

REDFOOT[®]

LEVELLING

User Manual for



Caravan Flip Leg System, and



12V EQ G2 Remote

Updated: August 2024

WARNING!

This is a 12VDC System **DO NOT** connect to your 24Volt House Battery

Warning:

Redfoot Levelling does not promote the use of our levelling systems as a 'Tyre Jack' solution. If the owner/user were to use the levelling system to lift the vehicle off the ground to have access underneath the vehicle or for changing a tyre, they must use Jack Stands as the primary support. Jack Stands should be always in use as the primary support when wheels are off the ground for long durations.

Modification of any factory-supplied item may result in the denial of all warranty claims. Call Redfoot Levelling Solutions Technical Support prior to any modifications. Redfoot Levelling Solutions offers full installation support for authorised approved Installers only. End user installers must read and accept our Warranty and Terms and Conditions on the Invoice issued with this purchase.

Danger:

With any hydraulic application, holding position on a cylinder must be done with safety in mind. System failure may cause the jack(s) to retract or extend suddenly. When working under or near the vehicle, always use jack stands of appropriate rating to support the weight of the vehicle.

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Panel Indicator LED's

There are a total of ten (7) LED indicators on the Redfoot Remote. The function of the LED's is detailed below.

POWER LED	Blue when the power is ON Blank when power is OFF
JACK LED (Pairs or All)	Blue when jacks(s) are selected Blank when jack(s) are not selected
BATTERY LED	Red when low battery Blank when operating as normal
FLASHLIGHT	ON when button on right side is pressed Press again to turn OFF

Remote Control Keypad Operation

To turn on/off the wireless remote control keypad press the on/off button as shown below. The indicator lights below will illuminate if you push the button in the 'On' position.



If for some reason your wireless remote control keypad battery is flat when it arrives, please connect it to a USB charging device (E.g. mobile phone charger) via the USB cord supplied. When connected the “BATT” light will illuminate **RED** and will change colour once fully charged.



****The following procedure assumes your cylinders are stowed in the “Retracted” position.**

Extending Cylinders

Note: Cylinders can only be deployed in either pairs or all together.

Push either Front, Rear, Left, Right or All button according to which cylinder pair you wish to extend. Each corresponding light will illuminate **BLUE** to indicate these are the cylinders that will be extended. E.g. Front has been selected below.



Push the “Extend” button, the power light should flicker to indicate it is signalling and pairing to the Controller Board and the corresponding cylinders should now be travelling in a downward direction. You will hear the pump operating; it is important to verify the legs are planted on to the ground securely.



Continue operating the wireless remote-control keypad by 'Extend' or 'Retract' buttons and corresponding sides to achieve your desired level for your caravan.

Note: If the "All" button is pushed in the "Extend" situation, your system will not work.

Retracting Cylinders

When you are ready to retract your cylinders, ensure everything is clear around the vehicle.

You can retract the cylinders in their paired configurations by pushing the corresponding Front, Rear, Left, Right or All button, and then press the "Retract" button. The power light should flicker to indicate it is signalling the Controller Board and the corresponding cylinders and should now be travelling in an upward direction. All cylinders will now rise until the pump reaches the required pressure and will automatically shut off.



Important Note** visually check and confirm all jacks are retracted prior to travel.

Helpful Hints

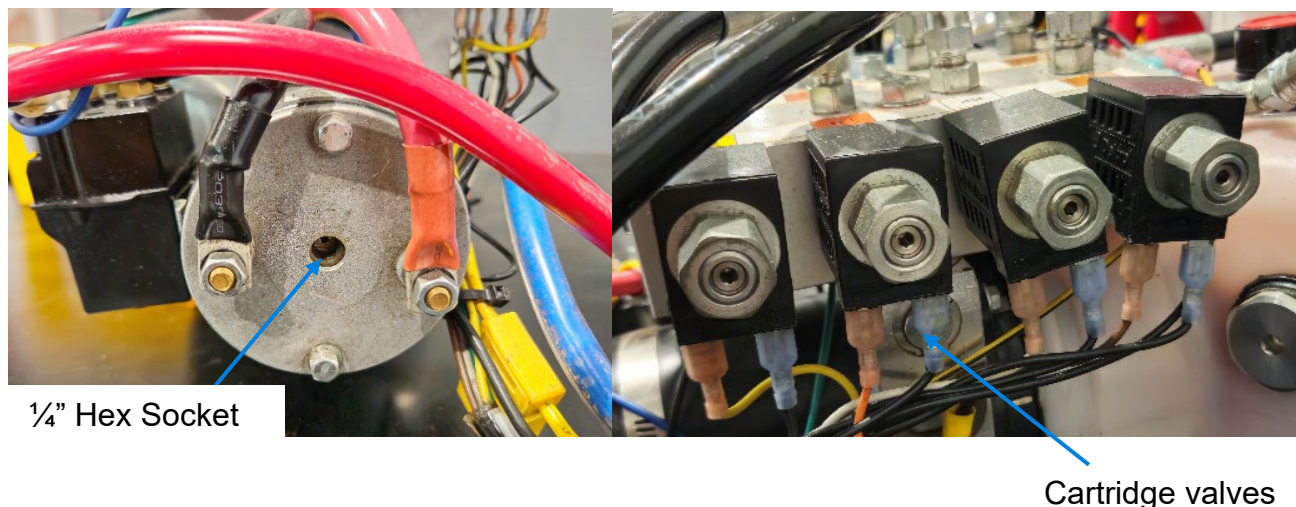
- If your motorhome is equipped with air suspension, it is recommended to start your motorhome and allow the chassis air to build before an All Retract. This will ensure adequate air supply to the chassis air valves.
- Your system may be equipped with a manual override option. Refer to the procedure for proper operation of this option. It is usually better to review this procedure prior to its actual use, rather than having to learn a new procedure in difficult environments.
- If the system has not been used (with the jacks stowed) for over 24 hours, it is recommended that you engage an All Retract prior to travel to re-pressurise the system.
- A lubricant, like BOESHIELD T-9 is recommended to clean and lubricate the cylinder shafts/rods and avoid corrosion.

Manual Override

7846/7847 KS Pump

Refer to Figure 1. This pump is equipped with a manual override. Locate the 4 valves on the right side of the manifold. Locate the screws recessed at the end of the appropriate cartridge valves. Using a 1/8th hex Key, turn the screw(s) clockwise until seated in. Remove the silver sticker on the front of the motor to reveal a 1/4" hex key fitting. Using the appropriately sized hex key socket and a drill capable of 2000 RPM (minimum). To Retract: Run the drill in the counterclockwise direction. To Extend: Run the drill in the clockwise direction.

Figure 1. 7846/7847 KS Pump



7001 SF Pump

Refer to Figure 2. This pump is equipped with a manual override. Locate the 4 valves on the left side of the manifold. Locate the screws recessed at the end of the appropriate cartridge valves. Using a 1/8th hex Key, turn the screw(s) clockwise until seated in. Using a 1/8th hex key, turn the recessed screw on the DV2 cartridge clockwise until seated. Turn and pull the red DV1 valve to approx. 180 °, this will allow the pump to be in retract mode. The valve knob will remain in the out position. Place the pump handle into the emergency pump lever at the front of the pump. Crank the handle several times until all legs have retracted. This process will take some time to achieve full retract of the legs.

On the 7001 SF Pump the return and extend connections banks are on the opposite side to the standard 784X KS pumps. As seen in the diagram below, the

return banks (striped box) are on the right side of the pump manifold and the extend (solid colour) banks are on the left side of the pump manifold.

Figure 2. 7001 SF Pump



Caution!

Following manual override operation, failure to return all the valves to normal position may result in one or more of the jacks drifting down from their retracted position. Ensure all screws recessed.

Troubleshooting Guide

Symptoms	Possible Cause	Solution
Controller will not turn on	Blown fuse at pump harness	Replace fuse 20A
	Faulty ground or 12VDC power	Trace and repair
	Low battery voltage	Charge batteries
	Defective controller	Call Redfoot Levelling
	Defective controller harness	Trace and repair
Controller turns on but jacks will not operate	Low battery voltage to pump	Charge batteries
	Faulty ground or 12VDC power	Trace and repair
	Defective keypad or controller	Call Redfoot Levelling
	Defective pump motor or solenoid	Replace motor and/or solenoid
	Other system defect	Call Redfoot Levelling
Jacks will extend but will not retract	Low battery voltage - min. 10.8	Charge batteries
	Bad motor or solenoid	Replace motor and/or solenoid
	Defective keypad or controller	Call Redfoot Levelling
	Faulty ground or 12VDC power	Trace and repair
	System defect	Call Redfoot Levelling

Symptoms	Possible Cause	Solution
Hydraulic pump inoperative	Low battery voltage - min. 10.5	Charge batteries
	Blown 20A fuse on pump harness	Replace fuse or breaker
	Faulty ground or 12VDC power	Trace/Repair or replace
	Defective pump motor or solenoid	Replace
Jack(s) bleed down from levelled or stowed position	Air in hydraulic system	Purge/bleed air
	External fluid leak	Trace and repair
	Defective valve in pump	Clean or replace valve
	Defective hydraulic jack/cylinder	Replace hydraulic cylinder
Jack(s) are jerky or noisy when extending or retracting	Air in hydraulic system	Purge/bleed air
	Fluid level low	Check fluid level and top up
	Damaged cylinder seal	Call Redfoot Levelling
Jack's will not retract from extended position	Low battery voltage - min. 10.5	Charge batteries
	Low battery voltage or poor ground	Change batteries/check ground return
	Damaged/Defective harness from controller to pump	Trace and repair
	Fluid level low	Correct fluid level and add
	Defective pump motor or solenoid	Replace

Installation of hoses to the manifold

Jack Leg

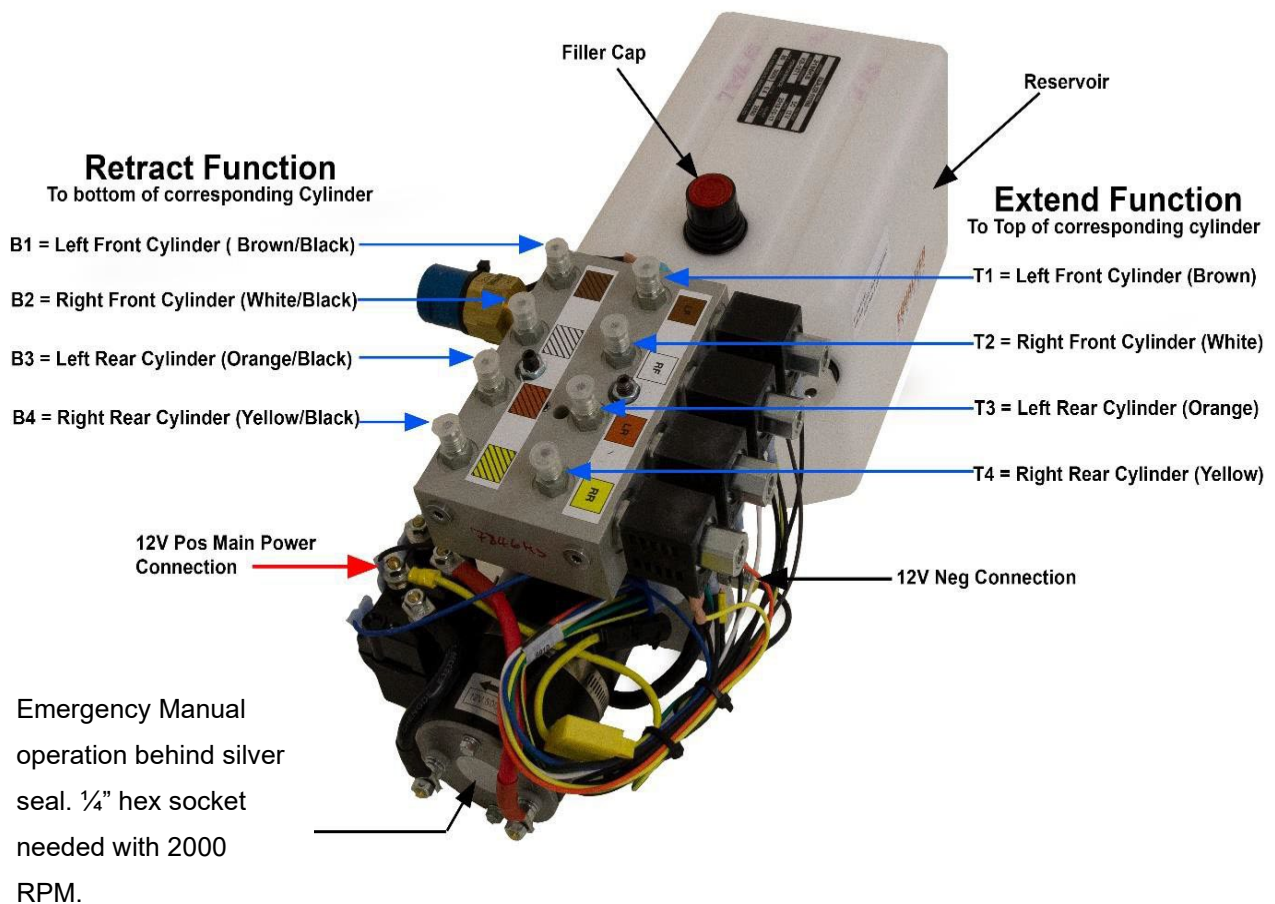
Left Front-Top
Left Front-Bottom
Right Front-Top
Right Front Bottom
Left Rear-Top
Left Rear-Bottom
Right Rear-Top
Right Rear-Bottom

Manifold Connection

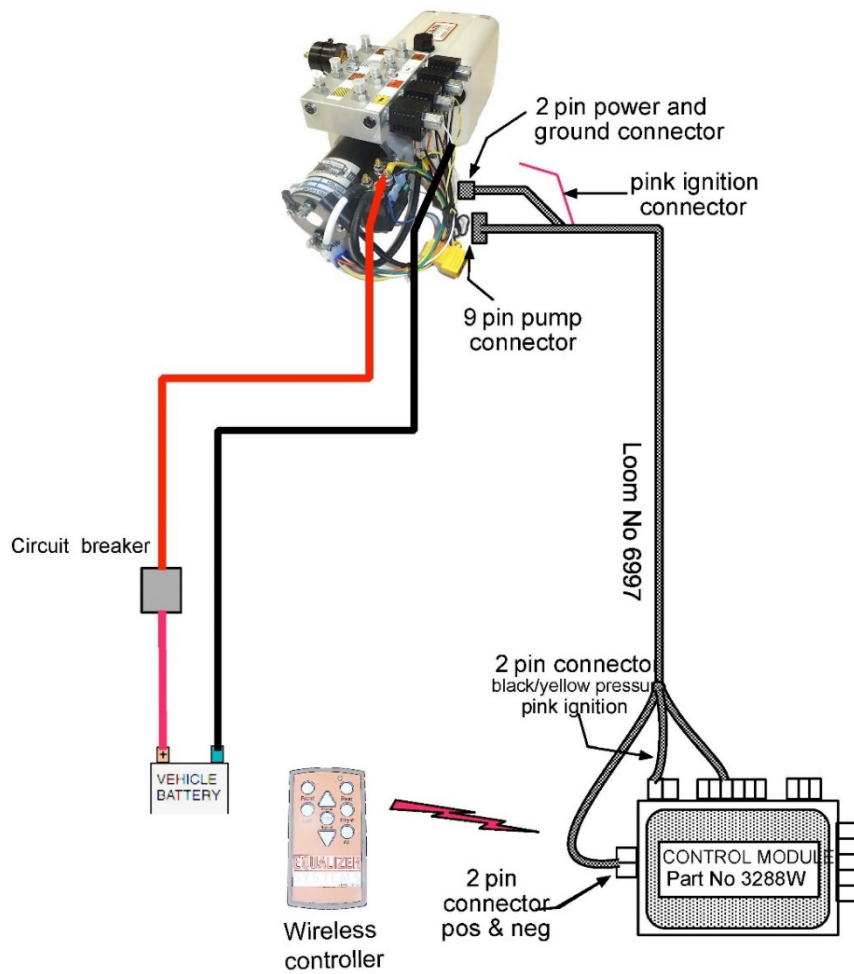
T-1 Brown Solid
B-1 Brown Stripe
T-2 White Solid
B-2 White Stripe
T-3 Orange Solid
B3- Orange Stripe
T-4 Yellow Solid
B-4 Yellow Stripe

7846/7847 KS Pump

Left side = Passenger Side of Vehicle
Right side = Drivers Side of Vehicle



Wiring Harness



Product Warranty Guide

Redfoot Levelling Pty Ltd

1. Only warranty claims with prior written or verbal authorisation from Redfoot Levelling will be recognised, all other claims will be denied.
2. Redfoot Levelling warrants levelling system components for a period of **one year** from the date of original sale of the vehicle. This warranty covers defects in material and workmanship only. Redfoot Levelling is not liable for any damage due to abuse, neglect, misuse, negligence, misapplication, error of operation, accidental or purposeful damage or damage due to an “Act of God” such as, wind or rain damage, flood, lightning or other natural causes of the like. Redfoot Levelling limited warranty is applicable to the Redfoot Levelling components only and does not apply to the vehicle, apparatus, or property to which it is attached. Warranty parts will be shipped at no charge if the repair is authorised by Redfoot Levelling representative. Purchased components used in authorised warranty repairs will be reimbursed at the original purchase price. All returns must be preauthorised by a Redfoot Levelling representative. Connotes will be supplied for their return unless prior arrangements have been made. Installers must receive and accept the appropriate Scope of Works from Redfoot Levelling prior to the commencement of any work.
3. Labour and freight expenses due to warrantable parts defects or workmanship will be reimbursed for the period of **one year** from the date of the original sale of the vehicle. Freight expenses will either be prepaid by Redfoot Levelling or reimbursed at the road logistic rate only. Any additional shipping charges or requirements are the obligation of the vehicle owner or service centre performing the warranty repair. The owner or Service Centre’s obligation may include overseas shipping charges, border fees, and any other additional fee of the like.
4. Prior authorisation is required before parts may be returned to Redfoot Levelling. Redfoot Levelling will supply a connote for the return goods.
5. Labour, parts, and freight credit (if applicable) will be sent after the parts are tested and the warranty claim is validated. Returned parts that are found to be in normal operating condition are not warrantable and will be charged to the owner or service centre. Redfoot Levelling reserves the right to charge back the service centre for labour claim payments previously submitted if the installation of the warranted part is found to be inadequate later.
6. Warranty labour will be reimbursed only for claims that have prior written or verbal authorisation from a Redfoot Levelling representative. Time associated with learning about the repair or excessive diagnostic and installation time will not be reimbursed. Warranty labour will be reimbursed at the authorised service centre’s published shop rate for that region. Overtime labour will not be reimbursed without

exception.

7. Replacement parts are warranted under the same guidelines listed in this guideline for the remainder of the original warranty or 90 days, whichever is longer. Proof of warranty repair date and original vehicle purchase date are required. No additional warranties expressed or implied are authorised by Redfoot Levelling.
8. All warranty works are to be completed and invoiced within 3-months of the Scope of Works date of issue.
9. Parts that are required to be returned to Redfoot Levelling, must be returned upon job completion and prior to warranty invoicing. Parts not returned within this period will be billed to the installer. Claims will be denied if the date submitted is greater than **30 days** from the repair.
10. Complete systems are not warranted unless authorised by a Redfoot Levelling representative. There are absolutely no exceptions to this clause.
11. Consideration should be taken regarding the location and protection of Redfoot Levelling's components prior to installation. Please reference our installation manuals for recommended locations and maintenance or visit www.redfootlevelling.com.au for more information. The failure of any Redfoot Levelling components due to extreme environmental conditions, improper installation or lack of maintenance will not be covered under the warranty.
12. Warranty coverage for parts or systems sold by non-authorised resellers will be at the discretion of Redfoot Levelling.
13. This warranty begins upon the sale date of the vehicle and is transferable, with limitation, subsequent owners are to provide the original sale date of the vehicle and proof of purchase.
14. Redfoot Levelling is not liable for loss of time, manufacturing costs, labour, material, loss of profits, direct or indirect damages incurred by the vehicle manufacturer.
15. Excessive warranty labour resulting from inadequate access to the Redfoot Levelling product will not be reimbursed.
16. Redfoot Levelling will not pay mark-up on warranty parts unless required by law.
17. Travel expenses, hotel, telephone, fuel, or any other expense of the like are not covered under the warranty.

No additional warranties expressed or implied are authorised by Redfoot Levelling.

Redfoot Levelling Pty Ltd
Unit 1, 7 Abeles Street
BARINGA QLD 4551
Ph. +61 7 5228 0211
E.info@redfootlevelling.com.au

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