



SERVICE

TECHNICAL DATA

NSU-SCOOTER 125/150 cc

Technical Data / Page 1

Edition X. 1957

125 cc with Kick Starter
(Flywheel Magneto Generator)

125 cc with Electric Starter
(Flywheel Dynamo Starter)

150 cc PRIMA with Electric Starter
(Flywheel Dynamo Starter)

ENGINE

Engine	=	Type 11/125 cc NSU-Scooter	Type 11/125 cc NSU-Scooter	Type 11/150 cc NSU-Scooter PRIMA
Type	=	Two stroke	Two stroke	Two stroke
No. of cylinders	=	1	1	1
Bore	=	52 mm	52 mm	57 mm
Stroke	=	58 mm	58 mm	58 mm
Cylinder volume	=	123 cc	123 cc	147 cc
Compression space	=	24 cc	24 cc	29.5 cc
Compression ratio	=	6.1 : 1	6.1 : 1	6.3 : 1
Output	=	5.1 h. p.	5.1 h. p.	6.2 h. p.
Maximum engine speed.	=	5200 r. p. m.	5200 r. p. m.	5000 r. p. m.
Compression pressure	=	53.5 lb/sq. in.	53.5 lb/sq. in.	54 lb/sq. in.
Control of gas flow	=	by ports	by ports	by ports
Piston undersize	=	-0.05 to -0.06 mm	-0.05 to -0.06 mm	-0.05 to -0.06 mm
Diameter of gudgeon pin	=	White 14 -0.002 mm Black 14 -0.005 mm	White 14 -0.002 mm Black 14 -0.003 mm -0.005 mm	White 15 ⁺⁰ mm -0.0025 mm Black 15 -0.0025 mm -0.005 mm
Diameter of gudgeon pin bush	=	14 ⁺ 0.034 mm ⁺ 0.016 mm	14 ⁺ 0.034 mm ⁺ 0.016 mm	15 ⁺ 0.034 mm ⁺ 0.016 mm
Lubrication	=	Petrol Air Mixture (1:20 resp. 1:25)	Petrol Air Mixture (1:20 resp. 1:25)	Petrol Air Mixture (1:20 resp. 1:25)

CARBURETTER

Ratio of Petrol Mixture	=	During Running-in 1 : 20 After Running-in 1 : 25	During Running-in 1 : 20 After Running-in 1 : 25	During Running-in 1 : 20 After Running-in 1 : 25
Carburetter	=	Type Bing 1/16/50, Main jet 85 or 16/28 Main jet 90, Needle jet 310, Needle position 2, cross section 5/8"	Type Bing 1/16/51, Main jet 85, Needle jet 310, Needle position 2, cross sec- tion 5/8"	Type Bing 1/20/22, Main jet 120 for silencer 11 16 00 503 or Bing 1/20/32, Main jet 95 for silencer 11 16 01 503, Needle jet 2.68, Needle position 2, slow running jet 45, cross section 25/32", or Type BING 1/20/37, Main jet 90 for silencer 11 16 04 503, Needle jet 2.68, Needle position 2, slow running jet 45, cross section 25/32"
Air filter	=	Oil bath air filter with choke control	Oil bath air filter with choke control	Oil bath air filter with choke control



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IGNITION

Type of ignition	=	Flywheel Magneto Generator 6 volt A. C.	Coil ignition, 12 volt D. C.	Coil ignition, 12 volt D. C.
Ignition timing	=	5/32" B. T. D. C.	5/32" B. T. D. C.	5/32" B. T. D. C.
Contact Breaker Gap.	=	0.008" — 0.012" (0.2 — 0.3 mm)	0.016" automatic advance and retard mechanism fully advanced	0.016" automatic advance and retard mechanism fully retarded
Type of spark plug	=	Bosch W 225 T 11	Bosch W 225 T 11	Bosch W 240 T 11
Spark plug gap.	=	0.016" — 0.020"	0.028"	0.028"

CLUTCH

Clutch	=	Multi-plate in oil bath	Multi-plate in oil bath	Multi-plate in oil bath
Clutch operation	=	By hand	By hand	By hand
Clutch spring pressure	=	119 lb	119 lb	137 lb
Clutch adjustment	=	3/16" — 5/8" play between clutch cover and lever	3/16" — 5/8" play between clutch cover and lever	3/16" — 5/8" play between clutch cover and lever

TRANSMISSION

Gearbox	=	NSU 3-speed gearbox	NSU 3-speed gearbox	NSU 3-speed gearbox
Oil level in gearbox	=	For Initial Filling: approx. 0.57 pt. engine oil SAE 30 (or gearoil SAE 80). For oil changes: approx. 0.35 pt.	For Initial Filling: approx. 0.57 pt. engine oil SAE 30 (or gearoil SAE 80). For oil changes: approx. 0.35 pt.	For Initial Filling: approx. 0.57 pt. engine oil SAE 30 (or gearoil SAE 80). For oil changes: approx. 0.35 pt.
Filling with grease of rear wheel drive casing and suspension	=	Appr. 10 1/2 oz. Epix or pressure lubrication grease (Remove both filler plugs and apply pressure grease gun to the filler on the suspension until grease oozes out of the opening of the drive casing.	Appr. 10 1/2 oz. Epix or pressure lubrication grease (Remove both filler plugs and apply pressure grease gun to the filler on the suspension until grease oozes out of the opening of the driving casing.	Appr. 10 1/2 oz. Epix or pressure lubrication grease (Remove both filler plugs and apply pressure grease gun to the filler on the suspension until grease oozes out of the opening of the driving casing.
Type of engagement	=	Driving pin	Driving pin	Driving pin
Axial float of the gear shafts	=	0.008" (not to be compensated)	0.008" (not to be compensated)	0.008" (not to be compensated)
Drive, Engine-Gearbox	=	Straight or spiral bevel gears	Spiral bevel gears	Spiral bevel gears
Drive, Gearbox-Rearwheel	=	Shaft drive straight or spiral bevel gears and spur gears with straight teeth	Shaft drive with spiral bevel gears and spur gears with straight teeth	Shaft drive with spiral bevel gears and spur gears with straight teeth



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TRANSMISSION

Ratio, Engine-Gearbox	= 1.31 :1	1.31 :1	1.3125 :1
Ratio of gears			
1 st gear	= 2.7 :1	2.7 :1	2.96 :1
2 nd gear	= 1.46 :1	1.46 :1	1.46 :1
3 rd gear	= 1 :1	1 :1	1 :1
Ratio, Gearbox-Rearwheel	= 3.76 :1	3.76 :1	3.77 :1
1 st gear	= 13.45 :1	13.45 :1	14.66 :1
2 nd gear	= 7.24 :1	7.24 :1	7.259 :1
3 rd gear	= 4.93 :1	4.93 :1	4.948 :1

WHEELS and BRAKES

Road wheels	= Removable	Removable	Removable
Tyre size	= 400 x 8	400 x 8	400 x 8
Inflation pressure			
Front Wheel	= 10 — 11.5 lb. sq. in.	10 — 11.5 lb. sq. in.	10 — 11.5 lb. sq. in.
Rear Wheel	= 18.5 lb. sq. in. solo, 25 lb. sq. in. with pillion passenger	18.5 lb. sq. in. solo, 25 lb. sq. in. with pillion passenger	18.5 lb. sq. in. solo, 25 lb. sq. in. with pillion passenger
Type of rim	= 2.45 — 8 DIN 7824 well base	2.45 — 8 DIN 7824 well base	2.45 — 8 DIN 7824 well base
Maximum road speed	= Appr. 46.6 m. p. h.	Appr. 46.6 m. p. h.	Appr. 50 m. p. h.
Front wheel brake	= Internal brake shoes mechanically operated	Internal brake shoes mechanically operated	Internal brake shoes mechanically operated
Rear wheel brake	= Internal brake shoes mechanically operated	Internal brake shoes mechanically operated	Internal brake shoes mechanically operated
Brake operation	= Front: hand operated Rear: foot operated	Front: hand operated Rear: foot operated	Front: hand operated Rear: foot operated
Average retardation	= Front wheel: 3.1 m/sec ² Rear wheel: 4.0 m/sec ²	Front wheel: 3.1 m/sec ² Rear wheel: 4.0 m/sec ²	Front wheel: 4.17 m/sec ² Rear wheel: 4.0 m/sec ²

MISCELLANEOUS DATA

Wheel base	= 48.4" (1230 mm)	49.6" (1259 mm)	49.6" (1259 mm)
Total length	= 71.3" (1810 mm)	72.2" (1834 mm)	75" (1905 mm)
Overall width	= 29" (738 mm)	29" (738 mm)	26.6" (680 mm)
Overall height	= 38.4" (975 mm)	38.8" (986 mm)	38.2" (985 mm)
Ground clearance	= 4.7" (120 mm)	5.3" (135 mm)	5.5" (140 mm)
Height of saddle	= 31.1" (790 mm)	30.8" (781 mm)	31.2" (795 mm)



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MISCELLANEOUS DATA

Frame	=	Central steel tube with sectioned strengthening pieces	Central steel tube with sectioned strengthening pieces	Central steel tube with sectioned strengthening pieces
Front fork	=	Swinging fork	Swinging fork	Swinging fork
Rear wheel springing	=	Swinging fork	Swinging fork, hydraulically damped	Swinging fork, hydraulically damped
Stand	=	Centre stand	Centre stand and prop stand	Centre stand and prop stand
Unloaded weight with fuel	=	220 lbs (100 kg)	264 lbs (120 kg)	270 1/2 lbs (123 kg)
Permissible total load	=	595 lbs (270 kg)	595 lbs (270 kg)	660 lbs (300 kg)
Fuel capacity	=	1 gallon 3 1/4 pints (6.3 ltr.) (including 2 1/4 pints (1.2 ltr.) reserve)	1 gallon 3 1/4 pints (6.3 ltr.) (including 2 1/4 pints (1.2 ltr.) reserve)	1 gallon 5 pints (7.3 ltr.) (including 2 1/4 pints (1.2 ltr.) reserve)

EQUIPMENT

Electrical equipment	=	Flywheel magneto generator 6 volt, with battery, head-lamp and electric horn	Flywheel dynamo starter with contact breaker LA 12/45/60, 2 batteries, head- and parking-lamp, electric horn	Flywheel dynamo starter with contact breaker LA 12/45/60, 2 batteries, head- and parking-lamp, electric horn
Instruments	=	Illuminated speedometer and clock	Illuminated speedometer and clock, clock with external winder. Starting-, lighting-, ignition-switch, handle for choke and tickler.	Illuminated speedometer. Starting-, lighting-, ignition-switch, handle for choke and tickler.
Accessories	=	Safety hook for parcels, adjustable handle-bars and driver's saddle, pillion seat and spare wheel, steering safety lock, tools.	Safety hook for parcels, adjustable handle-bars and driver's saddle, pillion seat and spare wheel, steering safety lock, tools.	Safety hook for parcels, rider's saddle pillion seat and spare wheel, steering safety lock, tools.