

Trouble Shooting Oxy Fuel Problems (Part 1)

From time to time, people will ask us what went wrong with their oxy-fuel equipment after we do a repair. Generally, the root of their problems can fall under 3 main reasons, and today we will talk about the first main cause which is Flashbacks.

Flashbacks: When the flame enters into the torch and travels backwards through the supply system

From our experience flashbacks are the most misunderstood problem with torch repairs and it seems the confusion mainly stems from the following myths.

Myth #1: If you have flashback arrestors on your torch, you won't have a flashback. This is not true. Flashback arrestors only contains the damage within the torch. If you don't have any flashback arrestors on the end of your torch and have a flashback, the flame will pass through the end of the torch, through the hoses, through the regulator and finally into the high-pressure cylinder.

Myth #2: You will know when the torch has had a flashback. This is also not true. Sometime the flashback isn't very dramatic and all you can tell is that your torch is no longer working correctly. However, when a repair technician examines the torch, he can tell if there was a flashback by finding evidence of black soot, burnt internal parts and damaged arrestors.

Myth #3: The flashback was caused by faulty equipment or a bad repair job. This can make customers very upset when they've just bought a new torch or if they just had it in for repair, but the reality is flashbacks are accidents created by operator error and can happen at any time (which is why flashback damage on torches are not covered by warranty.)

So, if flashbacks are caused by the user and not the equipment, what starts it and how do you prevent it?

CAUSES

- Grossly unequal pressures causes the higher-pressure gas to back up into the lower pressure hose and explode.

- Failure to purge each hose individually before lighting the torch. A torch that has been sitting idle for a while may have an explosive mixture in one hose. This could be brought on by the torch being bumped or dropped, which causes the torch valves to be opened slightly. Any obstruction of the tip increases the danger.
- Mildly unequal pressures plus an obstruction are hazardous. If tip blockage occurs, always close both torch valves immediately and then clean the tip.
- Faulty manipulation of valves, such as lighting a torch with both torch valves open, and otherwise failing to operate the equipment using the recommended procedure can cause a flashback.

SOLUTION

To avoid the conditions that cause flashback, maintain equipment in good working order, purge your lines, select the correct accessory for the job and use recommended procedures to set up and use the equipment.

If we can give you more information, please give us a call.

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GIVE US A CALL, WE'LL MAKE IT HAPPEN