

# **BL Motorcycles Ltd**

*Professional Workshop Manual - English Translation*

## **MZ - MZ\_ETS\_175\_250\_Trophy\_Sport\_1970\_Manual\_de\_intretinere**

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Your great wish has come true, and we are pleased to welcome you as the owner of a new MZ-ETS. We have endeavored to provide you with a fast and reliable vehicle. However, it now also depends on you whether the ETS remains powerful and reliable for a long time. Please be sure to observe everything recommended below regarding consumables, correct operation, and maintenance. Note it in your own interest, before you are shown by a workshop invoice what you have done wrong! Perhaps some old motorcycle hand thinks he knows this or that better - but you should rely on our recommendations. After all, motorcycles have been built in Zschopau for 50 years, and the knowledge and experience gained in the process should also be useful to you. Please also read the 'Warranty and Inspection Booklet' carefully. Should any warranty claims be made, proof of proper completion of the mandatory inspections is a prerequisite.

And now 'Have a good trip'!

VEB Motorradwerk Zschopau

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Image 1. ETS 250 1. Technical Data 1.1. Engine

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Type ETS 175 Trophy-Sport ETS 250 Trophy-Sport

Operating Principle Two-stroke loop scavenging Two-stroke loop scavenging Cooling Type Air (wind) Air (wind)  
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Number of Cylinders 1 1

Stroke/Bore 65/58 65/69

Displacement 172 cm<sup>3</sup> 243 cm<sup>3</sup>

Compression Ratio 9.5 ... 10 : 1 9.5 ... 10 : 1

Power 10.3 kW = 14.0 DIN-PS = 15.5 SAE-PS at 5000 ... 5400 rpm 14.0 kW = 19.0 DIN-PS = 21 SAE-PS at 5200 ... 5500 rpm

Max. Torque 2.0 kpm at 4700 ... 5000 rpm 2.6 kpm at 4700 ... 5000 rpm Lubrication Mixture lubrication 33: 1 (two-stroke engine oil) Mixture lubrication 33: 1 (two-stroke engine oil)

Connecting Rod Bearing (on crank pin and piston pin) caged needle bearing caged needle bearing

Crankshaft Main Bearing 2 bearings 6305 c 003 f 1 bearing 6302 2 bearings 6305 c 003 f 1 bearing 6302

Lubrication of Crankshaft Main Bearing through transmission lubricant through transmission lubricant

Fuel VK 88 (RON 88) VK 88 (RON 88)

1. 2. Carburetor

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Type BVF 26 N 1-2 BVF 28 N 1-3 Carburetor Values: Orifice in mm 26 28 Main Jet 105 115

Needle Jet 67 67

Part Load Needle No. C 5 with 5 notches No. C 5 with 5 notches

Needle Position from Above 3 ... 4 \*) (4th for break-in period) 3 ... 4 \*) (4th for break-in period)

Starting Jet 90 100 Idle Jet 35 40 Idle Air Screw 1 1/2 ... 2 1/2 turns open 2 ... 3 turns open Air Filter Dry air filter (paper insert) in the intake silencer

\*) Always Observe the Spark Plug Appearance!

1. 3. Electrical System

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Ignition Battery ignition with centrifugal advance Battery ignition with centrifugal advance

Ignition Timing 3.0 mm before TDC, with fully extended centrifugal weights 3.0 mm before TDC, with fully extended centrifugal weights

Breaker Contact Gap 0.3 mm 0.3 mm

Spark Plug Isolator M 14/260 Isolator M 14/260 Electrode Gap 0.6 mm 0.6 mm

Generator DC 6 V, 60 W; briefly 90 W Charging indicator light (red) in the speedometer Regulator RSC 60/6 under the left side panel Battery 6 Volt, 12 Ah (lead-acid flat battery) Ignition Coil 6 Volt, under the left panel Headlight Light emission 160 mm Dimmer switch on the left handlebar Taillight Light emission 95 mm combined with brake light Contact on the rear brake lever Horn under the fuel tank High beam is activated by a push button under the dimmer switch

## 1. 4. Transmission

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Type ETS 175 Trophy-Sport ETS 250 Trophy-Sport

Clutch on the left crankshaft stub - in oil bath (5 friction plates with cork parts)

Shifting Foot shift Number of Gears 4 Gear Ratio: 1st Gear 2.77 : 1 2nd Gear 1.80 : 1 3rd Gear 1.23 : 1 4th Gear 0.92 : 1 Neutral Indicator Electric indicator light (green) in the speedometer

## 1. 5. Power Transmission

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Type ETS 175 Trophy-Sport ETS 250 Trophy-Sport

Ratio Engine-Transmission 2.43 : 1 through helical spur gears 28 : 68 teeth Operating Instructions for the MZ Motorcycles ETS 175 Trophy-Sport and ETS 250 Trophy-Sport - Mira...  
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Ratio Transmission-Rear Wheel 2.65 : 1 x 17 : 45 teeth 2.14 : 1 x 21 : 45 teeth by roller chain 12.7x7.75x8.51 mm = 1/2 x 5/16 inch

## 1. 6. Chassis

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Type ETS 175 Trophy-Sport ETS 250 Trophy-Sport

Frame Single-tube frame, welded. Elastic engine mount rubber blocks

Type of Suspension Front Telescopic fork Rear Swingarm

Front Telescopic fork with oil shock absorption, 145 mm travel Rear Shock absorbers with oil shock absorption, 105 mm

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travel, spring hardness adjustable Wheels Wire spoke wheels with non-cranked spokes Rim Size Front 1.60 x 18 Rear 2.15 B x 16 Tires Operating Instructions for the MZ Motorcycles ETS 175 Trophy-Sport and ETS 250 Trophy-Sport - Mira... <http://www.mz-b.de/miraculis/aw/mz/text/ets1725b/ets1725b.html>

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Front 2.75 - 18 Rear 3.50 - 16 Tire Pressure (at overpressure)

Front 1.5 at Rear 1.9 at for solo riding Rear 2.1 at for riding with passenger Brakes Full hub brakes

## 1. 7. Dimensions and Weights

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Type ETS 175 Trophy-Sport ETS 250 Trophy-Sport

Wheelbase 1380 mm 1380 mm Length 2200 mm 2200 mm Width with/without Mirror 750/610 mm 750/610 mm Height with/without Mirror 1060/1030 mm 1060/1030 mm Ground Clearance, loaded 160 mm 160 mm Curb Weight 151 kg 151 kg