

MZ - MZ_ES_175_250_1969_Manual_de_intretinere

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Dear MZ Friend! Please do not put this manual aside unread, assuming you already know everything that is in it. While most people are familiar with vehicle technology today, even an old motorcycle enthusiast can still learn something now and then!

Motorcycles have been built in Zschopau for four decades. Therefore, all the prerequisites are factory-set for your vehicle to be reliable and safe - but whether it remains so now depends on you. This does not mean that you should treat your ES like a raw egg, but if you follow what we recommend below about breaking-in, correct operating fluids, maintenance, and care, you will find that your ES is indestructible. Therefore, take our advice to heart, your ES will thank you for it! We wish you a good journey!

VEB MOTORRADWERK ZSCHOPAU

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Picture 1. ES 175/2 - ES 250/2

1. Technical Data

1. 1. Engine

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ES 175/2	ES 250/2
Operating Method	Two-stroke reverse scavenging
Two-stroke reverse scavenging	
Cooling Type	Air (wind)
	Air (wind)
Number of Cylinders	1
	1
Stroke/Bore	65/58
	65/69
Displacement	172 cm ³
	246 cm ³
Compression Ratio	9:1
	8.5:1
Power	13.5 DIN HP = 9.9 kW at 5200...5500 rpm
DIN HP = 12.9 kW at 5000...5300 rpm	17.5
Max. Torque	1.85 kpm at 5000...5100 rpm
at 4500...4700 rpm	2.5 kpm
Lubrication	Mixture lubrication 33:1 (Hyzet oil)
	Mixture
lubrication 33:1 (Hyzet oil)	
Connecting Rod Bearing	Cage-guided needle bearing (on crank pin and piston pin)
	Cage-guided needle bearing
Crankshaft Main Bearing	2 bearings 6305 c 003 f 1 bearing 6302 Lubrication of the crankshaft main bearings through transmission lubricant
	2 bearings 6305 c 003 f 1 bearing 6302 Lubrication of the crankshaft main bearings through transmission lubricant
Fuel	VK 'Normal' (OZ 79)
79)	VK 'Normal' (OZ

1. 2. Carburetor

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ES 175/2	ES 250/2
Carburetor Type	BVF 26 N 1-1 (Startvergaser)
Carburetor Values:	BVF 28 N 1-1 (Startvergaser)

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Passage in mm	26	28	
Main Jet	100	107	
Needle Jet	65	67	
Part Load Needle	No. K2 with 5 notches	K3 with 5 notches	
Needle Position from Above	3...4 <small>*)</small>	3...4 <small>*)</small>	
Starter Jet	90 100		
Idle Jet	40 40		
Idle Air Screw	1 1/2...2 1/2 turns open	2...3 turns open	
Air Filter	Dry air filter in the intake silencer		

*) Always pay attention to the spark plug appearance!

1. 3. Electrical System

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	ES 175/2
	ES 250/2

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, 6V, 60W, briefly 90W
	DC, 6V, 60W, briefly 90W
Charging Indicator Lamp	(red) in the speedometer
	(red) in the speedometer

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Regulator	RSC 60/6, under the left side panel
	RSC 60/6, under the left side panel
Battery	6V, 12 Ah (lead-acid flat battery)
Ignition Coil	6V, under left panel
Headlight	Fixed - light emission 170 mm Dipped beam switch on the left handlebar
Tail Light	Combined with light emission 95 mm
Brake Light	Contact on the rear brake lever
Turn Signals	On both sides at the handlebar end (switch on the right handlebar) Turn signal relay in the headlight housing Horn under the fuel tank Headlight flasher is operated by a button under the dipped beam switch

1. 4. Transmission

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	ES 175/2		ES 250/2
Clutch	On the left crankshaft stub - in oil bath (5 friction discs with cork content)		
Shifting	Foot shift		
Number of Gears	4		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 Light	Electrical indicator lamp (green) in the speedometer		

1. 5. Power Transmission

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	ES 175/2		ES 250/2
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	-----		-----
	-----		-----
Gear Ratio Motor to Transmission 2.43:1 through helical spur gears 28:68 teeth			
Gear Ratio Transmission to Rear Wheel 2.65:1 = 17:45 teeth through roller chain 12.7 x 7.75 x 8.51 mm = 1/2 x 5/16 inch (With sidecar: 2.65:1 = 17:45 teeth) 2.14:1 = 21:45 teeth through roller chain 12.7 x 7.75 x 8.51 mm = 1/2 x 5/16 inch (With sidecar: 2.65:1 = 17:45 teeth)			

1. 6. Chassis

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	ES 175/2		ES 250/2
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	-----		-----
	-----		-----
Frame	Single-tube frame, welded. Elastic engine mounting in rubber blocks		
Type of Suspension Front and Rear	Front swingarm Shock absorbers with oil damping, 142 mm travel Rear Shock absorbers with oil damping, 115 mm travel, spring hardness adjustable	Front swingarm Shock absorbers with oil damping, 142 mm travel Rear Shock absorbers with oil damping, 115 mm travel, spring hardness adjustable	
Wheels	Wire spoke wheels with non-cranked spokes		
Rim Size	Front 1.85 B x 16 Rear 2.15 B x 16		
	Front 1.85 B x 16 Rear 2.15 B x 16		
Tires	Front 3.00 - 16 Rear 3.50 - 16		
Front 3.00 - 16 Rear 3.50 - 16			
Tire Pressure (at Overpressure)	Front 1.4 at Rear 1.9 at for solo riding Rear 2.1 at for solo riding and sidecar operation	Front 1.4 at Rear 1.9 at for solo riding Rear 2.1 at for solo riding and sidecar operation	
2.6 at for sidecar operation with passenger	2.6 at for sidecar operation with passenger		
Brakes	Full hub brakes		Full
hub brakes			

1. 7. Dimensions and Weights

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	ES 175/2 ES 250/2
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	Wheelbase 1325 mm

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Length 2090 mm	
Width with Mirror 862 mm	
Height 1060 mm	