

Coil Spring Compressor Doubles As A Sleeve Puller

Nathan Fleischer needed a piston sleeve puller for the 1941 Allis Chalmers C he was restoring in his Berkeley, Calif. backyard. The sleeves were a mess. He had torn the block apart, but he knew he couldn't just beat them out with a hammer.

"I only needed to pull them high enough above the block to knock them loose," says Fleischer. "I decided to make a sleeve puller using the threaded bolt and jaw from a coil spring compressor."

Fleischer needed a top bridge that would span the cylinder with enough space above the block to pull the sleeve into view. He also needed a push block that fit the bore of the cylinder.

"I could have used some steel tubing, but all I had was some 2-in. channel iron with 3/8-in. sides," says Fleischer. "It wasn't strong enough by itself, so I welded two 5-in. pieces together for the top bridge and two 3 3/8-in. pieces to match the bore."

Fleischer welded 2 short pieces of the channel iron at either end of the top bridge to act as spacers to either side of the cylinder. They would let the sleeves raise just enough to be knocked loose.

After drilling holes in the bridge and the push block, he slipped the bolt through the bridge and the cylinder. He slipped on the push block. After reversing the compressor jaws, he threaded them on as a lock nut. With a few turns of the bolt head, the sleeve came into view.

"The reversed jaws hit the engine block after 3/4 in. of travel," admits Fleischer. "As it was, that was just far enough. The great



Nathan Fleischer made a piston sleeve puller using the threaded bolt and jaw from a coil spring compressor.

thing is that the bolt and jaws can still be used if I need a coil spring compressor."

Fleischer is continuing to work on the model C. He admits there aren't too many tractors in his urban California neighborhood. He isn't sure what he will do with it when it's finished. This past Halloween, he pushed it into the front yard and set a hay bale by it.

"The trick-or-treaters thought it was neat," he says. "I expect most of them had never seen a real tractor before."

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Nelson remade the splined shaft on one of the hydraulic pumps on his skid loader. He ground the end of the shaft down, then drilled out the flywheel (above) and welded in pieces of hardened steel from other shafts to make a rectangular hole to match the shaft end.



Pump Fix Saved \$1,800

When Larry Nelson found out that replacing the hydraulic pump on his New Holland skid steer loader would cost \$1,800, he decided to fix it. The splines on the pump's driveshaft and on the flywheel were stripped.

"It was the first of 3 in-line pumps," explains Nelson. "The backs of the first and second pumps have splines with a coupler to the next pump. They drive the wheels. The third pump drives the lift cylinders."

With the first pump out of commission, so was the skid steer. Nelson decided to redo the splined shaft. He ground the end of the shaft down so the sides are flat and measure to 1/2 in. by 3/8 in. He then drilled out the

flywheel and welded in pieces of hardened steel from other shafts to make a rectangular hole to match the shaft end.

"I tried drilling out the flywheel hole," says Nelson. "The steel was too hard. I had to heat the temper out first. I would have needed a grinder to get through the hardness."

Once he had the hole drilled out and added the new pieces, he remounted the flywheel and slipped the shaft into place.

"It works fine," says Nelson. "I have used it almost every day for more than 6 months."

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Norm Dufresne put together this portable router table with 4 routers, which are set up with different bits at the right depth for the most common cuts he makes.

"4-Router Table" Reduces Prep Time

Norm Dufresne does a lot of wood working so he doesn't like to spend a lot of time changing router bits and adjusting the depth. That's why he put together a portable router table with 4 routers set up with different bits at the right depth for the most common cuts he makes.

He mounted 4 routers to plywood with 1 1/4-in. holes that line up with holes drilled in the 3/16-in. steel plate work area.

"I use steel because I have a dust pickup that attaches with magnets to whatever router bit I'm using," Dufresne says.

He can change bits and adjust heights with the routers in place and can move the unit wherever he needs it. There is plenty of room between the routers for him to maneuver long pieces of wood.

Dufresne says he doesn't have a pattern to sell, but he will give more detailed information to anyone interested in making a router table.

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Microwave Dries Wood Crack-Free

One of William Tamblin's favorite woodworking tools is a microwave oven. Because it heats things from the inside out, the oven works great for drying wood without any cracks after he's turned it on the lathe.

"I like working with wet wood because it's easier to turn," explains the Ontario FARM SHOW reader. "When I first started turning rolling pins, people complained that they cracked."

He decided to try the microwave and hasn't had any complaints since about the rolling pins, candlesticks and cutting boards he makes out of walnut.

"I put them in the microwave for a couple

of minutes, then open the door to let out the steam," Tamblin says. He repeats the process three or four times until the wood starts to feel hot.

When dry, Tamblin coats the wood with vegetable oil.

He's also microwaving apple wood.

The only problem, he says, is that the wood has to be small enough to fit in the microwave.

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Handy Anvil Hitch For Farriers

"I came up with this design when a farrier asked me to carry his anvil without having to lift it into his truck," says welder/fabricator Keith Davis of Cody, Wyo.

He designed and built a foldable hitch that fits a pickup's receiver hitch. The anvil is secured between angle iron brackets bolted to 2-in. sq. tubing. Davis beefed up the hitch with steel welded to a jack to stabilize the joint next to the rear passenger side. Another jack is attached to the front when the hitch is straightened out for use.

When finished, the farrier removes the pin, raises the jacks and folds the unit against the pickup and secures it in place with the pin through the receiver hitch.

"The farrier said that other designs echo, but this is quiet. It relies on the jacks instead of the truck frame to stabilize it," Davis says.

Another benefit is that the design is universal and fits on any truck without a custom bracket.

At about hip high, the anvil is at a good working height, and Davis notes the hitch unit could be adapted for other uses for



Foldable anvil hitch (shown here without anvil) fits pickup's receiver hitch. Anvil is secured between angle iron brackets bolted to 2-in. sq. tubing. A pair of jacks add stability.

construction workers, for example. He adds that he also designed a hitch for hanging deer or elk for skinning, and is always interested in coming up with designs to meet customers' challenges.

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