

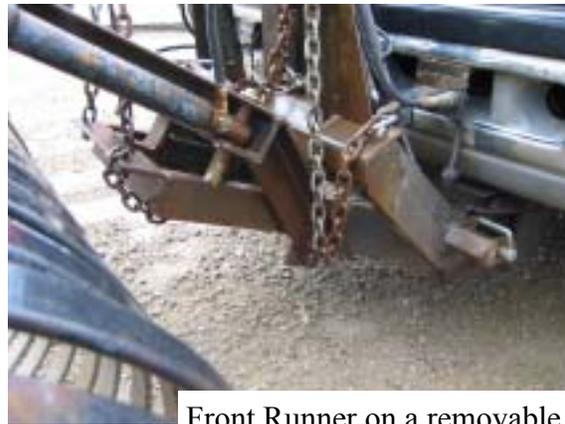
Front Runner & Fisher Plows

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An explanation of the different
Fisher snowplow systems & sizes
and tips for making the changeover
on the Minute Mount



Front Runner on an old style Fisher plow with “fixed” headworks



Front Runner on a removable Minute Mount system

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1. What Front Runner will fit
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At work on State of NH Trails Bureau's 450 Ford with Minute Mount

1. What Front Runner will fit ... 4/04 Page 2

Front Runner will typically fit both the original style non-removable Fisher snowplow headworks as well as the newer Minute Mount system on 3/4 and One Ton trucks in place of the snowplow “A” frame & blade.



Original Fisher Plow Mount

Photo at left shows the original style Fisher Snowplow mounting system with the plow removed. The FrontRunner “COUPLER” (at right of photo) hitches directly to the snowplow’s Push Beam under the truck, just as the original snowplow “A” frame always has.

The width of the push tabs (the flanges that pin onto the push beam of the truck) remains at 25” for most 3/4 and One Ton trucks for both the original and Minute Mount plows.

Note that 1/2 ton trucks (recommended only for residential use) have 22 1/2” spacing between push tabs as do some of the newest Chevrolet 3/4 ton trucks, requiring a coupler with 22 1/2” push tabs

Mounting onto an *original* Fisher hoist, *not* a Minute Mount, is accomplished in the same manner as mounting the snowplow.

Follow the directions beginning at Section 2 of the Operator’s Manual.

2. The Minute Mount system was introduced several years ago to allow the headworks (plow hoist assembly, pushbeam, and headlights) to be removed from the truck along with the plow when the plow is not in use.

At right is an older style **Minute Mount**. The basic geometry of the Minute Mount system remains the same as the original, with the Minute Mount providing a way for the forward portion of the headworks and the push beam to remain with the plow rather than the truck when the plow is removed.



Note that this truck has UNDER- HOOD HYDRAULICS, just as did most original Fisher snowplows (no pump hanging on headworks.)

The plow has been removed and the FrontRunner is ready to mount on the headworks.

Front Runner Fitting & Changeover Tips

At right is another Minute Mount configuration with an earlier style electric hoist, the SEHP (for Sole-noid Electric Hydraulic Pack), mounted directly on the headworks.



WARNING: While other aspects of this hoist system match these instructions, there is a problem with the FrontRunner “A” Frame hitting the body of the SEHP hoist.

This can be overcome by installing stops on the “A” Frame that contact the bottom of the hoist to limit upward travel. These stops can be blocks of hardwood or steel tubing bolted or welded in place. They will not otherwise affect the performance of the FrontRunner.



At left is a Minute Mount with the newer style **Insta-Act** electric/ hydraulic pump mounted directly to the headworks. Because this assembly mounts vertically between the support posts of the headworks and does not stick out like the older SEHP, there is no problem with the FrontRunner hitting the pump.

In the photo, the plow remains attached to the headworks before changeover to the FrontRunner.

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3. Making the changeover

Mounting onto any of the Minute Mount hoists begins with removing the snowplow from the same point on the pushbeam where the original style snowplow would have been removed.

This can be done when the snowplow is still mounted on the truck by reaching under the truck and removing the cotter pins that keep each of the pushbeam plow pins in place. Note that cotter pin removal is easier to do *before* the Minute Mount assembly is attached to the truck to eliminate working under the truck when the assembly is attached.

Then the plow pins can be removed to separate the plow from the truck.



continued.....

The changeover cont'd...

Lift and Highway Carrying Chain attachment:

It is also necessary to remove one lift chain retaining “U” bolt from the push frame so the chain can be removed through the loop on the hoist lift triangle.

(Photo shows Front Runner lift chain being reattached to front of the coupler during Front Runner installation)

Arrow points to “U” bolt.



Unlike the snowplow that has one chain for lifting the plow and another for keeping it elevated for highway travel, the FrontRunner has a single chain that performs both functions. The chain is installed and adjusted according to the Operating Instructions noting the following...

With older, pre-Minute Mount installations, it is typical to have the HIGHWAY CARRYING CHAIN hook to the headworks on the RIGHT vertical post. With this style, the FrontRunner lift chain is first attached to the DRIVER'S LEFT side of the front of the coupler, run up and hooked to the *lift hook (rather than loop)* and then back down to the right side of the coupler and the extra chain run is run forward around the front of the coupler and up to the attachment point on the headworks. ***See top photos on page 1***

Minute Mount plows have the Highway Chain attachment on the LEFT side of the headworks, so the FrontRunner lift chain attachment procedure is reversed, starting with attaching the end of the chain to the Driver's Right side of the coupler.

Cylinders & hoses:

Unless the truck has under-hood hydraulics with quick disconnects already in the line to the cylinders, it is recommended to install quick disconnects at the point where the hoses connect to the pump body so that plow cylinders can be removed with the plow.

It is necessary to install two pair of quick couplings, one at the pump and the other on the plow lines.

Remember to match the correct cylinder to the correct port on the hoist to be sure that the plow angling action remains the same- *control pushed to the right angles plow or FrontRunner to the right.*

Note that the LEFT port typically controls the Right cylinder (forcing plow or FrontRunner to angle LEFT), and the right port controls the left cylinder.



This step is unnecessary if the same snowplow cylinders are to be swapped from the snowplow onto the FrontRunner.

continued...

When swapping the same cylinders and hoses from snowplow to FrontRunner, it will be necessary to remove the cylinders from the snowplow and to temporarily lash them with rope or bungee cords onto the plow hoist, being careful to protect the hoses and fitting from damage during transfer. The cylinders will be re-installed on the FrontRunner after it is mounted on the hoist.

Note that it will likely be necessary to “bleed” a small amount of hoist fluid from one of the hydraulic hose connections in order shorten the cylinder and rod slightly to make it fit onto the FrontRunner. Bleeding the hose will not be necessary when reinstalling plow.



Installation and setup of the Front Runner should now be completed according to Section 2 of the instruction manual.

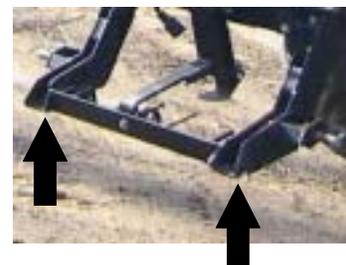
4. Other tips for Minute Mounts

Please note that the Minute Mount system includes a spring mechanism on the pushbeam that helps keep the headworks vertical when the snowplow is removed from the truck. It is very difficult to engage this spring when installing the FrontRunner or reinstalling the snowplow directly on the truck. If the spring is not properly engaged, the headworks are likely to fall forward when the whole assembly is removed from the truck. This can be prevented by inserting a block of wood between the FrontRunner “A” Frame and the base of the headworks during removal.



Otherwise, if a loader or overhead hoist is available, lift the entire headworks off of the truck where it will be easier to engage the spring with the rear of the coupler. Once the headworks is mounted on the FrontRunner or the snowplow, the complete unit is then reinstalled normally as a Minute Mount.

Another removal tip is to clear road material and debris from the sockets where the Minute Mount headworks separates from the truck using a stream of water or compressed air. If these sockets become filled with material, it is difficult to remove the spring loaded pins that connect the headworks to the truck especially if the debris becomes compacted or frozen.



Once the FrontRunner is installed on the truck it can be removed while attached to the headworks in the same manner as the snowplow is removed, taking advantage of the quick installation and removal features of the Minute Mount system