



**SET UP
AND INSTALLATION
INSTRUCTIONS
FOR
OPTA-FLOW SPREADER**

**FOR SERIAL NUMBERS AFTER
10S100899**

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INTRODUCTION

The information contained in this manual will instruct you on the proper installation and set up of this machine. Refer to the Table of Contents for an outline of this manual.

We require that you read and understand the contents of this manual COMPLETELY, especially the chapter on SAFETY, before attempting any procedure contained in this manual.



The Society of Automotive Engineers has adopted this SAFETY ALERT SYMBOL to pinpoint characteristics that, if NOT carefully followed, can create a safety hazard. When you see this symbol in this manual or on the machine itself, BE ALERT!, your personal safety and the safety of others, is involved.

• Defined in the next column, are the SAFETY ALERT messages and how they will appear in this manual.



WARNING

Information, that if not carefully followed, can cause serious personal injury or death!



CAUTION

Information, that if not carefully followed, can cause minor injury or damage to equipment!

NOTE: Additional information concerning the equipment or the procedure that may or may not be contained elsewhere in this manual.

REMEMBER After the Spreader is installed on the vehicle, the Pre-Delivery Check List and Delivery Check List (on outside back cover of this manual) must be completed.

TOOL LIST

Safety Goggles

Wrenches 3/8" - 15/16"

Impact Wrench

Wire Crimp Tool

Torque Wrench 0-300 inch lbs.

Utility knife

12 Volt Test Light

Impact Sockets 3/8" - 15/16"

Drill Bit 13/32"

Drill

Hole Saw 1-3/8"

3/16" Allen Wrench

SAFETY



BEFORE ATTEMPTING ANY PROCEDURE IN THIS BOOK, READ AND UNDERSTAND ALL THE SAFETY INFORMATION CONTAINED IN THIS SECTION. IN ADDITION, ENSURE ALL INDIVIDUALS WORKING WITH YOU ARE ALSO FAMILIAR WITH THESE SAFETY PRECAUTIONS.

For your safety Warning and Information Decals have been placed on this product to remind the operator to take safety precautions. It is important that these decals are in place and are legible before operation begins. New decals can be obtained from Sno-Way or your local dealer.

REMEMBER The careful operator is the best operator. Most accidents are caused by human error. Certain precautions must be observed to prevent the possibility of injury to operator or bystanders and/or damage to equipment.

NEVER operate Spreader when under the influence of alcohol, drugs or other medications that could hamper your judgement and reactions. An accident may result in serious injury or death to other persons or yourself.

ALWAYS operate vehicle in a well-ventilated area. The carbon monoxide in exhaust gas is highly toxic and can cause serious injury or death.

NEVER allow hands, hair or clothing to get near any moving parts such as fan blades, belts and pulleys. Never wear neckties or loose clothing when working on the vehicle or spreader.

NEVER wear wrist watches, rings or other jewelry when working on the vehicle or individual equipment. These things can catch on moving parts or cause an electrical short circuit that could result in serious personal injury.

ALWAYS wear safety goggles when working on the vehicle to protect your eyes from battery acid, gasoline, and dust or dirt from flying off of moving engine parts.

ALWAYS be aware of and avoid contact with hot surfaces such as engine, radiator, and hoses.

ALWAYS wear safety glasses with side shields when striking metal against metal! In addition, it is recommended that a softer (non-chipable) metal material be used to cushion the blow. Failure to heed could result in serious injury to the eye(s) or other parts of the body.

NEVER allow children or unauthorized person to operate this unit.

NEVER exceed 45 m.p.h. when loaded Spreader is attached to vehicle. Braking distances may be reduced and handling characteristics may be impaired at speeds above 45 m.p.h.



ALWAYS lock the vehicle when unattended to prevent unauthorized operation.

ALWAYS check the job site for terrain hazards, obstructions and people.

ALWAYS check surrounding area for hazardous obstacles before operating this unit.

ALWAYS inspect the unit periodically for defects. Parts that are broken, missing or plainly worn must be replaced immediately. The unit, or any part of it should not be altered without prior written approval of the manufacturer.

ALWAYS shut off the vehicle engine, place the transmission in Park, turn the ignition switch to the "OFF" position and firmly apply the parking brake of the vehicle before attaching or detaching the Spreader from the vehicle or when making adjustments to the Spreader Gates and/or Deflectors.

ALWAYS make sure personnel are clear of area being spread. Material is discharged from spreader at a high rate of speed and could injure bystanders.

ALWAYS inspect bolts and pins whenever attaching or detaching the Spreader, and before traveling. Worn or damaged components could result in the Spreader dropping to the pavement while driving, causing an accident.

NEVER place fingers in mounting frame or mount lug holes to check alignment when attaching spreader. Sudden motion of the spreader frame could severely injure a finger.

NEVER use material in the spreader containing twigs, brush, plastics, cans or other trash. Foreign materials could plug drive and discharge and damage unit.

NEVER use wet materials in the spreader. This unit is not designed to handle wet materials. Use only dry free flowing materials.

NEVER leave materials in hopper for long periods of time. Remember salt is Hygroscopic and will attract enough atmospheric moisture to cause it to "cake".

NEVER work on the vehicle without having a fully serviced fire extinguisher available. A 5 lb or larger CO² or dry chemical unit specified for gasoline, chemical or electrical fires, is recommended.

NEVER smoke while working on the vehicle. Gasoline and battery acid vapors are extremely flammable and explosive.

REMEMBER it is the owner's responsibility for communicating information on the safe use and proper maintenance of this machine.

VEHICLE FRAME & HOPPER INSTALLATION

Side Bracket Installation



WARNING

• Ensure Engine is OFF and set parking brake before mounting equipment on to vehicle. Vehicle movement, equipment failure or inadvertent operation of the control switches during installation could result in serious injury.

• NEVER place fingers in frame or mount lug holes to check alignment. Sudden motion of the frame could severely injure a finger.

FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.

1. Park vehicle in a flat clear safe work area. Set park brake. Remove key from ignition switch.

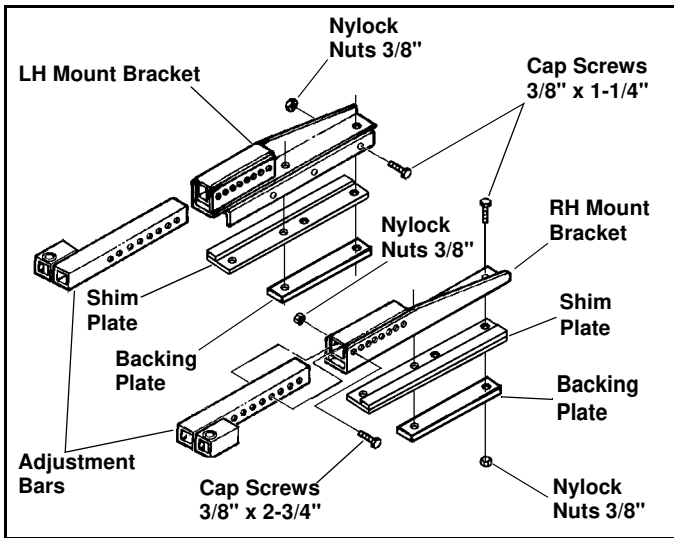


Figure 1-1

2. Locate the following parts: (See Figure 1-1)

- Left Hand Mount Bracket (#96102402), 1 req.
- Right Hand Mount Bracket (#96102401), 1 req.
- Shim Plate (#96104461), 2 req.
- Backing Plate (#96102273), 2 req.
- Adjustment Bars (#96102875), 2 req.
- Cap Screws 3/8" x 1-1/4" (#98009034), 10 req.
- Cap Screws 3/8" x 2-3/4" (#98100027), 4 req.
- Nylock Nuts 3/8" (#98009009), 14 req.

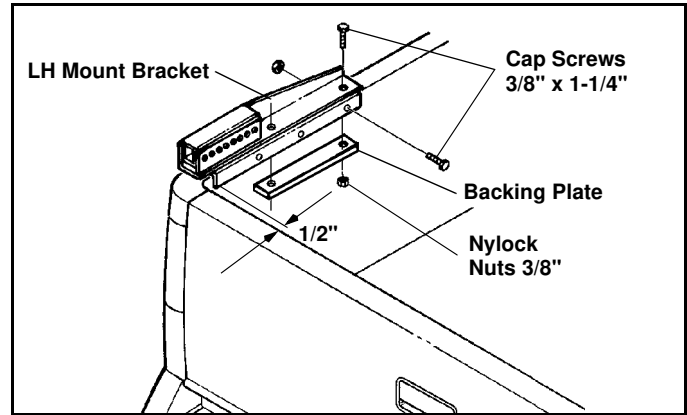


Figure 1-2

3. Place Mount Brackets (#96102402) on top of pick up bed side rails with leg of bracket against inside of pickup bed top side rail and with back of vertical leg approximately 1/2" in front of the inside of the tailgate. The square tube is to the rear of the bracket (closest to tailgate). (See Figure 1-2)

4. When Mount Brackets are correctly aligned with box rail clamp in place with a C-Clamp.

5. Using the two holes in the top and the three holes in the side of the Mount Brackets as a template drill 13/32" holes through vehicle bed side rail.

6. The top of the pick up bed side rails of many late model trucks are somewhat curved or sloping which will not allow the Mount Brackets (#96102401 & #96102402) to lie flat and level. To compensate for the slope or curve of the bed side rails, Shim Plates (#96104461) are provided to be installed between the Mount Brackets and the top of the truck side rails. Place a Shim Plate (#96104461) under the Mount Bracket with the shim strip (double thickness) toward the outside of the vehicle and the shim strip facing up.

7. Place Backing Plate (#96102273) under frame rail and secure each Mount Bracket to vehicle rail using five (5) 3/8" x 1-1/4" Cap Screws (#98009034) and Nylock Nuts provided. (See Figure 1-2)

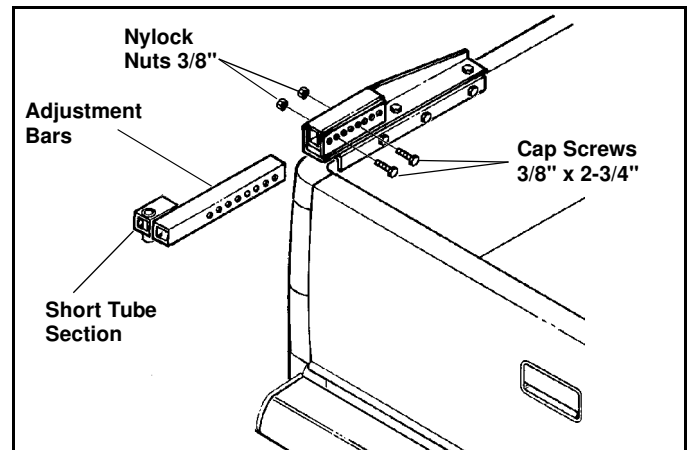


Figure 1-3

8. Locate two (2) Adjustment Bars (#96102875) and place them in Mount Brackets oriented so the short tube section is towards the outside of each Bar. Align holes in Adjustment bars with holes in Mount Bracket. Loosely secure each Bar with two (2) 3/8" x 2-3/4" Cap Screws (#98100027) and Nylock Nuts provided. (See Figure 1-3)

NOTE: Both Adjustment Bars should extend the same amount from the Mount Brackets.

Frame Assembly

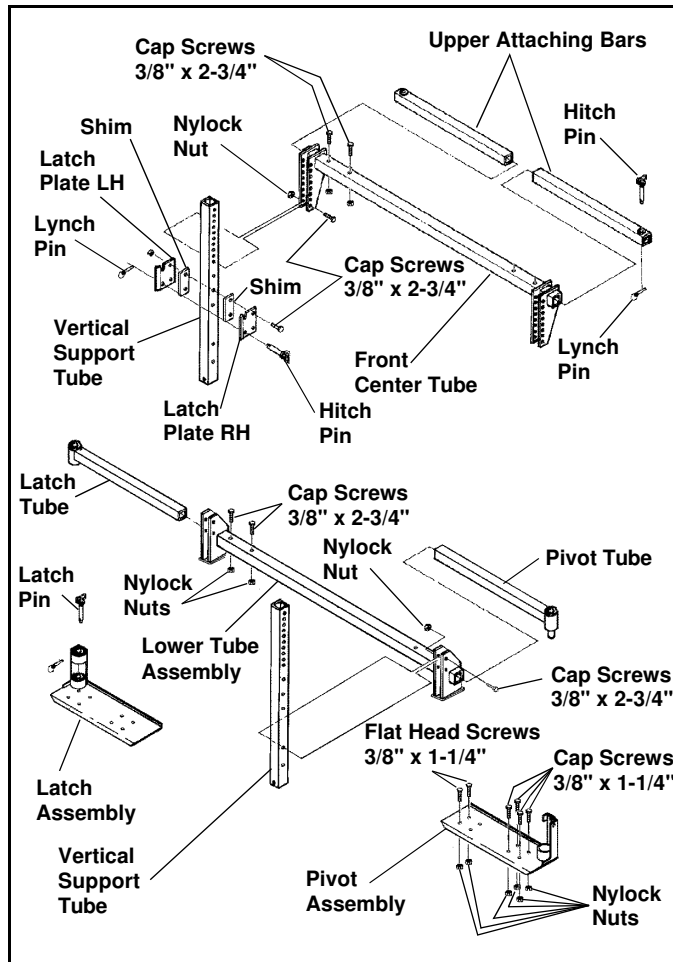


Figure 1-4

1. Locate the following parts:

- Front Center Tube (#96101909), 1 req.
- Upper Attaching Bar (#96101801), 2 req.
- Vertical Support Tube (#96101912) 2 req.
- Lower Tube Assembly (#96102878) 1 req.
- Latch Plate RH (#96102046) 2 req.
- Latch Plate LH (#96102045) 2 req.
- Shim (#96102399), 4 req.
- Cap Screws 3/8" x 2-3/4" (#98100027), 20 req.

- Cap Screws 3/8" x 1-1/4" (#98009034), 8 req.
- Nylock Nuts 3/8" (#98009009), 32 req.
- Hitch Pin (#96101794), 2 req.
- Lynch Pin (#98009169), 2 req.
- Pivot Side Tube (#96102870), 1 req.
- Latch Side Tube (#96102874), 1 req.
- Pivot Assembly (#96102861), 1 req.
- Latch Assembly (#96102865), 1 req.
- Latch Pin (#96102859), 1 req.
- Retainer Pin (#98100162), 1 req.
- Flat Head Screw (#98100163), 4 req.

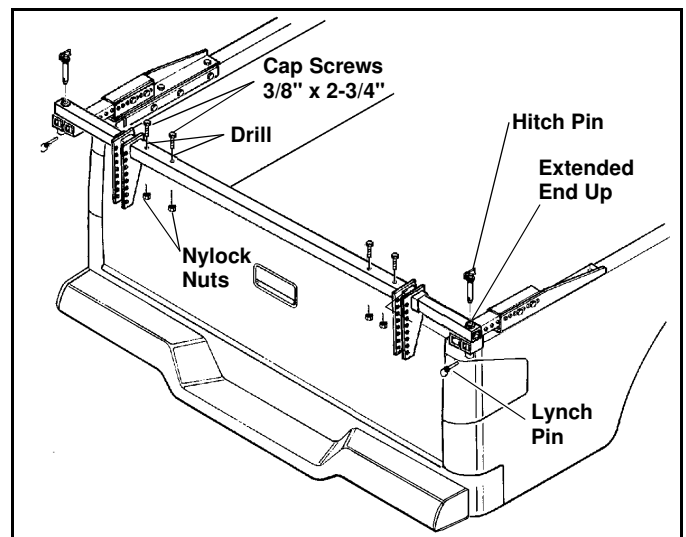


Figure 1-5

2. Place one (1) Upper Attaching Bar (#96101801) into each end of Front Center Tube (#96101909). Place the assembled unit on top of the two adjustment bars previously installed on the truck bed side rails and install a Hitch Pin (#96101794) through the two ends. Be sure that extended end of the round tube in the attaching bars are to the top. Be sure the mounting plates of the center tube are facing away from the truck bed and extended downward from the tube. (See Figure 1-5)

3. Adjust the Side Adjustment Bars so that all parts of the Front Center Tube are a minimum of 5/8" behind the tailgate of the vehicle.

NOTE: The hole patterns in the Vertical Support Tubes and Front Center Tube Mounting Brackets are arranged so that two holes spaced 3" apart will line up. Moving the Adjustment Bars or the Vertical Support Tubes 1/4" will permit a different set of holes to line up. By selecting a different pair of holes on 3" spacing, an adjustment in 1/4" increments is possible.

4. Center the Front Center Tube Assembly with the vehicle (side to side) and using the holes in the Front Center Tube Assembly as templates, drill 13/32" holes through the Adjustment Bars. Secure each bar with two (2) 3/8" x 2-3/4" Cap Screws and Nylock Nuts provided. (See Figure 1-5)

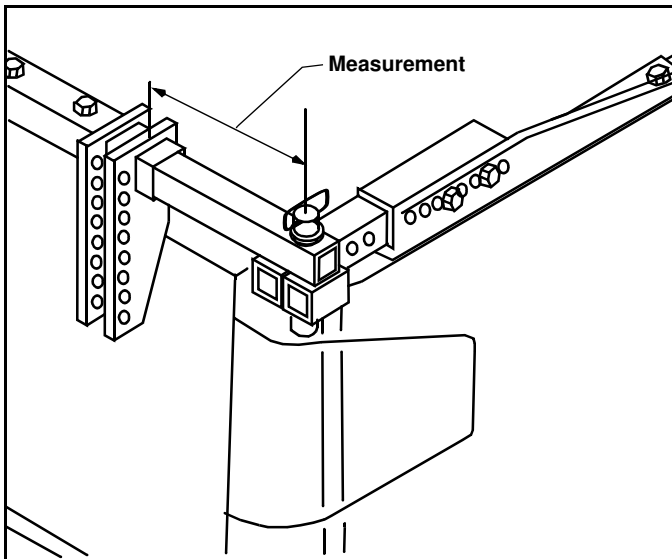


Figure 1-6

5. Measure and record the distance from the center of the right side Hitch Pin to the face of the closest Mounting Plate. (See Figure 1-6)

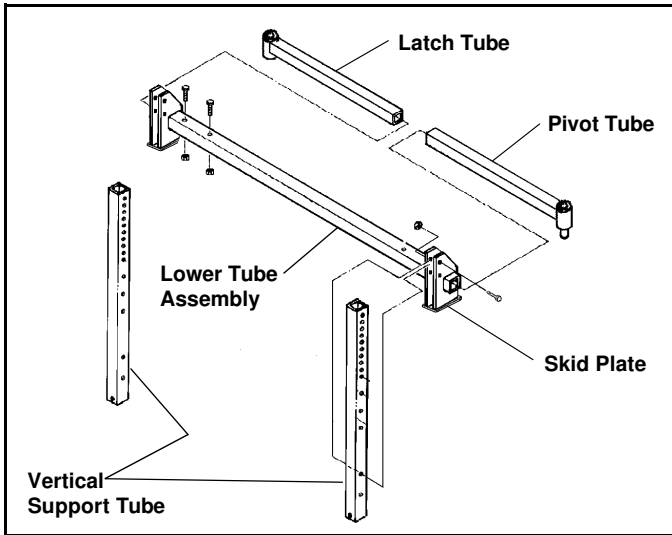


Figure 1-7

6. Orient the Lower Tube Assembly (#96102878) so that the skid plates are down and the mounting holes in the side plates are facing away from vehicle. Place the Pivot Side Tube Assembly (#96102870) into the right side of the Lower Tube Assembly, and place Latch Side Tube Assembly (#96102874) into left side of Lower Tube Assembly. (See Figure 1-7)

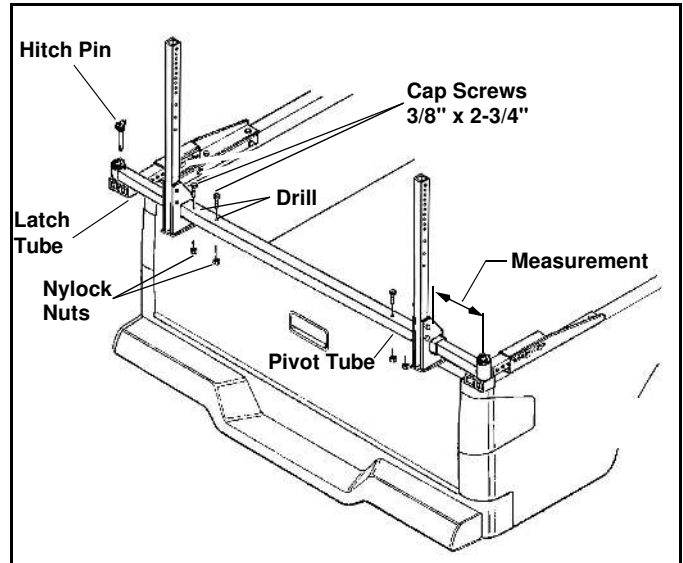


Figure 1-8

7. Remove the Front Center Tube Assembly, with Attaching Bars, and place the Lower Tube Assembly, with Pivot and Latch Tubes, on top of the Adjustment Bars, on the vehicle. Locate Pivot Side Pin in Hitch Pin hole on right side Adjustment Bar and secure Latch Side Tube to the left side Adjustment Bar with a Hitch Pin. (See Figure 1-8)

8. Measure from the center of the Pivot Pin to the nearest mounting plate in the Lower Tube Assembly. Move Lower Tube Assembly until this measurement matches the measurement recorded previously. (See Step #5.) When Lower Tube Assembly is correctly located, using the holes in the Lower Tube Assembly as templates, drill four (4) 13/32" holes through the Pivot and Latch Tubes. Secure each bar with two (2) 3/8" x 2-3/4" Cap Screws and Nylock Nuts provided. Remove the Lower Tube Assembly from the Adjustment Bars. (See Figure 1-8)

9. Place a Vertical Support Tube (#96101912) between the mounting plates on the Lower Tube Assembly and secure with two (2) 3/8" x 2-3/4" Cap Screws and Nylock Nuts provided. (See Figure 1-7)

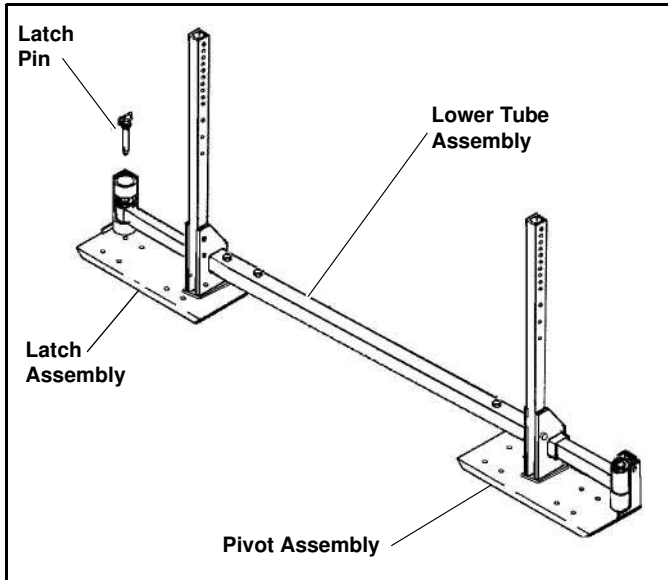


Figure 1-9

10. Install the Pivot Assembly (#96102861) on the end of the Pivot Tube. Rotate until Pivot assembly "locks" in position.

11. Install the Latch Assembly on the end of the Latch Tube. Secure with Latch Pin.

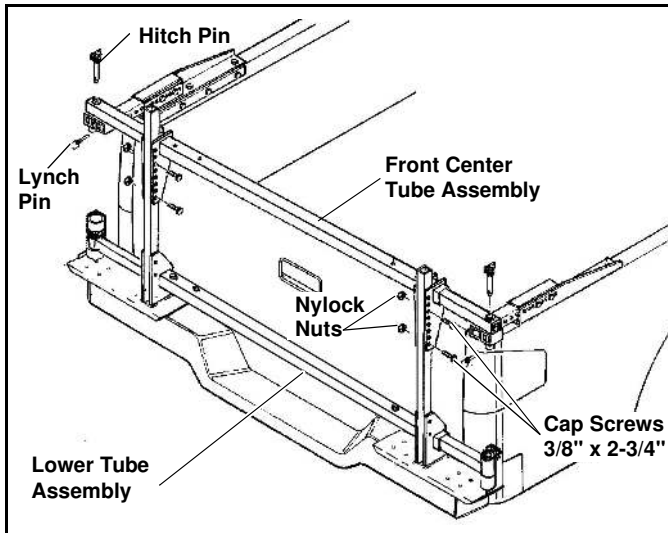


Figure 1-10

12. Place Front Center Tube Assembly, with Attaching Bars, back on the Mounting Tubes and secure with Hitch Pins and Lynch Pins.

13. Place the Lower Tube Assembly, with Pivot and Latch Assemblies, on the vehicle bumper with the Vertical Support Tubes lined up with mounting holes in the Mounting Plates of the Front Center Tube Assembly. Install two (2) 3/8" x 2-3/4" Cap Screws through holes in each Vertical Tube and Mounting Plate. Secure loosely with Nylock Nuts provided. (See Figure 1-10)

NOTE: The hole patterns in the Side Adjustment Bars and Side Mounting Brackets are arranged so that two holes spaced 3" apart will line up. Moving the Adjustment Bars or the Vertical Support Tubes 1/4" will permit a different set of holes to line up. By selecting a different pair of holes on 3" spacing, an adjustment in 1/4" increments is possible.

14. Position the Lower Tube Assembly so that the Vertical Support Tubes are absolutely vertical. Rotate the Pivot Plate and the Latch Plate until the Vertical leg contacts the Skid Plate on the bottom of the Lower Tube Assembly.

NOTE: When correctly located the bottom, mounting, plates on the Pivot and Latch Assemblies should lay flat against the vehicle bumper and the trailing edge should hang over the rear of the bumper. If not, adjust the Attaching Bars in or out, as required, so the correct alignment is achieved.

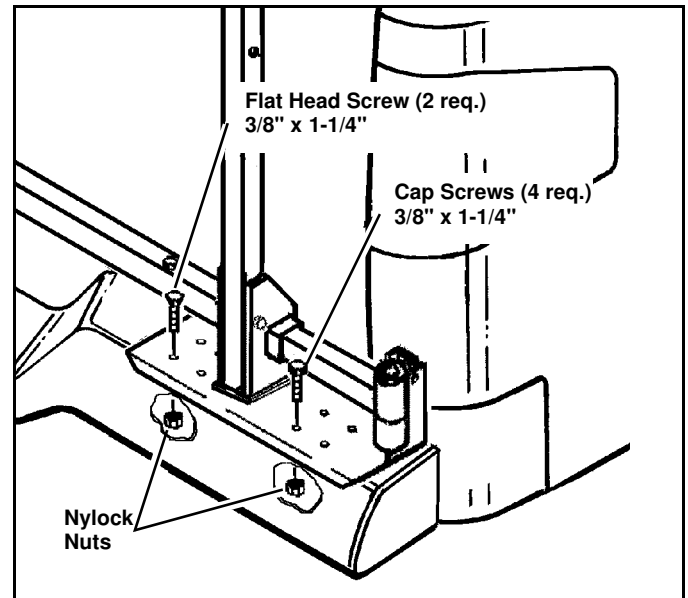


Figure 1-11

NOTE: Only two Flat Head Screws are used per assembly. Select tapered holes that do not interfere with bumper mounting hardware. If there is no interference use the holes closest to the center of the vehicle.

15. Using Holes in the Pivot and Latch assemblies as templates mark and drill six (6) 13/32" holes through the top of the vehicle bumper.

NOTE: It may be convenient to mark and drill the rear holes first, then bolt the assemblies in place. After that the mounting Frame can be removed to allow easy access to mark and drill the remaining holes.

NOTE: The pivot assembly and latch assembly are designed to be essentially a "universal fit" on the bumpers of pick-up trucks. Because of the wide variety of bumpers available for trucks, the preferred mounting hole usage may not always fit exactly according to the installation instructions in items 15 and 16 of these instructions. If the existing mounting holes in the latch assembly and pivot assembly can't be used exactly as specified in these instructions, the installer can drill additional holes in these brackets to allow bolting to the bumper. Each bracket should be installed with at least three bolts, preferably with at least one bolt near the rear of the bumper. Any additional holes drilled by the installer should be placed so that the mounting holes will not interfere with the skid plates on the lower tube assembly and so that they will not interfere with any bumper brackets or braces.

16. Secure the Pivot and Latch Assemblies to the vehicle bumper with four (4) 3/8" x 1-1/4" Cap Screws (#98009034) and two (2) 3/8" x 1-1/4" Flat Head Screws (#98100163) and Nylock Nuts provided. (See Figure 1-11)

17. If removed, install the Frame Assembly into the Pivot Bracket and swing Frame Assembly into position in Latch Bracket. Place Latch Pin (#96102859) through hole in Frame Assembly and Latch Bracket, secure with Retaining Pin (#98100162).

18. Align Upper attaching Bars with the Attachment Bars and place Hitch pin through bars and secure with Lynch Pin (#98009169).

19. Remove the cap screws previously installed through the Side Adjustment Bars and Side Mounting Brackets. Move the Side Adjustment Bars **forward** (to front of vehicle) until the next set of holes are in line (approximately 1/4") and re-install the cap screws and Nylock Nuts. This will insure that the top of the mounting frame leans slightly forward.

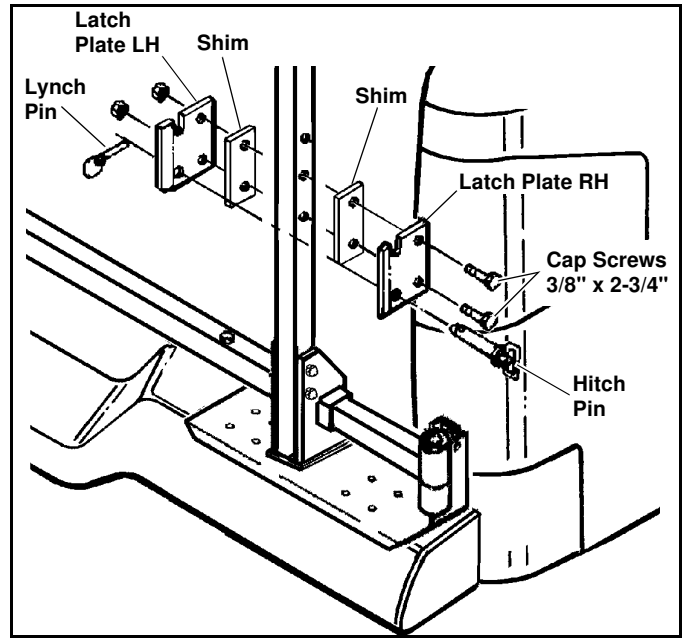


Figure 1-12

20. Assemble one (1) Latch Plate RH (#96102046) with one (1) Latch Plate LH (#96102045) and two (2) Shims (#96102399) to center holes in vertical Support Tubes making sure that the bent portions of the Latch plates face out, the notches face up, and the shims are between the Latch Plates and the Vertical Support Tubes.

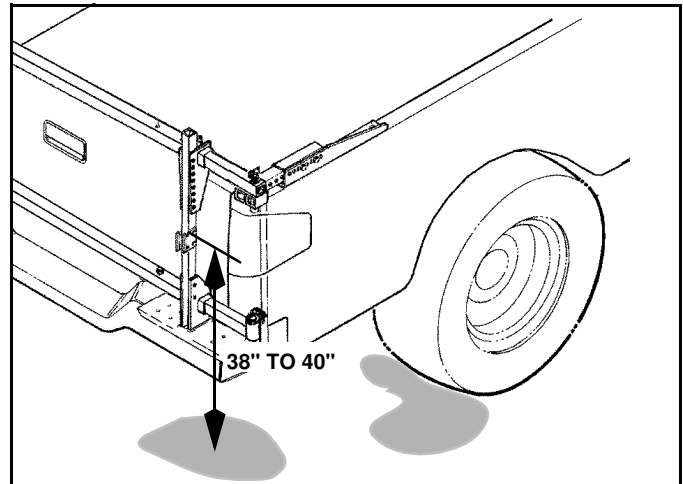


Figure 1-13

21. Position the Latch Plates so the lower hole is optimally positioned 38" to 40" above the ground. Secure each assembly loosely with two (2) 3/8" x 2-3/4" Cap Screws (#98100027) and Nylock Nuts.

IMPORTANT: DO NOT overtighten Cap Screws/Nylock Nuts on frame. Doing so will permanently warp the tube frame. Warranty does not cover damage caused by overtightening fasteners!

22. Tighten all Cap Screws on Frame assembly to 30 lbs-ft.

Hopper Installation



WARNING

NEVER mount Hopper on vehicle frame until **ALL** Hitch Pins and Latch Pin are in place and secured by the Lynch Pins and Retaining Pin.

FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.

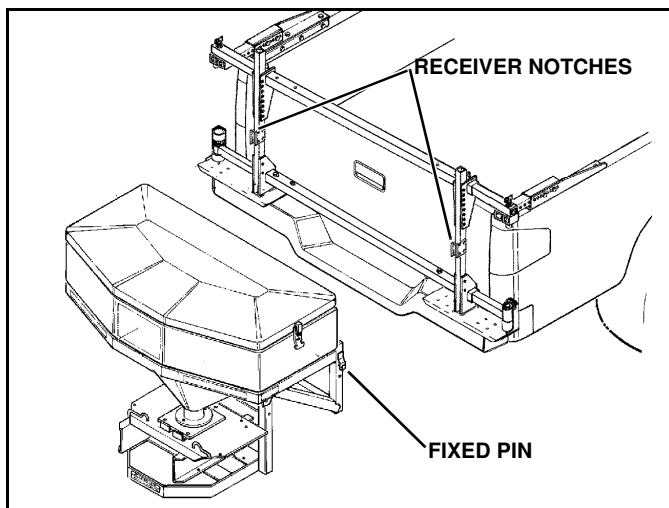


Figure 1-14

1. Remove Spreader Hopper Assembly from shipping carton.

2. Lift Spreader Hopper Assembly, position Hopper Frame against Mounting Frame, and lower Hopper Frame Fixed Mounting Pins into Receiver Notches in Mounting Brackets on each side of Mounting Frame. (See Figure 1-14)

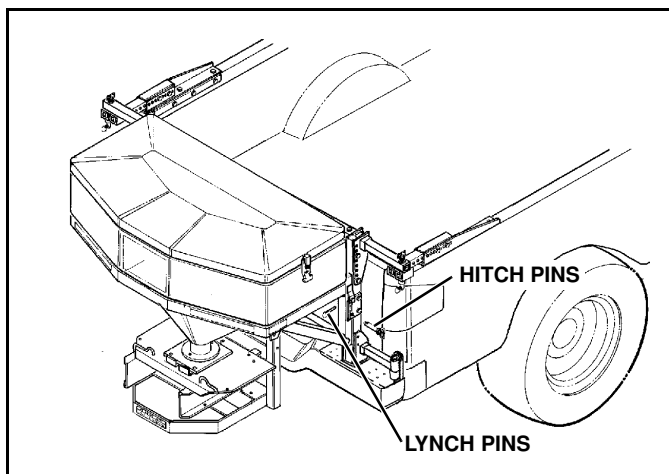


Figure 1-15

3. Install Hitch Pins through Mounting Brackets and Hopper Frame. Install Lynch Pins into Hitch Pins to secure them in place. (See Figure 1-15).

Wire Harness Installation

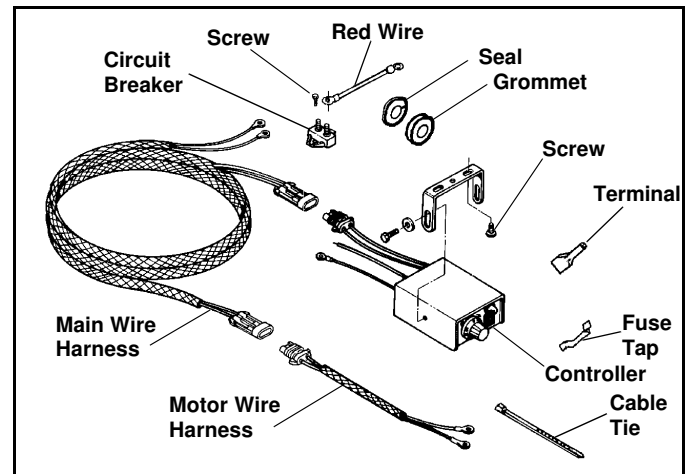


Figure 1-16

1. Locate the following parts:

- Controller (#96102302)
- Wire Harness, Main (#96102293)
- Wire Harness, Motor (#96102296)
- Circuit Breaker, 40A. (#96102344)
- Fuse Tap (#96002083), or (#96101832)
- Terminal, Female (#96002085), or (#96101845)
- Grommet (#96002077)
- Neoprene Seal (#96101846)
- Red Wire, Short (#96102362)
- Cable Tie, Plastic (#96001227)
- Self Tapping Screw (#98100037)
- Mounting Bracket (#96102444) (In Controller Carton)

NOTE: Take the extra time needed to plan the routing of the wiring harness before drilling any holes or fastening the harness or control box in place. Read all the instructions carefully to ensure all the required conditions are met for a safe and professional installation.

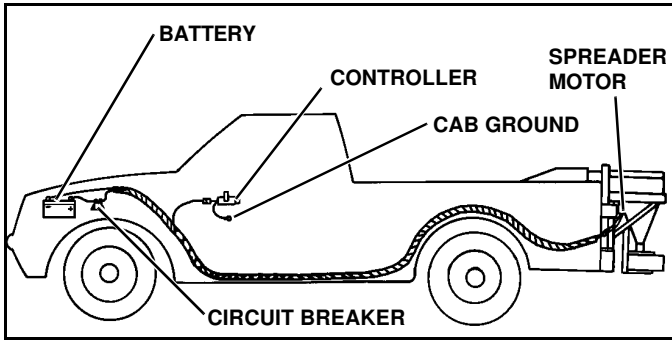


Figure 1-17

2. Uncoil the wiring harness and route the end of the harness with the short red and Black wires - with ring terminals installed- from under the vehicle up into the engine compartment on the battery side.
3. Position the Red and Black wires (with terminals) near the battery and prepare to route the five foot section, with connector, into the vehicle operator compartment area.
4. Look for an existing hole, with rubber grommet, in the vehicle firewall. The hole must be 1-3/8" or larger

CAUTION

DO NOT drill any holes until a thorough visual inspection is performed to determine that the area around the hole to be drilled, on both sides of the firewall, is clear of any obstacles such as brake lines, linkage or vehicle wiring.

5. If an existing 1-3/8" hole is not available, look for an area to drill a 1-3/8" hole that satisfies these conditions;
 - Hole should be drilled on the same side of the vehicle firewall (left or right) as the vehicle battery.
 - DO NOT put a hole in such a spot that will force the wiring harness, when installed, to interfere or be routed behind accelerator pedal, brake pedal, clutch pedal, parking brake or associated linkage.
 - DO NOT drill any holes until a thorough visual inspection is performed to determine that the area around the hole to be drilled, on both sides of the firewall, is clear of any obstacles such as brake lines, linkage or vehicle wiring.

NOTE: If the hole has to be drilled through carpeting or insulation, reverse the direction of the drill until the carpet has been penetrated, remove the carpet from the hole saw then use the forward direction to continue drilling through the firewall, this should prevent "running" in the carpet.

6. Using a hole saw, drill a 1-3/8" hole through the vehicle firewall.

CAUTION

Keep wiring harness away from moving parts, sharp edges and areas of extreme heat to avoid electrical failure and fire.

7. Insert wiring harness through rubber grommet and firewall, then install grommet into firewall.

WARNING

Disconnect vehicle NEG. (-) battery cable while performing Steps 8 - 19 to avoid serious bodily injury from fire or explosion.

FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.

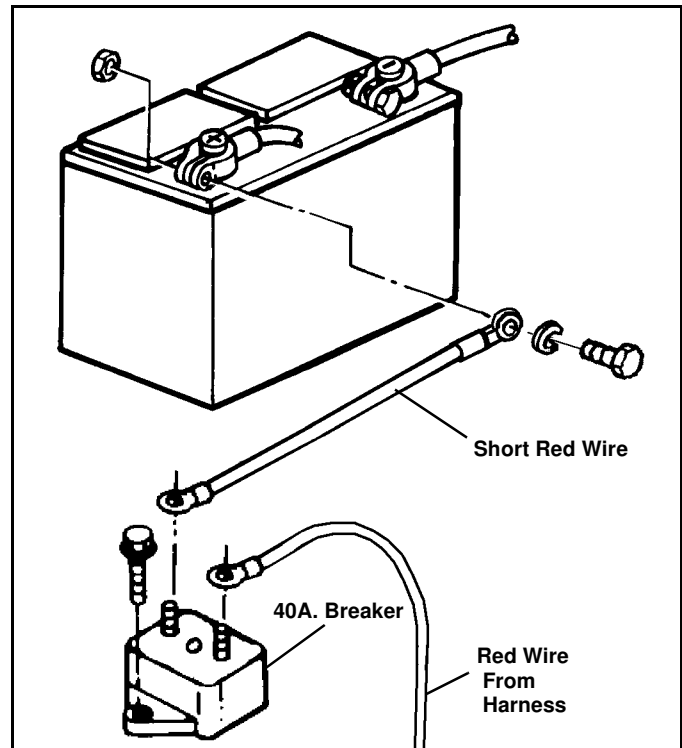


Figure 1-18

8. Locate Short Red Wire (#96102362) with two ring terminals. Attach the small ring terminal to the copper colored post marked BAT on the 40A Breaker (#96102344). Attach the other, large ring terminal to the battery positive terminal. (See Figure 1-18.)

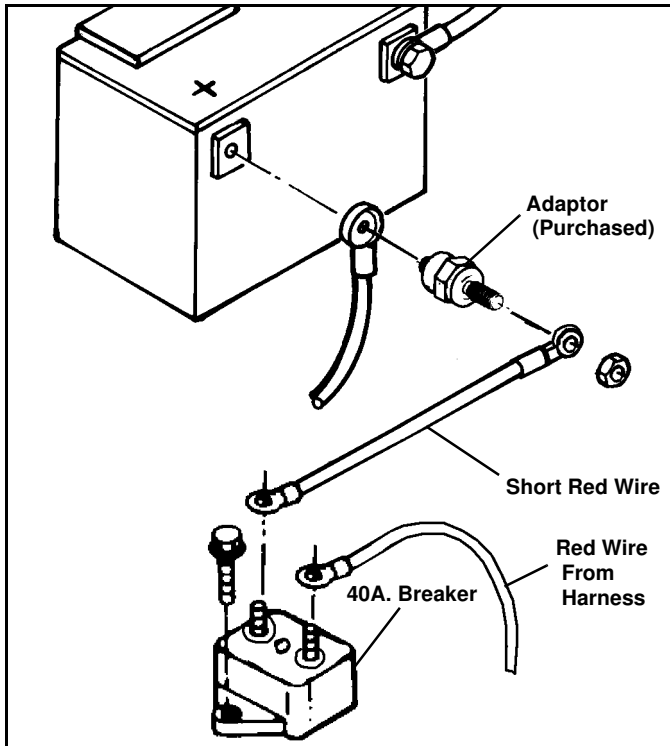


Figure 1-19

NOTE: If the vehicle has a "side post" battery, it will be necessary to install Adaptors (#96100773) to make connections at the vehicle battery. (See Figure 1-19.)

IMPORTANT: The Circuit Breaker must be placed in a location that will avoid excessive heat. DO NOT locate these parts near the engine exhaust manifold. A preferred location is one that will receive good air flow from the radiator fan, but be protected from excessive engine heat.

9. Mount the circuit breaker with two (2) #10 x 1" self-tapping screws (#98100037).

10. Attach the Ring Terminal of the Positive (RED) wire of the wiring harness to the other terminal of the Circuit Breaker.

11. Attach the harness Negative wire, vehicle NEG (-) cable to the vehicle battery NEG (-) post.



WARNING

Mount the control box in an area that will not interfere with the legs during seat travel and that will not allow the knees to come in contact with it in an accident.

FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.

12. Mount the control box mounting bracket to the center drive tunnel or vehicle dash with #10-16 x 1" self-drilling screws provided. Assemble the controller to the bracket with screws and washers provided.

13. Connect the Vehicle harness, inside the cab, to the control box Connector.

14. Remove the Accessory fuse from the vehicle fuse box.

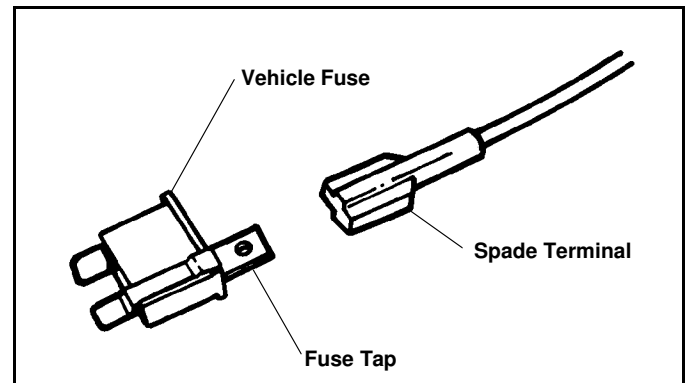


Figure 1-20

15. Using a test probe, determine the fused "Dead/OFF" side of the fuse and attach the A.T.O. Fuse tap to that side of the fuse. (See Figure 1-20.)

NOTE: Two Fuse Tap-ins are provided, one for standard (ATO/ATC) Automotive Blade Fuses and one for Mini-Blade Automotive Fuses. Determine which type of fuse the vehicle uses. If the standard fuse is used, the Fuse Tap-in will require the provided 1/4" Female Spade Terminal, if the Mini-Fuse is used, the Fuse Tap-in will require the provided 3/16" Female Spade Terminal.

IMPORTANT: DO NOT use fuse designated for headlamp, tail lamp, stop lights, panel lights, or other critical fuses.

NOTE: If accessory fuse is not available in the fuse box use another fuse with a 10-15 Amp designation, i.e. radio, lighter, etc.

16. Cut end of wire to length, strip end and install the appropriate female spade terminal onto wire.

17. Attach female spade terminal to appropriate Fuse tap-in and re-install fuse.

IMPORTANT: The RED wire must be protected by a fuse. If it is not practical to attach this wire to a fused circuit in the vehicle fuse box an in line 10 Amp fuse must be added to this wire.

18. Attach the controller ground wire (Black with Ring Terminal) to a grounding point inside the vehicle cab.



CAUTION

Keep wiring harness away from moving parts, sharp edges and areas of extreme heat to avoid electrical failure and fire.

19. Route Vehicle harness from engine compartment to rear bumper by the Pivot Assembly. Attach the harness assembly to the vehicle at different points in the cab and engine compartment and frame that will not allow the harness to come in contact with sharp edges, hot components and moving parts or mechanisms. Be sure the harness is supported and protected by the vehicle frame.

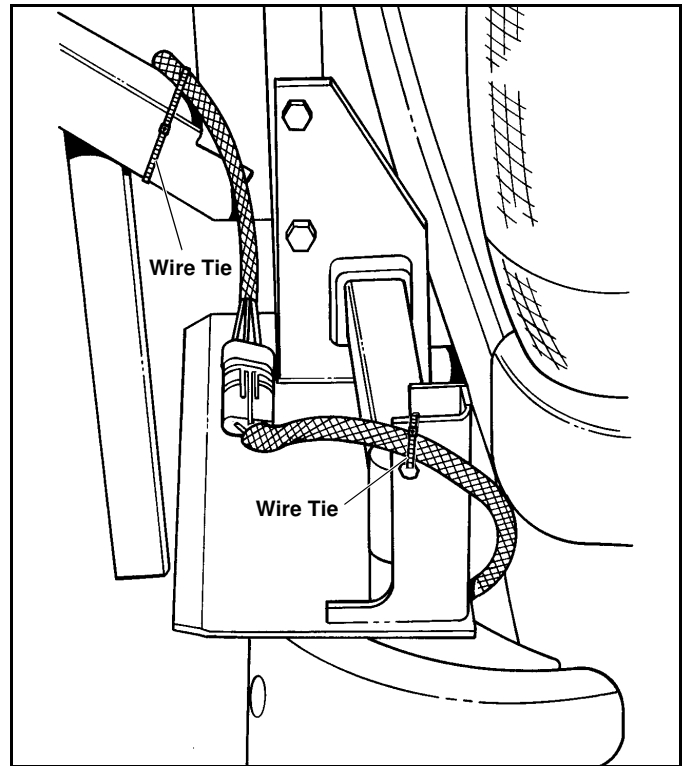


Figure 1-21

20. Route Main Wire Harness around the Pivot Assembly and fasten Main Wire Harness to the outside of the Pivot Assembly with a Plastic Cable Tie. (See Figure 1-21)

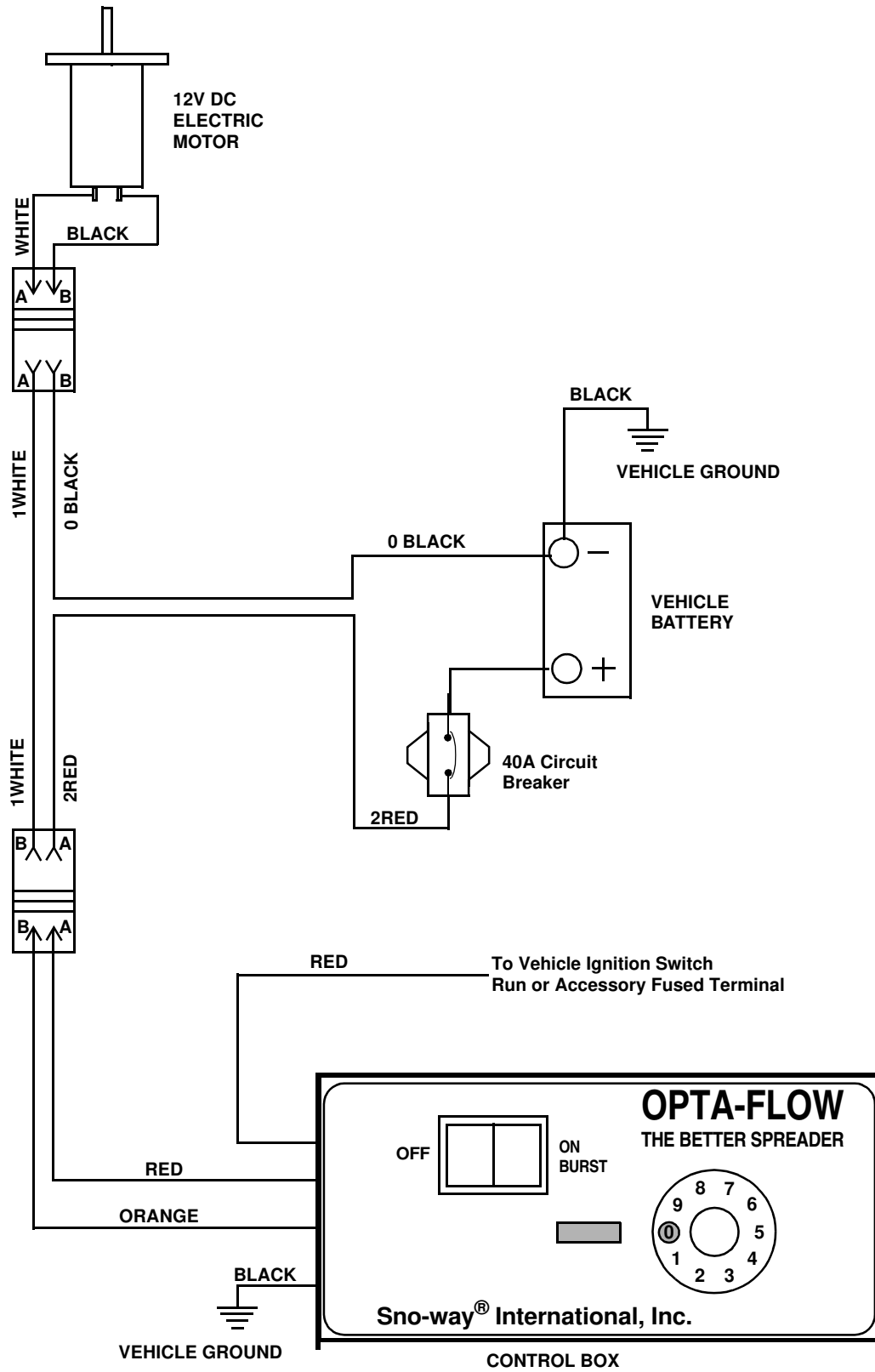
21. Connect the Motor Wire Harness to the Main Wire Harness.

22. Secure Motor Wire Harness to Hopper Frame with a Plastic Cable Tie. DO NOT secure Motor Wire Harness to vehicle mounted Frame.

23. Remove Latch Pin from Latch Assembly. Remove Hitch Pin from Latch side Upper Attaching Bar.

24. Pivot Hopper with Frame to make sure that there is no binding of wire harness around Pivot Assembly.

WIRING SCHEMATIC



DEALER PRE-DELIVERY CHECKLIST

The following inspections **MUST** be accomplished prior to delivering the OPTA-FLOW Spreader to the customer. Place an X ☒ in the box after accomplishing each item on the checklist.

CHECK THAT

- Parts have not been damaged in shipment. Repair or replace items that are loose, dented or missing.
- All covers, guards and decals are in place and attached securely.
- Drive belt tension is properly adjusted.
- Side Deflectors can be adjusted to all positions
- Flow Gates can be adjusted to all positions
- All mounting Hitch Pins are in place with Lynch Pins installed.

Start the vehicle engine and place an X ☒ in the box after accomplishing each item.

CHECK THAT

- Unit does not start until **START** switch is depressed.
- Drive Shaft and Spinner rotate freely.
- Drive rotation is correct (Clockwise from top of hopper)
- Speed can be adjusted through speed range with Controller.
- Burst sequence operates when START switch is depressed.
- Listen for abnormal noises or vibrations; Repair or replace as necessary.

DELIVERY CHECKLIST

The following checklist is to be accomplished with the Customer present, place an X ☒ in the box after accomplishing each item.

- After giving the Customer his Operating Manual, instruct him to read it **PRIOR** to operating the spreader. If he has any questions or does not understand part(s) of the Manual, ask him to contact the Dealer for answers or explanations **BEFORE** operating the unit.
- Record the Spreader Serial Numbers, Date of Purchase, Purchaser's Name and Address, and the Dealers Name, Address and Phone Number in the space provided on Page 1 of the Owner's Manual.
- Explain Hopper connect and disconnect procedures.
- Explain Spreader Frame Pivot procedures.
- Explain Mounting Frame connect and disconnect procedures.
- Demonstrate Controller operation and Burst function.
- Fill out Warranty Registration Card and mail COPY 1 to the factory to validate Warranty. NO Warranty claims can be honored if the Warranty Card is not on file at the factory.

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