

# Tactical Vehicles... Play it Safe: Plan Cold Weather PMCS

A PROPERLY MAINTAINED AND SAFELY OPERATED ARMY VEHICLE IS YOUR FIRST LINE OF DEFENSE IN COLD WEATHER.



BUT ICY CONDITIONS ADD ANOTHER LAYER TO ALREADY TOUGH CONDITIONS.



SO IT'S EVEN MORE VITAL TO FOCUS ON PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS).

FIRST, BE SURE TO FOLLOW MAINTENANCE STANDARDS PUBLISHED IN THE PMCS TABLES OF THE -10 TECHNICAL MANUALS (TMs) FOR YOUR VEHICLE.

TM GUIDELINES HELP IDENTIFY POTENTIAL FAILURES OF VEHICLE SUBCOMPONENTS THAT CAN CAUSE A MAIN SYSTEM TO FAIL AND POTENTIALLY INJURE OR KILL PERSONNEL.

HERE ARE SOME MORE TIPS FOR SUCCESSFUL WINTER OPERATIONS...



- Perform PMCS before, during and after vehicle operations.
- Before heading out, check road conditions along the entire route and know the difference between conditions. Vehicle operations might start out as GREEN or AMBER but be RED farther along.

## Key to Road Conditions

- GREEN:** Road conditions normal.
- AMBER:** Military vehicles will not be driven on roads except for essential official business. Commander may be directing authority.
- RED:** Same as amber, except directing authority is officer with 0-5 rank or above. Government vehicles required to travel will use tire chains or other similar devices designed for heavy snow conditions.
- BLACK:** Roads generally impassible due to landslides, washouts, ice, etc. All government owned/leased/operated vehicles prohibited from movement. Commanders 0-6 or above may authorize emergency vehicles to operate after risk assessment. If snow or ice caused the road conditions, tire chains or similar are required.

- Keep headlights clear. Brush snow off all headlights and taillights, and use low beams so the vehicle is more visible to others.



- Check tires and tire chains and make sure your crew is trained to properly install them. Inspect tires regularly, and check tread depth and tire pressure before any trip.



- Make sure windshield wipers work and the rubber blades are not torn.



PS MORE

- Check the windshield washer fluid reservoir regularly and refill as necessary. Debris from winter roads can be especially gritty and grimy.



- Check that your vehicle's battery is fully charged and in good condition.



- Stay alert when driving. Don't count on other drivers to use headlights, slow down, or follow the rules of the road. Your extra alertness may help counter some risks that other drivers present.



- Take it slow! You need more time to stop on icy roads. The recommended following distance on ice-covered surfaces is at least three times greater than the usual interval between your vehicle and the one in front of you. In snowy conditions, the average stopping time for a normal car going 60 mph is 10.6 seconds and 533 ft. That's nearly two times the length of a football field! Remember, a heavier vehicle takes even longer to stop.



- Apply brakes early to allow enough stopping time.

If your vehicle has antilock brakes, simply press the pedal down and hold it.

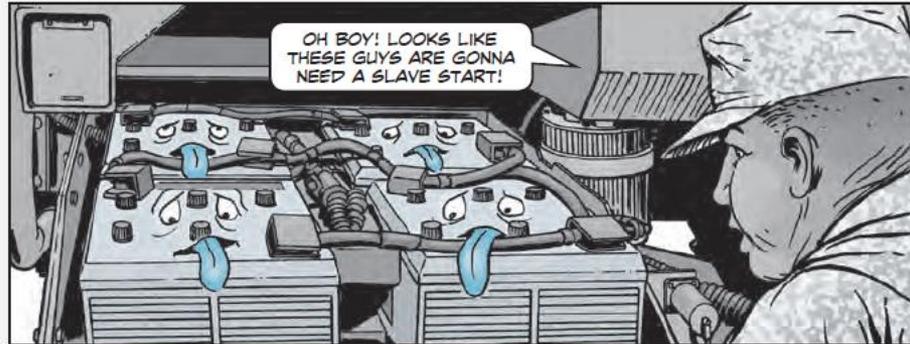
In vehicles without antilock brakes, gently pump the pedal to bring the vehicle to a stop without skidding.



For more information on PMCS and other vehicle-related topics, check out the USACRC Driver's Training Toolbox at: <https://safety.army.mil/drivertrainingtoolbox/>

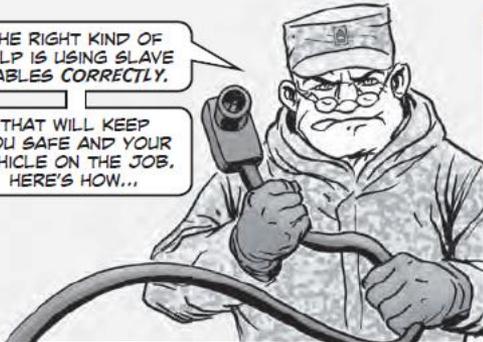
Wheeled Vehicles...

# SAFE SLAVE STARTING



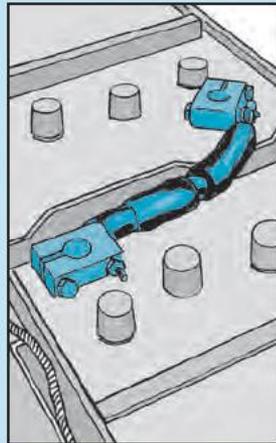
THE RIGHT KIND OF HELP IS USING SLAVE CABLES CORRECTLY.

THAT WILL KEEP YOU SAFE AND YOUR VEHICLE ON THE JOB. HERE'S HOW...

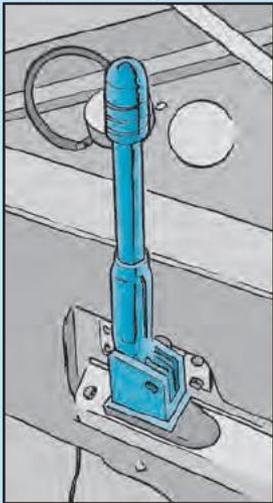


- Read the slave-starting steps in your vehicle's operating instructions.
- Never stand between vehicles being slaved and never position them nose-to-nose. That'll keep you and your vehicle safe in case one vehicle moves when it starts.
- Have your mechanic make sure the electrolyte in all battery cells is above the plates and is not frozen. Never slave frozen batteries. They can explode.

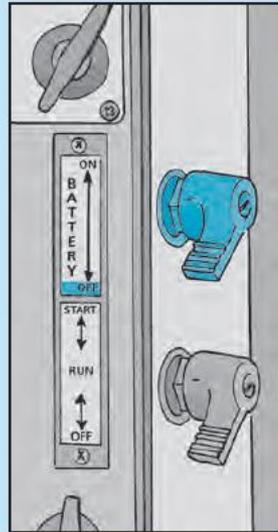
- Make sure all cables and terminals on the dead vehicle's batteries are tight and free of corrosion.



- Set the parking brakes on both vehicles. Shift both transmissions to neutral. Keep the live vehicle's engine running at fast idle.



- Make sure the dead vehicle's battery switch is OFF to prevent arcing when you connect the slave cable.



ONCE YOU'VE DONE ALL THE ABOVE, FOLLOW THE STEPS ON THE NEXT PAGE...

...AND MAKE SURE YOU DO 'EM IN ORDER!



1. Connect the slave cable to the dead vehicle's slave receptacle. The connection should be tight.
2. If either vehicle has the old two-prong slave receptacle, use the NATO adapter, NSN 5935-00-322-8959. Put the adapter on the receptacle and then connect the cable.
3. Push the slave cable connector into the slave receptacle on the live vehicle.
4. Wait at least 1 minute, but no more than 3, before trying to start the dead vehicle. This allows a trickle charge to warm up dead batteries before they get the full jolt.
5. If the vehicle has a clutch, step on it to reduce engine drag. Try to start the dead vehicle.
6. Keep the slave cable connected until the vehicle starts. Never unhook a slave cable while the starter is engaged, or you'll get arcing and burned-out cables and receptacles.



Use NATO slave adapter on old connectors

ONCE THE SLAVED VEHICLE HAS STARTED, PULL OFF THAT VEHICLE'S CABLE AND THEN REMOVE IT FROM THE OTHER ONE.



LET THE ENGINE RUN IN THE SLAVED VEHICLE AT FAST IDLE (1,000-1,200 RPM) FOR AT LEAST 20 MINUTES OR DRIVE THE VEHICLE ABOUT 5 MINUTES TO RECHARGE THE BATTERIES



TELL YOUR MECHANIC IF THE BATTERIES DON'T RECHARGE.



THANKS FOR THE SLAVE START, MASTER SERGEANT HALF-MAST!

MY BATTERIES REALLY APPRECIATE IT!

PS  
END

# MaxxPro Weather Safety Tips



CWA MARC ASSUMPCAO OF THE US ARMY COMBAT READINESS/SAFETY CENTER THINKS UNITS WITH MAXXPRO® MRAPS SHOULD CONSIDER THE WEATHER BEFORE OPERATING THEIR VEHICLES.



PS AGREES, SO USE HIS SAFETY TIPS...

- In severe weather conditions, place the transfer case in low gear and engage the front axle for four-wheel drive.
- During slippery weather (heavy rain, mud, snow or ice), turn off the engine brake and do not use it. Using the engine braking system during icy conditions could cause loss of traction and control.
- Driving in mud can make braking harder. If this happens, clean the brakes by driving about 500 feet with the brakes lightly applied.
- SLOW DOWN AND BRAKE SOONER in bad weather. In slippery road conditions or when there's less traction, you need to allow for increased stopping distances.

- When entering and exiting your vehicle, the steps can become very slippery from mud. Knock mud off your feet before entering the vehicle. In wet weather, take extra care when getting in and out of the vehicle. Metal steps get slick. Pay close attention to the rear ramp area's lower step. You don't want to suffer an injury by having your foot slip in between the two lower steps!
- Allow the engine to warm up to operating temperature during cold weather. The diesel engine has to be warm in order to operate at full potential.
- During wet weather, wipe mud off the vehicle so it doesn't build up and cover possible leaks. Also, dried mud is heavy and can damage parts.
- Before operating your MaxxPro®, make sure the mirror, windshield defroster and heater work. This will help visibility and raise the chances for mission success.
- Ensure that operators are using the correct mixture of antifreeze to water. Navistar, the MAXXPro® MRAP manufacturer, advises a 50/50 mix. This keeps water in the cooling system from freezing.
- During cold, icy or muddy conditions, keep vehicle in 4X drive. Otherwise, it could fishtail or hydroplane.
- In cold weather, set the heater flow valve to the OPEN position. (The valve is located inside the engine well, on the right side, next to engine block.)
- To avoid engine damage, use the fuel-fired heater in cold weather. You must visually check for a fuel leak. You want to ensure your vehicle is fully mission capable before operating it, especially in hostile areas. The fuel-fired heater is on the right side, behind the condenser, on the frame rail.



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MCV Stryker...

# BAD FIRING PINS DANGEROUS



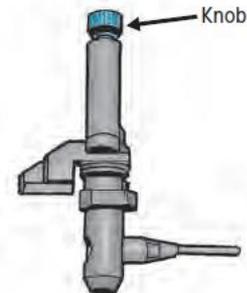
SOME BAD  
REMOVABLE  
FIRING PINS, NSN 1005-01-  
583-2295, FOR THE STRYKER  
MORTAR  
CARRIER HAVE  
GOTTEN OUT TO  
THE FIELD.

THESE FIRING  
PINS DO THE  
OPPOSITE OF  
WHAT THEY'RE  
SUPPOSED TO.

WHILE YOU'RE  
AT IT, ALSO  
CHECK THE FIRING  
PIN ASSEMBLY  
FOR THESE  
PROBLEMS...



- retaining pin spring jamming in the housing on the lock assembly
- retaining pin knob not turning or turning with difficulty



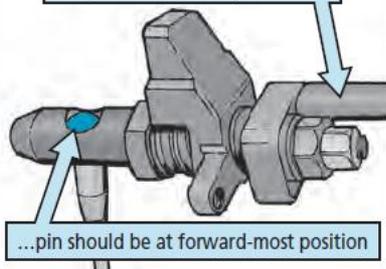
Retaining pin knob hard to turn?

When the bad removable firing pin is put in SAFE (3 o'clock position with the pin retracted), it's actually extended from the breech cap in the FIRE position. And when the bad firing pin is put in FIRE (9 o'clock with the pin extended), it's retracted.

The result is a round that won't fire in FIRE mode. If the crew can't remove the pin and puts the safety mechanism in the SAFE position to do the misfire procedure, the round could fire if it slips while using the round extractor. That could be a catastrophe.

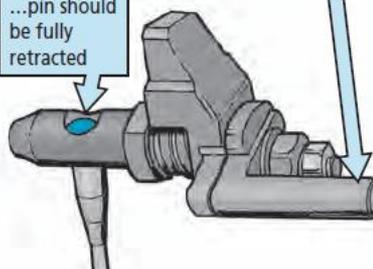
So, before another round is fired, repairmen should check all Stryker mortar carriers for bad removable firing pins. Check spare firing pins, too. See WP 0370 in TM 9-2355-311-10-3-3 for the removal/installation and inspection procedures. When the firing pin is in the SAFE position (3 o'clock), it should be fully retracted. If it's not, you've got a bad pin.

When lever is unlocked and 180  
degrees from SAFE position...



When lever is locked in SAFE position...

...pin should  
be fully  
retracted



If the firing pin is defective, turn it in to Contractor Logistics Support for free replacement.

Questions? Contact TACOM's Jason Nickert at DSN 786-6720, (586) 532-6720, or email:

[jason.j.nickert.civ@mail.mil](mailto:jason.j.nickert.civ@mail.mil)

For more information, see TACOM ground precautionary action (GPA) message 12-018:

<https://tulsa.tacom.army.mil/SAFETY/message.cfm?id=GPA12-018.html>