UHARVEST from unverferth **Grain Handling**

Data Management System
Grain Cart Installation Guide & Parts Manual
for Carts equipped with Scales

Part No. 271911

Foreward

This symbol identifies important safety messages. When you see it, read the message that follows and be alert to the possibility of personal injury.

Remember, safety instructions stated in this manual are for your protection. Read them carefully and follow them closely when working around or using this machine.

Read and study this manual completely before attempting to operate this implement. Take this manual to the field for handy reference when operating, adjusting, or servicing your machine.

When referenced, “Right-Hand” (RH) and “Left-Hand” (LH) side of the machine are determined by standing behind the machine and facing in the direction of travel.

Product Information

When ordering parts or when requesting further information or assistance, always give the following information:

- Machine name
- Model number
- Serial number

Registration

Be sure to register your UHarvest system to be **eligible for warranty and receive software update notifications**. Locate the grain cart, processor and ECU (Electronic Control Unit) serial numbers and then visit uharvest.net to register.

All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

Please fill out and retain this portion for your records. The serial number plate is located on the frame as shown below.

Purchase Date _____Model _____Serial No._____

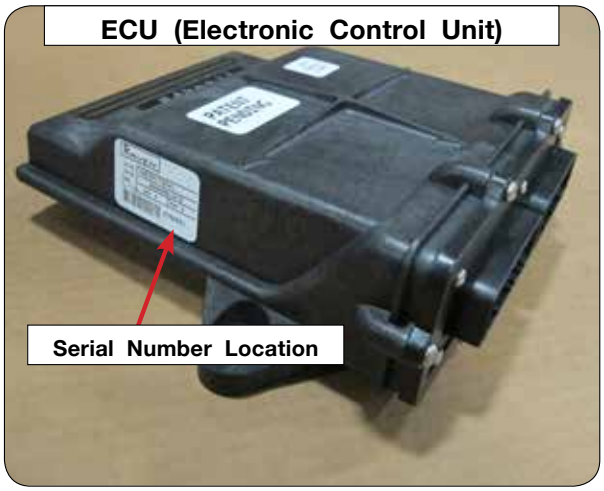
Dealer _____ City _____

Dealer Contact _____ Phone _____

Processor

Serial Number Location

ECU (Electronic Control Unit)



Serial Number Location

IMPORTANT

- *The information, specifications, and illustrations in the manual are based on information available at the time it was written. Due to continuing improvements in the design and manufacture of Unverferth products, all specifications and information contained herein are subject to change without notice.*

Table of Contents

Section I
Safety

Table of Contents

Section II
Set Up

The list below indicates what category each grain cart model refers to:

Single-Auger Front-Fold

Unverferth
1015, 1115, 1315

Single-Auger Rear-Fold

Brent
782, 882, 1082, 1282, 576, 678

Killbros
1150, 1160, 1175, 1185, 1195

Parker
524, 624, 739, 839, 1039

Unverferth
7250, 8250, 9250, 6225, 5225

Double- and In-Line Auger

Brent
1196, 1396, 1596, 2096

Killbros
1950, 1111, 1311, 1611

Parker
1048, 1348, 1648

Unverferth
1110, 1310, 1610

*For other brands of grain carts with this design, set up procedures may vary from the instructions provided.

Table of Contents

Section III
Parts

Section I
Safety

General Hazard Information

No accident-prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the equipment.

A large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power-driven equipment, whether it be transportation or processing, whether it be on the highway, in the harvest field, or in the industrial plant, can be safer than the person who is at the controls. If accidents are to be prevented--and they can be prevented--it will be done by the operators who accept the full measure of their responsibility.

It is true that the designer, the manufacturer, and the safety engineer can help; and they will help, but their combined efforts can be wiped out by a single careless act of the operator.

It is said that, "the best kind of a safety device is a careful operator." We, at Unverferth Mfg. Co., Inc. ask that you be that kind of operator.

REMEMBER:

THINK SAFETY

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT!

SIGNAL WORDS

DANGER

INDICATES AN EXTREMELY HAZARDOUS SITUATION OR ACTION THAT WILL RESULT IN SERIOUS INJURY OR DEATH.

WARNING

INDICATES A HAZARDOUS SITUATION OR ACTION THAT COULD RESULT IN SERIOUS INJURY OR DEATH.

CAUTION

INDICATES AN UNSAFE SITUATION OR ACTION THAT MAY RESULT IN PERSONAL INJURY.

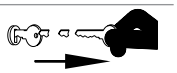
IMPORTANT

Is used for instruction on operating, adjusting, or servicing a machine.

Following Safety Instructions

- Read and understand this operator's manual before operating.

- All machinery should be operated only by trained and authorized personnel.
- To prevent machine damage, use only attachments and service parts approved by the manufacturer.
- Always shut tractor engine off and remove key before servicing.



- Avoid personal attire such as loose fitting clothing, shoestrings, drawstrings, pants cuffs, long hair, etc., that may become entangled in moving parts.

Before Operating or Servicing

- Do not stand between towing vehicle and implement during hitching.
- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked.

- Always make certain everyone and everything is clear of the machine before beginning operation.
- Verify that all safety shields are in place and properly secured.

- Ensure that all applicable safety decals are installed and legible.
- Secure drawbar pin with safety lock and lock tractor drawbar in fixed position.

Driveline Safety

- Do not allow children near equipment that is running or engaged.
- Do not exceed 1000 rpm PTO speed.
- Disengage the PTO, stop the tractor engine, and remove key from ignition before making inspections, or performing maintenance and repairs.

Pressurized Oil

- Relieve pressure before disconnecting hydraulic lines from tractor, loosening any hydraulic fittings or servicing hydraulic system. See hydraulic power unit manual for procedure to relieve pressure.
- Use a piece of cardboard or wood to detect leaks of hydraulic fluid under pressure. Correct hydraulic leaks immediately.
- High-pressure fluids can penetrate the skin and cause serious injury or death. Seek medical treatment immediately if injured by high-pressure fluids.
- Hydraulic system must be purged of air before operating to prevent serious injury or death.
- Do not bend or strike high-pressure lines. Do not install bent or damaged tubes or hoses.
- Repair all oil leaks. Leaks can cause fires, personal injury, and environmental damage.
- Route hoses and lines carefully to prevent premature failure due to kinking and rubbing against other parts. Make sure that all clamps, guards and shields are installed correctly.
- Check hydraulic hoses and tubes carefully. Replace components as necessary if any of the following conditions are found:
    - End fittings damaged, displaced, or leaking.
    - Outer covering chafed or cut and wire reinforcing exposed.
    - Outer covering ballooning locally.
    - Evidence of kinking or crushing of the flexible part of a hose.
    - Armoring embedded in the outer cover.

Preparing for Emergencies

- Keep a first aid kit and properly rated fire extinguisher nearby.


- Keep emergency numbers for fire, rescue, and poison control personnel near the phone.

Wearing Protective Equipment

- Wear clothing and personal protective equipment appropriate for the job.


- Wear steel-toed shoes when operating.

- Wear hearing protection when exposed to loud noises.

- Do not wear additional hearing impairing devices such as radio headphones, etc.

- This product may contain a chemical known to the state of California to cause cancer, or birth defects, or other reproductive harm.

Section II
Set Up

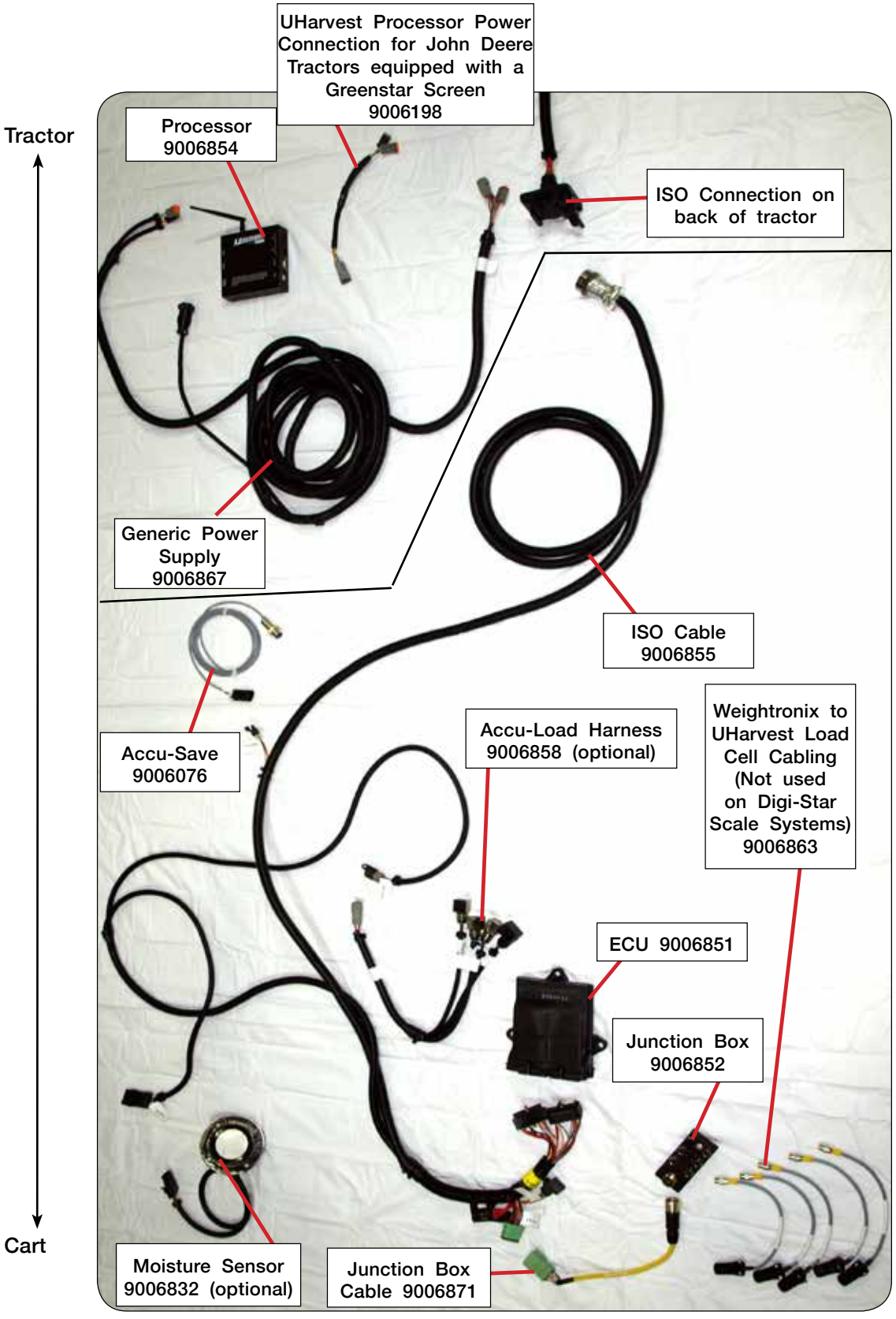
*Refer to page 5 for a list of carts that your cart may fall under.

General Set Up Information

This manual is for installation of the UHarvest data system components on the implement. For installation of the UHarvest Processor and related cabling on the tractor, please refer to your UHarvest Operation Guide. For installation of scale weigh bars, please refer to your grain cart operator's manual.

Single-Auger Front-Fold - UHarvest System Components

NOTE: For complete parts listing, see page 3-2 in the Parts section of this manual.



Single-Auger Front-Fold (continued)

Junction Box

To get the features associated with a separate hitch weight, the scale weigh bars must have connectors to connect to the UHarvest junction box. If the scale weigh bars do not have these connectors, or to add connectors, contact your dealer for a load cell cable and end connector repair kit for each scale weigh bar. (Unverferth Part Number 9005115).

If separate hitch weight features are not desired, then the UHarvest junction box is not needed. Use 9006932 to connect the UHarvest harness to the hard wired junction box.

These instructions are not necessary for use of the 9006932 cable to connect to the UHarvest harness to the hard wired junction box.

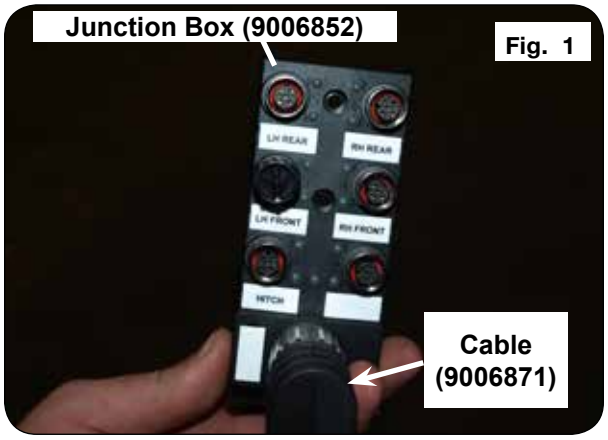


Fig. 1


Fig. 2

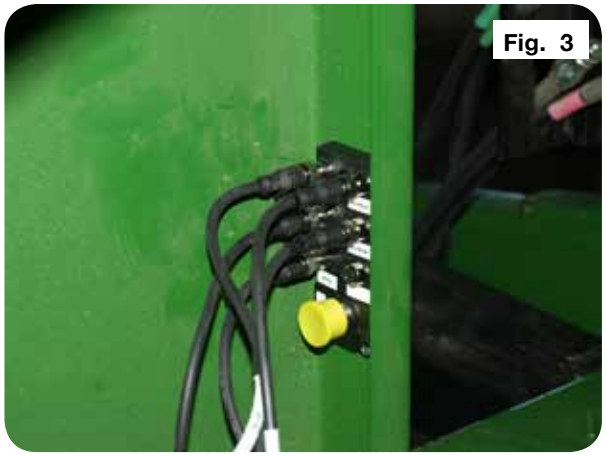


Fig. 3

1. Route the grain cart ISO cable on the cart starting behind the front standards and routing the cable forward through the PTO shield to the hitch point.

2. Attach the junction box to the underside of the center cross member between the front standards using the #8 hardware (Fig. 2) or to the inside of the standard if the cable length allows (Fig. 3).

3. If the scale weigh bars have Digi-Star 'EZ-Mate' connectors, attach the scale wire connector ends to the labeled junction box ports as labeled to assure accurate readings.

   If the scale weigh bars have Weigh-Tronix connectors, attach them to the UHarvest load cell cables to the appropriate scale wire connector ends and connect to the junction box ports as labeled to assure accurate readings.

4. Attach the round connector on 9006871 to the junction box. The connector is keyed so the elbow connector should be oriented with the elbow away from the scale wire connectors and tighten the threaded connection hand tight.

5. Attach the other end of the junction box cable to the grain cart ISO cable by connecting the 12-pin Deutsch connector. Align the recess in the extended shroud with the square extension of the mating connector. Be sure the connector is full engaged with the side clips.

NOTE: The load cell should be installed in the ports as labeled on the junction box otherwise certain features of the UHarvest system will not work properly.

Single-Auger Front-Fold (continued)

ECU (Electrical Control Unit)

1. Mount the ECU on the inside face of the Left-Hand standard using the three 9390-056 3/8"-16 UNC x 1 1/4" bolts and three 3/8"-16 UNC elastic hex jam nuts.

2. Connect the two, 30-pin rectangular connectors on the grain cart ISO cable to the bottom of the ECU. Do not force the connection as the connectors are keyed for proper alignment. Use a 1/4-inch nut driver to hand tighten the bolted connection (Fig. 4)


Fig. 4

Accu-Save

1. Park the empty unit on a firm, level surface. Block the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

2. On front-fold carts (4-bolt bearing), remove the bolts and nuts from the two left-hand bearing bolt holes on the second hanger bearing bracket. (Fig. 5)

3. Replace the two bolts with the same diameter, but longer 1/2"-13 x 1 1/2" bolts (9388-104) provided in hardware kit.

4. Reusing the hex nuts and lock washers removed in step 1, attach the brackets (252198B and 252199B).

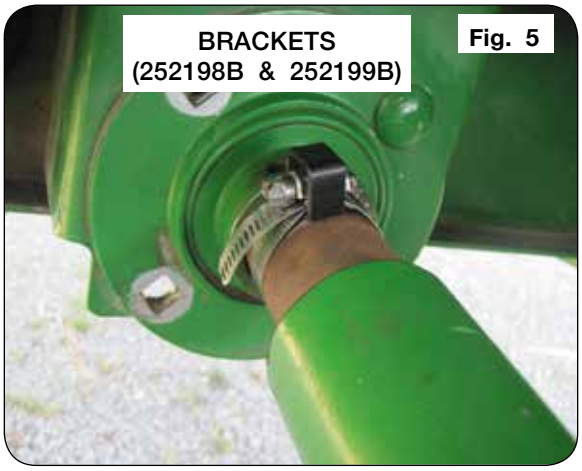


Fig. 5

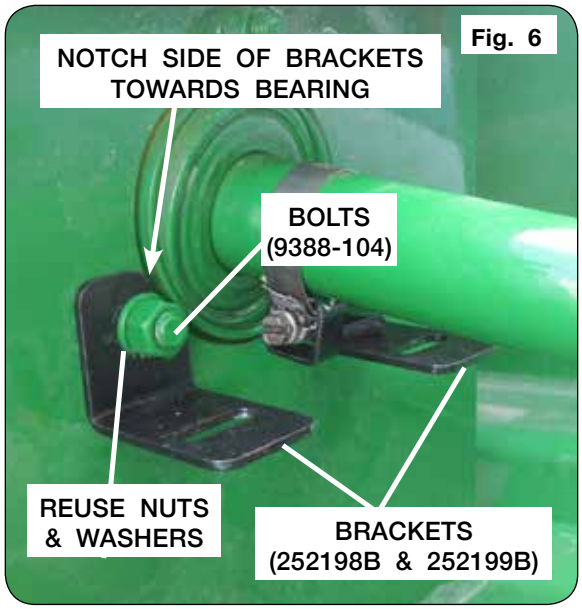


Fig. 6

NOTE: Install sensor mounting brackets (252198B and 252199B) with notches towards bearing to avoid interference with bearing.

NOTE: It may be necessary to shim brackets (252198B and 252199B) to avoid interference with bearing. If so, use provided washers to shim.

Single-Auger Front-Fold (continued)

Accu-Save (cont.)

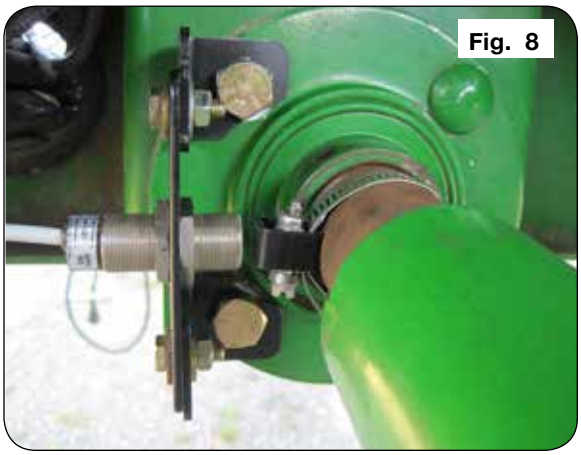


Fig. 8

5. Place foam tape (252349) onto the side of square tube “target” (251881B). Attach target to grain cart drive shaft (positioning tape side against the shaft), using stainless steel hose clamp (9006183). Position hose clamp tightening screw inside the target tube as shown. Do not fully tighten the hose clamp at this time.

6. Install flat bracket (252065) using 1/4”-20 x 3/4” flange screws (97420) and hex nuts (97189).

7. Attach Accu-Save sensor (9006076) to flat bracket, allowing sufficient clearance (1/8” to 1/4”) for the rotating shaft target, keeping sensor centered with drive shaft. Tighten jam nuts, all attaching hardware, and hose clamp.

NOTE: Use two washers provided in the hardware kit or two quarters to set the gap between the end of the sensor and target.

NOTE: Very little hose clamp should extend beyond the adjustment screw. If more than 1/2” extends beyond, bend down towards shaft or cut off.

8. Attach the Accu-Save sensor cable to the ISO cable connector labeled “Accu-Save”.

9. Reinstall any guards or shields that were removed during installation.

⚠ DANGER

- **ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME ENTANGLED IN A ROTATING DRIVELINE.**

Single-Auger Front-Fold (continued)

Accu-Load

NOTE: Accu-Load is available for Unverferth 1015, 1115 and 1315 Grain Carts only.

⚠ WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **RELIEVE PRESSURE BEFORE DISCONNECTING HYDRAULIC LINES OR SERVICING HYDRAULIC SYSTEM. SEE HYDRAULIC POWER UNIT MANUAL FOR PROCEDURE TO RELIEVE PRESSURE. (IMAGE OF OIL ENTERING HAND)**
- **USE A PIECE OF CARDBOARD OR WOOD TO DETECT LEAKS OF HYDRAULIC FLUID UNDER PRESSURE. CORRECT HYDRAULIC LEAKS IMMEDIATELY.**
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**
- **NEVER LOOSEN OR REMOVE ANY HYDRAULIC FITTING WITHOUT FIRST VERIFYING THAT ALL FLUID PRESSURE HAS BEEN RELIEVED. FAILURE TO DO SO MAY RESULT IN UNINTENDED MOVEMENT OF ALL OR A PORTION OF THE EQUIPMENT, POSSIBLY CAUSING SEVERE INJURY OR DEATH DUE TO CRUSHING OR CUTTING. INJURY MAY ALSO OCCUR FROM CONTACT WITH OIL UNDER PRESSURE THAT MAY ESCAPE DURING FITTING REMOVAL.**

1. Verify the cartridge part numbers are installed in the correct ports of the manifold. Look at the wrench flats of the Accu-Load manifold to find the part numbers. (Fig. 9, 10 & 11)

   S1 - WK10K-01
   S2 - WK10X-01
   S3 - WS10YR-01

NOTE: If the numbers do not match the ports as indicated above, contact your dealer.

Fig. 9

Fig. 10


Fig. 11

Single-Auger Front-Fold (continued)

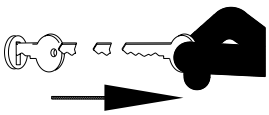
Accu-Load (cont.)

2. Attach the tractor drawbar to the grain cart hitch. Connect the hydraulic lines for the grain cart flow door to the tractor.

3. Run the flow door open and closed. Note which line is pressurized to open the flow door and which is pressurized to close the flow door. Flow door open should be set up with the lever having a detent position. If the tractor lever is in detent in the door closed position, remove the flow door hoses from the tractor and reverse them.

4. Remove the hydraulic pressure from all hydraulic circuits. See the tractor manual the the proper procedure.

5. Park the empty cart on a firm, level surface. Block the tires to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key, and disconnect the PTO shaft and hydraulics from the tractor and cart.



6. Install the 9/16"-18 JIC Male x 3/4"-16 Male O-ring Boss elbow 9874 into the T and B ports on the manifold 9005476. Install the 9/16"-18 JIC Male x 3/4"-16 O-Ring Male Boss straight adapter 92927 into the P and A ports. Install the 9/16"-18 JIC Male/Female elbow 9876 to the straight adapters. (Fig. 12)

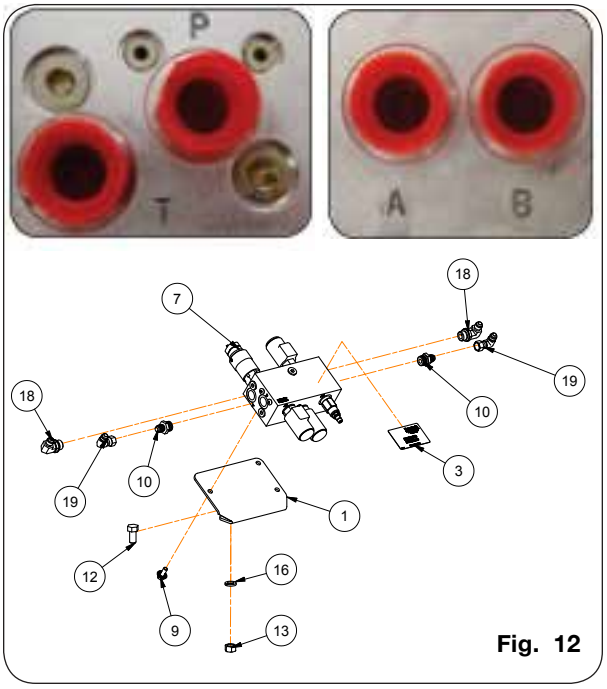


Fig. 12

7. Mount the Accu-Load manifold 9005476 to the mounting plate 252046B using the three 5/16-inch flange screws 91256. (Fig. 13)

Fig. 13

Single-Auger Front-Fold (continued)

Accu-Load (cont.)

⚠ WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

8. In the front, left hand corner of the grain cart, bolt the 251667B mounting plate to the front perimeter just below the auger tube. (Fig. 14 & 15) It may be necessary to drill holes to mount the manifold. Holes need to be 9/16-inches in diameter with a spacing of 4-inches. (Fig. 14)

NOTE: If drilling mounting holes, be sure to verify location with hoses to assure connection.

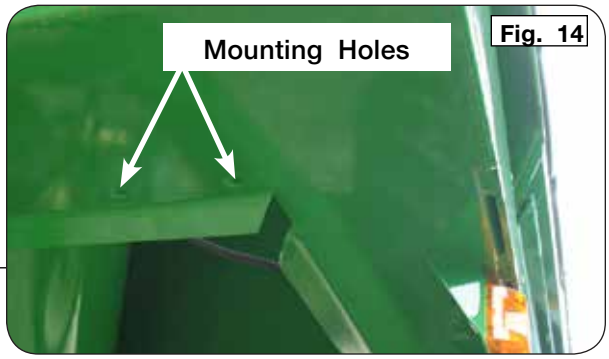


Fig. 14

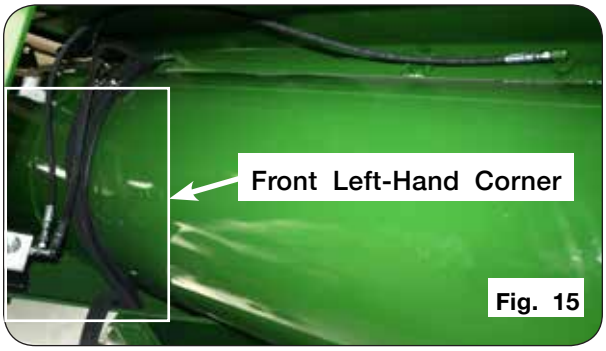


Fig. 15

9. On the grain cart flow door cylinder, disconnect the hose attached to the elbow on the rod end and attach to the fitting in manifold port P. Disconnect the hose attached to the elbow on the butt end of the flow door cylinder and attach to manifold port T.


Fig. 16

10. Attach hose 9005298 provided (53-inch) to the fitting on the manifold port B and the opposite end to the elbow in the rod end of the flow door cylinder. Attach hose 9003113 (33-inch) to the fitting on manifold port A and the opposite end to the butt end of the flow door cylinder. Port A should close the flow door (cylinder extend). Port B should open the flow door (cylinder retract). (Fig. 16, 17 & 18)


Fig. 17


Fig. 18

Single-Auger Front-Fold (continued)

Accu-Load (cont.)

11. Secure the new hoses with the clamps and hardware. Tighten all connections. (Fig. 19)

12. Reattach the hoses to the tractor and purge the lines, see the grain cart operator's manual for the proper procedure. Make sure the door open lever direction has detent.

13. Once the lines are purged, use the tractor lever to open and close the flow door. Verify the lever direction is in the same direction as step 4. The tractor lever for open needs to have detent capability.

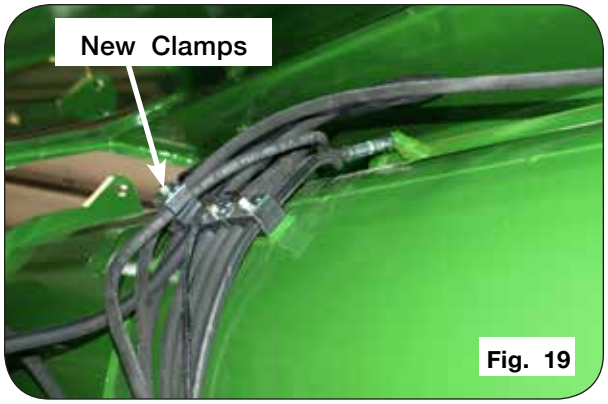


Fig. 19

Single-Auger Front-Fold (continued)

Accu-Load (cont.)

14. Connect harness 9006858 to the ISO Cable (9006855). Plug-in the 6-pin Deutsch connector on harness 9006858 to the connector labeled Accu-Load on the ISO cable (9006855). Route the branch with the four square DIN connectors labeled S1, S2, S3 & PSW1 to Accu-Load Manifold 9005476 mounted in steps 7 & 8. Attach the square DIN connectors to the three solenoids of the Accu-Load Manifold. Match up the labeled connector with the corresponding solenoids. The DIN connector labeled PSW1 is for the pressure switch installed in port PS of the manifold. Make sure to snug the retaining screw of all DIN connectors. **DO NOT OVERTIGHTEN**. (Fig. 20 & 21)

NOTE: The solenoid on the cartridge can be rotated or flipped by removing the retaining cap screwed onto the cartridge of the manifolds, sliding out the solenoid and flipping, then re-installing retaining cap. This may improve the routing of the harness.

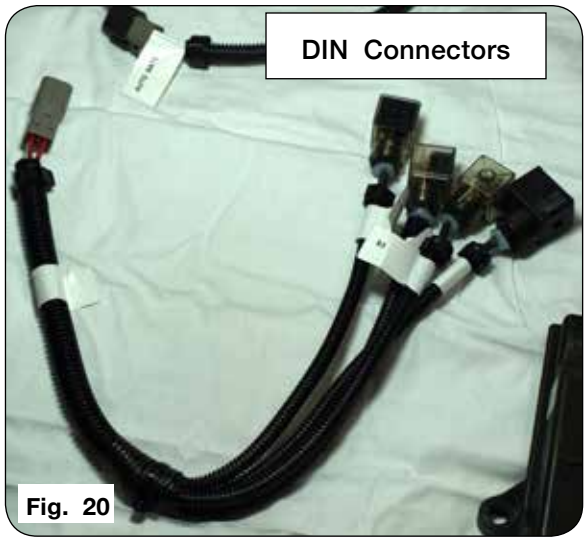


Fig. 20


Fig. 21

Single-Auger Front-Fold (continued)

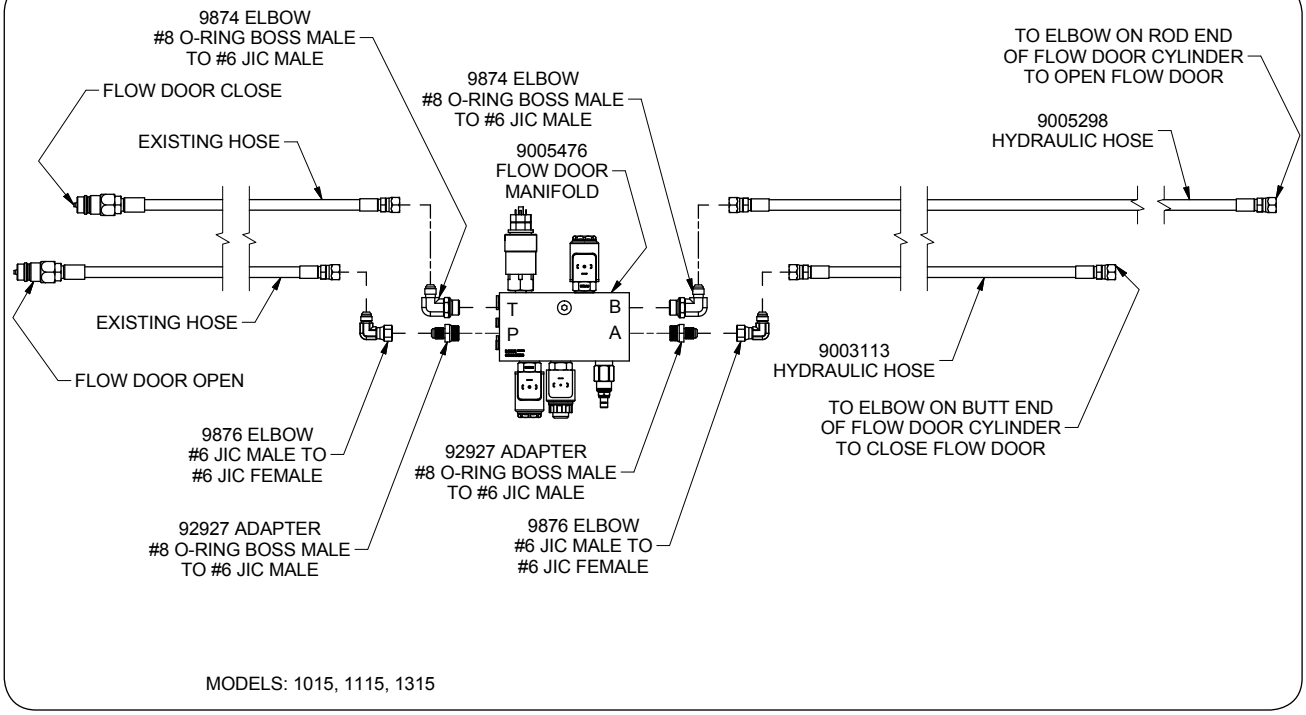
Accu-Load (cont.)

15. All connection points should be made. Retain the harness and cables with zip ties making sure slack is given in appropriate areas. Example: hitch point. (Fig. 22)

16. Start the tractor and test the flow door function by manual operation. Refer to the UHarvest operation manual for the remaining steps involved for the controller.


Fig. 22

Accu-Load Hydraulic Plumbing Schematic



MODELS: 1015, 1115, 1315

Single-Auger Front-Fold (continued)

Moisture Sensor (Optional)

NOTE: The sensing face of the moisture sensor should be close to flush with the inside of the cleanout door.

1. Park the empty cart on a firm, level surface. Place the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

2. Remove the existing cleanout door from the auger assembly by first removing the 3/8"-16 x 1" capscrew (9390-055) and 3/8"-16 locknut (9928). Secure the rack and then slide the cleanout door up and out of the channel. Retain the hardware for installing the new cleanout door.

3. Install the moisture sensor (9006832) and guard (281835B) to the outside of the new cleanout door using the four 1/4"-20 x 1" countersunk screws (902703-021) and four 1/4"-20 flange nuts (97189). The moisture sensor should be oriented with the connector toward the top of the cleanout door.

4. Slide the new cleanout door into the channel on the auger assembly and attach it to the rack using the same hardware that was removed in step 1.

5. Zip tie the moisture sensor cable to the chain link on the cleanout door and attach the 4 pin shroud Weatherpack connector to the breakout labeled "Moisture" on the ISO harness (9006855). The 2-pin tower Weatherpack connector on the moisture sensor is not used and should remain plugged. Also, ensure that there is adequate slack in the cable and harness for the cleanout door to completely open and close.

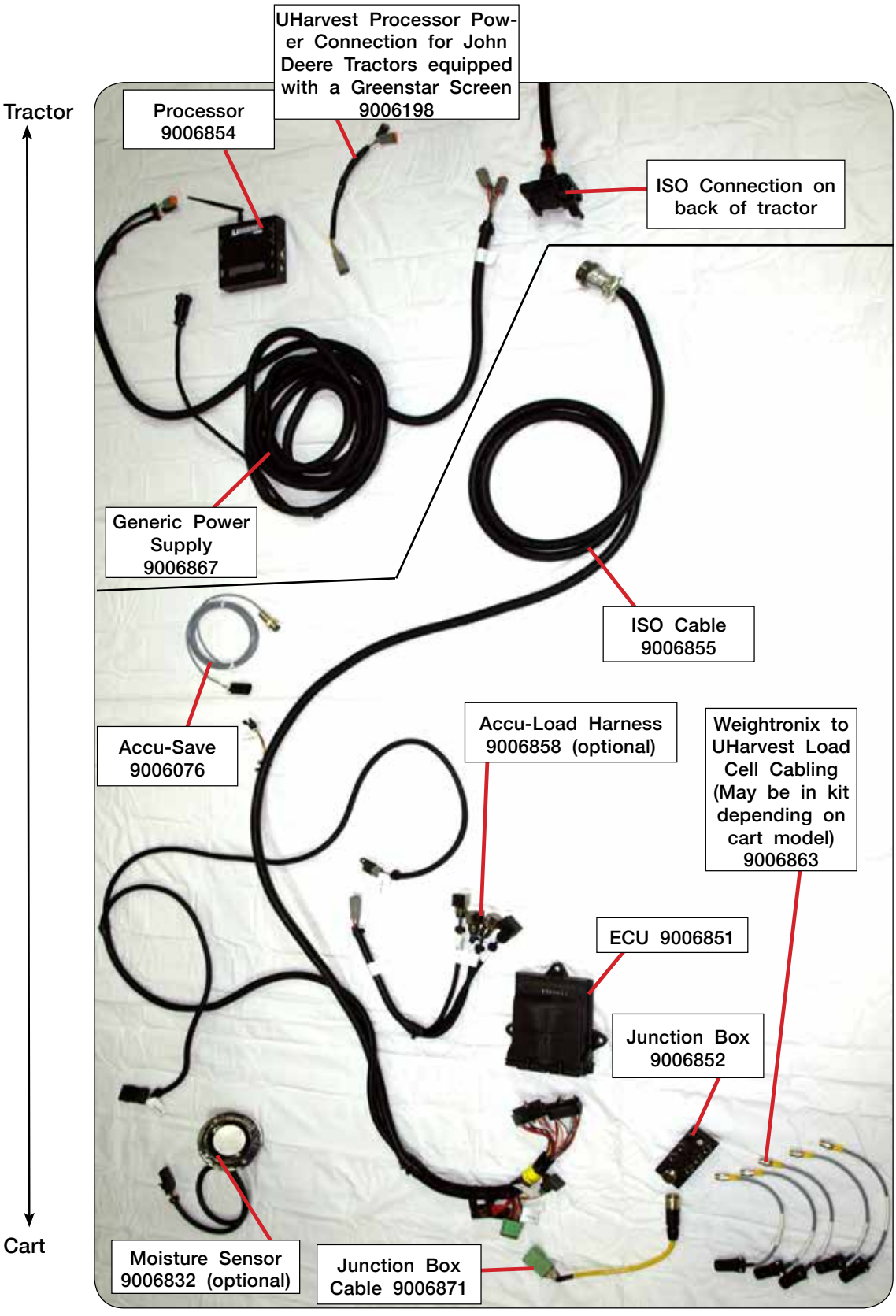
6. Route the moisture sensor ccable up the wheel rack and zip-tie to the holes in the rack. (Fig. 25 & 26)


Fig. 25

Fig. 26

Single-Auger Rear-Fold - UHarvest System Components

NOTE: For complete parts listing, see page 3-2 in the Parts section of this manual.



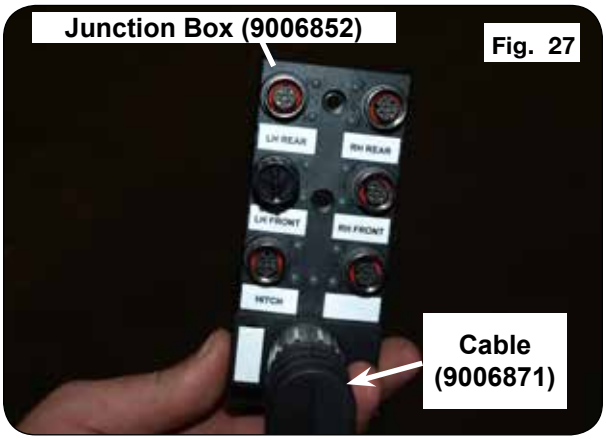
Single-Auger Rear-Fold (continued)

Junction Box

To get the features associated with a separate hitch weight, the scale weigh bars must have connectors to connect to the junction box. If the scale weigh bars do not have these connectors, or to add connectors, contact your dealer for a load cell cable and end connector repair kit for each scale weigh bar. (Unverferth Part Number 9005115).

If separate hitch weight features are not desired, then the junction box is not needed. Use 9006932 to connect the UHarvest harness to the hard wired junction box.

These instructions are not necessary for use of the 9006932 cable to connect to the UHarvest harness to the hard wired junction box.



1. Route the ISO cable on the cart starting behind the front standards and routing the cable forward through the PTO shield to the hitch point.

2. Attach the junction box to the underside of the center cross member between the left vertical face of the cart using the #8 hardware (Fig. 29).

NOTE: Facing the junction box to the inside of the cart will protect the scale wire ends.

3. Attach the scale wire connector ends to the junction box.

4. Attach the round connector on 9006871 to the junction box. The connector is keyed so the elbow connector is oriented with the elbow away from the scale wire connectors and tighten the threaded connection hand tight.

5. Attach the other end of the junction box cable to the grain cart ISO cable by connecting the 12-pin Deutsch connector. Align the recess in the extended shroud with the square extension of the mating connector. Be sure the connector is fully engaged with the side clips.

NOTE: The load cell should be installed in the ports as labeled on the junction box otherwise certain features of the UHarvest system will not work properly.

Single-Auger Rear-Fold (continued)

ECU (Electronic Control Unit)

1. Mount the ECU on the inside face of the left-hand standard using the three 9390-056 3/8”-16 UNC x 1 1/4” bolts and three 3/8”-16 UNC elastic hex jam nuts.

2. Connect the two 30-pin rectangular connectors on the grain cart ISO cable to the bottom of the ECU. The connectors are keyed to make correct connections. Do not force the connectors into the ECU. Use a 1/4-inch nut drive to hand tighten the bolted connection (Fig. 30).

Fig. 30

Single-Auger Rear-Fold (continued)

Accu-Save

1. Park the empty unit on a firm, level surface. Block the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

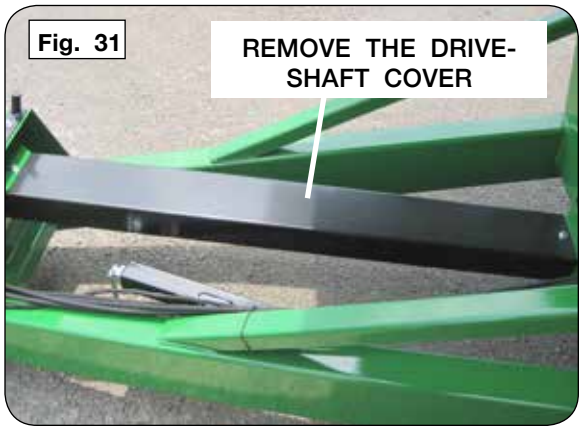
2. Remove the driveshaft cover to access the backside of the front driveshaft 3-bolt bearing. Remove the bolts and nuts from the bottom two bearing attaching bolts (Fig. 31).

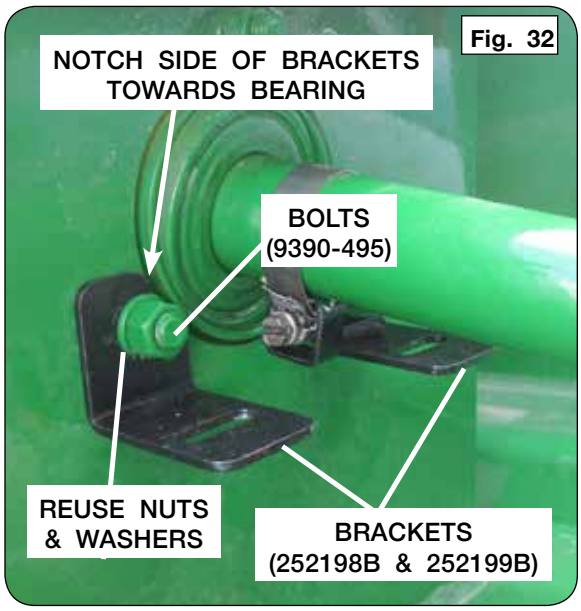
3. Replace the two bolts with the same diameter, but longer bolts (9388-104) provided in hardward kit.

4. Reusing the hex nuts and lock washers removed in step 1, attach the brackets (252198B and 252199B) (Fig. 32).

NOTE: Install sensor mounting brackets (252198B and 252199B) with notches towards bearing to avoid interference with bearing.

NOTE: It may be necessary to shim brackets (252198B and 252199B) to avoid interference with bearing. If so, use provided washers to shim.





Single-Auger Rear-Fold (continued)

Accu-Save (cont.)

5. Place foam tape (252349) onto the side of square tube "target" (251881B). Attach target to grain cart drive shaft (positioning tape side against the shaft), using stainless steel hose clamp (9006183). Position hose clamp tightening screw inside the target tube as shown. Do not fully tighten the hose clamp at this time (Fig. 33).

6. Install flat bracket (252065 using flange screws (97420) and hex nuts (97189) (Fig. 34).

7. Attach Accu-Save sensor (9006076) to flat bracket, allowing sufficient clearance (1/8" to 1/4") for the rotating shaft target, keeping sensor centered with drive shaft. Tighten jam nuts, all attaching hardware, and hose clamp.

NOTE: Use two washers provided in the hardware kit or two quarters to set the gap between the end of the sensor and target.

NOTE: Very little hose clamp should extend beyond the adjustment screw. If more than 1/2" extends beyond, bend down towards shaft or cut off.

8. Connect the Accu-Save sensor cable to the ISO cable harness connector labeled "Accu-Save".

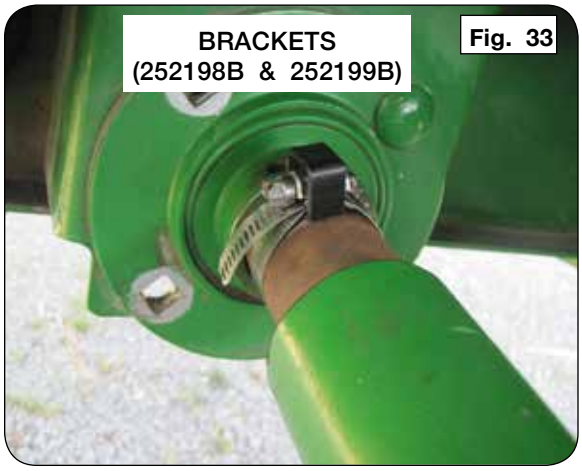


Fig. 33

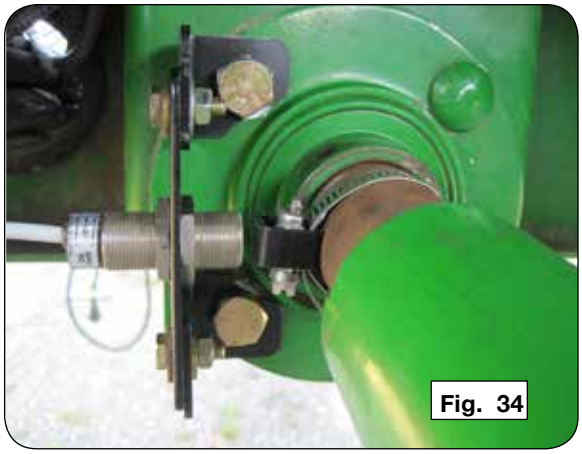


Fig. 34

9. Reinstall any guards or shields that were removed during installation.

DANGER

- **ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME ENTANGLED IN A ROTATING DRIVELINE.**

Single-Auger Rear-Fold (continued)

Accu-Load

NOTE: Accu-Load is available on Brent 882, 1082, 1282 Grain Carts only.

⚠ WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **RELIEVE PRESSURE BEFORE DISCONNECTING HYDRAULIC LINES OR SERVICING HYDRAULIC SYSTEM. SEE HYDRAULIC POWER UNIT MANUAL FOR PROCEDURE TO RELIEVE PRESSURE. (IMAGE OF OIL ENTERING HAND)**
- **USE A PIECE OF CARDBOARD OR WOOD TO DETECT LEAKS OF HYDRAULIC FLUID UNDER PRESSURE. CORRECT HYDRAULIC LEAKS IMMEDIATELY.**
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**
- **NEVER LOOSEN OR REMOVE ANY HYDRAULIC FITTING WITHOUT FIRST VERIFYING THAT ALL FLUID PRESSURE HAS BEEN RELIEVED. FAILURE TO DO SO MAY RESULT IN UNINTENDED MOVEMENT OF ALL OR A PORTION OF THE EQUIPMENT, POSSIBLY CAUSING SEVERE INJURY OR DEATH DUE TO CRUSHING OR CUTTING. INJURY MAY ALSO OCCUR FROM CONTACT WITH OIL UNDER PRESSURE THAT MAY ESCAPE DURING FITTING REMOVAL.**

1. Verify the cartridge part numbers are installed in the correct ports of the manifold. Look at the wrench flats of the Accu-Load manifold to find the part numbers. See figures 35, 36, & 37.

   S1 - WK10K-01
   S2 - WK10X-01
   S3 - WS10YR-01

NOTE: If the numbers do not match the ports as indicated above, contact your dealer.

Fig. 35

Fig. 36


Fig. 37

Single-Auger Rear-Fold (continued)

Accu-Load (cont.)

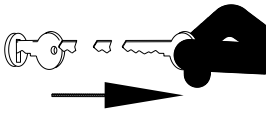
2. Attach the tractor drawbar to the grain cart hitch. Connect the hydraulic lines for the grain cart flow door to the tractor.

3. In a clear, flat area, fold the upper auger out to the unloading position.

4. Run the flow door open and closed. Verify and note which hose is pressurized to open the flow door and which hose is pressurized to close the flow door. This will be needed for later steps. Flow door open should be set up with the lever having a detent position. If the tractor lever is in detent in the door closed position, remove the flow door hoses from the tractor and reverse them.

5. Remove the hydraulic pressure from all hydraulic circuits. See tractor manual for proper procedure.

6. Park the empty cart on a firm, level surface. Block the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key, and disconnect the PTO shaft and hydraulics from the tractor and cart.



7. Install the 9/16"-18 JIC Male x 9/16"-18 JIC Female elbow (9874) into the "T" and "B" ports on the manifold (9005476). Install the 9/16"-18 JIC Male x 3/4"-16 O-Ring Male Boss straight adapter (92927) into the "P" and "A" ports. Install the 9/16"-18 JIC Male/Female elbow (9876) to top of the straight adapters (92927). See figures 38 & 39.

Fig. 38

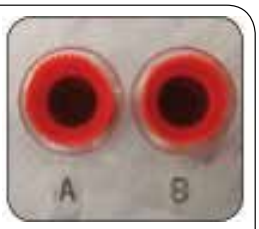
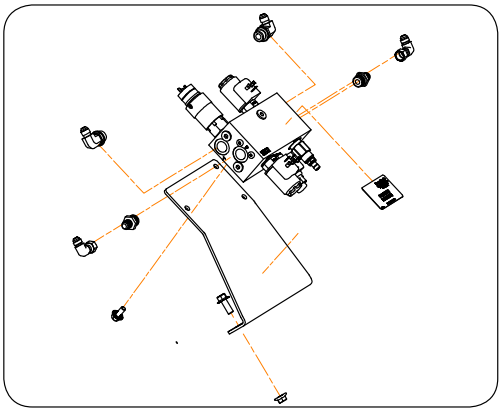


Fig. 39



8. Mount the Accu-Load manifold (9005476) to the mounting plate (251680B) using the three 5/16-inch flange screws (91256). See figure 40.

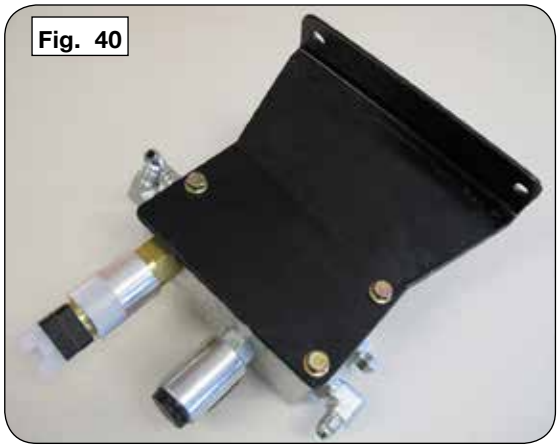


Fig. 40

Single-Auger Rear-Fold (continued)

Accu-Load (cont.)

9. In the front, left hand corner of the grain cart, bolt the 251680B mounting plate to the front perimeter just below the auger tube. (Fig. 41 & 42) It may be necessary to drill holes to mount the manifold. Holes need to be 9/16-inches in diameter with a spacing of 4-inches. (Fig. 41).

NOTE: If drilling mounting holes, be sure to verify location with hoses to assure connection. See figure 42.

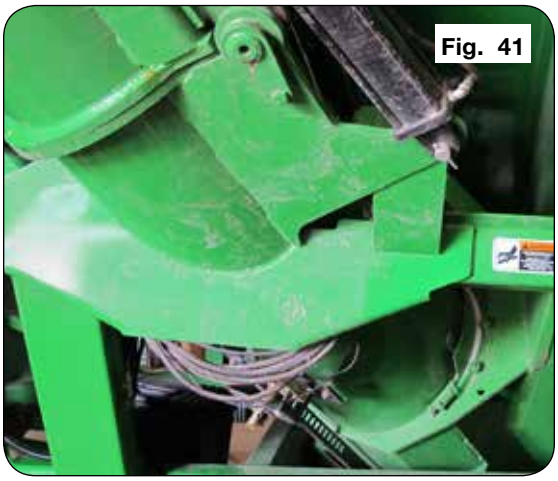


Fig. 41

Fig. 42

Single-Auger Rear-Fold (continued)

Accu-Load (cont.)

10. Find the flow door open hose (cylinder rod end) and disconnect where hose meets elbow fitting, see figure 9. Attach hose to elbow on "P" port of valve assembly.

    Find the flow door close hose (cylinder butt end) and disconnect where hose meets elbow fitting, see figure 43. Attach hose to elbow on "T" port of valve assembly.

11. Attach hose (98081) provided to elbow fitting on the manifold "B" port, see figure 44. Attach the opposite end of the hose to the elbow in the rod end of the flow door cylinder.

    Attach hose (98081) to elbow fitting on the manifold "A" port, see figure 44. Attach the opposite end of the hose to the butt end of the flow door cylinder.

    "A" Port - should close the flow door (cylinder extended).

    "B" Port - should open the flow door (cylinder retracted).

NOTE: Plumbing will allow for manual or Accu-Load control without changing the plumbing.

12. Tighten all connections.

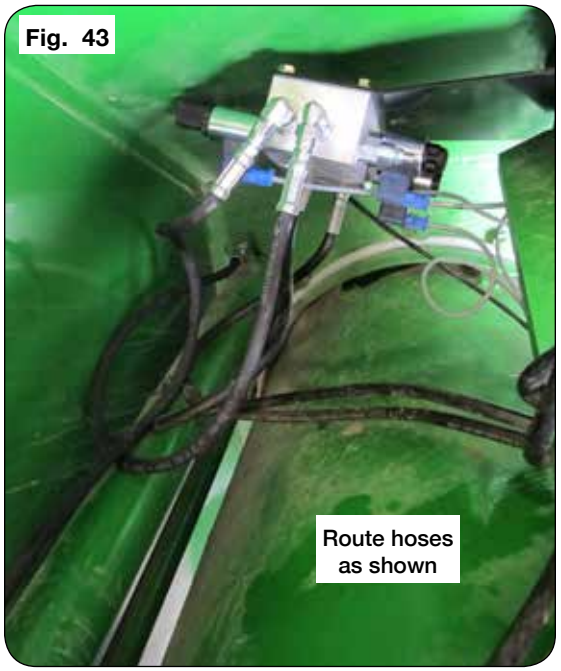


Fig. 43

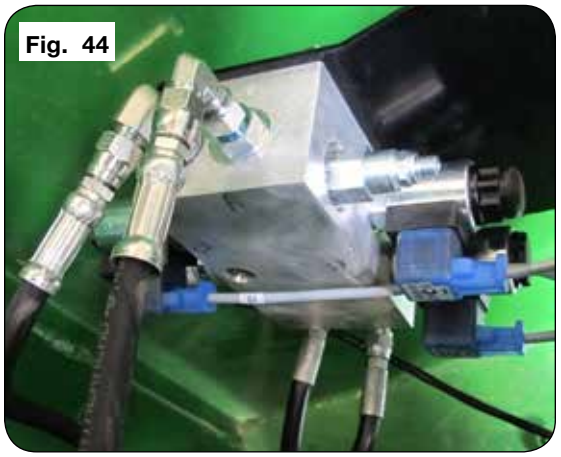


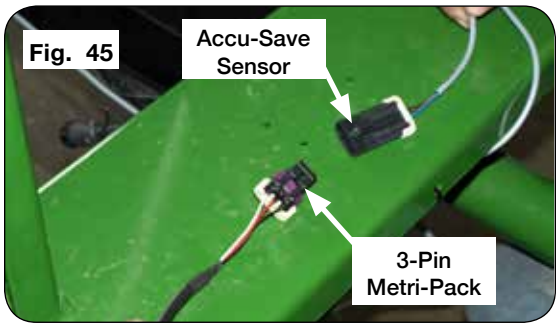
Fig. 44

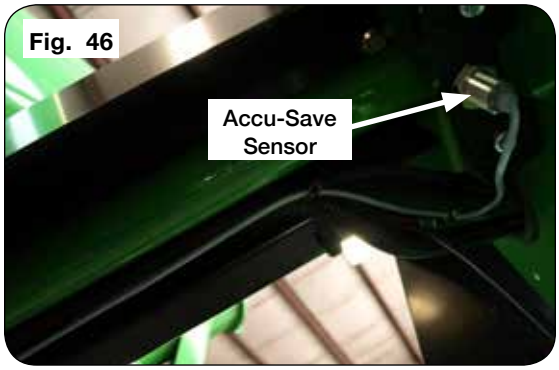
Single-Auger Rear-Fold (continued)

Accu-Load (cont.)

13. Rattach the hoses to the tractor and purge the lines. See the grain cart operator's manual for the proper procedure. Make sure the door open lever direction has detent. Open and close the door using the same lever direction and procedure as step 4.

NOTE: If the Accu-Save sensor is already present, disconnect it from the Y-cable and attach to the ISO cable connector labeled Accu-Save.





Single-Auger Rear-Fold (continued)

Accu-Load (cont.)

14. Plug-in the 6-pin Deutsch connector on harness 9006858 to the connector labeled Accu-Load on the ISO cable (9006855). Route the branch with the four square DIN connectors labeled S1, S2, S3 & PSW1 to Accu-Load Manifold 9005476 mounted in steps 7 & 8. Attach the square DIN connectors to the three solenoids of the Accu-Load Manifold. Match up the labeled connector with the corresponding solenoids. The DIN connector labeled PSW1 is for the pressure switch installed in port PS of the manifold. Make sure to snug the retaining screw of all DIN connectors. Do not overtighten. (Fig. 47, 48 & 49)

NOTE: The solenoid on the cartridge can be flipped by removing the retaining cap screwed on the cartridge of the manifolds and sliding out the solenoid and flipping, then installing and reinstalling retaining cap. This may make the routing of the harness easier.

Fig. 47

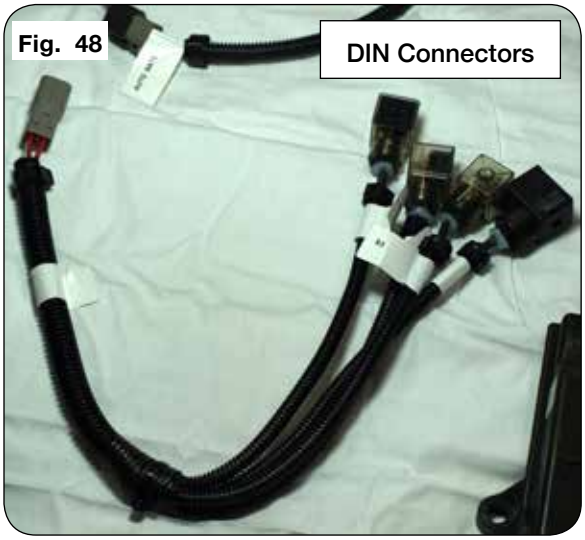


Fig. 48

DIN Connectors

Fig. 49

Single-Auger Rear-Fold (continued)

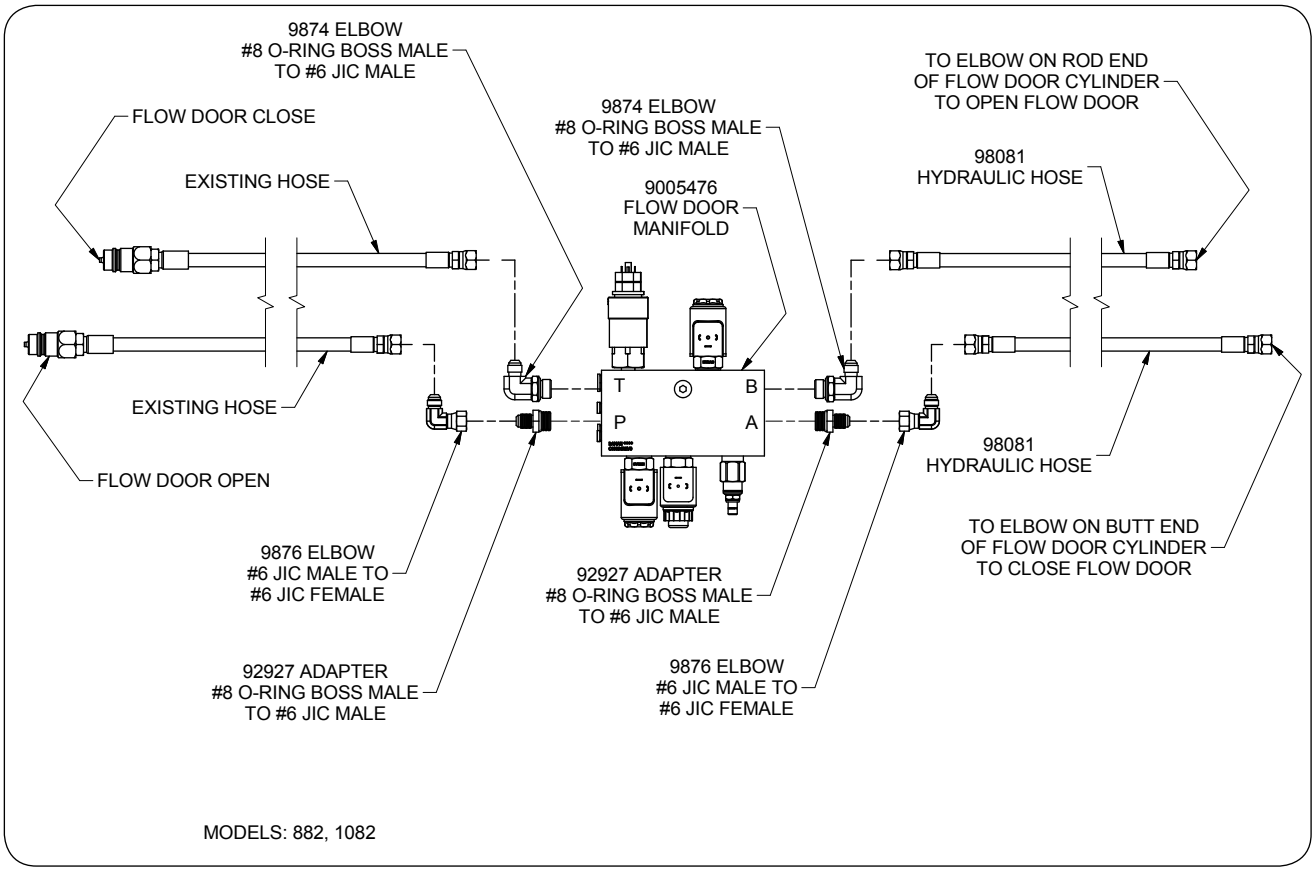
Accu-Load (cont.)

15. All connection points should be made. Retain the harness lines with zipties making sure slack is given in appropriate areas. Example: auger pivot, hitch point.

16. Reattach the hoses to the tractor and purge the lines. See the grain cart operator's manual for the proper procedure.

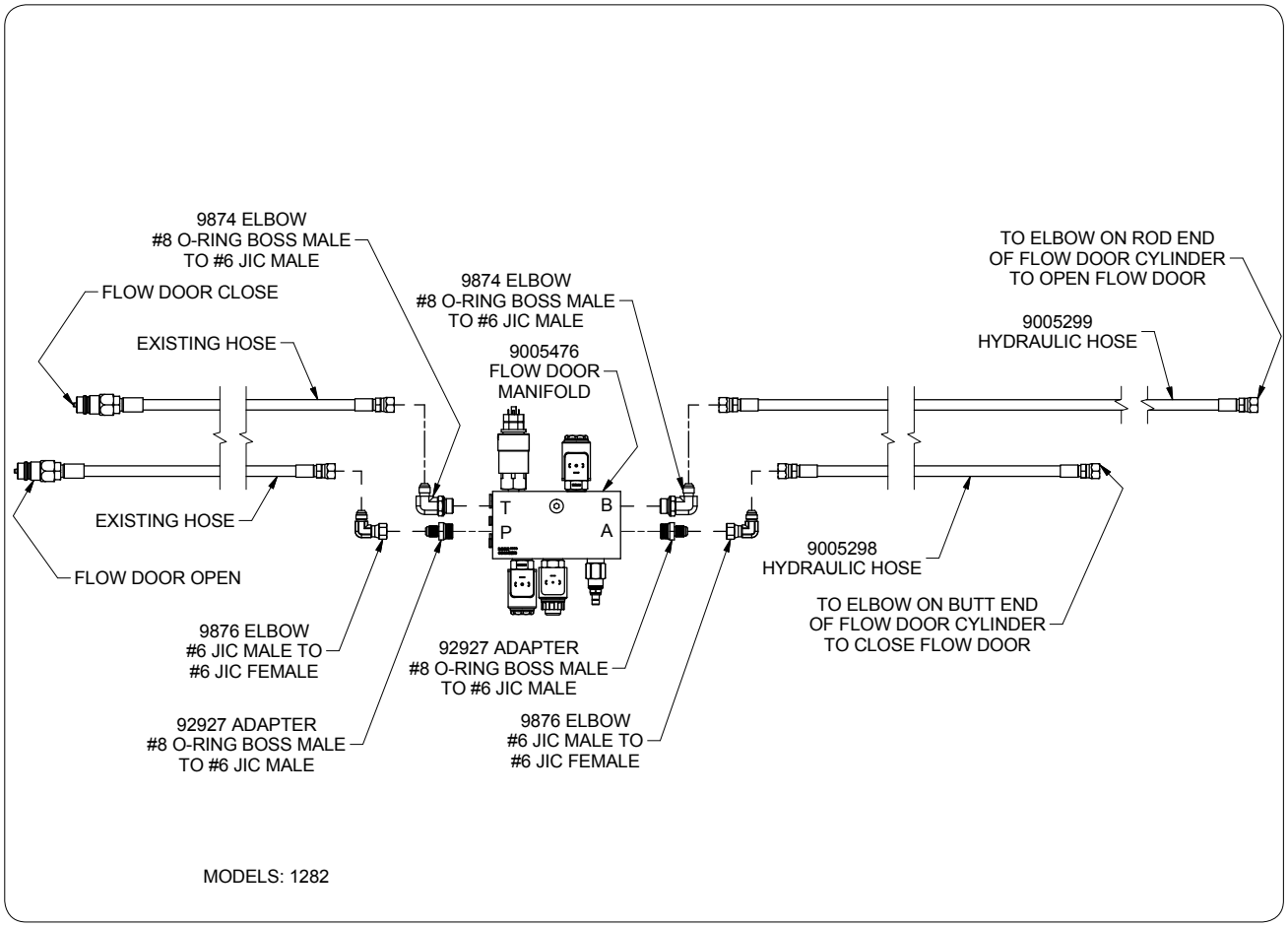
17. Start the tractor and test the flow door function by manual operation. Refer to the UHarvest operation manual for remaining steps involved for the controller.

Accu-Load Hydraulic Plumbing Schematic



Single-Auger Rear-Fold (continued)

Accu-Load Hydraulic Plumbing Schematic



Single-Auger Rear-Fold (continued)

Moisture Sensor (Optional)

Wheel Operated Cleanout Door

NOTE: The sensing face of the moisture sensor should be close to flush with the inside of the cleanout door.

1. Park the empty cart on a firm, level surface. Place the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

2. Remove the existing cleanout door from the auger assembly by first removing the 3/8"-16 x 1" capscrew (9390-055) and 3/8"-16 locknut (9928). Secure the rack and then slide the cleanout door up and out of the channel. Retain the hardware for installing the new cleanout door.

3. Install the moisture sensor (9006832) and guard (281835B) to the outside of the new cleanout door using the four 1/4"-20 x 1" countersunk screws (902703-021) and four 1/4"-20 flange nuts (97189). The moisture sensor should be oriented with the connector toward the top of the cleanout door.

4. Slide the new cleanout door into the channel on the auger assembly and attach it to the rack using the same hardware that was removed in step 1.

5. Zip tie the moisture sensor cable to the chain link on the cleanout door and attach the 4 pin shroud Weatherpack connector to the breakout labeled "Moisture" on the ISO harness (9006855). The 2-pin tower Weatherpack connector on the moisture sensor is not used and should remain plugged. Also, ensure that there is adequate slack in the cable and harness for the cleanout door to completely open and close.

6. Route the moisture sensor cable up the wheel rack and zip-tie to the holes in the rack.


Fig. 55

Fig. 56

Single-Auger Rear-Fold (continued)

Moisture Sensor (Optional) (cont.)

Lever Operated Cleanout Door

NOTE: The sensing face of the moisture sensor should be close to flush with the inside of the cleanout door.

1. Park the empty cart on a firm, level surface. Place the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

2. Remove the existing cleanout door from the auger assembly by first removing the 1/2"-13 locknut (94981) that attaches the linkage to the cleanout door. Secure the linkage and then slide the cleanout door up and out of the channel. Retain the locknut for installing the new cleanout door.

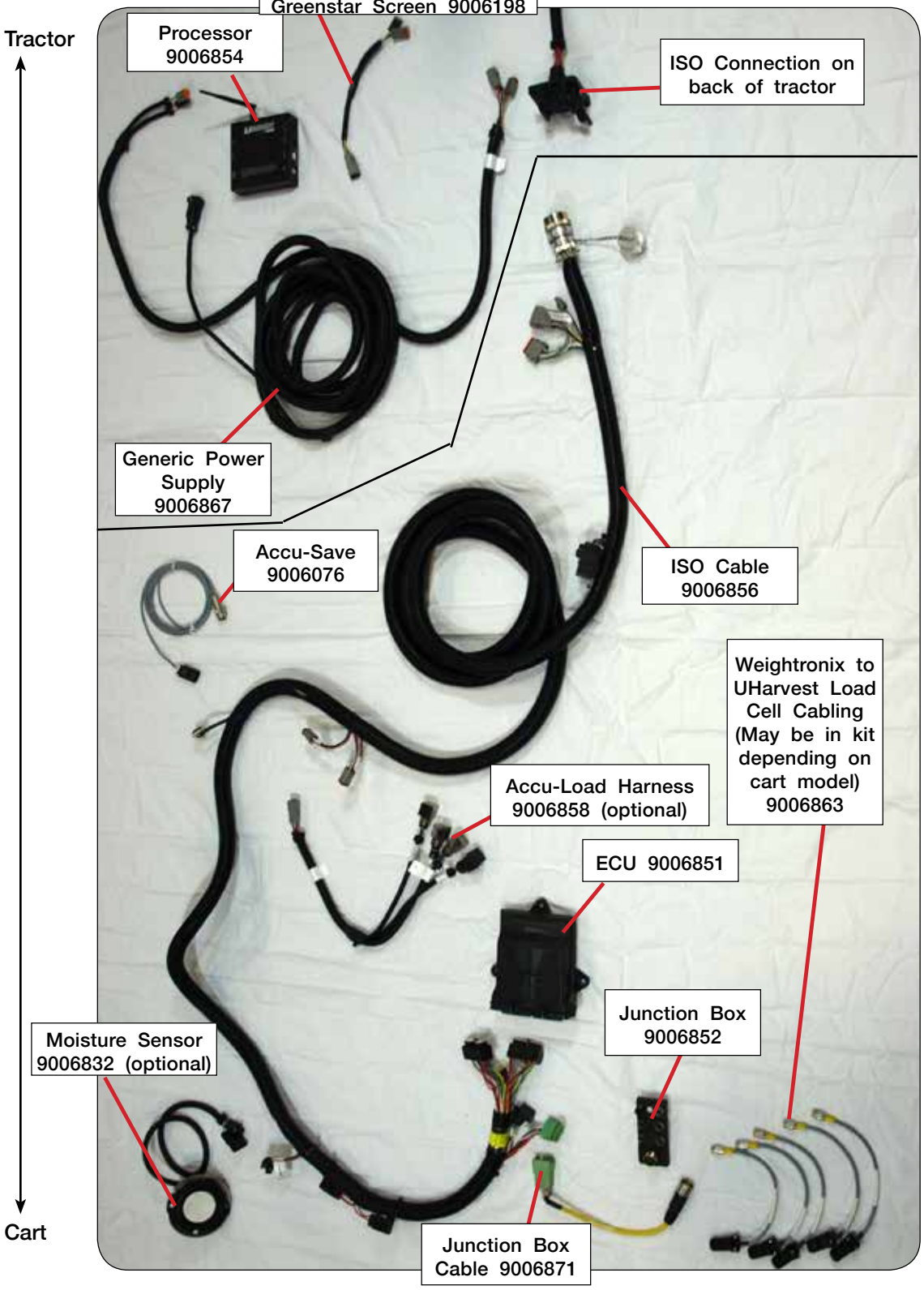
3. Install the moisture sensor (9006832) and guard (281835B) to the outside of the new cleanout door (233689B) using the four 1/4"-20 x 1" countersunk screws (902703-021) and four 1/4"-20 flange nuts (97189). The moisture sensor should be oriented with the connector toward the right of the cleanout door when looking at the door from the outside.

4. Slide the new cleanout door into the channel on the auger assembly and attach it to the linkage using the same locknut that was removed in step 1.

5. Zip tie the moisture sensor cable to the chain link on the auger assembly and attach the 4 pin shroud Weatherpack connector to the breakout labeled "Moisture" on the ISO harness (9006855). The 2-pin tower Weatherpack connector on the moisture sensor is not used and should remain plugged. Also, ensure that there is adequate slack in the cable and harness for the cleanout door to completely open and close.

Double- and In-Line Auger - UHarvest System Components

NOTE: For complete parts listing, see page 5-2 in the Parts section of this manual.



Double- and In-Line Auger (continued)

Junction Box

All Double-Auger Carts Except Killbros 1950
To get the features associated with a separate hitch weight, the scale weigh bars must have connectors to connect to the junction box. If the scale weigh bars do not have these connectors, or to add connectors, contact your dealer for a load cell cable and end connector repair kit for each scale weigh bar. (Unverferth Part Number 9005115).

If separate hitch weight features are not desired, then the junction box is not needed. Use 9006932 to connect the harness to the hard wired junction box.

These instructions are not necessary for use of the 9006932 cable to connect to the UHarvest harness to the hard wired junction box.

1. Route the ISO cable from the Left-Hand front side of the cart to the tractor hitch point.

2. Attach the junction box to the left vertical face of the cart using the #8 hardware.

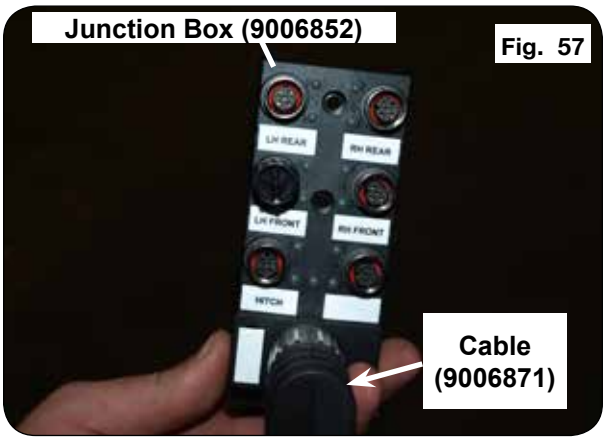
NOTE: Facing the junction box to the inside of the cart will protect the scale wire ends.

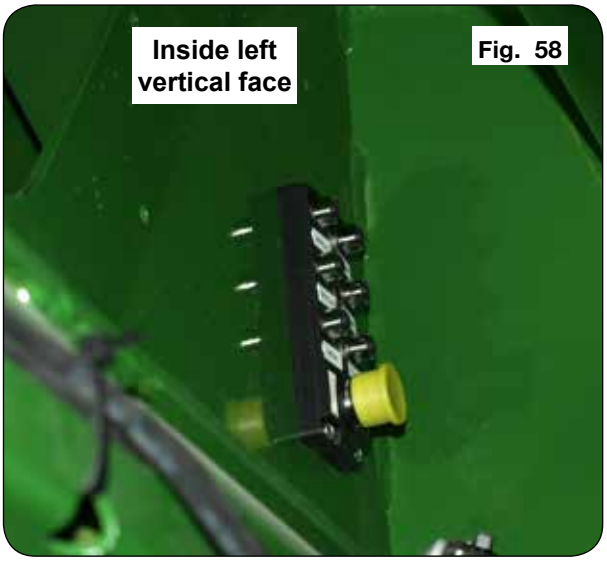
3. Attach the scale wire connector ends to the junction box.

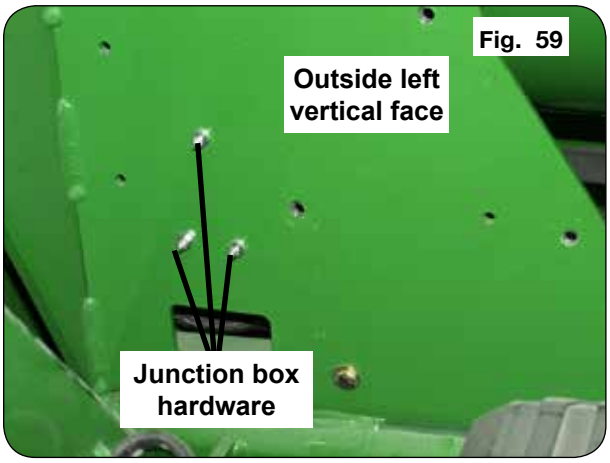
4. Attach the round connector on 9006871 to the junction box. The connector is keyed so the elbow connector is oriented with the elbow away from the scale wire connectors and tighten the threaded connection hand tight.

5. Attach the other end of the junction box cable to the grain cart ISO cable by connecting the 12-pin Deutsch connector. Align the recess in the extended shroud with the square extension of the mating connector. Be sure the connector is fully engaged with the side clips.

NOTE: The load cell should be installed in the ports as labeled on the junction box otherwise certain functions of the UHarvest system will not work properly.







Double- and In-Line Auger (continued)

Junction Box (cont.)

Killbros 1950

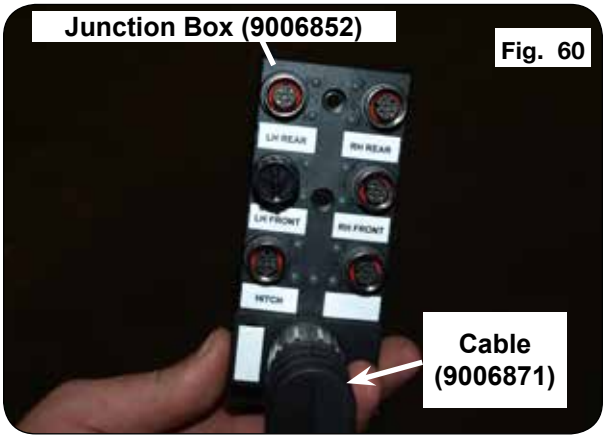


Fig. 60

To get the features associated with a separate hitch weight, the scale weigh bars must have connectors to connect to the UHarvest junction box. If the scale weigh bars do not have these connectors or to add connectors contact your dealer for a Load cell Cable and End Connector Repair Kit for each scale weigh bar. (Unverferth Part Number 9005115).

If separate hitch weight features are not desired, then the UHarvest junction box is not needed. Use 9006932 to connect the UHarvest harness to the hard wired junction box.

These instructions are not necessary for use of the 9006932 cable to connect to the UHarvest harness to the hard wired junction box.

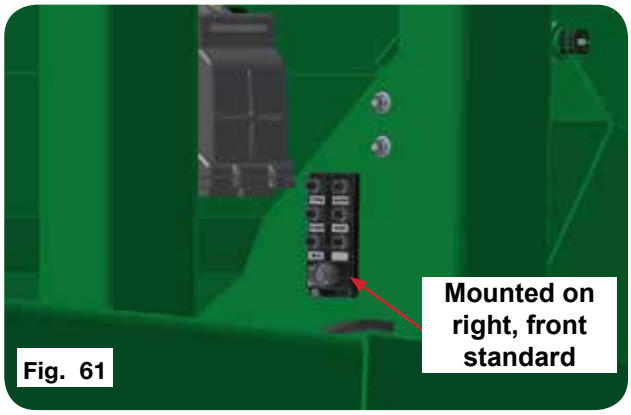


Fig. 61

1. Route the ISO cable from the Right-Hand front side of the cart to the tractor hitch point.

2. Attach the junction box to the right vertical face of the cart using the #8 hardware.

NOTE: Facing the junction box to the inside of the cart will protect the scale wire ends.

3. Attach the scale wire connector ends to the junction box.

4. Attach the round connector of 9006871 to the junction box. The connector is keyed so the elbow connector is oriented with the elbow away from the scale wire connectors and tighten the threaded connection hand tight.

5. Attach the other end of the junction box cable to the grain cart ISO cable by connecting the 12-pin Deutsch connector. Align the recess in the extended shroud with the square extension of the mating connector. Be sure the connector is fully engaged with the side clips.

NOTE: The load cell should be installed in the ports as labeled on the junction box otherwise certain functions of the UHarvest system will not work properly.

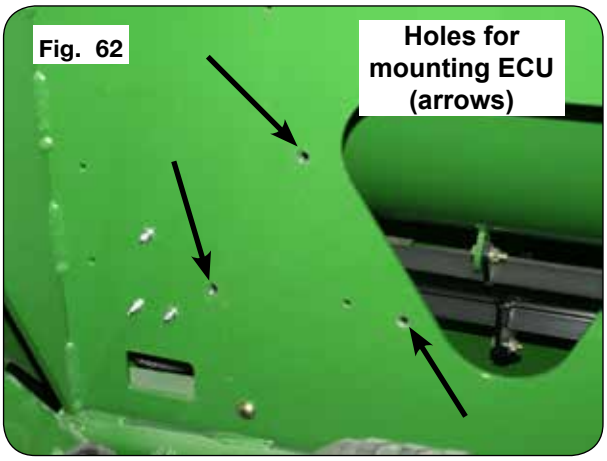
Double- and In-Line Auger (continued)

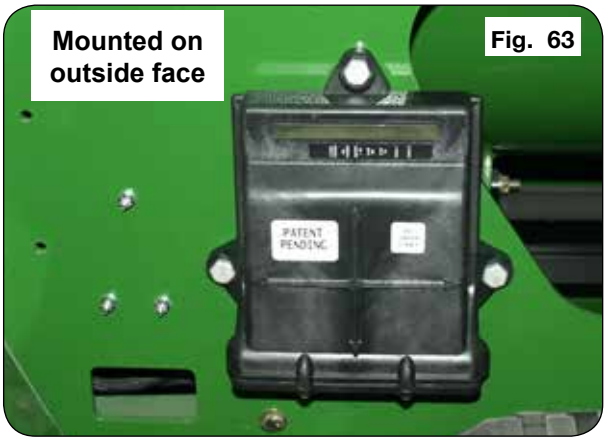
ECU (Electronic Control Unit)

All Double-Auger Carts Except Killbros 1950 which is on the following page.

1. Mount the ECU on the outside face of the left-hand standard using the three 9390-056 3/8”-16 UNC x 1 1/4” bolts and three 3/8”-16 UNC elastic hex jam nuts.

2. Connect the two 30-pin rectangular connectors on the grain cart ISO cable to the bottom of the ECU. The connectors are keyed to make correct connections. Do not force the connectors into the ECU. Use a 1/4-inch nut drive to hand tighten the bolted connection (Fig. 64).





Double- and In-Line Auger (continued)

ECU (cont.)

Killbros 1950

1. Mount the ECU on the outside, right-hand face of the tank using bracket the three 9390-056 3/8"-16 UNC x 1 1/4" bolts and three 3/8"-16 UNC elastic hex jam nuts.

2. Connect the two 30-pin rectangular connectors on the grain cart ISO cable to the bottom of the ECU. The connectors are keyed to make correct connections. Do not force the connectors into the ECU. Use a 1/4-inch nut drive to hand tighten the bolted connection (Fig. 65).

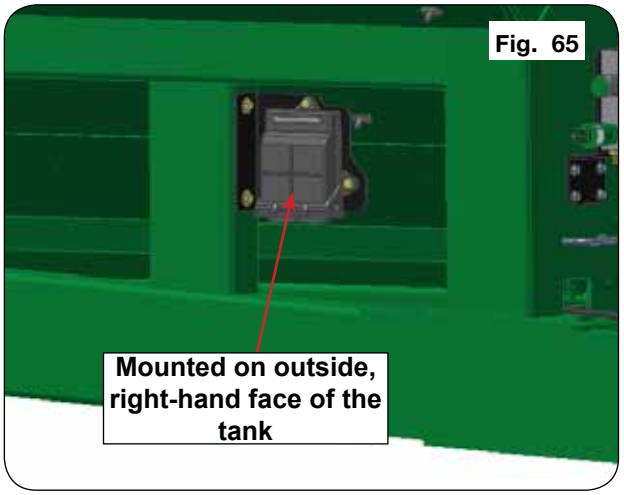


Fig. 65

Accu-Save

All Double Auger Except Killbros 1950

1. Park the empty unit on a firm, level surface. Block the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

2. Remove driveline from end of gearbox input shaft. (Refer to MAINTENANCE section of your grain cart manual for instructions.) Remove belt cover from front of junction box. Remove the hex nuts and lock washers attached to the bottom two bolts mounting the input shaft flange bearing to the junction box. Replace the bottom two bolts with the longer bolts (9390-495) included in the hardware kit. Attach the sensor mounting brackets (252198B & 252199B). Secure bolts reusing the existing lock washers and hex nuts removed.

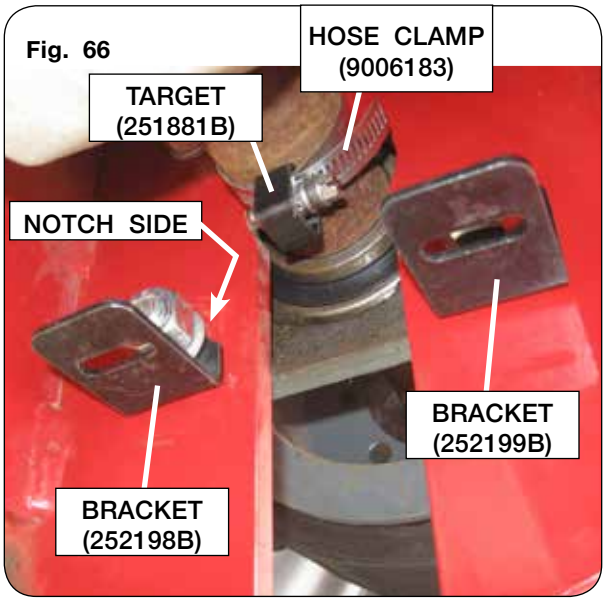


Fig. 66

NOTE: Install sensor mounting brackets (252198B & 252199B) with notches towards bearing to avoid interference with bearing.

NOTE: It may be necessary to shim brackets (252198B and 252199B) to avoid interference with bearing.

3. Place foam tape (252349) onto the side of square tube "target" (251881B). Attach target to grain cart drive shaft (positioning tape side against the shaft), using stainless steel hose clamp (9006183). Position hose clamp tightening screw inside the target tube as shown. Do not fully tighten the hose clamp at this time.

Double- and In-Line Auger (continued)

Accu-Save (cont.)

4. Install flat bracket (252065B) using flange screws (97420) and hex nuts (97189) (Fig. 67).

5. Attach Accu-Save sensor (9006076) to flat bracket, allowing sufficient clearance (1/8" to 1/4") for the rotating shaft target, keeping sensor centered with gearbox shaft. Tighten jam nuts, all attaching hardware, and hose clamp.

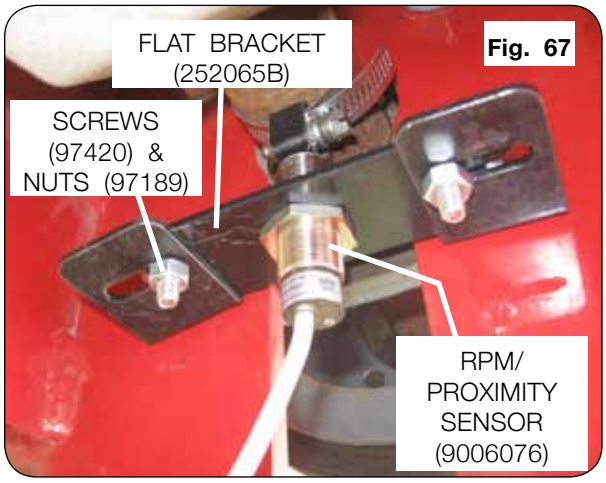


Fig. 67

NOTE: Use two washers provided in the hardware box or two quarters to set the gap between the end of the sensor and target.

NOTE: Very little hose clamp should extend beyond the adjustment screw. If more than 1/2" extends beyond, bend down towards shaft or cut off.

6. Connect the Accu-Save sensor cable to the ISO cable harness connector labeled "Accu-Save".

7. Reinstall belt cover and driveline removed in Step 1. (Refer to MAINTENANCE section of your grain cart manual for instructions.)

⚠ DANGER

- **ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME ENTANGLED IN A ROTATING DRIVELINE.**

NOTE: See the following page for installation on Killbros 1950 Grain Carts.

Double- and In-Line Auger (continued)

Accu-Save (cont.)

Killbros 1950

1. Park the empty unit on a firm, level surface. Block the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.
2. Connect the bracket to the rear bearing mount (Fig. 68).
3. Attach the Accu-Save sensor to the bracket.
4. Install the shield. Route the cable through the hole in the side of the shield.
5. Use the two self-tapping screw to attach the shield (Fig. 69).
6. Route the cable inside the right-hand frame rail.
7. Use the extension cable to reach the front of the cart.
8. Attach the cable to the break out labeled "Accu-Save".
9. Reinstall any guards or shields that were removed during installation.

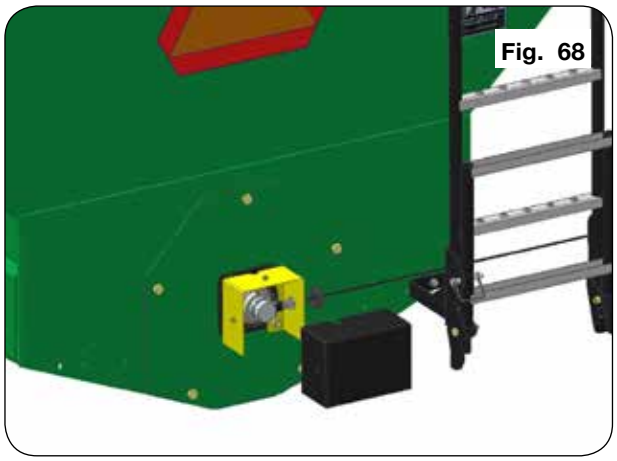


Fig. 68


Fig. 69

DANGER

- **ENTANGLEMENT WITH THE DRIVELINE WILL CAUSE SERIOUS INJURY OR DEATH. KEEP ALL GUARDS AND SHIELDS IN GOOD CONDITION AND PROPERLY INSTALLED AT ALL TIMES. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOE STRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT CAN BECOME ENTANGLED IN A ROTATING DRIVELINE.**

Double- and In-Line Auger (continued)

Accu-Load

NOTE: Accu-Load is available on Brent 1196, 1396, 1596, 2096 Grain Carts; Killbros 1111, 1311, 1611; Parker 1048, 1348, 1648 only.

⚠ WARNING

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **RELIEVE PRESSURE BEFORE DISCONNECTING HYDRAULIC LINES OR SERVICING HYDRAULIC SYSTEM. SEE HYDRAULIC POWER UNIT MANUAL FOR PROCEDURE TO RELIEVE PRESSURE. (IMAGE OF OIL ENTERING HAND)**
- **USE A PIECE OF CARDBOARD OR WOOD TO DETECT LEAKS OF HYDRAULIC FLUID UNDER PRESSURE. CORRECT HYDRAULIC LEAKS IMMEDIATELY.**
- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**
- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**
- **NEVER LOOSEN OR REMOVE ANY HYDRAULIC FITTING WITHOUT FIRST VERIFYING THAT ALL FLUID PRESSURE HAS BEEN RELIEVED. FAILURE TO DO SO MAY RESULT IN UNINTENDED MOVEMENT OF ALL OR A PORTION OF THE EQUIPMENT, POSSIBLY CAUSING SEVERE INJURY OR DEATH DUE TO CRUSHING OR CUTTING. INJURY MAY ALSO OCCUR FROM CONTACT WITH OIL UNDER PRESSURE THAT MAY ESCAPE DURING FITTING REMOVAL.**

1. Verify the cartridge part numbers are installed in the correct ports of the manifold. Look at the wrench flats of the Accu-Load manifold to find the part numbers. (Fig. 70, 71 & 72)

   S1 - WK10K-01
   S2 - WK10X-01
   S3 - WS10YR-01

NOTE: If the numbers do not match the ports as indicated above, contact your dealer.

Fig. 70

Fig. 71


Fig. 72

Double- and In-Line Auger (continued)

Accu-Load (cont.)

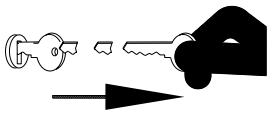
2. Attach the tractor drawbar to the grain cart hitch. Connect the hydraulic lines for the grain cart flow door to the tractor.

3. In a clear, flat area, fold the upper auger out to the unload position.

4. Run the flow door open and closed. Note which line is pressurized to open the flow door and which is pressurized to close the flow door. Verify and note the hoses for later steps. Flow door open should be set up with the lever having a detent position.

5. Remove the hydraulic pressure from all hydraulic circuits. See the tractor manual for the proper procedure.

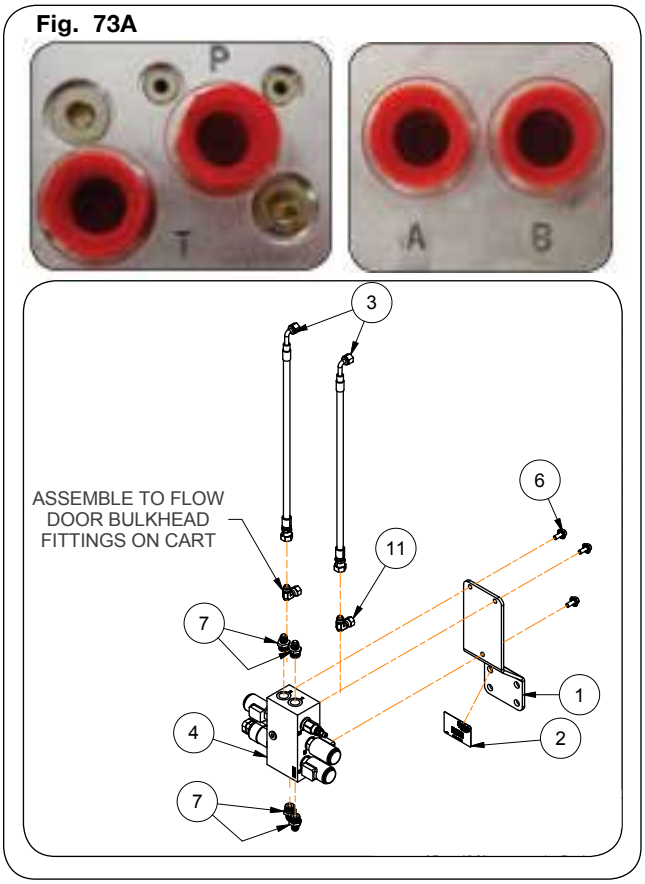
6. Park the empty cart on a firm, level surface. Block the tires to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.



7. Install the 9/16"-18 JIC Male x 3/4"-16 Male O-ring Boss adapters (92927) into all ports of the manifold (9005476). (Fig. 73A)

8. Mount the Accu-Load manifold (9005476) to the mounting plate (252046B) using the three 5/16-inch flange screws (91256). (Fig. 73B)

Fig. 73A



Double- and In-Line Auger (continued)

Accu-Load (cont.)

9. On the front of the grain cart, unbolt the four bolts located between the bulkheads which retain the front flow door to the hopper front panel. Install plate (252046B) to the front panel with the manifold above the bolts. (Fig. 74)

Fig. 74

10. Find the flow door open hose from the bulkhead and connect to the 'P' port of the Accu-Load manifold. Disconnect the flow door close hose from the bulkhead and connect to the 'T' port of the Accu-Load manifold. (Fig. 75)

11. Units with 5-Function Electric-Over-Hydraulic (EOH) flow door control: Attach run tee to the bulkheads on the front panel. (Fig. 75)

    Units with 3-Function EOH and Non EOH flow door: Attach elbows (9876) to the bulkheads on the front panel. (Fig. 75)

12. Attach hoses (9004113) to connect the fittings on the bulkheads to ports 'A' and 'B' of the manifold. Port 'A' should go to close the flow door (cylinder extend). Port 'B' should go to open the flow door (cylinder retract). If the unit has flow door EOH controls, attach the hoses diconnected from the bulkhead in step 10 to the corresponding tee attached in step 11.

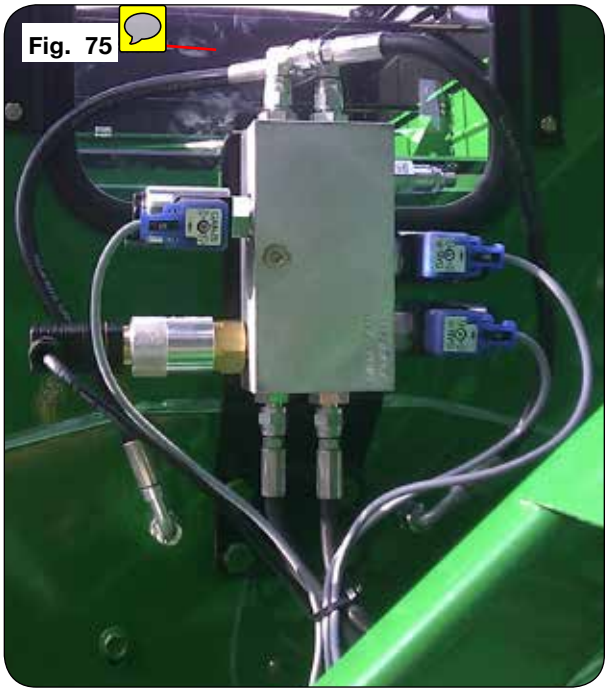


Fig. 75

NOTE: Plumbing will allow for manual or Accu-Load control.

13. Tighten all connections.

Double- and In-Line Auger (continued)

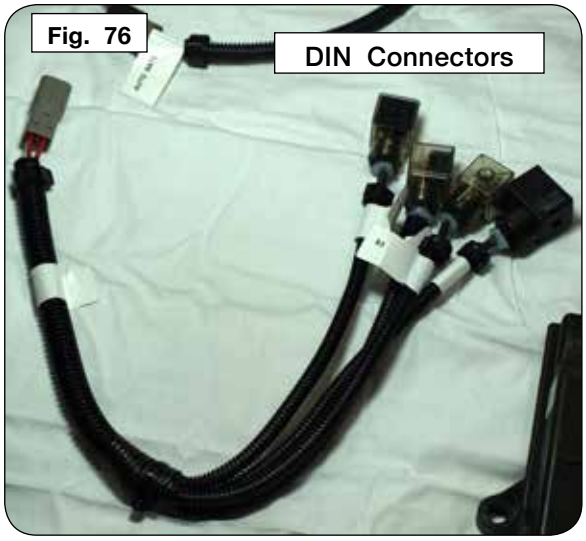
Accu-Load (cont.)

14. Reattach the hoses to the tractor and purge the lines. See the grain cart operator's manual for the proper procedure. Make sure the door open lever direction has detent.

15. Once the lines are purged, open and close the door using the same lever direction and procedure as step 4.

16. Connect harness 9006858 to the ISO Cable (9006855). Plug-in the 6-pin Deutsch connector on harness 9006858 to the connector labeled Accu-Load on the ISO cable (9006855). Route the branch with the four square DIN connectors labeled S1, S2, S3 & PSW1 to Accu-Load Manifold 9005476 mounted in steps 7 & 8. Attach the square DIN connectors to the three solenoids of the Accu-Load Manifold. Match up the labeled connector with the corresponding solenoids. The DIN connector labeled PSW1 is for the pressure switch installed in port PS of the manifold. Make sure to snug the retaining screw of all DIN connectors. Do not overtighten. (Fig. 76 & 77)

NOTE: The solenoid on the cartridge can be flipped by removing the retaining cap screwed on the cartridge of the manifolds and sliding out the solenoid and flipping, then installing and reinstalling retaining cap. This may make the routing of the harness easier.



Double- and In-Line Auger (continued)

Accu-Load (cont.)

17. Route the Accu-Save Sensor cable (9006131) as shown and connect to the Accu-Save Sensor connector on the ISO Cable (9006856) labeled “Accu-Save”.

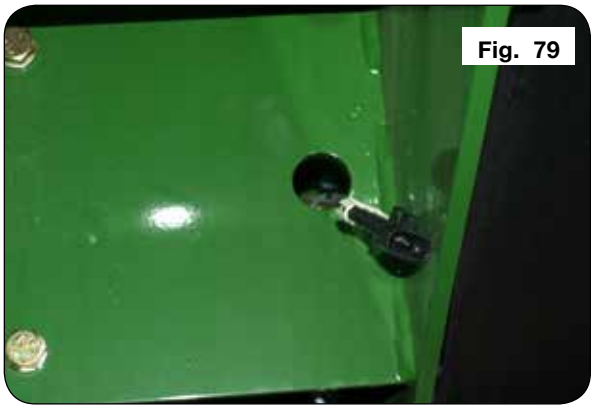


Fig. 79

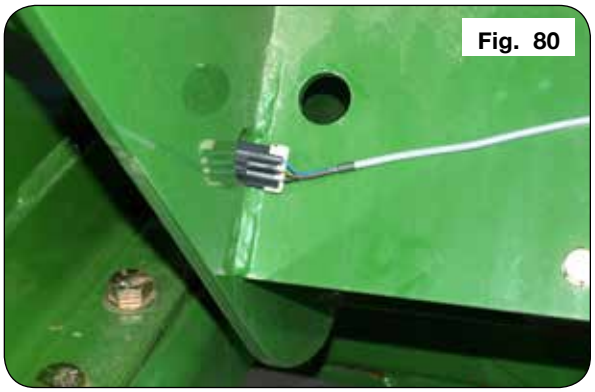


Fig. 80

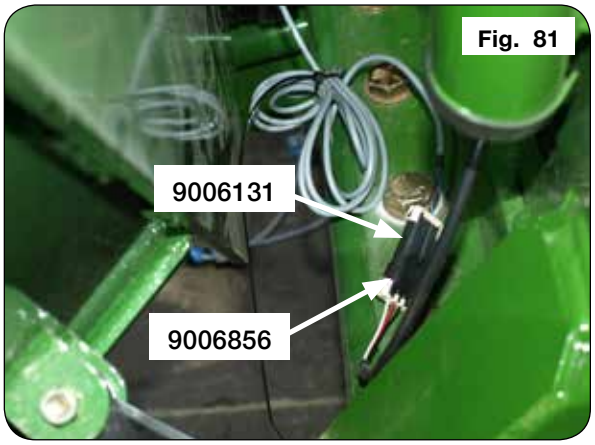


Fig. 81

Double- and In-Line Auger (continued)

Accu-Load (cont.)

18. All connection points should be made. Retain the harness lines with zipties making sure slack is given in appropriate areas. Example: auger pivot, hitch point. (Fig. 82)

19. Follow the Indicator manual for the remaining set-up and operating instructions.

20. Start the tractor and test the flow door function by manual operation. Refer to the UHarvest operation manual for remaining steps involved for the controller.

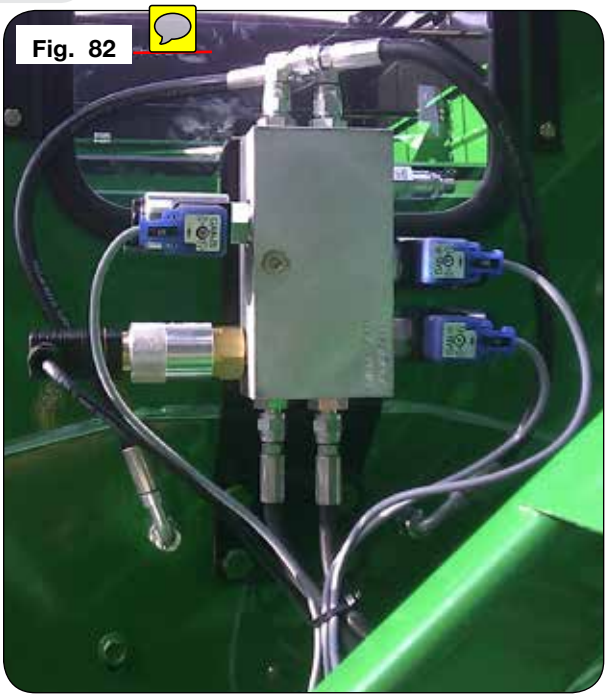
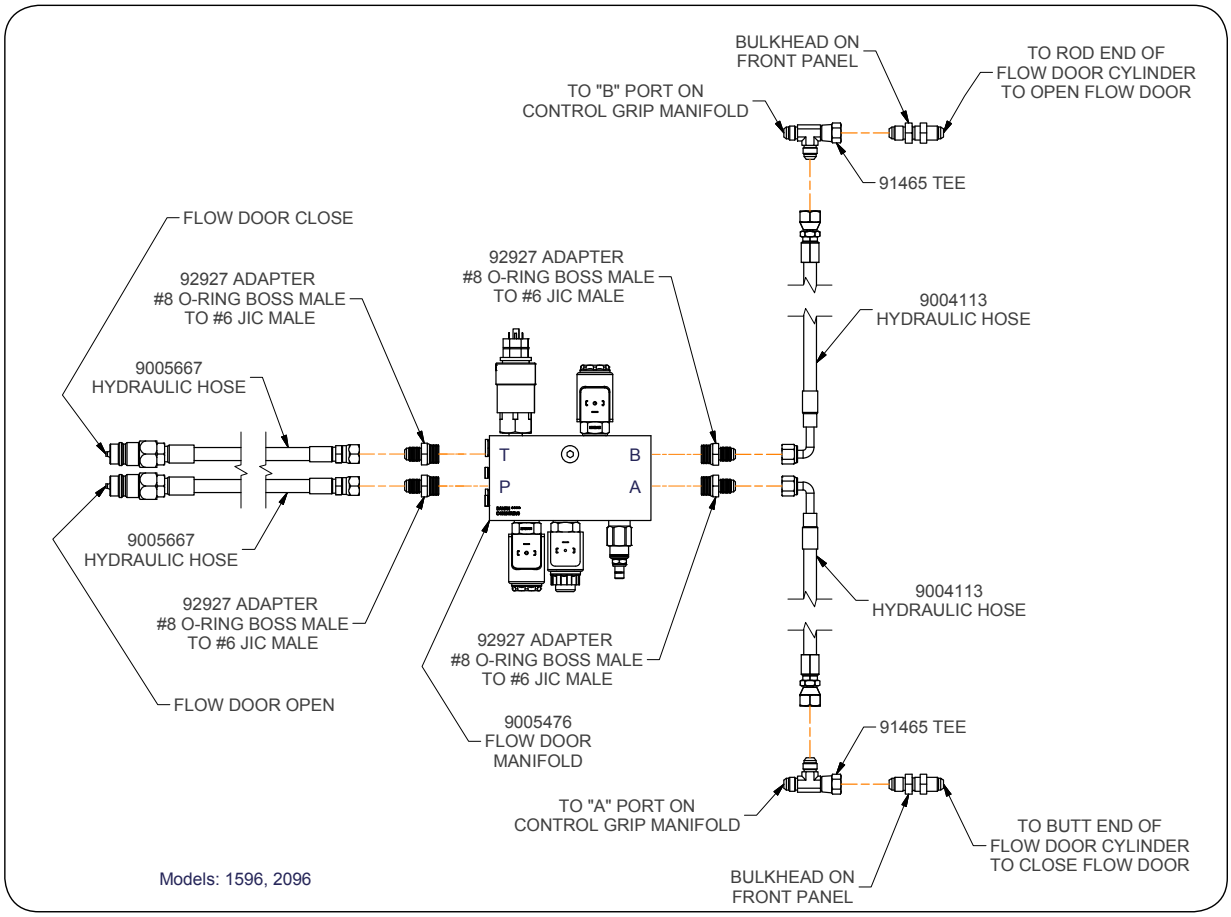


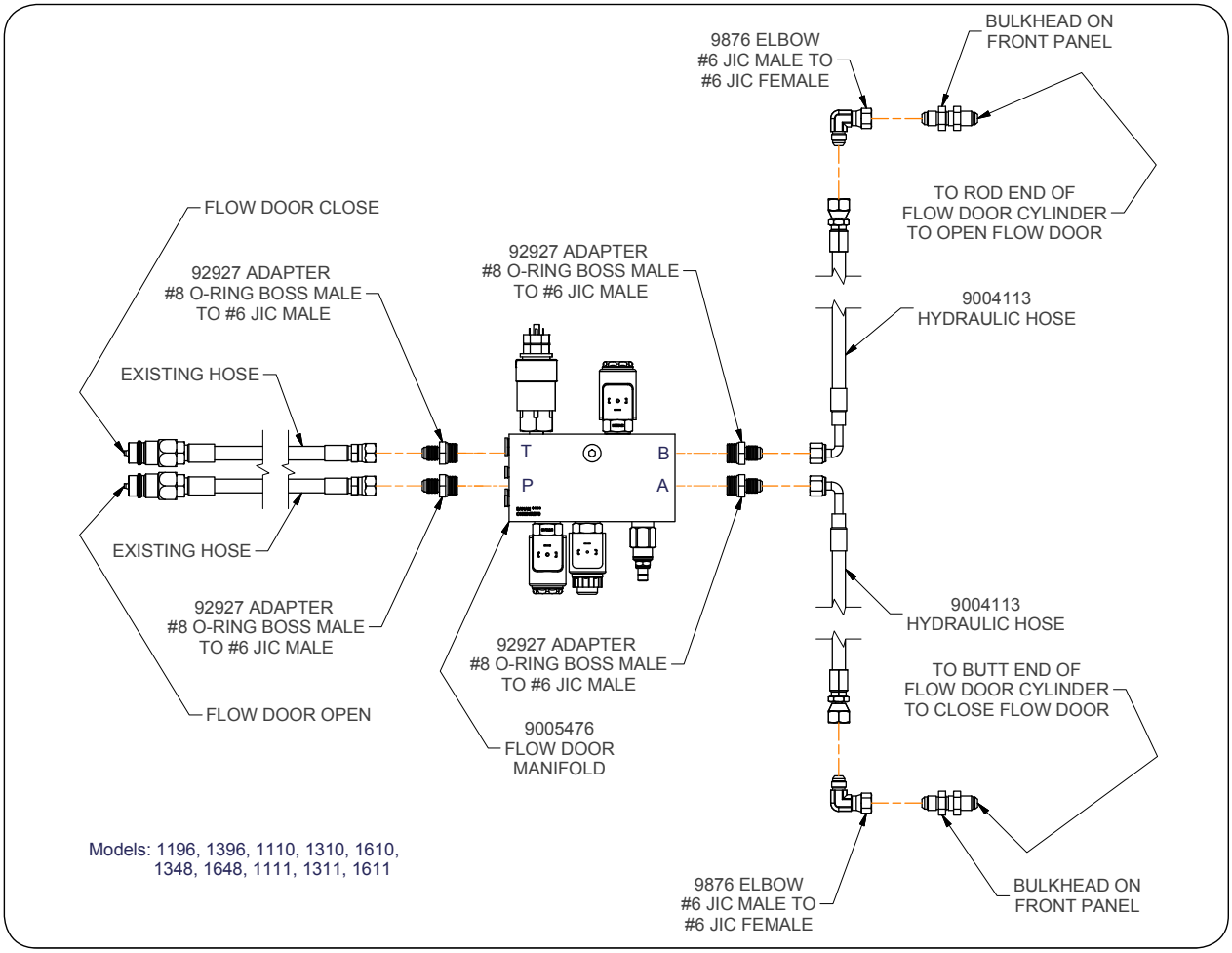
Fig. 82

Accu-Load Hydraulic Plumbing Schematic



Double- and In-Line Auger (continued)

Accu-Load Hydraulic Plumbing Schematic



Double- and In-Line Auger (continued)

Moisture Sensor (Optional)

These instructions are for Double- and In-Line Auger Carts except for the Killbros 1950 Cart. Those instructions can be found on the following page.

NOTE: The sensing face of the moisture sensor should be close to flush with the inside of the cleanout door.

NOTE: Some units may have a door with the hinge towards the front of the cart (opposite shown). Prior to opening the door, the moisture sensor connector must be disconnected.

1. Park the empty cart on a firm, level surface. Place the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

2. Remove the existing cleanout door from the auger assembly by first removing the two 3/8"-16 x 1 1/4" capscrews (9390-056) and two 3/8"-16 locknuts (9928). Retain the hardware for installing the new cleanout door.

3. Remove the two draw latches (9006497) from the existing cleanout door by first removing the six 10"-24 x 1/2" machine screws (9400-026) and six 10"-24 flange nuts (902331). Reinstall the latches to the new cleanout door (272636B, 273917B for 2096).

4. Install the moisture sensor (9006832) and guard (281835B) to the outside of the new cleanout door using the four 1/4"-20 x 1" carriage bolts (9388-003) and four 1/4"-20 flange nuts (97189). The moisture sensor should be oriented with the connector toward the hinge side of the cleanout door.

5. Zip tie the moisture sensor cord to the chain link on the cleanout door and attach the 4 pin shroud Weatherpack connector to the breakout labeled "Moisture" on the ISO harness (9006856). The 2-pin tower Weatherpack connector on the moisture sensor is not used and should remain plugged. Also, ensure that there is adequate slack in the cord and harness for the cleanout door to completely open and close.

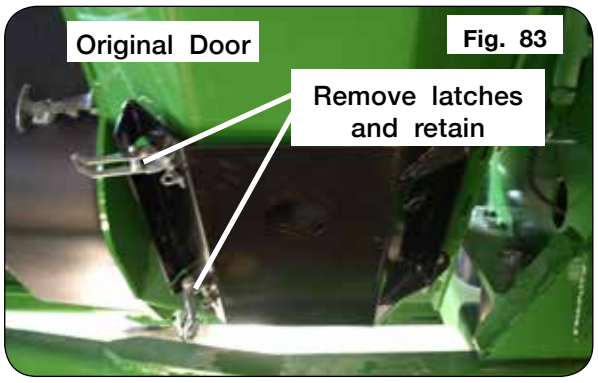


Fig. 83

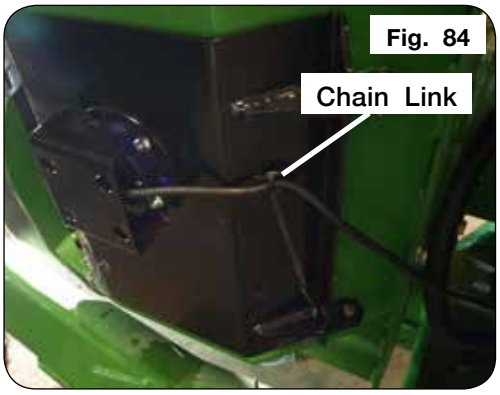


Fig. 84

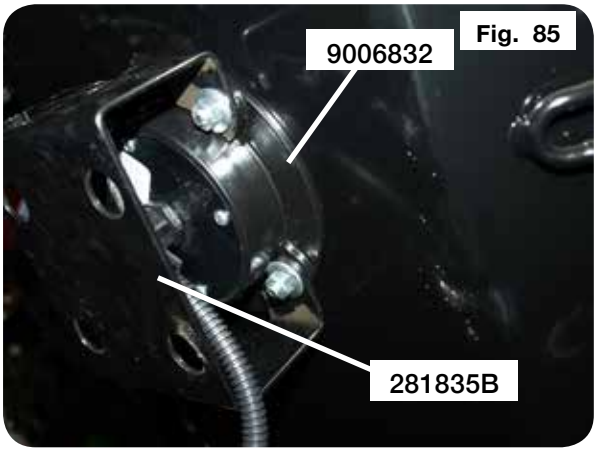


Fig. 85

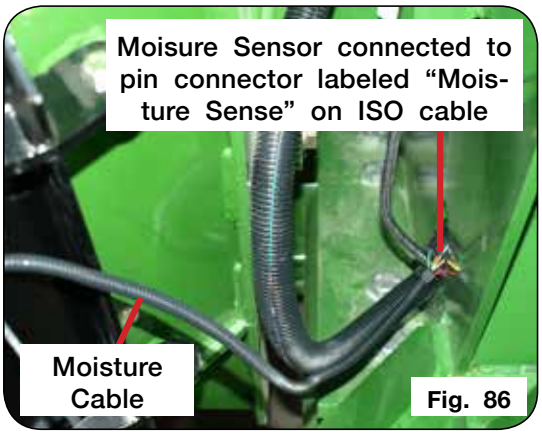


Fig. 86

Double- and In-Line Auger (continued)

Moisture Sensor (Optional)

For Killbros 1950 Carts:

NOTE: The sensing face of the moisture sensor should be close to flush with the inside of the cleanout door.

1. Park the empty cart on a firm, level surface. Place the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

2. If the cart does not have a pre-cut hole, use the template (2001515) in the kit provided. Center punch four mounting holes at the required location.

3. Drill holes using 9/32" dia. drill bit.

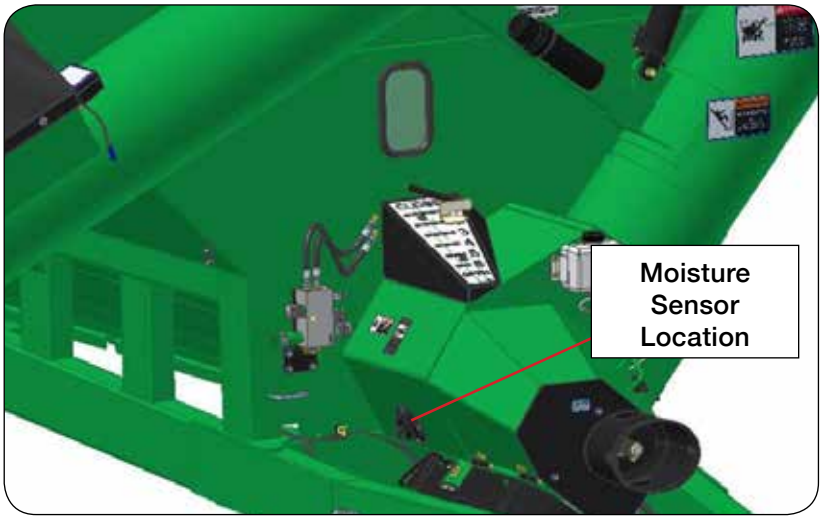
4. Secure the template to the cart using the four screws and nuts provided.

5. Using a hand-held plasma torch with 5/16" dia. tip, cut out the hole.

6. Remove the template. Deburr and clean up the hole to provide for proper mounting of the sensor.

4. Install the moisture sensor (9006832) and guard (281835B) to the bottom side of the vertical auger using the four 5/16"-18UNC x 3/4" self-threading bolts (9500724).

5. Route the cable and attach the 4 pin shroud Weatherpack connector to the breakout labeled "Moisture" on the ISO harness (9006856). The 2-pin tower Weatherpack connector on the moisture sensor is not used and should remain plugged.



Double- and In-Line Auger (continued)

Spout Centering (For Brent 1196, 1396, 1596, 2096 ONLY)

1. Park the empty cart on a firm, level surface. Place the tires on the machine to keep it from moving. Set the tractor's parking brake, shut off the engine, remove the ignition key and disconnect the PTO shaft and hydraulics from the tractor and cart.

Fig. 87

2. Install the sensor mount plate (284975B) to the two-holed plate on the side of the hood above the lower end of the spout tilt cylinder using two 1/4"-20 x 3/4" capscrews (9390-003), two 1/4" flat washers (9405-064), two 1/4" lock washers (9404-017) and two 1/4"-20 nuts (9394-002).

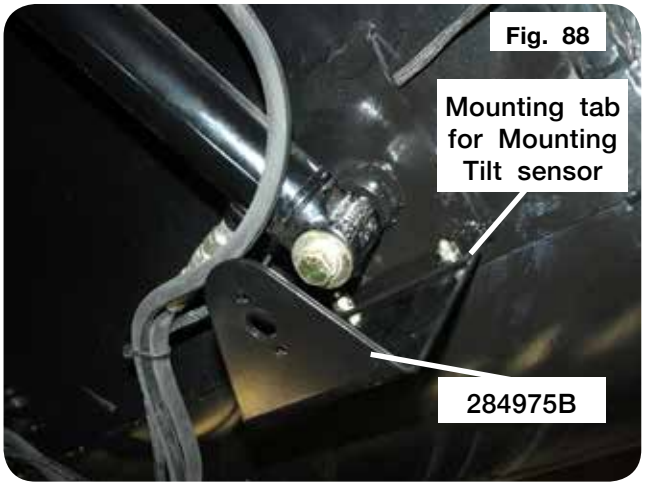


Fig. 88

3. Install one of the position sensors (9006838) to the outside of the sensor mount plate using two #10-24 x 1 1/2" machine screws (9500630-050), two 3/16" flat washers (9405-052) and two #10-24 flange nuts (902331). The sensor should be oriented with the connector toward the top end of the auger and the shaft toward the hood (Fig. 89). Position the sensor shaft centerline with the cylinder retaining bolt centerline as close as possible for best accuracy.

Fig. 89

Double- and In-Line Auger (continued)

Spout Centering (For Brent 1196, 1396, 1596, 2096 ONLY) (cont.)

4. Install the retainer weldment (284974) to the auger tilt cylinder using a 1/4”-20 U-bolt (9006839), two 1/4” flat washers (9405-064), two 1/4” lock washers (9404-017) and two 1/4”-20 nuts (9394-002) (Fig. 91). The retainer weldment should be oriented with the threaded rod straight, away from the hood. Do not completely tighten the two nuts as the retainer weldment will be located axially on the cylinder in the next step.

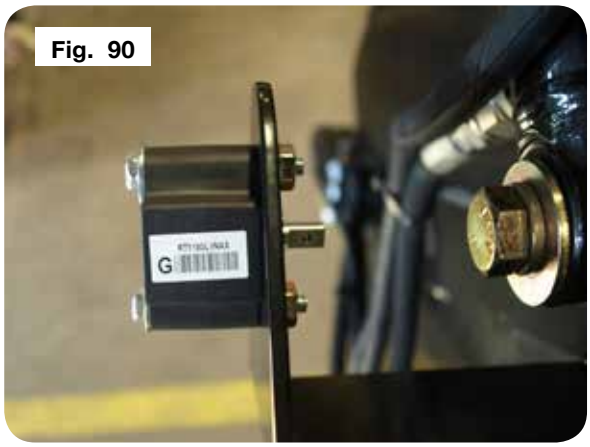


Fig. 90

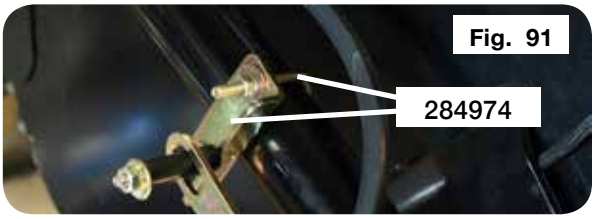


Fig. 91

5. Install one of the arm weldments (284972) to the sensor by sliding the bushing of the arm weldment over the shaft of the sensor and securing with a #10-24 x 1/4” set screw (9399-047). The set screw must be tightened against the flat face of the sensor shaft. The flat face of the sensor shaft must also be oriented away from the connector end of the sensor when the arm weldment is in line with the spout tilt cylinder. The threaded rod portion of the retainer weldment must also go through the slot in the arm weldment (Fig. 92 & 93).

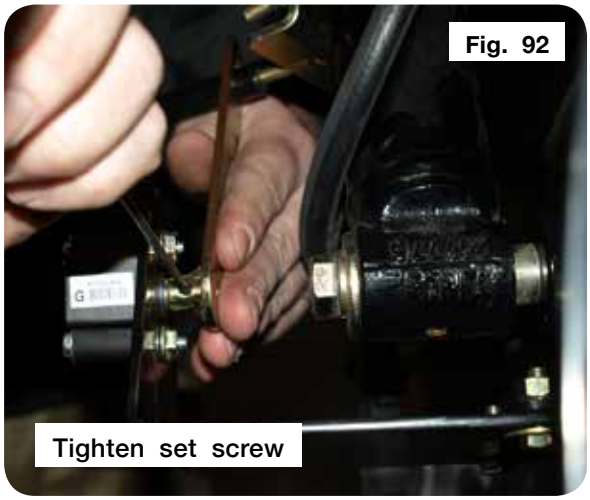


Fig. 92

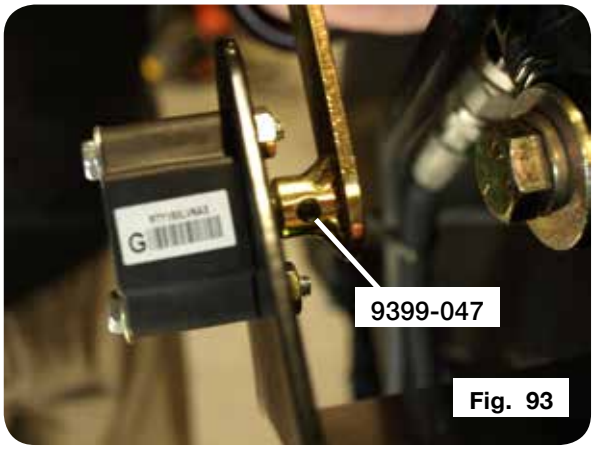


Fig. 93

Double- and In-Line Auger (continued)

Spout Centering (For Brent 1196, 1396, 1596, 2096 ONLY) (cont.)

6. Slide the shorter spacer bushing (284983) over the threaded rod portion of the retainer weldment and through the slot in the arm weldment. Retain the spacer bushing to the retainer weldment using a 1/4" flat washer (9405-064), 1/4" lock washer (9404-017) and 1/4" nut (9394-002). Center the spacer bushing in the slot in the arm weldment and tighten the two 1/4" nuts to secure the retainer weldment to the spout tilt cylinder (Fig. 94 & 95)

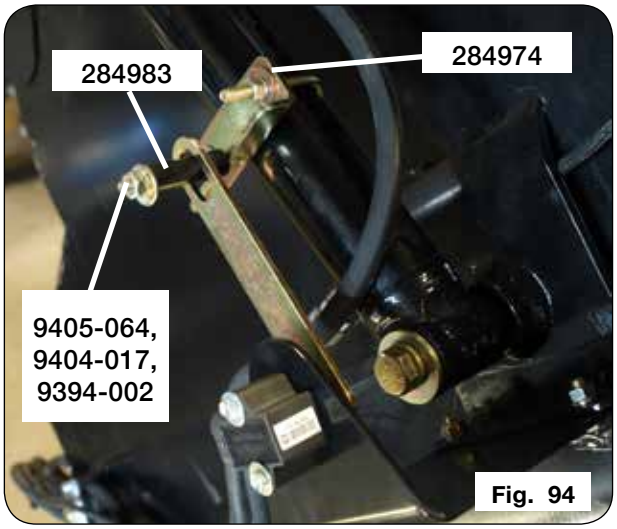


Fig. 94

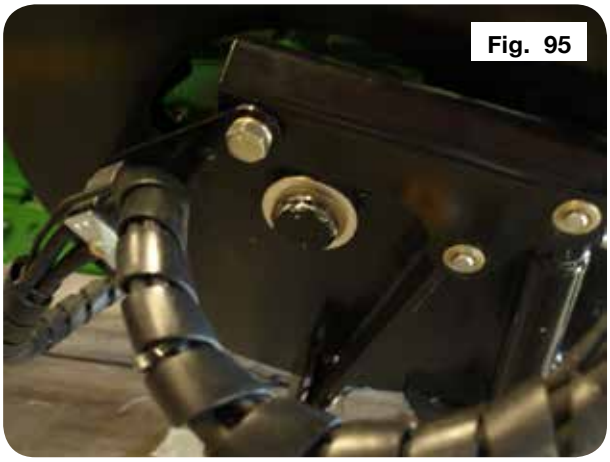


Fig. 95

7. Install the remaining position sensor (9006838) to the hood pivot weldment using two #10-24 x 1 1/2" machine screws (9500630-050), two #10 lock washers (9404-013) and two 3/16" flat washers (9405-052). The sensor should be oriented with the connector toward the cart and the shaft away from the hood pivot pin weldment (Fig. 96)

NOTE: If the hood pivot weldment does not have tapped holes, contact Unverferth Product Support.

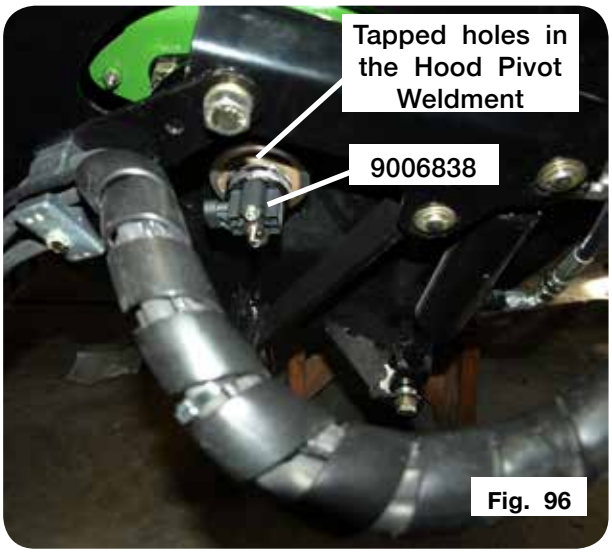


Fig. 96

Double- and In-Line Auger (continued)

Spout Centering (For Brent 1196, 1396, 1596, 2096 ONLY) (cont.)

8. Install the remaining arm weldment (284972) to the sensor by sliding the bushing of the arm weldment over the shaft of the sensor and securing the other #10-24 x 1/4" set screw (9399-047). The set screw must be tightened against the flat face of the sensor shaft. The flat face of the sensor shaft must also be oriented away from the connector end of the sensor when the slot on the arm is above the 1/4"-20 tapped hole through the end of the hood (Fig. 97).

8. Slide the longer spacer bushing (284984) through the slot in the arm weldment and line up with the 1/4"-20 tapped hole through the end of the hood. Retain the bushing with a 1/4"-20 x 4 1/2" capscrew (9390-018), 1/4" lock washer (9404-017) and 1/4" flat washer (9405-064) (Fig. 97).

10. Connect the breakout of the spout position harness (9006864) labeled "Tilt" to the first sensor installed on the side of the hood and the breakout labeled "Pivot" to the second sensor installed on the end of the hood. Route the spout position harness down the auger assembly with the hydraulic hoses and connect to the breakout on the ISO harness (9006856) labeled "Spout Sense". Ensure that there is adequate slack for the spout to tilt and rotate, and for the auger to fold and tilt.

11. Fully rotate and tilt the spout in both directions to ensure that there is adequate clearance for all of the newly installed components.

Refer to the UHarvest Operation Guide for steps for calibrating the Chute sensors, establishing the center position and operation.

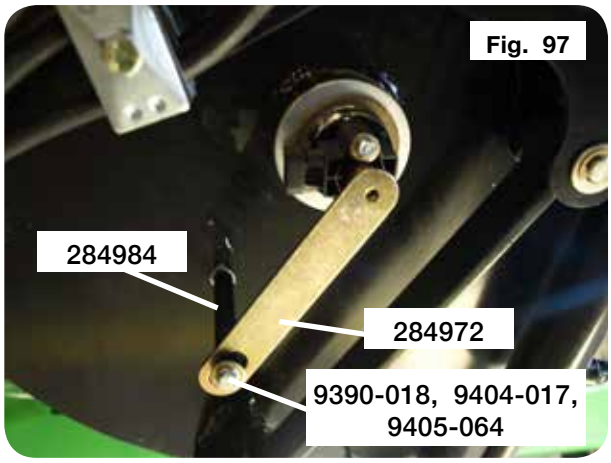
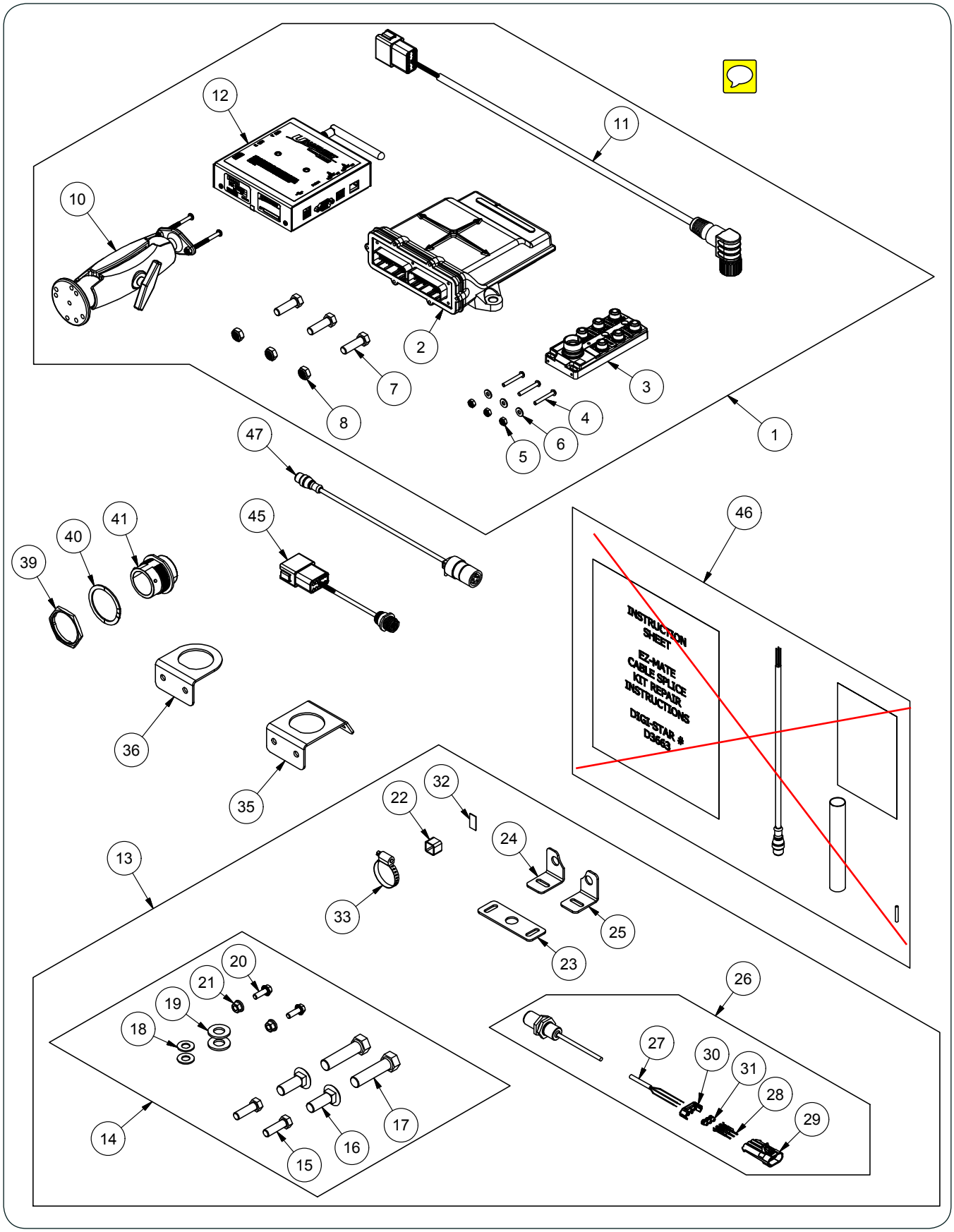


Fig. 97

Section III
Parts

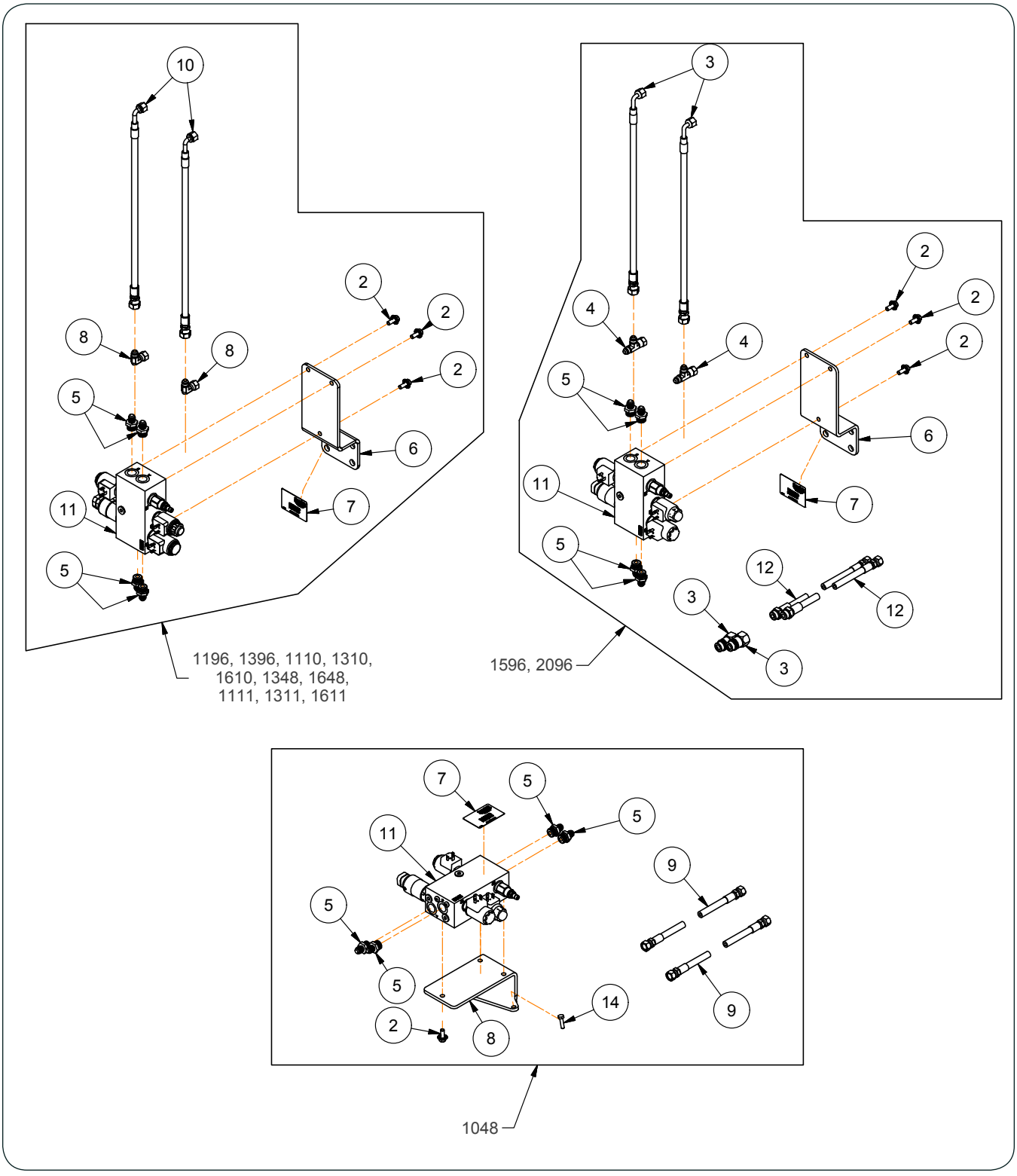
UHarvest Components



UHarvest Components

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	UHarvest Scale Kit - Universal	9006860	1	
2	UHarvest ECU	9006851	1	
3	Junction Box	9006852	1	
4	Pan Head Machine Screw, #10-32UNF x 1 1/4	9401-072	3	
5	Elastic Jam Nut, #8-32UNC	9397-001	3	
6	Flat Washer, #8	9405-044	3	
7	Capscrew, 3/8-16UNC x 1 1/4 Grade 5	9390-056	3	
8	Elastic Jam Nut, 3/8-16UNC Grade 5	9397-010	3	
9	Power Supply Cable	9006867	1	Not Shown
10	Mount Arm	9006859	1	
11	Cable Junction Box	9006871	1	
12	UHarvest Processor	9006854	1	
13	Accu-Save Sensor Kit =Black=	271473B	1	
14	Accu-Save Sensor Hardware Kit	251880	1	
15	Capscrew, 3/8-16UNC x 1 1/4 Grade 5	9390-056	2	
16	Carriage Bolt, 1/2-13UNC x 1 1/2 Grade 5	9388-104	2	
17	Capscrew, 9/16-12UNC x 2 1/4 Grade 5	9390-495	2	
18	Flat Washer, 3/8	9405-074	2	
19	Flat Washer, 1/2	9405-086	2	
20	Flange Screw, 1/4-20UNC x 3/4 Grade 5	97420	2	
21	Large Flange Hex Nut, 1/4-20UNC Grade 5	97189	2	
22	Target Sensor Tube =Black=	251881@	1	
23	Accu-Save Sensor Bracket =Black=	252065@	1	
24	Accu-Save Sensor Bracket =Black=	252198B	1	
25	Accu-Save Sensor Bracket =Black=	252199B	1	
26	Proximity Sensor w/Metri-Pack Connector	9006076	1	
27	Proximity Inductive Sensor	9005905	1	
28	Terminal/Male 18-16 GA	98942	3	
29	Connector - 3-Pin Shroud	9005445	1	
30	Connector - 3-Pin TPA Clip	9005446	1	
31	Cable, Seal-Metri Pack (White)	9006766	3	
32	Foam Tape	252349	1	
33	Hose Clamp	9006183	1	
34	UHarvest Pocessor Power Connection for John Deere Tractors equipped with Greenstar Screen	9006198	1	Not Shown
35	Connector Bracket =Black=	281836B	1	Single Auger ONLY
36	Connector Bracket =Black=	281837B	1	Double Auger ONLY
37	ISO Cable	9006855	1	Not Shown; Single Auger ONLY
38	ISO Cable	9006856	1	Not Showm; Double Auger ONLY
39	Panel Nut Size 24	9006885	1	
40	Lockwasher - Connector Size 24	9006886	1	
41	ISO Connector Cap Size 24	9006887	1	
42	Quick Start Guide for Notebooks	284991	1	Not Shown
43	Quick Start Guide for Virtual Terminal	271912	1	Not Shown
44	UHarvest Operating Manual	271913	1	Not Shown
45	Hard Wired Junction Box Adapter Cable	9006932	1	
46	Load Cell Cable & End Connector Repair Kit	~~9005115~~	1	Per Load Cell
47	Weigh-Tronix Load Cell Adapter Cable	9006863	1	Per Load Cell

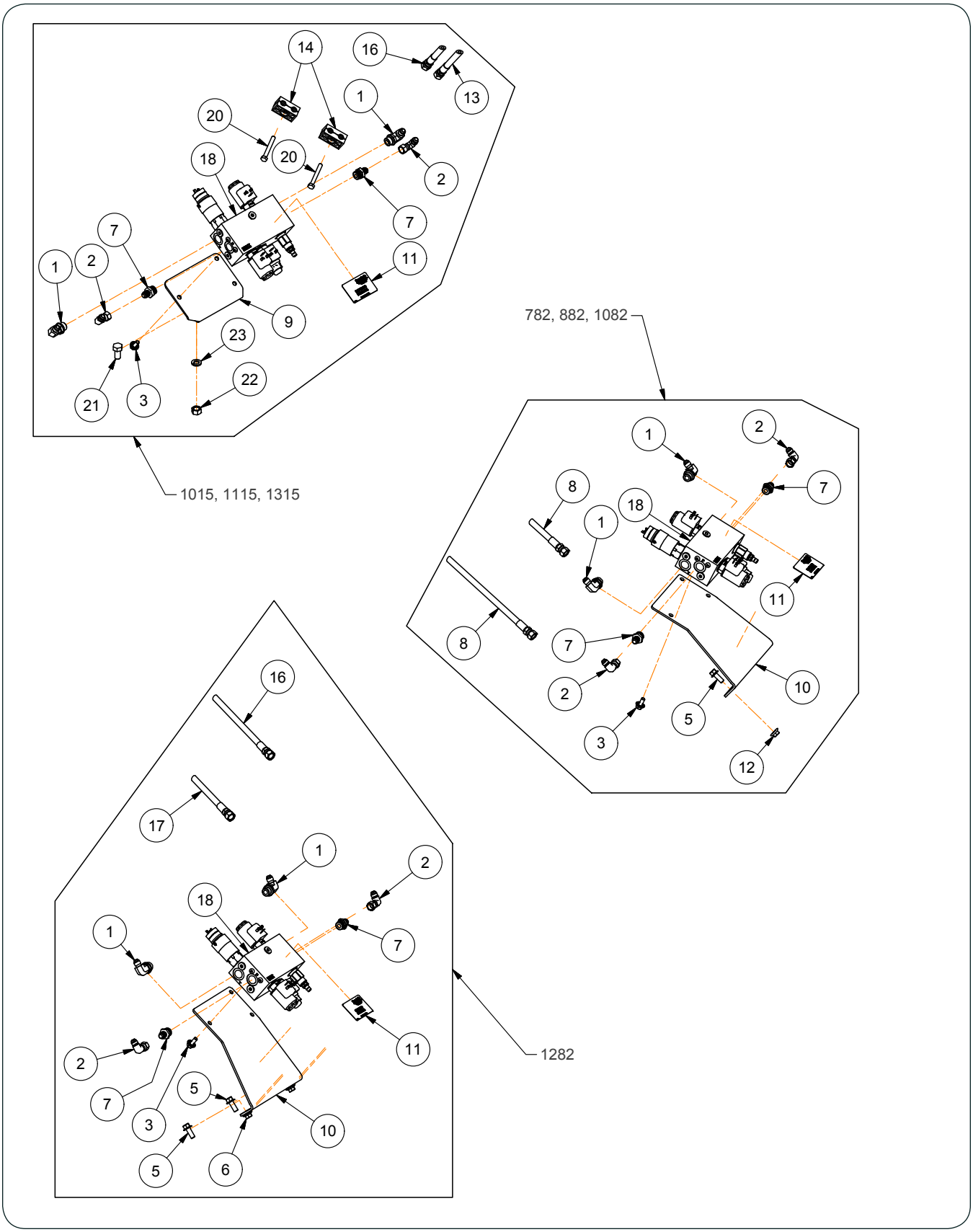
Accu-Load Components - Double- and In-Line Auger



Accu-Load Components - Double- and In-Line Auger

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Elbow 90 Degree 9/16-18 JIC Male x 9/16-18 JIC Female	9876	2	
2	Flange Screw 5/16-18 x 3/4	91256	3	Grade 5
3	Male Tip Coupling 3/4-16 O-Ring Female Threaded	91383	2	3000 PSI
4	Tee 9/16-18 JIC Male x 9/16-18 JIC Female Swivel Nut Run x 9/16-18 JIC Male	91465	2	
5	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	92927	4	
6	Plate 1/4 x 4 1/4 x 12 1/8 Valve Block Plate	252046B	1	
7	Decal - Patent Pending	273898	1	
8	Plate 1/4 x 6 7/16 x 12 1/4	284992B	1	
9	Hose 1/4 x 29 Hyd 3000 PSI 9/16-18 JIC Swivel Female Both Ends	9003131	2	
10	Hose 1/4 x 20 Hyd 3000 PSI 9/16-18 JIC 90 Degree Elbow x 9/16-18 JIC Swivel Female Both Ends	9004113	2	
11	Flow Door Manifold	9005476	1	
12	Hose 1/4 x 152 Hyd 3000 PSI 3/4-16 O-Ring Male x 9/16-18 JIC Swivel Female	9005667	2	
13	Cable - Accu-Load	9006858	1	Not Shown
14	HCS 1/4-20UNC x 1	9390-005	2	Grade 5

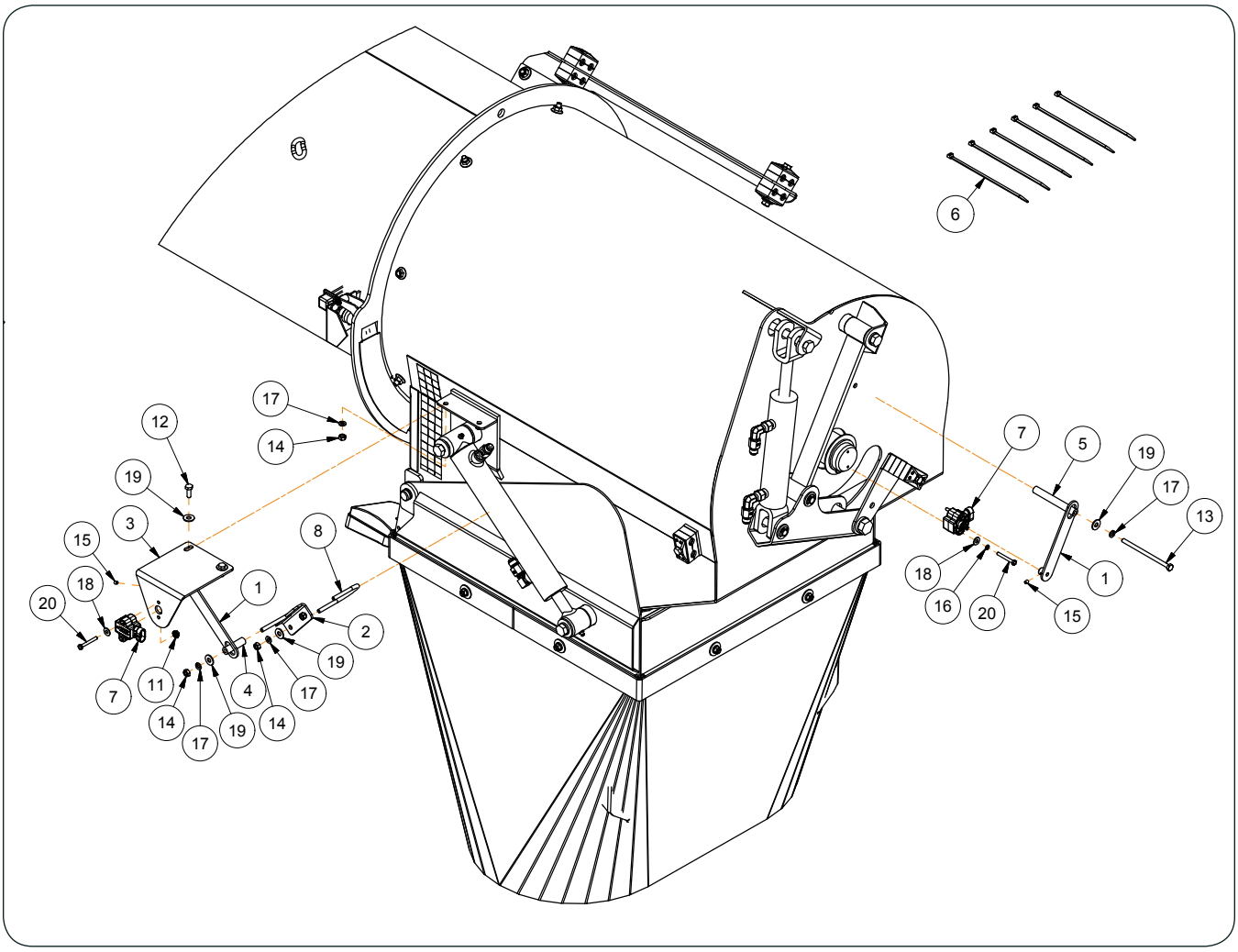
Accu-Load Components - Single-Auger



Accu-Load Components - Single-Auger

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Elbow 90 Degree 9/16-18 JIC Male x 3/4-16 O-Ring ADJ Male	9874	2	
2	Elbow 90 Degree 9/16-18 JIC Male x 9/16-18 JIC Female	9876	2	
3	Flange Screw 5/16-18 x 3/4	91256	3	
			5	
4	Hex Nut/Large Flange 5/16-18	91257	2	Grade 5
5	Flange Screw 3/8-16 x 1	91262	2	Grade 5
6	Nut/Large Flange 3/8-16UNC	91263	2	
7	Adapter 9/16-18 JIC Male x 3/4-16 O-Ring Male Boss	92927	2	
			4	
8	Hose 1/4 x 37 3000 PSI Hyd 9/16-18 JIC Female Swivel Both Ends	98081	2	
9	Bracket 8GA x 6 3/4 x 6 7/8	251677B	1	
10	Bracket 8GA x 9 1/8 x 12 1/4	251680B	1	
11	Decal - Patent Pending	273898	1	
12	Locknut/Flange 3/8-16UNC	9002717	2	Grade 5
13	Hose 1/4 x 31 Hyd 3000 PSI 9/16-18 Female Swivel JIC Both Ends	9003113	1	
14	Clamp Polypropylene Double 0.55D	9003816	2	
15	Hose 1/4 x 20 Hyd 3000 PSI 9/16-18 JIC 90 Degree Elbow x 9/16-18 JIC Swivel Female Both Ends	9004113	2	
16	Hose 1/4 x 53 Hyd 3000 PSI 9/16-18 Swivel Female JIC Both Ends	9005298	1	
17	Hose 1/4 x 80 Hyd 3000 PSI 9/16-18 Swivel Female JIC Both Ends	9005299	1	
18	Flow Door Manifold	9005476	1	
19	Cable - Accu-Load	9006858	1	Not Shown
20	HCS 5/16-18UNC x 2 1/2	9390-036	2	Grade 5
21	HCS 1/2-13UNC x 1	9390-099	2	Grade 5
22	Hex Nut 1/2-13UNC	9394-010	2	Grade 5
23	Lock Washer 1/2	9404-025	2	

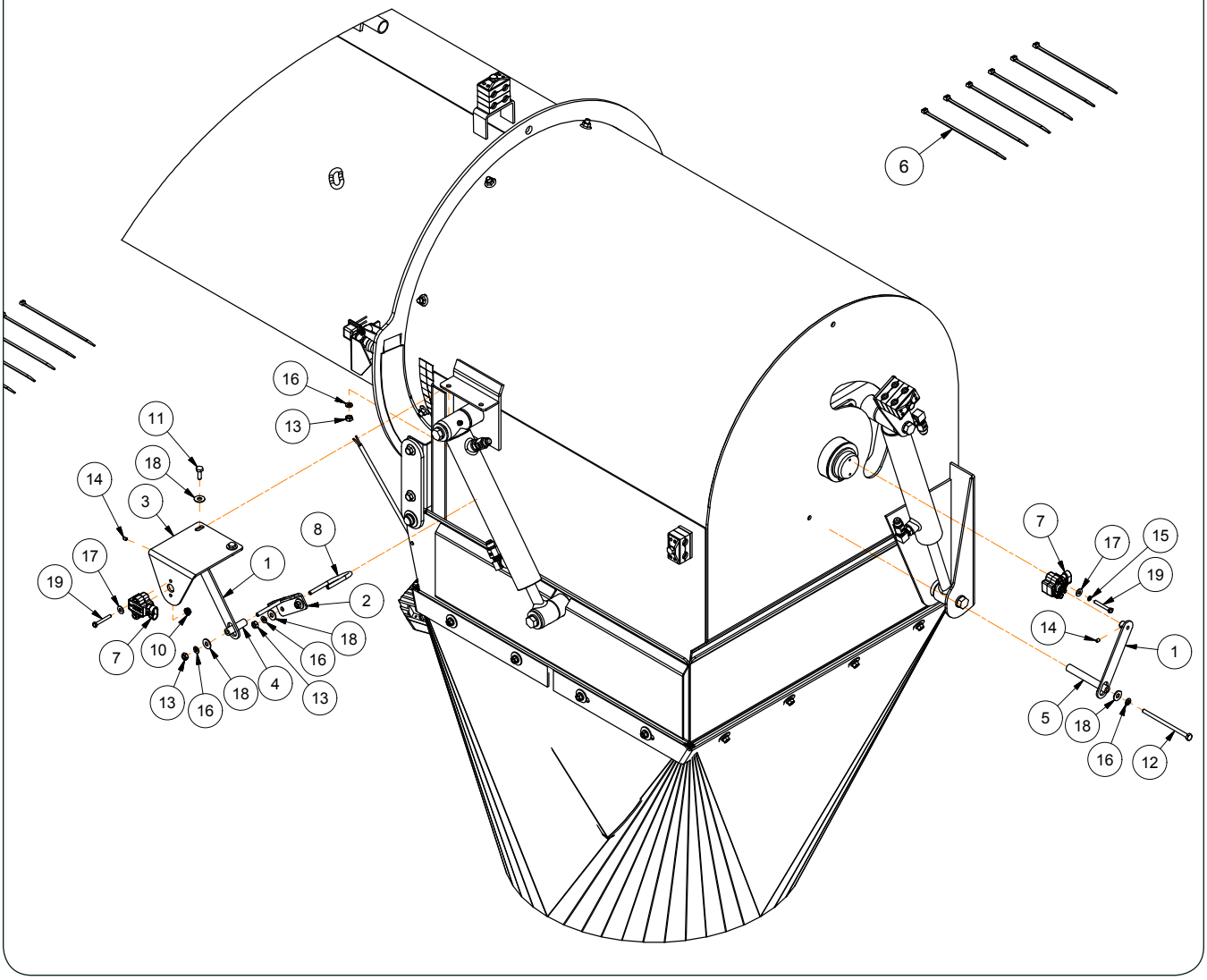
Spout Centering Components - Models 1196, 1396 & 1596



Spout Centering Components - Models 1196, 1396 & 1596

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Arm Weldment - Sensor	284972	2	
2	Retainer Weldment	284974	1	
3	Plate - Mount, Sensor	284975	1	
4	Bushing-Spacer	284983	1	
5	Bushing-Spacer	284984	1	
6	Cable Tie 6 x 3/16	9000106	6	
7	Sensor-Position, Hall-Effect	9006838	2	
8	U-Bolt 1/4-20	9006839	1	
9	Cable-Adapter, Joystick	9006857	1	Not Shown;Models 1196 & 1396 ONLY
10	Cable-Control, Chute	9006864	1	Not Shown
11	Flange Hex Nut #10-24	902331	2	
12	HCS 1/4 x 3/4UNC GR 5	9390-003	2	
13	HCS 1/4 x 4 1/2UNC GR5	9390-018	1	
14	Hex Nut 1/4-20UNC GR5	9394-002	5	
15	Set Screw 10 x 1/4UNC	9399-047	2	
16	Lock Washer #10 (.190)	9404-013	2	
17	Lock Washer 1/4	9404-017	6	
18	Flat Washer 3/16 USS	9405-052	4	
19	Flat Washer 1/4 USS	9405-064	6	
20	Machine Screw 10-24 x 1 1/2 Hex Head	9500630-050	4	

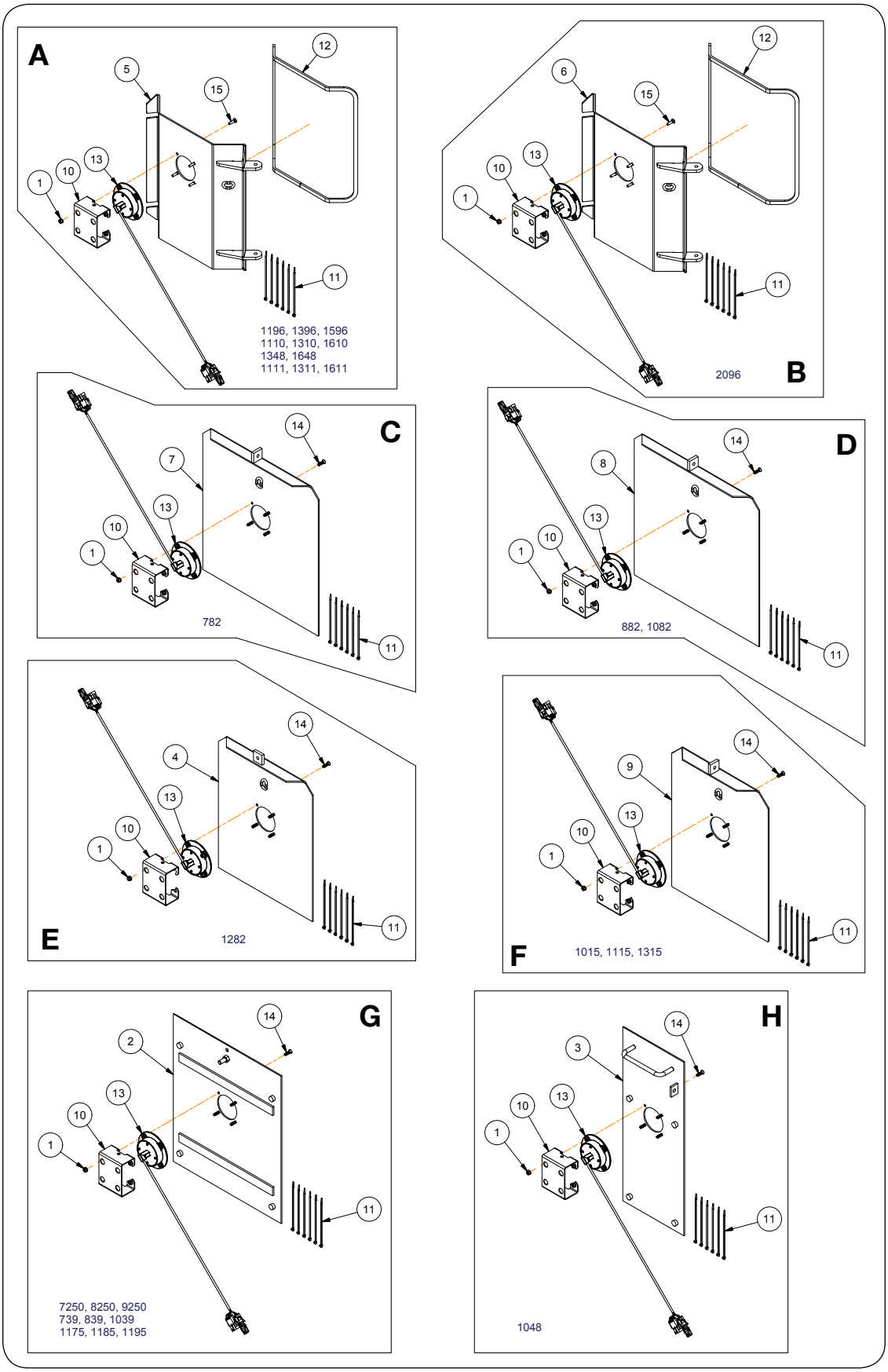
Spout Centering Components - Model 2096



Spout Centering Components - Model 2096

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Arm Weldment - Sensor	284972	2	
2	Retainer Weldment	284974	1	
3	Plate - Mount, Sensor	284975	1	
4	Bushing-Spacer	284983	1	
5	Bushing-Spacer	284984	1	
6	Cable Tie 6 x 3/16	9000106	6	
7	Sensor-Position, Hall-Effect	9006838	2	
8	U-Bolt 1/4-20	9006839	1	
9	Cable-Control, Chute	9006864	1	Not Shown
10	Flange Hex Nut #10-24	902331	2	
11	HCS 1/4 x 3/4UNC GR 5	9390-003	2	
12	HCS 1/4 x 4 1/2UNC GR5	9390-018	1	
13	Hex Nut 1/4-20UNC GR5	9394-002	5	
14	Set Screw 10 x 1/4UNC	9399-047	2	
15	Lock Washer #10 (.190)	9404-013	2	
16	Lock Washer 1/4	9404-017	6	
17	Flat Washer 3/16 USS	9405-052	4	
18	Flat Washer 1/4 USS	9405-064	6	
19	Machine Screw 10-24 x 1 1/2 Hex Head	9500630-050	4	

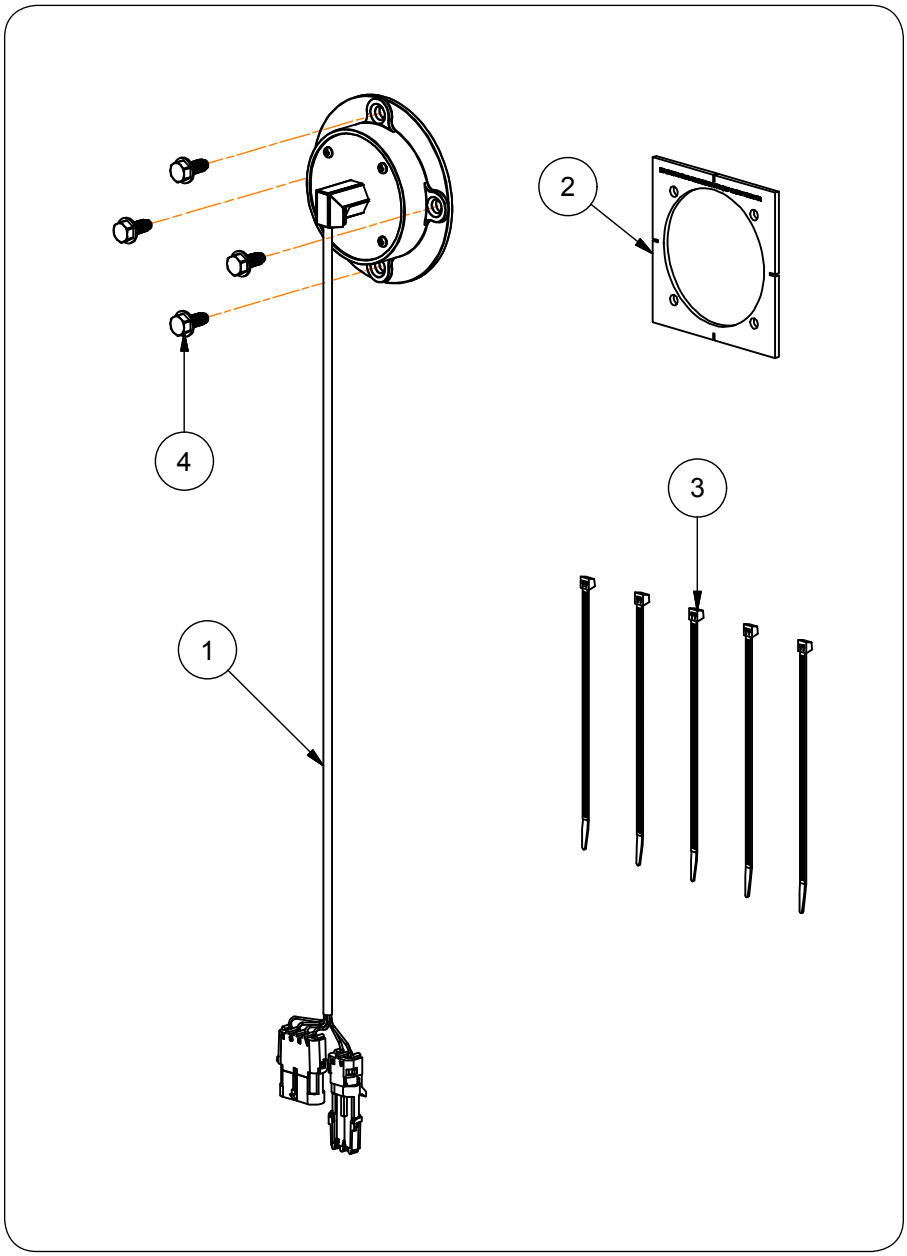
Moisture Sensor - All Units except Killbros 1950



Moisture Sensor - All Units except Killbros 1950

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
A	Moisture Sensor Kit			Brent 1196, 1396, 1596 Killbros 1110, 1310 Parker 1348, 1648 Unverferth 1111, 1311, 1611
B	Moisture Sensor Kit			Brent 2096
C	Moisture Sensor Kit			Brent 782
D	Moisture Sensor Kit			Brent 882, 1082
E	Moisture Sensor Kit			Brent 1282
F	Moisture Sensor Kit			Unverferth 1015, 1115, 1315
G	Moisture Sensor Kit			Killbros 1175, 1185, 1195 Parker 739, 839, 1039 Unverferth 7250, 8250, 9250
H	Moisture Sensor Kit			Parker 1048
1	Hex Nut/Large Flange 1/4-20UNC	97189	4	Grade 5
2	Cleanout Door Weldment =Black=	233689B	1	Killbros 1175, 1185, 1195 Parker 739, 839, 1039 Unverferth 7250, 8250, 9250
3	Cleanout Door Weldment =Black=	254748B	1	Parker 1048
4	Cleanout Door Weldment =Black=	268170B	1	Brent 1282
5	Cleanout Door Weldment =Black=	272636B	1	Brent 1196, 1396, 1596 Killbros 1110, 1310 Parker 1348, 1648 Unverferth 1111, 1311, 1611
6	Cleanout Door Weldment =Black=	273917B	1	Brent 2096
7	Cleanout Door Weldment =Black=	281830B	1	Brent 782
8	Cleanout Door Weldment =Black=	281832B	1	Brent 882, 1082
9	Cleanout Door Weldment =Black=	281834B	1	Unverferth 1015, 1115, 1315
10	Plate 12GA x 3 31/32 x 11 3/4 =Black=	281835B	1	
11	Cable Tie	9000106	6	
12	Gasket 1/4 x 1/2, Foam Material	9003757	A/R	
13	Moisture Sensor	9006832	1	
14	Flat Head 1/4-20UNC x 1 Capscrew	902703-021	4	
15	Carriage Bolt 1/4-20 x 1	9388-003	4	Grade 5

Moisture Sensor - Killbros 1950



Moisture Sensor - Killbros 1950

ITEM	DESCRIPTION	PART NO.	QTY	NOTES
1	Moisture Sensor	9006832	1	
2	Moisture Sensor Mount Template	2001515	1	
3	Cable Tie	9000106	5	
4	Thread-Cutting Screw 5/16-18 x 3/4	9500724	4	

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