



TECHNICAL NETWORK LEADERSHIP

50cc TSDI SBC2

Datasheet

Reference : 756482

GENERAL CHARACTERISTICS :

SPECIFICATIONS :

Company name : Elystar 50 cc

Mines type ** : G1AA1

(** official French body responsible for regulating weights and measures and changes made to motor vehicles)

DIMENSIONS (in mm) :

Length : 1900

Width : 720

Height (without rear-view mirrors) : 1230

Ground clearance : 90

Wheel base : 1360

WEIGHT (in kg) :

Laden weight : 99

STEERING :

Steering column mounted with ball-bearing cone and cup.

CAPACITIES (in litres) and RECOMMENDATIONS :

Fuel tank (including reserve) : 9 : super unleaded petrol 95 or 98 only.

Oil sump : 1,2 : semi synthetic for two stroke engines with separate oiling. Complies with API TC or ISO EGC or ISO EGD.

Crankcase : *

Cooling system : *

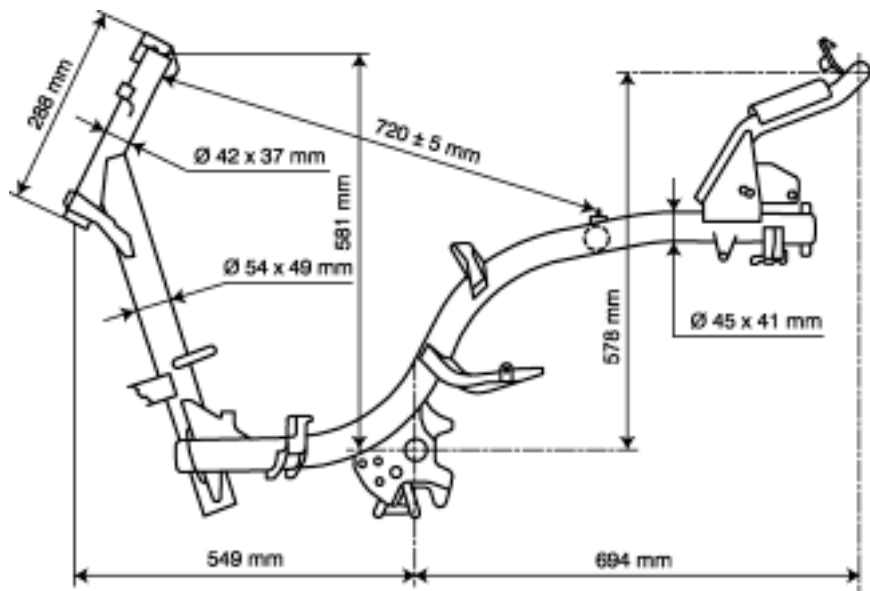
Relay box : 0,12. SAE 80W90

Fork : 0,11 per tube (ESSO UNIVIS 46 or AGIP H LIFT 46)

Braking circuit : DOT 4

LUBRICATION :

Separate lubrication by electric pump MIKUNI ESOP-03 driven by the control unit. The oil is injected directly into the inlet hose.



COOLING :

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

ENGINE :

2 stroke single-cylinder. Direct injection and catalyser.

Direct intake via valves into the crankcase.

Scavenging by 5 transfers.

Cylinder capacity : 49,1 cm³

Bore 1 shore : 40 x 39,1

Max power : 3,3 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 : straight.

SUSPENSION :

Front suspension type : hydraulic telescopic fork.

Travel : 97 mm

Rear suspension type : combined hydraulic adjustable spring-shock absorber.

Travel : 72 mm

MAIN BRAKE :

Integral braking with hydraulic control actuated from the left hand lever. Equipped with a double exit master cylinder, it controls simultaneously the front calliper's circuit and one of the rear calliper's circuit through a pressure limiter.

Diameter of brake pistons :

Front calliper : 30 mm

Rear calliper : 32 mm

Discs diameter and thickness :

Front disc : 226-4 mm

Rear disc : 210-4 mm

Mini thickness :

Front disc and rear disc : 3,5 mm

Diameter of the master-cylinder : 14,25 mm

Pressure limiter : 22 bars

EMERGENCY BRAKE :

Brake with hydraulic control actuated from the right hand lever. It's a conventional brake hand lever with a master cylinder which controls one of the rear brake's calliper.

Diameter of the brake piston : 28 mm

Diameter of the master cylinder : 12mm

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) :	1,3	1,6
Maxi wheel disc :	0,8 mm	0,8 mm
Balance :	*	*

TIGHTENING TORQUES (Nm) :

ENGINE :

Cylinder head : 12 to 15

Exhaust mounting on the cylinder : 15 to 18

Crankcase : 8 to 12

Spark plug : 20

CYCLE PART :

Engine mounting on connecting rod : 57 to 70

Front wheel : 60 to 70

Upper nut on the steering column : 70 to 80

Rear wheel : 100 to 120

Shock-absorber mounting rear, upper : 43 to 50

Lower : 20 to 25

Front brake calliper : 25 to 35

Front brake disc : 27 to 32

ADJUSTMENTS AND CHECKS :

CYLINDER / PISTON :

Ring gap clearance.

Upper : 0,025 ± 0,01 mm

Lower : 0,025 ± 0,01 mm

CONNECTING ROD / CRANKSHAFT :

Crankshaft run-out : 0,12 mm

SUPPLY CIRCUIT :

Gas pump : Synerject 5,2 l/h : 358-014.

Pressure regulator to 2,5 bar driven by air pressure

Gas injector : green Siemens 37.028 0,67 g/s to 2,5 bar

Air injector : blue Synerject 37.073

Compressor : Synerject

Disc box : Bing 235011

Temperature probe : Synerject

* : Not completed

IGNITION :

Ignition and injection control unit : Synerject
Spark plug : NGK CPR8E
Electrode gap : 0,55 mm
Ignition advance : cartographic
Ignition coil : Synerject
Primary winding resistance : 0,63 Ω ± 20 %
Secondary winding resistance : *
Spark plug cap resistance : 5 kΩ ± 10 %
Pick-up resistance : 120 Ω ± 10 %

ELECTRICAL EQUIPMENT :

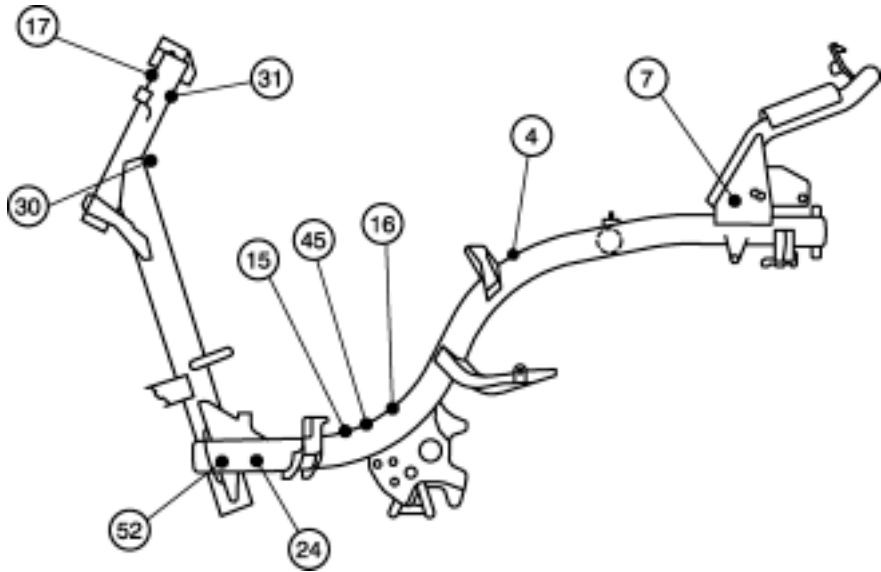
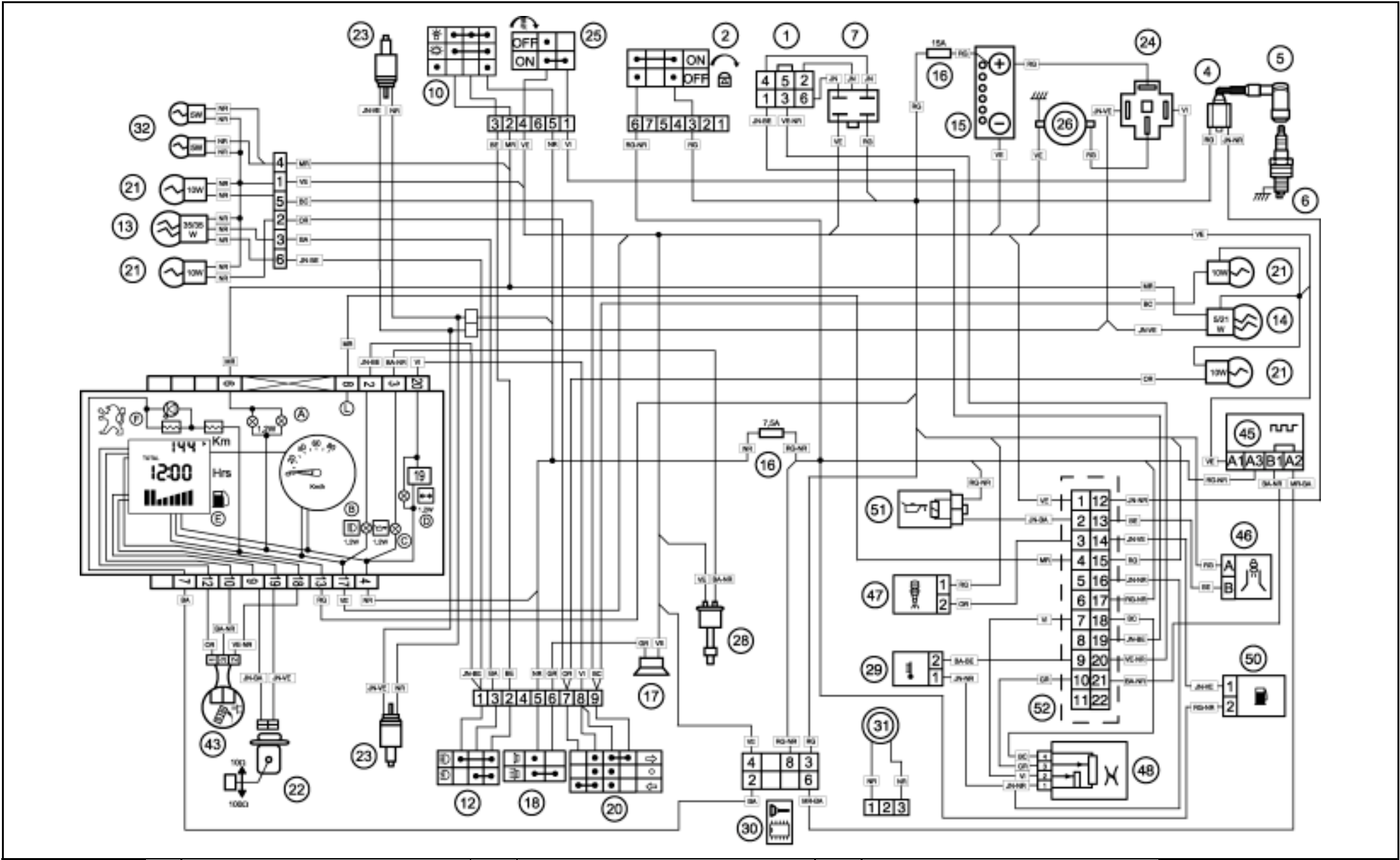
Current generator (type and power) : three-phase Ø 102 - 162W
Make : MITSUBA
Stator resistance : 0,9 Ω between phases
Battery regulation voltage : 14 ± 0,5V
Battery (type and capacity) : F7-12B 12V 7Ah
Lighting voltage : battery direct voltage

STARTER :

Power and type : 250W SM 10260
Make : MITSUBA

LIGHTING AND FUSES :

	Quantity	Power
Headlamp (code light) :	1	12V - 35/35W
Rear stop lamp :	1	12V - 21/5W
Indicator lamps :	4	12V - 10W
Number plate lighting :	*	*
Dash board lighting :	2	12V - 1,2W
Instrument panel indicator lamps :	3	1,2V
Main fuse :	1	15A
Signalling fuse :	1	7,5A
"Side light" bulb :	2	12V – 5W



A Instrument panel lighting	8) Automatic choke	29) Temperature sensor	BA : White
B Main beam control	9) Resistor (in line with choke) 6,7 Ω – 5W	30) Immobilizer	BA-BE : White/Blue
C Oil level warning light	10) Light switch	31) Antenna for anti-theft device	BA-NR : White/Black
D Indicator control light	11) Resistor (parallel to lighting) 5,9 Ω – 30W	32) "Side light" bulb	BC : Light blue
E Fuel gauge	12) Dip switch (main/low headlight)	33) Number plate light	BE : Blue
F LED "Anti theft device"	13) Headlight	35) Emergency switch (ignition)	GR : Grey
G Temperature gauge	14) Stop /tail light	37) Oil pressure switch	JN : Yellow
H Warning light "Reserve"	15) Battery	38) Cooling fan	JN-BA : Yellow/White
J Oil pressure warning light	16) Fuse	39) Thermo-switch cooling fan	JN-BE : Yellow/Blue
1) Generator	17) Horn	40) Electrical carburettor heating	JN-NR : Yellow/Black
a : Ignition coil (inner)	18) Horn switch	41) Power supply unit	JN-VE : Yellow/Green
b : Pickup	19) Indicator relay	42) Switch "Reserve"	MR : Brown
c : Alternating current	20) Indicator switch	43) Speed sensor	NR : Black
d : Battery charge current	21) Indicator bulb	44) Saddle actuator	OR : Orange
2) Ignition switch	22) Fuel gauge pickup	45) Diagnosis	RG : Red
3) CDI unit	23) Stop light switch	46) Air injector	RG-NR : Red/Black
4) Ignition coil (High voltage)	24) Starter relay	47) Gas injector	RS : Pink
5) Spark plug socket (resistive) 5 kΩ	25) Starter switch	48) Disc box	VE : Green
6) Spark plug (resistive) 5 kΩ	26) Starter motor	49) Atmospheric pressure sensor	VE-NR : Green/Black
7) Regulator, rectifier	28) Oil level switch	50) Gas pump	VI : Purple
(A) : Regulator AC		51) Oil pump	
(B) : (Regulator) rectifier DC		52) Ignition and injection control unit	