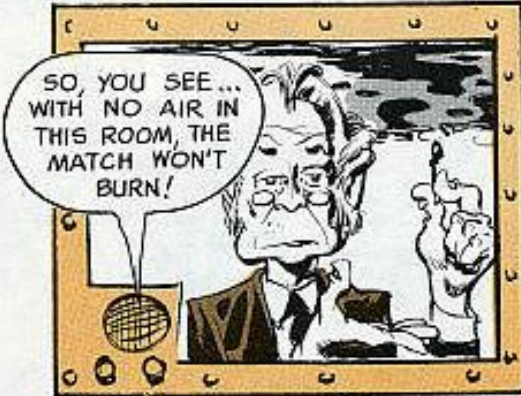


ENGINE AIR CLEANERS...

You can't even light a match without air. To burn 'most anything, you've got to feed it air. Like oxygen, man!

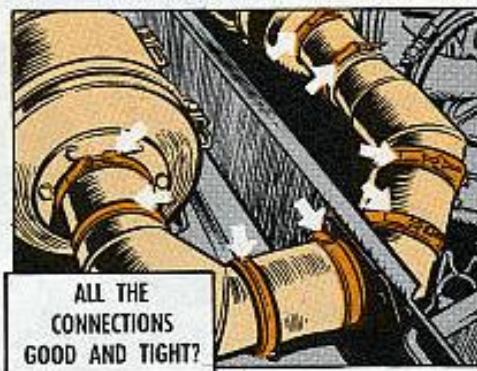
STARVATION



So everybody already knows that, huh?

Then how come some guys try to run an engine with a dirt-choked air cleaner?

Do they think an engine can live on fuel alone? Don't they know fuel won't burn good unless it's mixed with enough air? Can't they see that a heckuva lot of air has to pour through that engine air cleaner?



So why not just get that air cleaner out of the way? Wow — no good! Dirt's



DIET



murder inside your engine! Fact is, you've got to watch close to see that all tubes and other hookups between your air cleaner and the engine are air tight. Even a little hole the size of a pencil lead will let in enough dirt to tear up the shiny bearing surfaces in there.

If your engine's got no poop, if it's sluggish on pickup and hill climbing, there's a good chance your filter element's plugged up with dirt.

Your engine's starving for air!

You've waited too long already. Your air cleaner's long overdue for a cleaning.

HOW OFTEN? ENOUGH!

If you're on the ball, your engine never has to suffer from air starvation. Your TM or LO, or both, tells you how often to service your engine air cleaner.

Oh, so you're with it? You do give your air cleaner a regular goin' over just like the book says?



That's good—but maybe not good enough.

When you can see, feel and taste dirt in the air, you know you've got to take care of your air cleaner more often. Your engine sucks in a lot of air. That means your air cleaner picks up a lot of dirt.

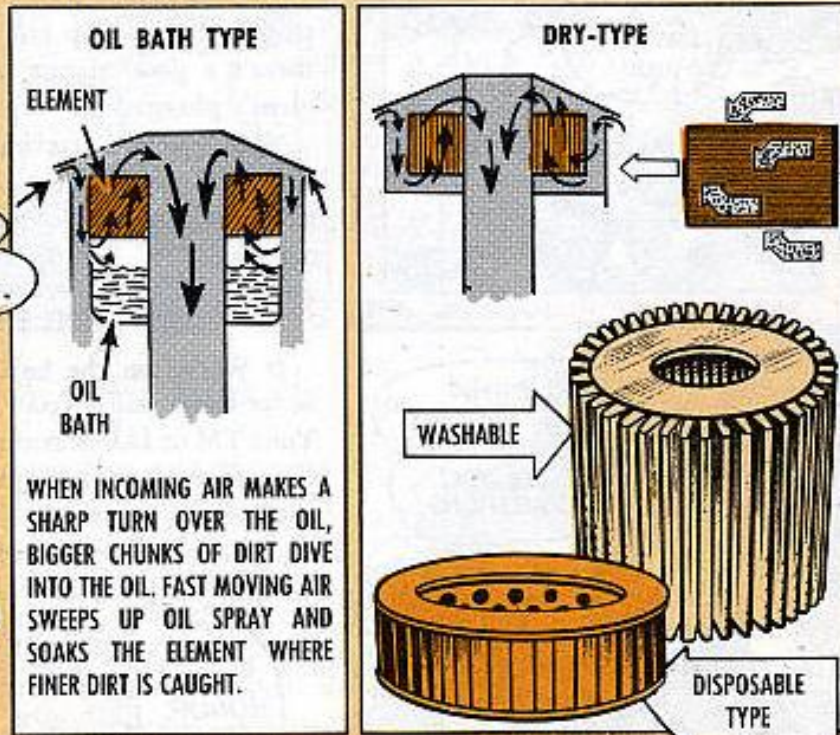
You may have to clean your air cleaner every day!

WHAT'S YOURS?

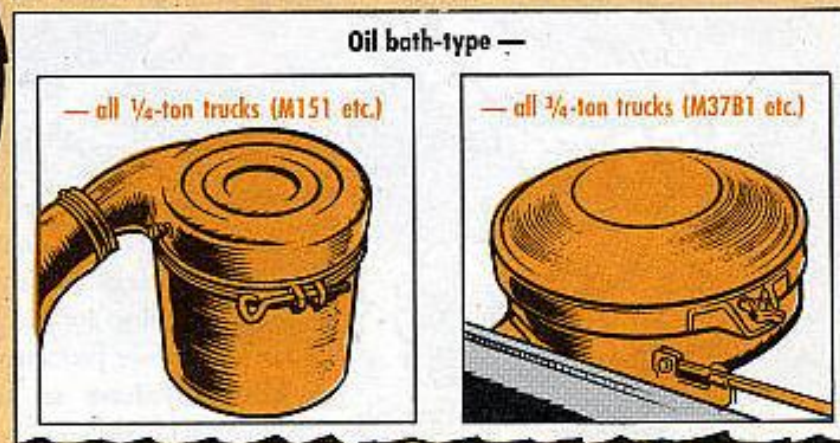
Let's take it from the top . . . start fresh. Let's make you the air cleaner expert in your outfit.

First off, your truck's got either an oil bath-type air cleaner or a dry-type air cleaner. Chances are, your dry-type job has a washable element, but there are a few air cleaners around with a non-washable (throwaway) element like you see in most late-model civilian vehicles.

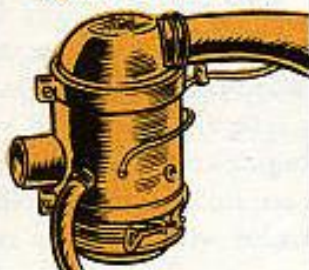
HERE'S HOW
THE TWO
KINDS WORK...



Here's the rundown on what's got what—check it out for your air cleaner:



— all 2½-ton gasoline engine trucks (M35 etc.)



— all 5-ton gasoline engine trucks (M54 etc.)

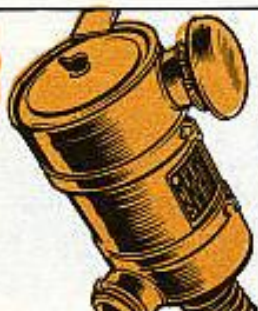


— all 10-ton gasoline engine trucks (M125 etc.) — 2 filters



Dry-type with washable element —

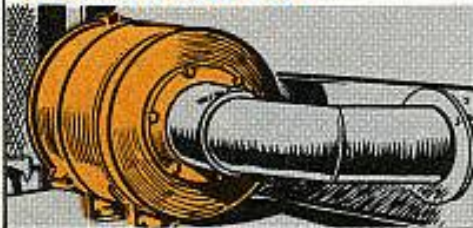
— newer 1¼-ton trucks (M715 etc.) with engine speed governor.



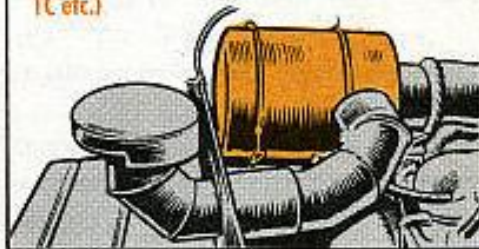
— all 2½-ton multifuel engine trucks (M35A1, M35A2 etc.)



— all 5-ton diesel and multifuel engine trucks (M54A1, M54A2 etc.)

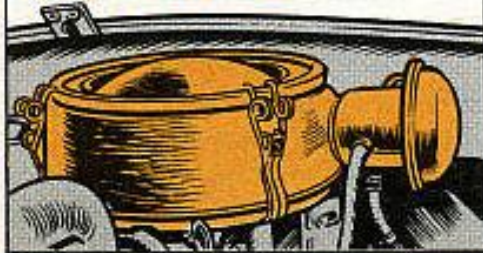


— all 10-ton diesel engine trucks (M123A-1C etc.)



Dry-type with non-washable element —

— older 1¼-ton trucks (M715 etc.) without engine speed governor.



OIL BATH AIR CLEANER

There's nothing tough about keeping your oil bath-type air cleaner in good shape.

Make sure the oil level's always up to the mark in the reservoir. Add oil if it's needed.



But never put used oil in your air cleaner. Back in the old days, they figured old crankcase oil was OK for this, but now the word is—Fresh Oil Only. Use the same type and weight oil you put in your engine crankcase.

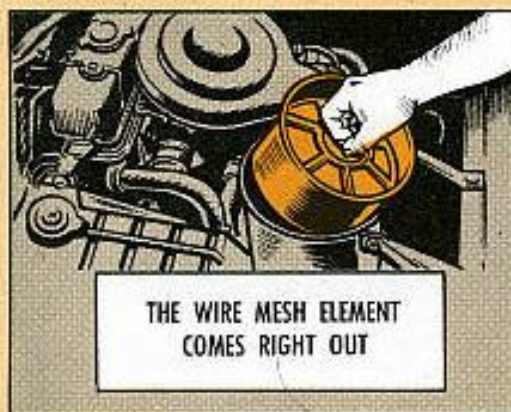
And watch out for your oil reservoir getting overloaded with dirt. You can tell by running your finger across the bottom of the reservoir. If you feel gritty dirt or thick muck on the bottom, you dump out that overloaded oil. Then you clean the reservoir and refill with fresh oil—up to the mark.

You pull this dump-clean-refill job every 1,000 miles or 6 months, but you'll find it's needed more often when you're operating a lot in dusty country.

ALL THE WAY

Your LO calls for a full-scale cleaning of your oil bath-type air cleaner—all parts—every 6,000 miles or 6 months. But, here again, "more often" may be needed.

If you've got a 1/4-ton or 3/4-ton truck, you take your air cleaner all apart for cleaning—the wire mesh element comes right out.



On other trucks—2 1/2-ton, 5-ton and 10-ton—the element's built into the air cleaner body.

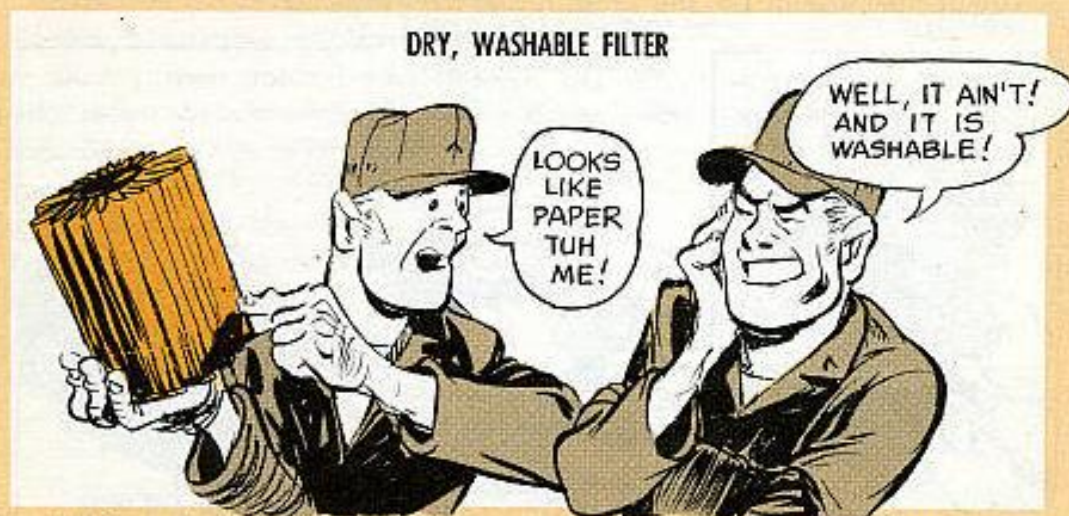


But you clean 'em all pretty much the same way. Let the element (or body-with-element) sit for a half-hour or so in dry cleaning solvent or mineral spirits paint thinner. Then slosh it up 'n' down in the solvent to rinse out the dirt. Give the body-with-element a reverse flush by lifting it out of the solvent and letting the stuff run out the inlet end.

Keep up this soaking 'n' sloshing until the wire mesh is clean. Then let 'er drain dry. Or, with the separate element, you can hurry up the drying job with compressed air.

You clean the reservoir and other air cleaner parts with the same kind of solvent. Use a rag or brush to get off stubborn stuff. Then wipe all parts dry with a clean cloth before putting the whole works back together.

And you fill the reservoir with fresh oil — right up to the mark.

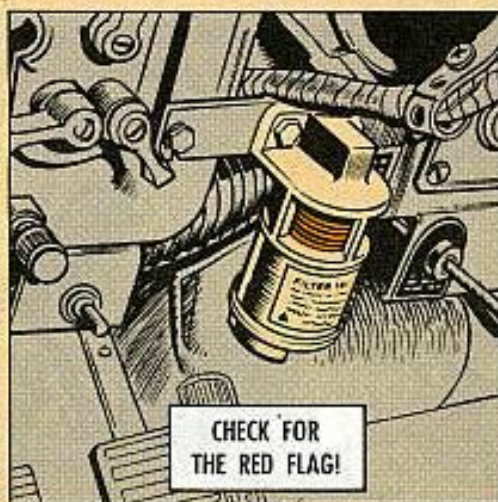


All those dry, washable air cleaner elements are the same in at least one way — they're washable. You may think it's made of paper inside, but it's not. It's a tough fabric — synthetic so water doesn't hurt it. You can wash it over 'n' over. It'll last a long time if you don't bang it around and punch holes in it.

This kind of element is great for trapping dirt. It does this job so well that it can plug up solid — if you let it — and your engine will get no air at all. How'd you like your nose 'n' mouth jammed full of dirt?

There're 3 ways of cleaning your dry, washable element — good, better and best.

Just slapping the dirt out is better than nothing when you're out in the field or on the road. That red flag locked up in your truck's air filter indicator means your engine's already suffering from air starvation. So you yank that filter element and get the dirt out. Slap it around the sides. Bump the ends — gently — against the truck or on the ground. And shake it hard so the dirt'll fall out.



Natch, you never have your engine running while the filter element's out — or you'll suck dirt into the engine like mad!

While you've got the element out for cleaning, wipe out the air cleaner housing with a clean cloth to catch any dirt layin' around in there.

Remember to hit the reset button on the air filter indicator so the red flag'll drop back down.

Back at the motor park, give your filter element a better cleaning with compressed air. Be careful! Use low pressure and wear goggles.



"Replace" does not mean you throw your old one away — unless your inspection shows it's torn or has holes poked in it.

Give your dirty element a bath — warm water and detergent in a tub or big bucket. Never use gasoline or other solvent on this kind of air cleaner element.

Let 'er soak for 5-10 minutes to loosen the dirt. Then slosh it around to wash off the dirt.

Rinse it in clean water. Shake it good to get out most of the water.

Give it another close goin' over for holes or other damage.

If your washed element's in good shape, it can go back to work in another vehicle after it's dried for 3 or 4 days.



2 KINDS IN 5-QUARTER

If your M715 or other 1½-ton vehicle has the dry, washable air cleaner element, you give it the same treatment. But you "replace" the element with a washed or new element at 3,000 miles.

Whenever you're handling this filter element, be mighty careful not to bend or damage those fins around the outside. They knock down the bigger dirt sucked in so it'll drop into that rubber vacuator valve.

The non-washable air cleaner element on older 5-quarter vehicles is usually good for 3,000 miles, too, but you replace it with a brand-new element. It's a good idea, though, to clean your element in between changes when you're operating in dusty country.

To clean this non-washable element, you just rap the top or bottom against

REMEMBER,
THERE'RE TWO
DIFFERENT TYPES
ON 1½-TONNERS.



WASHABLE TYPE



BE CAREFUL NOT
TO DAMAGE FINS

NON-WASHABLE TYPE



JUST TAP DIRT OUT

a flat surface to knock out the dirt. Not too hard, though, or you'll damage the gaskets — this'll let dirt slip by around the filter element.

PARTS AND SUPPLIES

Here're some of the things you need for pulling your air cleaner PM:



Dry, washable filter element —

- for 1½-ton trucks (newer model), FSN 2940-135-6531, in Ch 1 (May 70), TM 9-2320-244-20P
- for 2½-ton multifuel trucks, FSN 2940-804-7898, in TM 9-2320-209-20P (Jan 65)
- for 5-ton diesel and multifuel trucks, FSN 2940-974-9669, in TM 9-2320-211-20P (Mar 63) and Ch 1 (Sep 64)
- for 10-ton diesel trucks, FSN 2940-902-5553, in Ch 2 (Mar 70), TM 9-2320-206-20P

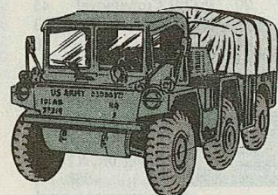
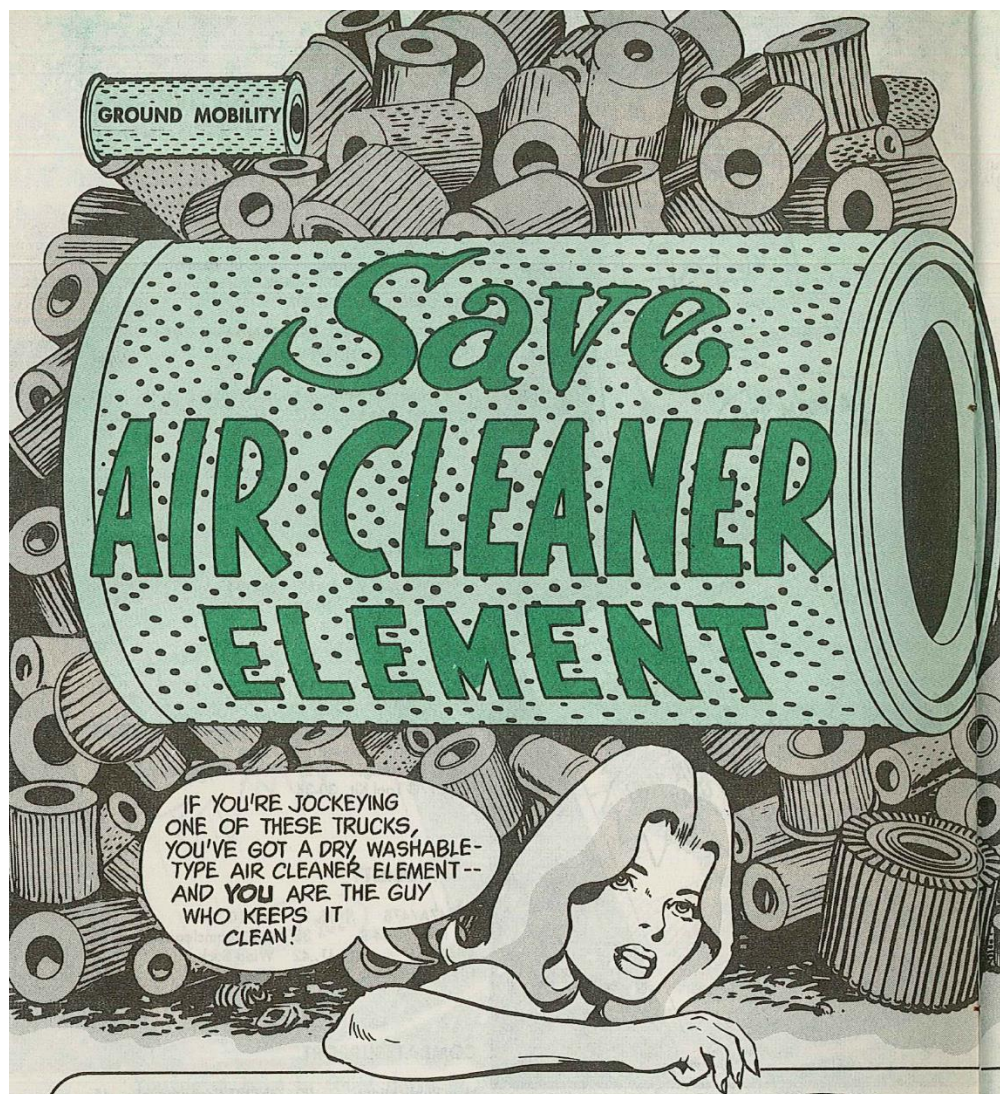


Dry, non-washable filter element —

- for 1½-ton trucks (older model), FSN 2940-875-9000, in Ch 1 (May 70), TM 9-2320-244-20P
- for your PM**

Cleaning supplies — Listed in such places as SB 38-100 (Jul 70) and in the O&M Supplies section of Ch 3 (Jun 67), TM 9-2320-209-10. Also, check your self-service supply store, since these items are available through GSA —

- Drycleaning solvent, FSN 6850-281-1985 (1-gal), FSN 6850-285-8012 (55-gal)
- Mineral spirits paint thinner, FSN 8010-242-2089 (1-gal), FSN 8010-558-7026 (5-gal), FSN 8010-246-6116 (55-gal)
- Detergent (liquid), FSN 7930-282-9699 (1-gal), FSN 7930-985-6911 (5-gal).



1 1/4-TON M561 AND
M792—GAMA GOAT



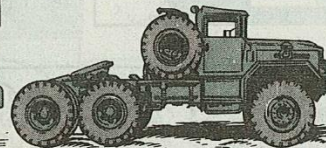
5-TON 8X8
MULTIFUEL—
M656, ETC.



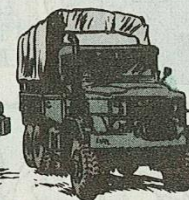
5-TON DIESEL
M809-SERIES—
M813, ETC.



5-TON DIESEL AND
MULTIFUEL—M54A1
M54A2, ETC.



10-TON DIESEL
M123A1C AND M123E2

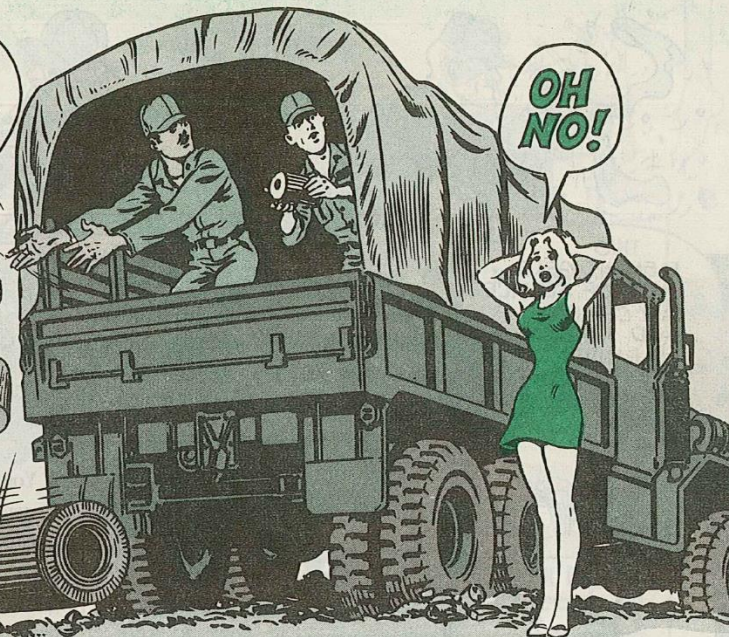
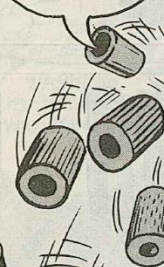


2 1/2-TON
MULTIFUEL—M35A1,
M35A2, ETC.



1 1/4-TON
M715, ETC. (LATE
MODELS ONLY)

CLEAN 'EM?
I THOUGHT AN
AIR CLEANER
ELEMENT WAS
A ONE-SHOT
DEAL.



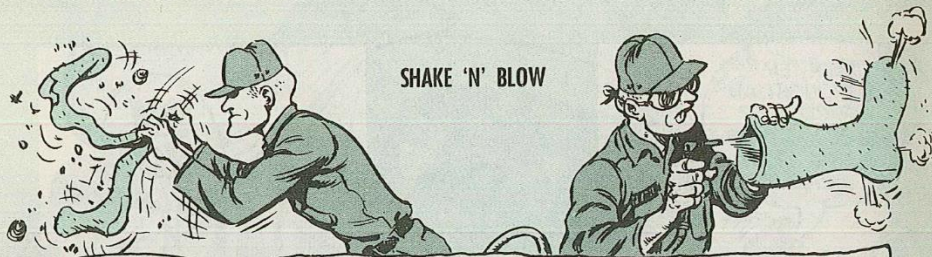
Throw your socks away when they're dirty. Don't bother washing 'em. Buy new ones, instead.

Silly, huh? A waste of money!

Well, that's what some guys are doing with that washable-type filter element in their engine's air cleaner.

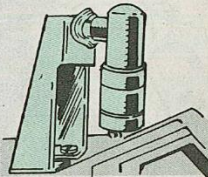
They're tossing out perfectly good filter elements—and putting in brand-new ones. And those filter elements don't come cheap!

They cost Uncle plenty because they're made tough enough to be cleaned over 'n' over again. You throw this kind of element away only when you can't get it clean enough to let air through. Or when it's got holes in it that let dirt through. Or when it's mashed so it doesn't fit right in the air cleaner can.



THIS ELEMENT GETS 2 KINDS OF SERVICE—AIR CLEANING AND WATER CLEANING.

Whenever that red flag locks up in your dash-mounted air cleaner restriction indicator, you pull your filter element and give it a cleaning.



You shake it, slap it gently around the outside and tap the ends—gently—on the ground or on your truck bumper.



Then you shoot low-pressure air to it—from the inside out—to blow out any dirt left in there.



After you put the element back into the air cleaner can and button 'er up good, punch the reset button on your air cleaner restriction indicator. This releases the red flag.

NOW RUN YOUR ENGINE—AND WATCH FOR THAT RED FLAG.



4

WASH, RINSE, DRY



WASHING IS THE BEST WAY TO CLEAN THAT FILTER ELEMENT.



Fact is, your TM or LO calls for regular washing.

Use warm water—not hot—and detergent in a tub or bucket. Let the

filter element soak for about 10 minutes to loosen the dirt. Then slosh it around to wash out the dirt.



Rinse it good in clean water, shake out the water and let it dry—completely dry. Never use a wet filter element in your engine air cleaner.



Your engine will suck out the water, and this could bust your engine with "hydrostatic lock."



NEVER USE A FILTER ELEMENT THAT'S GOT GOUGES IN IT OR IS OUT OF SHAPE.

DIRT'LL SNEAK RIGHT IN!

REMEMBER! REPLACE YOUR FILTER ELEMENT ONLY WHEN IT'S SHOT.



5



2½-TON MULTIFUEL TRUCK . . .

TOO MUCH FILTER

When you're ordering the air filter element for the M35A1 and -A2 series, be sure that's all you ask for. It's Filter Element, NSN 2940-00-804-7898, on page 38, TM 9-2320-209-20P (Oct 72).



JUST ORDER THE FILTER ELEMENT—OR
HOW ABOUT WASHING THIS ONE?

13

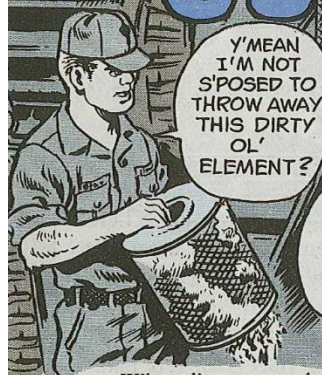
Some guys are ordering Air Cleaner, Intake, NSN 2940-00-129-5339, listed on page 37. This'll bring you the who-o-o-ole thing—shell assembly, element, gasket, head and latch.

And remember—that element's washable, so maybe you won't have to replace it after all.



WASHABLE AIR CLEANER ELEMENT

GUESS NOT,



Y'MEAN I'M NOT S'POSED TO THROW AWAY THIS DIRTY OL' ELEMENT?

NO, NO, A THOUSAND TIMES NO-- NOT UNLESS YOU FIND IT'S NO GOOD AFTER YOU'VE CLEANED IT! TOSSING OUT A USEABLE ELEMENT IS LIKE THROWING AWAY MONEY!

What d'ya wanna bet that there are perfectly good diesel engine air cleaner elements in your Property Disposal yard?

And you're having a tough time getting new ones?

Too many guys are tossing out air cleaner elements that only need blowing out with compressed air—or a good wash-rinse-dry treatment.

FOLLOW THESE FEW SIMPLE STEPS AND SAVE A

FIRST, TAP IT ON THE GROUND, GENTLY! IF YOU BANG IT TOO HARD, YOU'LL CHANGE THE SHAPE. THEN IT WON'T FIT SNUG IN THE CANNISTER—AND DIRT 'LL GO RIGHT PAST IT.



1

YOU'LL GET MORE DUST OUT BY SLAPPING THE ELEMENT AROUND THE SIDES. AGAIN—GENTLY!



2

NOW BLOW THIS DIRT OFF THE OUTSIDE.



4

GIVE IT ANOTHER GOOD GOING OVER AROUND THE INSIDE AND, FINALLY, ON THE OUTSIDE AGAIN. IF THE ELEMENT IS STILL PLUGGED WITH DIRT, WASH IT LIKE YOUR TM SAYS.

WASTE NOT!

YEAH, ELEMENTS FOR SOME TRUCKS COST UP TO 35 BUCKS APIECE.

BESIDES, ELEMENTS ARE IN SHORT SUPPLY!

These are the dry-type air cleaner elements you find on all multifuel engine trucks and most other diesel engine equipment. You can use 'em over 'n' over again if you handle 'em carefully and clean 'em.

Your -20 TM tells how to clean the element. Or, if the TM for your equipment hasn't yet picked up the word, get TM 9-2320-209-20 (Apr 65) for the 2½-ton truck and check the poop in Ch 3, page 218, para 70b.

After it's washed and dried (about 3 days for drying), this element can be used again—

- if there're no holes or tears in it;
- if the ends are not bent so they make a bad fit; and
- if air can still get through.

LOT OF BUCKS FOR "UNCLE":

BLOW COMPRESSED AIR AROUND THE INSIDE. THIS'LL PUSH DIRT BACK OUT TO THE OUTSIDE!



3

YOU'VE GOT A GO-NO-GO TESTER RIGHT ON YOUR EQUIPMENT. IT'S THE INDICATOR WITH THE LITTLE RED FLAG INSIDE.



When you put a cleaned element back in your equipment, run the engine for a few minutes and watch that indicator. If the little red flag shows up in the window and then locks into full view, the air cleaner element is plugged up so bad it can't be used anymore.

That's when you put in a new one. Trouble is, some guys just take a look at a dirty element and say: "I guess I need a new one."



5

New Look Filter Element

If you get a new engine air cleaner element—NSN 2940-00-804-7898—for your 2 1/2-ton truck that doesn't look like the old element, don't sweat it. It's a new type that does the job as good as the older type.