



# HAYMAN REESE

a division of TriMas Corporation Pty Ltd  
A.B.N. 60 004 546 543

## Weight Distributing Hitch Installation Instructions Including Adjustable Ball Mount

Instructions to suit: 74504, 75504, 74506, 76504, 76506, 74504A, 74504D, 74506D, 74508, 64506 & 66506.

- To ensure safe towing conditions the vehicle and trailer must be level when hooked up. It is critical that the Adjustable Ball Mount is assembled at the correct height and tilt.
- All operators should read these instructions, in full, especially the "Determining Correct Chain Link" and "Safety Notes" before proceeding.

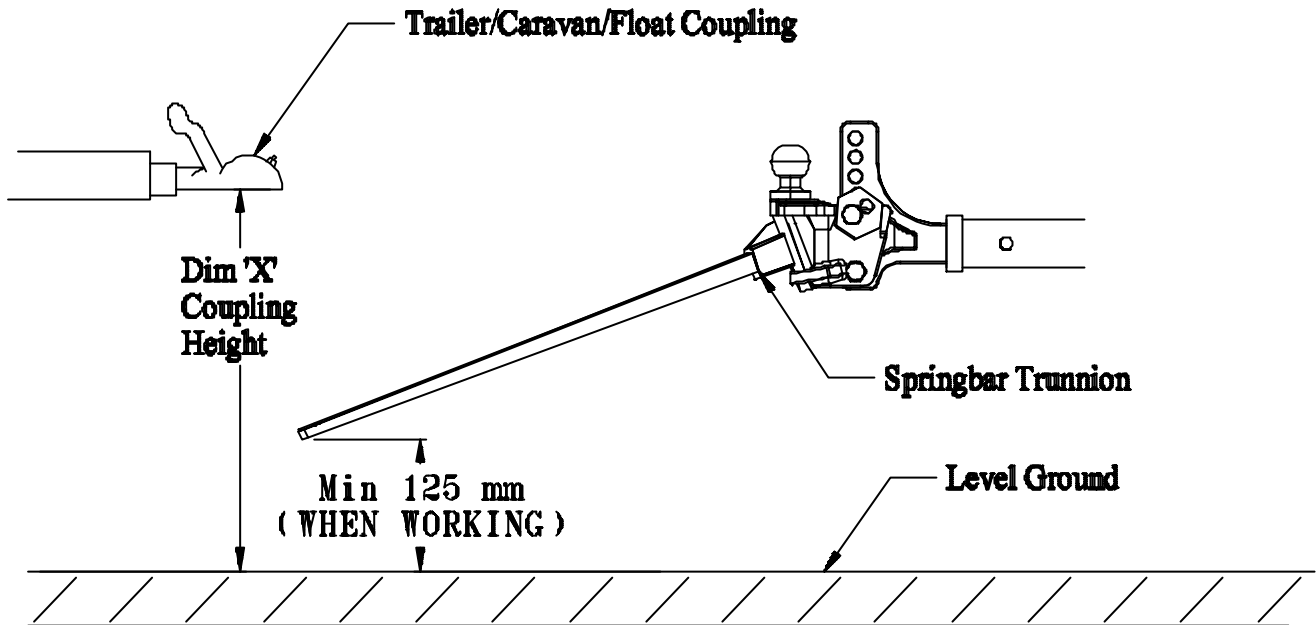
### **Adjustable Ball Mount Installation:**

1. Ensure caravan, horse float or trailer and towing vehicle is on level ground.
2. Ensure the trailer is horizontal using the jockey wheel. Check by measuring the distance from the ground to a fixed point (both at the front and rear) of the trailer. Refer Figure 4. **Note these heights.**
3. Measure height from the ground to the trailer coupling (coupling height "X") to determine towbar height. Refer Figure 1.
4. Insert the adjustable hitch shank into the hitch receiver, for maximum height adjustment shank may be positioned in either direction depending on the ball height required, secure with the pull pin and spring cotter pin provided. Refer Figure 2.
5. Position the ball mount head on the adjustable shank so that the top surface is at the level of the coupling height – Dim "X" (Figure 1). Install bolts through the nearest hole in the shank. If not perfectly aligned with a hole use the nearest lower one.
6. Adjust the cams to make the top surface of the ball mount horizontal, this can be adjusted as required.
7. Fit the spring washers and nuts and torque the bolts to 190Nm.

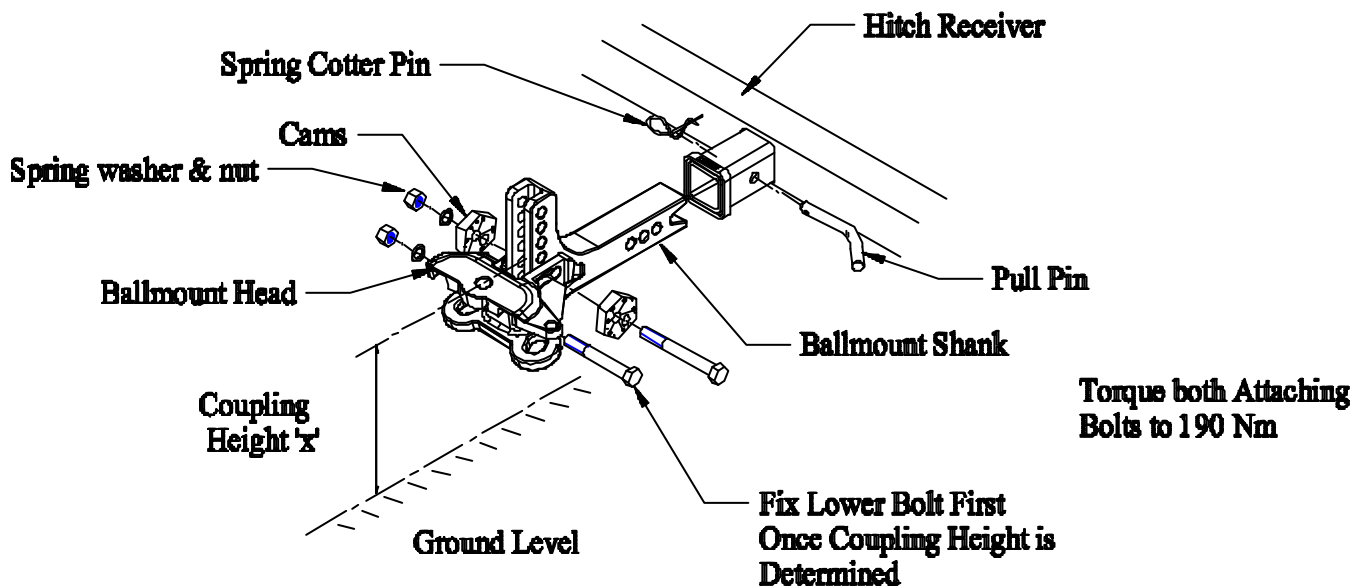


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**Figure 1:**  
Measure height from the ground to the trailer coupling (coupling height "X") to determine towbar height.

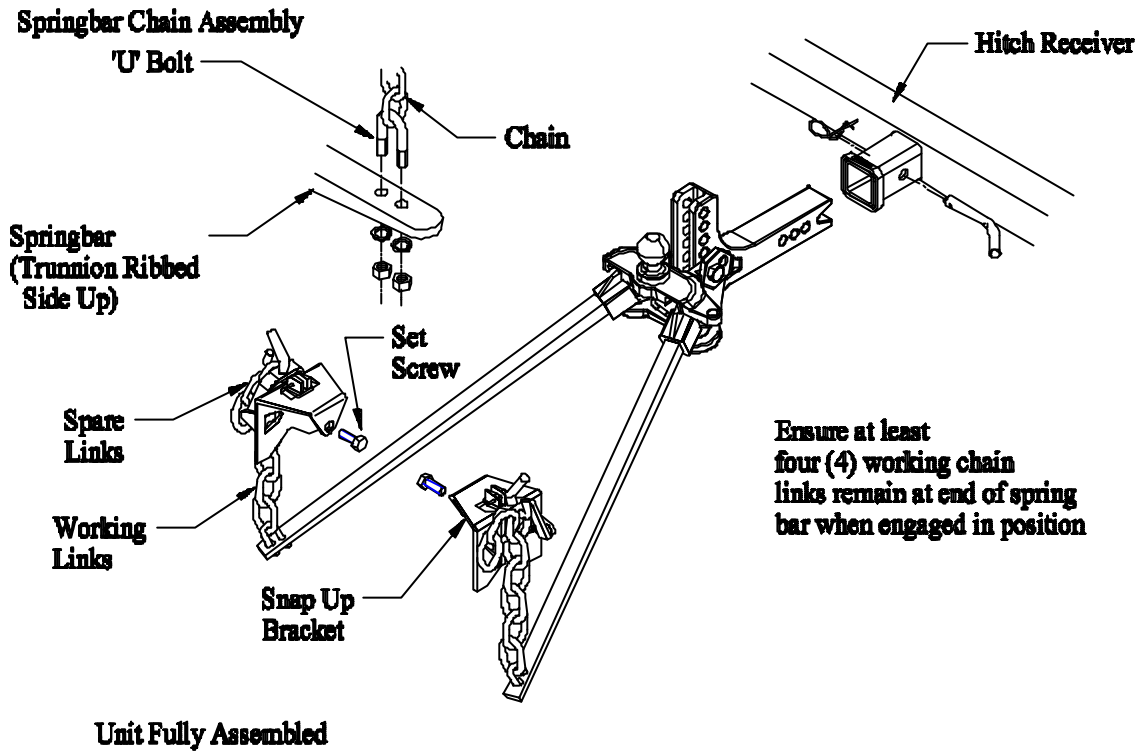


**Figure 2:**  
Insert the adjustable hitch shank into the hitch receiver.



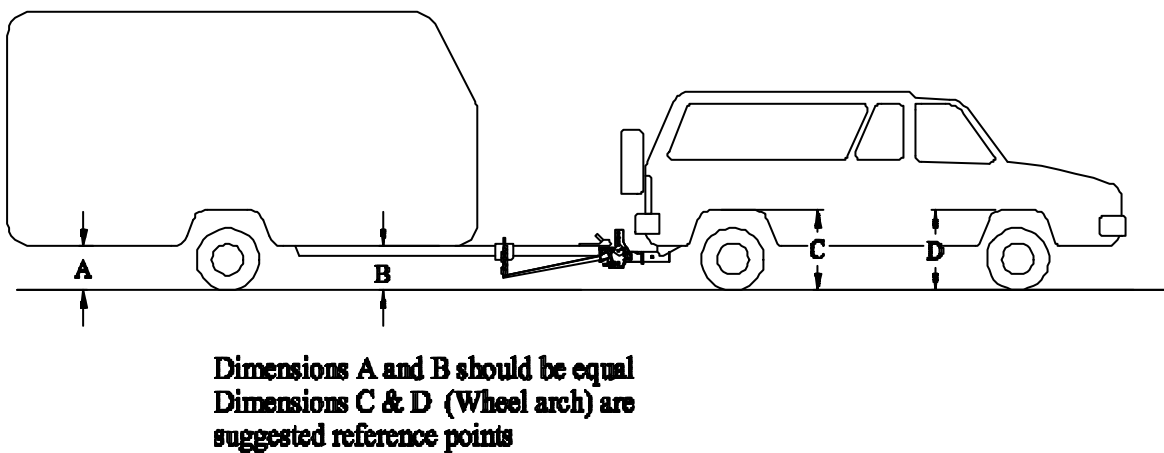
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**Figure 3:**

A minimum of 4 "working links" are required between the spring bar and frame bracket.



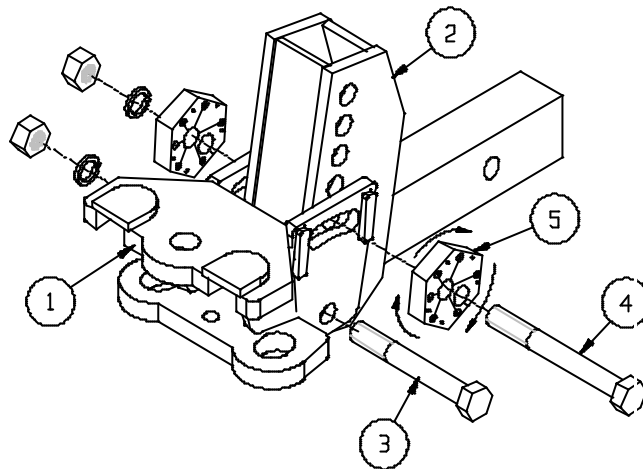
**Figure 4:**

Ensure the trailer is horizontal using the jockey wheel.



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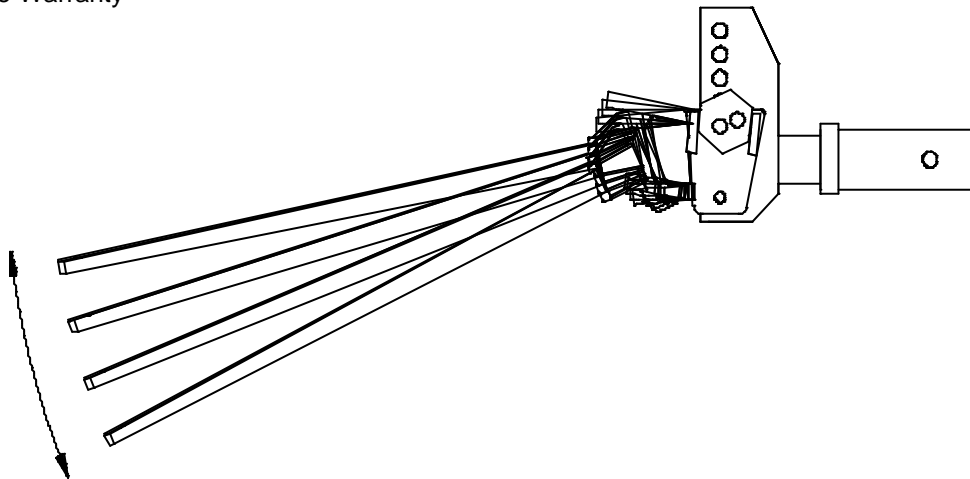
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**Figure 5:**  
*Cam Lock Adjustable Ball Mount*

## Features:

- No drilling required
- Adjustable head section
- Unique Cam Lock enables 12 Ball Mount angle settings
- Quick fit snap up brackets for easy lifting
- Quality engineered design
- Computer stress tested
- Backed by over 50 years of reliable manufacturing in Australia
- Lifetime Warranty



**Figure 6:**  
*Weight Distributing Hitch Assembly*

- Distributes towball weight to all wheels
- Restores steering geometry
- Reduces tyre wear
- Ensures positive towing control
- Improves braking
- Reduces independent movement between vehicle & trailer.
- Reduces sway.

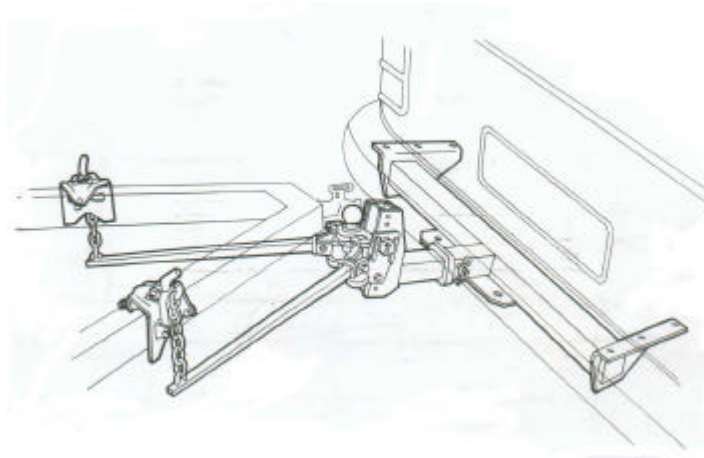


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**The Hayman Reese Cam Lock Adjustable Ball Mount provides you with the benefits of:**

- Setting up your Weight Distributing Hitch without any need for difficult and time consuming drilling of holes
- Safe towing over a long service life
- Quick and easy installation on any vehicle fitted with a Hayman Reese Receiver
- The new Cam Lock mechanism insures setting the Spring Bars to the correct ground clearance can be achieved within seconds. (Figure 7)



**Figure 7:**

*Setting the Spring Bars to the correct ground clearance.*

To enhance performance while towing, Hayman Reese Friction Sway Control and Dual Cam Sway Control products are available to complement your Weight Distributing System.

Weight Distributing Hitch Petty Patent No.: 657462  
Ball Mount Head Registered Design No.: 124954  
Cam Washer Registered Design No.: 124914



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## **Spring Bar Installation:**

1. Measure the height between the ground and selected reference points at the front and rear of vehicle (We suggest the wheel arches). Ensure the ground is level at the point of measurement and tyre pressures are at the specified values  
**Note:** *The measurements and position of the measurements* (Refer Figure 4)
2. Attach the trailer coupling to the ball mount on the vehicle
3. Attach the chains to the spring bars with the lock nuts provided. Ensure the chain is loose within the "U" bolt. Refer Figure 3.
4. Hold spring bar at opposite end to trunnion (trunnion ribbed side up - see safety note 3)
5. Locate lower boss on trunnion in lower socket of towball mount and slide the upper boss into the upper slot in the towball mount  
**Note:** *The spring bars are not handed and will therefore fit on either side*
6. Align the spring bars with the "A" frame of the trailer. Position the snap up brackets on the "A" frame, so that the chain on the end of the spring bar is vertical when located on the snap up bracket hook.
7. Tighten set screw on the snap up bracket onto "A" frame.  
**Note:** *On some caravan applications the gas bottles (or other accessories) may need relocation if the chain does not hang vertical*
8. Take load on the jockey wheel to bring trailer and vehicle to above horizontal  
**Note:** *This is a safety precaution to reduce the strain on the person performing the next step*
9. Locate link of chain on the hook on the snap up bracket. Slide the lifting tube over handle on snap up bracket and raise handle. Ensure the chain lifter passes over centre. While keeping pressure on the lifting tube, slide the safety pin through the small hole to lock the chain lifter in position - See safety note 2)
10. Repeat steps 6, 7 and 9 for the other side
11. Check the level of the car and trailer by measuring heights at the positions recorded in step 2 of 'Fitting Adjustable Ball Mount' and step 1 of 'Spring Bar Installation'. The front and rear of the vehicle should settle to the original readings within 15mm  
**Note:** *For increased traction, allow the rear of the vehicle to settle slightly more than the front for rear wheel drive. In the case of front wheel drive ensure that both vehicle and trailer are level. If the vehicle and trailer are not level, refer the section 'Determining Correct Chain Link'*
12. Ensure towball is well lubricated and tightened to the correct torque
13. Ensure all bolts, safety chains and brake connections are correctly fitted
14. Check for adequate clearance on the A frame for spring bar and chain movement in the event of cornering  
**Note:** *A minimum of 4 "working links" (Refer Figure 3) are required between spring bar and frame bracket. Less than the specified working links will cause the spring bar to pull the snap up bracket along "A" frame of towed trailer whilst cornering.*



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## **Determining Correct Chain Link:**

1. Load car in the way it will be used and reconnect the caravan or trailer. Connect the spring bars using the link that keeps the vehicle and trailer in a level position (see safety notes 1&2)

**Note:** *As a safety precaution use the jockey wheel to reduce strain on the person connecting or disconnecting the chains*

2. Remeasure vehicle and trailer heights at the points used previously (step 2 of 'Fitting Adjustable Ball Mount')
3. The trailer should be horizontal and the front and rear of the towing vehicle should settle to within 15mm of the original readings

**Note:** *The towball load is now equalised between the front and rear wheels of the towing vehicle and the trailer.*

4. It is suggested to mark the link used on chain with paint or similar to enable ease of refitment of caravan or trailer.
5. If sufficient working chain links can not be achieved (min 4 links) to set the Spring Bars at the correct height, rotate the Cam Locks (Fig 5 - 5) by removing the top bolt (Fig 5 - 4) in the Ball Mount Head (Fig 5 - 1) and loosening the lower bolt (Fig 5 - 3). Tilt the head downward until sufficient links are achieved then replace Cam Locks and bolts and nuts. If more ground clearance (on the end of the Spring Bar) is required repeat the procedure and tilt the head (Fig 5 - 1) in the opposite direction. The towball does not have to be vertical.

## **Safety Note - Installation And Operator Tips:**

1. Use the jockey wheel whilst the coupling is still engaged with towball to lift the vehicle and trailer to avoid unnecessary strain on the person raising or lowering the snap up brackets
2. Use both hands on the snap up handle to control the pressure and always ensure your legs and feet are not in a position where the bracket handle or the end of the spring bar can come in contact with them
3. If the need arises to disassemble the trunnion/spring bar assembly ensure they are reassembled in exactly the same configuration (don't turn over as breakage may occur). The capacity sticker should be on the upper spring bar surface.
4. The spring bars will develop a camber in them following use (which is completely normal) and will have no affect on performance
5. Wear will appear in the ball mount head where the trunnion locates both top and bottom (which is normal) having no affect on performance. This is working as a friction control and is reducing sway, replace when needed.
6. Some noise may be heard from the Weight Distributing Hitch (usually when travelling slowly or around tight corners). This is normal having no affect on performance. Lubrication (preferably dry lube) may be applied to the trunnion mounting points to reduce noise

**NOTE:** *Due to forces around the coupling, weight distributing hitches may restrict the operation of the override brakes. We, therefore, recommend the use of independent braking systems in conjunction with weight distributing hitches.*

<p><b>If you require any assistance with your Weight Distributing Hitch, or towing generally, you can contact Hayman Reese or an authorised stockist.</b></p>
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