SALCO PD 2 Piping Modification

These instructions detail what is included for the modification of the unloading system for a Trinity PowerFlo2 car. Do not throw away parts being disassembled as they may be used in a different process. Inspect parts being disassembled for defects. If a part needs to be replaced, please call Salco. These set of instructions assume the hoppers are welded to the mounting flange on the car; the four ball valves on the air manifold are grouped together; and the discharge pipes welded to the hoppers are stainless. Figure 1 shows the modification in its finished state. Some of the parts on the figure will not be modified.

DISASSEMBLY

First, make sure there is no residual pressure in the car. Check gauges and open the blowdown valve at the "A" end of the car. Remove all 4" and 5" piping and brackets from the bottom of the car. Also remove the 3" upper (#21,23) and lower (#14,15) elbows on the sides of the car. Save all parts and fasteners as they may be used later. Wash and dry piping to be used later. Discard all dirty gaskets and replace with new ones.

DISCHARGE FLANGE

There are two sets of hoppers in-line with each other perpendicular to the rail. On the hopper outlet closest to the 5" piping, apply a transition flange (#4) and gasket (#5) to the square flange on the near side. On the far side of the hopper, apply the blind flange (#31) and gasket (#5) formerly on the near side of the hopper. Weld the provided stainless steel flange (#39) to the discharge outlet pipe as shown in Figure 2. Please take precautions to isolate the work from the interior in order to eliminate contamination and exposure to possible combustible product inside the car. Buff out any discolorations from welding.

LATERAL APPLICATION

For initial fit-up, fasteners should be screwed on hand tight to allow for adjustment. Apply the 4" discharge pipe (#11) and gasket (#5) to the flanges welded in the previous step. The end with elbow directly welded to the flange should be attached to the discharge flange (#39). Apply a transition flange (#4) to the 4" discharge pipe (#11) with gasket (#5). The face of the transition flanges (#4) should line up with straight with the transition flange applied in the previous step. It may be necessary to cut the 4" discharge pipe (#11) to length, and apply one of the 4" compression couplings (#38) in order to get the right length. With the 5" butterfly valves (#3,3A) sandwiched between the transition flanges (#4) and the appropriate lateral (#1,2), apply with the correct fasteners (#42-44). Make sure the handles are pointed in the right direction and can opened and closed with no interference, see Figure 1. Follow the same steps for the other set of hoppers. The laterals (#1,2) from the other hopper must be in line with the first lateral applied, after all of the fasteners have been tightened.

5" PRODUCT PIPING

Slide the 5" pipe (#6) to butt up against the two laterals (#1,2). Apply the 5" compression couplings (#7) on both ends. Butt up one of the 5" flanged 45 degree pipes (#8) from the "Disassembly" step to the center lateral (#2). Apply another 5" compression coupling (#7). Cut 2 ¾" off the end of the other 5" flanged 45 degree pipe (#8). Bolt together, with gasket (#9), the cut 5" flanged 45 degree pipe (#8) to the existing bent pipe. See Figure3. Apply a 5" compression coupling (#7) to the cut 45 degree pipe (#8) and the 5" cross (#10). Apply the pipe hanger bracket (#35) with U-bolt (#37) for the cross (#10) as shown in Figure 3. Lay out the pipe hanger brackets (#34) for the 5" pipe (#6) and 5" flanged 45 degree pipe (#8) as shown in Figure 1. Weld the pipe bracket (#34) to the mounting flange on the car and attach u-bolt (#37). Bolt the check valve (#12) to the reducer on the lateral (#1) with gasket (#5). Make sure the arrow on the valve is pointing to the middle of the car.

3" AIR PIPING

Bolt the flanges of the provided air manifold extension (#19) and gasket (#20) to the existing air manifold (#17,18). Weld the air manifold bracket (#33) to the car and apply the u-bolt (#36) in the position shown on Figure 1. Apply the upper elbow (#21 or 23) (be sure to use the same elbow on the same side of the car) with the 3" butterfly valve (#22) sandwiched between the elbow and air manifold extension (#19). Apply the lower elbow (#14 or 15) (make sure the correct elbow is used on the correct end of the car) and gasket

(#13) to the check valve (#12). The elbows should line up. Cut the 3" hose (#30) piece in half. Press the 3" hose (#30) over the hose barbs on both elbows (#14-15,21,23). Tighten the hose clamps (#46) on both ends of the hose. Apply one end of the ¼" black tubing (#47) into the hose compression fitting on the upper elbow (#21,23). Apply the splice coupling (#49) to the existing hose and the newly applied tube (#47). Tack weld the tube clip (#48) to the under side of the car shelf and slip the new length of tube (#47) through the clip.

INSPECTION AND TESTING

Before testing, make sure all fasteners that may have been finger tight are now wrench tight. Close all 5" butterfly valves and blowdown valve. Open the 3" butterfly valves and all 2" ball valves, and secure the 5" dust caps. Hook up an air connection to the 3" kammed fittings. Pressurize the car body and piping to 14.7 psi. DO NOT GO OVER 14.7 psi. Leaks should not exceed ¾ psi over 30 minutes. Use Snoop to detect any leaks. After successful test, depressurize the car. Apply any touch-up paint jobs if necessary, and apply all necessary cable seals. Secure all kammed fittings. All piping not used may be discarded.