

**Date:**

November 2015

**Description:**

OME Suspension System

**Application:**

Toyota Hilux 2015

**Part No. & Barcode :**

Refer To Application Sheets

**Fitting:**

4 Hours

**Availability Date:**

Refer To Availability Table



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## Product Specification

**Aftermarket 4WD suspension is extremely complex. Determining the right solution for your vehicle and your requirements demands special attention to many factors.** Unlike numerous aftermarket suspension systems, which are only available in a single configuration targeting lift height, OME offers a range of tuned and matched integrated suspension systems to ensure the right suspension is available to suit how the vehicle is outfitted and the conditions it will encounter.

The OME Engineers initial evaluation of the new 2015 Hilux revealed a very firm, controlled ride when unladen in the OE trim. This provided the opportunity to explore tuning for comfort and control in various loading scenarios. OME's newly developed range will provide a plush ride over both on and off road slow speed features but still provide vehicle stability when a high speed manoeuvre is required. In order to accommodate for vehicles with various loads OME has developed a larger spectrum of strut and spring combinations than the previous Hilux range to provide the best load carrying ride comfort combination possible.

## Front Suspension:

### Springs

Four spring options were chosen to cater for No Bar, Bar, Bar/Winch and Bar/Winch/Accessories vehicle setups. With additional front accessories now available such as under body protection, recovery points, side rails, dual batteries etc a fourth coil option has been added to cater for the additional load these accessories provide. As the spring design is the same as previous model Hilux, existing coil part numbers were able to be used noting some slight change in application. Factory geometry allowed for a 40mm lift and still maintain an adequate level of droop.

### Struts

An extensive development and tuning project was undertaken to correctly match the ride quality to the spring rate and resulted in 2 front strut options depending on spring selection. Although valving is similar to the previous model Hilux, lengths have altered slightly and optimised for this model. The front strut also has an increased bottom bush size in line with the OE design.

## Rear Suspension:

### Springs

Extensive development has gone into the new Hilux leaf spring design. A great emphasis was placed on ride comfort with and without a payload which has led to three types of load dependent leaf designs. The 2015 Hilux OME Rear Leaf Springs are unique in how the second stage leafs interacts with the primary leafs, this is a key factor in low speed feature comfort.

SR5 models are now equipped with Halogen Headlamp Levelling sensors which are located on the rear leaf springs. To allow for the increase in lift a new bracket has been designed to correct the sensor parameters.

Medium loads (0kg to GVM, optimal performance at loads of 0-300kg)

Constant 300kg (300kg to GVM, optimal performance at loads of 300-600kg)

Constant 600kg (600kg to GVM, optimal performance at loads of 600kg plus)

### Shock Absorbers

Two new rear shock absorbers have been developed with particular attention to controlling the vehicle both with and without payloads. Numerous iterations of valving were tested in order to determine the best possible spring and shock absorber combination based on potential payload scenarios. As a result the best possible configuration of ride comfort and vehicle control was achieved.

## Shackles and Bushes

A new greasable shackle was designed to fit the new leaf spring geometry and SR5 Sensor mounting. This new shackle kit will work with the existing bush kit OMESB98.

## Specifications:

### Shocks/Struts

Nitrocharger Sport Part Number	Open Length (mm)	Closed Length (mm)	Upper Mount Bush Kit Part Number		Lower Mount Bush Kit Part Number	
			Original Kit	Bushes only	Original Kit	Bushes only
60132	627	390	SMP649	N/A	SMP649	N/A
60133	627	390	SMP649	N/A	SMP649	N/A
90028	560	430	N/A	N/A	110-110-115	N/A
90029	560	430	N/A	N/A	110-110-115	N/A

### Coils

Spring Part Number	X5K Steel	Bar Dia. Mm	Free Height mm		No. of turns	Coil Weight kg	Spring Rate		OE Spring Rate Lbs
			A	B			Lbf/in	N/mm	
2869	X	16.5	380	380	9.75	4.7	590	103	660
2884	X	16.5	390	390	9.75	4.7	590	103	660
2885	X	16.5	395	395	9.75	4.7	590	103	660
2887	X	16.5	400	400	9.75	4.7	590	103	660

### Leaf Springs

Spring Part Number	Stack Height (mm)	No. of Leaves	Eye Diameter mm		Weight (kg)	Primary Free Camber mm	Spring Rate	
			Front	Rear			Lbf/in	N/mm
EL089R	52	4+2	40	30	26	195	169/300	30/53
EL090R	62	5+2	40	30	31.9	188	220/389	39/68
EL091R	68	5+2	40	30	35.5	174	317/489	56/86

## Product Availability:

Product	Part Number	Available	Barcode
Coil Spring	2869	Now	9319092025237
Coil Spring	2884	Now	9319092023035
Coil Spring	2885	Now	9319092023042
Coil Spring	2887	Now	9319092024506
Leaf Spring	EL089R	January	9332018040435
Leaf Spring	EL090R	January	9332018040459
Leaf Spring	EL091R	January	9332018040466
Extra Leaf	EL45XL	January	9332018040442
Strut Sport	90028	December	9312891040593
Strut Sport	90029	December	9312891040609
Nitrocharger Sport shock	60132	December	9312891040616
Nitrocharger Sport shock	60133	December	9312891040623
Strut Top Hat Kit	OMETH002	Immediate	9332018027399
Upper Strut bushes	OME3133	Immediate	9332018026781
Greasable Shackle Kit	OMEGS25	January	9332018041692
Spring Bush kit	OMESB98	Immediate	9332018009760
Ubolts	OMEU53A	Immediate	9332018021748
Headlight Levelling Kit	FK86	January	9332018041708

