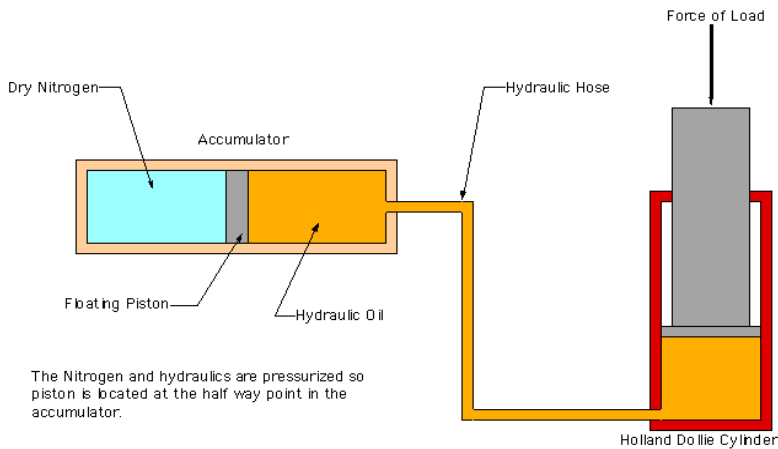


How to use Holland Dollies in conjunction with other transport systems.

Holland Dollies can be used in a system to carry a load completely or they can be used in conjunction with other transport systems with the use of accumulators. Often, the Department of Transportation will require dollies in conjunction with heavy transport trailers crossing bridges. By adding the Holland Dollie with accumulators, the load is distributed over a larger area.

Initial Conditions of Accumulator System

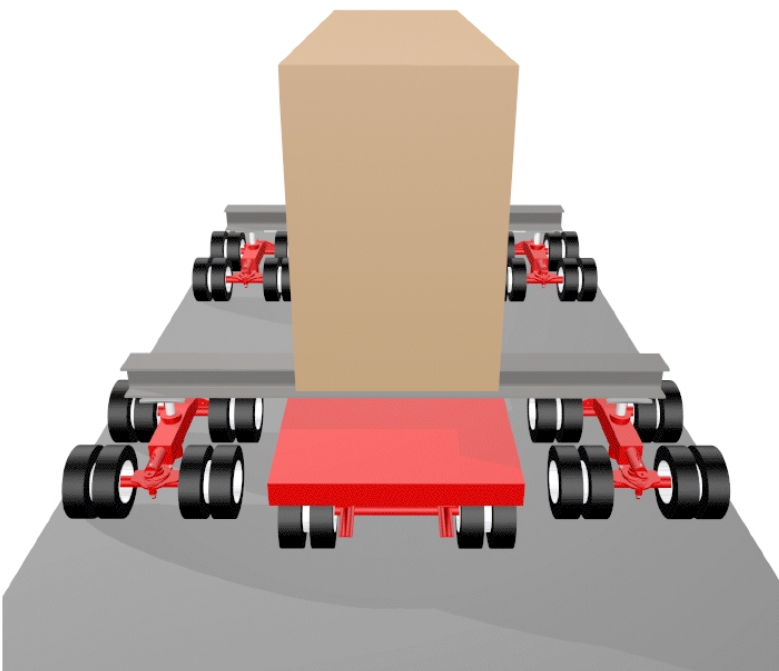


Pictures from a 3-d model illustrate the basic idea behind the system. The Holland Dollie must be able to apply force to the load in some manner in order to take weight. For illustration purposes, we have shown the dolly pushing on a beam under the load. This could be achieved many different ways, but for simplicity we have used a beam under the load.

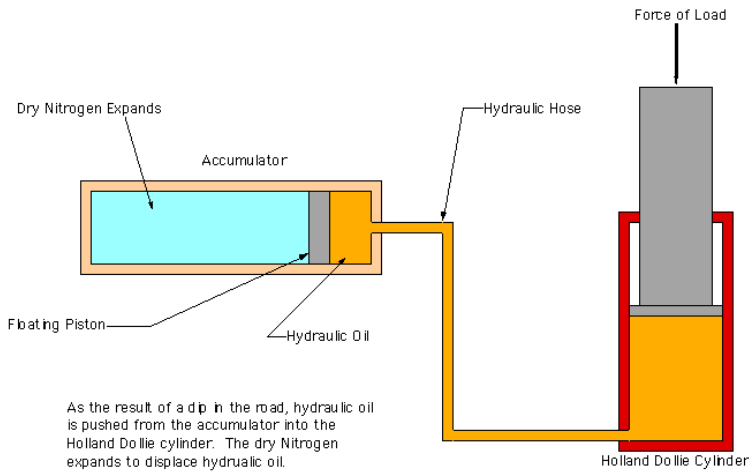
Through the hydraulic cylinder a calculated portion of the load is applied to the dolly by specifying the correct hydraulic pressure. This can be calculated or looked up in a table provided by Holland Moving & Rigging Supplies. The table converts the hydraulic pressure in the dolly cylinder to weight it is carrying. When the dolly cylinder is connected to the accumulator, it will allow the dolly to travel up and down and to adjust to the differences in height between the trailer and dolly. The figure to the left shows the initial starting conditions of the accumulator and dolly cylinder. More about this will be discussed on the back of this sheet.

The picture to the left shows a total of four dollies under the load. Steering can be accomplished by mechanically tying the tongue of the dollies to the load. In this case, the dollies act similar to another straight axle under the load. Turning corners with the dollies down may require castered steering. With castered steering, the dollies will follow the load around the corner. To visualize this, one can think of a shopping cart caster.

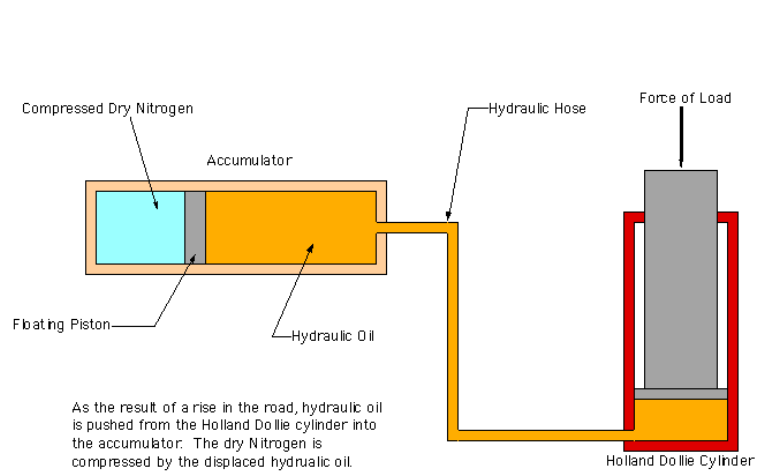
Turn over please...



Accumulator Displacing Oil

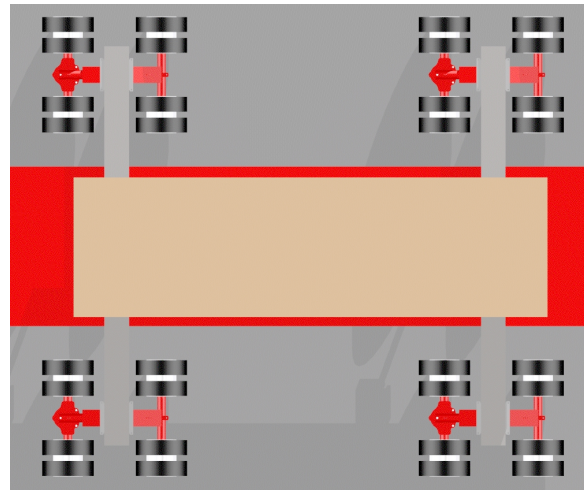


Dollie Cylinder Displacing Oil



An accumulator charged with nitrogen acts like a spring when connected to hydraulic circuit with the dolly cylinder. As illustrated above, the accumulator will displace oil to the dolly cylinder if the dolly encounters a dip in the road. Under the opposite circumstances, the accumulator will accept oil displaced by the dolly cylinder when the dolly travels over a rise in the road. All of this acts to maintain a relatively constant weight on the Holland Dollie.

For traveling long distances where the dollies are not needed to take weight, they can be pulled up. The cylinder in the Holland Dollie is double acting, which allows you to lift the dolly up off the ground. In the picture below, the dollies would be pulled up to the cross beams. Then the dollies would be tied securely so they would not swivel or rock. This allows the load to travel down the road without pulling the dollies off of the load.



Call us if you have any more questions on how to use Holland Dollies in conjunction with other transport systems.

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