

Supply Excellence



AT UNIT AND ORGANIZATIONAL LEVELS, THESE UNITS STOOD OUT FOR EFFECTIVE AND EFFICIENT SUPPLY OPERATIONS.

WINNERS AND RUNNERS-UP IN THE FIRST CHIEF OF STAFF, ARMY, AWARD FOR SUPPLY EXCELLENCE COMPETITION ARE...

Level I - Active Company/Battery/Troop

Category I - TOE Units

- Winner - 295th General Supply Co, Ft Lewis, WA
- Runner-up - 287th MP Co (Berlin), Germany

Category II - TDA Equivalent

- Winner - Joint Security Area (JSA), UN Cmd Scty Force, Korea
- Runner-up - US Army Field Station, Camp Humphrey, Korea

Level II - Active Battalion/Squadron

Category I - TOE Units

- Winner - 70th Trans Bn, 21st SUP-COM, Germany
- Runner-up - 32d Medical Supply, Optical & Maintenance Bn, Ft Bragg, NC

Category II - TDA Equivalent

- Winner - Consolidated Property Book Office, Ft Monroe, VA



Runner-up - 509th Sig Bn, 59th Sig Cmd, Italy

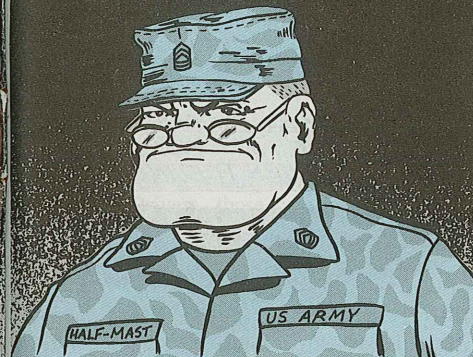
Level - Detachment - Active

- Winner - USA Senior ROTC Instructor Gp, Providence College, Providence, RI
- Runner-up - UK Detachment, 39th Sig Bn, 5th Sig Cmd, England

Level III Army Reserve Component

Company Category

Awards



Winner - 257th Trans Co (Hvy Trk), Las Vegas, NV

Runner-up - HHC, 561st Support Gp (89th ARCOM), Omaha, NE

Battalion Category

Winner - 3d Bn, 87th Inf, Ft Carson, CO

Runner-up - 394th Sta Hospital, Grand Rapids, MI

Level IV

Army National Guard

Company Category

Winner - HHC, 329th Support Gp, Virginia Beach, VA

Runner-up - HHD, 163d MP Bn, Washington, DC

Battalion Category

Winner - 2d Bn, 111th FA, Richmond, VA

Runner-up - 2d Bn, 175th Inf, Baltimore, MD

New winners will be selected each year. Competition info will be published in the Unit Supply UPDATE.

NOV 86



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PS wants your ideas and contributions, and is glad to answer your questions. Name and address are kept in confidence. Just write to:

MSG Half-Mast
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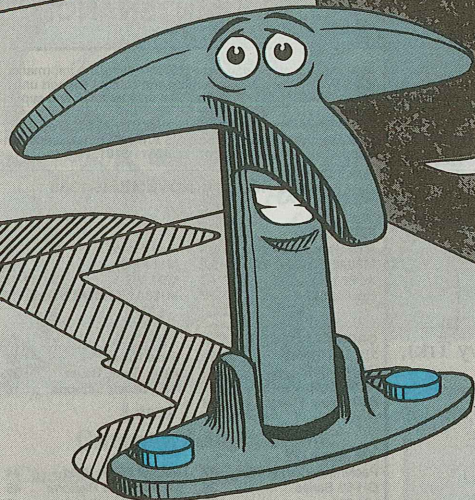
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NOV 86

1

Repair Ammo Box



THESE NEW RIVETS
GIVE ME A MORE
SECURE FEELING!

No need to scrap a turret platform ammo box, mechs, just because the latch is broken.

Use a little Yankee ingenuity—find some way to fix it.

One way is to use fastener, NSN 2590-00-001-3986, and solid rivets.

Depending on the thickness of the box you are repairing, you may need some of the following solid rivets:

NSN 5320-00-117-6788—0.249-0.254 dia, 0.615-0.635 lg

NSN 5320-00-117-6829—0.125 dia, 0.428-0.488 lg

NSN 5320-00-117-6853—0.186-0.191 dia, 0.490-0.510 lg

NSN 5320-00-721-9062—0.186-0.191 dia, 0.616-0.635 lg

NSN 5320-00-754-0991—0.186-0.191 dia, 0.552-0.572 lg

NSN 5320-00-754-0992—0.186-0.191 dia, 0.428-0.448 lg

Of course, you'll need to do a little touchup painting.

At any rate, for a mere \$2 latch and some rivets, you can save a \$130 ammo box.



Replace the latch
and save an ammo box

Hatch Bearings Need Grease



KEEP MY
BEARINGS
GREASED!

Drivers, those cam bearings that let your hatch slide open and shut will work a lot easier if you lube them.

For dusty, sandy areas, you use very little lube, as we said on Page 23 of PS 405. In other areas, you'll need to lube.

The tank LO's call for a little oil on hinges and handles, but don't mention the bearings.

There are three of them, spaced evenly around the hatch shaft.

As often as needed, put a little dab of GAA along each bearing track and open and close the hatch several times to spread the grease.

If the bearings on your hatch are worn out, grease won't help. Tell your mech to eyeball Fig 165 of TM 9-2350-253-20P-1. It shows what's needed to replace them.

M60A3 Tanks...



Lube bearing tracks
for smooth operation

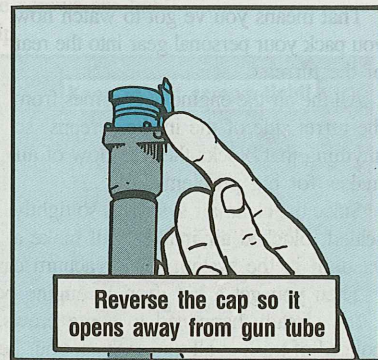
Prevent Mast Cap Damage

Turret mechs, the wind sensor mast cap can get ripped off by limbs and brush. But you can stop that by rotating the mast cap.

Make sure the cap hinge points toward the gun tube. Then if limbs and brush hit the mast, they'll just slip over the cap instead of damaging it.

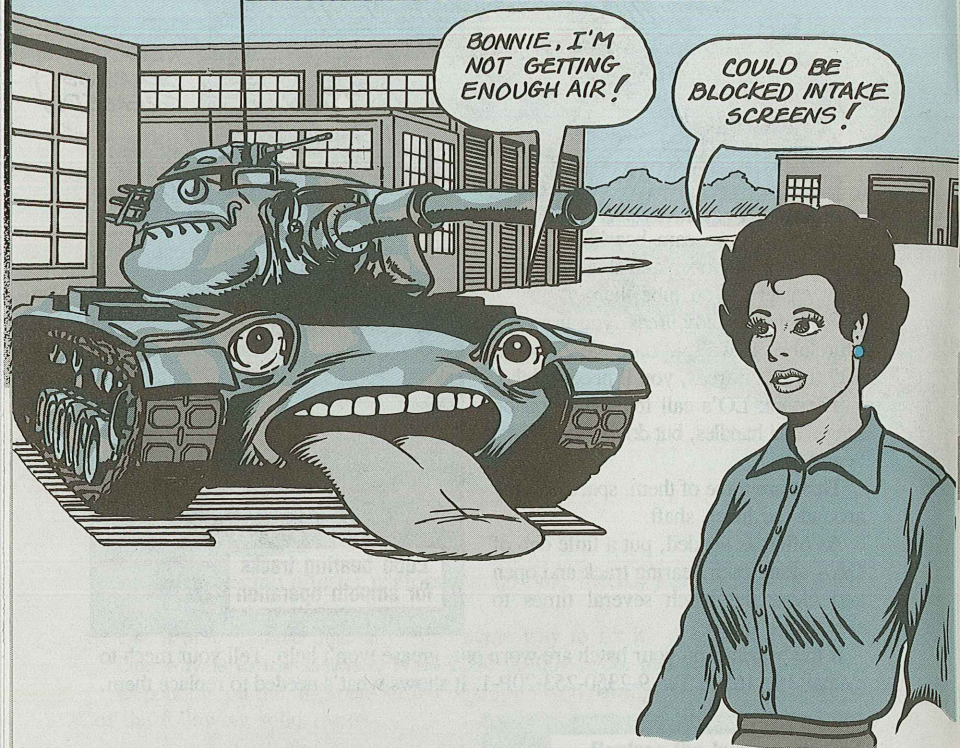
Just rotate the cap 180°. Use 4 new lock washers, NSN 5310-00-933-8118.

If the cap has already lost its "head," use NSN 1220-01-018-9175 to get a new one.



Reverse the cap so it
opens away from gun tube

No Restrictions, Please!



Air—clean air, give your M60A3 plenty of it.

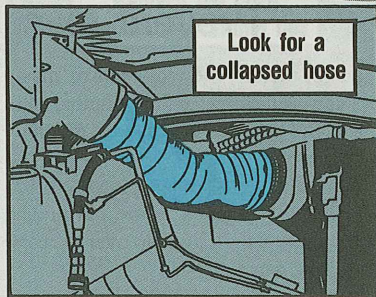
That means you've got to watch how you pack your personal gear into the rear of the turret.

All the air the engine gets comes from the turret side of the intake screens, so anything that blocks the free flow of air makes for big problems.

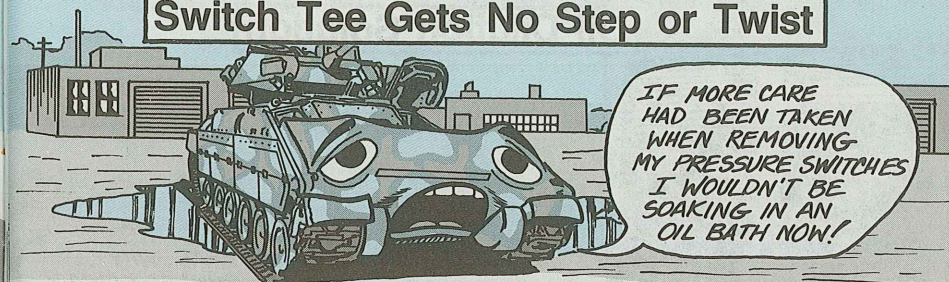
Since the clean-air system is so tightly sealed, blocked air intakes will make a vacuum in the system. This vacuum can collapse the intake hose.

Then you get a big drop in engine power and possible engine damage.

It's already happened to some crews. Don't be next. Keep your turret area policed of trash at all times. Stack your belongings away from the rear of the turret.



Switch Tee Gets No Step or Twist

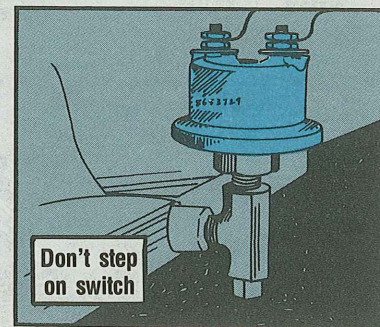


The mounting tee for the transmission low oil pressure switch won't take much of a twist without breaking or cracking.

Remember that, mechs, when you're working on the switch. Otherwise, you've set up your Bradley or MLRS for an oil bath...and maybe a fire.

When you're installing or removing the pressure switch, use two wrenches—one to hold the tee and the other to turn the switch.

And watch where you put your feet or where you kneel on the transmission, especially on the Bradley. It doesn't have a bracket to protect the switch. If you step or kneel on the switch, you can break the tee.



MLRS...

Keep Hand Brake Lever Tight

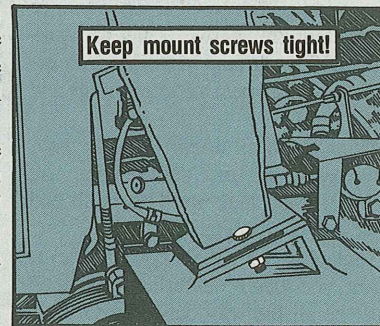
There are only 2 cap screws holding the parking brake control lever in place, mechs. That's no problem as long as the screws are tight.

They don't stay tight without your help.

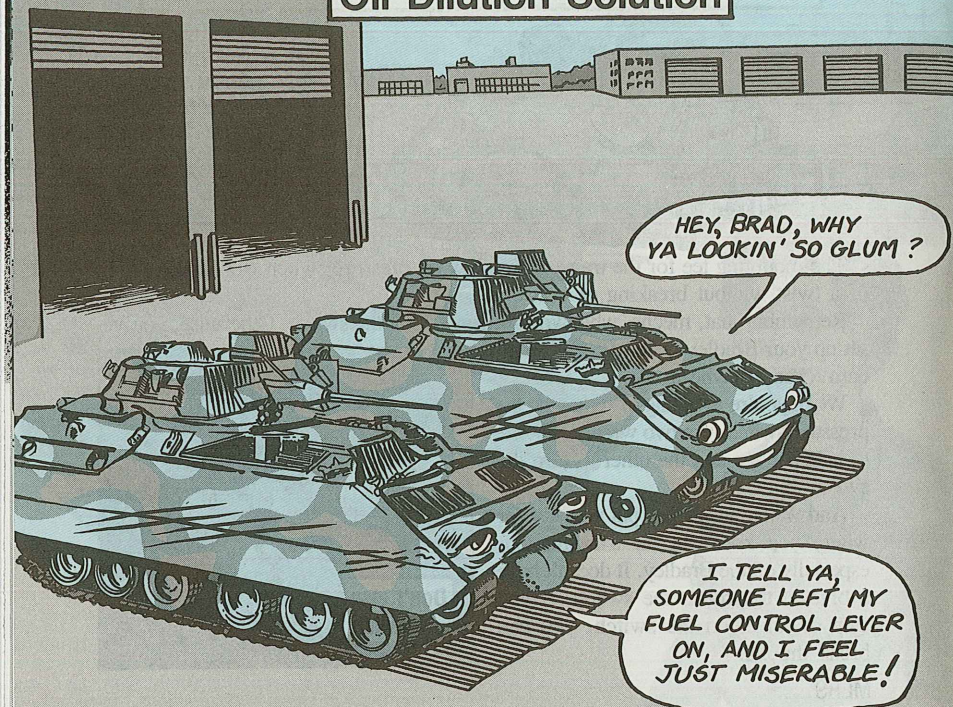
As the screws loosen from vibration, there's more and more "play" at the lever base. Metal fatigue can cause the lever base to break, meaning you'll need a new lever.

Plus, loose screws can cause the brake mechanism not to hold the brakes as tightly as needed. Like, the launcher/loader will roll.

So, give the old hairy eyeball to the lever every time you've got the cab raised. If it's loose, tighten the screws.



Oil Dilution Solution

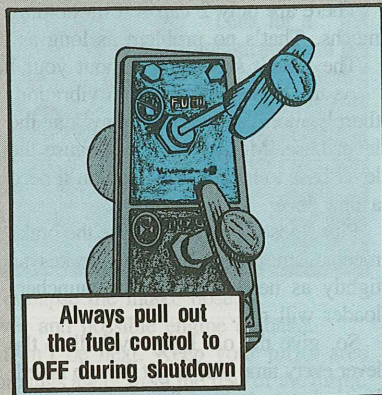


The drip-drip-drip of diesel fuel into your Bradley's or MLRS's engine oil is a sure ticket for damage.

You drivers can help prevent the drip by making sure the fuel control lever is always pulled out to OFF when you're not operating. Otherwise, fuel will continue to flow through the lines into the cylinders—then past the piston rings and into the oil.

Thinned-out oil doesn't lube as well, parts wear quicker. Your engine can hydrostatically lock up. This is all bad news for your engine!

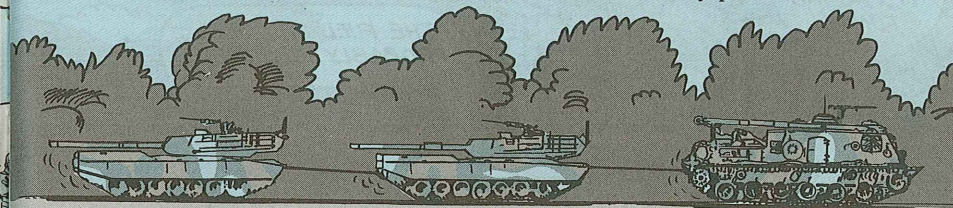
So double-check the fuel control lever before you lock up after the mission. It must be all the way out to be OFF!



Beware Dangers in Towing M1/M1A1 Tanks

When you tow an M1 or M1A1 tank, take extreme care with hookup, speed, turning and stopping.

The tanks weigh more than the "88" and that creates safety problems.

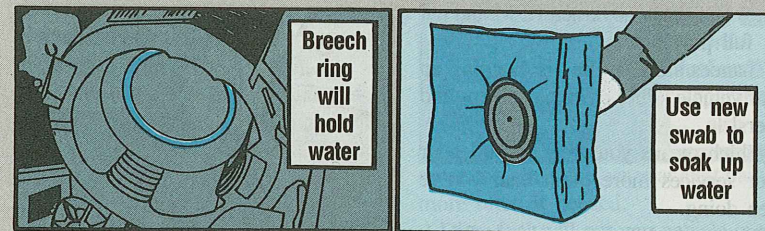


- Always use a third vehicle—another M1 will do fine—as a hold-back vehicle when you tow an M1 or M1A1 even though you use a tow bar.
 - Allow no one to ride in or on an M1 or M1A1 while it's being towed.
 - Tow at 5 MPH or slower when using a tow bar.
 - Tow at 2 MPH or slower when using tow cables.
 - Never make sharp turns or sudden stops. Make gradual, wide turns in first gear.
- If you don't do these things, the tank you're towing may push you sideways, may run up over your rear, may ruin your recovery vehicle's transmission or brakes, and might even flip you over.

New Chamber Swabs Available

Heads up, Redlegs! Cure your excess water problem with a couple of new chamber swabs.

Those of you who fire 155-MM and 8 inch howitzers are very familiar with the



swabbing problem. The old style swab won't soak up all the water, so the powder charge does. Then you've got short round problems.

Dry up all your water ailments with new swabs, NSN 1025-01-232-6822 for the 155-MM howitzers, and NSN 1025-01-232-6821 for the 8 inch howitzer.

Filters will

WHAT'S HAPPENIN'? IT'S ACTING FUNNY!

THE FUEL FILTER'S PROBABLY CLOGGED!

CHOKE!

COUGH!

COUGH!

CAC!

You say your diesel engine's hard to start—or won't start at all?

It misfires and runs rough when you do get it started, or it just dies?

It won't reach governed RPM and put out full power?

Chances are dirty fuel is clogging up your vehicle's fuel-cleaning screens and filters!

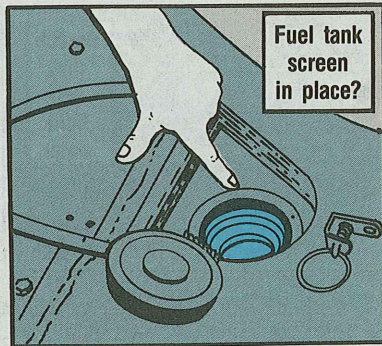
Which means you've gotta pull your filter services more often than you've been doing.

Every vehicle has some kind of fuel-cleaning device—screens, filters, or in some cases, fuel/water separators.

If you maintain them right, you'll have fewer problems with dirty fuel.

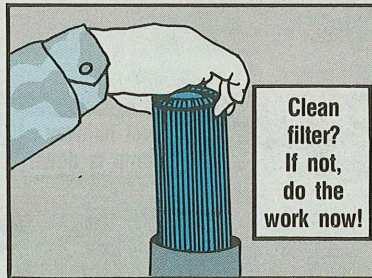
That means doing things by the TM's. As a general rule:

- Make sure the screens are in place and clean.

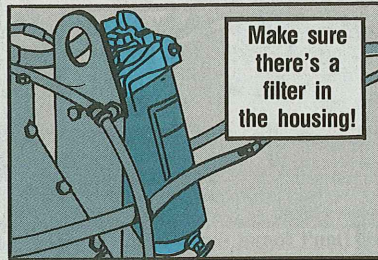


Clean the Fuel!

- Make sure all fuel filter elements are cleaned or replaced as needed to keep the



fuel clean. Some weather and storage conditions may mean you need to clean or change filter elements more often than the TM's say. If so, do the work—don't put it off.



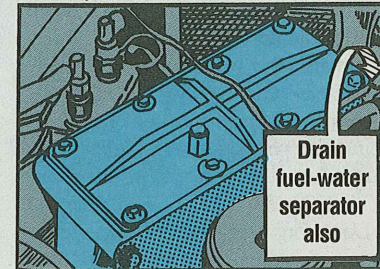
- Be sure there's a filter element in every filter housing. Don't laugh! There've been cases of elements being left out!

- Make sure you drain water daily from all fuel filters that have drains. If



conditions are really bad, drain twice a day—before operations and after cool-down.

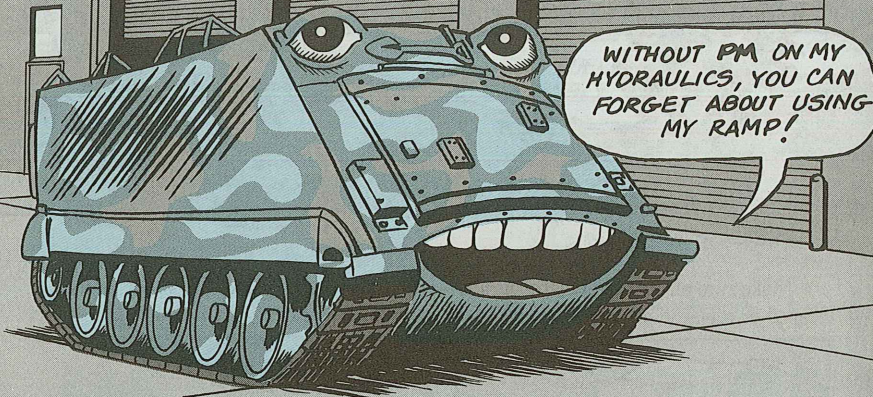
- If your vehicle has a fuel/water



separator, drain the water at least daily—more often if needed.

Dirty fuel will put any vehicle out of action. That's why it's everybody's job to make sure fuel is kept clean—fuel handlers, organizational mechanics and crew members.

What's the Ramp Without Hydraulics?



Not much!

Which means you've got three things to watch for when the ramp's not working right: low fluid level, clogged breather valves and clogged strainer.

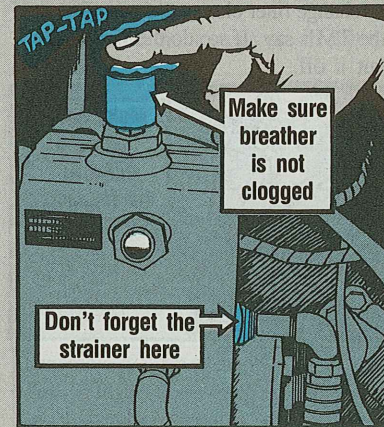
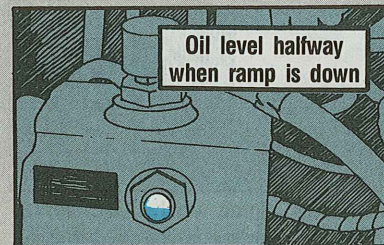
Right off, make sure the hydraulic oil level is about halfway up the sight glass on the reservoir when the ramp is down. Add oil as needed.

Dirt and other contamination make a hydraulic system sick by clogging its innards.

Eyeball the breather on top of the reservoir. If it's plugged, it won't relieve pressure. Clean it according to instructions in LO 9-2300-257-12 or LO 9-2350-261-12.

Don't forget the strainer. At least every six months, drain the reservoir and clean the strainer with dry cleaning solvent, P-D-680.

Clean-clean-clean is what it takes, and that means work-work-work. But it's the only way to keep your ramp in operation. It's not worth much if you're without hydraulic power.



Bolts Forward



I CAN REST BETTER IF MY BOLT'S FORWARD!

Dear Half-Mast,

When you store M60 machine guns, should the bolt be forward or to the rear? TM 9-1005-224-10 and TM 9-1005-224-24 don't really spell it out.

SGT J.J.M.

Dear Sergeant J.J.M.,

Forward's the way to go. Putting the bolt forward takes tension off the operating rod spring.

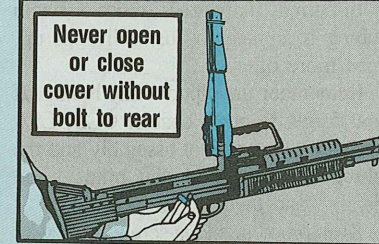
Remember, though, you must have the bolt to the rear before you open or close the cover. Otherwise, you'll damage the

Here's the rundown:

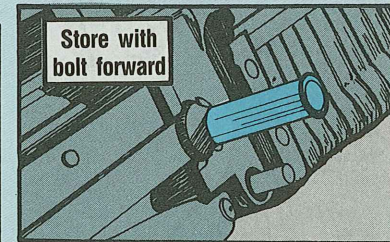
With the safety on FIRE and cover open, pull the cocking handle to the rear until the bolt locks.

Close the cover.

Never open or close cover without bolt to rear



Store with bolt forward



cover feed cam assembly and bolt actuator cam roller. Do it like it says on Pages 2-25—2-29 of TM 9-1005-224-10.

While holding the cocking handle, pull the trigger and ease the bolt forward. The M60's now ready for storage.

Half-Mast

PM

DO ME A FAVOR AND FOLLOW THESE TIPS. THEY'LL KEEP ME OUT OF THE SHOP!

Today's PM can prevent tomorrow's problems for your M60, operators. Follow these PM tips:

If you spot rust on your M60, don't reach for steel wool or other abrasives. They remove rust, but also rub away the finish. That leaves the door wide open to more rust.

If a rust spot is small, rub it out with CLP, LSA or LAW. Then wipe the spot clean and put fresh CLP, LSA or LAW on it. For large rust spots or areas where the finish is gone, tell your armorer. He can fix things with Solid Film Lubricant (SFL).

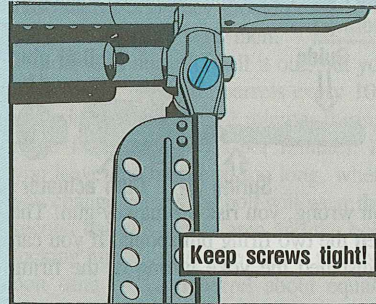
Lubing Reminders

In humid, rainy areas, twice-a-month lubing is a must. If rust still pops up, lube more often.

Remember the bipod while lubing. If you forget to put a coat of CLP, LSA or LAW on the pivot assembly and the plungers, the bipod can bind...and bend...and then it is ruined.

Keep bipod pivot leg screws tight with your combination tool. Tight screws prevent bent, broken, or lost bipod legs. Tell your armorer about screws that won't stay tight. He can restake screws to cure looseness.

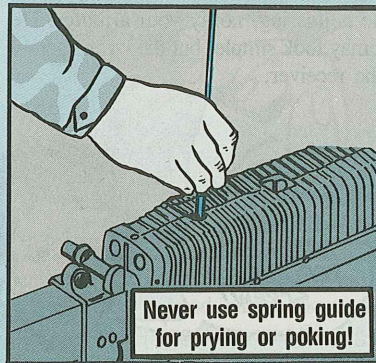
Prevents Problems



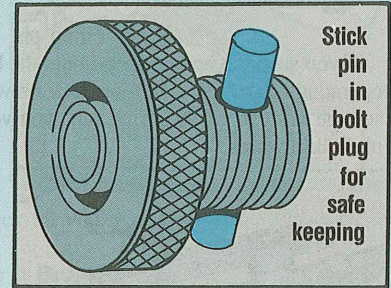
When you lube the barrel assembly, keep the barrel down and the gas cylinder up. That keeps lube from seeping into the gas cylinder, causing carbon buildup.

Disassembly Pitfalls

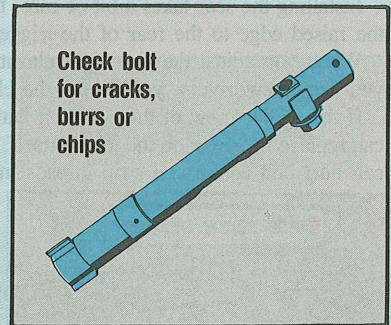
While taking your M60 apart, don't use the operating rod spring guide to poke or pry things like the forearm spring. That bends—and ruins—the guide. For prying and poking, use a dummy cartridge, cleaning rod, or the combination tool that comes with your M60.



The bolt plug pin is easy to lose when the bolt is disassembled. Stick the pin in the bolt plug immediately after you unscrew the plug from the bolt...and keep it there until you reassemble the bolt.



Check the bolt face and lugs and cam roller for cracks, burrs or chips. Make sure the cam roller moves. Report problems to your armorer.



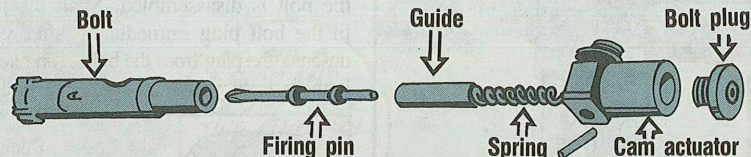
Never remove the ejector to clean the bolt assembly. You'll damage the ejector. Clean and lube the ejector on the bolt. Lube the bolt lugs, too. That helps the lugs last.

Straight On

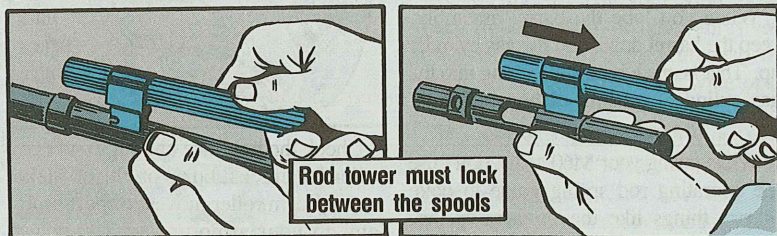
When you reassemble the bolt, get things straight. The cam actuator fits on the bolt either way. But the wrong way damages the bolt. The cam actuator's roller end goes on the bolt first. The actuator hole should match the bolt hole.

The long end of the firing pin goes in the bolt first. The small hole in the end of the guide fits on the short end of the firing pin. And the spring goes in the guide. It's firing pin...guide...spring.

Put it together like this:



If you snap the operating rod onto the bolt wrong, you risk a runaway gun. The operating rod tower yoke must lock **between** the two firing pin spools. If you can see the tail end of the firing pin, you've installed the yoke wrong or the firing pin's backwards.



Installing the sear takes a bit of care, too. Keep the flat side of the sear up and the raised edge to the rear of the trigger mechanism.

When you adjust the rear sight elevation scale, use your combo tool only. If you use screwdrivers, you'll burr the elevation range plate screw.

If the guide screw of the charging handle is missing, notify your armorer. He can replace it. Never do the job yourself. It may look simple, but the wrong screw can hurt bolt action and strip threads in the receiver.



14

LET YOUR ARMORERS REPLACE THE SCREW!



Barrels of Problems

You need both barrels for your M60, so give both equal PM. When you clean one barrel, clean the other. Check both barrels for twists, bulges, dents, loose parts and cracks. Twist the flash suppressors. They shouldn't move more than 1/16 inch.



Your TM doesn't spell it out, but you must give both barrels equal firing time. That means changing barrels every 10 minutes during sustained fire (100 rounds per minute) and every 2 minutes during rapid fire (200 rounds per minute). If you leave one barrel on too long, when you change barrels the bolt will wear the second barrel's socket area and the bolt locking lugs...fast. The idea is to keep bolt time on each barrel about equal. This keeps barrel socket wear equal and extends both barrel and bolt life.



While firing, hold the trigger fully back till you're through firing. That saves wear on the sear and sear notch.

Don't Be a Brute

Never muscle up on the traversing and elevating plunger. You can damage both the mount and plunger.

Never force the cocking handle. You can damage the cocking handle, safety or operating rod. A stubborn cocking handle is often caused by a safety set on S (SAFE) instead of F (FIRE).

Tell your armorer if your M60 won't budge.



When you travel, either hold your M60 or brace it. Never let it lie loose on a truck floor. A good jolt can loosen the leaf spring pin and bend the trigger guard. A loose leaf spring pin means the trigger mechanism grip assembly can come out. A bent trigger guard can cause a runaway gun.

NOV 86

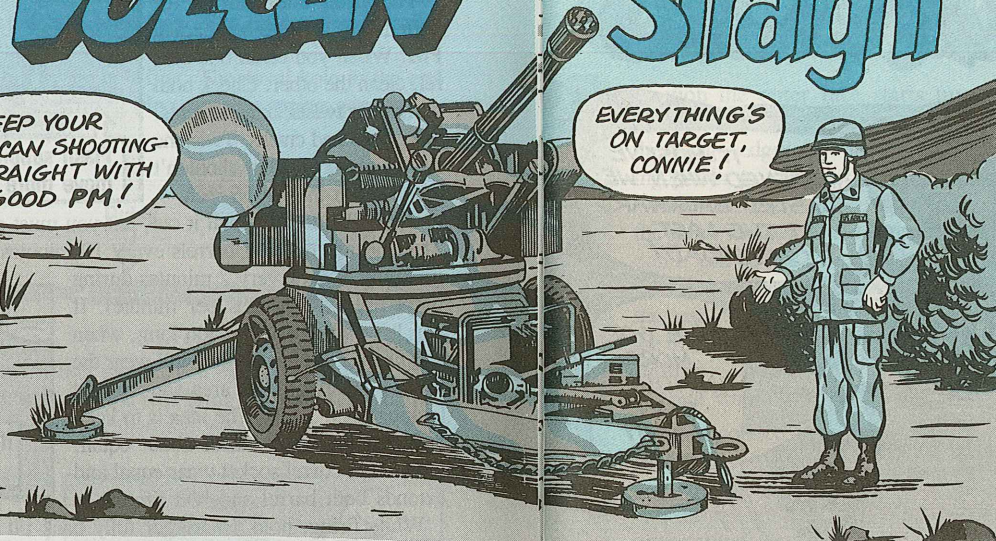
15

VULCAN

Straight Talk



KEEP YOUR VULCAN SHOOTING STRAIGHT WITH GOOD PM!

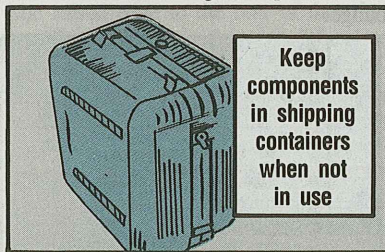


EVERYTHING'S ON TARGET, CONNIE!

Here are some ways for you operators to keep your M163A1 and M167A1 Vulcans on target.

Shipping and Handling

Save—and use—the shipping containers that components like the receiver-transmitter and radar range computer come



Keep components in shipping containers when not in use

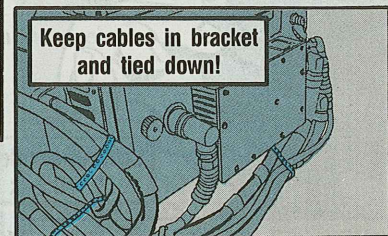
in. When you go to the field, pack back-up components in the containers to protect them from the bumps and bangs of riding in the back of a truck.

Another point: If something like the range computer goes down on your Vulcan, put it in its replacement's container

immediately. That keeps minor problems from becoming major on the computer's trip for repair.

Cable Tie-down Lowdown

Route cables between components like the distribution box and the radar receiver-transmitter through their brackets and tie them back with ties. If the heavy cables aren't secure, they kink and break... pull wiring out of connectors... and snag on tree limbs.



Keep cables in bracket and tied down!

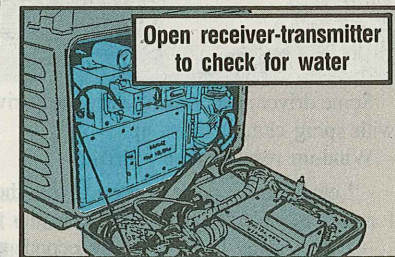
If you need ties, you can fabricate them with 7/8-in wide straps, NSN 5340-00-182-4682, or 3/8-in wide straps, NSN

Never let the voltage exceed 28.7 volts for the M167A1 or 29 volts for the M163A1. Never let the LOAD CURRENT meter exceed 100 percent for either Vulcan. If the LOAD CURRENT meter doesn't drop to 10 or less after 30 minutes of charging, stop charging and tell your mechanic. Something's wrong!

Mopping Up

If the radar receiver-transmitter gets wet from rain or washing, dry it immediately. Moisture can short out the receiver-transmitter's power supply.

Open the receiver-transmitter's panel and mop up any standing water. Pull the

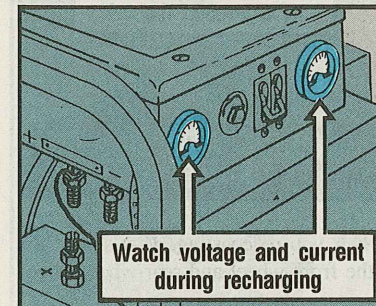


Open receiver-transmitter to check for water

5340-00-081-5169, and button stud fasteners, NSN 5325-00-027-0191.

Battery Charging

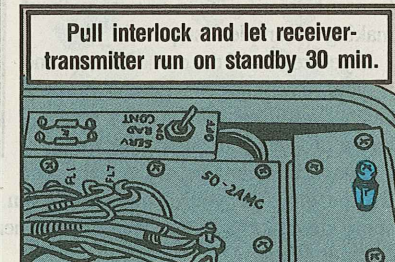
Recharging your Vulcan's batteries with the auxiliary power unit (APU) is not a turn-it-on-and-leave-it procedure. If you don't keep an eye on the APU's



Watch voltage and current during recharging

VOLTS meter and LOAD CURRENT meter during recharging, you can overcharge—and damage—the battery.

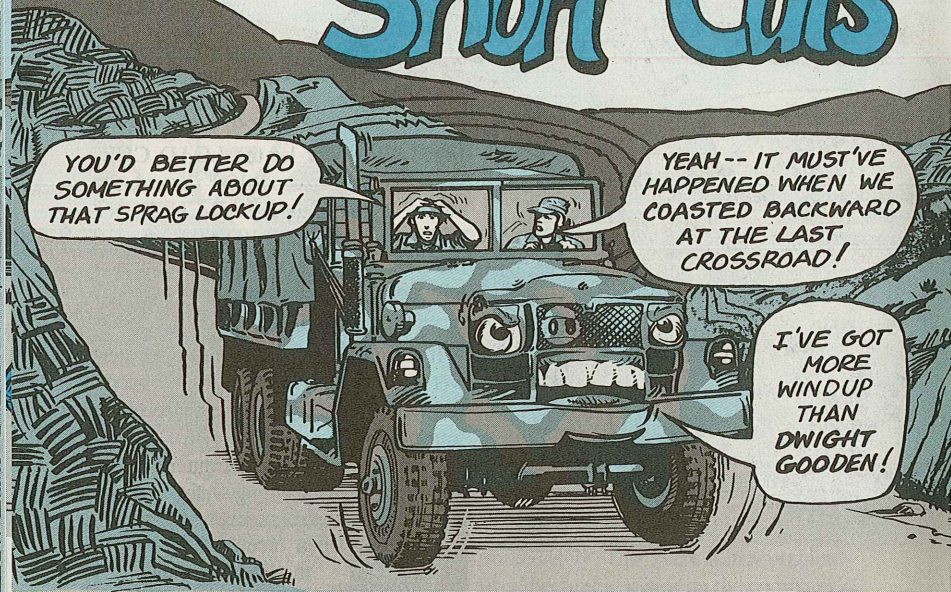
interlock switch and let the receiver-transmitter run on standby for 30 minutes



Pull interlock and let receiver-transmitter run on standby 30 min.

with the panel down. The receiver-transmitter's fan will dry up any remaining moisture.

Short Cuts

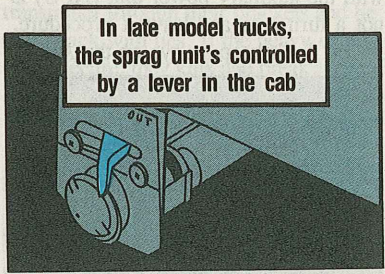


Some drivers cut corners when they drive their deuce-and-a-halves... and end up with sprag clutch "wind-up."

Wind-up results when a driver:

- Lets the truck coast backward with the transmission in a forward gear, or roll forward in reverse gear.
- Drives away from a stop in second gear.
- Shifts from reverse to first gear or from a forward gear to reverse without making a complete stop.

If you're one of the corner-cutters and if your truck has an automatic sprag clutch, you'll get wind-up—or worse—just a prop shaft, front axle or transfer.



Your truck must be in the right gear for the direction you're traveling—even when you're coasting. If it's not, the sprag clutch locks in the front drive. Then the front-wheel and rear-wheel drives battle for control.

The sprag's wedges are positioned between the inner and outer race on the front shaft of the transfer. Under normal conditions, the outer race (from the transmission) turns slower than the inner race to the front wheels. If the rear wheels lose

Cause Damage

traction the outer race starts turning faster than the inner race. That engages the sprag wedges, and transfers the driving power to the front wheels.

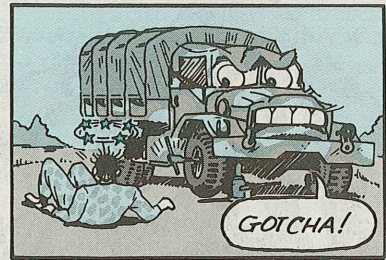
When the rear wheels regain traction, the sprag wedges should release. If they don't, you have a case of wind-up. The truck's front wheels bounce you all over the road... it's hard steering straight... the truck jumps out of gear... or it's hard shifting.

Treat wind-up like so:

If you coasted backward in a forward gear, drive forward the same distance you coasted backward.

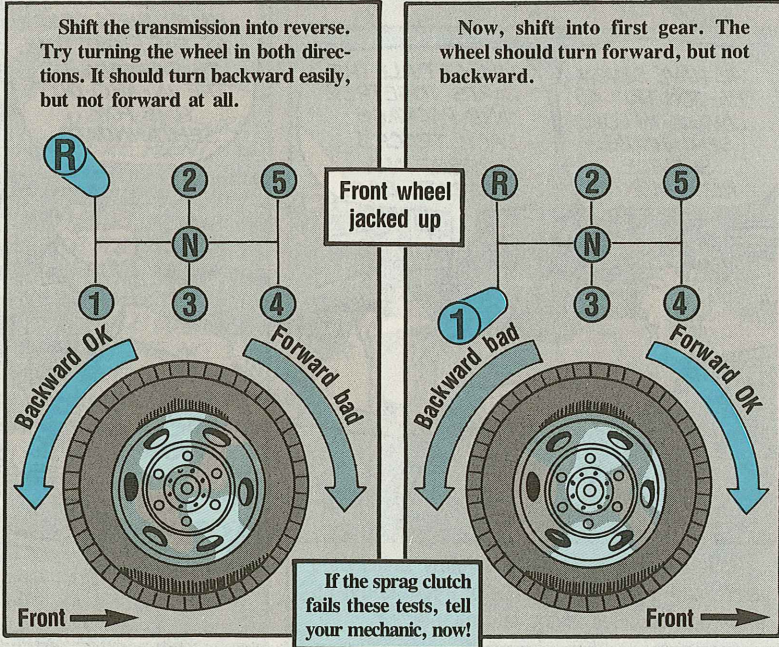
If that doesn't release the sprag wedges,

jack a front wheel off the ground. Taking the weight off the wheel may be enough

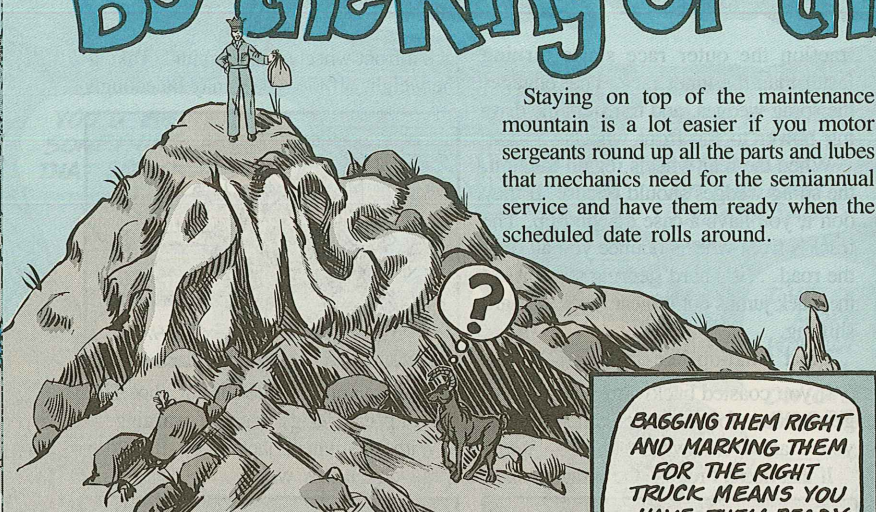


to cure the wind-up. Be careful, tho! The wind-up can let go without warning.

With the wheel jacked up, test the sprag clutch this way:

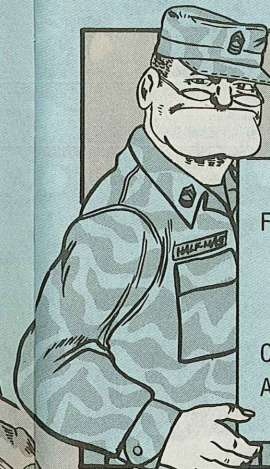


Be the King of the



Staying on top of the maintenance mountain is a lot easier if you motor sergeants round up all the parts and lubes that mechanics need for the semiannual service and have them ready when the scheduled date rolls around.

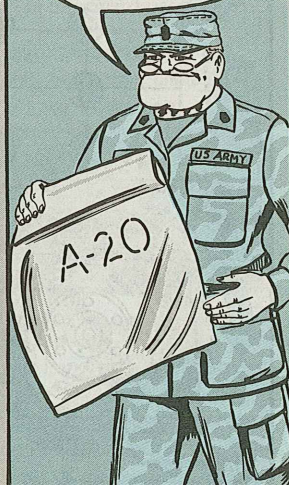
PMCS Mountain



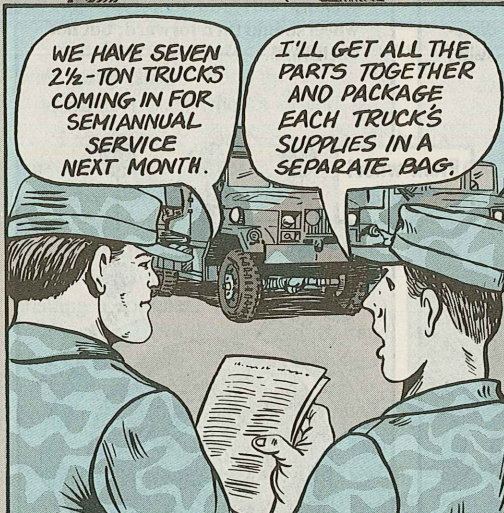
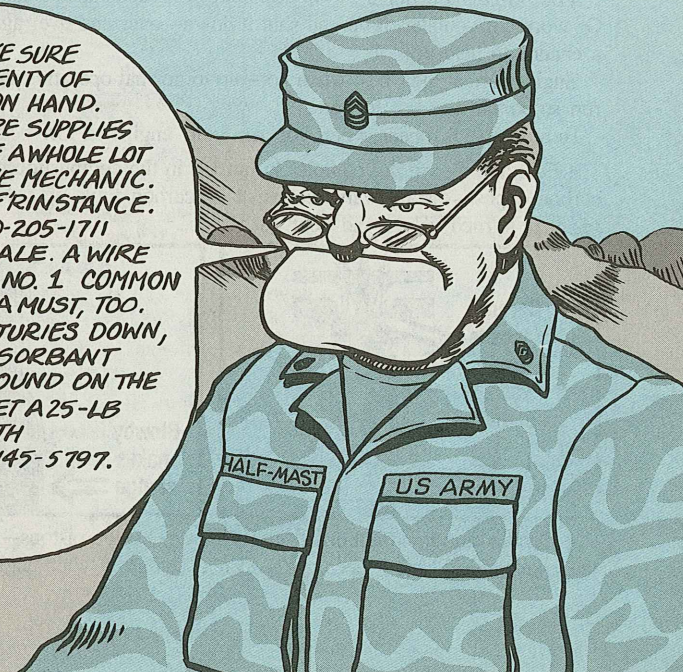
HERE ARE THE PARTS MECHANICS NEED FOR SURE:

	ITEM	NSN	QTY
Fuel Filter	Filter parts kit (secondary)	2910-00-134-7835	2
	Primary filter	2910-00-790-2300	1
	Primary gasket set	5330-00-678-3298	1
Oil Filter	Repair kit	2940-00-884-4801	2
	Filter	2940-00-804-7898	1
Air Cleaner	Rubber seal	5330-00-804-7899	1

BAGGING THEM RIGHT AND MARKING THEM FOR THE RIGHT TRUCK MEANS YOU HAVE THEM READY AT THE RIGHT TIME. THIS SPEEDS UP THE IN-AND-OUT TIME FOR SEMIANNUALS.



ALSO, MAKE SURE THERE'RE PLENTY OF LUBRICANTS ON HAND. THEN THERE ARE SUPPLIES THAT MAKE LIFE A WHOLE LOT EASIER FOR THE MECHANIC. COTTON RAGS, FRIN STANCE. NSN 7920-00-205-1711 GETS A 50-LB BALE. A WIRE BRUSH FROM THE NO. 1 COMMON SHOP SET IS A MUST, TOO. YOU CAN KEEP INJURIES DOWN, BY USING ABSORBANT ANTI-SLIP COMPOUND ON THE SHOP FLOOR. GET A 25-LB BAG WITH NSN 7930-01-145-5797.

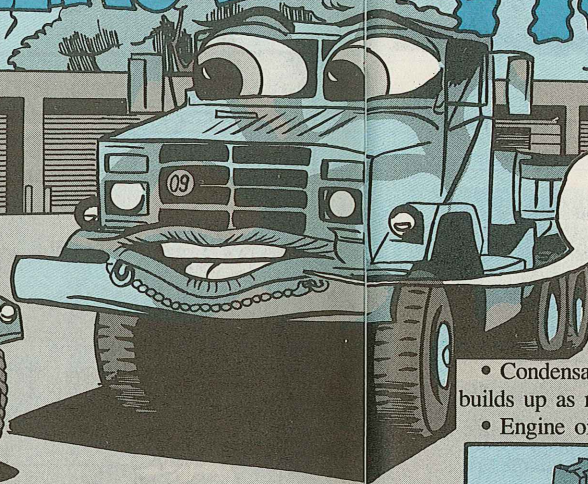
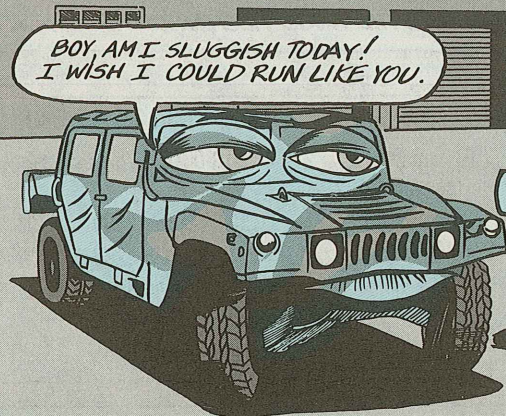


WE HAVE SEVEN 2 1/2-TON TRUCKS COMING IN FOR SEMIANNUAL SERVICE NEXT MONTH.

I'LL GET ALL THE PARTS TOGETHER AND PACKAGE EACH TRUCK'S SUPPLIES IN A SEPARATE BAG.

Gathering the parts together early saves time later—and it saves the hassle of trying to dig up parts and supplies at the last minute.

They Like It HOT!

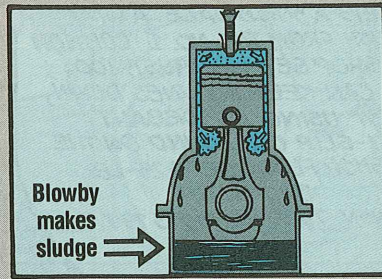
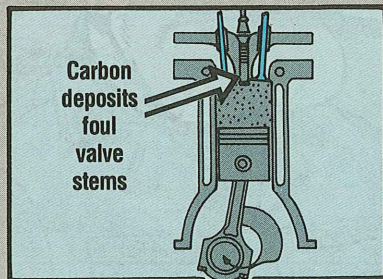


Your engine's in for a lot of trouble if you run it at low idle for a long time. Or worse, if you start it up and shut it down—over and over again—before it has a chance to heat up.

Engines are at their best when hot—up to normal operating temperatures. They run smoother and last longer.

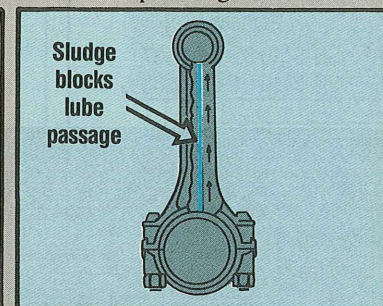
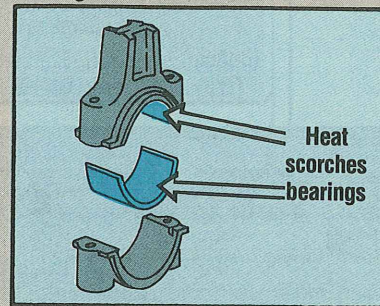
Here's what happens when you run your engine at low heat:

- Fuel and oil are not completely burned in the combustion chambers, leaving carbon deposits on the valve stems. That carbon fouls up valve operation. The result is burned valves and bent push rods.



- Condensation and unburned fuel slips around the pistons—blowby—and into the crankcase. There it becomes acid and sludge in your engine oil.

- Condensation from normal engine breathing never gets boiled off. Instead, it builds up as more acid and more sludge in the crankcase.
- Engine oil breaks down. Poor lubrication burns up bearings.



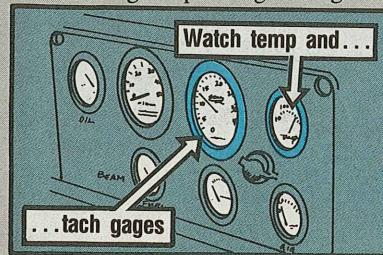
- Sludge blocks lube passages. Oil can't get through to lube and cool. Heat and friction tear up your engine.

High speed idling prevents this kind of trouble.

Watch the TEMP gage on your dash. Hold the engine speed high enough to keep the needle in the normal operating range specified in your -10 TM.

Watch the tachometer. It tells engine speed. Find the speed needed to make the heat that keeps the TEMP gage in the normal operating range.

Keep your idle high and avoid stop-and-start driving and your engine will perform at its best.



Screens and Bins

Need storage bins and screens for your M750 Shop Van?
A few of the bins are called out in TM 9-2330-238-14&P, but none of the screens are.

Here's the rundown:

Storage Bin

NSN 2540-01-076-9306

Screens

(Bottom) NSN 5410-01-135-0987
(Top) NSN 5410-01-135-0988

Storage Bin

NSN 7125-01-115-2288

Screens

(Bottom) NSN 5410-01-135-0987
(Top) NSN 5410-01-135-0988

Storage Bin

NSN 2540-01-125-3413

Screens

(Bottom) NSN 5410-01-135-0987
(Top) NSN 5410-01-135-0988

Storage Bin

NSN 7125-01-076-9299

Screens

(Bottom) NSN 5410-01-159-9547
(Top) NSN 5410-01-135-0986

by NSN

STORAGE BINS ARE INTERCHANGEABLE FRONT-TO-BACK EXCEPT FOR THE DESK UNIT. IT BACKS UP TO STORAGE BIN-- NSN 2540-01-125-3413. LEFT AND RIGHT SIDE BINS CANNOT BE INTERCHANGED THO'!



Storage Bin

NSN 7125-01-115-2289

Screens

(Bottom) NSN 5410-01-135-0987
(Top) NSN 5410-01-135-0988

Desk Unit

NSN 7110-01-076-9300

Screen

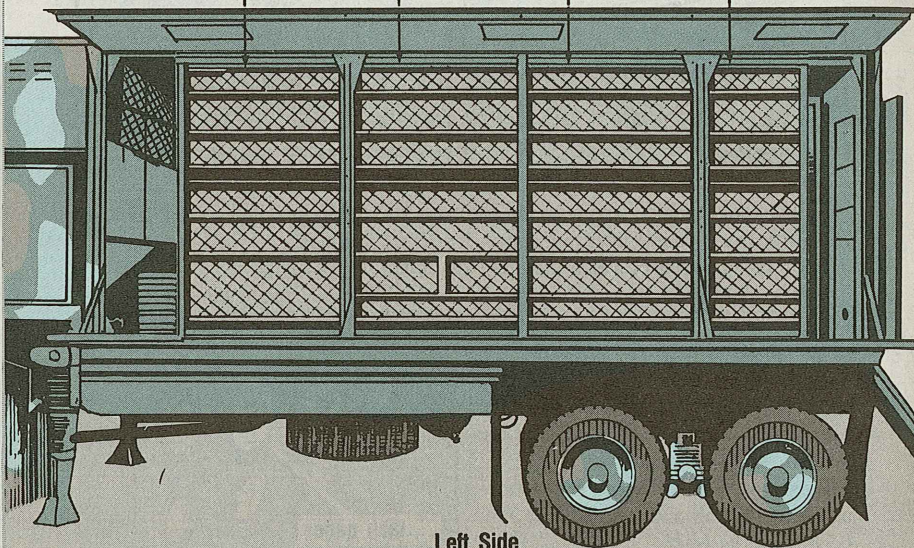
NSN 5410-01-135-0989

Storage Bin

NSN 2540-01-077-1686

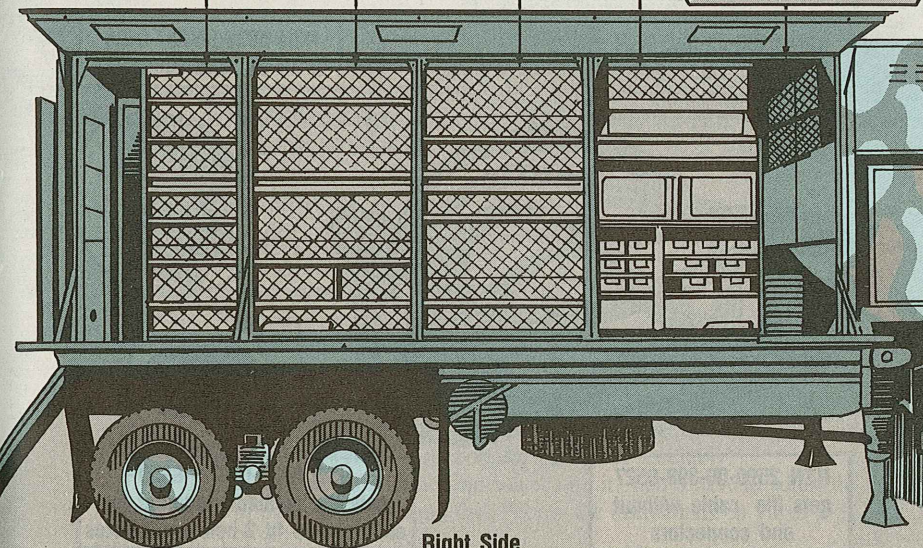
Screen

NSN 5410-01-135-0990



Left Side
24

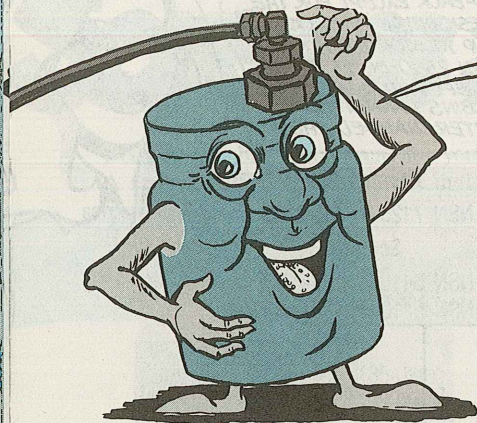
NOV 86



Right Side
25

NOV 86

Stop Air Line Freeze-Up



STOP BRAKE LINE FREEZE-UP WITH ME. I'LL KEEP YOU RUNNING RIGHT!

Moisture in air brake lines will freeze in cold weather and block the lines.

That's why most trucks have an alcohol evaporator to put alcohol into air lines to prevent moisture from freezing.

All trucks except the 10-ton M.A.N. use methyl alcohol in their evaporators. NSN 6810-00-597-3608 gets one gallon. NSN 6810-00-275-6010 gets a 5-gal can.

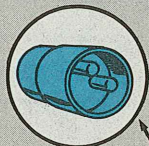
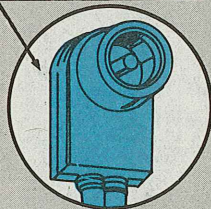
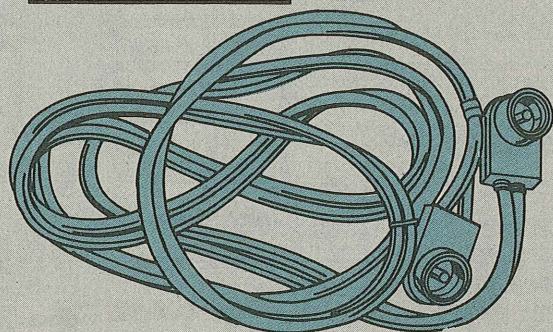
The M.A.N. takes a 50/50 mix of antifreeze, NSN 6850-00-181-7933, and denatured ethanol, NSN 6810-00-543-7415. Both are 5-gal cans.

Slave Cable Connection

Here're the parts making up the complete NATO slave cable, NSN 2590-00-148-7961, found in the No. 1 Common shop set:

NSN 6150-01-022-6004
gets the cable with
end connectors

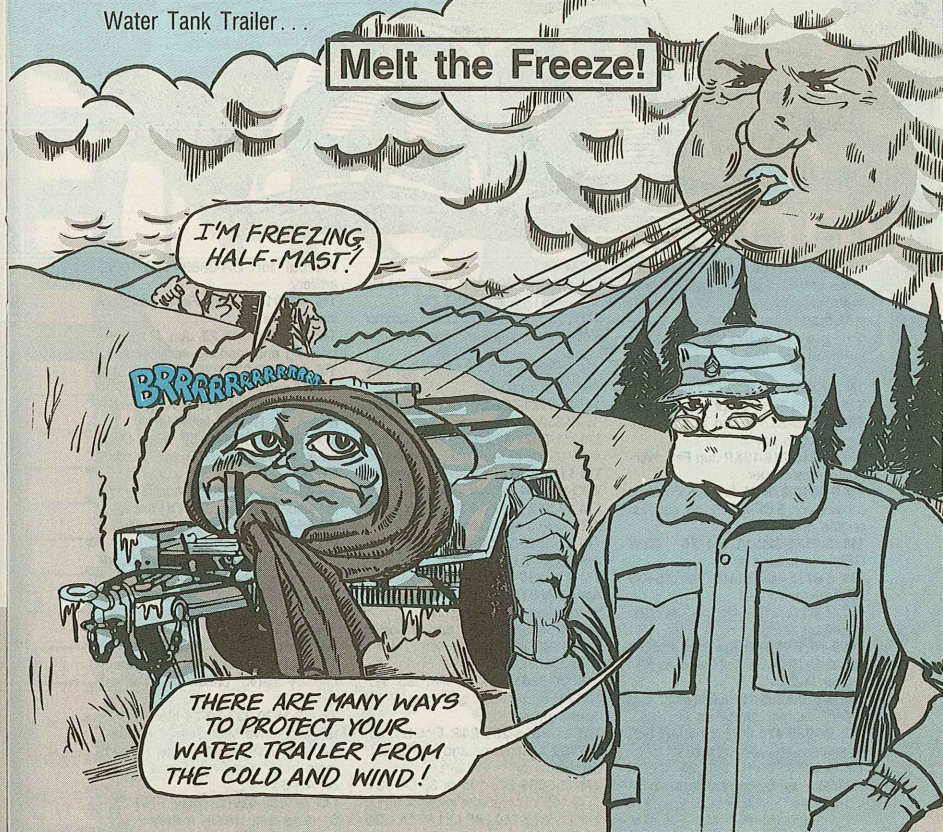
NSN 5935-00-567-0128
is for the end connector



NSN 2590-00-398-6527
gets the cable without
end connectors

NSN 5935-00-322-8959
gets the connector-adaptor for
each end to fit 2-hole receptacles

Melt the Freeze!



A quick way to foul up your M149, M149A1 or M625 water trailer is to let water freeze in the pipes and faucets.

To prevent freeze-up:

- Shelter the tank, especially if the temperature is below 0°F.
- Keep the manhole cover closed.
- After each use, close the valve at the front of the tank and drain the pipes through the faucets.
- Use an immersion heater in the steel tank. Never use it in a fiberglass tank. You could melt the tank.

The best immersion heater for the job is NSN 4540-00-266-6834. You'll find it in Chapter 5 of TM 10-4500-200-13 (Dec 69). It has a steel disk that provides a cover for the tank as well as a support for the heater assembly.

If you already have an M67 immersion heater, use it. You'll have to adjust the heater bracket to make it fit the tank, tho. Follow the instructions on Pages 2-31 and 2-32 in TM 9-2330-267-14&P.

PUBS

This is a selected list of recent pubs of interest to organizational maintenance personnel. This list was made from a computer print-out provided by the Adjutant General.

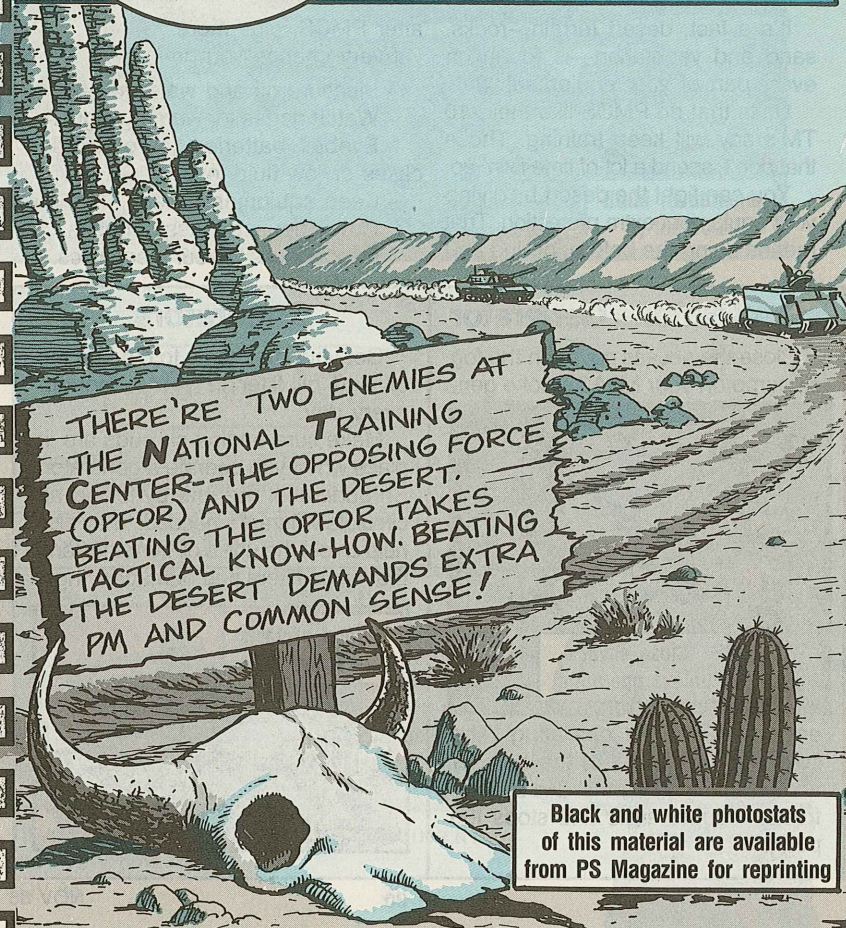
TM 3-4230-209-10 Jun M12A1 decon
TM 5-1940-273-10 Apr Assault boat
TM 5-3610-257-14 Jun Topographic reproduction set
TM 5-4210-218-13&P Jun Fire extinguisher recharger
TM 5-4310-378-14 Jul Reciprocating compressor, 5 CFM, 175 PSI, gasoline engine driven
TM 5-6115-323-14 Jul 76 1.5KW GED generator set
TM 5-6115-464-12-HR Jun 15-KW DED generator set
TM 5-6115-612-24P Jul Aviation generator set
TM 5-6675-250-10 Jun Gyro azimuth
TM 9-1015-249-10-HR Jun 81-MM mortar M252
TM 9-1100-205-10 Jul KM129 and KM159 atomic demolition charges
TM 9-1230-476-20-2 May AH-64A helicopter, fire control system
TM 9-1265-209-10 Oct 84 MILES simulator system, firing laser, M74 for Stinger
TM 9-1425-380-10-2 Mar Pershing 1A field artillery missile system
TM 9-1425-646-20P May MLRS launcher/loader
TM 9-2320-272-10-HR Oct 85 M939/M939A1 5-ton trucks
TM 9-2350-222-20P-1 Sep M728 CEV
TM 9-2350-253-20P-1 May M60A3/A3TTS tank
TM 9-2350-300-20P Jul Gun, ADA, self-propelled M163A1
TM 9-4931-477-24P Aug GLLD support equipment and G/VLLD ground support equipment
TM 9-4931-710-14&P Aug M139 alignment device
TM 9-4935-395-14 Feb Supply and packaging/preservation shop, semi-trailer mounted and repair parts shop, Pershing II field artillery missile system
TM 10-5411-200-14 Apr Expandable shelter NSN 5411-01-136-9838
TM 10-5411-201-14 Apr Expandable shelter NSN 5411-01-124-1377
TM 10-7360-201-10 Jun Bakery plant, M-1945, M1945-50, -53 and

M534-68
TM 10-7360-206-23P Jun Field kitchen MKT-75 and MKT-75A
TM 11-5800-213-L Oct LOAP, commo/electronic equipment fire direction center
TM 11-5820-882-10-1-HR Sep AN/PRC-68A radio set
TM 11-5821-321-24P Oct 85 R-2270-ARW-83(V) radio receiver
TM 11-5821-322-24P Oct 85 AN/ARW-83(V)5 radio remote receiving set
TM 11-5821-326-13 Apr 85 C-11470/TSQ-105(V)4 receiver control-indicator
TM 11-5821-327-13 Apr 85 R-2289-ARW-83(V) radio receiver
TM 11-5826-227-24P-1 Apr 85 AN/ARN-89B direction finder set
TM 11-5865-234-23-1, -2 and -24P Apr 85 AN/TSQ-105(V)4 surveillance information processing center
TM 11-5865-235-13-1 and -2 Apr 85 OA-9169/TSQ-105(V) internal communication group
TM 11-5865-239-13 Apr 85 TD-1374/U multiplexor and TD-1375/U demultiplexor
TM 11-5865-239-24P Oct 85 TD-1374/U multiplexor and TD-1375/U demultiplexor
TM 11-5865-240-13 Apr 85 OL-334/TSQ-105(V) computer terminal group
TM 11-5865-240-24P Oct 85 OL-334/TSQ-105(V) computer terminal group
TM 11-5865-241-13 Apr 85 TD-1376/U multiplexor and TD-1373/U demultiplexor
TM 11-5865-241-24P Oct 85 TD-1376/U multiplexor and TD-1373/U demultiplexor
TM 11-5865-243-12 Apr 85 AN/USD-9A(U) detecting system
TM 11-5865-244-24P Oct 85 CP-1605/TSQ-105(V) intelligence electronic warfare processor
TM 11-5865-245-13 Apr 85 CP-1601/TSQ-105(V) intermediate frequency processor
TM 11-5865-246-13 Apr 85 CP-1668/ARW-83(V) intermediate frequency processor
TM 11-5865-249-13 Apr 85 TD-1377/TSQ-105(V) audio demultiplexor
TM 11-5865-249-24P Oct 85 TD-1377/TSQ-105(V) audio demultiplexor
TM 11-6115-473-13 Jan 85 AN/MJQ-26 power distribution system
TM 11-7440-240-10-1 Jan Operator's

manual for OA-8389/GSG-10(V) artillery
TM 43-0139 Aug Field painting instructions
TM 55-1500-345-23 Jun Revision, painting and marking army aircraft
TM 55-1520-238-23P-1 and -3 Aug AVUM and AVIM RPSTL for AH-64A
TM 55-1520-238-23P-2 Aug AVUM and AVIM RPSTL for AH-64A
TB 55-1520-209-20-39 May One-time inspection of rotor blades CH-47A
TB 55-1520-214-20-46 Aug Riveting tail rotor blade tip cap OH-6A
TB 55-1520-214-20-49 Jul Ungrounding OH-6A
TB 55-1520-214-20-50 Aug Ungrounding H-6 series, OH-6A
TB 55-1520-214-20-51 Aug Inspect tail rotor blades, H-6 series
TB 55-1520-214-50-1 Jul Removing tail rotor blade abrasion strips, OH-6A
TB 55-1520-217-20-31 Mar Inspect primary servo pressure switches, CH-54B
TB 55-1520-237-20-74 Mar Inspect tail rotor drive shaft nuts, UH-60A
TB 55-1520-238-20-8 Mar Inspect main rotor head stretched straps on AH-64A
LO 9-1430-529-12 May AN/MPQ-51 radar set, HAWK missile
LO 9-2330-357-12 Jun XM860A1 flatbed semitrailer
SC 3433-90-CL-N01-HR Jul Cutting and welding torch outfit
SC 4920-99-CL-A92 Jun Tool set, AVUM Set No. 2 airmobile and Set No. 2 fixed base
SC 4920-99-CL-A92-HR Jun Hand receipt catalog, tool set, AVUM, company size Set No. 2 airmobile
SC 4940-95-CL-A08-HR Jun No. 2 Supplemental full tracked vehicle tool set
SC 5430-97-CL-E01 Jun Fabric tank MCRL-2 Jul MCRL NIIN to logistics reference number (microfiche)
MCRL-3 Apr MCRL Fsch to logistics reference number to NSN (microfiche)
PAM 310-12 Aug Index and description of Army training devices
SB 10-523 Jun Size tariff for clothing, equipment and footwear
UPDATE 2-9 May Unit supply UP-DATE #9
TM 11-7440-240-10-1 Jan Operator's

NTC

Desert Lessons Learned



THERE'RE TWO ENEMIES AT THE NATIONAL TRAINING CENTER--THE OPPOSING FORCE (OPFOR) AND THE DESERT. BEATING THE OPFOR TAKES TACTICAL KNOW-HOW. BEATING THE DESERT DEMANDS EXTRA PM AND COMMON SENSE!

Black and white photostats of this material are available from PS Magazine for reprinting



USE TB 43-0239,
MAINTENANCE IN THE
DESERT, AND THESE
TIPS TO FIGHT THE
DESERT'S SAND,
DUST AND HEAT.

PMCS

It's a fact, desert terrain—rocks, sand and vegetation—is tough on every part of your equipment.

Units that do PMCS like their -10 TM's say will keep training. Those that don't, spend a lot of time fixin' up.

You can fight the desert by giving your equipment extra protection. That means doing the before, during and

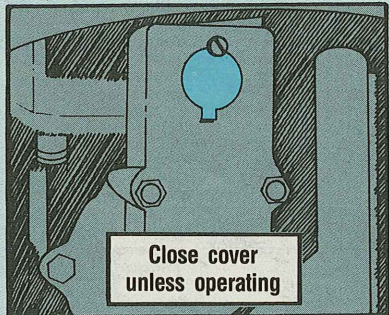
after PMCS, plus more.

Every chance you get:

- Measure oil and water levels.
- Watch gages for warning signs.
- Eyeball batteries for cracked cases or low fluid levels.
- Keep equipment clean.
- Cover unused glass surfaces.
- Report faults to your mechanics.

M3A3 Smoke Generator

Close the access cover on the fog oil pump on your M3A3 smoke gen-



Close cover
unless operating

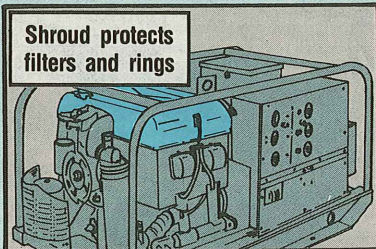
erator, unless it's operating. The cover keeps dirt out of the cylinder and off the rocker arms. Dirt buildup freezes rocker arms and stops the pump.

Generators

Get your mechanic to change the oil and oil filter in your generator every day.

Make sure engine shrouds are in place when you operate a generator. Shrouds cool the unit by letting air circulate where it's needed. They also help shield the unit's oil from the sand that clogs filters and damages rings.

Shroud protects
filters and rings



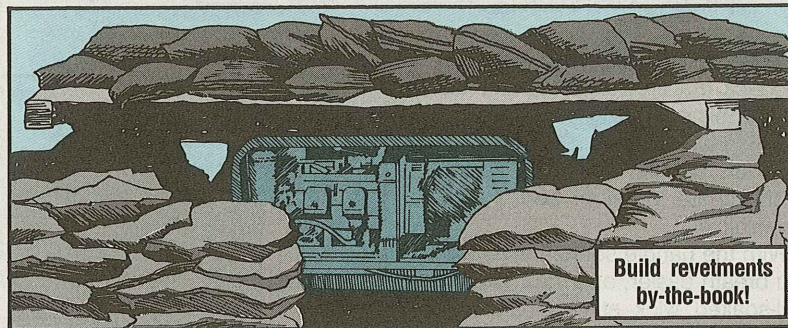
Revetment

Leave plenty of breathing room around power units working in the desert.

A revetment—sand bags and such—cuts noise and protects your unit from dust, but it can be an enemy.

Generators need lots of air to keep cool, so design revetments so air can flow around the unit. Without air, generators get too hot, and you lose your power.

Revetment building instructions are in the generator's operator's manual.

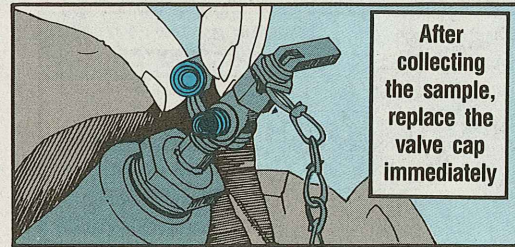


Build revetments
by-the-book!

AOAP

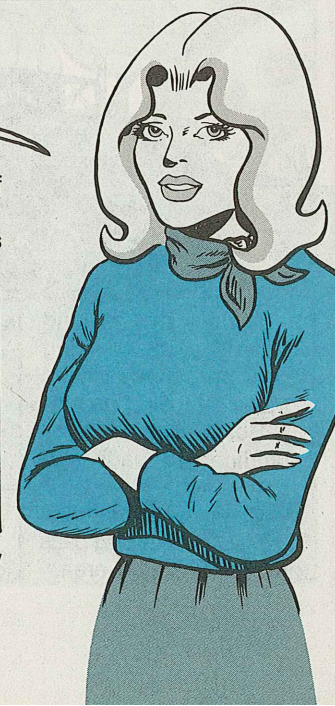
MAKE SURE YOUR
AOAP SAMPLE IS CLEAN.

If your vehicle has an AOAP valve, wipe dirt off before collecting an oil sample. Let a little oil drain from the valve, then collect the sample. That clears dirt from the valve line.



After
collecting
the sample,
replace the
valve cap
immediately

If you have to use the sampling pump, use a new tube every time.



M88A1 Recovery Vehicles

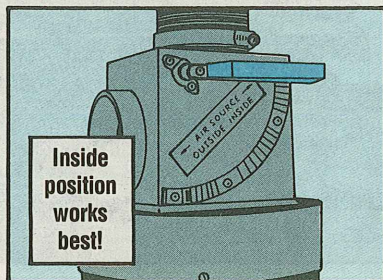


YOU M88 CREWMEN
WILL BREATHE A LITTLE
EASIER IF YOU SET
THE AIR INTAKE DAMPER
CONTROL CORRECTLY!

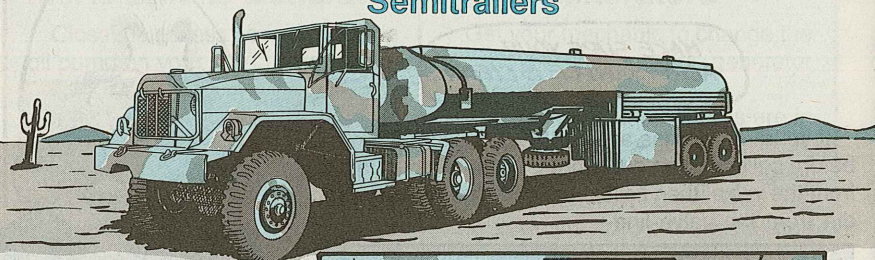
Check the air intake damper on your M88's personnel heater before you start up.

Set the damper control handle to let the heater draw air from inside the vehicle.

With the handle set for inside air, you breath easier, and the heater's fuel-soaked wick stays clean and burning.



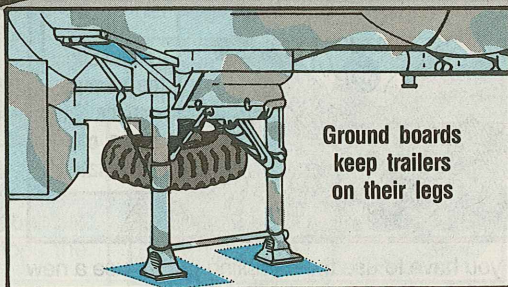
Semitrailers



Always put ground boards under the leg pads before lowering the trailer's landing gear.

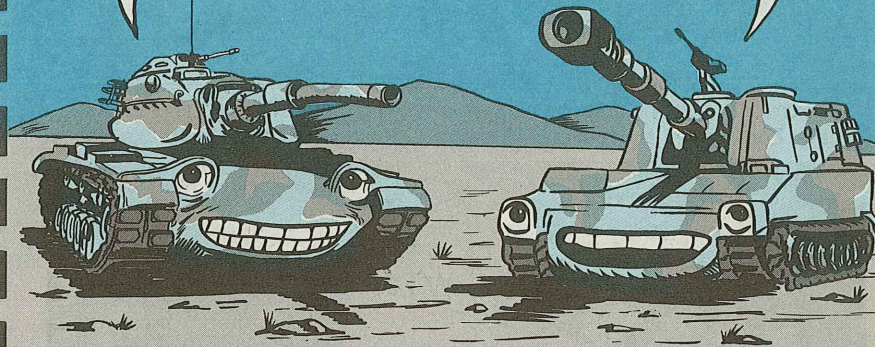
Heavy loads will force landing leg pads into soft sand.

Ground boards give the landing gear leg pads a larger support area.



JUST REMEMBER THESE
FEW SIMPLE NEVER'S...

... AND DESERT
TRAVEL WILL BECOME
MUCH SAFER!



Tracked Vehicle Safety

Desert safety includes using safe practices around vehicles. Keep in mind:

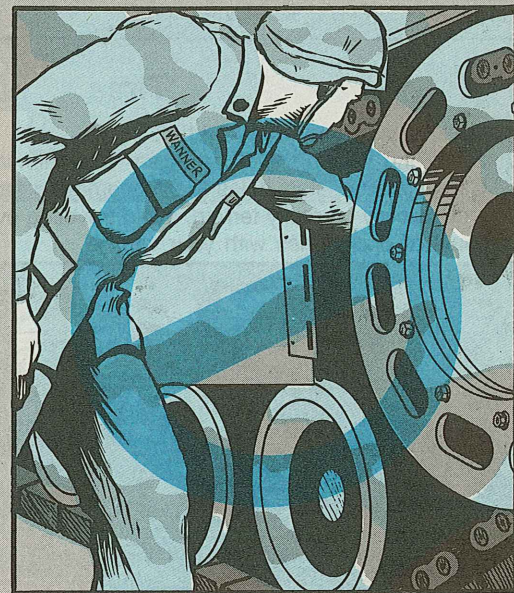
NEVER put your body over or around the wheels or track of a vehicle when the engine's running.

NEVER stand or sit on the outside of a tank when the turret's turning.

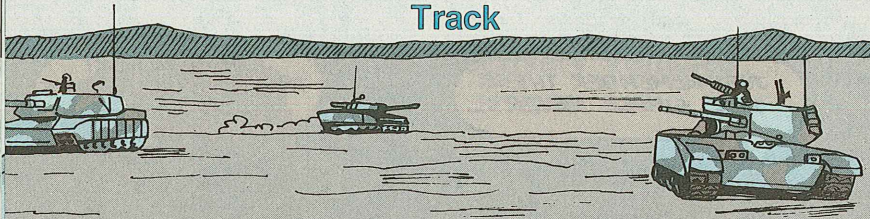
NEVER work underneath a vehicle if the engine's running.

NEVER touch sun-baked metal with bare hands.

NEVER move a vehicle in a congested area without ground guides—day or night.



Track



Inspect track for damage before, during and after every mission. Rocks can crack end connectors, break pins, mounting bolts, lube fittings or torsion bars. Look for leaks when greasing hubs. Moving track kicks up rocks and



Keep rocks and dirt off!

dirt that can lodge between the shocks and hull. If you don't take 'em out, the shocks bend and the hulls crack.

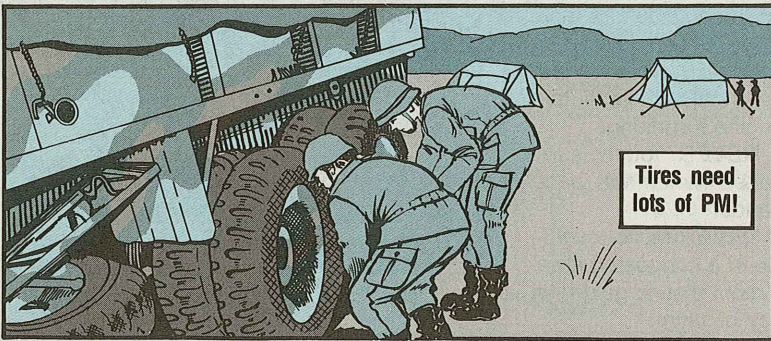
Tires

Look at your tires at every halt.

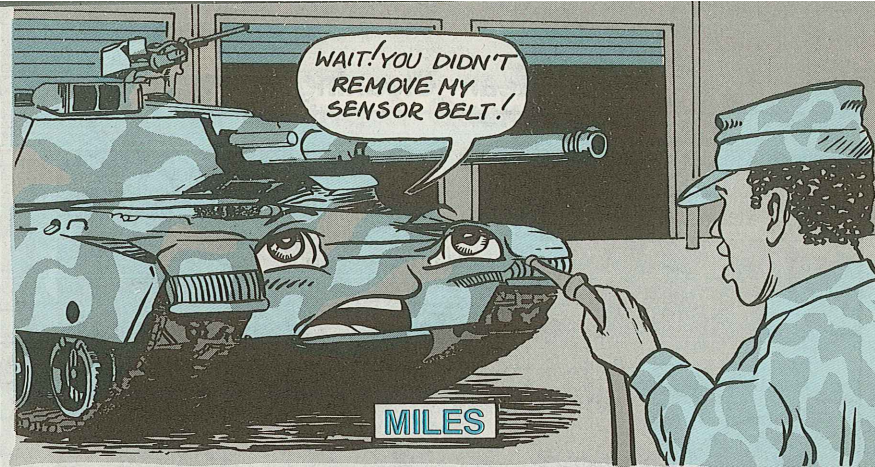
Sand and volcanic rock can wear tires thin.

Cactus spines start holes that become big flats in no time.

Drive slowly on rocky terrain, avoid traveling over vegetation, and carry a spare, if one comes with your vehicle.

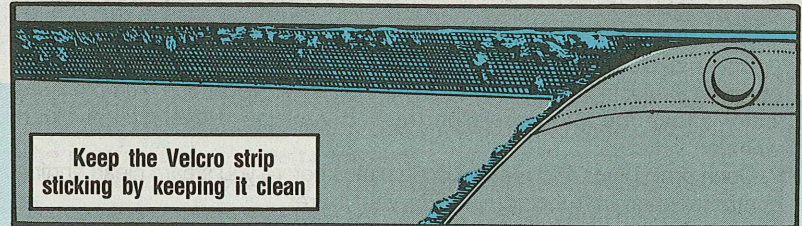


Tires need lots of PM!



Before washing a vehicle, cover or remove the Multiple Integrated Laser Engagement System's (MILES) sensor belt, transmitter, and combat vehicle kill indicator.

A stream of water shorts out the electronic equipment. It's best to remove all of the equipment before cleaning. If the sensor belt's left on, cover it with plastic.

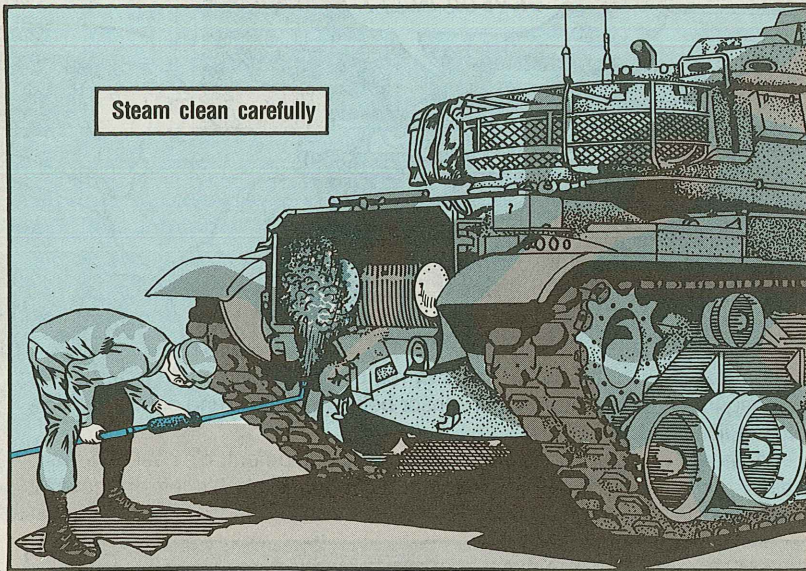


Keep the Velcro strip sticking by keeping it clean



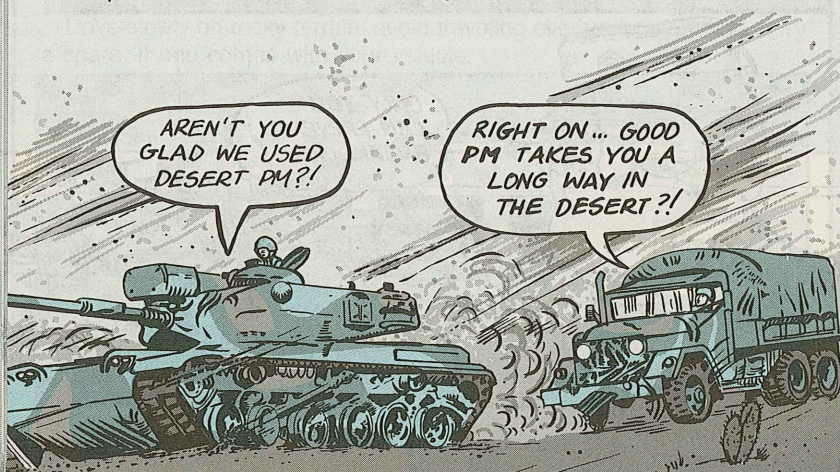
ONLY YOU CAN PREVENT BREAKDOWNS!

Steam Cleaning



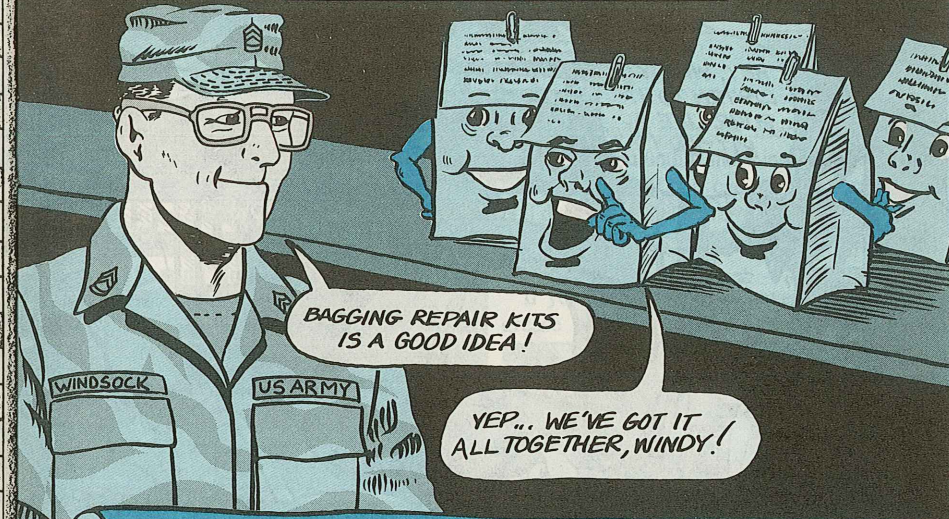
Cover all electrical plugs, connectors and radios. Never point a stream of steam at electrical plugs, wires, radios or seals. Never use high pressure water above the idler wheel on tracked vehicles. Never steam clean wheeled vehicles.

Open drain plugs and remove drain plates before you steam clean engine compartments, that includes inside your turret.



All Aircraft...

Packing & Gasket Kits



Dear Editor,

The 300-hour Phase Maintenance inspection of our aircraft calls for replacement of many O-rings that aren't included in the repair kits in the parts manual.

If we wait until the Phase is in progress before ordering the O-rings and gaskets we need, we can't complete the inspection on time. Then the aircraft is grounded until we can get the parts and complete the inspection.

We solved the problem by ordering and storing all the required O-rings and other parts not already included in repair kits. We put them into paper bags and attach a complete list of all parts to the outside of the bags for easy identification.

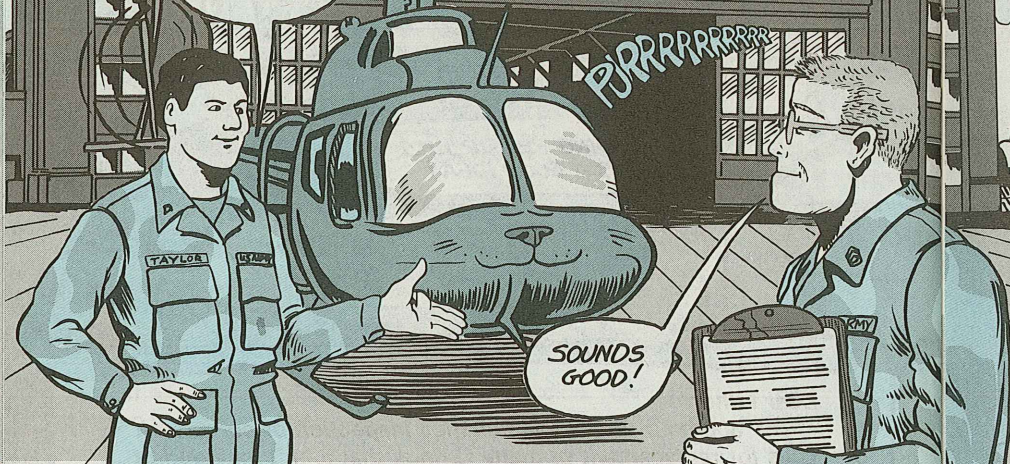
When the inspections are due, we just go to our storage cabinet and get the parts kits we need. Sure saves a lot of time and hassle.

SFC Robert Allen
Ft Campbell, KY

(Editor's note: Sounds like you've got your priorities—and parts—in order.)

On Lubing

HEY, WINDY!
LISTEN TO IT
PURR LIKE A
KITTEN!



When it comes to lubing your Kiowa's tail rotor driveshaft bearings, too much lube too often is as bad as too little lube too late. Either one can result in excessive bearing burnout.

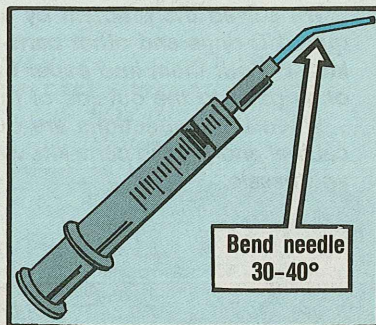
All eight bearings get $\frac{1}{2}$ to 1cc of aircraft grease, MIL-G-81322, every 25 flight hours, like it says in Fig 1-5 of TM 55-1520-228-23-1. But that's easier said than done because:

(1) The location of the No. 1 and No. 2 bearings makes them almost impossible to lube—unless you modify the needle, NSN 6515-00-754-2834, called for in the TM.

(2) Some of the older bearings have lube ports that require a special lube gun adapter.

Here are some tips to help you lube all eight bearings on time every time:

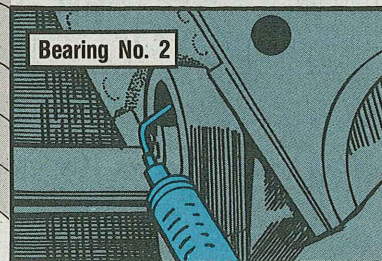
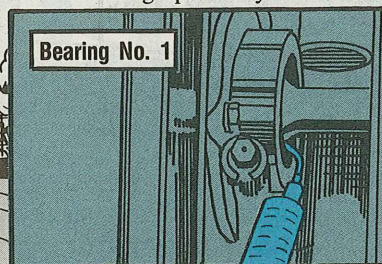
Bend the needle enough to let the point slip under the lip of the No.'s 1 and 2



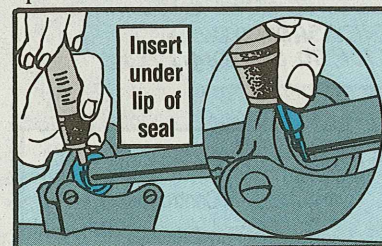
Bearings

I GET A LITTLE BENT
OUT OF SHAPE TO DO
A PROPER LUBE ...
BUT I CAN BEAR IT!

bearing seals. Before bending, though, insert lockwire or one of the needles' cleaning rods into the needle nose to keep it from closing up when you bend it.



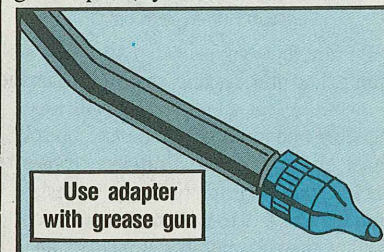
Insert the needle point under the seal lip with the beveled side of the needle



nose toward the center of the bearing. Otherwise, you can cut the seal when you slip the needle under the lip.

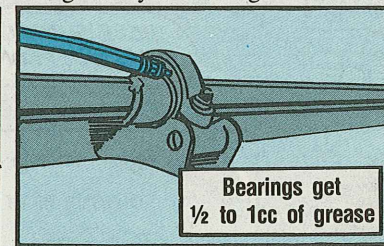
Then slowly push the needle point away from you until it slides into a socket under the seal. If you can't find a port, pull the needle until you find a port. Each bearing has two grease sockets, 180 degrees apart.

If your bird's bearings have exterior grease ports, you need a needle-nose



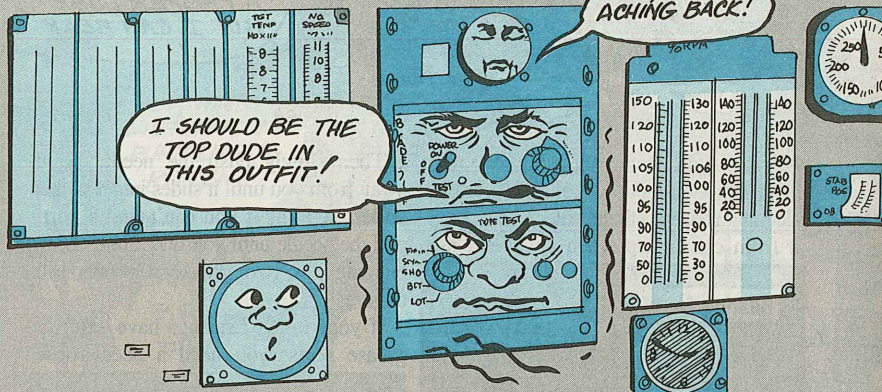
adapter, NSN 4930-00-200-1841, for your lube gun. But take care not to pump more than 1cc of grease into each bearing. If you do, you'll stretch the seal and maybe even unseat it. When that happens, you have to replace the bearing.

So practice pumping grease from your lube gun 'til you have a good idea how



much of a stroke you need to pump $\frac{1}{2}$ to 1cc. Then use that stroke when lubing bearings.

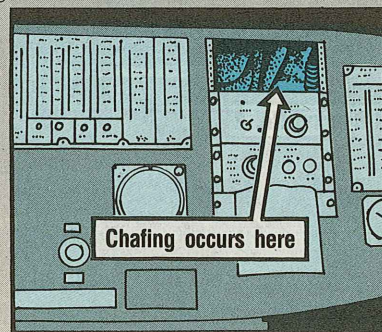
Stack 'em Right



Be sure the components of your bird's blade de-icing kit are installed right. Some aren't, and it's causing structural damage to the aircraft.

Instrument panel components include the icing rate meter, blade de-ice control panel and test panel. Components are stacked one way for birds up to serial number 86-24491, and another way for birds with serial number 86-24491 and later.

If they're stacked out of sequence for your aircraft, one or more components may be chafing against the windshield bulkhead between the center and right windshields.



HERE'S HOW THEY SHOULD BE STACKED, FROM TOP TO BOTTOM.

For helicopters prior to 86-24491

Icing rate meter
Control panel
Test panel

86-24491 and later

Control panel
Test panel
Icing rate meter

Installing the EPD

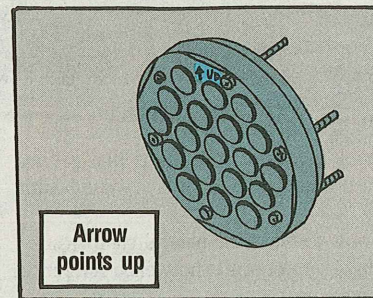
Next time your Cobra goes to the firing range, make sure it's fully equipped for the job.

Install the environmental protection device, NSN 1055-01-107-4731, on the M261 lightweight launcher if it'll be ripple fired with the MK66 rocket motors.

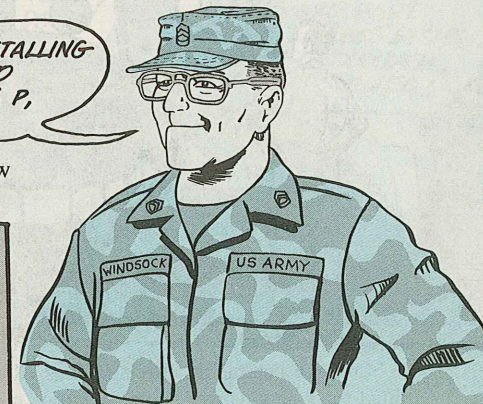
Otherwise, heat and flame from the rockets will warp the launcher's bulkhead. The EPD's not needed if you use MK40 motors.

UNTIL INSTRUCTIONS FOR INSTALLING THE EPD ARE ADDED TO TM 9-1055-460-13 & P, HERE'S HOW:

- Position the EPD with the arrow pointing up.



- Place it on the launcher with the bolts aligned with the launcher's captive nuts.



- Torque the EPD bolts to 50-75 lb-in. Be sure you don't stand in front of or behind the launcher when you're installing the EPD. If something accidentally triggered the launcher, you'd be in a world of hurt.

AH-1, UH-1...

Throttle Binding?

If you have a Huey or Cobra with a bad case of throttle binding, you may need to relieve the tension by adjusting the idle trimmer screw. Para 1-118 of TM 55-2840-229-23-1 tells how.

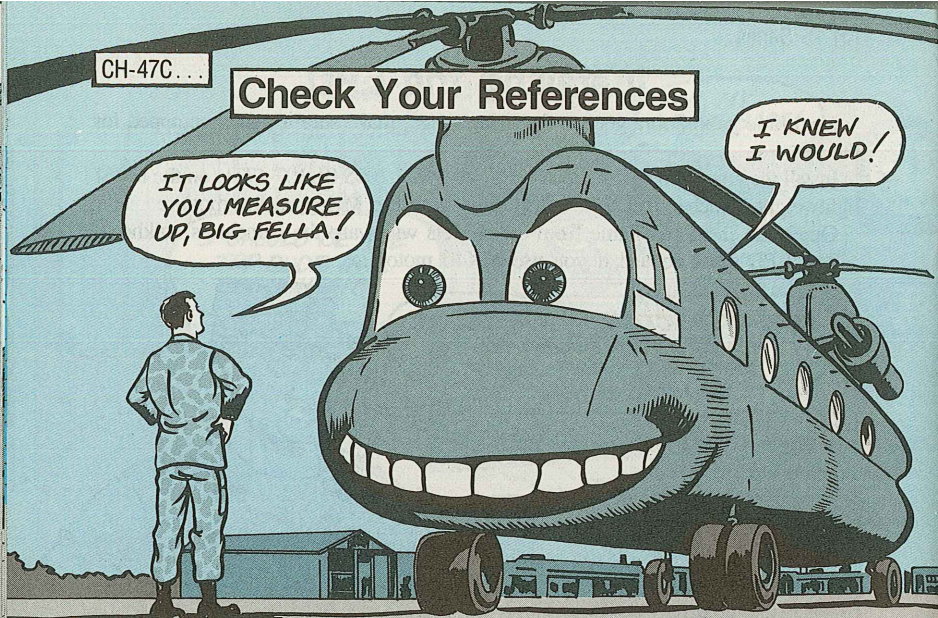
If that doesn't work, eyeball the bearings inside the pilot's and copilot's collective sticks for looseness or binding. Replace worn bearings with NSN 3110-00-808-2088.

Never lube those bearings. They're sealed. Lube could damage other components, such as wiring, inside the collective sticks.



CH-47C...

Check Your References

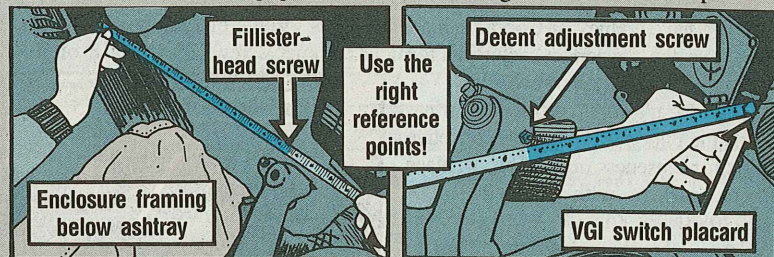


Making a neutral rig check of your Chinook's cockpit controls is like getting fitted for a new pair of boots. Accurate measurements are critical to your health and happiness.

Para 11-75 of TM 55-1520-227-23-4 tells how to make the neutral rig measurements using the right reference points. But Fig 11-15 doesn't show each reference point in detail, so some mechs get them mixed up.

On the copilot's control stick, measure the lateral distance from the center of the fillisterhead screw on top of the trigger grip to the enclosure framing below the ashtray on the left side of the cockpit.

Then measure the longitudinal distance from the detent adjustment screw on the top right side of the stick grip to the EMER marking on the VGI switch placard.

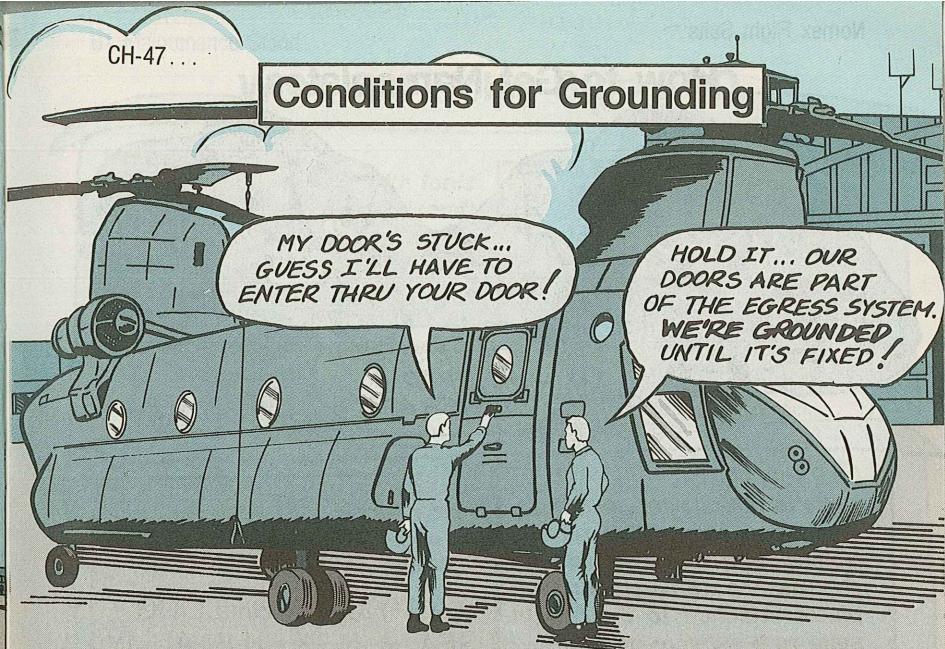


If you use the wrong reference points to take measurements, you'll throw the whole flight control system out of whack.

Save yourself a lot of grief—do it right the first time.

CH-47...

Conditions for Grounding



Dear Windy,
How do you interpret condition No. 10 of Fig 1-1 in DA Pam 738-751, Criteria for Red "X" entries? Does an egress system include our Chinooks' doors and windows?

I'd also like to know why our Chinooks are grounded if the power steering is inoperative. Even without it, our birds can still hover-taxi and 2-wheel-taxi.

SFC J.P.F.

Dear Sergeant J.P.F.,

On Chinooks, the pilot's and copilot's doors and the passenger compartment windows can be jettisoned. Therefore, they qualify as an egress system. And when an egress system is down, for whatever reason, it's an unsafe condition that requires a red "X" entry.

The power steering requirement in condition No. 13 applies only to fixed wing aircraft. It will say "fixed wing only" in the next update to DA Pam 738-751.

Windy

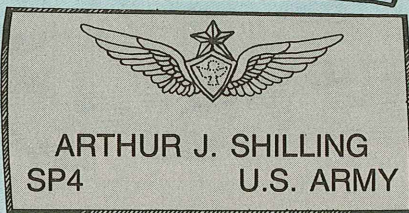
How to Get Nameplates



Dear Half-Mast,

We're not allowed to sew insignia and nameplates on our Nomex flight suits, but I've seen air crewmen with leather nameplates attached to their flight suits with a Velcro backing.

I've asked how to get these nameplates and whether they're authorized, but everybody has a different answer. What's the story?



SP4 A.J.S.

Dear Specialist A.J.S.,

Para 10-10 of AR 670-1 says that embossed leather nameplates will be provided to enlisted personnel at no cost to the individual. Officers can get 'em, too, but they have to pay for them.

The plates have no stock number or part number, so you order them on a DD Form 1348-6, using RIC S9T. Be sure to write in the Nomenclature block, "Nameplate for enlisted personnel flight suit."

In the Remarks block, describe the item and give your name, badge (crew member, senior crew member or master crew member) and rank.

The plates cost about \$2.50 each. CTA 50-900 is the authority.

Requisitions should go to:

Defense Personnel Support Center
ATTN: DPSC-FOKR
Philadelphia, PA 19101-8419

Half-Mast

Work Aid Helps Stop FOD

Dear Editor,

We've had problems with tools and trash being left on the aircraft and creating a potential safety hazard. Light trash gets sucked into the engine inlet and destroys the engine.

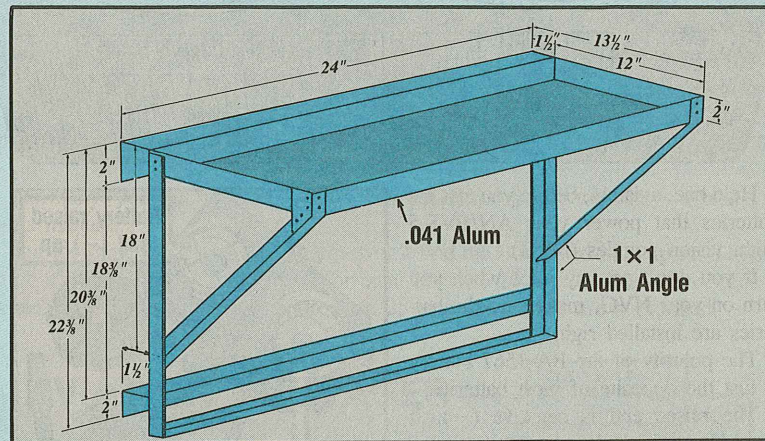
To help solve the problem, we've made a removable work tray for our B1 maintenance stands. It gives mechanics a place to put tools, parts and trash, such as safety wire, wire ties, clamps, etc., instead of putting them on the aircraft itself.

Our FOD problem has been reduced to a much safer level.

We fabricate the trays from 0.041-in aluminum and 1 x 1-in aluminum angle. The tray is easily attached and removed from the maintenance stand.



Work aid attaches to B1 maintenance stand



Ray E. Lofts
Mark A. Uhrig
Topeka, KS

(Editor's note: Way to go! Anything that'll help reduce FOD is a big plus.)

Night Vision Goggles...

A Positive Checkup

I'VE TESTED YOU GUYS... AND FIXED THE SPRINGS. YOU TWO CAN GO BACK TO WORK!

SURE HOPE THAT SPRING WORKS!

WAIT! YOU'RE UPSIDE DOWN!



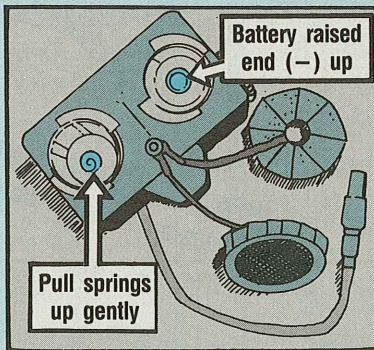
Hold one, aviators, before you toss the batteries that power your AN/PVS-5 night vision goggles (NVG).

If you don't get any juice when you turn on your NVG, make sure the batteries are installed right.

The polarity of the BA-1567 battery is just the opposite of most batteries.

The raised end is negative (-). It should be **up** in the battery compartment. The flat end is positive (+) and goes **down** in the compartment.

Remove the batteries and eyeball the springs in the bottom of the compartment. If they're mashed flat, the batteries can't make good contact. Pull each spring up gently. Put the batteries back in making



sure the flat, positive side fits against the springs.

If your NVG still won't work, replace the batteries.

Special Tools...

What's Authorized?

I WONDER WHY THERE'S NO BOI LISTED FOR OUR SPECIAL TOOLS!?

C'MON... IT'S GOTTA BE LISTED SOMEWHERE!



Normally, you can find the Basis of Issue (BOI) for special tools in your bird's parts manual.

But for some models of aircraft you won't find the BOI listed in the parts TM. Until it's added, go by this general formula: For 5 to 25 aircraft, one special tool is authorized at AVUM. For more than 25 aircraft, 2 tools are authorized.

AVIATION MESSAGES

CAT 1 EIR Phone
AUTOVON 693-2066
(24 hours)

If your unit has not received a message you have an interest in, check with your next higher headquarters:
OH-6-86-07, SOF, Technical, requirements for ungrounding OH-6A-series, 162359Z Jul 86.
OH-6-86-08, Commercial variants of H-6-series, requirements for ungrounding, 221600Z Jul 86.
OH-6-86-09, Technical, Commercial

variants of H-6, tail rotor inspection requirements, 221615Z Jul 86.
MIM-AH-1-86-ME-03, AH-1TH-1, DA Form 2410 data collection update or specific components, 182300Z Jul 86.
MIM-AH-1-86-ME-07, UH-1/EH-1, Fire shield and No. 1 tail rotor driveshaft assembly, 071500Z Jul 86.
MIM-UH-1-86-ME-08, (correction to MIM-UH-1-86-ME-06), UH-1/EH-1, Fire shield and No. 1 tail rotor driveshaft

assembly, 091600Z Jul 86.
MIM-UH-60-86-ME-09, UH-60A/EH-60A, Tire inflation equipment, 032000Z Jul 86.
MIM-OH-6-86-ME-05, Status of the ungrounding H-6 and commercial variants, 022000Z Jul 86.
MIM-OH-6-86-ME-06, Status of the ungrounding H-6 and commercial variants, 072130Z Jul 86.

Cool PM for

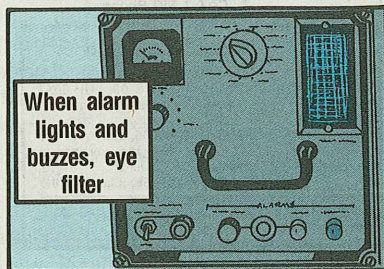


Your AN/GRC-103 radio set is a hot communicator at its best when it's cool. Paying attention to the cooling clues will keep it that way. When the overheat alarm on the T-983 transmitter front panel lights up and

buzzes, get the message—dust or dirt is causing heat buildup.

These clues let you know it's time to clean or change the transmitter's filter. If you push the button that silences the alarm, your set's headed for radio failure.

Same goes for removing the filter to let more air into the set. That opens the radio's innards to quicker doses of dirt and dust.



Hot Radio Set

Your best bet is to change the filter weekly at least, and more often in dusty areas, like it says in Paras 5-5e and 5-6 of TM 11-5820-540-12.

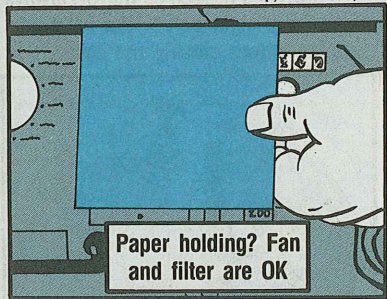
Clean the dirty filter with low-pressure air or with a solvent:

Size	NSN 6810-00-
12-oz aerosol can	930-6311
Quart	292-9625

Clean the dirt or dust out of the transmitter case too.

If you need a new filter, order it with NSN 4130-00-879-2280.

Also, you can give that cooling fan a little test to make sure it's doing its cool job.



Latch onto a piece of paper big enough to cover the T-983's air filter. Hold it flush against the frame.

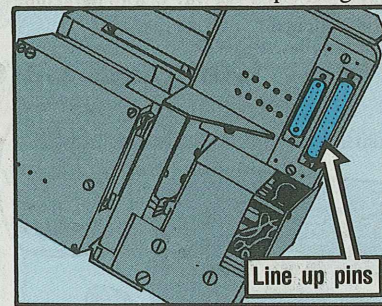
If the paper sticks, you're getting enough air to keep your set cool. If it falls, replace the filter. Maybe it's time to turn the transmitter in for repair if the paper falls after the filter is replaced.

While you're keeping that set cool, steer clear of setting those channel frequencies on the AM-4316 amplifier-converter too close together. Setting them closer than 50 channels will damage the 2A1A1 RF amplifier in the R-1329 radio receiver.

Use Care

Always use care on those components and cable connectors. Too much tugging and pushing will knock out your set.

When you pull out or push in components make sure you use a straight out-and-in motion. Line the component guide

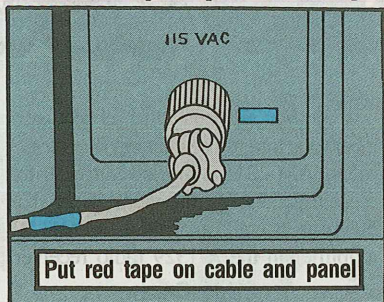


pins and the case locating pins. Slide the gear in easy until you feel the pins mate, then seat firmly.

Rough handling bends pins, which can cause arcing when you try to operate your set.

When you're connecting the CX-10762 power cable, make sure it's going on the right receptacle. It goes to the 115 VAC receptacle. But with a little muscle it'll fit on the order wire jack. This will damage the T-983's 5TR1A5 amplifier monitor panel.

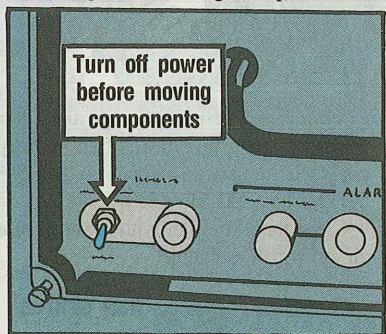
So you'll know where the power cable is connected, put a piece of red tape,



NSN 7510-00-550-7126, around the CX-10762 and another piece by the panel receptacle. This'll head off trouble.

If you make a rough connection, you'll break the receptacle anyway. So match up the key and keyway before tightening the connector.

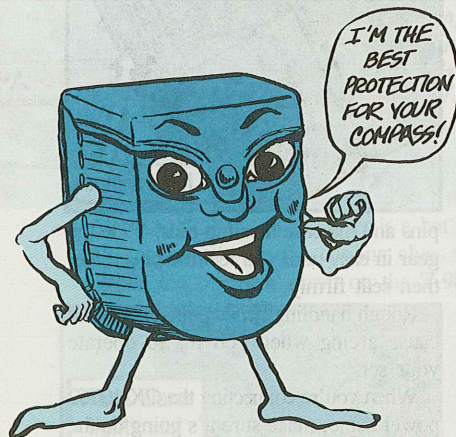
Always turn off the set's power before removing or installing components. If



you leave the set on, power and signal connectors can be damaged.

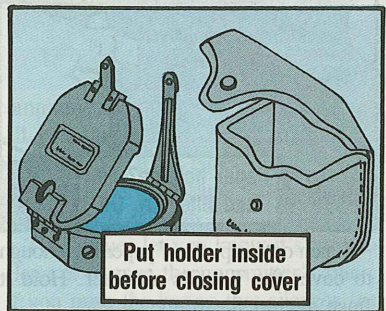
To stay a cool operator, make sure your radio set is hooked to an antenna or dummy load. Otherwise you'll burn out the transmitter.

Compass Care Saves Mirror



Careless handling of your M2 compass will leave you with a broken mirror. Then you have to turn in the compass for replacement since no repairs are authorized.

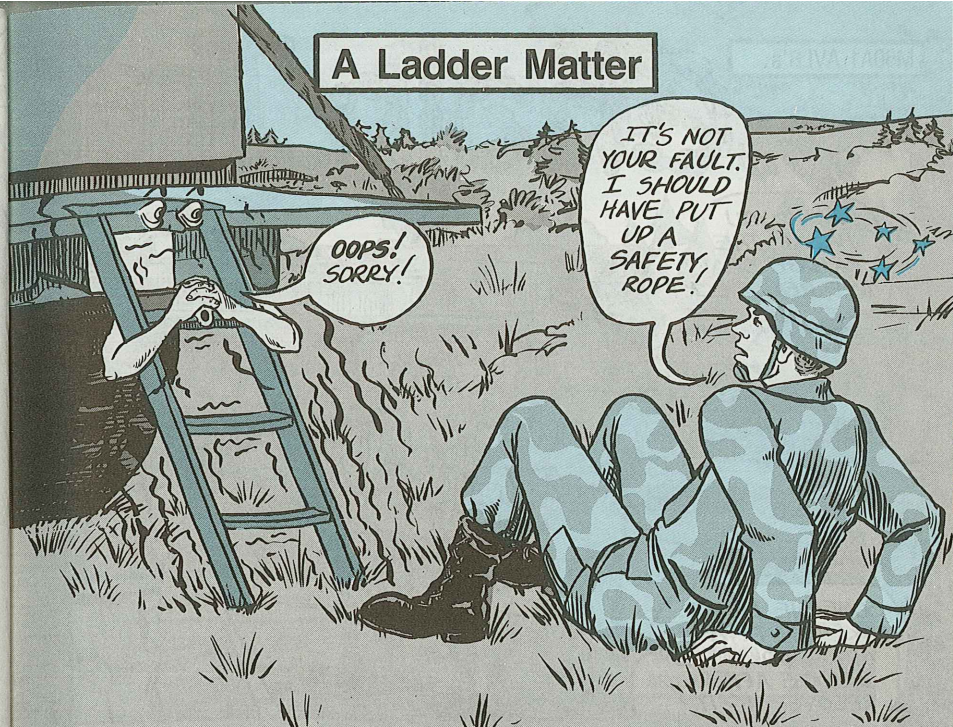
To prevent a messed up mirror, always put the rear sight holder flat inside the compass before closing the cover.



Then put the compass into the M19 carrying case with the mirror away from the case's snap button.

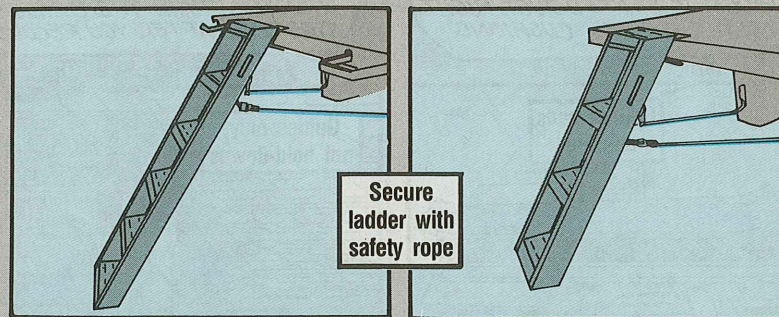
TM 9-1290-333-15 with Change 4 has more good maintenance tips.

A Ladder Matter



A leaning boarding ladder that's loose can make an acrobat out of you whether you want to be one or not. It can slip and flip you for a loop.

Fitting the ladder onto the tailgate of a truck or van equipped with a commo shelter is not enough. It needs to be snugged up with safety rope.



For the MX-3391/G ladder, attach two rope assemblies, NSN 4020-01-043-4214, and two guy fasteners, NSN 4030-01-040-9234.

For the MX-3543/G ladder, attach two rope assemblies, NSN 4020-01-051-7025. Use the same guy fasteners as above.

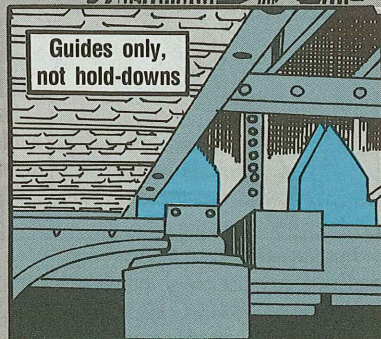
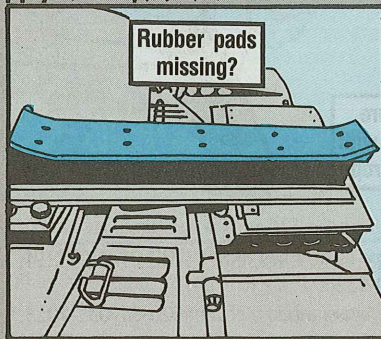
Chain That Bridge Down

HOW'D YOU
BREAK THE
BRIDGE SEAT
AND REAR DECK?

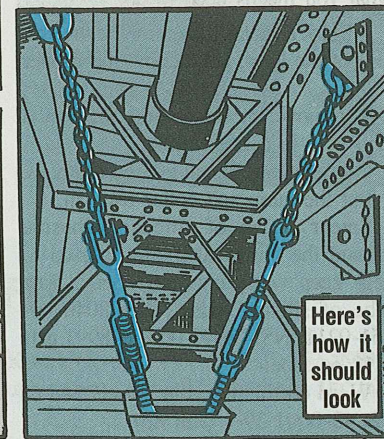
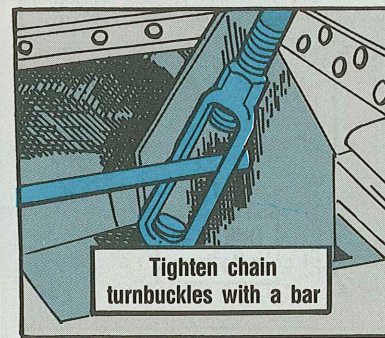
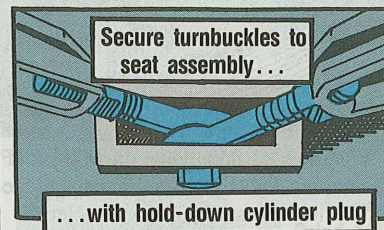
SOMEONE DIDN'T
TAKE THE TIME TO
CHAIN DOWN THE
BRIDGE AFTER
RECOVERING IT!

LET ME TELL YOU WHY YOU
MUST TAKE THE TIME!
WHEN THE BRIDGE MATES
WITH THE GUIDES ON THE
FIXED BRIDGE SEAT, YOUR
BRIDGE IS SEATED JUST RIGHT
ON THE RUBBER CUSHIONS!

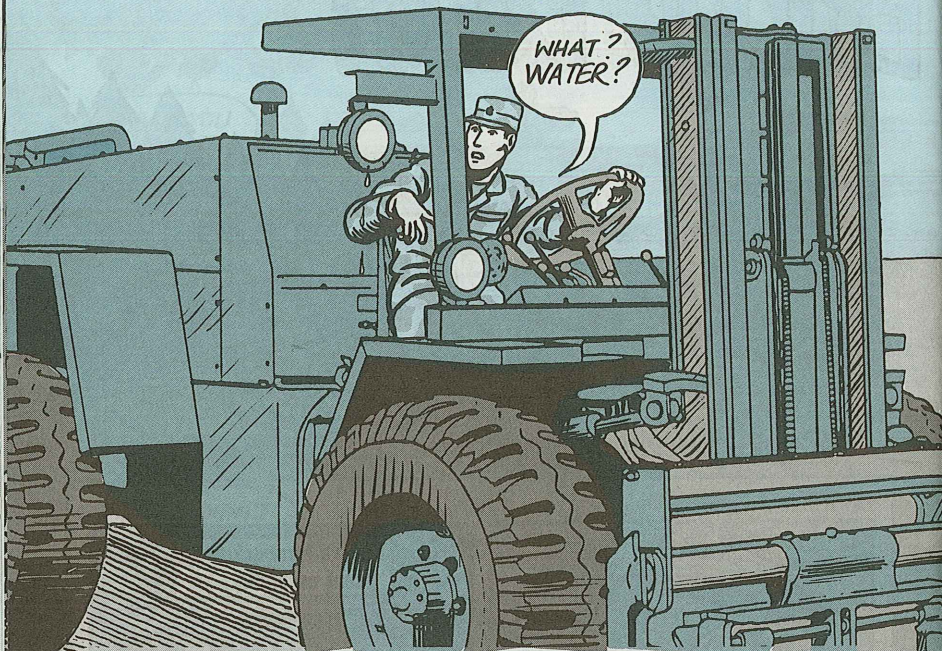
THE BRIDGE IS NOT SECURE, THO.
THOSE GUIDES ARE JUST THAT---
GUIDES. THE BRIDGE CAN BOUNCE
AND SHIFT ON THE SEAT DURING
CROSS-COUNTRY TRAVEL. THAT'S
WHY YOU CHAIN THE BRIDGE...
TIGHTLY... AFTER YOU RECOVER IT!



Do it like so:



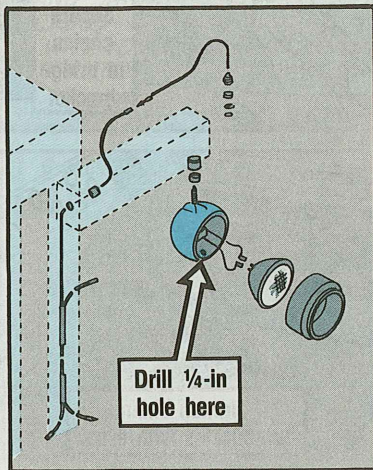
Flooded Floodlight Drain



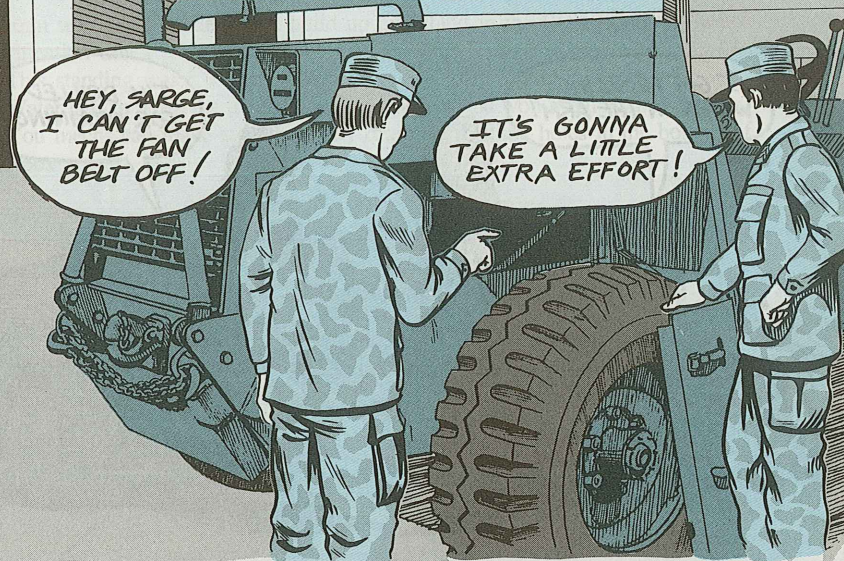
Waterlogged floodlights on M4K RTFL's cause all kinds of problems—from shorted-out lights to rusted housings. Keeping water out of the floodlights calls for a little construction work. Here's what you mechs need to do:

- Mark a spot for the drain on the bottom of the light, just behind the rubber collar.
- Remove the collar and lamp, and drill a 1/4-in diameter hole.
- Paint the bare metal around the hole. Put the lamp and collar back in.
- Smear a dab of silicone adhesive around the wire and mounting stud to help keep water out, too. Get a 5-oz tube of silicone with NSN 8040-00-851-0211. NSN 8040-00-865-8991 gets a 12-oz tube.

Word on this fix is in Para 2-14d of TB 43-0001-39-1 (Jan 86).



Make Room for Change

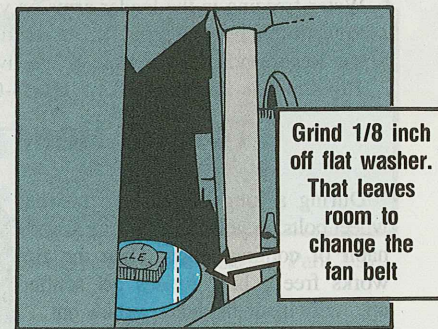


It's a tight squeeze between the crankshaft pulley and the engine mount's flat washer on some M4K forklifts.

That makes it tough when you try to remove the fan belt and can't get it past the flat washer.

So do this:

- Remove the mounting bolt and washer.
- Grind 1/8-inch off one side of the washer.
- Replace the bolt and washer with the trimmed side of the washer facing the crankshaft pulley.



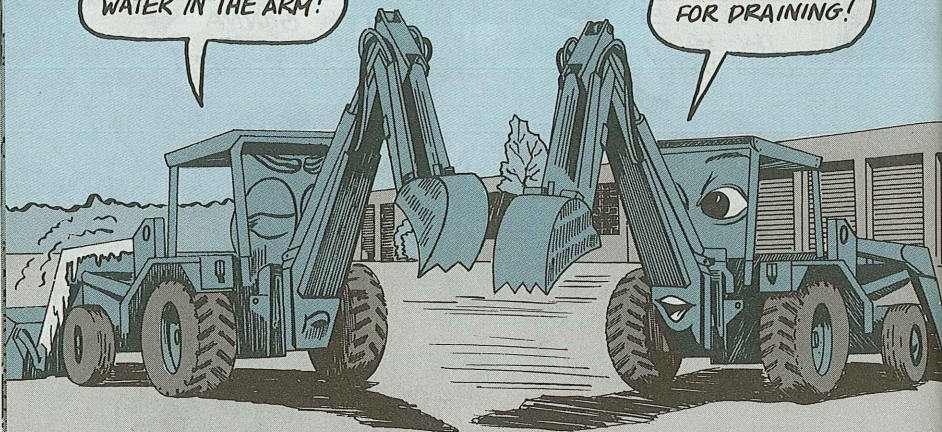
Fuel Filter

Get the 75-micron fuel filter for the M4K forklift with NSN 4330-01-159-5840. This gets a filter kit with filter and two rubber hoses to hook it up with. The kit replaces filter, NSN 2910-01-103-9150.

Drain Arms to Prevent Damage

I GOT FREEZING-WATER IN THE ARM!

I'M DRILLED FOR DRAINING!



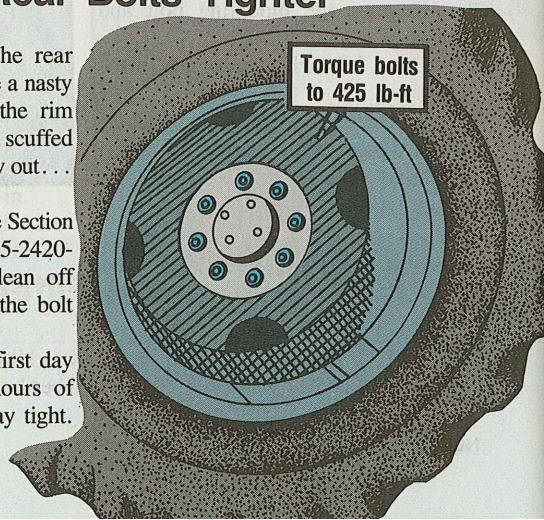
Water freezing in the loader arms on your JD410 can bulge or break the arms. Prevent this by drilling a 1/4- or 3/8-in drain hole in the underside of the arm at the lower end. Stay at least 1/2-in away from any welds when you drill. This word is in Para 2-13 of TB 43-0001-39-1 (Jan 86).

Torque Rear Bolts Tighter

During a long road haul, the rear wheel bolts on your JD410 have a nasty habit of coming loose. Then the rim works free... bolt threads get scuffed up... rim mounting holes wallow out... and there goes a rear wheel.

Tighten the bolts 425 lb-ft, like Section 10 General, Page 25-11 of TM 5-2420-222-14&P-2 says. But first, clean off any rust, dirt or paint around the bolt hole area.

Retorque the bolts after the first day of operation and every 200 hours of operation to make sure they stay tight.



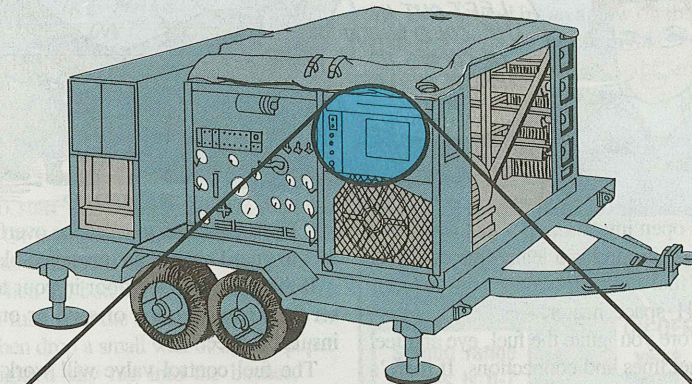
Drill for Water

Rain water and condensation build up and stand in the ROWPU 600-1 water purification unit's junction box.

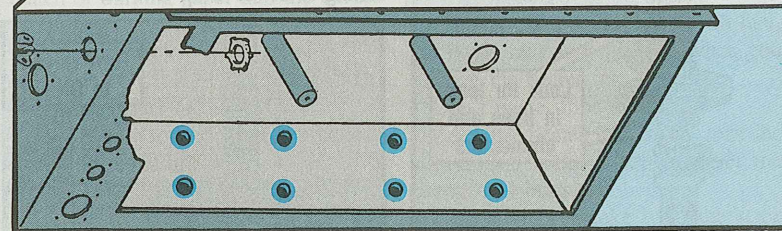
This standing water corrodes starters, relays, and control switches.

Water gets in when the junction box door warps and won't seal against the box.

You mechs can make sure the water drains by drilling holes in the bottom of the box.



Remove the box and drill eight 1/8-in holes like so:



While you have the box off, clean, inspect and repair it like it says in Para 2-57, c, d & e of TM 5-4610-215-24.

New junction boxes have the holes.

Electrical Indicator Unsafe

You can be killed if you use the electrical indicator, NSN 6625-01-060-3728, in the power line maintenance service kits—it's unsafe! Turn it in. It's no longer required and will be dropped from SC 4940-95-CL-A86 and -A87. The word is in AMCCOM Safety-Of-Use Msg AMSMC-MAT 151431Z May 86.

Warm up to Cool PM Operation



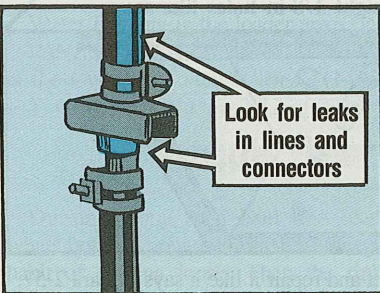
DON'T GET LEFT OUT IN THE COLD WHEN IT COMES TO SPACE HEATER PM!



IF WE'D KEPT UP OUR PM LIKE MALECKI DID, WE WOULDN'T BE WAITING FOR A CHANCE TO WARM UP IN THEIR TENT!

An open invitation to a tent fire at the ol' campground is a leaky line or fitting or a fuel-flooded burner pot on your M1941 space heater.

Before you ignite the fuel, eye and feel the fuel lines and connections. If there's a fuel leak, stop it!

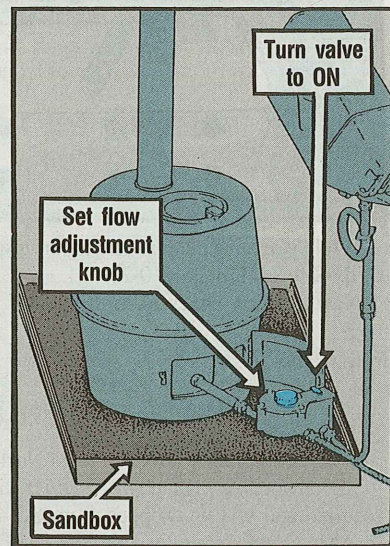


When you hook up the overflow hose to the float valve assembly, do this:

- Keep the hose lower than the fuel overflow connection.
- Keep kinks out of the hose.
- Keep the hose out of the way of big feet.
- Drain the fuel downward, outside and away from the tent, like it tells you on Page 2-7 of TM 10-4500-200-13.

- Use a container to catch the overflow fuel to guard against an unwanted blaze. If there's a wooden floor in your tent, set the stove in a box of sand or on an insulated sheet.

The fuel control valve will work the way it's supposed to when the heater is setting level, so keep it level.



To start the heater with oil, turn the ON-OFF valve to ON. Then turn the adjustment knob to 9.

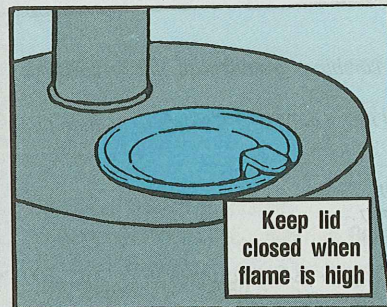
When the bottom of the burner is wet with fuel, turn the adjustment knob to 0.

Then drop a small wad of lighted paper or lighted oily rag into the burner.

If gasoline is used, drop a lighted match or burning paper into the burner and then turn the ON-OFF valve to ON with the adjustment knob set at 0.

KEEP YOUR FACE AND HANDS AWAY FROM OPENING.

Replace the top lid when the bottom of the heater is full of fire.

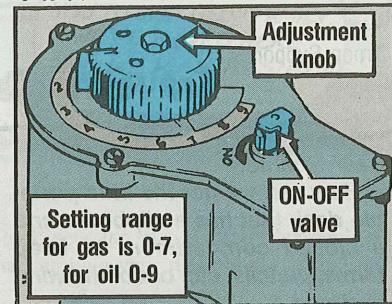


Wait five minutes when gasoline is used or fifteen minutes when oil is used to let the heater warm up.

Then set adjustment knob for size of flame you want.

The setting range, when using gasoline, is indicated by an arrow on the dial from 0 to 7. Any setting above 7 will waste fuel and make the heater smoke.

The setting range, when using oil, is 0 to 9.



If the burner pot is flooded with fuel, the flame may leap up high when you remove the heater lid.

Don't panic, though! Keep the heater lid closed, turn the adjustment knob to zero and let the excess fuel burn off.

Heavy, black smoke from the stack lets you know there is excess fuel being burned.

After the excess fuel is burned off, reset the control knob.

Never leave knob at maximum (position 9) even in cold weather. It can damage the heater or set your tent on fire.

Stove's Too Hot? Cool It!

Never try to take the heater outside while its burner pot is still lit. It can tip over. This'll set the tent on fire or burn you.

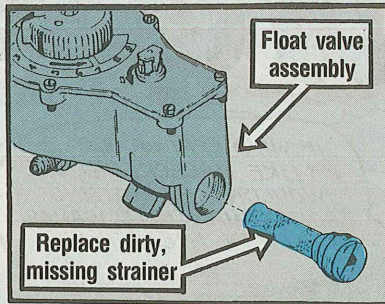
Keep Fuel Strainer Firm

A bent strainer in the float valve assembly of your heater will let unfiltered fuel into the burner. Before you know it, heat's reduced or cut out altogether.

Keep filtered fuel flowing by using care when you take out the strainer to clean it or put it back in.

If it's damaged or missing, replace it.

Use NSN 5410-01-231-1754 to order a new strainer.



Troop Support...

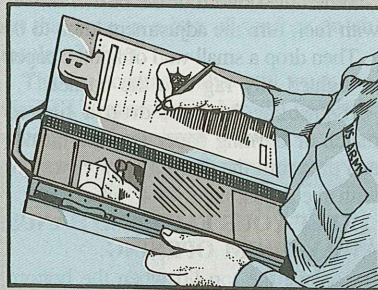
Traveling Desk Wanted

Dear Connie,

How can we get the little portable desk that has a clipboard and a closed compartment to keep forms, pencils, etc. out of the wind and rain.

I've seen this camouflaged carrying case in the field, but haven't found it in supply.

SGT A. A.



Dear Sergeant A. A.,

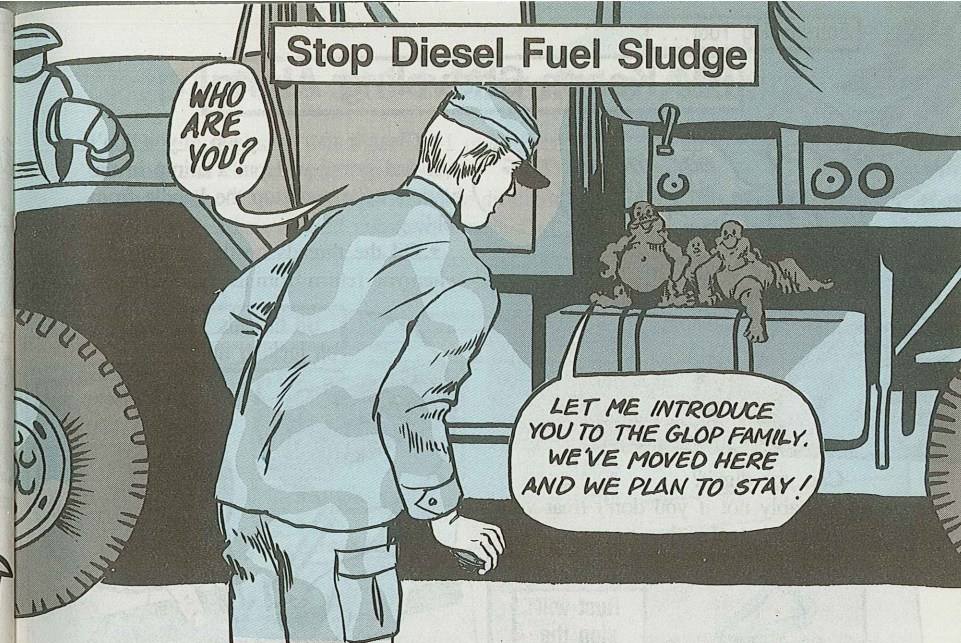
You're talking about the Mini Desk. It combines a clipboard and a covered, three-compartment storage area.

Your supply support can order the Mini Desk from GSA. Be sure to include this info on the DD Form 1348-6:

- GSA contract number—GS-00F-79260
- GSA special item number—NIIS-G-9707
- NIIS Supplement #2/Sep 85
- Manufacturer's name, address and telephone—Artistic Innovators, Inc, 100 15th Street East, Tuscaloosa, AL 35401, (205) 758-3076.
- Description—Mini Desk, camouflage, 16-in long, 12-in wide, 1¾-in deep.
- Authorization—CTA 50-970, Appendix A.

Connie

Stop Diesel Fuel Sludge



Water in your vehicle's diesel fuel tank sets the stage for a "garden"—a growth of microbiological organisms that can plug your fuel filters and foul up other parts of your fuel system.

You see it as sludge—slimy, black glop. It's most common in warm, humid weather, growing in the fuel tanks of inactive equipment and in fuel storage facilities.

But there's an additive that stops sludge buildup before it starts.

The Belvoir Research, Development and Engineering Center has an information booklet that tells all about the additive—including how to order and use it. Ask for "Diesel Fuel Stability and Cleanliness Problems in the Field."

Call:

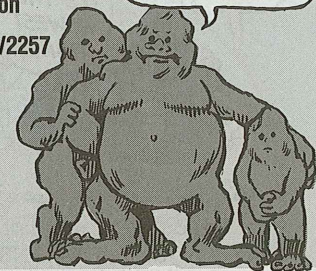
AUTOVON	COMM	FTS	Extension
354-	(703) 664-	544-	3576/4594/2257

Or write:

US Army Belvoir Research,
Development and Engineering Center
ATTN: STRBE-VF
Fort Belvoir, VA 22060-5606

Besides stopping sludge, the additive ends fuel breakdown and keeps sediment from clumping. It also has a corrosion inhibitor to prevent rust.

I GUESS WE HAVE TO FIND A NEW HOME!



Maintenance & Safety-of-Use Messages

TROSCOM SOU-MES-7-86—60KW DED generator sets, fabricate ground strap, AMSTR-MES 121300Z Aug 86.

TROSCOM SOU-MES-21-86—MT1-XX/XR, IRAPS, inspect harness assembly, AMSTR-MES 121300Z Aug 86.

TROSCOM SOU-MES-23-86—15 CFM, 175 PSI Air Compressor, NSN 4310-01-164-5544, potential safety hazard, AMSTR-MES 291728Z Aug 86.

US ARMY SAFETY CENTER—Identification of ether bottles (engine cold weather assist), potential explosive hazard, PESC-SPG 281600Z Aug 86.

AMCCOM SOU—M1, IPM1 and M1A1 Tanks, erratic turret movement, AMSMC-MAL 141800Z Aug 86.

AMCCOM SOU—MILES Antitank Weapon Effect Signature Simulator (ATWESS), obstruction of firing pin retraction, AMSMC-MAT-D 012055Z Aug 86.

TACOM SOU—Bradley M2/M3, 7.62MM coax machine gun hazard, AMCPM-BFVS 291800Z Jul 86.

TACOM SOU 86-29—M113A1/A2 FOV, Steering and brake control warnings, AMSTA-MCB 041400Z Aug 86.

TACOM SOU 86-31—Axle Torque Rod Support Brackets, M967, M969 and M970, 5,000 gallon fuel tankers, missing or cracked welds, AMSTA-MVA 021100Z Jul 86.

TACOM SOU 86-33—2W104 Harness, NSN 2590-01-073-0125, on M1-series vehicles, potential safety hazard, AMCPM-GCM-S 301330Z Jun 86.

TACOM SOU 86-35—15,000 lb Cap Forklift Trk, NSN 3930-01-195-7638, deadlined, AMSTA-FHMB 191800Z Aug 86.

TACOM SOU 86-38—M880-series vehicles, Model GC340-4 Warehouse tractor, fuel filter, NSN 2920-00-845-6770, potential hazard, AMSTA-MTA 151630Z Aug 86.

TACOM SOU 86-45—MLRS Carrier, M993, throttle hazard, AMCPM-LCV-TF 051300Z Aug 86.

TACOM SOU 86-46—M9 Ace Armored Combat Earthmover, heat stress guidance chart, AMSTA-MVC 081900Z Aug 86.

TACOM SOU 86-47—M35-series, 2½-ton trucks, brake air-hydraulic cylinder, potential safety hazard, AMSTA-MTB 061900Z Aug 86.

TACOM SOU 86-48—140-Ton FMC Crane, potential damage and personnel injury, AMSTA-MVM 081800Z Aug 86.

TACOM SOU 86-49—Bradley M2/M3, squad seat back stop failures, AMCPM-LCV-TS 051300Z Aug 86.

TACOM SOU 86-56—M35-series, 2½-ton trucks, brake air-hydraulic cylinder, follow up of TACOM SOU 86-47, AMSTA-MT 152100Z Aug 86.

TACOM SOU 86-58—Consolidates TACOM SOU's 86-47 and 86-56, deadlines all M35-series 2½-ton trucks, AMSTA-MTB 192300Z Aug 86.

Your Direct Support or Logistic Assistance Office (LAO) can provide you with more information.

SMART Message

SMART Msg #73—Changes GTA 25-6-9, Instructor's MILES Infantry System Training Guide, to show a different mounting method in Fig 22, DALO-PLA 011822Z Aug 86.

Connie's
★ POST ★
SCRIPTS



PROPER DESERT PM
WILL KEEP YOU OUT OF
SITUATIONS LIKE THIS!



M11 Rack on Way Out

Armorers, don't cancel your orders for M12 racks. Even though DS can modify your M11 racks to fit the new M16A2 rifles and the M16A1's with the new longer buttstocks—like we told you in PS 405, Page 27—you'll need M12 racks anyway. The Army wants the M16 family stored only in M12 racks.

Turn In Inertia Reels

Hold it! Don't scrap those seat assembly inertia reels used on Heuy's, Cobras, Kiowas and Skycranes. Turn 'em in for repair and save Uncle lots of dollars in the long run. The reels, NSN 1680-00-775-4182, are coded as non-repairable in the parts manuals, but that's being changed.

Turn in all unserviceable reels to AVIM and they'll send them to:

**Sharpe Army Depot
Lathrop, CA 95330**

Vulcan Lube Update

In PS 404 we told you not to use CLP to lube your M167A1/M163A1 Vulcan, but to use LAW instead. That should be LAW-AW, which is specially made for automatic weapons. NSN 9150-01-104-5227 brings 1 quart. Remember, LAW-AW has a shelf life of 6 months. You can still use solvent SD-2 on your Vulcan. NSN 6850-00-597-9765 brings 1 gallon.

Relay Valve Change

NSN 2530-00-875-2440 gets the emergency relay valve for the air brakes on the M172-series lowboy semitrailer. The NSN for Item 2 in Fig 13 of TM 9-2330-211-14&P is wrong.

M1009 NSN Change

Use NSN 2530-01-166-3033 to get brake shoes for the M1009 utility vehicle. The NSN has changed since TM 9-2320-289-20P (Jun 85) hit the field.

Water Sensor NSN

The water sensor for the fuel filter on CUCV's is NSN 2920-01-212-4771, PN 27284. The PN listed for Item 13 in Fig 18 of TM 9-2320-289-20P (Jun 85) is wrong.

"Request Game" Update

"Play the Request Game" on Pages 60-61 of PS 403 should have stated that, if the part number has dashes, spaces or slashes in your publication, enter it the same way in Columns 13-22 of the DD Form 1348-6.

M872A3 Snap Hook NSN

Get the snap hook for the rear corner stake assembly on your M872A3 semitrailer with NSN 5340-00-904-0008. The NSN listed for Item 7 of Fig E-36A in TM 9-2330-359-14&P has been dropped.

20-Ton RT Cranes...

Drive on Diamonds Only!

Crane drivers, check your tires now! If your 2380, 2385 or M320RT rough terrain crane is not running on diamond tread tires, you are in for trouble.

Tires with earth moving tread are too big. When you turn sharp or operate on rough terrain, they catch on the front fenders. You won't be able to turn the wheels all the way left or right.

The tire PN's for the 2380 and 2385 on Page 357 of TM 5-3810-232-20P are wrong. They're earthmoving tread. And Fig 264 of TM 5-3810-295-34P lists the wrong tire, too.

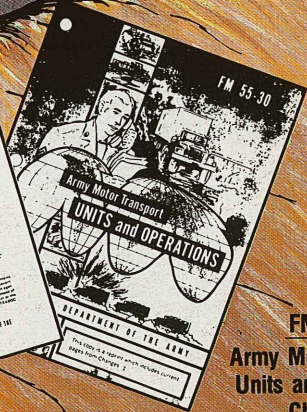
Get diamond tread tires with NSN 2610-01-080-5735.



Too Close... Too Fast... Can Cripple Convoy



FM 21-305
Manual for the
Wheeled Vehicle Driver
Chapter 24



FM 55-30
Army Motor Transport
Units and Operations
Chapter 5

Control Speed and Gap