

## OPERATION IN SNOW AND ICE (CONTINUED)

### 10. WHEN RE-INFLATING A TIRE (continued)

B. ON A VEHICLE AND HAS BEEN OPERATED AT LOWER OFF-ROAD PRESSURES IT IS STILL VERY IMPORTANT TO STAY OUT OF TRAJECTORY OF FLYING WHEEL/TIRE COMPONENTS IN THE EVENT OF RIM WHEEL SEPARATION EVEN WHEN THE TIRE IS MOUNTED ON THE VEHICLE A 10 FOOT HOSE WITH CLIP ON CHUCK AND INLINE GAGE SHOULD BE USED AND NO ONE SHOULD STAND WITHIN 10 FEET AND THE TRAJECTORY OF POSSIBLE WHEEL/TIRE COMPONENTS (STAY OUT OF THE DANGER ZONE AS EXPLAINED IN A. ABOVE)

11. SOMETIMES TIRE SIZES ARE SIMILAR AND CAN GET MIXED UP WHILE IN LOCAL STORAGE. TO MAKE SURE YOU HAVE THE RIGHT TIRE ALWAYS CHECK YOUR VEHICLE TM AND THE SIZE IMPRINTED ON THE SIDEWALL OF THE TIRE BEFORE MOUNTING THE TIRE.

12. WHEN CHANGING A TIRE DO NOT USE SLEDGEHAMMERS, TRUCK OUTRIGGERS OR ANY OTHER UNAUTHORIZED METHODS TO BREAK THE BEAD. A HYDRAULIC BEAD BREAKER IS AVAILABLE, EASY TO USE AND MAKES TIRE CHANGING QUICKER. SEE THE LIST BELOW FOR THE NSN OF THIS BEAD BREAKER.

## OPERATION IN SNOW AND ICE (CONTINUED)

13. BEAD CONSTRICTORS WERE DESIGNED FOR MOUNTING ONLY BIAS TIRES AND SHOULD NOT BE USED WHEN MOUNTING RADIAL TIRES. A BEAD CONSTRICTOR IS A TOOL WHICH HAS A BELT THAT WRAPS AROUND THE TIRES CIRCUMFERENCE AND SQUEEZES IT UNTIL THE BEAD IS SEATED. IF BEAD CONSTRICTORS ARE USED ON RADIALS THE SQUEEZING CAN CAUSE THE SIDEWALL TO BUCKLE AND TO KINK OR BREAK THE RADIAL SIDEWALL CORDS. UNFORTUNATELY MANY TIMES THE DAMAGE TO RADIAL SIDEWALL CORDS CAN GO UNNOTICED UNTIL A CATASTROPHIC TIRE FAILURE OCCURS.

14. COMMON TOOLS AND EQUIPMENT AVAILABLE TO MAINTAIN TIRES ARE AS FOLLOWS:

TOOLS AVAILABLE IN SHOP EQUIPMENT, AUTOMOTIVE MAINTENANCE AND REPAIR: REFERENCE TM 9-2610-200-14, DATED SEPTEMBER 2000, PAGE B-2.

1. TIRE INFLATION SAFETY CAGE, NSN 4910-01-373-0267, LENGTH 40 3/4", WIDTH 25", HEIGHT 56", 315 LBS
2. TIRE INFLATION SAFETY CAGE, NSN 4910-00-025-0623, LENGTH 78 3/4", WIDTH 35 1/2", HEIGHT 86 1/4", 1,600 LBS

GTA# 43-01-130

### TIRE TIPS

#### **COLD WEATHER OPERATION**

***THIS ABBREVIATED CHECKLIST IS NOT TO BE USED AS A REPLACEMENT FOR THE -10 SERIES TECH MANUALS OR ANY OTHER PMCS GUIDE***

**GENERAL TIRE MAINTENANCE.** TIRE MAINTENANCE IS VERY IMPORTANT. TEAM TIRE RECOMMENDS TAKING A FEW MINUTES TO CHECK AND MAINTAIN THE CORRECT TIRE PRESSURES AND TO VISUALLY INSPECT FOR CUTS AND TREAD DEPTH. THESE TECHNIQUES WILL HELP EXTEND THE LENGTH OF YOUR TIRES TO ACCOMPLISH THE MISSION. IN ADDITION, WE RECOMMEND NOT OVERLOADING (I.E., EXCEEDING THE COMBINED VEHICLE WEIGHT RATING) ANY VEHICLE, DUE TO THE FACT THAT OVERLOADING AFFECTS A VEHICLE'S HANDLING AND STABILITY AND DEFINITELY AFFECTS THE TIRES AND BRAKING.

#### **OPERATION IN SNOW AND ICE:**

WE RECOMMEND THE FOLLOWING THREE OPTIONS TO IMPROVE TRACTION ON SNOW AND ICE:

1. LOWER TIRE INFLATION PRESSURES
2. USE TIRE CHAINS
3. REPLACE BIAS PLY TIRES WITH RADIALS

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## OPERATION IN SNOW AND ICE (CONTINUED)

**CAUTION: FRESH SNOW MAY CONCEAL AN ICY ROAD SURFACE. EVEN WHEN SNOW AND ICE MAY HAVE MELTED ON MOST SURFACES, IT MAY REMAIN SOLIDLY PACKED OR FROZEN ON BRIDGES. ALSO, ISOLATED PATCHES OF ICE MAY BE ON AN OTHERWISE SHADED AREA CLEAR ROAD, ESPECIALLY IN SHADED AREAS**

1. DO NOT LET VEHICLES REST DIRECTLY ON ICE, SNOW, OR FROZEN MUD FOR EXTENDED PERIODS OF TIME AS INITIAL THAWING MAY OCCUR AND SUBSEQUENTLY THE TIRES WILL FREEZE IN. THE BEST WAY TO KEEP TIRES FROM FREEZING TO THE GROUND IS TO PARK ON A HARD SURFACE OR ANY OTHER AVAILABLE MATERIAL, SUCH AS PLANKS, LOGS ETC IF HARD SURFACE PARKING IS NOT POSSIBLE THE VEHICLE SHOULD BE MOVED PERIODICALLY SO THAT THE TIRES ROTATE APPROXIMATELY 180 DEGREES.
2. SYNTHETIC RUBBER TUBES CAN BECOME BRITTLE WHEN TEMPERATURES FALL BELOW -40. IF YOU ARE EXPECTING OPERATIONS IN TEMPERATURES BELOW -40 YOU CAN MINIMIZE THE EFFECTS OF THESE EXTREME TEMPERATURES BY LUBRICATION THE INSIDE OF THE TIRE, TUBE, FLAP BEAD, BEAD LOCK, AND RIM FLANGES. USE CONCENTRATED LUBRICANT, NSN 2640-00-256-5526 (QUART CAN) OR 2640-00-256-5527 (GALLON CAN) WITHOUT ADDING WATER.

## OPERATION IN SNOW AND ICE (CONTINUED)

3. DO NOT ADJUST OR INCREASE TIRE AIR PRESSURE TO TRY TO COMPENSATE FOR EXTREME OUTDOOR TEMPERATURES. AIR PRESSURE SHOULD BE ADJUSTED FOR THE TERRAIN IN WHICH THE VEHICLES OPERATING IN AND AS INDICATED IN THE TECHNICAL MANUAL. WHEN LOWERING AIR PRESSURE TO INCREASE MOBILITY IN SNOW AS RE-INFLATE THE TIRES WHEN RETURNING TO IMPROVED OR HIGHWAY ROAD SURFACES.
4. TO PREVENT TIRE VALVES FROM ICING UP, FREEZING OR GETTING CLOGGED WITH MUD AND DEBRIS MAKE SURE ALL TIRE VALVE STEMS HAVE VALVE CAPS INSTALLED.
5. TIRE CHAINS SHOULD ONLY BE USED IN SEVER SNOW AND ICY CONDITIONS AND SHOULD BE REMOVED IMMEDIATELY UPON RETURNING TO IMPROVED ROAD SURFACES. TIRES AND VEHICLE DAMAGE CAN OCCUR IF YOU LEAVE THE CHAINS ON OVER IMPROVED ROADS OR FOR EXTENDED PERIODS OF TIME. TIRE CHAINS CAN IMPROVE TRACTION ON ICE AND PACKED SNOW. HOWEVER, IN ORDER TO PERFORM THEIR FUNCTION, THEY MUST BE INSTALLED PROPERLY AND CLEANED REGULARLY. IF REGULAR CLEANING IS NOT PERFORMED, CHAINS CAN BECOME PACKED WITH ICE, AND WILL LOSE THEIR EFFECTIVENESS.
6. IF USING TIRE CHAINS DO NOT JUST APPLY THEM TO DRIVE WHEEL POSITIONS BUT INSTEAD TO ALL TIRE POSITIONS ON THE VEHICLE IF POSSIBLE. CHECK THE VEHICLE OPERATOR'S MANUAL TO DETERMINE THE CORRECT PROCEDURE FOR YOUR PARTICULAR VEHICLE.

## OPERATION IN SNOW AND ICE (CONTINUED)

7. CORRECT TIRE PRESSURE IS CRITICAL FOR VEHICLE MOBILITY IN SNOW, ICE OR MUD AND PROVIDES BETTER VEHICLE BRAKING AND STABILITY. CHECK YOUR TIRE PRESSURES REGULARLY AND AS INDICATED IN YOUR VEHICLE TECHNICAL MANUALS.
8. DO NOT MIX RADIAL AND BIAS TYPE TIRES ON THE SAME VEHICLE THE PROBLEMS WHICH CAN BE ENCOUNTERED WHEN MIXING BIAS AND RADIAL TIRES ARE A LOSS OF VEHICLE CONTROL, POOR HANDLING, POOR TRACTION AND BRAKING AND POTENTIAL MECHANICAL DAMAGE TO OTHER VEHICLE COMPONENTS.
9. USE THE APPROPRIATE TIRE LUBRICANT (REFERENCE TM 9-2610-200-14) TO MOUNT AND DEMOUNT TIRES. DO NOT USE ENGINE OIL OR ANY OTHER PETROLEUM BASED OILS AS THIS CAN CAUSE RAPID DECAY OF THE TIRES RUBBER COMPOUNDS.
10. WHEN RE-INFLATING A TIRE
  - A. REMOVED FOR SERVICE OR REPLACED ALWAYS USE A TIRE SAFETY CAGE, CLIP ON CHUCK, 10 FOOT HOSE WITH IN-LINE AIR GAGE AND STAND AT LEAST 10 FEET OUT OF THE DANGER ZONE (DANGER ZONE IS ANYWHERE IN FRONT OR BACK OF THE RIM OR OUTWARD FROM THE SIDEWALL AREA OF THE TIRE). INFLATE TIRES TO ONLY 40 PSI AND CAREFULLY CHECK TO ENSURE THAT THE TIRE BEAD AND ALL WHEEL COMPONENTS HAVE SEATED PROPERLY BEFORE INFLATING TO MAXIMUM AIR PRESSURE.