



**INSTALLATION
AND PARTS
MANUAL**

AUXILIARY LIGHT

AND

MOUNTING PACKAGE

99100473

AFTER S/N ALC114800

FOR PLOW SERIAL NUMBERS AFTER

STD200000

STG200000

MTD200000

MTG200000

HTD200000

HTG200000

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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.

 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.

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.

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

DEALER	
NAME _____	
ADDRESS _____	
CITY _____ STATE _____ ZIP _____	
PHONE () - _____	(FILL IN)

ORIGINAL PURCHASER	
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

Sockets	1/2", 9/16", 3/4"
Wrenches	1/2", 9/16", 3/4"
Torque Wrench	
Screw Driver	
Hammer	
Drift	3/16"
Dielectric Compound	
Pliers	
Pinch Bar	

INSTALLATION NOTES

1. Read all instructions carefully before attempting installation.
2. Complete assembly before tightening bolts.

MOUNTING INSTRUCTIONS

Lower Bar Installation:

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. Locate the following items:

- A. Lower Bar Assembly (#96104709)
- B. Pivot Bar Assembly (#96100020) (2 required)
- C. Pivot Sleeve (#96103558)
- D. Special Washer (#98100176) (2 required)
- E. Sleeve Assy (#96103515)
- F. Pin, Long Hitch (#96104713)
- G. Lanyard & Pin Assy. (#96105044)
- H. Roll Pin (#98100008)

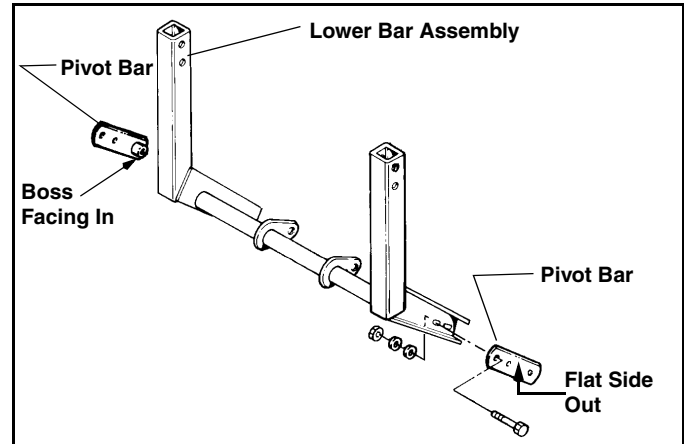


Figure 1

3. Loosely assemble Pivot Bar to Lower Bar Assembly outer arms. Use, two (2) 3/8" x 1-1/4" Capscrew (#98009034), with two (2) 3/8" Washers on each Capscrew and Nylock Nuts provided per Pivot Bar. (Figure 1)

NOTE: Raised Boss on Pivot Bar must face to INSIDE of assembly. (Figure 1)

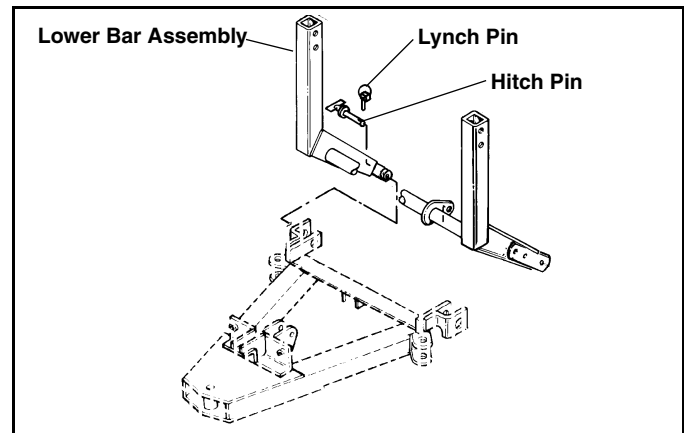


Figure 2

4. Mount Lower Bar Assembly to Main Plow Frame by sliding bosses on Pivot Bars into holes on Pivot Plates. Reuse Hitch Pins and Lynch Pins to locate and secure. (Figure 2)

NOTE: It may be necessary to remove one of the Pivot Bars in order to install Lower Bar Assembly.

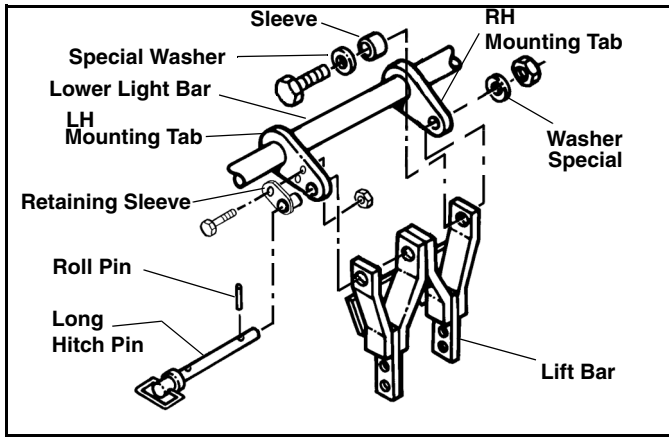


Figure 3

5. Install Sleeve Assembly (#96103515) through the 1" holes in the left side mounting tab on the Lower Light Bar Assembly and the Lift Bar Assembly with the retaining tab to the outside. Retain the Sleeve Assembly with one 5/16" x 1" Capscrew (#98100261) and one 5/16" Nylock Nut (#98009150) as shown in Figure 3. It is important that the retaining tab is fastened to the upper 5/16" hole in the mounting tab of the Lower Light Bar Assembly.

6. Align 1" hole in right side mounting tab, on Lower Bar Assembly Cross Tube, with matching hole in Lift Bar and insert Sleeve (#96103558) secure with 1/2" x 2" Capscrew (#98100010), two Special Washers (#98100176), and Nylock Nut provided. Tighten to 75 Ft. Lbs. (Figure 3)

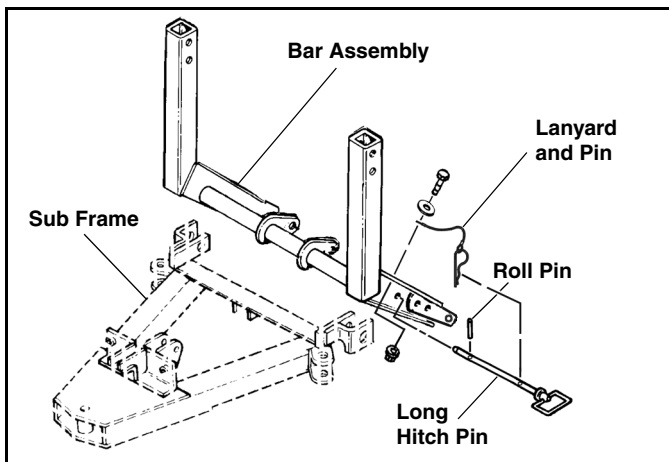


Figure 4

7. Attach the Lanyard and Pin Assembly (#96105044) to the left side channel of the Lower Light Bar Assembly with one 1/4" x 1" Capscrew (#98019027), 1/4" Plain Washer (#98100254) and Nylock Nut (#98100255) as shown in Figure 4.

8. Install the Long Hitch Pin (#96104713) through the 3/4" hole in the left channel of the Lower Light Bar Assembly and through the Sleeve previously installed

between the Lift Bar and mounting tab of the Lower light Bar Assembly. With the Long Hitch Pin fully inserted, install the Roll Pin (#98100008) in the 1/4" hole in the Hitch Pin. Install the pin so that the exposed ends are approximately the same length on each side of the Hitch Pin. (Figure 3) (Figure 4)

9. Before tightening the 3/8" Cap Screws between the Pivot Bars and Lower Bar Assembly, **secure the plow to the vehicle with all three hitch pins**. When the plow is secure, adjust the light bar to the vertical position.

10. Tighten all 3/8" Cap Screws on Pivot Arms and Pivot Bars to 45 Ft. Lbs. After all bolts are tight, pull the top hitch pin to make sure that it slides in and out easily. If not, re-adjust the lower light bar.

Upper Channel Assembly:

1. Locate the following items:

- A. Mounting Channel (#96104794) (2 required).
- B. Upper Channel (#96105090).

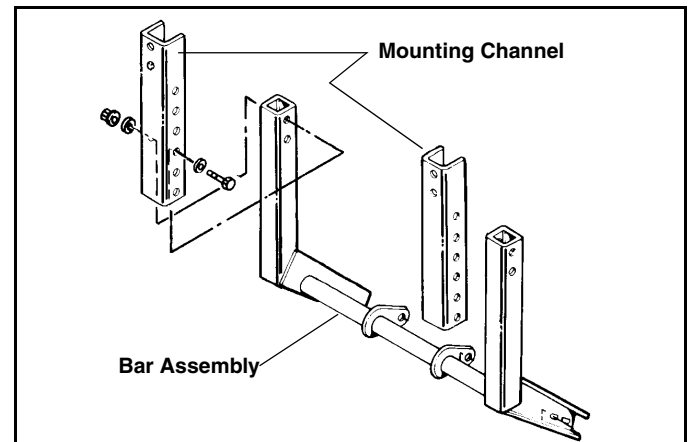


Figure 5

2. Attach Mounting Channels (#96104794) to Lower Bar Assembly using four (4) 3/8" x 3" Capscrews (#98009258), Washers (8 req.) and Nylock Nuts Provided. (Figure 5)

3. Attach the Upper Channel (#96105090) to the top of the mounting channels using four 3/8" x 1 1/4" Capscrews (#98009034) and Nylock Nuts (#98009009) as shown in Figure 6.



WARNING

Mounting Upper Channel too high may result in obstructed driver visibility and could cause accidents.

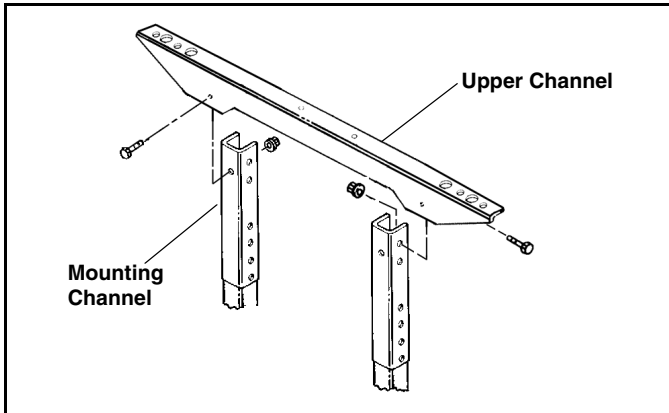


Figure 6

NOTE: Top of Upper Channel should be located above the top of the plow when plow is in raised position.



CAUTION

Do not overtighten the 3/8" x 3" Capscrews used for assembling Mounting Channels on Lower Bar. Doing so will cause frame to deform and make future adjustment difficult.

4. Tighten all 3/8"-16 x 1-1/4" Bolts to 45 Ft.Lbs Torque.

5. Tighten 3/8"-16 x 3" Bolts to 18-20 Ft.Lbs Torque.

Lamp Installation:

1. Locate Lamps and assemble according to directions provided with Lighting Kit. The lights should be mounted on the outside mounting holes for the V-plow, and on the inside mounting holes for the straight blade plows

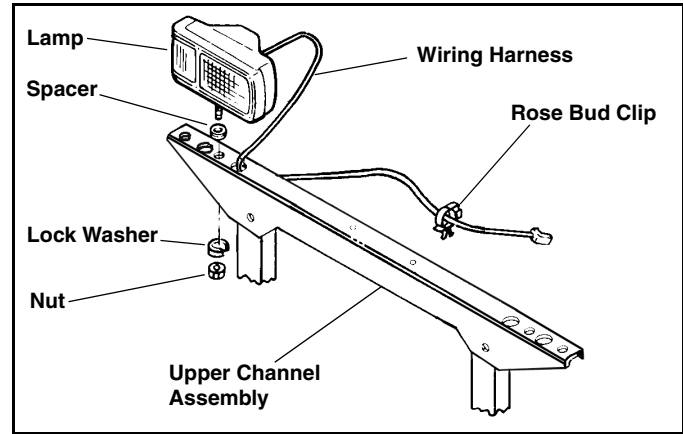


Figure 7

2. Mount Lamps on Upper Channel Assembly using supplied 1/2" lock washers and nuts. (Figure 7)

3. Pass Wire Harness attached to Lamps through holes in Upper Channel Assembly. (Figure 7)

4. Locate Universal Wire Harness, Switch, Grommets, Connectors, and install according to directions provided with lighting kit.



CAUTION

Take care to provide proper clearance from hot engine parts e.g. exhaust Manifolds.



WARNING

Failure to follow factory wiring recommendations could result in overloaded wiring and cause a electrical fire!

Do not replace stock fuse with higher rated fuse. This could result in overloaded wiring and cause a electrical fire!

5. Attach Plow section of Wire Harness to Upper Channel Assembly with Rosebud Clips provided. (Figure 7)


6. Connect the two white wires from the lamps together.

7. With Plow in *full up* position adjust Lamp light pattern by loosening Lamp Mounting Nut and swiveling Lamp on its base.

9. Operate Plow through full range of motions, up, down, right and left to make sure there is no binding or interference of the mechanical parts of the Plow and the wiring harness.

NOTE: Use a dielectric compound on all connections to prevent corrosion.

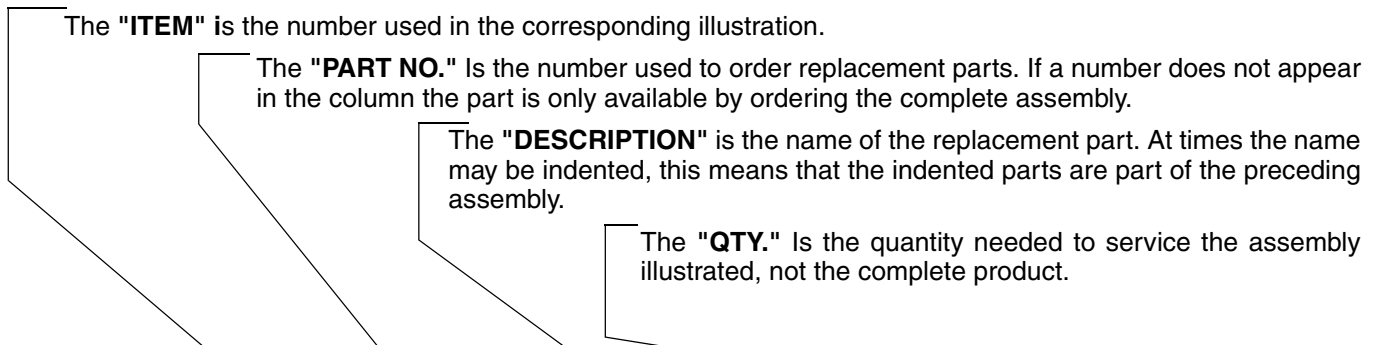
NOTE: In order to conform to Federal Motor Vehicle Safety Standards a SAE J602 Approved aiming device should be used when adjusting the Lamps.

 CAUTION
<p>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.</p>

8. Double check to make sure all Capscrews and Nuts are tight, Hitch Pins are installed, and Lynch Pins are locked.

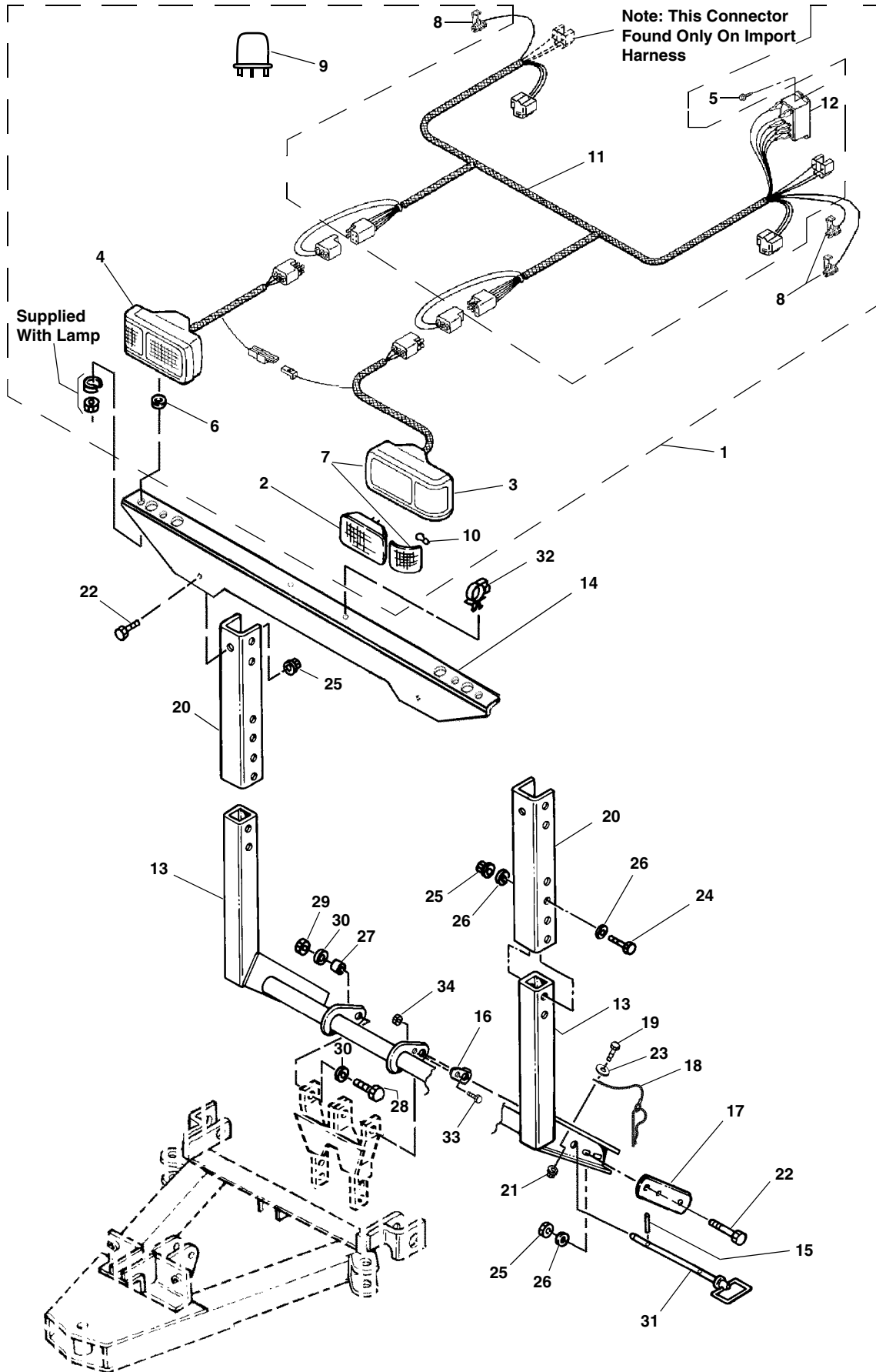
USING THIS PARTS LIST

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".



ITEM	PART NO.	DESCRIPTION	QTY.
1	96102357	LAMP KIT	1
2	96100514	Lamp, Sealed Beam	1
3	96102119	Housing, Assembly, LH	1

PARTS LIST



PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY.
1	96102357	LAMP KIT	1
2	96100514	Lamp, Sealed Beam	2
3	96102119	Housing, Assembly, LH (up to SN ALC120538)	1
	96106690	Housing, Assembly, LH (SN ALC120539 and later)	1
4	96102120	Housing, Assembly, RH (up to SN ALC120538)	1
	96106691	Housing, Assembly, RH (SN ALC120539 and later)	1
5	98100037	Screw, Self Tapping #10-16NC x 1"	2
6	96100509	Spacer	2
7	96100513	Retainer, With Lens (up to SN ALC120538)	2
	96106692	Lens, Turn Signal (SN ALC120539 and later)	2
	96106693	Gasket, Turn Signal (SN ALC120539 and later)	2
8	96002039	Scotch Lock™ Connector	3
9	96003010	Flasher	1
10	96003060	Lamp, Park & Turn	2
11	99100196	Harness, Wiring, Standard	1
	99100197	Harness, Wiring, Import	1
12	96101536	Relay, DPDT	1
13	96104709	Bar Assembly, Lower Light	1
14	96105090	Channel, Upper	1
15	98100008	Roll Pin	1
16	96103515	Sleeve Assy	1
17	96100020	Bar Assembly, Pivot	2
18	96105044	Lanyard & Pin Assy	1
19	98009027	Capscrew, Hex., 1/4"-20NC x 1"	1
20	96104794	Channel, Mounting	2
21	98100255	Nut, Hex., Nylock, 1/4"-20NC	1
22	98009034	Capscrew, Hex., 3/8"-16NC x 1-1/4"	10
23	98100254	Washer, Flat, 1/4"	1
24	98009258	Capscrew, Hex., 3/8"-16NC x 3"	4
25	98009009	Nut, Hex., Nylock, 3/8"-16NC	14
26	98009032	Washer, Flat, 3/8"	16
27	96103558	Sleeve	1
28	98100010	Capscrew, Hex., 1/2"-13 NC x 2"	1
29	98009013	Nut, Hex., Nylock, 1/2"-13NC	1
30	98100176	Washer, Special	2
31	96104713	Long Hitch pin	1
32	96100440	Clip, Rosebud	2
33	98100261	Capscrew, Hex., 5/16"-18 NC x 1"	1
34	98009150	Nut, Hex., Nylock, 5/16"-18NC	1
35	96102116	KIT, PLUG REPAIR (Not Illustrated)	1
36		Connector, Male End	1
37		Connector, Female End	1
38		Connector, Butt	12
39		Tube, Shrink	12

SNO-WAY PLOWS - LIMITED WARRANTY

FIVE YEAR STRUCTURAL LIMITED WARRANTY COVERAGE

The Sno-Way snow plow structural elements are warranted to be free from defects in materials and workmanship for a period of five years from date of delivery from an authorized Sno-Way Dealer. The Sno-Way Warranty Registration card for the product must be properly filled out and mailed to Sno-Way within 30 days of date of purchase to obtain benefits of this section of warranty.

Structural elements are defined for this warranty as: *Blade frames, A-frames, Swing Frames, vehicle sub frames, and structural components (weldments) of Sno-Way snow plows.*

TWO YEAR STANDARD LIMITED WARRANTY COVERAGE

The Sno-Way snow plow non structural components are warranted to be free from defects in workmanship for a period of two years from date of delivery from an authorized Sno-Way Dealer. The Sno-Way Warranty Registration card for the product must be properly filled out and mailed to Sno-Way within 30 days of date of purchase to obtain the benefits of this section of warranty.

Non structural product components are defined for this warranty as: *Blade inserts (polycarbonate or steel) and the SM01 Hydraulic power system and control module.*

ONE YEAR STANDARD LIMITED WARRANTY ACCESSORIES / SERVICE PARTS / COMPONENTS.

Sno-Way International, Inc. Warrants accessories, service parts and components purchased separately for a period of one year after original purchase to be free from defects in material and workmanship.

DEFINITION OF PRODUCT:

Product as used throughout this warranty means the Sno-Way line of Predator snow plows, straight blades and "V" blades and components thereof.

EXCLUSIONS UNDER THIS WARRANTY PROGRAM:

1. The installation of product must be an approved installation in accordance with the Sno-Way Vehicle Application Guide, Installation Instructions Manual and the Owner's Manual.
2. The "use" of the Sno-Way product must be in conformity with the operating and maintenance instructions as set forth in the Owner's Manual.
3. Damage as a result of accident, misuse and/or negligence is not covered.
4. The polycarbonate moldboard under the two year warranty does not cover: *Puncture, Hazing, Abrasion, Yellowing, Scratching or Chemical Damage.*
5. Normal wear items are excluded (Without limitation): *Paint finish-corrosion/contamination, Bushings and bearings, Plow shoes, Plow cutting edges, Blade markers/pins/clips, Accessory items and non-standard attachments - or any damage caused by the addition of non-standard attachments not sold by Sno-Way.*
6. Specific exclusions relating to items covered under the Two Year Warranty: *Fasteners and damage caused by failure to retighten fasteners, Electric contact corrosion - damage or abrasion of wiring harness, Control key pads/contacts, Any damage resulting from a failure to properly service and maintain the product as prescribed in the Owner's Manual.*
7. General exclusions:
 - (A) Any and all damage from the improper installation of product, misapplication of product, abusive use of vehicle and/or product, failure to properly maintain and service, improper repair, service or alteration of product, and any damage as a result of accident or misuse.
 - (B) Sno-Way will not be liable for any expense not related to defects in materials and workmanship. The attachment of product to or upon a vehicle, including any necessary modification of product or vehicle, is entirely at the purchasers risk and expense, and compliance with applicable motor vehicle rules and regulations is the responsibility of the installer.
 - (C) This Warranty when applicable applies to the "first" purchaser of product installed in accordance with Sno-Way Application Guides, Installation and Owner's Manuals, and to the transfer of the product by the "first" purchaser to another approved vehicle application by an authorized Sno-Way Dealer.
 - (D) The "repair" and/or replacement of any part or component is at the option of Sno-Way.
 - (E) Indirect costs incurred while "product" is being repaired during the warranty period are excluded such as; lost time, equipment rental, transportation charges, and similar incidental charges incurred.

OBTAINING WARRANTY SERVICE

To obtain warranty service, promptly return the product or any defective part at your expense to any authorized Sno-Way Dealer during the warranty period. Replacement or repair of defective or inadequate parts shall be performed without charge for labor or materials by such Dealer at his regular place of business during regular business hours after inspection and determination that the warranty applies.

Purchaser shall prepay all freight charges for returning Product or component to Dealer, Sno-Way or any other location designated by Sno-Way.

Note: The Sno-Way Technical Services help line is designed to service Sno-Way Dealers. Sno-Way Technical and Customer Service will help you locate your nearest Sno-Way Dealer.

Please also use the Sno-Way web site with the Dealer locator: www.snoway.com

DISCLAIMERS:

1. Sno-Way warrants its Products only as set forth in this warranty. Sno-Way makes no other warranties, express or implied, and disclaims all other warranties, including any implied warranty of merchantability or fitness for any particular purpose.
2. Sno-Way's obligations under this warranty are limited to those expressed in this warranty, and Sno-Way shall not be liable to the purchaser or any third party for any direct or indirect, incidental or consequential damage or loss.
3. No person is authorized to modify or add to this warranty in any manner.
4. If any Sno-Way product is improperly installed, altered, misused, damaged or otherwise tampered with, this warranty shall lapse and become null and void.

LEGAL RIGHTS:

Some states do not allow limitations on how long an implied warranty lasts or exclusions or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply fully to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. All "other" provisions and "limitations" not altered by local law shall continue to apply.

ENFORCEMENT/CONSTRUCTION

This Warranty shall be enforced and construed under the laws of the State of Wisconsin.

SNO-WAY® INTERNATIONAL, INC.

The logo for Sno-Way International, Inc. features the word "SNO-WAY" in a large, bold, stylized font. The letters are white with a thick black outline, and the "O" in "SNO" and "WAY" are connected. A registered trademark symbol (®) is located at the bottom right of the "Y".

Hartford, WI 53027 USA
Website: www.snoway.com
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