

PRADO

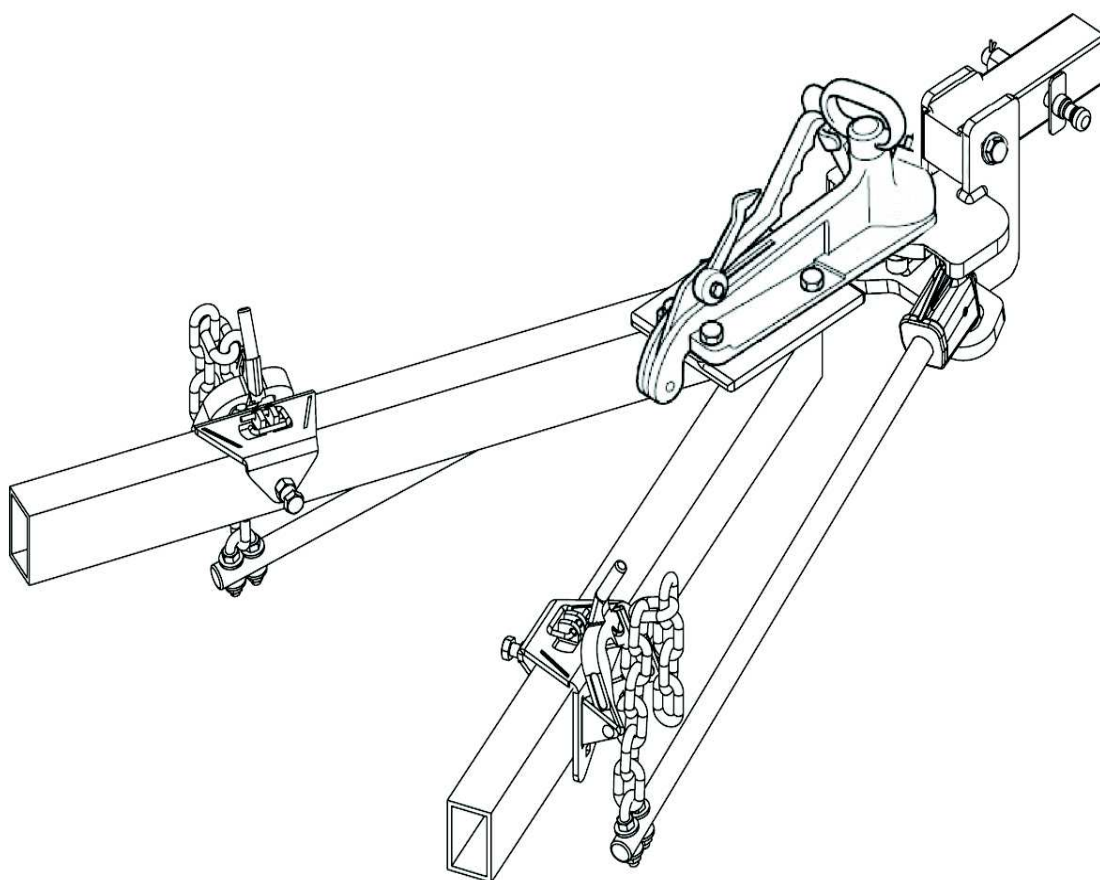
PRODUCTION DATE: AUGUST 2017 ONWARDS

FITTING INSTRUCTIONS FOR: ACCESSORY

PART NUMBER: PZQ62-60165 LOAD

DISTRIBUTION HITCH

PLACE THESE INSTRUCTIONS IN VEHICLE GLOVEBOX AFTER INSTALLATION IS COMPLETE



CAUTION

When not towing, the tongue must be removed and stored safely. Toyota recommends that the tongue not be stored in the vehicle.

CAUTION

This kit weighs in excess of 20kg.
Seek help to lift if required.

CAUTION

Do not exceed load distribution force outlined in these instructions as it may result in damage to system and reduced performance.

IMPORTANT

Do not install when not towing due to low ground clearance.

IMPORTANT

Always install the accessory following the fitting instructions. Failure to do so may cause damage to the vehicle or the accessory.

INSTALLATION TIME

Approximately 15 minutes.

GENERAL USER INFORMATION

- Toyota genuine Load Distribution Hitches (LDH) have been designed and tested to integrate with Toyota vehicles and genuine Toyota towbars.
- Correct installation of this LDH following the steps shown in these instructions will restore up to 100% of the load back onto the front wheels which will significantly improve vehicle handling, drive comfort and efficiency. This Tongue may be used without the spring bars fitted.

Caution:

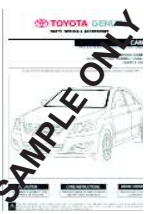
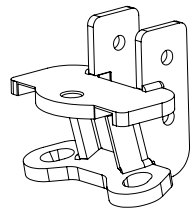
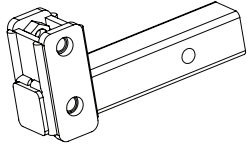
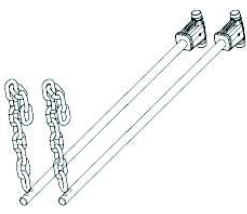
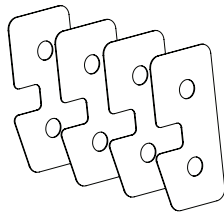
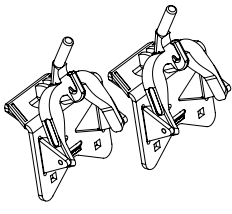
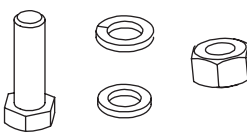

- Exceeding the load distribution force outlined in these instructions applies excessive stress on the vehicle chassis, towbar and LDH system and may result in reduced performance and damage to system.
- Be aware of reduced ground clearance when LDH is fitted.
- Ensure front axle capacity is not exceeded (refer to Owner's Manual).

Load Distribution Hitches (LDH) usage guide:

- Only use towbars listed on the label.
- LDH's should only be used on highway style roads as a dynamic supplementary support to a correctly loaded vehicle / trailer combination.
- This LDH has been specifically designed to maintain the genuine tow bar tow ball position
- LDH's should never be used to compensate for incorrectly loaded vehicle & trailer combinations.
- Do not use this LDH when:
 - Driving off-road.
 - Vehicle is fitted with auto height adjusting suspensions.
 - Trailer override brakes are being used as the trailer braking performance may be reduced
- Do not have spring bars engaged when:
 - Reversing
 - Driving on uneven terrain such as:
 - Steep abrupt inclines or declines.
 - Short steep gutters/dips in the road
 - Access ramps and driveways.
 - Speed humps

- Some noise may be heard from the load distribution hitch (usually whilst driving slowly or around tight corners). This is normal and does not affect performance. LHD system is self lubricating. Do not apply grease to any parts.
- Wear between the trunion and head assembly contact area is normal. This causes increased friction which reduces sway and improves driving comfort. Replace the components if the wear becomes excessive.
- Check all components (inc bolts, chains and brake connections) are correctly fitted/secured before each journey.
- Do not dismantle the spring bars.
- Always refer to the Toyota towing guide.

KIT CONTENTS

1 Fitting Instructions  x1	2 Head Assembly  x1	3 Shank Assembly  x1	4 Spring Bar Assy  x2
5 Shim Plate  x4	6 Tension Lever Clamp  x2	7 Fasteners  REFER PARTS LIST	8 Load Rating Label 

 CHECK THAT THE CONTENTS OF THE LDH KIT ARE COMPLETE & UNDAMAGED PRIOR TO FITMENT.

 IF ANY CONTENTS OF THE LDH KIT ARE INCOMPLETE OR DAMAGED THEY MUST BE REPLACED USING SPECIFIED ACCESSORY COMPONENTS.

PARTS LIST

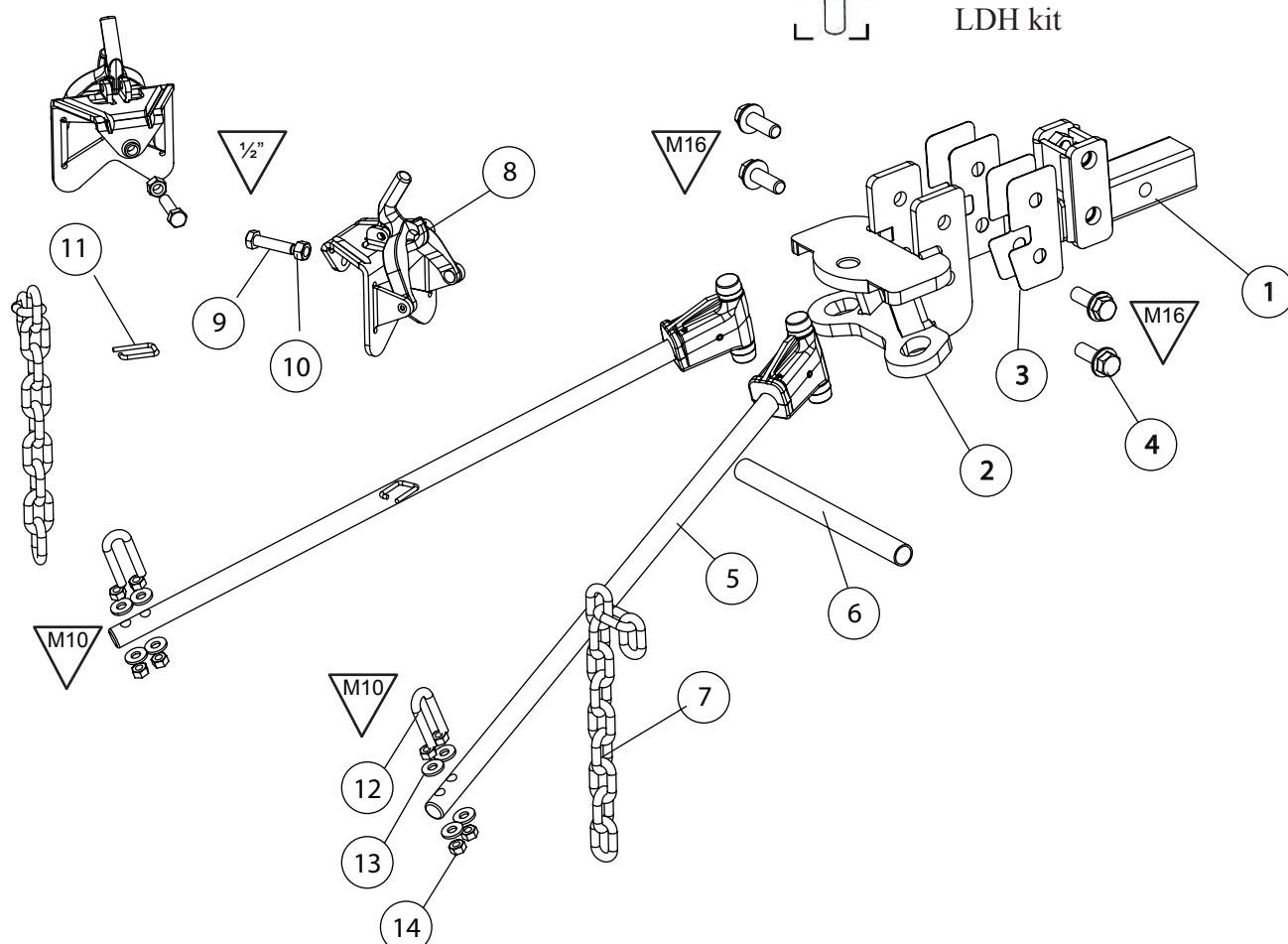
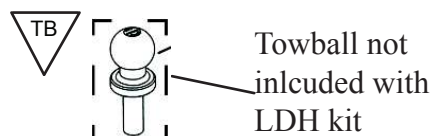
Check contents of kit before commencing & report any discrepancies.





ITEM NO.	DESCRIPTION	QTY.
1	SHANK ASSEMBLY	1
2	HEAD ASSEMBLY	1
3	SHIM PLATE	4
4	FLANGED SET SCREW M16x45x2.00	4
5	SPRING BAR	2
6	TENSION CLAMP TUBE	1
7	CHAIN	2
8	TENSION LEVER CLAMP	2
9	SET SCREW 1/2" UNC	2
10	HEX NUT 1/2" UNC	2
11	LOCKING PIN	2
12	M10 X 1.5 U-BOLT	2
13	M10 FLAT WASHER	8
14	M10 X1.5 HEX NUT	8

TOOLS REQUIRED

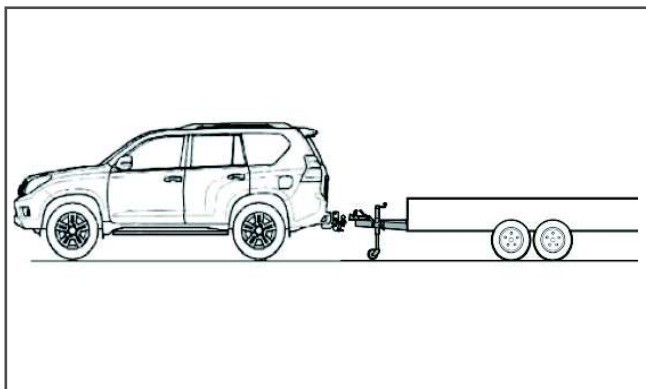
1 Masking Tape	2 Metric Sockets & Spanners	3 Torque Wrench
4 Pen	5 Measuring Tape	6 Jack

NOTE: ITEMS 3, 5, 8, 9 & 10 Supplied Pre-Assembled



-  - Towball Torque: 250 Nm
-  - M16 Fastener Torque: 250 Nm
-  - M10 Fastener Torque: 40 Nm
-  - 1/2" Fastener Torque: 20 Nm

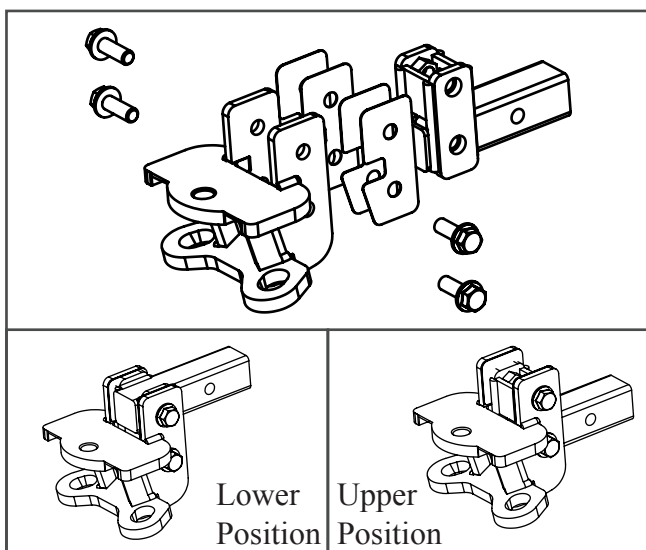
STEP 1



NOTE: Ensure the Toyota Towing Guide has been read and understood before fitting this accessory.

Ensure that both the trailer and the towing vehicle are sitting on flat level ground and parallel to each other.

STEP 2



Select your desired head position.

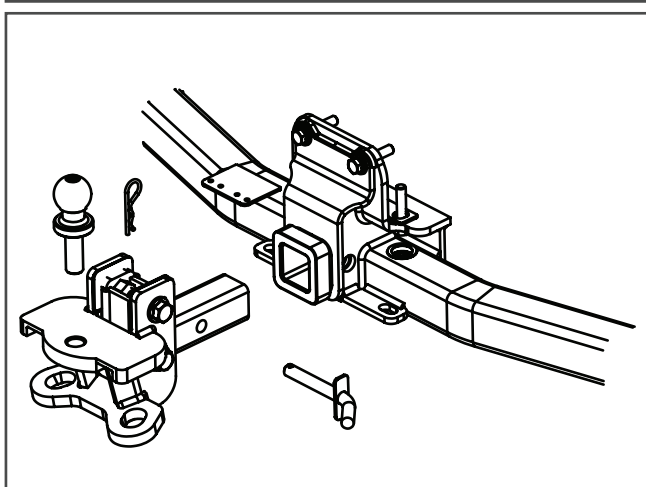
Ball position shall be between 350mm & 460mm from the ground when vehicle is fully laden.

Loosely assemble the shank (item 1) and the head (item 2) using 4x M16 flange bolts (item 4).

Select and install the appropriate number of shims (item 3) to ensure a tight fit between shank and head.

Tighten bolts.

STEP 3



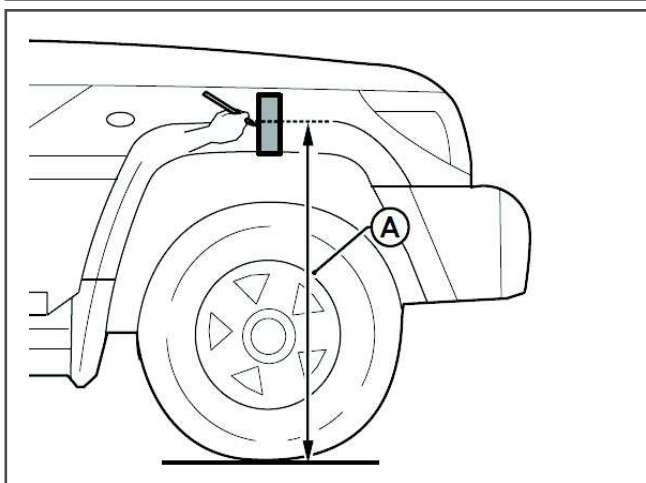
Insert head and shank assembly from step 2 into towbar hitch receiver and secure it with pull pin, and R-clip (supplied with towbar).

Install towball per instructions supplied with towball.



Ensure the towball surface is lubricated and the nut tightened as per page 3 specification.

STEP 4

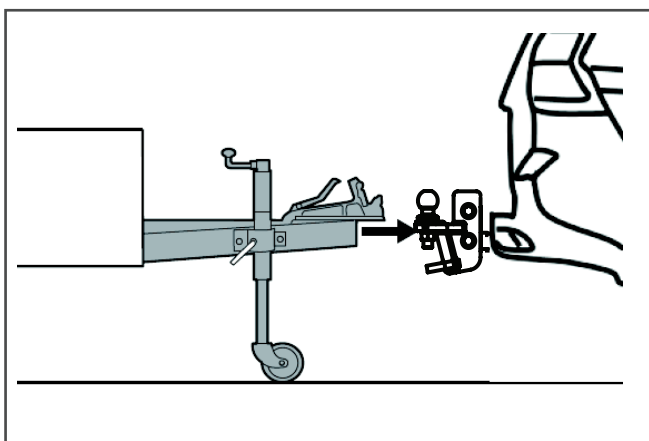


Ensure vehicle is loaded to the intended driving condition. Place masking tape at the top of the front wheel arches, above centre line of axle.

Measure vertical distance from ground to tape and mark a line on tape to the nearest 10mm.

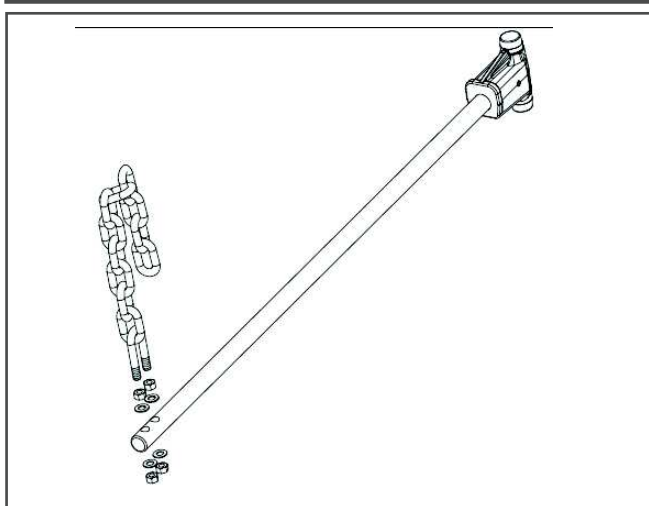
Record values in column A in the table supplied on Page 8.

STEP 5



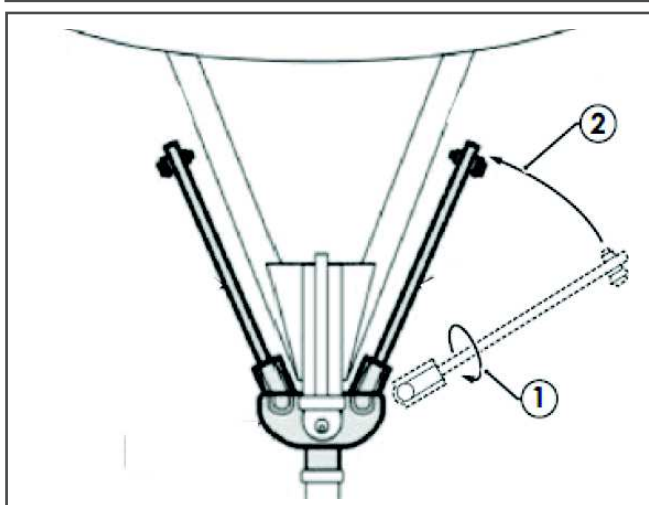
Attach trailer coupling to the towball mount as shown. Ensure coupling is fully engaged and remove load from jockey wheel.

STEP 6



Ensure M10 U-bolts (item 12) & M10 nuts (item 14) in both spring bar assemblies are loosely assembled to the same height position.

STEP 7



Attach both spring bar assemblies into the LDH head by first rolling the spring bar in the head and then moving it inboard to align with trailer A-frame.



Note: Spring bars must be engaged from the side.

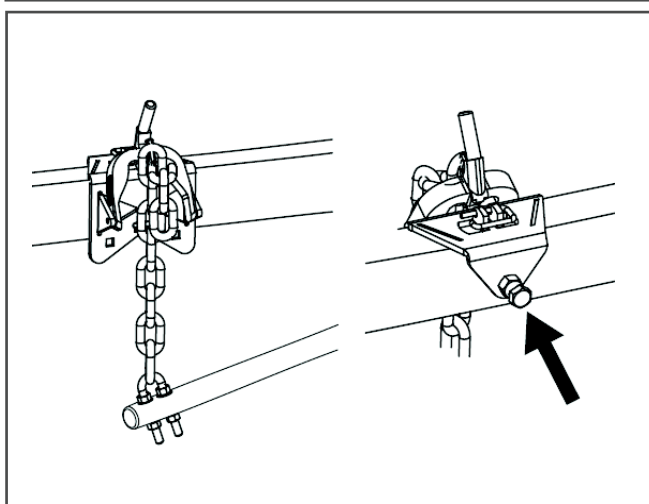


Note: Jockey wheel may need to be removed from trailer if it is preventing spring bar installation or operation.



Note: If the spring bar can not be inserted due to inadequate ground clearance vehicle may need to be lifted via a jack under towbar. Ensure jack is positioned safely and securely. Remove jack once both snap up brackets are pinned, prior to re-measuring wheel arch height.

STEP 8



Position tension lever clamps (item 8) on trailer A-frame vertically above spring bar chain attachment points. Secure each tension lever clamp with $\frac{1}{2}$ " bolt (item 9) and $\frac{1}{2}$ " nut (item 10). Tighten bolts.

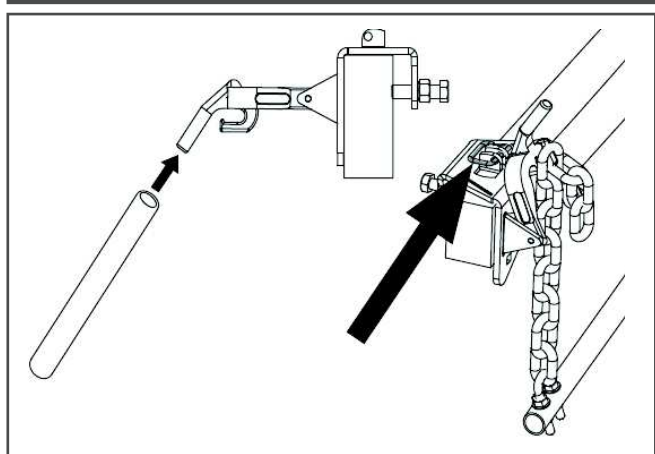


NOTE: If torque cannot be achieved without damaging trailer A-frame, place a steel plate under bolt to distribute load (minimum thickness 5mm).



NOTE: Ensure lock nut does not prevent correct tightening of $\frac{1}{2}$ " bolt.

STEP 9

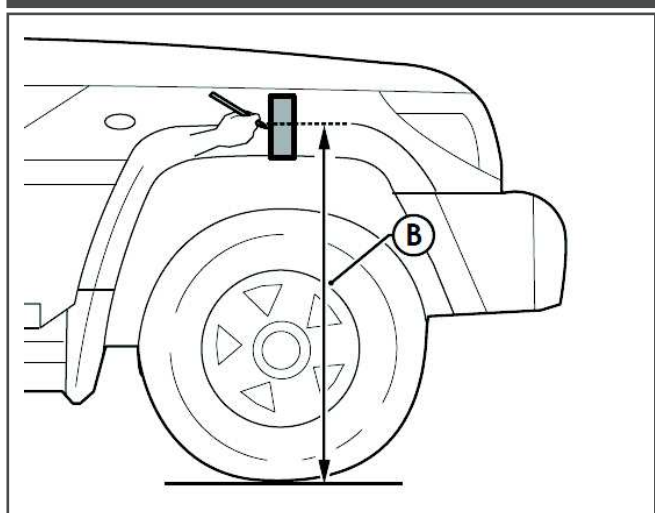


Insert extension handle (item 6) onto tension lever clamp. Open tension lever clamp until arm is parallel to the ground. Lift chain by hand and hook onto tension lever clamp arm. Using both hands raise tension lever clamp arm to final position. While firmly holding in final position insert locking pin (item 11).

Repeat for other side.

If chain link closest to knuckle is half way, adjust nuts on U-Bolts. Ensure both U-Bolts are assembled to the same height position.

STEP 10



Re-measure front wheel arch heights and record in column B of table supplied on Page 8.

STEP 11

Calculate Wheel arch movement and adjust according to table below.

Continue to adjust load condition until condition A is achieved.



NOTE: If number of links needs to be increased, vehicle may need to be lifted via a jack under towbar. Ensure jack is positioned safely and securely. Remove jack once both snap up brackets are pinned, prior to re-measuring wheel arch height.



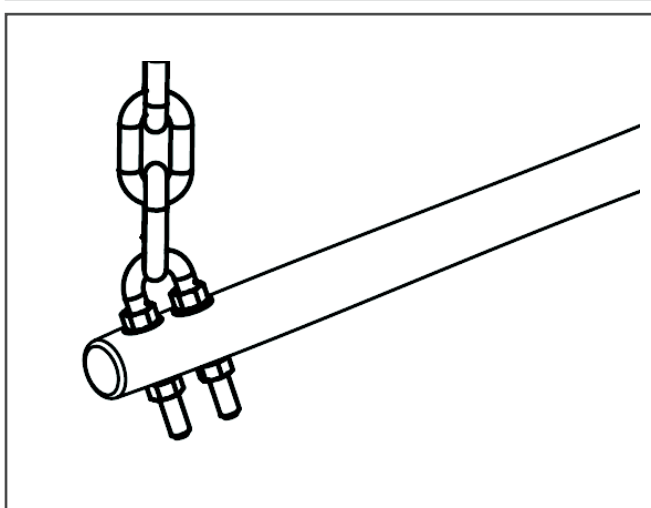
NOTE: For adjustment of load less than 1 chain link, adjust nuts on U-Bolts. Ensure both U-Bolts are assembled to the same height position.



NOTE: Wheel arch height may vary from left to right hand side of vehicle depending on loading. Differences between measurements should be consistent before and after load distribution (within 2-3mm). If measurements are significantly different, if possible redistribute the load in the vehicle, and repeat LDH installation procedure.

CONDITION	MOVEMENT CONDITION	ACTION	REASON
A	$A - B = 0$ (+/- 2.5mm)	Continue with Step 12	100% load distribution, difference is equal to 0. This is optimal condition
B	$A - B > 2.5\text{mm}$ (Greater Than)	Increase number of links between Spring Bar and Snap Up Bracket (on both sides) and repeat steps 9 & 10.	Distribution load is too high and could result in reduced performance or damage to vehicle and towing components
C	$A - B < 2.5\text{mm}$ (Less Than)	If desired, reduce number of links between Spring Bar and Snap Up Bracket (on both sides) and repeat steps 9 & 10.	Distribution load may be increased to further improved LDH performance.

STEP 12



Once final position is achieved, tighten upper M10 nuts on U-bolts.

Perform visual check of all components.

Load distribution hitch is ready to use.

LOAD DISTRIBUTION INSTALLATION TABLE

Trip No.	Wheel Arch	Height without Trailer Load (A)	Height with Trailer Load (B)	Wheel Arch Movement (A-B)
Example	Front Right	900	902	-2
	Front Left	900	898	+2
1	Front Right			
	Front Left			
2	Front Right			
	Front Left			
3	Front Right			
	Front Left			
4	Front Right			
	Front Left			
5	Front Right			
	Front Left			
6	Front Right			
	Front Left			
7	Front Right			
	Front Left			
8	Front Right			
	Front Left			
9	Front Right			
	Front Left			
10	Front Right			
	Front Left			
11	Front Right			
	Front Left			
12	Front Right			
	Front Left			
13	Front Right			
	Front Left			
14	Front Right			
	Front Left			
15	Front Right			
	Front Left			
16	Front Right			
	Front Left			