



Sand and gravel hopper sets on metal stand. Loader lifts hopper to pour material into cement mixer. As loader bucket tips, it activates a lever that trips trap door to dump load.



Cement is dumped into a second hopper which loader then moves to trench. There, a trap door on the hopper is manually opened to release concrete.

Custom Hoppers Make Concrete Mixing Easier

Richard Naish of Lebanon, Ohio recently sent FARM SHOW photos of his home-built, loader-mounted hoppers that he uses to make concrete.

He uses his Deere loader tractor to transport the self-unloading hoppers, which are made out of galvanized steel. One hopper is designed to load sand and gravel into the mixer. The other pours the finished concrete into a trench. Both hoppers have an inverted piece of angle iron at the top that allows Naish to pick them up with the edge of his loader bucket.

"These hoppers save a lot of time and protect my back," says Naish. "I bought a

Jaguar portable cement mixer years ago and modified it for use with either an electric or gas motor, which can be changed out by removing one pin. However, as the years went by I found that shoveling sand and gravel into the mixer was becoming more difficult. I always seem to have trouble finding help when pouring concrete."

One hopper is triangle-shaped, with an 8-in. square bottom section that has a trap door and chute at the bottom. The hopper sets on a metal stand for loading.

"I sized this hopper to hold 3 1/2 cubic feet of sand and gravel, which is what the mixer is rated for," says Naish.

Naish first dumps about 4 gal. of water into the mixer, then uses the loader to fill the hopper with sand and gravel. He then lifts the hopper off the stand and moves it over to the mixer. "When I tip the bucket back, the bottom of the bucket contacts a lever on the hopper that trips a trap door and dumps the load into the mixer. After setting the hopper back on its stand, I add a 45-lb. bag of Portland cement to the mixer and more water, if necessary."

The other hopper is square at the top and funnels down to a manually-operated trap door at the bottom. The hopper can hold a full mixer load of concrete.

"This hopper replaces my wheelbarrow and lets me position the load more closely for dumping," says Naish. "The entire system works great. It takes nine mixes to make a cubic yard of concrete, which I can do in about one hour.

"I recently used the hoppers to pour the footing for my new front porch. My friend Jeannie Christian helped me and took the photos."

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Oil Changing Ramps Solve Car Loading Problem

David Schmickle, Newburg, Mo., often uses his 4-WD pickup and 16-ft. utility trailer to haul old cars. He uses an electric winch and flat ramps to pull the cars up into the trailer.

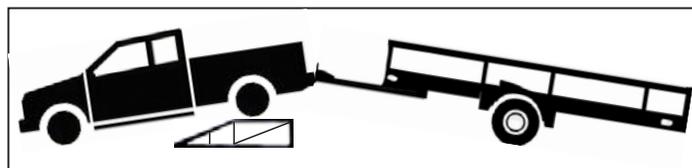
"The problem is, many cars set so low to the ground that I can't pull them up onto the trailer without the car's front end, or the muffler, hanging up on the trailer's floor," says Schmickle.

So he came up with an easy solution that puts the pickup's rear wheels on top of an ordinary set of oil changing ramps. He places the ramps behind the pickup, then backs up until the rear wheels are on top of them. Then he places a pair of standard flat ramps behind the trailer.

"The oil changing ramps raise the back end of the pickup about 1 ft., which causes the back end of the trailer to drop by several inches. It leaves an almost straight plane for the car to go up the flat ramps and onto the trailer," says Schmickle.

He owns 16-ft. utility trailers and uses them to haul old cars for friends. "Over the years the front ends on newer cars have been getting lower and lower, and it isn't always possible any more to pull them up onto the trailer," he says.

He recently bought a used Honda Civic with about 350,000 miles on it. "This car sits low and with that many miles on it I know it'll break down some day, but when that happens



Oil changing ramps raise back end of pickup about 1 ft., causing back end of trailer to drop by several inches. Schmickle then places 2 flat ramps behind trailer.

"I'll be able to load it onto the trailer by myself with no problems," notes Schmickle.

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Wheelbarrow Dump Trailer

"I use it to haul mulched leaves, rocks and dirt, firewood and other materials. It's handy to use - I just reach back and pull a trip lever to dump it," says James Henson, Union Mills, N.C., who converted an old wheelbarrow into a handy 2-wheeled dump trailer. He tows it behind his Simplicity garden tractor.

Henson already had the wheelbarrow, which is an industrial model with a deep bucket. He built a frame and tongue out of some old steel tubing and tach-welded a ball hitch off an old 4-wheeler to the tongue.

The dump bed rides on 12-in. tires off an old riding mower and has an axle made out of 3/4-in. round stock and square tubing. The bucket is hinged at the bottom.

A 1/4-in. thick, horizontal metal strap that's free to pivot is welded to the trip lever and is beveled at one end, which rests on a small metal tab welded to the frame. The main part of the strap rides on a 6-in. long compression

spring that's welded to the tongue. Pulling the trip lever forward compresses the spring and causes the strap to pull away from the frame, which causes the bucket to dump. When Henson lets go of the lever, the bucket drops back down and the strap automatically resets itself.

"It works really good. I use the tractor's hitch to raise the tongue 8 to 12 in. off the ground, which causes the frame to tilt down toward the back and completely empty the bucket," says Henson. "Once the load has been dumped I lower the hitch, which causes the bucket to slam back down.

"I used a 3/8-in. dia. metal rod to make the trip lever and the 6-in. long spring off an old trampoline to form the handle. The spring is shaped like a handle and has a comfortable feel."

Henson uses an early 1980's Allis Chalmers Simplicity garden tractor to pull the dump



Spring-loaded trip lever is used to dump bucket.

bed. "This tractor is quite rare and has a posi-traction rear end, so both wheels always pull at the same time," notes Henson.

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