Military Accessories for Russian Motorcycles
Part VIII: Driving, Fog, and Spot-Lights

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Driving Lights and Spot-Lights

• Generator/Alternator Limitations on Lighting
  – Limited Output at Rated RPM
  – Limited Output when Idling
• Spot-Light Mounted in Machine Gun Receiver
• Silver Goose Spot-Lights
• Driving and Fog Lights
• Extra Lighting Needs Relay Control and Wiring
  – Handlebar Switches Aren’t Made to Handle Increased Current
  – Wire and Fuses Aren’t Meant to Handle Increased Current
• Many Lighting Products Are Not D.O.T. Approved
  – For "off-road or competition"

Most folks scan their JC Whitney or KC catalog for spot lights, driving lights and fog lights. For good-looking military solutions, it is recommended to check with the Ural people, Silver Goose, Raceway Services, etc.
### Generators/Alternators for Ural (Урал) and Dnepr (Днепр)

<table>
<thead>
<tr>
<th>Generator/Alternator</th>
<th>Type</th>
<th>Vintage</th>
<th>Nominal Voltage</th>
<th>Current</th>
<th>Nominal Power</th>
<th>Motorcycles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Г-11 (G-11) (P/N: 72181)</td>
<td>DC Generator</td>
<td>1941-1951</td>
<td>6-Volt (7-Volt)</td>
<td>7-Amp</td>
<td>45-Watts</td>
<td>Ural(IMZ): M-72, Not Used</td>
</tr>
<tr>
<td>Г-11A (G-11A) (P/N: 72181-A)</td>
<td>DC Generator</td>
<td>1952-1957</td>
<td>6-Volt (7-Volt)</td>
<td>7-Amp</td>
<td>45-Watts</td>
<td>Dnepr (KMZ): M-72, M-72M, M-61, M-72, M-72N, early K-750</td>
</tr>
</tbody>
</table>

When considering adding a spotlight or driving lights, one look at the generator/alternator. Not until the short-lived Hitachi or the questionable 14.3771 was there enough extra current for more lighting.
Silver Goose offers a line of driving lights that blend nicely.
Ural/Universal Sidecar Auxiliary Driving Light

Another place to mount driving lights!

PN 10054
Driving Light Bars (Raceway Services)

"Dresser" (chrome) style light bar makes you "shine" on the road. Includes two 4" diameter DOT-approved auxiliary driving lights. Pre-wired with 15A toggle switch. Mounts to existing studs under headlight.

Ural/Universal Chrome 7" Diameter Auxiliary Driving Light used with above Light Bar or anywhere else stout enough to keep it from vibrating. "Hoodie" lens ring. Halogen bulb.

You need a bracket to hold those driving lights. The black bar matches the military décor.

PN 10050

Black powder-coated mandrel bent light bar for installing auxiliary driving or fog lamps on your Ural motorcycle. Lights not included. Mounts directly underneath headlight to existing studs and hardware.

PN 10051

Ural/Universal Bullet Style Turn Signal or Running Lights. Classic chrome-plated bullet style turn signal or running lights for your Ural or any other vehicle. Red lens also available.

PN 10053

PN 10056
Silver Goose Spot-Lights

The spotlight, when properly located, does not interfere with hack windshield when pushed forward. The controls can be reached by either driver or hack passenger, even with the windshield in place.

Available with OD Painted, Chrome or Stainless Steel Housing
Their heavy-duty light kits are needed to hook extra lights. The two heavy duty relays are actuated by signals from the headlight and power comes from the sidecar fuse box or dedicated line to the battery. You can’t just wire it in parallel with the headlight.
Spotlight Installation (silver goose)

• Mounting the Light
  – Most Important Part Is Positioning the Light
    • If Windshield Present or Planned, Place Spotlight Front Enough to Clear it when Windshield Is All the Way Forward
    • About 2 1/2 inches between Back of Spotlight Base and Apron Loop
  – After Marking where you want the light
    • Center-Punch and Cut Center Hole of 5/8” to 1” to Clear the Nut and Allow for Wiring
    • Recommended Hole-Saw because Large Drills Bits Have Tendency to Grab when Going thru Sheet Metal
  – When Center hole Is Cut
    • Position and Square-Up Base
    • Mark Bolt Holes with Scratch-Awl and Set Spotlight Aside
  – Center Punch the Markings
    • Pilot-Drill with a 1/8” Twist-Drill
    • Drill with 5/16” Twist-Drill
    • De-bur Inside and Out
  – Bead of Silicone-Sealant Around Center-Hole Recommended
  – Thread Wiring Thru and Set Spotlight in position
  – Bolt Up Base to Hack Tub and Tighten Nuts
• Electrical
  – The Push-In terminal can be connected to a spare on the fuse block in the hack tub. MAKE SURE YOU HAVE A 15 OR 20 AMP FUSE INSTALLED.

We have broken down the parts into bite-size chunks.9
Ural Northwest Spotlight Components

<table>
<thead>
<tr>
<th>Item</th>
<th>Component</th>
<th>IMZ #</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A</td>
<td>Spotlight Assy</td>
<td>8.1031-00019</td>
<td>$160</td>
</tr>
<tr>
<td>2</td>
<td>Spotlight</td>
<td>8.1031P-18061</td>
<td>$100</td>
</tr>
<tr>
<td>5</td>
<td>Spotlight Stand</td>
<td>8.1031P 21094</td>
<td>$63</td>
</tr>
<tr>
<td>7</td>
<td>Wiring Harness</td>
<td>8.1031P-18074</td>
<td>$28</td>
</tr>
<tr>
<td>17</td>
<td>Washer</td>
<td>DIN 9021 M6</td>
<td>$2</td>
</tr>
<tr>
<td>18</td>
<td>Spotlight Flange</td>
<td>8.1031P-21151</td>
<td>$13</td>
</tr>
<tr>
<td>19</td>
<td>Spotlight Spring</td>
<td>62-01419-01</td>
<td>$5</td>
</tr>
<tr>
<td>20</td>
<td>Spotlight Washer</td>
<td>8.1031P-21096</td>
<td>$15</td>
</tr>
<tr>
<td></td>
<td>Holder</td>
<td>8.1031P-21015</td>
<td>$32</td>
</tr>
</tbody>
</table>

Ural offers the standard spotlight kit.
F2motorcycles offers an additional light on the nearside front of the sidecar. This is connected to the original Headlight and has both low and high beam and doesn’t need to be operated separately using additional switches. Although the sidecar has a small white light on the mudguard, this additional hi/lo light makes it easier for on coming traffic to judge the width of the bike.
## Comparative Pricing of Driving Lights

<table>
<thead>
<tr>
<th>Item</th>
<th>Supplier</th>
<th>Part #</th>
<th>Fits</th>
<th>Approx 2010 Price (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving Light, Bumper Mounted w/Olive Drab Steel Housing &amp; Base</td>
<td>Silver Goose</td>
<td>#L-1A</td>
<td>Fits Factory 37mm Bumper</td>
<td>$71</td>
</tr>
<tr>
<td>Driving Light, Bumper Mounted w/Chrome Housing with Aluminum Base</td>
<td>Silver Goose</td>
<td>L-1B</td>
<td>Fits Factory 37mm Bumper</td>
<td>$69</td>
</tr>
<tr>
<td>Driving Light, Deck Mounted w/Olive Drab or Black Steel Housing &amp; Base</td>
<td>Silver Goose</td>
<td>L-2A</td>
<td>Mounts on top or side of car body</td>
<td>$79</td>
</tr>
<tr>
<td>Driving Light, w/Chrome Steel Housing and Polished Aluminum Base</td>
<td>Silver Goose</td>
<td>L-2B</td>
<td>Mounts on top or side of car body</td>
<td>$74</td>
</tr>
<tr>
<td>Driving Light, Nose Mounted w/Olive Drab Steel Housing &amp; Base</td>
<td>Silver Goose</td>
<td>L-3A</td>
<td>Surface Mounts on Hack similar to a MG Mount</td>
<td>$80</td>
</tr>
<tr>
<td>Driving Light, Nose Mounted w/Chrome Housing with Black Painted Base</td>
<td>Silver Goose</td>
<td>L-3B</td>
<td>Surface Mounts on Hack similar to a MG Mount</td>
<td>$79</td>
</tr>
<tr>
<td>Ural/Universal Chrome 7&quot; Diameter Auxiliary Driving Light</td>
<td>racewayservices.com</td>
<td>10053</td>
<td>Looks great on a Wolf or Retro</td>
<td>$50</td>
</tr>
<tr>
<td>Ural/Universal Sidecar Auxiliary Driving Light</td>
<td>racewayservices.com</td>
<td>10054</td>
<td>Mounts on Sidecar Step Bar</td>
<td>$30</td>
</tr>
<tr>
<td>Ural/Universal Bullet Style Turn Signal or Running Lights</td>
<td>racewayservices.com</td>
<td>10056</td>
<td>Classic chrome-plated bullet style</td>
<td>$30 pair</td>
</tr>
<tr>
<td>Spot Light, Military Style Spot Light w/Painted (Olive Drab) Steel Housing &amp; Steel Base</td>
<td>Silver Goose</td>
<td>SL-1A</td>
<td>Specify Color when ordering</td>
<td>$86</td>
</tr>
<tr>
<td>Spot Light for Retro/Tourist/Patrol w/Chrome Steel Housing and Polished Aluminum Base</td>
<td>Silver Goose</td>
<td>SL-1C</td>
<td>for Retro/Tourist/Patrol</td>
<td>$81</td>
</tr>
<tr>
<td>Stainless Steel Spot Light for Retro w/All Stainless-Steel Housing w/Polished Aluminum Base</td>
<td>Silver Goose</td>
<td>SL-1D</td>
<td>Specify Color when ordering</td>
<td>$100</td>
</tr>
<tr>
<td>Spot light with wire harness and mounting gear</td>
<td>ural.ca/pricelista.html</td>
<td>8.103-00019</td>
<td>Price includes fitting to a new bike</td>
<td>$286</td>
</tr>
<tr>
<td>Hi/Lo spot light on sidecar</td>
<td>f2motorcycles.ltd.uk</td>
<td></td>
<td>Price includes fitting to a new bike</td>
<td>$187 (£125)</td>
</tr>
<tr>
<td>Driving Light Relay Box</td>
<td>Silver Goose</td>
<td>RB-1</td>
<td>Includes wire and inline fuse for direct wiring to battery</td>
<td>$43</td>
</tr>
<tr>
<td>Battery Wiring Harness</td>
<td>Silver Goose</td>
<td>RB-2</td>
<td>Includes wire and inline fuse for direct wiring to battery</td>
<td>$16</td>
</tr>
<tr>
<td>Spotlight Bar with Spots [Aux Driving Lights]</td>
<td>racewayservices.com</td>
<td>10050</td>
<td>Chrome</td>
<td>$175</td>
</tr>
<tr>
<td>Driving Light Bar</td>
<td>racewayservices.com</td>
<td>10051</td>
<td>Black Powder-Coated</td>
<td>$80</td>
</tr>
</tbody>
</table>
Military Spot Light Mounted in MG Holder Pipe

Includes Special Adapter and Universal Clamp, 5m Long Cable
List Price: 56.00€
(www.oldtimergarage.eu)
Twin KC Hilite Fog Lights Mounted on a Black Spotlight Bar
(My 2003 Patrol)

Spotlight Bar fastened with two existing bolts.
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
- 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 the 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 (12/2009) eafranke@tampabay.rr.com

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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)

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Premiersely Unused Blue Connector

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15-Amp Auto Fuse

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Pos + 12 Volt Battery
Neg -
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**

<table>
<thead>
<tr>
<th>Switch Pin #</th>
<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>
<td>orange</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>
<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>
<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>
<td>0 V.</td>
</tr>
</tbody>
</table>

Switch Pin # 1 (to Fuse #1 Headlight Control Relays)
Switch Pin #2 (to Fuse #3&4 Ignition, Electric Start Relays, Brakes, Horn and Turn Signals)
Switch Pin #3 (to Fuse #4 Running Lights)
Switch Pin #4 (from +12-Volt Battery and Alternator)
Switch Pin #5 (from 2X orange)
Switch Pin #6 (from speedometer lights)

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

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

<table>
<thead>
<tr>
<th>Off</th>
<th>Non-Op</th>
<th>Non-Op</th>
<th>Non-Op</th>
<th>Non-Op</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run</td>
<td>Operate</td>
<td>Operate</td>
<td>Operate</td>
<td>Operate</td>
</tr>
<tr>
<td>Park</td>
<td>Non-Op</td>
<td>Non-Op</td>
<td>Non-Op</td>
<td>Operate</td>
</tr>
</tbody>
</table>
2002-2005 Fuse Block

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

(front-view)
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
  – raceway-services@gmail.com
- $80