



**Roll-up of Articles
February 2022**

General and Special Topics





CCE: 2021 Year-in-Review

/ Published Feb. 1, 2022



Photo by [Staff Sgt. Dalton Smith](#)

Note: text spot-colored in blue is hyperlinked.

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most extreme conditions possible, from arctic winters to extreme desert heat. CCE also operates in salt water, mud, sand, snow, ice and destroyed land areas caused by natural disasters such as fires, tornadoes and hurricanes.

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To keep construction equipment mission-ready, do your vehicle's PMCS, exercise your equipment, and let your vehicle's engine run for at least 30 minutes a week.

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[Cranes and Dozers: Wire Rope Grease](#)

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[Be Prepared for Hot Weather: A List of Must-Read PS Articles](#)

[Maintaining It Means Using It](#)

[Maintenance Mgmt: The Cold Reality about PMCS](#)

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As we begin our eighth decade, *PS Magazine* will continue to serve the Warfighter in the field. If you have a comment or question, let us know by emailing us at:

usarmy.redstone.asc.mbx.psmag@army.mil

Always remember: PM never stops!



PS Offers Retro PM & Safety Posters

/ Published Feb. 1, 2022



PS Retro Poster

PS: The Preventive Maintenance Monthly was created in 1951 by legendary comic book artist, Will Eisner, to help Soldiers maintain their vehicles and equipment to the highest standards by having the latest and most accurate sustainment, supply and safety information.

PS started as a digest-style comic book, printed and distributed to military units around the globe. In 2019, it ceased producing a cartoon-illustrated magazine and became a completely online publication and readiness information portal.

While the new digital platform allows *PS* writers to disseminate important maintenance and supply information (such as NSN changes) to the field much more rapidly, as well as offers new content and downloadable materials, readers definitely miss the cartoons. Luckily, the *PS* staff has access to nearly 70 years of archival art, which it can repurpose to reinforce time-tested truths about preventive maintenance and safety.

The *PS* website recently started offering 11-in by 17-in retro posters that unit maintenance and supply leaders can print and hang in motor pool offices, maintenance bays, supply rooms and other common areas where Warfighters congregate.

To download the posters, point your web browser [HERE](#):

PS plans to develop new posters periodically, so check the *PS* website often to see if any new ones have been added.



I Own This: January 2022 Nominees

/ Published Feb. 4, 2022

PS Magazine's ***I Own This*** campaign is designed to recognize Warfighters of all services who exemplify the highest standards of care for their assigned vehicles and equipment and contribute in meaningful ways to their unit's overall maintenance and supply posture. In short, they live and breathe readiness.

This month, we had one (1) Warfighter nominated for this program: SGT Carrie L. Snodgrass, US Army.

SPOTLIGHT PROFILE



SGT Carrie L. Snodgrass

US Army/Active

Supply NCO

Sapper Training Company/Sapper Leader Course

Fort Leonard Wood, MO

Nominated by: Mr. Brent Fiegenbaum

How did you come to know/observe the nominee's actions? I work at the TACOM Weapons Shop. SGT Snodgrass came to Fort Leonard Wood a few years ago and has worked diligently at improving the quality of her unit's equipment and preparedness with our Weapons Shop.

Why does this individual deserve recognition? When she arrived at the unit, SGT Snodgrass came into our shop and introduced herself to us as a new supply NCO for the SAPPER training company and leader course. She began to ask questions like:

what to do if they have a weapon down, future repairs, missing parts, and so on. She has worked with us routinely over the last few years and has made our job easier maintaining her unit's equipment. Her efforts caring for her unit's assigned weapons, and other equipment, tells us that she takes pride in her unit and her work. It's always a pleasure to have SGT Snodgrass visit our Weapons Shop. We wish other unit supply NCOs took the same level of pride in their work as she has done over the past several years.

Additional Comments: When SGT Snodgrass brings her unit's equipment to our shop, she brings a positive-forward attitude to getting things corrected and back on track. She is valuable asset to the SAPPER training company and training course.

To learn more about nominating a Warfighter for this recognition, read the article [HERE](#).



Readiness: SecArmy Feb 2022 Message to the Force

/ Published Feb. 11, 2022



The Honorable Christine Wormuth visits Fort Bragg

Photo by [Spc. Jacob Ward](#)

Secretary of the Army, Christine E. Wormuth, recently shared her six top objectives with Soldiers and Department of the Army Civilians in a message dated Feb 8, 2022. These objectives expand on the Army's foundational priorities of people, readiness and modernization.

You can read the message [HERE](#), which includes a downloadable PDF version.



Publications: Are Paper TMs Still Available?

/ Published Feb. 15, 2022



Photo by [Capt. Christopher Sikich](#)

Dear Half-Mast,

We have multiple vehicles without a -10 TM available for the operators to perform PMCS. That means that a lot of equipment gets dispatched without maintenance or the knowledge of how to properly operate them. This has led to an inability to identify deadline faults that might damage the vehicle, injure the operator or both.

Is there any way to reorder paper TMs to replace the ones that are missing?

SFC D.T.

Dear Sergeant,

Don't worry. We have you covered.

You can order publications through the [AMC Media Distribution Division \(MDD\) Order Portal](#).

To get a hard copy of a TM, someone in the unit needs to have a publications account. See [AR 25-38](#) and especially [DA PAM 25-38](#) (section 5-5) for instructions on setting up an account. Keep in mind that printing some publications might be delayed due to funding limits.

The US Army Materiel Command (AMC) Logistics Data Analysis Center (LDAC) is the official website for Department of the Army technical and equipment publications. View or download publications from [LDAC's ETM/IETM Online website](#). If the publication is electronic media only (EMO), operators need to use suitable display devices to view them.

Half-Mast



Corrosion: New Documents Published

/ Published Feb. 25, 2022



Photo by [Charles Rosemond](#)

Corrosion is an ongoing battle. To ensure this menace never wins the day, two new corrosion policy and procedures publications are available.

The documents are AR 11-42, *Army Corrosion Prevention and Control Program* (Jan 22), and DA PAM 11-42, *Army Corrosion Prevention and Control Program Procedures* (Jan 22).

You can view both on the Army Publishing Directorate website. Click the links below.

[AR 11-42](#)

[DA PAM 11-42](#)



Tactical Vehicles: Don't Make Winter Driving a Chilling Experience

/ Published Feb. 28, 2022



Photo by [Scott Sturkol](#)

Operators, winter driving presents unique challenges. The bottom line is that you need to be prepared for these challenges.

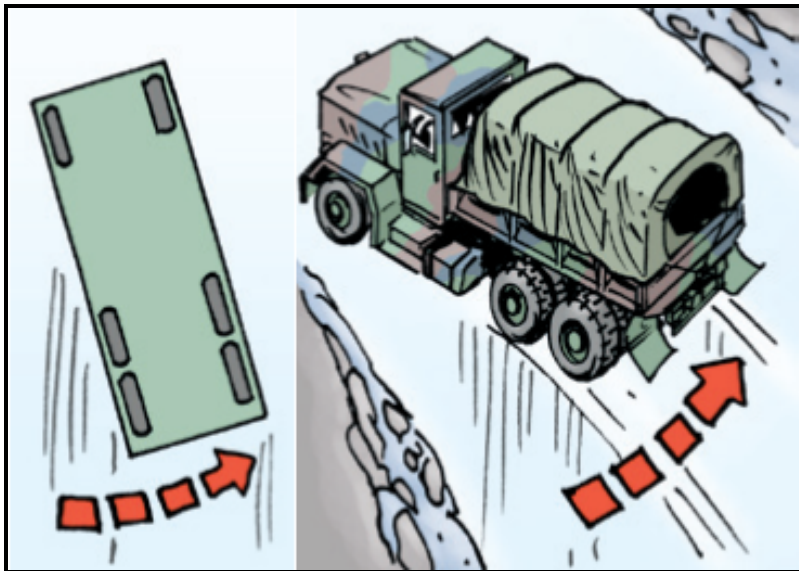
Use the guidance in the appropriate TM and these helpful tips to prevent problems down the road. **Caution:** Don't forget that using a cell phone while driving is a no-go!

Speed

Steep hills, sharp curves and ice or snow-covered roads can mean trouble! So what's your best defense? Adjust your speed to road conditions, allow yourself more time and be on the lookout for changing road conditions.

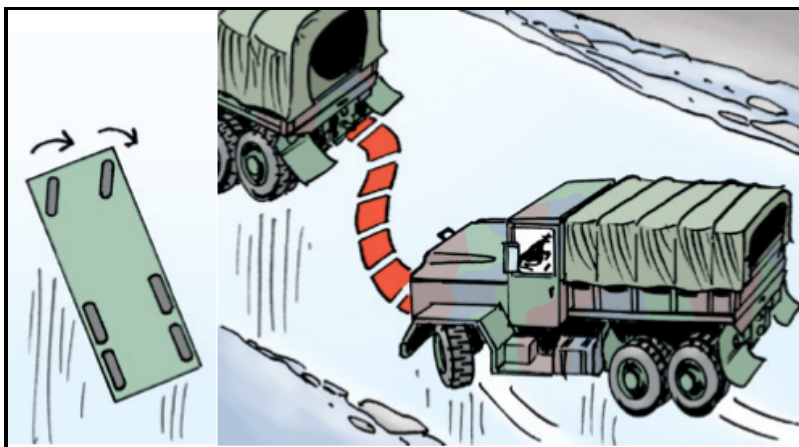
Skidding

What about skidding? Easy! Suppose that the rear of your truck is skidding to the right. What do you do?



Rear of vehicle skidding to the right

Remain calm and take your foot off the gas, then turn your steering wheel to the right, in the direction that your rear is skidding.



Turn steering wheel in direction your rear is skidding

Of course, if the truck is skidding to the left, then you'd do the opposite.

If driving a tractor trailer, steer away from the direction of the sliding trailer. Steer just enough to correct the skid and you'll be fine.

What about curves and downgrades? Slow down before going into a curve or downgrade. Engine drag helps too. Just ease off the throttle.

Keep your eyes on the road for stranded motorists and vehicles, as well as drifts of snow, mud and ice.

Even if the road ahead looks clean, don't be fooled. Slick, icy spots (black ice) form at the bottom of hills, on bridges, railroad crossings and in shaded areas in the winter.

Don't forget that bridges and overpasses freeze first! Cold air passes underneath them and freezes any moisture that's on them.

Hills

What should you know about hills? When climbing a hill, momentum and traction are your friends. Just remember...

- If momentum is too slow for wheel speed, the result is lost traction and your vehicle's tires will spin.
- If momentum is too fast for wheel speed, that also results in lost traction and the vehicle skids.
- If momentum and wheel speed are in tune, you'll have tire traction and good control.

When travelling uphill, the more momentum you have, the less traction you'll need to rely on.

It's also a good idea to let the vehicles ahead of you make it to the top of the hill first. Then you won't have to stop halfway up. And remember to keep your distance from other vehicles.

Try to get to the top of the hill in one uninterrupted run so that you've got enough momentum left to get your vehicle over the peak. This is especially helpful when pulling a trailer.



Use momentum to get over peak

Tires

Your tires are the only part of your vehicle gripping the surface of the road. So keep tires properly inflated and in good condition to improve traction.

Distribute loads evenly and place partial loads over the rear axle whenever possible. It'll help your vehicle's tires grip the road.

Avoid quick starts, sudden stops and sharp turns because they'll cause you to lose traction.

Tire Chains

Why use tire chains? Tire chains improve traction on ice and packed snow, but only if they are correctly installed.

It's important to use the right size and type of chain. Check your truck's operator manual to determine which tire chain is required.

Here are some common tire chain NSNs and in most cases, this info is found on the additional authorization list (AAL) in the vehicle's TM, in case your vehicle isn't listed.

Wheeled vehicle	Tire size	Chain assembly NSN 2540-
FMTV, MRAP, HIMARS	14.00x20	01-483-2930
M-ATV, MMPV	395x85R20	01-492-2989
HEMTT, PLS, MRAP RG-33	16.00Rx20	01-152-7813

M1070, M1070A1 HET	16.00Rx20	01-152-7813
M915 FOV, M916 FOV	11R22.5	01-453-0497
M915 FOV, M916 FOV	10.00-22 OR 11x24.5	01-396-1914
M939 FOV	11x20	00-933-9022

It's a great idea to look over TC 21-305-20, *Manual for the Wheeled Vehicle Operator* (Jan 16), for an explanation on how to install tire chains.

Although tire chains are designed to fit snugly, you'll want to tighten the chains by hand, instead of using tools. That prevents overtightening that can gouge tires.

If chains are still too loose after tightening by hand, use tire straps. By the way, some tire chain assemblies actually come with straps. Here's some tire strap info:

Size in inches	Stretch in inches	NSN 5340-
15	20-30	01-029-9084
21	26-42	01-231-6015
31	36-42	01-029-9085

Shifting

What's important about shifting gears in winter weather? Shifting during winter driving, especially downshifting, can affect traction. Try to make each shift as smooth as possible and be sure to follow the guidance in the appropriate TM because not all vehicles are the same.

Braking

What do you need to know about braking? Not all brake systems work alike. For example, if your vehicle has anti-lock brakes (ABS) you don't want to pump them. Instead, apply a firm pressure while using the brakes. If you've got air brakes, apply a light steady pressure.

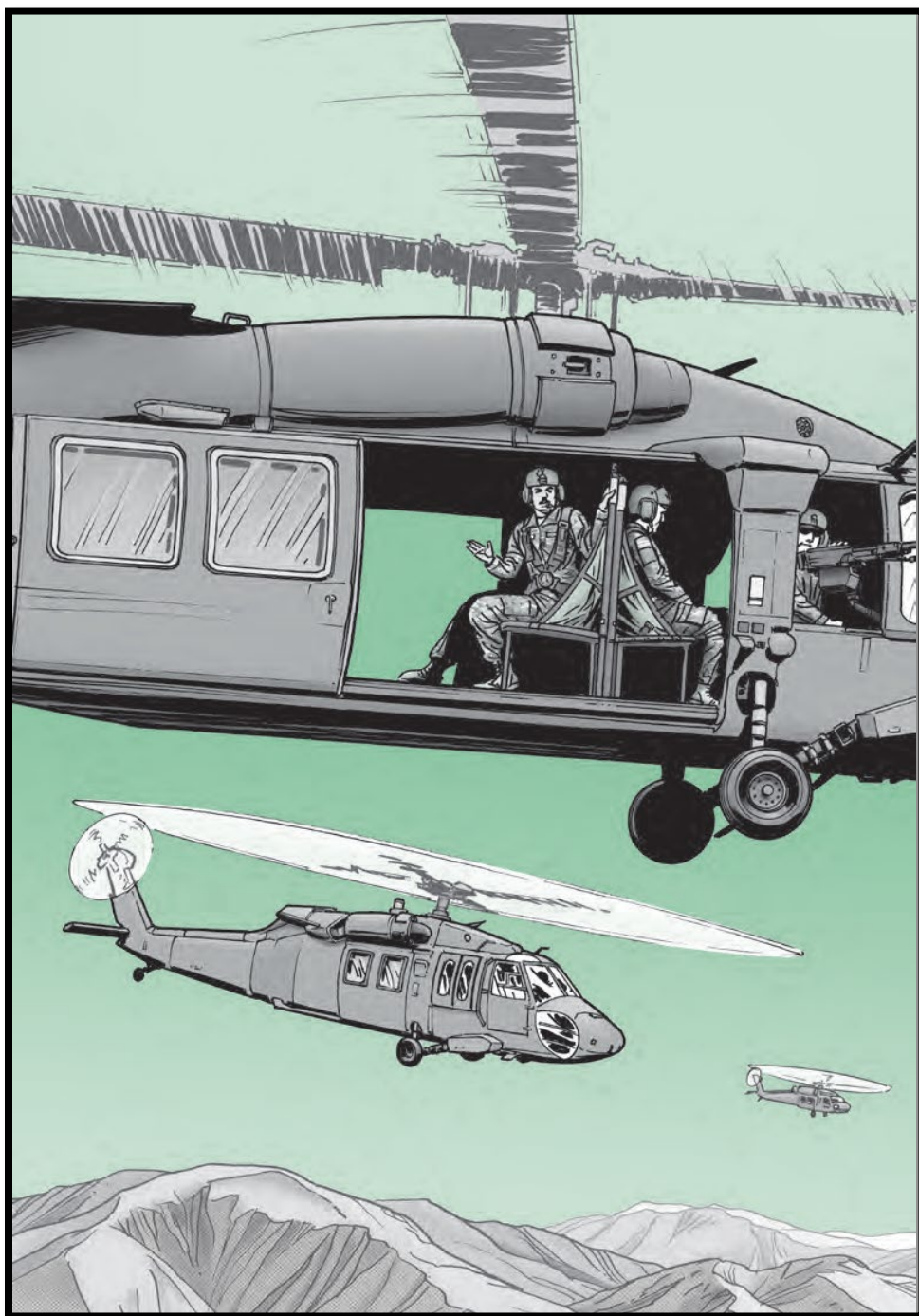
Don't use the engine brake in icy conditions because it takes twelve (12) times the normal distance to come to a stop.

Never slam on your brakes in winter driving conditions because the front wheels can lock and you'll lose control of steering.

The [US Army Combat Readiness Center](#) has videos, lessons learned and other helpful info for driving tactical vehicles. You'll also want to visit their [driver's training toolbox](#).

Related Articles: [HMMWV: Preparing for Winter Driving](#)

Aviation





All Aircraft: Update on Proper Shipping

/ Published Feb. 3, 2022



Photo by [Sgt. Andrew Valles](#)

Back in Jan 2020, in “[Aircraft: Proper Shipping Fights Corrosion and Saves Money](#),” we encouraged units returning items for depot level repair (DLR) to follow proper packing guidelines in order to protect the equipment, save money and fight corrosion. Here’s a bit more information to achieve these important outcomes.

Follow Regulations for Packaging

Remember to refer to the military packaging info in AR 700-37, *Packaging of Army Materiel* (Mar 17). Follow the guidelines for packaging and shipment of Army material and components detailed in AR 700-15, *Packaging of Materiel* (Jul 20), and DA PAM 700-32, *Packaging of Army Materiel* (Nov 20). Also, be sure to use TM 38-8145-709 (Jan 20), which covers Care of Supplies in Storage (COSIS), along with any component TM.

The Army Sustainment Command (ASC) Packaging, Storage, and Containerization

Center (PSCC) is the Army's go-to resource for packaging. They provide technical and specialized staff assistance in the fields of packaging, storage, hazardous materials, shelf-life management, automatic identification technology, distribution facilities modernization, international and domestic standardization and packaging application testing. In terms of packaging, they offer links to a Quick Guide on packaging and a section of Frequently Asked Questions [HERE](#).

Also, PSCC offers an instructional video series on the COSIS, such as Care of Long Life Reusable Containers (LLRCs), online. You can find links to the videos on PSCC's website.

Additionally, units must properly complete the DA Form 2410, *Component Removal/Repair/Install/Gain/Loss Record*, per DA PAM 738-751 (Feb 14), *Functional User's Manual for the Army Maintenance Management System– Aviation and update the Army Maintenance Management System-Aviation (TAMMS-A)*. This allows units to track their material status. If you have questions about the 2410, click [HERE](#).

Shipping parts, components and material loose and unprotected inside containers to repair facilities is a recipe for disaster. Your unit will be responsible for all damages and the increased repair costs. So your best bet is to package, preserve and ship material like the regulations say.



AH-64: Use Correct Multi-Meter for Circuit Check

/ Published Feb. 4, 2022



Photo by [Sgt. Sarah Sangster](#)

Mechanics,

When performing continuity checks on the S39 circuit continuity switch-box, use the Fluke® 27-II multimeter. Here's why.

TM 1-2840-248-23&P (Oct 19) has a caution concerning the S39 that says not to exceed 1.5 volts direct current (VDC) because going beyond that can damage the digital electronic control unit (DECU) and the enhanced digital engine control unit (EDECU).

However, in aviation maintenance action message (AMAM) H-64-20-AMAM-03, the voltage warning for the S39 connector check was raised to 10.0 VDC.

Here's the rub. The current Fluke® 1587 multimeter doesn't have settings to the

voltage at or below the 1.5 VDC. Although the DECU/EDECU can handle up to 10.0 VDC, exceeding the 1.5 VDC for continuity checks can energize some internal DECU/EDECU components and cause false readings while performing the S39 circuit check.

Based on this information and to maintain the correct voltage, it's better to use the Fluke® 27-II multimeter, NSN 6625-01-581-4058, because it maintains less than 1.5 VDC to perform the S39 circuit check with the most accuracy. You can find the multimeter in the aircraft maintenance hydraulic repairer tool kit (HYTK).



Aviation: Updated Calibration and Repair TB Published

/ Published Feb. 8, 2022

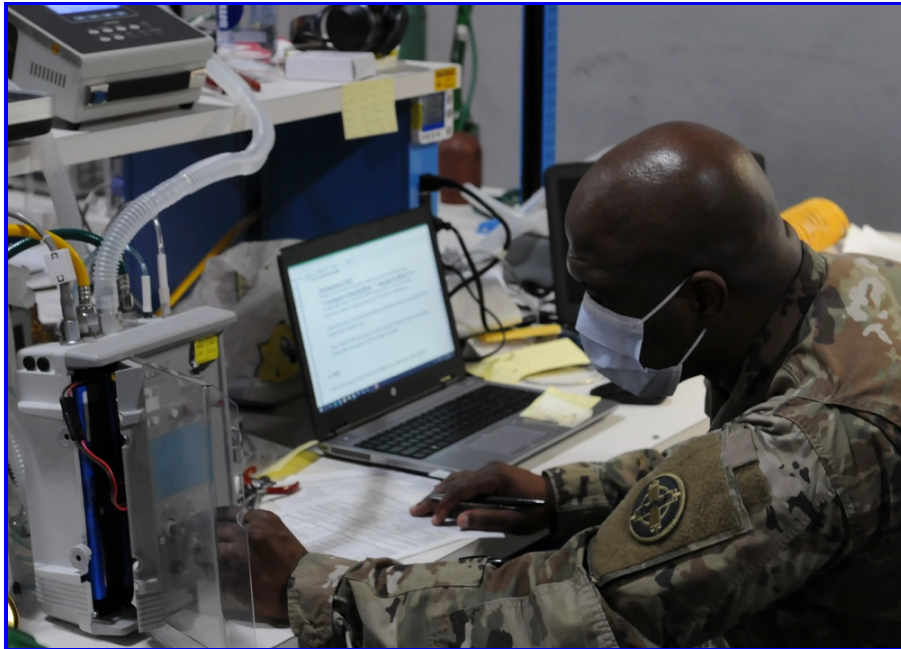


Photo by [Spc. Jakheem Folks](#)

Make a note that TB 43-180, *Calibration and Repair Requirements for the Maintenance of Army Material* (Feb 22), has been updated. In fact, it's updated monthly, so be sure to access the [Logistics Data Analysis Center \(LDAC\) electronic technical manuals/interactive electronic technical manuals \(ETMs/IETMs\).portal](#) often.

Get a copy of the 1 Feb 2022 version by clicking on the link below (you'll need your CAC to access):

[TB 43-180](#)



CH-47F: Chinook F-Model Training Info

/ Published Feb. 25, 2022



Photo by [Scott Sturkol](#)

The Chinook helicopter has changed a lot over the decades. The F-model is the newest aircraft and getting familiar with it comes with use and training.

On the Chinook Extranet website, there are some training courses to get you started on knowing more about your F-model aircraft.

Check out the Chinook Extranet at:

<https://extranet.chinook.peoavn.army.mil/>

The site is CAC-enabled, so you'll need to request access and make sure you use a .mil address when requesting access. When you enter the site, click on **Helicopter Training Courses** on the right side under Cargo Links. Then you'll see the following

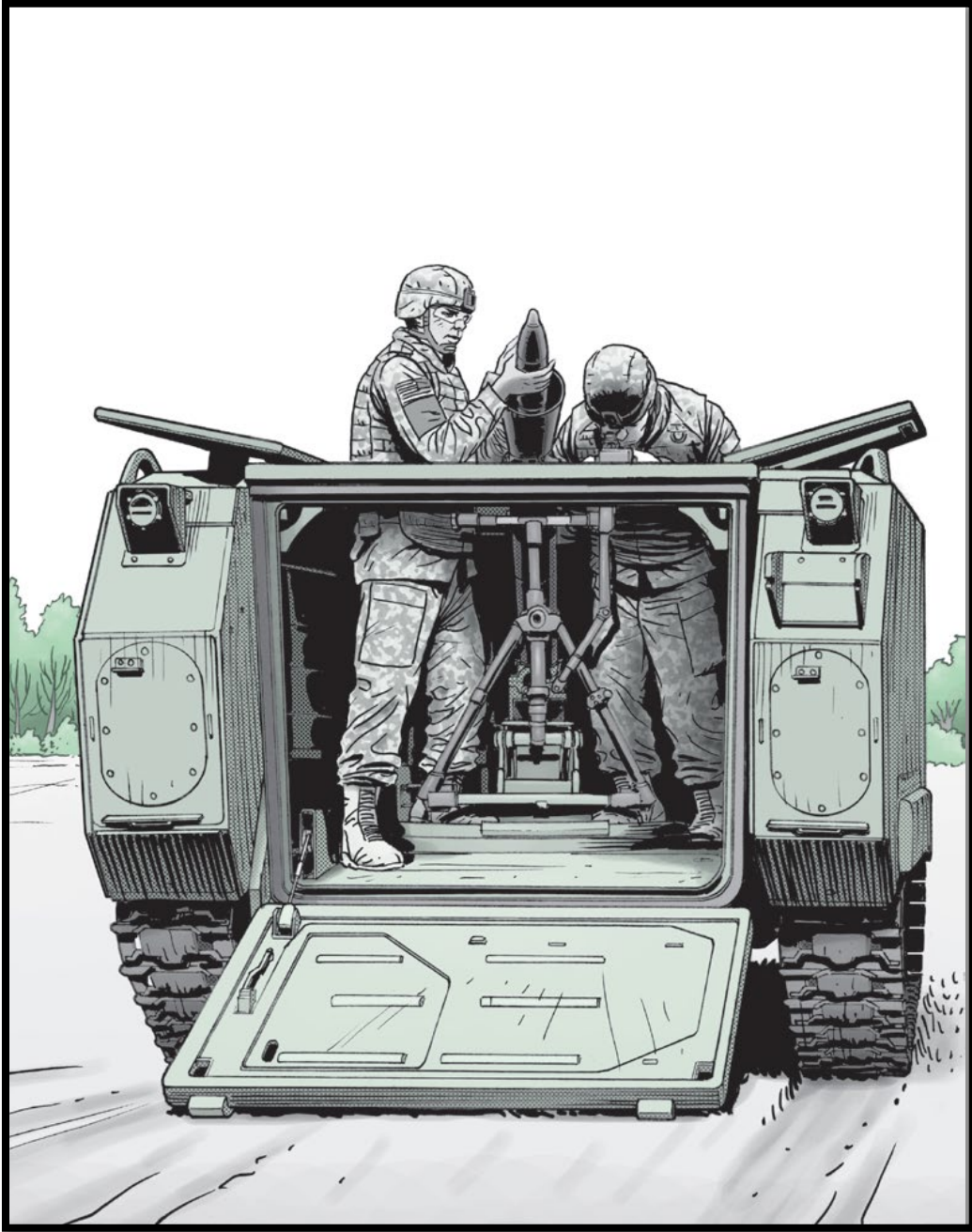
list of F-model cargo helicopter training courses.

- CH-47F Flight Control Rigging Training
- CH-47F Cargo Helicopter Familiarization Course
- CH-47F Software Loading Training
- Voltage Standing Wave Ratio (VSWR) Testing Training
- CH-47F Chinook Platform Heath Environment (CPHE) Training

Make a note that MYI 8.4.6 Non-Rated Crew Member Course and CH-47F CAAS 9.2 to CAAS 9.2.2 Differences Pilot Course are obsolete.

Be sure to **always** refer to the appropriate TM or IETM for operation and maintenance procedures of your Chinook helicopter.

Combat Vehicles





Bradley FOV: Use Proper Tool to Operate Power Unit Access Door

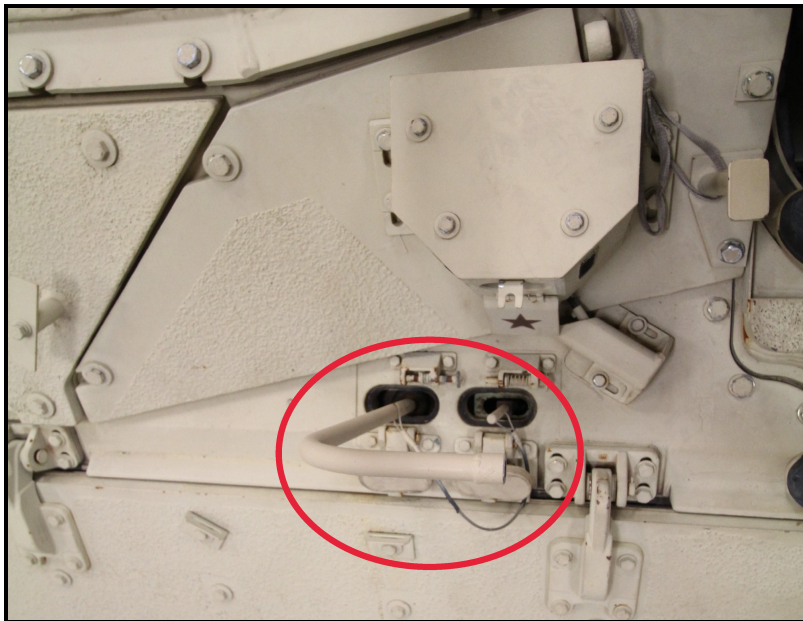
/ Published Feb. 4, 2022



Photo by [Cpl. Alisha Grezlik](#)

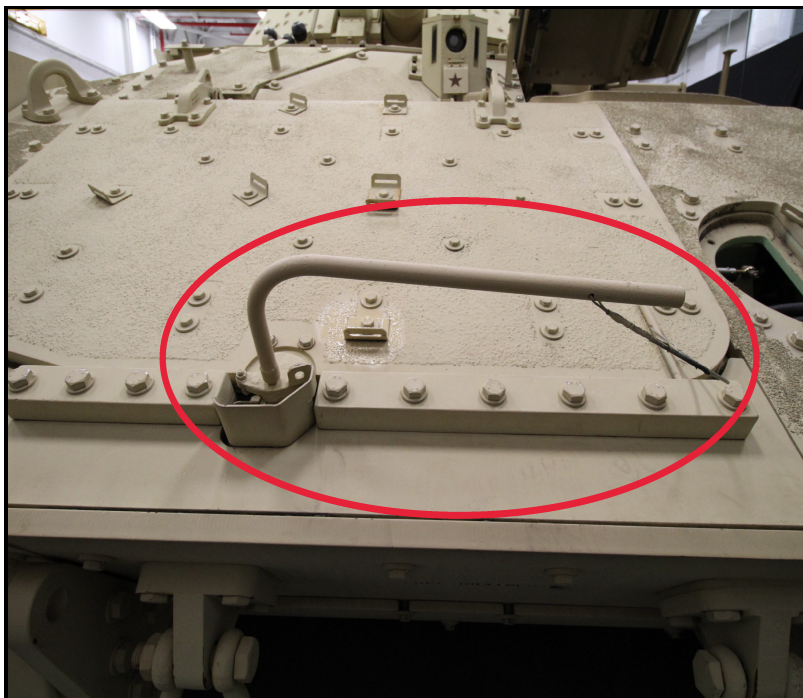
Crewmen and maintainers, just a friendly reminder that you should only use the correct tool to operate the Bradley FOV's power unit access door and its hydraulic pump.

The **correct tool** to operate the power unit access door and hydraulic pump is the **hydraulic pump handle**.



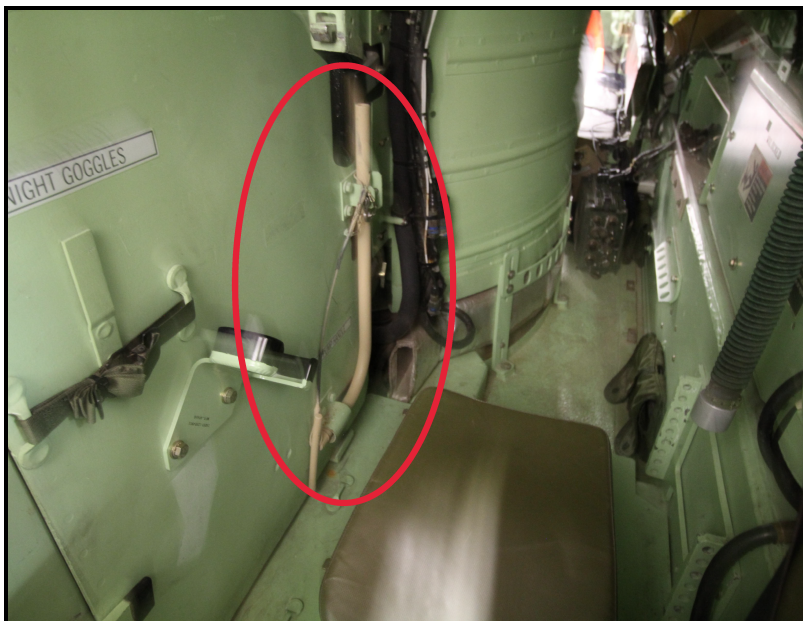
Operate power unit access door/hydraulic pump with correct tool

Using the incorrect tool can damage the hydraulic pump or latch post.



Correct tool for latch post is pump handle

The hydraulic pump handle is stored in the driver's bulkhead storage area.



Pump handle stored in driver's bulkhead storage area

Check out WP 0009 of TM 9-2350-438-10-1 (Nov 19) for information on properly opening and closing the power unit access door.



Ground Vehicles: Arctic Oil Replacement

/ Published Feb. 9, 2022



Photo by [Spc. Enrique Moya](#)

A new multi-functional, heavy-duty, arctic engine oil called *synthetic multi-purpose lubricant* (OE/HDO-SMPL-I) is now replacing the old OEA-30.

SMPL-I is formulated to improve low temperature starting and protect components when engine temperature heats up after vehicle startup. It also costs less than the old OEA-30.

All vehicles, with the exception of the two vehicles listed below, currently using OEA-30 should switch to OE/HDO-SMPL-I as soon as possible.

Two Vehicle Exceptions

- The M88A1/A2 recovery vehicle will continue to use the old OEA-30 in its transmission/final drive.
- The JLTV will continue to use a special 0W-30 fluid in its hydraulic/suspension system.

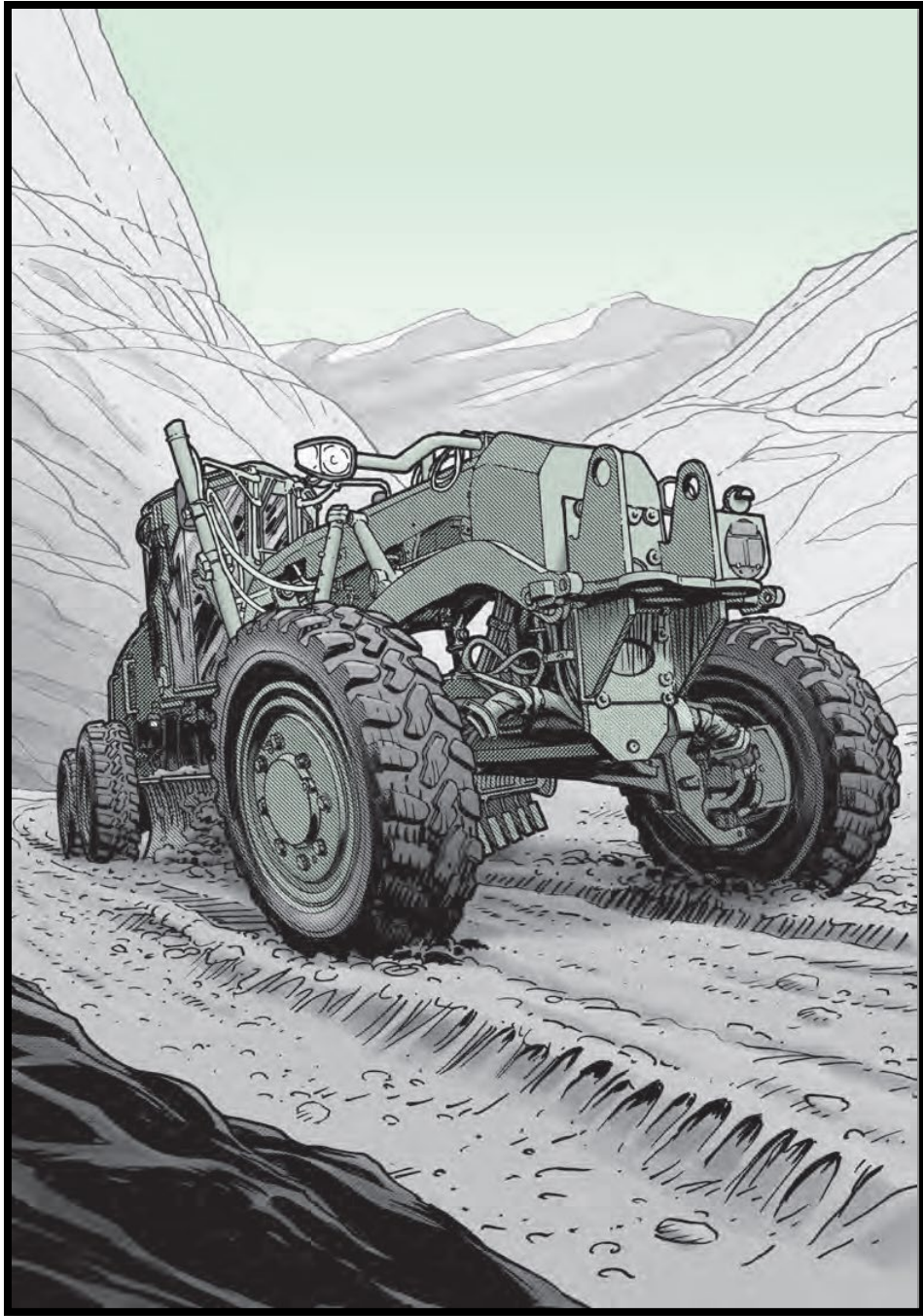
What's Available

These quantities of OE/HDO-SMPL-I oil are now available:

Quantity	NSN
1-qt	9150-01-648-5541
5-gal	9150-01-648-5549
55-gal	9150-01-648-5553

Any questions? Look at TACOM Maintenance Information Message (MIM) 21—33 for more info. Just grab your CAC and click [HERE](#).

Construction





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55-gal	9150-01-648-5553

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M160 Light Flail: Maintenance and Training Updates

/ Published Feb. 14, 2022



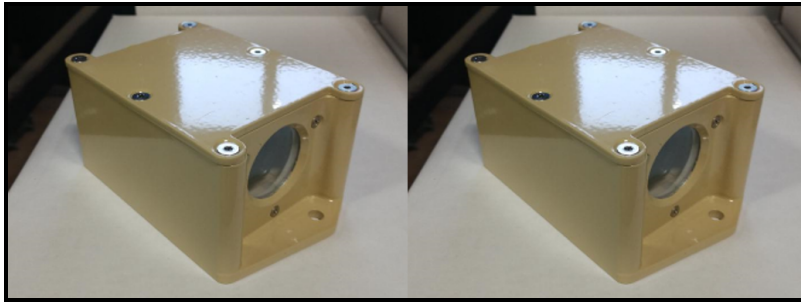
Photo by [Maj. Dan Marchik](#)

Operators and mechanics, upgrades to the M160 light flail robotic system continue to improve the vehicle's mission to detonate buried mines and scout ahead of HUSKY bomb-detecting vehicles. Here are recent maintenance and training updates you need to know about.

Front and Rear Camera Replacement

The light flail's front and rear cameras were replaced with a new-style camera. The front camera, NSN 6720-53-000-0665, and rear camera, NSN 6720-53-000-0664, continue to use the same NSNs as their predecessors. Make sure to replace the front camera's wiring harness with NSN 6150-53-000-0373, and the rear camera's wiring harness with NSN 6150-53-000-0294. Each harness includes new barrel connections and installation instructions.

Once the harness is installed, you should only replace it if there's a problem clearly traceable to the harness, rather than the camera.



Old front and rear cameras



New front and rear cameras

MBCU/Transceiver Coaxial Troubleshooting

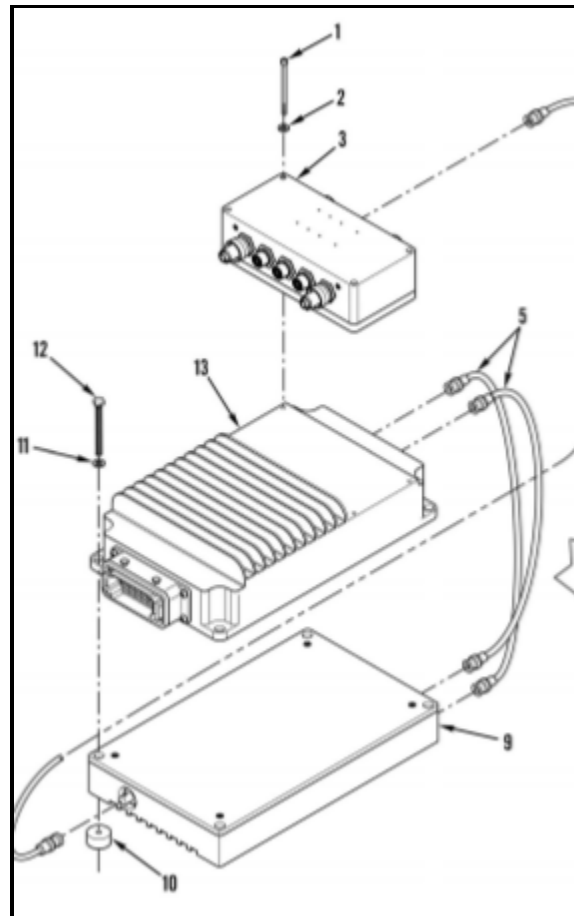
Operators, if you encounter a situation where you're able to control the flail but aren't receiving machine status data or are receiving status data but not able to control the robot, it's likely one of the two gold color coaxial cables that connect from the vehicle's mobile control unit (MBCU) transceiver is damaged. A faulty cable will cause the MBCU not to communicate with the operator control unit (OCU).

When this problem occurs, swap the coaxial cables and see if the reverse situation arises. That is, if you had control but no data, you'll now have data but no control. Or, if you had data but no control, you'll now have control but no data.

The cables are shown as Item 1 in Fig 2 of WP 0202, *MBCU Replacement*, on Page 0202-3 of TM 9-2360-392-23-3 (Jun 19).

For proper inspection procedures, follow the steps on Pages 0225-6 through 0225-8 of WP 0225, *Wiring Harness and Wiring Harness Connectors Inspection*.

Replace a faulty 10-in coaxial cable with NSN 5995-01-668-6980. The cable is shown as Item 5 of Fig 103 on Page 0104-2 in TM 9-2360-392-23P (Jun 19).



Replace faulty coaxial cable (Item 5)

Desktop Trainer

Sometimes units lack the time or land area to train with or put the light flail into operation.

Operators can now increase their operational experience by using an M160 desktop trainer, NSN 6910-01-654-9345. All tasks that operators need to review and train on are available on the desktop trainer.

The desktop trainer comes with a kit that includes a user guide. The guide explains the vehicle, how to operate it and includes two programs that demonstrate operator training and area clearance missions.

Each kit contains a Panasonic Toughbook™ laptop with built-in place touch screen features and a video game-style controller in place of the operator control unit (OCU).



M160 Desktop Trainer

Operators can sign out M160 desktop trainers from their respective Training Aid Support Center (TASC). Refer to that TASC's standard operating procedures for how long the trainer can be loaned and details on proper care and use.

Commo/Electronics





Communications: How to Get CCEv2 and MCN-AE Spares, Repair Parts

/ Published Feb. 16, 2022

Commo maintainers, when requesting Army-managed spares and repair parts for the communications systems AN/TYQ-167 (V)2, Commercial Coalition Equipment (CCEv2), and AN/TYQ-167(V)3, Modular Communications Node-Advanced Enclave (MCN-AE), you must take specific steps. The equipments' purpose, as well as instructions for obtaining spare or repair parts, are explained in the tables below.

Commercial Coalition Equipment version 2 (CCEv2)		
Nomenclature	NSN	LIN
AN/TYQ-167(V)2	5895-01-645-6998	C05115
The AN/TYQ-167 (V)2, Commercial Coalition Equipment (CCEv2) with radio bridging voice cross-banding (RBVC), delivers on-scene command post networking equipment capabilities. It provides either commercial or coalition mission data and RBVC technologies during defense support of civil authorities (DSCA) missions and contingency operations involving US coalition partners. The CCEv2 enables information exchanges of time-sensitive operational data to DOD, federal, state and local government first responders. The CCE primary components consist of 4 Harris X100M VHF/UHF radios, 10 ports, 2 Ethernets and one Cisco router. There is an Ethernet switch module, server (memory/computer) that will host VM(s), and type 1 encryption (KG-250X), which will be connected to the transmission systems. For each piece of equipment, the (V)2 and (V)3, excluding the portion of the CCE (V)2 known as the commercial radio case (CoRC), Product Director Net Enabler will administer the sustainment contract to		

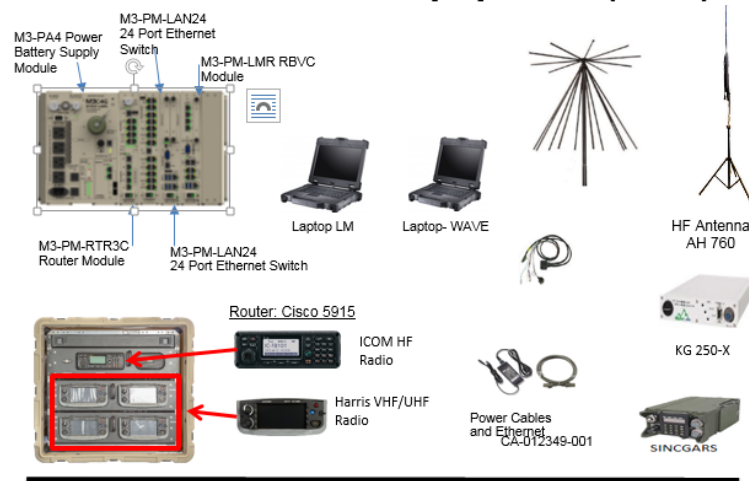
cover the 5-year period of performance (PoP). Force Modernization Division will provide coverage for the “CoRC” portion of the (V)2.

Field Soldiers can submit a funded requisition to their supporting supply support activity (SSA) when requesting Army-managed spares and repair parts using the Global Combat Support System-Army (GCSS-A). Units can start requisitioning parts in 3QFY22.

Questions? Email Martin at:

martin.a.powell13.civ@army.mil

Commercial Coalition Equipment (CCE)



Modular Communication Node–Advanced Enclave (MCN-AE)

Nomenclature	NSN	LIN
AN/TYQ-167(V)3	5895-01-643-5461	C05116

AN/TYQ-167(V)3 Modular Communications Node-Advanced Enclave (MCN-AE) is a suite of commercial items carried in three transit cases. The primary components are fitted into a 5-slot chassis, which consists of a power assembly and back panel switch, standard router with Ethernet switch module, standard 24-port Ethernet switch module, server (memory/ compute) module that will host VM(s), and type 1 encryption (KG-250X), which will be connected to the transmission systems. The secondary case will consist of a local area network (LAN) manager’s laptop computer.

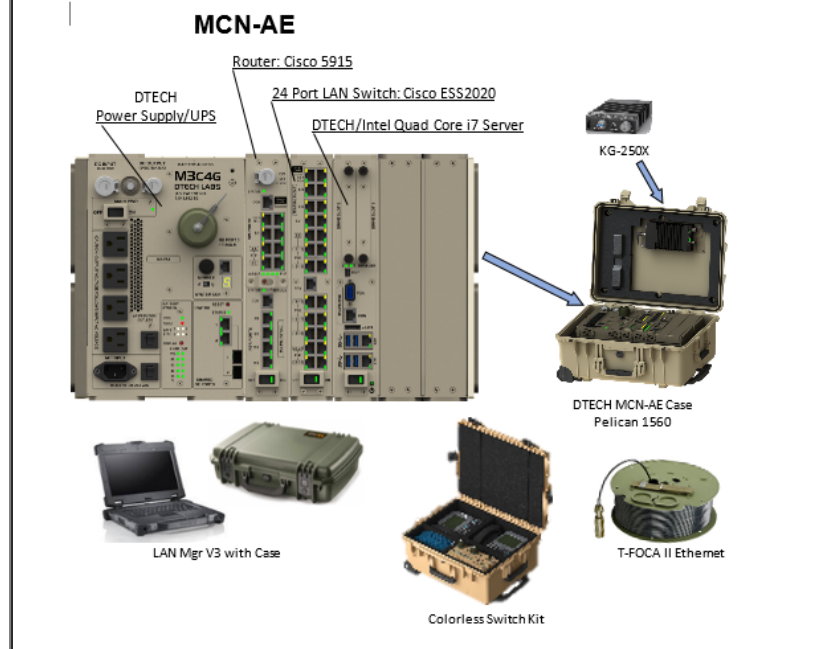
The MCN-AE(V)3 provides network connectivity with

commercial off-the shelf (COTS)-based network equipment (routers, data, switches, servers and security devices). It's cryptographically secured and can support numerous missions that require higher security classification. It provides 32 port end devices, including Voice over Internet Protocol (VoIP) phones, laptops and video teleconferencing equipment.

Field Soldiers can submit a funded requisition to their supporting supply support activity (SSA) when requesting Army-managed spares and repair parts by using the Global Combat Support System-Army (GCSS-A). Units can start requisitioning parts in 3QFY22.

Questions? Email Martin at:

martin.a.powell13.civ@army.mil





Batteries: New ABC Now Available

/ Published Feb. 24, 2022



Courtesy photo

Heads up! You can now order the latest generation battery charger. That's the ABC.

The Advanced Battery Charger (ABC), NSN 6130-01-660-3696, is a lightweight, rugged, portable battery-charging solution that provides state-of-the-art performance. It minimizes the time required to charge a wide range of common military batteries. This universal charger can also charge up to 16 batteries at the same time.

Through a variety of adapters, including the legacy Soldier portable charger (SPC) adapters, you can customize the ABC for specific charging requirements.

The charger's LCD display allows access to battery data to enable effective management of battery inventories. It has an upgrade port for future battery compatibilities and a removable lid for minimizing the required footprint.

The ABC is backwards-compatible with the majority of legacy PP-8498/U, SPC adapters.

Be aware that...

Adapter BTA-70100-1, NSN 6130-01-667-1471, must be ordered separately in order to charge the following batteries:

- BB-2590,
- BB-390 and
- BB-2557.

Adapter BTA-70100-2, NSN 6130-01-667-1500, must be ordered separately in order to charge these batteries:

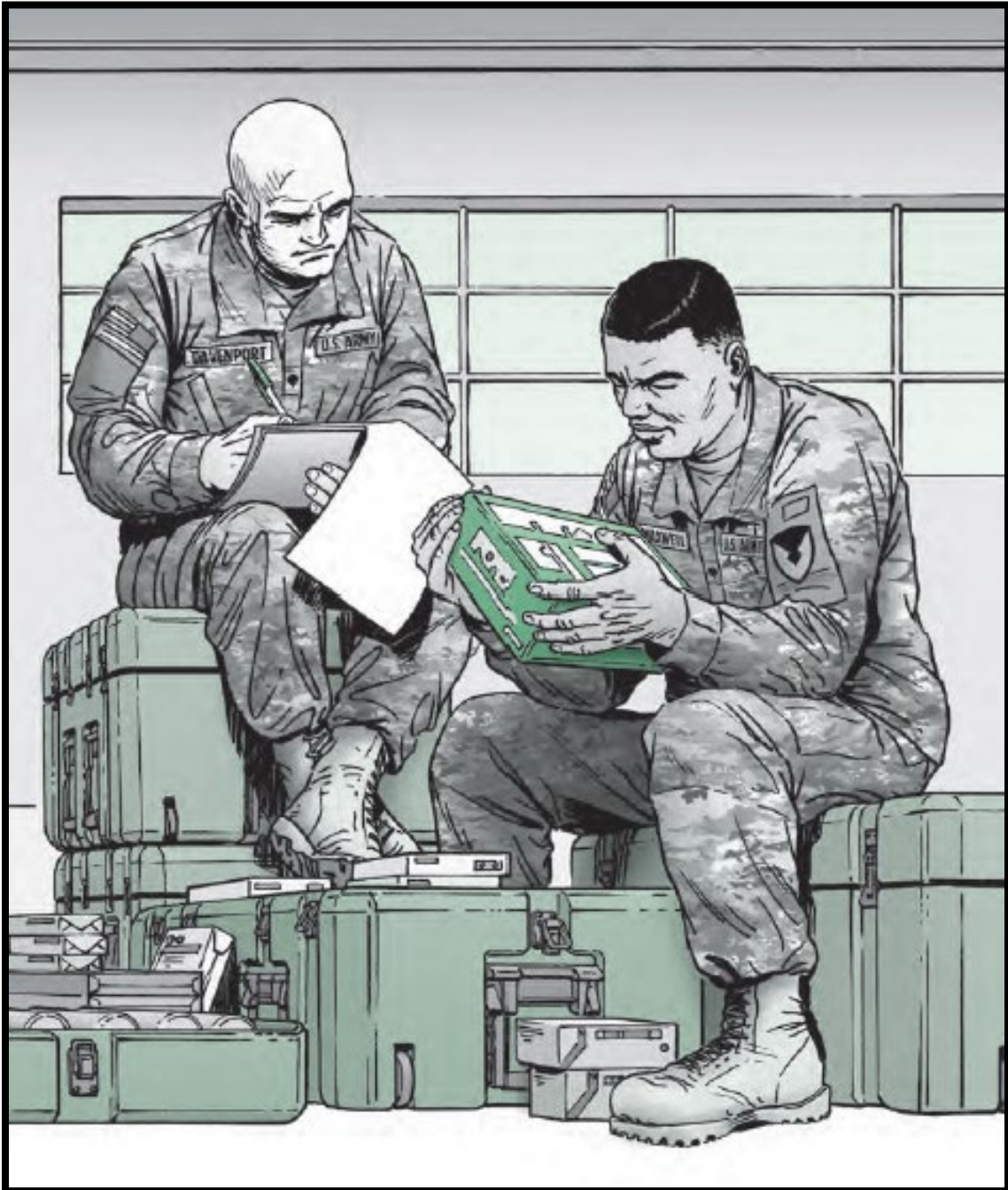
- AN/PRC-148 radio battery,
- AN/PRC-152 radio battery,
- D Size NiMH batteries and
- AA Size NiMH batteries.

Note: The ABC isn't a replacement for the SPC, NSN 6130-01495-2839, nor does the SPC have obsolescence issues.

Questions? Email:

usarmy.apg.cecom.mbx.ilsc-pe-pscoe-support@army.mil

Logistics Management





Publications: Are Paper TMs Still Available?

/ Published Feb. 15, 2022



Photo by [Capt. Christopher Sikich](#)

Dear Half-Mast,

We have multiple vehicles without a -10 TM available for the operators to perform PMCS. That means that a lot of equipment gets dispatched without maintenance or the knowledge of how to properly operate them. This has led to an inability to identify deadline faults that might damage the vehicle, injure the operator or both.

Is there any way to reorder paper TMs to replace the ones that are missing?

SFC D.T.

Dear Sergeant,

Don't worry. We have you covered.

You can order publications through the [AMC Media Distribution Division \(MDD\) Order Portal](#).

To get a hard copy of a TM, someone in the unit needs to have a publications account. See [AR 25-38](#) and especially [DA PAM 25-38](#) (section 5-5) for instructions on setting up an account. Keep in mind that printing some publications might be delayed due to funding limits.

The US Army Materiel Command (AMC) Logistics Data Analysis Center (LDAC) is the official website for Department of the Army technical and equipment publications. View or download publications from [LDAC's ETM/IETM Online website](#). If the publication is electronic media only (EMO), operators need to use suitable display devices to view them.

Half-Mast

Tactical Vehicles





HMMWV: PMCS Procedures Streamlined

/ Published Feb. 2, 2022



Photo by [Spc. John Russell](#)

Here's some good news, operators! According to TACOM [Maintenance Information Message \(MIM\) 22-011](#), PMCS procedures have been streamlined for your HMMWVs. This means you'll spend less time getting ready for missions because duplicate tasks have been eliminated.

In the link you'll find revised work packages (WPs) for up-armored and basic HMMWVs. There's also a complete list of models affected. Review the list of vehicles and download the revised WPs until the TMs are updated.

TM 9-2320-387-10 (Sep 12) for up-armored HMMWVs should be revised by 2nd QTR FY22. For basic HMMWVs, TM 9-2320-280-10 (Sep 13) should be revised by 3rd QTR FY22.



M1000 HET Semitrailer: Leave APU Valve Open

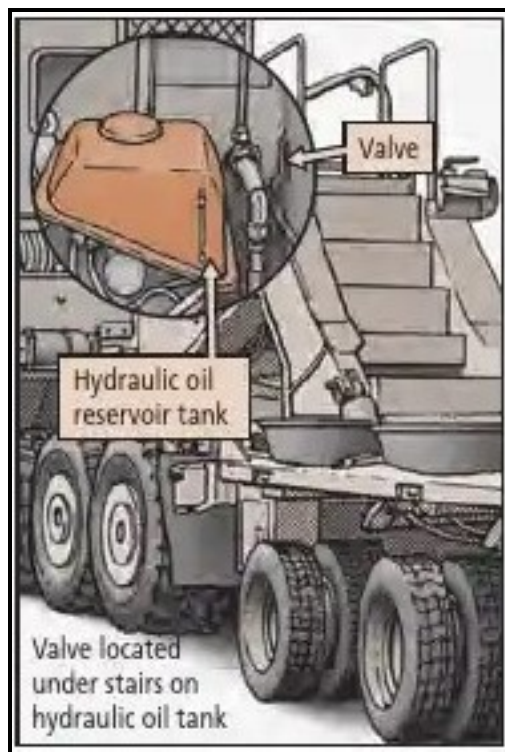
/ Published Feb. 4, 2022



Courtesy Photo [16th Sustainment Brigade](#)

This article initially appeared in PS 799 (Jun 19). Operators, there's a valve on the HET Semitrailer's APU hydraulic reservoir that **must** remain open when operating the APU.

If not, the hydraulic motor pump fails within a few seconds...completely freezing the trailer's hydraulic suspension, gooseneck and steering.

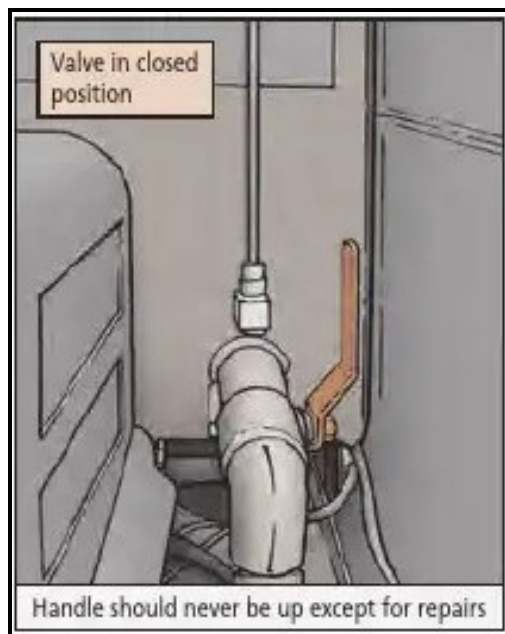


Valve located under stairs on hydraulic oil tank

TM 9-2330-381-13 (Oct 09, w/Ch 1, Apr 15) shows what the valve's open position looks like. It's pretty simple. The hydraulic tank also has a label next to the valve, indicating the open position (handle down) and closed position (handle up).

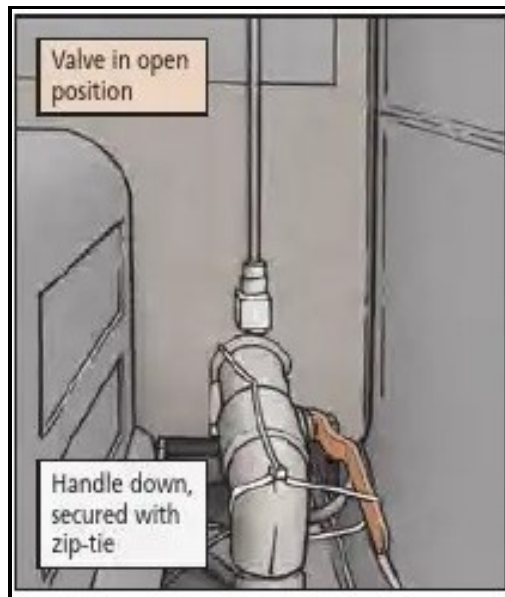
Step 2 in Item 6 of the semitrailer's Before PMCS procedures instructs operators to ensure the valve is in the open position. Other troubleshooting tips and guidance say the same thing. At no time are operators ever instructed to close the hydraulic oil valve!

The only time that valve should be closed is when maintenance personnel repair hydraulic system components. Once repairs are done, the maintainers' checklist requires them to re-open the valve. That's why the valve should always remain in the open (down) position.



Handle should never be up except for repairs

A good way to keep this valve in the open position is to secure it with a zip-tie. You don't want to prevent closing it altogether in case of emergency, such as a ruptured hydraulic line. But zip-tying it open will make it harder to accidentally close the valve. It'll also make operators think twice before closing it!



Handle down, secured with zip-tie

Replacement Pump

To order a new HMP for the M1000, use NSN 4320-15-010-3304, even though FEDLOG still shows the old pump available with NSN 4320-01-331-8742. Some units also have extras in supply, so your unit may be reluctant to change. But the new pump is now the only **authorized** replacement HMP for the M1000.



Ground Vehicles: Arctic Oil Replacement

/ Published Feb. 9, 2022



Photo by [Spc. Enrique Moya](#)

A new multi-functional, heavy-duty, arctic engine oil called *synthetic multi-purpose lubricant* (OE/HDO-SMPL-I) is now replacing the old OEA-30.

SMPL-I is formulated to improve low temperature starting and protect components when engine temperature heats up after vehicle startup. It also costs less than the old OEA-30.

All vehicles, with the exception of the two vehicles listed below, currently using OEA-30 should switch to OE/HDO-SMPL-I as soon as possible.

Two Vehicle Exceptions

- The M88A1/A2 recovery vehicle will continue to use the old OEA-30 in its transmission/final drive.
- The JLTV will continue to use a special 0W-30 fluid in its hydraulic/suspension system.

What’s Available

These quantities of OE/HDO-SMPL-I oil are now available:

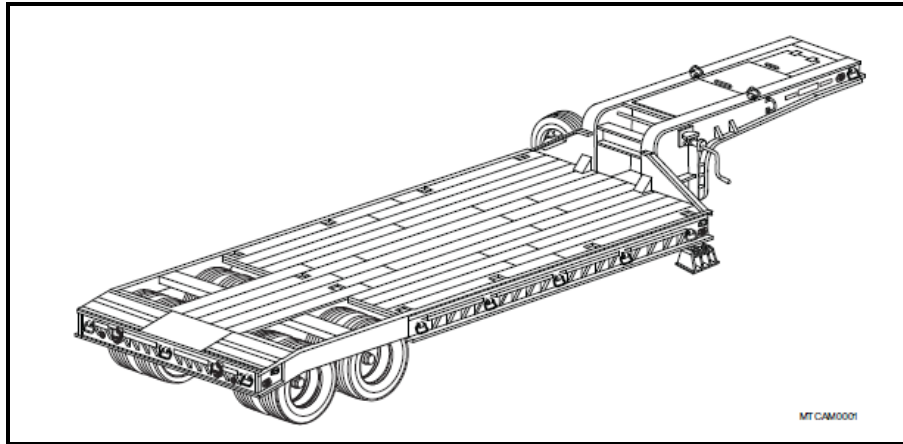
Quantity	NSN
1-qt	9150-01-648-5541
5-gal	9150-01-648-5549
55-gal	9150-01-648-5553

Any questions? Look at TACOM Maintenance Information Message (MIM) 21—33 for more info. Just grab your CAC and click [HERE](#).



M172A1 Semitrailer: Need the NSN for the Ramp Assembly?

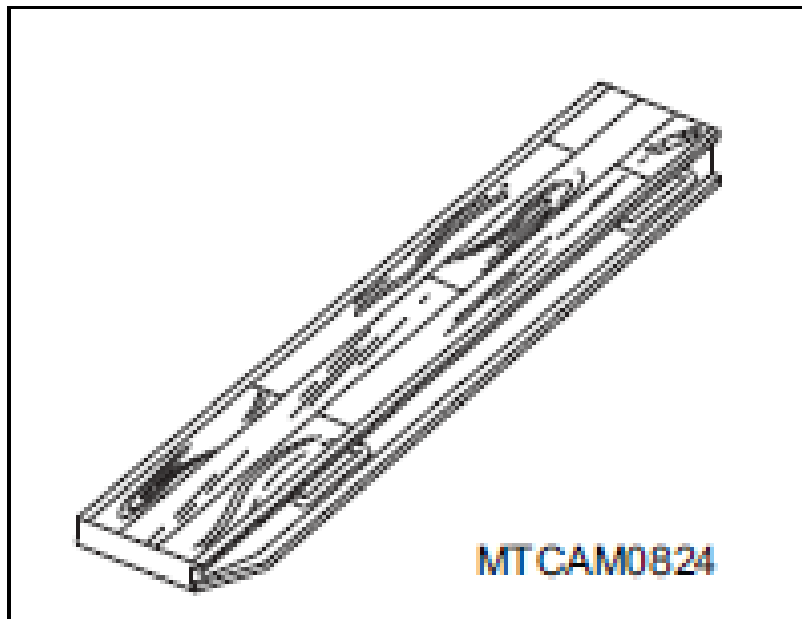
/ Published Feb. 17, 2022



Courtesy photo

Mechanics, are you looking for the NSN for a ramp assembly for your M172A1 semitrailer?

Order it with **NSN 3990-00-353-6354**, which is in the current version of TM 9-2330-211-13&P (Sep 15).



M172A1 Ramp assembly

The NSN in older TMs was replaced.

Speaking of “replaced,” always ensure you’re using the latest, most current TM. If you’re having challenges accessing a TM, ETM or IETM, then talk with your leadership about ways to make them available when they’re needed. Also ensure your unit publications clerk is keeping all publications current.

Related article: [Publications: Are Paper TMs Still Available?](#)



M105A2, M105A3 Trailers: Replacement Lunette and Landing Leg

/ Published Feb. 25, 2022



Courtesy photo

M105A2 Lunette

Maintenance leaders, you can get your commander's approval to replace the original lunette on your M105A2 trailers with a swivel lunette, NSN 2540-00-999-5584.

The swivel lunette makes it easier to line up the trailer with the truck's towing pintle, which is a bonus in rough terrain and bad weather. Just mount the new lunette into the original lunette's recess.

M105A3 Replacement landing leg

TACOM LCMC's [GPA 09-019](#) informed users to replace the original landing leg on the M105A3 trailers with new ones. Get the stronger and safer landing leg with NSN 2590-01-564-2057.



Tactical Vehicles: Don't Make Winter Driving a Chilling Experience

/ Published Feb. 28, 2022



Photo by [Scott Sturkol](#)

Operators, winter driving presents unique challenges. The bottom line is that you need to be prepared for these challenges.

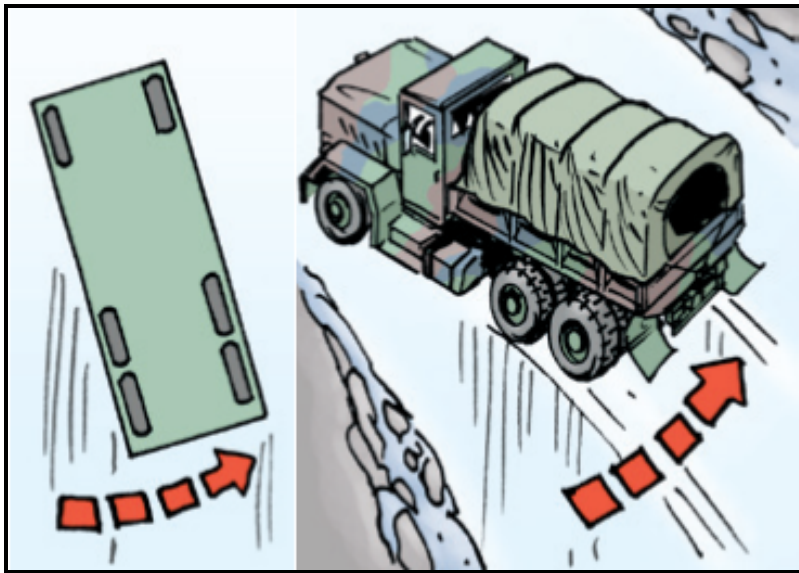
Use the guidance in the appropriate TM and these helpful tips to prevent problems down the road. **Caution:** Don't forget that using a cell phone while driving is a no-go!

Speed

Steep hills, sharp curves and ice or snow-covered roads can mean trouble! So what's your best defense? Adjust your speed to road conditions, allow yourself more time and be on the lookout for changing road conditions.

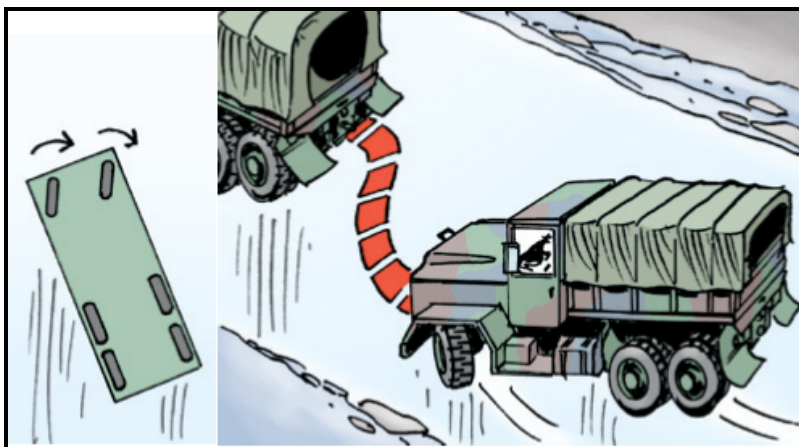
Skidding

What about skidding? Easy! Suppose that the rear of your truck is skidding to the right. What do you do?



Rear of vehicle skidding to the right

Remain calm and take your foot off the gas, then turn your steering wheel to the right, in the direction that your rear is skidding.



Turn steering wheel in direction your rear is skidding

Of course, if the truck is skidding to the left, then you'd do the opposite.

If driving a tractor trailer, steer away from the direction of the sliding trailer. Steer just enough to correct the skid and you'll be fine.

What about curves and downgrades? Slow down before going into a curve or downgrade. Engine drag helps too. Just ease off the throttle.

Keep your eyes on the road for stranded motorists and vehicles, as well as drifts of snow, mud and ice.

Even if the road ahead looks clean, don't be fooled. Slick, icy spots (black ice) form at the bottom of hills, on bridges, railroad crossings and in shaded areas in the winter.

Don't forget that bridges and overpasses freeze first! Cold air passes underneath them and freezes any moisture that's on them.

Hills

What should you know about hills? When climbing a hill, momentum and traction are your friends. Just remember...

- If momentum is too slow for wheel speed, the result is lost traction and your vehicle's tires will spin.
- If momentum is too fast for wheel speed, that also results in lost traction and the vehicle skids.
- If momentum and wheel speed are in tune, you'll have tire traction and good control.

When travelling uphill, the more momentum you have, the less traction you'll need to rely on.

It's also a good idea to let the vehicles ahead of you make it to the top of the hill first. Then you won't have to stop halfway up. And remember to keep your distance from other vehicles.

Try to get to the top of the hill in one uninterrupted run so that you've got enough momentum left to get your vehicle over the peak. This is especially helpful when pulling a trailer.



Use momentum to get over peak

Tires

Your tires are the only part of your vehicle gripping the surface of the road. So keep tires properly inflated and in good condition to improve traction.

Distribute loads evenly and place partial loads over the rear axle whenever possible. It'll help your vehicle's tires grip the road.

Avoid quick starts, sudden stops and sharp turns because they'll cause you to lose traction.

Tire Chains

Why use tire chains? Tire chains improve traction on ice and packed snow, but only if they are correctly installed.

It's important to use the right size and type of chain. Check your truck's operator manual to determine which tire chain is required.

Here are some common tire chain NSNs and in most cases, this info is found on the additional authorization list (AAL) in the vehicle's TM, in case your vehicle isn't listed.

Wheeled vehicle	Tire size	Chain assembly NSN 2540-
FMTV, MRAP, HIMARS	14.00x20	01-483-2930
M-ATV, MMPV	395x85R20	01-492-2989
HEMTT, PLS, MRAP RG-33	16.00Rx20	01-152-7813

M1070, M1070A1 HET	16.00Rx20	01-152-7813
M915 FOV, M916 FOV	11R22.5	01-453-0497
M915 FOV, M916 FOV	10.00-22 OR 11x24.5	01-396-1914
M939 FOV	11x20	00-933-9022

It's a great idea to look over TC 21-305-20, *Manual for the Wheeled Vehicle Operator* (Jan 16), for an explanation on how to install tire chains.

Although tire chains are designed to fit snugly, you'll want to tighten the chains by hand, instead of using tools. That prevents overtightening that can gouge tires.

If chains are still too loose after tightening by hand, use tire straps. By the way, some tire chain assemblies actually come with straps. Here's some tire strap info:

Size in inches	Stretch in inches	NSN 5340-
15	20-30	01-029-9084
21	26-42	01-231-6015
31	36-42	01-029-9085

Shifting

What's important about shifting gears in winter weather? Shifting during winter driving, especially downshifting, can affect traction. Try to make each shift as smooth as possible and be sure to follow the guidance in the appropriate TM because not all vehicles are the same.

Braking

What do you need to know about braking? Not all brake systems work alike. For example, if your vehicle has anti-lock brakes (ABS) you don't want to pump them. Instead, apply a firm pressure while using the brakes. If you've got air brakes, apply a light steady pressure.

Don't use the engine brake in icy conditions because it takes twelve (12) times the normal distance to come to a stop.

Never slam on your brakes in winter driving conditions because the front wheels can lock and you'll lose control of steering.

The [US Army Combat Readiness Center](#) has videos, lessons learned and other helpful info for driving tactical vehicles. You'll also want to visit their [driver's training toolbox](#).

Related Articles: [HMMWV: Preparing for Winter Driving](#)

