

Automatic Headlight Dimmer

CHRYSLER CORP. AUTOMATIC HEADLIGHT DIMMER

Imperial

DESCRIPTION

The Automatic Beam Changer controls headlight beam selection automatically. Unit senses light intensity from approaching vehicles and automatically adjust headlights to high or low beam. Major components of the unit are Photo-Amplifier, Power Relay, Foot Switch, Drive Sensitivity Control and interconnecting wiring. Component functions and locations are as follows:

Photo-Amplifier — A light sensing optical device and transistorized amplifier mounted ahead of radiator cradle assembly and is accessible with hood raised.

Power Relay — Relay receives signal from photo-amplifier and switches headlights to high or low beam. Unit is mounted on front floor pan just above foot dimmer switch.

Override Foot Switch — Unit replaces regular dimmer switch and provides automatic control of headlight beams, or low beam only. Partially depressing switch plunger provides an over-riding high beam and automatic operation will be restored when pressure is relieved. Switch provides conventional control of upper and lower beams with sensitivity control in "OFF" position.

Sensitivity Control — Mounted coaxially with instrument panel headlight switch. Rotating knob clockwise will increase sensitivity (switches to low beam with approaching car farther away). Rotating knob counterclockwise will decrease sensitivity (switches to low beam with approaching car closer). With knob turned to "OFF" position, high and low beam is controlled manually with foot switch.

OPERATION

AUTOMATIC OPERATION

Headlights are under automatic control or low beam only, depending on position of foot switch. Under automatic control, lights will go to low beam whenever light strikes the photo-amplifier. Driver may obtain high beam by over-riding automatic control with slight pressure on foot switch. Lights will return to automatic control when pressure is removed. Sensitivity is driver-controlled with knob on instrument panel.

MANUAL OPERATION

With sensitivity control knob in counterclockwise "OFF" position, headlight beams will be controlled manually by depressing override foot switch in usual manner.

TESTING

With car in a well lighted area, start engine and operate at fast idle. Set sensitivity control knob to center of its rotation. Turn headlight switch on, and headlights should remain on lower beam in both positions of dimmer switch. With foot switch in automatic position, covering photo-amplifier with black cloth should cause headlights to switch to high beam and

return to low beam when cloth removed. With headlight dimmer on automatic and lights on lower beam, rotate driver control knob to "OFF" position and headlights should switch to high beam. Depress foot switch to manual and headlights should switch to low beam.

NOTE — Before testing, check in-line fuse in gray wire between sensitivity control and power relay.

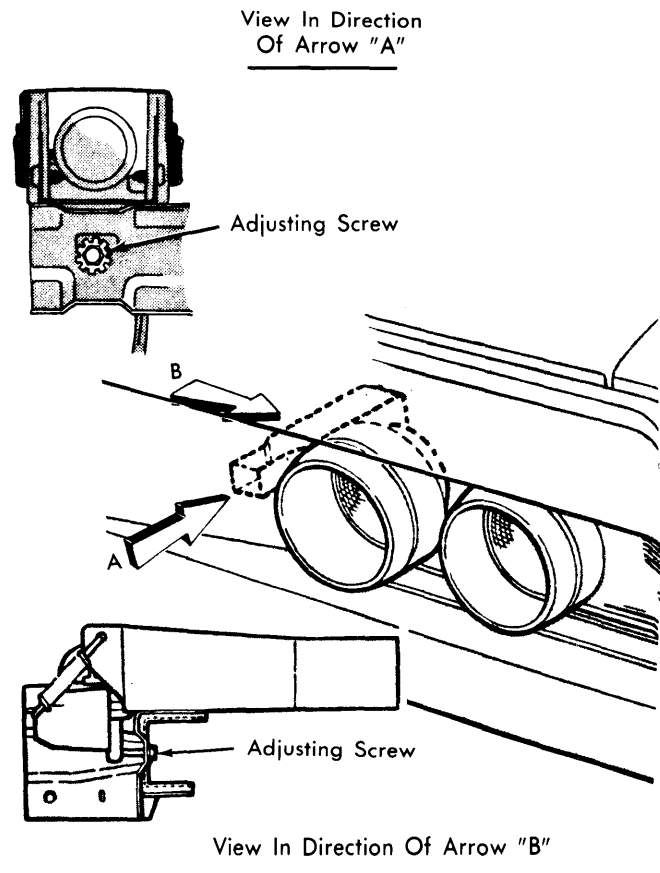
ADJUSTMENT

PHOTO-AMPLIFIER

NOTE — Unit has level assembly for use in setting correct vertical aim attached as part of unit. Do not disturb factory calibration adjusting screw on level.

1) With car unloaded, gas tank at least half-full, tire pressures correct (3-5 lbs. maximum variation), trunk empty except for spare tire, place car on level floor and rock sideways to allow springs and suspension to assume normal position.

2) Raise hood and turn adjusting screw (see illustration) until level bubble is centered. Always make final adjustment by turning screw clockwise.



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PHOTO-AMPLIFIER ADJUSTMENT SCREW LOCATION

CHRYSLER CORP. AUTOMATIC HEADLIGHT DIMMER (Cont.)

TROUBLE SHOOTING & DIAGNOSIS

NO LOW BEAM OPERATION

Driver's control not to center of rotation. Faulty or loose connections to foot switch, power relay, driver control or photo-amplifier. Poor ground at power relay or photo-amplifier. Defective power relay, photo-amplifier or foot switch. Blown fuse.

NO OVER-RIDING HIGH BEAM

Defective foot switch. Driver control not grounded or faulty photo-amplifier.

NO HIGH BEAM WITH FOOT SWITCH IN AUTOMATIC AND PHOTO-AMPLIFIER IN DARKNESS

Photo-Amplifier faulty or incorrect connections at power relay.

HEADLIGHTS FAIL TO DIM

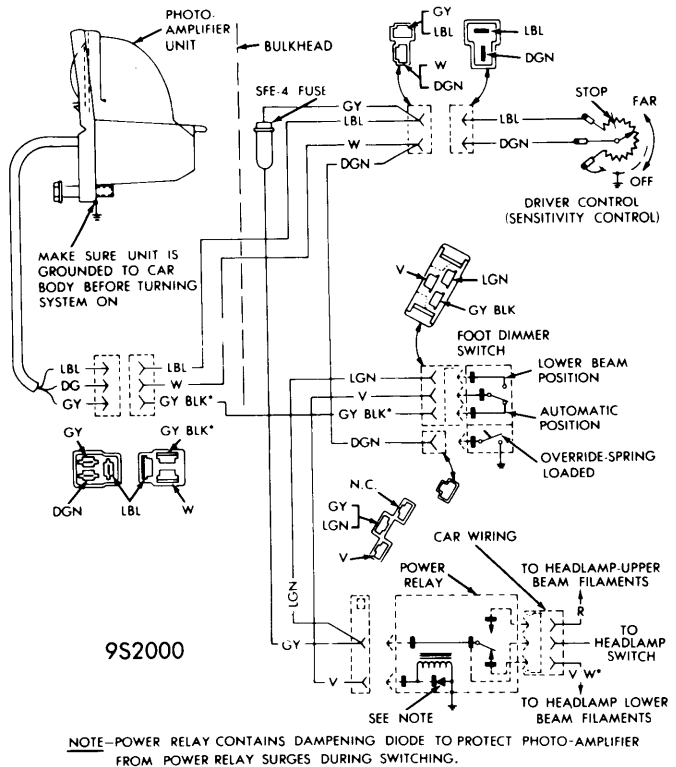
Photo-Amplifier is improperly aimed. Loose, disconnected or broken photo-amplifier wiring. Blown fuse. Faulty foot switch wiring. Faulty photo-amplifier.

HEADLIGHTS ON AUTOMATIC LOW BEAM; DRIVER CONTROL "OFF"; LIGHTS DO NOT GO TO HIGH BEAM

Faulty ground on drivers control.

NO LOW BEAM WHEN FOOT SWITCH DEPRESS TO MANUAL POSITION

Faulty wiring in foot switch circuit or faulty foot switch.



CHRYSLER CORP. AUTOMATIC HEADLIGHT DIMMER WIRING DIAGRAM