

***Ural and Dnepr
Generators and Alternators
Part III: Г-414 (G-414) Generator***

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Types of Generators/Alternators for Ural (Урал) and Dnepr (Днепр) (01/11)

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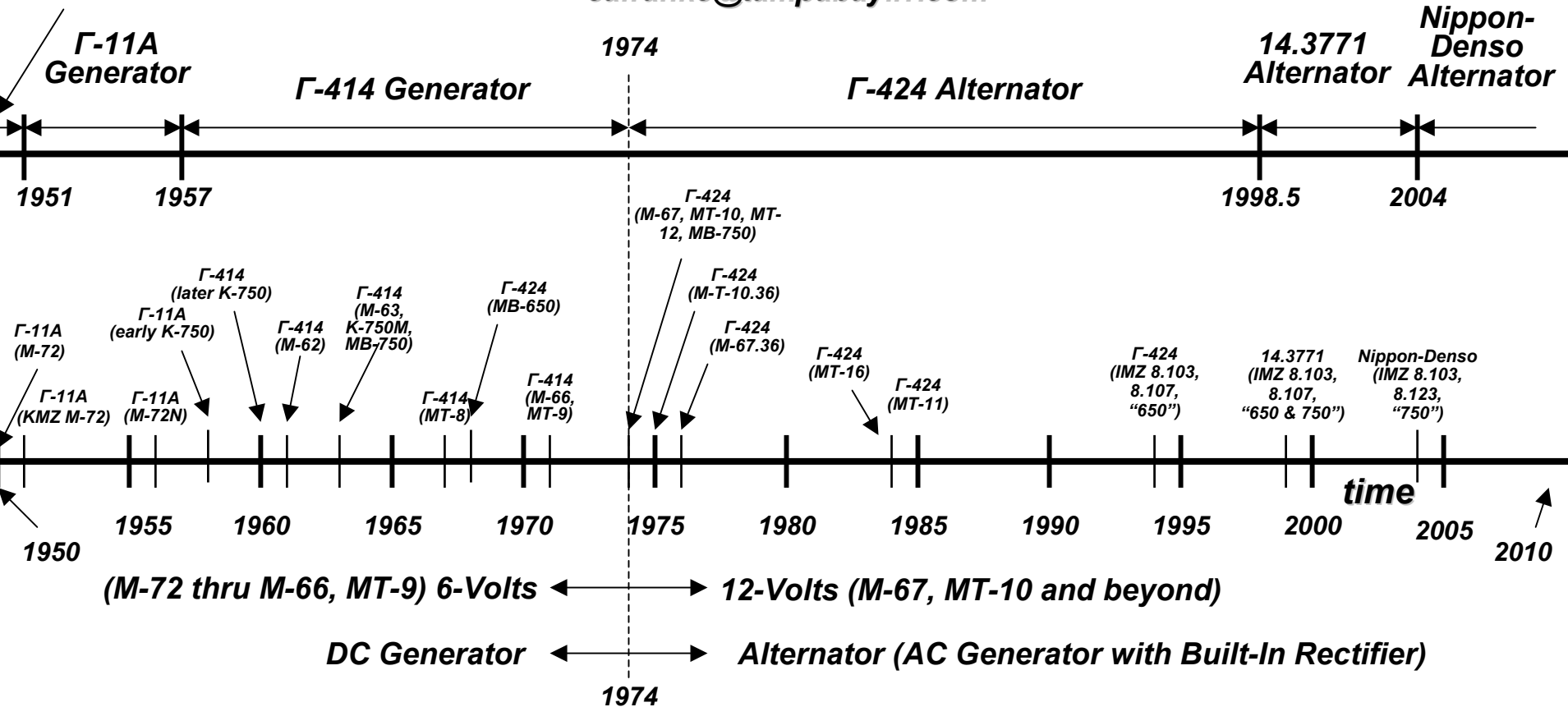
Generator/ Alternator	Type	Vintage	Nominal Voltage	Current	Nominal Power	Motorcycles	
						Ural(IMZ)	Dnepr (KMZ)
Г-11 (G-11) (P/N: 72181)	DC Generator	1941- 1951	6-Volt (7-Volt)	7-Amp	45-Watts	M-72	Not Used
Г-11A (G-11A) (P/N: 72181-A)	DC Generator	1952- 1957	6-Volt (7-Volt)	7-Amp	45-Watts	M-72, M-72M , M-61	M-72, M-72N, early K-750
Г-414 (G-414) (P/N: 750181)	DC Generator	1957- 1974	6-Volt (7-Volt)	10-Amp	65-Watts	M-62, M-63, M-66	K-650, later K-750, K-750M, MB-750, MB-750M, MT-8, MT-9, MT-12
Г-424 (G-424) (P/N: 3701000)	Alternator (Built-in Rectifier)	1974- 1998	12-Volt (14-Volt)	14-Amp	150-Watts	M-67, M67.36, IMZ 8.103 Series	MB-650, MB-650M, MT-10, MT-10.36, MT-11, MT-16
Hitachi (Limited Appearance)	Alternator/ Starter	1998- 1998.5	12-Volt (14-Volt)	18-Amp	300-Watts	IMZ 8.103 and 8.107 “650” Series	Not Used
14.3771 (RPOC) (P/N: 14.3771- 010)	Alternator (Built-in Rectifier & Regulator)	1998.5- 2004	12-Volt (14-Volt)	35-Amp	500-Watts	IMZ 8.103, 8.103X, 8.123, 8.123X “650 & 750” Series	Not Used
Nippon Denso (P/N: IMZ-8.1037- 18092)	Alternator (Built-in Rectifier & Regulator)	2004- present	12-Volt (14-Volt)	55-Amp	770-Watts	IMZ 8.103, 8.103X, 8.123, 8.123X “750” Series	Not Used

Notes:

- Nomenclature:** The Cyrillic letter “Г” transliterates (Russian-to-Latin) to “G” or “L” or “T.” Thus we see Г-414 or G-414 or L-414 or T-414, all for the same part.
- Cannot use Г-424 Alternator with discharged battery or without battery.**
- MB-750 = MW-750, MB-750M = MB-750M**
- The frame (case) of the Г-11/Г-11A generator is positive (positive-ground).**
- Г-414 Generator: P/N: 750181 6-Volt (negative ground), whereas P/N: 750181-A (positive-ground) for fitting Г-11A’s into early K-750’s.**

Ural (Урал) - Dnepr (Днепр) Generator/Alternator Time-Line (01/11)

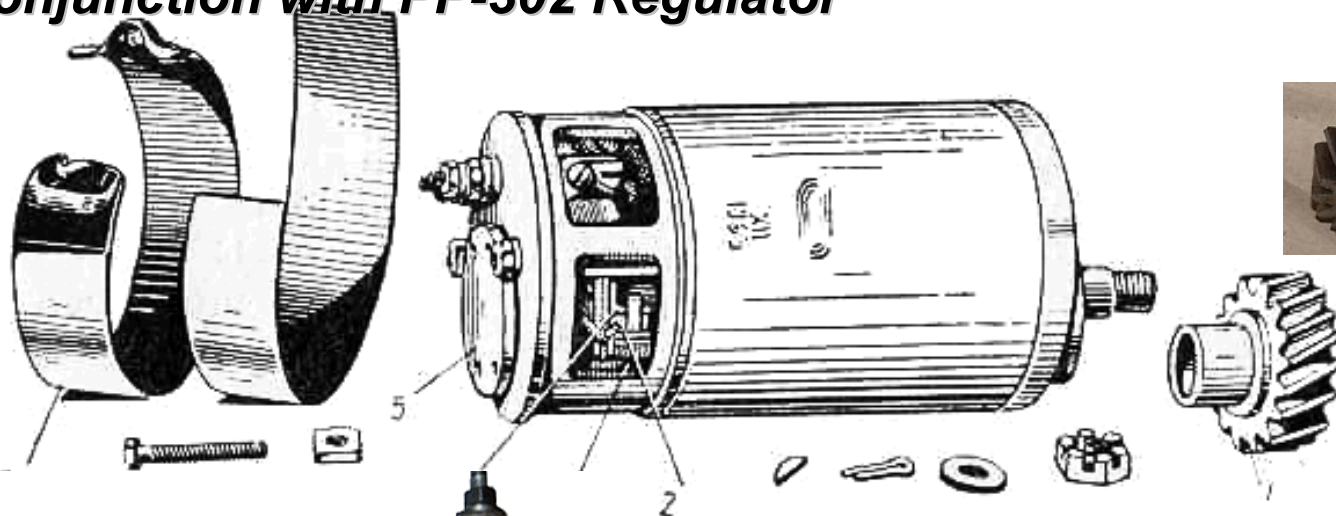
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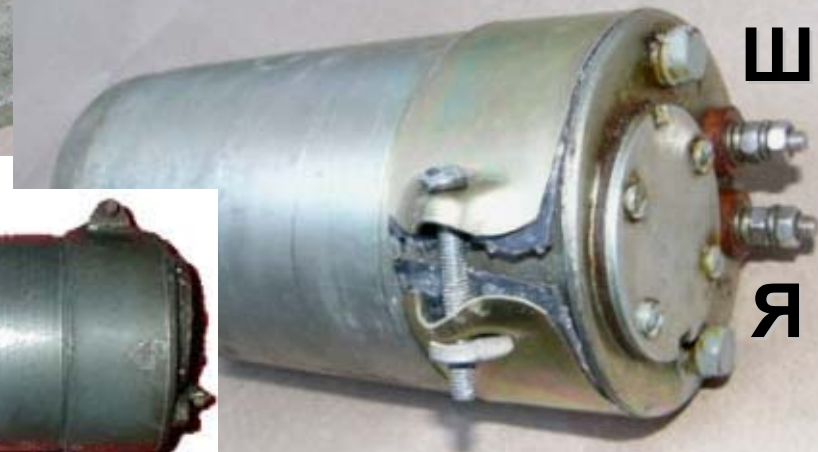
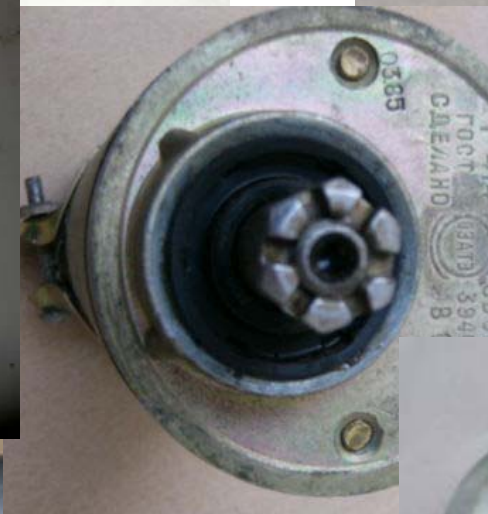
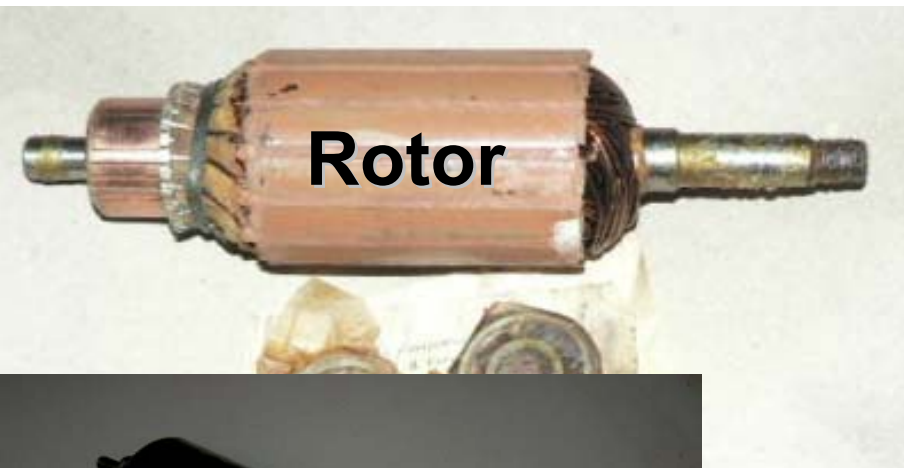
Alternators have progressed in output voltage and power, From the Г-11 (G-11) generator of 6-Volts/45-Watts in 1941, the Г-11А in 1952, the Г-414 6V/65 W in 1957, the Г-424 of 12V/150W in 1974, the 14.3771 of 12V/500W in 1998.5, to the present-day Nippon-Denso alternator of 12-V/770W.

Г-414 (G-414) 6-Volt Generator (1957-1974)

- 6-Volt / 10-Ampere / 65-Watt Generator
- Rotor Speed: 1,350 rpm (6.5-V, 0-A), 1,950 rpm (10-A)
- Used on;
 - Ural: M-62, M-63, M-66
 - Dnepr: K-650, later K-750, K-750M, MB-750, MB-750M, MT-8, MT-9 & MT-12
- Negative-Ground Case
- Works in Conjunction with PP-302 Regulator



Г-414 6-Volt Generator (01/11)



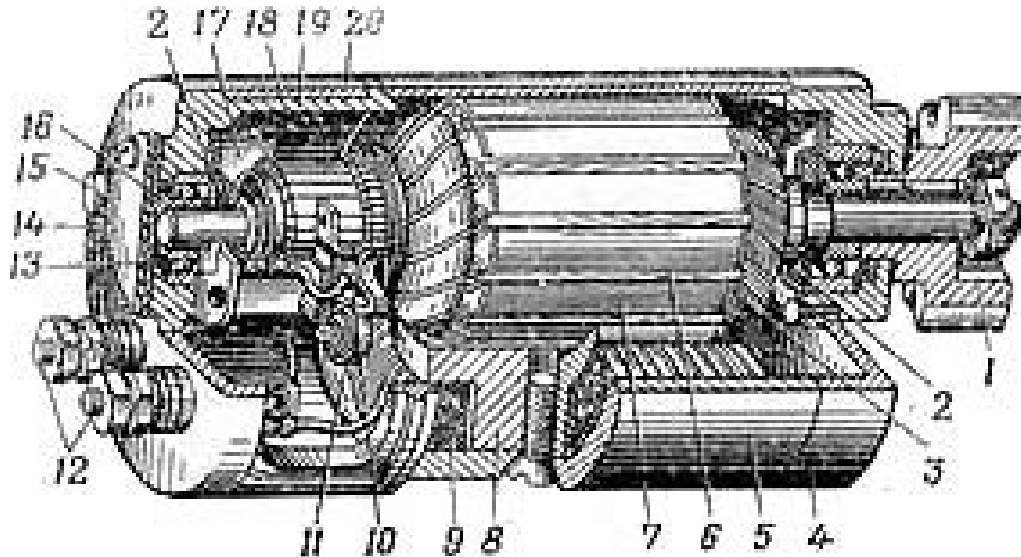
Generator for DNEPR MT-9, K-750, K-650 and URAL M-62, M-63, M-66



- ***Polarity: Negative Ground***
- ***Direction of Rotation (drive side): Right-Hand (clockwise)***
- ***Weight: 3.8 kg***



Г-414 6-Volt Generator (01/11)



Pinion Drive

- 1 - pinion drive (gear)***
- 2 - oil seals bearings***
- 3 - armature winding of 28 coils***
- 4 - front cover***
- 5 - case***
- 6 - wooden wedge into rotor groove***
- 7 - rotor (armature)***
- 8 - pole extension or shoe***
- 9 - excitation (field) winding***
- 10 - carbon brush***

- 11 - spring brushes***
- 12 - terminals***
- 13 - ball bearing***
- 14 - ball bearing cover***
- 15 - stud***
- 16 - armature shaft***
- 17 - brush holders***
- 18 - commutator***
- 19 - back cover***
- 20 - protective tape***

Alternators, with their more-compact rotors, are able to generate current at higher geared speeds, to allow charging even at idle. They are also able to handle higher power in the stator windings, without the limitations and wear of the brushes.

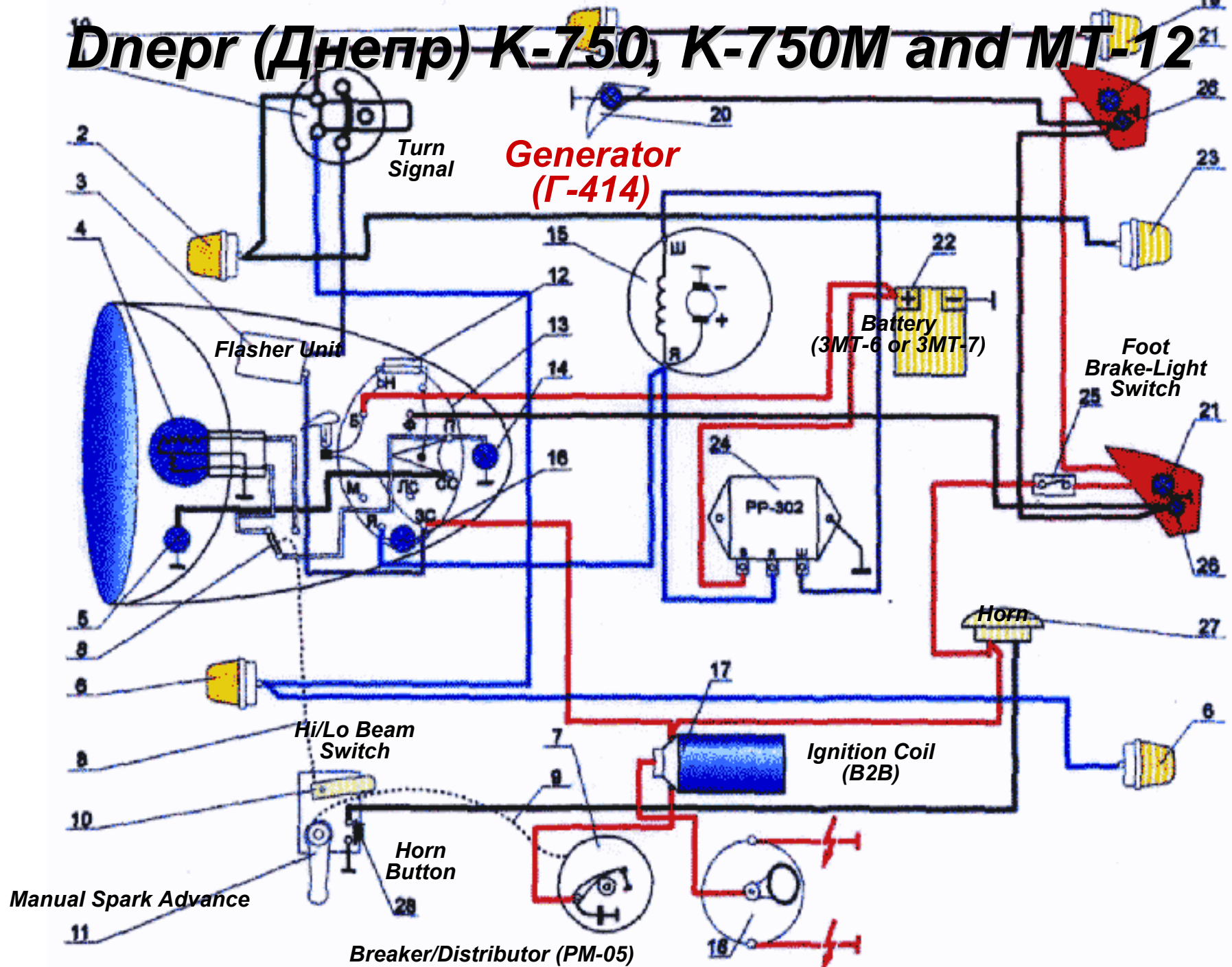
Г-414 (G-414) Generator



Flashing the Field of the Generator

- ***Generator Can Reverse Polarity if You Have a Completely Dead Battery or If You Remove It from the Frame***
- ***To Flash the Field on a Negative Ground System***
 - ***Disconnect the Wires to the Regulator***
 - ***Connect a Ground from the Frame to the Field (III)***
 - ***Spark the Armature Terminal (Я) from the Battery +***

Днепр (Днепр) К-750, К-750М and МТ-12



Днепр (Днепр) Early K-650

with PM-05 Breaker/Distributor and B2B Ignition Coil

7&8-Oil Pressure Sensor (MM-106) and Emergency Light

15- Spark Plug (Candle) (A8)

16-Interrupter/Distributor (PM-05)

18-Horn (C37A)

22-Foot Brake-Light Switch (BK854)

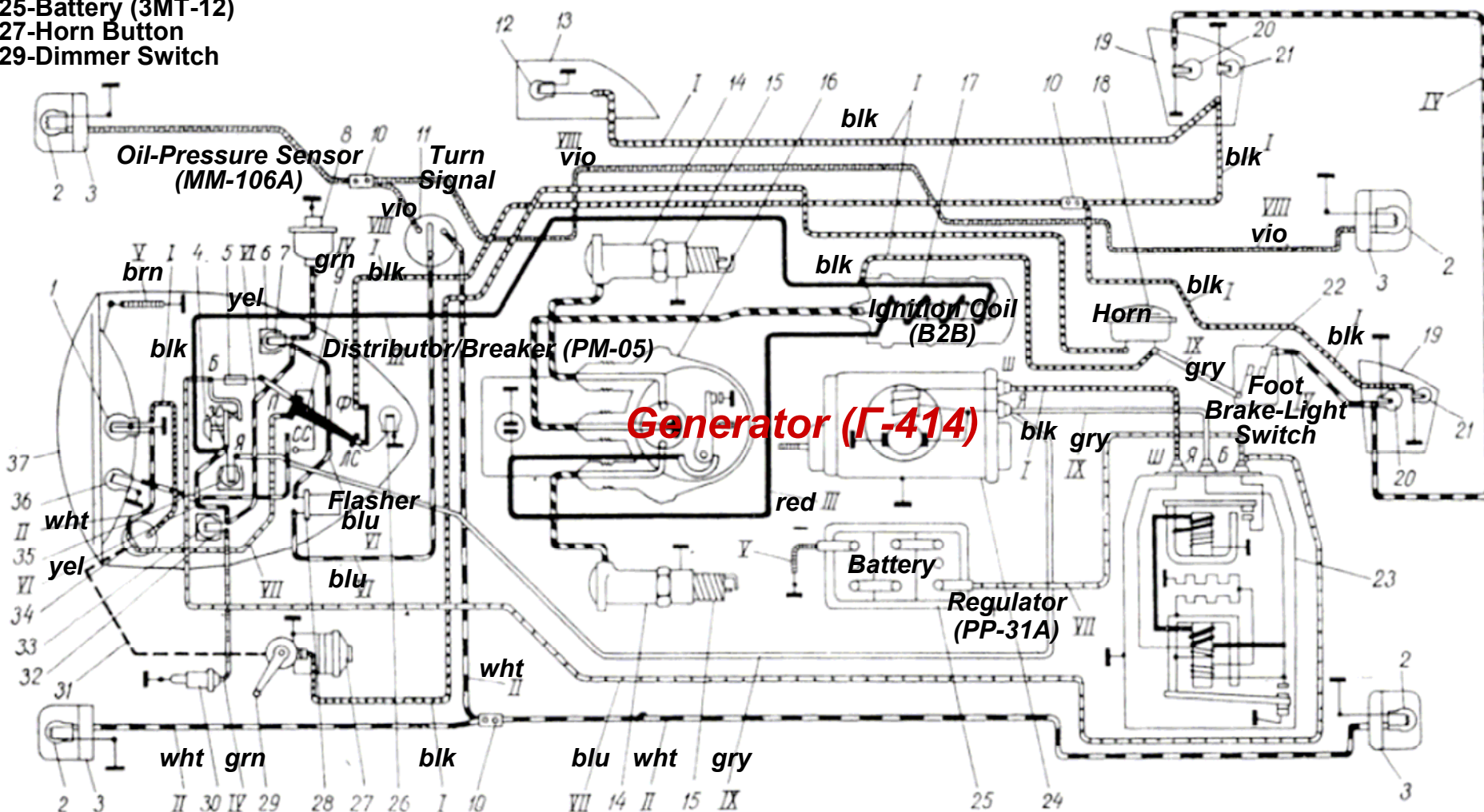
23-Regulator (PP-31A)

24- Generator (Г-414)

25-Battery (3MT-12)

27-Horn Button

29-Dimmer Switch

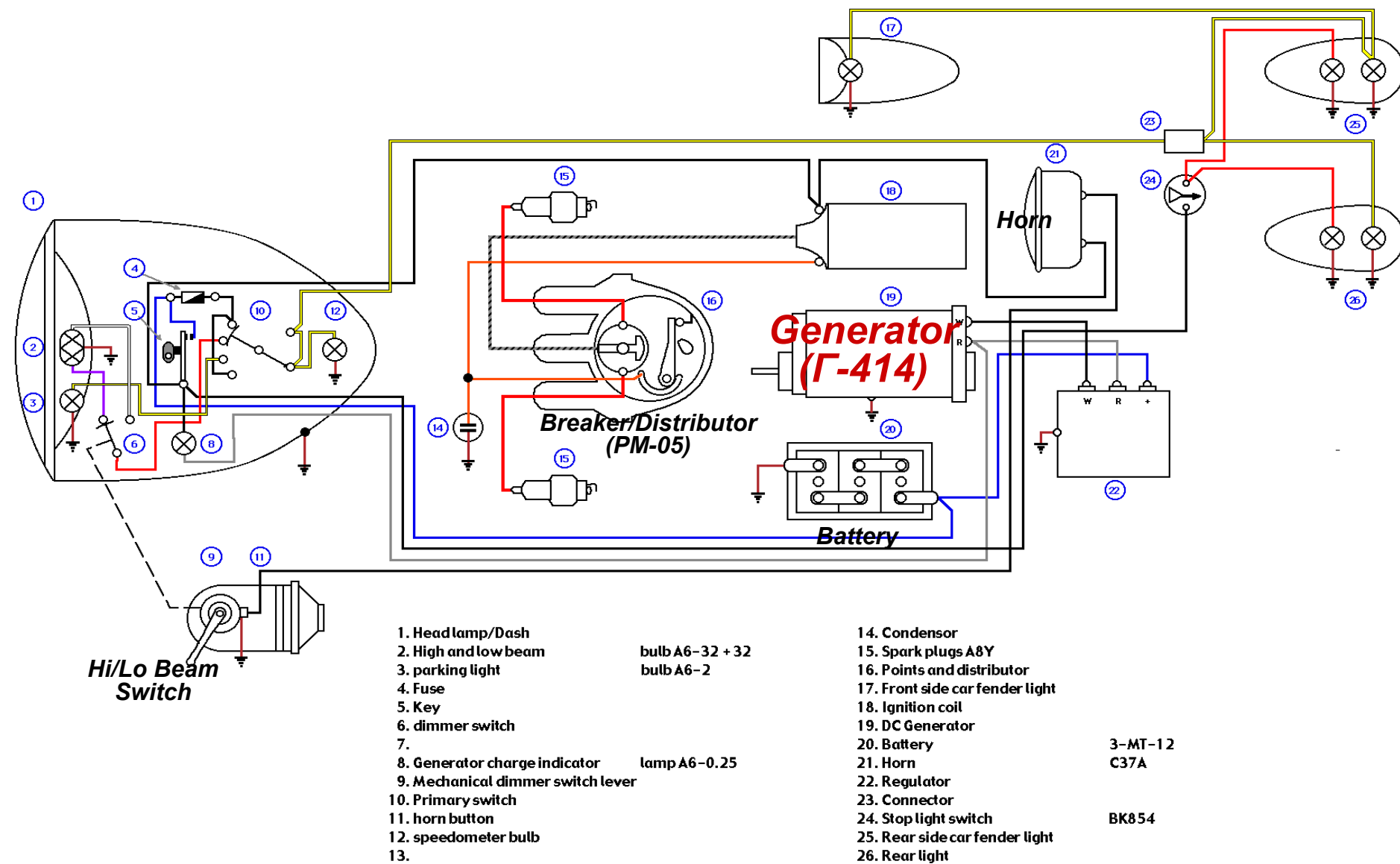


23 November 2006

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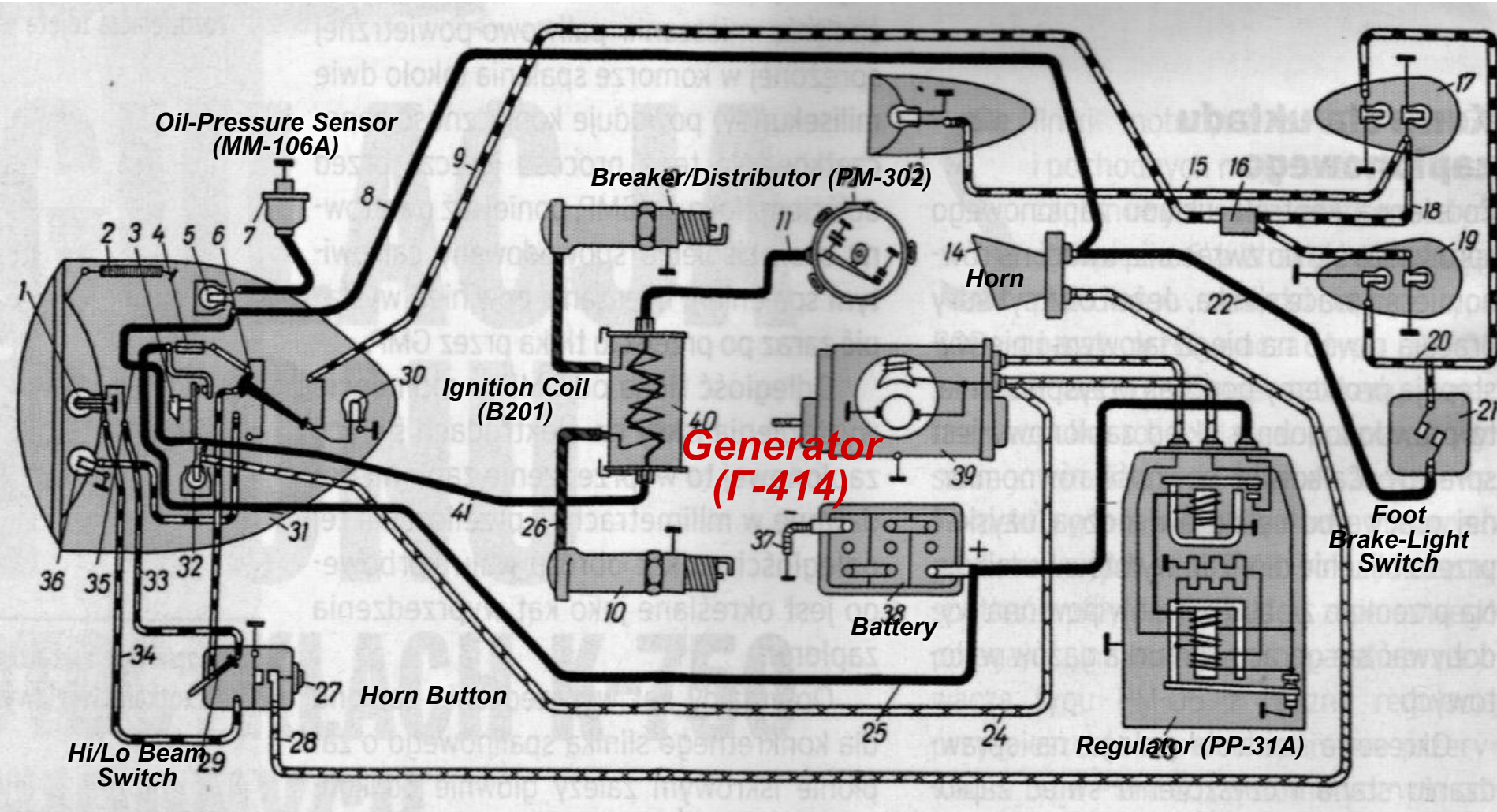
Note: Wire colors are not likely correct nor consistent with factory wiring.
Schematic may have errors as well.

1941 Днепр (Днепр) K-750, K-750M and MT-12



Dnepr (Днепр) Later K-750

(with Breaker PM-11A, PP-302 and B201 for Automatic Control of Firing Angle)



Dnepr (Днепр) Later K-750 and K-750M

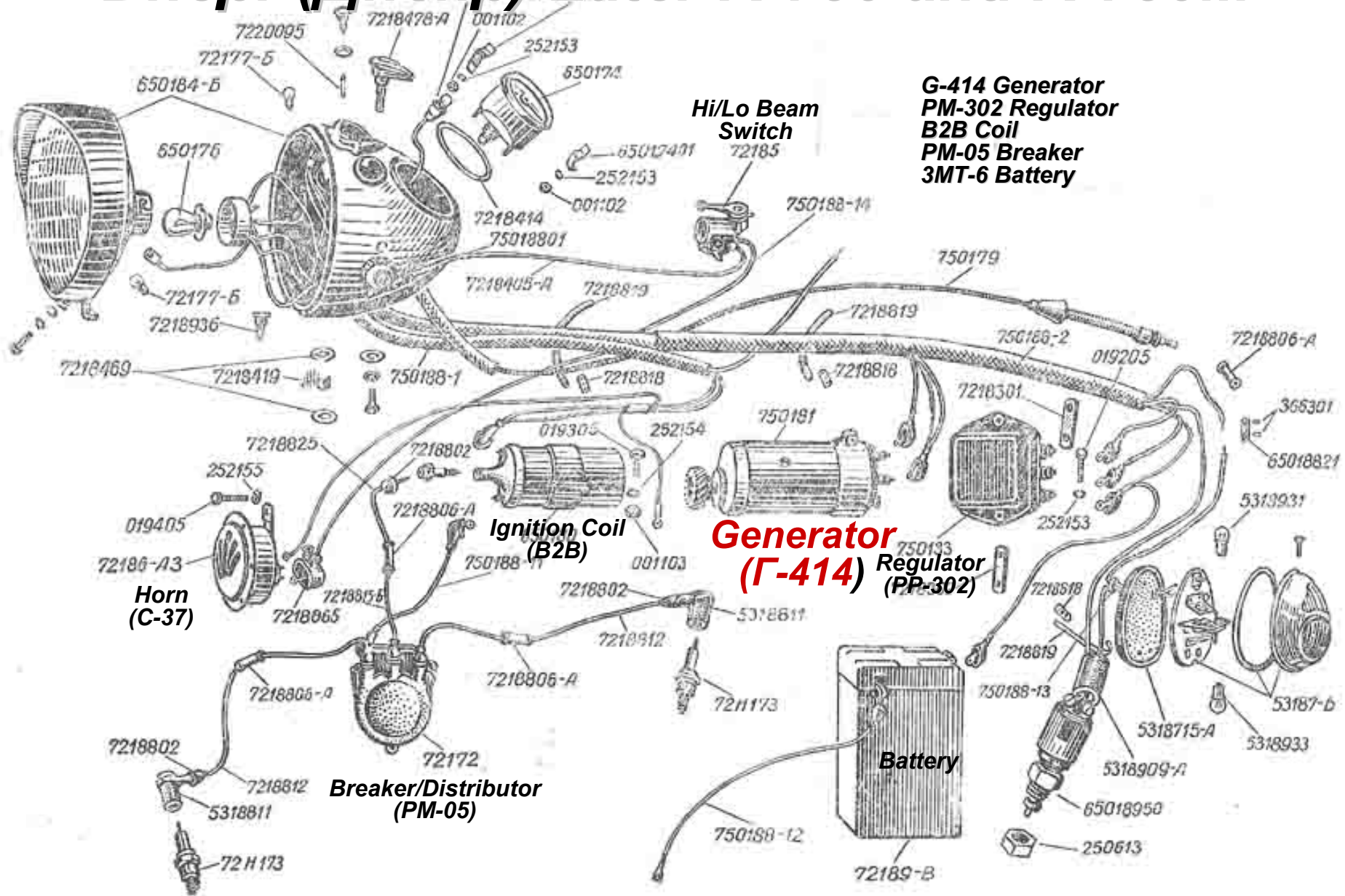
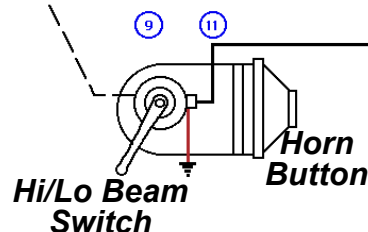
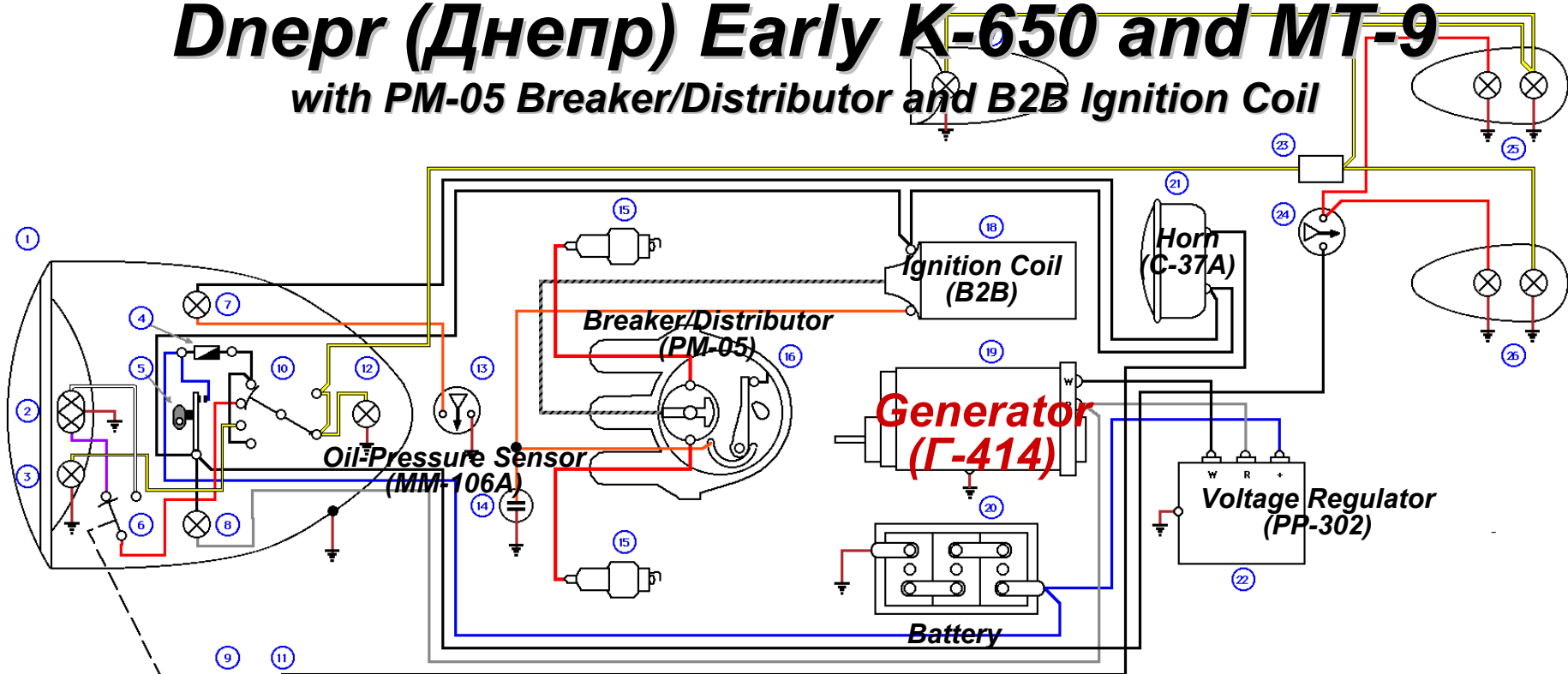


Рис. 34. Монтажная схема электрооборудования мотоцикла

Dnepr (Днепр) Early K-650 and MT-9

with PM-05 Breaker/Distributor and B2B Ignition Coil



1. Head lamp/Dash

2. High and low beam

3. parking light

4. Fuse

5. Key

6. dimmer switch

7. Oil pressure indicator

8. Generator charge indicator

9. Mechanical dimmer switch lever

10. Primary switch

11. horn button

12. speedometer bulb

13. Oil pressure switch

bulb A6-32 + 32

bulb A6-2

A6-1

lamp A6-0.25

14. Condensor

15. Spark plugs A8Y

16. Points and distributor

17. Front side car fender light

18. Ignition coil

19. DC Generator

20. Battery

21. Horn

22. Regulator

23. Connector

24. Stop light switch

25. Rear side car fender light

26. Rear light

3-MT-12

C37A

BK854

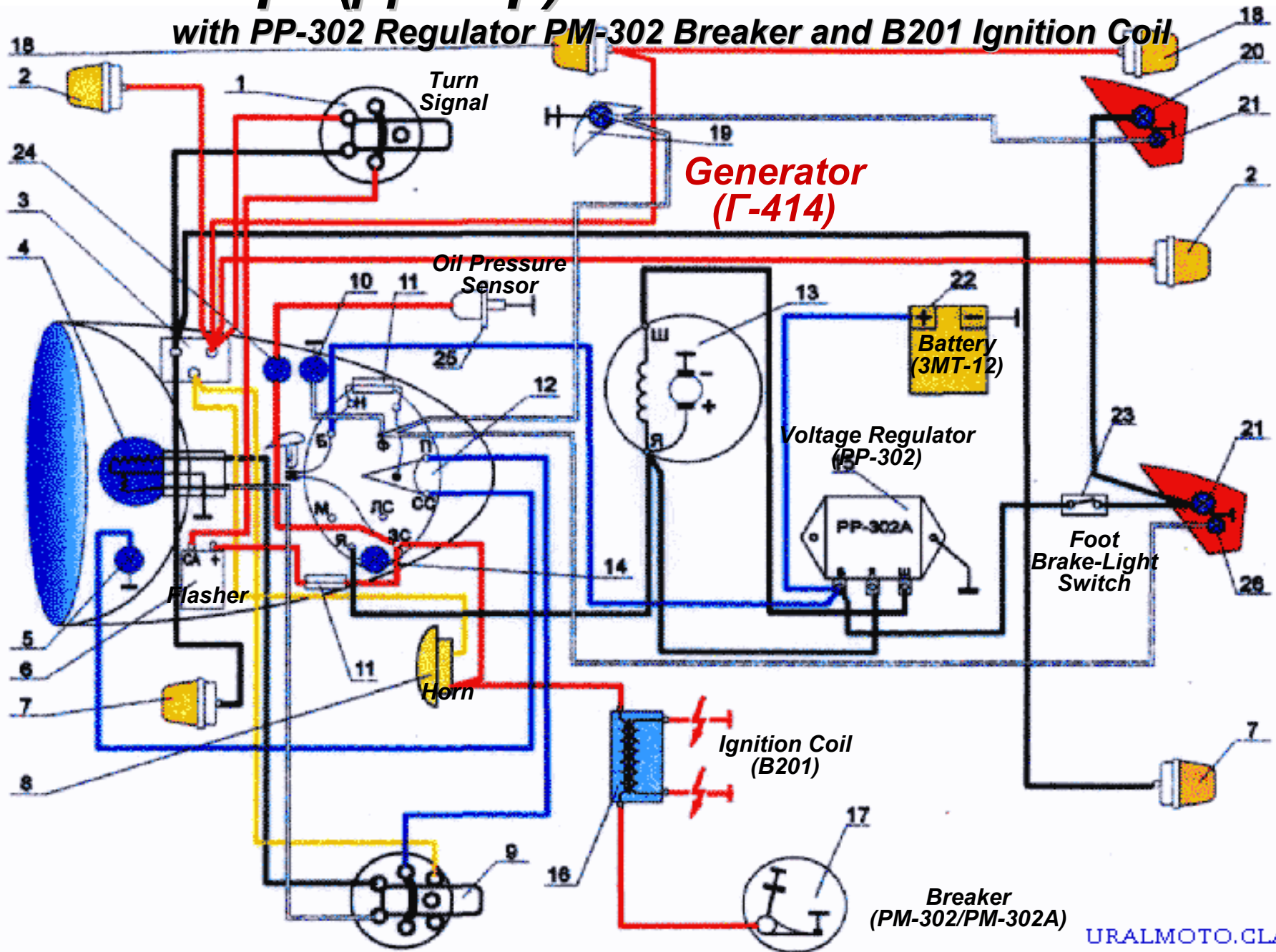
1968 K-650, Dnepr MT-9

wykonął:

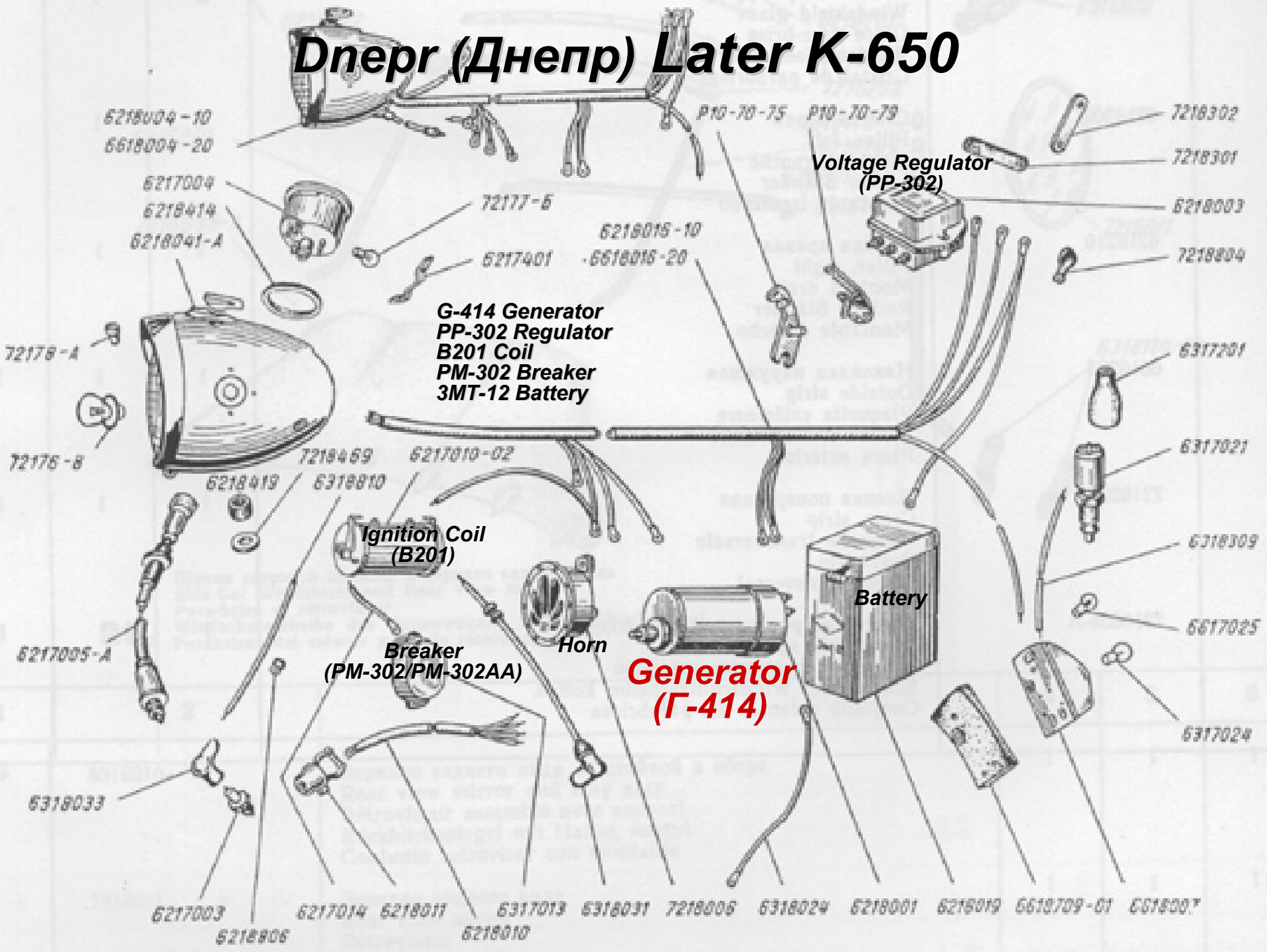
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Днепр (Днепр) Later K-650 and MT-9

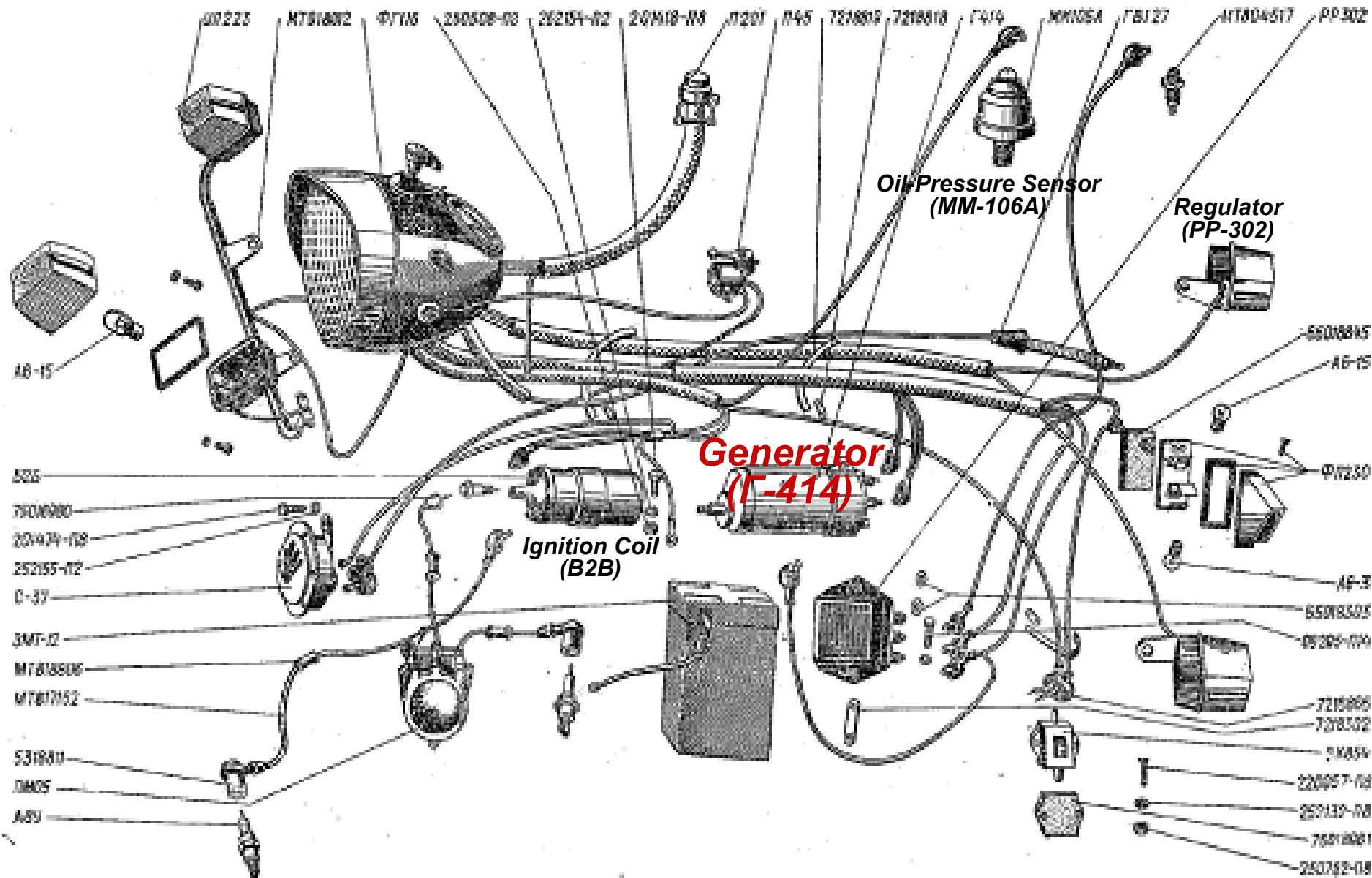
with PP-302 Regulator PM-302 Breaker and B201 Ignition Coil



Днепр (Днепр) Later K-650

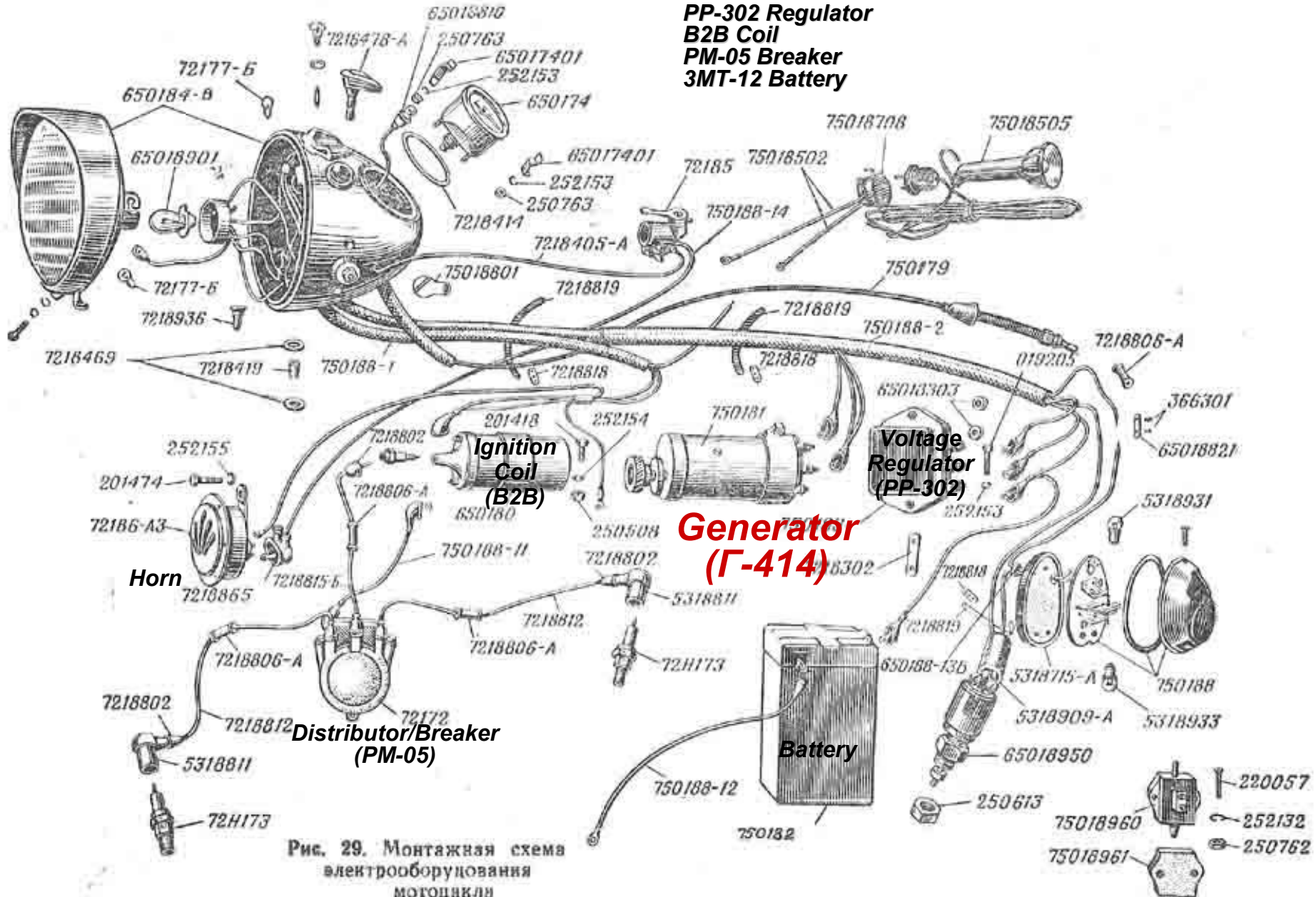


Днепр (Днепр) МТ-9

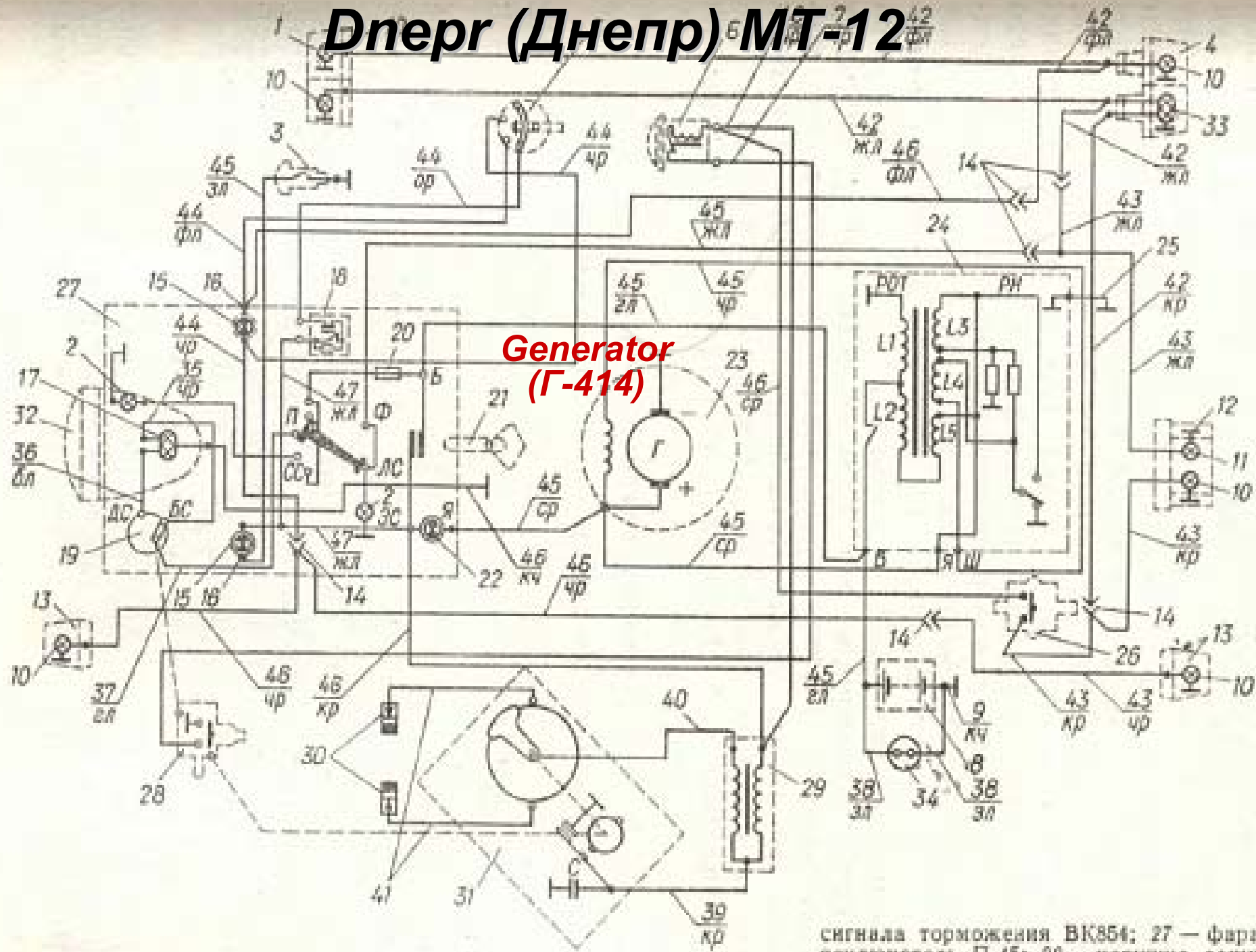


Днепр (Днепр) МВ-750, МТ-12 (1961)

G-414 Generator
PP-302 Regulator
B2B Coil
PM-05 Breaker
3MT-12 Battery

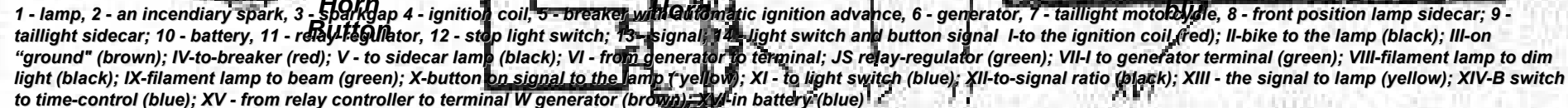


Днепр (Днепр) МТ-12

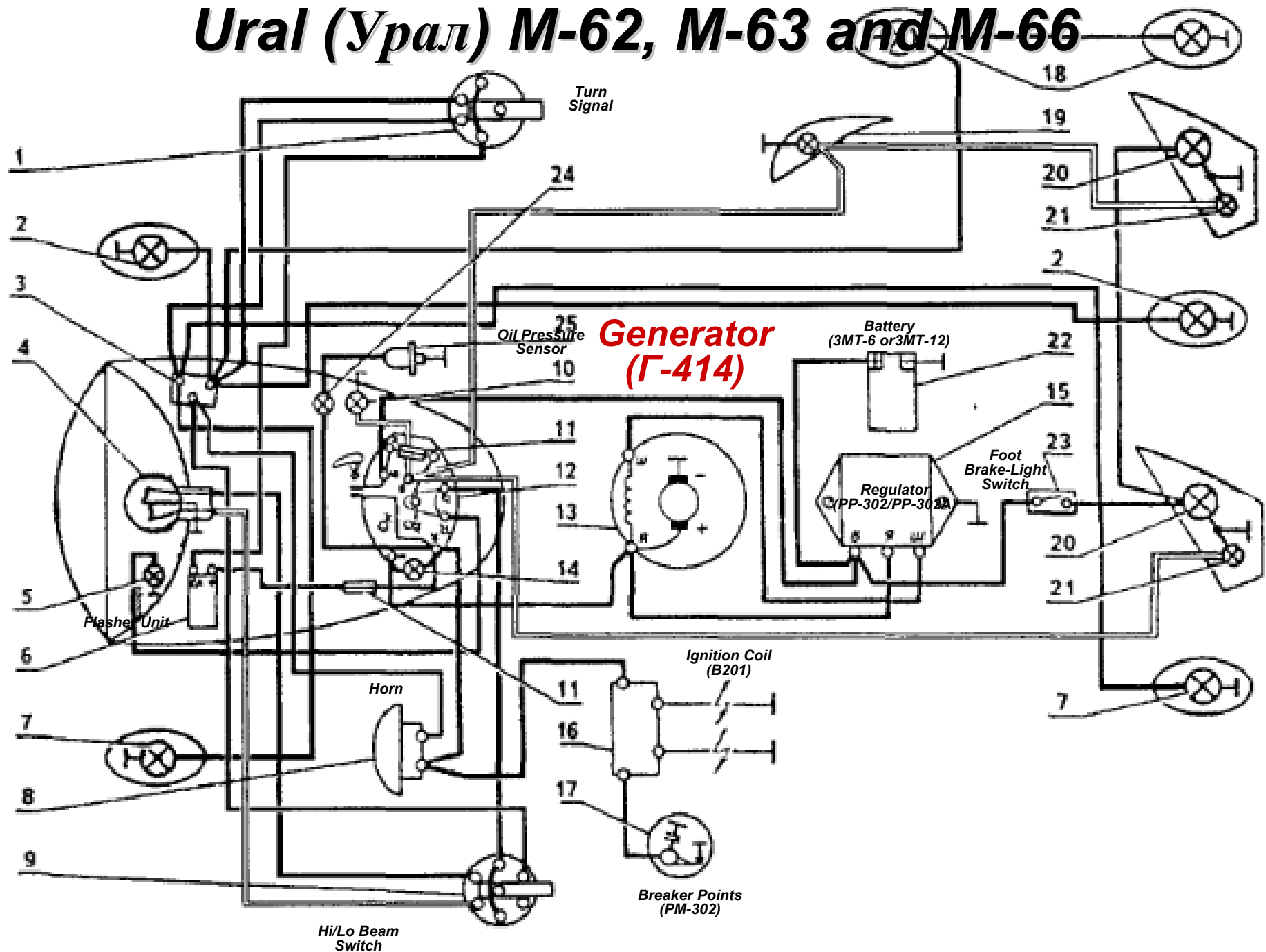


сигнала торможения ВК854; 27 — Фара

Ural (Урал) M-63 (Ural-2)



Ural (Урал) M-62, M-63 and M-66



Ural (Урал) M-66 (Ural-3)

