

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



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 |

