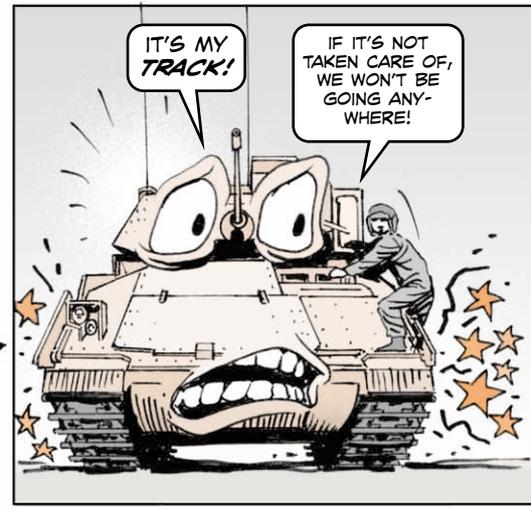


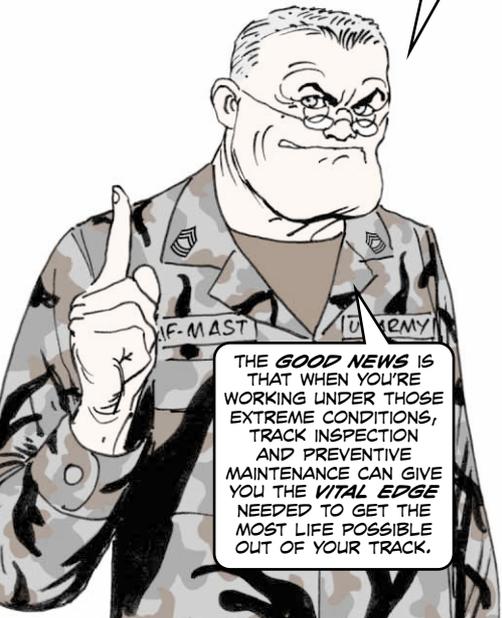


# BEAT THE HEAT WITH PM!



LET'S FACE IT, CREWMEN. DESERT OPERATIONS ARE TOUGH ON YOUR BRADLEY'S TRACK.

HEAVY LOADS, LONG HOURS OF OPERATION, HIGH SPEEDS AND EXTREME HEAT ALL COMBINE TO WEAR OUT TRACK MUCH FASTER THAN IT WOULD NORMALLY.



THE GOOD NEWS IS THAT WHEN YOU'RE WORKING UNDER THOSE EXTREME CONDITIONS, TRACK INSPECTION AND PREVENTIVE MAINTENANCE CAN GIVE YOU THE VITAL EDGE NEEDED TO GET THE MOST LIFE POSSIBLE OUT OF YOUR TRACK.

## Track Shoe Wear

T157 and T157I track shoes have several critical wear areas:

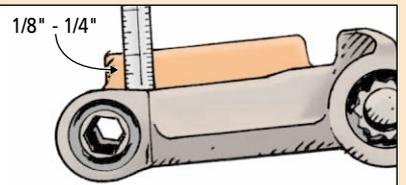
- grouser height
- center guide thickness
- pad thickness
- sprocket window width
- bushings

When one shoe wears out, it can have a negative effect on the others, so proper inspection during your before-and after-operation PMCS is vital.

Follow the Condition Code F wear guides below from TM 9-2530-200-24, *Standards for Inspection and Classification of Tracks, Track Components and Solid-rubber Tires*.

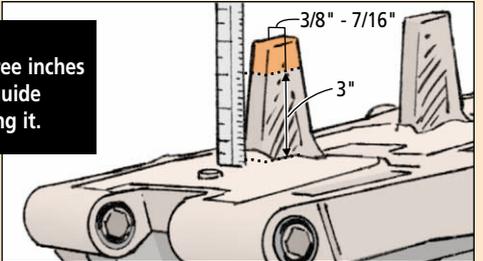
Condition Code F means the track shoe or pad is repairable if it's replaced **when** it reaches this level of wear. Components and pads worn beyond these limits are not repairable. It costs a lot more to replace track than to repair it.

**Grouser height:**  
1/8-in to 1/4-in measured from the top of the bushing boss to the top of the grouser. Anything more than 1/4 inch is still OK to use.

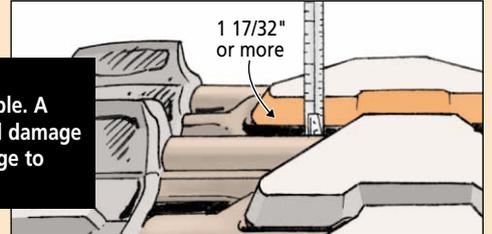


**Center guide thickness:**  
3/8-in to 7/16-in at a point measured three inches up from the shoe surface. If the center guide measures more than 7/16 inch, keep using it.

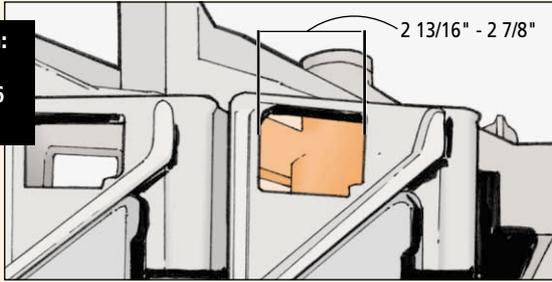
While you're at it, check for broken or bent center guides. They can cause the track to override and damage the roadwheels and support rollers. They can even throw a track.



**Pad thickness:**  
Less than 1 17/32-in thick is unserviceable. A pad worn down enough to allow metal damage to the grouser can cause enough damage to make the track shoe non-repairable.

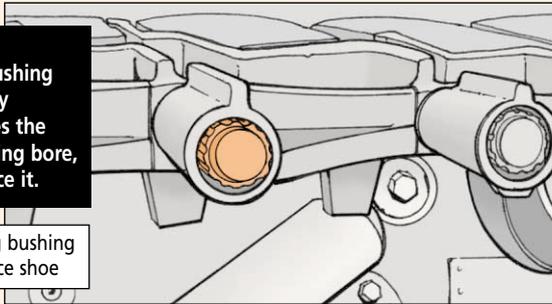


**Sprocket window width:**  
2 13/16-in to 2 7/8-in.  
Anything less than 2 13/16 inches is still usable.



2 13/16" - 2 7/8"

**Bushings:**  
Off-center pins indicate bushing wear and should be closely watched. If the pin touches the inside surface of the bushing bore, the shoe's not good. Replace it.



Pin touching bushing bore? Replace shoe

Also, watch for pins that stick out more on one side of the shoe than the other. One of the locking nuts could be loose or missing. The locking nuts are a one-time-use item, so make sure your mechanic uses a new one if they are loose or damaged.

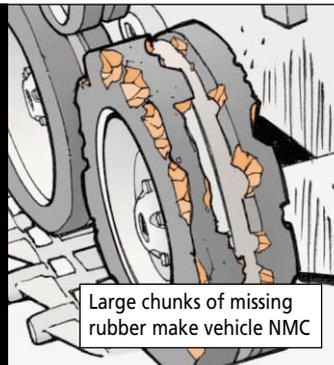
## Wheel Inspection

ROADWHEELS, IDLER WHEELS AND SUPPORT ROLLERS SHOULD BE INSPECTED FOR WEATHER CRACKING, CHUNKING AND TREAD SEPARATION. HERE'S WHAT TO LOOK FOR...

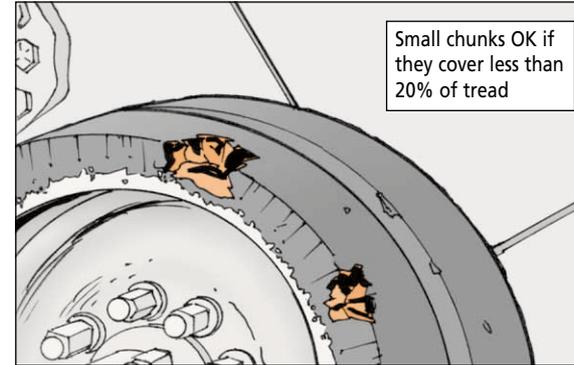


**Weather cracking:**  
If weather cracks extend completely across the tread surface and are deeper than 1/4 inch, the wheel is unserviceable.

**Chunking:**  
For roadwheels, one missing chunk of rubber that measures three by four inches or larger is enough to make your vehicle NMC. Depth of the chunking doesn't matter. Even smaller chunks can make the roadwheel unserviceable if they cover more than 20 percent of the tread surface.



Large chunks of missing rubber make vehicle NMC

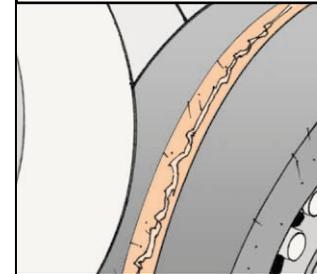


Small chunks OK if they cover less than 20% of tread

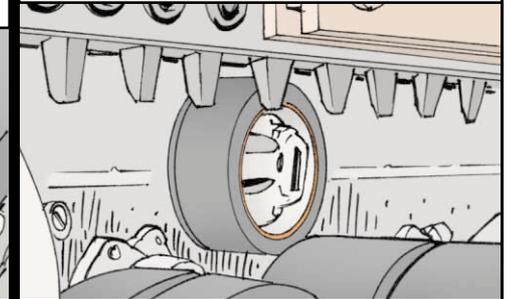
For support rollers, it only takes a chunk measuring one inch by two inches to cause a deadline. Again, the depth of the chunking doesn't matter and a collection of smaller chunks that cover more than 20 percent of the tread surface make the support roller unserviceable.

**Tread separation:**  
Separation of the tread that is one inch or wider and goes around 75 percent of the roadwheel makes your vehicle NMC. The same goes for support rollers, except the separation only has to be 1/2 inch or wider.

Check for separation that extends 75% around roadwheel



Check support rollers for separation, too



THERE ARE A COUPLE OF THINGS YOU CAN DO TO PREVENT SOME OF THIS TREAD DAMAGE.



**First**, check for loose hardware. Loose lug nuts allow the roadwheels and support wheels to wobble. That further strips the lug bolt threads and eats away at the wheel's mounting holes.

The more the wheels move, the greater the chance that the center guides will hit and damage the tread.

**Second**, remove track debris whenever possible. Rocks thrown up by the track can lodge between the roadwheel arms. That results in gouging and deep cuts or grooves in the tread.

## Shocks and Hubs

Good shock absorbers generate heat during operation. If any of your shocks are cool or only slightly warm to the touch, report 'em. They aren't doing the job and can cause excessive track wear.

Roadwheel hubs are the exact opposite. If they generate excessive heat, it's a good sign that the bearings are failing. Tell your mechanic.

Be careful when checking for hot shocks or hubs. Either one can generate enough heat to burn you.

Shocks should be hot after operation

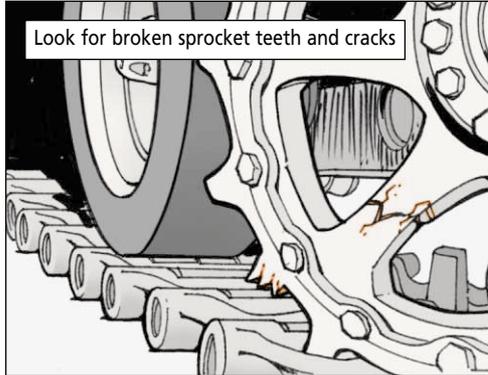


## Sprockets

Check the drive sprockets on your Bradley for broken teeth, cracks, excessive wear and loose mounting bolts.

When replacing or reversing a sprocket, make sure all mating surfaces are clean before reinstalling the parts. Pay special attention to bolts and the surface of the sprocket where the bolt mounts. Dirt between these areas can cause the bolt to loosen or break.

Look for broken sprocket teeth and cracks



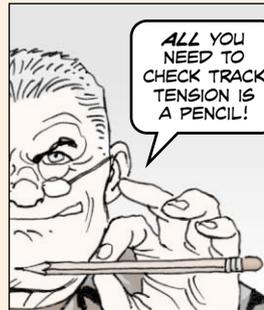
## Track Tension

Improper track tension will wear out track fast! Track that's too tight cups sprocket teeth and strains shoe pins. Track that's too loose gets thrown, damaging roadwheels and support rollers.

Keep track tension just right by checking it after every operation. Let the vehicle roll to a complete stop on firm, level ground. Stop the engine and try turning the rear support roller with one hand.

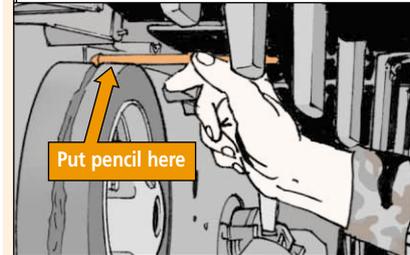
The roller should turn freely, but with only enough room between the track and roller for a pencil to pass through.

If there's more room than that, the track is too tight. If the roller won't turn at all, the track is too loose. Either way, it's time to make some adjustments.



### To tighten track tension:

1. Place a pencil between the track and the rear support roller.



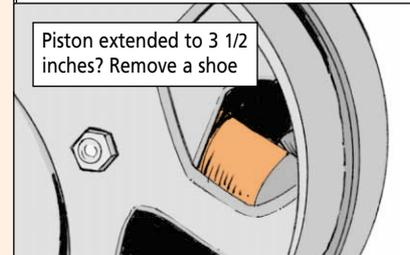
2. Wipe the lube fitting with a clean cloth and pump grease into the track adjuster.



3. Watch the pencil. The tension is right when there's just enough room between the track and the rear support roller for the pencil to fit.

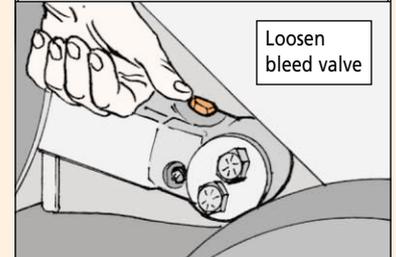
4. Keep an eye on the track adjuster piston, too. The maximum extension for the piston is 3 1/2 inches. If you've reached that limit and the track is still too loose, you'll need to remove a track shoe and start over.

Piston extended to 3 1/2 inches? Remove a shoe



### To loosen track tension:

1. Once again, place a pencil between the track and the rear support roller.
2. With a 5/8-in open-end wrench, loosen the track adjuster bleed valve just enough to allow grease to flow.



3. Watch the pencil. When there's just enough room between the track and the rear support roller for the pencil to fit, the tension is right.
4. Re-tighten the bleed valve and wipe away excess grease.

DON'T STOP THERE!

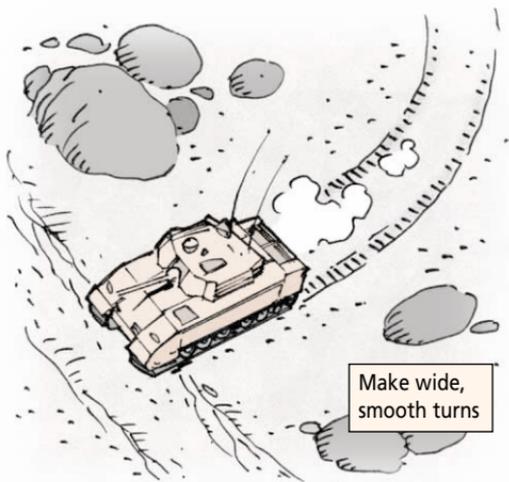
THE JOB'S NOT FINISHED UNTIL YOU'VE DRIVEN THE VEHICLE 100 FEET, COASTED TO A STOP AND CHECKED THE TRACK TENSION ONCE MORE.

## Driving

Be wary of a lack of steering response. That indicates sand is building up between the treads and sprockets or idler wheels. If you allow the buildup to continue, the sand will throw the track.

Try “shaking” the vehicle with the steering or backing up to remove sand buildup. Remove accumulated sand by hand at your next stop.

Make wide, smooth turns instead of sharp, hard turns in your Bradley. That'll eliminate some of the sand accumulation and put less stress on track pads.

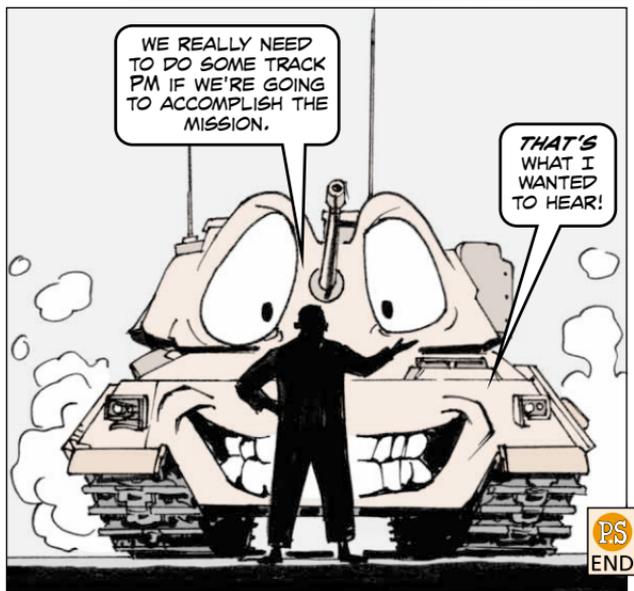


THE INFORMATION  
IN THIS ARTICLE  
**ALSO** APPLIES  
TO THE MLRS  
CARRIER.



WE REALLY NEED  
TO DO SOME TRACK  
PM IF WE'RE GOING  
TO ACCOMPLISH THE  
MISSION.

**THAT'S**  
WHAT I  
WANTED  
TO HEAR!



## Bradley Turret Travel Lock

Having problems with the turret travel lock on your M2A2/M3A2 Bradley? Don't try to fix it yourself. Tell your mechanic. He'll adjust, repair or replace the travel lock following the instructions in Chap 9 of TM 9-2350-284-20-2-2.