ARMY MOTORS

VOL. 6-NO. 6-SEPTEMBER 1945

Why Vehicles Die Young

There used to be a little drinking hymn that went, "I'll eat when I'm hungry, I'll drink when I'm dry; if hard times don't kill me, I'll live till I die."

If you were drunk enough, you could apply this same theme to the life-expectancy of tanks and trucks. "If hard times don't kill them, they'll live till they die."

Into each and every automotive assembly there is built a certain amount of **service life.** Strong materials and good design are used to guarantee a nice, long, reasonable existence.

When they build an engine, for instance, they say, "Let's put some of that good Pennsylvania iron in it to make it long-wearin'. And some of that fine Colorado copper to keep it sparkin'. That sweet-smellin' Ohio rubber will keep it ridin' long and smooth."

Then they all stand off admiringly and shout, "Gee, that there engine oughta be good for at least 50,000 miles runnin'!"

And then into the picture comes GUS THE TRUCK DRIVER. Now Gus may be a kindly cuss who used to give his dear old mother 35 cents every Saturday night to go out and get good-natured on, but that's not important. The important thing is, how does Gus feel about the **service life** of the assemblies in the truck he's operating?

What does he know about it? He may know, for instance, in a vague sort of way, that it's bad to ride the clutch—but does he fully understand what damage is done when he rides the clutch? Does he have a clear picture of what happens when he forces and grinds the gears into engagement? Does he realize that he's denying these assemblies, the full, rich service life their maker granted them?

As we say, Gus is a good-natured cuss at heart; if somebody told him **exactly,** so he could see it with his mind's eye, what happens to the engine when he pours in a little sand along with the gasoline, he couldn't help but be a little more careful about these things. No man is criminal enough to deliberately neglect the oil in his truck; it's only because he's not fully conscious of the damage that's done, that he does it.

Who's to make these things clear to Gus the driver? **The Man Who Knows—the mechanic.** When he spots a driver over-working the clutch, a couple of words can straighten the driver out. When the driver brings the vehicle in for repair, a quick mention of what did the damage will keep it from happening again.

When all drivers are made service-life conscious, brother, hard times won't be killing our wagons—they'll strictly live till they die.

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THE NEW
AR 850-15

The law on "Miscellaneous—Motor Vehicles" gets a major overhaul for the first time in two years. This'll help you get hep to what's what

Changes that affect **you**—because they affect vehicle operation and maintenance — blew in with the newly-revised AR 850-15 (1 Aug. 45). New do's and don't's, new words like "semigloss" and "full gloss" have been written into the regulations. And a lot more, too.

NEW PAINT

Good news for maintenance men who've long been bitching about lusterless OD breaks out in par. 7, which prescribes approved semigloss olive drab for vehicles (certain ones excepted). The new paint is Enamel, olive drab, rust-inhibiting, U. S. Army spec. 3-181, amendment 3, type V—**Fed. Stock No. 52-E-7574** for a 1-gal. can, **52-E-7574-75** for a 5-gal. can. But don't start requisitioning it now—the stuff won't get into supply channels for 60 to 90 days, and anyway, you only put it on when the vehicle's due for a **repaint.** ASF Circular 291 (1 Aug. 45) says: "The new painting procedure . . . will be applicable to U. S. Army motor vehicles now in use, other than those excepted . . . when the vehicles require complete refinishing in accordance with established maintenance schedules and upon the availability of the semigloss paint prescribed."

On busses, ambulances (except ¾-ton 4x4's), and passenger sedans, the AR goes whole hog on gloss. It says they **may** be painted a full gloss OD—**but not until a repaint is necessary.**

DRIVER'S RECORD

First to hit the driver's eye is the business about recording accidents in his "201" file. The antics of the careless driver are a matter for the record now. He doesn't get off to a fresh start when he transfers to another station—his past performance as a driver follows him in his personnel file, wherever he goes. Accidents and scores and ratings on drivers' examinations become part of the personnel record.

SAFETY RULES

There's new SOP for the driver in the Fire and Safety Precautions (par. 26). As a precaution against fire, among other things, the law says "No vehicle will be operated unless entirely free of gasoline leaks."

New safety precautions also take the form of guards, flares, lights, or flags to be posted when the vehicle's halted in a dangerous position—and warning devices for loads protruding beyond the body of the vehicle. The AR doesn't specify what these new devices will be, or when or where you get them—but that'll come along soon in some other WD publication. (AR's have done their job when they tell you to do this or that. The WDC's, FM's, TM's, SB's, etc. tell you how to carry out the regulations.)

Also under "safety," you'll notice in par. 25*a*(2) that the new AR follows the old AR's lead by requiring you to furnish ". . . the identification card attached to Standard Form 26." But leave us remain calm and read to the end of this paragraph: There still is **no** identification card attached to Standard Form 26; none is being printed now and there's no sign that it ever will be; but it's still okay to devise and reproduce the required card locally. Lacking any kind of printed card, drivers of vehicles involved in accidents may use any old scrap of paper to give the other party their name, their CO's name, the vehicle number, and their station.

MAINTENANCE MUSTS

Under the new law, all 1st- and 2nd-echelon maintenance must be accomplished before a vehicle's turned in or transferred by a using unit. 1st- and 2nd-echelon maintenance is a **must,** and higher-echelon maintenance should be performed, too, wherever 3rd-, 4th-, or 5th-echelon personnel, supplies, and time are available. In other words, you pass your vehicles on in tip-top condition.

In pars. 35*b*, 35*d*, and 37*e* of the new AR, there seem to be some changes concerning technical inspections of vehicles, but interpreting them is beyond the scope of this review. Since you people in the lower echelons don't perform TI's anyhow, losing sleep over same is not recommended.

From now on, pulling assemblies and passing 'em back to the 4th or 5th echelon for rebuild is taboo when repair will restore the assembly to a serviceable condition —the repair's made with the assembly in the vehicle whenever it's practical.

Protection of assemblies against damage or corrosion in storage or in transit within the continental U. S., and the turning in of complete assemblies (except in active theaters where conditions prevent), both appear in the new AR.

These are just a few of the things you'll begin to do and not do—for the whole story, see the AR itself. It oughta be in your mail any day now.

GMC STEERING-GEAR LEAKS

If your 2½-ton 6x6 puddles in public places, better look into its steering-gear housing and check a few things

Are you getting a bum steer? Has the steering-gear housing on your 2½-ton 6x6 General Mudder started greasing at the mouth? That may mean trouble. Could be your worm has turned too far. Either that or your cab is loose as a double-jointed goose. If it's loose, it'll bounce up and down on the frame when the going gets rough and beat the bloomers off the housing and anything else that gets in the way.

But first a word about worms. When your housing springs a leak, chances are your worm nut's traveled too far left or right and gotten off its trolley at either end of the line. When that happens (see Fig. 1), your recirculating balls have to work on an unfinished part of the worm. Kind of tough on the balls.

Besides, if the nut's going hog-wild these days—if it runs way out every once in a while and piles into the end cover—any time now you can start looking for loose bolts, a bruised worm, a bent, cracked cover, a damaged housing, **and**—sooner or later—a new truck. Or—one day when you're highballing through some surprised aborigine's backyard, you'll make a sudden sharp turn to miss his garage—and cronch!—nut slams into end cover and something'll give for good.

Moral: Unless your truck steers just as well with a long pole or a pair of reins, it's smart to keep your worm nut from sliding out of bounds.

WANDERING WORM NUT

So how does it get out of bounds? For one thing, those two little turning-angle adjusting screws (wheel stops) on the front axle—see Fig. 2—just have to be bent a little so the wheels will turn farther, and right away your worm nut climbs out in the rough. Then, if the screw breaks off, you're in for real trouble.

Or maybe your pitman arm isn't lined up right with the pitman shaft. That'll do it every time—throws worm-nut travel to one side or the other. Much the same thing happens when your drag link or your steering arm gets the bends or a front-axle spring makes a slight shift. It takes straight parts, put on straight and kept that way, to make straight steering.

Any one of those things can drive your worm nut wild and start that nosebleed in the housing department. So here's how to go about finding out what ain't cookin' (straight from the pearl-packed paragraphs of TM 9-801, 24 Apr. 44):

First, before you connect the drag link to the pitman-arm-ball stud, turn the steering wheel—gently, gently—to extreme left and then turn the front wheels left as far as they go (Fig. 3)—as

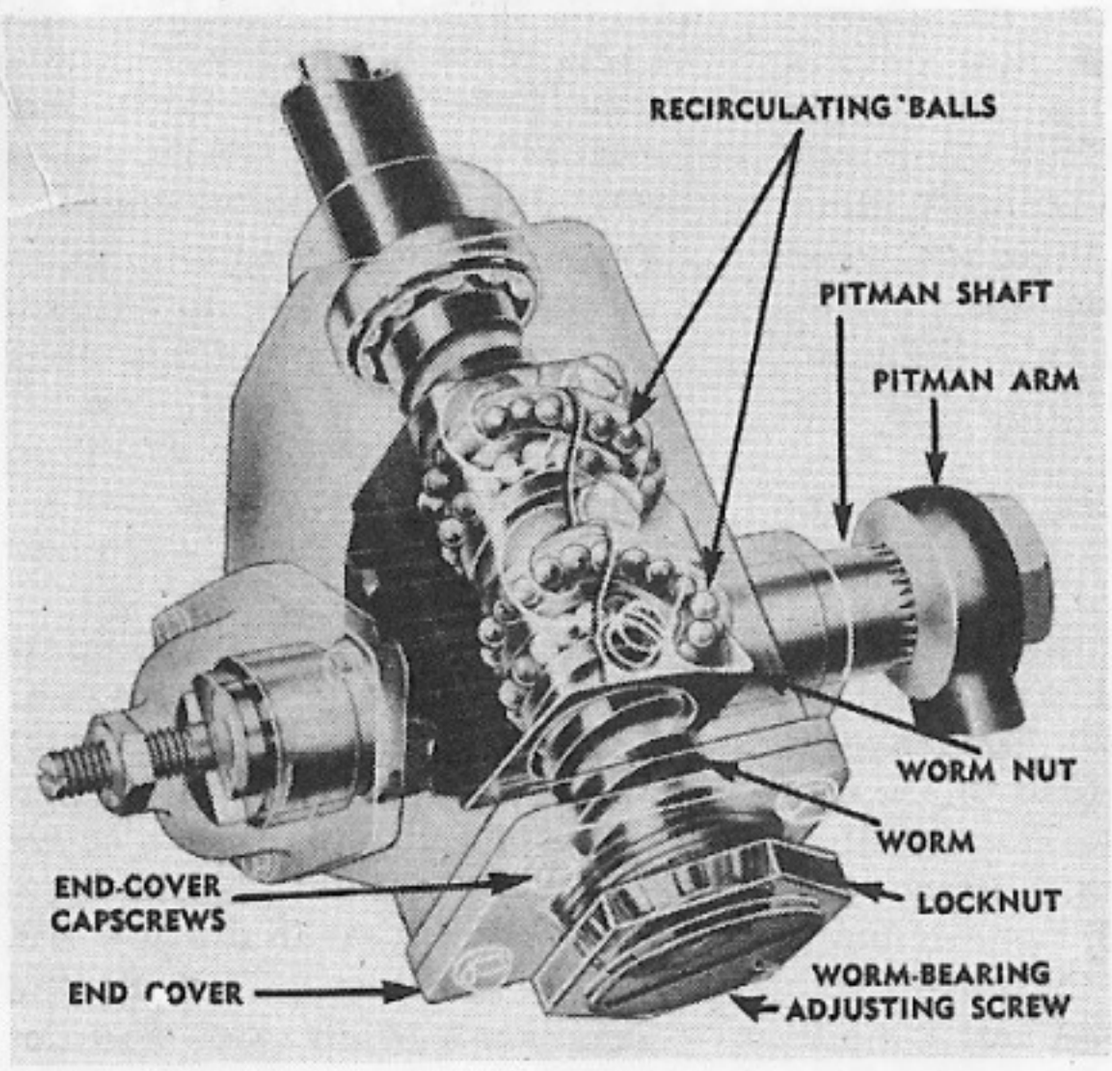


Fig. 1—These balls take a beating if they rough-ride over unfinished parts of the worm.

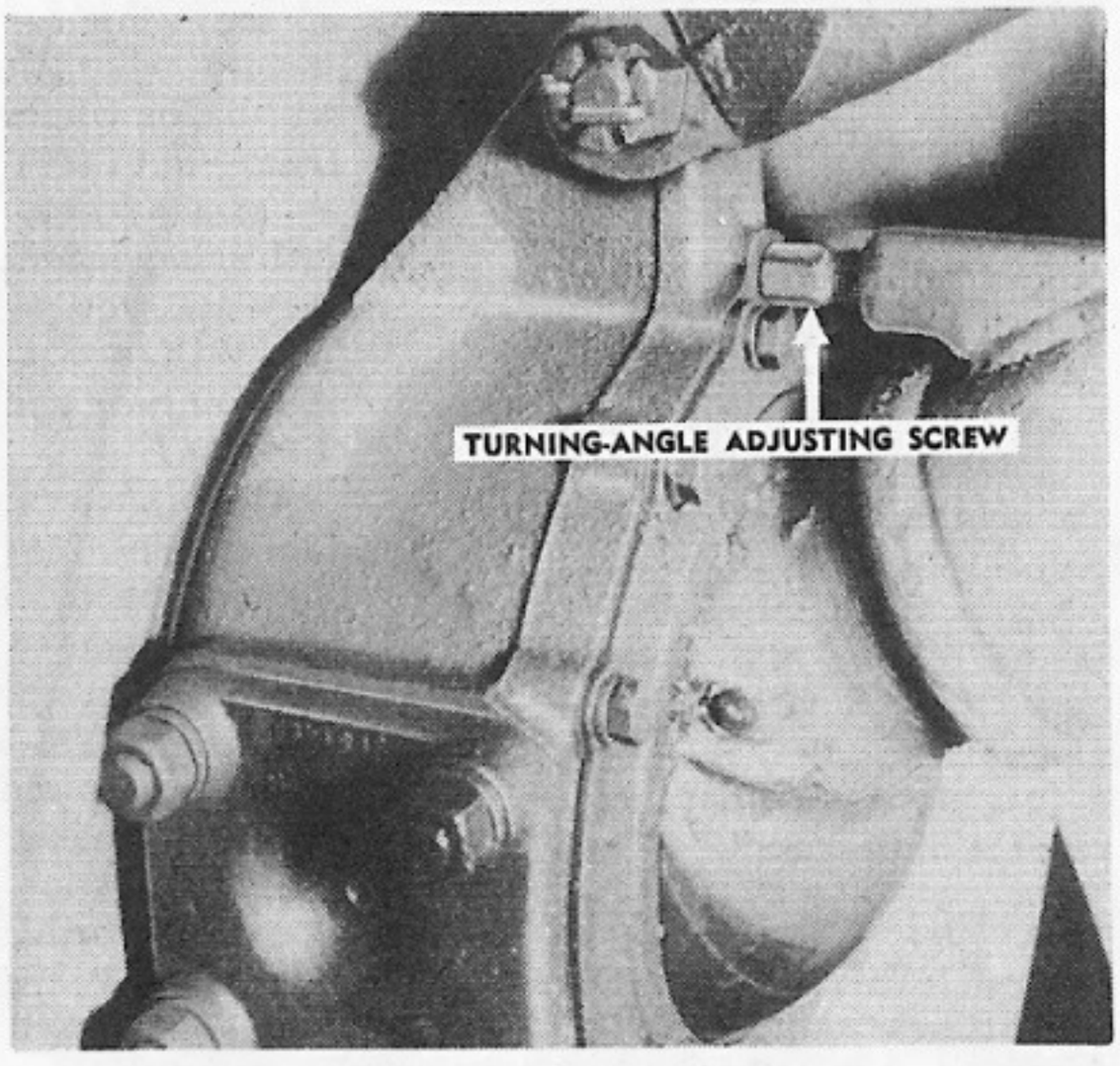


Fig. 2—If turning-angle adjusting screws get out of line, the worm nut'll slide too far.

far as the stop screw'll let 'em go. Then, when you hold the drag link against the pitman-arm ball, the ball should be ½" ahead of the little hole they cut for it in the link. Any more than that means your wheels are turning too far to the left; any less means they're not turning far enough. And usually—either way—it means something's lined up wrong. Something stinks with the link, or maybe you got a ball with a crawl.

When you lug your wheels around to extreme right, sure enough, the ball should be ½" **behind** the hole (Fig. 4). That's what they call logic. Pretty simple—all you have to do is keep an eye on the ball and you'll bat 1.000 every time.

There's also a way of making sure you get the pitman arm on the shaft the way the manufacturer meant it should go. You can turn the steering wheel—slow, slow, easy does it, Charlie—from one extreme to the other, counting the turns. Then, if you can divide by two (if you can't, ask Half-Mast—he's on his threes already), turn it back exactly half-way and slap on a little tape to mark the exact top and bottom of the wheel in center position.

Then, making sure your wheels themselves are pointed straight ahead and the flat spot in the pitman arm is lined up even with the shaft serrations (that's Webster for them grooves on the shaft), you can go ahead and tighten up the whole works. When you're all through, the steering wheel should still be dead center and the front wheels lookin' you right in the eye.

IT'S SPRINGS AGAIN—

Could be that beat-up springs in the drag-link sockets are giving your wagon those wall-eyed weaves. They're supposed to take up shock from the front wheels so that your steering gear'll have a smooth ride—but if one of the springs is broken, your gear is in for more jolts than an angel at a GI bull-session. A perfect set-up for that shiverin' shimmy.

Speaking of jolts, by the way, that loose cab with the Brooklyn bounce is good for plenty. And

(Continued on Page 171)

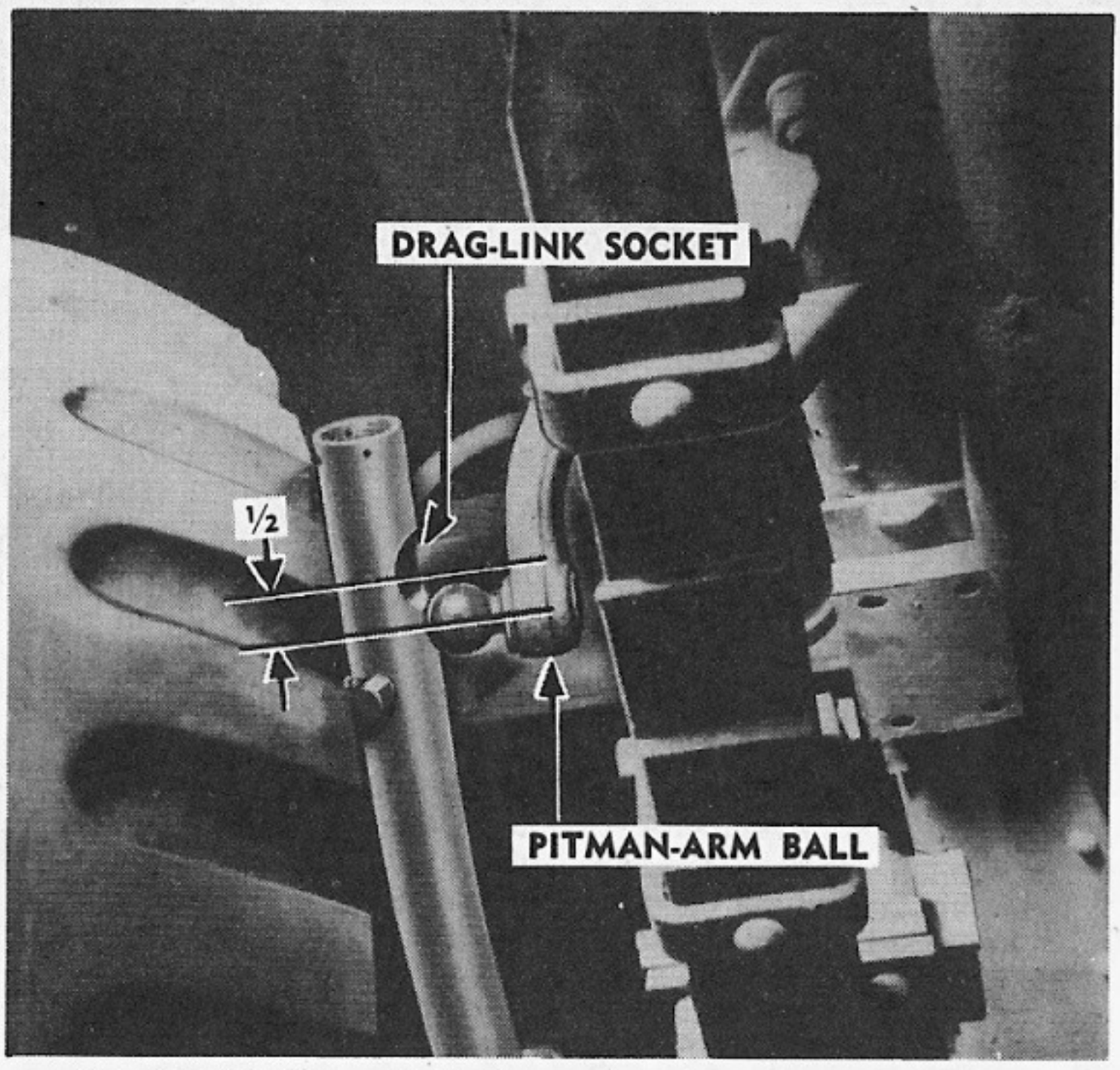


Fig. 3—With drag link disconnected and front wheel turned to extreme left, ball should be ½" ahead of hole in link.

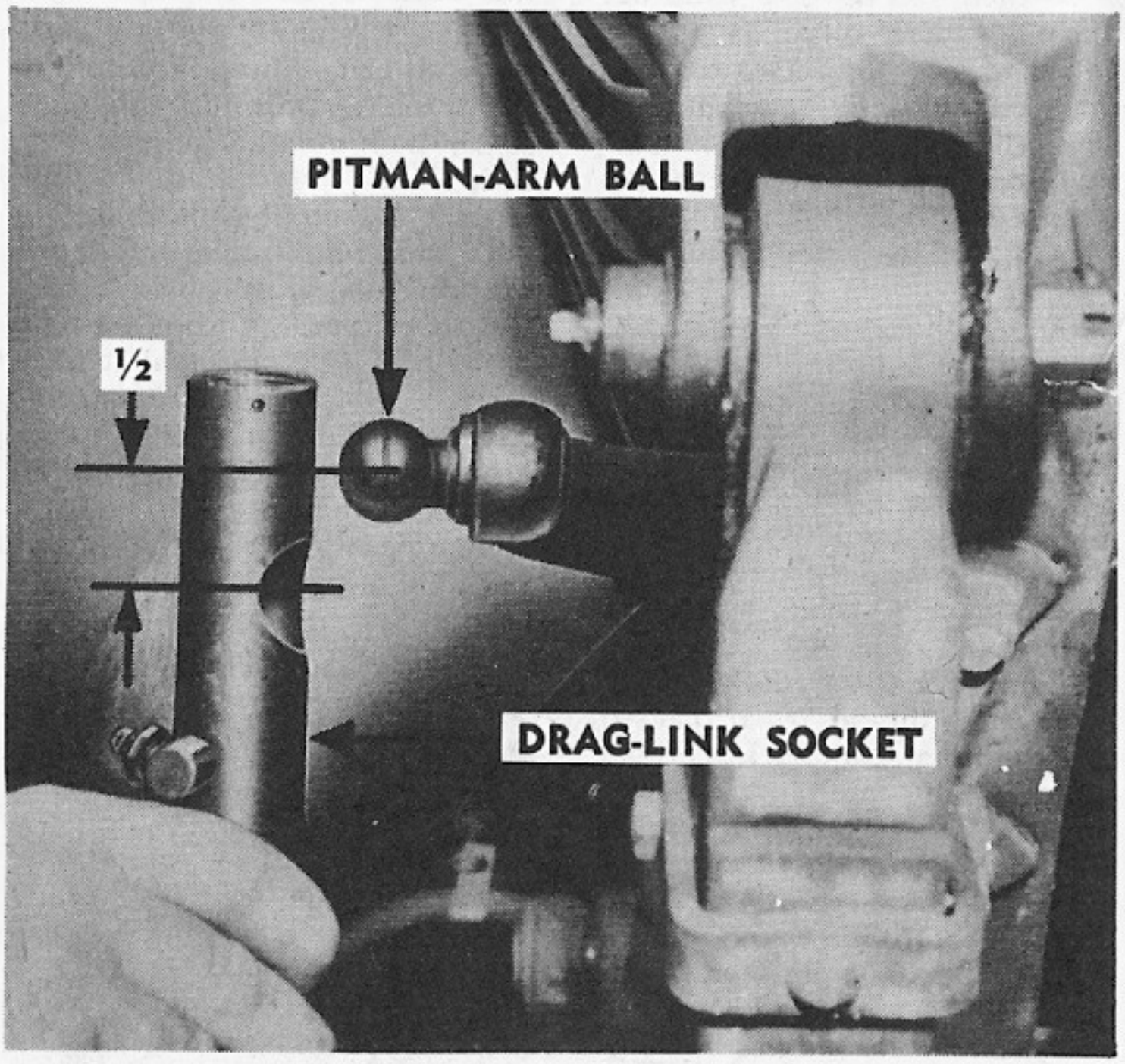


Fig. 4—Reverse happens when wheels and steering wheel are turned to extreme right. Ball should be ½" behind hole.

CONNIE RODD'S BULLETIN BOARD

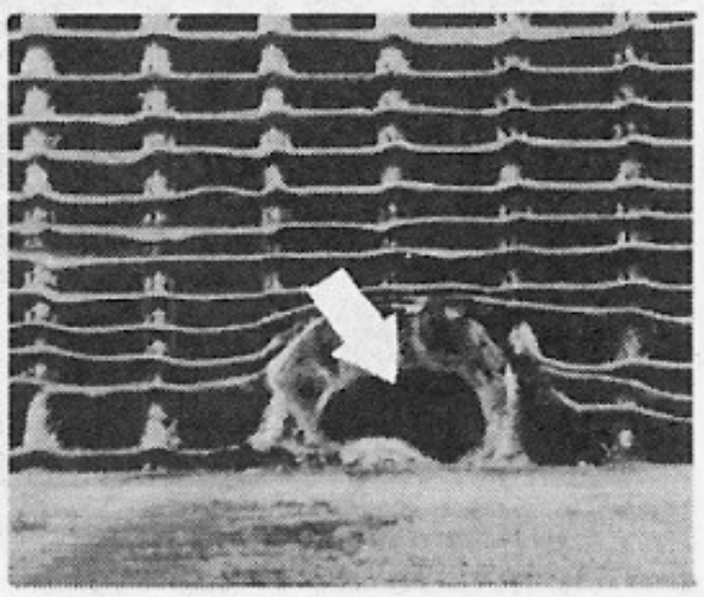
M4 *Bearing Freeze*

Has the bearing been freezing to the bogie arm on the horizontal-volute suspension of your M4-series tank? Could be caused by the lockwasher that's in there. The washer fails and the adjustment nut tightens itself, forcing the bearing to freeze on the bogie arm—then you have to whip out the old cutting torch to get the bogie wheel off. Save yourself further trouble by requisitioning new lockwashers (they're 14-gage steel instead of 16 and have two tongues): Ord Part No. A7320704, Item Stock No. G104-7320704.

High-Speed Tractor Radiator Repair

If you're a handy man with an oxy-acetylene welding torch, you can seal up those nasty leaks that plague the torque-converter and transmission-oil-cooler radiators of M4, M5, and M6 high-speed tractors (TB ORD FE40, 8 May 45). Most of these leaks are caused by vibration, punctures, or an overdose of internal pressure. Anyhow, what you need to plug them are class 4 silver solder (1/16" dia., 1-oz. roll, Fed. Stock No. 46-S-611) and silver-solder brazing flux (8-oz. jar, Fed. Stock No. 51-F-637). Don't let any joker talk you into using brass brazing-rod or lead-tin solder instead of class 4 silver solder to repair leaks on these radiators. The intense heat you need to melt the brass rod'll melt the radiator joints, too, since they're made of silver solder with a very low melting point. And using lead-tin solder means you'll never be able to use silver solder where you've previously used the lead-tin, because the silver won't stick where this other type's been used.

After cleaning the radiator metal till it shines in the sun, apply the brazing flux. Heat the solder with a welding torch (No. 5 tip) until it just starts to flow. Then build up the metal slowly until the hole is closed. If the radiator tube is split or in really bad shape, you can close the tube off at both ends and seal it from the top and bottom header-tanks, like this: Puncture a small hole near the top and bottom of the bad tube and plug the top and bottom ends of this tube by feeding the solder through the small holes. Be careful, though, that you don't use so much heat that the solder runs into the header tanks.



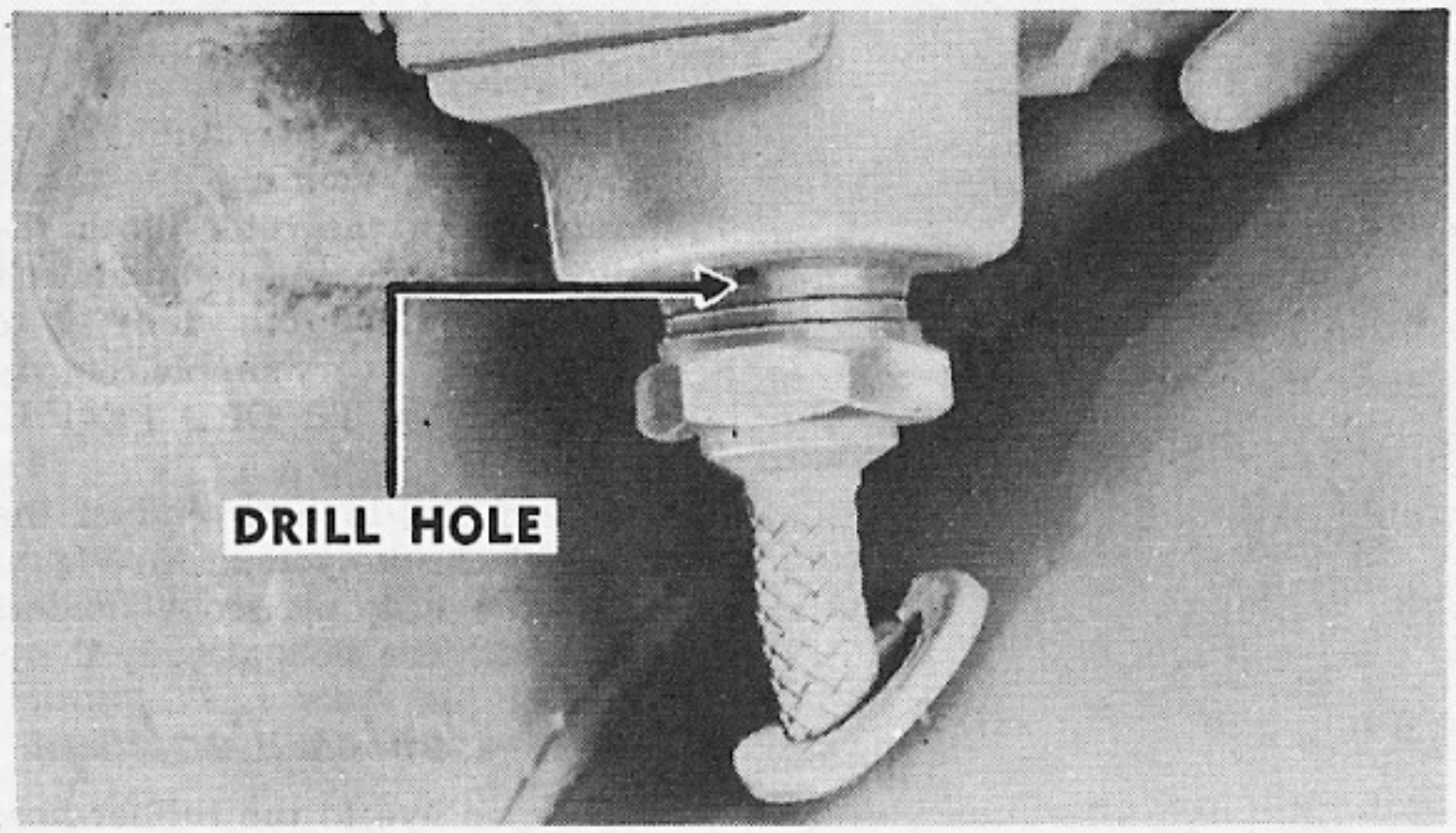
If it's a center tube that's shot, you may have to cut the outside tube in front of it at the top or bottom (see Fig., col. 2) with a sharp chisel so you can get at the damaged tube to plug it.

M4 *and* M6 *Tractor Oil Seals*

The last word on oil seals for 18-ton M4 and 38-ton M6 high-speed tractors is **not** to install 'em with non-vulcanizing cement (according to both TB ORD 302 and TB 9-788-3, 6 Jun. 45). I know, I know—it says to use that stuff in par. 34*a* of TM 9-1785B (4 Apr. 44) and in par. 25c of TM 9-1788 (22 Sep. 44). But they're wrong. Non-vulcanizing and other ordinary rubber-cement goes to pieces fast when in contact with oil. And there's no point in using what's not gonna last.

Par. 127*d*3 of TM 9-788 (25 Jul. 44) tells you to use Neoprene or other oil-resistant cement—but that's not good enough, either.

Instead, when you're installing oil seals in these tractors, use only **synthetic-rubber cement** (Fed. Stock No. 52-C-1556, Mfr's Part No. USR-6128, for a 2-oz. tube). When you're applying it, be sure the seals are clean and all old cement is removed. Then set 'em under pressure just like you're told in the vehicle TM's.



Half-Track Headlamps

Half-trackers complain that there's always water lying down in the bottom of the headlight sockets. It rusts out the little spring contacts in the headlamp and, half the time, the half-tracks are without lights. It isn't something you can blame on rotting of the gasket up around the top of the socket, either—the gasket is usually in good shape. Still there's water at the bottom of the socket.

Fix: Drill a ⅛" hole in the bottom of the socket (see Fig. above) to let whatever water gets in there, drain out.

Exit Smoke Mortars

You won't need that smoke mortar on your M4-series medium tank any longer. TB ORD FE43 (15 May 45) says to remove them from all such vehicles in the field as of now.

Here's the way to do it: Take off the four screws and safety nuts that hold the mortar to the tube bracket. Follow that with the strap assembly, the smoke-bomb racks, and the exhaust nozzle.

You have a choice of two ways to close up the hole in the turret. The best way is to cut off the tube bracket flush with the inside and outside of the turret. Then cut a 2"-dia. armor plug long enough to extend about ¾" above the top of the turret and ½" below when it's stuck in the hole. Weld the plug to the turret with a ¾" fillet weld on the outside and a ½" weld on the inside.

The other method is to cut off the tube bracket flush with the outside of the turret and weld a 6"x8"x½" (minimum) armor plate over the hole. Use a ½" fillet weld all around.

Note to M24 light tankers: TB ORD FE43 claims it applies to your buggies, too—but that's not so. Plucking smoke mortars out of M24's is a different story, which'll show up soon in another TB or something. I'll say when.

Side-Panel Guides on the Jimmy

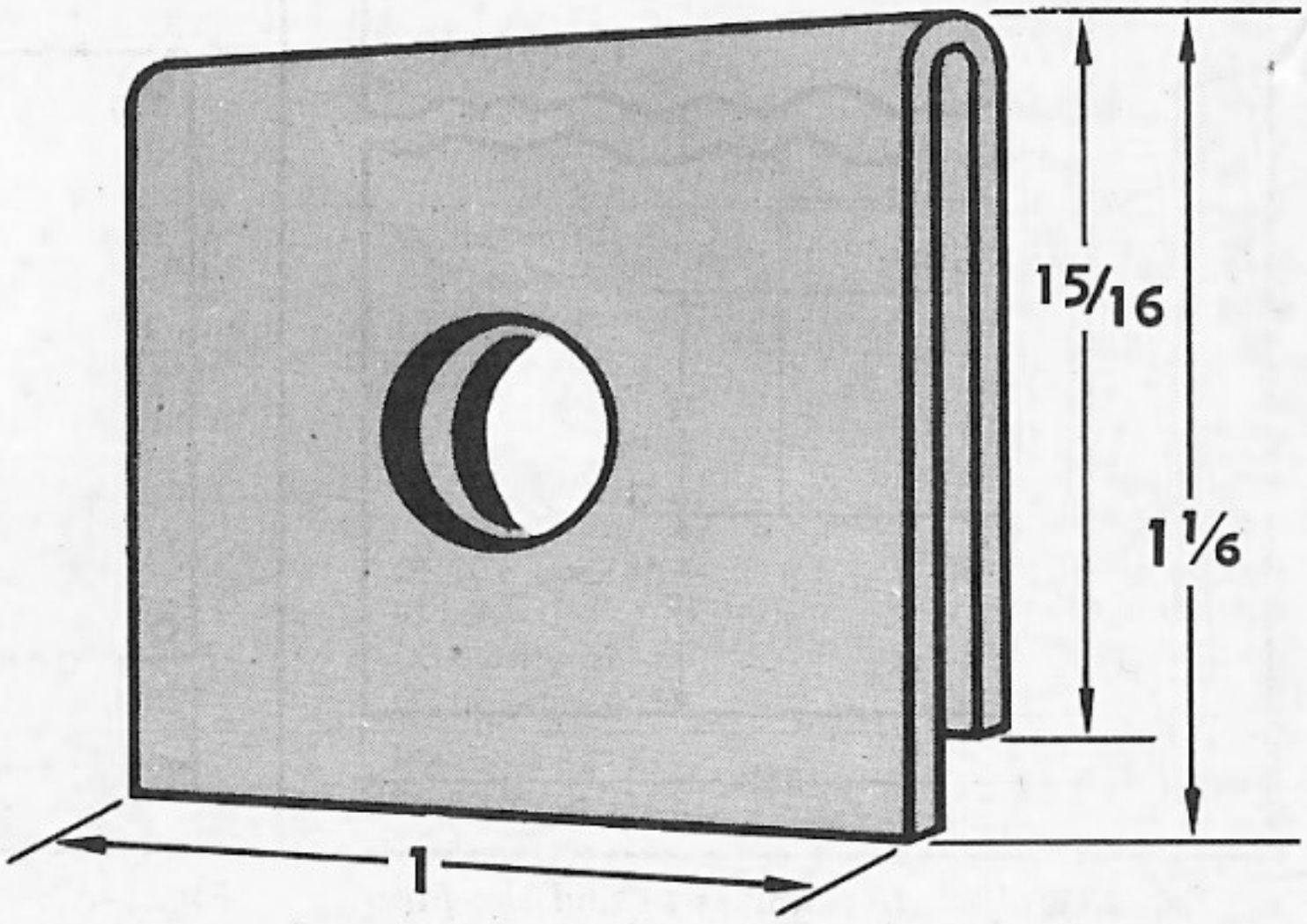
Are your cowls breaking? Are your side panels splitting? Are your fenders cracking? Are you losing your hood-side-panel guides? You're in bad shape, man.

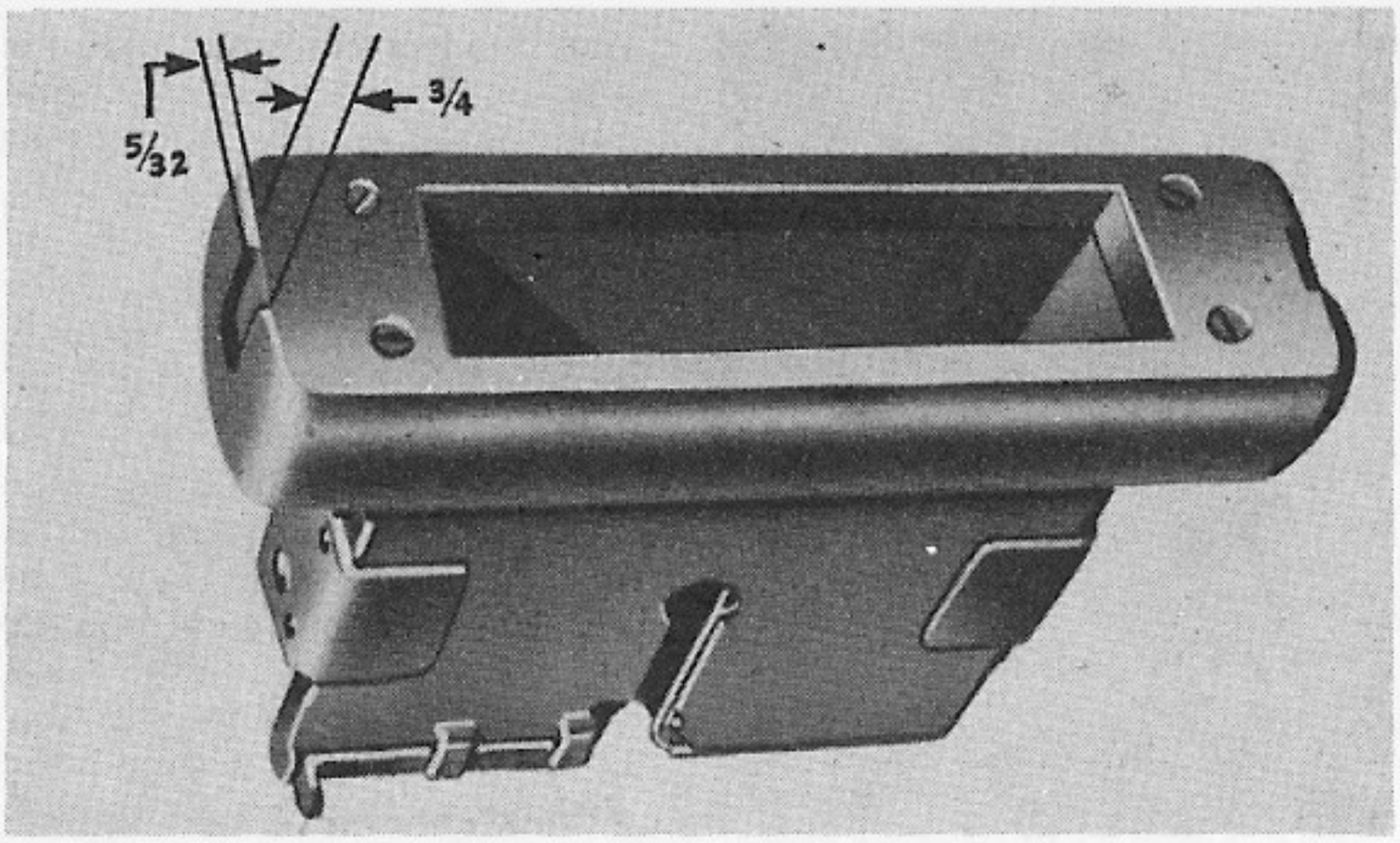
Bad roads and vibration loosen the flat, recessed-head bolt, ¼-20x⅝ (Mfr's Part No. GM-156249) and before you can say "There she goes!" the side-panel guide (GM-2164377) on your 2½-ton GMC is gone with the wind.

Worse luck, the guide isn't issued for replacement—so hang onto the ones you've got, or make new ones from 16-gage sheet metal. You need a piece 2" long by 1" wide. Bend it over into a U-shape so that one leg is about ⅛" shorter than the other (see Fig. below). Drill a 5/16" hole exactly in the center and countersink it to a 7/32" inside diameter and a 33/64" outside diameter.

And it's not a good idea to fasten the hood side directly to the cowl, using the hole on the top of the hood side-panel, because that makes a pretty rigid hookup and is the cause of split cowls and panels and cracked fenders.

If you don't want to keep tightening that nut and bolt every whipstitch, you can tack the nut on by lightly smacking the bolt threads with a hammer. Keep the bolt loose, though, so you can rotate the guide a little when you want to yank the side panel. A loose rivet will work just as well, by the way, and can't be lost.





Periscope Dope

In case that old-type periscope holder on your M4 medium or M26 heavy tank is running into interference with the rotor-block retaining pins on the commander's vision-cupola-hatch door, I've picked up this very simple remedy for you from TB ORD FE41 (9 May 45).

File a slot in each end of the rotor block like you see in Fig. at left. The new periscope holders come with the slots already there.

Oil-Cooler Leakage

Give an eye to the rubber-hose connections of the transmission-oil-cooler lines on your M26, T26E2, or T26E5 heavy tank. My tank-wise brethren tell me the lines have been leaking like a sieve—but you can make them toe the mark by tightening the clamps regularly. Before the hose are set right, do yourself a favor and tighten them three times: Once when you first get the tank, the second time after 50 miles of operation, and again after 100 miles of operation. Do the same thing when you install new lines on the oil cooler. One caution: Don't think you can do it right all at one time by putting a lot of muscle into it—if you're the man I think you are, you'll break the clamp.

Turntable Fuel-Filter on M2 Cranes

There's nothing really wrong with the turntable-engine fuel-filter on the M2 truck-mounted crane. Nothing except that you have to crawl down under to get at it. And then you have one helluva time putting it back again.

To make this filter easier to get at, TB 9-771-FEI (30 Mar. 45) says to cut a neat little service door in the right-hand-side front panel. First cut out a 12" x 12" opening, 3¼" from the left side of this panel and 10" from the bottom (Fig. 1). If there's nothing better handy, drill overlapping holes and use a cold chisel. For a real smooth job, file or grind the edges. You'll need a cover for this opening—so get a 14½" x 14½" piece of 18-gage scrap metal and drill 3/16" holes in each corner (Fig. 2). Then place the cover over the opening to figure where to drill the four holes in the panel. Attach the cover with four No. 8 self-tapping ½" screws (Item Stock No. H001-1076150) and four No. 8 external-teeth lockwashers (Item Stock No. H001-7017561).

Now when you want to get at the fuel filter, just remove the cover and there it is.

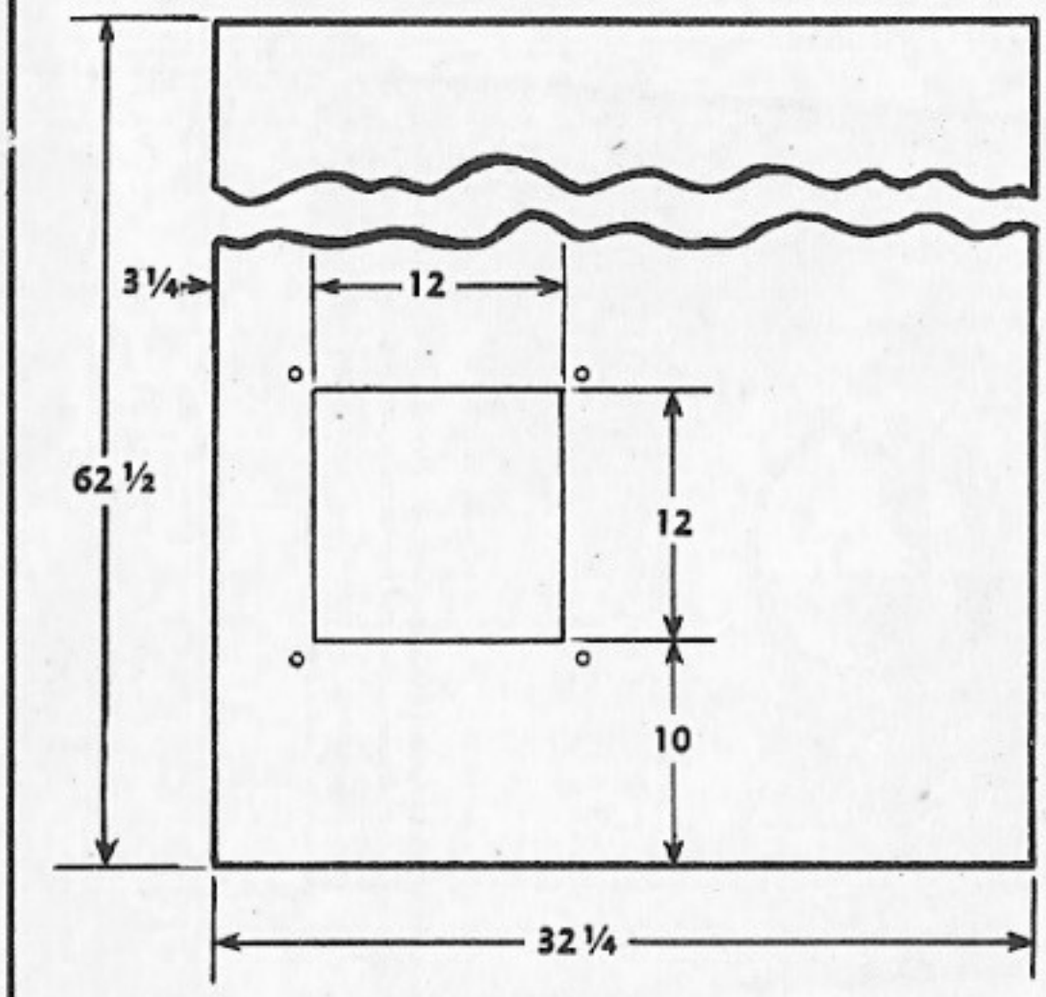


Fig. 1—Follow the figures to find the filter.

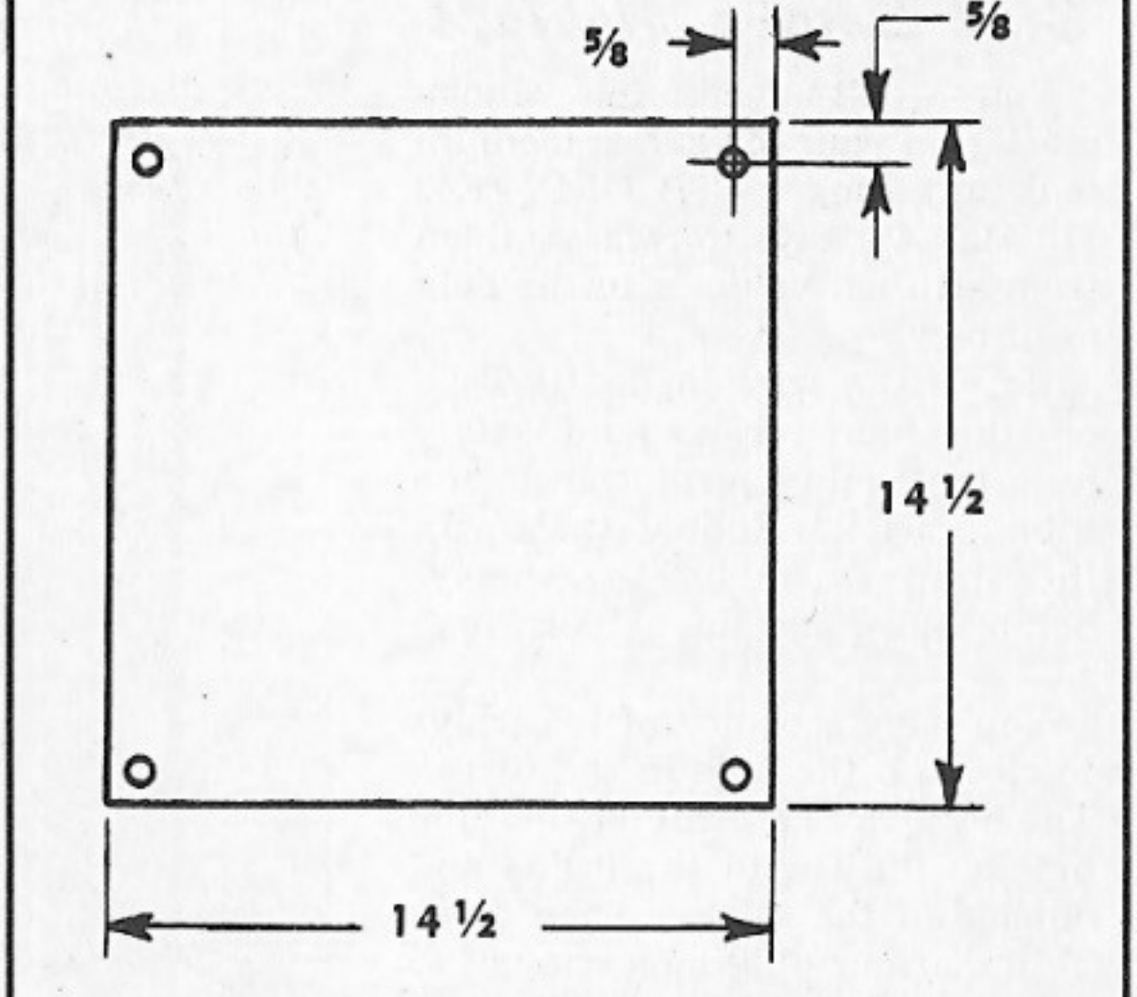


Fig. 2—Cover the hole with a screwed-on plate.

HIT AND PINCH-HIT LUBES

Some important corrections and additions (from TB ORD 300) to the list of emergency substitutes, etc., in your June ARMY MOTORS

Under the same title as you see above, the June issue of ARMY MOTORS gave you a table of correct lubricants, emergency substitutes, and what **not** to use in specified vehicles and equipment. All this was based on TB ORD 282—which has since been superseded by **TB ORD 300.**

You can bring your June chart up to snuff by making the following changes (see the previous list for a key to the symbols):

Wheeled and Half-Track Vehicles—For universal joints, the emergency substitutes are now OG 0 below 32° F and OG 00 below 0°. For cables, emergency substitutes are OE 10 below 32° F and OE 30 above 32° F.

Tanks and Gun Motor Carriages—Under gear cases, add torquematic transmission: Prescribed lube, OE 10—emergency substitute, none—do not use OE 30 or OE 50.

For hydraulic mechanism, delete PM from the list of lubes not to be used.

For the traversing and elevating mechanism, grease points, the prescribed lubricants should be OG 0 above 32° F and OG 00 below 32° F; emergency substitutes, CG 0 above 32° F and GL. For oil points, add grease to the "Do not use" column.

Motorcycles—For engines and gear cases, insert OE 10 above 0° F and OE 30 above 32° F in the "Do not use" column.

For wheel bearings (under chassis), change the second emergency substitute to CG 1 below 32° F.

TB ORD 300 also provides a table of emergency lube data for **High-Speed Tractors.** Here it is:

HIGH-SPEED TRACTORS

Item	Lubricant	Emergency Substitute	Do NOT Use
ENGINES	OE 30 above 32° F OE 10 below 32° F	None	OE 50
GEAR CASES:			
Winch	OE 50 above 32° F OE 30 below 32° F	GO 90 above 0° F GO 75 below 0° F	OE 10
Others	OE 30 above 32° F OE 10 below 32° F	None	OE 50
TORQUE CONVERTER	DA	None	OE GO
CLUTCH SELECTOR	OE 10 above 32° F PS below 32° F	PL below 32° F	OE 30 OE 50 PM GO
CLUTCH BEARINGS	CG 1 above 32° F CG 0 below 32° F	WB above 32° F OG 0 below 0° F	OG 00 BR WP
UNIVERSAL JOINTS	CG 1 above 32° F CG 0 below 32°F	OG 0 below 0° F	WB WB 3 WP
SUSPENSION SYSTEMS:			
Oil points	OE 30 above 32° F OE 10 below 32° F	OE 50 above 32° F PS below 0° F	PM OE 50 below 32° F
Grease points	CG 1 above 32° F CG 0 below 32° F	OG 0 below 32° F OG 00 below 0° F	WB WP
CABLES	Used crankcase oil	PM above 32° F OE 30 above 32° F OE 10 below 32° F PS below 0° F	Grease

GET YOUR DODGE BRAKES ON THE BALL!

They're a little on the tricky side—but knowing how to adjust them is 99-44/100% of the battle

The last thing a brake adjuster oughta do is adjust his brakes. You can go ahead and adjust 'em till the last GI clears out of Japan —and still they won't work right unless you **first** make sure you've got enough fluid in the master cylinder, pedal free-travel is sufficient, brake linings are okay (no glaze, no grease or oil), wheel-cylinder pistons and brake shoes are working freely, and wheel bearings are in proper adjustment.

In the case of the ¾-ton 4x4 and the 1½-ton 6x6 Dodge—whose brakes have been cussed on occasion by a few baffled folk—the fluid in the master cylinder shouldn't be below ¾" from the top of the filler hole, as shown in Fig. 1. The brake-pedal free-travel should be 7/16" (Fig. 2). The master-cylinder piston-cup must uncover the relief port when the brakes are released. Without enough fluid, the brakes act slowly —and without that pedal free-travel, the brakes drag. Another caution before we start making the adjustment is to let the brake drums cool off if they're hot from operation. Otherwise they'll contract after you've made the adjustment and throw off your clearances.

MAJOR ADJUSTMENT

First, let's take a Dodge that requires a major brake adjustment. This adjustment's called for when you've replaced brake shoes or linings or when drums have had to be replaced or resurfaced. It may also be a good idea to make a major adjustment after new linings have been run-in, say 200 to 300 miles after they've been installed.

You start by loosening the locknuts and turning the brake-shoe anchor-bolts so the punch marks on the threaded end face each other and flat sides of the bolts are horizontal as in Fig. 3.

Now you can forget the anchor bolts for a minute and turn the cam hex-nuts until you've got a toe clearance, measured at a point near the cam, of **.006"**. Then rap the cam-adjusting hex to be sure the cam is seating properly. After the rap, if the clearance isn't .006", reset it and conk the cam hex again. Repeat this until you've got .006" clearance with the cam seated correctly.

Getting back to the anchor bolts, you set the heel clearance also at **.006"**, measured one inch from the end of the lining. In making this adjustment, the right-hand anchor bolt should be turned counter-clockwise and the left-hand anchor bolt clockwise to reduce the clearance between the drum and lining.

In case you're curious about that toe adjustment, or even if you're not, go ahead and check it. If your brakes weren't in too bad shape, the toe clearance should now check to **.012"**, which is exactly what we want. If it doesn't, due to worn parts or maybe high spots on the lining, all you do is move the cam and anchor adjustments a very little at a time until

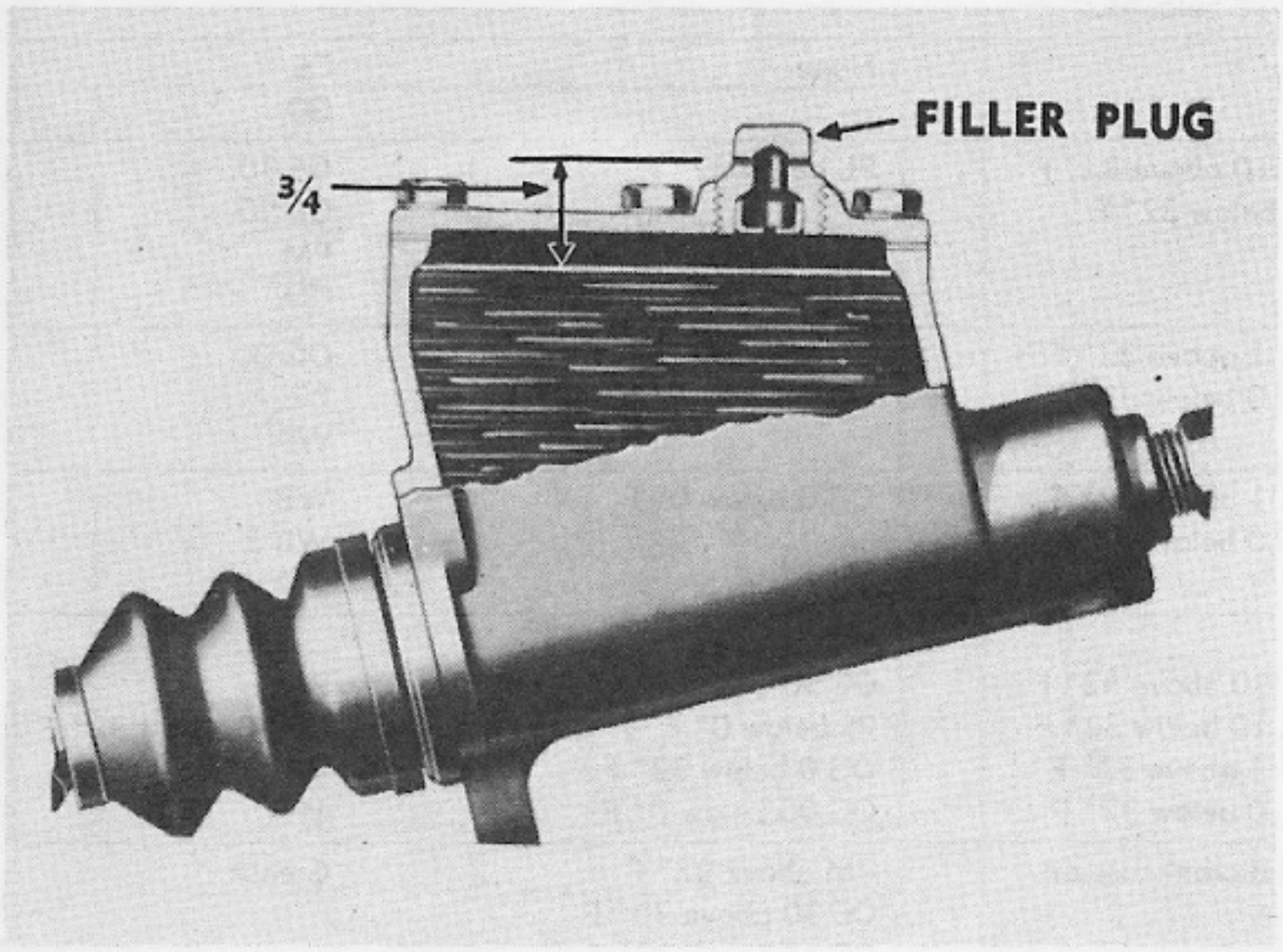


Fig. 1—To start off on the right foot, fill your Dodge master cylinder to a level ¾" below the top of the filler hole.

you hit .012" toe and .006" heel clearances. Tighten the anchor-bolt nuts securely and you got brakes on your Dodge.

MINOR ADJUSTMENT

For a minor brake adjustment to reduce brake-pedal travel caused by lining or drum wear, or to release brake drag, you need to adjust the cam only.

While revolving the brake drum, turn the cam until the brake shoe drags on the drum, if it didn't already—then turn the cam in the opposite direction until the drag is gone. Now apply the brakes and see that the shoe doesn't drag after you release the pedal. If it does, back off the cam a little and rap the cam hex to seat it properly.

The reason for all this conking is that the cam has a bad habit of tipping down out of alinement when it's moved with the shoe against it, and a sharp rap will usually put it back where it belongs. (There's some talk of relocating the cam spring to correct this but there's nothing official on it yet.)

If you don't get good braking action after a minor brake adjustment, better recheck your linings, drums, and working parts of the brake to be sure they're in good condition. If they are, a major brake adjustment should be the answer to your problem.

People have been known to put the brake-shoe-return springs in backward so they interfere with the cam, causing the brakes to lock. This couldn't happen if you were using the brake-spring pliers (Fed. Stock No. 41-P-1579). Another cause of locked brakes is loose backing-plates. Be sure to tighten them every time you fuss with your brakes.

One parting suggestion: You don't have to take off on a cross-country trip to test your brakes after cleaning up the end covers. Just jack up the truck, run the wheels, and then slap on the brakes. You'll know immediately if the end covers stick open, because the brakes will be held on. Saves a lot of wild-goose chasing up and down the road.

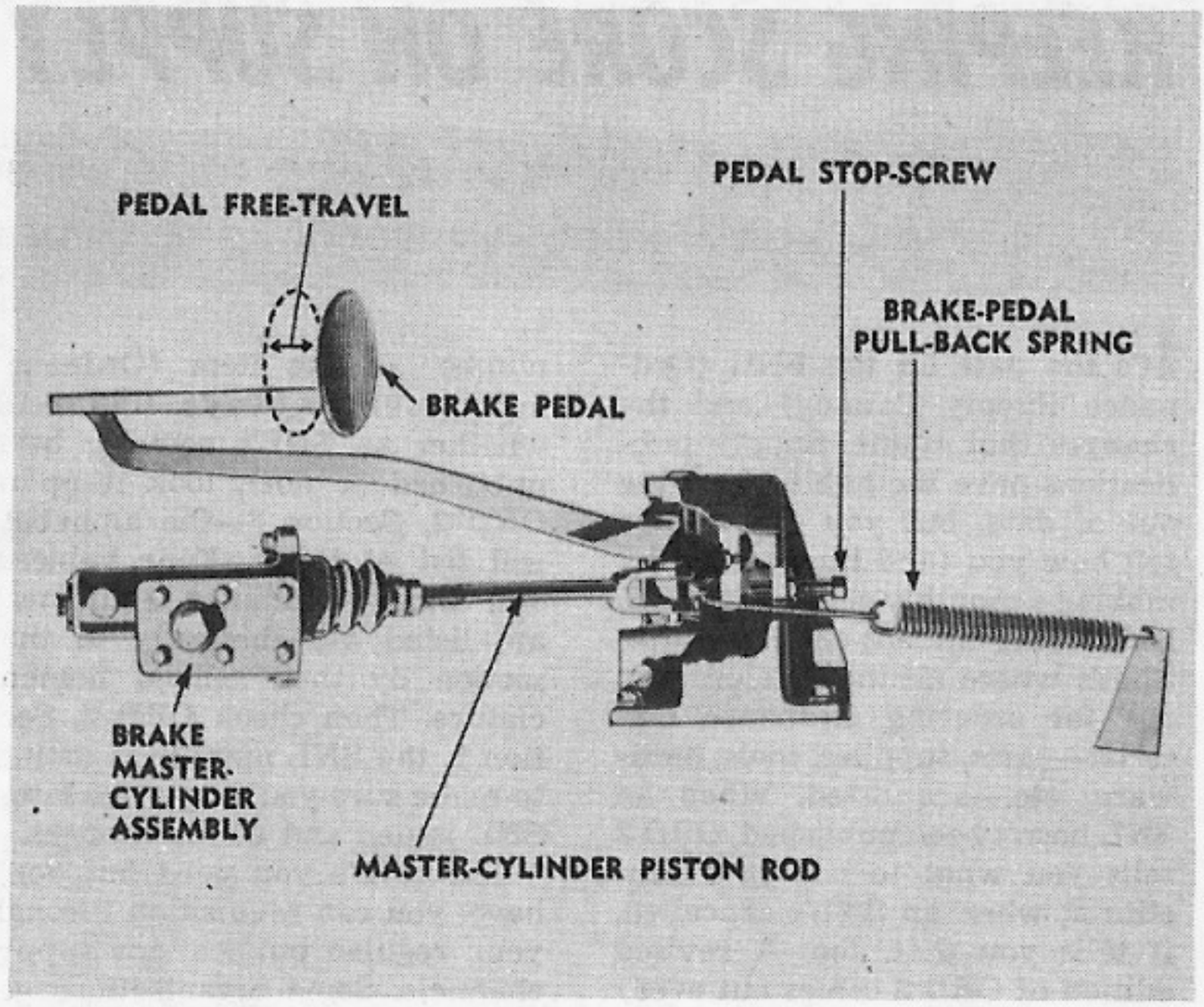


Fig. 2—Without that 7/16" free play, shown between the brake pedal and the dotted circle, your brakes'll drag.

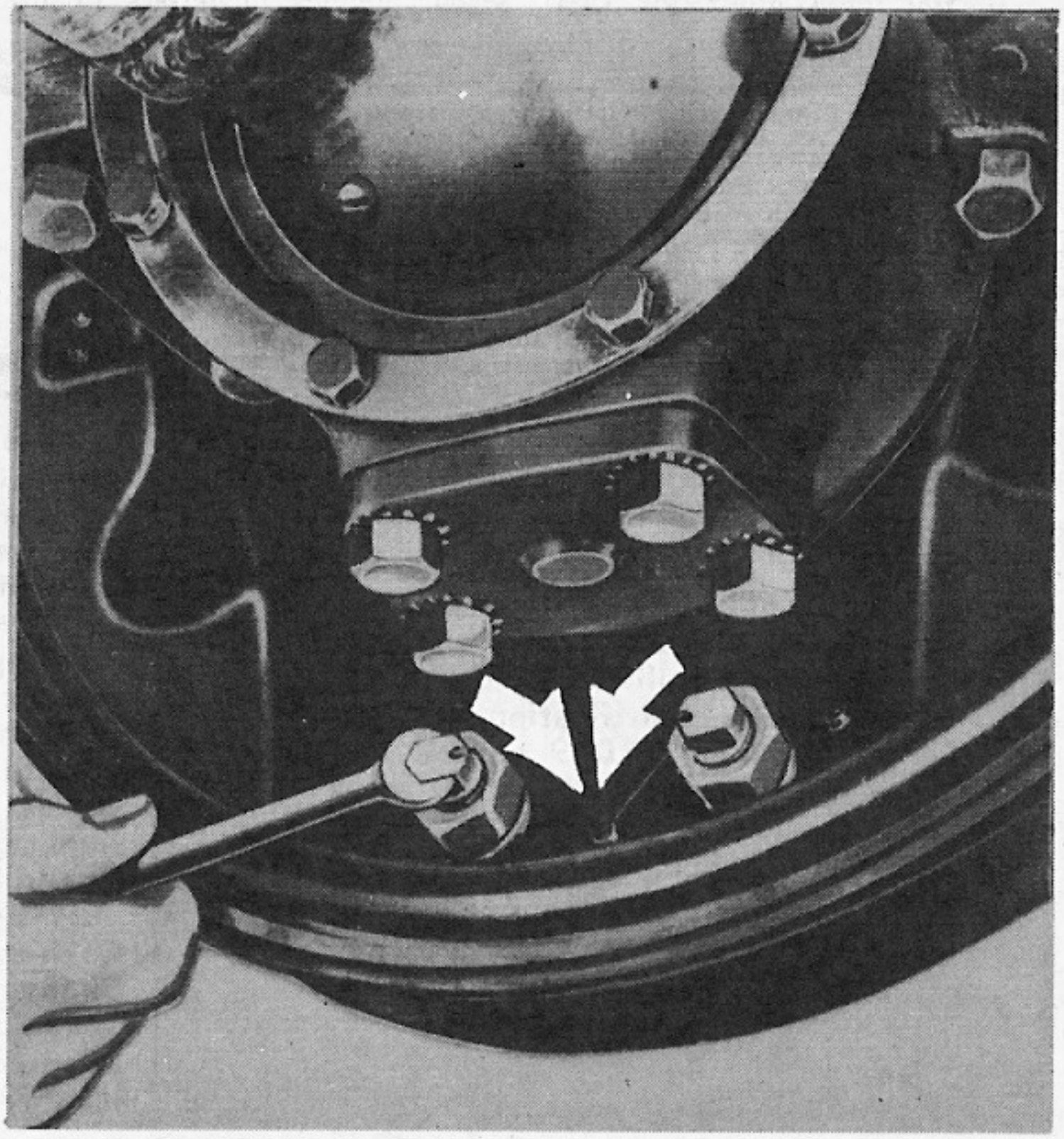


Fig. 3—Set anchor bolts as shown to start major adjustment. Turn the arrow to bring lining closer to drum.

KEEPING SCORE ON SUPPLY PUBLICATIONS

You can't order parts and tools without books—and you can't know your books without ORD 2, Index

It's the **date** on the SNL (Ordnance Supply Catalog) and the **changes** that count. Supply publications have the habit of getting out of date, but you can always tell how you (and they) stand by making a monthly check in **ORD 2, Index**—the current one, of course. That's where all the catalogs you use for ordering Ordnance material—parts, supplies, tools, hardware, etc.—are listed. When an SNL hasn't been published, ORD 2 tells you what to use as a substitute; when an SNL's cancelled, it tells you that, too. A revised edition of ORD 2 comes out every other month, and a change brings it up-to-date in between.

If you don't know the SNL number of the item (Ordnance equipment always has one, whether an SNL's actually been published or not), look it up in ORD 2, Section 3—the alphabetical list of items. Your vehicles and other Ordnance equipment are listed alphabetically in that section by their official nomenclature. Then check ORD 2, Section 2, the SNL numerical listing, to make sure you've got the **latest** SNL issued and all its **changes.**

The SNL's you need but don't have, you can requisition through your regular publications supply channels. Some organizations get them on automatic distribution—others don't. But paste this in your helmet in letters of fire: **Any outfit, whether it's on the regular distribution list or not, can requisition any publication it needs.** ASF Ordnance Supply Catalog, **ORD 2, Index,** tells you what supply publications covering Ordnance equipment are available. Latch on to it first—then get the latest SNL's (and changes), for your vehicles and for any other supplies and equipment you need in connection with vehicle maintenance. You've heard plenty about ordering parts by the book—well, you have to order **books** by the book, too—**ORD 2, Index.** That brings you supply books—supply books bring you parts, hardware, tools, etc. (it says here). Anybody want 'em???

G-147	Half-track vehicles (International Harvester) CAR, half-track, M9A1; CARRIER, personnel, half-track, M5; CARRIER, personnel, half-track, M5A1; CARRIAGE, motor, multiple gun, M14; CARRIAGE, motor, multiple gun, M17 ORD 7-8-9 Organizational spare parts and equipment, Higher echelon spare parts and equipment (Addendum), and Service parts catalog.....	15 May 1944	1, †2
G-148	TANK, light, M22 (T9E1) (Marmon-Herrington) ORD 7 Organizational spare parts and equipment.....	22 Jan 1944	1

A three-in-one SNL with the ORD 7, 8, and 9 all bound together—they put 'em out that way a while back. 2nd echelon uses only ORD 7 and ORD 9 sections—ORD 7 for ordering parts, and ORD 9 (where they're illustrated) for identifying 'em.

Date on latest catalog. If you've got any of these International half-tracks, you should have it.

It don't mean a thing without these changes—Change 1 and Change 2.

Symbol indicates Change 2 was distributed since the last ORD 2 was published.

An old 10-series parts list (put out by QM back in the days when trucks were in their bailiwick). Use it for parts identification until you see an ORD 9 on the list. Ordnance catalogs for most vehicles have superseded the 10-series parts lists, but when they haven't, ORD 2 shows what 10-series manual to use.

	...Service parts catalog.....	15 Feb 1944	
G-532	TRUCK, 7½-ton, 6 x 6, prime mover, w...ack) Model NO-2, NO-3, NO-6, NO-7 (TM 10-1478, ...d edition, dated Oct 1943) ORD 7 Organizational spare parts and ...pment..... ORD 8 Higher echelon spare parts and equipment (Addendum).....	27 Jun 1944 15 Oct 1944	1

Will you love us in peacetime...

as you did in war?

The best transportation magazine it has been our privilege to read.-WO J.L.H.

Your magazine is a lot more useful than a lot of TM's.-Sgt. B.J.B.

It's a swell magazine.

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Tops with us — we definitely want it.-Lt. C.W.S.

your magazine does more than anything else to aid preventive maintenance. — H.B.

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L.D.T.M.

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one of the best published.

I only hope your wonderful magazine is carried on after the war.-Lt. L.L.S.

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Widely read and quoted. - S.L.M.

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The best publication I have seen in 21 years of automotive maintenance.-W.O.G.

Keep it Coming! - S/Sgt.

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Splendid help to men in the field. — L.R.a.

I can't praise it too much.

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A helluva lot of good dope. — W/O

Read Army Motors every chance I get. - Cpl. H.L.K.

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I had the pleasure to read

I would rather lose my chaw card than army motors — Cpl. A.M.C.

SEE INSIDE

The only complete and reliable source of information — Pvt. W.L.R.

Announcing the POSTWAR ARMY MOTORS

THIS is it, men! The September issue of ARMY MOTORS, with the Victory cover, is the last one to be published and distributed—for free—by Ordnance. The magazine's war job is done—and we'll leave it to you how well done.

But ARMY MOTORS' **postwar** job is just beginning. We're staying in business "on our own" to continue our teamwork with you people in the field—to answer your long, loud cry for a postwar maintenance mag like ARMY MOTORS. Hell, this won't only be **like** ARMY MOTORS — this'll be the McCoy (none genuwine without Half-Mast's signature).

You can keep right on getting the same old Greaseball's Home Companion that puts your hottest ideas in print, solves your problems, tells you what's new, and helps you know your vehicles—and the strange new commercial jobs, too—inside out. All you gotta do is autograph the coupon, plunk it in an envelope, and pay off when you get the bill. Hop to it, man—don't miss an issue!

● To keep your ARMY MOTORS

● **M/SGT. HALF-MAST McCANICK**—There's no sign of a discharge for this trouble-shootin' tramp. Your favorite answer man will be in there pitchin' fast curves till the cows come home.

● **CONNIE RODD**—The most pinned-up pigeon of the gas-house

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● **JOE DOPE**—CWO Will Eisner's magnificent moron has snaffed things up for years and he can't stop now. You'll catch him every month with his OD pants down, as always.

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How Many Years? ☐

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NAME

PRESENT ADDRESS

HOME ADDRESS

	ORD 7-8-9 Organizational spare parts and equipment, Higher echelon spare parts and equipment (Addendum), and Service parts catalog.....	1 Oct 1944	1, 2
G-502	TRUCK, ¾-ton, 4 x 4 (Dodge T214) (Master parts list, SNL G-657) Model WC-51, weapon carrier; Model WC-52, weapon carrier, w/winch; Model WC-53, carryall; Model WC-54, ambulance; Model WC-56, command reconn.; Model WC-57, command reconn., w/winch; Model WC-58, radio; Model WC-59, 61, telephone maint.;. Model WC-60, emergency repair chassis; — emergency repair chassis, w/winch		
	†TRUCK, ¾-ton, 4 x 4, ambulance, KD WC 64		
	†ORD 7 Organizational spare parts and equipment.....	27 Mar 1945	
	†ORD 8 Higher echelon spare parts and equipment (Addendum).....	15 Mar 1945	
	ORD 7-8-9 Organizational spare parts and equipment, Higher echelon spare parts and equipment (Addendum), and Service parts catalog. (Later ORD 7 and ORD 8 printed separately).....	15 Aug 1944	1, 2

Hang on to your ORD 7, 8, 9 (three-in-one book), even though you've got the ORD 7 published separately. You'll need the ORD 9 section of the three-in-one for parts identification.

You can toss out all those marked "cancelled" any day now—the sooner, the better. Notice of an SNL cancellation used to come through as a numbered change to the SNL, but it's not done that way any more. Now it's just marked "cancelled" in the SNL numerical listing in ORD 2.

M-1	Electrical apparatus units and parts ORD 5 Electrical apparatus units and parts.....	29 Jun 1943	3
M-2	Publication canceled		
M-3	Publication canceled (formerly Miscellaneous accessories units and parts). Material transferred to applicable Groups H, J and K		
M-4	†Publication canceled (formerly Accessory unit parts, miscellaneous)		
M-5	Items common to two or more groups †ORD 13 Items common to two or more groups.....	21 Apr 1945	
M-6	Publication canceled		
M-7	Publication canceled (formerly Miscellaneous semi-special bulk material)		
M-8	†Publication canceled (formerly Miscellaneous chests, kits, racks, and tool rolls (without contents)) (transferred to SNL J-15)		

GMC STEERING GEAR

(Continued from page 163)

that ain't all. You may remember your steering column is mounted on the dash and your housing on the truck frame—so all you have to do is have them jerked apart a little, about five and a half times every second, and brother, your lorry is headed fast for some haggard hacks' happy hunting-ground, traveling steerage. Even if it doesn't get there, that flexing action in the steering and gear box isn't going to improve its disposition.

PUT IT BACK RIGHT

If you have to make any adjustments on your gear, better make sure you get the whole works together again right-side-up. Housing and cover have to be tight. If the end-cover-attaching bolts are loose, that large adjusting screw in the center of the cover has to be loosened at least two turns before you put the squeeze on the bolts themselves. That's so you won't end up with a long ground swell in the clamping surface of the cover—to say nothing of a healthy oil leak and a fistful of damaged parts.

If you're smart, too, when you're putting that end cover back on, you'll slap in new gaskets and dribble a little Permatex on 'em so they'll seal better. If there aren't any new gaskets on your shelf, you can cut some out of plain old wrapping-paper.

Anyway, if your favorite ten-wheeled friend has an advanced case of the blind staggers and you're going steer-crazy yourself, don't sit and ponder the enormous inequities of unkind fate — face your housing problem squarely: Wake up and steer right.

Secrets of the Wrecker

THAT MYSTERIOUS OIL LEAK ON THE DIAMOND T 4-TON WRECKER, WHERE TO LOOK FOR AN AIR-BRAKE LEAK—ALSO SELECTED SHORT SUBJECTS

One of the big mysteries of the European War was: *Where does the oil come from that drips all over the front axle of the Diamond T 4-ton wrecker?*

From Wurzburg all the way down the sunshine route to the everlovin', fraternizin' town of Pilsen, Czechoslovakia, the little people gathered in the streets and bandied the question.

Today, with the doors of diplomacy thrown wide open, the answer can be told.

The oil leaks out of the timing-gear case through the generator-mounting sleeve.

Pin on your Dick Tracy Junior G-man button and leave us find out why the oil leaks out of the generator-mounting sleeve. There's a couple reasons why:

First, there's the safety-wired locking studs holding the gears and the oil slinger (Fig. 1) tight on the generator shaft. If these studs work loose, the generator shaft spins freely in the sleeve of the slinger and the slinger doesn't turn. Not turning, the slinger doesn't sling the oil back where it belongs.

This is the first possibility—tightening the studs and checking the safety wiring, if it's the source of the leak, is your answer.

Second thing to look at is the slinger itself (Fig. 1). A hasty or profile-type examination shows that it has a center sleeve which is crimped on. There is such a thing as taking a generator apart and finding that the leak all over the wrecker's front axle is due to the sleeve coming uncrimped from the rest of the slinger. Again, the slinger can't spin and sling the oil back where it came from.

The repair here is to braze sleeve and slinger back together again.

The third condition that may be causing your leak is a damaged seal. Just inside the generator-mounting sleeve, there's a cork seal (Fig. 2). If this seal was damaged when first installed, it'll

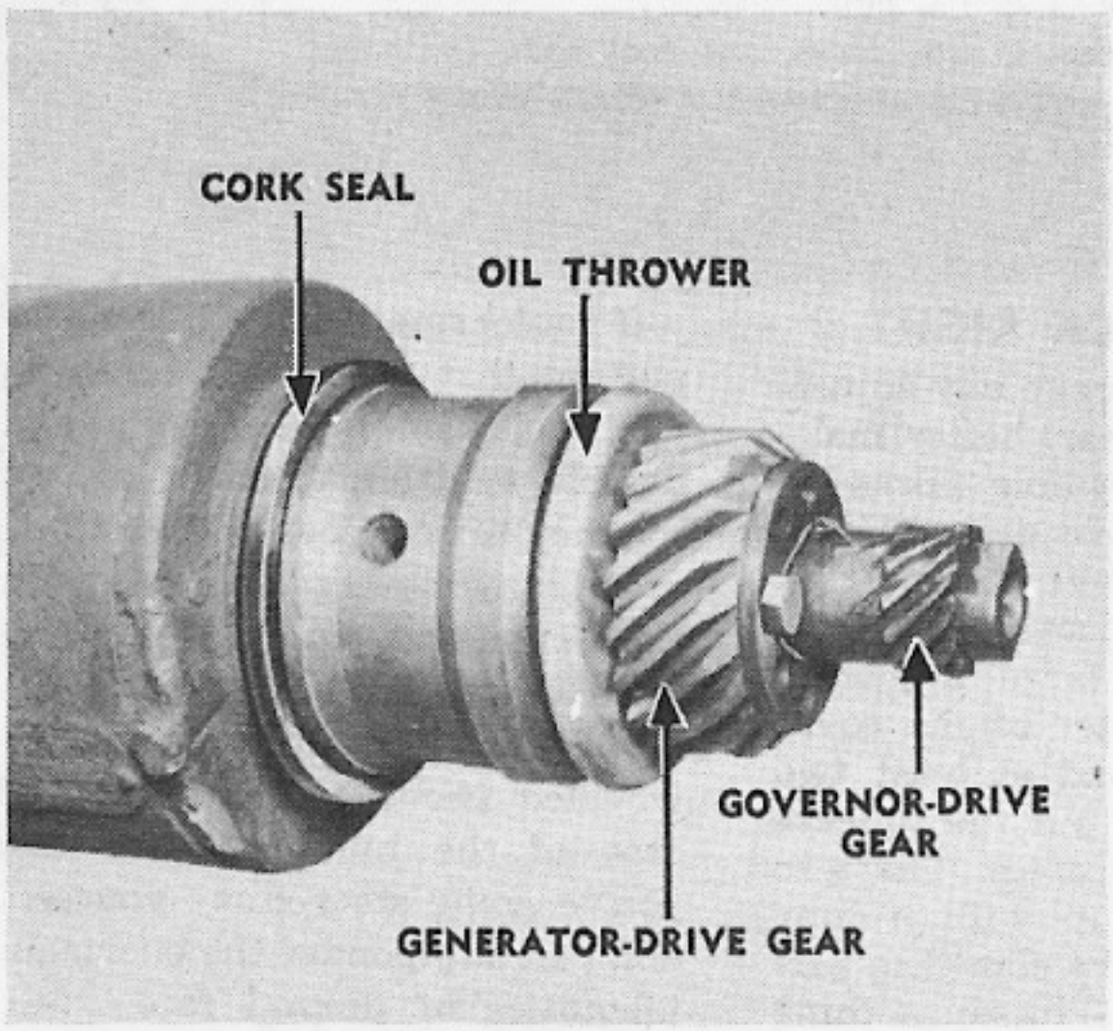


Fig. 1—The cork seal, slinger, and locking studs, any of which might cause that oil drip.

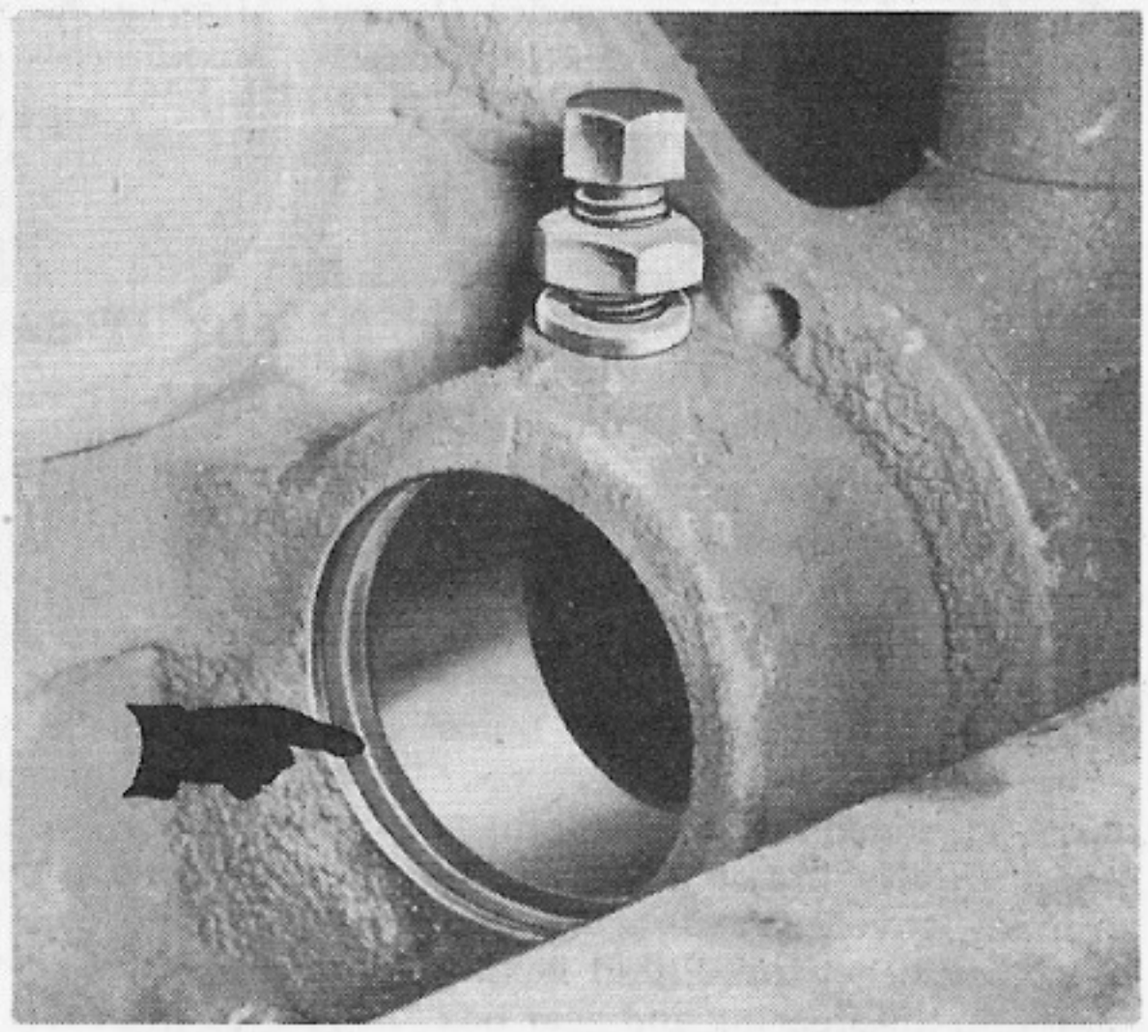


Fig. 2—Where the cork seal sits in the generator-mounting sleeve. Replace it if shot.

let the oil leak out of the timing-gear case. Or the seal might of got beat out in the course of the day's occupation by the movement of the generator. The set screw holding the generator in the mounting sleeve might be loose—or maybe it was wedged in cockeyed. In either case, the seal takes a beating.

Replace the damaged seal, if shop supply can produce one, or cut a new seal out of cork gasket-stock. Tighten the set screw holding the generator in the mounting sleeve and lock it with the locknut.

NO AIR BRAKES

The most exciting thing that can happen to a Diamond T wrecker operator—outside of a strafing—is applying the air brakes going downhill with a blind curve coming up, and finding that the air brakes have vanished into thin air.

The weak spot in the air-brake system, that has been letting the air out of the bag, is the copper tubing (Fig. 3) in the circuit that feeds the hand-operated brake-valve on the steering column. This tubing, which runs into the brass fitting sitting up near the top of the firewall on the left side of the engine compartment, is on the receiving end of a lot of vibration and too often breaks.

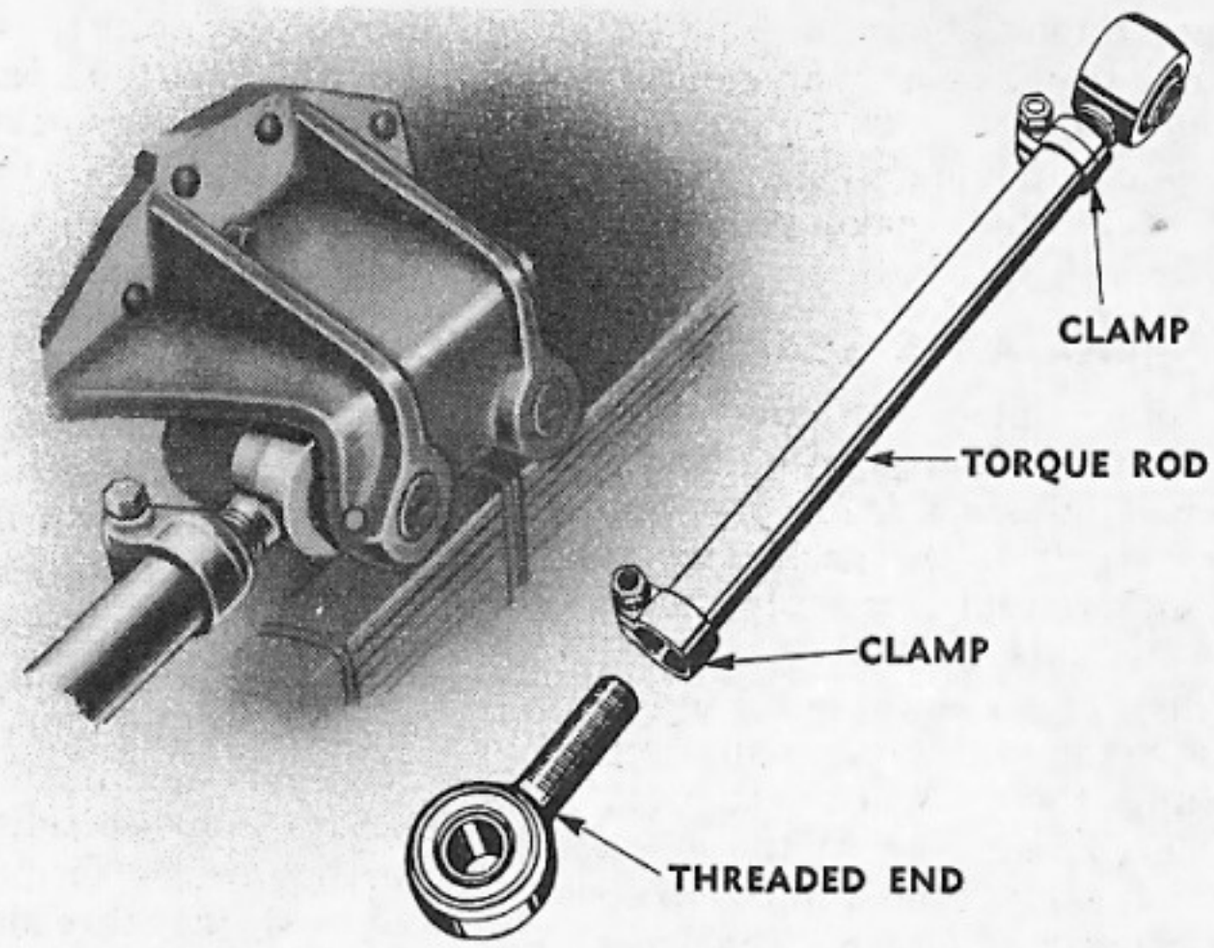


Fig. 5—Line up the slots in the clamp and torque arm as close as possible to keep the threads from stripping out.

The break comes in the tubing just inside the brass fitting, right below the ferrule or collar on the tube. Vibration crystallizes the copper line and makes it brittle. Being brittle, it breaks. When it breaks, you've got an air leak. A leak in the air-brake system means you've got little or no air brakes to control your 4-ton wrecker.

Let us pray.

The roadside fix to get your wrecker home is pretty simple. Take the broken tubing out of the brass fitting and take the ferrule off. You'll have to split the ferrule to do this, by driving a tapered drift down into the broken end of the tubing. Move the ferrule down farther on the copper tubing, insert the tubing into the brass fitting, and tighten.

This, to repeat, is strictly a roadside repair. Ye Olde Mechanic's Remedy for copper tubing that is subject to so much vibration is to put a coil or pig's tail in the line. The curl in the line absorbs the shakes.

To modify the line this way, you'd have to replace the original ⅜" copper tubing, which is about 33½" long, with a section of ⅜"

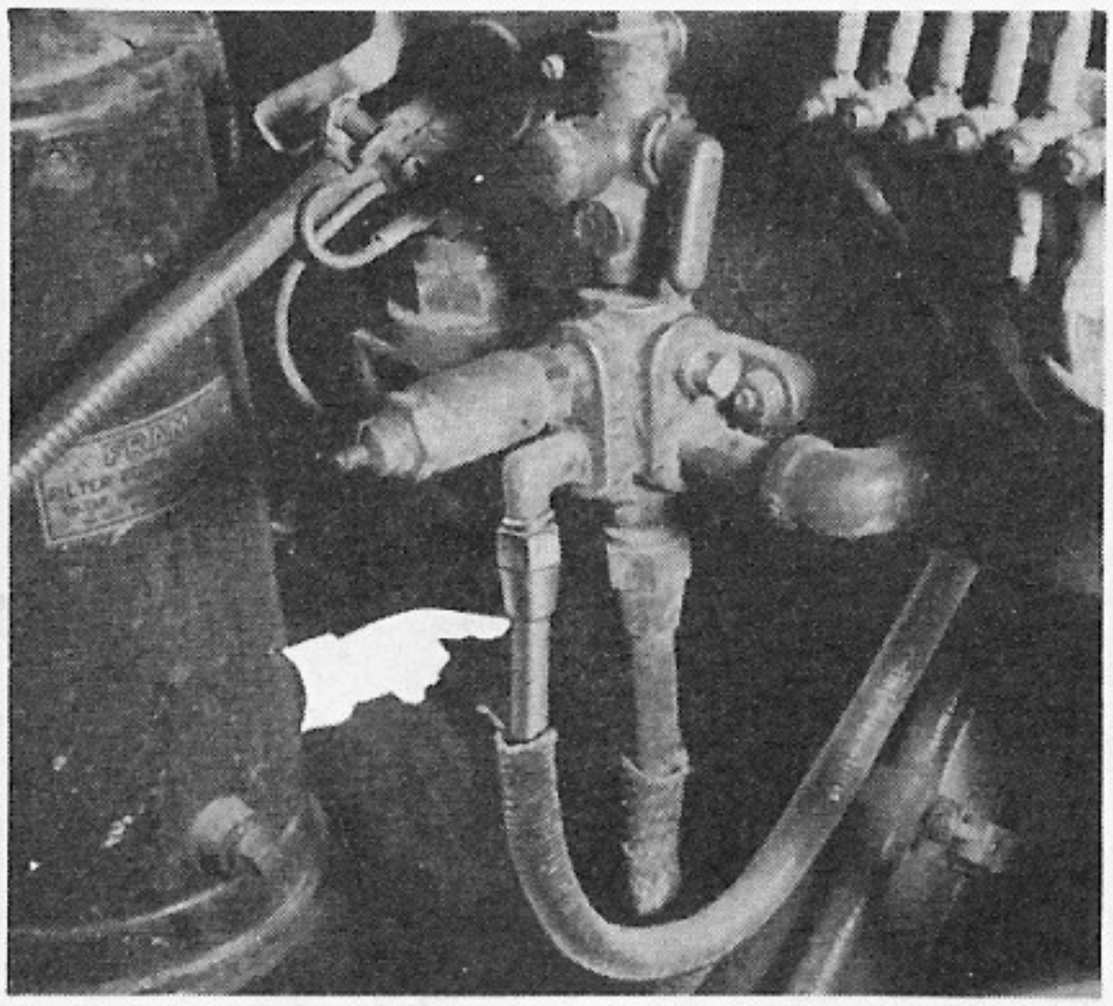


Fig. 3—The little copper tubing cracks and takes all the wind out of your brake system.

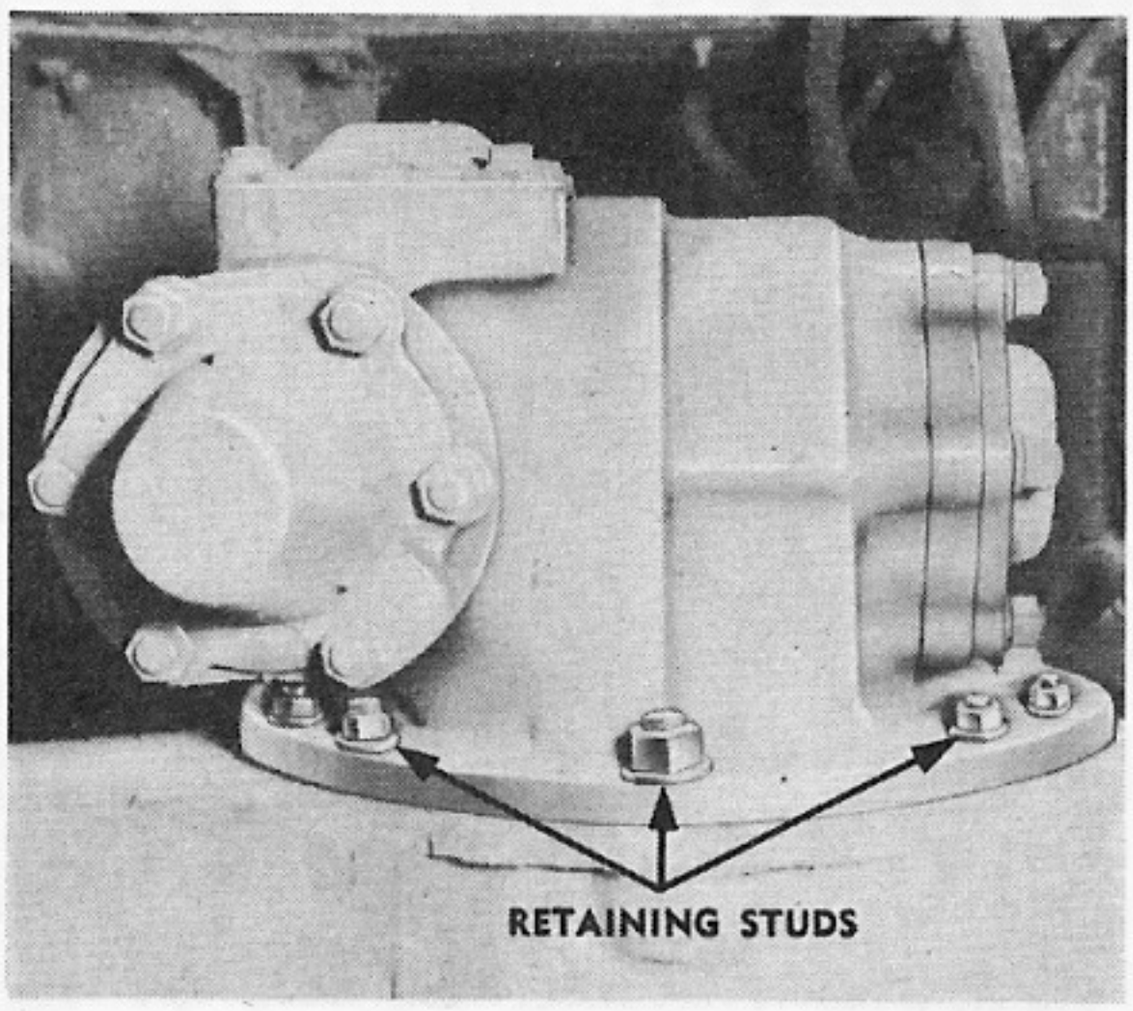


Fig. 4—When the retaining nuts aren't kept tight, oil leaks, the gasket goes—no wrecker.

copper tubing about 38" long—or enough to make a complete loop in the line.

If you're having enough of this sort of trouble, make your own decision.

REAR-AXLE LEAKS

Another place on the 4-ton wrecker where you often find a tell-tale oil stain is on the rear axles—right at the gasket where the differential assembly hooks onto the axle (Fig. 4).

This comes from not keeping those retaining bolts on the axle housing tight. When not tight, the terrific strain that the whole wrecker gets causes these bolts to stretch and loosen. The loose bolts allow the mating surfaces of the differential housing and the axle housing to grind out the gasket—and some poor Ordnance slave has a big dirty job changing that gasket. The drive-shaft and the axle have to be pulled and your valuable wrecker may be tied up for days or weeks.

Preventive Maintenance—keep after those retaining bolts, keep them tight.

REAR-BOGIE TORQUE-ARMS

Another one of those things that can stand repeating, because it happens so often, is the condition where the torque arms on the rear bogies strip their threads and pull out. You can see any number of wreckers running around with the tube part of the torque arm actually brazed to the threaded shaft, as a sort of shade-tree repair.

As Connie Rodd explained in May, one way to help keep the threads from stripping out is to move the clamp down an inch and a half to the center of the threads (see Fig. 5). This gives it a better grip on the threads.

As a further explanation, the manufacturer points out that the bogie action of the wheels causes a sidewise action in the torque arms. This sidewise action causes the threads in the torque arm to rub against the threads on the threaded shaft. In time, the threads wear and create more clearance for themselves — being loose like this, they're on the way to stripping out. And if the clamp on the torque arm isn't lined up the way it's supposed to be, it doesn't do a job of holding. The clamp should be positioned so that the slot in it is lined up as close as possible to the slot in the torque arm. This, the manufacturer says, will give you full clamping action out of the clamp. He gives you a little leeway so you can get at the tightening nut on the clamp by permitting the slot in the clamp to be 45° away from the slot in the torque arm—but no more.

Also, somebody might remind the driver that cowboying the wrecker around over rough terrain is probably what really throws too much strain on the torque arms and causes them to pull out.

REAR-END SHIELD

How badly beat up is the rear end of your wrecker? Notice we don't ask is it beat up. Practically every 4-ton wrecker in Germany and Czechoslovakia has a rumpled rump. This comes from towed vehicles swinging, swaying, and banging up against the rear of the wrecker.

Out in the Pacific, your scrap iron and armor plate situation may be different, but in the ETO, a number of outfits have fortified the rear ends of their wreckers by covering the whole rear end with a sheet of scrounged armor plate (Fig. 6). The plate is cut out so it doesn't hide the rear bumperette and pintle, and a couple of holes are cut for the trailer-cable connection and for the tail lights to show through. A couple more holes are cut, one on each side, for holding the hooks on the ends of the boom cables when not in use.

BUSTED GOVERNOR TOWER

Judging by the number of 4-ton wreckers in Germany that had the governor towers (Fig. 7) knocked off, and then brazed back on (to

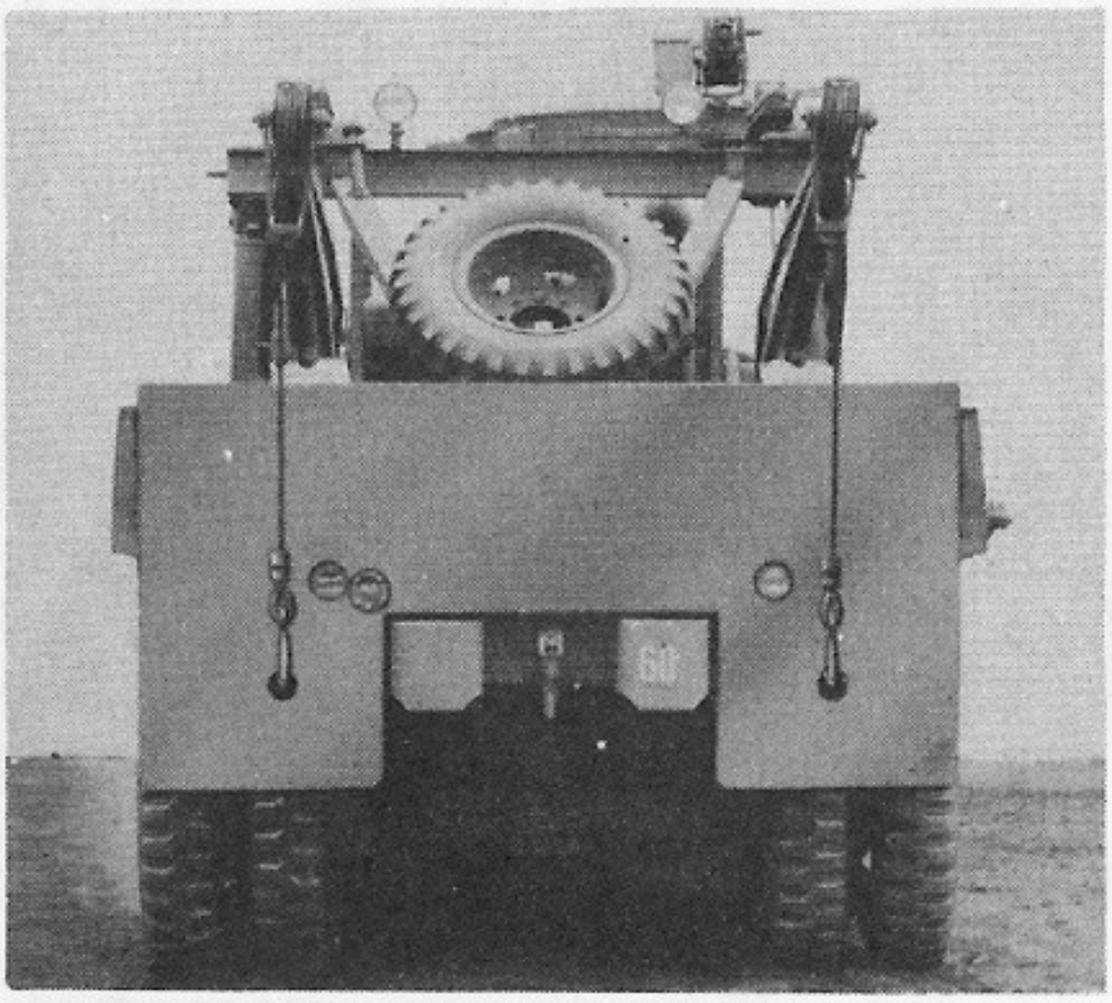


Fig. 6—Armor plate on the rear end kept many an ETO wrecker from being banged up.

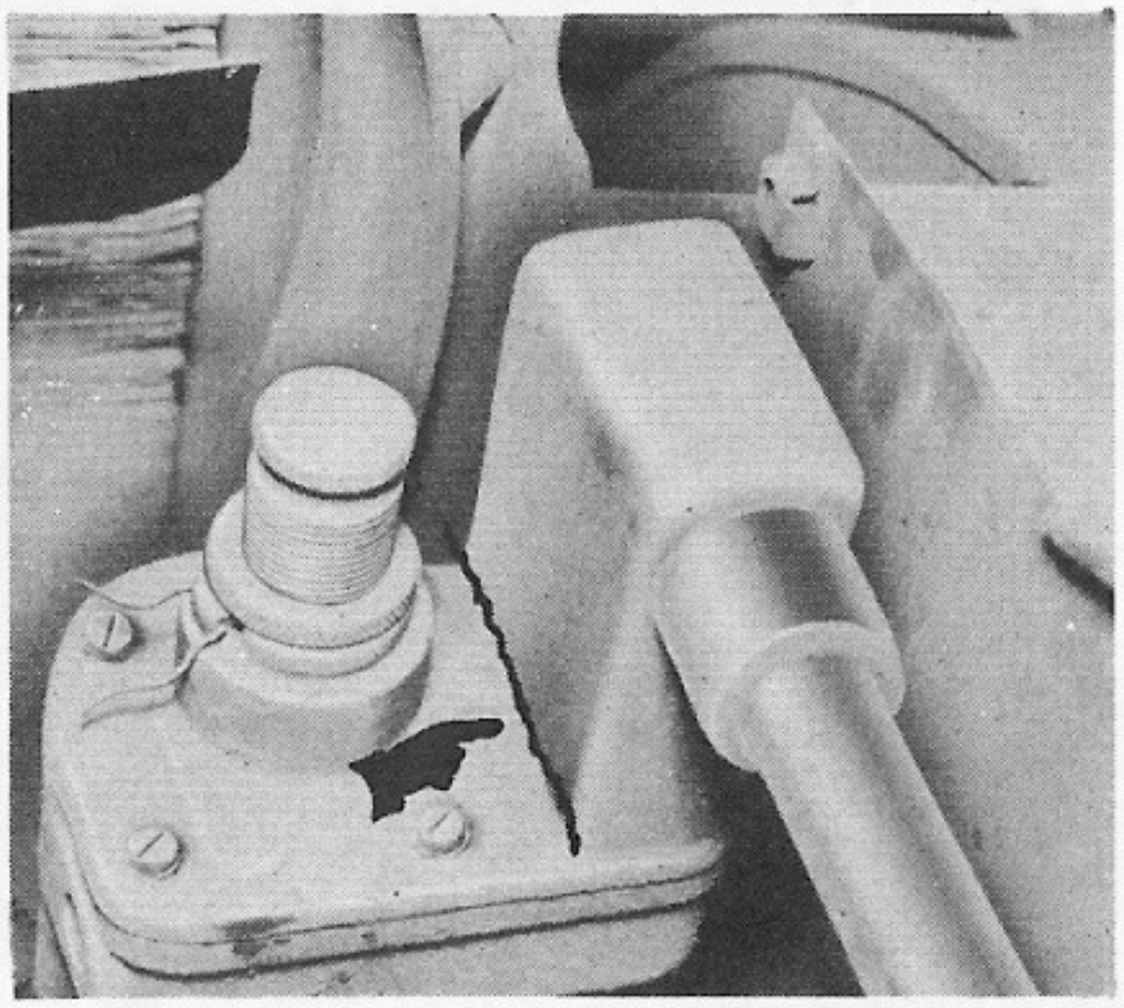


Fig. 7—The governor tower cracks along the dotted line when the fender comes too close.

be knocked back off again), it looks like a certain old modification work order (FSMWO G509-W2, 4 Feb. 43, cancelled for lo these many months) had maybe ought to be revived again.

The trouble is that there's not enough clearance between the right-front fender and the governor housing and tube that runs along the topside of the engine. If the wrecker runs through a ditch, the twisting of the frame causes the fender to bang up against the governor assembly and crack the tower off. Also, if in some way the fender brackets have been bent so that they cock the fender in toward the engine, the governor is again in danger.

FSMWO G509-W2 gave you a pattern (Fig. 8) showing how to cut the fender to keep it away from the governor. If you've never done it on your wrecker, help yourself to the Fig.

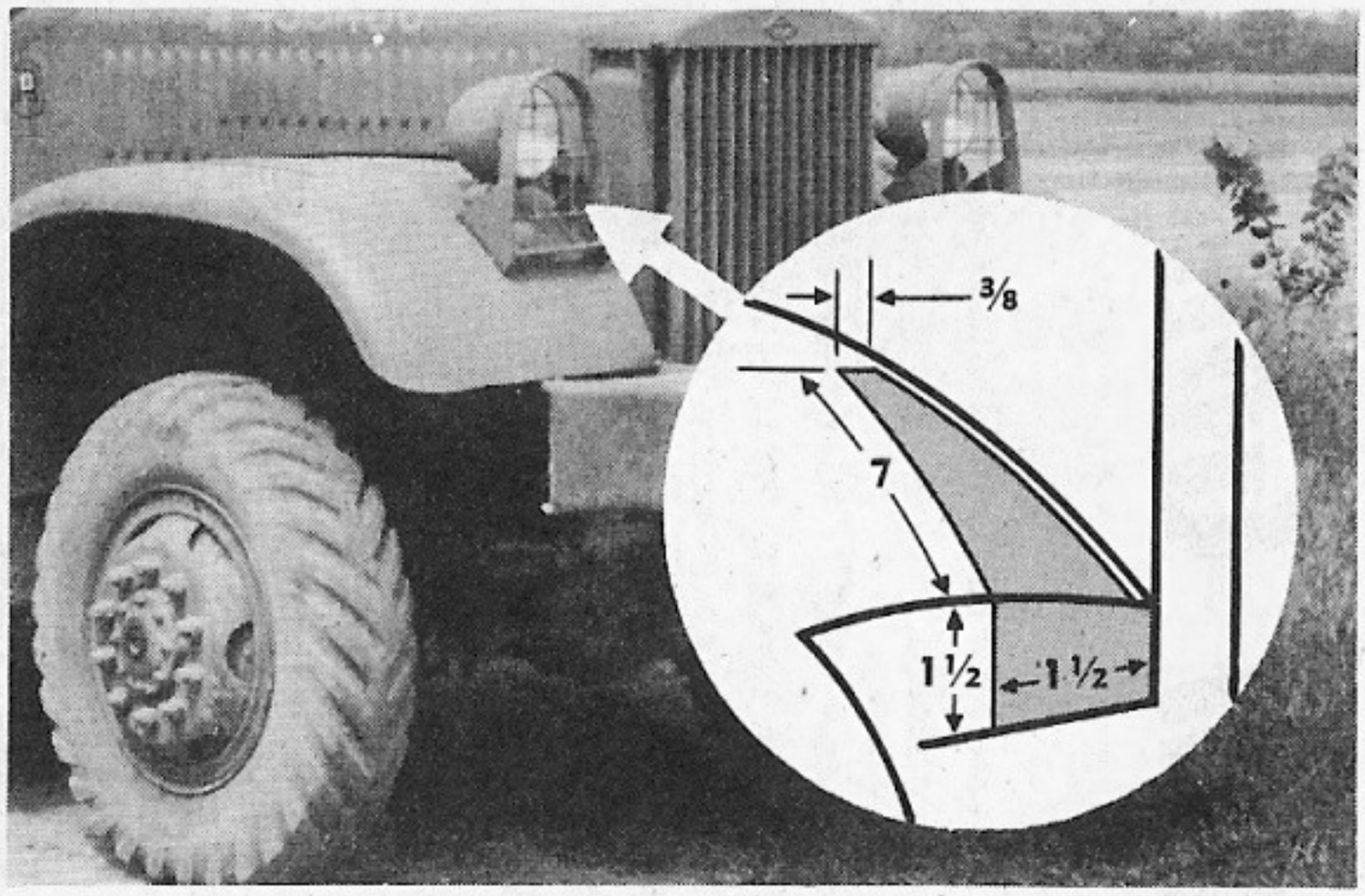


Fig. 8—Cut out the shaded portion on the inner side of the right-front fender to remove the threat to the governor tower.

BOOM BOONS

In an Ordnance MAM Company, the wrecker is often used to unload heavy assemblies like replacement engines. The engine is picked up and the boom is pushed around by hand to wherever it's to be unloaded. This is okay—except when the boom base-plate (Fig. 9) is rusty and dry of lubricant. Then it becomes hard work to bull the boom around.

The answer is to keep the boom base-plates from getting rusty by lubricating them. This could be done by taking the boom off and smearing grease on the plates every couple months as required. Another way might be to put a grease fitting in there. In this case, you'd have to groove the base plate to guide the grease all around the plates. Take your choice.

Talking about the booms, have you ever towed a 2½-ton along a sunny country road and suddenly found yourself with enough flat tires on your wrecker to require the second spare which sits on the wrecker bed? Since you can't get at the second spare without spreading the booms apart, you've got to unhook your towed load, including taking off the tow bar you're using, all the while ducking trucks that go flying by on the narrow road. A lot of outfits have gotten around all this work by taking the second spare off the wrecker bed and mounting it right on top of the first spare. A couple of 11" by ¾" bolts do the job. It also gives you extra carrying space on the wrecker bed. Naturally, you've got to keep the bolts

(Continued on page 192)

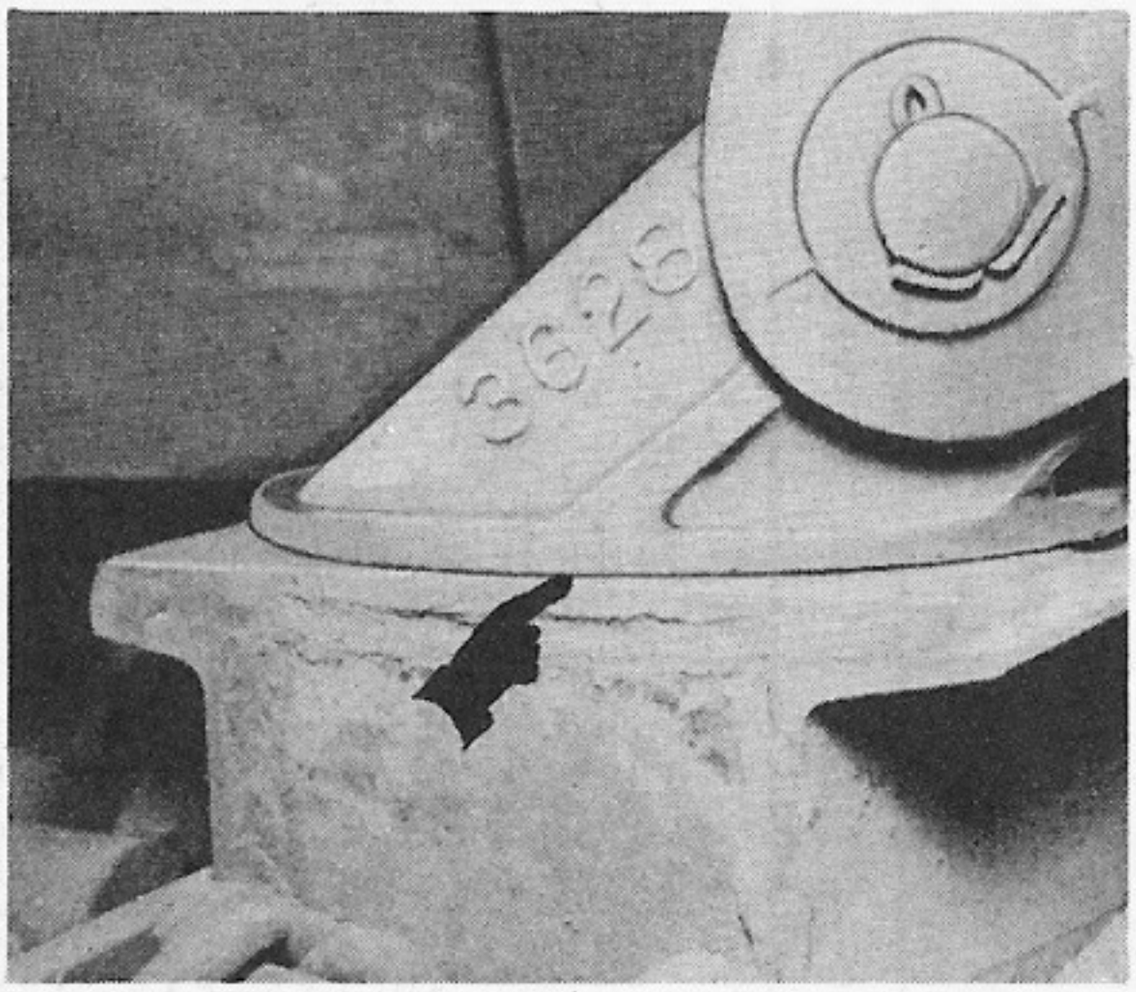


Fig. 9—Rust frictions up the action of the boom on the base plate. It needs lubrication.

Fig. 10—Perfect for odd pushing jobs, and won't lock horns with what you're pushing.

A Chart for the Chain Gang

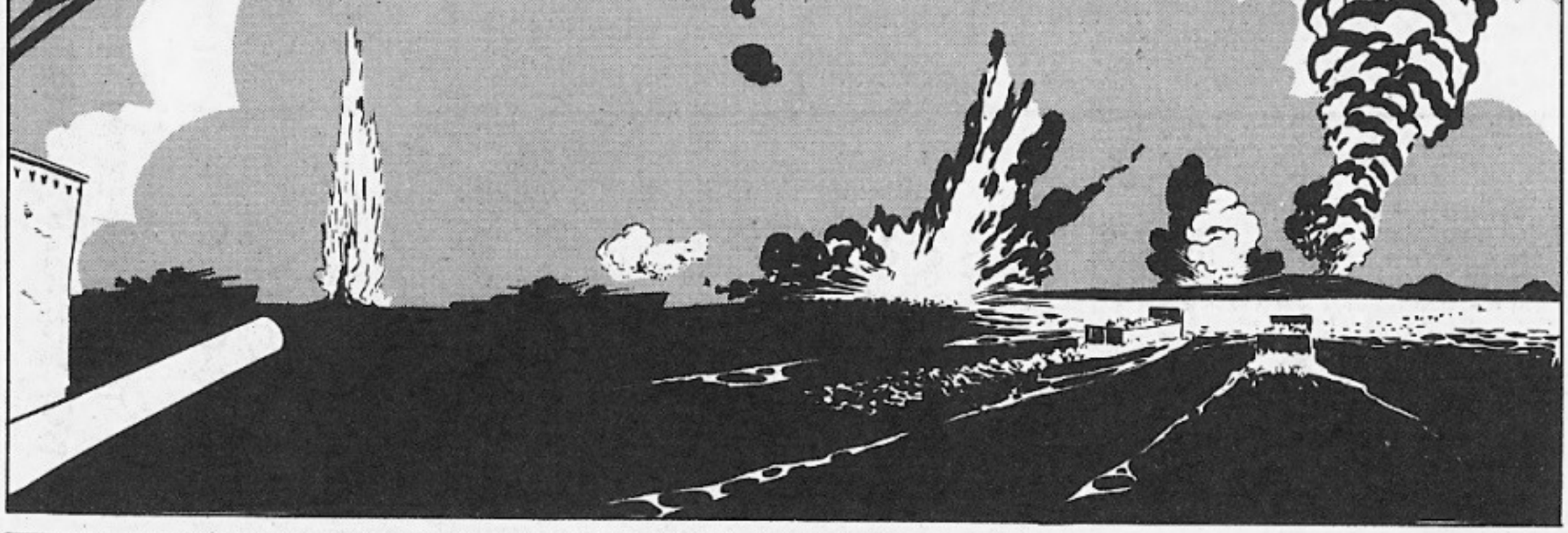
From A. F. Dooley, Automotive Advisor, came a chart showing the tire-chain stock number for every size and shape of tire. Stock numbers on Mr. Dooley's chart have been brought up-to-the-minute by Lt. W. B. Burkett, OCO-D, in the chart reproduced below—so you have here the "old" Fed. Stock No. (in case you've got some of those chains in the bin), the "new" Fed. Stock No. (if you haven't retagged it H17), and the Item Stock No., which is the official stock number now. Depots are stocking by the H17 number (col. 5)—the one that'll show up in new and revised Ordnance Supply Catalogs (SNL's) for vehicles.

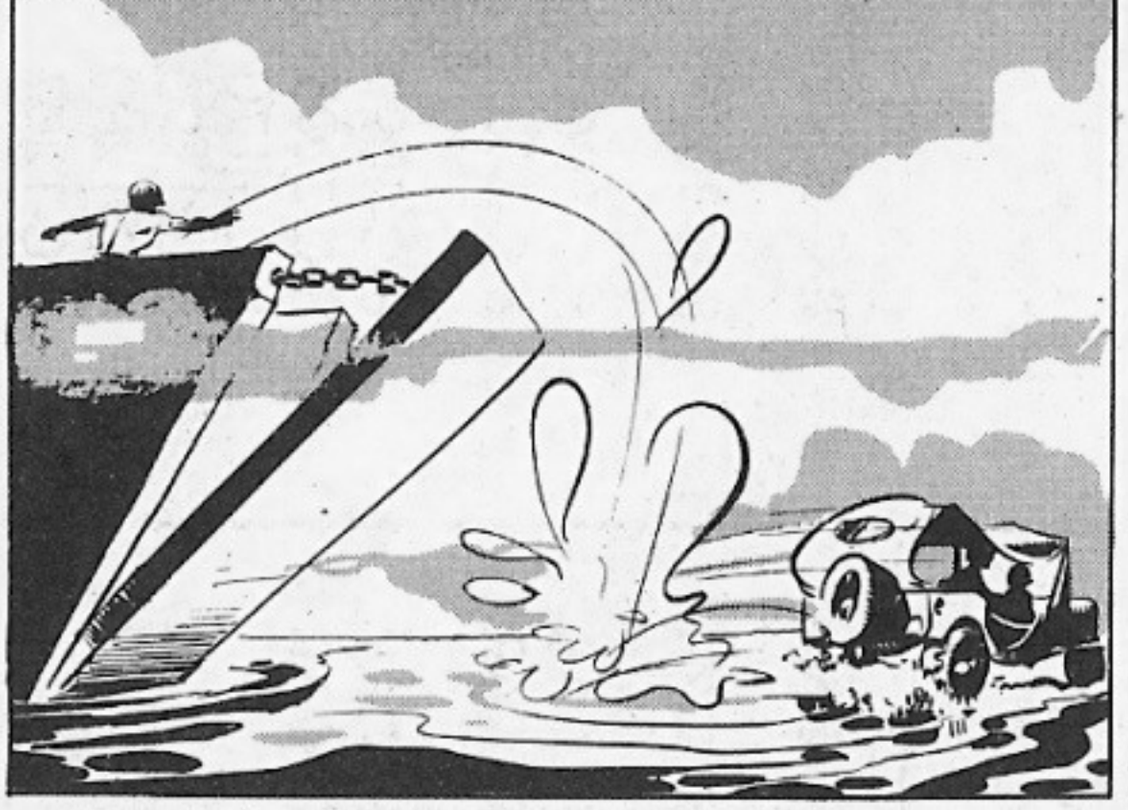
Chains stocked under "old" Fed. Stock Nos. (col. 3) are slightly heavier and use a shorter side-chain and longer cross-chain than those bought under current Army specs. Point is, chains under any one of the three numbers are interchangeable with other chains on the same line, even though they look a little different.

File or post this chart for ready reference, eh?

TIRE-CHAIN INTERCHANGEABILITY (Complete Chains)		"OLD" FED. STOCK NO. SERIES (Stocks under these numbers being exhausted and replaced by "New" Fed. Stock No. Series)	"NEW" FED. STOCK NO. SERIES (Deleted to Item Stock No. H17)	ITEM STOCK NO. SERIES (Order tire chains by this number. H17 numbers will be official stock numbers in new vehicle SNL's and revisions of old ones)
TIRE SIZE	TYPE			
6.50 x 20	TRUCK DUAL	8-C-1880	8-C-1545	H17-540001
7.00 x 20	TRUCK DUAL	8-C-1900	8-C-1562	H17-540002
7.50 x 16	TRUCK DUAL	8-C-1904	8-C-1569	H17-540003
7.50 x 20	TRUCK DUAL	8-C-1915	8-C-1575	H17-540004
8.25 x 20	TRUCK DUAL	8-C-1923	8-C-1600	H17-540005
9.00 x 20	TRUCK DUAL	8-C-1947	8-C-1625	H17-540006
10.00 x 20	TRUCK DUAL	8-C-1950	8-C-1637	H17-540007
10.00 x 22	TRUCK DUAL	8-C-1955	8-C-1638	H17-540008
10.00 x 24	TRUCK DUAL	8-C-1960	8-C-1639	H17-540009
11.00 x 20	TRUCK DUAL		8-C-1660	H17-540010
12.00 x 20	TRUCK DUAL	8-C-1970		H17-540066
12.00 x 24	TRUCK DUAL		8-C-1665	H17-540011
14.00 x 24	TRUCK DUAL		8-C-1675	H17-540012
6.00 x 16	TRUCK SINGLE	8-C-2206	8-C-2358	H17-540013
6.50 x 16	TRUCK SINGLE		8-C-2359	H17-540014
7.00 x 20	TRUCK SINGLE	8-C-2235	8-C-2395	H17-540015
7.50 x 16	TRUCK SINGLE	8-C-2250	8-C-2399	H17-540016
7.50 x 17	TRUCK SINGLE	8-C-2255	8-C-2400	H17-540017
7.50 x 20	TRUCK SINGLE	8-C-2260	8-C-2380	H17-540018
8.25 x 16	TRUCK SINGLE		8-C-2418, 8-C-2318	H17-540020
8.25 x 20	TRUCK SINGLE	8-C-2268	8-C-2420	H17-540021
9.00 x 16	TRUCK SINGLE	8-C-2276	8-C-2438	H17-540022
9.00 x 20	TRUCK SINGLE	8-C-2280	8-C-2440	H17-540023
10.00 x 20	TRUCK SINGLE	8-C-2285	8-C-2452	H17-540024
10.00 x 22	TRUCK SINGLE	8-C-2290	8-C-2453	H17-540025
10.00 x 24	TRUCK SINGLE	8-C-2295	8-C-2454	H17-540026
10.50 and 11.00 x 18	TRUCK SINGLE			H17-540067
11.00 x 20	TRUCK SINGLE		8-C-2477	H17-540027
12.00 x 20	TRUCK SINGLE	8-C-2305	8-C-2490	H17-540028
12.00 x 24	TRUCK SINGLE		8-C-2495	H17-540029
14:00 x 20	TRUCK SINGLE		8-C-2520	H17-540030
14.00 x 24	TRUCK SINGLE		8-C-2523	H17-540031
3.50 x 18	MOTORCYCLE		8-C-2832	H17-540036
4.00 x 18	MOTORCYCLE		8-C-2833	H17-540037
4.50 x 18 and 5.00 x 16	MOTORCYCLE		8-C-2838	H17-540038
5.50 x 16	PASSENGER CAR	8-C-3027	8-C-3290	H17-540039
6.00 x 16 and 6.50 x 15	PASSENGER CAR	8-C-3055	8-C-3306	H17-540040
6.25 and 6.50 x 16	PASSENGER CAR	8-C-3060	8-C-3308	H17-540042
7.00 x 15	PASSENGER CAR	8-C-3085	8-C-3335	H17-540043
7.00 and 7.50 x 16	PASSENGER CAR	8-C-3090	8-C-3340	H17-540044
7.50 x 16	PASSENGER CAR	8-C-3095	8-C-3360	H17-540045
6.50 x 20	TYPE AH (2 SIDE CHAIN) TRUCK DUAL	8-C-1170	TYPE AH DUAL TRUCK CHAINS NO LONGER APPROVED FOR SUPPLY	
7.00 x 20		8-C-1190		
7.50 x 20		8-C-1200		
8.25 x 20		8-C-1207		

JOE DOPE






SO, THIS IS PACIFIC WARFARE ... FOOF ... A CINCH! NOW, WHEN I WAS IN THE ETO BLA BLA BLA
BN OF AUTOMOTIVE MAINT CO.


WELL, Y'AINT IN THE ETO NOW — THINGS IS DIFFERINT HERE! VEHICLES DON'T LAST AS LONG—SO BETTER GET ON THE BALL, JOE!
AAAAH, THAT'S A LOTTA SOUP! I SUPPOSE YER GONNA TELL ME THE OLD WHEEZE THEY SELL IN MAINTENANCE MAGAZINES ABOUT VEHICLES BLOWIN' UP OR ROTTING T'DUST. WHY, WHEN I WUS IN THE ETO I NEVER MAINTAINED ONE VEHICLE AND STILL WE WON THE WAR!

AHHH, Y'TALK LIKE A GUY WIT PAPER PANTS... OUT HERE SALT AND SAND GETS IN EVERYTHING! ON THESE ISLANDS EVEN THE AIR IS SALTY!

AAHH, I WATER--PROOFED THE ELEKTICKLE SYSTEM, DINT I?... AND THATS ALL..ATS GOOD ENUF!

JOE DOPE

BUT WHAT ABOUT CORAL DUST... THATS SO FINE IT GETS INTO A LUBRICANT AND MAKES IT ABRASIVE... **AND** FUNGUS THAT ROTS LEATHER AND CANVAS... THERE AINT NO "AUTOBAHNS" OUT HERE, SON, ONLY MUDDY, ROCKY, HOGBACKED, ROADS!

JOE DOPE

AW SPIT! I BEEN THROUGH THE NORMANDY LANDIN', THE RACE 'CROST FRANCE, PLUS THE BULGE BATTLE WITH THIS VEHICLE AND I NEVER ONCE FIXED IT.... **IT STILL RUNS!**

MY JEEP!

WELL, DAT'S POSSIBLE— BUT ALL I GOTTA SAY IS VEHICLES OUT HERE ROT BEFORE Y'R EYES!

I AM SORRY, **PRIVATE DOPE,** BUT WE DO NOT HAVE AN EXTRY VEHICLE TO GIVE YOU... TAKES A LONG TIME FER US T'GET STUFF OVER FROM STATESIDE.. **HEY,** WITH THEM GOOD ELECTRICAL WIRES YOU SO CAREFULLY WATERPROOFED Y'MIGHT IMPROVISE SOMETHIN!

SUPPLY

BATTERY

HIM? OH HE'S IMPROVISING ...GOOD OL' AMERICAN INGENUITY!

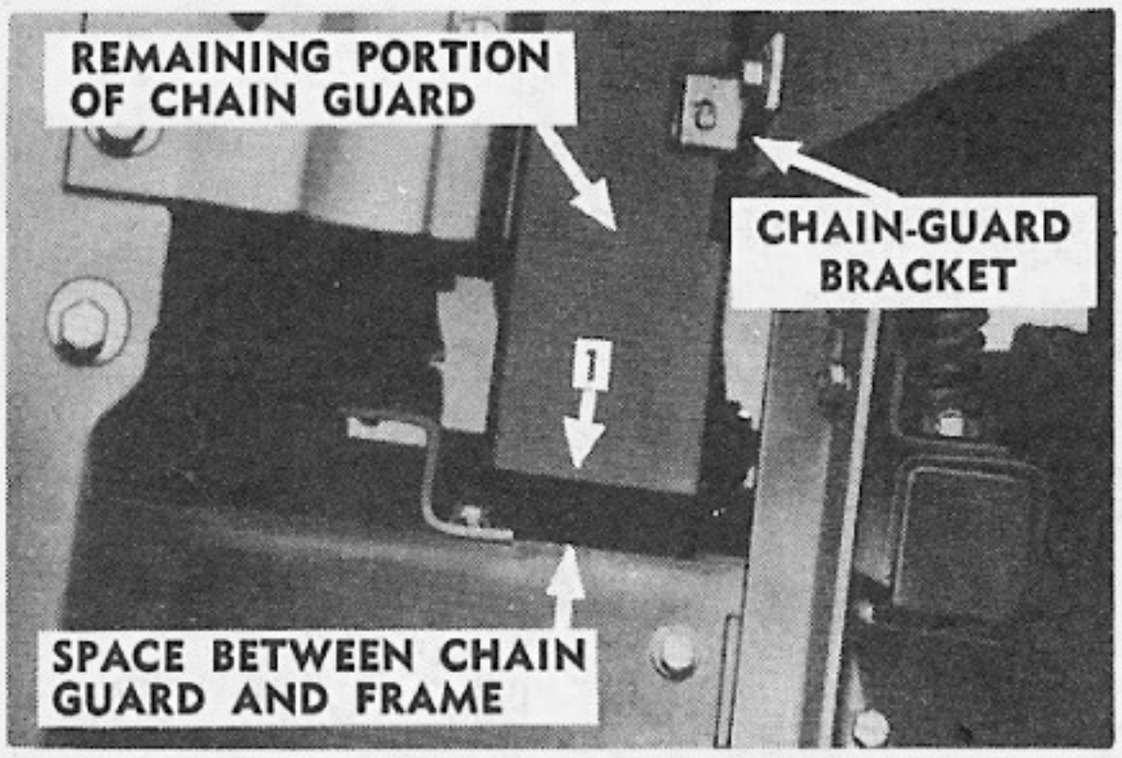
M27 BST SHEAR PINS

You can stop replacing 'em wholesale after you put in this new kind—and fix up your hoist-winch prop-shaft

Maybe they won't be earmarked for the Emperor any more, but bombs still have to be loaded and heaved around by your 2½-ton GMC bomb-service truck M27. One thing sure—you can't lift bombs without the winch and the winch won't work with a broken idler-gear pin.

There's been plenty of trouble caused by failure of both the idler-gear pin and the universal joint of the hoist-winch propeller-shaft. These failures happen because the shear pin doesn't fit right and because the propeller shaft isn't in a straight line—but the answer has finally turned up, as it turns out. After you've made these changes and found out how long that winch will work without a breakdown, you'll have less TS with your BST.

You can finish off the failures by replacing the original idler-gear pin with the new lockwire-type idler-gear pin (Item Stock No. G501-03-38734)—and by relocating the propeller shaft into a straight line instead of the present double angle from which our trials and tribulations and gray hairs stem. The pix show you how.



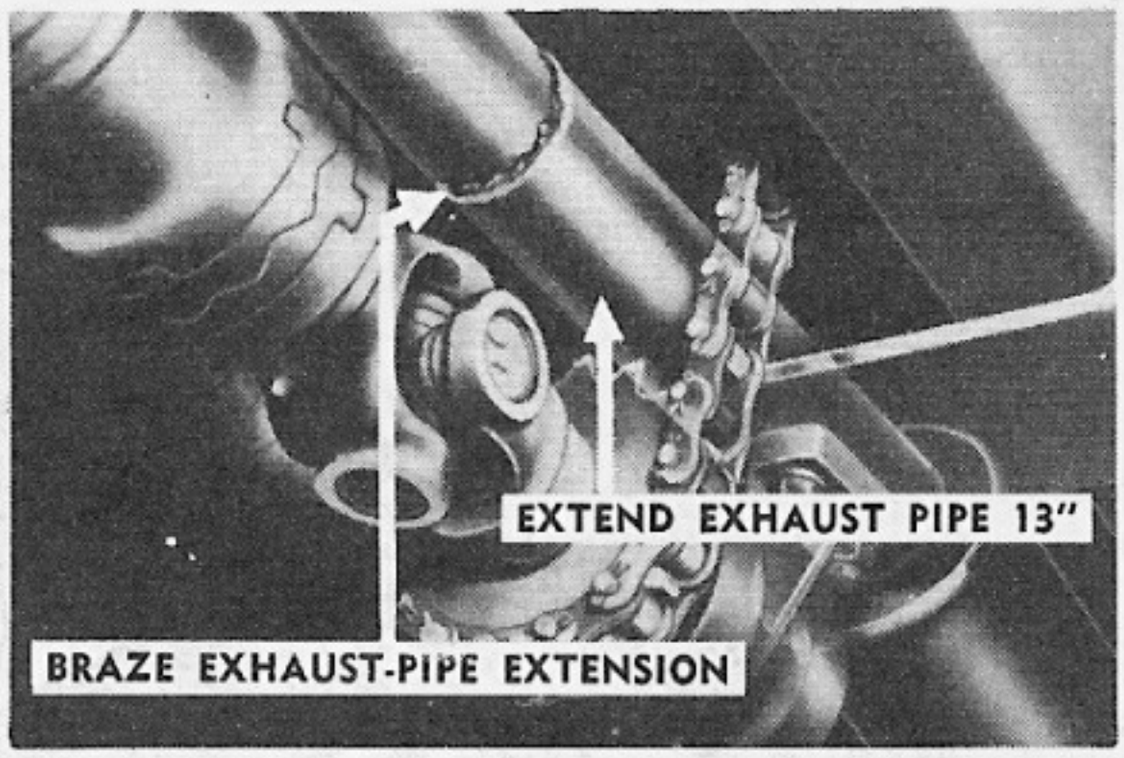
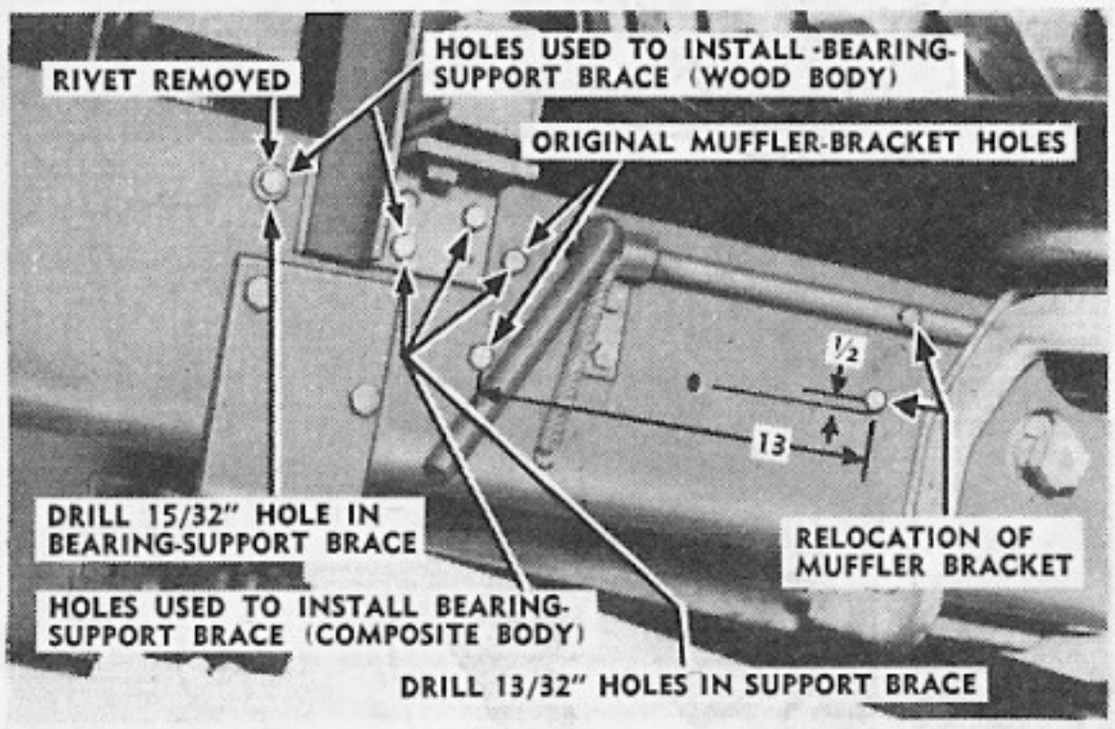


***Fig. 1**—Remove lower chain-guard, cut it off 1" above top of frame, and discard lower portion. Separate chain and remove double-bearing assembly with propeller shaft attached. Cut 1½" off the spline end of the shaft and taper it as before, removing all burrs. Discard bearing-assembly support. **Fig. 2**—Remove entire exhaust line. Disassemble exhaust pipe and tailpipe from muffler, then cut off and discard 13" of tailpipe from muffler end. Make and install a piece of pipe 13" long, attaching it to the exhaust pipe at the muffler end.*



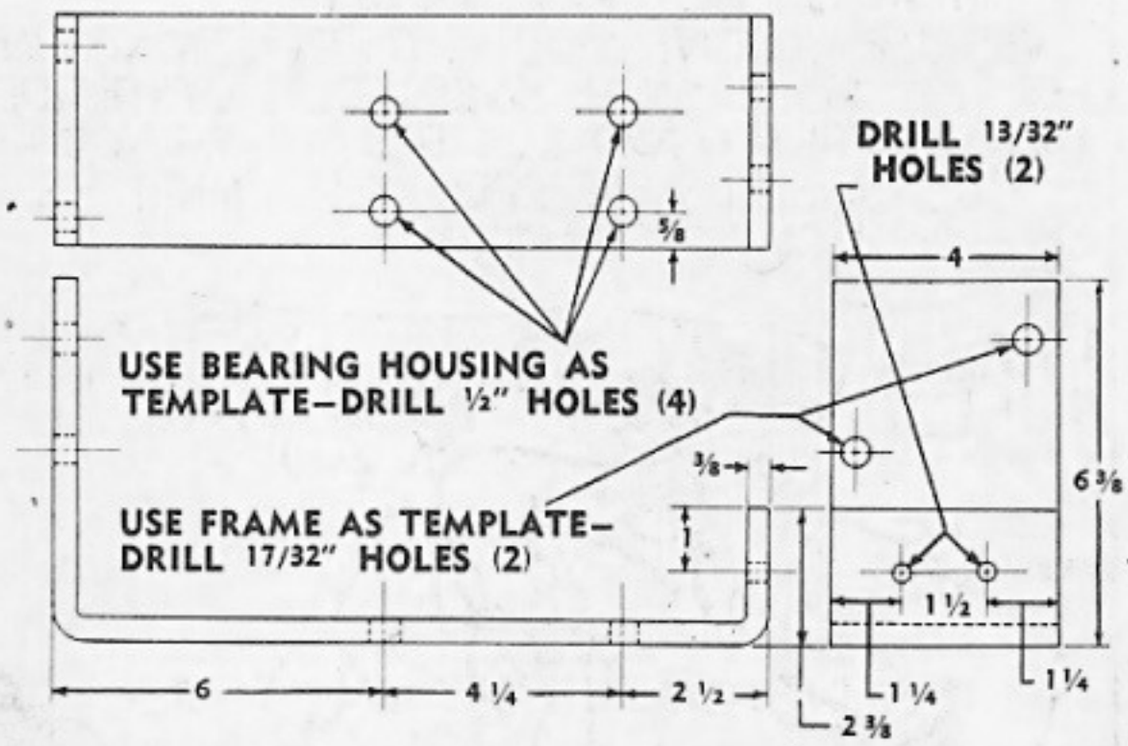


***Fig. 3**—Relocate muffler bracket 13" toward rear of frame and up about ½". Take off chain-tightener-spring bracket. Reinstall exhaust pipe, muffler, and tailpipe assembly. **Fig. 4**—Use these dimensions for a new bearing support. The bearing-support-mounting holes in the frame and bearing housing can be used as a template to scribe the holes in the support; then drill the holes.*

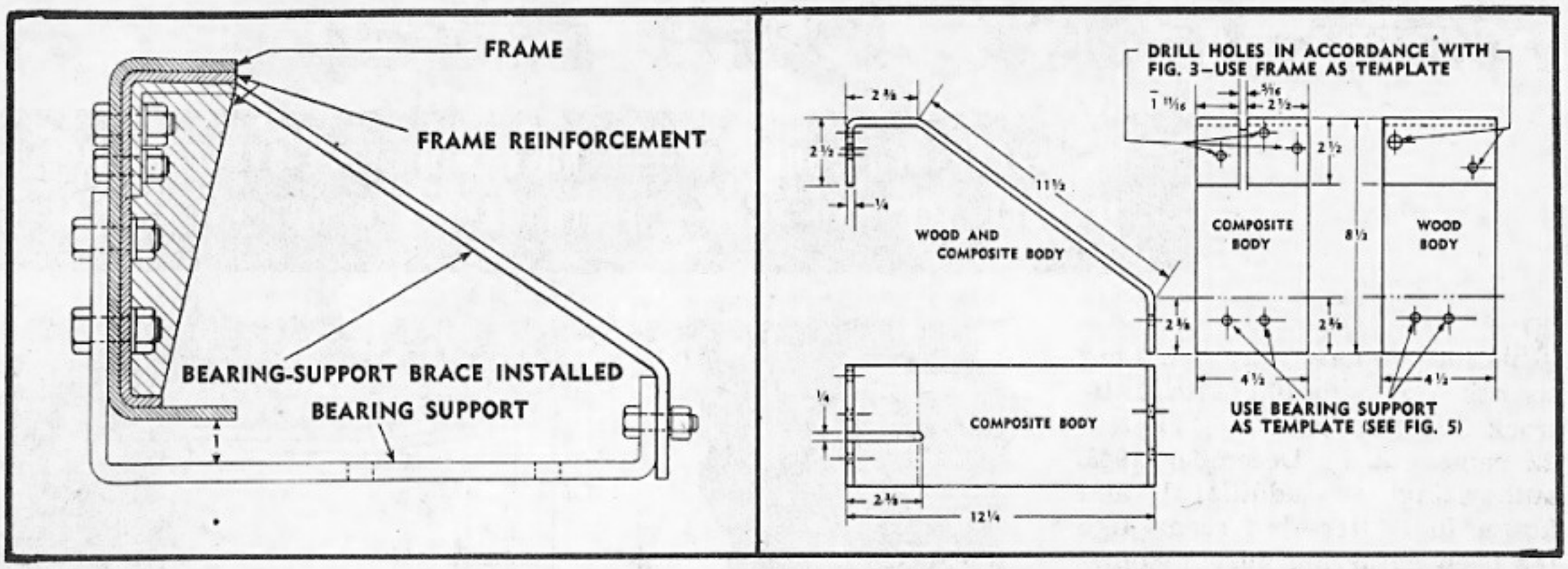
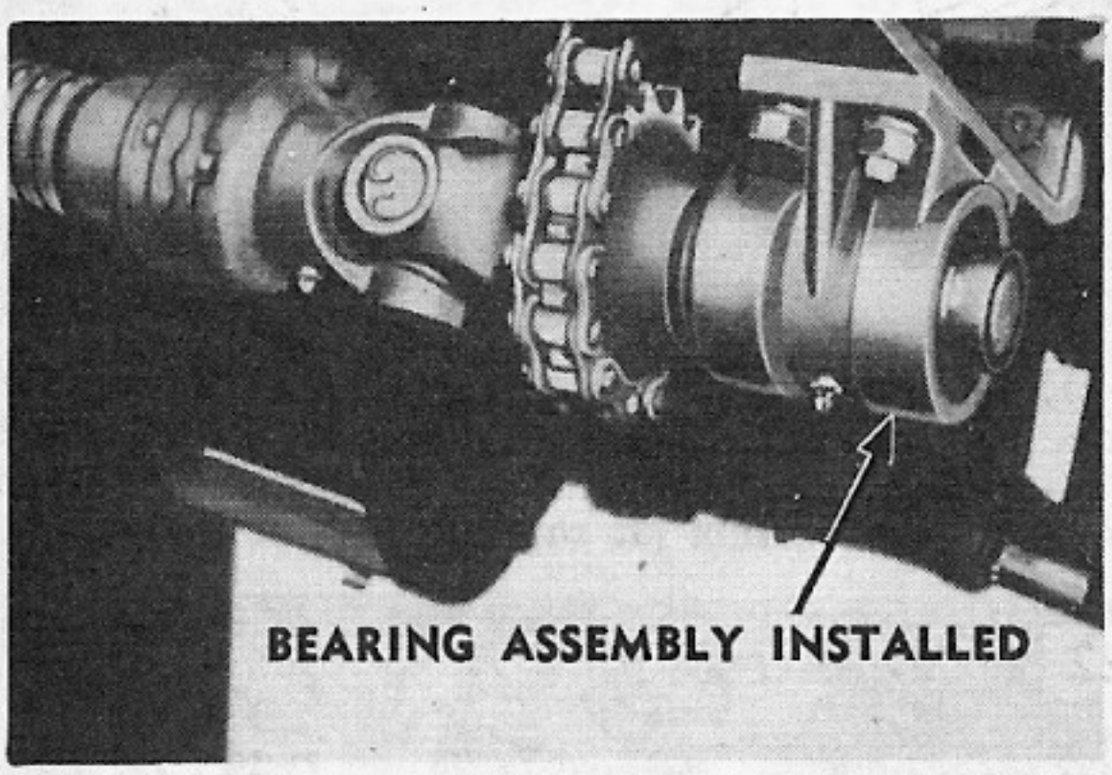


Fig. 5—*Install the bearing support on the frame. The bearing-support braces will be slightly different according to the vehicle's body type.* ***Fig. 6***—*Remove rivet and bolt from frame for wood-type body or two bracket bolts from frame for composite-type body (see Fig. 3). Make and install (Fig. 5) bearing-support brace according to body type of vehicle.*



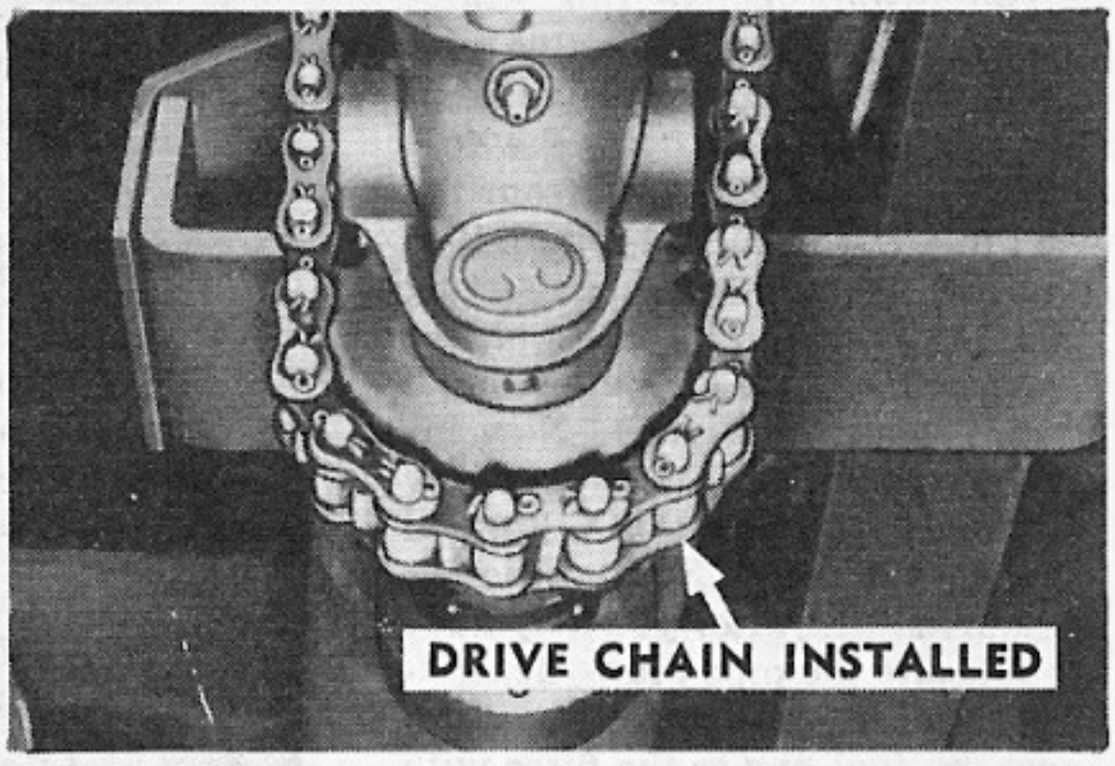
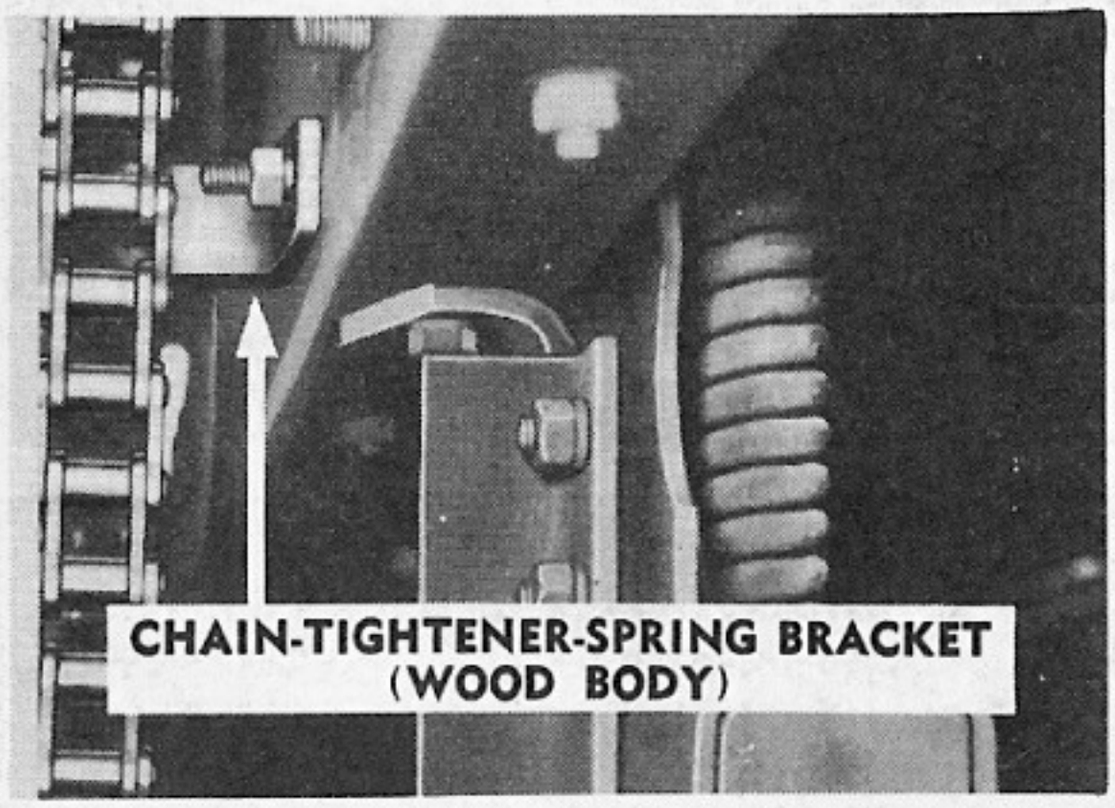


Fig. 7—*Reinstall bearing assembly (Mfr's Part No. GW-6Y1120Y) flush with support, using original bolts. Line up all sprockets before tightening.* ***Fig. 8***—*Install drive chain on sprocket, inside the frame, allowing enough play to counteract body travel during operation and to allow for vehicle operation without load. Discard the three extra links from the shortened chain.*



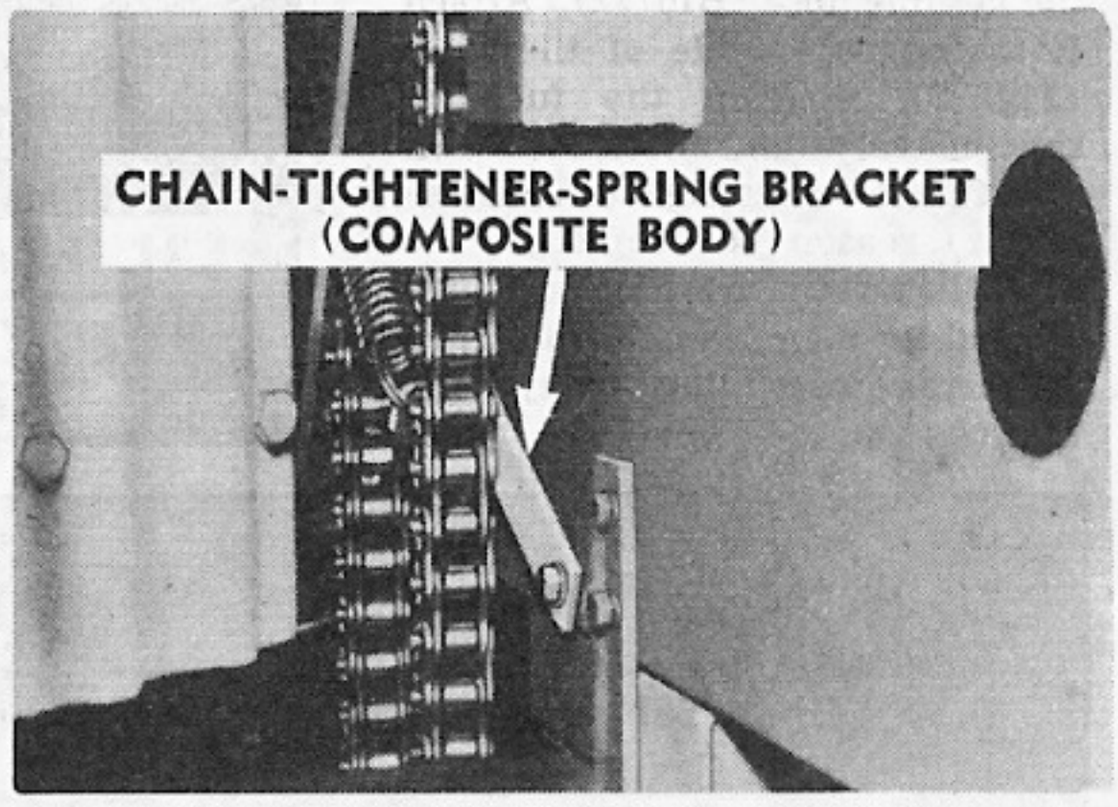


Fig. 9—*Install chain-tightener-spring bracket as shown for wood-type body. Reinstall chain guard (Fig. 1).* ***Fig. 10***—*Install chain-tightener-spring bracket as shown for composite-type body. Reinstall chain guard (Fig. 1). Now your winch is a cinch in a pinch—or any other time.*

Half-Track Fuel Filter

THIS 2-YEAR-OLD CURE CAN END NO END OF FUEL-SYSTEM GRIEF —IN CASE YOU AND YOUR HALF-TRACK NEVER GOT WIND OF IT

This fix has long gray hair—but so has your trouble with half-track fuel systems. (OFS)TB 710-22 came out in December 1943, authorizing an additional and larger fuel filter—but seems like it's been gathering dust in somebody's drawers ever since. Believe it or not, the filter assembly is still yours for the requisitioning (see list of items below).

You install it like this: Close the fuel-tank shut-off valve and disconnect the shut-off-valve flexible hose (B16772) from the fuel line (D48176). Cut 4½" from the fuel line (D48176) and reflare it so you can use the same connecting nut. Drill two 13/32"-dia. holes on the inner face of the left-hand frame side-rail (Fig. 1). Now install the filter, using screw (BCBX1CD), nut (BBBX1C), and lockwasher (BECX1K). Before you install the filter you may have to relocate the pipe plugs, depending on which outlets you use. Connect the fuel line to the filter with connector (CNEX2SB). Using the fuel line you reflared, connect it to the filter with the other connector (CNEX2SB). Next comes the flexible hose (B16772). Attach it to the other side of the filter (Fig. 2). Reopen the fuel-line shut-off-valve and check for leaks.

If for some strange (or too familiar) reason you can't get the filter listed in the TB, scrounge around for a regular 2½-ton GMC or ¼-ton jeep filter. They'll do the job, too.

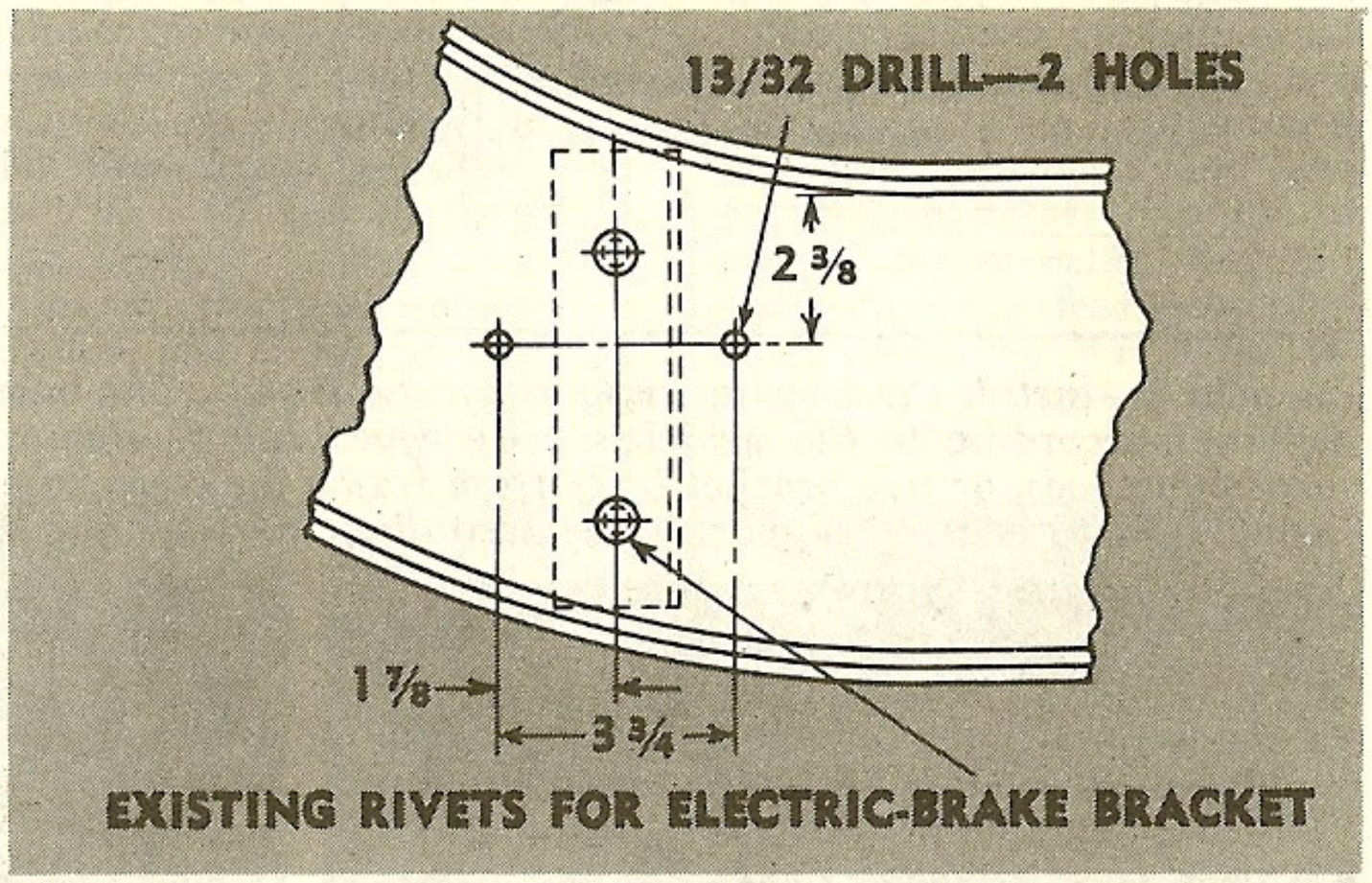
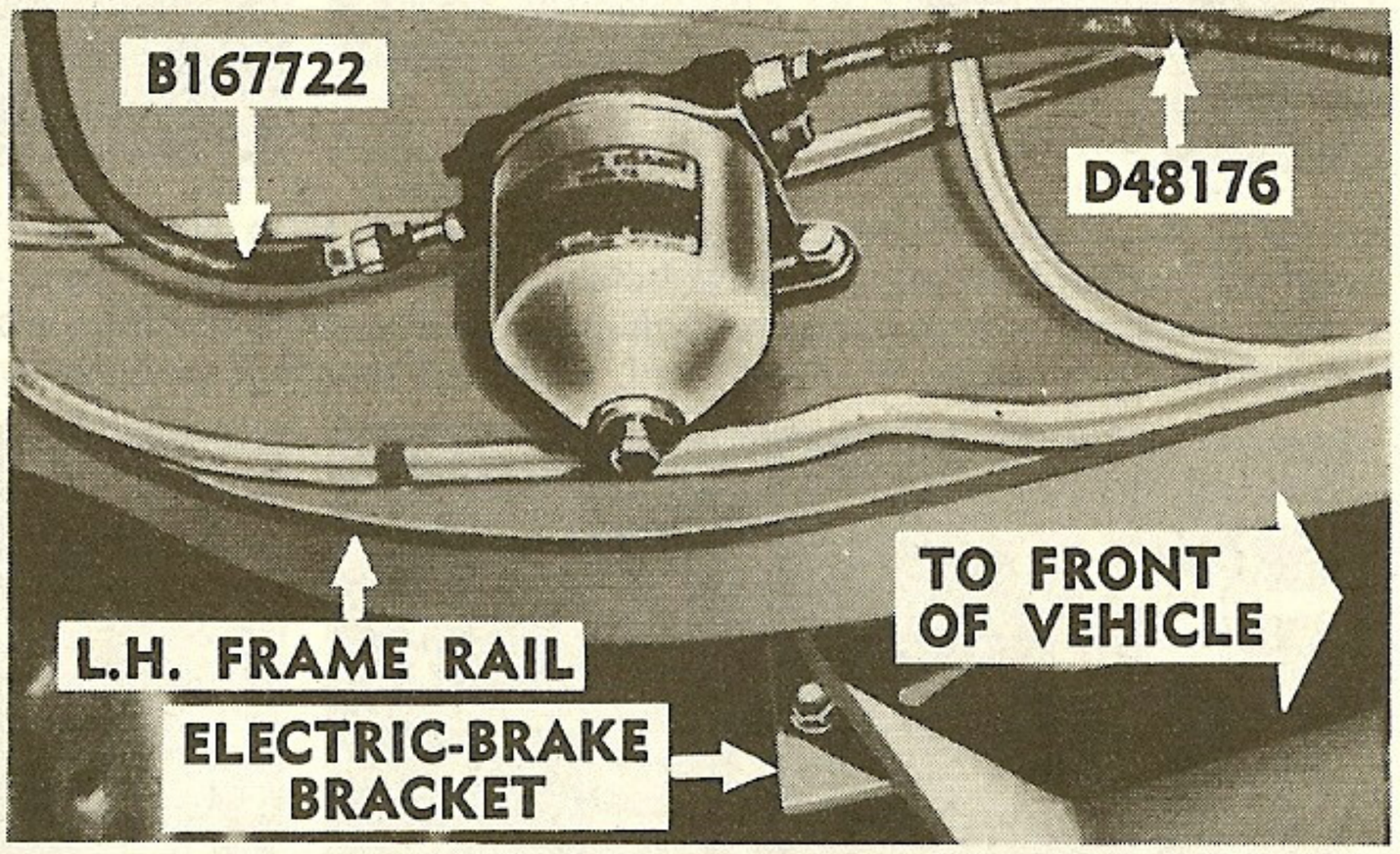


Fig. 1 (above)—Drill the two holes in the side rail to make a new resting place for your filter. Fig. 2 (below)—This is what the filter looks like all hooked up, with no leaks and no more headaches from your fuel system (it says here in small print).



Qty.	Nomenclature	Item Stock No.	Pc. Mark
1	FILTER, FUEL, AC TYPE T2, ASSEMBLY	G102-5585947	C85947
2	CONNECTOR, MALE, 5/16" TUBE, BRASS	H6-02-32006	CNEX2SB
2	NUT, 5/16" TUBE, BRASS	H6-02-30208	CNEX2DA
2	NUT, HEX., SEMI-FIN., 3/8-24NF-2	H1-40-27545	BBBX1C
2	SCREW, CAP, HEX. HD., 3/8-24NF-2x1 1/4	H1-10-13250	BCBX1CD
2	WASHER, LOCK, 3/8x1/8x3/32	H1-15-18009	BECX1K

CONTRIBUTIONS

BE RICH! BE FAMOUS!

It's a breeze. All you gotta do is send full details whenever you dream up an idea that helps a vehicle—or a lower-echelon maintenance man—to do a better job. You'll be rich (in a way that money can't buy) because you'll earn yourself a one-year **personal** subscription. You'll be famous (if your deal hits print) because GI's by the hundreds of thousands will bless your name for showing them a way out of their troubles. Address **The Editor, ARMY MOTORS Magazine, Office, Chief of Ordnance, Detroit 32, Michigan.**

Dear Editor,

Here's a tip on interchanging starters on the KR-11 5-ton International truck and the U-7144T 4-5-ton Autocar.

The International uses a Delco-Remy Model 713 and the Autocar uses an Auto-lite Model ML 4209. These starters are interchangeable except for the starter-cable-stud location.

To get by with the regular cable, just rotate the starter frame ½ revolution and file new slots for the dowel pins. This puts the stud where you want it and makes everybody happy.

Sgt. Choyce W. Burton
Liberal Army Air Field

Ed. Note—Your idea of interchanging cranking motors on the Autocar U-7144T and the International KR-11 is okay as an emergency fix—but isn't authorized for ordinary replacements because they're not 100% interchangeable. However, the cranking motor from the White 444, 4-5-ton 4x4 C.O.E., is interchangeable in all respects with the one from the Autocar U-7144T.

Dear Editor,

The bell crank on the jeep is a spot the driver always misses, unless his mechanic keeps him on the ball to grease it every chance he gets.

Here's my idea: I keep some ¼-ton universal cork retainer-seals on hand. If a new jeep comes in, I put two in right away—then replace them every semi-annual check.

I pull off the bell crank, put one cork seal on the bottom of the shaft—then put the bell crank through and put another on top, then the washers, etc. This prevents grease from running out and water or dirt from coming in.

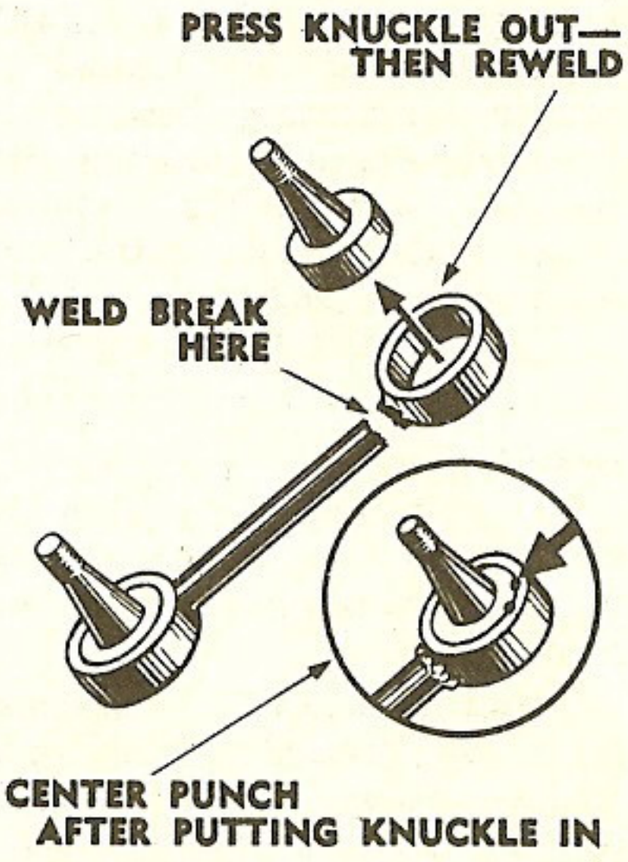
Sgt. N. A. Perfetto
APO 758

Dear Editor,

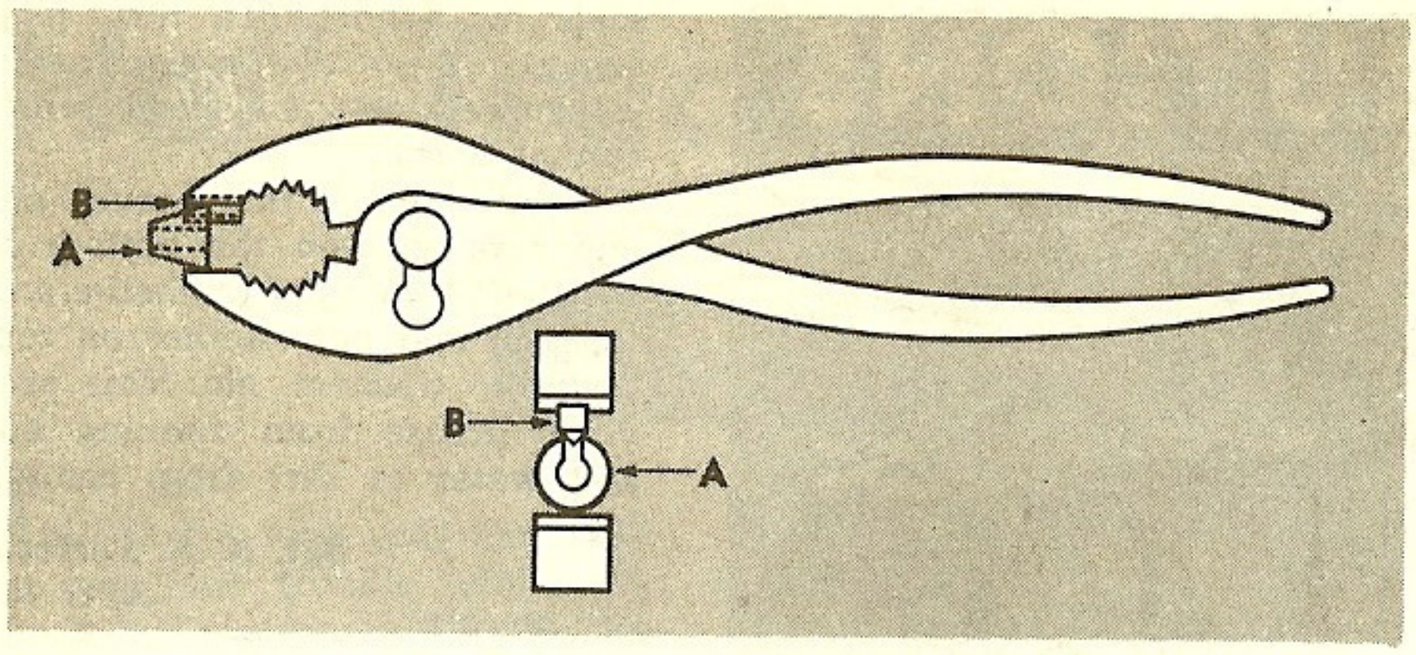
Here's an idea that might help other guys because it sure helped us. We noticed that when a late-type shock-absorber link breaks on the 2½-ton 6x6 GMC's, it isn't long before these bad roads and cobblestone streets shake the front springs loose. We couldn't get replacements but we finally hit on an easy way to repair the broken ones (see Fig. below).

First, we press out the fiber-packed knuckle to keep the packing from burning while we weld the ring back on the link. After welding, we re-press the knuckle back in place and center-punch around the ring to insure the knuckle staying put. It's a pretty quick job and gives you a shock-absorber link that's as good as a new one.

T/5 Fred Wilson, Jr.
T/4 James W. Wood
APO 350



The "W-W Special" repair method for your GMC shock-absorber links.



Dear Editor,

In order to remove the drive flanges on GMC 2½-ton trucks with the split-type housing, I improvised a time-saving tool (see Fig. above).

I found it handy to remove the dowels from the flange-studs **after** the flanges have been loosened from the hubs. Although the dowels seem to be loose on the studs, they often cling quite stubbornly and have to be pried off.

Using my pliers—which I made from an ordinary pair of the 8" slip-joint type by inserting a little tapered blade slightly wider than the slot in the tapered dowels (I brazed it into one of the jaws)—it's a cinch to get those dowels off. Just insert blade "B" into the dowel slot "A", making sure to get a good grip, and compress the plier handles, thereby opening the dowel and permitting it to be removed from the stud freely. The big opening on the adjustable-type pliers is best suited for proper functioning because the jaws work parallel to each other in that position. It's important to see that the jaws of the pliers are the same length.

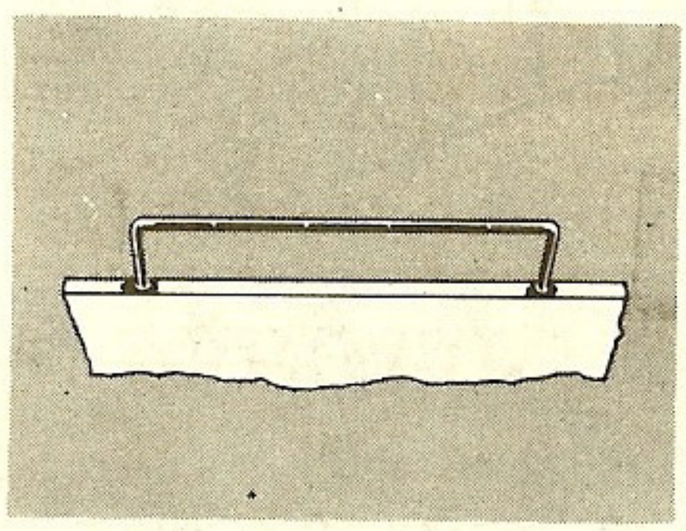
T/4 Herman Koesten
APO 98

Dear Editor,

I'd like to mention a little idea most of us here in this land of dikes and canals are using on our jeeps.

With the sheet iron from empty oil drums, discarded wing tanks, etc., we've made fender extensions running from the leading edge of the fenders down to the bumper bar. This prevents all the mud thrown forward by the top of the front wheels from being blown back on the windshield. It also helps keep mud from being splashed onto the headlight lens.

Lt. W. F. Zadrozny
APO 339



The **784th Armored FA Bn.** sends in this idea for a hand hold to keep the commander of an M7B1 gun motor carriage on his feet when it's rumbling over rough terrain. Get a piece of ½" round stock, bend it, and weld it to the edge of the bow armor (see Fig. above). That'll keep him right side up.

Dear Editor,

Here is a gadget I made (see Fig. below) that'll save time, sore backs, and cussing in removing and replacing clutches on a GMC 6x6.

Remove two screws in the middle of the transmission cover and place this bar over it and tighten. (Weld that "L" shape to the bar and use the two screws you took out to tighten it to the transmission. Then weld a large ball-bearing or wheel to each end of the bar.) Remove the transmission bolts from housing (flywheel) and pull the transmission back, resting the pilot shaft on the flywheel-housing pilot-hole. After replacing the clutch and pressure plate with screws, leaving them loose, the transmission can be pushed in place without using any clutch aliner. Been using it for quite a while and it works damn good.

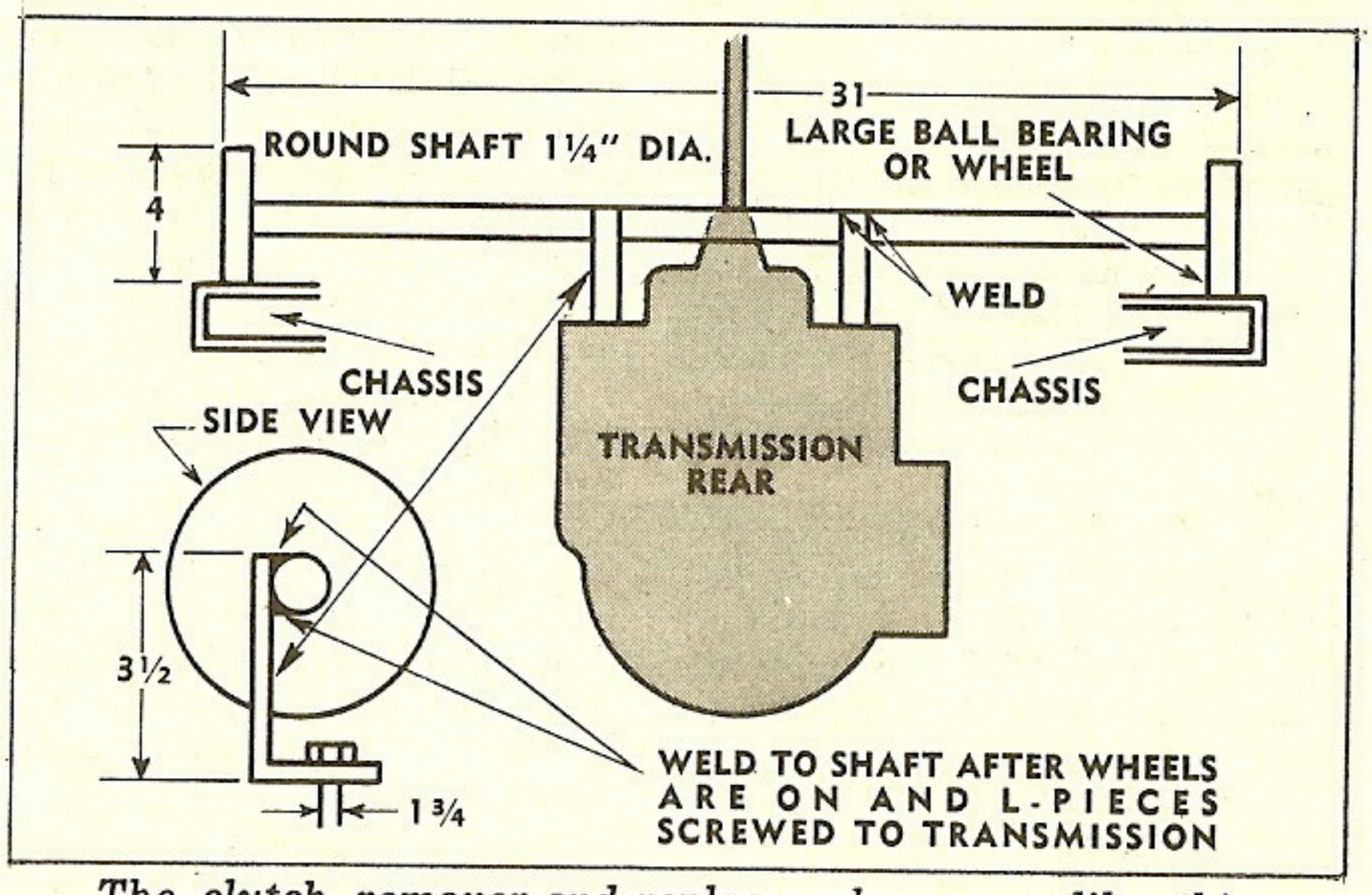
Pvt. Stanley Suyeto
APO 524

Ed. Note—This oughta be right welcome where a floor jack's not available.

Dear Editor,

Since being over here in the ETO, I've found it impossible to get windshields for weapons carriers (¾-ton Dodge).

The only thing we were able to get was jeep windshields which are ¾" too short. To make them fit a Dodge, I used a ¾"-wide piece of Masonite, same thickness



The clutch remover-and-replacer shapes up like this.

and length as the windshield. (For that matter, a board or plywood of the proper dimensions would also do the trick.) The bottom corner of the plywood away from the glass should be rounded off so as to help it slide easier. I filled the crack with glyptal to keep water from coming in the cab.

I have used this arrangement on 3 vehicles and it has worked very well.

S/Sgt. Nicholas P. Cassisi
APO 629

Ed. Note—Better keep that stunt in the strictly emergency class. It doesn't give much support to the bottom of the windshield.

Dear Editor,

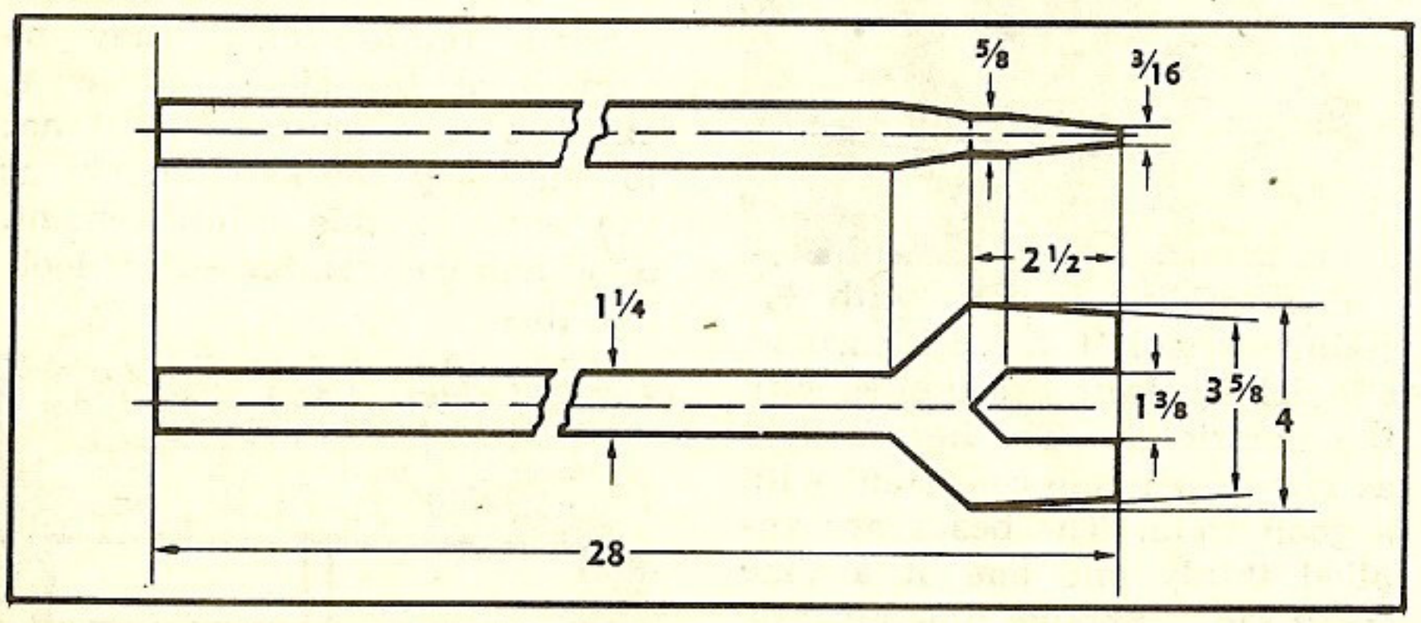
This idea might help any installation that has a "roving patrol"—like our Guard Force jeeps.

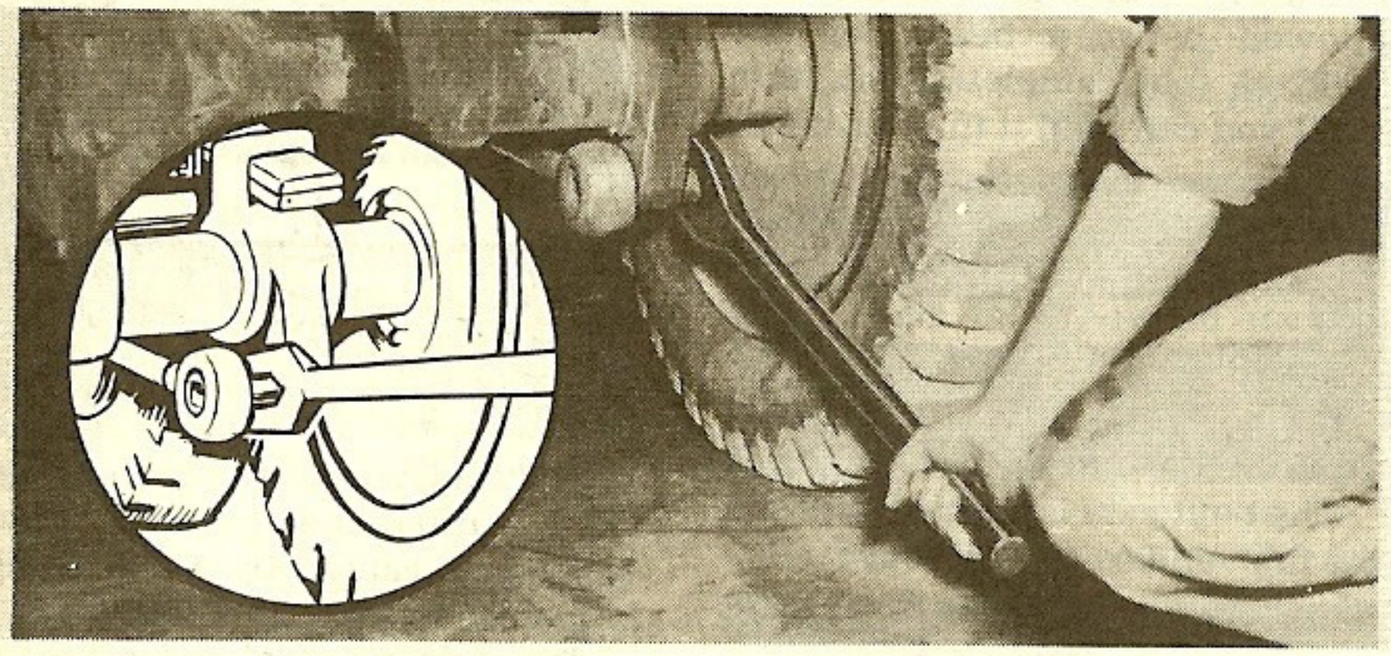
We have three jeeps in service 24 hours daily, which cruise at 12 miles per hour. They're equipped with a radio (sending and receiving set), lights, horn, and self-starter. All these are operating on a 6-8 volt battery. As a result, we found it necessary to change the batteries every day.

To correct this condition, we increased the crankshaft pulley 1½" and decreased the generator pulley 1". This increased the charging rate to 12-15 amps at idling speed. Since this change was made, we haven't had any trouble and it sure saved us a lot of battery headaches.

Stanley Stief
AAF, Reading, Pa.

Ed. Note—Keeping overloaded batteries charged that way shows your gray cells are perking, too. But you gotta be careful to hold the vehicles down to a top speed of 25 mph—any faster than that, and the generator'll take a terrific beating, especially the coil windings. Better put some warning where any driver can see it, cautioning against exceeding 25.





O. D. Wright at **Camp Hood** is removing the rear axles from GMC 6x6's a lot easier these days. The tough job of getting those torque rods off is made painless by his 2-in-1 tool (see Figs. above). Take the nut off the torque rod and then drive the tool in between the axle-housing bracket and the hub of the torque rod. Bang the bottom of the bracket with a heavy hammer. Easy now—tap the tool lightly and use it as a pry bar. The material for the tool? Just dig an old axle shaft out of the junk pile.

Dear Editor,

Here are a couple of ideas that have saved us plenty of work:

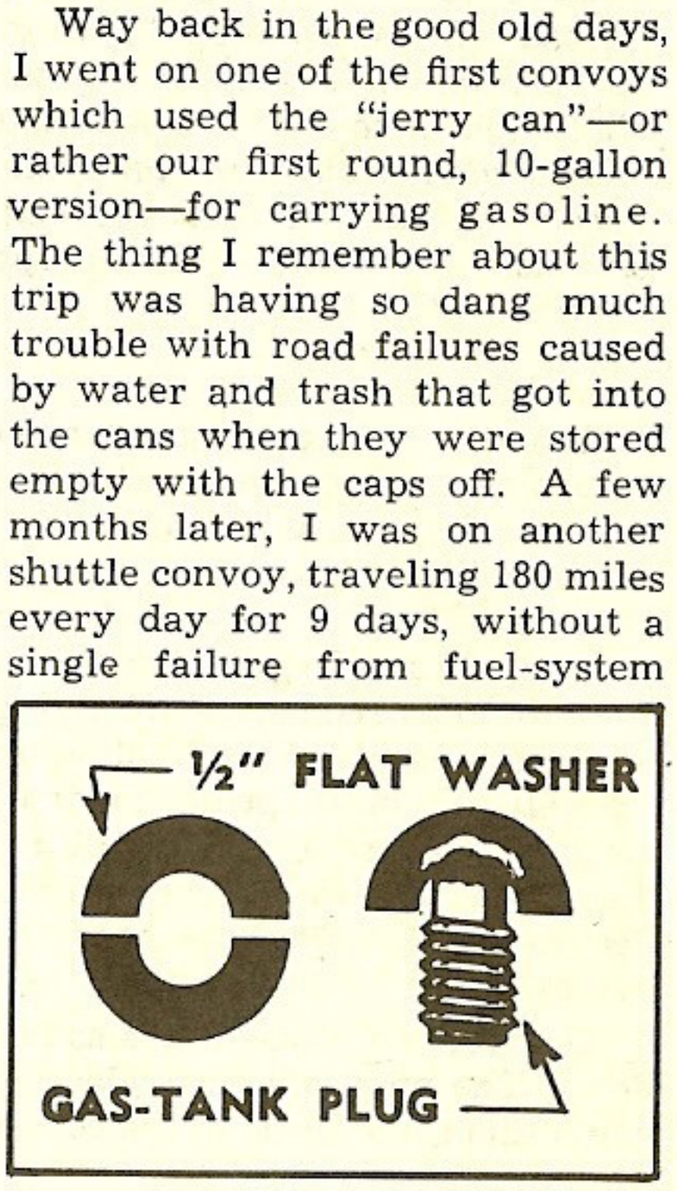
Every time we used our block-and-tackle set, it took a long time to roll up the 300 feet of rope—and when it **was** rolled up, it didn't look good. To remedy this, we rolled the rope on a DR5 wire reel. We mounted it on the frame near the cab of our 2½-ton wrecker (it can be mounted on the frame or anywhere out of the way). With this system, it's very easy to reel out enough rope for a job and takes just a second to re-roll it. This also keeps the rope in good shape and ready for use.

The other idea is about gaskets. On every semiannual maintenance inspection we use a lot of wheel-hub gaskets, and as they are not always available, we have to cut them out of gasket paper. All we use is a straight calipers with one edge sharpened to a knife edge, a punch set, and gasket paper. The measurements can be taken right from the old gaskets and a new set can be made in the same time it would take to walk to the tool room to find out if they have a set of the gaskets there.

T/4 Salvatore D'Andrea
APO 230

Dear Editor,

Way back in the good old days, I went on one of the first convoys which used the "jerry can"—or rather our first round, 10-gallon version—for carrying gasoline. The thing I remember about this trip was having so dang much trouble with road failures caused by water and trash that got into the cans when they were stored empty with the caps off. A few months later, I was on another shuttle convoy, traveling 180 miles every day for 9 days, without a single failure from fuel-system



trouble. We got our gas from cans and almost every other way you can think of, too.

How did we do it? I'll tell you. Before we started, all gas tanks on our trucks were modified so the water could be drained out each morning. The modification consisted of taking ½" flat washers, cutting them in half, and welding or brazing them to the drain plugs of the fuel tanks (see Fig., page 185).

Here's the application: Every morning before chow, have each driver remove his modified wing-nut-type gasoline-tank drain-plug and count to 5 like this: 1, 2, 3, 4, 5. Then, as the gas runs down your arm and into your eye, replace the plug.

Here's what's accomplished—before (and remember that "before" business) anyone climbs on the truck to shake up the contents of said gas tank, you've drained off the bottom and lowered the "water level" so that none of it gets into the fuel system in the first place. You may cry fire hazard—but you don't smoke in the motor pool, do you?

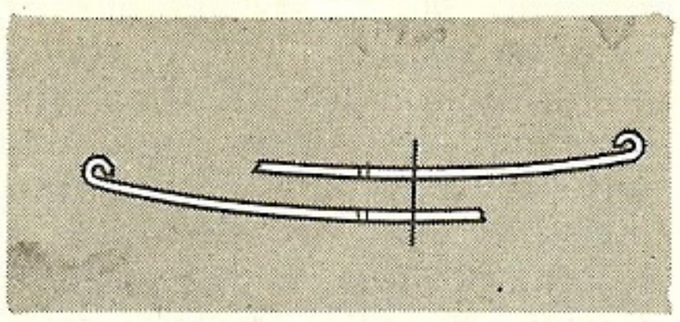
Lt. Col. H. F. Drew
APO 772

Ed. Note—Slick trick, Colonel, but here are two points to remember: (1) Be sure the truck is level to avoid draining good gas instead of water, and (2) weld the washer halves to the drain plugs lightly so that if something scrapes the bottom of the tank, the washer halves will get knocked off instead of the drain plugs yanked out.

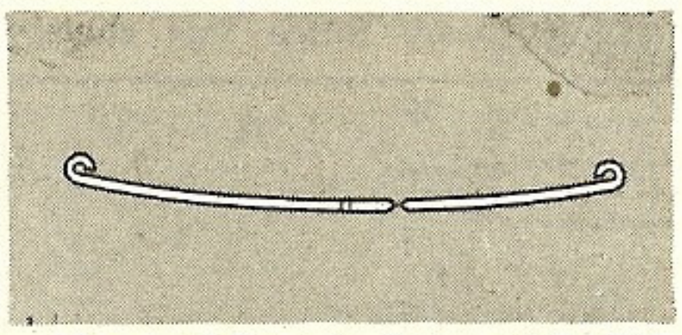
Dear Editor,

Recently we have experienced a good deal of trouble with broken front springs on GMC 6x6's. Not being able to obtain sufficient replacement caused me to resort to welding broken main leaves. To date the repaired leaves are giving good service—they are holding up as well as rebuilt springs made of original leaves. No weld failures have occurred as yet, nor do the leaves break anywhere near the welds.

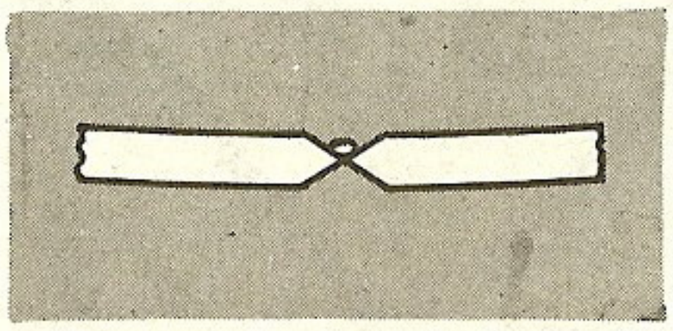
The welding procedure is as follows: The only practical place to weld them is as close to the center bolt or as near to the U-bolts as possible. If the leaf is broken outside this area, then two broken leaves are used to make one. The leaves are cut so the weld comes in the right place, thus:



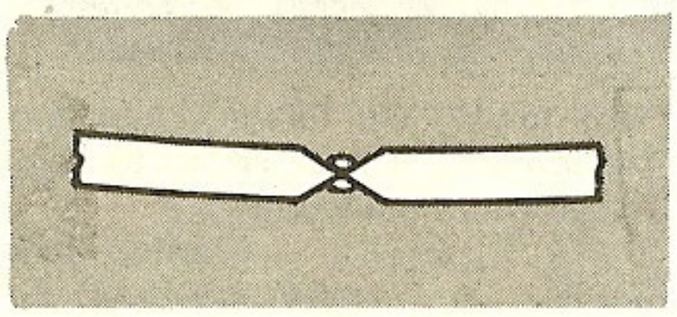
The spring leaves are beveled with a double "V" on an emery wheel after being cut with an oxyacetylene torch, then lined up accurately, like this:



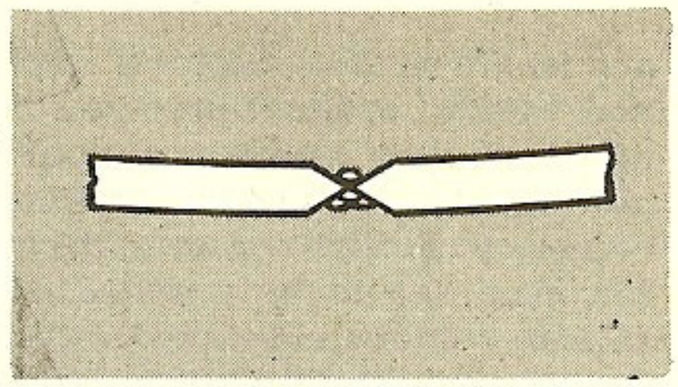
The welding is done with ⅛" stainless-steel 18-8 (18% chrome, 8% nickel) electrodes applied with the electric arc. The heat is kept as low as possible consistent with a good weld. The beads are applied thinly and one at a time (next Fig.). Enough time must be allowed between beads for the weld to cool completely, at least until you can hold it in your hand.



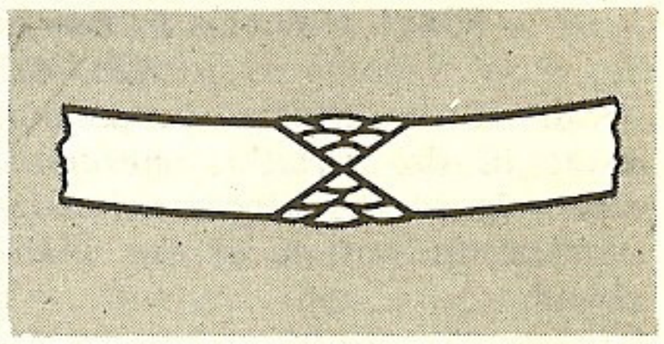
The next pass is applied opposite the first, and so on, this way:



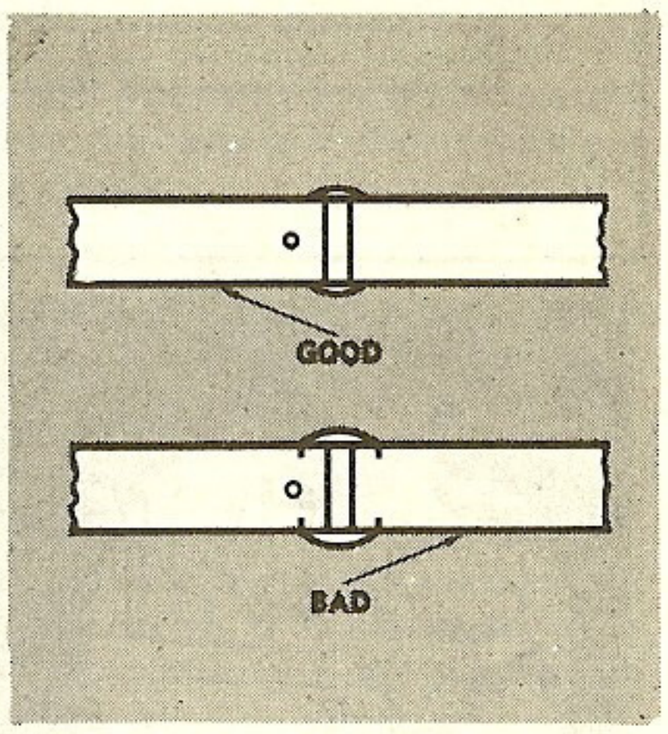
Warping can be controlled by applying two beads on the outside of the warp before applying any on the inside. Again the beads should be allowed to cool separately and completely. This will straighten it out as shown in the next sketch. However, careful alinement before welding will minimize the warping effect.



About six beads will fill one side of the bevel, twelve for the whole weld as you see here. The surfaces are then ground flush.



Some reinforcement may be applied at the sides. However, extreme care must be used not to cause any checks or cracks at the ends of this reinforcement. Good and bad reinforcement look like this:



By "cold welding" in this way, the natural annealing effect and brittleness caused by arc welding high-carbon steel is minimized.

The stainless steel rod makes a very ductile weld and has all the tensile strength needed. This same procedure would work on most spring leaves and bicarbon-steel tools and parts.

Four to six hours may be allowed for the job. A dozen can be welded as fast as one because of the necessary cooling time.

T/4 George B. Huhn
APO 218

Ed. Note—When you're done, remember that spring U-bolts oughta be finally tightened when the vehicle is under normal load.

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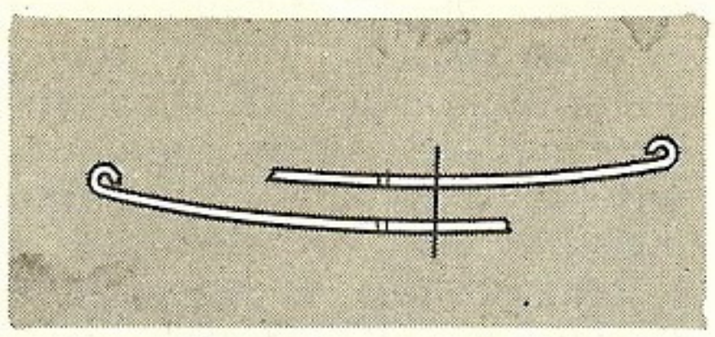

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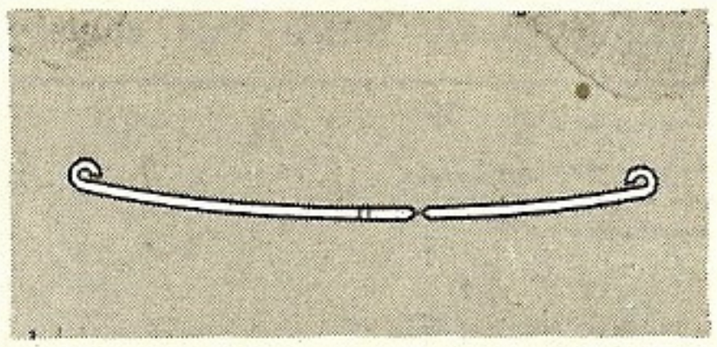

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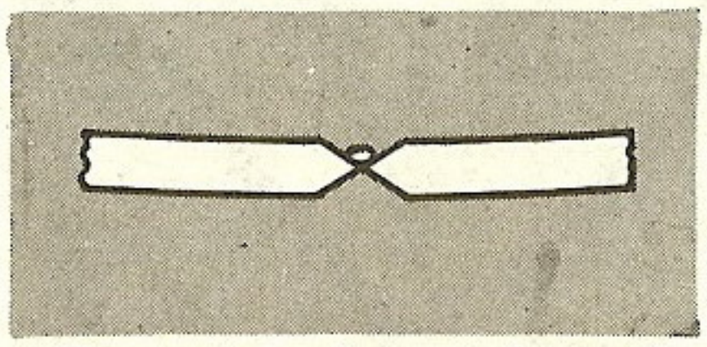

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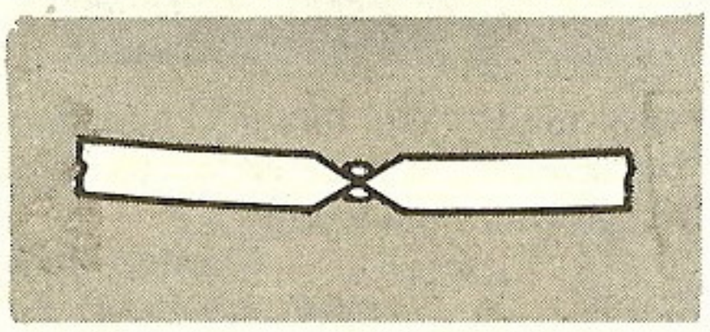

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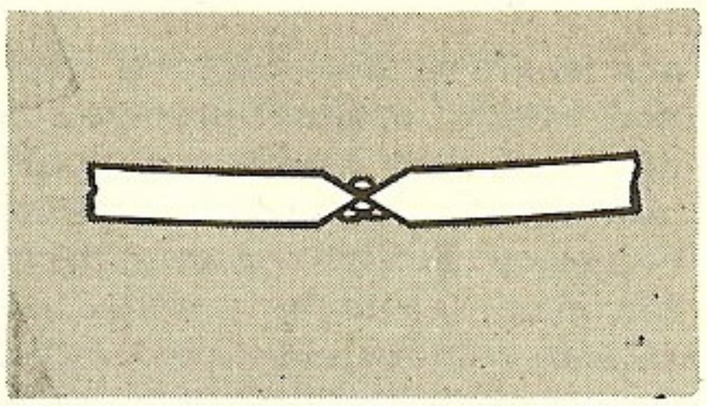

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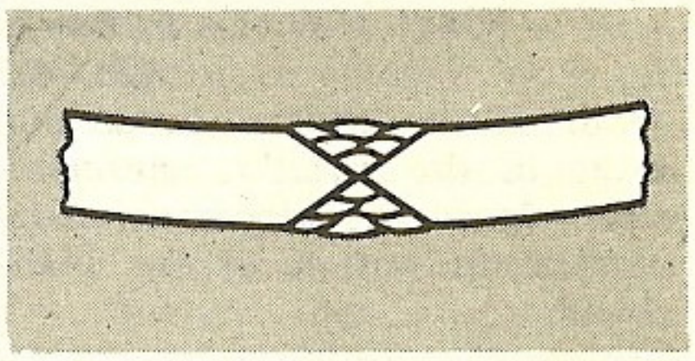

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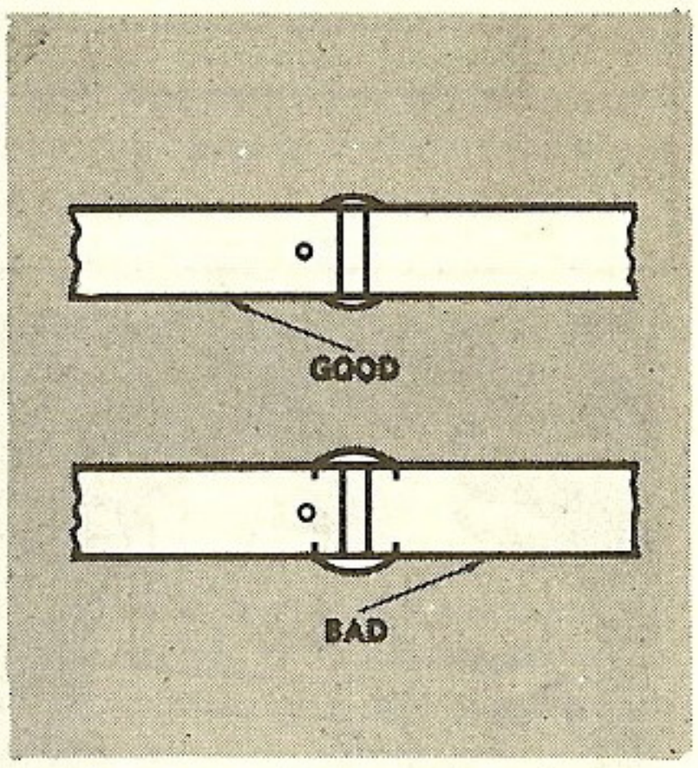

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T/4 George B. Huhn
APO 218

Ed. Note—When you're done, remember that spring U-bolts oughta be finally tightened when the vehicle is under normal load.

SGT. HALF-MAST McCANICK'S

QUESTION DEPARTMENT

Dear Half-Mast,

I maintain that you cannot charge and discharge a battery at the same time. In other words, as long as the ammeter is showing a charge, the generator is feeding everything. Right?

Also, please explain why one side of the secondary (in the ignition coil) is connected to the plus side of the primary winding.

Pfc. D. B.

Dear Pfc.,

Right—a battery can't be charging and discharging at the same time. If the ammeter shows a charge, the generator is dishing out current for lights, ignition, etc. (if the vehicle is running, of course), and also charging the battery. Whenever the ammeter shows a charge, at least some of it's going to the battery.

According to the manufacturer of the ignition coil, there's a slight improvement in operation when the grounded side of the secondary winding is connected to the positive side of the primary winding. Personally, I never did notice any difference, except it does away with some radio interference. The latest trick is to ground the secondary to the metal case of the ignition coil, but I still don't think it changes anything.

Half-Mast

Dear Half-Mast,

I'd like to ask you a question about ¼-ton jeep shock absorbers. TM 9-803 tells how to maintain and adjust them, but not how to refill them. I'd like to know if they can be refilled.

While the war was going on in the ETO, I drove a 4-ton wrecker. But now I'm working as a mechanic in a motor pool and I find jeeps with from 8000 to 20,000 miles on them that have never had their shock absorbers looked at. Most have no fluid left and have never been adjusted. So maybe I could refill them and stop a lot of broken springs.

T/5 J. C. G.

Dear Corporal,

There are two types of shock absorbers used on the ¼-ton—the non-refillable (Gabriel), and the refillable (Monroe). You can tell the refillable type by the cutaway sections on the outer shell—that's the top section of the shock absorber. Gabriel shock absorbers have to be replaced if out of fluid, but Monroe shock aborbers can be refilled by higher echelons like it says in TB 9-1803B.

Since the rear shock absorbers are longer than the front ones, you won't get the right action if you switch 'em, and besides, you put a mess of strain on the spring-clip plates on the axle. Check 'em up—short shocks in front, long ones behind.

You can tell 'em apart by measuring the length from center eye to center eye when fully compressed: Monroe, front 10-9/16", rear 11-9/16"; Gabriel, front 10-5/16", rear 11-5/16".

Half-Mast

Dear Half-Mast,

We've noticed recently — especially after long drives—that the extreme heat of the engine, circulating around the battery, has a tendency to shorten the life of the battery in both the 1½-ton and ¾-ton Dodges. Why couldn't an opening be made up near the front of the engine to allow some of the heat to escape? Both the Ford and Willys ¼-tons have such an opening by the headlight and neither of these trucks has this trouble.

S/Sgt. S.

Dear Sergeant,

I think you'd find that the temperature around the battery of the Dodges is just about the same as in jeeps under the same conditions. The charging rate of the battery would have a lot more effect on its life span than the engine heat would. If the charging rate's too high, the regulator needs adjusting. Sometimes engine heat will cause vapors to gather 'round the battery if it's too full of electrolyte. Might also help to put asbestos sheeting around the battery, like they do in the tropics.

Half-Mast

Dear Half-Mast,

How about the correct dope on gear-lube level for the gear boxes on 4-ton and 6-ton trucks? I've heard ½" below from some guys and full-cold from others and I'm

tired of getting gigged at inspections.

T/Sgt. G. S.

Dear Sergeant,

This oughta gag those gigs you've been getting on gear-case lube levels. All you have to remember is—with a **gage,** the level should be at the full mark, and with a **plug,** the level should be full up to the plug with a cold engine.

TB ORD 217 (8 Nov. 44) superseded all other instructions for lube levels in transmissions, transfer cases, final-drive assemblies, gear-reduction cases, power-take-off units, differential-gear cases, and winch-case units. It says that all inspections will be made with the lubricant temperature the same as the surrounding air temperature—that means a cold engine. With a bayonet or any other type gage, the lube level's to be to the "FULL" mark. When a plug is used to check the lube level, the lube is to come right up to the plug opening.

Natcherly, the level will rise during operation because of the heat and the lubricant whipping around but it'll return to normal after cooling. It's doubly important—with this higher level—to keep all vents open to stave off oil-seal failures at high speeds and operating temperatures.

Half-Mast

Dear Half-Mast,

In the PM Roster (WD AGO Form 460) which you ran in the May ARMY MOTORS, you show only two weekly services between the two monthly services on the second line. Shouldn't there be a W3 on the 22nd?

Capt. R. S. F.

Dear Captain,

The answer's yes. That form was no pin-up, the way it ran. Shoulda been just like the one on page 19 in TM 37-2810, but it wasn't. Like you say, there oughta be a W3 on line 2, scheduled and performed (traced in ink) on the 22nd of the month. What's more, the scheduled services on lines 21, 22, 23, and 24 should be for a Dodge ¾-ton 4x4, like in TM 37-2810. One more thing, a PM Roster gets a date (month and year) up in the right-hand corner.

Three strikes, that's all—I hope, I hope.

Half-Mast

Dear Half-Mast,

AR 850-5 (15 Feb. 45), par. 15 (*d*), says: "With a few exceptions, unit-identification markings are placed on front and rear of the vehicle. (See figs. 4 to 19, inclusive, and 21.) Front and rear markings are identical." And 15 *d* (1) says: "Trailers.—For common types of trailers, front and rear marking are required. (See figs. 14 and 15.) For trailer, bomb, M5; trailer, tractor, crane; and similar trailers, only side markings are required. See figure 16."

However, in fig. 14, page 65, no **front** unit-identification markings are shown. Should we follow the text or the illustration, **or** isn't the trailer, cargo, 1-ton, a common-type trailer??

H. B. W.

Dear Mr. W.,

Yep, it's a plenty-common-type trailer, and unit-indentification markings belong on the front as well as the rear, like it says in the text. They oughta be on the figures (14 and 15), too—but since they ain't, just follow the text.

Half-Mast

Dear Half-Mast,

Our outfit just got over here in the Pacific and we already have trouble with our jeeps.

The biggest problem is the way the brake linkage is binding. The clevis pins rust and there isn't a damn way to get them off except cut them. We've been grinding the pins to undersize (and it helps), but if this was done elsewhere it would save a hell of a lot of trouble. If you would give me the latest dope on this, I'd appreciate it very much.

Lt. L. L. J.

Dear Lieutenant,

Grinding those clevis pins down like you say, looks like the only suitable fix if you can't get replacements, but you'll probably find the connections getting too loose later on. They're fitted snug in the first place because the hammering action of a too-small clevis will cause yoke distortion and can wear the clevis clean through. I think your best bet is to apply thin-film rust-preventive compound. Or, if that ain't handy, try a frequent squirt of rust-preventive oil or plain old engine oil to beat the rust.

Half-Mast

Dear Half-Mast,

We've noticed on recent inspections that a large number of mufflers installed on vehicles do not have a moisture-drain hole. This is true of all the replacement mufflers—the original ones have drain holes. Is this an oversight on the part of the manufacturer, or is there a specific reason for not putting the drain hole on replacement mufflers?

T/Sgt. W. W. C.
Sgt. J. H. B.

Dear Sergeants,

Could be there was a mistake in

SAVE WASTE FAT

Don't burn off all your blubber over a maintenance problem that's got you stymied—you may have to live off that fat some day. Send your problems to M/Sgt. Half-Mast McCanick, who has plenty of fat to spare. The old boy's been riddled with riddles for years but there's very few holes in his answers. Write direct to **Half-Mast, ARMY MOTORS Magazine, Office, Chief of Ordnance, Detroit 32, Michigan.** If your question's fascinating enough to be published, you'll also get a one-year **personal** subscription to this Greaseball's Home Companion.

assembly on those mufflers—they might've been turned 180°, so the drain hole comes out on top. Some mufflers, y'know, are designed so that when the vehicle is started, exhaust blows the water out. They don't need drain holes.

But if you're replacing a muffler that **had** a drain hole with a muffler that **hasn't** a drain hole—well, drill one.

Half-Mast

Dear Half-Mast,

Who ever gave these inspectors the idea that there could be "too much" water in the radiator? I always thought the overflow pipe was installed on the radiator to take care of any excess water.

Sgt. D. G. K.

Dear Sergeant,

You're right about the overflow pipe taking care of any excess water in the cooling system, and when it's just **water** that's overflowing, nobody should squawk. But when you're using anti-freeze or inhibitor, and fill the system above the bottom edge of the baffle in the top of the radiator, you're wasting the stuff. It'll just run out on the ground after the heat of the engine makes it expand. Fill to the bottom of the baffle and keep peace in the family.

Half-Mast

Dear Half-Mast,

Would appreciate some simple procedure (other than blasting powder) for removing the pressure-type fuel-tank cap on the ¼-ton jeep on cold mornings when there seems to be a vacuum in the tank—at least they resist removal, but definitely! And there's not enough space between the cap and the tank top-shield to get a good grip on it. Any suggestions?

Cpl. H. A. M.

Dear Corporal,

It often takes more'n frozen fingers to flip off those fuel-tank caps. But there's a simple gadget you can make to get a grip and put on the pressure. Take a piece of 1"x 1" wood, 12" to 18" long, and bolt a loop of canvas at one end. The canvas should be about 1" wide and long enough so the loop'll fit around the cap. When you push the free end of the stick in the direction that the cap screws off, the canvas loop grips the cap like a wrench. If the canvas slips, line it with a slab of rubber. Then the harder you push, the tighter the grip.

Half-Mast

Dear Half-Mast,

Between the rear brake-drum and backing plate on a newly-assembled 2½-ton 6x6 GMC, there is a felt weather-stripping. After the vehicle is in use, should the felt be removed or not?

Sgt. A. J. M.

Dear Sergeant,

That felt strip was never an official modification but it looks like a few slipped through somehow. The idea behind it was to keep mud 'n' stuff from oozing inside the drums. The deal wasn't so hot, though, on accounta if you drive the truck over 25 mph, the stripping may get hot enough to burn and get all charred up. If you think it's helping to keep mud outta the drums and you're not driving your trucks that fast, leave 'em on—otherwise take 'em off. Fielder's choice.

Half-Mast

Dear Half-Mast,

What do we do about TB's and MWO's when they're omitted from the new index? Does it mean that they're cancelled or rescinded, and that we don't do the work any longer—or does it mean that because a new TM comes out, the actual work on the modification is automatically done also?

For instance, TB ORD 14 called for a front-axle filler-plug modification. The index, FM 21-6, omits it. We still get unmodified vehicles. Do we modify them or not?

We aren't inquiring about the particular modification; we just want to know the story in general.

Lt. F. W.

Dear Lieutenant,

There's no general story that covers all cancelled MWO's and TB's. Whether or not you do the work after the MWO or TB has been cancelled depends on the reason for cancellation. You'll have to take it up with the Maintenance Division, Office, Chief of Ordnance-Detroit, as the situation arises, if you don't know the reason for cancellation. And the only way you'll know that is by making a regular monthly check in the "Rescissions, Supersessions, and Cancellations" section of FM 21-6 (the last section in the book).

When a publication's dropped from the FM 21-6 listing, notice of cancellation, supersession, or rescission is published in that section with the reason—which tells you whether it's cancelled because it's obsolete, been superseded by another publication, what the superseding publication is, etc. But the list of cancellations, supersessions, and rescissions **ain't** cumulative, so unless you check each edition of FM 21-6, you won't know why in hell the TB or MWO has been dropped from the list.

Those FM 21-6 lists of TB's MWO's, etc., **are official lists of publications authorized for issue by AG depots.** And when a TB or MWO (or any other WD publication) is dropped from the listing, it means it's been officially cancelled, superseded, or rescinded, and ain't stocked and issued by AG depots any more.

But the omission of a TB doesn't necessarily mean it's been superseded by a TM, or that it was cancelled because the info was incorporated in a later TM. Info in some TB's is the kind that'd never be picked up in a TM—yet it might be cancelled. For example, when a slight change is made on a vehicle in production, a TB, suggesting the same change in the field, might be published, and eventually cancelled after plenty of time has gone by for the work to be done. Then, too, TB's are sometimes cancelled because policy or procedure has changed, making the TB obsolete. The same story goes for MWO's.

So when you get hold of a vehicle that hasn't been modified, and you're in a stew about what to do, better take it up with the

(Continued on page 192)

The Month's Directives

A check-list of recent official publications affecting lower-echelon vehicle maintenance. All are distributed to the field through established channels —**not** by the Office, Chief of Ordnance-Detroit or the Publications Department, Raritan Arsenal. For further dope on distribution, consult **FM 21-6** or your organizational or post publications officer.

WAR DEPARTMENT AGO PUBLICATIONS

AR—Army Regulations
FM—Field Manual
TM—Technical Manual
TB—Technical Bulletin
LO—Lubrication Order
MWO—Modification Work Order
TC—Training Circular
WDC—War Department Circular
SB—Supply Bulletin

ASF CATALOG, ORDNANCE SUPPLY CATALOG

ORD 1—Introduction
ORD 2—Index
ORD 3—List of Major Items for Issue to Troops, Posts, Camps and Stations
ORD 4—Allowances of Expendable Supplies
ORD 5—Stock List of All Items
ORD 6—Sets of Equipment
ORD 7—Organizational Spare Parts and Equipment
ORD 8—Higher-Echelon Spare Parts and Equipment
ORD 9—List of All Parts or List of All Service Parts
ORD 10—Tool, Load, and Supply Guide
ORD 11—Ammunition
ORD 12—Obsolete General Supplies
ORD 13—Items Common to Two or More Major Items
ORD 14—Interchangeability List
ORD 15—Cross Reference Lists
ORD 16—Captured Foreign Materiel

GUN MOTOR CARRIAGES

CARRIAGE, MOTOR, 75-MM HOWITZER, M8
TB 9-732B-19, Lubrication instructions.

CARRIAGE, MOTOR, 3-IN. GUN, M10, M10A1
TB ORD FE48, Oil-cooler protector straps.

CARRIAGE, MOTOR, 90-MM GUN, M36, M36B1, M36B2
TB ORD FE48, Oil-cooler protector straps.

CARRIAGE, MOTOR, 90-MM GUN, M36B1
LO 9-748 (1 May 45).

CARRIAGE, MOTOR, 155-MM HOWITZER, M41
ORD 7, SNL G-236 (19 Jun. 45).

CARRIERS

CARRIER, PERSONNEL, HALF-TRACK, M5A1
ORD 7, SNL G-147, Vol. 3 (21 Jun. 45).

CAR, HALF-TRACK, M9A1
ORD 7, SNL G-147, Vol. 1 (21 Jun. 45).

CARRIER, CARGO, M29
MWO ORD G179-W7, Equipping vehicle for tandem operation.
TB 9-772-FE5, Replacement of 12-volt battery with two 6-volt batteries.

LIGHT TANKS

TANK, LIGHT, M3A3
TB ORD 296, Engine governor setting.

TANK, LIGHT, M5, M5A1
LO 9-732 (8 Feb. 45).

TANK, LIGHT, M22
TB 9-724-7, Lubrication instructions.

TANK, LIGHT, M24
TB ORD FE43, Removal of 2-in. smoke mortar M3.
TB 9-729-FE3, Sealing hull to prevent water entering crew and engine compartments.
TB 9-729-FE4, Auxiliary carburetor-fuel-filter.
TB 9-729-FE5, Gunner's foot rest.
LO 9-729 (20 Apr. 45).

MEDIUM TANKS

TANK, MEDIUM, M4 SERIES
TB ORD FE43, Removal of 2-in. smoke mortar M3.

TANK, MEDIUM, M4, 75-MM GUN, DRY
ORD 7, 8, 9, SNL G-104, Vol. 6, 11, 14, C6 (17 Jun. 45).

TANK, MEDIUM, M4, 105-MM HOWITZER
ORD 7, 8, 9, SNL G-104, Vol. 6, 11, 14, C6 (17 Jun. 45).

TANK, MEDIUM, M4A1, 75-MM GUN, DRY
ORD 7, 8, 9, SNL G-104, Vol. 6, 11, 14, C6 (17 Jun. 45).

TANK, MEDIUM, M4A1, 76-MM GUN, WET
ORD 9, SNL G-207 (20 May 45).

BULLDOZER, TANK MOUNTING, HYDRAULICALLY OPERATED, AND EXCAVATOR, MINE, T5E3
ORD 7, 8, SNL G-228, C3 (30 Jun. 45).

VEHICLE, TANK RECOVERY, M32 SERIES
TB 9-738-FE3, Elimination of interference between recovery-vehicle boom and towed-vehicle turret.

VEHICLE, TANK RECOVERY, M32, M32B1
TB 9-738-FE2, Elimination of carbon-monoxide-gas hazard.

TRUCKS

TRUCK, 1½-TON, 4x2 (FORD)
LO 9-806 (10 May 45).

TRUCK, 1½-TON, 4x2 (IHC K-5, KS-5)
LO 9-824 (10 May 45).

TRUCK, 1½-TON, 4x4, BOMB SERVICE, M6
ORD 9, SNL G-85, G-506, Vol. 4 (25 Jun. 45).

TRUCK, 2½-TON, 4x2 (IHC)
ORD 9, SNL G-541 (20 Jun. 45).

TRUCK, 2½-TON, 6x6, AMPHIBIAN (GMC DUKW-353)
ORD 9, SNL G-501 (1 Jun. 45).

TRUCK, 2½-TON, 6x6 (GMC CCKW-353, LWB)
TB 9-801-FE3, High winch-base for M55 gun-mount loading-aid kit.

TRUCK, 2½-TON, 6x6, SMALL ARMS REPAIR, M7, M7A1, M7A2
ORD 7, SNL G-138, Vol. 1, C2 (1 Jul. 45).

TRUCK, 2½-TON, 6x6, AUTOMOTIVE REPAIR, M8, M8A1 (LOAD A)
ORD 7, SNL G-139, Vol. 1, C2 (2 Jun. 45).

TRUCK, 2½-TON, 6x6, ARTILLERY REPAIR, M9, M9A1
ORD 7, SNL G-140, C2 (4 Jul. 45).

TRUCK, 2½-TON, 6x6, MACHINE SHOP, M16, M16A1, M16A2 (LOAD A)
ORD 7, SNL G-146, Vol. 1, C1 (11 Jun. 45).

TRUCK, 2½-TON, 6x6, MACHINE SHOP, M16, M16A1 (LOAD B, B1, B2)
ORD 7, SNL G-146, Vol. 2, C2 (12 Jun. 45).

TRUCK, 2½-TON, 6x6, MACHINE SHOP, M16, M16A1 (LOAD D)
ORD 7, SNL G-146, Vol. 4, C2 (14 Jun. 45).

ORD 7, SNL G-146, Vol. 4, C3 (29 Jun. 45).

TRUCK, 2½-TON, 6x6, MACHINE SHOP, M16, M16A1 (LOAD F)

ORD 7, SNL G-146, Vol. 5, C2 (30 Jun. 45).

TRUCK, 2½-TON, 6x6, ELECTRICAL REPAIR, M18, M18A1, M18A2

ORD 7, SNL G-149, C3 (1 Jun. 45).

TRUCK, 2½-TON, 6x6, INSTRUMENT BENCH, M23

ORD 7, SNL G-178, C2 (3 Jul. 45).

TRUCK, BOMB SERVICE, M27

TB 9-766-2, Brake controller for hydraulic operation of electric trailer-brakes.

TRUCK, 4-TON, 6x6, (DIAMOND T)

TB ORD 297, Engine-water-pump and constant-velocity U-joint lubrication.

TRUCK, 4-to-5-TON, 4x4, TRACTOR (FEDERAL, AUTOCAR, WHITE)

TB ORD 297, Engine-water-pump and constant-velocity U-joint lubrication.

TRUCK, 4-to-5-TON, 4x4, C.O.E., TRACTOR (FEDERAL, KENWORTH, MARMON-HERRINGTON)

ORD 7, SNL G-513 (18 Jun. 45).

TRUCK, 6-TON, 6x6, BRIDGE ERECTING AND CRANE CHASSIS (BROCKWAY, WARD LA FRANCE, WHITE)

LO 9-813-1 (28 May 45).

TRUCK, 6-TON, 6x6, PRIME MOVER (WHITE 666)

ORD 8, 9, SNL G-512, G-514, C1 (25 Jul. 45).

TRUCK, 6-TON, 6x6, BRIDGE ERECTING (WHITE)

ORD 7, 8, 9, SNL G-690, C1 (15 Jul. 45).

TRUCK, 6-TON, 6x6, PRIME MOVER (CORBITT 50SD6)

ORD 8, 9, SNL G-512, G-514, C1 (25 Jul. 45).

TRUCK, 6-TON, 6x6 (BROCKWAY, WARD LA FRANCE)

ORD 7, 8, SNL G-547, C4 (25 Jun. 45).
ORD 7, 8, SNL G-547, C5 (20 Jul. 45).

TRUCK, WRECKING, HEAVY, M1, M1A1 (WARD LA FRANCE SERIES, 1, 2, 3, 4, 5, KENWORTH 570, 571, 572, 573)

ORD 8, 9, SNL G-116, C1 (18 Jun. 45).

TRACTORS

TRACTOR, HIGH-SPEED, 13-TON, M5

TB ORD FE40, Torque-converter and tranmission-oil-cooler radiator repair.

TRACTOR, HIGH-SPEED, 18-TON, M4

TB ORD FE40, Torque-converter and tranmission-oil-cooler radiator repair.

ORD 7, 8, 9, SNL G-150, C3 (5 Jul. 45).

TRACTOR, HIGH-SPEED, 38-TON, M6

TB ORD FE40, Torque-converter and transmission-oil-cooler radiator repair.

TB 9-788-3, Oil-seal cement.

ORD 9, SNL G-184, C1 (25 Jul. 45).

TRAILERS

SEMITRAILER, 5-TON PAYLOAD, 8-TON GROSS, 2W, STAKE AND PLATFORM (OLSON MFG., TRAILER CO. OF AMERICA, TRUCK ENG.)

ORD 7, 8, 9, SNL G-675, C3 (15 Jun. 45).
ORD 7, 8, 9, SNL G-675, C4 (30 Jul. 45).

SEMITRAILER, 6-TON PAYLOAD, 10-TON GROSS, 2W, VAN, KNOCK-DOWN BODY, 1934

ORD 7, SNL G-665 (7 Jul. 45).

SEMITRAILER, 10-TON PAYLOAD, 14-TON GROSS, 2W, STAKE AND PLATFORM, 1944 (MODEL 1025)

ORD 9, SNL G-676 (15 Jun. 45).

TRAILER, AMMUNITION, M23

ORD 7, 8, 9, SNL G-216, C2 (15 Jul. 45).

MOUNT, TRAILER, MULTIPLE CAL. .50 MACHINE GUN, M55

ORD 7, SNL G-220 (9 Jun. 45).

BUSSES

BUS, 29-PASSENGER, 4x2 (IHC)

LO 9-824 (10 May 45).

BUS, 37-PASSENGER, 4x2 (IHC K-7, KS-7)

ORD 9, SNL G-541 (20 Jun. 45).

LANDING VEHICLES

VEHICLE, LANDING, TRACKED (ARMORED) MKI

TB ORD 296, Engine-governor setting.

VEHICLE, LANDING, TRACKED (UNARMORED) MKII

TB ORD 296, Engine-governor setting.

ORD 7, 8, 9, SNL G-167, G-168, C7 (25 Jul. 45).

VEHICLE, LANDING, TRACKED (ARMORED) MKII

TB ORD 296, Engine-governor setting.

ORD 7, 8, 9, SNL G-167, G-168, C7 (25 Jul. 45).

VEHICLE, LANDING, TRACKED (UNARMORED) MKIV

TB ORD 296, Engine-governor setting.

ORD 7, 8, 9, SNL G-209, C2 (20 Jul. 45).

VEHICLE, LANDING, TRACKED (ARMORED) MKIV

TB ORD 296, Engine-governor setting.

EQUIPMENT

COMPRESSOR, AIR, PORTABLE, GASOLINE-ENGINE-DRIVEN, 5 H.P., 16 CU. FT. CAPACITY, W/TANK AND HOSE (WISCONSIN ENGINE AEH, BRIGGS & STRATTON ENGINE Z), WAYNE PUMP CO. 5163-HG, COMPLETE (66-C-1175)

ORD 7, SNL J-406, C1 (10 Jun. 45).

GENERAL

FM 21-6, List and index of WD publications (10 Jul. 45).

FM 21-7, List of WD Films, Film Strips, and Recognition Film Slides (Apr. 45).

TM 9-867, Maintenance and care of hand tools (19 Apr. 45).

TM 10-515, C1, The Motorcycle (30 Jun. 45).

TB ORD FE42, Wheel jacks for general-purpose vehicles.

TB ORD FE45, Ordnance combat vehicles: Armored first-aid-kit stowage box.

TB ORD 300, Emergency instructions for lubricants and cleaning materials.

TB 9-850-19, Use of liquid lens-cleaning soap and antifog compound on optical instruments.

ORD 2, Index (1 Jul. 45).

ORD 5, SNL H-1, Standard hardware (7 Jun. 45).

ORD 6, SNL G-27, Sec. 2, Motor vehicle repair tools (1 Jul. 45).

SB 9-26, Preparation for shipment of unserviceable transport and combat-vehicle major assemblies (18 Jun. 45).

SB 9-46, C1, List of prices for ordnance materiel, automotive spare parts (23 Apr. 45).

YOU CAN'T START A FRENCH-REBUILT JEEP UNLESS . . . .

A quick way to go stark, raving nuts is to sit at the wheel of a jeep equipped with a replacement French carburetor, and try to start it without previously having been tipped off about what's what with these carburetors.

Hundreds of batteries have been ground down because People Didn't Know, and international relations have not been so shaky since cognac went up to 50 francs a snort.

When you start a jeep that has the original American carburetor, you naturally step on the accelerator to feed it gas, or maybe pull out the throttle. In true Yankee fashion, the truck responds with a happy roar and you are off in a shower of genuine Willys parts.

But French carburetors speak a different language. They are Solex non-standard carburetors—and if you know anything about Solex European carburetors, you remember that many of them use a fuel primer to spray gas into the engine for quick starting instead of choking as on American vehicles. But these non-standard Solex carburetors do not even have the fuel primer—they depend on the **choke** to furnish fuel for starting. And there the resemblance to your American carburetor stops—because there's no direct connection between the accelerator pedal or throttle and the carburetor accelerating-pump. In other words, when you hit the accelerating pedal or work the throttle button, the accelerating pump in the carburetor does not throw a spurt of fuel into the engine to help you get started. All the accelerator does is wave the carburetor butterfly around.

So when you sit there mashing down on the accelerator pedal, all you do is open wide the carburetor butterfly. This breaks the vacuum in the manifold and the choke can't operate fully (the choke operates on the vacuum in the manifold to draw gasoline from the carburetor bowl through a by-pass around the butterfly valve). With the choke not operating properly, there's nothing—absolutely nothing—throwing enough of a charge of gasoline into the engine to help you get started.

You sit there in a fit of blind rage working away at the accelerator pedal and grinding down the battery.

Wake up, man, wake up—the whole division's laughing. The only true way to start your jeep, if it has a French-rebuilt engine featuring the non-standard Solex carburetor, is to leave the accelerator pedal and throttle button alone and use the choke for starting. As follows: **Switch on the ignition. Pull the choke out all the way. Step on the starter. Do not touch the accelerator pedal or throttle.**

Since many of these Solex carburetors will be finding their way to the Pacific, it might be a wise idea to stencil these instructions on these jeeps for all to see.

For the benefit of mechanics, an ETO bulletin announces that there are no repair kits available for reconditioning these carburetors. In the ETO, they will be returned to the Salvage and Reclamation Officer, Depot 0-644, for repair. In the Pacific, you'll probably just have to replace them.

To identify these carburetors, the bulletin says they will be marked with two diagonal blue stripes around the main body. Also, engines rebuilt with these carburetors will be so tagged.

WRECKER SECRETS

(Continued from page 175)

tight to keep the tires from chafing and prevent wheel damage.

UPSIDE-DOWN BUMPER

Here's an idea that one shop had to sell the Old Man for three months before he'd let them do it. Now he wouldn't be without it. It consists of welding another bumper upside down (Fig. 10) on the present bumper of the 4-ton wrecker. The idea is a real time- and work-saver around the shop. It enables the wrecker to push all vehicles from the jeep on up in and around the bays, and it's fine for short pushes to start any vehicles with a dead battery or busted starter. It saves the pieces, too—if you've ever tried to push a GMC with the wrecker, you know how the wrecker bumper slides right up over the Jimmy's bumper, smashing the grill and the radiator. If the GMC has a front winch and the Diamond T bumper slides over the winch and tow hooks, it's really hell to pull them apart.

The upside-down bumper saves all this and also puts up an extra guard for the winch gear-box on the wrecker.

The extra bumper is easy to put on—lay a bead along the seams where the two bumpers meet and brace it on each side, from the frame to the lower half of the extra bumper, with ½" by 2" flat stock.

Like everything else in this deal, the double bumper is good according to your needs, time, and facilities—and what the Old Man will let you get away with.

SGT. HALF MAST

(Continued from page 189)

Maintenance Division of the Office, Chief of Ordnance-Detroit, Detroit 32, Michigan.

It's okay to go ahead with TB ORD 14, by the way. That's one of those TB's that was cancelled because it'd been out in the field long enough for every vehicle affected to be taken care of.

Half-Mast

• • NEWS FLASHES • •

The items on this page include latest news, revisions, and corrections verified after the publication deadline

Hand tools are about to get the kind of treatment they deserve and need—that is, if you follow the instructions in **TM 9-867, "Maintenance and Care of Hand Tools"** (19 Apr. 45). The right ways and wrong ways are all shown in pictures: Maintenance tips for each type of hand tool, such as bits and boring tools, calipers, punches, reamers, hand grinders, etc. — common misuses — proper methods for sharpening, cleaning, and repairing tools—prescribed lubricants for tools that need 'em—how to store tools—along with plenty of dope on how to keep rust on the run.

You'll want to follow the charts showing what grease to use and how often to use it on hand-grinder parts and other tools. Every maintenance shop oughta have this TM, and every mechanic oughta use it.

* * *

TB 31-200-7, "Ordnance Wheeled Materiel: Tire Inflation Pressures" (23 May 45), has been distributed now. Any outfits that didn't get a copy can requisition one — and you'd better, since it specifies the tire pressures you're supposed to carry and supersedes those in all publications of earlier date.

Some new tables are added, authorizing lower pressures for certain vehicles operating over unusual terrain, but you'll have to check through the bulletin yourself to see just how it affects your rubber.

* * *

Today's unserviceable assembly can become a serviceable assembly some day soon, if it gets the special treatment it requires before being sent out for rebuild or remanufacture. Complete instructions for preparing such an assembly for shipment are in **SB 9-26, "Preparation for Shipment of Unserviceable Transport and Combat Vehicle Major Assemblies"** (18 Jun. 45), which supersedes SB 9-26 (23 Jun. 44).

SOP in one respect has changed. **Washing or cleaning assemblies before shipment isn't done any more**—too many spick-and-span engines turned up for rebuild with innards all rusted by moisture from the cleaning job.

The outfit that removes the assembly is responsible for preparing it for shipment the way it's supposed to be done, when the tactical situation and facilities permit. But if you don't have the proper materials, the know-how, or the tactical situation **doesn't** permit, tag the assembly with WD AGO Form 9-81 (Exchange Part or Unit Identification Tag), and let the higher-echelon boys get it ready.

WDC 213 (17 Jul. 45) puts the last of the old QM **Motor Transport Technical Service Bulletins** out of business. There's one list for those rescinded, and another for those superseded by other publications (also tells you what the superseding publications are). If you've got any MTTSB's on the shelves, better check through the circular and see what publications (if any) oughta take their places.

* * *

The story goes that a lot of people who oughta know better are using the **low-voltage circuit tester** (Fed. Stock No. 17-T-5575) on 24-volt electrical systems in combat vehicles. Tie some insulated wire around your finger to remind you that this tester was designed for use on 6- and 12-volt systems **only**—none higher.

* * *

That so-called **universal GMC gasket set** (Official Stock No. 3500-2185905, Mfr's Part No. GM-2185905), used for engine overhaul on all 2½-ton 6x6's and 6x4's, has been thrown out because it never did fit all these vehicles. It was okay only for the CCKW and AFKWX models with shallow oil pans. That meant you had to adapt this set to the other jobs as best you could. From now on, there'll be a special gasket set for each GMC, which you'll requisition by the following numbers:

Official Stock No.	Mfr's Part No.	Type of 2½-ton GMC
3500-2200139	GM-2200139	CCKW, shallow oil pan
3500-2200140	GM-2200140	AFKWX, shallow oil pan
G508-7000895	GM-2200131	CCKW, deep-sump oil pan, cast-iron carburetor
G508-7000896	GM-2200132	AKFWX, deep-sump oil pan
3500-2200651	GM-2200651	CCKW, deep-sump oil pan, die-cast carburetor
G501-7001941	GM-2200628	CCKW, shallow oil pan, cast-iron carburetor

* * *

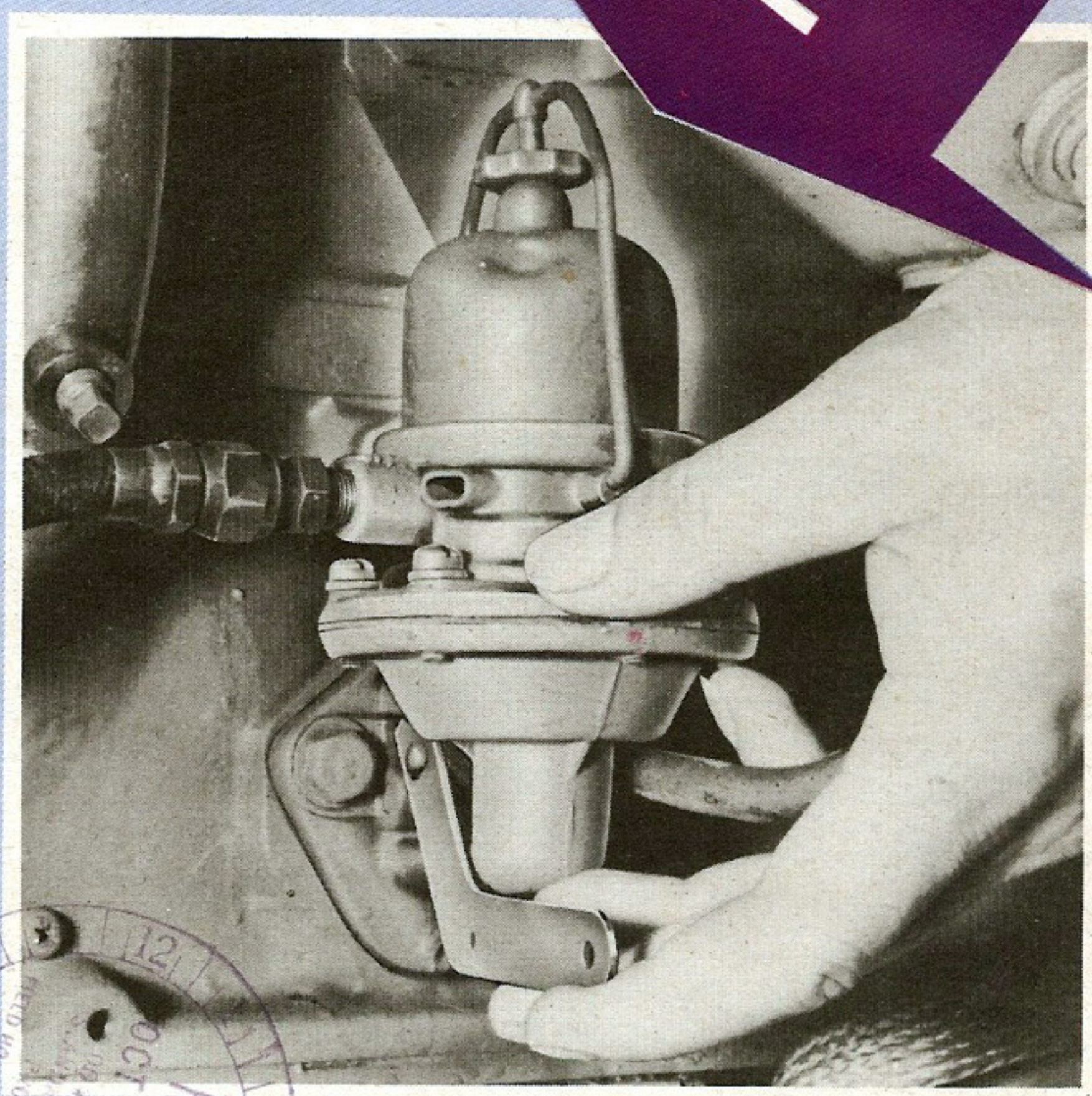
Soon as you can, obliterate any old markings on drums and containers you put **used oil** in, and paint in big, permanent letters on the container the notice: CRANKCASE DRAININGS. **SB 10-241** (Jul. 45) says so, and goes on to tell how ZI posts, camps, and stations can dispose of drained oil.

* * *

You people who have **Dukws below No. 2005** probably have the old Higgins bilge-pump (Mfr's Part No. GM-2182014) that keeps the bilge knee-deep in water. For better elimination, try Bilge Pump Kit, GM-2206456 (Item Stock No. G501-570039). It's available at Rossford Ordnance Depot for outfits with the old-type pump. Only one per duck, piggy.

Take your tool in your hand and lay a hard on that starter

THIS!



● After you've run out of gas and refueled your truck, don't sit there like a dope grinding down the battery. Prime the fuel system first with the little hand primer (see Fig.)—there's one on every GI truck's fuel pump.