



Chart above shows “psi” and hydraulic oil temperature on an out-of-service grapple bucket stored outside from September 9th to 21st, 2017. Measurements were taken every 5 min., 24 hrs. a day. From Sept. 9th to the 15th, the Hose End Chamber WAS NOT connected to the hydraulic hose. From Sept. 16th to the 21st, the Hose End Chamber WAS connected.

Device Solves Hydraulic Pressure Lock Problem

Dale Maney’s Hose End Chamber (H.E.C.) makes hydraulic pressure buildup in hoses a thing of the past. The chamber relieves pressure when rising temperatures cause hydraulic oil to expand. Maney explains that people often don’t know what the problem is, only that sometimes it’s hard to reconnect hoses.

“Everyone I talk to who has hydraulics generally has a piece or two they have trouble with,” says Maney. “If they haven’t, it’s probably because their hose coupler bleeds it off. I’ll ask if they have a problem with thermal expansion, and they’ll tell me no, but add that they have a bad coupler.”

Left connected to a tractor reservoir, there is no buildup. It is when hoses are disconnected that the increasing pressure has nowhere to go. Maney finds that the flat face couplers found on newer equipment may be making the problem even more common.

“They stay cleaner and don’t leak, but that increases potential expansion,” he says.

The H.E.C. solves the problem. When inactive hoses are coupled to it, the chamber acts like a tractor reservoir, providing a place for the excess pressure to go.

While developing the H.E.C., Maney found that as little as 400 psi of additional pressure can lock up a traditional Pioneer-

style coupler. A flat coupler takes only 300 psi before it can no longer be reconnected. At the same time, thermal expansion can increase hydraulic pressure in a cylinder and hoses sitting in the sun from 1600 psi to 2400 psi when the temperature only goes from 45 to 50 degrees.

“Black cylinders absorb even more heat,” says Maney.

He points out that pressure increases tend to be much less when equipment is parked inside or in the shade. Pressure differential decreases as temperatures cool.

It is bad enough when the male coupler locks up. However, with the thermal expansion, cylinders can activate on their own or damage seals and develop leaks.

“Thermal expansion can be a real problem when a wing that was stored in near vertical position lands on other equipment,” says Maney. “I had problems with my pod trailer blowing seals while it was standing unused.

“Over time you will get a slight buildup of hydraulic fluid in the chamber, but that is better than having it run out on the ground or on a customer’s drive,” he points out.

Maney makes three H.E.C.’s; L-12, S-12 & S-38. The L-12 large chamber is priced at \$75 and designed for full-size and multi-cylinder attachments. The S-12 small chamber



When inactive hoses are coupled to the Hose End Chamber, it relieves hydraulic pressure buildup in the hoses.

is designed for single cylinder attachments and accepts ½ in. couplers. The S-38 is designed for compact tractor attachments and accepts 3/8 in. couplers. Both the S-12 and S-38 are priced at \$45.

“There is no drama or anything exciting about the H.E.C.,” says Maney. “It just works. Some of my customers, like myself, have them on every piece of hydraulic equipment.”

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