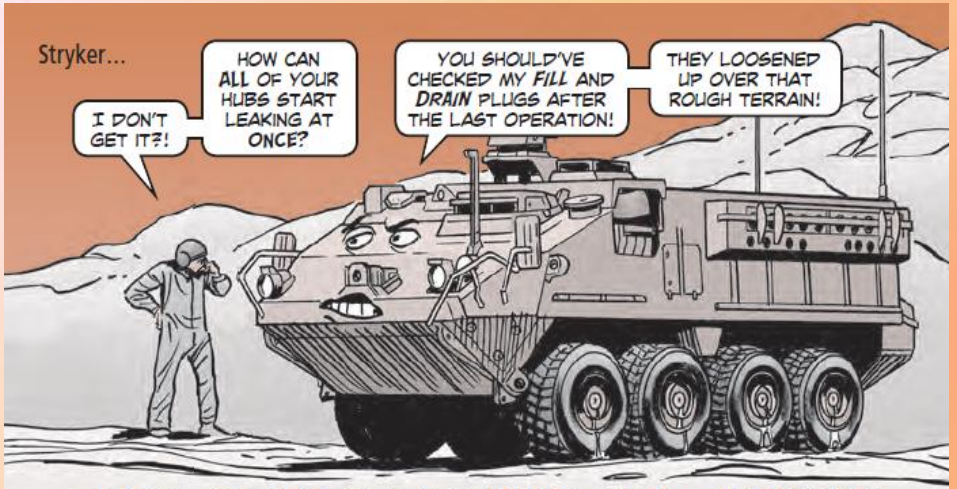


TWO STEPS TO HUB OIL CHECK

The wheel hubs on your Stryker have sight glasses for checking the oil, drivers. Seems like it oughta be an easy process then, huh?

It's a little more complicated than you might think. Checking the oil is actually a two-step process that involves oil level and oil color.

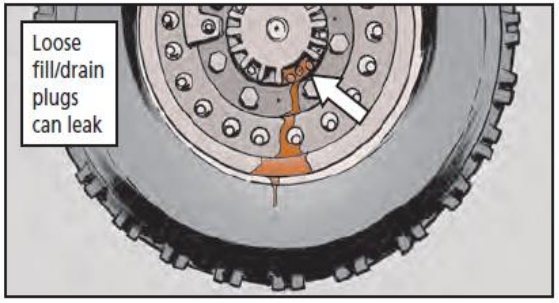
Oil Level

Wheel hub oil levels should be checked after every operation—but not **immediately** after. You need to allow about an hour for the oil to run back from the planetary gears into the hub to get an accurate reading. Do it too soon and you'll end up overfilling the hubs.

Oil level should be in upper half of sight glass

The correct oil level should be in the upper half of the sight glass, usually between $^{3}/_{4}$ and $^{7}/_{8}$ full.

Keep that oil level where it should be by checking the fill and drain plugs periodically. Sometimes those plugs can loosen during operation and allow the hub to leak. If you don't catch it soon enough, the hub can seize up.



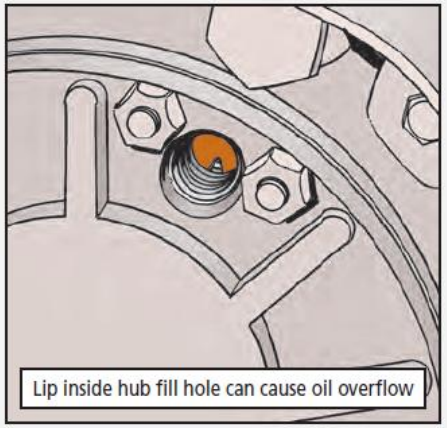
Oil Color

Oil color in your Stryker's hubs will vary. Knowing how to read the color code can head off damage.

New oil will be yellowish to clear in color. It soon turns black—usually within the first 25 miles or so. Either color works as long as the level is where it should be.

But if the oil turns milky or greenish in color, you've got a problem. Those colors mean the oil is contaminated with water and has lost its ability to lubricate. Your Stryker is NMC until your mechanic can flush the contaminated oil and refill the hub with SAE 75W90 oil.

Mechanics, make sure you go slow and easy when replacing the oil. There's a small lip inside the filler hole that makes filling the hub slow work. Go too quickly and you'll have a mess to clean up when the oil overflows.



Lip inside hub fill hole can cause oil overflow

RESTRAIN CARGO SAFELY

Dear Editor,

Securing cargo safely shouldn't happen by luck or by accident. One question I've asked others is, did you ever stop and think how valuable a lowly chain and its proper use can be?

It's very important to correctly tie down military vehicles that need to be transported. Official guidance is available to help out with this.

I wanted your readers to see these photos. There are a number of restraint problems here:

- **Improper assymmetrical tie-downs (strap on one side, chains on the other)**

- **Improper restraint method (one chain used and connecting to the transport vehicle passing through two openings, instead of two separate tie-down chains, one per opening, for added security and strength)**

Any of these issues could result in a restraint failure and a loss of load, physical damage, and injuries. This would affect equipment availability, readiness and the safety of warfighters.

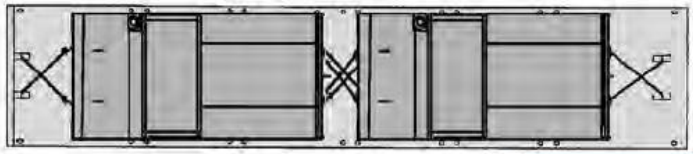
Please remind your readers that restraint guidance is available and *must* be used by anyone responsible for transportation and deployment. This is even more critical when moving items defined as transportability problem items (TPIs).

TPIs are generally large, heavy and complex items requiring extreme care and attention when transporting.

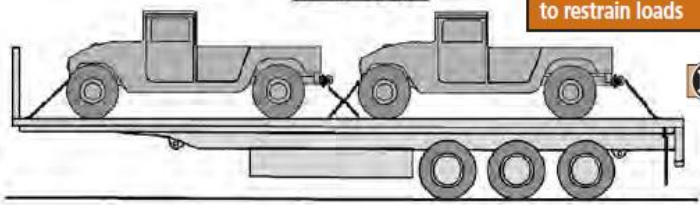
The Transportation Engineering Agency (TEA) publishes easy-to-use guidance in the form of pamphlets like SDDCTEA Pam 55-20, *Tiedown Handbook for Truck Movements*.

Also, use your vehicle's tech manuals. The instructions in these pubs must be followed to make sure you have safe movement. Otherwise, you'll end up with improper restraints that can lead to equipment damage, personnel injuries, or death.

TOP VIEW



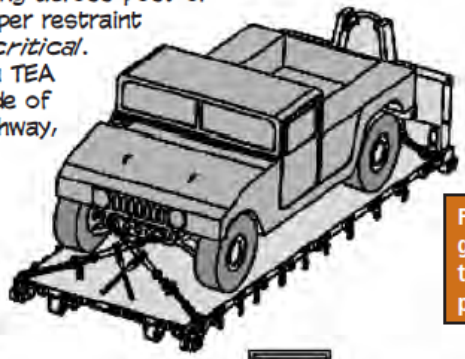
SIDE VIEW



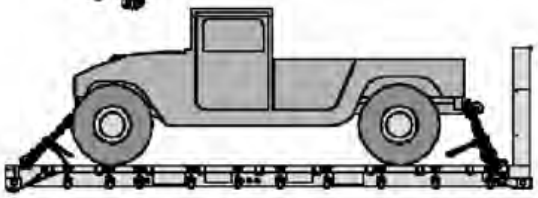
TMs show proper way to restrain loads

PS MOR

Whether you're heading across post or traveling the globe, proper restraint of military payloads is *critical*. Guidance is available in TEA pamphlets for each mode of transportation (air, highway, rail, and sea).



Follow guidance in transportation pubs



Units can order or view the pamphlets and other transportability references for free on TEA's website:

http://www.tea.army.mil/dep/transport/default.asp

While viewing the website, it's a good idea to check out TEA Pam 70-1, *Transportability for Better Deployability*. It gives a good overview of transportability. Pay special attention to the Vehicle Sizes and Weights Chart.

Mark Levine
Transportation Engineer
SDDC-TEA
Scott AFB, IL

Editor's note: *Great coverage, Mark! Readers, Para 10-1e of FM 55-30,* Army Motor Transport Units and Operations, *says: "The* ***driver*** *supervises the loading of his vehicle and ensures that his cargo is properly loaded and secured against movement. He further ensures that the load is balanced and does not exceed the vehicle capacity as noted on the data plate. He uses the vehicle tarpaulin to protect the load from the weather and pilferage. Once the driver accepts the load from the shipper, he alone is responsible for its safe delivery.* ***The driver should not accept an unsafe load and must resolve any dispute before moving.****"*

Here are some other publications related to transport that you'll want to read before moving out:

AR 55-162, Permits for Oversize Overweight, or other Special Military Movements on Public Highways in the United States

AR 600-55, The Army Driver and Operator Standardization Program (Selection, Training, Testing and Licensing)

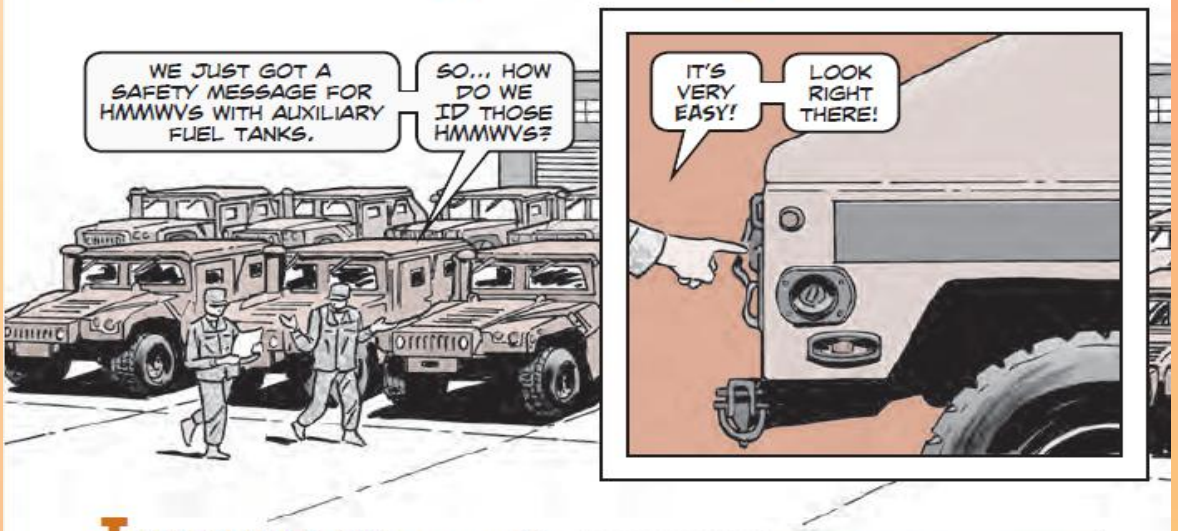
STP 55-88M14-SM-TG, Soldier's Manual and Trainer's Guide for MOS 88M, Motor Transport Operator–Skill Levels 1, 2, 3, and 4

TC 21-305-20, Manual for the Wheeled Vehicle Operator

PS END

HMMWV...

Identify Auxiliary Fuel Tanks

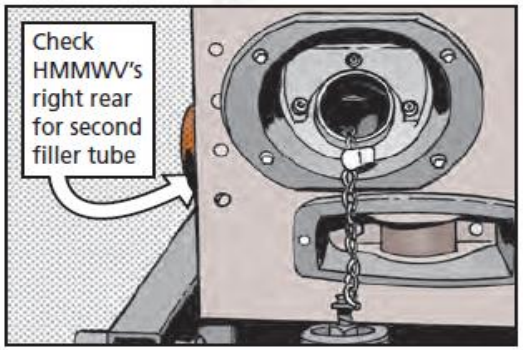


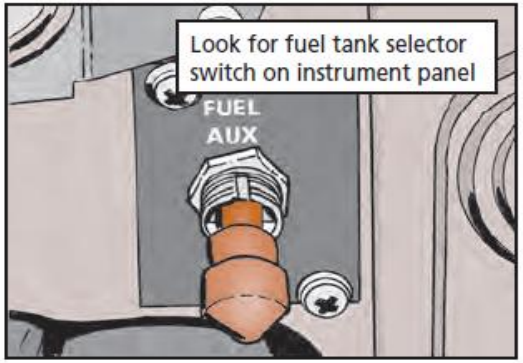
TACOM LCMC's GPA message 12-005 addressed auxiliary fuel tanks in HMMWVs with ground mobility vehicle modifications. After that safety message was released, the truck headshed got a lot of requests from the field for help identifying HMMWVs with auxiliary fuel tanks.

One quick and easy way to identify a HMMWV with the auxiliary fuel tank is to look for a second filler tube. The auxiliary filler tube is aft of the main filler tube on the rear of the HMMWV.

You can also look for the auxiliary fuel tank selector switch inside your HMMWV. It's located on the instrument panel on all HMMWVs with auxiliary tanks installed.

And if you haven't followed the instructions in the safety message, now's the time. You can eyeball it online:





https://tulsa.tacom.army.mil/safety/gpm/tacom_wn/GPA12-005.html

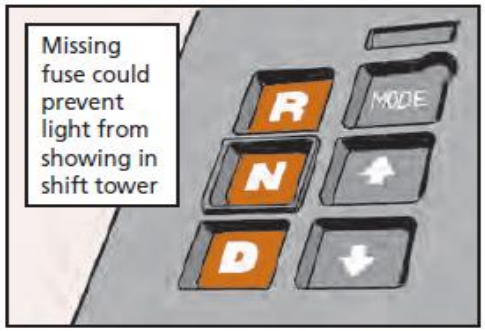
M915 FOV...

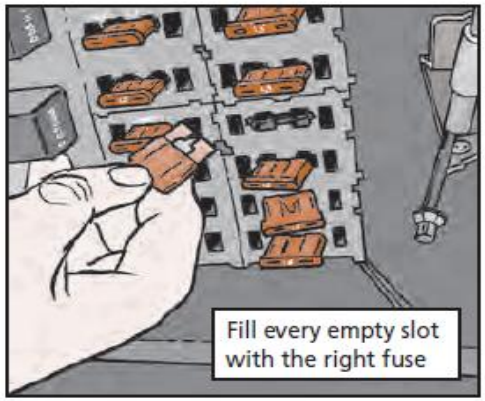
KEEP EVERY FUSE IN ITS PLACE!

Does your unit have an M915A4 truck that won't start and has no light on the shift tower? Or does the shift selector in your M915A4 truck's cab no longer shift into drive? In both cases, the problem may be a missing fuse.

The factory mislabeled some of the M915A4's fuses as spares. They're not really spares because each one is needed for your truck to run right.

The solution is to keep *all* fuses installed in the fuse panel. Be sure there's a fuse in every empty slot. Then keep extra fuses in your glove compartment. You may need them later.





Size	NSN 5920-01-
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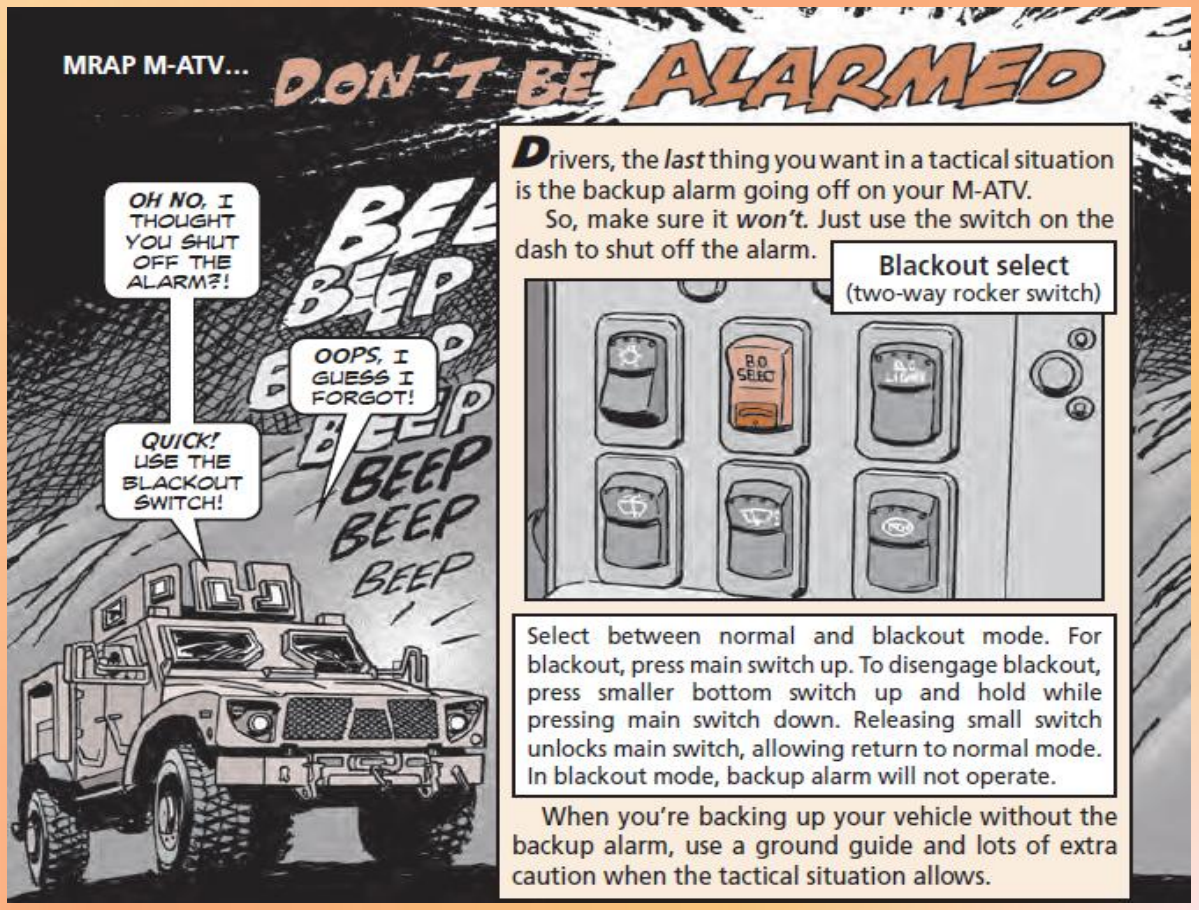
15A	085-0825
20A	123-5211
25A	149-6953
30A	188-6294



Drivers, the *last* thing you want in a tactical situation is the backup alarm going off on your M-ATV.

So, make sure it ***won't.*** Just use the switch on the dash to shut off the alarm.

Blackout select
(two-way rocker switch)

Select between normal and blackout mode. For blackout, press main switch up. To disengage blackout, press smaller bottom switch up and hold while pressing main switch down. Releasing small switch unlocks main switch, allowing return to normal mode. In blackout mode, backup alarm will not operate.

When you're backing up your vehicle without the backup alarm, use a ground guide and lots of extra caution when the tactical situation allows.

MRAP M-ATV...

HARD TO STEER

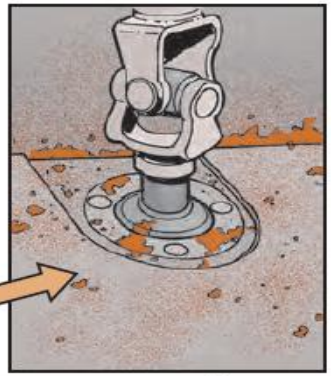
Sometimes it's hard to turn the steering wheel on the M-ATV, especially when the vehicle has been sitting for a while.

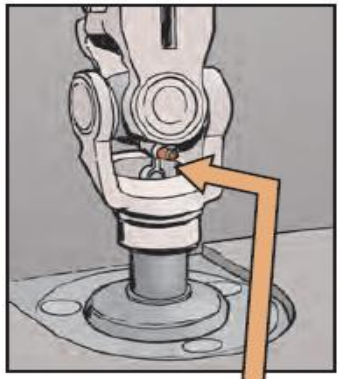
That's because wet sand and mud corrode the steering wheel shaft where it mounts into the cab's floor.

One source of wet sand and mud

Here's what you can do to make steering easy:

- Use a 7/32-in hex wrench to remove the bolts that hold the steering column plate in place. You'll find the wrench in a handy key set that comes with NSN 5120-01-473-9592.





- Use a brush or low-pressure air (30 psi) to clean the area around the steering column.
- After a good cleaning, use a dry-film lubricant spray on the steering column shaft. NSN 9150-01-260-2534 gets an 11-oz spray can.
- And while you're at it, use a grease gun and lube the shaft's U-joint with 3 or 4 pumps of grease.

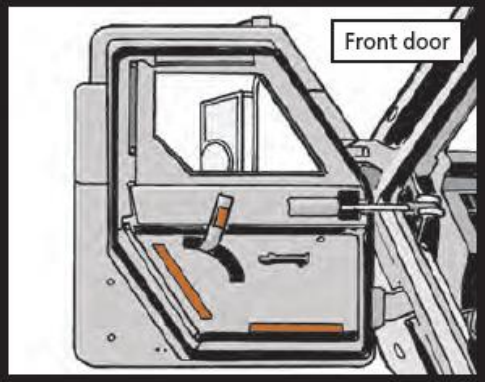
MRAP Vehicles...

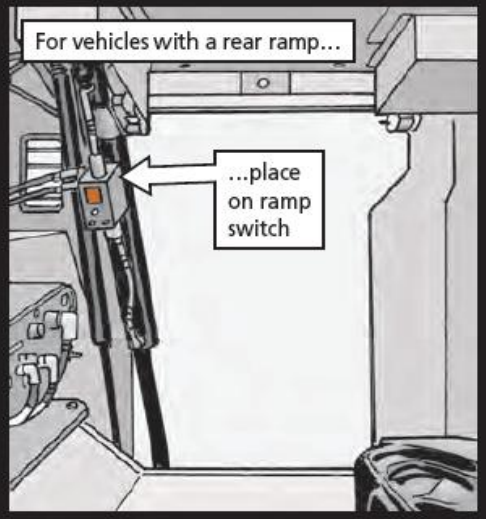
SHED SOME LIGHT

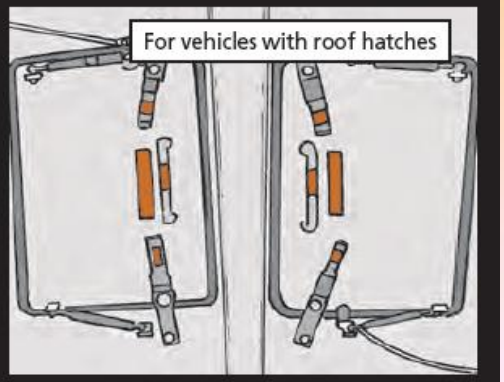
Door handles and escape hatches inside MRAP vehicles are hard to see, especially in the dark, because there's little color contrast between the handles and surrounding area.

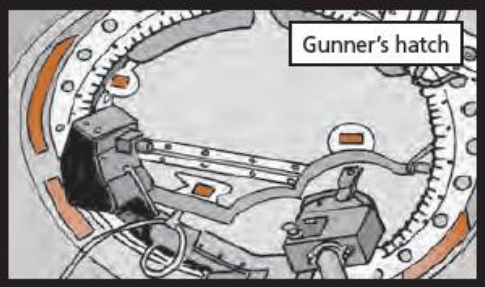
You can shed some light (or glow) on the situation by adding a strip of pressure-sensitive tape, NSN 9390-01-573-0835, in the right places.

Inside the MRAP, place the tape on the escape hatches and doors like so:

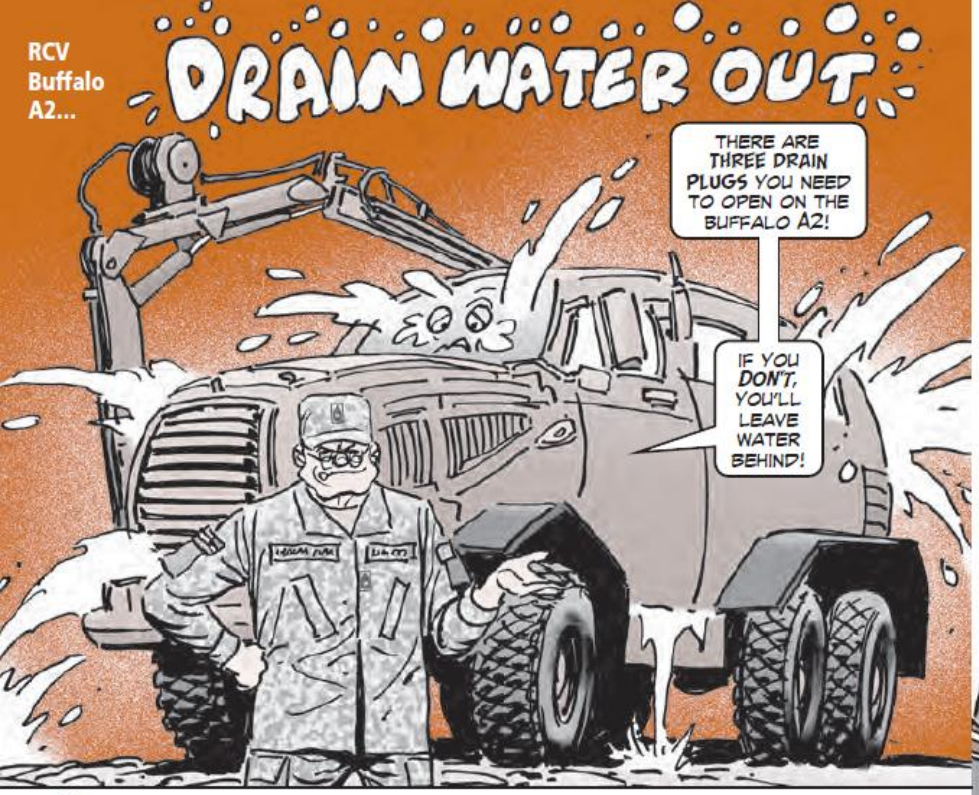






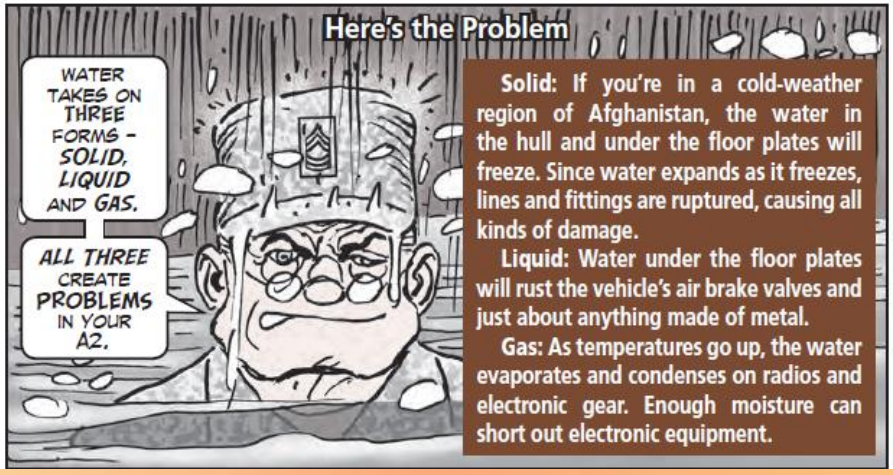


By the way, this tape works on composite and non-metallic surfaces. Just make sure you use a clean rag and alcohol wipes to clean any dirt off the area where the tape is being applied.



Crewman, water collects in the hull of your Buffalo A2 like a rain barrel at the side of a barn.

Water drips off wet boots and uniforms, trickles in from the top of the vehicle, comes in from the wash rack, or seeps in through loose drain plugs during fording.



By the way, make sure any water drained from the hull goes into a drip pan and is disposed of according to your unit's SOP. That's because any fluid leaks, like coolant, oil or power steering fluid, can end up in the vehicle's hull. So, **never** dump contaminated water down a drain or let it run on the ground.

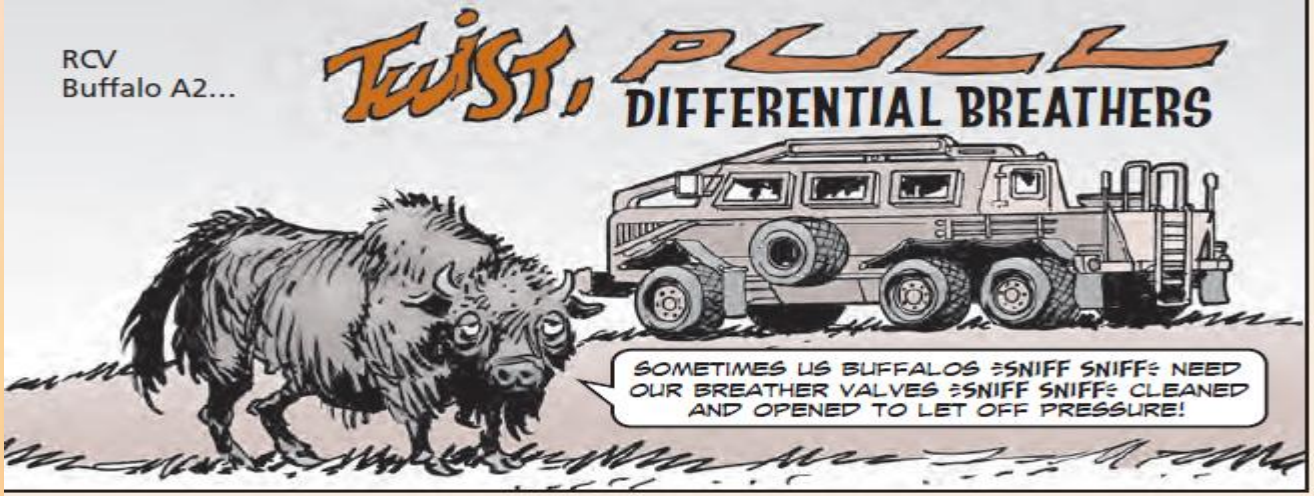
Also, you don't want water to get back in through the drain plug openings. Make sure you reinstall 'em before operation–and do it right. Plugs that are too loose will vibrate free. And plugs that are too tight are hard to open and more likely to be left closed when draining is needed.

So, apply a little anti-seize compound, NSN 8030-01-087-8254, to the threads before installing the plugs. That lets you tighten the plugs enough to keep them from vibrating loose, but makes them easier to open next time.

Just make sure you put the compound on each plug's threads and the threaded portion of the hull. That way, all the threads are coated and the plugs won't stick.

RCV
Buffalo A2...

TWIST, PULL
DIFFERENTIAL BREATHERS



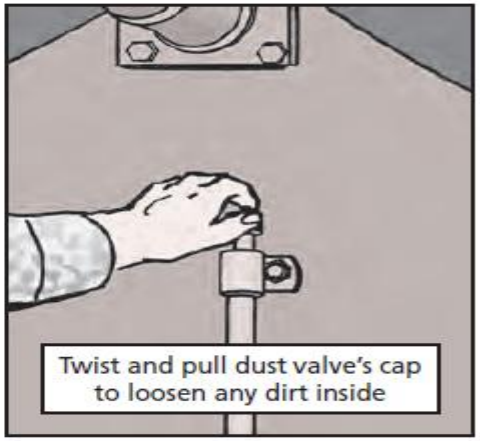
Breather valves on the Buffalo A2's front and rear differentials must be clean and open to let off pressure that builds up in those assemblies.

If a breather valve is plugged, seals blow, gear oil leaks out, and gears go, too.

Keeping the breather valves clean is simple: Twist the valve's cap to loosen any dirt stuck inside. Then pull on the cap to make sure it's moving freely. If the cap won't turn and pull up, get a new valve.

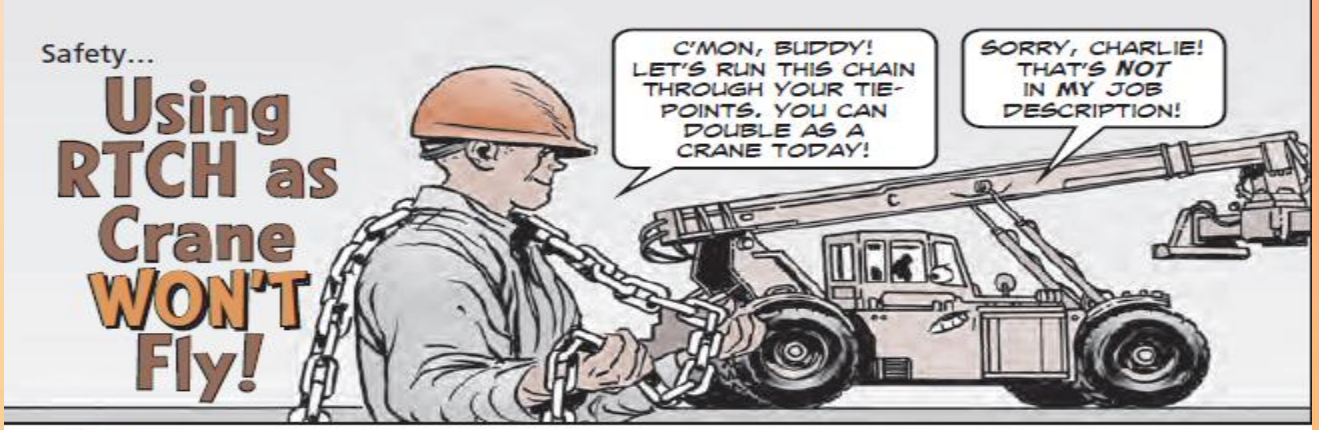
Make sure the new valve is good by blowing into the threaded end. If you can't easily blow through the breather, it won't do the job for your equipment. The cap on a good breather opens a little under ½ psi – almost no pressure at all.

Then give all breather valves the twist-and-pull test after each operation in mud or heavy dust. Your A2's differentials will live longer if you do.


Twist and pull dust valve's cap to loosen any dirt inside

Safety...

Using RTCH as Crane WON'T Fly!



The RT240 Rough Terrain Container Handler (RTCH), NSNs 3930-01-473-3998 and 3930-01-522-7364, is a nifty workhorse in the field. It's used to lift, move, stack or unstack 20-ft to 40-ft ISO containers. The RTCH can even be used as a forklift if a special forklift kit is installed.

But one thing it **isn't** is a crane. Some units are making their RTCH pull double duty as a substitute crane. They're using it to lift materials or equipment with chains, slings or straps attached to the tie-down points.

Bad idea. The RTCH's tie-down points are only meant to secure the top handler during transportation. They were never designed to pull or lift materials or equipment.

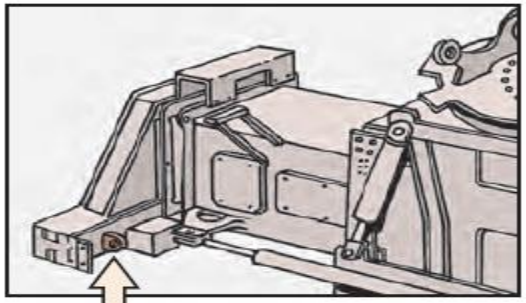
Misusing the RTCH can result in a load dropping unexpectedly and damaging equipment, or even worse, injuring or killing someone. The problem is widespread enough that TACOM LCMC issued a safety of use message prohibiting using the RTCH as a crane.

See TACOM SOUM 12-002 online for details:

https://tulsa.tacom.army.mil/safety/soum/tacom_wn/SOU12-002.html

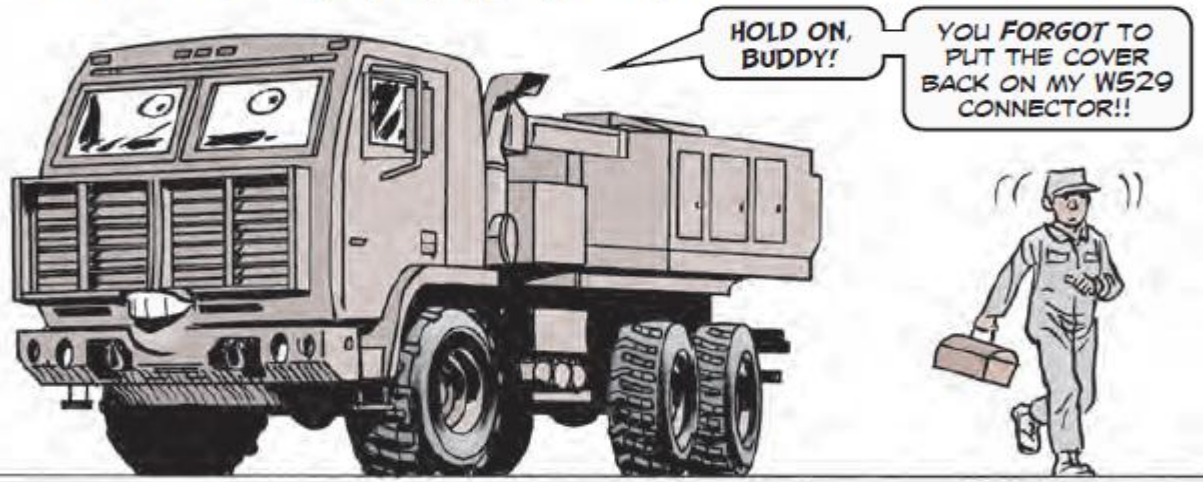
Questions? Contact TACOM LCMC's MHE equipment specialist, William Roach, at DSN 330-6129, (586) 467-6129, or email:

william.j.roach.civ@mail.mil



One of the four top handler tie-down points being improperly used for lifting. Tie-down points should only be used to tie/secure the RTCH top handler during transportation

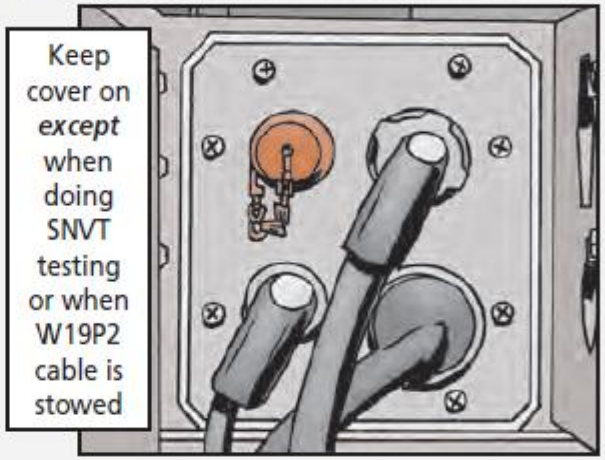
COVER STOPS CABLE FAILURE



Since 2007, the HIMARS' W529 cable assembly has failed 38 times. Half those failures were in 2011. The W529 is failing because crews fail to install its cover.

The W529 cable connector has a cover that should always be installed except when the SNVT test is being run or when the W19P2 cable is stowed. When the test is over, the cover needs to be put right back on and left there.

Without the cover, the connec-tor has no protection against moisture or backblast from rockets firing. Corrosion eats away at the connector's pins and soon there's no electrical connection.



So do your HIMARS a favor and use the W529 cover. And check for the cover during your weekly PMCS. Order a new one through your Lockheed Martin rep with P/N MS27502B17N if it's missing.

MORE ON SLAT DANGERS!

Dear Editor,

We saw your article in PS 700 (Mar 11) on the dangers of opening and closing the Fox's rear door when the Fox is equipped with slat armor. Through our experience supporting the Fox here at Ft Leonard Wood, we would like to offer these comments and suggestions:

- With the slat armor, the door weighs close to 100 pounds. Plus there are only about 1½ inches of clearance between the door slats and the slats on each side of the door. So you need to not only worry about the door falling and conking someone on the head, which happened here, but also the danger of a Soldier getting his fingers caught between the slots if he tried to catch a falling door. He could easily lose fingers if that happened.
- We've found the best way to close the door is to have one person sit on the door entrance's edge, while another stands outside to the side of the door. The person sitting releases the locking handle and then both guide the door down while maintaining upward pressure. The person outside needs to stay to the side, out of the door's path.

- To open the door, the safest way is to push from the inside with both hands until you feel the door lock in the open position. Of course, you want to make *very* sure the door has locked in place before you release it.
- PS 700 said the fix for the additional weight from the slat armor was to have your Fox field rep adjust the gas cylinder that controls the upper rear door. That's a good idea, but you should still use these procedures for opening and closing the rear door in case the gas cylinder fails.

Rob Pardun
Greg Tipton
TACOM Maintenance Support
Ft Leonard Wood, MO