DIY Detents For Quick-Connect Relief

Hydraulic hoses heating in the sun build up pressure, making it difficult to insert the male coupling into a spool valve. Dale Freeman priced commercial detent tools at $100 or more. Even worse, different-sized couplers may require multiple tools.

"I made my own with scraps I had in my shop," says Freeman. "You can use whatever you have handy and customize the tool to your quick-connects."

Freemen's detent consists of two pieces of 3/8 by 1 1/2-in. wide steel bar with a T-bolt made from all-thread rod and sized to match the nipple on the quick-coupler. It also includes connecting bolts and spacers.

He drilled holes at both ends of one bar for connecting bolts and a hole in the center for the detent T-bolt.

"I welded a heavy-walled nut sized to the rod, over the center hole," says Freeman. "I like heavy-walled nuts for this, as it's easy to weld them in place without damaging the threads. It's easier than tapping the hole."

He drilled a hole in one end of the second bar and cut a slot in the other end that extends past the midpoint of the bar. The slot needed to be wide enough to slip over the threaded part of the male fixture on the hose.

"Different hose ends may require different-sized slots," notes Freeman. "If you have multiple male sizes, only this piece will likely have to be duplicated to match each size."

Freeman made spacers from scrap pieces of nylon block. He cut them to size, leaving space between the steel bars for the coupler head and the end of the detent T-bolt.

"Nylon blocks are easy to drill and mill to shape," says Freeman.

He inserted a bolt through one steel bar, a coupler and the second bar. He added a washer and lock nut, tightening it just enough so the bars could still pivot.

To relieve pressure on a coupler, slip the slot over the coupler's threads and insert a bolt through the hole in the bar with the centered nut.

To relieve pressure on a coupler, he slips the slot over the coupler's threads and inserts a bolt through the hole in the bar, with the centered nut, a second spacer and the slot.

"Add a large washer and a nut to the bolt," says Freeman. "However, before tightening the nut down, make sure the quick-connect coupler is lined up with the detent T-bolt."

He recommends wrapping a rag around the male coupler and the detent T-bolt head while applying pressure to the nipple. He notes that it's always messy, but the rag helps. As always with hydraulic fluid under pressure, especially if the nipple is under high pressure, avoid allowing fluid to penetrate the skin.

"I learned how easy it was to misplace the tool, so I drilled another hole at the pivoting end," says Freeman. "I hooked a gear clip to it and hang it up when not in use."

Contact: FARM SHOW Followup, Dale Freeman, Monroe, Va. 24574.

Cleaner and Bearing Packer products provide users with an easy way to service wheel roller bearings.

Bearing Cleaning And Packing Tools

AARC products were designed specifically for cleaning and packing wheel roller bearings in aircraft, trailers, tractors, RVs, ATVs and automobiles of all sizes. The Bearing Cleaner and Bearing Packer provide an easy way to service wheel roller bearings.

"It's a simple process to clean and pack bearings, and it only takes a matter of seconds," says Derrick Bechel, an AARC account representative.

The Cleaner aggressively flushes cleaning solvent through roller bearings to loosen and rinse away accumulated bearing grease. Simply place the AARC Bearing Cleaner chamber over a dirty wheel bearing and pull up on the plunger. This creates a flushing action that should be repeated three to five times, leaving the bearing free of grease and debris.

The Packer works by first loading a standard grease tube into the chamber. Make sure the product is inverted during use. Place a clean bearing onto the yellow cone. With the bearing held by hand, apply downward pressure on the plunger. Grease is forced up through the bearing, creating a complete and even pack.

"AARC Bearing Cleaner and Packer is manufactured in Elmwood, Wis., and is sold worldwide through aircraft, trailer and RV supply dealers," Bechel says. "The two products are also sold directly to repair shops and end users."

Interested customers can purchase AARC Bearing Cleaner directly, for $129 and AARC Bearing Packer for $99 plus S&H.

Contact: FARM SHOW Followup, MAI Genesis, 605 Project Dr., Elmwood, Wis. 54740 (ph 715-953-2416; info@aarc-us.com; www.aarc-us.com).

Gary (left) and Todd (right) Carlson with the CAD kit they envisioned.

Door Kit Makes Ceiling Access Easy

AJ Manufacturing sells about 6,000 Ceiling Access Door (CAD) kits a year. Competitors make their share as well. Had Todd Carlson not helped his dad, Gary, a retired carpenter, with a shop update, they might not exist.

"My dad had moved to a new place, and I was helping set up his woodshop," recalls Carlson of AJ Manufacturing. "We assembled an access door for the attic. While taking a break, we discussed how nice a pre-hung, preassembled, self-trimming, gasketed door would be to install."

Carlson took the concept back to the company where he works. It took several months to develop a commercial product. The first version was only 1 in. thick because of the design's geometry. It measured 24 by 36 in. to fit between framed trusses 24 in. on-center. It featured a prepainted, assembled aluminum frame, a gasket, and a 1-in. polyurethane foam core R6 panel with prepainted white metal skins. The door opened into the attic on hinges, with a handle on the top side for egress.

"The product value for builders or installers was saving time and cost to install an access door with a consistent and predictable appearance and sealing," says Carlson. "The gasket ensures the door is sealed to minimize leakage of heated or cooled air."

While the CAD kits saw rapid adoption, customers requested higher insulation values. The challenge with thicker door panels is that the door swings within a fixed space. A recent breakthrough in hinge design by the company's engineers made 4-in. (R28) and 6-in. (R32) thick doors possible.

"Several patent-pending features allow the thicker panels to operate smoothly within the frame," says Carlson. "The doors feature a hold-open device, and our 24 by 48-in. panel has a bifold geometry for enhanced operator safety."

Carlson notes that working with his father, Gary, led to the development of the innovative CAD product in the first place.

"After selling over 100,000 of these doors, he deserves to be recognized for his contribution," says Carlson.

Innovation at AJ Manufacturing isn't limited to doors and windows. Loose attic insulation is an ongoing problem with attic access doors. One solution is for builders to install a wooden dam around the door. AJ Manufacturing stumbled on an innovative solution to this problem when a 35,000-lb. shipment of mis-coated sheet metal was rejected for its intended use.

"The supplier issued a credit and suggested we recycle it," says Carlson. "We don't like to do that, so we had a contest among employees for ways we could use it where appearance didn't matter. The winning idea was a sheet metal insulation dam."

The new product ships flat to the customer, with a hem folded at the top edge. It features perforated fold lines, end tabs and receiving slits for closure.

"It's 20 in. tall, accommodating up to an R60 insulation depth," says Carlson. "With the perforations, it's easy for an installer to bend it at 90-degree corners with bare hands, quick and easy and perfectly straight."

Contact: FARM SHOW Followup, AJ Manufacturing, 1217 Oak St., Bloomer, Wis. 54724 (ph 800-328-9448; info@ajdoor.com; www.ajdoor.com; www.discountdoorsandwindows.com).

Carabiner clip and attached bits make this a compact, versatile tool for tight spaces.

Mini-Ratchet Gets Into Tight Spaces

Milwaukee's 7-in-1 Multi-Bit Mini Ratchet is a handy, pocket-sized tool for reaching spots that standard drivers can't access.

A practical option for shop and field use, the ratchet's 4-degree arc swing allows small, controlled movements in confined spaces.

A carabiner-style clip makes it easy to attach and carry. It's paired with a set of short bits stored within reach for quick bit changes. A thumbwheel is incorporated into the design to help select bits and control the ratcheting action.

The mechanism itself is engineered to provide enough stops so the user can execute modest swings with the handle, a feature that can be helpful when more substantial torque isn't required or possible.

"Just got my 7-in-1 Multi-Bit Mini Ratchet. It's tiny but built well. This mini tool helps you get into hard-to-reach spots," says an online reviewer.

The Mini Ratchet can be purchased in stores and online from retailers such as Ace Hardware, Northern Tool and Home Depot for $20 to $25.

Contact: FARM SHOW Followup: Milwaukee Tool, 13135 W. Lisbon Rd., Brookfield, Wis. 53005 (ph 800-729-3878; www.milwaukeetool.com).