

I REDUCING RISK AND COST

TIRE INSERTS...



**...AN INNOVATIVE SOLUTION
TO INCREASE SAFETY**

The necessity of extremely high tire pressures in the pallet carrier tires posed a safety threat to operators and bystanders. Here's how Harsco worked with Trojan Tire Inc. to find an innovative solution.

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BACKGROUND

The scrap delivery service requires specially designed pallet carriers to transport loaded scrap baskets to the furnace. These machines are required to traverse one-half mile (1km) over a partially paved, slag road with a 400K lbs. (183 tonnes) payload.

To achieve the load capacity, extremely high tire pressures would have been required for each of the twelve rear tires. However, operational space limitations did not allow for additional wheels or axles to disperse the load to reduce the air pressures required.

This posed a very real safety risk for pallet carrier operators and nearby site workers, as the machines must navigate road hazards like potholes, scrap metal, ruts, and debris. With the proximity of the tires, if one tire were to explode, the rest would follow.



Harsco Scrap Delivery

STATUS



1-6 tires were replaced after 6040 operating hours
(~\$1.57/Hr./Tire)



7-12 tires were replaced after 7200 operating hours
(~\$1.32/Hr./Tire)

THE SOLUTION

Harsco partnered with Trojan Tire Inc. www.trojantire.com to test their patented Soft Core® tire inserts in this application to eliminate safety risks associated with operating extreme air pressures and reduce overall tire costs by reducing premature tire failure.

The Trojan Soft Core® inserts require zero air pressure, achieved by inserting a series of rubber inserts into the tire cavity to progressively fill the void entirely.

The inserts are customized to the size and brand of tire used and can be reused up to four times with the same brand/size tire. It is also possible to retread the tire prior to complete tread wear-out.

Soft Core® inserts were installed on all twelve rear Trelleborg 16.00-25 off-road tires, rotated regularly, and monitored.

OUTCOME

This innovative solution provides an array of advantages:

- One of the primary benefits is that it eliminates air, which means there is **no risk of explosion**
- Premature tire failures from punctures and rapid release of pressure are now a thing of the past.
- The **load carrying capacity has increased by 1.5 times** – improving productivity.



- Additionally, the Trojan Soft Core® is reusable, which is **far better for the environment.**

For more information on the costs and implementation of this solution, please contact us at cwoodhouse@harsco.com

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Tires with Soft Core® Inserts

MAKING A WORLD OF DIFFERENCE™

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