



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 : *

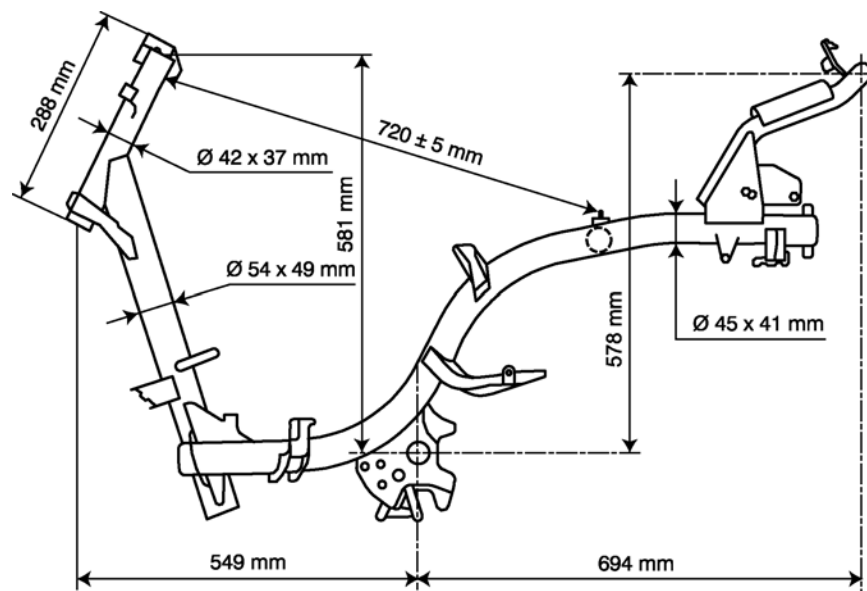
Relay box : 0,12. SAE 80W90

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.



* : Not completed

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 main circuit and 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 the first circuit of the front 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

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 : $0,63 \Omega \pm 20 \%$

Secondary winding resistance : *

Spark plug cap resistance : $5 \text{ k}\Omega \pm 10 \%$

Pick-up resistance : $120 \Omega \pm 10 \%$

ELECTRICAL EQUIPMENT :

Current generator (type and power) : three-phase $\varnothing 102 - 162\text{W}$

Make : MITSUBA

Stator resistance : $0,9 \Omega$ between phases

Battery regulation voltage : $14 \pm 0,5\text{V}$

Battery (type and capacity) : F7-12B 12V 7Ah

Lighting voltage : battery direct voltage

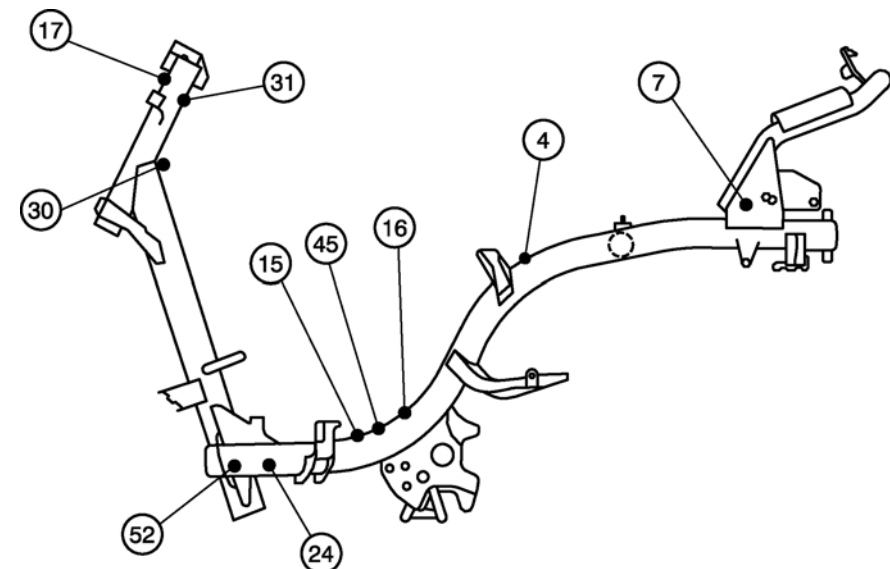
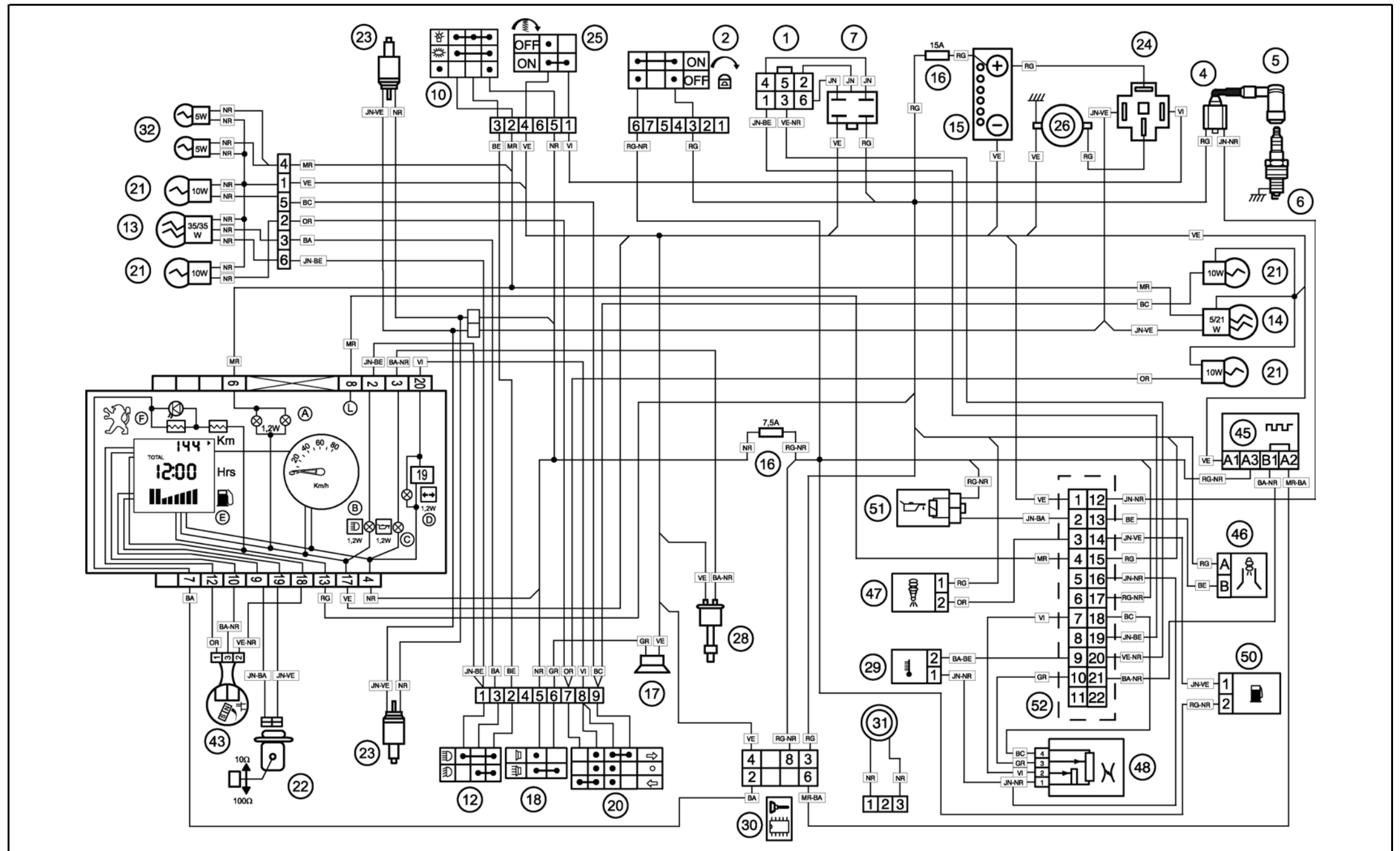
STARTER :

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
 B Main beam control
 C Oil level warning light
 D Indicator control light
 E Fuel gauge
 F LED "Anti theft device"
 G Temperature gauge
 H Warning light "Reserve"
 J Oil pressure warning light

1) Generator
 a : Ignition coil (inner)
 b : Pickup
 c : Alternating current
 d : Battery charge current
 2) Ignition switch
 3) CDI unit
 4) Ignition coil (High voltage)
 5) Spark plug socket (resistive) $5 \text{ k}\Omega$
 6) Spark plug (resistive) $5 \text{ k}\Omega$
 7) Regulator, rectifier
 (A) : Regulator AC
 (B) : (Regulator) rectifier DC

8) Automatic choke
 9) Resistor (in line with choke)
 $6,7 \Omega - 5\text{W}$
 10) Light switch
 11) Resistor (parallel to lighting)
 $5,9 \Omega - 30\text{W}$
 12) Dip switch (main/low headlight)
 13) Headlight
 14) Stop /tail light
 15) Battery
 16) Fuse
 17) Horn
 18) Horn switch
 19) Indicator relay
 20) Indicator switch
 21) Indicator bulb
 22) Fuel gauge pickup
 23) Stop light switch
 24) Starter relay
 25) Starter switch
 26) Starter motor
 28) Oil level switch

29) Temperature sensor
 30) Immobilizer
 31) Antenna for anti-theft device
 32) "Side light" bulb
 33) Number plate light
 35) Emergency switch (ignition)
 37) Oil pressure switch
 38) Cooling fan
 39) Thermo-switch cooling fan
 40) Electrical carburettor heating
 41) Power supply unit
 42) Switch "Reserve"
 43) Speed sensor
 44) Saddle actuator
 45) Diagnosis
 46) Air injector
 47) Gas injector
 48) Disc box
 49) Atmospheric pressure sensor
 50) Gas pump
 51) Oil pump
 52) Ignition and injection control unit

BA : White
 BA-BE : White/Blue
 BA-NR : White/Black
 BC : Light blue
 BE : Blue
 GR : Grey
 JN : Yellow
 JN-BA : Yellow/White
 JN-BE : Yellow/Blue
 JN-NR : Yellow/Black
 JN-VE : Yellow/Green
 MR : Brown
 NR : Black
 OR : Orange
 RG : Red
 RG-NR : Red/Black
 RS : Pink
 VE : Green
 VE-NR : Green/Black
 VI : Purple