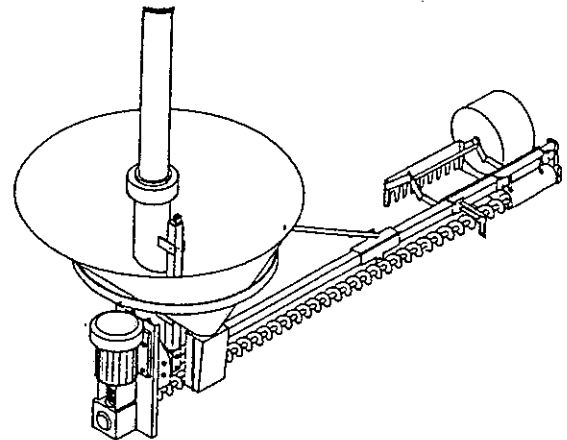
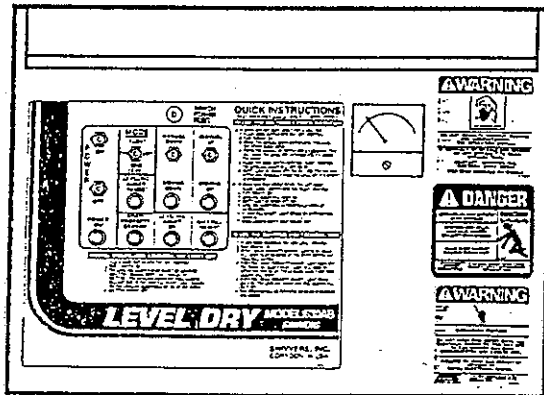


# LEVEL-DRY DELUXE

## MODEL 630AB

Patent Pending



## OPERATING INSTRUCTIONS

# SHIVVERS

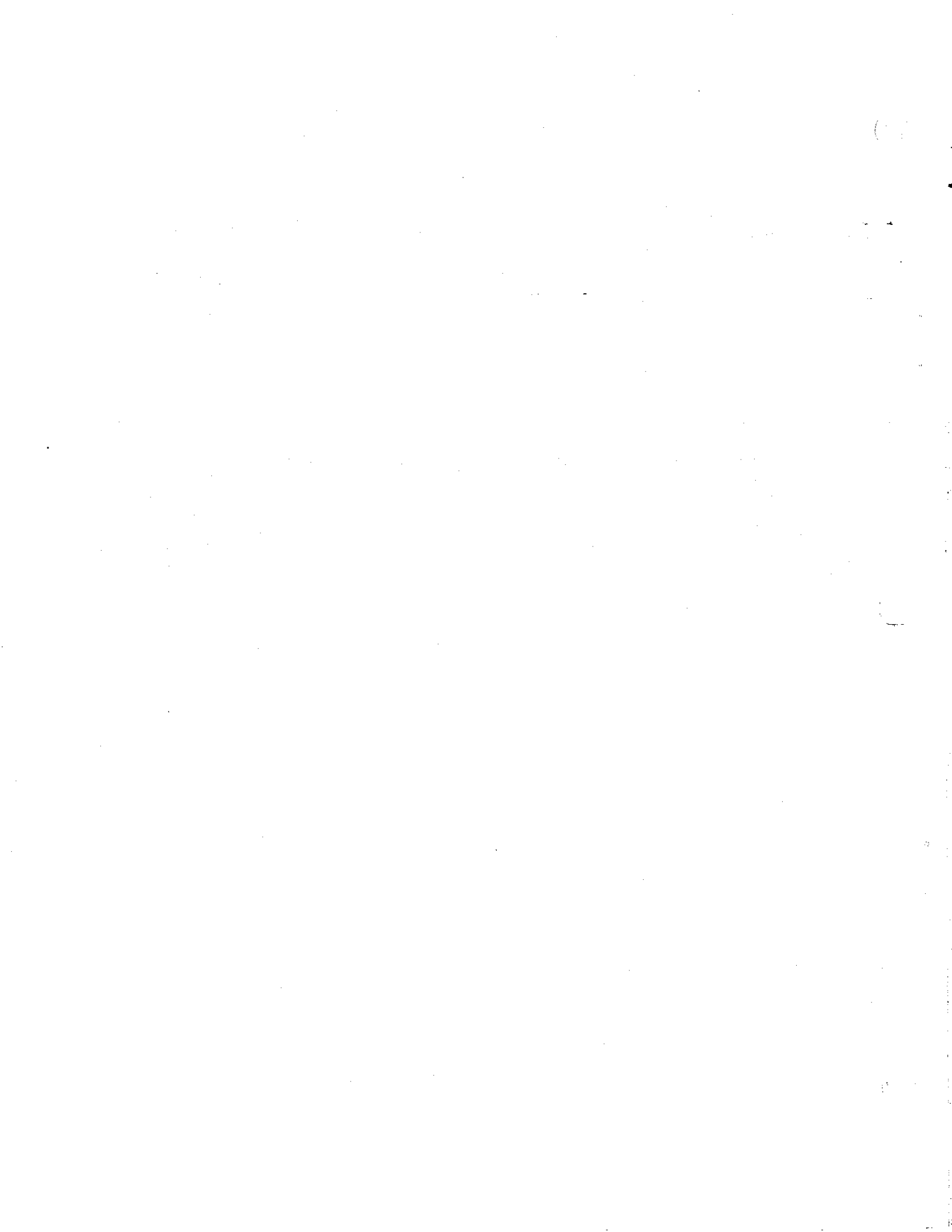
Shivvers Incorporated  
614 West English St.  
Corydon, IA 50060  
515/872-1005

P-10798  
4/06/94

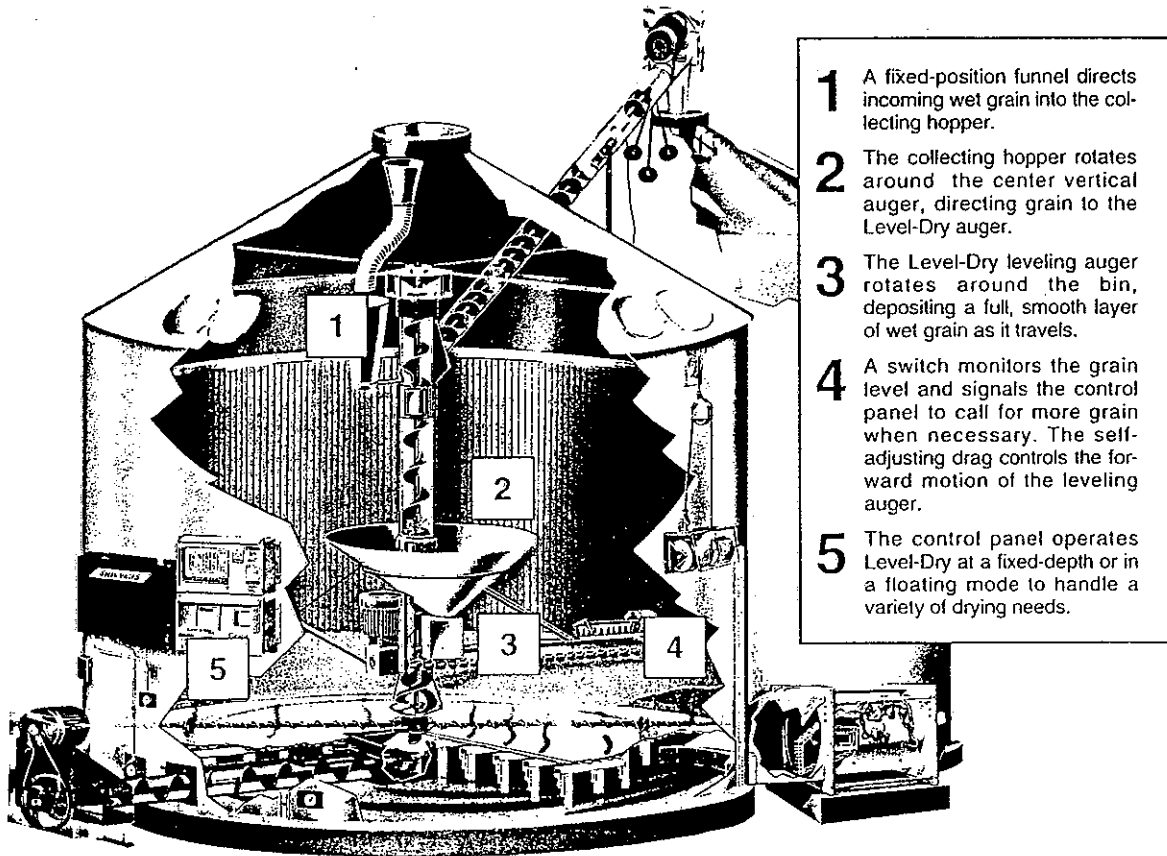


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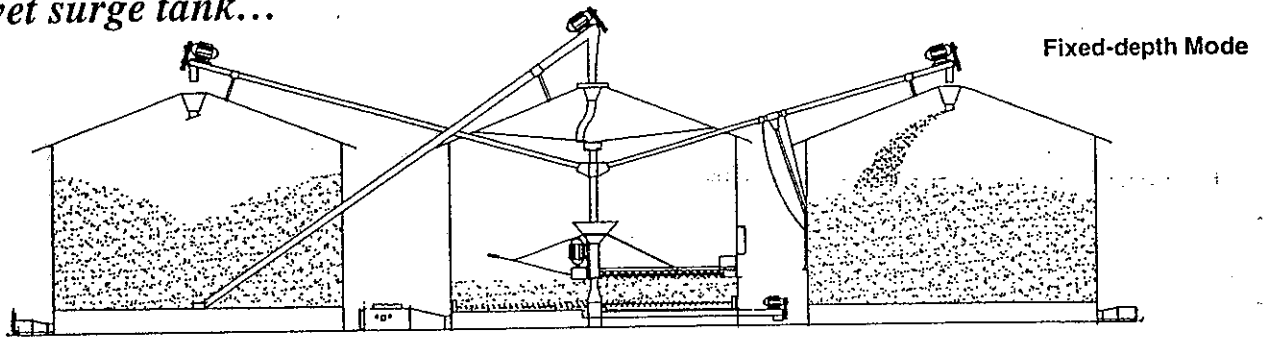


# INTRODUCTION

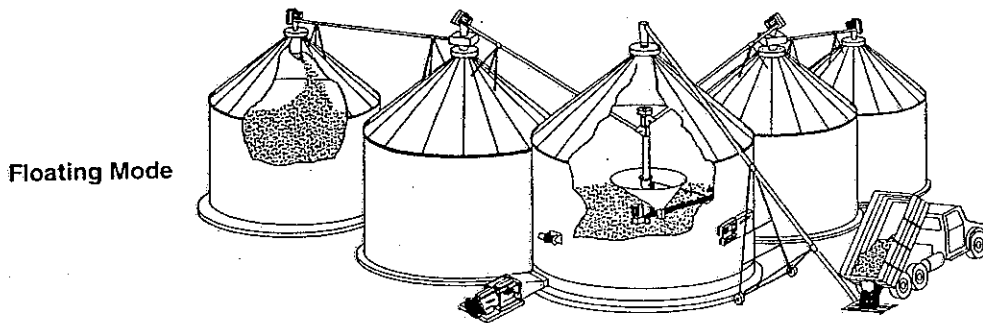


Level-Dry's grain-leveling auger rotates around the center tube, spreading the grain evenly at any depth selected by the operator. Any "dips" or low spots in the drying grain are filled to give a smooth, uniform surface of wet grain after each pass of the Level-Dry. Drying capacities are increased because the machine may be operated at very low grain depths for extended periods of time. A layer of wet grain is deposited on top as a layer of dry grain is removed from the bottom. The wet grain placed on top "captures" any unused heat in the drying air, resulting in high efficiency and high capacity.

*You'll get the highest drying capacity using a storage bin as a wet surge tank...*



*...or gain convenience by using Level-Dry in the floating mode.*



Fixed-depth drying is the Level-Dry's highest capacity mode. The operator adjusts the Level-Dry to the grain depth desired by pushing the <up> or <down> buttons on the Level-Dry control box. The Level-Dry maintains that depth by calling for additional grain from the wet holding bin when required. Depths in the 18-24 inch range are usually selected for fastest drying. Efficiency and capacity are under the operator's control since any depth may be selected. At the end of the drying season, simply operate the Level-Dry in the Floating Mode, as described below, to refill the wet holding bin and regain valuable storage.

The Level-Dry may also be used in the Floating Mode. In this case, the bin is filled as the grain comes from the field. The operator lowers the Level-Dry and starts putting grain in the bin. The Level-Dry gently and evenly spreads the grain across the drying area, and automatically raises as required. Less compaction means higher air flow and faster drying. And best of all, no more shoveling the bin level at the end of the day.

# SAFETY

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 that the equipment was installed properly. Factors that contribute to the overall safety of operation 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 Shivers Incorporated at the address shown on the front page.

Shivers is genuinely interested in providing the safest practical equipment to our customers. If you have a suggestion which you believe will enhance the safety of this product, please write us and let us know.



TAKE NOTE ANYTIME THIS SYMBOL APPEARS.  
YOUR SAFETY, AND THAT OF PERSONS AROUND  
YOU IS AT STAKE.

Anytime you are working with your drying unit, be sure to observe these common sense rules:

- 1). All units must be equipped with a main disconnect switch in close proximity to the grain bin's entry door. It must have the capability of being locked into the OFF position. Disconnect and LOCK OFF all electrical power before conducting any inspection, maintenance, repair, adjustment, or cleaning of the drying system. When you must have the electrical power on to troubleshoot equipment, do it from a safe distance, and always outside the bin.
- 2). Keep the bin entrances locked at all times. To unlock the bin, first lower the Level-Dry, then shut the master disconnect off. Take the lock off the bin entrance and place it on the main disconnect before opening the bin entrance. Never enter the drying bin unless the Level-Dry is completely lowered, and all power is disconnected and locked off.

- 3). Always keep all shields and guards in place. If shields or guards must be removed for inspection or maintenance, replace them before turning the power back on.
- 4). Do not turn the power on without being sure everyone is clear of all the drying equipment.
- 5). Make sure that all decals are in place and are easily readable. Do not operate the equipment with missing or illegible decals. If replacements are needed, contact Shivvers Incorporated or your dealer.
- 6). Prior to use, inspect all equipment to insure that it is in good operating condition. Do not operate with missing, damaged, or worn parts.
- 7). Metal edges can be sharp. Wear protective clothing and handle equipment and parts with care.
- 8). Keep all children and bystanders away at all times.
- 9). Periodically review all operating and safety manuals with any personnel working with this equipment. Always train new employees before they operate the drying equipment. Insist that they read and understand the operating and safety manuals.

**DON'T TAKE CHANCES!**

**SLOW DOWN AND DO IT RIGHT!**

**AUTOMATIC CONTROLS CAN START EQUIPMENT AT ANY TIME!**

**ACCIDENTS ARE FOREVER!**



# LOCATION OF SAFETY DECALS

Safety decals are mounted at the factory whenever possible, but it is your responsibility to make sure other decals are installed in the proper places. It is also your responsibility to insure that the decals remain in good, legible condition. You must replace safety decals if they are missing or become illegible. Also, if any new equipment components are installed during repair, the current safety decals are required to be affixed to the replaced component.

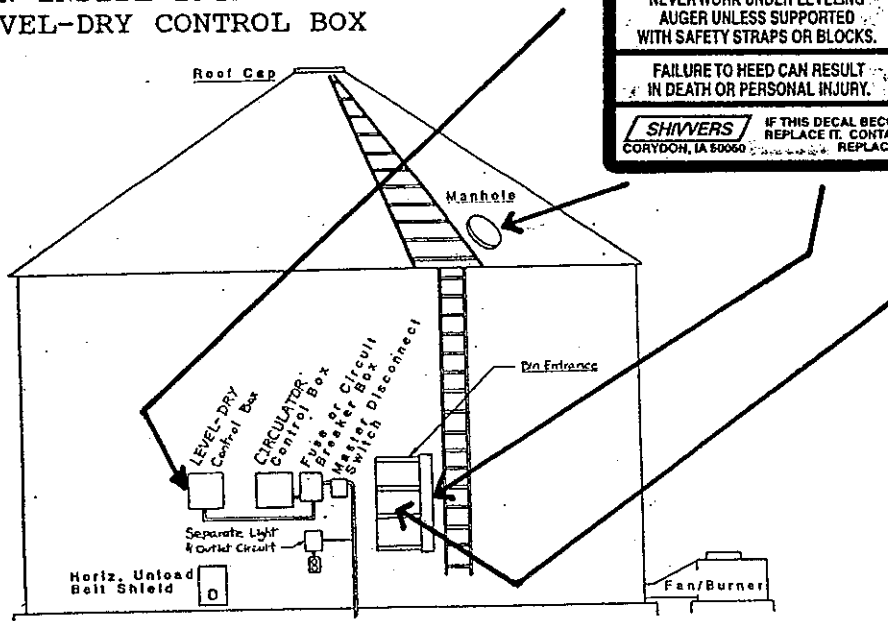
**IMPORTANT:** If suggested decal locations, or factory applied decals, are not clearly visible, place decals in a more suitable area. Contact Shivers Incorporated for free replacement decals. The part numbers start with a "P-", such as P-10717.

Before applying decals, make sure the mounting surfaces are clean (not oily) and dry.

Review the following decals, and verify that they are in place, are easily readable, and clearly identify the dangers present. Contact Shivers Incorporated for free replacement decals or for clarification of any questions you may have.

## P-10717

- 1). MANHOLE ENTRANCE
- 2). BIN OUTSIDE ENTRANCE
- 3). BIN INSIDE ENTRANCE
- 4). LEVEL-DRY CONTROL BOX



# P-10809

- 1). MANHOLE ENTRANCE
- 2). BIN OUTSIDE ENTRANCE
- 3). BIN INSIDE ENTRANCE

## ! DANGER



**THE ROTATING AUGERS IN THIS BIN CAN KILL OR DISMEMBER.**

- AUGERS CAN INCREASE TRAVEL SPEED UNEXPECTEDLY
- AUTOMATIC CONTROLS CAN START THESE MACHINES AT ANY TIME
- OPEN AUGERS ARE HIDDEN FROM VIEW UNDER THE GRAIN

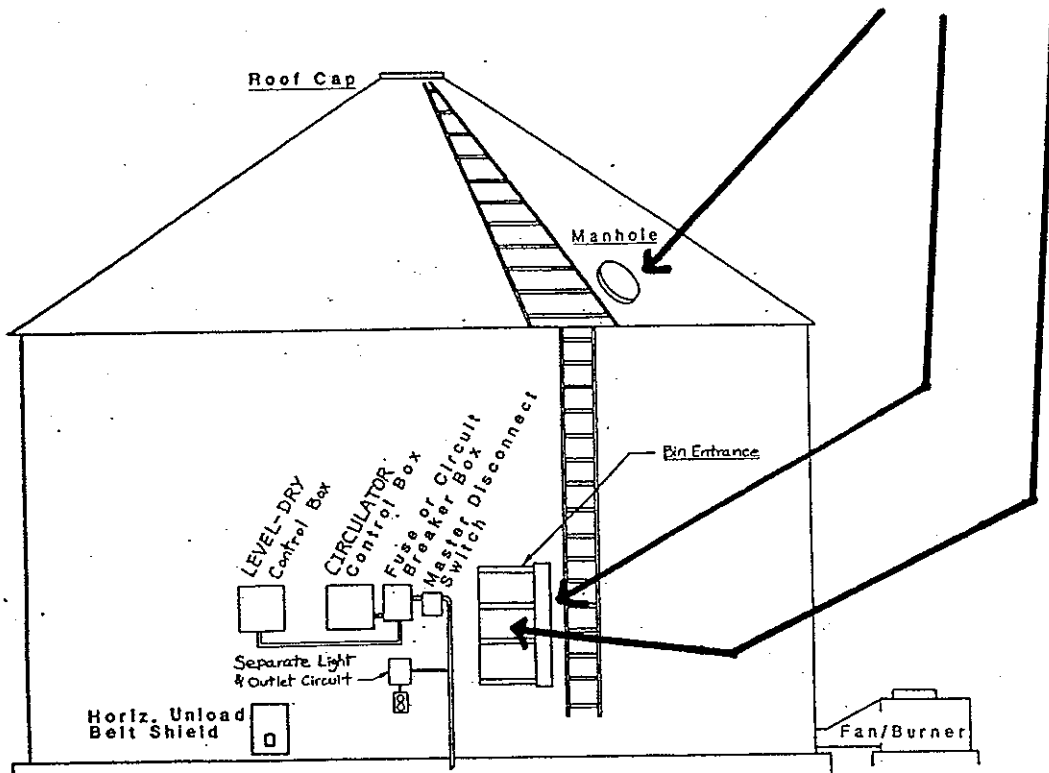
**KEEP THIS DOOR LOCKED AT ALL TIMES. DISCONNECT POWER AND USE LOCK ON THIS DOOR TO LOCK POWER OFF BEFORE ENTERING BIN FOR ANY REASON.**

**FAILURE TO HEED CAN RESULT IN DEATH OR SEVERE PERSONAL INJURY.**

**SHIVERS**  
Corydon, IA 50060

If this decal becomes difficult to read, replace it. Contact Shivers for a free replacement decal.

P-10809



# P-10223

- 1). CIRCULATOR OR DRI-FLOW BELT SHIELD
- 2). CONTINUOUS FLOW TRANSFER AUGERS
- 3). WET GRAIN INPUT AUGERS, ESPECIALLY IF AUTOMATICALLY CONTROLLED.

# ! WARNING



**ROTATING EQUIPMENT**

**AUTOMATIC CONTROLS CAN START THIS EQUIPMENT AT ANY TIME.**

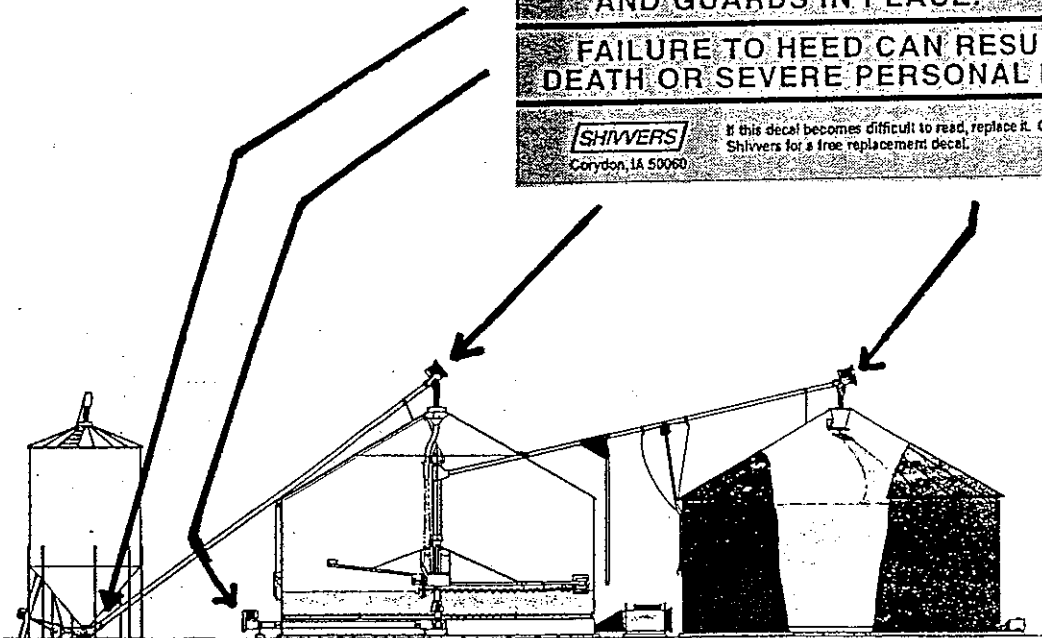
- DISCONNECT AND LOCK OFF ALL ELECTRICITY BEFORE DOING ANY INSPECTION, MAINTENANCE, OR CLEANING.
- DO NOT ENTER THE BIN, OPERATE THE CLUTCH, ADJUST BELTS, OR LUBRICATE MACHINE UNTIL ALL POWER IS DISCONNECTED AND LOCKED OFF.
- DO NOT RUN THIS MACHINE WITHOUT ALL SPOUTS, SHIELDS, AND GUARDS IN PLACE.

**FAILURE TO HEED CAN RESULT IN DEATH OR SEVERE PERSONAL INJURY**

**SHIVERS**  
Corydon, IA 50060

If this decal becomes difficult to read, replace it. Contact Shivers for a free replacement decal.

P-10223



# P-10811

1). ON MAIN DISCONNECT BOX

## ⚠ CAUTION

THIS IS THE MAIN POWER DISCONNECT FOR THE FOLLOWING EQUIPMENT:

ELECTRICIAN MUST PUT ACTUAL EQUIPMENT LIST IN THIS AREA.

ALWAYS SHUT THIS SWITCH OFF AND LOCK IT OFF, BEFORE WORKING ON ANY OF THE ABOVE EQUIPMENT OR GOING INTO THE DRYING BIN.

MAKE SURE EVERYONE IS OUTSIDE OF DRYING BIN AND AWAY FROM ALL THE ABOVE EQUIPMENT BEFORE TURNING THE POWER BACK ON.

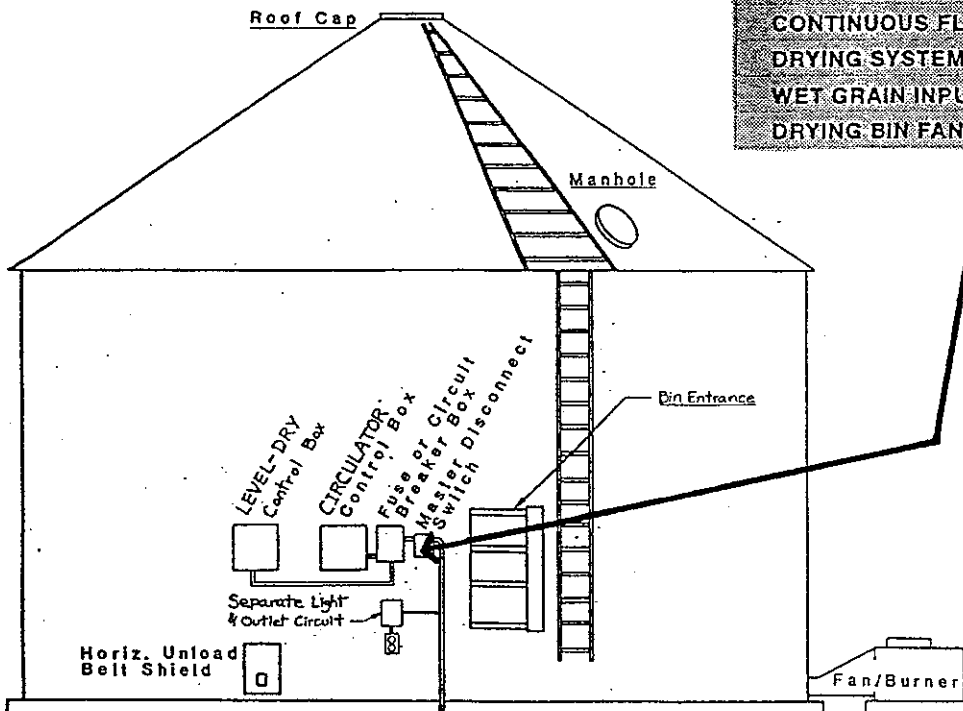
**SHIVERS**

Corydon, IA 50060

If this decal becomes difficult to read, replace it. Contact Shivers for a free replacement decal.

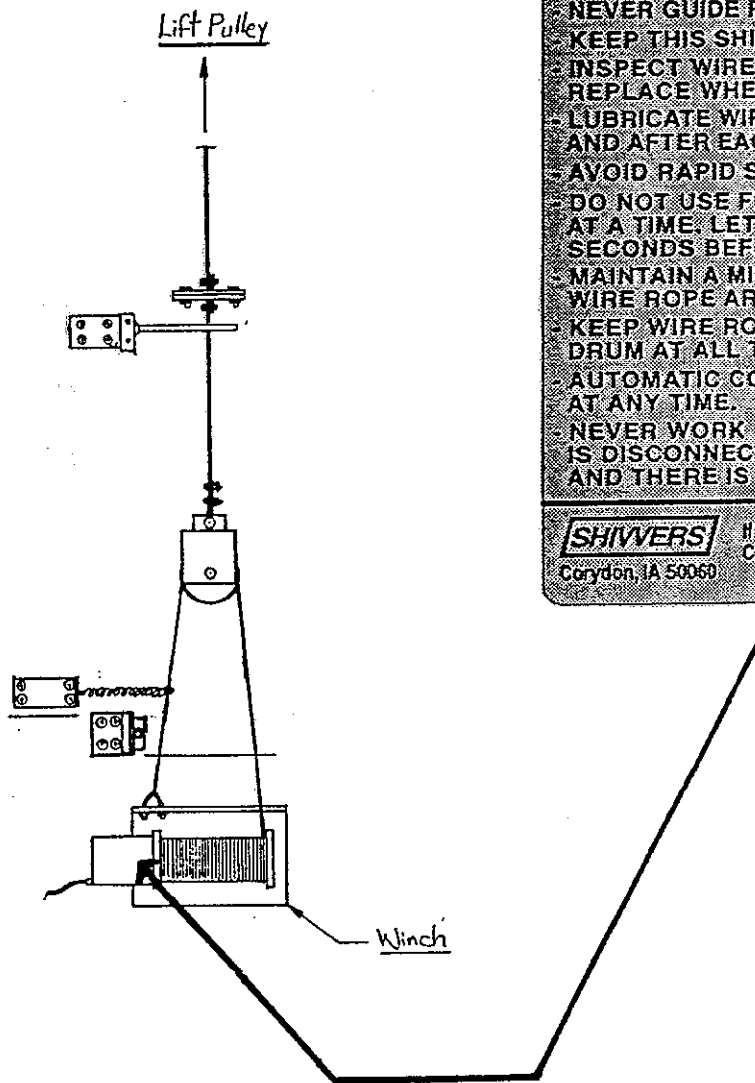
P-10811

LEVEL-DRY DISTRIBUTION AUGER  
DRYING BIN FLOOR (SWEEP) AUGER(S)  
DRYING BIN UNLOADING AUGER(S)  
LEVEL-DRY CONTROL BOX  
CONTINUOUS FLOW TRANSFER AUGER(S)  
DRYING SYSTEM GRAIN SPREADER(S)  
WET GRAIN INPUT SYSTEM  
DRYING BIN FAN(S) AND BURNER(S)



# P-10816

1). ON ELECTRIC WINCH SHIELD



## **! CAUTION**

- KEEP HANDS CLEAR.
- NEVER GUIDE ROPE ONTO DRUM WITH HANDS.
- KEEP THIS SHIELD IN PLACE AT ALL TIMES.
- INSPECT WIRE ROPE FREQUENTLY AND REPLACE WHEN FRAYED.
- LUBRICATE WIRE ROPE AND PULLEYS BEFORE AND AFTER EACH DRYING SEASON.
- AVOID RAPID STARTING AND STOPPING.
- DO NOT USE FOR MORE THAN 10 SECONDS AT A TIME. LET COOL FOR AT LEAST 30 SECONDS BEFORE STARTING AGAIN.
- MAINTAIN A MINIMUM OF FOUR WRAPS OF WIRE ROPE AROUND WINCH DRUM.
- KEEP WIRE ROPE WOUND TIGHTLY ON THE DRUM AT ALL TIMES.
- AUTOMATIC CONTROLS CAN START WINCH AT ANY TIME.
- NEVER WORK ON WINCH UNTIL ALL POWER IS DISCONNECTED AND LOCKED OFF, AND THERE IS NO LOAD ON THE WINCH.

**SHIVERS**  
Corydon, IA 50060

If this decal becomes difficult to read, replace it.  
Contact Shivers for a free replacement decal.

P-10816

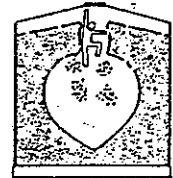
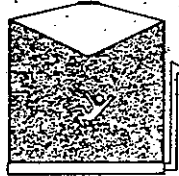
# P-10125

- 1). INSIDE OF OUTER BIN ENTRANCE ON ALL BINS
- 2). MANHOLE ENTRANCE ON ALL BINS

# **! DANGER**

**FLOWING GRAIN TRAPS AND SUFFOCATES**

**CRUSTED GRAIN COLLAPSES AND SUFFOCATES**



**YOU CAN SUFFOCATE UNDER GRAIN IN THIS BIN.**

**-IF YOU MUST ENTER THIS BIN-**

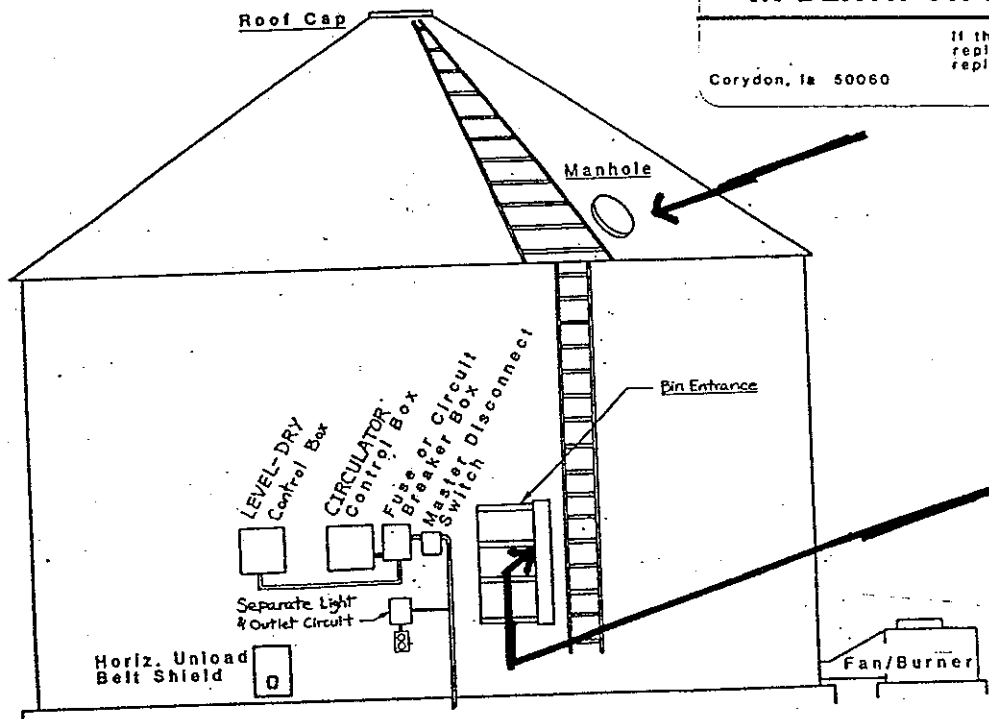
1. SHUT OFF AND LOCK OUT ALL POWER
2. USE A SAFETY HARNESS AND SAFETY LINE
3. WEAR A DUST RESPIRATOR
4. AVOID THE CENTER OF THE BIN
5. STATION A PERSON TO HELP FROM OUTSIDE THE BIN

**FAILURE TO HEED CAN RESULT IN DEATH OR PERSONAL INJURY.**

If this decal becomes difficult to read, replace it. Contact Shivers for a free replacement decal.

Corydon, Ia 50060

P-10125-




P-10367

P-10226

- 1). ON LEVEL-DRY CONTROL BOX
- 2). ON CIRCUITROL CONTROL BOX
- 3). ON FAN AND BURNER CONTROL BOX
- 4). ON COMPU DRY CONTROL BOX (IF INSTALLED)

**! WARNING**




**DO NOT OPERATE WITHOUT READING AND UNDERSTANDING THE OPERATING MANUAL**

**IF MANUALS OR DECALS ARE MISSING OR ARE DIFFICULT TO READ, REPLACE THEM.**

**CONTACT: SHIVERS INC.  
CORYDON, IOWA 50060  
FOR FREE MANUALS OR DECALS**

P-10367

**! WARNING**



**DANGEROUS VOLTAGE**

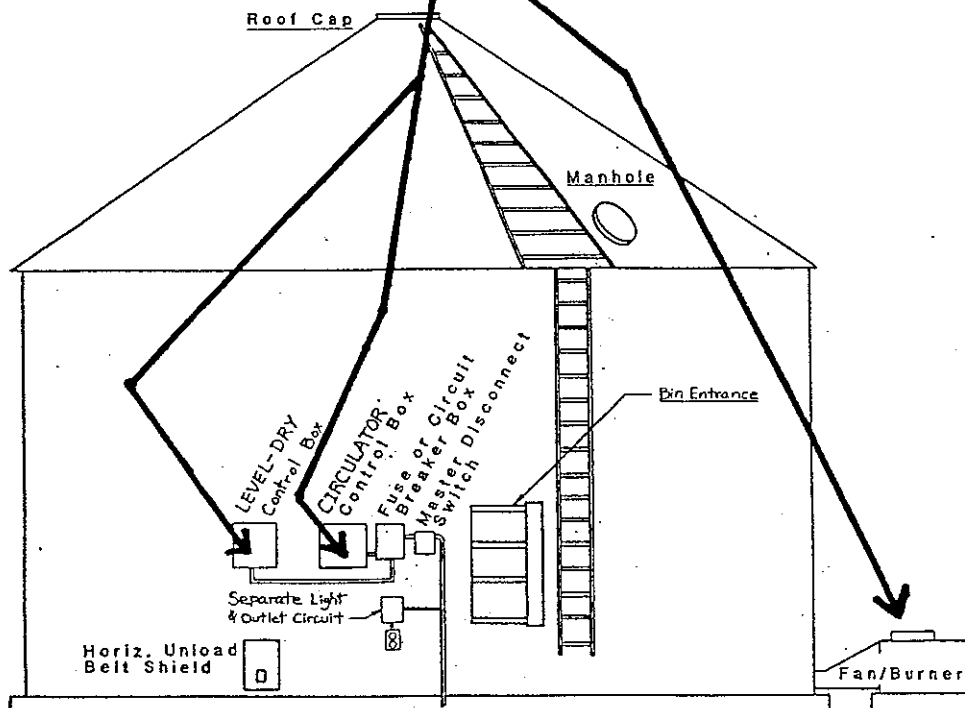
**DO NOT OPEN THIS COVER UNTIL ALL ELECTRICAL POWER TO THIS BOX AND TO FAN/BURNER HAS BEEN DISCONNECTED AND LOCKED OUT.**

**FAILURE TO HEED CAN RESULT IN SERIOUS OR FATAL ELECTRICAL SHOCK.**

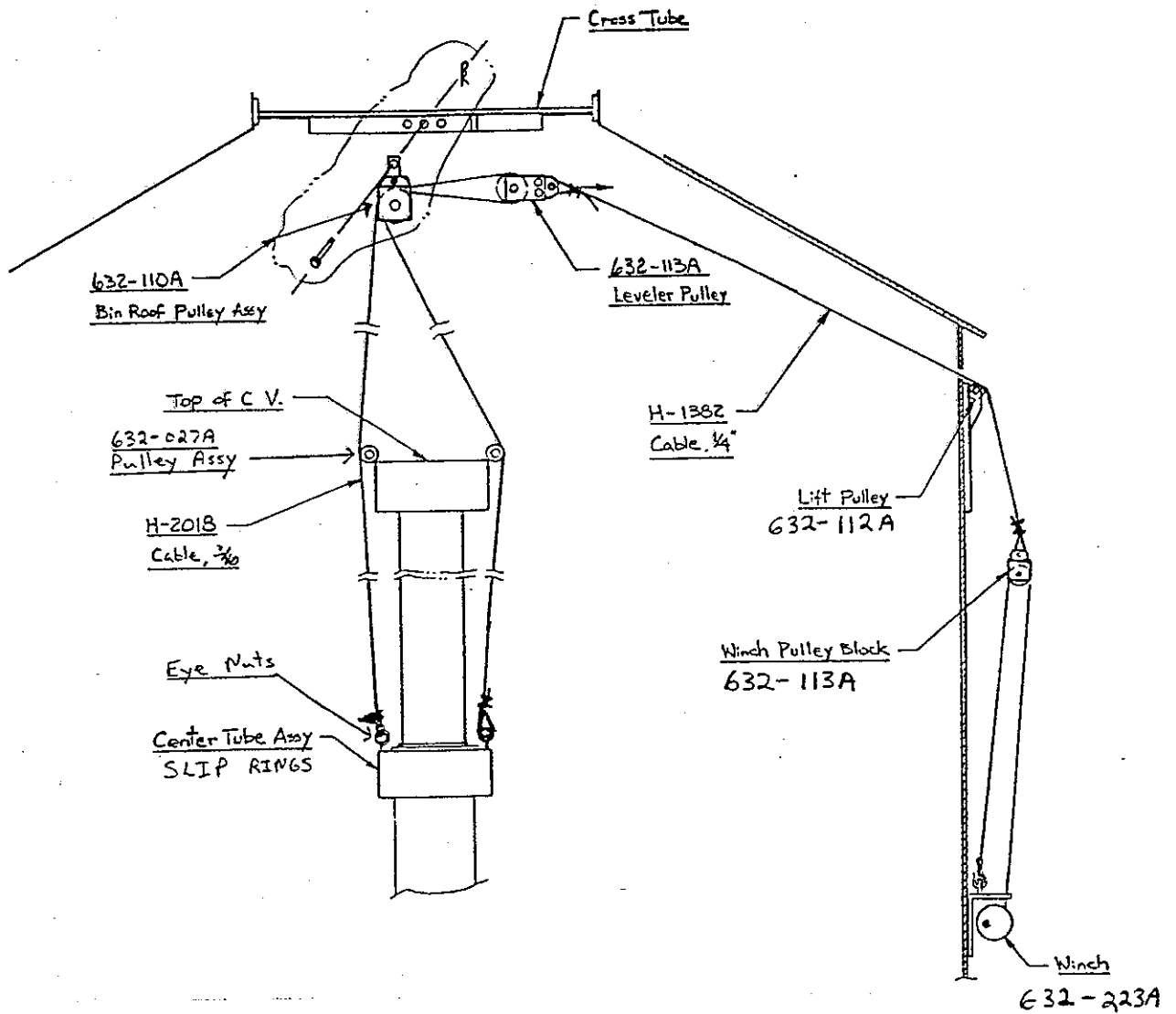
**SHIVERS**  
Corydon, Ia 50060

If this decal becomes difficult to read, replace it. Contact Shivers for free replacement decal.

P-10226

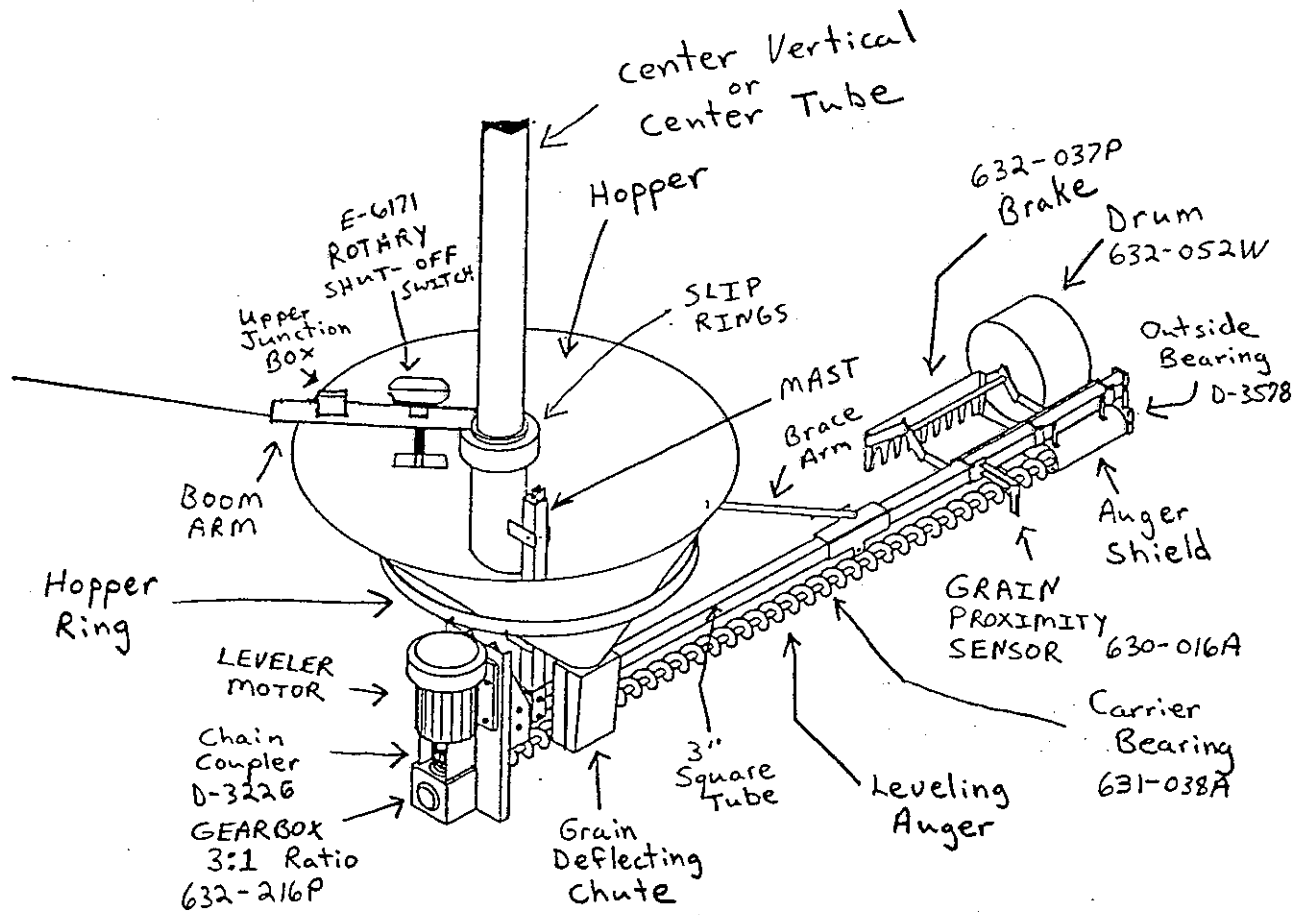


# IDENTIFICATION OF PARTS

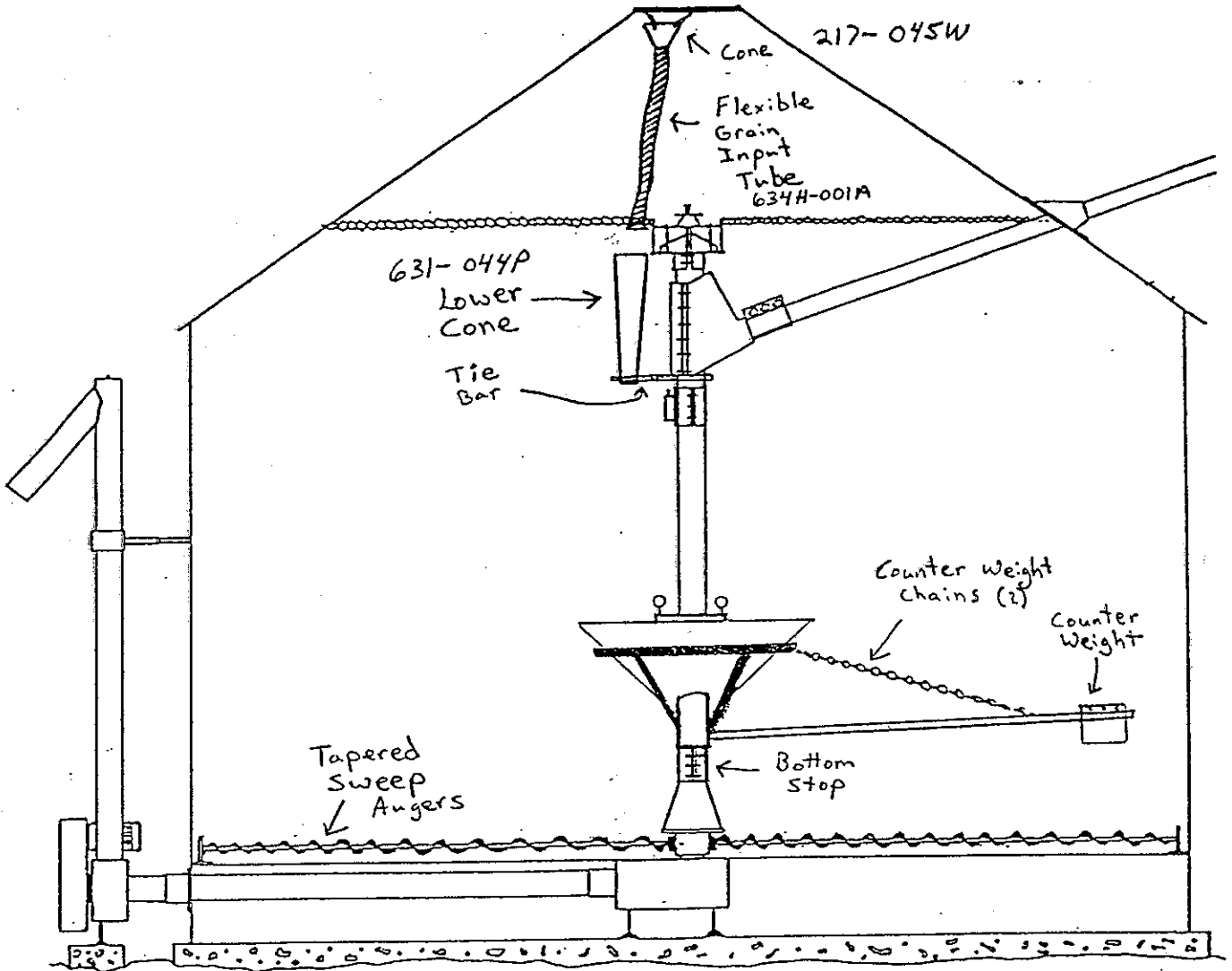


## WINCH AND CABLE SYSTEM

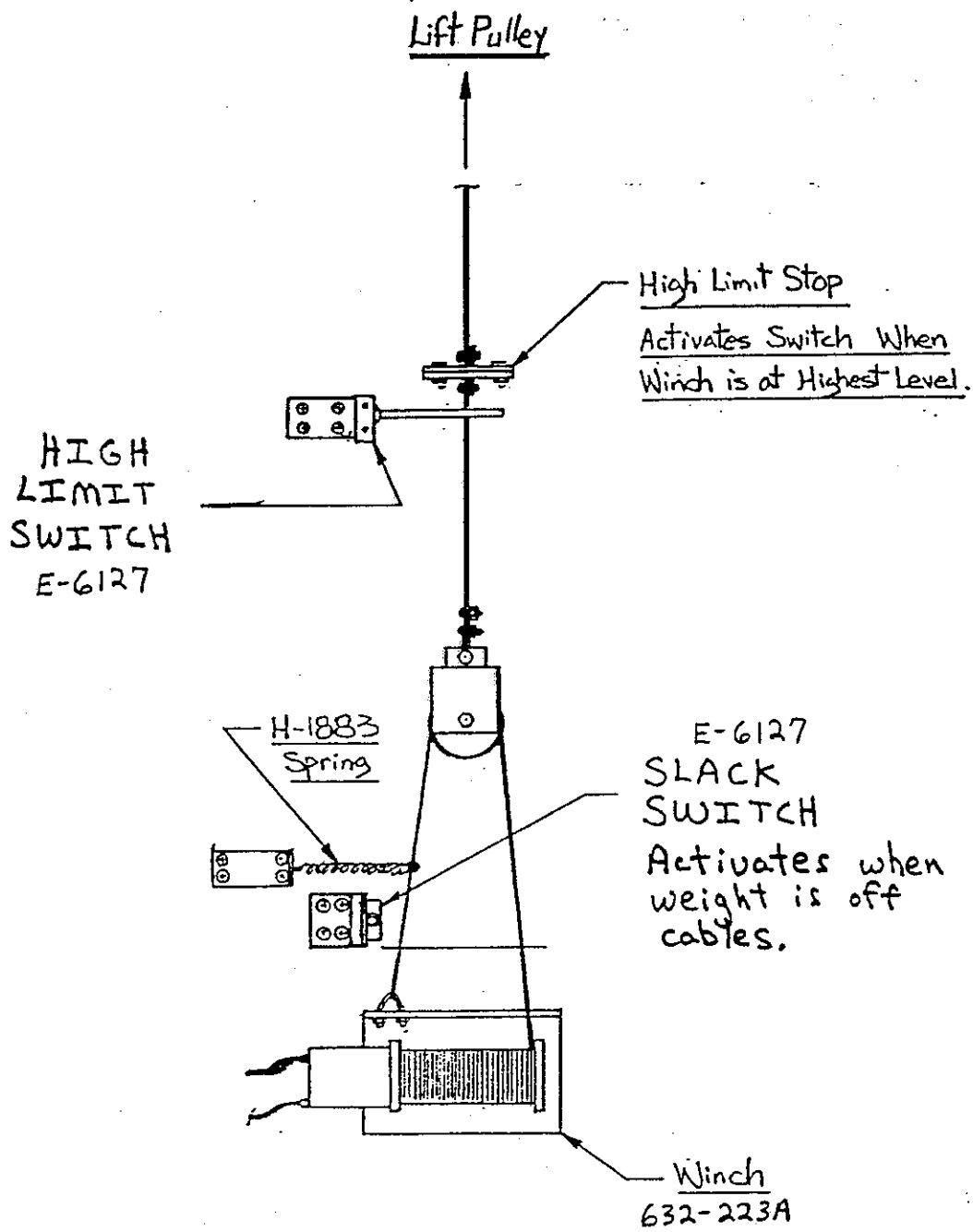




## LEVELING SYSTEM



**LEVELING SYSTEM**  
(CON'T.)



## WINCH SWITCHES

# OFF MODE

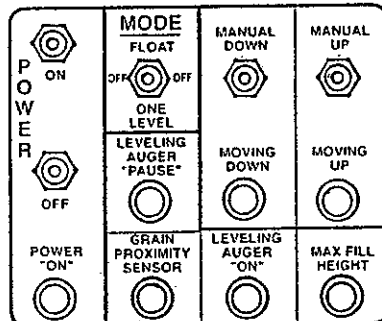
## (MANUAL WINCH OPERATIONS)

Use the OFF Mode for manual raising and lowering of the Level-Dry. The leveling auger will not run in this position. The circuit breaker for the winch is undersized to prevent damage from occurring to the bin, and to the winch, if there is an overload. For this reason, the winch can only be operated for 5-10 seconds at a time. The winch then needs 20-30 seconds to cool down before being operated again. Also, do not rapidly cycle the Manual Down or Manual Up switches. Hold the switch down firmly, don't let it "chatter".

Place the Level-Dry Mode switch in the OFF position. Press the Power ON switch. The Power "ON" light should come on. Press the MANUAL DOWN switch to lower the leveling auger. If the auger comes to grain, or the bottom stop, it will stop going down. The slack switch will be activated because there won't be any tension on the cables. The Moving Down light will go off.

Press the MANUAL UP switch to raise the leveling auger. Do not hold the switch down for more than 5-10 seconds or the circuit breaker for the winch will trip. Release the switch and let the winch cool down for 20-30 seconds, then press the MANUAL UP switch again. When the leveling auger gets to the maximum fill height, the Moving Up light will go off, and the Max Fill Height light will come on.

Press the Power OFF switch to shut the Level-Dry off.



# FLOAT MODE

## (FILLING THE BIN FROM A TRUCK OR WAGON)

Use the FLOAT Mode when filling the bin from a truck or wagon, (not using a wet holding bin). In this mode, once a layer of grain has been put in the bin, the leveling auger will raise 4-6" to put in another layer of grain. When it gets to the maximum height, the leveling auger will shut off so incoming grain should immediately be shut off. It is strongly recommended to connect the optional alarm circuit when running in the FLOAT Mode. Serious structural damage to the Level-Dry and the bin can occur if the leveling auger gets buried, and the sweep augers start removing the grain.

### 1). FIND THE GRAIN LEVEL.

On initial start up, or if grain hasn't been added to the bin for a long time, it is desirable to have the leveling auger at the lowest possible position. This will take less grain to get a level layer in the bin. If the leveling auger is 5' in the air it will take a lot more corn to get a level layer of grain than if it is only 6-12" in the air. This step can usually be bypassed if grain is being steadily added to the bin. If it has been more than an hour since the last load, do this step.

Put the Mode switch in the OFF position. Press the Power ON switch. Press the Manual Down switch until the MOVING DOWN light goes off. Press the Manual Up switch for 2-3 seconds. This will raise the leveling auger a few inches above the current layer.

### 2). START THE LEVELING AUGER.

Put the Mode switch in the FLOAT position. If it isn't already on, press the Power ON switch. The Power "ON" light, and the LEVELING AUGER "ON" light, should come on. Empty the load of grain into the bin. Especially if grain hasn't been added for several hours, monitor the amp meter on the front panel of the Level-Dry control box. If the bin is very uneven because of worn sweep augers, or hot spots in the bin, the leveler motor can start drawing excessive current. If this occurs, simply press the Manual Up switch for 2-3 seconds to raise the leveling auger. Once the leveling auger has made a complete pass it will automatically move up as required. If the brake is not grabbing grain, it may take a couple of passes for grain to be carried all the way to the outside of the bin. This is normal and should not cause any problems if everything is adjusted properly. With real high grain input rates however, it may be necessary to slow down the input rate for a little while to get grain to the outside of the bin. Once the brake has something to grab, the grain input rate can be increased.

Monitor the high limit stop on the cable, and be ready to stop putting grain in if it is near the high limit switch.

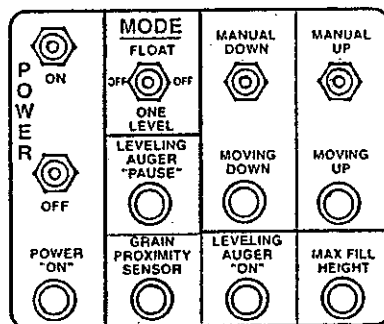
See the section on adjustments for fine tuning the system.

**3). SHUT THE LEVELING AUGER OFF.**

If grain isn't going to be added for a long time, press the Power OFF switch to shut the leveling auger off. If desired, place the Mode switch in the OFF position.

**APPROXIMATE 220V MOTOR FULL LOAD AMPS  
(REFER TO MOTOR NAMEPLATE FOR ACTUAL AMPS)**

| HP  | 1 PHASE<br>FLA | 3 PHASE<br>FLA |
|-----|----------------|----------------|
| 3   | 17             | 10             |
| 5   | 28             | 15             |
| 7.5 | 40             | 22             |
| 10  | 50             | 28             |



# ONE LEVEL MODE

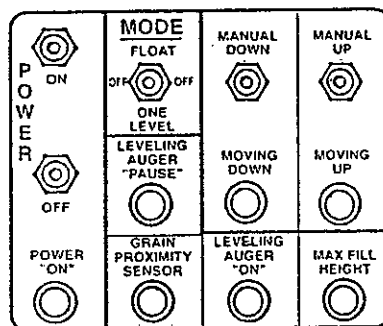
## (FILLING BIN FROM WET HOLDING TANK)

Use the ONE LEVEL Mode when grain is stored in a wet holding tank. In this mode, the leveling auger stays at one height. As grain is removed from the dryer, the Level-Dry will call for more grain to keep a constant fill of grain in the bin. There are a lot of factors involved in setting the most efficient grain depth, such as, air flow, drying temperature, and grain moisture content. From a practical standpoint, about 2' seems to cover almost all conditions. Keep the Level-Dry at least 1" above the bottom stop so the weight is carried by the cable system and not the center vertical.

Place the Mode switch in the ONE LEVEL position. Press the Power ON switch. If the GRAIN PROXIMITY SENSOR light is on, grain will have to be removed by the dryer before anything will happen. Once the grain is removed, the LEVELING AUGER "PAUSE" light will come on. This is a time delay that keeps the leveling auger from cycling on and off rapidly. After the time delay, usually 5-8 minutes, the leveling auger will start. The grain input augers should also start at this time. The incoming grain will be spread by the leveling auger until it catches up with the sweep auger. The grain proximity sensor on the end of the leveling auger will come in contact with the grain, which will shut the leveling auger and grain input augers off. This process will be repeated as grain is removed and added.

If a deeper bed of grain is desired, simply press the Manual Up switch for a few seconds to raise the Level-Dry. If a lower grain depth is desired, shut the Level-Dry off, and wait for the dryer to remove some grain. Then turn the Level-Dry back on, and press the Manual Down switch.

See the section on adjustments for fine tuning the system.



# ADJUSTMENTS



# DANGER

NEVER GO INTO THE DRYING BIN UNLESS THE LEVEL-  
DRY IS COMPLETELY LOWERED AND THE POWER IS  
DISCONNECTED AND LOCKED OFF.

THE LEVELING AUGER AND TAPERED SWEEP AUGERS CAN  
START AT ANY TIME AND INCREASE TRAVEL SPEED  
RAPIDLY.

It may be necessary to make some final adjustments to the Level-Dry the first time grain is added to the system. Adjustments may also have to be made as conditions vary through the drying season. Make all observations from outside the bin, preferably through the manhole cover. Make sure the leveling auger is completely lowered, and all power is disconnected and locked off before making any adjustments.



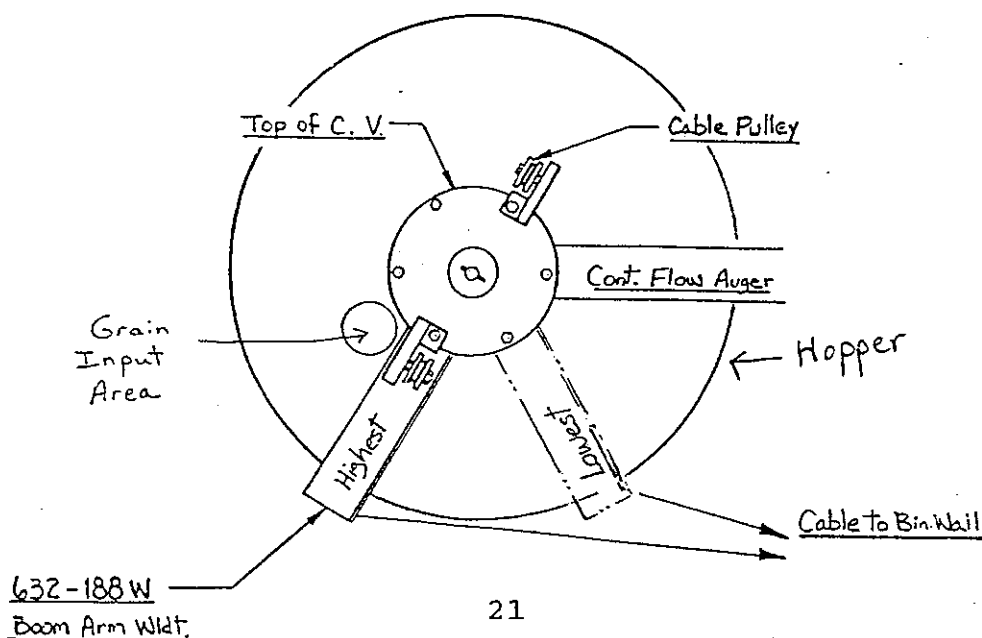
## ADJUSTING THE GRAIN INPUT



NEVER GO INTO THE DRYING BIN UNLESS THE LEVEL-DRY IS COMPLETELY LOWERED AND THE POWER IS DISCONNECTED AND LOCKED OFF.

THE LEVELING AUGER AND TAPERED SWEEP AUGERS CAN START AT ANY TIME AND INCREASE TRAVEL SPEED RAPIDLY.

Make sure the grain is falling into the hopper close to the rotary paddle switch. If something fails, the hopper will fill with grain, and it has to activate the paddle switch for it to shut the Level-Dry off. It will also activate the alarm circuit if there is one connected. If the grain stream is too far away from the paddle switch, the hopper will overflow and it will take much longer for the switch to activate. Observe the grain flow from the manhole cover. Lower the leveling auger completely and disconnect and lock off all power. Adjust the lower cone by moving the tie bars to get the grain to the desired location. The paddle switch will rotate forward as the Level-Dry is raised, so keep this in mind when making the adjustments.



## ADJUSTING THE BRAKE



# DANGER

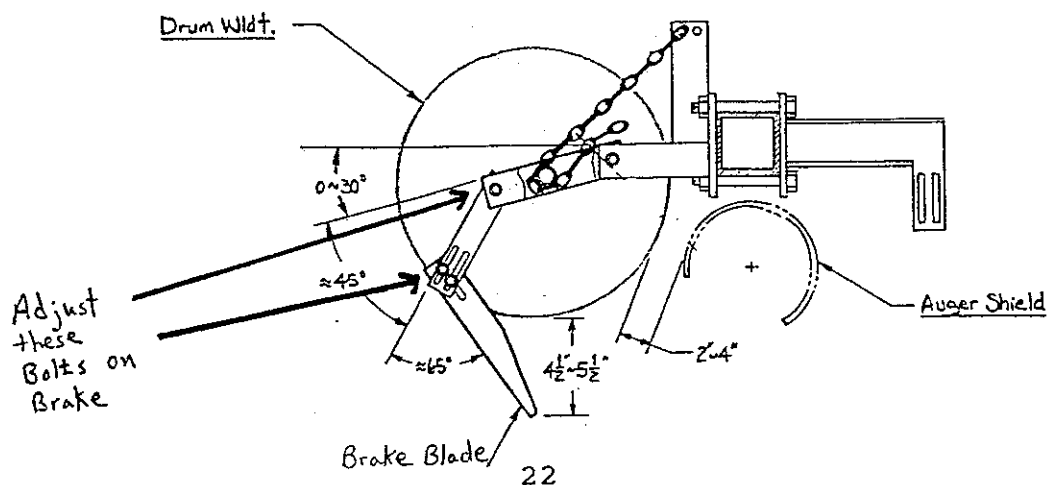
NEVER GO INTO THE DRYING BIN UNLESS THE LEVEL-DRY IS COMPLETELY LOWERED AND THE POWER IS DISCONNECTED AND LOCKED OFF.

THE LEVELING AUGER AND TAPERED SWEEP AUGERS CAN START AT ANY TIME AND INCREASE TRAVEL SPEED RAPIDLY.

The amount of braking required depends on the bin diameter, incoming feed rate, and moisture of incoming grain. The Level-Dry can compensate for a lot of the changes, so once the brake is set for your installation it probably won't require much more adjustment. If conditions change, keep an eye on the brake to make sure it is compensating for the change.

When filling the bin for the first time, the Level-Dry will start advancing before grain is carried all the way to the outside edge. This is normal, and on the next pass it should get the grain out far enough for the brake to grab. With real high grain input rates, it may be necessary to slow the input down a little to get grain to the outside edge. Once the brake has something to grab, the grain input rate can be increased.

Observe from the manhole the action of the brake. If grain is not getting to the outside edge, the brake will have to be lowered. If it is piling too high on the outside edge, the brake will have to be raised. Lower the leveling auger completely then disconnect and lock off all power before going into the bin to make any adjustments.



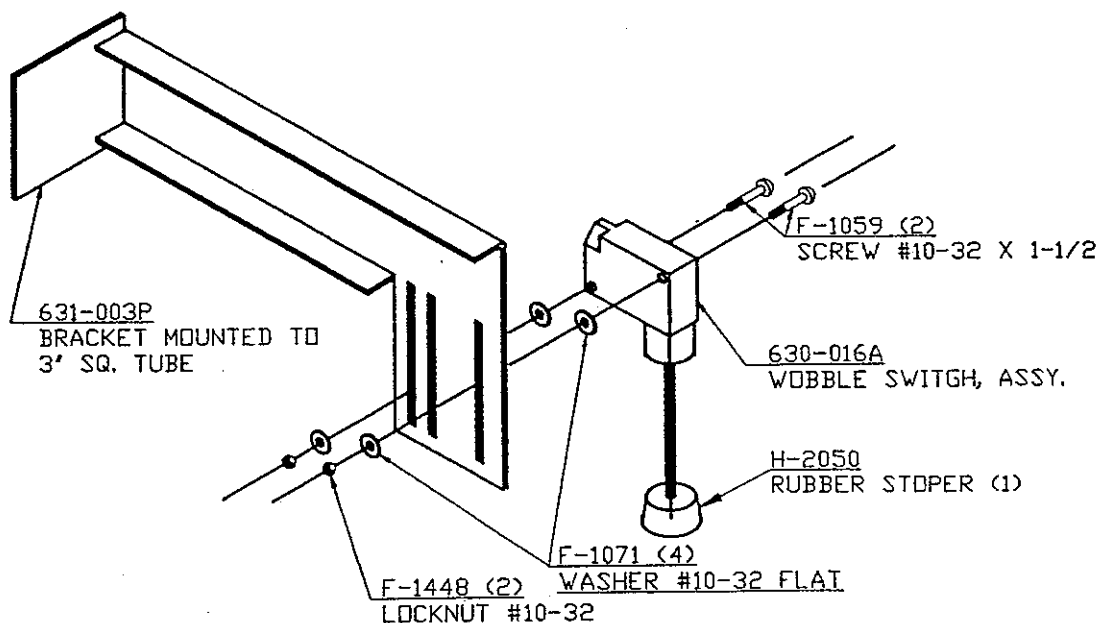
## ADJUSTING THE GRAIN PROXIMITY SENSOR



NEVER GO INTO THE DRYING BIN UNLESS THE LEVEL-  
DRY IS COMPLETELY LOWERED AND THE POWER IS  
DISCONNECTED AND LOCKED OFF.

THE LEVELING AUGER AND TAPERED SWEEP AUGERS CAN  
START AT ANY TIME AND INCREASE TRAVEL SPEED  
RAPIDLY.

The grain proximity sensor needs to be adjusted up or down so that it hits the grain once the bin is level. Depending on the operating mode, when this switch is activated, the leveling auger will either stop or raise. It needs to be adjusted so that it always hits grain, but it can't be so low that it doesn't reset when the tapered sweep augers remove a layer of grain. Observe the action of the switch from the manhole. Lower the leveling auger then disconnect and lock off all power before going into the bin to make any adjustments.



## ADJUSTING THE TIMERS



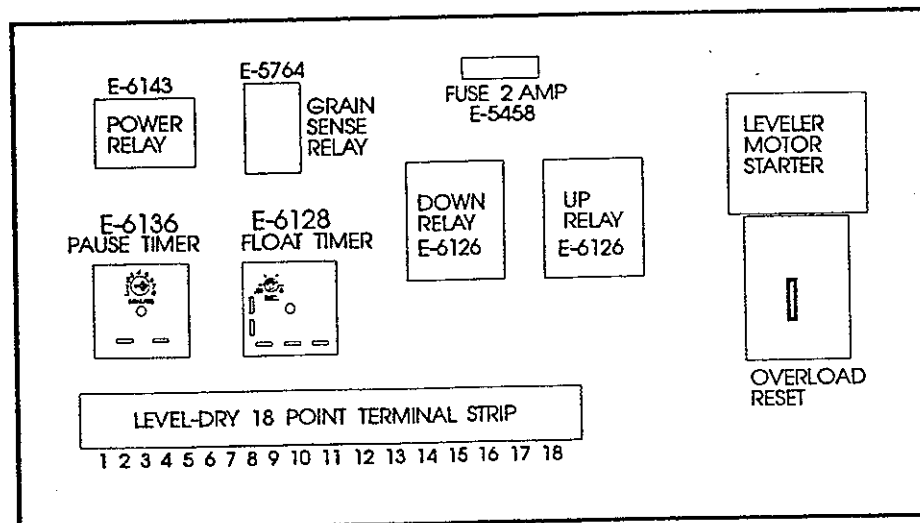
# DANGER

NEVER OPEN THE LEVEL-DRY CONTROL BOX UNLESS THE MAIN POWER IS DISCONNECTED AND LOCKED OUT.

FAILURE TO HEED CAN RESULT IN SERIOUS OR FATAL ELECTRICAL SHOCK.

Timer E-6128 is a .25 to 5 second delay on break timer. It is usually orange, and sets the amount the leveling auger will raise in the FLOAT Mode. It is usually set for the leveling auger to raise 4-6" when the grain proximity sensor hits grain.

Timer E-6136 is a .1 to 8 minute delay on make timer. It is usually black, and sets the amount of "PAUSE" in the ONE LEVEL Mode. It is usually set for 5-8 minutes so that the leveling auger and wet grain input augers aren't cycling on and off all the time. Once the tapered sweep augers remove grain from the dryer, and the GRAIN PROXIMITY SENSOR light goes off, the LEVELING AUGER "PAUSE" light will come on. The leveling auger will not come on until this time delay has elapsed.



# RECIRCULATION



NEVER GO INTO THE DRYING BIN UNLESS THE LEVEL-  
DRY IS COMPLETELY LOWERED AND POWER IS  
DISCONNECTED AND LOCKED OFF.

THE LEVELING AUGER AND TAPERED SWEEP AUGERS CAN  
START AT ANY TIME AND INCREASE TRAVEL SPEED  
RAPIDLY.

The flippers on top of the center vertical should have been changed when the Level-Dry was installed, to a size lower than normal. When recirculating grain in the bin with the Level-Dry it is important that the grain does not pile up on the outside edge of the bin. Once the grain gets out there the Level-Dry cannot do anything with it. If grain is still building up on the outside of the bin, put on smaller flippers. Contact your dealer or Shivers for more information.

Leave 6-12" of vertical movement on the Level-Dry when filling the bin for recirculation. After the bin is full, raise the leveling auger this 6-12" to help insure that it doesn't get buried with grain. Monitor the bin at least twice a day to make sure the hopper, or leveling auger are not building up with grain. If they are, turn the leveling auger on to spread the grain. If there is a low spot in the bin, such as under a continuous flow transfer auger, it may be desirable to place the leveling auger there.

# MAINTENANCE



NEVER GO INTO THE DRYING BIN UNLESS THE LEVEL-  
DRY IS COMPLETELY LOWERED AND POWER IS  
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THE LEVELING AUGER AND TAPERED SWEEP AUGERS CAN  
START AT ANY TIME AND INCREASE TRAVEL SPEED  
RAPIDLY.

## GEARBOX

Drain and replace oil after first 25 hours of run time, and at 200 hour intervals after that. The gearbox requires about one quart of 90 weight oil. A drain plug is located on the bottom of the gearbox. To fill, remove both of the side plugs. Put a 1/2" 90 degree street elbow in one side. Fill with oil until it starts running out the other side. Plug the side holes, leaving the street elbow in place if desired.

Grease the top zerk on the gearbox with one shot of multipurpose No. 2 grease every 50 hours of run time.

## CARRIER AND OUTSIDE BEARING

Grease with 1-2 shots of multipurpose No. 2 grease at the beginning of each dryer season.

## LEVELER MOTOR

Contact the motor manufacturer for recommended interval and type of grease. Clean the outside of the motor and the motor cooling fan occasionally, if there is a buildup on them.

## **CABLE AND PULLEY SYSTEM**

Inspect and lubricate all wire rope and pulleys before and after each drying season. Use a spray type lubricant such as WD-40. Replace wire rope when frayed or rusty. Inspect all cable and winch supports to make sure they, and the bin, are in good condition. Replace or reinforce any questionable pieces as required.

## **BRAKE AND DRUM ASSEMBLY**

Lubricate pivot points with WD-40 before and after each drying season.

## **SAFETY DECALS AND LOCKS**

Review location and legibility of safety decals. Replace if necessary. Make sure safety locks on bin entrances work and are being used. Go over this manual, and other equipment safety manuals, with everyone running the drying system.

# TROUBLE SHOOTING



NEVER GO INTO THE DRYING BIN UNLESS THE LEVEL-DRY IS COMPLETELY LOWERED AND POWER IS DISCONNECTED AND LOCKED OFF.

THE LEVELING AUGER AND TAPERED SWEEP AUGERS CAN START AT ANY TIME AND INCREASE TRAVEL SPEED RAPIDLY.

NEVER OPEN THE LEVEL-DRY CONTROL BOX UNLESS THE MAIN POWER IS DISCONNECTED AND LOCKED OFF.

- 1). LEVEL-DRY POWER WILL NOT COME ON.
  - a). Hopper may be full of grain. Disconnect and lock off main power. Station someone outside the bin for assistance. Carefully go in the bin and shovel grain out of the hopper. Make sure the rotary paddle switch starts turning. Check the reset on the leveler motor, if there is one. Check the chain coupler, gearbox, and auger sections. At the Level-Dry control box, check the overload reset. After everyone is outside of the bin, and clear of all the other drying equipment, and the control box is shut, turn the main power back on. Try the Level-Dry again. Try to identify what caused the hopper to fill with grain and correct the malfunction.
  - b). Control fuse may be blown. Disconnect and lock off main power. Open Level-Dry control box and check the 2 amp control fuse.
  
- 2). LEVELER MOTOR WILL NOT RUN.
  - a). If LEVELING AUGER "ON" light doesn't come on, overload may be tripped. Disconnect and lock off main power. Open Level-Dry control box and press Reset on overload. Shut control box and turn power back on.



- b). If LEVELING AUGER "ON" light comes on, check fuses or circuit breakers feeding leveler motor. If these are OK, and there is an overload on the leveler motor, lower the Level-Dry completely. Disconnect and lock off main power. Station someone outside the bin for assistance. Go inside the bin and check the overload on the leveler motor.
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- 3). WINCH DOES NOT RUN.
    - a). Check winch power reset breaker on the control panel. Make sure cables are in pulleys. Only use winch intermittently.

