

people not sitting at the table? Or why is it not a whole conversation? But I don't know. I'm a person in recovery. We're a whole different breed. So we talk and we do things as community. We talk when we make decisions. I don't make any decision for my group Sobriety Warriors without sitting down with them and asking them, what did you think? Yeah, you don't move forward without that.

J: So we took it to a community vote.

**It was a community vote?**

J: Yeah. There were some people that were like, "We'll just take the three acres." They were like, we're winning! And I was like, but why would we want to win a little bit? Why don't we just want to have it?

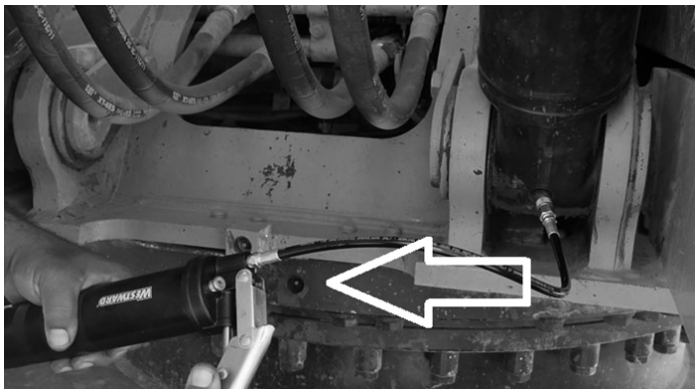
N: Yeah.

J: Technically, we won—and since I've been involved, we've won three times. This is more solid, it feels at least, but yeah, we won last year and then we got vetoed. So how do you stick with it?

# Dear

This interview was the first in an emergent oral history project documenting reflections on the struggle against demolition of the Roof Depot and for community control of the site. Both Nicole and Joe have continued their community work in the neighborhood. In particular, momentum built around the culmination of the Roof Depot struggle has lived on through ongoing efforts to support and defend encampments of mostly Indigenous unhoused people in the Phillips neighborhood. ef!j looks forward to more reflections on these interconnected struggles out of Minneapolis.

# Ned Ludd,



Dear Ned Ludd,

How can we expect to end civ when the propaganda starts in early childhood? Consider that the National Education Association listed Mike Mulligan and his Steam Shovel as one of its “Teachers’ Top 100 Books for Children”. A book that makes it seem like industrial machines are alive and have charming personalities?! That digging up the earth with big machinery is a noble pursuit?! For shame! Have you seen those illustrations, Mr. Ludd? They are so evocative! So perfect! So cozy! So damn cute! My affinity group and I curl up and read it every night before bed. First we were looking at the pictures in order to locate opportunities for sabotage, but lately I can’t sleep at night when I think about hurting Mary Anne! She may be a steam shovel, but she’s my friend! And one more question: how does Mike Mulligan go to the bathroom?

Sincerely,  
Ramona Quimby

Dear Ramona,

First of all, I prefer the gender neutral, they, because really my spirit belongs to all and is in everyone. So Mr. Nedd simply will not do. Second, machines are no one’s friend. They are not alive. They are not people. No, not even Mary Anne. You must stop making eye contact with that steam shovel. Ned Ludd may not win a Caldecott anytime soon, but at the very least I can supply you with accurate and up to date information about modern excavators.

You and your affinity group are unlikely to come across a machine like Mary Anne, which were out of general use even by 1939. Modern excavators don’t run on steam, they don’t have charming personalities, and they definitely don’t have eyelashes. They’re everywhere. I don’t think I’ve seen an apocalyptic earth destroying project they are not a part of. Their buckets have a part in everything from shopping malls to pipelines, no matter if it’s in a mountain, a valley, or even a mountain valley. Because nearly all excavators have one common design, their weaknesses are common as well. I’m going to give a general overview, that will apply to every excavator, no matter the manufacturer.

Excavators are fluid-powered. That means that they require hydraulic oil and hydraulic pressure to operate, to move, and to spin. The common layout is as follows: The operator compartment is on the left (or driver’s side for those in the US.) The fuel is in the first tank on the right side of the machine. The hydraulic oil is in the second tank just behind that. The right side also has the maintenance doors. The engine is sideways in the rear. There are a mass of hydraulic lines that begin in the manifold, which is typically located in the center of machine near the main mast. In most modern manifolds, an electronically controlled valve directs the flow. (In older models, the manifold is hydraulically controlled, so if you don’t see wires, move to a different section). At the end of the machines tracks, often rotated to be opposite of the bucket, you will find the final drive hoses. There are two hoses going to each side of the final drive. There is a plug on each side of the final drive.

If you are lucky, the final drive plugs will be facing up, typically between 10 and 2 O’clock. The plug is usually either an inverted square and can be removed with a ratchet with no socket, or an allen socket (a bolt can open the allen style plug, which is typically metric). Anything that is added to the final drive will begin to mess with the tight tolerances of its gears. Fine sand, pond water, really anything 20 microns or smaller. The smaller the better, if available. The final drive is one of the more expensive components on the machine. If it is broken, the machine can’t move.

Grease fittings are everywhere on excavators but the ones lubricating the central bearing are ripe for the



most expensive mischief. They are typically located above and between the tracks, one of the most hidden areas of the machine, convenient for a wrencher who wants to avoid being spotted. Any abrasive powder or cream added to grease does some bad stuff over time.

While typically not much of a hassle to repair, in rural areas where it often takes longer to get new parts and mechanics, it can be worth it to add stuff to the Diesel Exhaust Fluid, especially several times or to multiple machines. On modern excavators, you may find the DEF blue cap in several areas, but often near the fuel tank expect all caps to be locked. Luckily, they can be opened by an operator key, the same key that opens the door and starts the engine. Operator keys are typically the same across all of a manufacturer's equipment. (John Deere and Volvo have a specific excavator key but I'm unaware of other manufacturers that do this.)

When it comes to the fuel tank, there isn't much you can put in that will actually do long term damage to the engine or the injectors, although you could always siphon out a fuel supply for your hippie friend's schoolbus. And let us never forget those times when creative and detail-oriented monkey wrenchers have either completely filled a fuel tank with tiny sticks or hiked concrete miles up hill. Anyone who tells monkey wrenchers to "get a job" can't possibly know how hard they work to get the job done.

The hydraulic tank often will have a thermometer-like gauge on its side that will show the color (typically red) and fluid level. Water will turn the oil cloudy and pink after the machine is run. Unlike engine oil and fuel, hydraulic oil can't be filtered before going through the pump and all the hoses and cylinders. Because there is so much pressure in the system, hydraulic oil will generally only see filtration every couple passes. The hydraulic oil tank cap has a fine screen to prevent accidental contamination. It's easy to poke a hole in the screen or to pour liquid through it. If the screen is punctured, it's one of the few times sand will cause real damage. In Ned Ludd's personal opinion, hydraulic oil should not be lit on fire. It burns bright and hot. Cops and Feds get really excited about arson and don't stop looking.

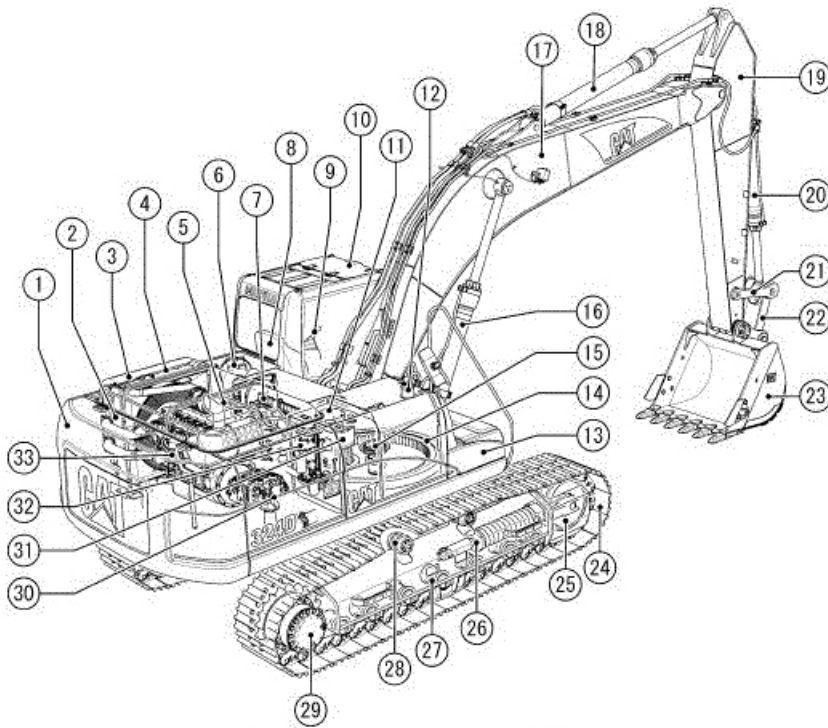
Let's move on to some safe, healthful fun with the electrical system. Wires larger than an ink pen should be avoided, especially the larger red ones. Wires the size of the ink tube inside the pen or smaller are fair game. As machines get more complex, sensors are more important. Especially on the newer machines that can be remotely operated, any wiring that is cut (and all should be) should be done in the most difficult possible way to repair. Focus on removing entire sections of wiring, or cut next to the component that the wiring is attached to. The sensors for the emission controls are on the exhaust and, if cut, often shut the machine down quickly. Batteries are to be avoided but computer systems are not. It is often easy to find certain maintenance access codes online. The Cat code is sometimes 9992. You can also simply try the last 4 digits of the engine serial number.

Excavators are expensive. Larger excavators are very expensive. Many companies take samples of the fluids every time the machine is serviced in order to check for wear. The lab looks at parts per million in engine oil samples. They will be concerned to find even a pinch or a sprinkle of powdered iron, chrome, aluminum, lead, or copper in the engine oil. Potassium or sodium in the final drive will also cause concern (and who doesn't carry a little salt while camping?)

Remember, Ramona, Ned Ludd is a 200 plus year old wingnut and should only be read as cathartic entertainment. Remember also that at the end of the book, Mary Anne was turned into a furnace, showing that all good machines will in the end meet fire and flame.

To answer your original question, when Mike Mulligan locked down to Mary Anne, I believe he wore a diaper.

Sincerely,  
Ned Ludd



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## SAFETY NOTE:

Implements that are held off the ground will drop suddenly if hydraulic lines or tubing are messed with. If this happens, someone can die. While the machine is running, operating pressures are high, sometimes in excess of 5000 psi. High pressure hydraulic oil is a danger to you, to employees, and to the environment. If 5000 psi oil hits what the oil doesn't cut off, it could be injected into your blood stream and you will die. It will hurt a lot while you are dying. Therefore, **LEAVE LINES AND HOSES ALONE.**