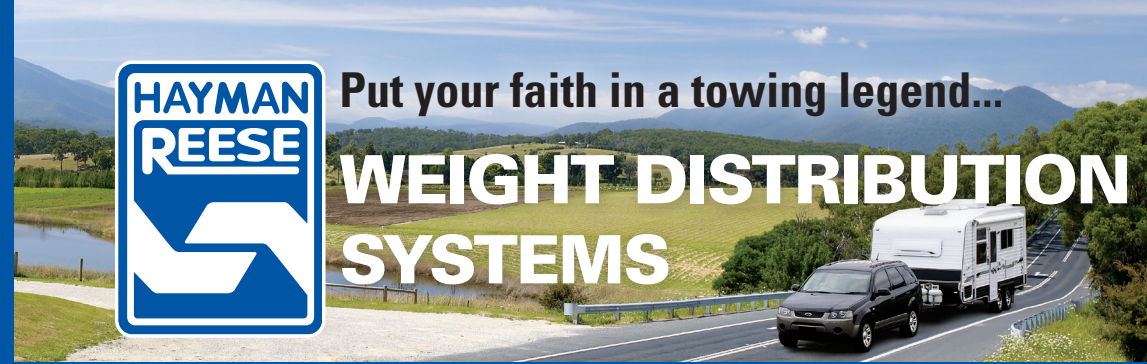




Put your faith in a towing legend...

# WEIGHT DISTRIBUTION SYSTEMS



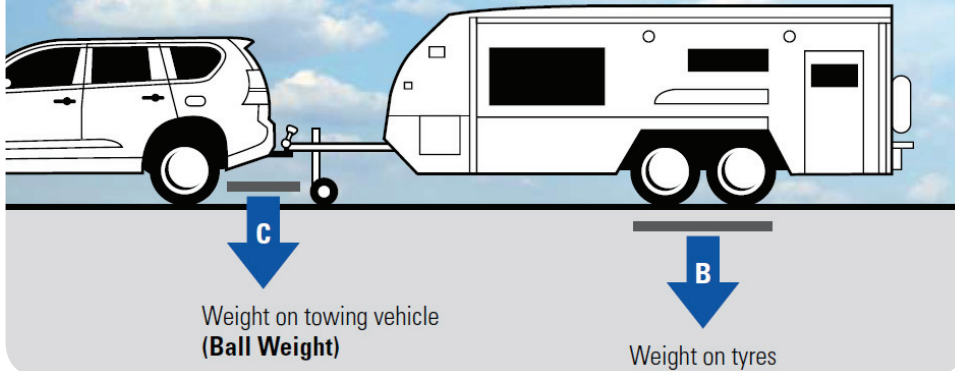
**PART No: 712003**

**Weight Distribution Systems**

**PLEASE ENSURE THAT THESE INSTRUCTIONS ARE UNDERSTOOD PRIOR TO FITMENT**

Dimensions A and B should equal Dimensions C & D  
(Wheel Arch) are suggested reference points

**A** Payload including gas, water and all non factory fitted accessories

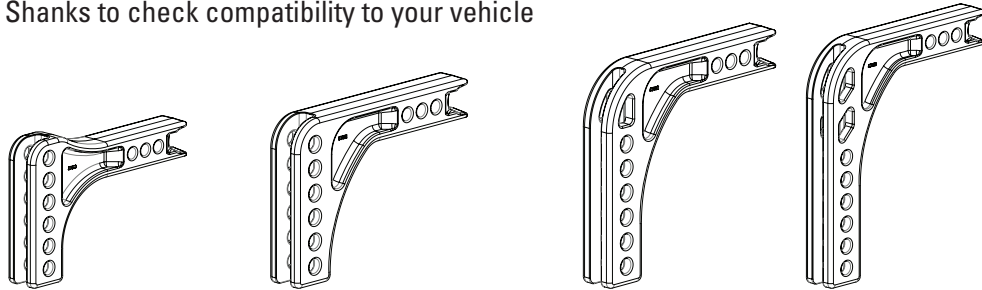


**C** Weight on towing vehicle  
(Ball Weight)

**B** Weight on tyres

## Optional Drop Shanks

A range of Drop Shanks are available to setup 4WDs and applications where the lowest/highest setting is not low/high enough. Always seek advice from your nearest Hayman Reese Distributor before fitting different sized Drop Shanks to check compatibility to your vehicle



50150 - Standard

50151 - 30mm

50152 - 95mm

50153 - 160mm

## 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.  
ALWAYS MAINTAIN CONTROL OF THE SNAPUP BRACKET UNTIL THE SAFETY CLIP IS IN POSITION – AS THE SPRING BAR IS UNDER HIGH TENSION, INJURY MAY OCCUR IF THE SNAPUP BRACKET IS NOT CONTROLLED BEFORE THE SAFETY CLIP IS FITTED
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. Disengage the Spring Bars of the Weight Distribution system when driving or reversing into and out of driveways.
5. Whilst driving, it should always be observed that the Weight Distribution system be disengaged (i.e. release Spring Bars) when: negotiating rough, uneven terrain; entering or exiting driveways, short steep gutters, access ramps, speed humps and dips; negotiating tight, acute turning at low speeds; or when travelling up/down steep abrupt inclines (i.e. severe, undulating road surfaces).



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# INSTALLATION INSTRUCTIONS

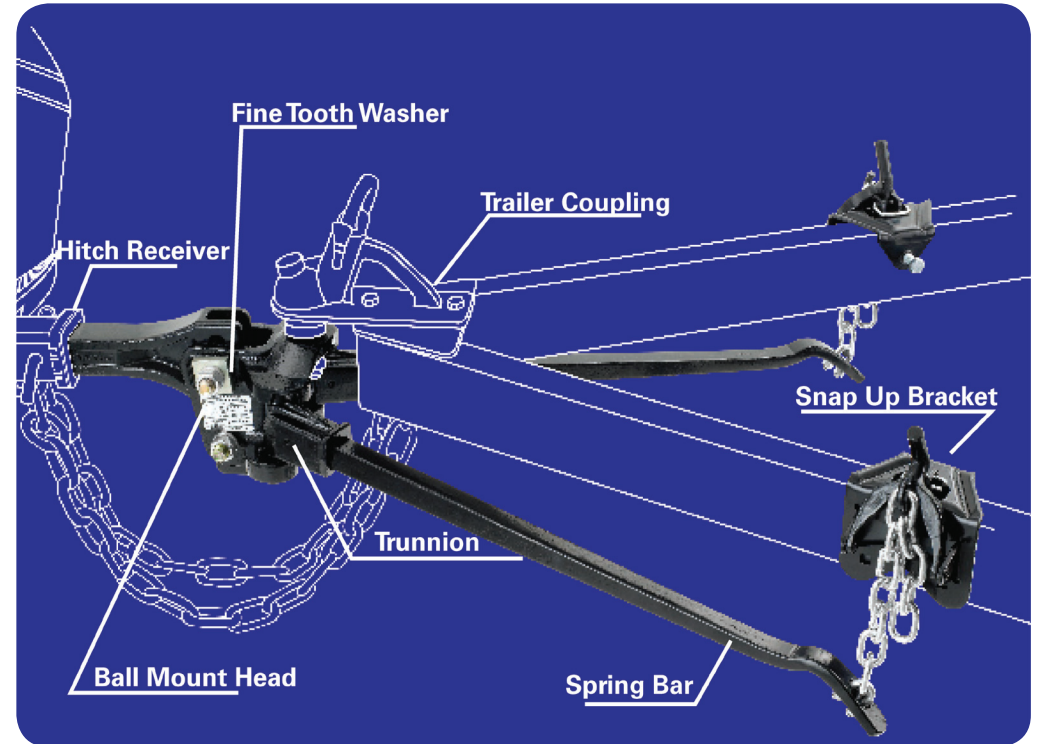
PART No: 712003

Weight Distribution Systems

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6. Drive with caution over corrugated roads and approach inclines slowly whilst the Weight Distribution system is in use. Disengage Spring Bars as deemed necessary.
7. The spring bars will develop a camber in them following use (which is completely normal) and will have no adverse effects on performance.
8. Wear will appear in the ball mount head where the trunnion locates both top and bottom (which is normal) having no adverse effects on performance. This is working as a friction control and is reducing sway, replace when needed.
9. Some noise may be heard from the Weight Distributing Hitch (usually when travelling slowly or around tight corners). This is normal having no adverse effects on performance. Lubrication (preferably dry lube) may be applied to the trunnion mounting points to reduce noise

**NOTE: Weight distributing hitches restrict the operation of the override brakes. We recommend the use of independent braking systems in conjunction with weight distributing hitches.**



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# INSTALLATION INSTRUCTIONS

PART No: 712003

Weight Distribution Systems

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## *Adjustment and fine tuning*

20. Raise the jockey wheel and remove.
21. Measure the caravan and the vehicle, ideally the complete combination should have settled by an equal amount of approx 15mm.
22. If the front of the vehicle has settled more than the rear you will need to increase the amount of working links. If more links are not available, remove the springbars, remove the caravan from the vehicle and adjust the cams to change the angle of the towball towards the vehicle.
23. If the rear of the vehicle has settled more than the front you will need to reduce the amount of working links. If the minimum of 4 links is already being used, remove the springbars, remove the caravan from the vehicle and adjust the cams to change the angle of the towball away from the vehicle.
24. Follow the springbar installation process to refit the springbars and measure the vehicle and caravan again, if they have still not settled evenly then readjustment of the ball mount head on the shank will be required to achieve the correct heights.
25. Once the correct set up has been achieved tighten the two M19 bolts on the head to 190Nm.
26. Insert the 127mm long (5") top bolt with one of the cams against the head of the bolt and slide through the ball mount head and the shank so that the top plate is horizontal, attach the second cam, spring washer and nut on other side and tighten both nuts semi tight.

## **Installation Instructions (Approximately 60 mins)**

1. Ensure that the Vehicle and the Caravan are both on flat even level ground and aligned in a straight line with at least 3 metres of clear area in front of the vehicle.
2. Ensure that the vehicle and the caravan are loaded the way it would normally be when being towing.
3. With the jockey wheel attached to the caravan, drive the vehicle forward to provide sufficient working area between the vehicle and the caravan.
4. Using the jockey wheel level out the caravan using a point at the front and rear of caravan on a common plane e.g. chassis of van. Record this measurement.
5. Measure height from ground to the underside of the coupling. Record this measurement.
6. Measure the front and rear vehicle height from the ground up to the wheel arches. Record these measurements.
7. Insert the adjustable drop shank into the hitch receiver on the vehicle and secure with the pull pin and clip. The shank can be used in either direction to ensure the correct ball height adjustment is achieved. Optional drop shanks are available if additional adjustment is required.
8. Slide the ball mount head over the shank so that the top plate is at the same measurement as the height of the coupling as recorded on the set up sheet. Insert the 115mm long (4½") bottom bolt in the nearest hole. If the exact height can't be achieved use the next nearest lower hole, fit the spring washer and nut.



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# INSTALLATION INSTRUCTIONS

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Weight Distribution Systems

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9. Insert the 127mm long (5") top bolt with one of the cams against the head of the bolt and slide through the ball mount head and the shank so that the top plate is horizontal, attach the second cam, spring washer and nut and tighten both nuts semi tight.

10. Fit the towball to the top plate of the weight distribution head.

## **Springbar and Snap up bracket assembly and installation**

11. Use the jockey wheel to raise the coupling enough to provide clearance over the towball, approx 80-100mm.

12. Attach chain to each springbar using the "U" bolts and locking nuts. Tighten locking nuts evenly until there is a minimum of 5mm (2-3 threads) exposed past the bottom of the nut and the chain can still rotate in all directions without binding on the U bolt.

13. Fit set screw to snap up bracket and position the bracket over the A frame of the caravan so that the chain will hang vertical when the connected. Finger tighten set screw against the inside of the A frame and then tighten a further full turn. Do not over tighten.

14. Reverse the vehicle until the towball is directly under the coupling.

15. Using the jockey wheel lower the coupling onto the towball and secure with the locking mechanism.

16. Using the jockey wheel raise the coupling until the caravan is roughly level or slightly above.

17. From the underside, insert the formed end of the springbar into lower hole of the ball mount head at 90 degrees to coupling, push springbar upwards and align with the top hole, rotate the springbar towards the vehicle until the keyway in springbar aligns with locating key on ball mount head, then rotate springbar away from vehicle to align with the A frame of the caravan.

18. Lift the pivoting arm of the snap up bracket so it is parallel to the ground, hold the chain from the springbar vertically and connect the nearest chain link onto the hook of the pivot arm. Slide the lifting handle over the end of the pivoting arm, Raise the handle fully to allow the pivoting arm to go over centre, install the safety pin through the snap up bracket base and the pivoting arm. Do not release the tension on the lifting handle until the safety pin is fully in place.

19. Repeat process for other side. Make sure the same number of links (refer to diagram), are being used on both sides. Springbars can be used on either side, they are not left or right handed.

**Note: Ensure that there is a minimum of 4 working\* chain links between the pivot arm hook and the springbar. If this can't be achieved with the current set up remove the caravan and adjust the cams on the top bolt to angle the towball away from the vehicle.**

Chains need to hang straight up and down when fully attached

\* Working links are those that are not attached to either the springbar U-bolt or the bracket. Refer to diagram.



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