



**INSTALLATION
AND PARTS
MANUAL**

AUXILIARY LIGHT

AND

MOUNTING PACKAGE

99100305

AFTER S/N ALC105030

FOR PLOW SERIAL NUMBERS AFTER

24D100000

24G100000

25D100000

25G100000

28D100000

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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

FAILURE TO HEED CAN RESULT IN SERIOUS 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	7/16" — 1-3/8"
Wrenches	7/16" — 1-3/8"
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, with plow mounted, in a suitable location.



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 HEED CAN RESULT IN SERIOUS INJURY OR DEATH.

2. Locate the following items:

- A. Lower Bar Assembly (#13)
- B. Pivot Bar Assembly (#17) (2 req.).
- C. Pivot Sleeve (#24).
- D. Special Washer (#27) (2 req.).

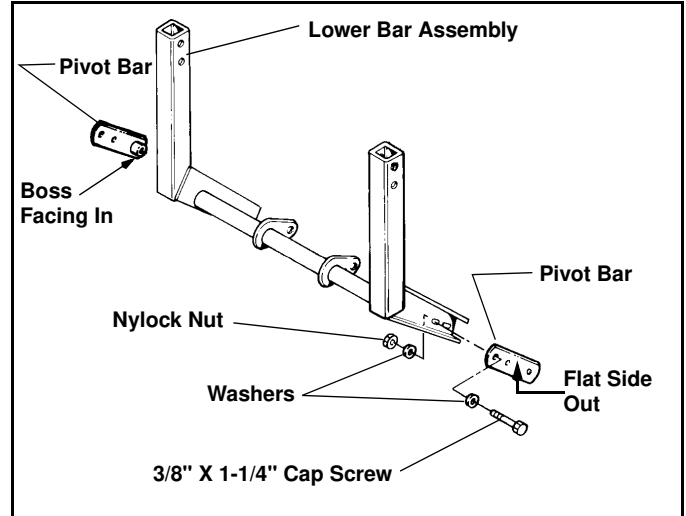


Figure 1

3. Loosely assemble Pivot Bars (#17) to Lower Bar Assembly (#13) outer arms. Use, two (2) 3/8" x 1-1/4" Cap Screw (#20), with two (2) 3/8" Washers on each Cap Screw and Nylock Nuts provided per Pivot Bar. (See Figure 1)

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

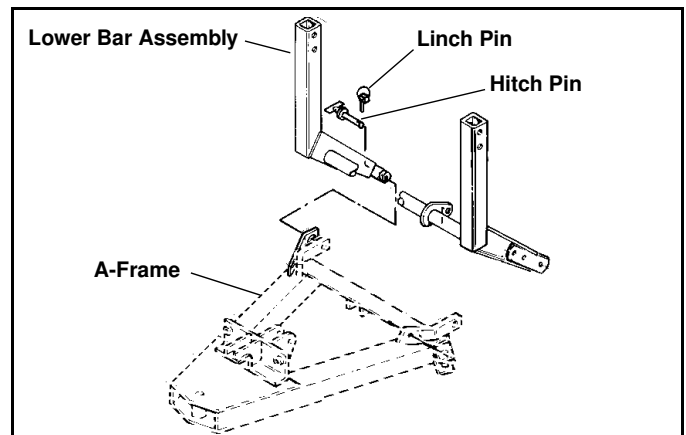


Figure 2

4. Mount Lower Bar Assembly to Main Plow Frame by sliding bosses on Pivot Bars into holes on A-Frame. Use long Hitch Pins (#96100015) to locate and secure. Reuse Linch Pins. (See Figure 2) (See Figure 3)

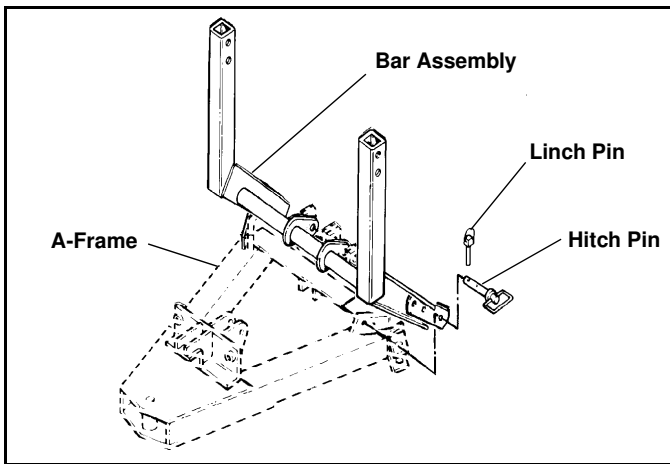


Figure 3

NOTE: It may be necessary to remove one of the Pivot bars in order to install Lower bar assembly.

5. Remove Linch Pin, Roll Pin, and Hitch Pin located on Lift Bar. Remove Hitch Pin from Lift bar. (See Figure 4)

6. Align 3/4" hole in mounting tab, on Lower Bar Assembly Cross Tube, with matching hole in lift arm. Insert Hitch Pin in aligned holes and replace Roll Pin and Linch Pin. (See Figure 4)

7. Align 3/4" hole in mounting tab, on Lower Bar Assembly Cross Tube, with matching hole in Lift Bar and insert Sleeve (#24) secure with 1/2" x 2" Cap Screw (#25), two Special Washers (#27), and Nylock Nut provided. Tighten to 75 Ft. Lbs. (See Figure 4)

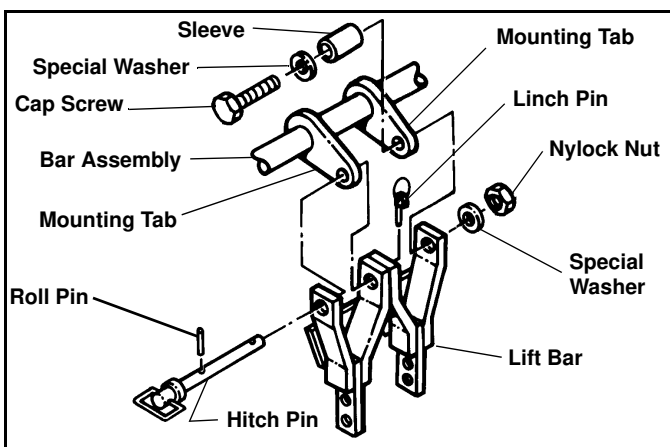


Figure 4

8. Before tightening the 3/8" Cap Screws between Pivot Bars and Lower Bar Assembly, attach Snow Plow to vehicle with Hitch Pins.

9. Tighten all 3/8" Cap Screws on Pivot Arms and Pivot Bars to 45 Ft.Lbs.

Upper Channel Assembly:

1. Locate the following items:
 - A. Mounting Channel (#18) (2 req.).
 - B. Upper Channel (#14).
 - C. Light Bracket (#36) (2 req.).
 - D. Light Bracket (#37) (2 req.).
 - E. Spacer (#29) (2 req.).

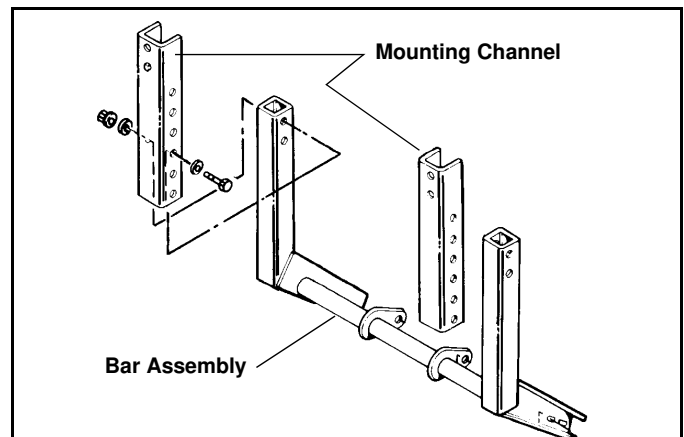


Figure 5

2. Attach Mounting Channels (#18) to Lower Bar Assembly using four (4) 3/8" x 3" Cap Screws (#21), Washers (8 req.) and Nylock Nuts Provided. (See Figure 5)

3. Attach pair of Light Brackets (#36) and (#37) to each end of Upper Channel with six (6) 3/8" x 1" Cap Screws (#19), and Nylock Nuts provided. (See Figure 6)



WARNING

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

FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.

4. Attach Light Brackets/Upper Channel assembly to Mounting Channels with two (2) 3/8" x 1" Cap Screws (#19), and two (2) 3/8" x 3" Cap Screws (#21), and Nylock Nuts provided. Use two (2) Spacers (#29) between Light brackets and channel on long Cap Screws. (See Figure 6)

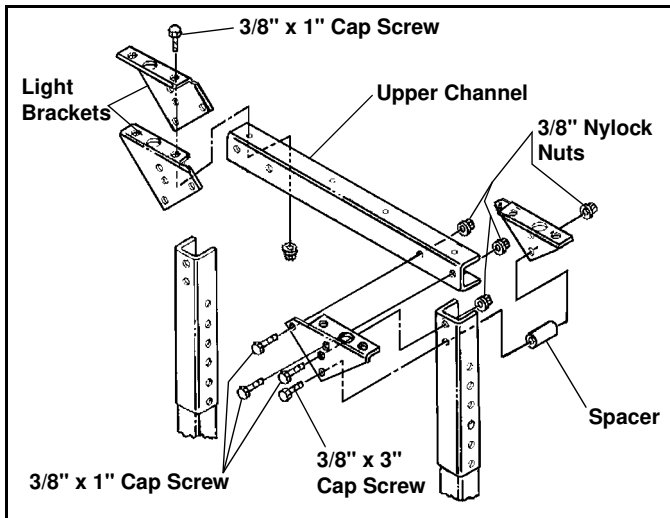


Figure 6

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" Cap Screws used for assembling Mounting Channels on Lower Bar. Doing so will cause frame to deform and make future adjustment difficult.

5. Tighten all 3/8" x 1" Cap Screws to 45 Ft. Lbs Torque.
6. Tighten 3/8" x 3" Cap Screws to 18-20 Ft. Lbs Torque.

Lamp Installation:

1. Locate Lamps and assemble according to directions provided with Lighting Kit.

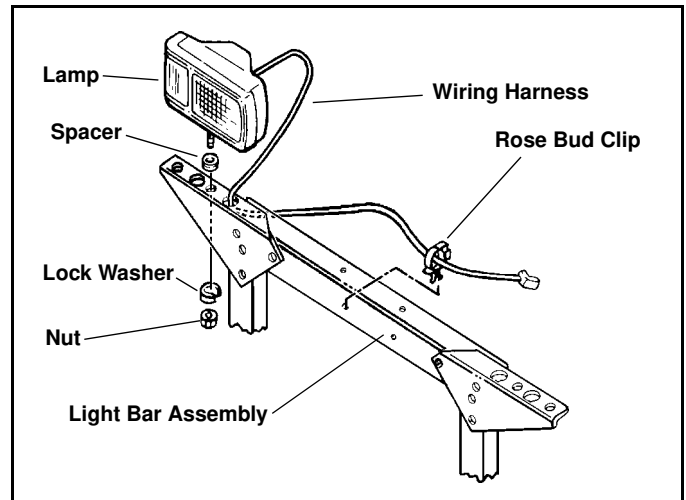


Figure 7

2. Mount Lamps on Upper Channel Assembly. (See Figure 7)

*NOTE: Each Light Bracket has two mounting holes to allow a narrow or wide light spacing. The **wide spacing** is recommended for 28 Series Plows.*

3. Pass Wire Harness attached to Lamps through holes in Upper Channel Assembly. (See 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.

NOTE: Chevrolet and GMC C/K Pickup Trucks from 1988-on require a Special Factory wire harness. Refer to GM Service Bulletin 90-8A-20.



WARNING

Failure to follow Factory wiring recommendations could result in overloaded wiring and cause an electrical Fire!

Do Not Replace Stock Fuse with higher rated Fuse. This could result in overloaded wiring and cause an electrical Fire!

FAILURE TO HEED CAN RESULT IN SERIOUS INJURY OR DEATH.

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

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

NOTE: For the Wide Light Spacing, ground wire extension 96102936 is required to connect the white wires from the lamps.

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

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

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.

8. Double check to make sure all Cap Screws and Nuts are tight, Hitch Pins are installed, and Linch Pins are locked.

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.

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.

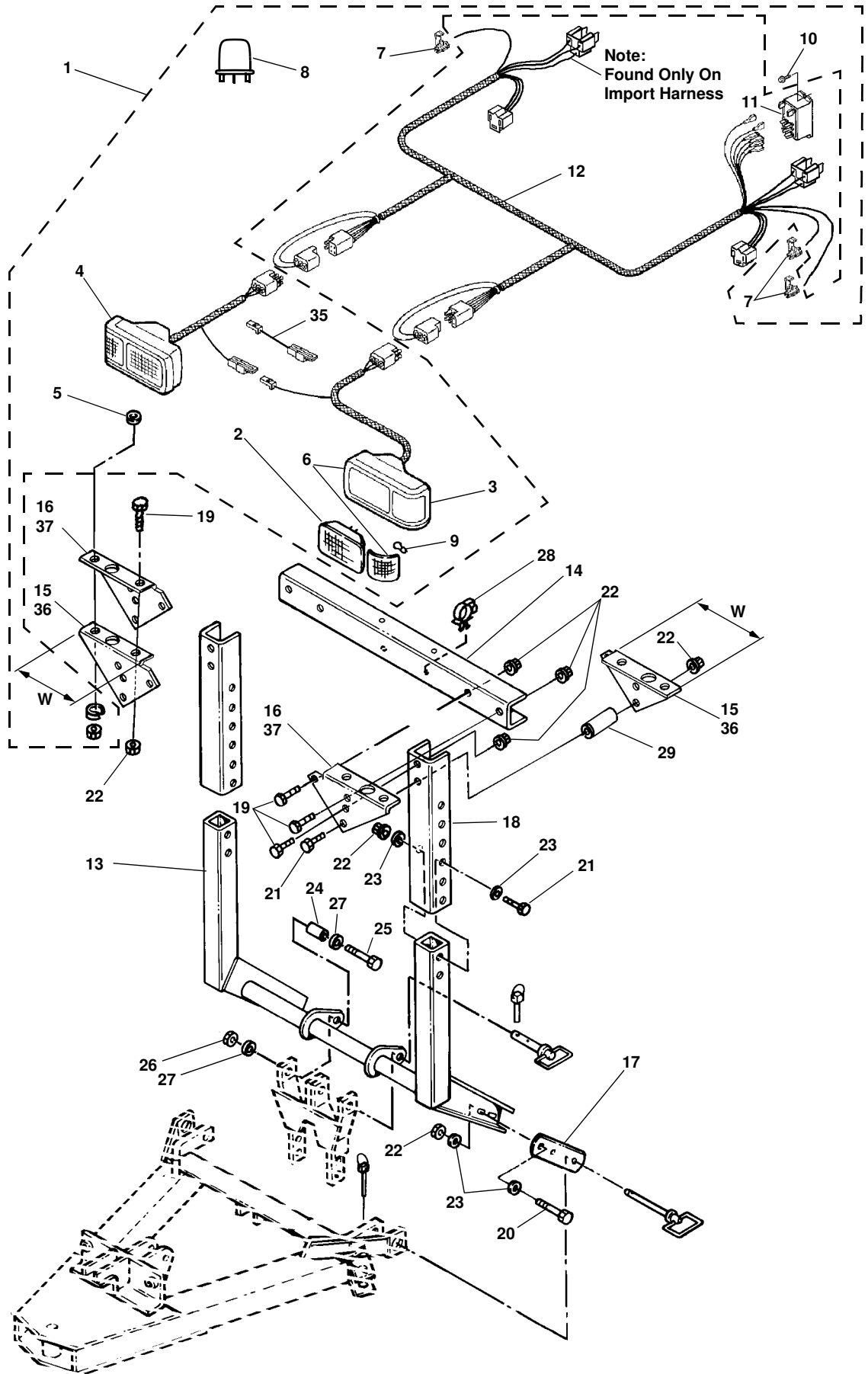
The **"DESCRIPTION"** is the name of the replacement part. At times the name may be indented, this means that the indented parts are part of the preceding assembly.

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

PARTS LIST

ITEM	PART NO.	DESCRIPTION	QTY.
1	96102357	LAMP KIT	1
2	96100514	Lamp, Sealed Beam	1
3	96102119	Housing, Assembly, LH.....	1
4	96102120	Housing, Assembly, RH.....	1
5	96100509	Spacer	1
6	96100513	Retainer, With Lens	1
7	96002039	Scotch Lock™ Connector.....	3
8	96003010	Flasher.....	1
9	96003060	Lamp, Park & Turn	1
10	98100037	Screw, Self Tapping #10-16NC x 1".....	2
11	96101536	Relay, DPDT	1
12	99100196	Harness, Wiring, Standard.....	1
	99100197	Harness, Wiring, Import.....	1
13	96100413	Bar Assembly, Lower Light.....	1
14	96100412	Channel, Upper.....	1
15	96101291	Bracket, Light - R.H. (W=7-3/8")	2
16	96101292	Bracket, Light - L.H. (W=7-3/8").....	2
17	96100020	Bar Assembly, Pivot	2
18	96100028	Channel, Mounting.....	2
19	98009022	Cap Screw, Hex., 3/8"-16NC x 1"	8
20	98009034	Cap Screw, Hex., 3/8"-16NC x 1-1/4"	4
21	98009258	Cap Screw, Hex., 3/8"-16NC x 3"	6
22	98009009	Nut, Hex., Nylock, 3/8"-16NC.....	18
23	98009032	Washer, Flat, 3/8"	16
24	96100014	Sleeve	1
25	98100010	Cap Screw, Hex., 1/2"-13 NC x 2"	1
26	98009013	Nut, Hex., Nylock, 1/2"-13NC.....	1
27	98100176	Washer, Special	2
28	96100440	Clip, Rosebud	2
29	96101287	Spacer	2
30	96102116	KIT, PLUG REPAIR (Not Illustrated)	1
31		Connector, Male End	1
32		Connector, Female End.....	1
33		Connector, Butt.....	12
34		Tube, Shrink.....	12
35	96102936	Extension, Ground Wire	1
36	96102917	Bracket, Light - R.H. (W=15-7/8")	2
37	96102918	Bracket, Light - L.H. (W=15-7/8").....	2

PARTS LIST



SNO-WAY PLOWS

LIMITED ONE-YEAR WARRANTY

SNO-WAY Warrants to the original retail purchaser for a period of one (1) year from the date of delivery from an authorized SNO-WAY Dealer that your new SNO-WAY Plow is free from defects in materials and workmanship if properly set up and operated in accordance with the recommendations set forth in SNO-WAY's Set-up and Operator's Manuals. This warranty does not cover normal wear items such as shoes and wearstrips.

SNO-WAY Plows used by a dealer as a demonstrator shall be warranted only for the period of one (1) year from the date of delivery to said dealer and the first subsequent purchaser shall be entitled to the remaining warranty protection.

This warranty shall not apply to any item of equipment which has been repaired or altered outside the SNO-WAY factory or authorized SNO-WAY dealership or which has been subject to misuse, negligence or accident: neither shall it apply to equipment which has not been operated in accordance with SNO-WAY printed instructions or has been operated beyond the SNO-WAY'S recommended snow plow operating class.

The Polycarbonate Moldboard is warranted to the original retail purchaser for a period of two (2) years from the date of delivery of the SNO-WAY Plow from an authorized SNO-WAY dealer and applies only to breakage of the Polycarbonate Moldboard. This warranty does not cover puncture, hazing, abrasion, yellowing, scratching or damage due to chemical attack. This warranty shall not apply to the polycarbonate moldboard which has been repaired or altered outside the SNO-WAY factory or authorized SNO-WAY dealership.

To validate this warranty, your dealer and you must complete the enclosed Warranty Registration Card at time of purchase of the plow and return the Factory copy to SNO-WAY International, Inc. within ten (10) days following delivery of your new Plow.

To obtain warranty service, promptly return your Plow 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.

EXCLUSIONS OF WARRANTY

Except as otherwise expressly stated herein, SNO-WAY makes no representation of warranty of any kind expressed or implied, including merchantability or fitness for particular purpose in respect to the equipment.

SNO-WAY shall not be liable for incidental or consequential damages for any breach of warranty, including but not limited to loss of use, inconvenience, rental or replacement equipment, loss of profits or other commercial loss.

No agent, employee or representative of SNO-WAY has any authority to bind SNO-WAY to any affirmation, representation or warranty concerning its equipment except as specifically set forth herein.

Certain limitations expressed herein are excludable in accordance with provisions of local law. Such limitations shall be deemed struck if such local law is applicable. All other limitations and provisions shall continue to apply.

SNO-WAY INTERNATIONAL, INC.

SNO-WAY® INTERNATIONAL, INC.



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