Drip Loop Installation Instructions

Verity Rear Vision Systems strives to provide the highest quality to our customers. Our cameras are rated IP69K waterproof, which means they can withstand a 1,400 psi pressure spray with a fluid temperature of 150º F degrees.

Our company tests every returned camera to determine the cause of failure. The most common breach where water has penetrated the camera is around the seal where the video cable is attached. This seal is in a compression fitting that evenly applies pressure around the cable to prevent it from being pulled out and to keep water from getting in. The cable and the seal around it can be damaged when the cable is pulled too tightly behind the camera - particularly at a sharp angle. The following is one example of state requirements on cable installation.

1.2.11 Slack

Wires and cables shall be as short as practicable, **except that sufficient slack shall be provided to:**

- Prevent undue stress on cable, wires and connections, including connections to resiliently supported parts;
- Enable parts to be removed and replaced during servicing without disconnecting other parts;
- Facilitate field repair of broken or cut wires;
- Units which are difficult to connect when mounted, shall be capable of movement to a more convenient position for connecting and disconnecting cables.

Necessary Change (1 Suggested)

Install a proper drip loop. When certain camera covers are used preventing a drip loop, provide ample slack as to not damage the rear camera seal. There is also a sealant inside the camera as a secondary seal against water penetration.

Suggestion: Use screws, not rivets, during bracket install. This would allow much easier new camera replacement for cameras damaged while backing into loading docks. This suggestion stems from end-user complaining about the use of rivets here.

Proper install of camera
Below shows and example of a drip loop

Cable Tension

Fig 1

Note the slack in the cable (fig 1). It is not pulled tight against the bracket (fig 2).

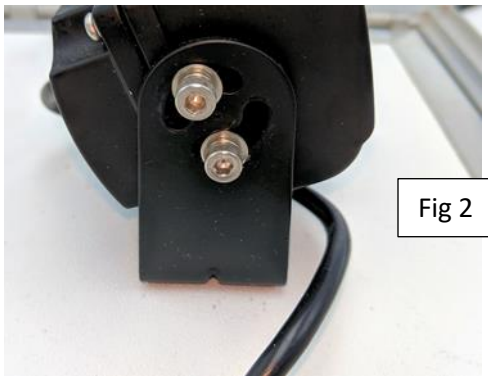


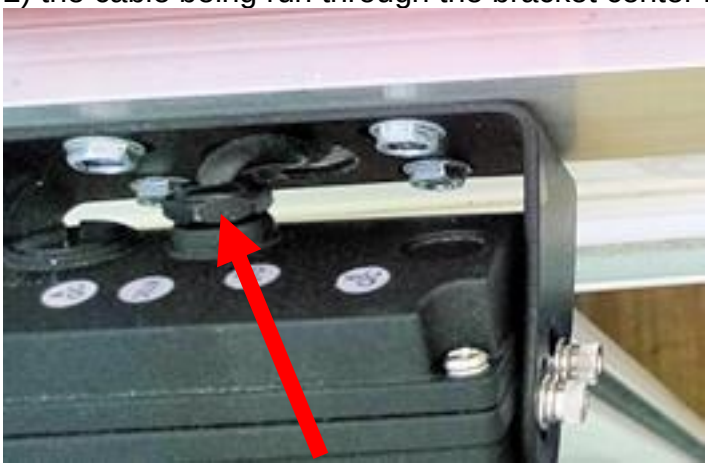
Fig 2

Below: The cable correctly coming out of the back of the camera has no tension on it.

Fig 3

Below are Examples of:

1) excessive tension on the cable
2) the cable being run through the bracket center hole.



Damaged Seal & Using Center Hole

Too Much Cable Tension

Bracket Center Hole Mistakes

The Center hole in the bracket is not the best way to insure not leaks in the camera cable. Below is the suggested way to install a bracket (not the hole in the center of the bracket.

Verity has been including this sheet or page 2 above in each order.

The Routing of a Cable Inside the Vehicle

The image shown in figure the cable is coming through the wall and bending around the edge of the through hole which is represented in a red circle. The tension around that edge can damage the wiring inside the cable over time or even cause a cut in the cable.

Fig 2.

The suggestions made by Verity RVS is to allow for a drip loop (i.e., slack) in the interior of the truck as shown in figure three. Also, putting wire loom on the camera cable where it comes in through the wall will help to protect the cable from being cut.

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Fig 3.

Conclusion

VerityRVS appreciates the quality workmanship and professionalism our customers exercise while installing our systems. It is not easy for us to suggest an installation change when such care is being taken to make the installation look neat and orderly. However, a drip loop will minimize damage to the camera cable seal and some slack in the cable will lessen the overall wear and tear it will receive. You can find our short video detailing drip loop installation on YouTube entitled “Verity Rear Vision Systems Support Video on Drip Loops.”