

Issue 621

PS

August
2004

THE PREVENTIVE MAINTENANCE MONTHLY

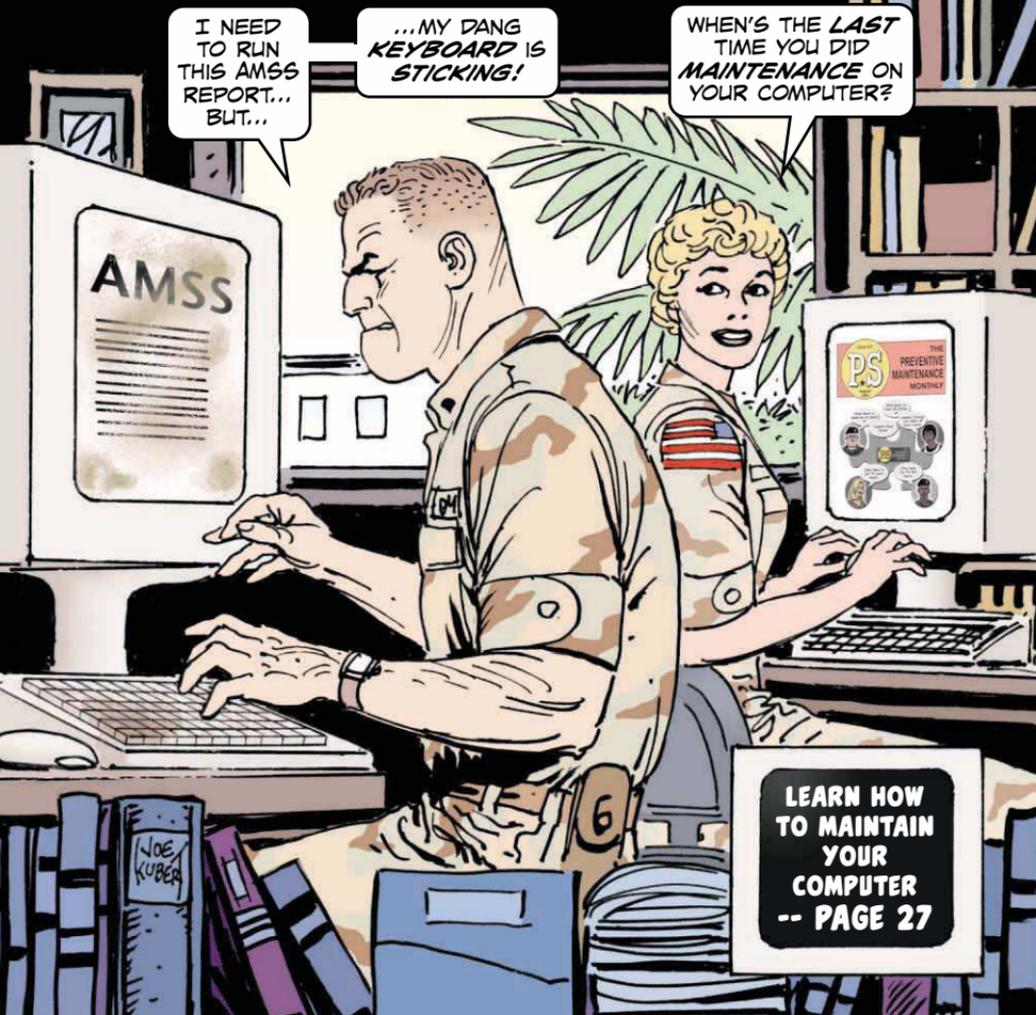
TB 43-PS-621

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Distribution is
Unlimited

I NEED
TO RUN
THIS AMSS
REPORT...
BUT...

...MY DANG
KEYBOARD IS
STICKING!

WHEN'S THE LAST
TIME YOU DID
MAINTENANCE ON
YOUR COMPUTER?



LEARN HOW
TO MAINTAIN
YOUR
COMPUTER
-- PAGE 27

GIVE IT TIME!



To do a good, thorough PMCS takes time. In the case of something like a tank, helicopter or missile system, PMCS takes lots of time, as in hours.

Time is in short supply in most units. There's often too much work for too few people. And sometimes operators and mechanics aren't given enough time to give their equipment the attention it needs and deserves. They rush through PMCS in order to finish it in the time they've been given. That out-of-the-way grease fitting is overlooked or the hard-to-reach hose is not checked for cracks.

In some ways, a rushed PMCS can be worse than no PMCS. At least with no PMCS, you know your equipment is not ready. A rushed PMCS can give you false confidence in your equipment. You hit the road thinking you're ready for action when disaster is just over the horizon because of poor maintenance.

So give PMCS the time it deserves. How much time? Sometimes it's hard to tell. The TMs don't usually spell out time requirements. The easiest way to figure the time needed is to have an experienced soldier do a thorough PMCS and time him. Then make sure at least that amount of time is allowed for PMCS.

Just give it time, commanders and senior NCOs, time enough to do a good PMCS.



TB 43-PS-621, The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all soldiers assigned to combat and combat support units and all soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user. Masculine pronouns may refer to both genders.

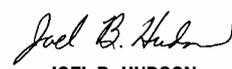
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You are invited to send PS your ideas for improving maintenance procedures, questions on maintenance and supply problems and questions or comments on material published in PS.

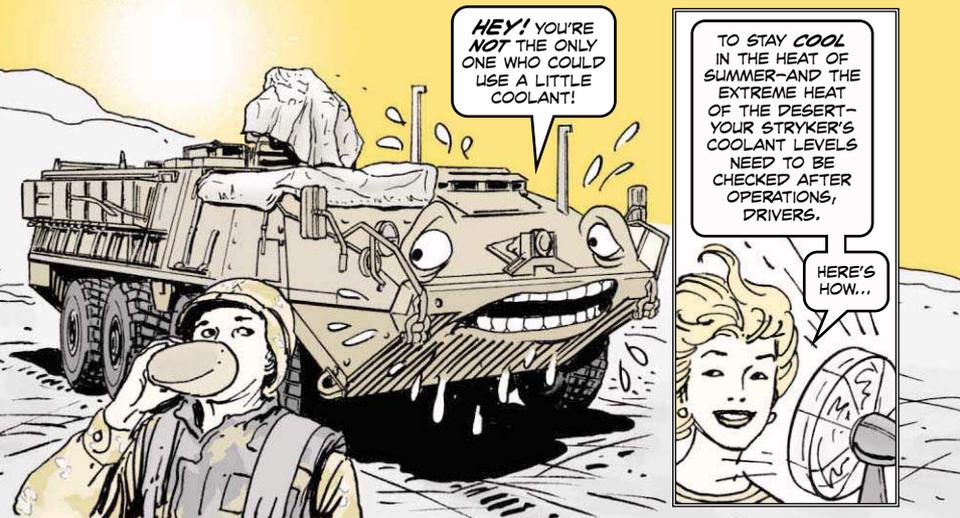
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General, United States Army Chief of Staff

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Or e-mail to:
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KEEP YOUR COOL!



Open the front service and engine cover hatches and eyeball the sight glass on the surge tank. The sight glass should be completely full. If it's not, carefully remove the pressure cap on top of the surge tank and add coolant until the sight glass is full.



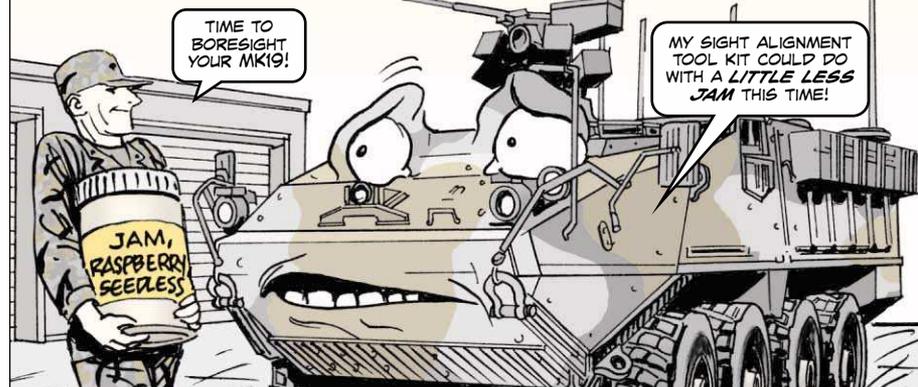
Make sure you let the engine cool before removing the cap during an after-operations check. Otherwise, hot coolant can spray from the opening, causing severe burns. It's also a good idea to wear protective gloves and chemical goggles to protect your eyes and skin.

Next, check the coolant overflow reservoir. If the coolant isn't above the FULL COLD mark, remove the cap and add coolant.



The right amount of coolant in the surge tank and overflow reservoir will help your Stryker keep its cool when the heat is on.

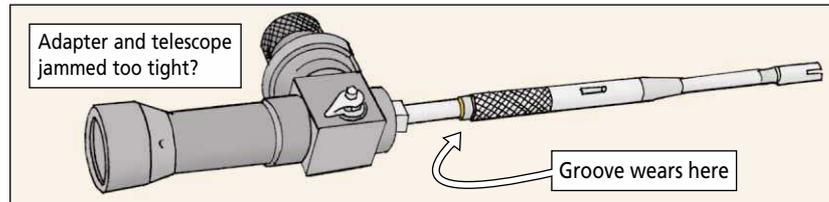
USE LESS JAM ON BORESIGHT



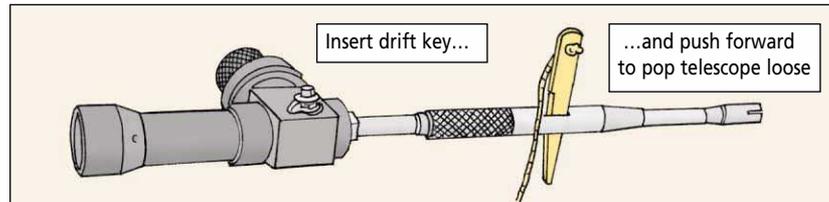
Boresighting the MK19 or .50-cal machine gun on your Stryker is easy with the sight alignment tool kit, NSN 1240-01-512-4531. That is unless you're too heavy-handed.

Some operators have a tendency to jam the boresight telescope, NSN 1240-01-490-5099, too tightly into the MK19 or .50-cal adapter. Since it's hard to get out, they end up twisting the telescope loose.

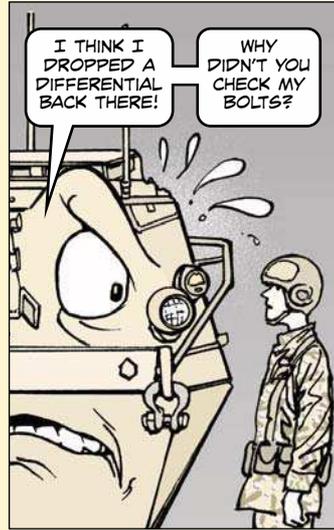
Enough of that wears a small groove around the shaft. The telescope starts wobbling when it's inserted into an adapter and boresighting becomes a lot tougher.



Your best bet is to avoid jamming the telescope and adapter together. If you do have problems getting them apart, use the drift key that comes with the tool kit. Just slip the drift key in the slot on the adapter and push it forward to pop the telescope free.



BEWARE OF BOLT BUSTERS



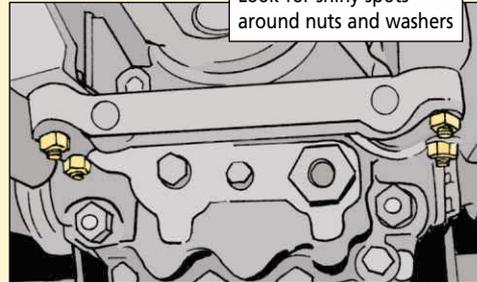
Checking the differential bolts on your Stryker is a before- and after-operation PMCS check, drivers.

And it's an important one. Vibration and collisions with brush, rocks and other debris can be a bolt buster. And that's enough to make you lose a differential.

Each differential has 8 bolts, nuts and washers holding it in place. Each vehicle has 4 differentials, so you have a total of 32 sets of hardware to check.

Look for shiny spots around the nuts and washers that indicate loosening bolts. If you find one, report it.

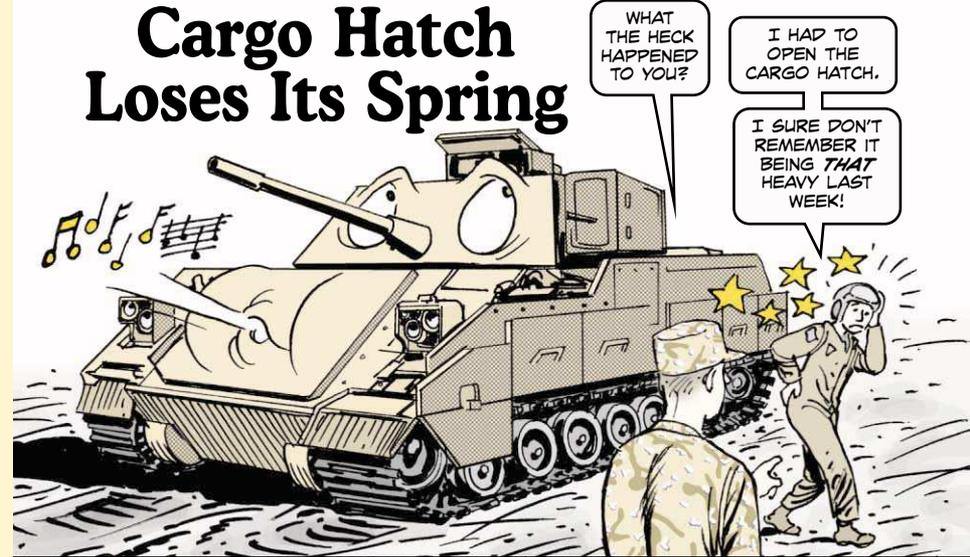
Look for shiny spots around nuts and washers



Mechanics, add a few drops of sealing compound, NSN 8030-01-014-5869, to the bolt threads before torquing the nuts to 58-64 lb-ft. That'll help keep the nuts in place.

Replace missing bolts with NSN 5305-01-297-1865. A new nut comes with NSN 5310-01-155-3858 and a new washer with NSN 5310-01-265-6333.

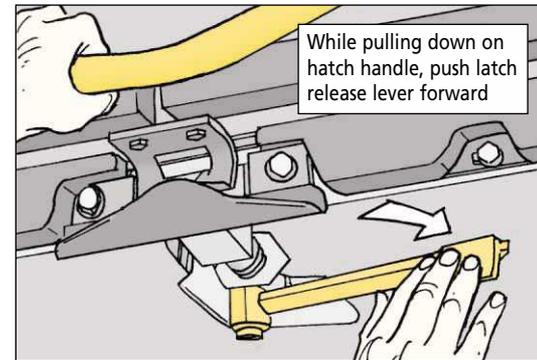
Cargo Hatch Loses Its Spring



Crewmen, the cargo hatch on your M2/M3-series Bradley is quite heavy. That's why it comes equipped with a leaf spring system to help open it to the pop-up, TOW load, upright and full-open positions.

Unfortunately, like everything else, those leaf springs are going to wear out or break. When that happens, the leaf springs don't pick up any of the weight. And you can hurt your back trying to do it all on your own.

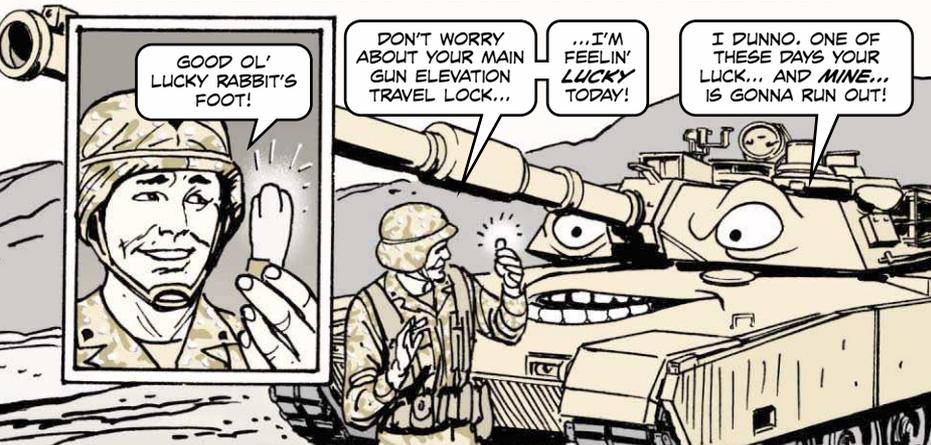
To test the leaf springs, pull down on the hatch handle and push the latch release lever forward. Slowly release the downward pressure on the hatch handle. The hatch should move to the pop-up position.



IF THE HATCH *DOESN'T* MOVE TO THE POP-UP POSITION, LET YOUR MECHANIC KNOW. HE'LL REPLACE THE LEAF SPRINGS USING NSNs 5360-01-388-1565 AND 5360-01-388-1523.



HOW LUCKY ARE YOU FEELIN'?



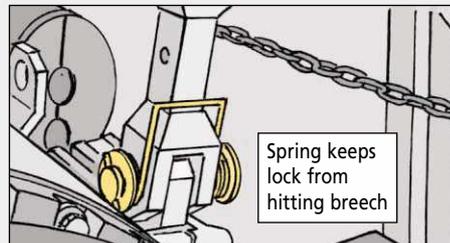
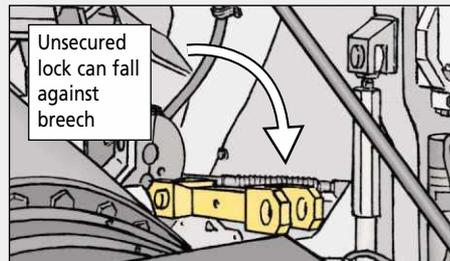
For careless tankers, pure luck is the only difference between a main gun elevation lock that works and one that creates an unsafe tank.

Careless tankers don't pin the lock to the gun mount assembly bracket after releasing the cannon from the stowed position.

If you're lucky, the lock will fall forward out of the way. As luck would have it, though, it often falls back against the breech ring when the main gun is fired. As the main gun moves back into battery, the breech ring hits the travel lock and shears the mounting bracket from the main gun cradle.

When that happens, safety is jeopardized for both the crew and mechanics. Several maintenance functions rely on this lock to keep crewmen and mechanics out of harm's way.

That little slip up will cost you a lot of down time since a depot-certified welder will have to come to the tank to make repairs. But even worse, your unit has to fork over \$30,000 for a new main gun cradle.



Mechanics, you can install a very low cost insurance policy by adding a spring to the lock. The spring forces the lock to the stowed position, keeping it away from the breech ring.

Here are the parts you'll need:

Size	NSN
Spring	5360-01-384-5338
Washer	5310-01-384-4231
Pin	5315-01-385-7871
Cotter pin	5315-01-378-7858

Here's how to put the parts together:

1. Remove the old cotter pin and straight-headed pin.
2. Place the new spring over the elevation lock.
3. Slip a washer over the new pin and slide the pin through the spring and lock.
4. Place another washer over the open end of the pin.
5. Secure the pin in place with the new cotter pin.

When you're finished, make sure the chain attached to the lock's quick-release pin is short enough to keep the pin from getting caught under the lock. Remove a few links if necessary.

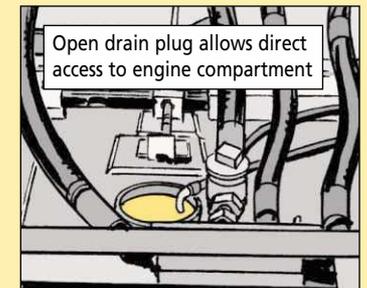
Plates and Plugs in Place?



The air filters on your recovery vehicle and AVLB won't be worth a hill of beans if the vehicle's hull access plates and drain plugs aren't installed properly.

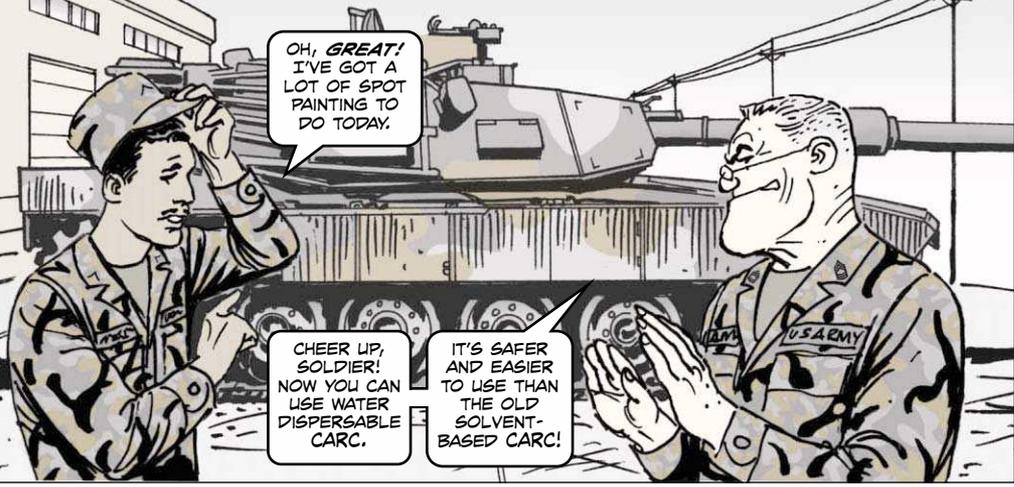
A loose or missing plate or plug lets the vehicle's fans pull dust directly into the engine compartment. That's a near certain death sentence for the engine and transmission, especially for vehicles deployed to Southwest Asia.

Before leaving on the next mission, take a close look under your vehicle. If any of the access plates or drain plugs are loose or missing, report 'em. If a drain plug is just open, close it!



[Click here for a copy of these articles to email to a friend](#)

NEW CARC EASIER, SAFER TO USE



THERE'S A NEW CARC IN TOWN AND YOU'RE GOING TO FIND IT A WHOLE LOT BETTER TO USE THAN THE OLD STUFF.

IT'S CALLED WATER DISPERSIBLE (WD) CARC AND THE KEY WORD IS **WATER**.

WD CARC CONTAINS WATER AND IS THINNED WITH WATER.



The Differences

There are a lot of differences between WD CARC and the old solvent-based CARC. And you'll be very happy with most of 'em.

- **Solvent content.** The solvent content of WD CARC is less than half that of solvent-based CARC. It also contains no hazardous air pollutants.
- **Compatibility.** Since WD CARC is fully compatible with all existing CARC primers and topcoats, you can use it to touch up a vehicle that's been painted with solvent-based CARC.
- **Flexibility.** WD CARC is more flexible after application. That means fewer problems with chipping and cracking.



- **Mar resistant.** WD CARC is more durable and doesn't scratch as easily as the old CARC. That means less time spot painting to fix scratches and scrapes.



- **Weather resistant.** WD CARC is much more durable in all weather conditions. In fact, tests have shown that WD CARC can last up to twice as long as the old solvent-based CARC.



- **Color stability.** WD CARC doesn't fade like the old CARC. So when you do have to spot paint, you won't have to worry about the colors not matching.



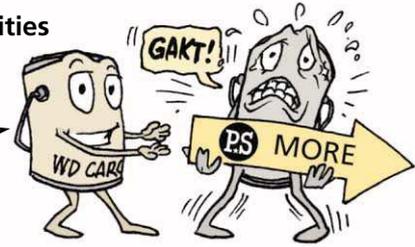
- **Cost.** WD CARC does cost a little more than the old CARC, but you won't need as much. Tests have shown that up to one-third less paint is needed during spray application.



The Similarities

Although WD CARC is water-based, the **personal protective equipment required during spray and brush application remains the same as for solvent-based CARC.**

TURN THE PAGE TO LEARN WHAT YOU'LL NEED!



- Clothes that cover all your skin. Coveralls work well.
- Boots and rubber gloves.
- Face shield or splash goggles to protect your eyes from paint.

• Respiratory protection. A respirator—not just a dust mask—is always required when spray painting with WD CARC. However, depending on the conditions and location for spot painting with a brush, you may or may not need a respirator. Contact your local occupational safety and health office to perform an evaluation of your work area.

If a respirator is required, they'll do a baseline medical evaluation, fit-test you for the proper respirator and train you in its use.

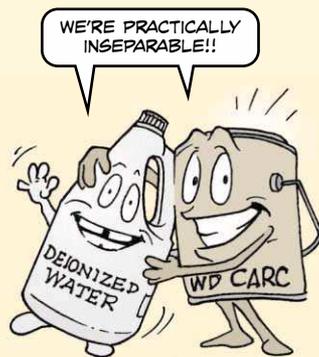


Mixing

WD CARC comes in two-component kits that have to be mixed before use. The mixing ratio is two parts of component A to one part of component B.

Once the two components are thoroughly mixed, you can thin the paint by adding up to one part deionized (or distilled) water to four parts of the mixed paint. You may want to thin a little less for brush painting. Again, you must thoroughly mix the paint to ensure the water and both components are completely blended.

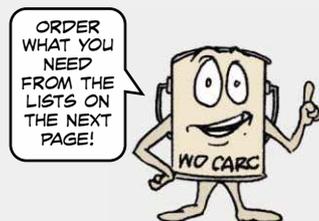
Be careful not to over thin with water since that will make the paint unusable.



WD CARC NSNs

There are two types of WD CARC. Type I is better than the original CARC but contains silica-based extender pigments that are almost identical to those used in solvent-based CARC.

The extender pigments in Type II are replaced by small spherical beads. These beads are the main reason for the paint's improved performance properties and make it the recommended choice.



Type I WD CARC			
Color	Federal Standard 595 No.	Kit Size	NSN 8010-01-492-
Green 383	34094	3-pt	6637
		3-qt	6638
		3-gal	6639
		15-gal	6640
Brown 383	30051	3-pt	6641
		3-qt	6642
		3-gal	6643
		15-gal	6644
Tan 686A	33446	3-pt	6645
		3-qt	6646
		3-gal	6648
		15-gal	6649
Black	37030	3-pt	6650
		3-qt	6651
		3-gal	6652
		15-gal	6654
Aircraft green	34031	3-pt	6655
		3-qt	6656
		3-gal	6657
		15-gal	6658
Aircraft gray	36300	3-pt	6659
		3-qt	6660
		3-gal	6661
		15-gal	6663

Type II WD CARC			
Color	Federal Standard 595 No.	Kit Size	NSN 8010-01-493-
Green 383	34094	3-pt	3168
		3-qt	3169
		3-gal	3170
		15-gal	3171
Brown 383	30051	3-pt	3172
		3-qt	3173
		3-gal	3174
		15-gal	3175
Tan 686A	33446	3-pt	3176
		3-qt	3177
		3-gal	3179
		15-gal	3180
Black	37030	3-pt	3182
		3-qt	3183
		3-gal	3190
		15-gal	3191
Aircraft green	34031	3-pt	3192
		3-qt	3193
		3-gal	3194
		15-gal	3195
Aircraft gray	36300	3-pt	3196
		3-qt	3197
		3-gal	3198
		15-gal	3199

WD Primer NSNs

The military specification for solvent-based CARC (MIL-C-46168) will be cancelled at the end of 2004 and officially replaced by WD CARC (MIL-DTL-64159).

Water dispersible primer is also available to prep bare metal before painting. The white primer listed is lead- and chromate-free. The light green primer is lead-free, but contains chromate. Follow the instructions that come with the primer.

WD Primer		
Color	Size	NSN 8010-01-
White	1 1/4-qt	193-0519
White	1 1/4-gal	193-0520
White	5-gal	193-0521
Light green	1-qt	218-0856
Light green	1-gal	218-7354

More Info

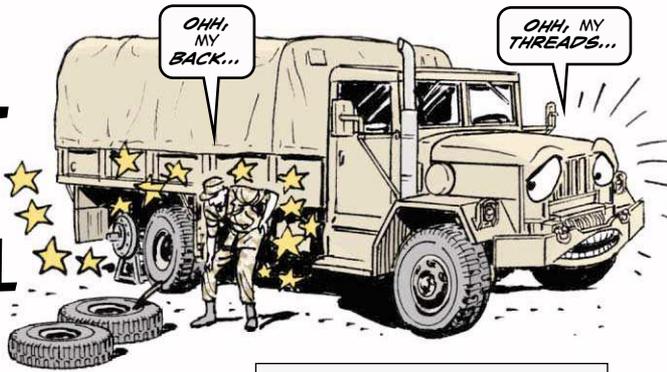
You'll find more information about WD CARC—including specifications and POCs—at the U.S. Army Research Laboratory web site:

<http://www.arl.army.mil/wmrd/coatings/index.html>



Tactical Wheels...

NO DRIFT WITH WHEEL LIFT



Mechanics, not getting everything lined up when you wrestle a truck's wheel and hub assembly back onto an axle can cause axle damage.

That damage includes mangled threads, leaky seals and leaky bearings!

Head off wheel and axle damage as well as a sore back by using the wheel lift, NSN 4910-00-554-5983, from the Common shop sets.

Even when you use the lift, get a buddy to help you. An extra pair of eyes can make sure everything is lined up.

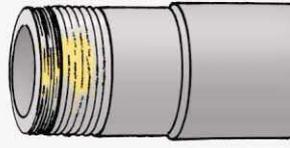
So what about repair parts NSNs? There are none.

You can get parts by writing to:

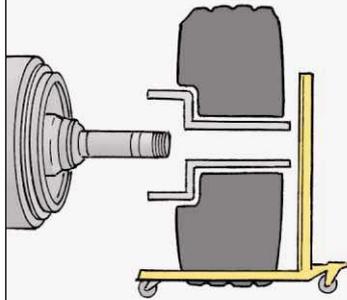
Nestor Sales LLC
7337 Bryan Dairy Road
Largo, FL 33777

Or you can call them at (727) 544-6114. Ext. 347 gets the government sales and repair parts office.

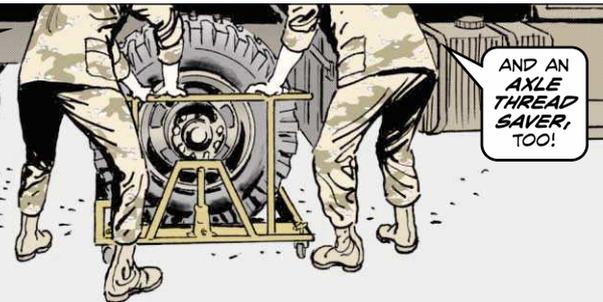
Poor alignment causes bunged-up threads



Wheel lift makes alignment easy



THIS WHEEL LIFT SURE IS A BACK SAVER!



AND AN AXLE THREAD SAVER, TOO!

HEMTTs...

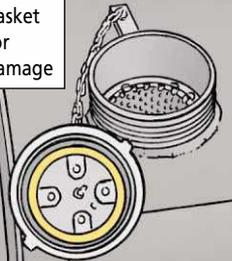
AVOID THE FUEL CAP FOLLIES



Before you screw the fuel cap back in place on your HEMTT, take a look at the cap's gasket, operators.

Dirt and sand around the rim of the filler neck—and just plain old wear and tear—can cut, gouge and wear away the gasket. Enough damage lets dirt, sand and water get inside your fuel tank.

Check gasket for damage



If the gasket's damaged, order a new fuel cap, NSN 2590-01-165-0763. The gasket itself has no replacement.

BRIEFLY SPEAKING...



HMMWV Turnbutton

NSN 5325-00-823-5999 gets the turnbutton fastener that's used to secure the soft cover to the vehicle's bow enclosures. This NSN replaces the parts info shown as Item 11, Fig 318 of TM 9-2320-280-24P-1.

TURN IN FITS

If your motor pool has a fuel injection pump test stand (FITS), NSNs 4910-01-194-7667 or 4910-01-316-6176, that's no longer needed or is unserviceable, TACOM-Rock Island would like to know about it. They have a contract to upgrade FITS and they need test stands. Contact TACOM-RI at DSN 793-5074 / (309) 782-5074 or email AMSTA-LC-CT@ria.army.mil

EVERYTHING YOU

NEED FOR MOUNTING

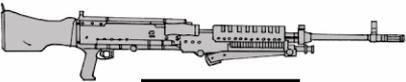
UNITS SOMETIMES HAVE *DIFFICULTY* FIGURING OUT WHAT ALL THEY NEED TO MOUNT THEIR MACHINE GUNS.
THE DIFFICULTY HAS ENDED.



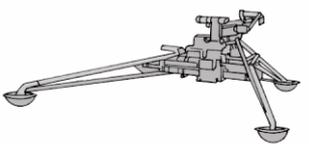
MAJ DON HURST, WHO LEADS TACOM-ROCK ISLAND'S MACHINE GUN MOUNT TEAM, HAS PUT TOGETHER THESE CHARTS.

THEY LIST WHAT IS *REQUIRED* TO MOUNT YOUR M240B, M249, MK 19, AND M2 MACHINE GUNS.

M240B Tripod

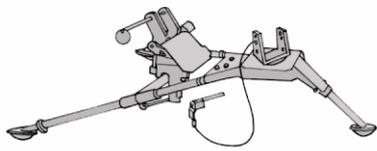


USE EITHER



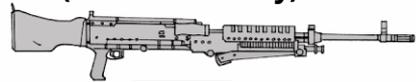
M192 lightweight ground mount, NSN 1005-01-503-0141

OR



M122A1 machine gun tripod mount, NSN 1005-01-433-1617

M240B HMMWV Pedestal (M998-series only)



USE



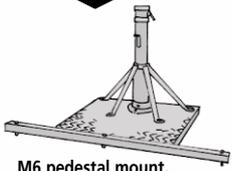
ammo adapter bracket assembly, NSN 1005-01-431-8324
deflector kit, NSN 1005-01-468-0552

AND



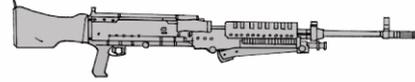
M197 Machine gun mount, NSN 1005-01-413-4098

AND



M6 pedestal mount, NSN 1005-01-411-6341

M240B Vehicle Ring Mount



USE



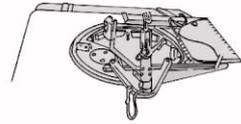
ammo adapter bracket assembly, NSN 1005-01-431-8324
deflector kit, NSN 1005-01-468-0552

AND



M197 Machine gun mount, NSN 1005-01-413-4098

and then choose one of the following:



M1025/M1026/M1114 HMMWV pintle adapter, NSN 3120-01-188-5082

OR



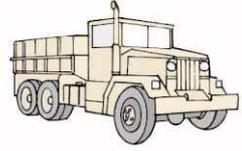
M66 machine gun mount ring, NSN 1005-00-701-2810

OR



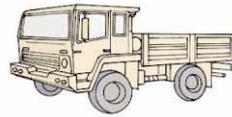
lightweight mounting kit for 900-series 5-ton, NSN 1005-01-432-3339 (kit includes mount ring)
cab reinforcement kit, NSN 2590-01-436-9144

The M66 will work with any of the following:



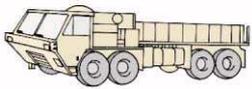
800-series 5-ton mounting kit, NSN 1005-01-226-4589

OR



LMTV and FMTV mounting kit, NSN 1005-01-381-5431

OR



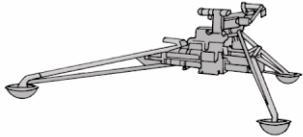
HEMTT mounting kit, NSN 2590-01-220-6377

PLS mounting kit, NSN 1005-01-363-2502 (both the HEMTT and PLS mounting kits include the M66 mount ring.)

M249 Tripod

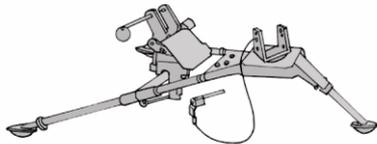


USE EITHER



M192 lightweight ground mount,
NSN 1005-01-503-0141

OR



M122A1 machine gun tripod mount,
NSN 1005-01-433-1617

M249 HMMWV Pedestal (M998-series only)

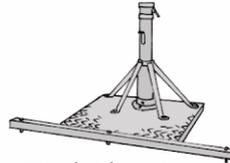


USE



M197 Machine gun mount,
NSN 1005-01-413-4098

AND



M6 pedestal mount,
NSN 1005-01-411-6341

M249 Vehicle Ring Mount

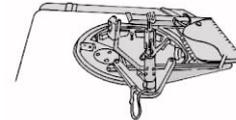


USE



M197 Machine gun mount,
NSN 1005-01-413-4098

and then choose one of the following:



M1025/M1026/M1114
HMMWV pintle adapter,
NSN 3120-01-188-5082

OR



M66 machine gun mount ring,
NSN 1005-00-701-2810

OR



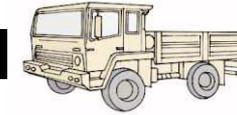
lightweight ring
mounting kit
for 900-series 5-ton,
NSN 1005-01-432-3339
(kit includes mount ring)
cab reinforcement kit,
NSN 2590-01-436-9144

**The M66 will
work with
any of the
following:**



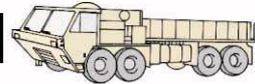
800-series 5-ton mounting kit,
NSN 1005-01-226-4589
cab reinforcement kit,
NSN 2590-01-322-2694

OR



LMTV and FMTV mounting kit,
NSN 1005-01-381-5431

OR



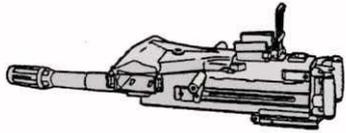
HEMTT mounting kit,
NSN 2590-01-220-6377
PLS mounting kit,
NSN 1005-01-363-2502
(both the HEMTT and PLS
mounting kits include the
M66 mount ring.)



YOUR PUBS
CLERK CAN
ORDER A POSTER
OF THIS INFO.

TELL HIM TO
ORDER DA
POSTER 750-97
(1 APRIL 2004).

MK19 Tripod



USE EITHER

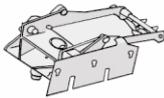
MK93 MOD 1,
NSN 1005-01-383-2757

OR

MK64 MOD 9,
NSN 1010-01-412-3159

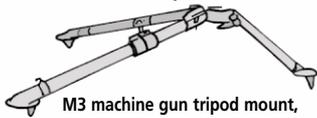


Carriage and Cradle



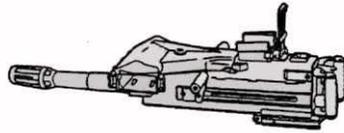
Carriage and Cradle

WITH



M3 machine gun tripod mount,
NSN 1005-00-322-9716

MK19 HMMWV Pedestal (M998-series only)



USE EITHER

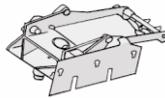
MK93 MOD 1,
NSN 1005-01-383-2757

OR

MK64 MOD 9,
NSN 1010-01-412-3159



Carriage and Cradle



Carriage and Cradle



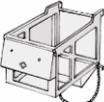
Catch bag assembly



Catch bag assembly



40MM mounting bracket



40MM mounting bracket

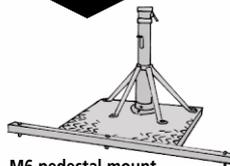


Universal pintle adaptor



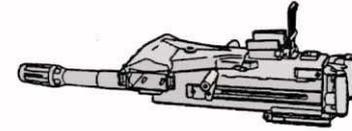
Universal pintle adaptor

WITH



M6 pedestal mount,
NSN 1005-01-411-6341

MK19 Vehicle Ring Mount



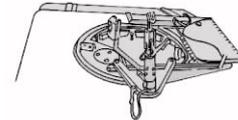
USE EITHER

MK93 MOD 1,
NSN 1005-01-383-2757
(see *MK19 HMMWV Pedestal* entry
for specifics)

OR

MK64 MOD 9,
NSN 1010-01-412-3159
(see *MK19 HMMWV Pedestal* entry
for specifics)

and then choose one of the following:



M1025/M1026/M1114
HMMWV pintle adapter,
NSN 3120-01-188-5082

OR



M66 machine gun mount ring,
NSN 1005-00-701-2810

OR



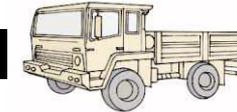
lightweight ring
mounting kit
for 900-series 5-ton,
NSN 1005-01-432-3339
(kit includes mount ring)
cab reinforcement kit,
NSN 2590-01-436-9144

**The M66 will
work with
any of the
following:**



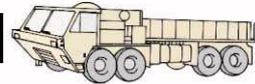
800-series 5-ton mounting kit,
NSN 1005-01-226-4589
cab reinforcement kit,
NSN 2590-01-322-2694

OR



LMTV and FMTV mounting kit,
NSN 1005-01-381-5431

OR



HEMTT mounting kit,
NSN 2590-01-220-6377
PLS mounting kit,
NSN 1005-01-363-2502
(both the HEMTT and PLS
mounting kits include the
M66 mount ring.)

ARMORERS AND
MECHANICS, KEEP
THIS STORY SAFELY
FILED WHERE YOU
CAN FIND IT.

YOU WILL
NEED THIS
INFO-COUNT
ON IT!



M2 Tripod



USE EITHER

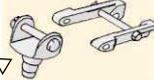
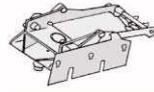
MK93 MOD 1,
NSN 1005-01-383-2757

OR

MK64 MOD 9,
NSN 1010-01-412-3159



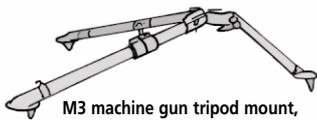
Carriage and Cradle



Carriage and Cradle

NOTE:
the M2 mounting
adaptor assembly,
NSN 1010-01-151-6217,
must be ordered
separately from the
MK64 MOD 9

WITH



M3 machine gun tripod mount,
NSN 1005-00-322-9716

M2 HMMWV Pedestal (M998-series only)



USE EITHER

MK93 MOD 1,
NSN 1005-01-383-2757

OR

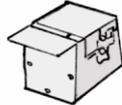
MK64 MOD 9,
NSN 1010-01-412-3159



Carriage and Cradle



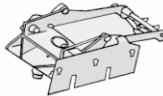
Catch bag assembly



.50 cal ammo holder



Universal pintle adaptor



Carriage and Cradle



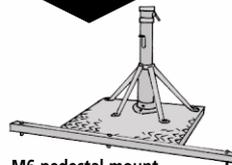
Catch bag assembly



Universal pintle adaptor

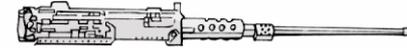
NOTE:
the M2 ammo holder,
NSN 8140-01-387-3095,
and the mounting
adaptor assembly,
NSN 1010-01-151-6217,
must be ordered
separately from the
MK64 MOD 9

WITH



M6 pedestal mount,
NSN 1005-01-411-6341

M2 Vehicle Ring Mount



USE EITHER

MK93 MOD 1,
NSN 1005-01-383-2757
(see *M2 HMMWV Pedestal*
entry for specifics)

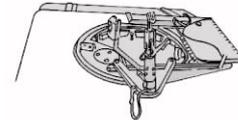
OR

MK64 MOD 9,
NSN 1010-01-412-3159
(see *M2 HMMWV Pedestal*
entry for specifics)

OR

6650 MACHINE GUN
MOUNT
NSN 1005-00-704-6650

and then choose one of the following:



M1025/M1026/M1114
HMMWV pintle adaptor,
NSN 3120-01-188-5082

OR



M66 machine gun mount ring,
NSN 1005-00-701-2810

OR



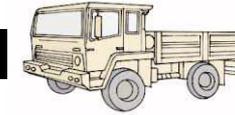
lightweight mounting kit
for 900-series 5-ton,
NSN 1005-01-432-3339
(kit includes mount ring)
cab reinforcement kit,
NSN 2590-01-436-9144

The M66 will
work with
any of the
following:



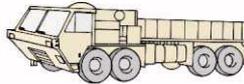
800-series 5-ton mounting kit,
NSN 1005-01-226-4589
cab reinforcement kit,
NSN 2590-01-322-2694

OR



LMTV and FMTV mounting kit,
NSN 1005-01-381-5431

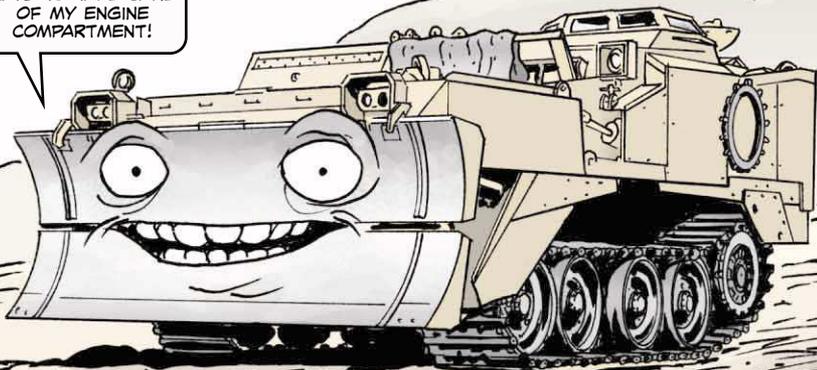
OR



HEMTT mounting kit,
NSN 2590-01-220-6377
PLS mounting kit,
NSN 1005-01-363-2502
(both the HEMTT and PLS
mounting kits include the
M66 mount ring.)

ENGINE COMPARTMENT PM

HERE ARE SOME WAYS TO TAKE CARE OF MY ENGINE COMPARTMENT!



MECHANICS, A FEW AREAS IN THE ACE'S ENGINE COMPARTMENT NEED YOUR ATTENTION WHEN YOU'RE PULLING MAINTENANCE.



A Little Cleanup

The fan shroud makes a convenient shelf for tools and coffee cups.

No sweat, unless you leave those items sitting there when you close the rear access panels.

Anything left behind bounces off the shelf—then ends up hitting the fan blades after the engine starts and the vehicle starts moving. A fan with broken blades will cause the engine and transmission to overheat.

Before you hop out of the engine compartment, take a quick look around to make sure nothing gets left behind. It can make the difference between a completed mission and waiting for help to arrive.



MAKE SURE YOU *DON'T* LEAVE ME BEHIND!!

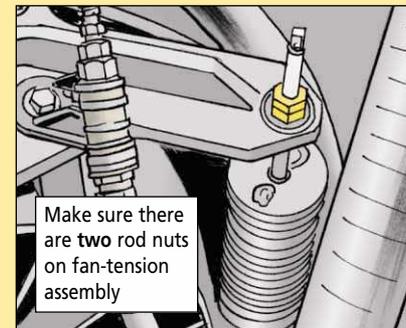
Missing Nut?

The fan-tension assembly in the vehicle's engine compartment is used to adjust the V-belt tension for the radiator fan.

Vehicle vibration causes the rod nuts on the fan-tension assembly to loosen. The rod's top nut has also been known to get lost during repairs or V-belt adjustment.

Problem is, one nut will work loose, which won't keep the right amount of tension on the belt. That means the V-belt comes loose, causing the engine to overheat—not good, especially in the desert!

So, make sure there are two rod nuts on the fan-tension assembly. If a nut is missing, replace it with NSN 5310-00-732-0559. The nut is shown as Item 4, Fig 130 of TM 5-2350-262-24P.



Make sure there are **two** rod nuts on fan-tension assembly

Retainer Strap Mishap

An ounce of prevention is worth a pound of fire fighting in the vehicle's engine compartment.

Start the prevention by checking the five hydraulic lines that are mounted directly across from the engine's exhaust manifold.

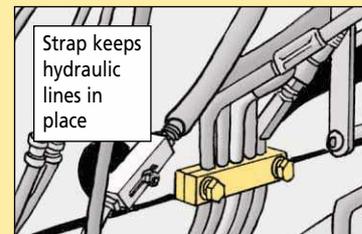
Each line is held in place by a retaining strap that keeps it snug against the wall.

But straps get misplaced when a hydraulic line is repaired, or when the engine is removed by support. Operating the earthmover when a strap is missing allows those hydraulic hoses to rub up against the engine's exhaust manifold. That can cause a leak and a fire.

So replace a missing retainer strap with NSN 5340-01-179-7530, or secure the lines with a tie-down strap, NSN 5975-00-570-9598, until the retainer strap is replaced. Straps are shown as Item 40 in Fig 140 of TM 5-2350-262-24P.



Look for lines rubbing on exhaust manifold



Strap keeps hydraulic lines in place

DEUCE...



A Grip on Safety Tips

USING THE EARTHMOVER'S WINCH SAFELY CAN **SAVE** IT FROM MAJOR REPAIR...

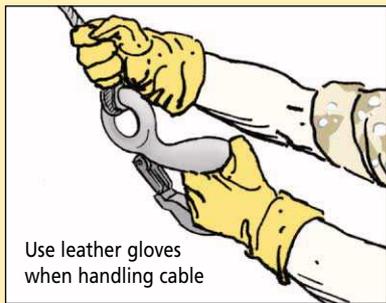
...SO KEEP THESE SAFETY TIPS IN MIND WHENEVER YOU OPERATE THE WINCH.

- Make sure the rear window guard is down during the winching operations. The screen protects the window—and you—from thrown debris or a snapped cable.

Keep rear window guard down when winching



- Use leather gloves, NSN 8415-01-394-0208, when handling the cable. The gloves will protect your hands from burrs and broken wires that are hidden by dirt and grease.



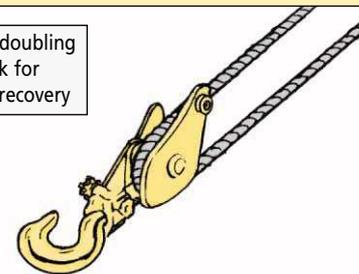
Use leather gloves when handling cable

- **Always** leave at least five loops of cable on the winch drum when pulling a load. That keeps the pressure off the attaching hardware and on the cable—where it belongs.



- **Always** use the doubling block from the BII compartment when doing a self-recovery or when recovering another DEUCE. The block doubles the DEUCE's pulling force, giving you the muscle you need—44,000 pounds—to do the job.

Use doubling block for self-recovery



- Keep the DEUCE and its load in a straight line. Pulling the load at angle puts too much stress on the winch drum and attaching hardware. Also, your sight is blocked by the rollover protective structure. That's an accident waiting to happen.

- The earthmover's winch can handle debris like logs, stumps and fallen trees, and can even recover another DEUCE. To do that, the winching DEUCE must be stationary. But you **can't** tow another DEUCE with the winch cable.

DEUCE...



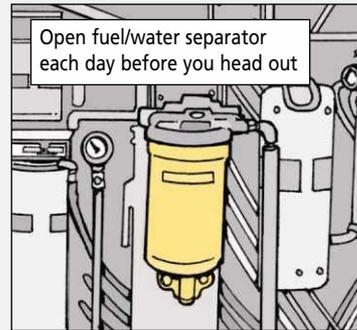
Condensation forms in the DEUCE's fuel tank when hot days and cool nights come together. That means you operators have to get the water out of the fuel system. If you don't, the engine runs rough... or not at all.

Fuel/Water Separator

Before operation, drain the fuel/water separator to remove water and crud. Open the separator (located behind the oil filter compartment door) by turning its drain cock counter-clockwise. Store drained fuel in an approved hazardous waste container. Never dump it down a drain or on the ground.

If the fuel is clear, you're OK. If the fuel doesn't run clear, close the valve and report it to your mechanic.

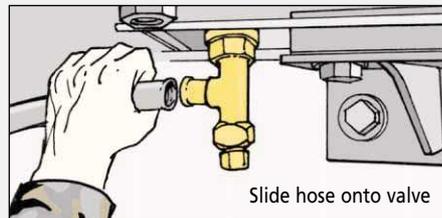
Also, make sure your mechanic replaces the fuel filter twice a year.



Fuel Tank Drain Valve

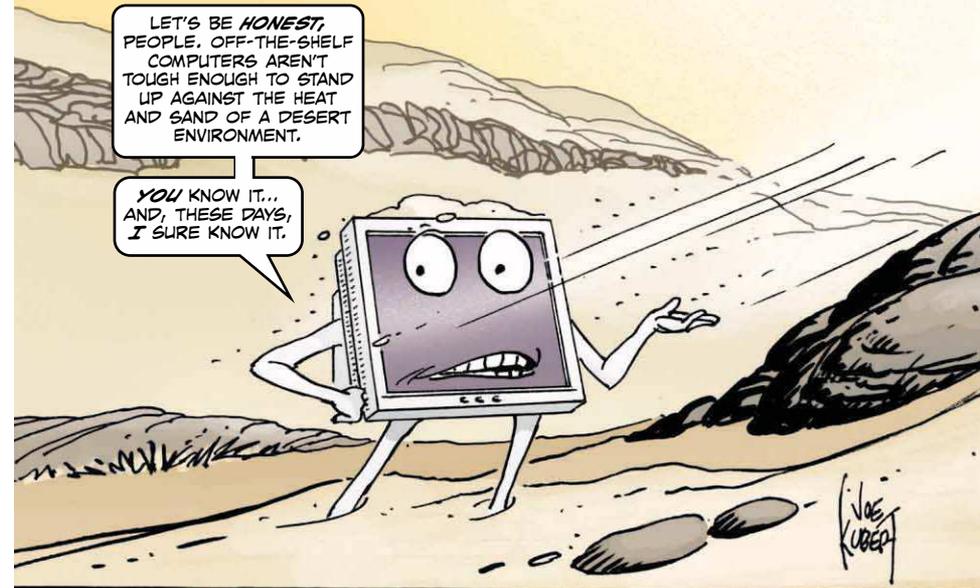
One drain valve that gets overlooked is the one for the fuel tank. It's located under the cab and under the roadside platform.

Before you open the drain valve, cut an 18-in piece of 1/4-in rubber hose, NSN 4720-01-267-9343, and slide it onto the valve. With the extension hose on the drain valve, drain water and crud from the fuel tank into an approved hazardous waste container until it runs clear.



Then close the valve and remove the hose. Do this every 1,000 service hours like it says on Page 15-74 of TM 5-2430-200-24.

EVERYTHING YOU NEED TO KNOW ABOUT COMPUTER PM IN THE DESERT



PREVENTIVE MAINTENANCE IS THE **ONLY** WAY THAT MEANS KEEPING US **CLEAN**.

HERE ARE SOME ITEMS THAT CAN HELP YOU DO JUST **THAT!**

PTOO!

Item	NSN
General computer tool kit	5180-01-378-4517
Vacuum cleaner/blower	7910-01-423-9525
Replacement bags for vacuum	7045-01-417-3206
Anti-static cleaner	6850-01-463-5809
Anti-static towels	7920-01-295-8918
Canned air duster (8oz)	7930-01-411-9794
Canned air duster (10oz)	7930-01-398-2473
Canned air duster (12oz)	7930-01-406-4055
CD-ROM lens cleaner	7045-01-450-4369
Cleaning paper/laser printer	7045-01-412-1482
Cleaning wipes for monitor	7045-01-455-4031
Head cleaning kit/floppy drive	7045-01-316-7523
Keyboard/mouse cleaning kit	7930-01-406-2203
PDA screen covers (Palm V,m500)	7045-01-490-6703
PDA screen covers (Palm VII,IBM)	7045-01-490-6702
PDA screen cleaners	7045-01-490-6700

OKAY... NOW THAT YOU'VE GOT THE CLEANING MATERIALS, LET'S GET STARTED!

FIRST... TURN OFF AND **UNPLUG** YOUR COMPUTER. WHY DO **THAT**, YOU ASK?

"'CAUSE IF YOU **DON'T**, A SHORT CAN **BLOW** YOU BOTH OUT OF THE PICTURE. **THAT'S WHY.**"

The CPU Case

LET'S START WITH THE CPU CASE.

WIPE DOWN THE **OUTSIDE** WITH A **LINT-FREE CLOTH** MOISTENED WITH **ANTI-STATIC CLEANER**.

"**DON'T** SPRAY THE CLEANER **DIRECTLY** ON THE CASE... IT MIGHT DRIP INTO THE CPU."

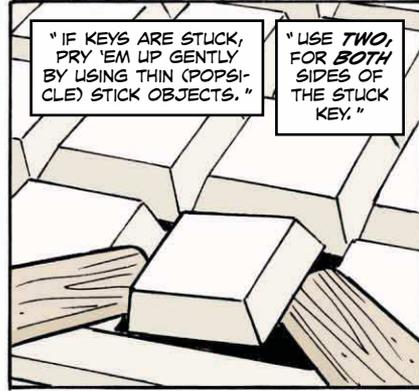
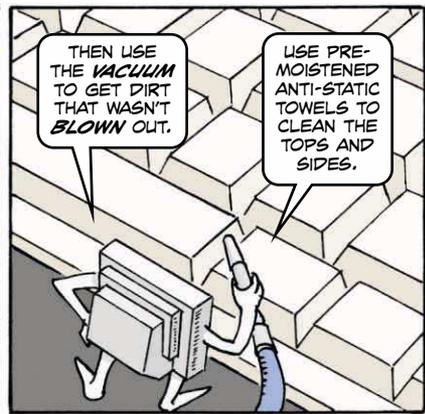
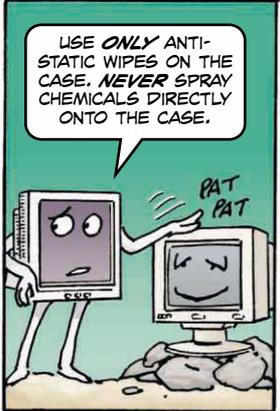
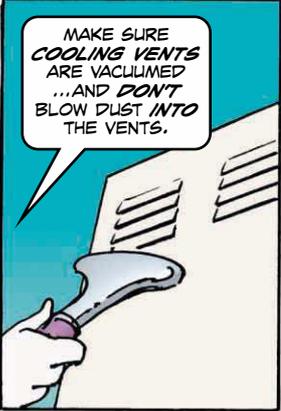
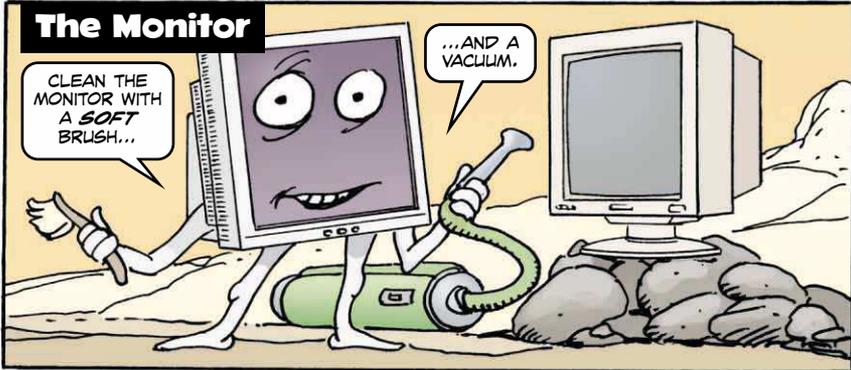
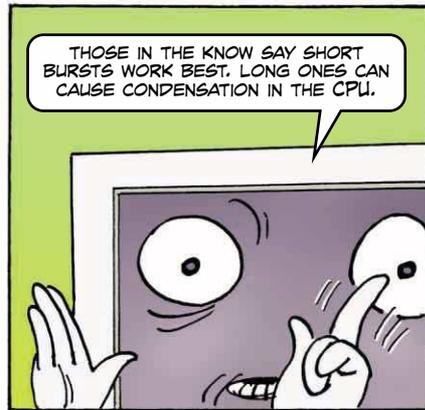
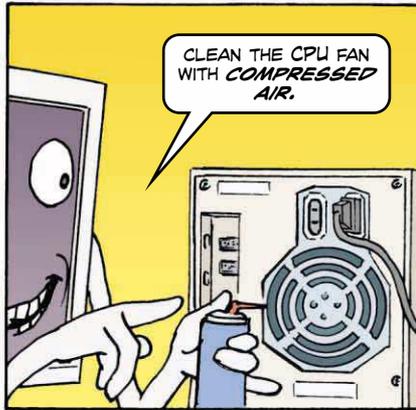
USE THE SPRAY SPARINGLY... YOU **DON'T** NEED A **LOT** TO DO THE JOB.

POOF!

"SQUEEZE YOUR CLOTH BEFORE YOU APPLY IT. IF MOISTURE DRIPS, YOU'VE USED **TOO MUCH**."

IF YOU CAN ORDER THE ANTI-STATIC TOWELS THAT ARE **PRE-MOISTENED**, USE 'EM.

THEY'RE PERFECT!



"FIRST, **UNPLUG** YOUR MOUSE FROM THE COMPUTER. THEN, TURN IT ON ITS BACK TO REMOVE THE **HOUSING** AROUND THE MOUSE BALL."

"REMOVE THE BALL AND CLEAN IT WITH A SOFT TISSUE AND WINDOW CLEANER FLUID."

"USE A DRY COTTON SWAB TO CLEAN THE **INSIDE** OF THE CASING."

The Drives

"GET A **DRIVE CLEANING KIT** TO CLEAN YOUR FLOPPY AND CD-ROM DRIVES."

FOLLOW THE INSTRUCTIONS THAT COME WITH THE KITS, AND REMEMBER...

...DON'T USE **COMPRESSED AIR**. THAT WILL ONLY BLOW DUST AND DIRT **DEEPER** INTO YOUR COMPUTER.

The Printer

BEFORE CLEANING YOUR PRINTER, TURN IT OFF AND UNPLUG IT FROM YOUR COMPUTER.

TAKE OUT **ALL** THE PAPER. GET YOUR VACUUM, LINT-FREE CLOTH AND YOUR COMPRESSED AIR.

"BLOW OUT DUST AND EXCESS TONER AND USE YOUR **COMPRESSED AIR** AND USE YOUR **VACUUM** TO SUCK UP WHAT'S LEFT."

"YOUR **LASER** PRINTER PROBABLY HAS A **CLEANER PAPER** TO CLEAN THE PRINT ROLLERS."

CHECK THE INSTRUCTIONS THAT CAME WITH THE PRINTER FOR THE TYPE OF CLEANING PAPER YOU NEED.

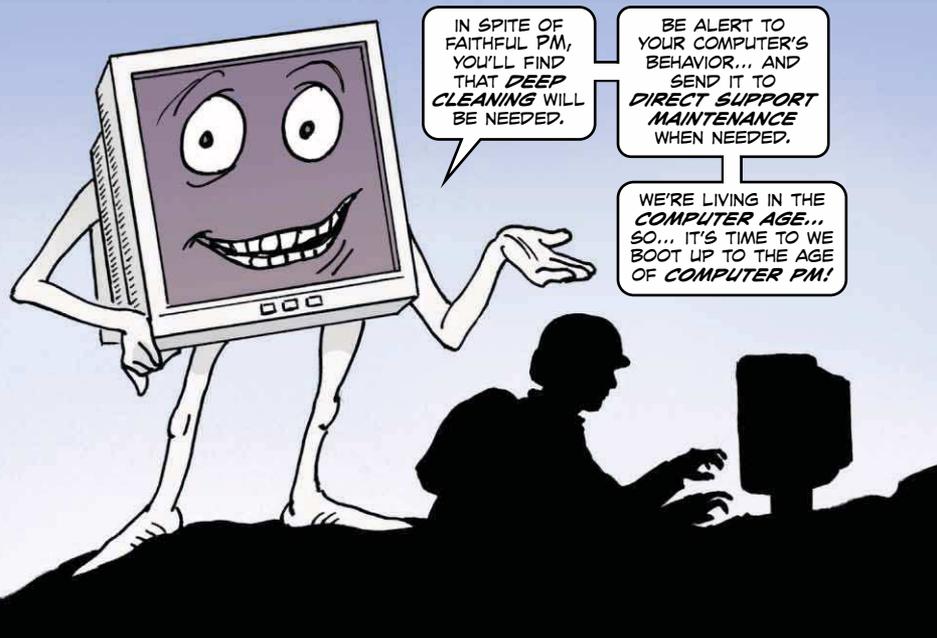
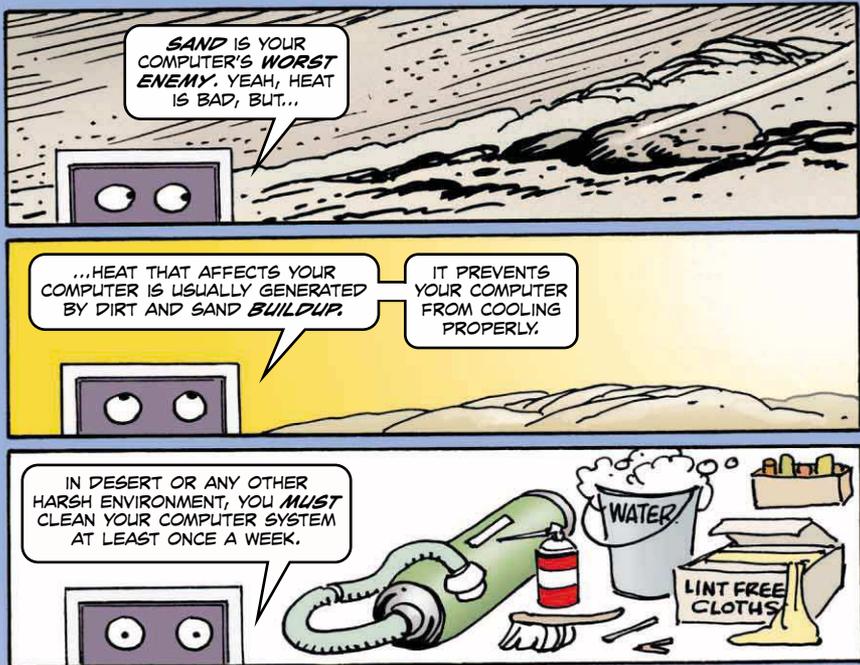
The PDA

"PERSONAL DATA ASSISTANTS ARE POPPING UP ALL OVER THE PLACE. KEEP PROTECTIVE COVERS ON THEM TO SAVE THE SCREEN FROM DUST AND SAND SCRATCHES."

"COVERS SHOULD BE REPLACED EVERY MONTH... OR **SOONER!**"

"PDA CLEANER CAN BE USED FOR **OUTSIDE** SURFACES AND THE SCREEN."

"BUT REMEMBER TO CLEAN OFF ABRASIVE MATERIALS **FIRST!**"



OH-58D...

A WHOLE LOT OF SHIPPING GOIN' ON



Mechanics, shipping Kiowa Warrior components to depots and contractor repair facilities without the proper paperwork just means you'll see them again—unrepaired.

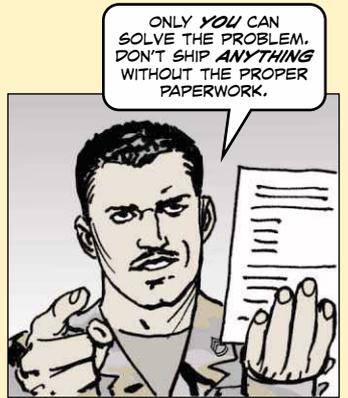
Parts without mandatory historical records like the DA Forms 2410, 2408-16 or 2408-16-1 or the DA Form 2408-5-1 will be returned to you, and that means your bird remains NMC.

Parts returned without paperwork waste time and money, cause delays in turn-around on parts back to the field, degrade depot and contractor support and affect stock availability and unit readiness.

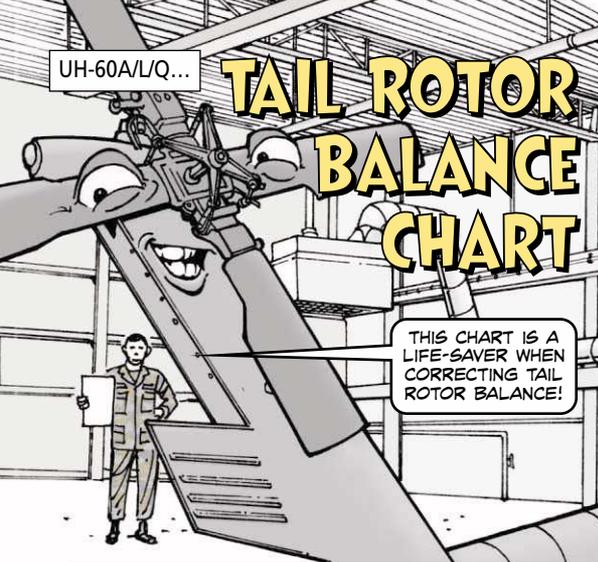
Units using ULLS-A and other automated systems should print out copies and attach them to the components before shipping them.

For reportable tracked components and parts received without the DA Form 2410 data, follow the instructions in Chapter 1 of DA PAM 738-751, Army Maintenance Management System Aviation (TAMMS-A).

If you have any questions, contact AMCOM's Ann Waldeck at DSN 746-5564 (256) 876-5564 or email ann.waldeck@redstone.army.mil



TAIL ROTOR BALANCE CHART



THIS CHART IS A LIFE-SAVER WHEN CORRECTING TAIL ROTOR BALANCE!

	SS4409-013	AN960C416	NAS1149D0463K	Grams
AN4-12A		2		16
		2	1	17
AN4-13A		3		18
	1	2		19
		4	1	20
AN4-14A	1	2	2	21
	1	3	1	22
AN4-15A		7		23
AN4-14A	2	2	1	24
	2	3		25
AN4-15A	1	6		26
AN4-14A	3	2		27
	2	5		28
AN4-15A	3	3	1	29
	3	4		30
	4	2	1	31
AN4-16A	3	6		32
	4	3	1	33
AN4-15A	5	2		34
AN4-16A	5	2	2	35
	5	3	1	36
AN4-17A	4	6	1	37
	6	2	1	38
AN4-16A	6	3		39
	7	2		40
	6	5		41
AN4-17A	7	2	2	42
	7	4		43
	8	2	1	44
AN4-20A	7	5	1	45
	7	6		46
AN4-17A	9	2		47
	9	2	2	48
	9	3	1	49
AN4-20A	9	5		50
	10	2	1	51
	10	3	1	52
	10	2	3	53
	10	3	2	54
	10	5		55
AN4-21A	11	2	2	56
	11	4		57
	12	2	1	58
	12	3		59
	13	2		60

Dear Rotor,

Correcting tail rotor balance on our Black Hawk is a tedious maintenance procedure.

It requires having the right hardware stack-up of bolts, washers, and nuts for each quadrant and use of a gram scale for ensuring the required weight and balance.

We've come up with a handy tail rotor balance weight chart that tells you the hardware needed for a given weight needed to correct tail rotor balance. We use the chart in conjunction with procedure 5, Page 0069 00-25 listed in TM 1-6625-724-13&P and the corresponding parts list in Fig 75 of TM 1-1520-237-23P-2.

The chart is used like so: Find the weight needed in the right column, then move to the left to determine the number of washers and the correct bolt to use.

The chart allows for the thickness of the retention plate, so that for each weight shown, we have the correct amount of the threads on the end of the bolts.

The weight listed is approximate. So you'll need to verify the hardware weight with a gram scale.

SGT Steven Williams
AASF, INARNG

	SS4409-013	AN960C416	NAS1149D0463K	Grams	
AN4-22A	12	4	1	61	
	12	5		62	
	13	3	1	63	
	13	4		64	
	14	2	1	65	
	14	3		66	
AN4-23A	15	2		67	
	14	4	1	68	
	14	5		69	
	15	3	1	70	
	15	5		71	
	16	2	1	72	
	16	3		73	
	17	2		74	
AN4-24A	16	5		75	
	17	2	2	76	
AN4-25A	17	3	3	78	
AN4-24A	18	2	1	79	
	18	3		80	
	19	2		81	
	19	4	1	82	
AN4-25A	19	2	2	83	
	19	3	1	84	
	19	4		85	
	20	2	1	86	
	20	3		87	
	21	2		88	
	AN4-26A	20	5		89
		21	2	2	90
21		3	1	91	
21		4		92	
21		2	1	93	
22		3		94	
AN4-27A	23	2		95	
	22	5		96	
	23	2	2	97	
	23	3	1	98	
AN4-30A	23	2	4	99	
AN4-27A	24	2	1	100	
	24	3		101	
	25	2		102	

	SS4409-013	AN960C416	NAS1149D0463K	Grams
AN4-30A	24	5		103
	25	2	2	104
	25	3	1	105
	25	4		106
	26	2	1	107
	26	3		108
AN4-31A	27	2		109
	26	5		110
	27	2	2	111
	27	3	1	112
	28	2	1	113

Use appropriate bolt length shown plus number of washers shown to obtain the amount of grams indicated. Weights shown include nut.

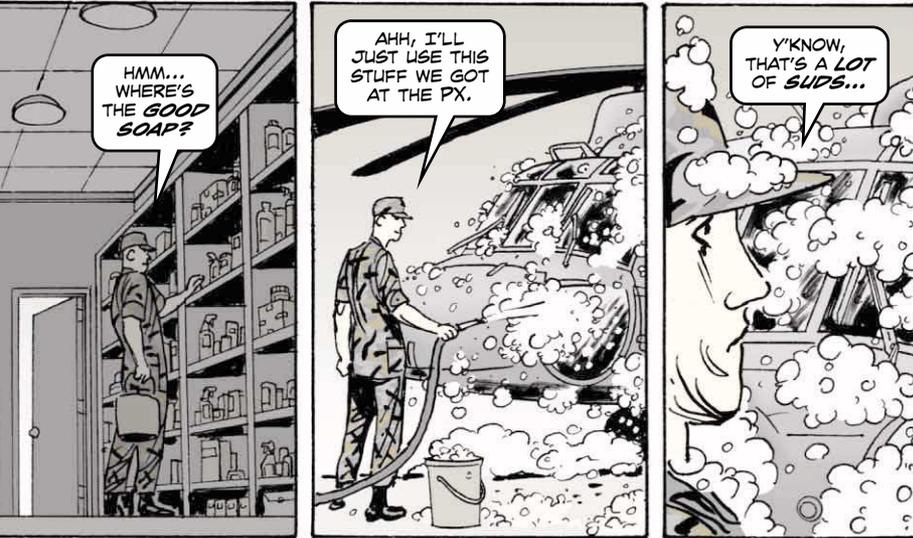
Always verify weight with gram scale

Part	NSN	Item
AN4-12A	5306-00-151-1422	Bolt
AN4-13A	5306-00-151-1421	Bolt
AN4-14A	5306-00-151-1420	Bolt
AN4-15A	5306-00-151-1419	Bolt
AN4-16A	5306-00-151-1418	Bolt
AN4-17A	5306-00-151-1417	Bolt
AN4-20A	5306-00-151-1416	Bolt
AN4-21A	5306-00-151-1415	Bolt
AN4-22A	5306-00-151-1414	Bolt
AN4-23A	5306-00-151-1413	Bolt
AN4-24A	5306-00-151-1412	Bolt
AN4-25A	5306-00-151-1411	Bolt
AN4-26A	5306-00-151-1410	Bolt
AN4-27A	5306-00-151-1409	Bolt
AN4-30A	5306-00-151-1408	Bolt
AN4-31A	5306-00-151-1407	Bolt
AN960C416	5310-00-531-9515	Washer
NAS1149D0463K	5310-01-352-9564	Washer
M220365-428	5310-00-877-5796	Nut
224409-013	5310-01-132-4408	Washer

Dear SGT Williams,
Good job. Looks like you've solved a weighty situation with this tail rotor balance chart.

Rotor Blade

AIRCRAFT CLEANING



Mechanics, washing your aircraft's exterior with just any old type of cleaner is not authorized.

"Have it your way" is not the way to clean your bird. **Never** use unapproved industrial cleaners, detergents and degreasers (including Simple Green) that haven't been tested and approved by the Army.

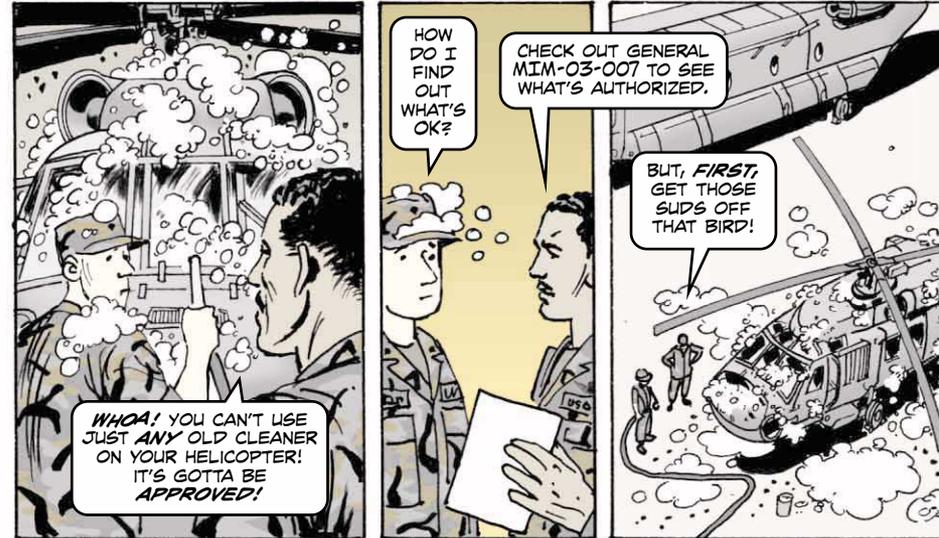
Some unapproved cleaners have a "citrus" product name and contain a compound called "D-Limonene," which often has as citrus scent.

Commercial cleaners have failed Army performance tests and are not approved for use. Using them to wash your bird can cause corrosion when runoff is trapped in nooks and crannies. These cleaners will also reduce strength in steel, make alloys brittle, degrade canopy transparencies and damage painted surfaces and cadmium plating.

If you've already used any unapproved cleaners, thoroughly wash your bird with fresh water and an approved Army aircraft cleaning agent.

Your airframe maintenance manuals list them. Follow that cleaning with a corrosion inspection and treatment and an application of an approved corrosion preventive compound as identified in your -23 TMs and Chapter 3 and Appendix D of TM 1-1500-344-23, *Aircraft Weapon System Cleaning and Corrosion Control (May 96)*.

THE RIGHT WAY



ALSO LOOK IN MIL-PRF-85570 TYPE II AIRCRAFT CLEANERS...



*...AND ORDER THE FOLLOWING APPROVED CLEANERS...

NSN 6850-01-	Qty
239-0571	1 gal container
235-0872	5 gal can
248-9828	15 gal drum
236-0128	55 gal drum

*ALSO, CHECK OUT MIL-PRF-87937 AND ORDER...

NSN 6850-01-	Qty
390-7827	1 gal container
339-5227	5 gal container
339-5228	55 gal drum
390-7828	bulk

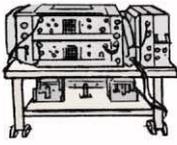
Finally, check the info in maintenance information message GEN-MIM-03-007 (Aug 03). Make sure that all cleaning, lubricating and preserving products used on your aircraft are listed in your TMs or are otherwise approved by the Army.

If you're not sure about a product, contact your local AMCOM logistics assistance rep at the LAO. Or contact Thomas Issacs at DSN 861-3414, ext 231, (361) 961-2000 ext 231 or email:

tisaacs@amcom-cc.army.mil

An alternate POC is Herb Goode at DSN 861-3414, ext 233, commercial (361) 961-2000, ext 233 or email:

hgoode@amcom-cc.army.mil



Sounding Off about SINGGARS

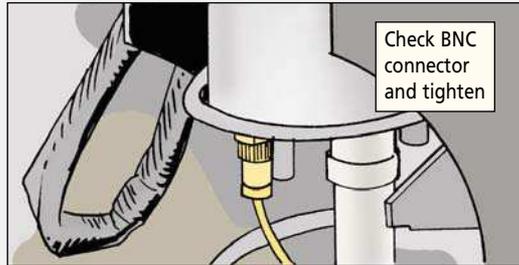
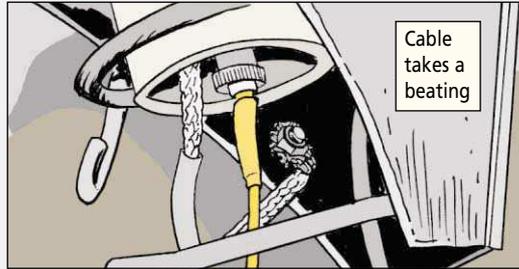
Dear Editor,

A SINGGARS is made to operate up to 25 miles (or more) at 50 watts, but many of them can't communicate beyond a handful of miles.

Some of that loss comes from terrain or buildings in the signal path or weather, but a lot of it comes from poorly maintained cables and antennas.

The RF cable that runs from your antenna to your RT takes quite a beating. It's exposed to flying mud, rocks, sticks and other debris. In addition, this cable is asked to handle all types of weather. It's a protected cable, but it really wasn't designed to handle the weather and the beating it takes.

This abuse drastically degrades the cable's electrical performance. A new cable should have less than one watt of loss. Some "in use" cables that we tested had eight watts of loss or more!



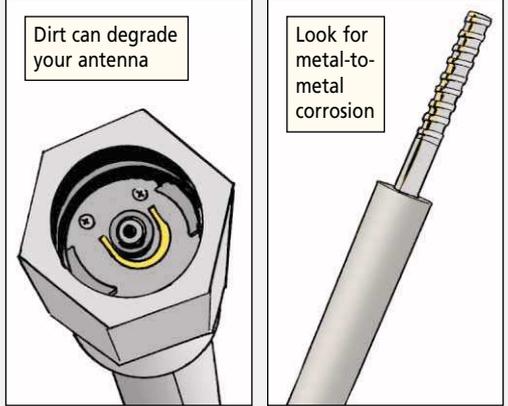
Also, the BNC connector used on these cables is not the best for providing good metal-to-metal contact. Vibration can loosen it, so check it often.

If your RT is not performing as it should, make the RF cable one of your first checks.

Of course, the antenna itself could be the culprit. Dirt, metal oxides and other contaminants can really degrade your antenna. So can a pound of silicone grease applied where only a trace is needed! Keep antennas clean and test them often to make sure they are reliable.

Good cables and a good antenna will go a long way toward having long way conversations.

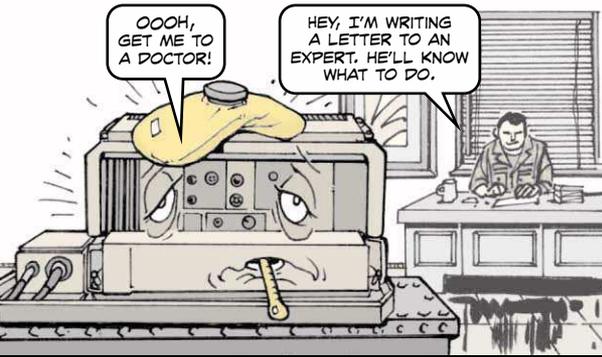
CW4 Ron Nidiffer
24th ID,
Ft Riley, KS



(Editor's note: CW4 Nidiffer has been in the radio business since 1967 and he knows his stuff! We can only add you need to get out of the motor pool and give yourself some distance to do a radio test. In the motor pool, if you up the power enough, you almost always can get a good check. But with a 20-mile separation out in the boonies, you'll know whether your radio is good to go or not.)



Repairing the RT-1539



OOOH, GET ME TO A DOCTOR!

HEY, I'M WRITING A LETTER TO AN EXPERT. HE'LL KNOW WHAT TO DO.

Dear Half-Mast,
I have an RT-1539A in need of repair. I have heard there is a shop set up for mobile subscriber receiver/transmitters (MSRT) repairs where Reserve units can send their RTs. Do you have the address?

SGT D. R. W.



DEAR SERGEANT D. R. W., ALL RT-1539s IN NEED OF REPAIR ARE SHIPPED TO THE NEAREST GENERAL DYNAMICS REPAIR FACILITY.

HERE ARE THE FOUR LOCATIONS...

General Dynamics C4 Systems
3800 Terminal Avenue
Ft Hood, TX 76544

USAMC CECOM Europe MSE RSC
Berliner Ring 26
64625 Bensheim, Germany

General Dynamics C4 Systems
Bldg 9564
Belmont and I Streets
Ft Lewis, WA 98433

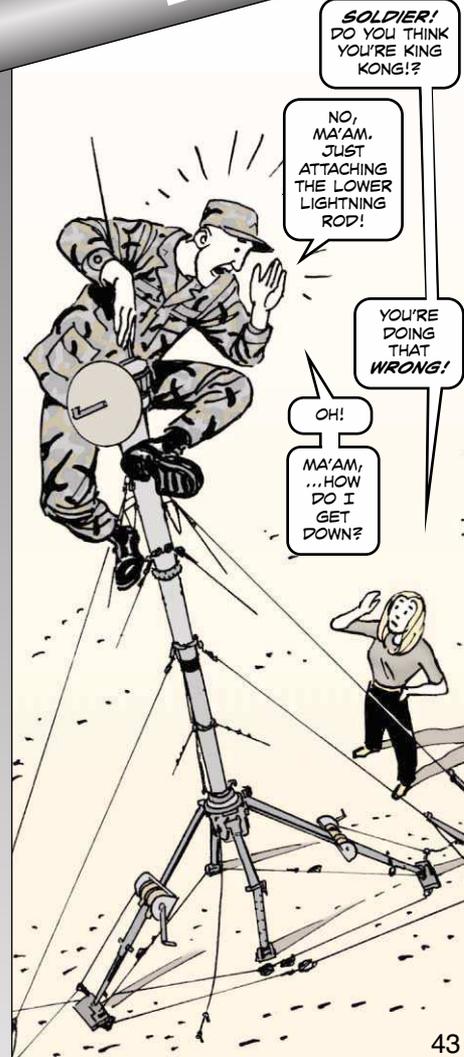
General Dynamics C4 Systems
Bldg A2746
Cole and Kero Street
Ft Bragg, NC 28307

TO GET YOUR RT TO THE RIGHT PLACE AND TO UNDERSTAND FUNDING SOURCES FOR REPAIRS, EMAIL SHEILA BRAY AT CECOM: Sheila.Bray@us.army.mil OR CALL HER AT DSN 992-2588 OR (732) 532-2588.



YOU'LL ALSO NEED TO SUBMIT A WORK ORDER AND FOLLOW THE TM INSTRUCTIONS FOR THE SHIPMENT OF THE RT.

TILT THE ROD!



SOLDIER! DO YOU THINK YOU'RE KING KONG!?

NO, MA'AM. JUST ATTACHING THE LOWER LIGHTNING ROD!

YOU'RE DOING THAT WRONG!

OH!

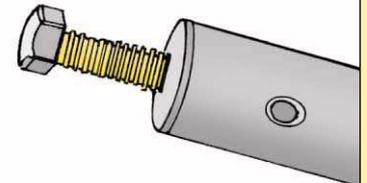
MA'AM, ...HOW DO I GET DOWN?

If attaching the lower lightning rod, NSN 5920-01-377-9518, to the AB-1373/TRC antenna positioner requires the King Kong treatment, you're screwing it in wrong!

The lightning rod mounting bracket on the positioner is tilted. This means the rod should not stand straight while you're screwing it in. It needs to be at an angle.

When you try the straight on approach, you'll cross thread the rod in the positioner.

Don't cross thread the rod



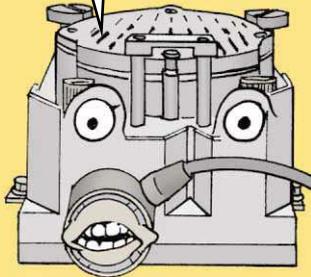
Once you've done that, you can forget about unscrewing the rod. It won't come apart without a great deal of force. That force will strip the threads and send your lightning rod to the useless pile.

So, slap a little silicon lube on the rod threads and then, with a slight tilt of the rod, screw it to the positioner. It should fit like they were made for each other.

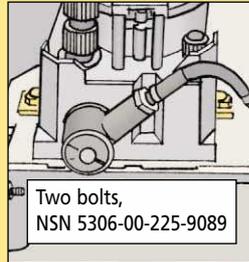
LOUDSPEAKING PARTS!

IF YOU NEED TO INSTALL AN LS-671/VRC, NSN 5965-01-222-1420, THE SINGGARS LOUD-SPEAKER, YOU'LL NEED **THESE PARTS** TO DO IT...

NSN	Item
5340-01-391-2740	Mounting plate
5306-00-225-9089	2 machine bolts (5/16-24 x 1 in)
5310-00-407-9566	2 lock washers, (5/16 in)
5310-00-081-4219	4 flat washers, (5/16 in)
5310-00-880-7746	2 hexagon nuts (5/16-24 in)



Mounting plate, NSN 5340-01-381-2740



Two bolts, NSN 5306-00-225-9089

Halfway Is Not THE Way



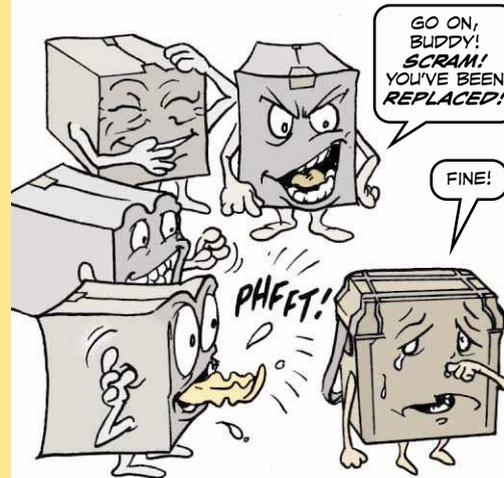
Halfway is not enough when you unscrew the primary power cable from the LS-671 loudspeaker on your SINGGARS vehicular radio. It's all the way or nothing.

You need to unscrew the cable's connector the whole way before trying to unhook the cable. Some folks stop halfway. Then they yank and twist the cable in a vain effort to take it off. That just puts stress on the circuitry inside the J1 connector. If the circuitry gets damaged, no power gets through to the loudspeaker.



Unscrew it all the way!

New S & S Container



GO ON, BUDDY! SCRAM! YOU'VE BEEN REPLACED!

FINE!

PHFFT!

Drop NSN 1240-00-137-7768, shipping and storage container for the AN/PVS-5 night vision device, from your component-of-end items list. Check any of those "special NSNs lists" you have and make sure that NSN is deleted on them, too. That container is no longer available.

Instead, use shipping box, NSN 8115-00-550-3574, as your shipping and storage container for the night vision device. This box is one of the "Fast Pack" boxes that are supplied by GSA.

NVG Mount for ACH

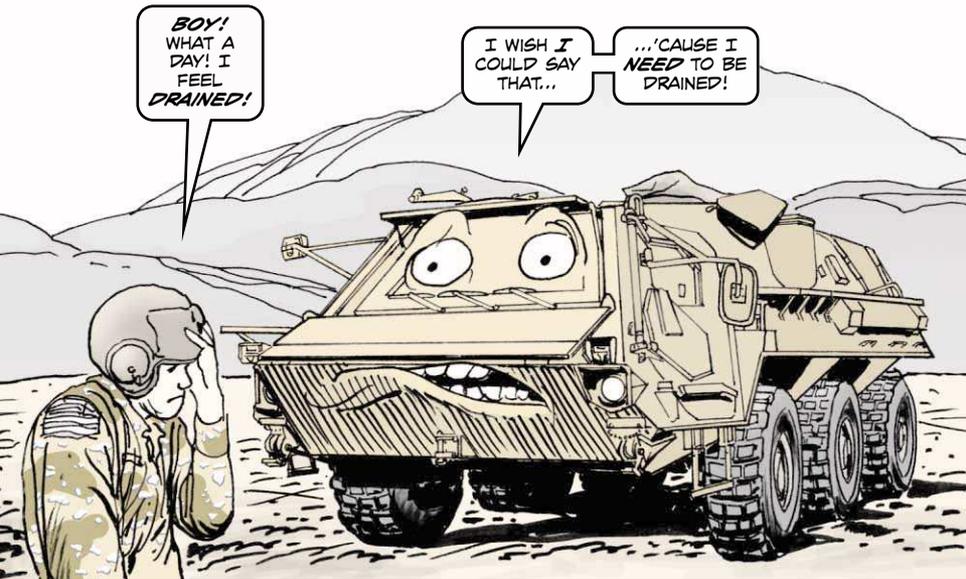


WHAT TH-? HOW CAN I MOUNT MY NVG ON THIS THING?!

Dear Half-Mast,
We were issued the advanced combat helmet (ACH), NSN 8470-01-476-2524, but there's a problem. The mounting bracket for the AN/PVS-14 won't work with the ACH. The mount is unstable and sticks above the curve of the helmet. In short order, the mount breaks. Is there anyway to solve this mounting problem?
SPC J.D.J.

Dear Specialist J.D.J.,
Order the new ACH/CVC front bracket kit, NSN 5340-01-509-1467. This mount will work for your AN/PVS-7s as well as the AN/PVS-14s. Now you no longer have a mounting problem.
Half-Mast

Being Drained Is Good



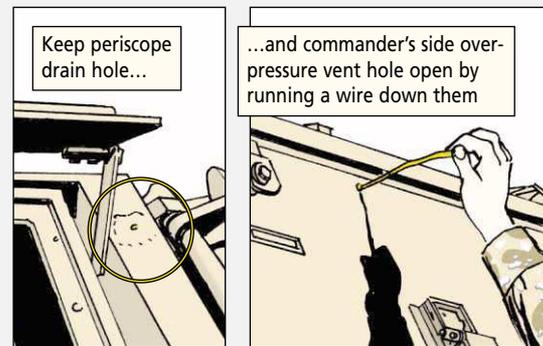
When you are drained after a long day's work, that's not so great. But for your Fox, being drained is great. If it's not drained on a regular basis, it develops problems doing its job.

The most critical drains are the three under the vehicle. If they're not opened at least weekly, water—sometimes lots of water—builds up in the hull, which can cause engine problems and corrosion. Anytime there is a heavy rain, **drain!** Your Fox will need it. If possible, drain into a container. The water may be mixed with oil and antifreeze and you don't want that soaking into the ground.

Mud sometimes plugs the drain holes, so it's a good idea to clean them out with water before and after every mission. The procedure is on Page M-020 in TM 3-6665-339-10. If the drain holes get too plugged, you have to pull the floor boards and M21 in order to get at the drain holes. That's a job you want to avoid.



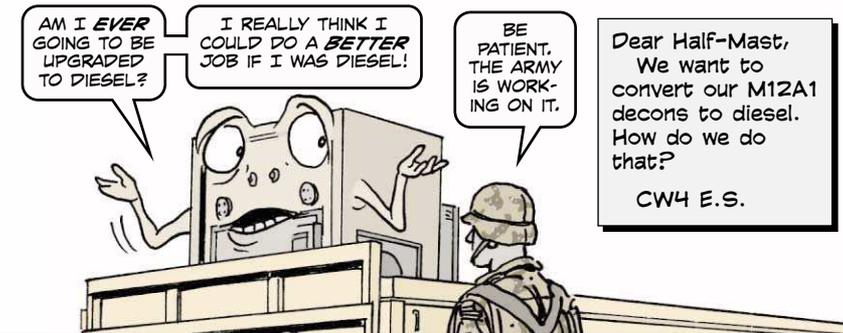
Clear the driver's side periscope drain hole and the overpressure vent hole on the commander's side. For some reason, wasps like to build nests in those holes and they plug up. A plugged drain hole for the periscope means the driver will get wet. A plugged vent hole can affect overpressure. The easiest way to clear both holes is to run a wire down them. Do this monthly.



Another drain hole to keep clear is the one by the fuel spout. If it's plugged, water builds up and can get in the fuel when you take off the fuel cap. The easiest way to clear the spout hole is to blow out any dirt with an air hose.

M12A1 Decon...

DIESEL IS COMING



Dear Chief E.S.,

Well, you can't do that. There is no MWO for converting M12A1s to diesel. But the Army through the Depot Rebuild Program is gradually converting all its M12A1s to diesel. The converted M12A1s will run on both diesel and JP8. Many active Army units have already received the diesel M12A1s.

The diesel M12A1s will have their own TMs. TM 3-4230-237-10 has been finished and is ready for printing. TM 3-4230-237-23&P should be finished late this year. In the meantime, TB 3-4230-209-23 provides much of the new info that will be in the -23&P. The TB is on the Electronic Technical Manual website at

<http://www.logsa.army.mil/etms/online.htm>

If you want to find out when your unit is scheduled to receive a diesel M12A1, contact CPT Eric Towns at DSN 222-6500, (703) 692-6500 or email: eric.towns@hqda.army.mil

Half-Mast

Experiences from a Teacher



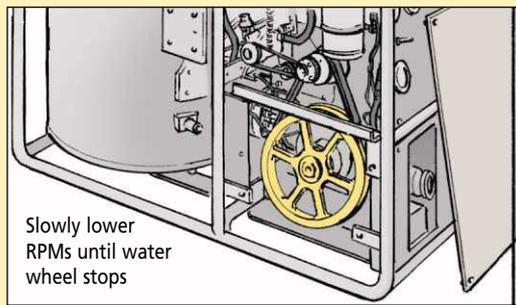
THIS EXPERIENCED TEACHER FROM THE CHEMICAL SCHOOL HAS SOME GREAT IDEAS ON HELPING YOUR M17.

GIVE HIM -AND THEM- A LISTEN!

Dear Editor,

Teachers learn from experience, too. Through teaching soldiers at the U.S. Army Chemical School, I've learned a few tricks on keeping an M17-series decon running.

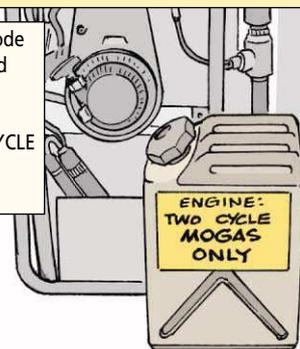
- TM 3-4230-228-10 says to shut down the M17 by pushing the throttle to O. The trouble with that is that the sudden stop strains the belt for the water wheel and wears out the belt faster. Avoid that by gradually lowering the engine speed until the water wheel stops. Then push the throttle to O.



Slowly lower RPMs until water wheel stops

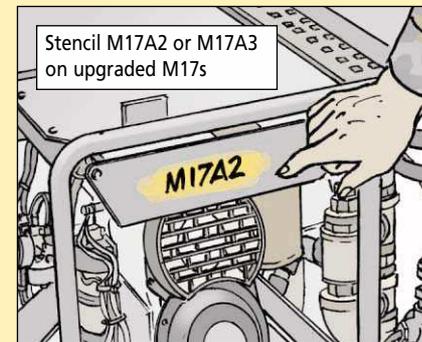
- M17s have 2-cycle engines that require oil mixed with MOGAS. The older M17s and M17A1s need 1 quart per 5 gallons of gas while the newer M17A2s and M17A3s need 1 pint. To avoid confusion, units need to color code fuel cans to match either the silver fan guards on the M17 and M17A1 or the black guards of the M17A2 or M17A3 to avoid putting in the wrong fuel-oil mixture. They also need to stencil **ENGINE: TWO-CYCLE MOGAS ONLY** on the cans.

Color code cans and stencil **ENGINE TWO-CYCLE MOGAS ONLY**



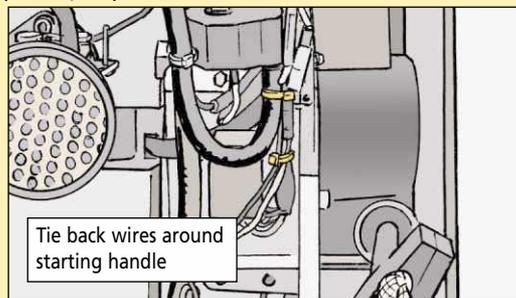
Units also need to remember, though, many old M17s have been upgraded to M17A2s or -A3s, but the markings and instructions on the decon still are those for the older version. That could lead to someone putting in the wrong fuel-oil mixture. If your M17s have been upgraded, stencil M17A2 or M17A3 in big letters on the decon and paint out the old instructions for the fuel oil mixture. Stencil **1 PINT OIL PER 5 GAL MOGAS** somewhere like on the side of the burner.

Stencil M17A2 or M17A3 on upgraded M17s



- Don't let the wand waste water when you operate with a blivet. Hang the wand on the side of the blivet so the water goes right back in the blivet when you're not deconning. Idle down the M17 so that the water pressure is low. This is especially important in the desert.

- If the wires around the starting handle dangle, they can be ripped right out when you jerk the handle out. Prevent that by tying the wires back with several zip ties.



Tie back wires around starting handle

SSG Jorge Morel
U.S. Army Chemical School
Ft Leonard Wood, MO

(Editor's note: Whoa! You did good, Sergeant. Thanks for sharing your teaching experience.)

Mobile Kitchen Trailer Help

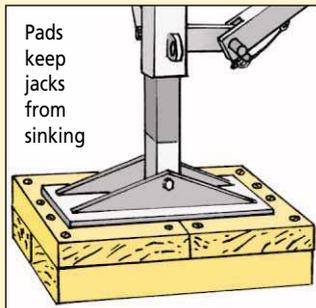


NOBODY LIKES TO MISS A MEAL. AND YOU WON'T HAVE TO IF YOU DIGEST THESE PM TIPS FOR YOUR MOBILE KITCHEN TRAILER (MKT)...



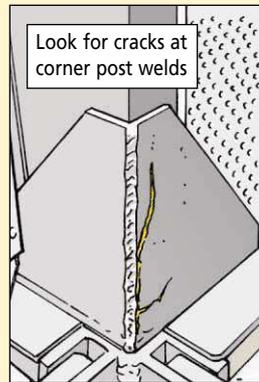
Setting Up the Kitchen

- Tow the MKT with a 2 1/2-ton truck. A bigger truck can beat up the corners of the trailer when you turn.
- If you can't find firm ground and have to park your trailer on soft ground, the leveling jacks can sink and your kitchen will tilt. Avoid this problem by making a set of 12-in or larger square pads to put under the jacks.



- Make the pads out of four 2x6x12-in boards nailed or screwed together.
- After you raise the roof, lock the corner posts. The locking pin doesn't go all the way through the post, so it's hard to tell if it's locked. Raise the roof until a 1/4-in hole is visible in the side of the upper section of the corner post facing the roof jack. Then snap the locking pin in place and lower the roof jack slightly. Wiggle the locking handle back and forth a bit to make sure the pin is in before removing the roof jack.
- If you put camouflage netting over the MKT, leave room to open the roof vents. Otherwise, netting gets tangled in the vents when you try to close them.

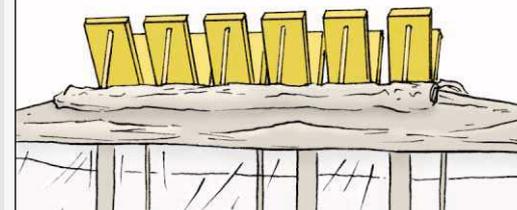
- Vibration, and heavy use, can crack the welds that hold the corner posts to the floor brackets and around the bolts that hold the floor brackets to the frame. Take a close look at the welds and floor brackets and report any cracks right away.



Pack Up and Move Out

- Before you start packing the trailer to move out, close and lock the roof vents. If you wait until the MKT's packed, you can't get to the vents to close them.
- Never move out with the vents open. You risk breaking the locking arms.

Close and lock roof vents before you pack to move out



- Follow the packing instructions in TM 10-7360-206-13 for a fully equipped MKT or the roof won't close. And make sure to strap everything down.
- Crank both leveling jacks all the way up before you go. If you don't, the foot will rub against the tire when you store the jack for traveling.

Make sure the quick release lock pins for storing the leveling jacks are completely through both sides of the stowage bracket. And make sure the pins have lanyards and that they're not broken.



HEY! I THINK THIS COMPASS IS **BROKEN!**

HOW CAN YOU TELL?

RAISE YOUR



THE DIAL'S NOT **FLOATING.**



I'M NOT DAMAGED! YOU GUYS JUST NEED **DIRECTIONS.**

SIGHTS



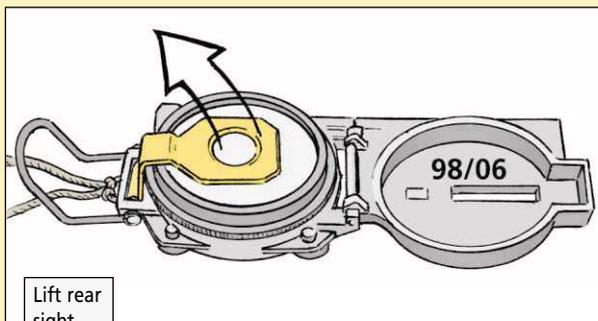
LIFT MY REAR SIGHT SO IT'S **VERTICAL--** YOU'LL SEE I'M **A-OK!**



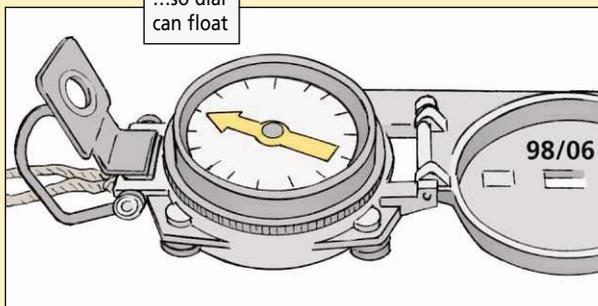
GET **LOST,** POPS!

Your new lensatic compass, NSN 6605-01-196-6971, has a floating dial. If the dial's not floating, don't assume it's damaged. Try lifting the rear sight until it's vertical to the compass base.

You see, when you fold the compass, the rear sight clamps down on the dial and locks it in place. That protects it. You need to lift the sight more than 45° for the dial to rise up and float. And it must float and rotate freely for the needle to point magnetic north.



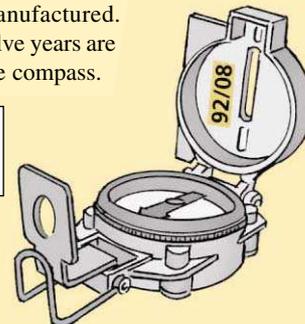
Lift rear sight...



...so dial can float

The compass has roughly a 12-year service life. During that time its illumination gradually dims to about 1/2 its original brightness. You'll find a code stamped inside the compass cover. The first two digits of the code are the last two digits of the year the compass was manufactured. When the twelve years are up, replace the compass.

Code shows year compass was made



YOU'LL FIND MORE TIPS ON THE USE AND CARE OF YOUR COMPASS IN CHAPTER 9 OF FM 3-25.26, **MAP READING AND LAND NAVIGATION.**

THE RIGHT DIRECTION

If you're still navigating by your old aluminum magnetic compasses, NSNs 6605-00-151-5337 or 6605-00-846-7618, turn them in before you get lost. These compasses gradually lose their illumination over time. After 12 years you can't read them in the dark, and you need to turn them in for replacements.

Turn in the old compasses as radioactive waste in accordance with AR 11-9, the **Army Radiation Safety Program.**

To help guide you through this world, get the replacement compass, NSN 6605-01-196-6971. It's aluminum and it has a radioactive dial that lights up in the dark. Tritium makes it luminous.

MAKE INTERACTIVE WORK FOR YOU!

THIS IS THE FIRST STORY IN A SERIES OF FIVE ON FED LOG.

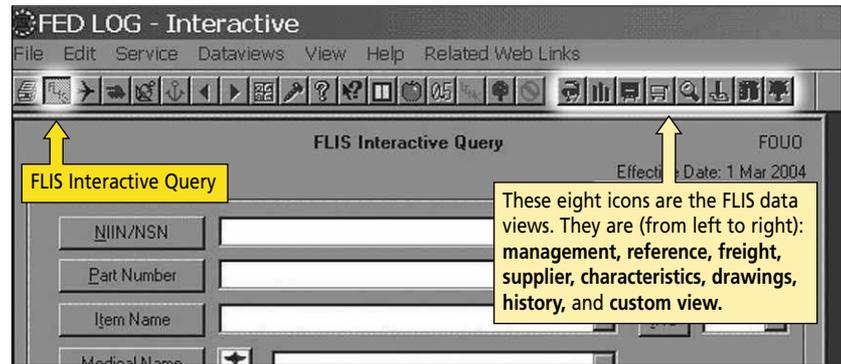
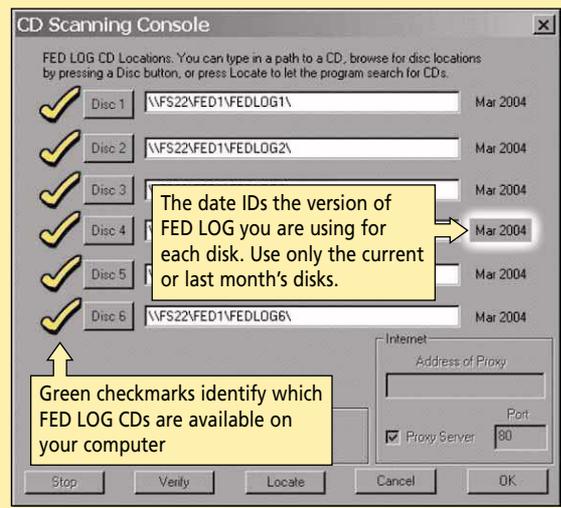


Some PLL/ULLS clerks may not be taking full advantage of FED LOG. Here's how to make FED LOG work for you.

The first FED LOG Interactive screen is the CD Scanning Console.

Green checkmarks identify which disks are available in your computer. To the right is the disk's publication date. It should show the current month or the month just preceding. Anything older is an out-of-date disk.

Once you have the right disks, click OK to move to the work screens.



Below the FED LOG Interactive pull-down menus is a row of icons. The icons duplicate the pull-down menus. When you open FED LOG Interactive the *Federal Logistics Information System (FLIS)* is the default icon. If you make no changes, all your searches will be in *FLIS*. At the right there are eight grayed-out icons, called data views. These views display the data on your search in different ways.

FLIS displays 6 of the 8 million national stock numbers in FED LOG. The armed services have 2 million unique NSNs and display all the NSNs used by their service. It's best to start searches in your service's interactive and expand to FLIS if necessary.

The *Army Interactive* icon is the green tank. When you click on the tank, five service unique icons are added to the right of the eight *FLIS Interactive* data view icons.



NEXT MONTH, WE'LL DISCUSS QUERY BOXES.



DEPLOYING? WHAT ARE YOU TAKING?



SERGEANT, WE'VE BEEN ALERTED TO DEPLOY.

FIND OUT WHAT EQUIPMENT WE NEED TO TAKE!

YES, SIR!

I KNOW JUST WHERE TO GO-DAYS!

Your unit's received deployment notification. Now the commander wants you to find out what equipment should go with your unit and what you can obtain in the area of operations (AO).

DON'T PANIC- HELP IS AVAILABLE.



U.S. Army Forces Command funds the Deployment Asset Visibility System (DAVS). DAVS provides deploying units a view of the stock required and available in the AO. It also has info on the policies and procedures for obtaining stock there. DAVS has an enhanced image library of more than 1,800 photos of equipment used in the AO. DAVS helps units to quickly establish a baseline Deployment Equipment List (DEL) of the equipment the unit will need to bring to support their mission.



DAVS CAN IMPORT PBUSE AND SPBS-R FILES TO COMPARE THEM TO STOCKS IN THE AO TO SHOW...

- What is available
- What a unit needs to bring
- What shortages need to be filled prior to deployment

The DAVS Container Load Module will build packing lists down to serial numbers of items for footlockers, unipacks/triwalls, and containers. This gives the commander a clear picture of what is packed and where it is. DAVS is available to units deploying to the Balkans, Afghanistan, Iraq, and Guantanamo Bay, and as Multi-National Force Observers. Free training is available to individually sourced units and commands. For assistance or to schedule training, call FORSCOM's Plans, Operations and Force Projection Division, Plans and Operations Branch at DSN 367-7090/6151 or (404) 464-7090/6151.



GOOD JOB, SERGEANT! IT'S ALL HERE!



2005 SEA Nominations



TODAY'S BIG STORY CONCERNS ARMY SUPPLY EXCELLENCE!

HERE'S CONNIE RODD WITH THE STORY!



AHH... JUST ENOUGH TIME FOR A QUICK CLIP!



WHAT!?! PHPPHPT! I'M ON THE AIR!?

THANKS, BONNIE! ARMY SUPPLY ROOMS AROUND THE WORLD CAN BEGIN PREPARING THEIR NOMINATIONS FOR THE 2005 ARMY SUPPLY EXCELLENCE AWARDS.



HERE'S THE STORY...

The Army Chief of Staff Supply Excellence Awards (CSA SEA) boost logistics readiness and supply effectiveness. The program recognizes extraordinary supply and support operations, outstanding property accountability, direct support and resource management, and awareness and strict adherence to logistics management and the Army Command Supply Discipline Program (CSDP).

Guidance for the CSDP is in Appendix B of AR 710-2. The CSA SEA is open to active Army, National Guard, and Reserve units.

Units interested in competing for the award should contact their MACOM representatives for guidance.

MACOMs will submit nominations no later than Dec. 10. More info is available on Army Knowledge Online's Knowledge Collaboration Center (KCC) by clicking on these links in order:

- KCC >
- ArmyCommunities >
- TRADOC >
- Quartermaster >
- Supply Excellence.



WE HOPE TO ANNOUNCE YOUR UNIT AS A WINNER NEXT YEAR!

THE 2003 CHIEF OF STAFF ARMY AWARD FOR MAINTENANCE EXCELLENCE

CONGRATULATIONS TO WINNERS AND RUNNERS-UP OF THE 22d ARMY AWARD FOR MAINTENANCE EXCELLENCE.

HERE ARE THE UNITS THAT RECEIVED 2003 AAME AWARDS.



ACTIVE TOE UNITS

Small Category

Winner: 11th Sig Det, 2d Sig Bde, (NETCOM)

Runner-Up: HHC, 501ST MI Bde, (INSCOM)

Medium Category

Winner: 3d MI Bn, (INSCOM)

Runner-Up: 524th MI Bn, (INSCOM)

Large Category

Winner: 532d MI Bn, (INSCOM)

Runner-Up: 297th MI Bn, (INSCOM)

TDA UNITS

Small Category

Winner: Avn Flight Det, HHC, Ops Grp, Combat Maneuver Training Center, (USAREUR)

Runner-Up: Equipment Concentration Site 66, (FORSCOM)

Medium Category

Winner: 58th Trans Bn, 3d Chem Bde, (TRADOC)

Runner-Up: Maintenance Activity Pirmasens, (USAREUR)

Large Category

Winner: Maintenance Activity Kaiserslautern (USAREUR)

Runner-Up: 527th MI Bn, (INSCOM)

RESERVE TOE UNITS

Small Category

Winner: 912th Med Co (DS), (FORSCOM)

Runner-Up: 842d QM Co, (FORSCOM)

Medium Category

Winner: HHC, 807th Med Cmd, (FORSCOM)

Runner-Up: HHC, 160th MP Bn, (FORSCOM)

Large Category

Winner: 94th General Hospital, (FORSCOM)

Runner-Up: NONE SELECTED.

NATIONAL GUARD TOE UNITS

Small Category

Winner: HHD, 690th Maint Bn, (NCARNG)

Runner-Up: 5694th Engr Det (FFTG), (OHARNG)

Medium Category

Winner: 732d Maint Co, (NCARNG)

Runner-Up: A Co, 434th Main Spt Bn, (MNARNG)

Large Category

Winner: 2d Bn, 156th Inf Regt, (LAARNG)

Runner-Up: 690th Maint Bn, (NCARNG).

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Would You Stake Your Life *right now* on the Condition of Your Equipment?



THE KEY TO GOOD

COMMO

**LINE IT UP TO
THE KEYWAY!**