



# Deluxe 12V Trailer Light Kit

**Model 41782**

## ASSEMBLY AND OPERATING INSTRUCTIONS



Due to continuing improvements, actual product may differ slightly from the product described herein.



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**To prevent serious injury, read and understand all warnings and instructions before use.**

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**For technical questions and replacement parts, please call 1-800-444-3353**

## Specifications

Included Components	Corrosion Resistant Housing (2) Class A Combination Stop, Tail, Turn Signals, Side Markers and License Plate Bracket
Wiring Harness	20 Ft. Split Y type 4' Color Coded Trunk Harness
D.O.T.	Department of Transportation Approved

Lamp Type	12V Automotive type
Power Required	12 VDC
Net Weight	3 Lbs.

## Save This Manual

You will need the manual for the safety warnings and precautions, assembly instructions, operating and maintenance procedures, parts list and diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Keep the manual and invoice in a safe and dry place for future reference.

## Safety Warnings and Precautions

**WARNING:** When using tool, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

### *Read all instructions before using this tool!*

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate automotive accessories in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Batteries and automotive accessories may create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while installing and operating a automotive accessory.** Distractions can cause you to lose control. Protect others in the work area from debris such as corrosion materials and sparks. Provide barriers or shields as needed.
4. **Automotive accessories must be properly installed and grounded in accordance with all codes and ordinances. Check with a qualified electrician if you are in doubt about how to properly install this product.**
5. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electric shock if your body is grounded.
6. **Do not expose automotive accessories to rain or wet conditions.** Water entering a automotive accessory will increase the risk of electric shock.

## Personal Safety

1. **Stay alert. Watch what you are doing, and use common sense when operating an automotive accessory. Do not use an automotive accessory while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating an automotive accessory may result in serious personal injury.
2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
3. **Avoid accidental starting. Be sure the vehicle ignition switch is off before installing this item.**
4. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of tools or accessories in unexpected situations.
5. **Use safety equipment. Always wear eye protection.** Dust mask, nonskid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

## Trailer Light Use and Care

1. **Use bolts and included fasteners to properly secure and support the trailer lights to a stable platform.** This automotive accessory is designed to be installed to a firm structure on the trailer.
2. **Use the correct trailer lights for your application.** Do not overload the power supply, nor expect the trailer lights to perform a task other than the one for which they were designed. The correct automotive accessory will do the job better and safer at the rate for which it is designed.
3. **Do not use the automotive accessory if the power switch does not turn it on or off.** If you observe the trailer lights not reacting as expected according to these instructions, disconnect and remove the trailer lights from the vehicle.
4. **Store idle tools and accessories out of reach of children and other untrained persons.** Such items may be dangerous in the hands of untrained users.
5. **Keep automotive accessory maintained and clean.** Properly maintained automotive accessories are less likely to fail and are easier to control. Do not use a damaged automotive accessory. Tag damaged automotive accessories "Do not use" until repaired.

## Automotive Electrical Precautions

1. **Read all instructions and warnings on any battery or automotive electrical systems before working on vehicle.**
2. **Do not expose the battery or bare wires, switches or connections to rain or wet conditions.**
3. **To avoid damage of cable and plug, never pull the cable to disconnect the Trailer Lights.**
4. **Do not use the Trailer Lights if the cables or plugs are damaged.**
5. **Repairs should be carried out by a qualified technician.**
6. **Do not touch the battery poles with any conductive source.**
7. **If the battery is removed, do not store the battery in a box with other metal objects.**

## Specific Safety Rules

1. Maintain labels and nameplates on the Trailer Lights. These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
2. Always wear safety impact eye goggles and heavy work gloves when working on or around lead-acid batteries. Wear long sleeve shirt, long pants and work shoes. Using personal safety devices reduce the risk for injury. Safety impact eye goggles and heavy work gloves are available from Harbor Freight Tools.
3. Maintain a safe working environment. Keep the work area well lit. Make sure there is adequate surrounding workspace. Always keep the work area free of obstructions, grease, oil, trash, and other debris. Do not use a power tool in areas near flammable chemicals, dusts, and vapors. Do not use this product in a damp or wet location.
4. Always unplug the Trailer Lights from their electrical connection before performing any inspection, maintenance, or cleaning procedures.
5. Avoid contact with Battery Acid. If splashed, immediately wash affected area with clean water. Continue washing area until medical help arrives.
6. Turn vehicle ignition off before making cable connections. Vehicle's engine must be cooled down before making cable connections.
7. Connect Trailer Lights cable to proper polarities. Connect black cable to the negative battery terminal, and the red cable to the positive battery terminal (For a negative grounded system). Failure to do so could result in sparks, possible fire and severe personal injury.
8. Keep cables clear of fan blades, belts, pulleys, and other moving parts of the engine that may cause injury, or damage to the Trailer Lights.
9. Work on vehicle in well ventilated areas to prevent the accumulation of noxious or explosive gases.
10. Do not allow the Black and Red battery cables or terminals to touch. Failure to adhere to these directions could result in severe personal injury. If this happens, sparks will occur that can melt connection lugs, or other metal objects, and create the potential for fire.
11. Use only with vehicles and boats with 12 volt electrical systems.
12. Disconnect the positive battery cable of the vehicle before connecting trailer lights.
13. Keep any extension cords off the ground and away from water when working on vehicle.
14. When using any extension or power cord, always use a Ground Fault Circuit Interrupter (GFCI) protected electrical outlet.

# Unpacking

*When unpacking, check to make sure that the product includes the following:*

- (2) Combination Class A Stop-Tail-Turn lights and License Plate Bracket**
- (2) Side Marker Clearance Lights**
- 23 Ft. Split Y-style Wiring Harness**
- 4 Ft. Color Coded Trunk Harness**



*If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual.*

# Installation

**Warning:** Before Installation, disconnect positive battery cable of the vehicle.

**Warning:** Whenever drilling, be sure that drill will not damage any wires, tubes or components on either side of the member being drilled. Plan for your installation so units will be located conveniently and wires will be routed out of the way of any other components. Plan to fill all drilled holes with sealant to prevent water intrusion or rust.

**NOTE:** If trailer requires assembly, install trailer light kit after trailer is fully assembled.

**NOTE:** When installing lights on a trailer whose bed folds up, always carefully rout the wires so they will not be damaged when trailer bed is folded up.

## **Vehicle Connection:**

**NOTE:** Refer to wiring diagram on page 8 while reading these directions.

**NOTE:** Use standard blue wire connectors available in any automotive supply to make these connections.

1. Connect the BROWN wire of the color coded Trunk Harness to the vehicle's tail light wire. Connect the YELLOW wire of the color coded Trunk Harness to the vehicle's *left* hand stop and turn light. Connect the GREEN wire of the color coded Trunk Harness to the vehicle's *right* hand stop and turn light. See assembly diagram on page 7.

**NOTE:** If the towing vehicle has separate turn and stop lights, you will have to wire these separately. See vehicle owner's manual for instructions.

2. Attach the WHITE ground wire to the vehicle's frame. You may use a hardware clip, or drill a pilot hole and use self-tapping metal screw (not included). Before drilling, make sure the drilling path is clear of electrical wires or cables.

**CAUTION:** Be sure the Trailer Lights and components are firmly attached and will not come loose during normal driving or an unforeseen sudden stop.

### **Trailer Light Mounting and Connection:**

1. Attach the License Plate Bracket to the left rear of the trailer.
2. Attach one Stop-Turn-Tail light to the license plate bracket onto the left rear of the trailer.
3. Attach the other Stop-Turn-Tail light to the right rear of the trailer.
4. Use the Metal Frame Clips included in the hardware package to attach each half of the Split Y-Style wiring harness down each side of the trailer. Run the YELLOW and BROWN wires down the left side and the GREEN and BROWN wires down the right side.
5. Connect YELLOW and BROWN wires to the left hand light with wire nut connectors.
6. Connect GREEN and BROWN wires to the right hand light with wire nut connectors.
7. Attach the WHITE ground wire to the trailer frame.
8. Attach the side markers to the forward part of the sides of the trailer. One on each side as indicated in the diagram on page 8. Attach the marker light wires to the BROWN harness wire using blue wire connectors.

**NOTE:** If the trailer is over 80 feet wide, D.O.T. requires 3 red marker lights at the rear of the trailer. These are not included in this kit, and must be purchased separately.

9. Connect the harness plug to the trunk connector plug. Turn on the car headlights. Both tail lights and all side marker lights should come on. If they do not come on, recheck all connections and light bulbs.
10. The brake lights should come on only when the vehicle brake pedal is depressed. If not, recheck connections and light bulb.
11. The brighter tail lights should come on and blink when the directional lights of the vehicle are operated. If not, check all connections and bulbs.

## **Operation**

1. With the vehicle turned on, the Trailer Lights will come on at the same time the headlights are turned on.
2. Observe the trailer lights to be sure they are operating properly. Test the brake and directional lights before beginning a trip.
3. After use, switch Off the vehicle light switch.

## **Changing a light bulb**

***In the event a light bulb is damaged or burned out, use a phillips screw driver (not included) to change the bulb.***

1. Using a phillips screwdriver, remove the screws holding the lens on the light.
2. Carefully pull the lens straight off the light, keeping the seal in place. Set the lens, seal and screws aside in a safe place.
3. Remove the damaged bulb. In most cases, push the bulb straight into the socket and rotate 1/2 turn to the left to loosen the bulb. It will then pull straight out. Some automotive light bulbs simply screw out by turning counterclockwise. Examine your bulb to determine the proper way to remove it.
4. After removing the old bulb, replace it with a new one of the same type. Either push in and turn to the right or screw in clockwise depending on the bulb type.

5. Replace the lens being careful to reposition the seal properly. The seal prevents water intrusion and consequent damage to the bulb, bulb socket or wiring.
6. Replace the screws and tighten hand tight. Be careful not to overtighten, as this might damage the seal or crack the lens.
7. Test the light to be sure it is working.

## Care and Troubleshooting of your Trailer Lights

1. The lens of the trailer lamps must be kept clean. The lamps should be handled with care to prevent breakage. Light bulb sockets must be cleaned periodically to prevent or remove corrosion.
2. Maintain proper electrical wiring polarity to prevent damage to the lights.
3. All lamps have a limited life-span. However, if you are experiencing problems with your trailer lights inspect the following:

### **Bulbs:**

- Inspect for broken or burned out bulbs or corroded sockets.
- Check connection where lamp broken where glass meets the base.
- Make a visual inspection of the bulb for broken or loose components.

Correct any defect found in these inspections

### **Wiring Harness:**

- Check for broken wires, pinched wires or loose or corroded connections.
- Recheck to be sure wiring follows diagram on page 8.
- Inspect light housing and wiring for mechanical damage

Periodically clean the lights by wiping with a lint free towel or clean damp cloth.

### **PLEASE READ THE FOLLOWING CAREFULLY**

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER NOR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

*NOTE: Some parts are listed and shown for illustration purposes only and are not available individually as replacement parts.*

# Wiring Diagram

