OPERATING INSTRUCTIONS

FOR 8" TO 13" TRANSPORT AUGERS

CONTROLLED FLOW GRAIN SPREADER

@ SHIVERS INCORPORATED

MODEL 653E-001A MECHANICAL PARTS 2 HP

MODEL 653F-001A VARIABLE SPEED CONTROLLER
TABLE OF CONTENTS

22 • Filling In A Low Spot
17-21 • Diverter Valve And Plate Adjustment
14-16 • Operating Instructions
9-13 • Identification Of Parts
8 • Other Decal Locations
6-7 • Location Of Safety Decals
3-5 • Safety Information
2 • Introduction
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Your variable frequency drive.

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This manual covers two different versions of variable frequency drives used to control the speed of the spreader pan speed.

In the 2 HP spreader unit will spread grain from 8 to 13" input augers into bins from 24" to 48" in diameter.

A spreader power fuses disconnect switch or circuit breaker, with lockout capability is required but not included. The spreader control requires 220 VAC input power which may be single or three phase. An optional transformer is available for 3 phase installations which cannot obtain 15 VAC from one line of the 3 phase input.

The controlled flow grain spreader is a unique design that allows for even spreading from an overhead down-spool or overhead spreader.

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SAFETY INFORMATION

OPERATOR RESPONSIBILITY

The operator of this machinery must assume the responsibility for his own safety, and that of those who are working with him. He must also make sure the equipment was installed properly. Factors that contribute to the overall safety of the operator are proper use, maintenance, and frequent inspection of the equipment. All of these are the operator's responsibility.

If any items covered in this manual are not completely understood, or there is a concern with the safety of the product,

contact SHIVERES incorporated at the address shown on the front page.

The safety alert symbol will be accompanied by one of these signal words whose definitions are given as:

DANGER: Red and white. Indicates an imminent hazardous situation that, if not avoided, will result in death or serious or major injury.

WARNING: Orange and black. Indicates a potentially hazardous situation that, if not avoided, could result in death or serious or major injury.

CAUTION: Yellow and black. Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

safety alert

symbol alert

take note anytime this safety alert

you are at stake.

your safety, and that of persons around

symbol alert

with your help, we will enhance the safety of this product. please write us and let us know.

SHIVERES is genuinely interested in providing the safest practical equipment to our customers.

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Safely Information
SAFETY INFORMATION
Both decals are located on the outside of the Spreader control box. The P-10223 and P-11035 decals are also located on the spreader.

To prevent serious injury or death:

**WARNING**

- Do not operate without all guards and shields in place.
- Keep all power switches locked off.
- Keep dangerous or servicable equipment switched off before operating. Before operating, make sure all controls are in the proper position.
- Disconnect and lock out power source.

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**Caution:**

- The spreader can start without warning. Around 80 ft. speeds over 100 MPH. Sweep Augears can suddenly whip. Sweep Augears are hidden under the grain. Augears can start without warning. Automatic controls can start equipment at any time without warning. Equipment is not controlled.

**WARNING**

- Extra field installed safety decals are sent with the controlled flow grain spreader. Instructions on where to find safety decals for other installed Shivvers equipment consult your operators safety manual.

This manual shows the location of safety decals that apply to the controlled flow grain spreader.
P-1.1232 is also located on the driver side assembly.
Both decals are located on the access panel of the spreader control box.

---

**DANGER**
Keep components in good repair.
Close cover before operating.
Lock out power before removing cover.
To prevent serious injury or death.

**WARNING**
Corroded, IA 50650 for replacements.
Difficult to read, contact Skilvors, Inc.
If manuals or decals are missing or...

Avoid unsafe operation or death.
To prevent serious injury or death.

Location of Safety Decals
Located inside the front cover of the spreader control box and on the spreader.

Located on the access panel of the spreader control box.

SAME RATE OF FLOW.

For best results, always input grain to the spreader at the speed control knob on drive is not used. Use toggle switches.

Adjust spreader fan speed until grain just hits bin wall.

Diverter must be on unless a hole is being filled in.

Press "START" on drive to begin rotation of spreader fan.

Adjust the diverter valve setting. See owner's manual.

(See owner's manual for complete instructions)

TEXT INSTRUCTIONS

OTHER DECAL LOCATIONS
DISCONTINUED IN MID 2004

AGI Drive
for Electrical Control

For a complete understanding of the total drying and grain handling system, see the Shivelys System Operators Safety Manual (P-10001) for definitions, proper use of safety locks and

IDENTIFICATION OF PARTS
IDENTIFICATION OF PARTS
MVX9000 KEYPAD/DISPLAY OPERATION

IDENTIFICATION OF PARTS

NOTE:
SWITCH BOX

IDENTIFICATION OF PARTS

Turn diverter on and off.

Adjust spreader pan speed and to

Located near manhole. Use to
CONTROLLED FLOW GRAIN SPREADER

IDENTIFICATION OF PARTS
Note: Both conditions above can also be changed with adjustment of pan filter plate (see drawing 2.3) in the bottom of the spreader pan, but the open position usually works best. (Unit is set with this plate in the open position at the factory.)

"Pan Speed". If your grain is pilling too much near the outside of the bin (see drawing 2.2), decrease "Pan Speed". Keep throwing some of the grain to the bin wall. If your grain is pilling too much in the center (see drawing 2.1), increase "Pan Speed" to get generally good spreading results. Note that as your bin fills up the "Pan Speed" will need to speed up the "Pan Speed" to Normal. Also adjust the spreader pan speed so that some grain hits the bin sidewall 3-5 feet above the top surface of the grain.

If Bin Fills Too Much In The Center Or On The Outside.

5. For best results, always input grain at the spreader at the same rate of flow.
4. Always press "Stop" on the voltage frequency drive box before shutting electrical power off.
3. Using the "Pan Speed" lever in the Switch box, which should be located close to the root manhole, adjust the spreader manhole to a normal setting.
2. Turn on the divider motor by using the "Divider" lever in the Switch box which should be located close to the root manhole.
1. Press "Start" on the voltage frequency drive box to begin rotation of spreader pan. Pan must be rotating before you let grain into the bin.

General Instructions

See pages 18-19. Make sure power is disconnected and locked out.

1. Adjust the divider valve and divider plate to their nominal operating positions if this was not done during installation.

OPERATING INSTRUCTIONS

Initial Startup
OPERATING INSTRUCTIONS
If you find this to be a minor nuisance, you need to adjust the size of the grain opening in the diverter hopper.

Turn the diverter motor back on. Diverter motor using the "Diverter" lever in the Switch box, when the flag points to the low spot. Once the low spot is filled in, if your bin is filling high on one side, the grain opening in the diverter hopper is set too far in the open position. This means that you need to adjust the diverter hopper opening. Your operator and your operators understand the need to achieve this flow rate from load to load, you are ready to adjust the diverter. To consistently achieve this flow rate, normal operations involve the transport auger RPM at a given speed and then unloading your truck or wagon at the maximum flow which the transport auger will accept. Once you have established this flow rate, your truck or wagon at the maximum flow which the transport auger will accept. Normally, this involves setting the transport RPM at a given speed and then unloading your truck or wagon at the maximum flow, which you will use when filling your bin. Otherwise, the highest flow rate from the diverter hopper, the size of the bin fills higher on one side. The leverness of fill from side to side of the bin is affected the most by the diverter opening. To always set the unload rate at one given flow rate which you choose.

Your diverter hopper opening must be set to allow full grain flow at the grain spreader will quickly plug and you will be dumping all of your grain into the center of the bin or onto one side of the pan.

OPERATING INSTRUCTIONS
Diverter Valve and Plate Adjustment

A danger

Make sure power is disconnected and locked out before making any adjustments.

Note: The higher the sugar outlet above the spreader, the smoother and faster the grain will flow. (Recommended space is 24" minimum.)

Make sure the spreader is level. This can also affect side to side filling.

clockwise opens the hop. Counterclockwise closes it.
Rolling the nuts adjustment nuts. Be careful not to drop it into your grill. It is best
Use a long extension on a 9/16" socket to reach the
You may make adjustments with the nuts on the top of the hopper
Bottom view without pan

for 1/3" augers

2 1/2" open from center

SETTINGS ARE:

Grain Opening

3.25

Initial Adjustment of Diverter Valve

Divert Valve

Valve Adjust

Diverter Plate Adjusment

Diverter Valve and Plate Adjustment

3.2
DIVERTER VALVE AND PLATE ADJUSTMENT

Initial Adjustment of Diverter Valve

At normal flow rates, adjust grain opening so that diverter hopper fills, but without overflowing or plugging.

(See drawing 3.3B)

Use the Diverter Valve Adjustment to close the Diverter Valve against the center shaft.

(See drawing 3.3C)

The diverter valve comes from the factory closed for 10" or smaller augers. It will need to be adjusted openning of 2". It will need to be adjusted preset for 13" transport augers, with an adjustment for 10" or smaller augers only.
We suggest having one observer stationed at the center till hole of the grain bin. Close the opening through the spreader each time signal is being prepared to quickly shut down the transport auger if necessary.

How Rate:

A person must be sized to handle this task. Your grain opening must be sized to handle this task. It is essential to keep the auger moving when unloading the grain. If you plug the grain spreader, you have closed the transport auger. If you plug the grain spreader, you have closed the transport auger. If you plug the grain spreader, you have closed the transport auger. If you plug the grain spreader, you have closed the transport auger. If you plug the grain spreader, you have closed the transport auger.

Once you have closed the diverter plate past a given "critical point" remove and move the diverter plate until you are satisfied with the spreading result. Continue this process until you are satisfied with the spreading result.

As you move the diverter plate, observe the grain being fed into the transport auger. If it is still feeding unevenly, close it down a little more. If you notice low loads, and observe the load again, the effect inside your bin. If it is still loading unevenly, close it down again.

Fine-tune the grain flow by closing the diverter plate a small amount.
Flow through the Divertor hopper:

- Low Flow Valve or Divertor plate to throttle down the grain volume and low flow (less than 2500 BU/h), 8" or smaller inlet augers.

Divertor Valve Plate Adjustment
FILLING IN A LOW SPOT

If a low area occurs in the bin, go to the control box.

If the grain fills the bin sidewall 3-5 feet above the top surface of the grain, turn the diverter switch back on. Continue filling in the low spot or area of the low spot. When the grain is again level, adjust the diverter and spreader pan speed to fill in the inside of the area.

Once the outside of the low area is filled in, adjust the diverter pan speed so that the outside of the low area is filled first. Adjust the spreader pan speed depending on the spreader pan speed. It may be necessary to re-adjust the diverter motor to fill the low area.

Most of the grain should be thrown to the low area. Start putting grain through the spreader at the same setting if was before filling in the low spot or area of the low spot. When the grain is again level, adjust the diverter and spreader pan speed to fill in the inside of the area.

If a low area occurs in the bin, go to the control box.