PSB#021584
Status of the Large 3-ring (RW-1-82; RW-1-83)
February 15, 1984

***SAFETY WARNING***

All Wonderhog IIs, Sprints, and Vectors with the large rings of the 3-Ring release stamped RW-1 '82' and RW-1 '83' are grounded as of February 3, 1984 until the large rings are either replaced or pull tested for strength.

Some of the large rings with the above markings were not heat treated at the suppliers and are soft. Two incidents have been reported where these rings elongated on opening shock. One

of these incidents prevented the jumper from releasing a malfunctioned main canopy. The deploying reserve entangled with the main. Rings with markings of RW1-81 and RW1-84 are acceptable. Only the RW-1 '82' and RW-1 '83' are suspect.

If you own a Wonderhog with the suspect rings, you may obtain replacement rings at no charge from the Relative Workshop by sending a letter requesting replacement RW-1 rings and in

cluding the serial number of your Wonderhog. The rings must be replaced by a senior or master rigger. These replacement rings are free. ** (Suspect rings must be returned to the RWS.)

If you wish not to replace these rings, they must be pull tested to 2500 1bs. A rigger must observe this test. You should measure the I.D. of the large ring prior to testing with a micrometer.

The ring should be loaded to 2500 lbs., the load relaxed, and the ring remeasured. There should not be a difference of more than 0.005. If there is, replace the ring. If both large rings pass the test, the rig should be tagged,

Proper tagging procedure is to place a small piece of wire through the webbing slot on the right side ring. A piece of picture hanging wire can be used. Place a lead seal on the wire and use the rigger's seal press to seal and tag the rig. A rigger must observe the pull test and his/her seal must be used to tag the rig. Proper notation should be made on the packing data card and in the rigger's log,book .

Owners of rigs that are not Wonderhogs must contact the manufacturer for replacement rings. **To make it easier to replace rings on rigs we have designed a separable RW-1 similar to a normal separable D ring. All that is required is a bolt cutter and a screwdriver. No stitching is required.

****SAFETY BULLETIN****

NUMBER: 3

DATE: FEBRUARY 15, 1984

TO: ALL OWNERS AND CURRENT USERS OF THE 3-RING RELEASE SYSTEM SUBJECT: STATUS OF THE LARGE 3-RING

A detailed investigation into the reported failure of the large 3-ring has resulted in the following:

1. Rings stamped RW-1-81 or RW-1-84 are safe to use.

2. All rings stamped RW-1-82 or RW-1-83 may be defective; therefore, any harness equipped with these rings cannot be jumped unless one of the two following options are met:

a. OPTION #1 - REPLACE ALL SUSPECT RINGS. A separable ring is currently being produced (available in mid-February) which will enable a quick and easy replacement of all suspect rings. Upon request, replacement ring kits and complete installation instructions will be provided (NOTE: A heavy duty bolt cutter will be required to remove the suspect rings).

b. OPTION #2 - TEST ALL SUSPECT RINGS. An FAA Master or Senior Rigger is authorized to certify that suspect rings are not defective as follows:

(1) Using a Tinius Olsen or other suitable pulltesting devise, pull in opposite directions against each side of the round portion of the ring using 1" tubular nylon webbing, or either Type VII or Type VIII nylon webbing folded under to a width of 1" (See Diagram 1).

(2). Subject each load to a 2500 lb. (1134 kg.) proof load. Measure the I.D. of the large'ring prior to testing with a micrometer, load the ring to 2500 lbs., relax the load, and remeasure the ring. Rings which show no deformation more than 0.020 inches are acceptable. Any ring showing deformation more than 0.020 MUST BE REPLACED. (NOTE #1: Defective rings will noticeably distort when loading reaches approximately 2000 lbs. (907 kg.) and stay distorted when tension is relaxed. NOTE #2: If pull test is conducted using two metal bars in place of webbing loops and test is conducted at 90 degrees to normal hardware loading (as shown in drawing), then a 2500 lb. load may stretch normal good hardware. Therefore, a 2000 1b. load will be sufficient to certify a ring as good in this case).

(3). Harnesses using rings which have been tested and are found to be acceptable, must be designated by permanently affixing a rigger's seal (with symbol) using wire (not red

rigger's thread) to the right ring's webbing slot. The seal must be attached to the square portion of the ring through which the main lift web passes, not the round portion.

(4). Once sealed, a permanent entry must be entered in the parachute log book accompanying the harness which states that.the rings were satisfactorily tested to a 2500 lb. proof load, and the date of test.

(5). The rigger or other individual performing the test and certifying that the rings have been tested should retain a permanent record of each test and the date of test.

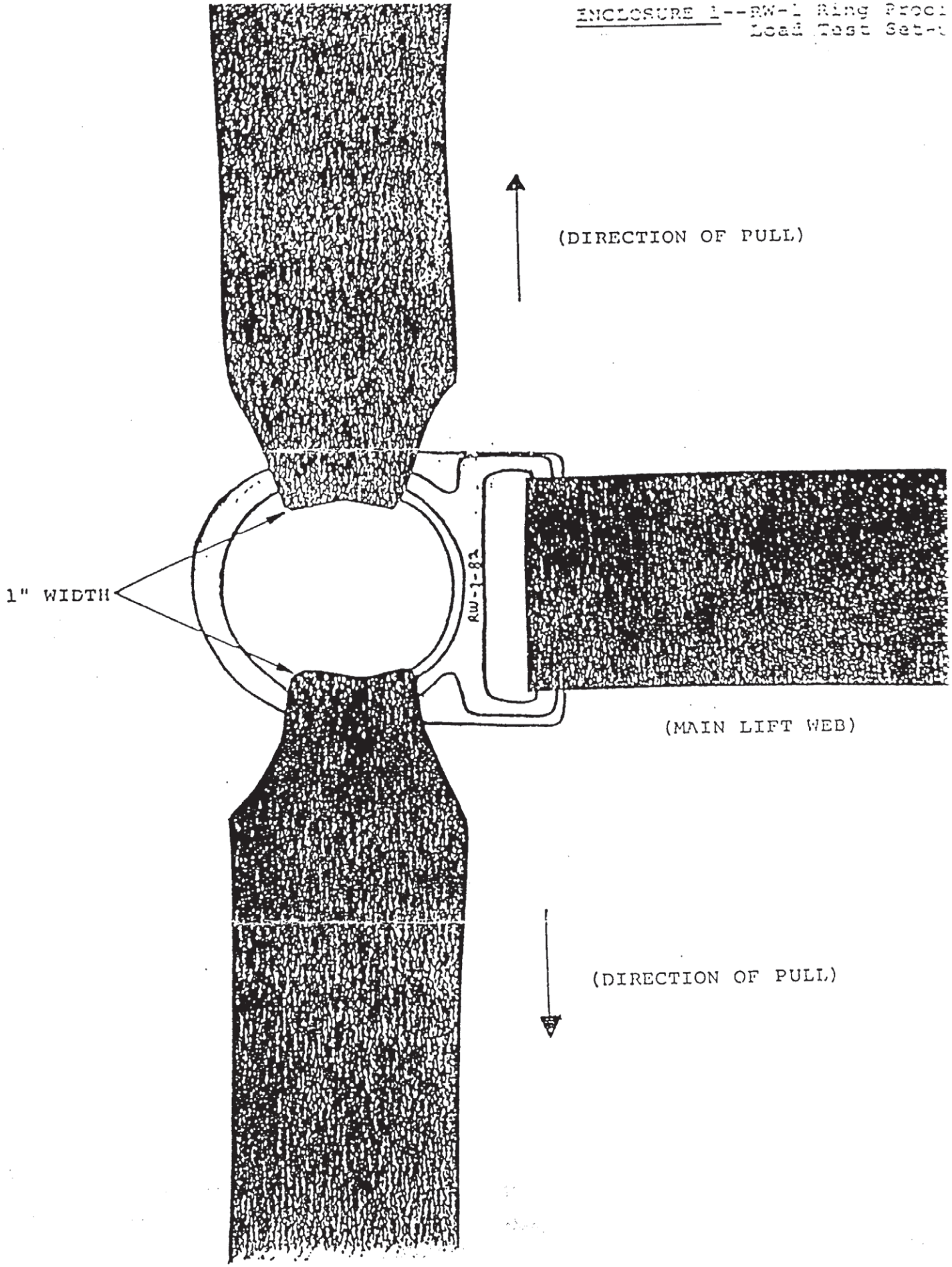
(6). In the event that a harness has only 1 acceptable ring, BOTH RINGS MUST BE REPLACED.

For further information, contact 3-Ring Inc. at (904) 73G-6721.

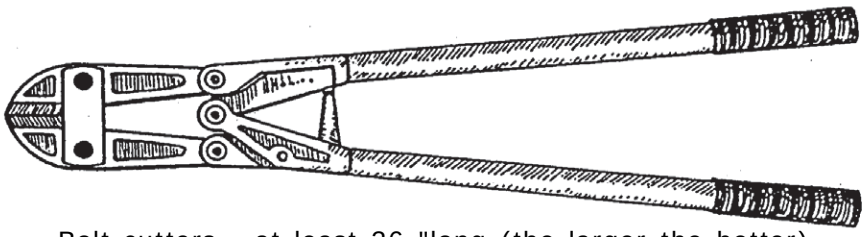
William R. Booth President

**ANY PERSON WHOSE RIG NEEDS REPLACEMENT RINGS, SHOULD CONTACT THE MANUFACTURER OF THE CONTAINER (i.e. Wonderhogs/Relative Workshop, Racers/Jump Shack, Alpha Systems/G.Q. Security).

ENCLOSURE 1--RW-1 Ring Proof Load Test Set-u



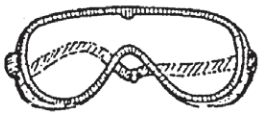
REPLACING THE RW-1-82/83 RING
Equipment needed



Bolt cutters - at least 36 "long (the larger the better). Must be for cutting hardened steel. Cutters with the marking "soft and medium metals" are inadequate for the job.

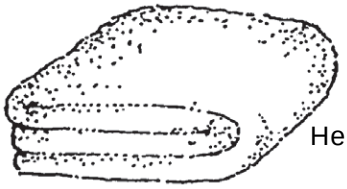
Two replacement rings (each should include main ring body and bottom

Needle nose pliers



Safety goggles

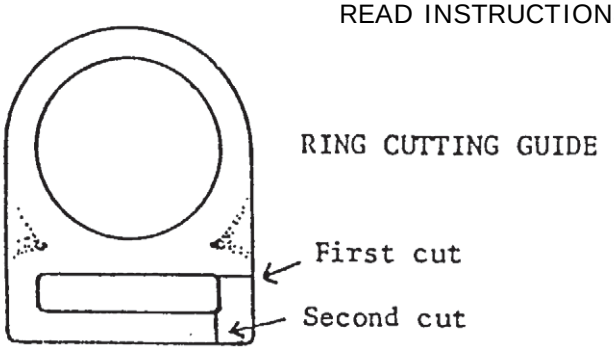
One large straight head screw driver



Heavy towel

One Phillips-head screw driver.

READ INSTRUCTIONS COMPLETELY BEFORE STARTING




Make both cuts on the same side of the ring.

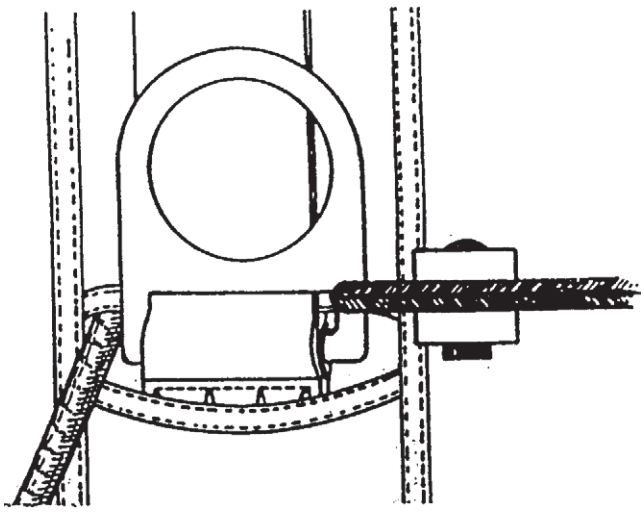
Prepare rig and working area. This operation is best done on a flat hard surface such as the floor or a sturdy workbench. Remove main risers. Lay rig flat on working area and pull straight up on ring to be cut. Keep rig and surrounding webbing as far away as possible from the rest of the rig during the entire process. Make both cuts on the same side of the ring.

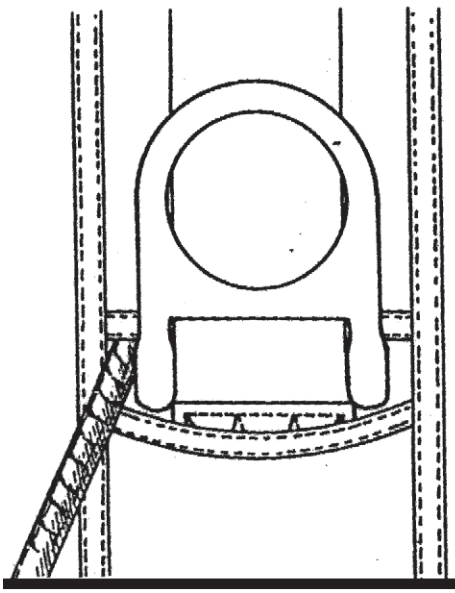
NOTE

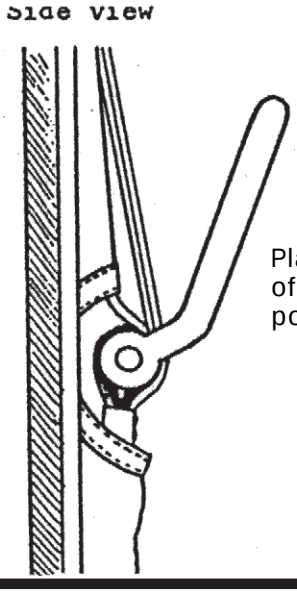
Be very careful not to damage webbing during any part of the process. Any slight nick or cut will necessitate replacing the whole side of the harness - a major expense!

First cut

Push webbing as far away as possible from the area to be cut. Use only the very tip of the bolt cutters nd set the edge at the very top of the slotted ction of the ring (see cutting guide illustration). When the bolt cutters are in place, place a neavy towel over the area to be cut. The.ring will usual ly stay put, but occasional ly pieces can go flying; the towel will keep everything in place.

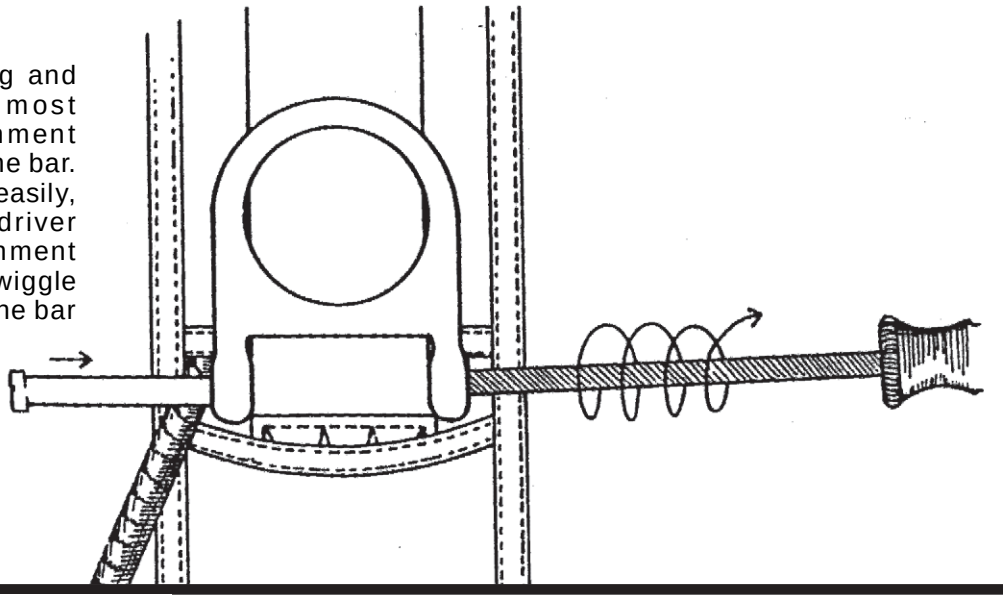


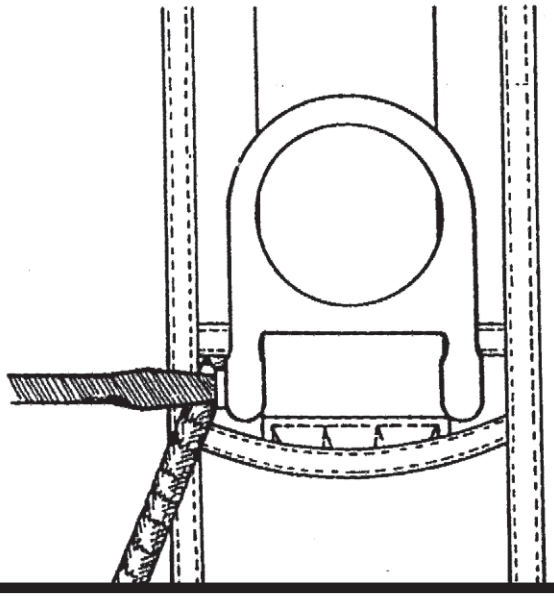





Place ring in correct position. Note angle of ring in side view; the top of the ring points back towards harness.

Insert bar through hole in ring and rina attachment loop. On most Wonderhogs, the ring attachment loop will be quite snug around the bar. To help slide the bar through easily, put the Phillips head screw driver rough the rina end and attachment loop from the other side and wiggle the screw driver while moving the bar through.





When bar is through, be sure no piece of webbing is pinched between bar and ring end. Carefully thread bar into ring end - tighten till snug (both ends of the bar should be almost flush with ring ends). Do not over tighten - this may strip threads.

NOTE: be sure bar has a small dot of greenish fibre lock on the threaded end. This helps keep it securely tightened into ring end.