

BL Motorcycles Ltd

Professional Workshop Manual - English Translation

MZ - MZ_ETZ_125_150_251_301_1990_Manual_de_intretinere

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Dear MZ Friend! With the present operating instructions, we want to contribute to ensuring that your motorcycle will always be a reliable companion. Thanks to our many years of experience in motorcycle construction, the ETZ is a robust, powerful, reliable and low-maintenance vehicle. To ensure that this always remains the case, please observe the following instructions for treatment and care.

Starting and operating the vehicle requires that you read the present operating instructions conscientiously, observe the instructions given here for proper use, possess the legal authorization valid for the country of use to drive this vehicle, and know and observe the conditions under which the vehicle may be used. The vehicle must remain in the technical condition delivered by the manufacturer. The manufacturer accepts no liability for damage resulting from failure to observe the instructions and regulations, from the installation of non-standard spare parts and accessories, or from improper repair work. We wish you 'Good Ride'! Motorradwerk Zschopau GmbH

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1. Technical Data

1.1. Engine and Power Transmission

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ETZ 125 ETZ 150 ETZ 150 ETZ 251 ETZ 301

Engine Type EM 125 EM 150.2 EM 150.1 EM 251 EM 301

Operating Method Two-stroke reverse scavenging

Power 7.5 kW at 6000 rpm 9 kW at 6000 rpm 10.5 kW at 6500 rpm 15.4 kW at 5500 rpm (12.5 kW at 5000 rpm) 17 kW at 5500 rpm

Max. Torque 12.3 Nm at 5500 rpm 15 Nm at 5500 rpm 15.8 Nm at 6200 rpm 27.4 Nm at 5200 rpm (24.5 Nm at 4500 rpm) 30.6 Nm at 5200 rpm

Lubrication Mixture lubrication 50:1 (100:1 when using Castrol Biolube)

Gearbox Number of Gears 5 5 5 5

Neutral Indicator Yellow indicator light - only for luxury version

Power Transmission to the Rear Wheel Operating instructions for MZ motorcycles ETZ 125, ETZ 150, ETZ 251 and ETZ 301 <http://www.mz-b.de/miraculis/aw/mz/text/etz251b/etz 251b.html>

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Roller chain 0.8 B-1-128 TGL 11796 (12.7 x 7.75 x 128)

Gearbox-Rear Wheel Ratio 3.2 (15:48 teeth) 3.0 (16:48 teeth) 3.2 (15:48 teeth) 2.29 (21:48 teeth) 2.18 (22:48 teeth)

1.2. Carburetor

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ETZ 125 ETZ 150 ETZ 150 ETZ 251 ETZ 301

Type 22 N 2-2 24 N 2-2 24 N 2-2 30 N 3-1 30 N 3-2

Intake Manifold Diameter 22 mm 24 mm 24 mm 30 mm 30 mm

Main Jet 115 120 120 130 135

Needle Jet 70 2) 70 2) 70 2) 70 70

Part Load Needle 2.5 A 513 2.5 A 513 2.5 A 513 2.5 B 511 2.5 B 511

Part Load Needle Position from above 31) (2, at the first inspection) 31) (2, at the first inspection) 31) (2, at the first inspection) 4 4

Starting Jet 70 70 70 95 95

Idle Jet 35 35 35 50 50

Idle Air Screw Approximately 1.5 turns open, Approximately 2.5 turns open 3), Approximately 2.5 turns open 3), but setting the max. concentration of CO in the exhaust gas to 2.5 ... 3.5 Vol. % at 1200 rpm

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Idle Speed Approximately 1200 rpm 1200 rpm 1200 rpm 1200 rpm 1200 rpm adjusted with throttle stop screw

Air Bleed Screw (approximately 4 turns open) Air Bleed Screw (approximately 4 turns open)

1) Note the spark plug face! The lower plate of the needle holder counts

2) with 2 compensating air jets 60

3) Idle mixture screw

1.3. Chassis

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ETZ 125 ETZ 150 ETZ 150 ETZ 251 ETZ 301

Suspension

front Telescopic fork with hydraulic damping, travel 185 mm

rear Shock absorbers with hydraulic damping, travel 135 mm

Spring preload and angle adjustable

Wheels Wire spoke wheels

Rims

front 1.85 x 18 1.85 x 18 1.85 x 18 1.85 x 18 1.85 x 18

rear 2.15 x 16 2.15 x 16 2.15 x 16 2.15 x 16 2.15 x 16

Tires Operating instructions for MZ motorcycles ETZ 125, ETZ 150, ETZ 251 and ETZ 301

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front 2.75 x 18 R 2.75 x 18 R 2.75 x 18 R 2.75 x 18 R or 90/90 - 18 S 2.85 - 18 R or 90/90 - 18 S

rear 3.25 x 16 R 3.25 x 16 R 3.25 x 16 R 3.25 x 16 R or 110/80 - 16 3.25 - 16 R or 110/80 - 16 S

Tire Pressure

(Overpressure) Solo front 150 kPa (1.5 kp/cm²) 170 kPa (1.7 kp/cm²) 170 kPa (1.7 kp/cm²)

rear 190 kPa (1.9 kp/cm²) 190 kPa (1.9 kp/cm²) 190 kPa (1.9 kp/cm²)

at permissible total mass front 150 kPa (1.5 kp/cm²) 170 kPa (1.7 kp/cm²) 170 kPa (1.7 kp/cm²)

rear 3.25 - 16 R 280 kPa (2.8 kp/cm²)

110/80-16 S - - - 250 kPa (2.5 kp/cm²)

Brakes

front Simplex internal shoe brake or hydraulically operated disc brake

rear Simplex internal shoe brake

1.4. Electrical System

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ETZ 125 ETZ 150 ETZ 150 ETZ 251 ETZ 301

Nominal Voltage 12 V 12 V 12 V 12 V 12 V

Ignition Battery ignition, depending on version, via breaker points or electronically controlled

Ignition Timing 2.5 +0.5 mm

20° 15' ... 22° 15' 22°45' ... 23°45'

before top dead center, fixed

Breaker Point Gap 0.3 +0.1 mm (dwell angle 132° + 5° at idle)

Dwell Angle of the Electronic Ignition 180° or 50%

Spark Plug Isolator ZM 14 - 260 or comparable foreign types (multi-range plugs)

Electrode Gap 0.6 mm 0.6 mm 0.6 mm 0.6 mm 0.6 mm

Generator Three-phase AC 14 V, 15 A, with rectifier and regulator

Battery 12 V, 5.5 Ah 12 V, 5.5 Ah 12 V, 5.5 Ah 12 V, 5.5 Ah 12 V, 5.5 Ah

Bulbs Headlight 12 V, 45/40 W, TGL 11413 or H 4, 12 V, 60/55 W, low beam asymmetrical

Parking Light 12V, 4 W, base BA 9s, TGL 10833

Taillight 12V, 5 W Dual Filament Bulb P 25-2-12 V (21/5 W)

Brake Light 12V, 21 W Dual Filament Bulb P 25-2-12 V (21/5 W)

Turn Signal 12 V, 21 W, base BA 15s

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Indicator Lights and Instrument Lighting 12V, 2 W, base BA 7s, TGL 10833

Fuses Main fuse 2 x fuse insert A 16 TGL 11135 (16 A)

Turn Signal System Fuse insert A 4 TGL 11135 (4 A)

Alternator Excitation Fuse insert T 2 A (fine fuse 2 A)

1.5. Masses

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ETZ 125 ETZ 150 ETZ 150 ETZ 251 ETZ 301

Empty Mass (with fuel and tools) 120 kg 1)

123 kg 2) 120 kg 1)

123 kg 2) 120 kg 1)

123 kg 2) 141 kg 1)

144 kg 2) 141 kg 1)

144 kg 2)

Permissible Total Mass 290 kg 290 kg 290 kg 330 kg 330 kg

1) Version with drum brake

2) Version with disc brake

1.6. Filling Quantities

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ETZ 125 ETZ 150 ETZ 150 ETZ 251 ETZ 301

Fuel Tank 13.0 l 13.0 l 13.0 l 17.0 l 17.0 l

of which Reserve 1.5 l 1.5 l 1.5 l 1.5 l 1.5 l

Gearbox Oil 0.5 l 0.5 l 0.5 l 0.9 l 0.9 l

1.7. Performance

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ETZ 125 ETZ 150 ETZ 150 ETZ 251 ETZ 301

Maximum Speed 100 km/h 105 km/h 110 km/h 125 to 130 km/h 130 to 135 km/h depending on load, weather conditions and seating position

Fuel Consumption 2.3 ... 3.5 l/100 km 2.4 ... 3.6 l/100 km 2.6 ... 4.0 l/100 km 3.5 ... 5.0 l/100 km 3.5 ... 5.0 l/100 km

2. Operating Fluids

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Engine Regular gasoline 'Normal' (RON 88), mixed in a ratio of 50:1 with two-stroke engine oil (with Castrol Biolube, a ratio of 100:1 is possible). Operating instructions for MZ motorcycles ETZ 125, ETZ 150, ETZ 251 and ETZ 301
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Example: Mix 10 l of fuel with 0.2 l of two-stroke engine oil. The use of unleaded fuel with at least 88 octane is possible.

Gearbox Gearbox oil SAE 80 or unalloyed engine oil SAE 40 for summer and winter. In the GDR, GL 100 oil is used.

Chassis Gearbox oil SAE 80 and rolling bearing grease

Brake Fluid SAE 70 R 3 or SAE I 1703

Electrical System For a new battery, use accumulator sulfuric acid with a density of 1.28 g/cm³ (1.23 g/cm³ in the tropics) at 25°C, and only use distilled water to refill the battery.

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Pole grease as corrosion protection for the battery connections. Hypoid oil (viscous gearbox oil) for the breaker point lubrication felt. Operating instructions for MZ motorcycles ETZ 125, ETZ 150, ETZ 251 and ETZ 301
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