#### #25\_2021\_January\_Newsletter

#### Off-Road Safety Academy <bob.wohlers@discoveroffroading.com>

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Thank you for signing up to receive my newsletters. I hope you've found the previous editions informative and helpful for your vehicle-supported adventures. I trust you will enjoy this month's newsletter. If you have comments, please email me: Bob.Wohlers@discoveroffroading.com. You can access, download, and read previous newsletters on my website here (Click Here): NEWSLETTERS. Look through the Newsletter Reference for a topic that may interest you, or download them all!



# 2021 Four Wheel Camper Adventure Tours - Some Rescheduled and Others are SOLD OUT

Here's an update on my 2021 off-road adventure tours for Four Wheel Camper owners. Due to certain areas closing to permitted events and other logistical concerns, I've had to cancel the Mojave Road tour for 2021. The Death Valley tour is rescheduled for Fall, 2021. National Park closures to permitted events are due to the limited ICU bed capacity in California.



Death Valley FWC Adventure Tour.

#### All other tours are "on" as scheduled (at this time).

The Rimrocker trail and Baja (Winter) tours are sold out. However, there are still a few spots open on the following tours:

- 1. Drive Through the Valley of Death Death Valley National Park Off-Road Adventure: Rescheduled for Fall 2021 October 28-31:
- 2. Camp Baja Beaches Summer Introduction to Baja Mexico Adventure
- 3. San Rafael Swell Reconnoiter Southeastern Utah Off-Road Adventure

Off-Road Safety Academy, Inc. and Four Wheel Camper, LLC invite you to explore the remote backcountry with like-minded vehicle-supported adventurers. This is our third year offering these enormously popular tours. Come along and see new sights, camp in new locations, meet new friends, and learn how to off-road safely. Each tour includes unique evening campfire discussions on such topics as overlanding navigation, water disinfection, satellite communications, backcountry survival, and various 4WD topics.

Off-Road Safety Academy is a permitted BLM and National Park Outfitter and Guide.

You may signup and purchase Tours by clicking: HERE.

If you have questions after reading all the Tour information, click HERE, please call Bob at: 909.844.2583.



For more Adventure Tour information, CLICK HERE.

Black Rock Desert Hot Springs.



Camp Baja Beaches Adventure Tour. Camping right on the beach of the Sea of Cortez.

## 2021 4WD Safety Courses - Only A Few Spots Left



Happy Students!

Want to learn more about your 4-Wheel Drive vehicle? Want to improve your off-road driving skills? Interested in keeping you and your loved ones safe while off-roading? How about keeping your vehicle and the environment free from damage? Off-Road Safety

Academy™ will safely



Learning Rock Crawling & Hill Climbing.

teach you in one weekend what it takes most people years to learn on their own.

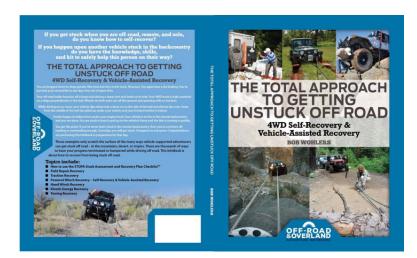
## Discovery Course: Introduction to 4X4 Off-Roading - March 20-21 & April 10-11

The Discovery Course is Off-Road Safety Academy's two-day beginning 4WD offering. More advanced drivers will find this course useful as well.

This course is held at Prairie City State Vehicular Recreation Area (SVRA) near Folsom and Sacramento, California. Cost per person is \$450.

To sign up and pay for this course click: HERE and click on the March 20-21 OR April 10-11 Discovery Course buttons on my website.

## **Bob's Famous Two-Day Recovery Course is May 1-2, 2021 (SOLD OUT)**



Can't Attend My Recovery Course - Purchase This Book!

Sorry, but this course is SOLD OUT. Please watch for additional 2021 Recovery courses in the future. Watch the calendar of course listings and dates by clicking: HERE.

Can't attend my Recovery Course? Purchase my book by clicking: HERE.



Kinetic Energy Recovery.

## Off-Road Safety Academy will Conduct Training Clinics at the 2021 Truck Camper Adventure Rally -Quartzsite, AZ

Truck Camper Adventure
Online Magazine will hold
their second Rally in
Quartzsite, Arizona on
February 11-14, 2021. To
date, over 160 campers and
their owners have enrolled in
what will probably be the
largest truck camper rally
ever held.



Off-Road Safety Academy will attend and conduct two popular training clinics -

In-Field Tire Repair and Winching 101. Bob will be selling his books and ready to meet campers and answer questions. I hope to see you there! Come on out to Quartzsite.

Like last year's inaugural rally, this outdoor camping event will be held at the Roadrunner Wash on Bureau of Land Management (BLM) land. This is a free event. For more information, click HERE.

## Factor 55 Rope Retention Pulley Evaluation



Photo 1 - Rope Retention Pulley by Factor 55

#### Introduction

Factor 55 sells and distributes a product called the Rope Retention Pulley (RRP). From their website, see details by clicking: HERE.

This product is marketed to recreational off-roaders. The RRP is used in winch

rigging set-ups and during winching recovery operations. The RRP (as with every other off-road specific pulley block) can be used to increase the pulling power of a winch (mechanical advantage) or redirect the winch line at an angle. If you are interested in how pulleys work and how to include them in winch rigging set-ups get my book *The Total Approach to Getting Unstuck Off Road - Self-Recovery & Vehicle-Assisted Recovery*. (Click HERE to purchase on Amazon.)

The RRP differs significantly from most traditional split-leg pulley blocks (see Photos 1 and 2). Differences include:

- The RRP may only be used with an appropriately rated synthetic rope shackle to secure the pulley to other rigging equipment.
- The RRP is only to be used with synthetic rope winch line; never steel cable.
- The RRP is a LIGHTWEIGHT ALTERNATIVE to traditional split-leg pulley blocks (all of which are heavier some significantly heavier).
- Per weight, the RRP is stronger by design than practically all split-leg pulley blocks.
- Is a historical design used by the sailing industry.
- The RRP does not "trap" a winch line as securely as most split-leg pulley blocks.



Photo 2 – The Excellent Safe-Xtract Split-Leg Pulley Block

The RRP also differs from other "recovery rings" (Photo 5) used in recreational off-roading winching operations. Differences include:

- The RRP is the only "recovery ring" with a patented rope retention feature. (Photo 3)
- The hole radius of the RRP provides a smooth rubbing surface and keeps the legs of the soft shackle from rubbing on the edges of the RRP. Because of the "hump" on each side of the RRP, the soft shackle does not rub up against the engraved writing on the RRP. (Photo 4)
- The hole radius surface of the RRP has been TEFLON treated to increase slickness and heat dissipation when rolling on its soft shackle.



Photo 3 - Rope Retention Features of the RRP



Photo 4 - Close Up of Soft Shackle Use & Positioning



Photo 5 - Non-Rope Retention Soft Shackle Ring Pulley

#### As a Side Note...

Robert Pepper in Australia has recently posted a piece on YouTube about Recovery Rings. Robert covers some information about a variety of different Recovery Rings I do not in this newsletter, so have a look at his video by clicking: HERE. Nevertheless, he has also used Recovery Rings extensively and basically has the same opinion as me regarding their use in the field.

## **Criticisms of the Rope Retention Pulley**

Since the release of the RRP there has been criticism of its safety and efficiency when used in the field under a variety of recovery scenarios. Some initially said not to use the RRP because it produced high friction (heat) where the soft shackles

came in contact with the RRP surfaces. Others alleged that the RRP is "60+ percent" less efficient than a split-leg pulley block. This means that the RRP would need 60+ percent more force to move an object than with a split-leg pulley block.

Determination of real heat production and efficiency data comes from the scientific method - not guesses by individuals that don't even own the product. Data must be reproducible to be accepted as valid. No one has been able to prove either of the aforementioned criticisms with actual data. That said:

It is true that a traditional split-leg pulley block
IS more efficient than the RRP - about 6-10 percent
more efficient. It is NOT true that
dangerous "rope-destroying" heat is generated through
friction between the RRP surface and its soft shackle.

Regardless, these two initial criticisms are almost meaningless for the general public that rarely uses their winch in the field. I've been heavily using the RRP in real in-field recoveries, in my courses, at winching clinics, and during accessory evaluations. For example, I've been using the same soft shackle with my RRP for over two years now. This soft shackle is not damaged nor is it ready to "retire."

To view legitimate, real-world testing of the RRP with respect to these two initial criticisms - RRP efficiency and heat production, watch the videos by clicking: HERE and HERE.

Recently, two more criticisms of the RRP's safety and use have come to light:

• Failure During Rigging Set-Up. It is reported that a winch line will fall out of the RRP, more often than not, during initial rigging set up. This supposably happens once the winch line is placed in the RRP and the rope is pulled back to the vehicle with the winch. This means that the person(s) setting up the rigging have to go back to the RRP and correct the failure by placing the winch line back around the RRP. This results in extra effort and time during the recovery process. The percentage of this failure has not been clearly defined in writing or demonstrated through repetitive testing or actual use. I have heard from those arguing for the non-use of the RRP that failure in this regard is a "very high." There is no more or less explanation of this reported failure when the RRP is attached to an anchor point (self-recovery; vehicle with the winch is stuck) or when the RRP is attached to another stuck vehicle (vehicle-assisted recovery; the vehicle with the winch is extracting a second vehicle).

• RRP Disfunction During Momentary Slack in Winching Operations. It is reported that during momentary slack in a winch rigging set-up the winch line in an RRP falls out of the pulley. The percentage of this failure has not been defined in writing or demonstrated through repetitive testing or actual use. I have heard that this failure is "up to 80%" during discussions with those arguing for the non-use of the RRP. Some using the RRP to winch vehicles up a rocky hill have reported that the winch line fell out of the RRP about "half the time" when there was a momentary slack.

Video One was posted on social media. This video distinctly shows a failure of the RRP. What can't be seen is what is happening off camera. There's no accusation of deception or malfeasance with respect to this video, but the fact remains we do not know what is happening off-camera and why.

For example: 1) What is the winching vehicle doing? 2) Position of the winching vehicle? 3) What type of recovery is being attempted? If we could see all aspects of the recovery, we might be able to intelligently evaluate the scenario and even try to duplicate the failure. What we can see in the video is that a few accepted safe winching techniques are ignored when pulling on the RRP.

To Play the Videos Listed in this Newsletter, Click on the Word HERE.

Click HERE to Watch Video 1 – Rope Retention Pulley Failure

### **My Evaluation Methods**



Photo 6: Tripod Video Camera Focused on Winching Vehicle



Photo 7: Tripod Video Camera Focused on RRP

My Factor 55 Rope Retention Pulley product evaluation seeks to fairly prove, disprove, or moderate the aforementioned newly stated criticisms when using accepted safe winching methods. (See section: Safe Winching Procedures Important for Use With RRP.)

Using one-camera and two-camera perspectives, various winch rigging set-ups have been executed and imaged for public consumption and evaluation. In most evaluations, a two camera shoot perspective is important to show viewers: 1) What the winching vehicle and rigging is doing, and simultaneously 2) What the RRP is doing during a pull. See still Photos 6 and 7 for camera placements. When

it is not important to see two perspectives, a single camera is used. During most tests, still photos of the camera, vehicle, and winch rigging set-ups are taken for organizational perception.

#### **Disclosures**

I'm not employed by Factor 55, nor have I been involved in prototype testing of Factor 55 products. I've never received any type of financial compensation from Factor 55. I have written educational vehicle recovery material that Factor 55 have reprinted for customer use.

The educational material provided to Factor 55 was given free of charge and is condensed material from my published book on Amazon, "The Total Approach to Getting Unstuck Off Road – Self-Recovery & Vehicle-Assisted Recovery." The only consideration for providing this educational material to Factor 55 includes the display of my company logo and website address on the two booklets.

Most importantly, I am not a recovery equipment and accessory MANUFACTURER, nor do I resale any said equipment for profit. I do not receive any remuneration for any individual sale of the Rope Retention Pulley or any Factor 55 products. This cannot be said for the majority of those openly criticizing the RRP and labeling it "unsafe" for use under any circumstances.

#### **Testing Objectives**

For this evaluation, here are my testing objectives:

- 1. Prove, disprove, or moderate the new criticisms directed against the Factor 55 Rope Retention Pulley when accepted safe winching practices are utilized\*.
- 2. Use the Rope Retention Pulley in a variety of significantly different winch rigging set-ups on differing terrain to explain the stated criticisms.
- 3. Video the various winch rigging set-up evaluations for public consumption, allowing the public to draw their own conclusions on the RRP safety and efficiency.
- 4. Should any of the primary criticisms prove true at any level, develop simple but specific criteria under which the Rope Retention Pulley may be used safely and efficiently by off-roaders.

\*Using accepted safe winching practices is an important qualifier for this or any winch accessory evaluation. Regardless, I do test the RRP during this evaluation is such as way that no piece of equipment should actually be used in the field. I violate safe winching guidelines during my tests to TRY to get the RRP to fail.

#### **Overview – Test Video Number One**

Click **HERE** to Watch Test Video 1 – Rigging a RRP and Attempts to Force Line from the Pulley for Failure.



## Overview for Test Video Number One:

• It is reported that a winch line will fall out of the RRP during initial rigging set up. This supposably happens once the winch line is placed in the RRP and the rope

is pulled back to the vehicle with the winch.

- The tree strap in this video is hung high around the tree, rather than near the ground as per normal and accepted safe winching practices. The tree strap is configured this way on purpose. This allows the RRP to hang more **vertically** rather than horizontally, with the pulley resting on the ground. I also added an Anchor Shackle to the rigging for some weight to force the pulley to hang vertically. The winch line should fall out of the pulley more easily when hanging vertically above the ground. The RRP is configured this way in this video to help eliminate the argument that the ground is holding the winch line in the pulley.
- At the end of the video I try repeatedly to cause the winch line to fall out of the RRP. This action cannot be classified as normal or safe winching practices.
- There is no audio for this video.

#### **Overview – Test Video Number Two**

#### Click HERE to Watch Test Video 2 – Another Rigging Video – RRP on the Ground

## Overview for Test Video Number Two:

• As mentioned previously, it is reported that a winch line will fall out of the RRP during initial rigging set up. This supposably happens once the winch line is



placed in the RRP and the rope is pulled back to the vehicle with the winch.

• Unlike Test Video No. One, this video has the tree strap at the base of the trunk per normal winching set-ups. The RRP basically rests on the ground once the winch line is placed around the pulley. Resting on the ground actually aids in retaining the winch line in the pulley.

#### **Overview – Test Video Number Three**

Click **HERE** to Watch Video 3 – Repeated Shock-Loading of Rope Retention Pulley.



Overview for Test Video Number Three:

• This is a split screen video, from a two-camera shoot. The image on the left is the RRP hanging from a Factor 55 HitchLink on the anchor vehicle. The anchor vehicle is

in neutral, tires are chocked, and parking and foot brake on. The image on the right represents the "stuck" vehicle, capable of winching itself uphill (an 11.4° slope).

- This video is completely transparent nothing is hidden or left to the imagination. One can see what both the vehicle AND the RRP is doing.
- The amount of actual rope used from the winch is minimal during this pull. This is by design so an orange/colored winch line extension could be used. The orange rope shows better to the camera than a black winch line.
- To produce an enhanced slack winch line and subsequent shock load, the winching vehicle is put in gear and driven a short distance up hill. This action cannot be classified as normal or as following safe winching practices. (Winching operations should be smooth, slow, and steady.) Both actions, momentary slack and shock load, are intended to try and "motivate" the winch line to drop out of the RRP. At no time did the winch line fall out of the RRP, even under these extreme conditions.

[I have more split-frame videos on file, showing different successful RRP configurations. These may soon be published for public consumption.]

### **Summary**

It is acknowledged that a split-leg pulley block is slightly more efficient than the RRP. It is also acknowledged that most split-leg pulley blocks will generally hold a winch line more securely in place under varying circumstances than a Factor 55 Rope Retention Pulley.

Nevertheless, after conducting multiple tests (like those seen in the videos) and performing actual in-field recoveries with the Factor 55 Rope Retention Pulley, it is my opinion that this product is safe to use if published and accepted winching guidelines are adhered to. I have NOT seen failures at the level purported by its critics, nor have many of my colleagues I work with.

If in doubt about the use of the Rope Retention Pulley in a specific recovery scenario:

- Simply use other equipment that you believe will accomplished the job in a safer manner, or
- Be more **CIRCUMSPECT** with the pull itself watch the RRP carefully.

I'm NOT saying that the RRP is BETTER than split-leg pulley blocks. I'm saying that:

If you desire to carry lighter recovery equipment and/or take with you several pulleys in the backcountry, a Factor 55 Rope Retention Pulley is a alternative to carrying multiple heavier split-leg pulley blocks.

It is my opinion is that the differences between a split-leg pulley block and an RRP are not enough to discourage anyone from using the RRP, especially when considering the RRP's light weight and small size. In my universe, and probably for yours as well, I can afford the minimal loss in efficiency for the convenience of the RRPs portability and ease of handling.

#### **Bottom Line**

I will continue to use the RRP in winch rigging set-ups. I will continue to teach the safe use of Factor 55's Rope Retention Pulley. When personally venturing into the backcountry I plan on taking one, or maybe two, split-leg pulleys and at least two Rope Retention Pulleys. My days of loading many heavy split-leg pulley blocks in my recovery kit are behind me.

# Safe Winching Guidelines Important for Use With the RRP (Or Any Winching Accessory)

To safely and efficiently use the RRP (or any winch accessory) during winching operations, the following published winching tenets should be adhered to. These guidelines come from a variety of winch manufacturers – WARN, MileMarker, Ramsey, Super Winch. Any winch rigging set-up and recovery operation should adhere to these existing guidelines – not just those using the RRP. Pay particular attention to the **BOLDED** words when using the RRP.

• Along with a little **common sense**, the guidelines laid out in this book can help

you keep off-roading fun. Just remember to **think through each situation before you act** and TREAD LIGHTLY!

- Whether you're recovering another vehicle or pulling a stump from the ground, knowing the proper winching techniques can help keep you and others around you safe. And perhaps the most important part of the winching process, regardless of the situation, is what you do before you pull.
- Always take your time to assess your situation and plan your pull carefully.
- Always take your time when using a winch.
- Use the right equipment for your situation.
- PUT WINCH ROPE UNDER TENSION. Using the winch switch, slowly wind the winch rope until no slack remains.
- CHECK YOUR ANCHOR. Make sure all connections are secured and free of debris before continuing with the winching procedure.
- As you probably have already noticed, there are many things to do and consider before you actually begin pulling. Think through what you're doing, and you can keep yourself and those around you out of harm's way. Operating your winch properly is so important, in fact, you should practice these techniques before having to face the distractions and stresses of a real winching situation.
- With the winching vehicle's engine on and light tension already on the winch rope, **begin winching slowly and steadily.**
- Avoid shock loads by using the control switch intermittently to take up winch rope slack. Shock loads can momentarily far exceed the winch and winch rope ratings.
- Keep a 90° angle between the winch and run the winch rope to the first anchor-point and through the snatch block.
- Always remove any element or obstacle that may interfere with safe operation of the winch.
- Always take time to use appropriate rigging techniques for a winch pull.
- Never use vehicle to pull load on winch rope.
- Combined load or shock load can damage, overload and break rope.

Remember to always use a mature attitude and thoughtfulness while conducting any in-field winching recovery. During winching recoveries, follow the acronym STOPA: Stop, Think, Observe, Plan, and then Act and you'll rarely have a failure of any kind.

### PRACTICE, PRACTICE, PRACTICE

### and Hands-On Skill Training



Here's a huge qualifier for the use of the Factor 55 Rope Retention Pulley or any winch accessory:

PRACTICE winching skills. When you purchase new accessories for your recovery kit, practice with the device. Also,

purchase my book on recovery, then get a group of your off-roading friends and go practice setting up various rigging scenarios found in my book. Practice with the RRP. Discover for yourself its pros and cons. Have fun.

The best and fastest way to get actual recovery experience is to signup for Hands-On Skill Training Prior to Attempting Actual Recoveries in the Field.

Take a recovery course from Off-Road Safety Academy. We will provide you with an objective and safe overview of the use of many recovery accessories and rigging set-ups. Don't wait until you need these skills in the field and have to guess the right way to perform a vehicle recovery.



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