Russian Headlight Assemblies

Part XXX-2: Headlight Cavity for the M-72
(Also See Parts XXX-1 thru -12)

Ernie Franke
eafranke@tampabay.rr.com
02 / 2018
Ural (Урал) М-72 with Voltage Regulator PP-1 (thru 1949)

1 - generator: Г-11
2 - relay-regulator: PP-1
3 - rechargeable battery
4 - distributor: PM-05
5 – breaker points: PM-05
6 - ignition coil: KM-01
7 - spark plugs (candles)
8 - horn
9 - lamp
10 - driving lamp and low light
11 - the parking light bulb
12 - tail light
13 - tail light sidecar
14 - front light sidecar
15 - control lamp
16 - ignition switch
17 - key
18 - fuse
19 - switch beam and dipped beam
20 - lever switch near and far light
21 - horn button signal
22 - ignition control stick
23 - fuse lamps
24, 25 and 26 - high voltage wires
27, 28, 29 and 30 - bundle of low voltage wires
31 and 32 wire lanterns sidecar

19. Hi/Lo Beam Switch
20. Hi/Lo Beam Lever
21. Horn Button
22. Manual Spark Advance
23. Sidecar Fuse
24. High Voltage Wires
25. High Voltage Wires
26. High Voltage Wires
27. Low Voltage Wires
28. Low Voltage Wires
29. Low Voltage Wires
30. Low Voltage Wires
31. Wire Lanterns Sidecar
32. Wire Lanterns Sidecar

1. Generator (Г-11А, 1950+)
2. Voltage Regulator (PP-1)
3. Battery
4. Distributor (PM-05)
5. Breaker Points (PM-05)
6. Ignition Coil (KM-01)
7. Spark Plug (Candle)
8. Horn
9. Lamp
10. Driving Lamp and Low Light
11. Parking Light Bulb
12. Tail Light
13. Tail Light Sidecar
14. Front Light Sidecar
15. Control Lamp
16. Ignition Switch
17. Key
18. Safety Fuse
19. Safety Fuse
20. Hi/Lo Beam Lever
21. Bowden Control Cable to PM-05 Spark Advance
22. Handlebar Control Switch (P-45)
23. Sidecar Fuse
24, 25 and 26. High Voltage Wires
27, 28, 29 and 30. Bundle of Low Voltage Wires
31 and 32. Wire Lanterns Sidecar

Positive-Ground
1. Battery
2. Ignition Key
3. Ignition Switch
4. Charge Lamp Indicator
5. Generator Г-11
6. Voltage Regulator PP-1
7. Low-Voltage Primary Winding
8. High-Voltage Secondary Winding
9. Ground Point
10. Contact (Breaker) Point
11. Center Contact
12. Contacts from Spark
13. Spark (Candle) Plug
14. Condenser (Capacitor)

Note: Early M-72’s had positive-ground.
1. Headlight Cavity
2. Hi/Lo-Beam Switch
3. Central Switch
4. Ignition Switch
5. Charge Light
6. Safety Fuse
7. Sidecar Running Lamps (no turn signals)
8. Signal Horn
9. Generator (Г-11)
10. Battery
11. Relay Regulator (RR-1/PP-1)
12. Rear Bike Lamp
13. Ignition Coil
14. Breaker Points
15. Distributor
16. Spark Plug (candle) (PM-01)
17. Horn Button Switch
18. Spark Advance Lever
19. Hi/Lo-Beam Dimmer Lever

Cable from Spark Advance Lever to PM-05 Breaker/Distributor
M-72 (1942) with PP-1 Voltage Regulator

- 72184 Headlight Assembly (ΦГ-6)
- 72178 Generator “Alarm” Indicator (A6-0.25)
- 72174 Speedometer СП-8
- Safety Fuse Holder and Fuse
- 72176 Dual-Filament Headlight (A6-32+32)
- 7217 Parking Light (A6-2)
M-72 Headlight Cavity (oppozit.ru)
M-72 Headlight Cavity (www.ural-hamburg.de)
ΦΓ-6 Headlight Assembly for M-72 (1942)

- Central Switch
- Dual Filament (Hi/Lo) Headlight Lamp
- Parking Lamp
- Generator "Alarm" Light
- Fuse
- Speedometer / Odometer
- Hi/Lo Beam Dimmer Switch
- Mechanical Linkage (Bowden Cable) to Left Handlebar
- Hi/Lo Beam Control Cable Grommet

Note: Original M-72's have buckets that aren't drilled out for the "Deco" switch cover, just have the key slot sticking out.
M-72 Headlight Cavity

10. Safety Fuse

14. Dimmer Switch with Bowden Cable

Ignition Switch

Generator “Alarm” Light

Master Switch

to Handlebar Control Switch

12. Generator Warning Light

Headlight Lamp Cover

Bowden Cable to Left Handlebar Control Switch

4. Parking Lamp

5. Dual Filament (Hi/Lo) Headlight Lamp

5. Dual Filament (Hi/Lo) Headlight Lamp

10. Safety Fuse
M-72 Hi-Lo Beam Light Switch
Central ignition switch supplies 6-Volts to the bike/sidecar lamps and either the hi/lo beam lamp or the parking light. The ignition switch also supplies energy to the generator field coil, ignition coil, and voltage regulator.
Ural (Урал) Early M-72 (1941)
with PM-05 Distributor/Breaker Points and PP-1 Voltage Regulator

1. Head lamp/Dash
2. High and low beam
3. Parking light
4. Fuse
5. Key
6. Dimmer switch
7. 
8. Generator charge indicator
9. Mechanical dimmer switch lever
10. Primary switch
11. Horn button
12. Speedometer bulb
13. 
14. Condenser
15. Spark plugs A8Y
16. Points and distributor
17. Front side car fender light
18. Ignition coil
19. D.C. generator
20. Battery
21. Horn
22. Regulator
23. Connector
24. Stop light switch
25. Rear side car fender light
26. Rear light

Hi/Lo Beam Switch
Horn Button

Speedometer Light
Generator (Г-11)
Ignition Coil (КМ-01)
Voltage Regulator (PP-1)
Distributor/Breaker (PM-05)
Battery
Ural (Урал) M-72 with Voltage Regulator PP-31 (1950+)

1 - generator: Г-11А
2 - relay-regulator: РР-31
3 - rechargeable battery
4 - valve
5 - breaker: РМ-05
6 - ignition coil: B2Б
7 - spark plugs (candles)
8 - signal horn
9 - lamp
10 - driving lamp and low light
11 - the parking light bulb
12 - tail light
13 - tail light sidecar
14 - front light sidecar
15 - control lamp
16 - central switch
17 - key
18 - safety
19 - switch beam and dipped beam
20 - lever switch near and far light
21 - button signal
22 - Ignition control stick
23 - fuse lamps
24, 25 and 26 - high voltage wires
27, 28, 29 and 30 - bundle of low voltage wires
31 and 32 wire lanterns stroller

Hi/Lo Beam Switch
Breaker/Distributor (PM-05)
Ignition Coil (B2Б)
Generator (Г-11А)
Horn
Battery
Regulator (РР-31)
Message: 21. Horn Button

Manual Spark Advance
Handlebar Control Switch (P-45)
Spark Plug (candle)
Positive-Ground
Bowden Control Cable to PM-05 Spark Advance

Message: 15
Ural (Урал) Later М-72 (1955) with Г-11A generator and PP-31 regulator
Ural (Урал) Later M-72
with Г-11А generator and PP-31 regulator

1. Headlight
2. Parking light bulb
3. High and Low beam bulb
4. High beam/low beam electrical switch
5. Central switch
6. Fuse
7. Indicator light
8. front light of the sidecar
9. Sidecar lights fuse
10. Ignition key
11. Ignition setting lever with actuator cable
12. High beam/low beam mechanical actuator with cable
13. Signal button
14. Distributor
15. Spark plugs
16. Ignition coil
17. Points
18. Horn
19. Generator
20. Sidecar taillight
21. Relay automatic controller RR-1
22. Battery
23. Taillight

Note: Positive-Ground
Ural (Урал) M-72M, M-72K with PP-302 Regulator

3. Flasher Unit
4. Hi/Lo Lamp
5. Parking Light
8. Hi/Lo Beam Switch
12. Fuse
13. Switch
14. Speedometer Light
16. Generator Alarm Light

Turn Signal

Flasher Unit

Generator (Г-11А)

Battery (3MT-6 or 3MT-7)

Regulator

Foot Brake-Light Switch

Horn

Hi/Lo Beam Switch

Hi/Lo Beam Lever

Manual Spark Advance

Breaker/Distributor (PM-05)

Ignition Coil (B2Б)

Horn Button

3. Flasher Unit
4. Hi/Lo Lamp
5. Parking Light
8. Hi/Lo Beam Switch
12. Fuse
13. Switch
14. Speedometer Light
16. Generator Alarm Light

Turn Signal

Flasher Unit

Generator (Г-11А)

Battery (3MT-6 or 3MT-7)

Regulator

Foot Brake-Light Switch

Horn

Hi/Lo Beam Switch

Hi/Lo Beam Lever

Manual Spark Advance

Breaker/Distributor (PM-05)

Ignition Coil (B2Б)

Horn Button
M-72 after 1950, with Rear Horn (www.oldtimergarage.eu)

Note: No Foot Brake-Light Switch

M-72
od / after 1950
klakson z tyłu / rear horn

Regulator (PP-31A)

Generator (Γ-11A)

Horn

Ignition Coil (B25)

Battery (3MT-6 or 3MT-7)

Breaker/Distributor (PM-05)
Later Dnepr M-72 Wiring Diagram
(with voltage regulator PP-302, foot brake-switch and oil pressure sensor)
(www.oldtimer garage.eu)

2. Horn Button switch
9. Oil Pressure Sensor
7. Horn
4. Generator Г-11
6. Battery
8. Foot Brake-Switch
5. Bike Park/Brake Light
11. Front Sidecar Light
10. Rear Sidecar Light
9. Oil Pressure Sensor
3. Voltage Regulator
4. Generator Г-11
3. Voltage Regulator

Hi/Lo Beam Lamp
Parking Light
Generator Alarm
Speedometer Light
Fuse
Cable mass

www.oldtimer garage.eu
M-72 / K-750 Wiring Diagram

- Generator (Г-11)
- Voltage Regulator (PP-302)
- Ignition Coil (KM-01)
- Breaker Points (PM-01)
- Distributor (PM-01)
- Main switch:
  - 6: to plus battery and regulator
  - 61: to generator
  - 31: to city light and speedo light
  - 56: to light switch
  - 55: to plus ignition coil, claxon and brake switch
  - 15: 3c

- Parking Light
- Hi/Lo Beam Switch
- Tail Light
- Alarm Light
- Generator Alarm Light
- Minus on earth

Wiring connections and labels are indicated with arrows and text.
Schematic for a Russian Motorcycle Headlight Assembly

Three-Position Switch (Run, Off, Park)

Battery

Voltage Regulator

Safety Fuse for Lights

Dual-Beam Headlight

Hi/Lo Beam Dimmer Switch

Parking Lamp

Speedometer Lamp

Rear Bike/Sidecar Lights

Generator

Alarm Light

Ignition Coil

Breaker Points

Safety Fuse for Rear Lights

Ignition Key
Фиг. 133. Устройство фары M-72.
1 — ободок фары; 2 — контакт для соединения ободка с массой; 3 — рефлектор; 4 — выступ для крепления держателя ламп; 5 — держатель ламп; 6 — лампа малого света; 7 — лампа большого света; 8 — винт крепления обода к корпусу фары; 9 — ключ; 10 — спидометр; 11 — держатель предохранителя; 12 — контрольная лампа; 13 — выход троса переключателя; 14 — центральный переключатель; 15 — переключатель дальнего и ближнего света.
M-72 Headlight Assembly (http://bcozz.multiply.com)