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About: HID Lamp Systems

Will I Lose The Ability To Use The High Beams:

- **No!** I only sell HID components that work in all 12V Harley Davidson's. Everything fits in all models.

Can I remove the lighting system and put it on my next bike:

- Yes, No Problem

Can I Bring Along My Old Halogen Bulb And Carry It For My Sense Of Security:

- Yes, you can easily remove the HID bulb and replace the halogen bulb with little tools on the side of the road. Just disconnect the HID & snap on the plug onto your HID bulb.

What Is HID:

- HID Lamp stands for High Intensity Discharge Lamp. Unlike Halogen lamps, High-Intensity-Discharge (HID) lamps don't have a filament but create light by the arc between two electrodes. The arc activates the Xenon, which in turn ignites the metal halide.

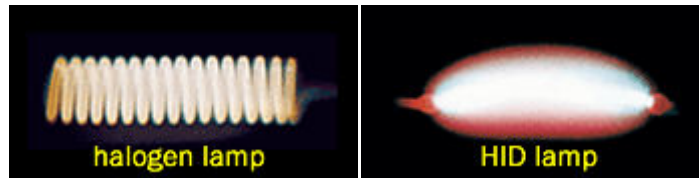
Why Not Buy a Xenon-filled Coated Bulb for \$9:

- Other companies produce halogen bulbs that are gas-filled. They still have a filament as they are halogen technology, but the gas gives the bulb a bluer color when lit. Xenon-filled halogen bulbs produce little or no more light output then standard halogen bulbs of the same wattage.
- *Do Not Be Fooled* By Companies That Offer Hid Look Bulbs! They are not a true XENON HID light system.

How It Works:

- The HID Lamp is a system that produces light by putting xenon gas and metal halide salts into the light emitting tube installed inside the HID Lamp.
- The electrons inside the light emitting tube collide with the metal atoms, initially using 23,000 volts generated from the control system (ballast) to strike an arc. Once the arc is struck the voltage drops to a

stable 83 volts & the power draw drops to 3.2 amps due to reduced resistance.



How Much Brighter:

- Luminous: Halogen lamp: **700-1000 lumen**. HID lamp: **3200 lumen**.

Could I Not Just Purchase a Stronger Watt Halogen Bulb to Get a Brighter Light:

- Increasing the wattage will make the bulb a little brighter but still much dimmer than the XENON HID lamps. Also, $AMPS = (Amps = Watts/Volts)$ or $(BULB\ WATTS \times 2) / BATTERY\ VOLTAGE\ OUTPUT$ (12V.). As you increase the wattage on your bulb you increase the current draw on your entire electrical system. You additionally increase the heat on your headlight. This is critical in motorcycle applications and could cause your lens and wiring to melt.

Why Is HID a Better Light:

- HID lights can provide you with 2-3 times more light than other halogen lamps, which can help overcome severe road condition.
- This higher light output improves both light intensity and light distribution on the road, widening the field of vision for earlier recognition of people and objects.
- Brilliant white light has better reflecting ability, which makes you drive more safely under bad weather (rain, snowfall or night time).
- The color temperature of 6000K (color of the sun) is accepted by eyes, thus not tiring as quickly which does improve your feeling of security and driving capabilities.

How Much Power Does It Take:

- Power Consumption: Halogen lamp: 55W-65W/5.5A. HID lamp: 35W/3A. Results: By comparison, the power save of HID is almost half less than the halogen. Less resistance on your stator = a more fuel efficient and powerful motor.

How Long Does a Bulb Last:

- Longevity: SilverStar® H4 ST Halogen lamp 55W Rated Life: 150 hrs, H-4 HID lamp: 3000-3500 hrs. **Ref:** SilverStar® Catalog http://www.sylvaniaautocatalog.com/sylvania/ProductBrowse_Highp_SilverStar.asp?BepartNo=&BatchId=70&ProductNumber=H4%20ST&PartNo=%20ST,%20%20ST

What If My Light Does Not Work & I am on a Road Trip:

- If you are on the road and in the unlikely event your light does not work, call me toll free 1-866-899-5962 , you can purchase a replacement bulb & I will ship it to you any method you choose & to any convenient location closest to you the same or next day depending on the time and day of call. I will get it done A.S.A.P., **ME!**

Vibration of a Motorcycle:

- HID is unaffected by vibration. Road vibrations can cause damage to coil lighting technologies.

The Working of a HID:

- The working voltage of the metal halide lamp is about 86V, and the starting voltage is up to 23000V. It is impossible for your battery to provide voltage. A ballast is needed.
- The ballast must deliver 35 watts to the lamp when the voltage across the lamp is between 65 and 108 volts. When this voltage is lower, the ballast must deliver at least .5 amp but generally no more than 2 amps and preferably as close to 35 watts as possible. Higher currents are preferred - a partially warmed up metal halide lamp sometimes has an unstable arc at lower current.
- A voltage across the bulb higher than 108 volts only occurs in the early stage of establishing the arc or if the bulb is failing. The ballast should deliver enough power to heat up the electrode tips enough for the arc to establish.
- Metal halide lamps require AC. DC is tolerable briefly, and then preferably only if the bulb is cold.
- Under powering a metal halide lamp is undesirable. If the electrodes are not hot enough, they do not do a good job of conducting electrons into the arc and voltage drop in this process (known as the "cathode fall") is excessive. Excessive cathode fall causes positive ions in the arc to hit the electrode at excessive speed which "sputters" electrode material onto the inner surface of the arc tube.

Can I Use a Modulator, DRL (daytime running lights) or Auto Switch:

- No, because the arc needs to remain struck. Fluctuating voltage or turning on and off the bulb decreases life or could cause damage.

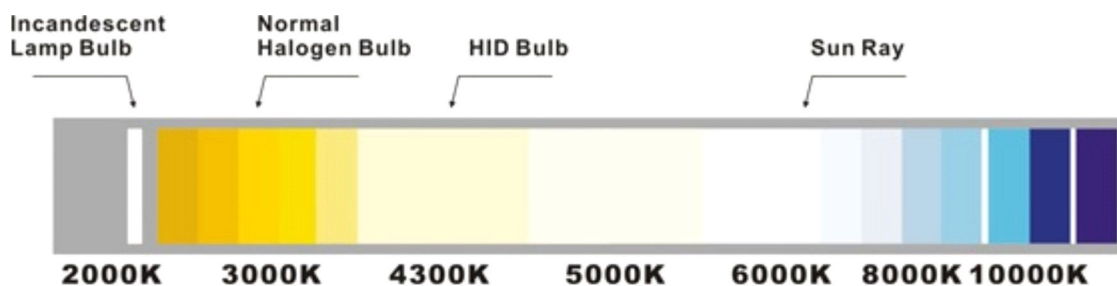
Are These XENON HID Light Systems Street Legal:

- Every jurisdiction has its own rules and regulations governing the use of automotive lighting. XENON HID lighting systems that are supplied with the vehicles from the factory are DOT approved.
- NO XENON HID conversion kit available from any source is DOT approved if installed outside of the factory. Moreover, in the U.S, this is not street legal for use on public roads. As a result, we officially

endorse the kit for exhibition and off-road use and will only sell the kit to be used for these purposes. We are not responsible for buyers who violate the terms of sale while in which they will assume all responsibilities for any unauthorized or unintended use other than exhibition or off-road use.

Color Temperature and the Lumen

- The unit of the color temperature is K.
- The unit of the brightness is lumen.
- Because the sensitivity of the eye for different color is distinct, the color temperature is too high for the eye to be sensitive, for example, the lumen of 4300K is 3200lm, but it cuts down to 2200lm when it is 12000K.
- Do not mistake that the higher the color temperature, the brighter the light. The color temperature is only related to the temperature of the light color, not to the brightness.
- To an extent, the higher the color temperature, the lower the lumen, and the penetration of the fog and raining would be worse.
- The penetration of the 3000K (golden light) is good, fitting for the fog and raining. However, this is just for the distance, not for the bright lighting, it is tired for the eye after a long time driving.
- We recommend & we only sell the color temperature of 6000K.
- The surface temperature of the sun is 6000K, it is the same color temperature as 6000K.
- Color temperature of the halogen lamp is 2800K



According to the ECER and IEC 60810 rule, the lumen of the 4250K is 3200lm >< 450lm, and we consider the relationship as follows:

4100K 3300lm >< 350lm &	5000K 3000lm >< 350lm	6000K 800lm >< 350lm	7000K 2600lm >< 350lm
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Warranty / Returns

» **WARRANTY COVERAGE:** Ballasts and/or Bulbs are warranted for a period of one (1) year from the date of the purchase. Warranty does not cover breakage due to improper installation, shipping, or handling.

» **EXCLUSIONS:** Any defects resulting from water damage, fire, acts of nature, misuse, abuse, modification, improper installation, vehicle crash, or any type of impact. Any modification to the system or operating on a vehicle with damaged headlight housing will void the warranty. Motorcycle Metal will not be responsible for damages to motorcycles resulting from the use, misuse, or inability to use a Motorcycle Metal product.

I hope I have covered all of your concerns and answered your questions.

Sincerely,

A handwritten signature in blue ink that reads "Howard G. Messner". The signature is written in a cursive style and is placed on a light-colored rectangular background.

Howard G. Messner President