

All year the orders have been very late coming in but we have stayed busy. When the dust finally settled, January, February, March and April ended up being pretty strong months. Right now it looks like we are going to be very slow in June and July. These things have a way of changing but I think we have to be prepared for a slowdown. I hope that the last minute orders and emergencies keep us busy but I suspect that we're going to have a slow summer. In fact I've asked Larry to schedule a Technician meeting – sometimes that's all we need to do and then the orders start flowing again.

Last month I reported on an incident with the new Hansen style gas fittings. The bad news is that one inadvertently disconnected in the middle of a job. The good news is that the flapper valve in this fitting stopped the flow of gas and there was no release or fire. We have investigated the fittings involved in the incident and we returned them to the manufacturer for inspection. We have also simulated the same situation in the shop with compressed air. I believe that we now understand what may have happened.

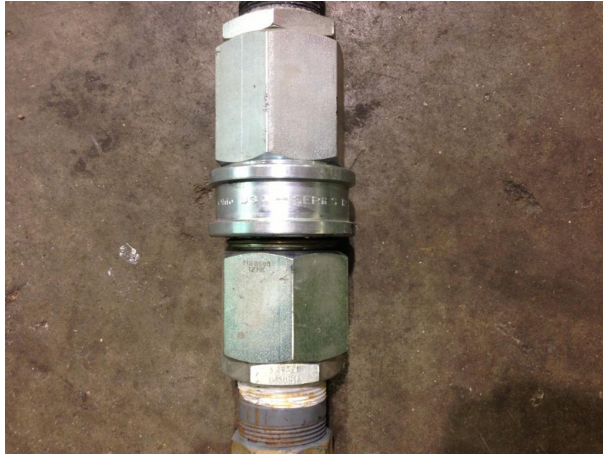


Female end of fitting with sleeve pulled back

The way this fitting works is that the male end of the fitting has grooves on its OD. When it is inserted into the female end of the fitting, the ball bearings fit down into the groove. When the sleeve on the female side slides forward, the ball bearings are held in place in the groove and the fitting can't come apart.



Properly mated and locked fitting.



Fitting with sleeve partially retracted.

The manufacturer could find nothing wrong with the fitting that came apart. The only way that the coupling would disconnect was if the sleeve was pulled back. We experimented in the shop using 20 psi of compressed air. We found that it was possible for the connection to stay together while under 20 psi of pressure with the sleeve stuck partially pulled back as shown above. This condition could happen if a hose was properly connected and then dragged across a floor where the sleeve was pulled back by friction with the floor (or the sleeve was kicked, etc). It is a touchy condition where the sleeve will stick in the mostly retracted position but the coupling doesn't blow apart. When it is in this position, it doesn't take much vibration or jiggling before the connection lets loose.

We'll never know for sure what happened on this particular job but since the hose stayed in service for 5 days before blowing apart, I believe that somehow the sleeve was retracted as shown above. My suspicion is that some movement of the already coupled hose (drag on floor, across crack, etc) caused the sleeve to partially retract. With 20 psi gas, there wasn't enough pressure to immediately cause disconnect – some vibration, expansion/contraction, or other “final straw” caused it to let loose after 5 days.

The immediate corrective action is to put a zip tie on the connected fitting to prevent the sleeve from slipping back. We are also investigating with the manufacturer whether there is another way to secure the sleeve.



Zip tie to prevent inadvertent sleeve retraction.

We selected these fittings as a safety enhancement. The main feature that we wanted was the flapper valve so that any live hose that is disconnected would immediately stop the flow of gas. This feature worked as designed and prevented a serious accident. Once a disconnect has occurred, the fitting cannot be put back together until the pressure in the hose has been released. Just shutting off the supply of gas does not relieve the pressure in the hose. The spring pressure and the gas pressure behind the flapper are too great to overcome by manually inserting the male portion of the fitting.

We are still working on the recommended method for relieving the pressure to allow a reconnection. Beating on the flapper to overcome the pressure is not recommended. All methods require that you first shut off the gas supply at the client isolation valve. One method would be to loosen a threaded fitting and allow a slow bleeding off of the gas pressure in the hose. Another method under consideration is a gear puller type tool to depress the flapper and relieve the pressure. Larry, Chris and Kari will be working to finalize a recommended procedure. If the fittings are secured with zip ties, it is a situation that we should not have to address.

I recently attended a conference and had a 4 hour session on the impact of the new Obama-care law. This discussion only applies to US Hotwork employees. This new law is over 2000 pages long and many critical issues are left to be decided by the regulators resulting in thousands more pages of rules and regulations. The main purpose of the law is to get health insurance coverage for people who do not have coverage provided by their employer. Since most of those people can't afford to pay for their own coverage, the government subsidizes it. In order to pay for the cost of these new subsidies, new taxes, fees, and penalties are imposed – mostly on employers like Hotwork. It is a very complicated situation that is going to end up with differences by state of residence and family income level. For Hotwork and its US employees, my impression is that there is no benefit but there are new costs, reporting requirements and bureaucracy. As it is rolled out in each state, there will probably be advertisements encouraging people to get the new, cheap health insurance (government subsidized). Please be aware that to qualify for that subsidized insurance you must meet at least 2 conditions; 1.) your employer doesn't offer you health insurance and 2.) your family income level has to be low enough to meet subsidy rules. As things become clearer while this law is implemented, Hotwork may consider changing

the way we provide health insurance benefits for our employees. Initially, I don't anticipate any major changes.

Recently we went to a jobsite and learned that they had a site rule prohibiting splices in 480v cables. The fan cables that we supplied were not long enough to reach the client's disconnect box so the client assigned their electricians to replace our fan cables with longer ones. The electricians did this work without oversight or supervision by Hotwork employees. When the fans came back to the shop, this condition was found inside our fan cabinet.



Rather than land the new wires on the terminal strips, the electricians cut off a short pigtail and made untaped wire nut splices inside our equipment. We don't consider this to be good workmanship and it is possible that these fans could have been sent back out to another job in this condition if not discovered in our shop. Whenever possible, you should try to monitor the work performed by plant electricians on our equipment. If there is a reason to suspect the workmanship, you should red tag the equipment for the shop to check when returned. We're not qualified electricians but we can observe and advise the ones who do work on our equipment. In this case they didn't want splices in their plant so they put them inside our equipment?!?!

We have discussed the sensitivity around using social media (Facebook, etc) to discuss client and work related issues (don't do it). We have also discussed the benefit that could be derived from having a private Hotwork exchange like Facebook to allow sharing of problems and solutions from jobsites. So far, we haven't found a practical way to implement a secure discussion forum. We continue to look for an app that will satisfy our needs. Recently I had the pleasure of welcoming my first grandchild (Lucy) and I was exposed to the Apple Photo Stream App. It allows for the sharing of photos and comments to a private distribution list of individuals. It only functions on Apple devices but it could provide a lot of the functionality that we have been looking for in a Hotwork forum. I'm curious how many people use

an Apple device and/or if they are aware of more generic apps that do the same thing. Let me know if you have any ideas.

Tom