

Success Story: Shuttlewagon® Division of Nordco

Market Served:
Railroad

The Shuttlewagon's hydraulic manifolds are machined to accept Eaton STC® fittings directly on the hose ends, without employing a fitting to connect hose to the block. This reduces the number of fittings in the hydraulic system and, therefore, the number of potential leak points.

Eaton STC Connectors Have Excellent Track Record on Railcar Mover

Location:

Grandview, Missouri

Segment:

Commercial vehicles: railcar mover

Challenge:

Preventing hydraulic fluid leakage in and around hose and fittings

Solution:

Eaton's STC threadless connectors

Results:

STC fittings are standard connections on all Shuttlewagon production models

Contact Information:

Tony Swin
Eaton's Hydraulics Group
(816) 746-0812
tonytswin@eaton.com

Jerry Welch
Eaton's Hydraulics Group
(419) 891-7645
jerrywelch@eaton.com

Background

In vehicles with extensive hydraulic systems, leakage of hydraulic fluid in and around hose and fittings is a pernicious problem that simply cannot be ignored. Apart from environmental concerns that leaking hydraulic fluid can cause, maintaining the integrity of the hydraulic system against fluid loss is imperative for preventing failure of the system.

A railcar mover from the Shuttlewagon Division of Nordco was no exception.

Challenge

Early in the design of the "Commander" series Shuttlewagon, this problem was given a top priority at the Grandview, Missouri, manufacturer. There simply had to be a better solution for hydraulic connections than

commonly used flared fittings that were a major cause of hydraulic fluid leakage. Shuttlewagon engineers, Don Crist and Sean Willoughby, began to explore alternatives by consulting with Dave Ziemer, technical consultant at Engineered Sales Inc., an Eaton Premier Advantage Distributor in Kansas City, Missouri.

Solution

The result of their efforts was a prototype incorporating an entirely new type of hydraulic connector, Eaton's Snap-To-Connect (STC) connector. Instead of inserting a threaded male connector into a female port—resulting in a metal-to-metal seal—Eaton's threadless connector uses a snap ring to connect the male with the female, which seals on an O-ring.

The result is a leak-free connection—in a snap. Gone is the need to turn the connecting nut on a flare-type connector that can result in cross-threading, a kinked hose, or an improperly torqued

connection. A simple flat connecting wrench is the only tool required to release the connection.

Results

In addition to eliminating leakage and reducing installation time, STC fittings also offer real benefits when working in a confined space, where applying a wrench with each hand can be difficult. The Shuttlewagon's hydraulic manifolds are machined to accept Eaton STC fittings directly on the hose ends, without employing a fitting to connect hose to the block. This reduces the number of fittings in the hydraulic system and, therefore, the number of potential leak points.

"The success of STC connectors on the Shuttlewagon demonstrates STC's application versatility," says Eaton's Jerry Welch, product manager.

"Direct porting the female STC into the manifold, instead of using adapters, demonstrates the future of how customers

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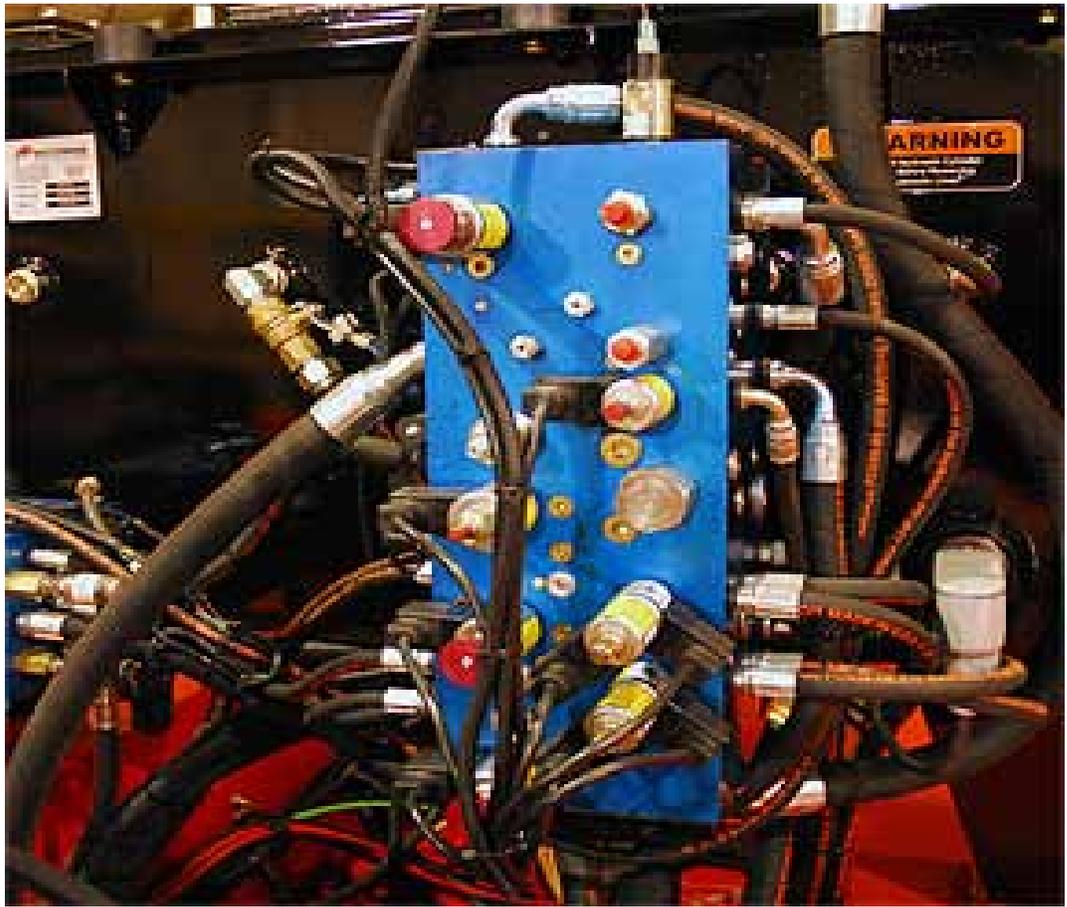
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will be connecting hose and tubes to hydraulic systems.

In addition to STC fittings, the Shuttlewagon is also equipped with Aeroquip® hose, Char-Lynn® steering control units, Eaton® 420 Series pumps, and filtration products.

For information on other Shuttlewagon features, call 816-767-0300 or visit www.shuttlewagon.com.



Eaton STC fittings are standard connections on all Shuttlewagon production models.

Eaton
Hydraulics Group USA
14615 Lone Oak Road
Eden Prairie, MN 55344
USA
Tel: 952-937-9800
Fax: 952-294-7722
www.eaton.com/hydraulics

Eaton
Hydraulics Group Europe
Route de la Longeraie 7
1110 Morges
Switzerland
Tel: +41 (0) 21 811 4600
Fax: +41 (0) 21 811 4601

Eaton
Hydraulics Group Asia Pacific
Eaton Building
4th Floor, No. 3 Lane 280 Linhong Rd.
Changning District
Shanghai 200335
China
Tel: (+86 21) 5200 0099
Fax: (+86 21) 5200 0400