

HITCH-EZY

CUSTOMER INFORMATION FOR 5 TONNE COUPLING

NOTE: The towing vehicle and the tow-bar must be rated to the capacity of its intended use. Remember that a chain is only as strong as its weakest link.

Hitch-Ezy's 5 tonne rating is based on a 2 million cycle dynamic test with a static imposed load (resting draw bar weight) of 500 kg and the D-Value was 30.2 kN while the V-value was 16.1 kN.

Couplings rated above 3.5 tonne are obliged to specify a V-value if they tow a pig trailer. Caravans are defined as pig trailers by virtue of having a non-hinged draw bar.

The component registration number (CRN) on the 5 tonne Hitch-Ezy coupling is 47868.

When towing above 4.5 tonne the installation on both the truck and the trailer must be approved by an accredited person. This requirement is in the National Heavy Vehicle Law.

Fitting the tow-pillar and the coupling.

a) Mounting the tow-pillar on a tow-bar tongue:

- 1) The tow-pillar anchors the stainless steel Hitch-Ezy specification plate to the tow-bar tongue. **NB** To ensure unimpeded articulation for cornering the stainless steel specification plate must be able to sit flat on the tow-bar tongue with the turned down tags embracing the sides of the tow-bar. **Do not modify the specification plate: A suitably dimensioned tow-bar tongue must be employed.**
- 2) The diameter of the tow-pillar's shank must be matched to the diameter of the ball-mount hole in the tow-bar tongue.
- 3) Use the new spring washer and nut supplied.
- 4) The included "arthritis aid" (tommy bar) can engage in the hole in the neck of the tow-pillar to control tow-pillar rotation while tightening the nut on the shank. Flats on the lower end of the shank when present can also be used to control tow-pillar rotation.
- 5) Tighten the 7/8" shank nut to 150Nm (110ft/lbs) and a 1 1/4" shank nut to 200Nm (150ft/lbs).

b) Mounting the tow-pillar on a weight distribution hitch (WDH):

- 1) Hitch-Ezy is compatible with most WDHs and fitting does not involve moving the coupling's point of articulation away from vertically above the WDH's ball-mount hole as was intended by the WDH manufacturer.
NOTE: The certified towing capacity of the combined WDH and Hitch-Ezy coupling is only as high as its weakest element.
- 2) The shank diameter of the Hitch-Ezy tow-pillar must be matched to the diameter of the ball-mount hole in the WDH.
- 3) The Hitch-Ezy tow-pillar with a 1.25" diameter shank has a 5 tonne towing rating but few WDHs are rated to that level.
- 4) When the Hitch-Ezy tow-pillar with a 7/8" diameter shank is used with a WDH the included 75mm diameter and 20mm thick spacer with beveled edge down **must be interposed** between the top of the WDH and the stainless steel specification plate that lies below the O-ring bearing base-washer.

NOTE: When this spacer is used there is more leverage on the shank of the tow-pillar and the coupling's towing rating is reduced to 3.5 tonne.

We advise against welding the spacer to either a WDH head or a tow-bar tongue. Never weld to a casting.

5) It is essential that you also refer to documents "Fitting a Hitch-Ezy tow-pillar to a weight distribution hitch head that is NOT A CASTING" and "Fitting a Hitch-Ezy tow-pillar to a CAST WDH" as appropriate.

NOTE: Contact Hitch-Ezy at www.hitch-ezy.com if in doubt about the suitability of any given brand of WDH. Never modify a WDH. Never weld to a cast WDH. Follow the WDH manufacturer's instructions.

Mounting the coupling's body to the trailer's draw-bar:

- 1) Use six new **Metric 12mm or 14mm Class 8.8 or 10.9** bolts with four hardened washers and nyloc nuts or new spring-washers and nuts. For a 5 tonne towing rating bolts must be used in **all six** bolt locations.
- 2) Bolt length must ensure 100% thread engagement of the nut.
- 3) Tension nuts to bolt manufacturer's specification. Tightening torque depends upon bolt type. Guidance is 100Nm or 75 ft/lbs dry.
- 4) The supplied rating label must be affixed to the towing vehicle.
- 5) If only front and rear bolts pairs are used the coupling's rating is downgraded to suitable for towing a maximum of 3,500kg.

Coupling:

Please watch videos at: <http://www.hitch-ezy.com.au/features.html> and in a review article on Hitch-Ezy at <http://www.rvdaily.com.au/issue009>

- 1) Avoid sudden unintended vehicle or trailer movements. Trailer wheels should be chocked. The jockey wheel should be properly secured and on stable ground.
- 2) The tow-pillar and the coupling's sleeve should both be clean and lightly greased.
- 3) **Position the coupling** above the tow-pillar with the axis of the tow-pillar approximately aligned with the axis of the coupling's sleeve.
- 4) **Lower the sleeve onto the tow-pillar until the sleeve and tow-pillar are exactly aligned.** The coupling has self-centering properties onto the tow-pillar in response to draw-bar weight.
NB Keep hands clear during initial engagement and alignment of the sleeve onto the tow-pillar. There is no need to open the rotating lid locking mechanism until after the sleeve has engaged and aligned itself to the tow-pillar.
- 5) **Open the locking mechanism.** Press the secondary-lock button and turn the lid anticlockwise through 45 degrees to the unlocked position. There is no need to continue pressing the secondary lock button once lid rotation has started. Resistance to turning the lid to the unlocked position will be encountered if the sleeve has been lowered too far onto the tow-pillar before an attempt is made to open the locking mechanism. If necessary raise the sleeve a little until it is easy to open the locking mechanism.
The included **arthritis aid** (tommy bar) inserts into any of the holes in the rotating lid to provide (if required) a lever that makes it easy to rotate the lid to the unlocked position against the resistance of the return spring.
- 6) **Lower the sleeve to full engagement.** Only once the lid is turned to the unlocked position can the sleeve descend to fully engulf the tow-pillar. The mechanisms will automatically double lock once the sleeve and tow-pillar are fully engaged and your grip on the lid is released.
- 7) **Visually confirm that the sleeve engulfs the o-ring** on the base-washer at the bottom of the pillar.
- 8) **Visually confirm that the lid has rotated clockwise to the locked position and that the secondary-locking stainless steel button has returned to full engagement in the notch in the back of the lid.**
- 9) **Engaging the coupling using the technique of backing into the tow-pillar's "mouth" is best understood by watching the above referenced videos.**

Uncoupling:

- 1) Avoid sudden unintended vehicle or trailer movements. Whenever possible uncouple on level ground. The trailer's jockey wheel should be properly secured and on stable ground. The trailer's hand brake should be applied and wheels securely chocked to avoid the trailer rolling in any direction.
- 2) Ensure the jockey wheel has sufficient range of travel to lift the coupling's sleeve free of the tow-pillar.
- 3) Press the secondary-lock button and then turn the lid 45 degrees anticlockwise to the unlock position.
- 4) Manually hold the lid in the unlock position only until the sleeve is raised far enough to expose all of the weight bearing base-washer that has the sealing O-ring on it.
- 5) The coupling's sleeve is now free to fully disengage without continuing to hold the lid in the unlocked position. You can therefore keep your hands well away while the jockey wheel lifts the coupling totally free of the tow-pillar.

Full decoupling can result in unexpected trailer movement if wheel chocks are poorly placed and your hand cannot be injured if it is not in the vicinity of the coupling during the final phase of disengaging the tow-pillar.

- 6) A spigot is attached by a leash to the arthritis aid and can be used to hold the lid in the unlocked position. When inserted it frees up both hands to operate a stiff jockey wheel winding mechanism. The use of this spigot (plug/key) is best understood by watching the above referenced videos.
- 7) **If this spigot is used for coupling it is essential that it is removed before towing as it keeps the locking mechanism in the unlocked position which means the coupling is free to disengage the tow-pillar.**

Maintenance and safety:

- 1) Always follow the above instructions for coupling and uncoupling.
- 2) Keep safety chains attached while towing and uncoupling.
- 3) Keep mating surfaces clean and lightly greased.
- 4) Use the tow-pillar-cover and dummy tow-pillar to protect your coupling's components from contamination when uncoupled.
- 5) Grease with Shell Gadus S3 V220C 2 or equivalent high pressure grease.
 - a) The two yoke pivot bolt grease nipples can be periodically greased until a small amount of grease extrudes then wipe off the excess.
 - b) The nipple in the lid can be greased 6 to 12 monthly. Wipe out any excess grease that is extruded inside the main sleeve.
- 6) Periodically spray the stainless steel secondary-locking button's shaft with WD40 or silicon spray and check that the button's return spring functions properly to engage the button's "skirt" with the notch in the rotating lid.
- 7) Do not remove or paint over the labels on the coupling or the stainless steel specification plate.
- 8) Check all mounting bolts regularly for tightness.
- 9) **Do not use any part of the Hitch-Ezy coupling or the tow-pillar for vehicle recovery purposes.**
- 10) **The "wings" on weight distribution devices (even with torsion bars removed) can impede downward articulation as a trailer approaches a jackknife position.** Blocked articulation can cause vehicle, tow-bar or coupling damage. An unlimited range of down articulation is only possible when a tow-bar tongue is used. The range of down articulation available at jackknife with any particular WDH can be ascertained by testing the coupling's range of movement on the WDH **before** fitting the coupling to the trailers draw bar.
- 11) **Never discard or modify the stainless steel specification plate that is positioned under the tow-pillar's O-ring bearing base washer. If the label plate cannot fit without modification you are attempting to use either an inappropriately dimensioned tow-bar tongue or an inappropriate style of WDH.**

Before towing always perform a final safety check to confirm that:

- a) Hitch-Ezy is fully engaged and engulfing the O-ring on the tow-pillar's base washer,
- b) The locking lid has rotated to the locked position and the stainless steel secondary lock button is engaged in the notch in the lid,
- c) Trailer lights are plugged in and are functioning properly,
- d) Trailer brakes are connected and are functioning,
- e) Safety chains are attached,
- f) WDH level-ride bars are correctly fitted,
- g) Hand brake is released and wheel chocks are removed,
- h) Jockey wheel is stored or swung into an up-position,
- i) Trailer's stabilising legs are wound up,
- j) Gas is turned off,
- k) TV aerial is down,
- l) Doors, windows, awnings and hatches are properly closed and secured,
- m) Bikes or other items mounted on the outside of the van are properly secured.
- n) Hoses and electrical cords are disconnected and safely stored.