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THE TERRIBLE TEN

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Fitting Not Crimped

1

Some ends are designed to be crimped. Other ends have the option to be either crimped, banded, or clamped. Crimped end fittings are proven to be one of the most effective hose end securing methods available, and reduce the maintenance issues brought on by bands and clamps. When dealing with an assembled hose, always be sure that the assembly meets or exceeds the guidelines from the hose manufacturer.

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Bubble Crimp

2

Ferrules and fittings are made at optimal lengths for the best grip. When a crimp is not properly completed, this bubble effect causes a 2-fold issue. Without the full length of the ferrule being utilized, the effectiveness of the crimp is questionable at best. Bubble crimps also cause a secondary issue, the ferrule's teeth will not engage the fitting, further reducing the overall crimp effectiveness.

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Not Tight Enough

3

Screwed down clamps designed for steam use require regular maintenance. The same goes for worm gear clamps and any other hose clamp that depends on bolts or screws. Without it, these clamps will slowly work themselves loose, leading to leaks, and eventually without maintenance, hose failures. While examining hoses, always ensure that the clamps are at the optimal tightness.

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Banding clamps are designed to work in groups to ensure an effective seal on the fitting hose barbs. However, banding clamps do not offer a perfect 360° seal around a hose. In order to prevent a leak like on the example here, the bands need to be staggered from each other. With a proper stagger, leaks can be prevented.

Leak Path

4

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Hydraulic Hose Requires Bite To Wire Fittings

5

Hose menders are a great solution for connecting 2 ends of a hose together. However, hydraulic lines are a special case, and require special consideration. Bite to wire fittings are one of the strongest hydraulic fitting types you can use, as the interior teeth of this fitting "bite" into the reinforcement layer of the hose. This crimped end connection is incredibly strong, and is designed for the high pressure of hydraulics.

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Wrong Clamp

6

Using the wrong clamp is a risky proposition. The wrong clamp might be too small, which prevents proper "grip" to the hose and fitting, or the clamp is too large, which can risk it being too loose. Steam clamps are made to size specifically for the fittings and hoses, so the wrong size will lead to leaks or shifting of the underlying fitting.

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Wrong Safety Latch

7

Cam and groove fittings are an incredibly popular and easy to use fitting for their versatility, easy connection, and great pressure ratings. Camlocks do not come without pitfalls however. The arms are designed to be kept down using an appropriate safety latch, usually a pin, or in the case of an Instalock, a properly designed ring. In this case, a rubber band is ineffective and is prone to slipping. This allows the arms to swing freely, risking a hose decoupling in the middle of material transfer.

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Fitting Not Properly Inserted

8

Fittings are built to be inserted into hose up to a certain point. This depth ensures that the appropriate grip on the fitting exists so that the working pressure of the hose can be maintained. Always ensure that hoses are inserted to the correct depth - both on new and old hoses.

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Ferrule Not Crimped To Lock

9

Every ferrule made with teeth is designed to lock into the fitting that it crimps around. These teeth provide additional hold onto the fitting, resulting in a stronger grip and better adhesion. Misaligned teeth point to a problem with the ferrule position, which in high pressure applications can lead to hose failure.

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Just Wrong

10

The wrong hose using the wrong fitting and clamped with the wrong clamp. This poorly assembled hose is just asking for trouble. Always ensure that the fitting properly fits the hose, and is crimped or clamped to specifications.