Part XXI: Adding Fog Lights to Russian Motorcycles

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Adding Fog Lights to Russian Motorcycles

• Looking for something that would increase conspicuity (visibility or noticeability) to other drivers
• Chose to mount two fog lights along-side headlight
• Chose lowest power-consumption (35-watt each) lights – easy on alternator/battery.
• Need to add a relay in the circuit to turn lights on & off – allows the current to pass thru the relay contacts and not thru the ignition switch
• 15-amp common auto fuse added in headlight cavity – where it should be, and not under the gas-tank
• Control for fog-light relay coil receives voltage from previously unused blue connector in headlight cavity – folks keep asking about that unused connector – used in europe, not in u.s.
  – because the relay control voltage is derived from this european daylight switch connector, fog lights go out when switch to hi-beam
KC Hilites 487 50 Series 5" Black Amber Fog Light System - Set of 2

- Designed to Provide Clear and Brilliant Lighting
- Features a 35-Watt Rating (per Lamp)
- Manufactured from Highly Durable Material
- Backed by a 23 year Warranty
- Price: $123 & this item ships for FREE with Super Saver Shipping

KC 50 Series - 5" Round Black-Chrome AMBER Fog Light Kit. KC 50 Series provide powerful light output in a compact 5" round housing. Two axis mounting provides for quick and easy aiming. Ideal for use on compact trucks & SUVs where space limitations are a consideration.

- Bulb Type: 12-Volt / 35-Watt / 7,000 Candlepower (Wagner 4414A)
- Features: Black-Chrome Housing with Multi-Position Bracket
- Kit Includes: Two Lamps with Protective Light Covers, Pre-Terminated Relay Wiring Harness and Easy to Follow Instructions
- Dimensions: 6" x 4 3/4" x 3 5/8"
Addition of Fog Lights to 2003 Patrol

If the headlight goes out (Hi/Lo Relays and Fuse are under the gas-tank, big job) you still have the two Fog Lights to get you home! (Don't ask how I know this)
The relays, controlled by the ignition switch and the Hi/Lo beam switch, are used to make high-current connections. (Thus the ignition switch and Hi/Lo handlebar switch last longer because their contacts only handle relay coil current.)
2002-2007 Ignition Switch

**Back View of Ignition Switch**

Wire Colors are shown, because switch numbers are very hard to read!

**Ignition Switch**

<table>
<thead>
<tr>
<th>Off</th>
<th>Run</th>
<th>Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headlight</td>
<td>Brake Light</td>
<td>Turn Signals</td>
</tr>
<tr>
<td>Non-Op</td>
<td>Operate</td>
<td>Operate</td>
</tr>
<tr>
<td>Non-Op</td>
<td>Operate</td>
<td>Operate</td>
</tr>
<tr>
<td>Non-Op</td>
<td>Operate</td>
<td>Operate</td>
</tr>
<tr>
<td>Running Lights</td>
<td>Operate</td>
<td>Operate</td>
</tr>
</tbody>
</table>

Non-Op = non-Operational, Operate = Operational

Off: All electrical systems are off.
Run: Voltage is applied to all electrical systems.
Parking: Voltage is applied to running lights only.

**Switch Pin #**

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire Color</td>
<td>grey</td>
<td>red</td>
<td>blue</td>
<td>none</td>
<td>yellow</td>
</tr>
<tr>
<td>Off</td>
<td>0 V.</td>
<td>0 V.</td>
<td>12 V.</td>
<td>0 V.</td>
<td>0 V.</td>
</tr>
<tr>
<td>Run</td>
<td>12 V.</td>
<td>12 V.</td>
<td>12 V.</td>
<td>12 V.</td>
<td>12 V.</td>
</tr>
<tr>
<td>Park</td>
<td>0 V.</td>
<td>0 V.</td>
<td>12 V.</td>
<td>12 V.</td>
<td>12 V.</td>
</tr>
</tbody>
</table>

(to Fuse #1 Headlight Control Relays)
(to Fuse #3&4 Ignition, Electric Start Relays, Brakes, Horn and Turn Signals)
(to Fuse #4 Running Lights)
2002-2005 Fuse Block

- **to Ignition and Electric Start Relays**
- **to Brake Lights and Horn**
- **to Headlight Control Relays**
- **to Running Lights**

(front-view)
Twin KC Hilite Fog Lights Mounted on a Black Spotlight Bar
(My 2003 Patrol)

Spotlight Bar fastened with two existing bolts.
Black Spotlight Bar

- Black Powder-Coated Spotlight Bar (P/N 900160 A)
- High-Quality Mandrel-Bent Tubing
- Furnished with Wire Openings, Black End-Caps and Clip-Mounts for Lights
- Mounts Directly underneath Motorcycle Headlight to Existing Studs and Nuts
- Bar is Exceptionally Strong and Stable to Eliminate Light Flicker
- Raceway Services
  - 2700 19th St. SE Unit #3
  - Salem, Oregon 97302
  - racewayservices@gmail.com
- $80 (in 2009)