



TECHNICAL NETWORK LEADERSHIP

50 cc Advantage

Datasheet

Reference: 758503

GENERAL CHARACTERISTICS

SPECIFICATIONS

Company name: Elystar 50 cc Advantage
Official type-approval code: G1AAE

DIMENSIONS

Length: 1900 mm
Width: 720 mm
Height (without rear-view mirrors): 1230 mm
Ground clearance: 90 mm
Wheelbase: 1360 mm

WEIGHT

Laden weight: 99 kg

STEERING

Steering column mounted with ball-bearing cone and cup.

CAPACITIES AND RECOMMENDATIONS

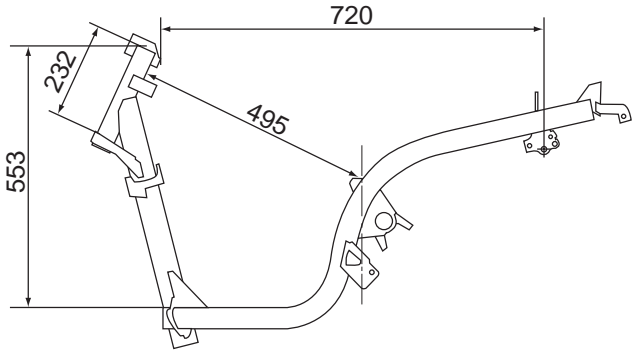
Fuel tank (including reserve) : 8 l : super unleaded petrol (95 or 98) only.
Oil tank: 1.3 l: Semi synthetic for 2 stroke engines with separate oiling. Complies with standards: API TC or ISO EGC or ISO EGD.
Crankcase: *
Cooling system: *
Relay box: 0.12 l SAE 80W90
Fork: 0.11 l per tube (ESSO UNIVIS 46 or AGIP H LIFT 46)
Braking circuit: DOT 4

LUBRICATION

Separate lubrication by piston pump, synchronized with the throttle grip. Either with variable flow or with fixed flow (depending on the model). Driven by a gear on the RH crankshaft. The oil is injected directly into the carburettor.

COOLING

By a circulation of forced air by means of a turbine on the flywheel magneto.



ENGINE

2-stroke single-cylinder.
Direct intake via valves into the crankcase.
Scavenging by 5 transfer ports.
Cubic capacity: 49.1 cc
Bore x stroke: 40 x 39.1 mm
Max. power output: 3.5 kW
Max. power rating: 7000 to 7200 rpm
Max. torque rating: 6600 to 6900 rpm

TRANSMISSION

By 2 variable pulleys and V-type belt. 6 roller type drive pulley mounted on the left shank of the crankshaft. Fixed flange of the pulley equipped with cooling fins to cool the belt.
Driven/centrifugal 3 block lined clutch pulley mounted on the end of the relay box input shaft.

RELAY BOX

By shaft and pinions. Double set of pinions.
• 1st gear teeth set: Helical.
• 2nd gear teeth set: RH.

SUSPENSION

Type of front suspension: Hydraulic telescopic fork.
Travel: 97 mm
Type of rear suspension: 1 combined adjustable spring hydraulic shock absorber.
Travel: 72 mm

FRONT BRAKE

Single disc type, hydraulic control.
Diameter of the brake piston: 30 mm
Disc diameter and thickness: 190-3.5 mm
Mini. thickness: 3 mm
Diameter of the master-cylinder: 11 mm

REAR BRAKE

Single disc type, hydraulic control.
Diameter of the brake piston: 30 mm
Disc diameter and thickness: 180-3.5 mm
Mini. thickness: 3 mm
Diameter of the master-cylinder: 11 mm

WHEELS AND TYRES

Integral aluminium wheels and tubeless tyres.

| | Front | Rear |
|---------------------------|-------------|-------------|
| Rim dimensions | 3" x 12" | 3.5" x 12" |
| Tyres dimensions | 120/70 - 12 | 120/70 - 12 |
| Pressures (bar) | 1.5 | 1.8 |
| Max. wheel lateral runout | 0.8 mm | 0.8 mm |
| Balance | * | * |

TIGHTENING TORQUES

ENGINE

Cylinder head: 23 Nm
Exhaust mounting on the cylinder: 15 to 18 Nm
Crankcase: 8 to 10 Nm
Spark plug: 10 Nm

CYCLE PART

Engine mounting on connecting rod: 52 to 62 Nm
Front wheel: 47 to 53 Nm
Upper nut on the steering column: 60 to 80 Nm
Rear wheel: 100 to 120 Nm
Shock-absorber mounting rear, upper: 43 to 50 Nm
Lower: 33 to 40 Nm
Front brake caliper: 25 to 35 Nm
Front brake disc: 27 to 32 Nm
Rear brake caliper: 25 to 35 Nm
Rear brake disc: 27 to 32 Nm

ADJUSTMENTS AND CHECKS

CYLINDER/PISTON

Piston ring gap.
Upper: 0.025 ± 0.01 mm
Lower: 0.025 ± 0.01 mm

CONNECTING ROD/CRANKSHAFT

Crankshaft run-out: 0.05 mm

CARBURETION

Carburettor.
Make: GURTNER PA
Main jet: 390
Idle jet: 74
Needle (type and adjustment step): L 3035 H 1st notch
Starter jet: 45
Mixture screw: 1 tr 1/8
Idle setting: 1600 rpm ±100

IGNITION

Ignition unit: ACI 100 MAGNETI MARELLI
Spark plug: NGK BR7HS or EYQUEM R850
Electrode gap: 0.6 to 0.7 mm
Ignition advance: variable.
Ignition coil: TEC MP11 or T11C X7A
Primary coil resistance: 0.26 Ω ± 20 %
Secondary coil resistance: 3 kΩ ± 10 %
Spark plug cap resistance: 5 kΩ ± 10 %
Pick-up resistance: 120 Ω ± 10 %

ELECTRICITY

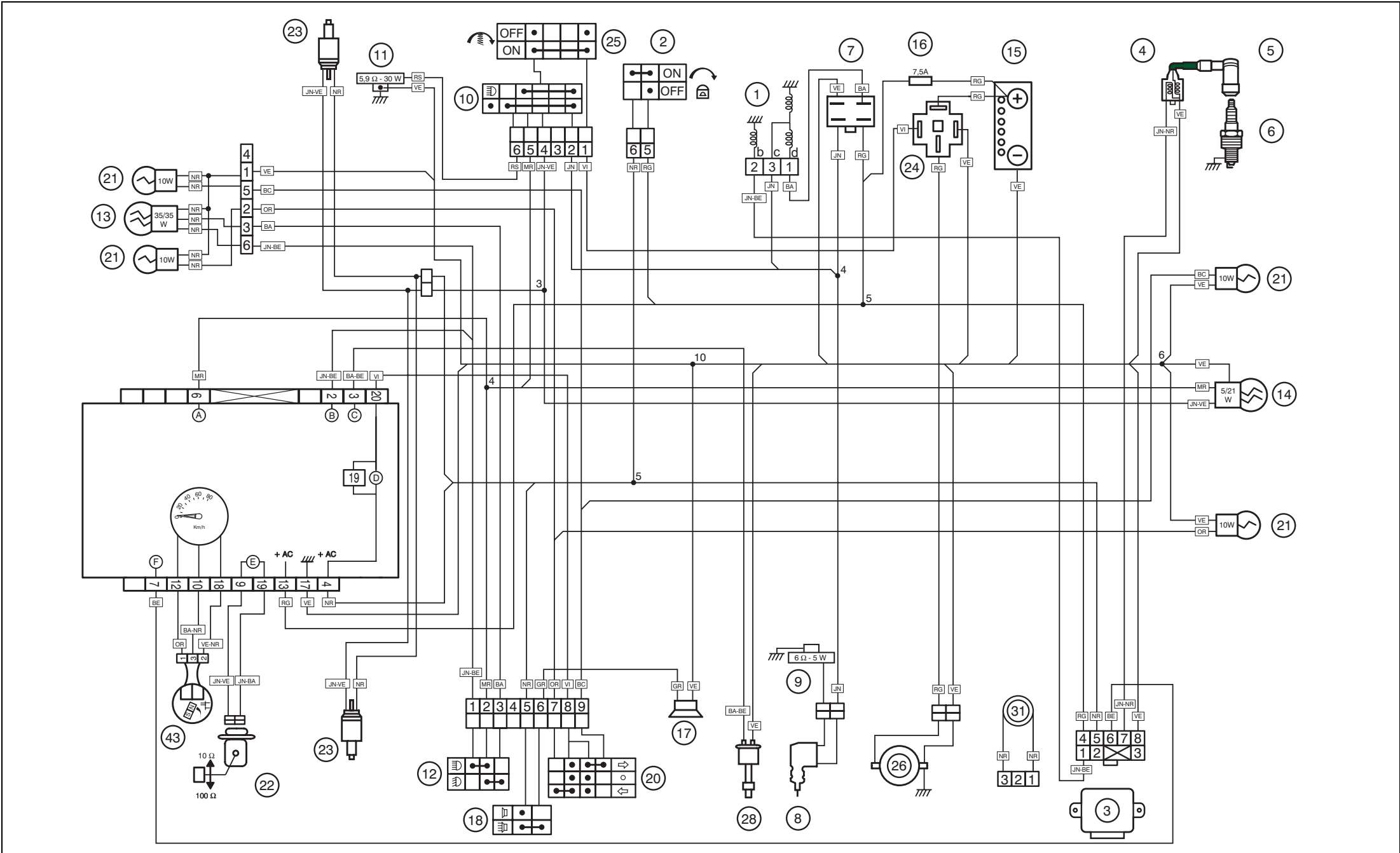
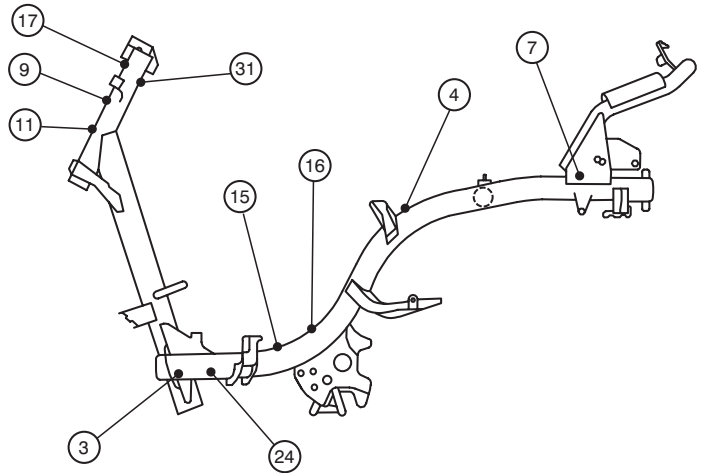
Current generator (power): GF10-232-90 W
Make: MITSUBA
Stator resistance: Yellow wire 0.6 Ω± 25 % - White wire 0.7 Ω ± 25 %
Battery regulation voltage: 14.5 ± 0.5 V
Battery (type and capacity): YT4L-B - 12V 4Ah

STARTER MOTOR

Power and type: 150 W - SM10 254
Make: MITSUBA

LIGHTING AND FUSES

| | Quantity | Power |
|----------------------------------|----------|--------------|
| Headlamp (low beam) | 1 | 12V - 35/35W |
| Tail light and stop light | 1 | 12V - 21/5W |
| Indicator lamps | 4 | 12V - 10W |
| Number plate lightning | * | * |
| Dash board lighting | 2 | Led |
| Instrument panel indicator lamps | 3 | Led |
| Main fuse | 1 | 7.5A |
| Signalling fuse | * | * |
| "Side light" bulbs | * | * |



| | | | | |
|---|-------------------------------------|---|---------------------|--------------------|
| A Instrument panel lightning | 11) Lighting resistor | 37) Oil pressure switch | BA: White | VC: Light green |
| B Main beam control | 12) Dip switch (main/low headlight) | 38) Cooling fan | BA-BE: White/blue | VE: Green |
| C Low oil level warning light | 13) Headlight bulb | 39) Thermo-switch cooling fan | BA-NR: White/black | VE-NR: Green/black |
| D Direction indicator warning light/Hazard warning lights | 14) Stop/tail bulb | 42) Switch "Reserve" | BC: Light blue | VI: Purple |
| E Fuel gauge | 15) Battery | 43) Speed sensor | BE: Blue | |
| F LED "Anti theft device" | 16) Fuses | 44) Saddle lock | GR: Grey | |
| G Temperature gauge | 17) Horn | 45) Diagnostic plug | JN: Yellow | |
| H Warning light "reserve" | 18) Horn switch | 46) Air injector | JN-BA: Yellow/white | |
| 1) Magneto flywheel | 19) Flasher unit | 47) Petrol injector | JN-BE: Yellow/blue | |
| a) Ignition | 20) Indicator relay | 48) Throttle unit | JN-NR: Yellow/black | |
| b) Sensor | 21) Blinking lights bulbs | 50) Petrol pump | JN-VE: Yellow/green | |
| c) Alternating current | 22) Fuel gauge | 51) Oil pump | MC: Light brown | |
| d) Battery charge current | 23) Stop light switch | 52) Ignition and injection control unit | MF: Dark brown | |
| 2) Ignition switch | 24) Starter motor relay | 53) Idle valve | MR: Brown | |
| 3) CDI unit | 25) Starter motor switch | 54) Altimetric and air temperature sensor | MR-BA: Brown/white | |
| 4) Ignition coil (high voltage) | 26) Electric starter motor | 55) Blinking light relay | NR: Black | |
| 5) Spark plug socket 5 kΩ | 28) Mini oil level switch | 56) Blinking light relay | OR: Orange | |
| 6) Resistive spark plug 5 kΩ | 30) Immobilizer | 57) ABS/PBS relay | RG: Red | |
| 7) Diode regulator | 31) Transponder antenna | 58) Fuel pump relay | RG-BA: Red/white | |
| 8) Choke | 32) "Side light" bulb | 59) Hazard warning lights switch | RG-JN: Red/yellow | |
| 9) Starter resistor | 33) Number plate light | 61) Lighting relay | RG-NR: Red/black | |
| 10) Lighting control | 36) Neutral contactor | 62) Oil pump control unit | RS: Pink | |