

Issue 462

PS

May
1991

THE PREVENTIVE MAINTENANCE MONTHLY

TB 43-PS-462

HEY,
WHAT'S HIS TROUBLE?
WHY'S HE CHOKIN'?

THE TROUBLE'S NOT WITH HIM,
YOUR EXHAUST IS **BLACK SMOKIN'**!

HAK

WHEEZE!

COUGH...
GAG!

The Black Smoke Rap...
See Page 27

Link End Item to Repair Parts



When your unit goes on a mission, you need to take enough repair parts to support each end item. But how do you know how many parts to take?

The USAMC Materiel Readiness Support Activity (MRSA) folks can help you compute what you need. They will send you a demand history listing that shows how many repair parts were ordered for a particular end item during a certain time period. The numbers are based on the repair parts supply requests processed through the Central Demand Data Base. The End Item Code (EIC) that you put in card columns 54-56 of your repair parts supply request links it to the end item in the data base.

The listing covers all the demands for repair parts for the end item or for a specific repair part. You can also request the listing to cover a specific Department of Defense Activity Address Code (DODAAC), geographical area or time period.

Get the listing by sending your request to:

**USAMC
Materiel Readiness Support Activity**

**ATTN: AMXMD-SE
Lexington, KY 40511-5101**

Or by calling:
**DSN 745-4161/4137
Commercial (606) 293-4161/4137**

Be sure to give them:

- What you want the listing to cover (DODAAC, geographic area or Army-wide).
- The time period you want the listing to cover.
- End item NSNs.

MAY 91



THE
**PREVENTIVE
MAINTENANCE
MONTHLY**

TB 43-PS-462. The Preventive Maintenance Monthly, is an official publication of the Department of the Army, providing information for all soldiers assigned to combat and combat support units and all soldiers with unit maintenance and supply duties. All information published has been reviewed and approved by the agency responsible for the equipment, publication or policy discussed. Application of the information is optional with the user.

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

MSG Half-Mast
The Preventive Maintenance Monthly
Lexington, KY 40511-5101

FAX: DSN 745-3855
or Comm 606-293-3855

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

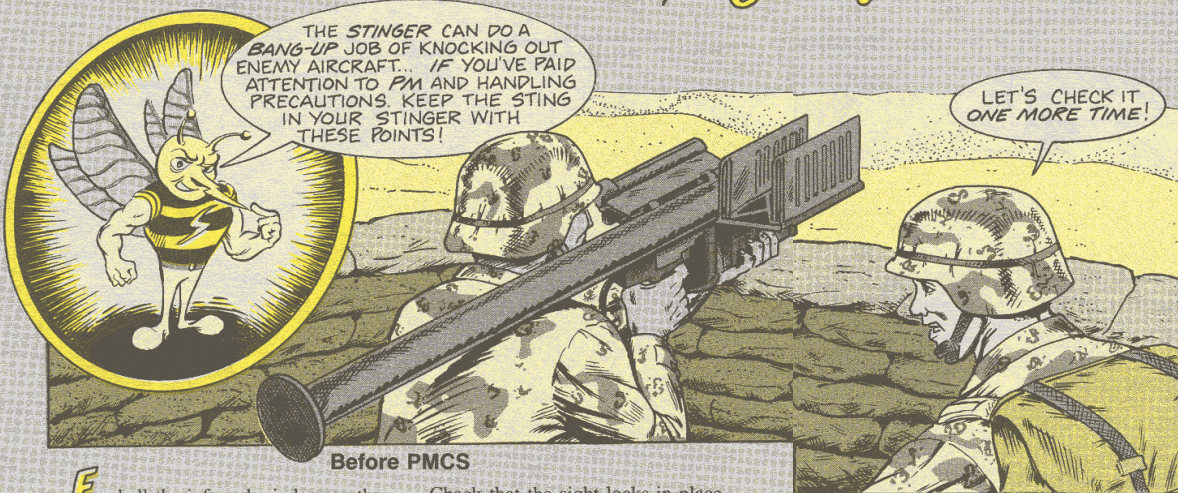
Official:

THOMAS F. SIKORA
Brigadier General, United States Army
The Adjutant General

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Don't Be Stung by Lack of PM



In the Field

All your PM will be for nothing if you're not careful handling the Stinger. It has delicate—and important—parts that break easily.

If you're jumping out of a vehicle, hold the IFF connector in your hand so it can't swing free and catch on something.

Pull the launch tube out of the case like this:



Eyeball the infrared window on the Stinger for dirt and oil. If the window's dirty, clean it only with lens tissue, NSN 6640-00-559-1385, and cleaning compound, NSN 6850-00-392-9751. Cloth scratches the window. Dry the window thoroughly.

Make sure the infrared window has a cover. It protects the delicate window from dirt and scratches.

Before PMCS

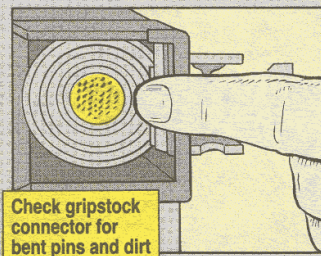
Check that the sight locks in place. Only two screws hold the detent clip in place. If they work loose, the sight won't lock and you can't fire.

Eyeball the wiring on the launcher for bare spots. Bare spots cause shorts—always hazardous to electrical equipment.

Eyeball the launcher wiring for bare spots



Eyeball the gripstock electrical connector for bent pins and dirt. Both keep you from getting a good electrical connection and cause misfires and hangfires. Clean out dirt with an artist's brush. Never use a gripstock with bent pins. Turn it in.



- ⚡ Grip under the tube's middle with your right hand.
- ⚡ Grip directly in front of the gripstock with your left hand.
- ⚡ Tilt up the rear of the tube to a 45 degree angle.
- ⚡ Bring the launch tube straight back to your shoulder. You're ready to put the antenna up.

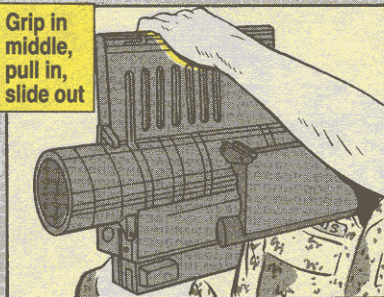
Never pull the launch tube out with a twisting motion. You could break the sight or pop open the gripstock latch.

If you jerk the antenna up, you can rip it completely off. Do it right.

Grip the antenna at top center and pull it toward the launch tube to release the catch.

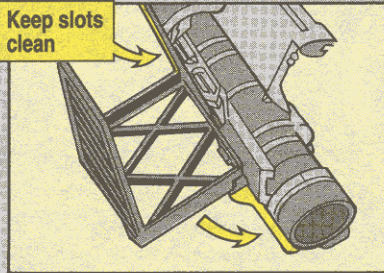
At the same time, lift the antenna and pull it slightly to your left.

Grip in middle, pull in, slide out



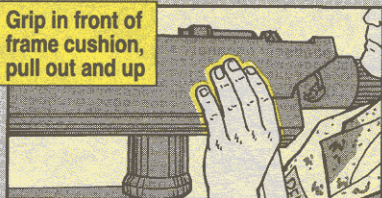
If the antenna won't slide, STOP! Clean the antenna slots. If that doesn't let the antenna slide freely, it's time to replace the gripstock.

Keep slots clean



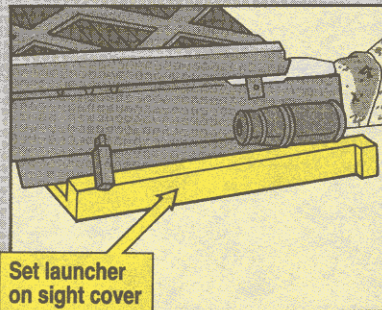
Raise the sight by gripping it just in front of the frame cushion. If you grip

Grip in front of frame cushion, pull out and up



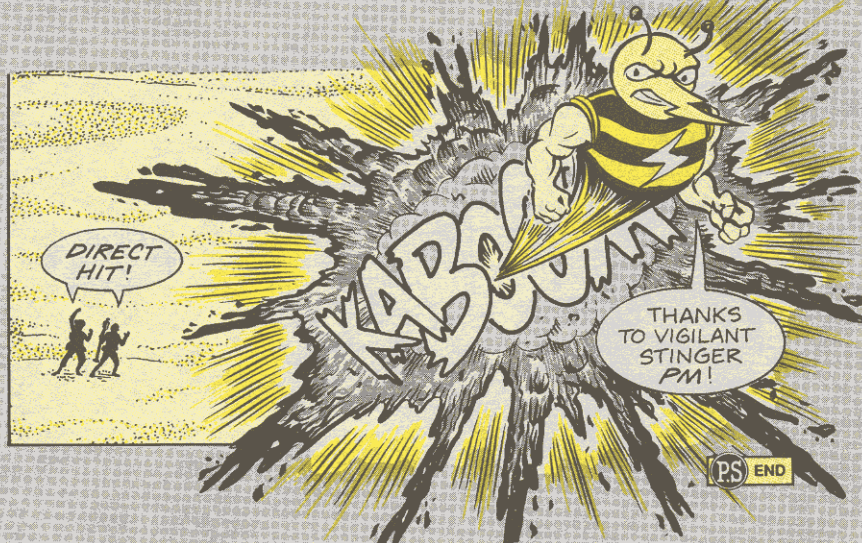
the sight in the middle, you crack it.

If you must set the launcher down, lay it flat on the sight cover. If you lay

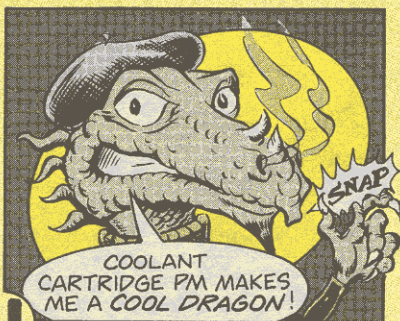


Set launcher on sight cover

it on the antenna, you'll damage the antenna. If you stand it on end, you damage the fragile blowout disc.



Be Cool with Coolant Cartridges



If you don't play it cool with your Dragon night sight's coolant cartridges, you'll soon be shooting into the night blindly. Keep seeing and shooting with these cautions:

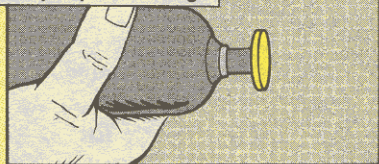
Always keep a cartridge locked in the sight, even when the sight's not



being used. Without the cartridge installed, the actuator seal dries out and the actuator leaks compressed air. The cartridge also keeps sand from plugging up the actuator.

Save the orange cap that comes with the cartridge... and use it. Whenever a cartridge is not installed on the sight, install the cap on the cartridge. The cap shuts out sand that will plug up the actuator when the cartridge's locked in.

Keep cap on cartridge

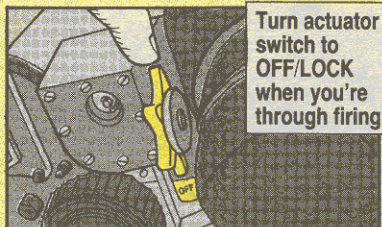


Never force the actuator switch to lock in the cartridge. That can destroy the actuator ball bearings and the cartridge's needle valve.

If you feel resistance when you push the actuator switch toward LOCK, stop. Rotate the cartridge slightly and try the switch again. You may have to rotate the cartridge several times before it seats fully in the actuator.

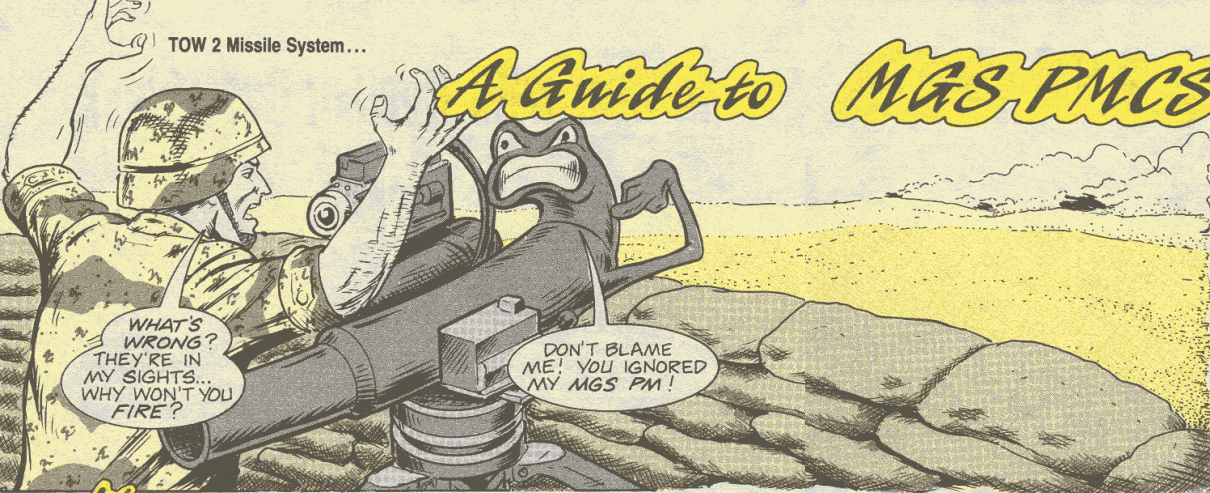
Try a different cartridge if that doesn't work. No luck? Time for your repairman.

Doublecheck that you've turned the actuator switch to OFF/LOCK when you're through firing. It's easy to forget to turn the night sight off... or



accidentally turn the switch to RELEASE. Leaving the sight on drains the cartridge and battery. With the switch on RELEASE, the cartridge comes out far enough for sand to get in the actuator.

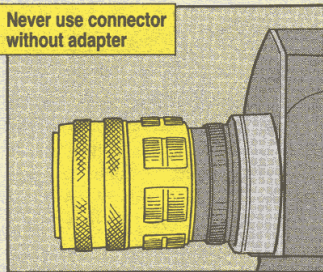
A Guide to MGS PMCS



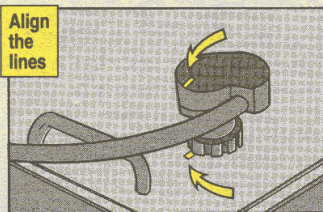
Without the missile guidance system (MGS), your TOW 2's NO-GO and you're gone if enemy tanks appear. Keep your MGS on the go like this:

- Take care connecting the MGS. Hands down, the No. 1 killer of the MGS is rough handling of the MGS cable. During PMCS, make sure the cable's adapter is screwed on tight. If it's missing, get another adapter from your repairman.

Never use connector without adapter



Align the lines

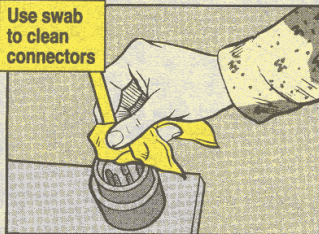


and keyways on the jack and connector. If you feel resistance when you push in the connector, jiggle it to the right or left. If you still feel resistance, STOP. It's time to call your repairmen.

- Eyeball both the MGS jack and the cable connectors for dirt and sand. They will clog the jack holes and cause bad connections and bent pins.

Report clogged jack holes to your repairman. Hit the cable connector against the palm of your hand to knock out sand. Wrap a rag around a stick to make a swab. Wet the swab with alcohol. Clean out any remaining sand from the connectors with the swab.

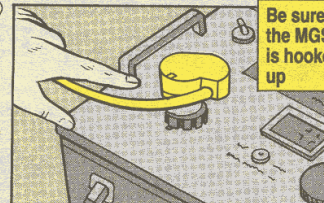
Use swab to clean connectors



- Be sure the MGS is hooked up to the traversing unit and day sight

tracker before you turn on the power. Otherwise, trapped voltage zaps MGS transistors.

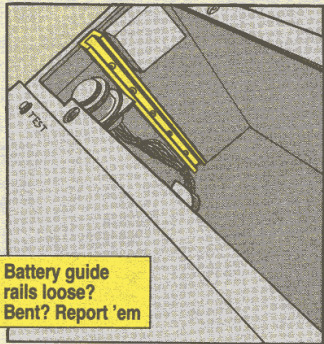
Be sure the MGS is hooked up



- When you're not firing, keep the MGS cable connector wrapped in plastic and the MGS cover latched to seal out sand.

Never let the cable connector drag on the ground.

- Feel the MGS battery guide rails for looseness or bends before you install the battery. Loose rails let the battery bounce around in the MGS. Bent rails make it hard to install or remove the battery. Report bad rails.



Battery guide rails loose? Bent? Report 'em

Nuts and Bolts of Bolt PM

If your M16's bolt is out of action through PM neglect, you may soon be out of action... unless you can outrun the enemy.

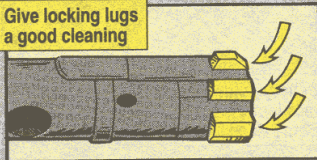
SERGEANT,
THE BOLT ON
MY RIFLE
IS STUCK!

NOW'S THE
TIME FOR ACTION!
WHAT WERE YOU DOING
WHEN IT WAS TIME
FOR PM?

The bolt and bolt carrier become so gunked with carbon they can't move, extract, or lock... and your rifle can't shoot. Keep your rifle's bolt moving free and easy like this:

Use an old bore brush and CLP (or RBC) to get every speck of carbon and dirt off the bolt locking lugs. Also clean the chamber and its locking lugs

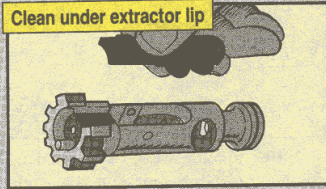
Give locking lugs
a good cleaning



with a chamber brush and CLP. You'll need to use lots of elbow grease to get them completely clean. Dirty locking lugs make trouble for bolt locking and unlocking.

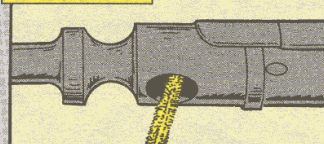
Give the areas under the extractor lip a good cleaning. If the extractor's dirty, your rifle jams.

Clean under extractor lip



Clean inside the bolt by running a pipe cleaner in and out of its holes until

Clean inside bolt
with pipe cleaner

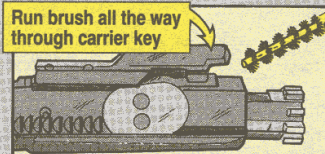


all carbon's gone. Clean the bolt face around the firing pin hole with a patch. A dirty bolt causes sluggish firing... or none at all.

Run your bore brush through the carrier key... all the way. If you don't get out all the carbon, you do get short recoil. If the key is loose or burred, report it. A bad carrier key stops firing.

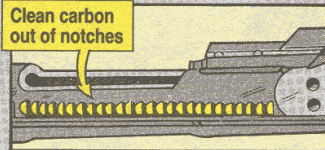
Remember, cotton swabs are for your ears, not carrier keys. The swab's cotton plugs the key. It's difficult—sometimes impossible—to get the cotton out.

Run brush all the way
through carrier key



Brush out all the carbon in the notches along the bolt carrier. If they're caked, the forward assist won't be much assistance.

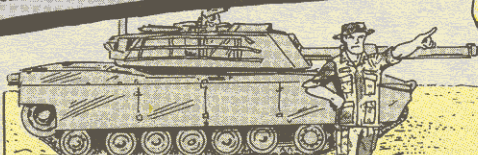
Clean carbon
out of notches



Never use the firing pin as a cleaning instrument. That blunts its point and ruins it. Use a bore brush or pipe cleaner to clean.

Beat the Heat

Keeping the engine's exhaust heat directed away from the oil coolers and crossover hose takes regular PM.



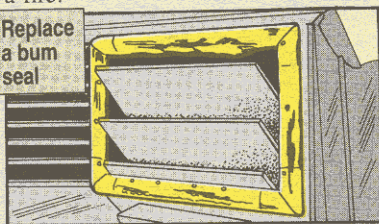
WITH ALL
THE PM THIS UNIT
DOES, A BUM SEAL
CAN'T GET A BREAK
AROUND HERE.
—SIGH—



First, make sure the asbestos seal on the inside of the grille door is in place and not worn, crushed or torn.

If the seal's not sealing, engine heat causes the oil cooler hose to get brittle, crack and leak. Oil could drip onto the hot exhaust manifold, ignite and start a fire.

**Replace
a bum
seal**



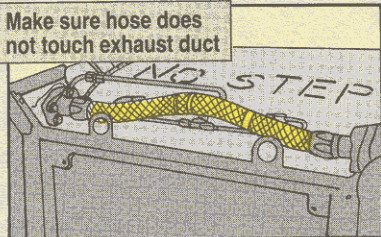
If you spot a bum seal, replace it using NSN 5330-01-099-6331. Replace the old seal screws with NSN 5306-01-309-7031. This stainless steel screw can take more heat. Coat the new screws with antiseize compound, NSN 8030-00-597-5367. Torque the

screws to 120-130 lb-in. They'll come out easier next time.

Eyeball the oil cooler crossover hose for cracks and wear. If the hose is damaged, replace it with NSN 4720-01-067-9039.

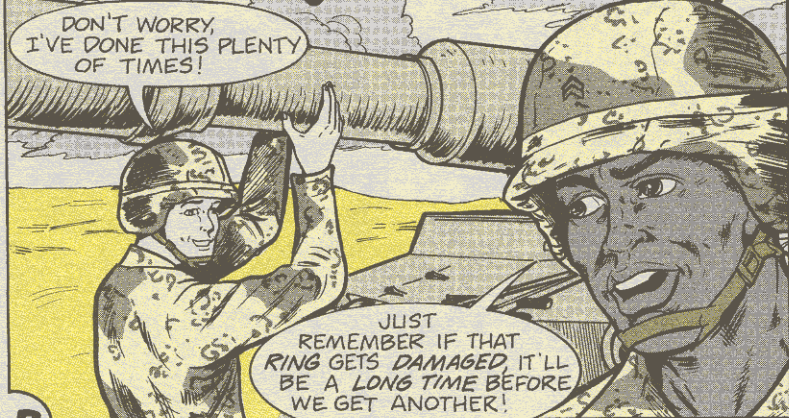
Secure the hose so it doesn't touch the exhaust duct or the top deck. If the hose touches, loosen the mounting bolts and reposition it. Torque the bolts to 46-58 lb-ft.

**Make sure hose does
not touch exhaust duct**



Start the engine and check the hose clamp O-rings for leaks. If there's a leak, replace the O-rings.

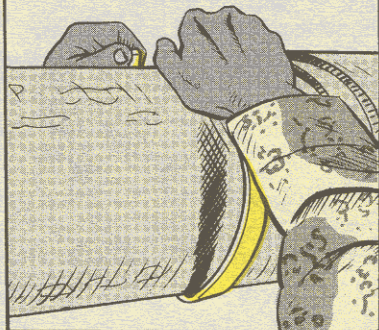
Valve-Ring-in-Short-Supply



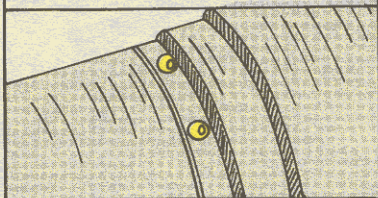
Be extra careful moving the bore evacuator valve ring when you're cleaning the gun after firing.

The valve ring is in very short supply, and if it's damaged, your howitzer is NMC until the ring's replaced. That could be a long time.

Carefully spread the valve ring only enough to lift it out of its retaining groove.



Slide the valve ring toward the muzzle brake just far enough to get at the 10 valve balls and valve seats.



If the valve ring needs cleaning, use the same RBC or CLP and cleaning brushes you use on the valve balls and seats. Do not remove the ring from the cannon unless there is no other way to clean it.

Pay special attention to lubing the ring after cleaning. Put a light coat of grease on it as called for in LO 9-2350-311-12. That'll help make it move easier next time you're cleaning.

PM Tips for Good Running



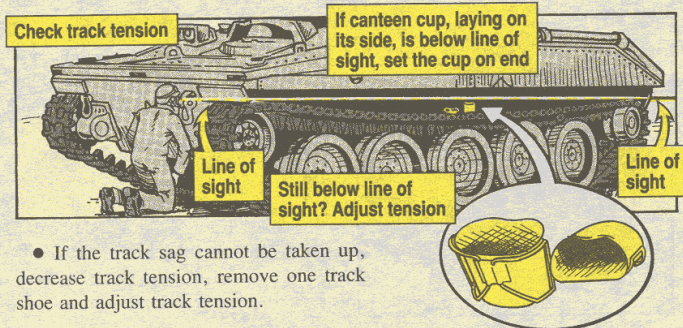
Your trusty M551 recon vehicle has been around a long, long time. And like many old soldiers, it serves the Army well. But it requires you, the crew, to stay on top of vehicle PMCS.

Since you no doubt know the routine in TM 9-2350-230-12 by heart, eyeball these PM tips for a little extra help in keeping your Sheridan mission-ready.

Track Adjustment

To make quick work of checking track tension, try this:

- Get an object 3½ inches tall (canteen cup, 7.62mm ammo box lying on its side or a .50 cal machine gun gage fully extended) and put it on the track directly above the No. 3 roadwheel.
- Push the front mud flap back and sight along the track from the idler wheel to the sprocket. If the object gets in the way of your line of sight, the track's too tight. Loosen the track by opening the pressure bleed plug. If the top of the object is just along the line of sight, track tension is OK.

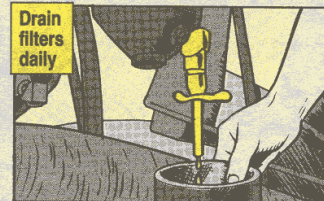


- If the track sag cannot be taken up, decrease track tension, remove one track shoe and adjust track tension.

Fuel Filters

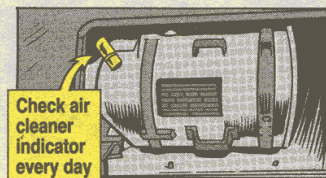
Draining the filters, both primary and secondary, is a daily before-operation job. But the drain cocks have a nasty habit of breaking, so turn 'em easy like.

Use a container to catch the water and fuel to save the mess and prevent fires.



Air Cleaner Indicator

Take a couple of seconds to look at the air cleaner restriction indicator every day. If the indicator shows green, it's OK. If red shows, the filter element needs to be cleaned or replaced.



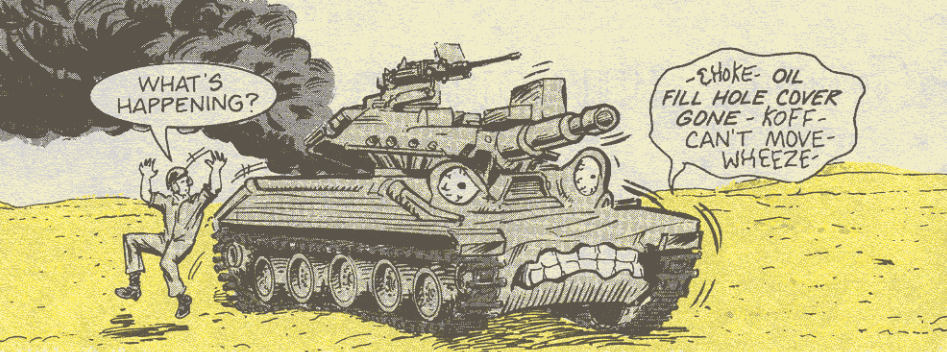
Keep the Air Cleaner Clean!

There are three ways to clean the air cleaner elements:

1. Gently jar out the dust with your hand.
2. Get your mechanic to wash the element in soap and water or a good non-sudsing detergent. Rinse it and air out until dry.
3. Use compressed air, blowing from the inside of the element, to blow out dirt. Use a back-and-forth motion.

Never bang the element on the front or rear deck of the vehicle.





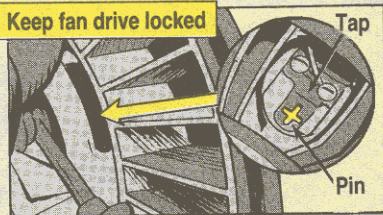
Engine Oil Fill

The two fill hole covers vibrate loose. If either one vibrates off, oil gets thrown out of the engine. The engine will heat up, and maybe seize. Lose a cover? Replace it with NSN 2590-00-758-9043.



Keep it Cool

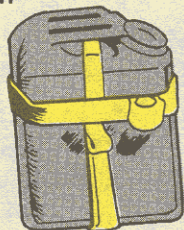
Keep fan drive locked



Having your mechanic lock the cooling fan drive is a good idea in hot places like the desert. Your -12 TM says to do it only in an emergency, but you can figure the desert is an emergency.

Water Can

Keep the straps tight on your 5-gal water can. Otherwise, vibration against the bracket could cut a hole in the bottom of the can.



Strap down water can tight

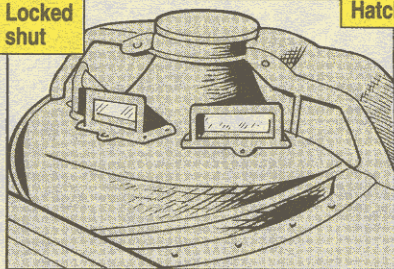
Deck Doors

Make sure the battery and air cleaner doors are shut before anyone traverses the turret. The bustle racks can crush a lid left in the upright position.

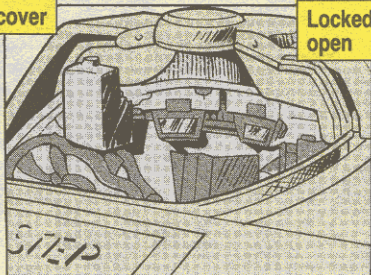
Hatch Cover

The driver's hatch cover is heavy. Make sure it's locked open or closed before you move the vehicle. A loose hatch cover won't feel very good if it hits you in the neck.

Locked
shut



Hatch cover



Locked
open

Dangerous Hatch Handle

The driver's hatch handle is spring-loaded. It can break your jaw. When you release from either the left or right hatch locking latch, the spring snaps the handle with a lot of force. Keep your face clear of the handle.

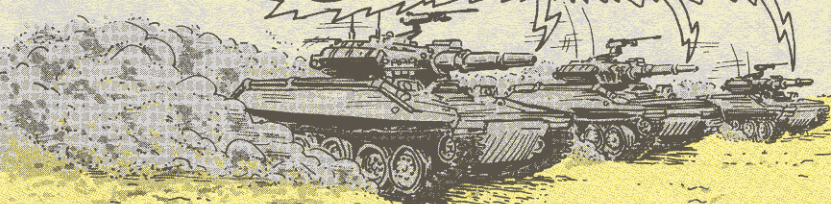
MMF-FGAW-FYM
VA HAX HMBLA!*

*TRANSLATION:
KEEP YOUR
FACE CLEAR
OF THE HATCH
HANDLE!

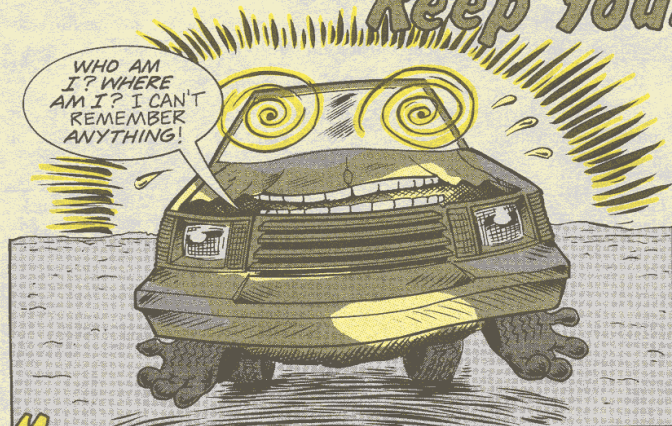


SHERIDANS...

CHARGE!



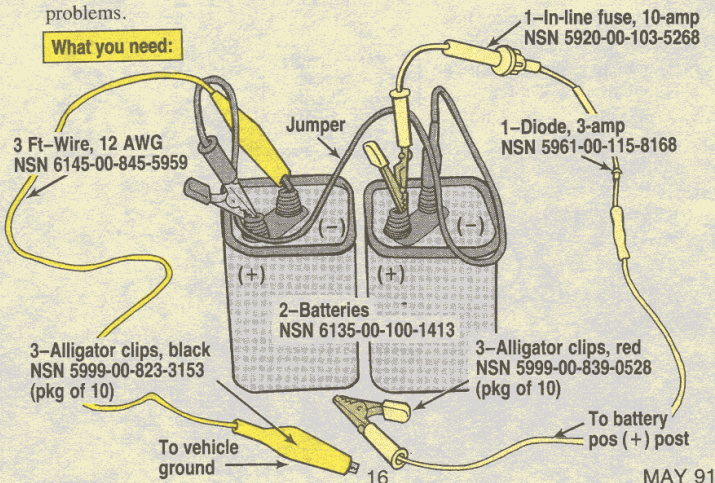
Keep Your Memory



Many late model vehicles have electronic wizardry that gives digital readouts. When you disconnect the battery cable, you destroy programmed electronic memories. Gadgets go bonkers.

But you can make a "temporary memory retention device" to overcome these problems.

What you need:



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How to make the connections:

It takes three wires; one for ground, one for a jumper (to connect the batteries in series), and one hot wire.

Make them like so:

- **Ground wire:** Cut 14 inches of 12-gauge wire. Connect a black alligator clip to each end.
- **Jumper wire:** Cut an 8-in piece of wire. Connect a black alligator clip on one end and a red one on the other.
- **Hot wire:** Cut two 8-in pieces of wire. Connect a red alligator clip on one end of the wire. Solder the other end to one end of the in-line fuse. Connect the other end of the in-line fuse to the diode. Make sure the bar or arrow of the diode is away from the fuse. (If you connect the diode in reverse, you'll lose all the electronic memories.) Now solder the other piece of wire to the diode. Connect a red alligator clip to the other end of the wire.

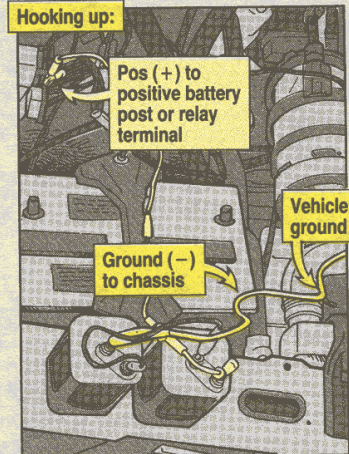
Hooking up:

- Connect the lantern batteries with the jumper wire. Put the red alligator clip on the + (positive) post of one battery and the black clip to the - (negative) post of the other lantern battery.
- Connect the red alligator clip (fuse end) to the + (positive) post of the lantern battery pack.
- Hook the red clip with the diode to the vehicle starter switch terminal (look for the end of the vehicle's battery's red wire). If you prefer, hook the alligator clip to the vehicle's posi-

tive post terminal so it remains attached when you remove the cable.

- Connect the black wire, one end to the lantern battery pack negative post and the other end to a ground on the engine, such as the alternator bracket. Just make sure you get a good connection.

Before going any further, turn off all accessories and close the vehicle doors. Your little lantern battery pack does not have enough gumption to power accessories.

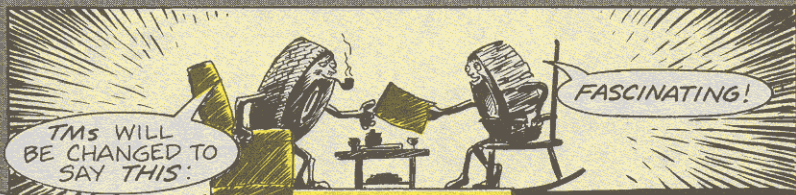
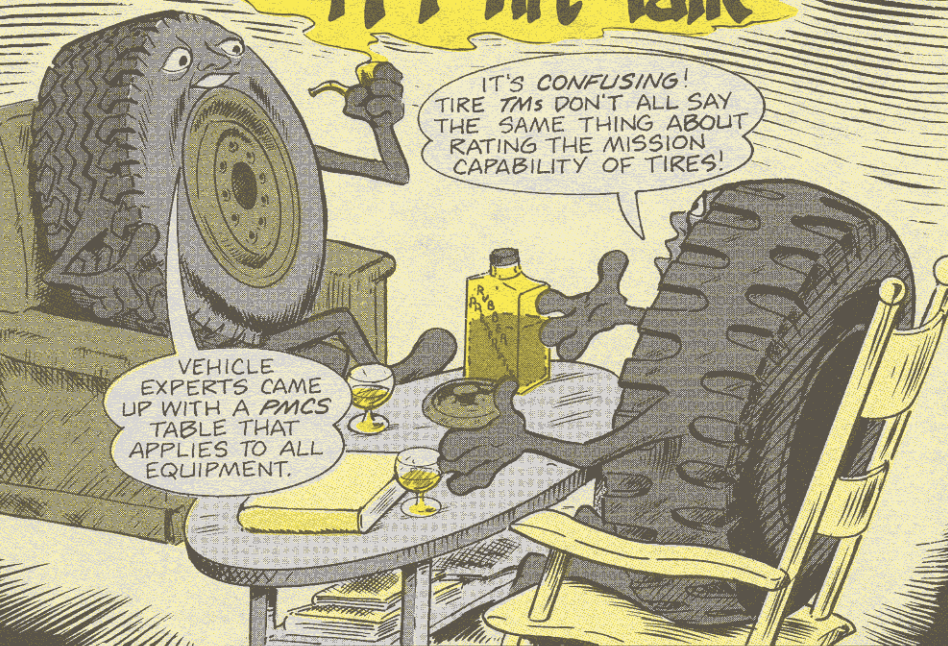


Now you can remove the battery cables—negative cable first—and recharge the old battery, or replace it with a new one. It's a good idea to wrap the positive terminal with electrical tape to keep it from accidentally touching the metal body and shorting out.

MAY 91

17

TM Tire Talk



TIRES:

PROCEDURES:

Check for and have repaired, filled or adjusted as needed.

Visually check for underinflated and unserviceable tires (including spare if normal equipment). Check tires for leaks, cuts, gouges, cracks or bulges. Remove all penetrating objects.

Equipment is not ready/available if:

On vehicles with one tire on each side of an axle, any tire (including the spare) missing or unserviceable.

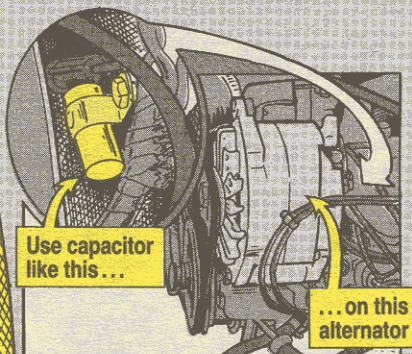
On vehicles with dual rear wheels, two tires (including the spare) missing or unserviceable. Any tire (two tires on dual wheeled vehicles) has cut, gouge, leak, crack or bulge which would result in tire failure during operation.

Static Stopper

Dear Editor,

I found that adding a radio frequency bypass capacitor and some grounding straps under the hood of a CUCV can do wonders to high frequency radio reception.

Begin by adding a capacitor to the left-side alternator. Use the same capacitor that's on the right side, NSN 5910-01-089-1916. Hook it up like the one on the right alternator.

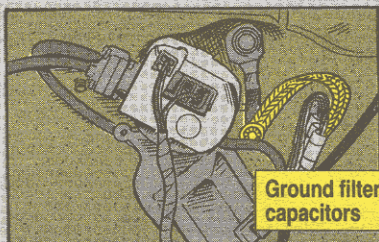


To provide additional static suppression, add grounding straps to each back corner

of the hood. Use braid, NSN 6145-00-682-9894, running from the hood to the firewall.



Finally, use a length of braid to ground the filter capacitors mounted on the firewall.



These three fixes filter out much of the radio frequency "noise" from the charging system of your CUCV and your radios have much cleaner signals.

CW2 Karl M. Schulte
WIARNG

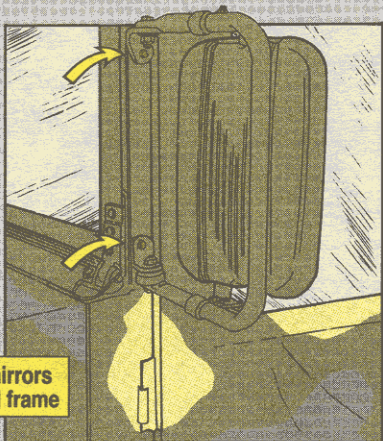
(Editor's note: Thanks for clearing that up!)

HMMWVs...

HMMWV Mirror

The mirrors on HMMWVs are small and vibrate so much you can't see what's behind you. But now there's a larger, "West Coast" mirror available. The mirror has a convex, wide-angle view area at the bottom.

Get a kit to add left and right mirrors with NSN 2540-01-302-2595. The kit's listed on Page 202B-1 of Change 3 to TM 9-2320-280-20P. Individual repair parts are shown in Fig 166A.



Mount new mirrors to windshield frame

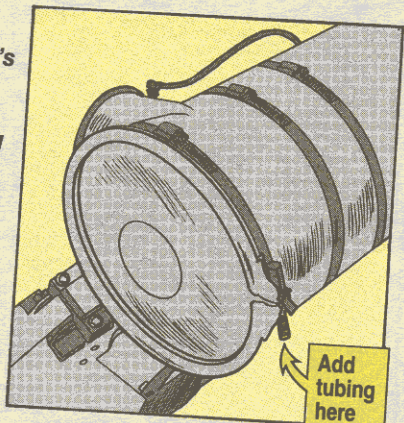
Air Cleaner Bolt Cover Up

Dear Editor:

The clamp on the HMMWV's air cleaner assembly gets cruddy from dirt and water during off-road driving. Crud causes rust. Rust makes it hard to remove the nut to clean the filter element.

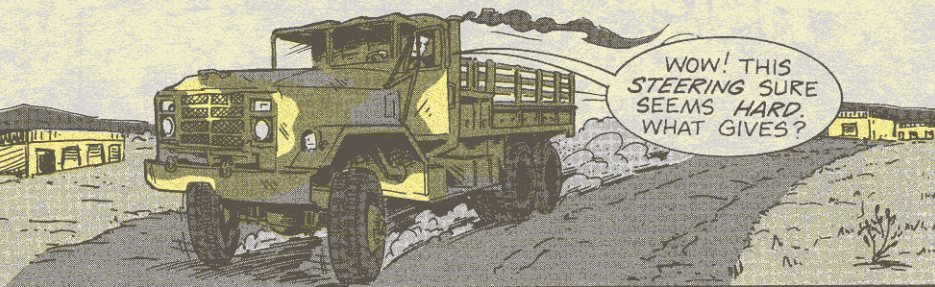
To protect the clamp bolt, use 3/8-in shrink tubing, NSN 5970-00-954-1624. Cover one side of the clamp bolt. Tighten down the nut. Then cover the threads of the bolt. The tubing slices off easily when removing the nut.

**SSG George Stute
APO New York**



(Editor's note: Thanks for the tip. Shrink the tubing with a heat gun. NSN 4940-00-561-1002.)

Power Steering Pump Leak

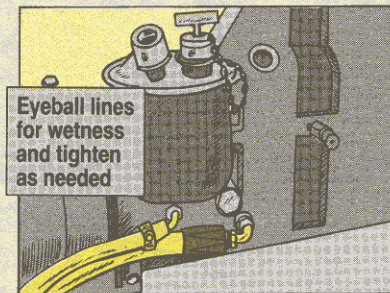


The power steering pump on M939A2 5-ton trucks has a tendency to leak. When too much fluid leaks out, you lose your power steering.

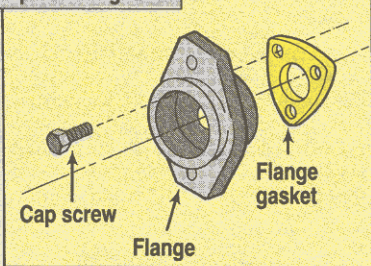
So, before you drive out of the motorpool in your new M939A2-series truck, eyeball the hose clamp on the oil return line going to the power steering pump. Make sure it's good and tight... and that there're no drops of fluid hanging around.

Feel for wetness around the oil supply line's tubing nut connectors. Make sure they're tight and dry.

Eyeball the power steering pump where it's connected to the air compressor. Get your mechanic to remove the pump if you find a leak. Direct Support will replace the flange gasket, NSN 5330-01-271-9407, and torque the three cap screws to 30-40 lb/ft.



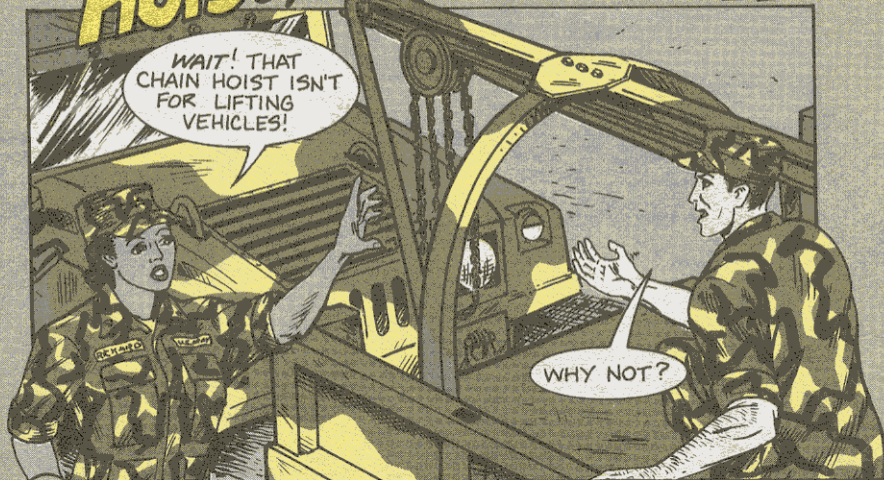
Direct support will replace the gasket



M52 Fuel Switch & Light

Get the dash-mounted fuel transfer pump switch for M52-series tractor trucks and other 5-tonners with dual fuel tanks with NSN 5930-00-296-6318. The indicator light is NSN 6210-01-014-0764. Make a note until these NSNs are added to TM 9-2320-211-20P.

Hoist, but Don't Tow



If you have a truck-mounted hoisting unit, NSN 4910-00-754-0652, you know it is handy for lifting loads up to 3,000 pounds into the truck. And of course you can use the towbar to flat-tow any truck that's the same size or smaller.

You might think you have a light duty wrecker for recovering disabled trucks, too. **WRONG!**

The chain hoist is only rated to lift 3,000 pounds. Even a HMMWV will overload the hoist if you try to lift one end. And lifting and towing puts even more stress on the chain. It'll break, and someone could be hurt! Do not lift and tow vehicles!

Rough Service Lamp NSN's

A drop light, as any mechanic knows, is a gadget with a burned-out lamp when you need to use it.

Cures for that problem come with these NSNs:

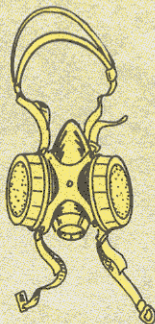
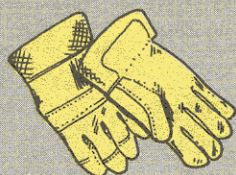
Voltage	Watts	NSN 6240-00-	Used with
120	100	824-4676	Regular drop lights
24	25	153-6494	Vehicle-powered light used with military vehicles
12	25	222-0276	Vehicle-powered light used with commercial vehicles

Canvas & Glass Shop Update

HERE ARE SOME SAFETY ITEMS TO ADD TO YOUR SHELTER MOUNTED CANVAS AND GLASS SHOP, NSN 4940-00-209-6239.

Instead of one air filtering respirator, NSN 4240-00-022-2524, as shown on Page 20 of SC 4940-95-A63, the new SC will show two respirators. You can go ahead and order another respirator, using TB MED 502 as your authority.

Item	NSN	Qty
Leather gloves	8415-00-634-4658	1 pr
Face shield	4240-00-542-2048	1 ea

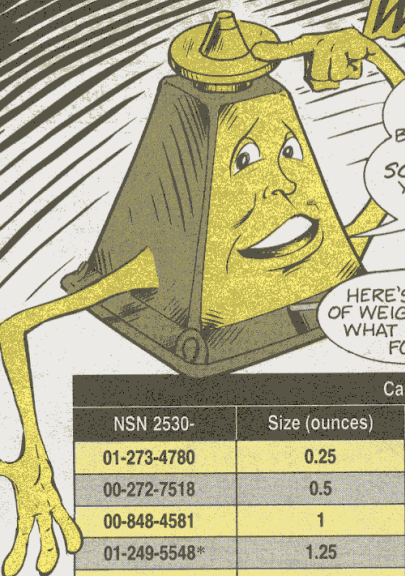


Tiedown Strap NSNs

Electrical tiedown straps to tie back wires and wiring harnesses are hard to find. Here are some of the different lengths that are available:

NSN 5975-00-	Size (inches)	Qty
074-2072	6½	100
156-3253	13½	100
570-9598	10½	100
727-5153	3	100

Wheel Weight NSNs



YOU'LL FIND A
**BUBBLE TYPE WHEEL
BALANCER** IN THE NO. 1.
COMMON SHOP SET.
BUT YOU WON'T FIND **NSN's**
FOR WHEEL WEIGHTS IN
SC 4910-95-CL-A74. WHEN
YOU USE UP THE ONES THAT
CAME WITH THE BALANCER,
YOU'RE OUT OF LUCK!

HERE'S A LIST
OF WEIGHTS AND
WHAT THEY'RE
FOR.



Cars		
NSN 2530-	Size (ounces)	Application
01-273-4780	0.25	Std passenger car
00-272-7518	0.5	Std passenger car
00-848-4581	1	Std passenger car
01-249-5548*	1.25	Std passenger car
00-267-0312	1.5	Std passenger car
00-272-7520	2	Std passenger car
00-195-8088*	2	Std passenger car
00-848-4578	2	Special passenger car
01-181-3920	2	Chrysler '83 cars and FWD trucks
00-251-5756	2.5	Std passenger car
00-848-4579	2.5	Std passenger car
00-848-4580	3	Std passenger car
01-191-6756	3	Std passenger cars (80-84 Fords)
00-272-7524	3.5	Std passenger car
00-848-4585*	4	Std passenger car
00-272-7523	4	Std passenger car
00-272-7525	5.0	Std Passenger car

Trucks		
NSN 2530-	Size (ounces)	Application
01-280-4382	0.509	Std truck wheel
00-174-2840	3	Std truck wheel
01-188-1349	4	Std truck wheel
00-050-2067	4	Std truck wheel
01-027-8739*	4	Std truck wheel
01-028-1307*	6	Std truck wheel
00-050-2064	6	Std truck wheel
00-050-2060	6	Std truck wheel
00-050-2065	6	Std truck wheel
01-301-0411	6	Std truck wheel
01-027-6943*	8	Std truck wheel
00-709-5922	16	Std truck wheel

*These NSN's are not on the AMDF. Order them on a DD Form 1348-6 from RIC S9C.

Metric Threading...

I'M
AVAILABLE
IN
CASE
YOU NEED
ME!



Plastic Cases Available

Snap-On Tool Corp	Part Number
Little case (holds 25 pieces)	TD 2425-1
Big case (holds 41 pieces)	TD 9902A1

If you break or lose the plastic cases that come with the metric tap and die set, NSN 5136-01-119-0005, in the No. 2 Common shop set, you can get new ones. The cases are not listed in SC 4910-95-CC-A72. They are furnished by two manufacturers, Snap-On Tool Corp and Hanson Tool Division.

MAY 91

Order the cases from GSA on a DD Form 1348-6 using CAGE 55719 and the part numbers.

If your tap and die set was manufactured by the Hanson Tool Division, order the replacement case on a DD Form 1348-6 using CAGE 75055 and part number G97312-MT.

25

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 5-3805-261-24P Dec 90 CAT 130G grader
TM 5-3895-372-24P Nov 90 M919 concrete-mobile mixer body
TM 5-4310-452-24P Dec 90 DED 250 CFM air compressor
TM 9-1005-201-23&P Dec 90 M249 machine gun
TM 9-1090-203-23P Dec 90 M28A2 and M28A3 helicopter armament subsystems
TM 9-1425-429-24P Sep 90 Stinger missile system
TM 9-1425-2525-24P Sep 89 Mandatory parts list (HAWK missile system)
TM 9-1430-600-20-1 Dec 90 AN/MSQ-104 ECS Patriot air defense guided missile system
TM 9-2350-222-PCL Aug 90 M728 CEV
TM 9-2350-238-PCL Oct 90 M578 recovery vehicle
TM 9-2350-252-24P-1 Oct 90 M2/M3-series Bradley
TM 9-2350-253-PCL Aug 90 M60A3 tank
TM 9-2350-261-PCL Aug 90 M113A2-series FOV
TM 9-2350-277-PCL Aug 90 M113A3 carrier
TM 9-2350-284-24P-1 Mar M2A2/M3A2 Bradley

TM 9-2350-300-PCL Oct 90 M163A1 Vulcan
TM 9-2350-304-PCL Oct 90 M110A2 SP howitzer
TM 9-2350-311-PCL Oct 90 M109-series SP howitzer
TM 9-4935-470-24P Nov 90 TOW heavy antitank/assault weapon
TM 9-4935-780-23P Jan AN/TSM-173 test support system (Army helicopter improvement program)
TM 9-5855-882-24P Nov 90 AN/UAS-12B night vision sight
TM 10-6640-229-13&P Sep 90 Precision general purpose water baths model TS-66518 AW-9
TM 11-1520-210-20P-2 Sep 90 UH-1 modification for installation of AN/ASN-43, AN/ARC-164(V), AN/ARN-89, AN/ARN-123, AN/APX-100(V), AN/ASN-128, AN/ARC-186, AN/ARC-199, AN/ARC-201, ICS/audio discriminator (P/N DSK-9-05079) and TSEC/KY-58
TM 11-6130-247-24P-3 Sep 90 PP-3940C/G power supply
TM 55-1520-210-CL Dec 90 Operator's and crewmember's checklist
TM 55-1520-228-BD Jan BDAR, OH-58A and OH-58C
TM 55-1560-307-13&P Dec 90 Extended range fuel system army model CH-47 helicopter, NSN 1560-01-221-7600
TM 1-1520-238-20-12 Dec 90 Tail rotor and intermediate gearbox temperature alarm control units on AH-64A
TM 1-1520-248-20-11 Feb Inspect OH-58D co-pilot observer cyclic stick
TM 9-2330-356-14 Nov 90 Warranty program for 5,000 gallon semitrailer M970

TM 10-8415-206-20-1 Dec 90 SPH-4 helmet
TM 55-1520-228-20-55 Jan Inspect and recall of tail rotor blades on OH-58A/C
TM 55-1520-237-20-119 Jan Replace and inspect tail rotor pitch beam retaining washer UH-60A/L and EH-60A
TM 55-1520-237-20-120 Jan Main rotor blade tip caps UH-60A/L and EH-60A helicopters
TM 55-1520-240-20-44 Jul 90 Eddy current inspect of engine cross shafts, CH-47D
TM 55-1520-242-20-50 Jan UH-1H/V/M crew door hinge pins
TM 55-1520-242-20-51 Jan UH-1H/V swashplate outer ring assembly
TM 55-2840-241-20-04 Nov 90 OH-58A/C filter tube P/N 23051141 recall
PAM 710-2-117 Jan The Army combat PLL program mission of profile development list ground and missile equipment MPL
PAM 710-2-120 Jan The Army standardized combat PLL/ASL program mission profile development list aircraft MPL
SB 38-101 Apr Spare/repair part to end item applications (48X microfiche)
SB 700-20 Mar Army adopted/other items selected for authorization/list of reportable items
CTA 50-970 Sep 90 Expendable/durable items (except: medical, class V, repair parts and heraldic items)

SMART Message

SMART MSG #88—Provides units with notice of a change to the BOIP for the turret mechanics supplemental tool kit.

Maintenance & Safety-Of-Use Messages

AMCCOM SOU-MSG-07-91—Advisory, Precautions when firing 4.2-inch HE M329A2 cartridge, AMSMC-DSM-MG 252110Z Feb 91.

AMCCOM Maintenance Advisory Msg 91-09—Gives repair information on Bradley fighting vehicle system's line replaceable unit, AMSMC-MA 141900Z Feb 91.

MICOM SOU-MSG-91-02—Warning for air-to-air Stinger (ATAS) and Avenger captive flight trainers (CFT), AMSMI-LC-AM 281500Z Feb 91.

TACOM SOU-MSG-91-05—Operational, Off road restrictions for M870, 40-ton lowbed semitrailer, AMSTA-M 202230Z Feb 91.

TROSCOM SOU-MSG-09-91—Limited one-time inspection, inspect AN/PSS-11 mine detector set to determine whether the output amplifier module is right color, AMSTR-MEPP 211500Z Feb 91.

TROSCOM SOU-MSG-08-91—Advisory, A/S32P-19-series firetruck, potential safety hazard with the metal fan blades of the heat exchanger, AMSTR-MEPP 222100Z Feb 91.

TROSCOM SOU-MSG-02-91—One-time inspection, inspect MACI firetruck, NSN 4210-01-193-3621, for loose wires on top of muffler, AMSTR-MEPP 262000Z Feb 91.

TROSCOM Maintenance Advisory Msg 91-11—Air filter replacement on 20 CFM diving compressors, AMSTR-MEP 051430Z Mar 91.

TROSCOM Maintenance Advisory Msg 91-06—Corrects Line Item Number in Maintenance Advisory Msg 90-43, AMSTR-MEPP 081500Z Mar 91.

The Black Smoke Rap

THEY CALL US MECHANICS,
WE'RE RAPPIN' KINGS,

♪ AND WE'RE HERE
TO TELL YA' JUST
A FEW THINGS!

BLACK
EXHAUST SMOKE
WILL DO YA' IN,

♪ YOU'RE ♪
WASTIN' FUEL
AND THAT'S
A SIN!

YOU'RE
WEARIN' OUT
YOUR ENGINE,
YOU'RE POLLUTIN'
THE AIR,

♪ YOU'RE ♪
KILLIN' YOUR
TRUCK, MAN, AND
YOU DON'T
CARE!

YEAH,
WE'RE
MECHANICS,
WE'RE A
RAPPIN'
DUO,
♪♪
SENDING
OUT ADVICE
JUST FOR
YOU-O!



♪ A DIRTY ♪
AIR CLEANER
COULD BE CAUSIN'
THAT SMOKE!

STOPPIN'♪
THAT AIR CAUSES
♪ YOUR ENGINE
TO CHOKE!



IT'S ALL THAT
FUEL THAT'S NOT
GETTIN' BURNED,
♪
MAKIN' BLACK
SMOKE THAT'S
A TOUGH
LESSON
LEARNED!

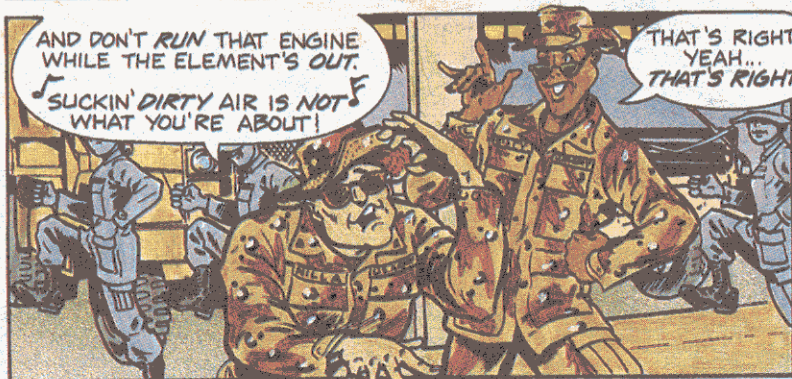
SO CHECK THAT INDICATOR,
LOOK FOR THE RED,
♪
CLEAN THAT ♪
CLEANER, YOU'LL
STAY
AHEAD!

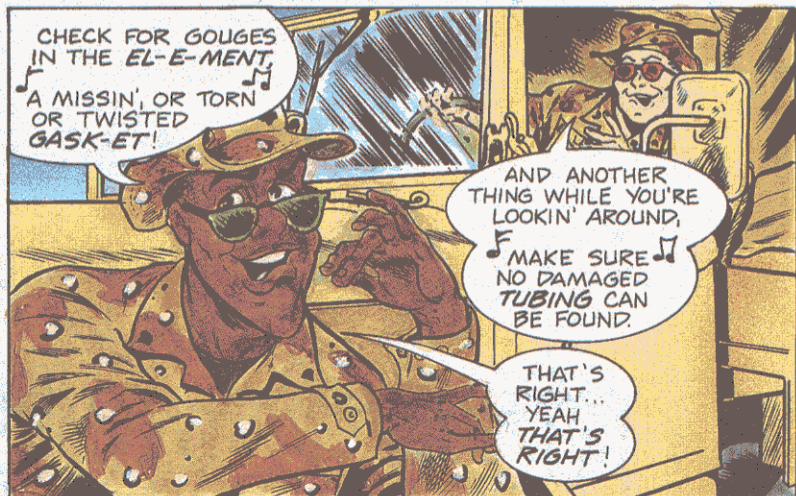


AND DON'T RUN THAT ENGINE
WHILE THE ELEMENT'S OUT.

♪ SUCKIN' DIRTY AIR IS NOT ♪
WHAT YOU'RE ABOUT!

THAT'S RIGHT...
YEAH...
THAT'S RIGHT!

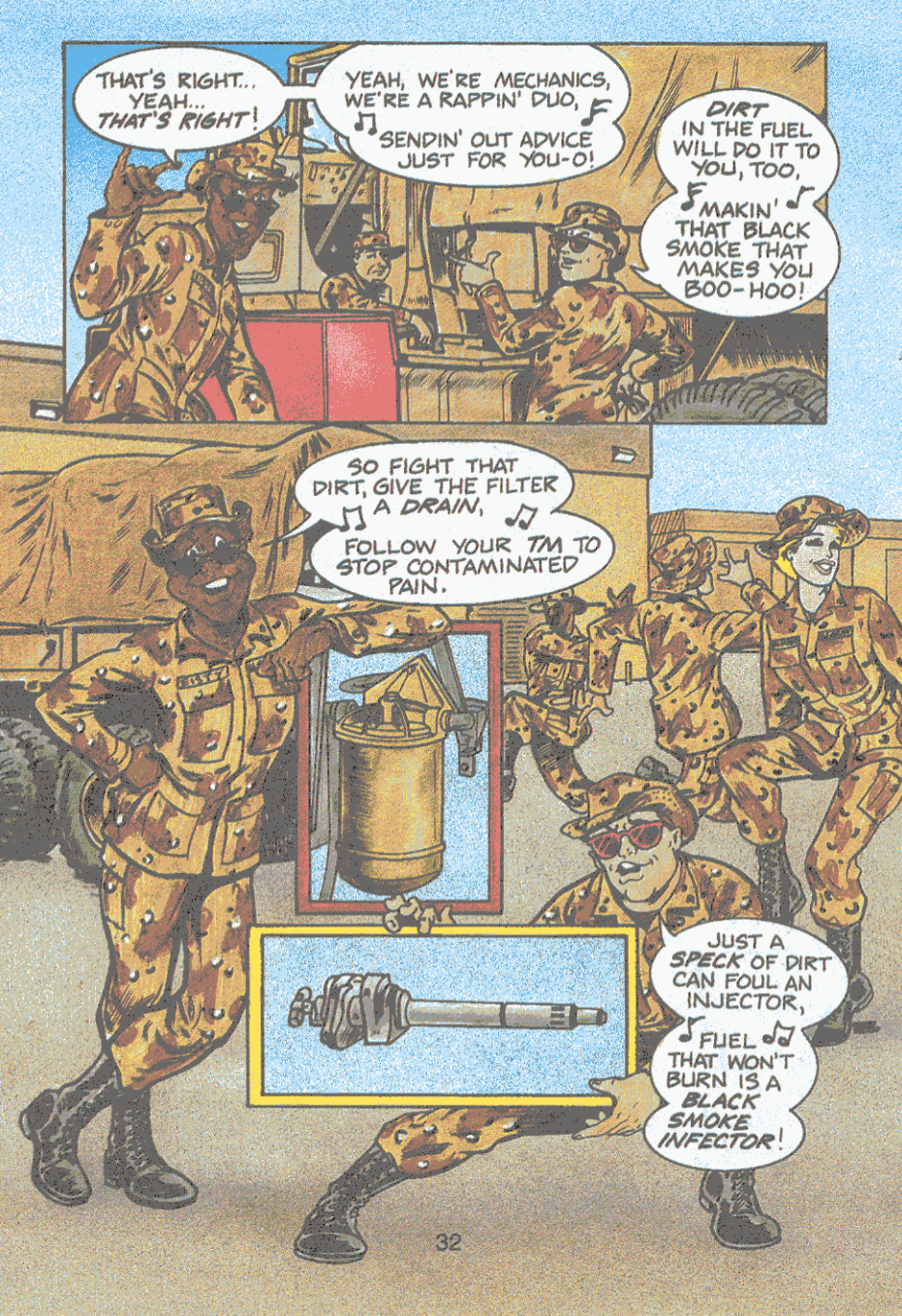




A comic book illustration depicting a group of soldiers in camouflage uniforms and hats, dancing in a street. A speech bubble from one soldier reads: "If your Exhaust is Black Smokin' And you find yourself Chokin', Cease, Desist-- Don't Let it exist -- PM's the Thing, and We're not Jokin'!". The scene is set in a street with buildings in the background. The soldiers are wearing uniforms with "U.S. ARMY" patches. One soldier in the foreground is wearing a hat with "NILLA" on it. The style is a classic comic book illustration with bold lines and a limited color palette.

WE HAVE THE WORLD'S BEST EQUIPMENT ...*Take care of it*

IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.



THAT'S RIGHT...
YEAH...
THAT'S RIGHT!

YEAH, WE'RE MECHANICS,
WE'RE A RAPPIN' DUO,
♪ SENDIN' OUT ADVICE
JUST FOR YOU-O!

DIRT
IN THE FUEL
WILL DO IT TO
YOU, TOO,

♪ MAKIN' ♪
THAT BLACK
SMOKE THAT
MAKES YOU
BOO-HOO!

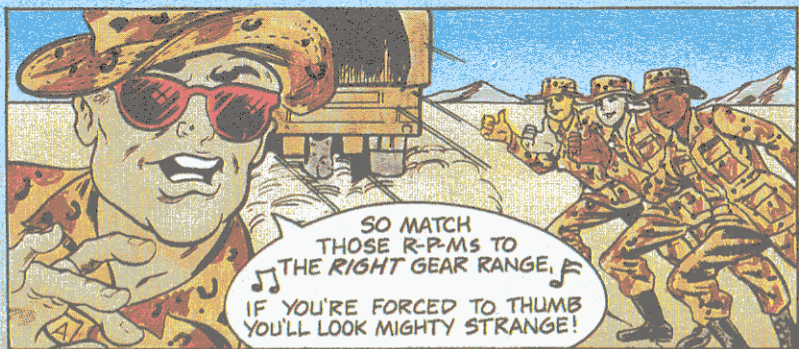
SO FIGHT THAT
DIRT, GIVE THE FILTER
A DRAIN, ♪

FOLLOW YOUR TM TO
STOP CONTAMINATED
PAIN.

JUST A
SPECK OF DIRT
CAN FOUL AN
INJECTOR,

♪ FUEL ♪
THAT WON'T
BURN IS A
**BLACK
SMOKE
INFECTOR!**





SO MATCH
THOSE R-P-Ms TO
THE RIGHT GEAR RANGE, ♪
IF YOU'RE FORCED TO THUMB
YOU'LL LOOK MIGHTY STRANGE!

YEAH,
WE'RE
MECHANICS...

WE'RE
A RAPPIN'
CREW!

FOLLOW
OUR ADVICE
OR WE'LL BE
LOOKIN' FOR
YOU!

PS END

YOUR NOSE KNOWS

First it's kablooeey and then it's kaput! Now your battery's gone and your bird's in a world-of-hurt.

Why?

A poorly adjusted voltage regulator.

Para 3-4c of TM 11-6140-203-14-2, the Aircraft Nickel-Cadmium Battery manual, gives the word on checking your regulator.

Para 3-281 of TM 55-1500-204-25/1, the General Aircraft Maintenance manual, and your bird's TM, gives the specifics on how to adjust your regulator.

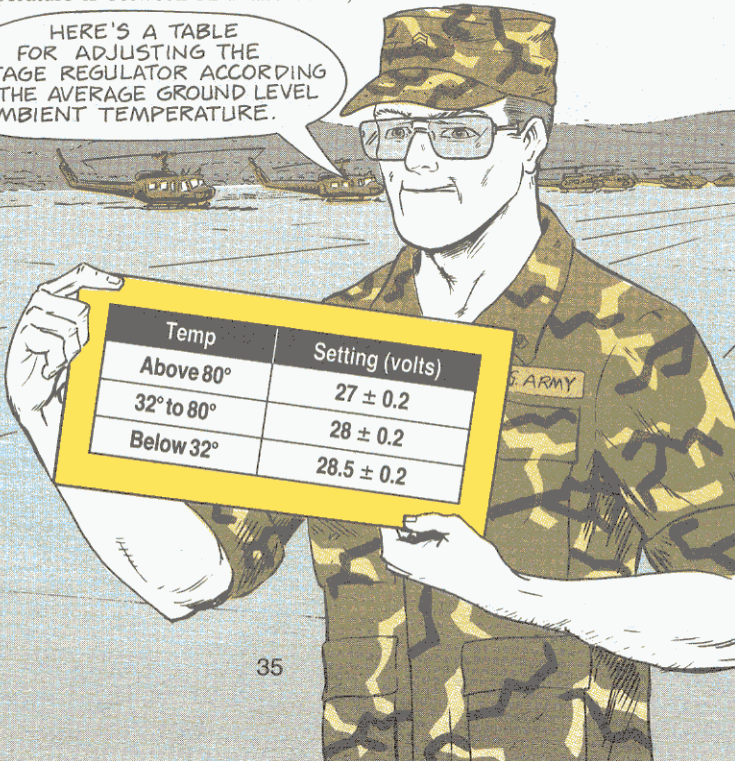
And your nose will tell you where to set the adjustment.

If your nose has an icicle dangling on it for a week, set the regulator on 28.5 ± 0.2 . (That will mean the average weekly ground ambient temperature is 32°F or below.)

If your nose gets badly sunburned for a week, set the regulator on 27 ± 0.2 . (That means the average temperature is 80°F or above.)

If your nose gives no signals, keep the setting at 28 ± 0.2 . (That means the average temperature is between 32°F and 80°F .)

HERE'S A TABLE
FOR ADJUSTING THE
VOLTAGE REGULATOR ACCORDING
TO THE AVERAGE GROUND LEVEL
AMBIENT TEMPERATURE.



Temp	Setting (volts)
Above 80°	27 ± 0.2
32° to 80°	28 ± 0.2
Below 32°	28.5 ± 0.2

Open the Door to PM

YOUR JOB IS ONLY PARTLY DONE WHEN YOU DO PM INSIDE AND OUT. **COMPLETE PM** MEANS KEEPING THE DOORS IN TOP SHAPE, TOO!



A Seal That Seals

If your door seals are coming unglued, do this—

Remove the retainers and rivets.

Use toluene, NSN 6810-00-281-2002, to take off the old seals and glue.

Clean the seal area and the edge of the door with a clean cloth dampened with methyl-ethyl-ketone, NSN 6810-00-281-2785. Clean the new seal, NSN 9390-00-133-6472, with the damp cloth, too.

Lightly rub the gluing surface of the new seal to roughen it with sandpaper, NSN 5350-00-721-8117.

Glue the seal back to the fuselage, or, as an alternative, directly to the door. Either way, sand the area with the sandpaper before you glue.

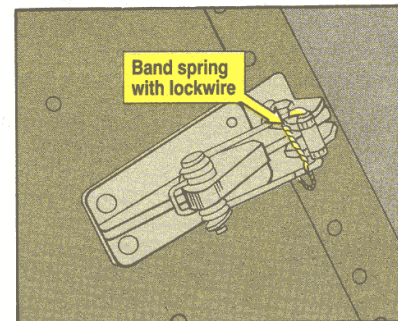
Glue the seal with adhesive, NSN 8040-00-097-6524. Use brush, NSN 7920-00-514-2417, to apply it. Put adhesive on both the seal and the area you're gluing it to.

Allow the glue to dry for at least one hour. Then, firmly press the seal into place. Close the door and leave it closed for at least 2 hours.

After the glue dries, install the retainer clips with blind-type rivets, NSN 5320-00-582-3304.

A Spring with Spring

Hinge springs that hold the crew doors in place wear out quickly. Then the spring slips out of the hollow pin that holds the door open. You can extend the life of the spring by banding it with lockwire. It will keep the spring from slipping out of the pin.



No Stack with a Rack

Stacking removed Kiowa doors or laying them on the ground will scratch the windows and leave the doors open to abuse from big feet.

Solve the problem with a door rack made out of 2 x 4's. Here's the way it should look:

CUSHION EACH SLOT WITH STRIPS OF SCRAP PADDING. KEEP THE PADDING IN PLACE WITH ELECTRICAL TIES. NSN 5975-00-074-2072.



Bottle the OH-58 Gearbox Cap

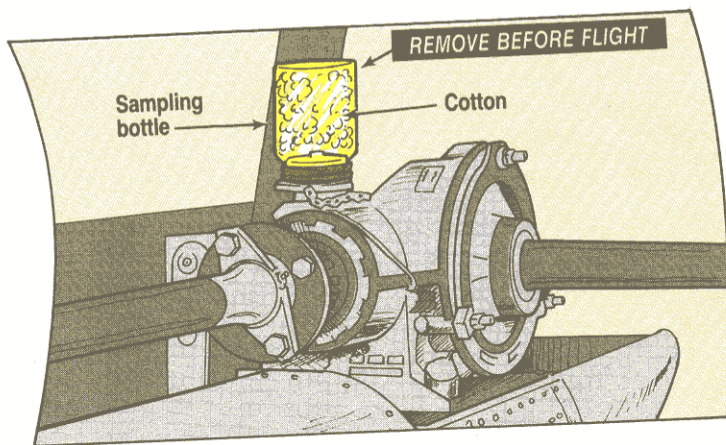
Dear Editor,

Moisture seeps through the tailrotor gearbox vented cap on our Kiowas and contaminates the oil.

We cap the cap with a vehicle oil sample bottle. Here's how:

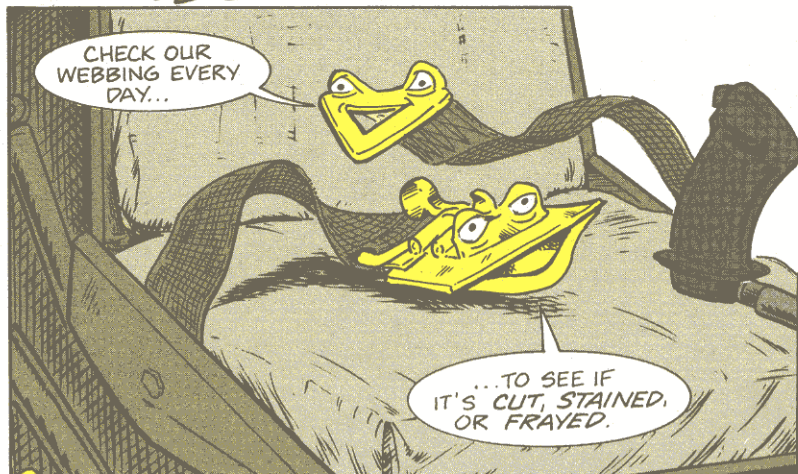
1. Cut off the bottle's threaded neck.
 2. Pack the bottle with cotton to absorb moisture.
 3. Stick the bottle over the cap and tape it tight.
 4. Attach a "Remove Before Flight" streamer by running a wire through the bottle and streamer.
- Voila! No more outside moisture contamination.

2LT Stephen P. Iodss
APO New York



(Editor's note: Covering the filler cap is a good idea. Make sure the cover is secure to the airframe so it doesn't cause FOD and that its removal is noted as a part of preflight.)

Don't Be Rash to Trash



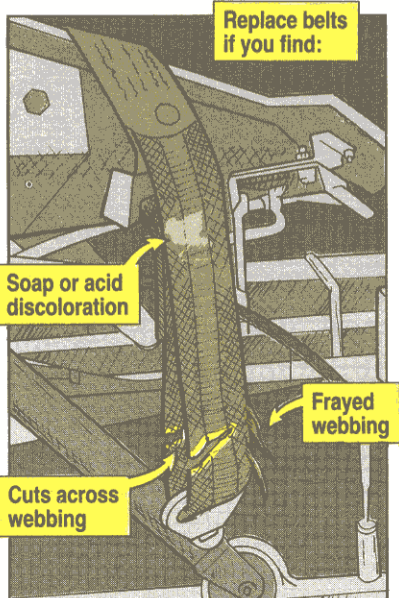
Seat belts are like a poker hand... you've got to know when to hold 'em and know when to fold 'em.

You "fold" (replace) your seat belts when daily inspections uncover:

- Cuts across the webbing, horizontal or vertical;
- Discoloration of webbing caused by caustic soaps or acids;
- Frayed webbing more than 2 inches long.

You "hold" (keep) your belts even if:

- They are discolored from the sun or from rubbing against metal;
 - They have broken stitches; (Stitching should be repaired like it says in Para 3-311b of TM 55-1500-204-25/1.)
 - They have fuzz;
 - They're moldy or mildewed.
- (Wash them like it says in Para 3-311c of TM 55-1500-204-25/1.)

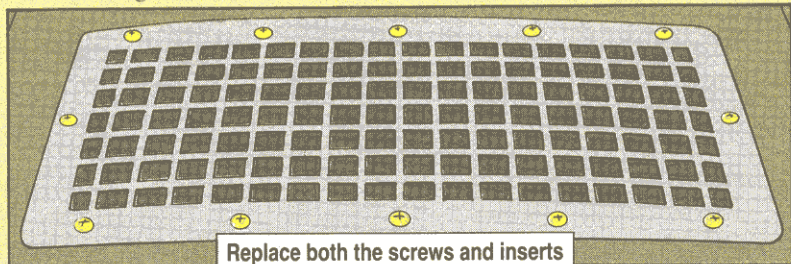


The Taming of the Screws



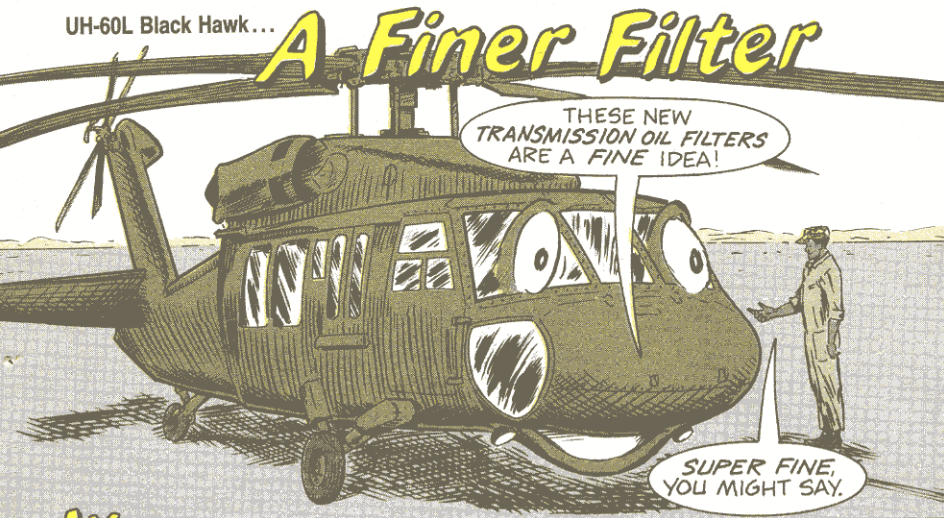
Rusted and seized screws make removing and installing the screen cover on your bird's nose door a tough job.

The only way to do the job right is to replace both the screws and the inserts. But removing the inserts buried inside the panel is another battle. Here's how to win that fight:



1. Drill $\frac{1}{16}$ -in holes around each bad screw until you can remove the screw and the insert with needlenose pliers.
2. Stick a new insert, NSN 5325-01-150-7836, into the hole. Seal it tight with adhesive, NSN 8040-01-163-3481.
3. Let the adhesive harden, then attach the screen cover with new screws, NSN 5305-00-866-0937.

A Finer Filter



When you add fresh transmission oil to your UH-60L Black Hawks, the filter button may shortly pop.

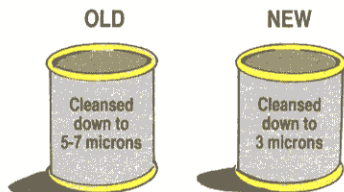
The -60L's have a transmission oil filter that will stop contaminants as small as 3 microns (about 1000th of an inch).

The current transmission oil is only cleansed down to 5-7 microns. It doesn't take long before 5-7 micron-filtered oil running through a 3-micron filter will clog it. When it does, change the filter, **but not the oil.**

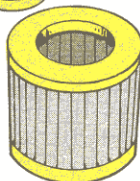
Eventually this finer filtration will mean fewer filter changes and more reliable transmissions. Initially, however, it means more filter changes.

Chances are you'll go through several filters quickly until contaminants have been filtered from the oil. Once you reach that stage, you should find transmission oil filter changes few and far between.

The filtration system has two filters. In addition to the 3-micron primary filter, there's a 75-micron secondary filter. When you change the primary filter, change the secondary filter if debris is on the element.



**3-micron filter element,
NSN 1650-01-266-9728**



**75-micron filter element,
NSN 1650-01-266-9729**

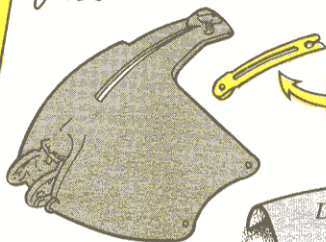
Mounting the AN/AVS-6

Dear Half-Mast,

When we add mount assembly, NSN 5855-01-151-4229, to attach the AN/AVS-6 night vision goggles to our SPH-4 flight helmet, the visor link sometimes breaks.

Item 28 of Fig. E-4 of TM 10-8415-206-12 & P shows the link as a part of the mount assembly. That assembly costs \$171. Can't we just order the link and save some bucks?

WO1 D.W.



Replace a broken visor link with NSN 5855-01-260-6451

Dear Mr. D. W.,

You bet, Sir. Replace a broken visor link assembly with NSN 5855-01-260-6451. That will save your unit \$160 every time you make the repair.

Half-Mast

Aviation Messages

If your unit has not received a message you have an interest in, check with your next higher headquarters.

UH-1-91-ASAM-01, Maint Mand, UH-1H/V/M, Inspect pilot and copilot door hinge pins, 021800Z Jan 91.

UH-1-91-ASAM-02, Maint Mand, UH-1H/V, Inspect swashplate outer ring assembly, 031800Z Jan 91.

OV-1-91-ASAM-02, Info, OV-1D/RV-1D infrared louvered scarf shroud suppressor, 091810Z Jan 91.

OH-58-91-ASAM-04, Maint Mand, OH-58A/C, Inspect seat belt support assemblies, 101900Z Jan 91.

AH-1-91-ASAM-01, Oper, AH-1S/P/E/F, Stabilization control amplifier and armament system check

w/changes to operator's manuals/checklists, 111630Z Jan 91.

OH-6-91-ASAM-02, Maint Mand, OH-6A, I and II night vision goggle lighting system wiring, 142030Z Jan 91.

CH-47-91-ASAM-02, Oper, CH-47D that need MWO 55-1520-240-50-43, (conversion of three piece cross shaft to one piece cross shaft), 171830Z Jan 91.

OH-58-91-ASAM-05, Info, OH-58D, Closed circuit refueling (CCR) receiver, 171900Z Jan 91.

AH-64-91-ASAM-03, Maint Mand, AH-64A w/active back-up control system, 222130Z Jan 91.

UH-1-91-ASAM-03, Info, UH-1H/V, Changes concerning the

improved inlet particle separator, 281545Z Jan 91.

OH-58-91-ASAM-06, Info, OH-58D, Revised inspect/replace criteria for main rotor pitch link bearing, 281600Z Jan 91.

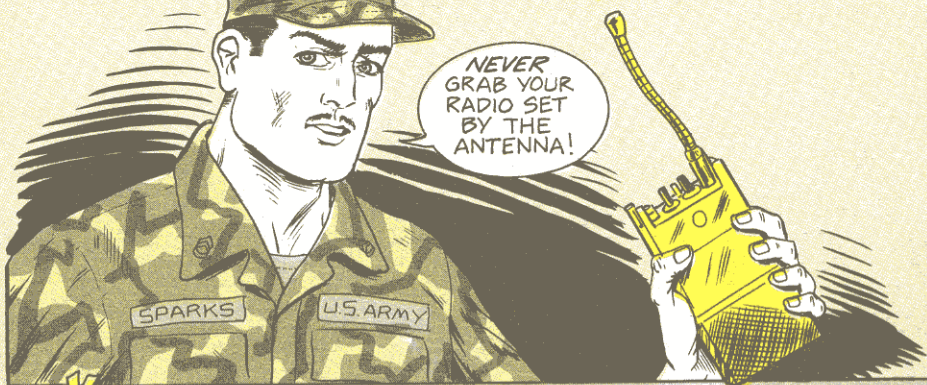
CH-47-91-ASAM-03, Operational, CH-47D, Revised checklist for CH-47D aircraft, involved in operation Desert Storm, 312000Z Jan 91.

AH-64-91-01, SOF, Tech, AH-64A, Inspect servocylinders for nonconforming hardware, 271930Z Jan 91.

AH-64-91-02, SOF, Tech, AH-64A, Addendum to one time inspection of servocylinders for nonconforming hardware, 302130Z Jan 91.

CAT 1 EIR Phone:
DSN 693-2066
(24 HOURS)

Antenna and Battery Bits



Your AN/PRC-68 radio will work for you if you treat it right. Here are a couple of items that need special treatment.

Antenna Care

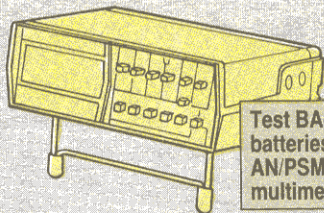
When you pick up the radio set, grab the radio, not the antenna. Grabbing the antenna cracks the control panel face. That puts your radio out of business.

If you need a carrying case for the radio, get it with NSN 8465-01-157-1157.

Battery Care

Before using your radio, give the battery a check-up. The BA-1588/U battery, NSN 6135-01-094-6536, gives about 40 hours of service at 70 degrees Fahrenheit and above.

Test the battery using the AN/PSM-45 multimeter, NSN 6625-01-139-2512. Connect a load across the battery terminals. Use a 44.2 ohm resistor, NSN 5905-01-102-3406. The BA-1588/U battery is OK if it reads no less than 12 volts.



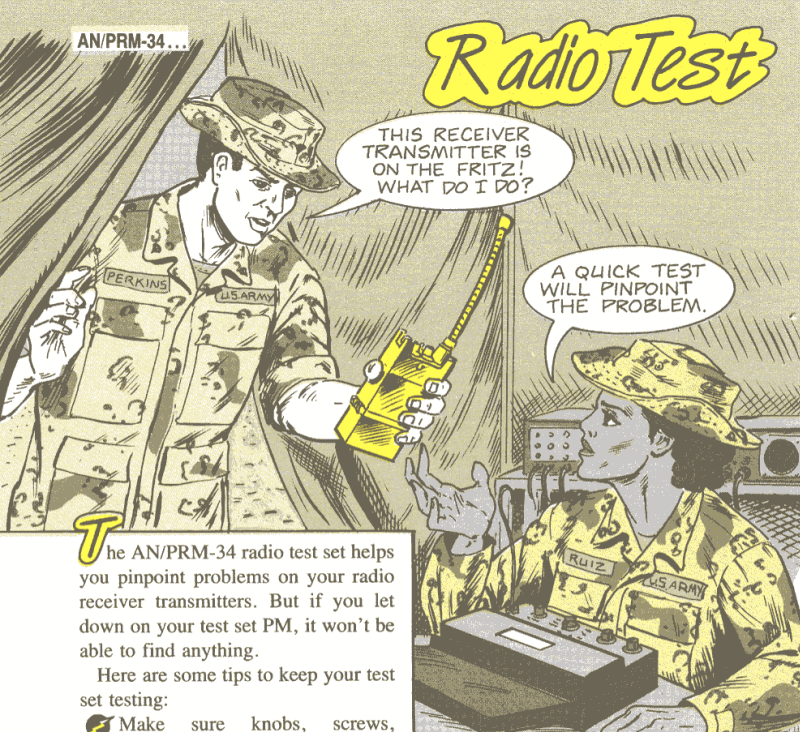
Test BA-1588/U batteries with AN/PSM-45 multimeter

A BA-5588/U lithium battery, NSN 6135-01-088-2708, will power your radio for about 50 hours at 70 degrees Fahrenheit and above. However, there's no tester in the system to test lithium batteries.

Be sure to take out the battery when your set's idle.

If the battery's strong but your signal is weak, get your repairman to align the radio with an AN/PRM-34 test set.

Radio Test

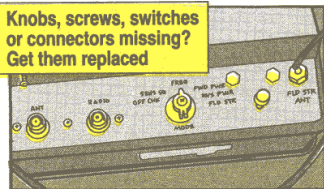


The AN/PRM-34 radio test set helps you pinpoint problems on your radio receiver transmitters. But if you let down on your test set PM, it won't be able to find anything.

Here are some tips to keep your test set testing:

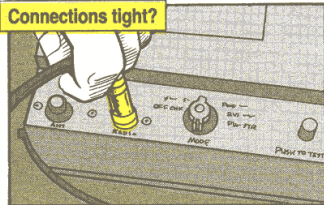
 Make sure knobs, screws, switches and connectors are not missing or broken. If any are broken or missing, get them replaced. Don't leave any places open for dust, sand or moisture to get inside.

Knobs, screws, switches or connectors missing? Get them replaced



 Feel connections to make sure they're connected tight. Operating the RT with loose connections can damage your transmitter.

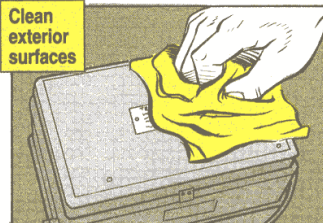
Connections tight?



Set Tips

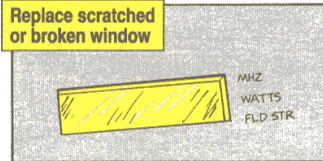
 Keep sand, dust, dirt and moisture off exterior surfaces with a clean, soft cloth. Never use abrasive materials or cleansers on painted surfaces or the display window.

Clean exterior surfaces



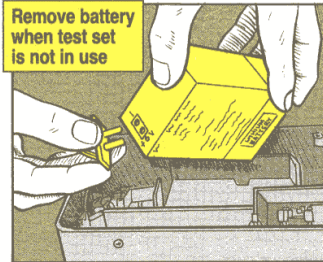
 Make sure the display window is not scratched or broken. Get it replaced if it's scratched or broken so bad that you cannot read the numbers.

Replace scratched or broken window



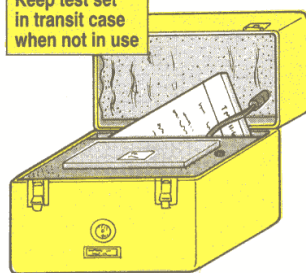
 Remove lithium battery if the set is to be stored longer than 30 days.

**Remove battery
when test set
is not in use**



 Keep the test set in its case when it's not in use. This keeps out moisture and dust and protects the test set from damage.

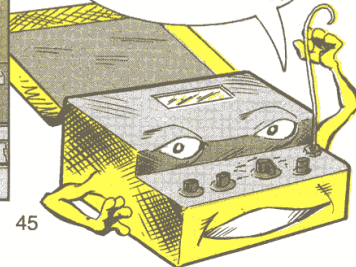
Keep test set in transit case when not in use



Check the inside gasket of the transit case for possible tears where moisture or dust can leak through.

Another thing, before testing the RT-524, RT-246 or R-442 equipment, be sure you turn on your AN/VRC-12 series radio and let it warm up about five minutes. If you don't let it warm up, the test results could be wrong.

KEEP ME IN
SHAPE AND I'LL
BE THE BEST FRIEND
A SICK RADIO HAS!



Heat Trips Circuit Breakers



When you operate the distribution illumination system, electrical (DISE) in the desert, you'll need to decrease the electrical load because of the high temperatures.

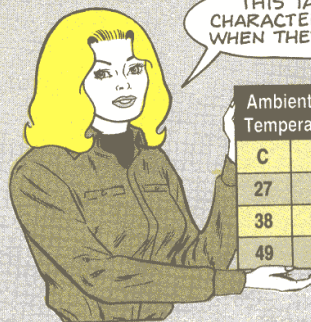
Circuit breakers heat up when they carry current. When the air temperature is high, the breaker heats up more. Then it trips at a lower amperage than it's rated for.

When you use the DISE to power equipment that must have an uninterrupted power supply, the load capacity of the circuit breaker should be reduced and, if necessary, the load should be redistributed.

The load can be redistributed by moving loads to different circuit breakers, adding another DISE box or using a DISE box with a higher ampere rating. TM 5-6150-226-13&P and FM 20-31 have the information on load balancing.

Remember, no matter what the temperature, never to load the circuit breakers to their full capacity because of load fluctuations during starting and stopping.

Try to avoid exposing the DISE to direct sunlight. Put DISE boxes in the shade or make shade for the boxes. Be sure the DISE boxes are well ventilated.



THIS TABLE GIVES THE APPROXIMATE TRIP CHARACTERISTICS OF THE CIRCUIT BREAKERS WHEN THEY ARE HOUSED IN THE DISE BOXES.

Ambient Air Temperature		Approximate Circuit Breaker Capacity in Amps Rated					
C	F	20	40	60	100	200	
27	80	15-17	30-34	45-51	75-82	152-173	
38	100	14-16	28-32	42-48	71-81	143-164	
49	120	12-14	25-29	36-42	64-73	129-148	

AN/MJQ-32, -33 Power Plants...

Wired for Light

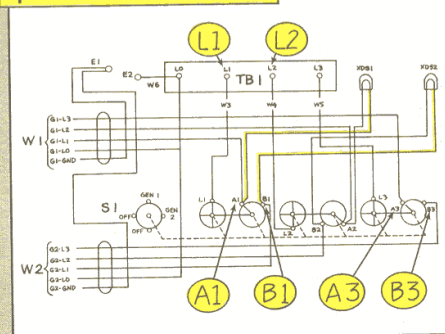
Your AN/MJQ-32 and AN/MJQ-33 power plant's switch box needs to be rewired so that the indicator lights operate in both single- and three-phase operation.

The indicator lights don't operate in single phase operation when the generator terminals are hooked up like Fig 4-4 of TM 5-6115-640-14&P shows. You need to rewire the indicator lights to operate from generator terminals L1 and L2. Do this by moving the indicator wires from A3 to A1 and B3 to B1.

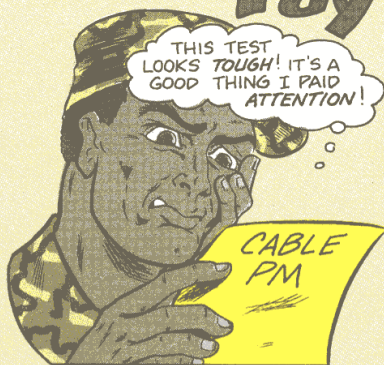
TROSCOM Maintenance Advisory Msg 90-15, AMSTR-MES 092200Z May 90 has the word.

MAY 91

Rewire indicator lights to operate from terminals L1 and L2



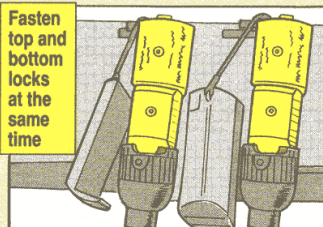
Pay Attention to PM



You'll get high marks in cable maintenance if you pay attention at PM time.

The plug and receptacle have a lot of contact pins. If you put the plug in at an angle, you'll bend or break the pins. Just a little care and a few extra seconds can help prevent damage.

Line up the connector and receptacle before you squeeze them together.



When you have them together, fasten the top and bottom locks at the same time. That puts even pressure on the contacts.

Coverup

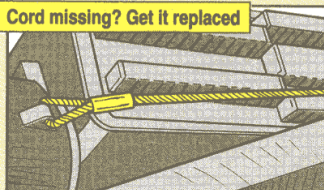
When the cable's not being used, make sure the cover is on.



Without the cover, dirt and moisture knock out circuits. So be sure that both the receptacle and cable connector covers are on for protection.

Cord Connection

If the cord that holds the connector covers on is missing, get your repairman to make a new one. The items he



needs to make the cord are wire rope, wire swaging sleeve and a compressing tool.

The wire rope comes by the reel or by the foot. NSN 4010-00-222-4482 gets a 1000-ft reel and NSN 4010-00-575-6233 is ordered by the foot.

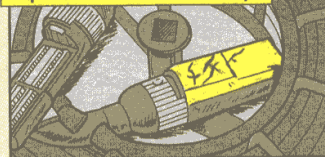
to PM

The wire swaging sleeve is NSN 4030-00-431-5536. A compressing tool to crimp the sleeve is NSN 5120-00-323-2292. Use Appendix A of CTA 50-970 as your authority to order these items.

Cap Tip

Replace the plastic caps on your connector or receptacle if they are cracked or broken. Broken or cracked connectors don't make good contact and your communications suffer.

Replace broken or cracked caps



Order a replacement kit with NSN 5999-01-073-5507. That gets enough caps to repair ten connectors.

Cable Protection

When the cable crosses roads or busy field sites, protect the cable by burying it.

Bury cable in busy areas

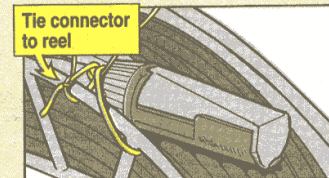


Otherwise, the constant pounding of heavy boots or vehicles damages the cable jacket and the inside wiring gets mashed or broken.

Bury the cable 6 to 12 inches deep. In sandy ground, you may want to go down as much as 3 feet.

Plug Protection

After reeling up your cable, protect the covered connector by tying it to the inner section of the reel rim with a piece of field wire. That keeps it from being stepped on or kicked around.



Never try to tuck the connector between the cable on the reel. That bends the cable and makes it dry rot. You can head off some dry rot by giving cables a thin coat of silicone, NSN 6850-00-880-7616.

Check out TC 24-20, Tactical Wire and Cable Techniques, for more information on cable maintenance.



Stop the Drain



Run to Charge

There's a quirk about battery charging on these generators you need to know. The alternator doesn't put out a lot of current, so it takes time to recharge the batteries.

After a normal start during warm weather, the alternator needs at least 30 minutes with the generator running at high idle to recharge the batteries.

If it takes several tries to start the engine, or if you have to use the heater elements and glow plugs to warm a cold engine, you need to run the generator several hours to recharge the batteries.

■ Check for Charge

You can check the state of your batteries using the antifreeze/battery tester, NSN 6630-00-105-1418, in the No. 1 Common shop set.

Battery charge is OK if the specific gravity is between 1.260 and 1.280. If the reading is less, recharge the batteries—but not too fast! Limit the charging current to five amps.

Specific gravity range OK

					-50
G	1.300	—			-40
O		—			-30
O		—			-20
F	1.250	—	R	S	-15
A		—	U	A	-10
R		—	S	F	-5
	1.200	—	T	E	0
R		—			+5
E		—	D		+10
C	1.150	—	R		+15
H		—	A		
R		—	I		+20
G	1.100	—	N		
E		—			
BATTERY					+25
CHARGE					

3-KW DED Generators...

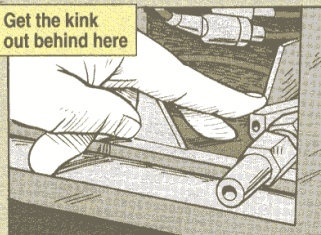
Straighten Oil Drain

On some MEP-701A 3-KW DED generators, the oil drain line is too long and gets kinked. When you open the line to drain the oil, little or nothing comes out.

If the drain line on your generator is kinked, fix it like so:

🔥 Drain the oil. If the kink prevents draining, pinch the line closed at the

Get the kink
out behind here



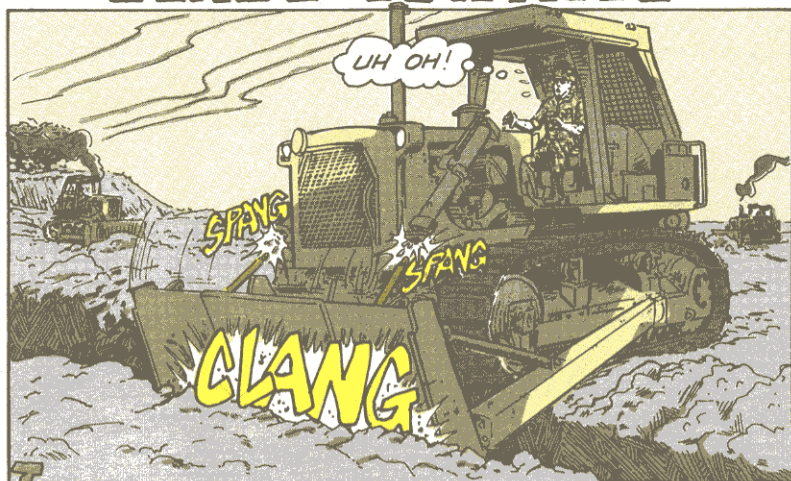
Remove the line from the barbed fitting on the drain cock.

Use a knife to cut off up to $\frac{3}{4}$ inch of the line so that there are no kinks between the engine and drain cock.

Put the line back on the drain cock.

engine end with pliers before cutting it loose from the drain cock. Then let the oil run into a suitable container.

BLADE CONTROL

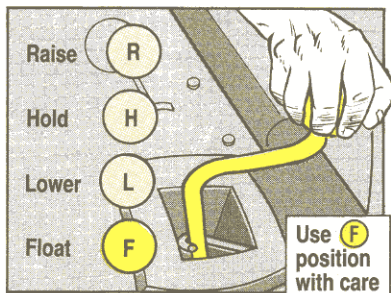


There you sit atop your D7G dozer—with the blade lift cylinder rods yanked out of the cylinders. How did you do that?

You used the “quick drop” feature on the tractor when the blade was over a ditch . . . or a big hole.

The quick drop lets the blade fall quickly when you put the blade control lever in the F (for FLOAT) position. But there is no built-in stop. The blade drops until it hits the ground—or the end of the cylinder rod hits the end of the cylinder and rips the nut off the rod.

So, take heed when you work where the blade can drop 18 inches or more below the bottom of the tracks. Use the F position with care, or shift to L to lower the blade under power. On level ground, you can use the F position to drop the blade quickly.



KEEP
SHARP ON
BLADE
CONTROL!



Good Beltmanship

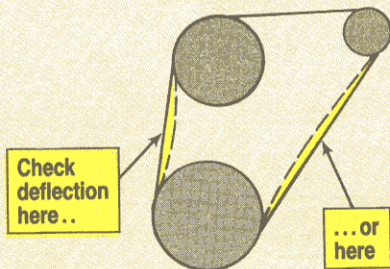
GOOD BELTMANSHIP IS A KEY TO YOUR VEHICLE'S PM!

Belts on your equipment need special care. You can't just install them and forget them.

When properly adjusted, belts feel alive and springy. Without enough tension, they feel dead. With too much tension, they feel like a wound up guitar string that's ready to pop!

Check a new belt at the end of the first hour's run. If you don't have a gage to measure belt tension, use the hand method.

Push down hard on the belt with your thumb halfway between the pulleys.



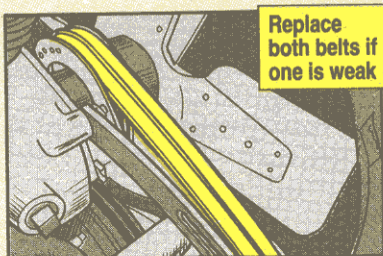
You ought to get about 1/2-in deflection for each 10 inches of span length. Adjust the tension if needed.

Check tension again after 10 hours running time. Then check and adjust belt tension every 250 hours.



Belt Wear

If your equipment uses two or more identical belts to handle heavy loads, replace them as a set. If you try to replace one belt and not the others, you can run into BIG belt problems.



The old belt has stretched. You can't get it tight. The new belt gets the whole load... which tears up the new belt and burns the old one.

Crane Cable Needs Care, Too!



LISTEN TO HIM, SOLDIER. THOSE WIRE ROPES NEED ATTENTION JUST AS MUCH AS THE REST OF THAT CRANE!

Crane cables have a hard life. They're exposed to the weather, and often don't get any PM. Then when you need them, they can let you down.

Cleaning

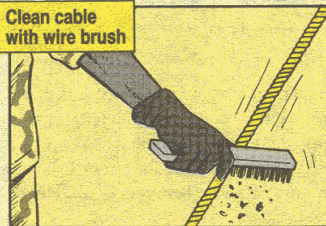
A good cleaning goes a long way in making wire rope last.

(Always use leather gloves when you handle wire rope.)

Unreel the cable and lay it out straight. Use a wire brush—like the

one in the No. 1 Common shop set—to get off old lube and dirt.

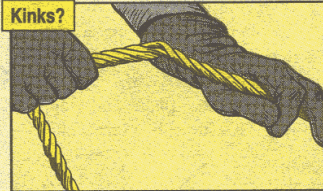
Clean cable with wire brush



Crane Cable Needs Care, Too!

While you're cleaning, look for broken strands, kinks and other damage.

Kinks?



Replace the cable if you find any kinks or frayed, worn or corroded areas. If individual wires in the strands are broken, see if the rope is safe to use following Para 1-14b(2)(b) of TM 5-725, Rigging.

Broken strands? Replace cable



Lubing

Wire rope cable needs lubing to protect it from rust, so lube it according to the LO for your gear. If the LO doesn't cover it, here's what you do:

- When the cable is exposed to the weather, coat it with wire rope grease, NSN 9150-00-530-6814.

- When the cable is not exposed to the weather, use 85W-140 gear oil, NSN 9150-01-035-5395. Never use used oil. It contains acid that'll weaken the rope fast.

- In dry, dusty areas, rope doesn't need oiling. Fact is, grease or oil will collect dust and grit that'll chew up the cable.

FOR MORE INFORMATION ON WIRE ROPE CARE SEE PARA 1-12 OF TM 5-725, RIGGING.



M353 Hand Brake Lever NSN

Use NSN 3040-00-330-3262 to get the lever for the hand brake on the M353 trailer. The NSN for Item 1 in Fig 8 of TM 9-2330-247-14&P is wrong.

PM Prescription

HERE'RE SOME PM CHECKS TO KEEP YOUR NUCLEAR DENSITY AND MOISTURE SOIL TESTER FIT AS A FIDDLE!

DUST AND SAND BUILD UP IN EVERY NOOK AND CRANNY, ESPECIALLY IN THE TESTER'S CAPTIVE SHUTTER. HERE'S HOW TO CLEAN IT.



✂ Set the tester on its side with the source in the safe position. Stand behind the tester and peek over the bottom of the tester to see the clean-out plate. Remove the quarter-turn fasteners holding the clean-out plate in position.

✂ Remove the plate and captive shutter. The shutter is attached to the

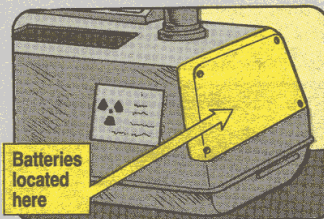


plate. Do not touch the brass ring around the hole in the plate to prevent contamination.

✂ Clean the shutter and plate thoroughly. Stand behind the tester and use toothbrush, NSN 8530-00-290-2921, to clean out the shutter chamber. Do not extend the source to clean the end of the rod. LEAVE IT ALONE!

✂ Spray the shutter, shutter chamber and clean-out plate with lubricant, NSN 9150-00-163-9036. Let it dry 4 hours before you put the shutter and clean-out plate back in place.

Ni-Cad Battery Tips



Keep the battery pack out of the tester when it's not being used. If left in, the batteries will leak and corrode the inside.

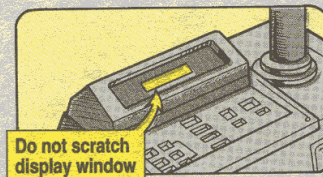
Store the battery pack in the storage case. There's a separate compartment for it.

Always use only nickel-cadmium batteries, NSN 6140-00-497-0490.

Keep Tester Clean

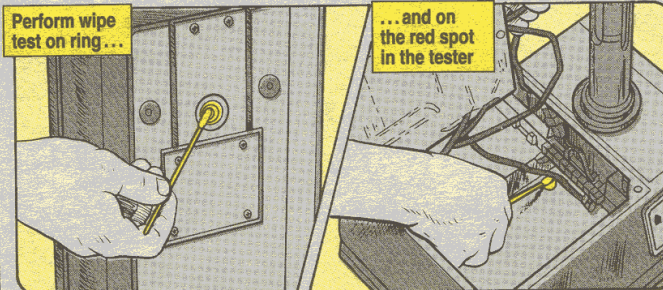
Wash the tester and case with a mild detergent and water. Remove asphalt and stubborn spots with P-D-680 dry cleaning solvent.

Make sure you do not scratch the display window with abrasive cleaners. It's hard to see through scratches.



Semiannual Testing

Perform the radiation leak wipe test spelled out in Para 4-6.3 of TM 5-6635-386-12&P every six months. If you miss a test, you can't use the tester.

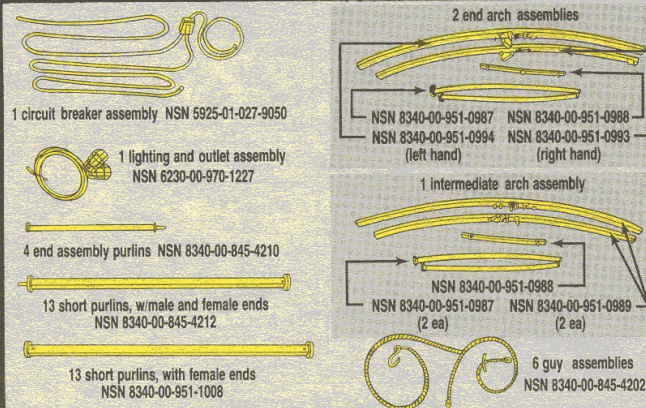


Component Breakout

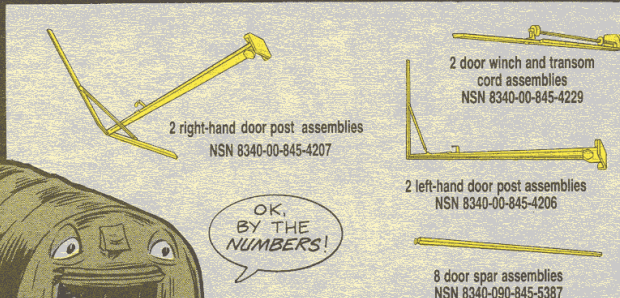
Keeping track of the parts of your maintenance tent, NSN 8340-00-951-6419, can be a real pain. To begin with, the NSN for the tent is only used for identification—you can't order a complete tent with it.

If you need to order a complete tent, use the NSNs for the three major sections—the end, door and intermediate frame sections. Or order just the parts you need.

Frame Section, end, NSN 8340-00-951-6420

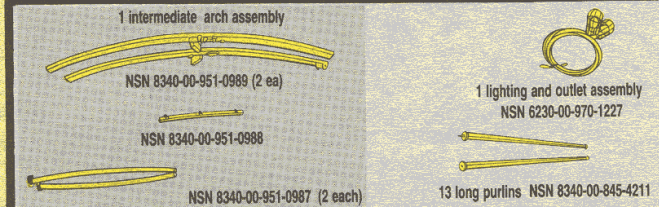


Frame Section, door, NSN 8340-00-951-6421



OK,
BY THE
NUMBERS!

Frame Section, Intermediate, NSN 8340-00-951-6422



If you need a standard 32-ft maintenance tent, you'll need one end section (which includes both ends), one door section (enough for two doors) and three 8-ft intermediate sections.

For longer tents, order one intermediate section for each extra 8-ft length. Generally, tents should not be longer than 64 feet.

You'll need these items, too:

Item	NSN	Quantity
Tent section, end	8340-00-951-6424	2
Tent section, intermediate	8340-00-951-6425	1 for each intermediate section
Pin, steel, 12-in long	8340-00-823-7451	24
Tent liner, end "A"	8340-00-986-0024	1
Tent liner, end "B"	8340-00-978-9627	1
Tent liner, intermediate	8340-00-951-6426	1 for each intermediate section
Pipe, aluminum, liner support, 43-in long	4710-00-542-2903 (Supplied by the foot)	18 (9 for each end)
Pipe, aluminum, liner support, 91-in long	4710-00-542-2903 (Supplied by the foot)	9 for each intermediate section

You may also need the ground anchor kit, NSN 9340-00-951-6423. This kit has 50 ground anchors, two driving heads and two handles. You provide the maul or sledge-hammer.

TM 10-8340-207-14 tells you how much rope's needed. Read through the TM and jot down the lengths you'll need. Then add about a third more before ordering. When you order the rope, NSN 4020-00-536-3476, be sure to specify the length. Otherwise, you may get a 2,250-ft roll.

Never order an entire tent section to replace one part. If you can't find the item you need here, it'll be listed in the TM.



M870 Brake MWO Update

If your M870 low-bed semitrailer has had MWO 5-2330-360-50-1 applied, check it before you use it. That MWO added spring brake chambers to the forward two axles. However, if the air lines to the rear axle brake chambers are misrouted, the lines can be pulled off and the brake chambers damaged in cross-country operations. You'll find the check and repair info in TACOM Safety-of-Use Message 91-01, AMSTA-M 120100Z Jan 91.

UH-1/AH-1 Refueling Port Parts

Replace just the latch or housing, not the entire closed circuit receiver port, any time the latch or housing breaks on your Huey or Cobra. Get the latch for both with NSN 1560-01-070-5669. Get the Cobra housing with NSN 1680-01-242-7267 and the Huey's with NSN 1680-01-222-8827.

CUCV Glove Box NSN

The glove box is not shown in Fig 126 of TM 9-2320-289-20P. Order it with NSN 2510-01-166-1146.

Mud Flap Kit NSN

All 2½- and 5-ton tractor trucks need mud flaps. None have them. You can get a mud flap kit with NSN 2540-01-281-9855 that fits all these tractor trucks.

ROWPU Connection Cure

Some 600 GPH reverse osmosis water purification units (ROWPU) were fielded with a two-piece adapter to connect the nuclear and chemical filter to the ¾-in hose. But you can't connect both the inlet and outlet adapters to the filter at the same time. You need:

Item	Size	Qty	PN
Adapter	½ to ¾ inch	4	13228E3312-14
Adapter	¾ to 1½ inch	2	13228E3312-16

Order them on a DD Form 1348-6 by using CAGE 97403 and the part number from RIC A12.

MT250 Crane Filter Element

If you only need the air filter element, order it with NSN 2940-00-842-1878. NSN 2940-01-195-0541 gets the complete air filter assembly.

M39 Circuit Breaker NSN

The NSN has changed for the circuit breaker for the sending unit in the fuel tank of the M39-series 5-ton truck. Order a new circuit breaker with NSN 5925-00-026-4767. This is the same breaker as used on the M809- and M939-series trucks.

M870 Washer PN

CAGE 26697 PN MP5-0105-7 gets the oil seal assembly washer that's called out as Item 23, Fig 15 of TM 5-2330-360-14&P. The PN in the TM is wrong. Order the washer on DD Form 1348-6 using RIC AKZ.

M911 TM Correction

Item numbers for the air tanks shown as Items 3 and 4 in Fig 86 of TM 9-2320-270-20P are reversed. Item 3 should be PN 217321, which crosses to NSN 2530-00-377-8779. Item 4 should be PN 282194, which goes to NSN 2530-00-127-8684.

M1009 Lock Hub O-Ring

The O-ring on the M1009 CUCV's lock assembly has a nasty habit of leaking. A leaking seal makes your CUCV NMC. You can now replace just the O-ring. Get it with NSN 5330-01-331-7230.

Cobra Glue

Adhesive, NSN 8040-01-012-8749, has been taken out of supply. When TM 55-1520-236-23-1 calls for Item 15 on the Consumable Materials list, or TM 55-1520-234-23-1 calls for Item 7B, use adhesive, NSN 8040-01-163-3481.

M871, -A1 Lifting Eye Lock

The lock for the lifting eyes on these semitrailers is not listed in TM 9-2320-350-14&P. No NSN has been assigned, but you can order the lock on DD Form 1348-6, with CAGE 48217, part number 90-M and RIC S9C.

M911 Brake Knob NSN

NSN 5930-01-155-4163 gets a push/pull knob for the C-HET's pneumatic brake valve listed as Item 1, Fig 110 of TM 9-2320-270-20P. The knob is not shown as a separate item. NSN 5315-01-136-1617 gets the pin that holds the knob in place.

NSN Change for SUSV Slave Cable

NSN 6150-01-294-1375 gets the SUSV's slave cable and adapters. The NSN shown for Item 2, Page B-3 in TM 9-2350-272-10 (for the M973) and for Item 2, Page B-2 in TM 9-2350-285-10 (for the M973A1, M1067, M1065 and M1066) is wrong.

Aircraft T53 Engines

Preformed packing, NSN 5330-00-810-9659, Item 13 of Page 123 of TM 55-2840-247-23P, will no longer be supplied. Get an O-ring for the bleed actuator assembly for the T53-L-13, -703, and -701A engines with NSN 5330-00-020-0105.

Fuel Filter Cup NSN

NSN 2910-01-060-2482 gets the cup for under the filter element in the fuel filter on 2½- and 5-ton multifuel-powered trucks. Make a note until your TM is updated.

Water Can Cap NSN

Missing a cap for a 5-gal military water can, NSN 7240-00-089-3827? Order the cap assembly (which includes the lid and cap) with NSN 7240-00-089-7312. The NSN's listed on Page 5-3 of TM 10-7200-200-13.

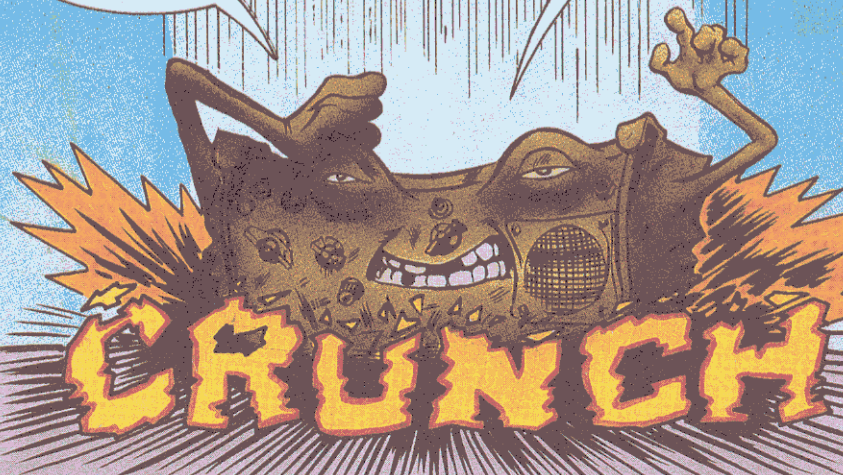
Distribution: To be distributed in accordance with DA Form 12-34-C-R for TB-33-Series

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

PACK and HAUL REPAIRABLE ITEMS CAREFULLY!

OHH! I
WAS SENT IN
FOR MINOR REPAIRS,
BUT NOW I NEED A
MAJOR OVERHAUL!

DON'T LET
POOR PACKING
AND ROUGH HANDLING
JACK UP YOUR
REPAIR BILLS!



CRUNCH