AIR COMPRESSOR KIT



Sand, rocks, mud and bitumen all require different tyre pressures to improve traction characteristics. By having the ARB tyre compressor on board, letting down and reinflating your vehicle tyres will become easy. The ARB air compressor is designed with reliability and durability in mind and will inflate the largest of vehicle tyres as well as other inflatable goods such as mattresses and dinghies. The air compressor is also the provider of compressed air for the renowned ARB differential lockers.

## SNOW CHAINS



Snow chains are an accessory which is fitted to the tyres of the vehicles to provide superior traction when driving through snow and ice.

Snow chains are attached to the drive wheels of a vehicle. Chains are usually sold in pairs and must be purchased to match a particular tyre size (tyre diameter and tread width). It is recommended for a 4WD vehicle two pairs are purchased.

Driving with chains will reduce fuel efficiency and can limit the speed of the automobile to approximately 50km/h (30mph).



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