

FARM AID TRUCK MOUNT

Presentation

Farm Aid Brand

- Words that customers use when talking about a Farm Aid mixer are:
 - Turns easy
 - Simple
 - Great Value
 - Mixes fast
- We used those words in the conceptual design of the truck mount when we laid out the truck mount design.
 - Low horsepower
 - Simple drivetrain

Truck Mount Attributes

- If a truck is rated **over** 33,000# gross weight (GVW) our government taxes the truck 12% on new sales. Farmers can seek an exemption.
- Trucks with a GVW of 33,000# are popular.
- A two wheel drive International truck weighs about 10,000# without a box.
- We designed the box and mount to minimize weight. It is about 10,000# -empty.
- This leaves about 13,000# for feed legally.

Truck Mount Attributes (cont)

- **Allison** automatics are the most popular truck transmission.
- Since **2001** the drive for the PTO is “Live” all the time so power is available in neutral and with the brake applied or not.
- They make different size transmissions based on the size of the truck (1000, 2000, 3000, and 4000).
- The bigger the transmission the higher the PTO capacity.
- Most 33,000# GVW trucks can have a 95 HP PTO.
- BUT, 4WD trucks used by power companies use a smaller transmission that is only capable of a 57 HP max, a 2750 Allison.

Truck Mount Attributes (cont)

- In testing we measured 18.5 HP with 13,500# of finishing ration on the test 680.
- We budget about 38 HP for the system.
- “Small” 2750 transmissions found in some trucks do not create an issue for us.

Truck Attributes Conclusion

- 2001 or newer
- 33,000# GVW (single axle)
- Any Allison transmission
- 4 WD or 2 WD

HOW DOES THIS WORK?



Operator turns the PTO switch on.

PTO On/Off
(Connected to the TCM)



TCM monitors engine speed and turns off the PTO before the pump is damaged by speed. It tells the mixer when to turn on.

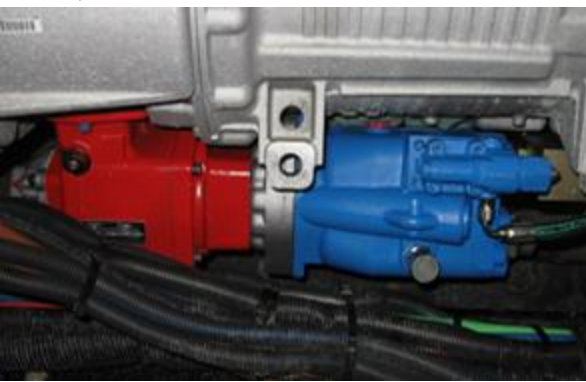


Hydraulic Demand

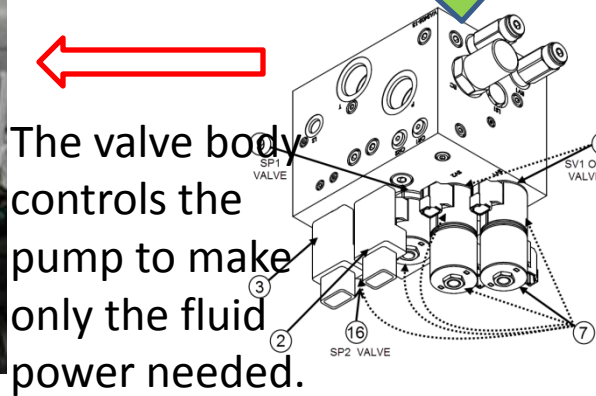
FLUID POWER

TCM (Transmission Control Module)

TCM tells the PTO when to engage.



PTO (red) Pump (blue)



The valve body controls the pump to make only the fluid power needed.

Valve Body

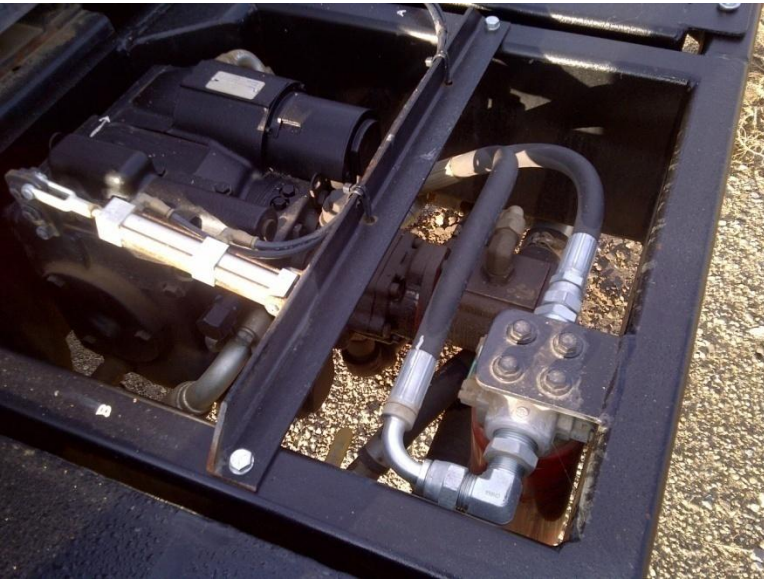
The control box tells the valve body where to and how much oil to flow.



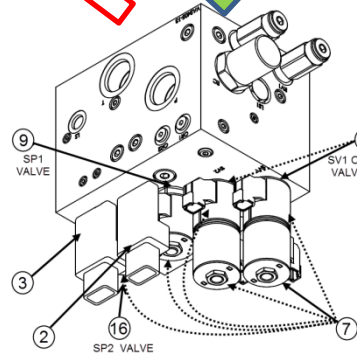
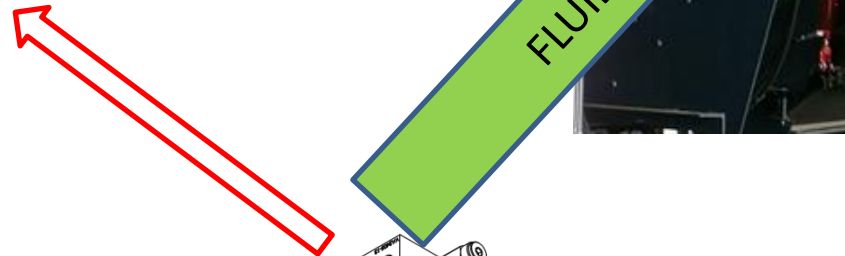
Mixer

Control Box

FRONT MOUNTED PUMP



Front Mounted Pump
On all the time. The valve body controls the pump to make only the fluid power needed.



Valve Body

The control box tells the valve body where to and how much oil to flow.

Mixer



Control Box

HOW DOES THIS WORK?

- We program the TCM to turn off the PTO before the pump is damaged by going over speed.
- We program the valve body so that it has a “Soft Start” to prevent damage.
- We program the valve body to limit the speed of the drives.
- We have the system integrated with the transmission so that if the TCM turns the system off and then on it must go through a soft start.

Operation Of The Mixer

- We recommend adding gear reduction so that the truck has a “Granny Gear”. This is called a “drop box”. It greatly increase the engine rpm at feeding speeds. With it the truck speed is much easier to control at feeding speeds as the engine is turning faster and the automatic transmission is “locked up”.
- To feed you simply pull up to the bunk:
 - Stop and shift into low speed
 - Lower the elevator
 - Start elevator
 - Open the feed door
 - When the bunk is filled to the desired level step a little harder on the gas

POPULAR OPTIONS FRONT BUMPER



POPULAR OPTIONS REAR BUMPER



POPULAR OPTIONS BACK UP CAMERA



POPULAR OPTIONS

NOTEBOOK TRAY



POPULAR OPTIONS FLOOD LAMPS

(ONE FOR THE ELEVATOR IS STANDARD)



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POPULAR OPTIONS

REMOTE START



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POPULAR OPTIONS

MIRROR MOUNT REMOTE DISPLAY



POPULAR OPTIONS TOW HOOKS



POPULAR OPTIONS

FENDERS



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