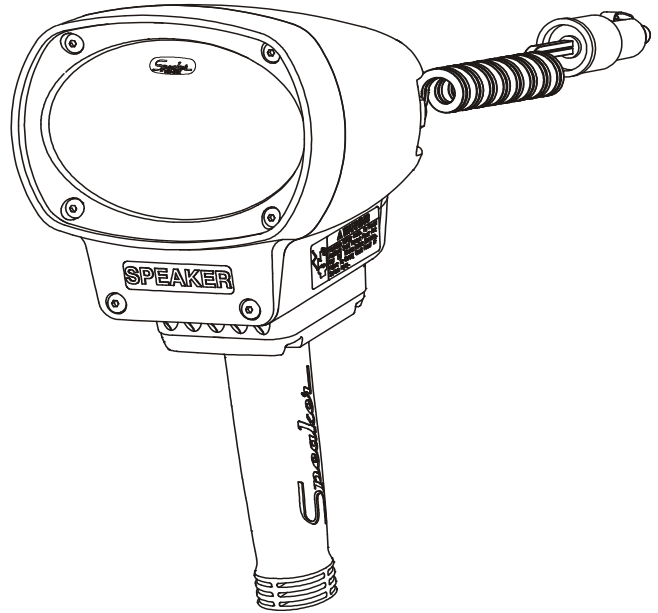


Model 9770 (35 Watt; 12-Volt DC)

Model 9780 (35 Watt; 24-Volt DC)

Hand Held HID Lighting System



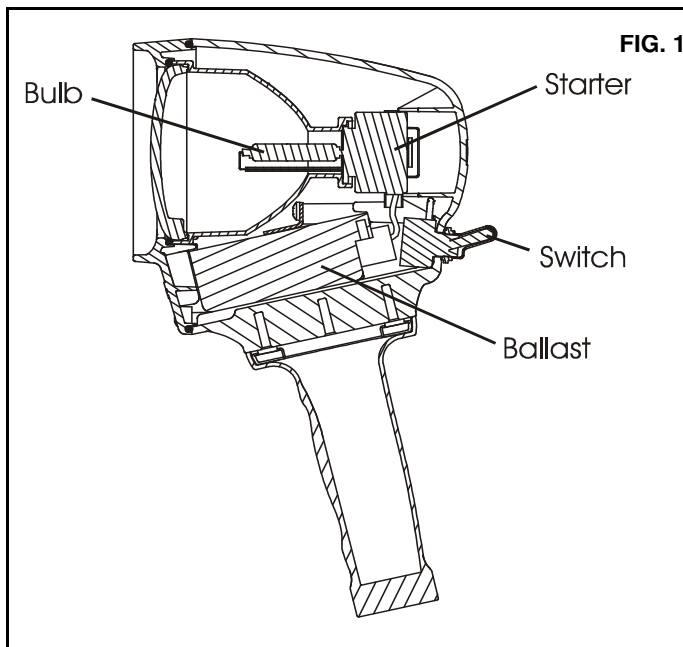
WARNING

Hazardous Voltage Inside. To Prevent Accidental Shock Remove Power And Wait (5) Minutes Before Servicing. Failure to Comply Could Result In Serious Injury.

THEORY OF OPERATION:

High Intensity Discharge (HID) lighting describes a type of light source producing light energy by means of an arc sustained within a gaseous enclosure. This system is comprised of three (3) major components:

- The bulb which contains the environment and houses the arc;
- The starter (located on rear of bulb) which boosts the voltage from the ballast to create the arc in the bulb; and
- The ballast which provides high voltage to the starter.



Major advantages of HID lighting are high color temperature producing a brilliant white light and extended service life due to the absence of a wire filament. These features lend themselves to applications requiring extended use and severe conditions. HID provides the user several times the output of incandescent or halogen lamps using the same levels of input energy.

GENERAL OPERATION:

The Speaker HID Light System is designed for heavy duty, long life applications. When input power is introduced to the ballast system, an arc is struck in the bulb between two contacts. Although HID offers extra long service life, frequent re-striking (on/off) of the arc will shorten bulb life. Once the arc is struck, it is preferable to leave the lamp on until it is no longer needed. If a voltage disturbance extinguishes the arc, the system will shut down to protect the lamp. If this occurs, you should remove power from the lamp to allow a reset and then reapply power. Normal operation will resume. A minimum contact rating of 20 Amp tungsten is recommended due to the current in-rush at lamp start-up.

Failure to adequately size will damage and/or shorten the life of the relay. Keeping the lens of the lamp clean of mud, paint, debris, etc. will also extend the life and performance. Debris on the lens could cause damage due to trapped heat. Damage of this type is not covered under the warranty and can be prevented by simple cleaning with mild soap and water.

CAUTION:

Do not place lamp in lens-down position when turned on.

INSTALLATION:

The HID lighting System consists of a lamp assembly with an internal ballast. This assembly must be plugged into a 12 volt or 24 volt automotive power port/cigarette lighter.

WARNING

The HID bulb contains gas under pressure and could shatter. Protect bulb against abrasions, scratches and liquids. Do not touch the glass envelope. Operate bulb only in a lamp assembly. Replace if damaged or cracked. Wear eye protection when handling. Disconnect power before removing.



WARNING



Disconnect input power to ballast before servicing unit

TROUBLESHOOTING CHART

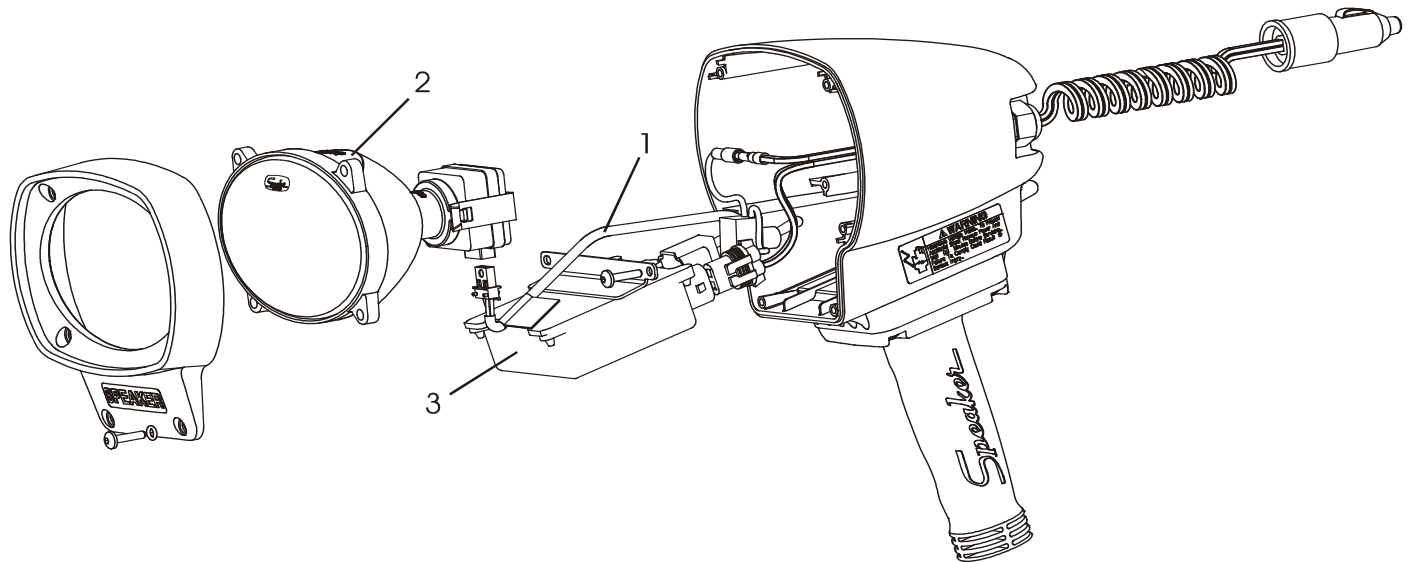
Problem	Inspect/Possible Cause	Solution
Unit does not light	HID Internal Protection Circuit	Remove power from HID system. Wait 30 seconds and reapply power
	Check electrical connections and cords	Replace if damaged
	Low/no voltage input to unit	Repair or replace defect in input system
	Beam burned out	Disconnect power; replace beam; reconnect power; attempt re-start
	Ballast Failure	Disconnect power; replace ballast assembly; reconnect power; attempt re-start
Arc strikes but will not sustain	Check input current (see specifications)	Repair or replace defective input system
	Beam burned out	Disconnect power; replace beam; reconnect power; attempt re-start

ONE YEAR WARRANTY: All Speaker products sold hereunder are warranted to resellers and commercial industrial users for one (1) year from date of purchase against defects in material and workmanship. Products found to be defective during the warranty period will be repaired or replaced (at Speaker's option) without charge. The defective product must be returned transportation prepaid with proof of date of purchase to J.W. Speaker Corporation, Service Dept., W185 N11315 Whitney Drive, Germantown, Wisconsin 53022. The repaired or replaced product will be returned to the purchaser with transportation prepaid by Speaker. Contact the factory for a Return Materials Authorization (RMA).

This warranty does not cover removal or installation costs, or products subjected to misuse, neglect, accident, improper installation, or use in violation of instructions furnished by Speaker. This warranty is Speaker's exclusive obligation with respect to products sold hereunder. NO OTHER WARRANTIES OF ANY KIND ARE MADE, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Under no circumstances shall Speaker be liable for incidental or consequential damages of any kind arising out of the sale or use of any Speaker product.

SYSTEM SPECIFICATIONS

Series 9770	Ballast Input Voltage	Maximum Amp Draw	Ambient Operating Temperature	Bulb Identifier	Output (lumens)	Color Temp
35-Watt, 12 volt System	9-16 VDC	20A Max (initial) 3.18A max (steady state)	-40 to 85C	D1S (35W)	3200 lm	4100° K
35-Watt, 24 volt System	18-32 VDC	20A Max (initial) 1.60A max (steady state)	-40 to 85C	D1S (35W)	3200 lm	4100° K



PARTS LIST

Item	Description	Item	Description
Complete	HID Lighting System, 12 Volt or 24 Volt Spot	2	HID Beam, 12-24 Volt, Spot
1	Wire Harness	3	Ballast Assembly, 35W 12V or 35W 24V

J.W. Speaker Corp. N120 W19434 Freistadt Road Germantown, WI 53022-8211 USA
262.251.6660 / 800.558.7288