

# **SNO-WAY**®

**SNOW & ICE CONTROL EQUIPMENT**

## **INSTALLATION & PART'S MANUAL**

### **CONVERSION KIT 96110119**

**FOR CONVERTING SNO-WAY'S  
STANDARD LIGHTING KITS  
(96102357 and 96106606)  
TO THE EIS KIT**

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# INTRODUCTION

This manual was written for the assembly, installation and maintenance of the optional light assembly. Most importantly, this manual provides an operating plan for safe use. Refer to the Table of Contents for an outline of this manual.

Please keep this manual with your machine at all times as reference material and so it can be passed on to the next owner if the machine is sold.

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.

 <b>WARNING</b>
Information, that if not carefully followed, can cause serious personal injury or death!

 <b>CAUTION</b>
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.*

**BE AWARE! It is illegal to remove, deface or otherwise alter the safety decals mounted on this equipment.**

Record the Serial Number and the Model number in the space provided below as a handy record for quick reference. The Serial number Plate is located on the Lower Light Bar Assembly. This plate contains information that your Dealer needs to answer questions or to order replacement parts, if needed, for your unit.

<b>NAME PLATE DATA</b>	
SERIAL NUMBER _____ (Located on the Lower Light Bar Assembly)	
DATE OF PURCHASE _____	(FILL IN)

<b>DEALER</b>	
NAME _____	
ADDRESS _____	
CITY _____ STATE _____ ZIP _____	
PHONE ( ) - _____	(FILL IN)

<b>ORIGINAL PURCHASER</b>	
NAME _____	
ADDRESS _____	
CITY _____ STATE _____ ZIP _____	
PHONE ( ) - _____	(FILL IN)

We reserve the right to make changes or improve the design or construction of any part(s) without incurring the obligation to install such parts or make any changes on any unit previously delivered.



## 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.**

**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 or damage.

**ALWAYS** wear seat belt and shoulder harness when driving, or when riding as a passenger in the vehicle. Hidden obstructions can cause the vehicle to stop suddenly while plowing snow, resulting in serious injury if proper safety gear is not being worn.

**ALWAYS** insert the cylinder lock when plow is not in use. If the cylinder lock is not installed, the plow blade could inadvertently drop and cause serious injury.

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

**NEVER** exceed 10 mph when plowing. Excessive speed may cause serious injury and damage to equipment and property if an unseen obstacle is encountered while plowing.

**ALWAYS** position blade so it does not block path of headlamp beam. Do not change blade position while traveling. An incorrect plow position blocking headlamp beam may result in an accident.

**NEVER** exceed 45 mph when snow plow is attached to vehicle. Braking distances may be reduced and handling characteristics may be impaired at speeds above 45 mph.

**NEVER** operate a snow plow 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** shut off the vehicle engine, place the transmission in Neutral or Park, turn the ignition switch to the "OFF" position and firmly apply the parking brake of the vehicle before attaching or detaching the blade from the vehicle or when making adjustments to the blade.

**ALWAYS** lock the vehicle when unattended to prevent unauthorized operation of the plow.

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

**ALWAYS** keep hands and feet clear of blade and A-Frame when attaching or detaching plow.

**NEVER** place fingers in A-frame or mount lug holes to check alignment when attaching snow plow. Sudden motion of the plow could severely injure a finger.

**NEVER** stand between the vehicle and blade or directly in front of blade when it is being raised, lowered or angled. Clearance between vehicle and blade decreases as blade is operated and serious injury or death can result from blade striking a body or dropping on hands or feet.

**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.

**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.

**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 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** use your hands to search for hydraulic fluid leaks; escaping fluid under pressure can be invisible and can penetrate the skin and cause a serious injury! if any fluid is injected into the skin, see a doctor at once! Injected fluid MUST BE surgically removed by a doctor familiar with this type of injury or gangrene may result.

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

# INSTALLATION

## ASSEMBLY TOOLS NEEDED

Phillips and Flat Head Screw Drivers  
(Large and Small Head)

Wire Cutter and Wire Stripper

Needle Nose Pliers

Crimping Tool

Black Electric Tape

Sockets 1/2", 9/16", 3/4"

Wrenches 1/2", 9/16", 3/4"

Torque Wrench

Hammer

Drift 3/16"

Dielectric Compound

Pinch Bar

## Wiring the Driver's side light (LH):

4. Remove the six screws that hold the sealed beam lamp and the turn signal lens into the housing. Remove the face plate, turn signal lens and the gasket behind the turn signal lens. Retain for reinstallation in a later step.

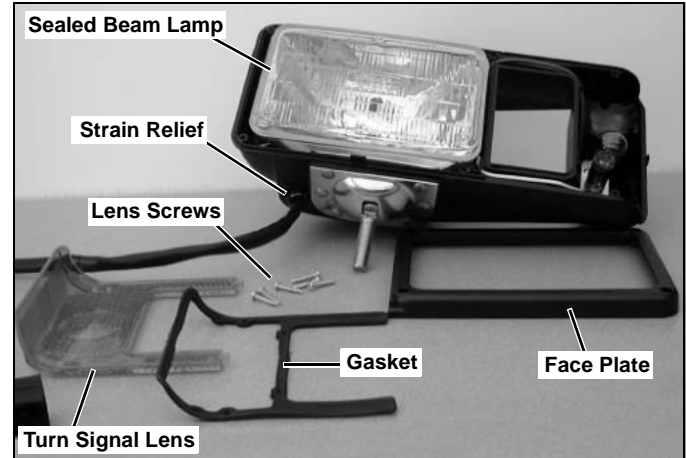


Figure 1-1

## INSTALLATION NOTES

1. Read all instructions carefully before attempting installation.

2. Complete assembly before tightening bolts.

5. Remove the sealed beam lamp from the housing and unplug the connector from the back of the lamp. Remove the 4 rubber grommets that hold the headlight into the housing. Retain for reinstallation in a later step.

## INSTALLATION INSTRUCTIONS:

1. Park vehicle in a suitable location and remove plow.

**WARNING**

- **Plow must be in full down position before work is to be started.**
- **Put vehicle in park, set and/or lock parking brake and turn off ignition. Failure to do this could cause serious personal injury or death!**

2. If installed on the vehicle, disconnect the Standard Lights that are currently on the plow from the truck light harness. Ensure there is no power coming from the truck through the plow light harness. To do this make sure that the vehicle lights are shut completely off and that the truck is not running.

3. For easier installation, remove the plow lights from the light bar.

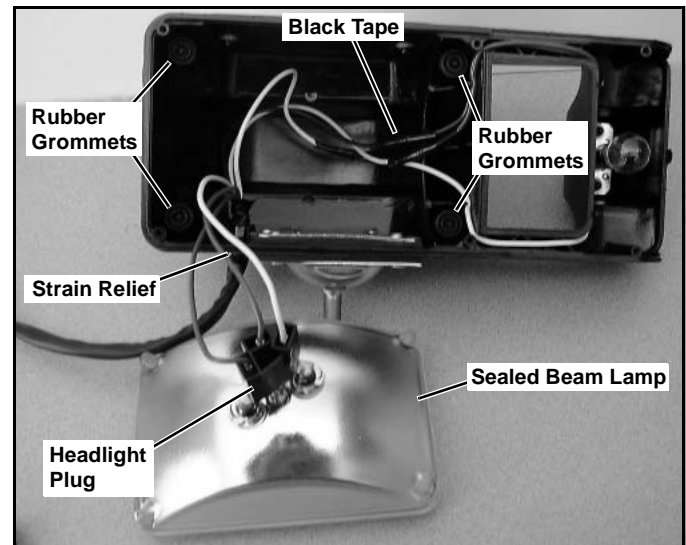


Figure 1-2

6. Remove the black electrical tape from the connections to the park/turn bulb and the tape that holds all the wire together at the base of the housing.

7. Using a small screw driver disconnect the park/turn signal connections and remove the wires that go into the headlight plug. Retain plug for reinstallation in a later step.

8. Using a needle nose plier, loosen the plow light harness from the housing. Retain the plastic strain relief that holds the harness into the housing for installation of the EIS harness.

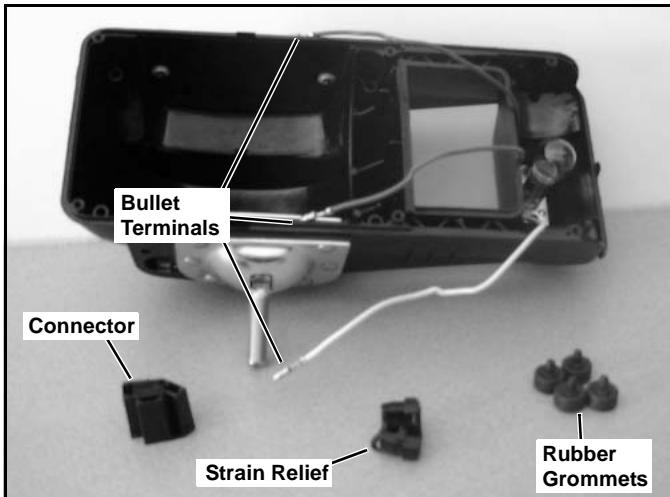


Figure 1-3

9. Using a wire cutter, cut off existing bullet terminals from the brown, red and white wires coming from the park/turn signal bulb. Next strip the wire 1/8. back from the end of the wire. Crimp on the male bullet terminals (#3) provided in the kit.

**If you have a 96106606 light kit use instructions #10A and #13A.**

**If you have a 96102357 light kit use instruction #10B and #13B.**

10A. Wire (1) EIS Harness LH, Plow Light (#1) into the drivers side (LH) lamp by completing the following steps:

Thread the wires through the hole at the bottom of the housing.

Place the plastic clip around all the wires, but don't insert into the housing until the wiring of the EIS harness is complete.

Connect the yellow wire from the EIS harness to the red turn signal wire.

Connect the black wire from the EIS harness to the white park/turn signal ground wire.

Connect the brown and violet wires from the EIS harness to the brown park signal wire.

Using the black electric tape, tape all the connections just made.

Using figure 4 insert the white, blue and green wires into the correct positions. Note the tabs on the terminals should be facing to the outside of the connector.

**NOTE:**

- The tabs on the terminals should be facing to the outside of the connector.

- The shorter length light blue and/or brown wires can remain tucked inside the loom. These are only used with the optional 4-Sight™ Plow Lighting Kit.

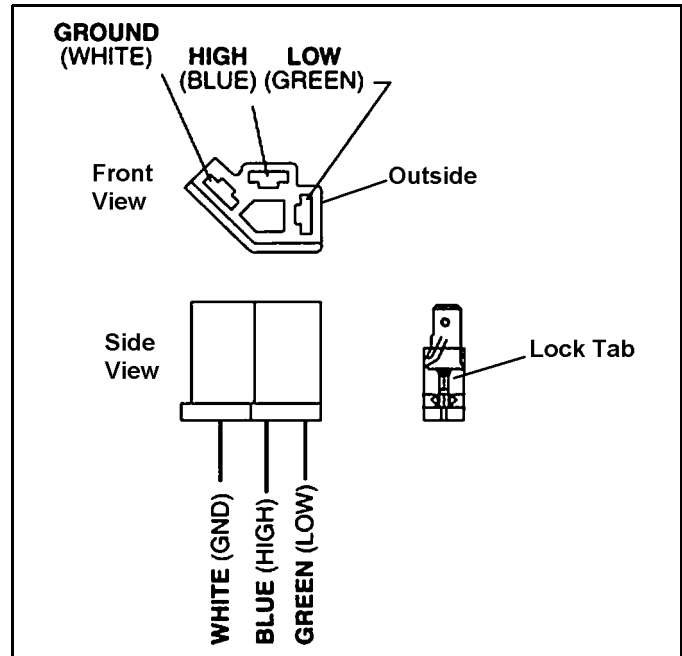


Figure 1-4

Plug the connector back into the sealed beam lamp.

10B. Wire (1) EIS Harness LH, Plow Light (#1) into the drivers side (LH) lamp by completing the following steps:

Thread the wires through the hole at the bottom of the housing.

Place the plastic clip around all the wires, but don't insert into the housing until the wiring of the EIS harness is complete.

Connect the yellow wire from the EIS harness to the yellow turn signal wire.

Connect the black wire from the EIS harness to the white park/turn signal ground wire.

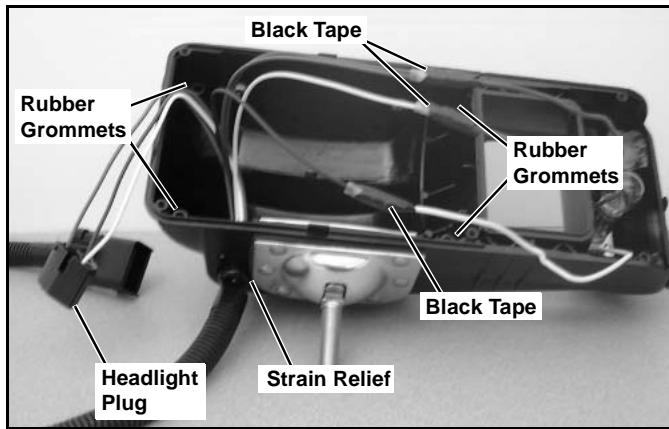
Connect the brown and violet wires from the EIS harness to the black park signal wire.

Using the black electric tape, tape all the connections just made.

Using figure 4 insert the white, blue and green wires into the correct positions. Note the tabs on the terminals should be facing to the outside of the connector.

Plug the connector back into the sealed beam lamp.

11. Now that the EIS harness is wired into the headlight, insert the plastic strain relief back into the hole in the bottom of the housing. Using black electric tape, tape around the loose wires by the plastic strain relief inside the housing. Then replace the 4 rubber grommets into the housing. Next, put the headlight back into place; attach the face plate, turn signal lens and gasket with the six screws removed in step #3.



**Figure 1-5**

**Passenger side housing:**

12. Repeat steps 3-8 on the passenger side headlight housing.

13A. Wire (1) EIS Harness RH, Plow Light (#2) into the drivers side (RH) lamp by completing the following steps:

- Thread the wires through the holes at the bottom of the housing.
- Place the plastic clip around the loose wires, but don't insert into the housing until the wiring of the EIS harness is completed.
- Connect the gray wire from the EIS harness to the red turn signal wire.
- Connect the black wire from the EIS harness to the white park/turn signal ground wire.
- Connect the brown and orange wires from the EIS harness to the brown park signal wire.
- Using black electric tape, tape all the connections just made.
- Using Figure 4, insert the white, blue and green wires into the correct positions. Note the tabs on the terminals should be facing to the outside of the connector.
- Plug the connector back into the sealed beam lamp.

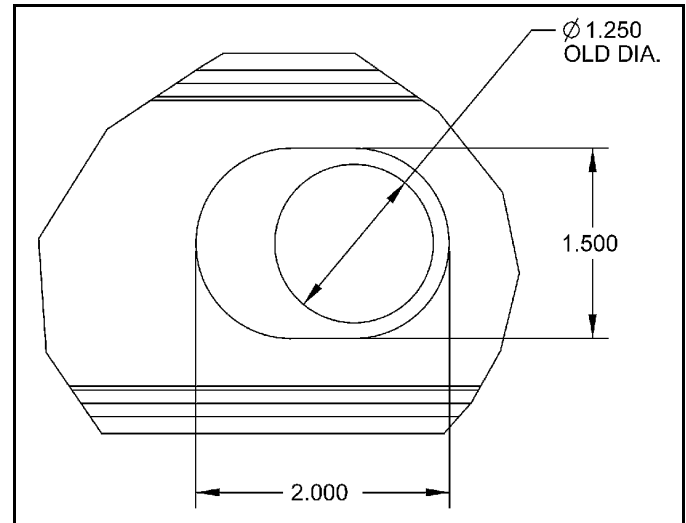
13B. Wire (1) EIS Harness RH, Plow Light (#2) into the drivers side (RH) lamp by completing the following steps:

- Thread the wires through the holes at the bottom of the housing.
- Place the plastic clip around the loose wires, but don't insert into the housing until the wiring of the EIS harness is completed.
- Connect the gray wire from the EIS harness to the yellow turn signal wire.
- Connect the black wire from the EIS harness to the white park/turn signal ground wire.
- Connect the brown and orange wires from the EIS harness to the black park signal wire.
- Using black electric tape, tape all the connections just made.

- Using Figure 4, insert the white, blue and green wires into the correct positions. Note the tabs on the terminals should be facing to the outside of the connector.
- Plug the connector back into the sealed beam lamp.

14. Repeat Step #10 for the Passenger's side headlamp.

15. In order for the plug to fit through the light bar, the current 1-1/4" diameter hole must be slotted towards the center (or inside) of the plow by 3/4" of an inch and the hole needs to be enlarged to 1-1/2" diameter.



**Figure 1-6**

16. Mount the headlamps back on the light bar using the hardware previously used in the original install.


17. Route the harness through the newly enlarged access hole and down the inside of the light bar supports.

18. Plug into the EIS main harness and check for functionality.

19. With the plow in the full up position adjust the lamp light pattern by loosening the Lamp Mounting Nut and swiveling the lamp on its base.

*NOTE: Use a dielectric compound on all the connections to the EIS Harness to prevent corrosion.*

*NOTE: In order to conform to the Federal Motor Vehicle Safety Standards a SAE J602 Approved aiming device should be used when adjusting the Lamps.*


CAUTION

**Make sure that beam pattern is not impaired by upper edge of plow. If beam is impaired move Upper Light Bar Assembly to a higher position and readjust Lamps.**

# PARTS LIST INTRODUCTION

Our dealership network stands by to provide you with any assistance you may require, including genuine Sno-Way service parts. All parts should be obtained from or ordered through your dealer. Give complete information about the part as well as the Model Number and Serial Number of your machine.

Record the Serial Number in the space provided in your Owner's Manual for quick reference. The Serial Number for the unit is on a plate located on the left frame gusset of the Hopper Frame.

"Right" and "Left" are determined from a position sitting on the Operators Seat of the vehicle.

We reserve the right to make changes or improvements in the design or construction of any part without incurring the obligation to install such changes in any unit previously delivered.

## USING THIS PARTS LIST

Below is parts listing with four columns. The first column is the "ITEM", the second is the "PART NUMBER", The third is the "DESCRIPTION" and the fourth is the "QUANTITY".

The **"ITEM"** is the number used in the corresponding illustration.

The **"PART NO."** Is the number used to order replacement parts. If a number does not appear in the column the part is only available by ordering the complete assembly.

The **"DESCRIPTION"** is the name of the replacement part. At times the name may be indented, this means that the indented parts are part of the preceding assembly.

The **"QTY."** Is the quantity needed to service the assembly illustrated, not the complete product.

ITEM	PART NO.	DESCRIPTION	QTY.
1	96100083	O-ring	1
2	96001529	Elbow	3
3	98100036	Capscrew, Hex.,3/8"-16NC x 7/8"	9

## PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY.
1	96107985	Harness, Plow Light, LH EIS.....	1
2	96107986	Harness, Plow Light, RH EIS .....	1
3	96110127	Male Bullet Terminal.....	6

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