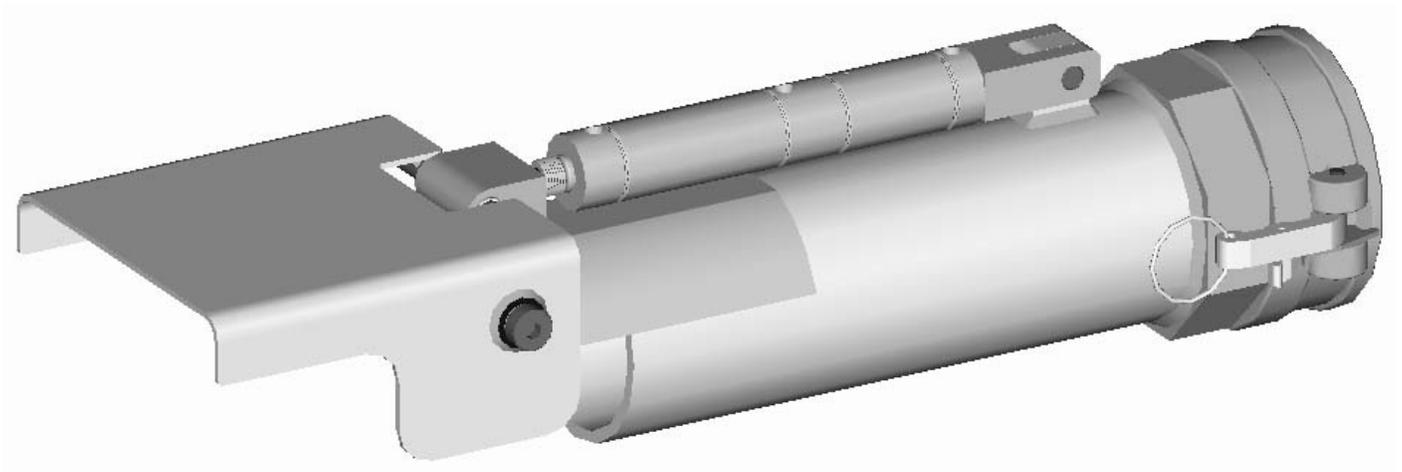




Load Diverter Manual Three Position Style



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Key Features of the Load Diverter

1. Easy installation
2. All parts included
3. Constructed of smooth-cased aluminum
4. Easy removal for cleaning
5. Can reduce load time by as much as 30%
6. Operator has control of loading
7. Eliminates overloading on drive axles
8. Eliminates “slamming” or load shifting
9. Reduces chance of contaminating the load
10. Saves on fuel costs
11. Saves driver time and reduces stress
12. Reduces blower wear
13. Reduces trailer maintenance
14. Reduces the guess work needed to achieve a perfect load

Recommended Safety Instructions

- Comply with all warnings provided in this manual.
- Read all safety and operating instructions before installing and operating the Load Diverter.
- Retain all safety and operating instructions for future reference.
- DO NOT use attachments NOT recommended by the Load Diverter’s manufacturer, as they may cause hazards.
- DO NOT place the Load Diverter on uneven surfaces. It may fall and be damaged, and personnel could suffer serious injury.
- Always wear proper fall protection when cleaning, installing or servicing the Load Diverter.
- A copy of these instructions is available on-line at <http://www.salcoproducts.com/trucking.htm> in the “Product Installation Instructions” section.

Parts List

- 1) Load Diverter
- 2) 3 Position Air Switch Assembly
- 3) 1/4" D.O.T. Nylon Tubing (Black, Red and Blue)
- 4) 1/4" x 3/4" Hex Bushing
- 5) 1/4" Male NPT x 1/4" Instant Tube Fitting
- 6) 90° 1/4" Male NPT x 1/4" Instant Tube Fitting (Assembled into Brass Bulkhead Coupling)
- 7) Brass Bulkhead Coupling
- 8) 3/4" SAE Steel Washer
- 9) 3/4" Rubber Washer
- 10) 3/4" Brass Jam Nut
- 11) 1/4" Brass Nipple (Assembled into Brass Bulkhead Coupling)
- 12) Female Quick Disconnect Fittings
- 13) Male Quick Disconnect Fittings
- 14) Coiled Nylon Hose
- 15) 1/8" Male NPT x 1/4" Instant Tube Fitting
- 16) Mounting Bracket
- 17) 1/4" x 1" Stainless Steel Bolts
- 18) 1/4" Stainless Steel Lock Nuts
- 19) Nylon Ties
- 20) Caution Label

INSTALLATION

The Salco Products Load Diverter is easily installed by a certified trailer mechanic in under one hour. The Load Diverter is designed to retrofit any self-loading dry bulk trailer. To assist the mechanic, installation instructions contain illustrations.

Adhere to all shop safety practices when installing the Load Diverter and follow all installation procedures. This model attaches to a male cam fitting. If your trailer does not have a male cam fitting on the rear loading tube, contact Salco Products.

Note: *If your trailer is equipped with two loading lines always use the rear line. The cam fitting must be located in the rear of the hopper and must be installed prior to the installation of the Load Diverter.*

1. **Disconnect the air supply and drain all air tanks on trailer!** Check all air tanks to ensure that the air is completely drained before going to Step 2. **Note:** It is recommended that all threaded parts be secured with Teflon tape.
2. Remove the reserve plug from the air tank. Insert the hex busing [#4, Figure 1] into the air tank and tighten. Insert the 1/4" male NPT x 1/4" instant tube fitting [#5, Figure 1] into the hex bushing. Attach 1/4" nylon tubing [#3, Figure 1] into the instant fitting [#5, Figure 1].
3. Place the air switch in an easily accessible area on the rear of the trailer. This placement should allow the operator to use the air switch without obstruction. If needed, a mounting bracket with nuts and bolts is provided.
4. Cut the 1/4" tubing to the desired length. Insert the 1/4" tubing [#3, Figure 1] from the air tank into the "Air Inlet" instant tube fitting elbow [Figure 2]. Secure the nylon tubing to the frame of the trailer using nylon ties.
5. Attach the Load Diverter to the cam fitting on the loading line.
6. Before drilling holes for the bulkhead fittings, determine where they will be placed. The holes can be drilled in the cover or in the roof of the trailer near the ring. Find an area that will not interfere with the ribs on the underside of the cover or the operation and locking mechanism of the domelid cover. **DO NOT** create a trip hazard.
7. Drill three 3/4" holes a minimum of 3" apart to ensure that there is enough room for tightening the brass jam nuts [#10, Figure 2].
8. Place the caution label [#20] in a visible area on or near the dome lid where the Load Diverter is located.
9. Assemble the fittings according to Figure 3. Ensure that the rubber washer [#9, Figure 3] is compressed between the steel washer [#8, Figure 3] and the hatch cover or roof. Two female quick disconnects [#12, Figure 3] with one male quick disconnect between them [#13, Figure 3] will be connected to the 1/4" brass nipples [#11, Figure 3]. This is to ensure that the lines do not get reversed when the Load Diverter is removed for cleaning.
10. Thread the 1/8" male NPT x 1/4" instant tube fittings into the cylinder on the Load Diverter. Insert the coiled tubing into the instant tube fittings on the cylinder.
11. Keep track of which color tubing is connected to the corresponding port on the cylinder [Figure 4].
12. Using the best possible route to the 3 position air switch assembly, secure the air tubing to the exterior of the trailer using cable ties. [Figure 5]. Cut and insert the tubing into the corresponding male fitting 1/8" male NPT x 1/4" tube compression fittings. Ensure that Positions 1, 2 and 3 are connected on the switch assembly [Figure 2] and the cylinder [Figure 4].

13. Attach air supply and regenerate air tanks. Check all fittings and hoses for air leaks.
14. Move air switches up and down checking the operation of the Load Diverter. Verify that the labels match the operation of the Load Diverter.
15. Wash the trailer after installation and before loading.

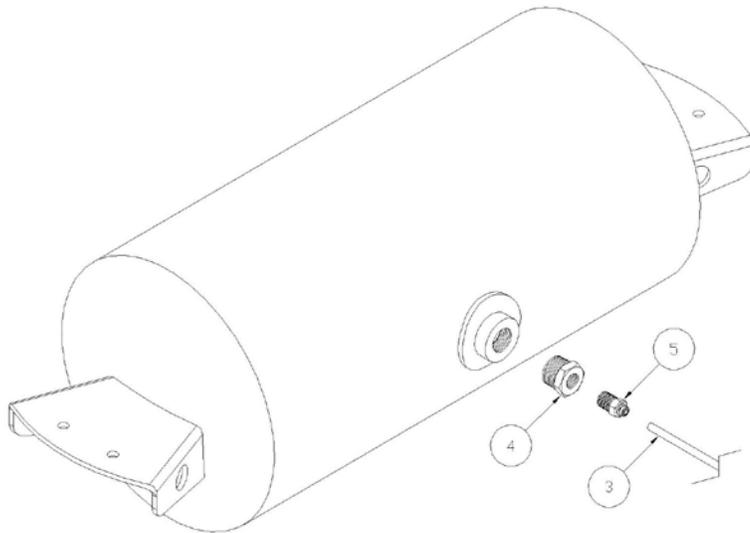


Figure 1

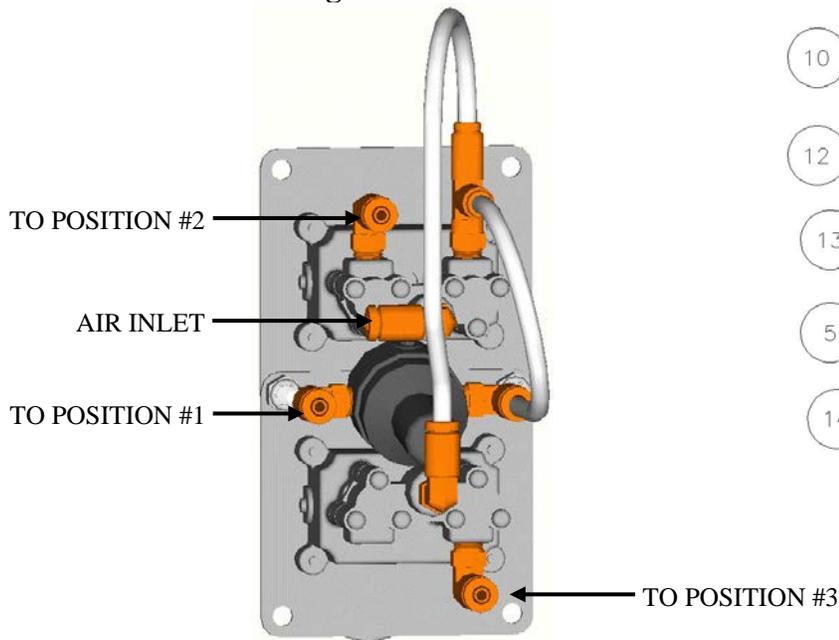


Figure 2

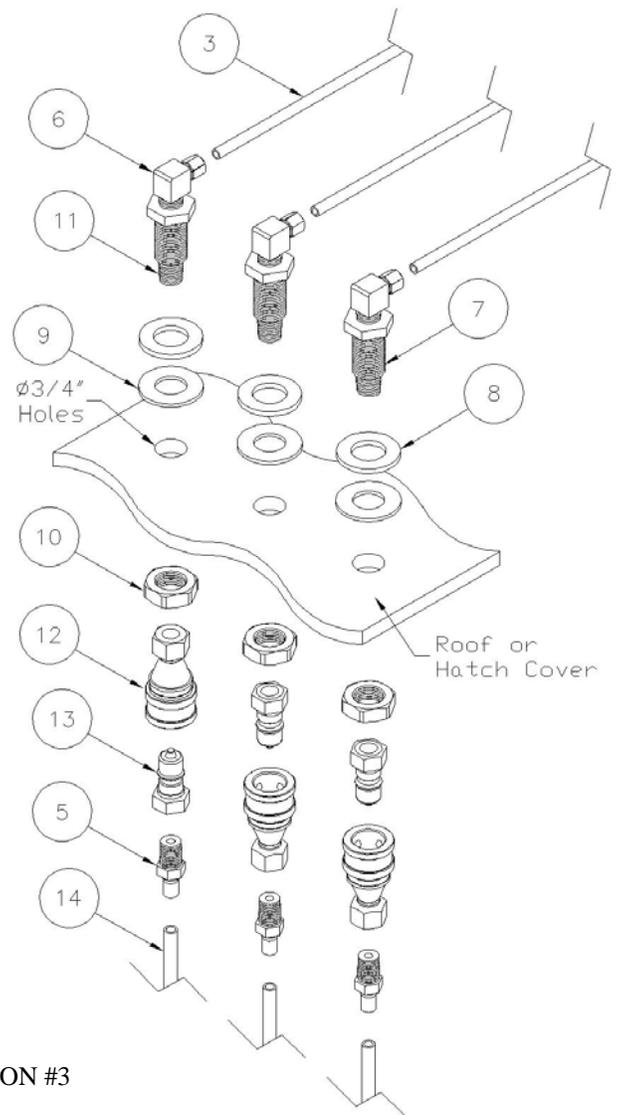


Figure 3

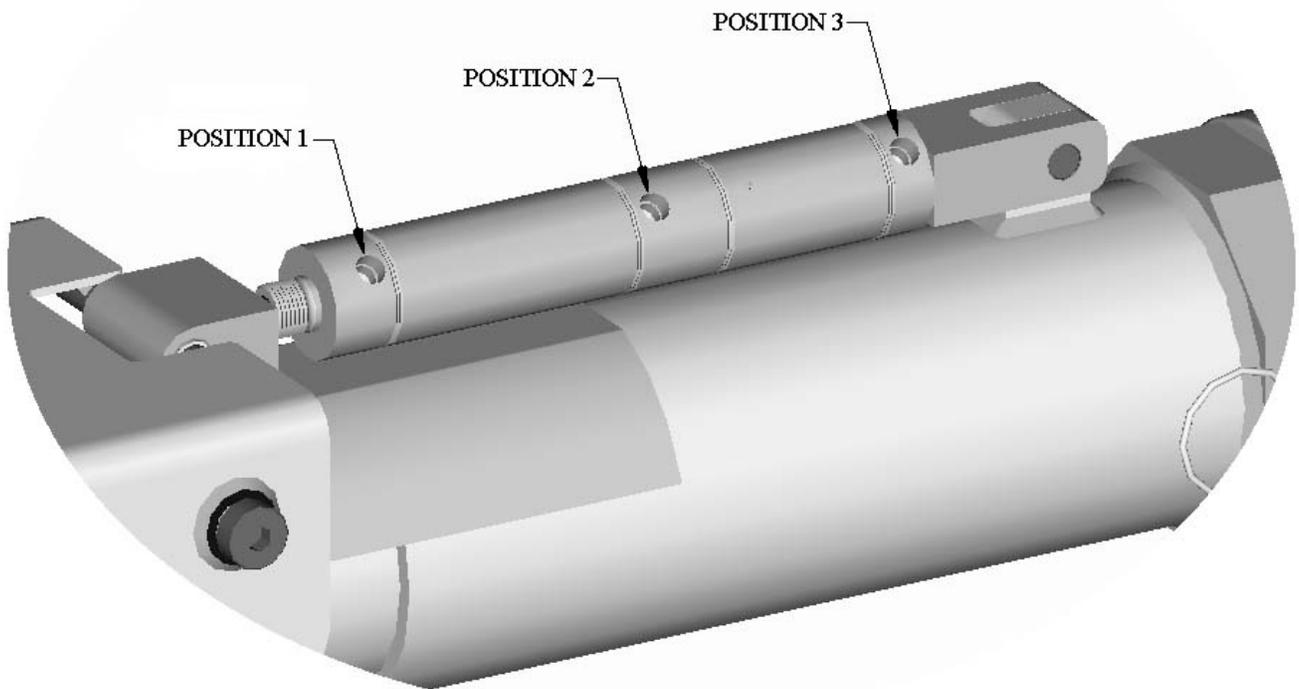


Figure 4

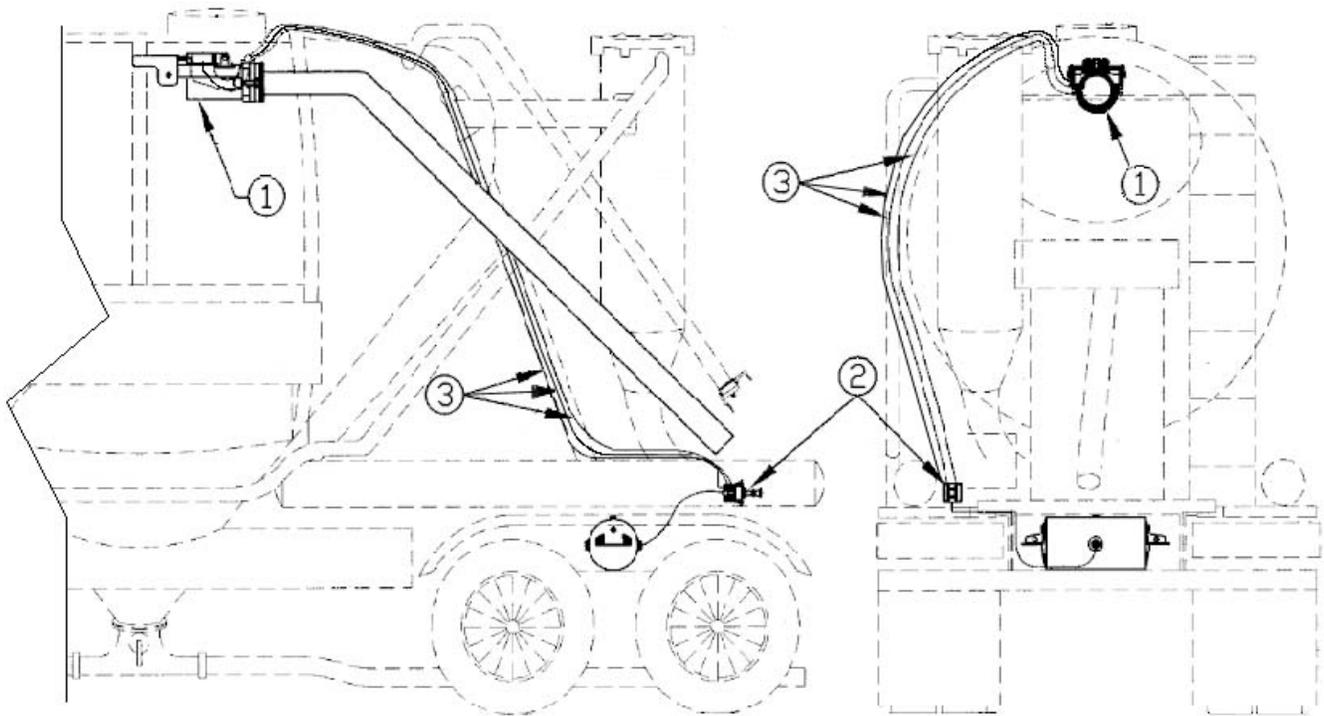


Figure 5

Operation

The Salco Load Diverter is operator friendly and easy to use. This section of the manual instructs the proper way to vacuum load using the Salco Load Diverter. Factors to consider when loading include suspension weights, weights of products and attaining maximum vacuum.

1. Before loading, evaluate the desired load. This is accomplished by determining the weight of the load, type of product, and rail car compartments to be off-loaded. Loading partial rail car compartments first is recommended. Compartments with a weight of under 7000 lb should be loaded to rear of the trailer first. This allows for the drop in vacuum that occurs when emptying the partial compartments. We do not recommend changing standard loading practice, but we do recommend maintaining highest possible vacuum rate. When loading from the far side of the railcar the drop in vacuum may not allow lighter products to reach the front of the trailer. When possible, vacuum product from the near side of compartment to achieve optimal loading results.
2. Before starting the blower, make sure the air switch (#2) is in the proper position. When loading a partial rail car compartment (loading to the rear of a trailer) the air switch (#2) should be in the “REAR” position. When starting a new compartment always have the air switch (#2) in the “FRONT” position and the rail car valve fully open. This creates the maximum vacuum needed to place the product on the front of the trailer.
3. As loading begins, monitor the vacuum and suspension gages. The vacuum gage should reach and maintain maximum vacuum. All products being loaded react differently, creating different pressures from product to product. Tractor suspension gages also vary with equipment. The driver will know his proper drive weight by monitoring his tractor suspension gage. The suspension gage displays the air pressure in the tractors air ride suspension. This is also viewed as a scale to achieve proper drive weight. When the Load Diverter is activated, it will not allow product to the front of the trailer. It must be understood that loading the rear of the trailer will add weight to the front. The Load Diverter should be activated at about 10% under the maximum drive weight.

Example: If the maximum drive weight on the gage is 57 psi = 34,000 lb, divert or switch to the rear at 50 to 52 psi. The lower the psi, the lower the drive weight. 50 to 52 psi is at approximately 10% under the ideal drive weight.

4. Moving the air switch (#2) into the “REAR” position drops the Load Diverter door to a 90° position. With the door in a 90° position, product is placed to the rear of the trailer. The trailer rear suspension gage displays the pressure in the trailer’s air ride suspension. When this gage reaches its maximum pressure, shut down loading. Most trailers have pressure markings in the gage box or notes near the rear of the trailer that provides a visual record of weight based on experience. All trailers that have a diverter installed must also have the rear axle pressure/weight conversion (34,000 lbs. = XX psi) written near the suspension gage.
5. Putting both switches into the upper position will put the door into a 45° position. This will place product in the middle of the trailer. Putting product in the middle is beneficial when the load limits are closed to being obtained.

These instructions can be modified for different suspension weights, weights of products, and to maintain maximum vacuum. You will find the more you use the Load Diverter, the more it will be used as a loading tool. How does the product load? For light, medium and heavy products, make minor adjustments to your switch weight. The combination of loading experience and these instructions will save significant time and assist the driver to obtain an optimally loaded trailer.

CLEANING AND CARE

The Salco Load Diverter is a low maintenance unit. Its operation is pneumatic and mechanical. The Load Diverter is designed to be removed from the trailer during washing without disconnecting the air lines that may be under pressure.

1. Thoroughly wash the Load Diverter with water, checking housing exterior and interior. Remove the gasket in cam fitting [Figure 6]. Be sure to rinse gasket and gasket seat.
2. Inspect the Load Diverter for cleanliness
3. Check the operation of the Load Diverter after every wash.
4. Using a 5/16" hex allen wrench and rotating in a clockwise direction, check each of the two shoulder bolts for hand tightness. If the shoulder bolts are found to be loose: a) Remove the shoulder bolts and clean any oil, Loctite or other residue out of the threaded holes and bolt threads. b) Inspect the shoulder bolt plastic clip bearings and replace them if needed. c) Apply 3 - 6 drops of Loctite® 263 Threadlocker to shoulder bolt threads. d) Re-apply the shoulder bolts and torque them back down to 30 ft-lbs. Allow the Loctite® to cure for at least 90 minutes before putting into service and at least 24 hours before washing.
5. Do not kink or twist hoses, as it may result in damage to the hoses.
6. Do not let the Load Diverter tip over when setting it on the ground. This could cause damage to the unit or cause serious injury to personnel.
7. After washing and inspecting the Load Diverter, place it back onto the load line. Make sure that the locking arms are fully engaged [Figure 7].
8. Never hold the Load Diverter door or try to move the door when under pressure. Holding the diverter door or preventing movement of the door could cause injury and damage the Load Diverter.

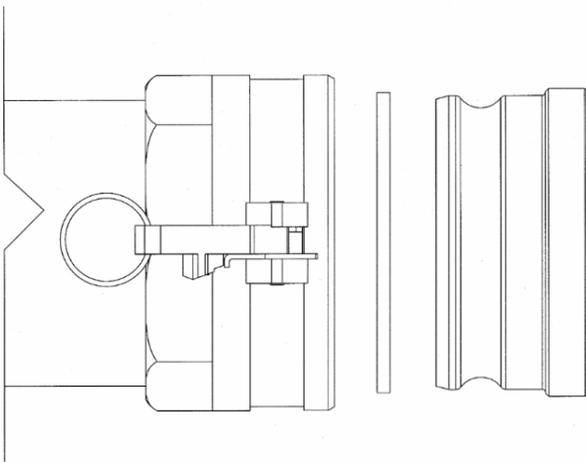


Fig. 6

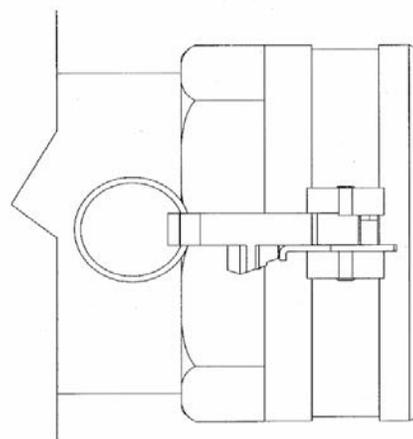


Fig. 7