

Rear Impact Guard

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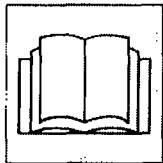
Publication Date: March 2006

INSTALLATION INSTRUCTIONS

Rear Impact Guard	
T18S Trailer	
Kit Number: 190-1098	Estimated Installation Time: 3.5 hours

Before You Start

Read instructions thoroughly. Check to see if all parts in bill of materials are in kit. If parts are missing or do not match bill of materials, contact Trenchless Product Support.



⚠ WARNING Incorrect procedures could result in death, injury, or property damage.
Use equipment correctly.

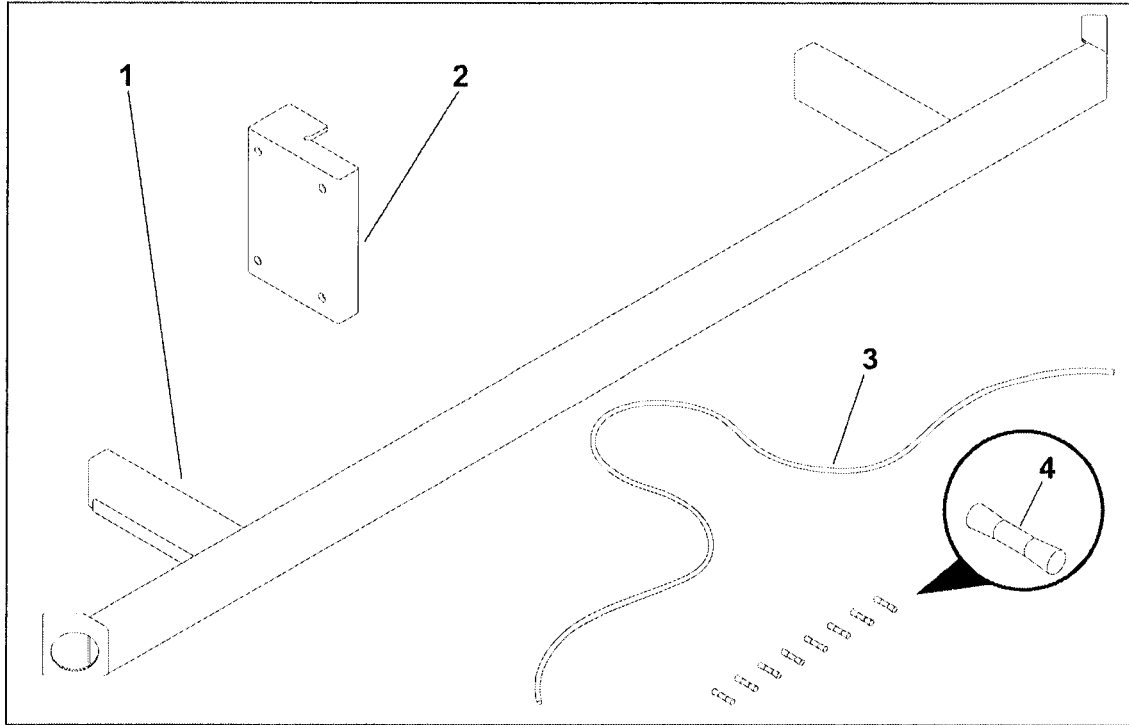
NOTICES:

- Empty tank.
- Park on level area.
- Turn off engine and remove key from ignition.
- Block the wheels.
- Use hoists and other load bearing devices designed to hold weight of equipment.

Purpose of Kit

This kit contains the parts and instructions necessary to install a rear impact guard and relocate the filter canister on the T18S trailer.

Overview



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Ref.	P/N	Description	Qty.
1	205-1013	rear impact guard	1
2	300-2427	filter mount bracket	1
3	215-1088	wire (16 ga 2 wire primary)	60"

Ref.	P/N	Description	Qty.
4	215-1090	butt connector (16-14 ga) w/heat shrink	8
n/a	274-352	hi-vis stripe	3

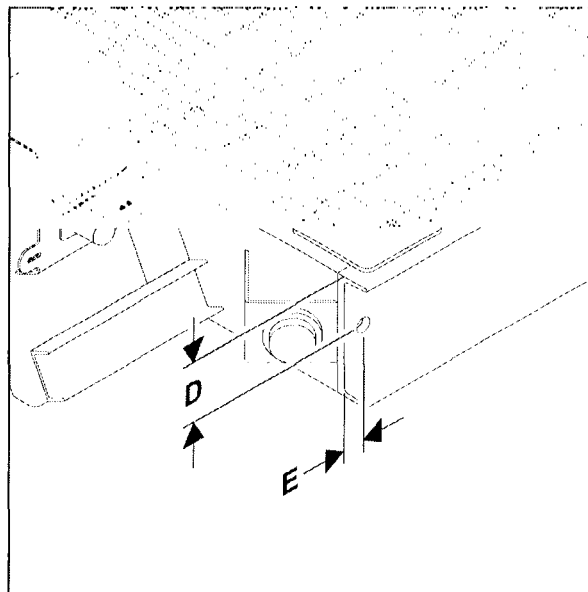
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Install Rear Impact Guard

Drill Hole for Light Extension

1. Ensure that trailer light harness is disconnected from pulling vehicle.
2. Use the dimensions shown to drill a 1" (25 mm) hole into end of trailer.

Ref.	Measurement
D	4" (102 mm)
E	1.5" (35 mm)



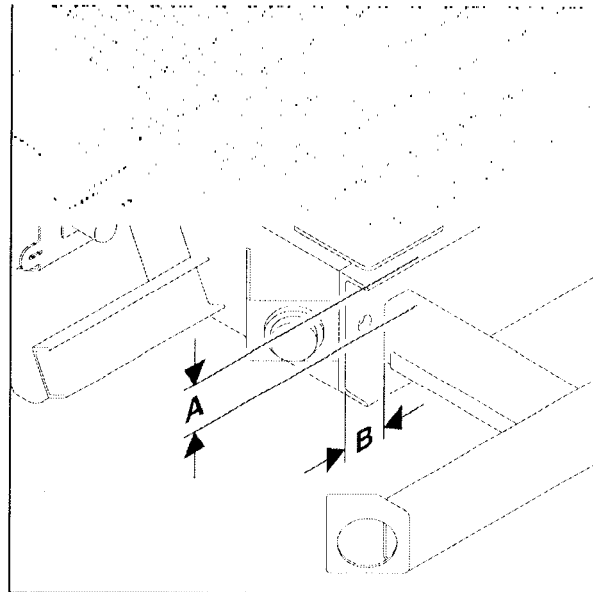
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Position Guard

1. Mark trailer in the general position where guard will be installed.

Ref.	Measurement
A	3 3/8" (86 mm)
B	3" (76 mm)

2. To prepare trailer for welding, use an abrasive disc or abrasive cleaner to remove paint.
3. Use blocks and shims to make a level surface for fitting up the guard according to the measurements in step 1.
4. Check that guard is level with trailer both from left to right and from fore to aft.



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NOTICE: Welding can damage electronics.

- Disconnect battery at battery disconnect switch before welding to prevent damage to battery. Do not turn off battery disconnect switch with engine running or alternator and other electronic devices may be damaged.
 - Connect welder ground clamp close to welding point and make sure no electronic components are in the ground path.
 - Always disconnect the ECU ground connection from the frame, harness connections to the ECU, and other electronic components prior to welding on machine or attachments.
5. Tack weld guard into place. Re-check position of guard. Re-check level.

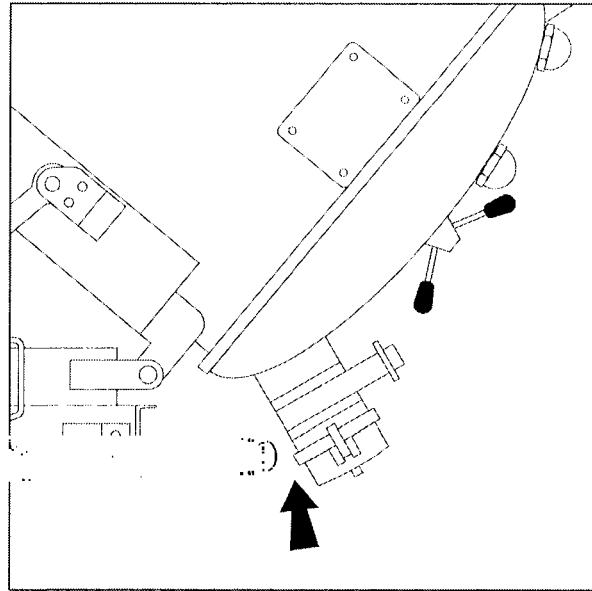
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Test

1. Ensure that tank is empty. Turn battery disconnect switch to the on position and start unit.
2. Fully tilt tank.

NOTICE: Do not unlatch door with tank tilted up.

3. Check clearance between drain valve and impact guard as shown:
 - If valve clears guard, proceed with installation.
 - If valve does not clear guard, adjust position of guard. (Refer to measurement on page 4, step 1).
4. Return tank to horizontal position.
5. Stop unit and turn battery disconnect switch to the off position.



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Weld Guard

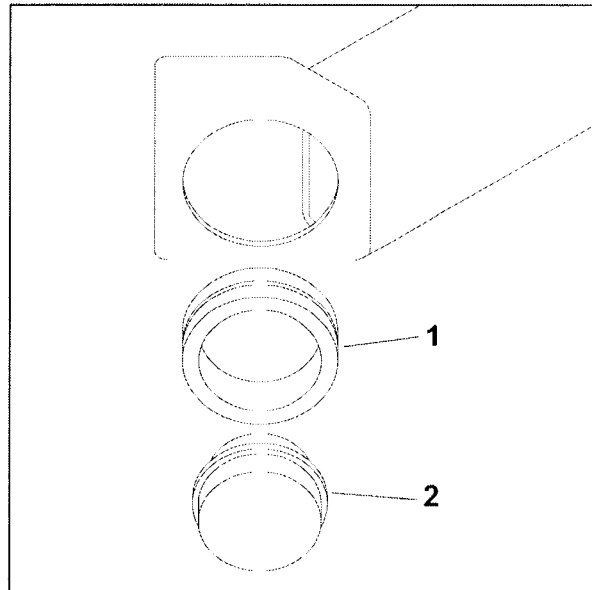
1. Use a 3/8" (10 mm) fillet weld on the top, left and right side of each mounting tube to secure guard to trailer.

NOTICE:

- Stick weld using a 7018 rod (tensile 70 KSI); or
 - MIG weld using wire equivalent to 7018, such as AWS class (ER70S-6).
2. Allow welds to cool, then inspect and repair if necessary.
 3. Clean welded area of slag and contamination. Paint to prevent rusting.

Move Marker Lights

1. Disconnect marker light from trailer harness. Remove marker (2) and large rubber grommet (1) from trailer and install on impact guard.



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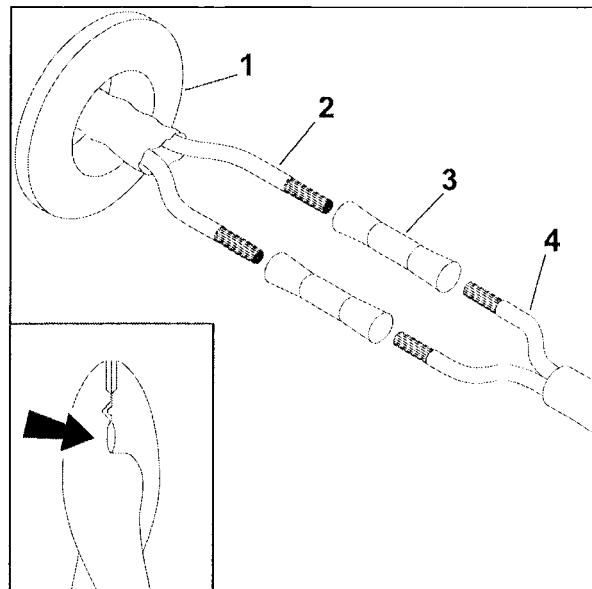
2. Cut connector from trailer harness, leaving enough wire on the connector to splice.
3. Install grommet (1) into newly drilled hole. Thread trailer harness (2) through hole.
4. Cut extension wire (4) in half and prepare ends for splicing.

Note: Each half should measure approximately 30" (76 cm.) Use one half for each side of the trailer.

5. Use heat shrink connectors (3) to splice extension wire (4) to trailer harness (2):
 - Match wires WHT to WHT and BLK to BLK. Insert wires into connector and crimp.

NOTICE: To prevent damage to heat shrink tape, use smooth opening in pliers (shown) to crimp connectors.

- Apply heat to seal heat shrink connectors.



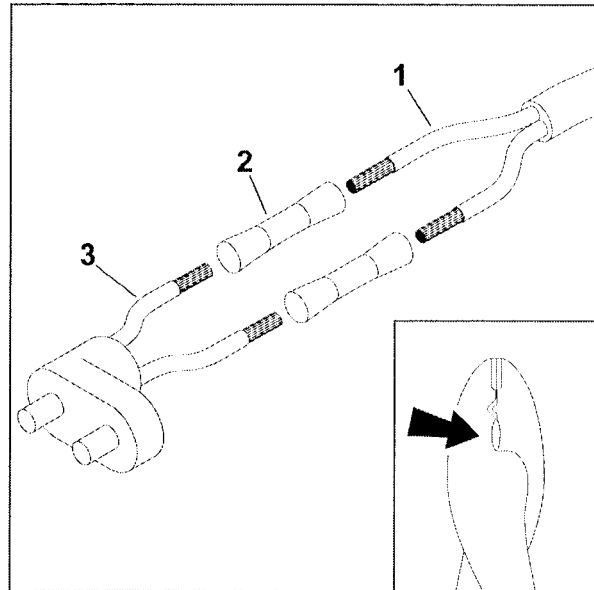
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6. Use heat shrink connectors (2) to splice opposite end of extension wire (1) to marker connector (3).
 - Match wires WHT to WHT and BLK to BLK. Insert wires into connector and crimp.

NOTICE: To prevent damage to heat shrink tape, use smooth opening in pliers (shown) to crimp connectors.

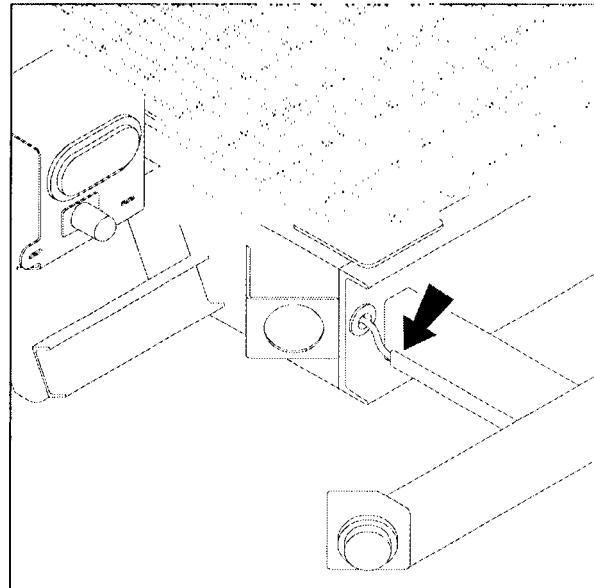
 - Apply heat to seal heat shrink connectors.
7. Connect marker lights to harness.
8. Connect trailer harness to vehicle and test lights for proper operation.



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9. Route wire through channel (shown). Use a rubber mallet to bend tracks up to protect wire.

NOTICE: Ensure that wire does not become pinched or kinked in the channel.
10. Cut original marker light holder from trailer. Grind to make smooth, then paint to prevent rusting.



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Modify Filter Canister Bracket



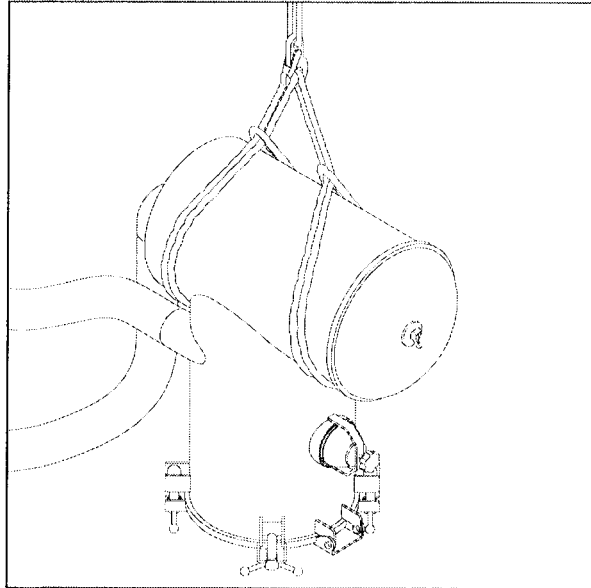
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WARNING Crushing weight could cause death or serious injury. Use proper procedures and equipment or stay away.

1. Use a hoist with two slings to support filter canister, as shown.

Note: Filter canister weighs 200-300 lb (91-136 kg).

2. Remove four bolts from canister bracket. Save hardware for reuse.
3. Move filter canister away from working area. (It is not necessary to disconnect any hoses or fittings.)

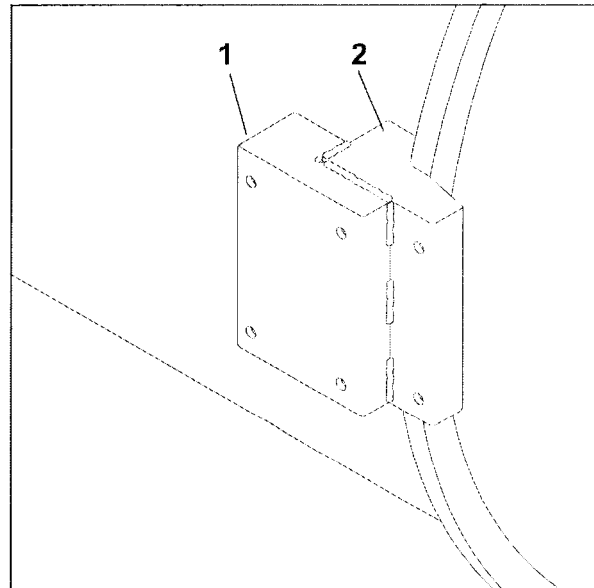


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NOTICE: Welding can damage electronics.

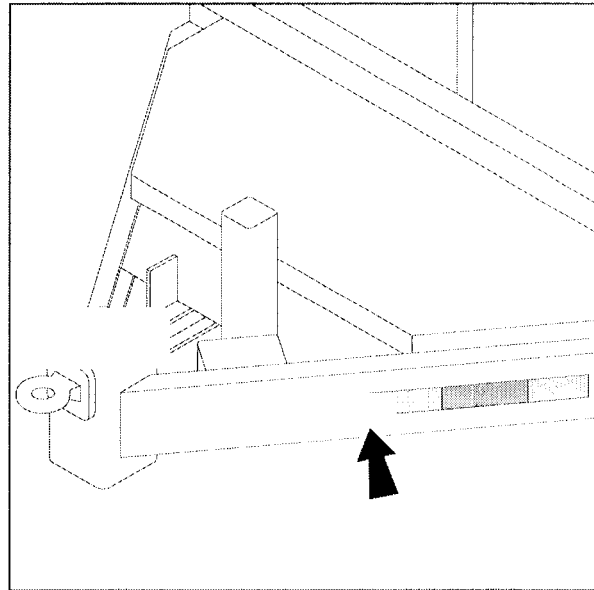
- Disconnect battery at battery disconnect switch before welding to prevent damage to battery. Do not turn off battery disconnect switch with engine running or alternator and other electronic devices may be damaged.
 - Connect welder ground clamp close to welding point and make sure no electronic components are in the ground path.
 - Always disconnect the ECU ground connection from the frame, harness connections to the ECU, and other electronic components prior to welding on machine or attachments.
4. Mark bracket in general area where new bracket will be installed. Use an abrasive disc or abrasive cleaner to remove paint from weld area.
 5. Position new bracket (1) as shown. Ensure that the top of the new bracket (1) is flush with the top of the original bracket (2). Clamp or tack weld into place.
 6. Secure new bracket on top and left side with 1/4" (6 mm) fillet welds at 2" (51 mm) intervals (shown.)
 7. Allow welds to cool, then inspect and repair if necessary.
 8. Clean welded area of slag and contamination. Paint to prevent rusting.
 9. Move filter canister into position and secure to new bracket using original hardware.



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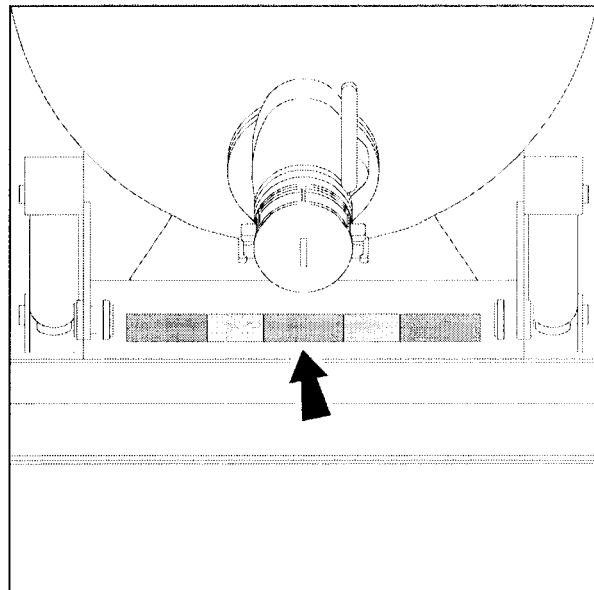
Install Reflective Tape

1. Install reflective tape on each side of trailer tongue as shown.



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2. Install reflective tape below rear of tank as shown.



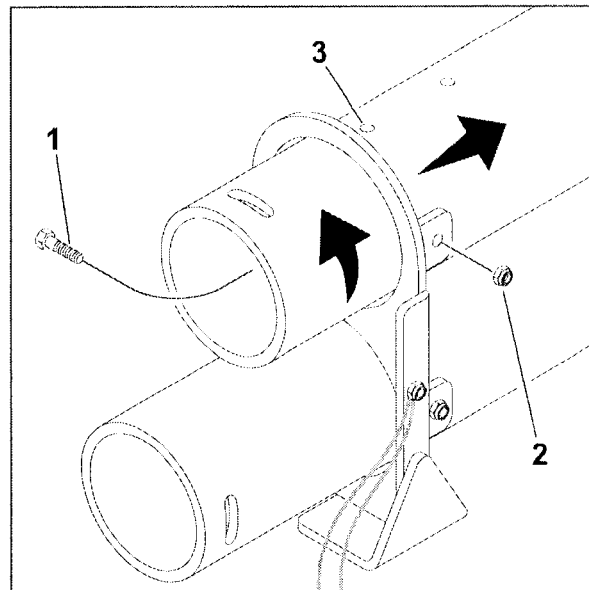
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Adjust Hose Storage Tube

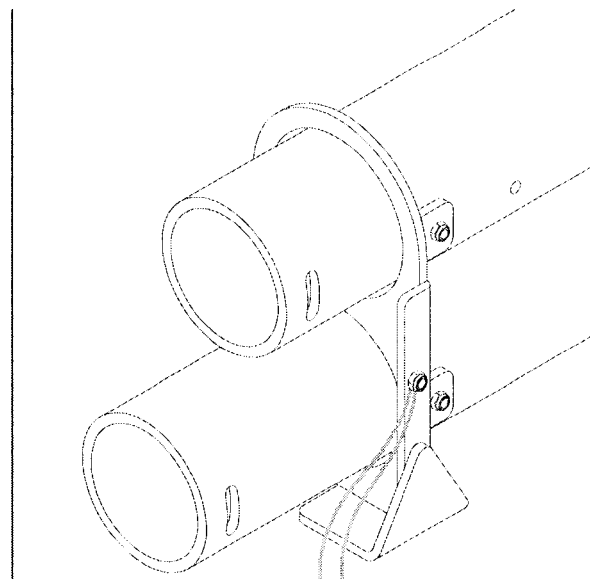
IMPORTANT: This procedure applies only to units equipped with hose storage tubes.

1. Remove hose from top storage tube.
2. Remove nut (2) and bolt (1) from tube mounting bracket.
3. Slide tube toward the front of the trailer.
4. Rotate tube until hole where bolt was installed is at the top.
5. Drill new hole (3) $7/32$ " (6 mm) in diameter 2.5" (64 mm) back from the first hole.



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6. Align new hole with hole in mounting bracket and install bolt and nut as shown.



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