MZ - MZ_ES_175_250_1962_Manual_de_intretinere

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Dear MZ Friend! Please do not put these operating instructions aside unread, assuming you already know everything that is written in them. Although most people are familiar with vehicle technology these days, even an old motorcycle hand can still learn something now and then!

Motorcycles have been built in Zschopau for four decades. Therefore, all the factory prerequisites are in place to ensure that your vehicle is reliable and safe to operate - whether it stays that way, however, now depends on you. This is not to say that you should treat your ES like a raw egg, but if you follow what we recommend below about running 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 pleasant journey!

VEB MOTORRADWERK ZSCHOPAU

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Image 1. ES 175, View from the Right
Image 2. ES 250, View from the Left

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	ES 175/1	ES 250/1
Engine		
Operating method	2-stroke reverse scavenging	2-stroke reverse scavenging
Number of cylinders	1	1
Stroke	65	65
Bore	58	70
Displacement	172 cm²	250 cm²
Compression ratio	8:1	7.7:1
Cooling type	Air (wind)	Air (wind)
Power at 5000 rpm	11 HP	14.25 HP
Lubrication	Mixture lubrication 25:1 'Hyzet'	Mixture lubrication 25:1 'Hyzet'
Carburetor	BVF 25.5 KN 1-1 (slide valve)	BVF 27 KN 1-1 (slide valve)
Carburetor settings:		
Passage in mm	25.5	27
Main jet	100 (95 after run-in period)	105 (100 after run-in period)
Needle jet	67	67
Idle jet	45	45
Needle position	4	4
Slide cutaway	4 mm	4 mm
Idle air screw	2 1/2 ... 3 turns open	2 1/2 ... 3 turns open
Air filter	Wet air filter with intake noise damper	Wet air filter with intake noise damper
Ignition	Battery ignition	Battery ignition
Spark plug	Isolator M 14/240	Isolator M 14/240
Electrode gap	0.6 mm	0.6 mm
Pre-ignition	4 mm BTDC with fully extended centrifugal weights	3.5 mm BTDC with fully extended centrifugal weights
Alternator	GM 6V, 60W, briefly 90W	GM 6V, 60W, briefly 90W
Clutch	Multi-disc clutch in oil bath	Multi-disc clutch in oil bath
Gearshift	Foot shift	Foot shift
Number of gears	4	4
Gear ratios		
1st gear	2.77:1	2.77:1
2nd gear	1.63:1	1.63:1
3rd gear	1.23:1	1.23:1

4th gear 0.92:1 0.92:1
Ratio from engine to gearbox 2.43:1 = 28:68 teeth 2.43:1 = 28:68 teeth
Ratio from gearbox to rear wheel 2.67:1 = 18:48 teeth 2.25:1 = 20:45 teeth
Power transmission to the rear wheel = roller chain 12.7 x 7.75 x 8.51 mm 12.7 x 7.75 x 8.51 mm
Chassis
Type of suspension
Front Strut with oil shock absorption, 142 mm travel Strut with oil shock absorption, 142 mm travel
Rear Strut with oil shock absorption, adjustable, 115 mm travel Strut with oil shock absorption, adjustable, 115 mm travel
Wheels Wire-spoke wheels Wire-spoke wheels
Rim size
Front 1.85 B x 16 1.85 B x 16
Rear 2.15 B x 16 2.15 B x 16
Tires
Front 3.25 x 16 3.25 x 16
Rear 3.50 x 16 3.50 x 16
Tire pressure
Front 1.4 atm 1.4 atm
Rear 1.9 atm for solo riding 1.9 atm for solo riding
Rear 2.1 atm for riding with a passenger 2.1 atm for riding with a passenger and sidecar
Brakes Central brake 160 mm diameter. 30 mm wide Central brake 160 mm diameter. 30 mm wide
Wheelbase 1325 mm 1325 mm
Length 2000 mm 2000 mm
Width 790 mm with mirror 790 mm with mirror
Height 1185 mm with mirror unloaded 1185 mm with mirror unloaded
Ground clearance 175 mm 175 mm
Empty weight 159 kg 162 kg
Permissible load 171 kp 167 kp
Permissible total weight 320 kg 320 kg
Maximum speed approximately 95 km/h approximately 110 km/h

Filling Quantities
Gearbox 900 cm^3 Engine oil 900 cm^3 Engine oil
Fuel tank approximately 15 l Fuel mixture 25:1 approximately 15 l Fuel mixture 25:1
of which reserve approximately 1.5 l approximately 1.5 l
Struts 80 cm^3 shock absorber oil 'Globo' per strut 80 cm^3 shock absorber oil 'Globo' per strut

With a favorable coefficient of friction on a grippy concrete road (highway), a
braking deceleration of 7.2 m/s^2
can be achieved. Prerequisite are, good tire condition and correct brake adjustment. With proper operation of both brakes, the following
braking distances result:
30 km/h 4.8 m, 60 km/h 19.4 m, 90 km/h 44.0 m.

These values do not include the driver's reaction time!

Image 3.