

Hentwig's 823 S. Prince
397-0221

Safari[®]

MO-PEDS

OPERATING

AND

OWNERS

MANUAL



- SUPER EXTRA
- COBRA
- MT 300
- MT 400
- COMANDOS 4S

FOREWORD

The main purpose of this instruction booklet is to enable owners of SAFARI mopeds to enjoy years of trouble-free service.

Simple instructions are given on the following pages along with suggestions, advice and information of a technical but readily understandable nature. Individuals who have little or no mechanical aptitude can use this guide to keep their moped in first class operating condition for years to come.

SERVICING

Whenever it becomes necessary to have service work done on your SAFARI moped which entails special mechanical proficiency and equipment knowledge, it is best to bring your moped to your local authorized SAFARI dealer.

In this way you will be certain that any work done is performed by trained mechanics and that any parts which have to be replaced are substituted with original equipment.

BREAKING-IN PERIOD

By adhering without exception to the breaking-in instructions, the motor will be able to operate most easily at full power, and, even more importantly, it will last longer and perform better. While the motor is being broken in, it is advisable to use the oil mixtures recommended on the lubrication chart (page 4) so as to enable the internal parts of the motor to "seat" properly.

I DURING THE FIRST 100 MILES

- a) Never under any circumstances exceed a speed of 20 mph (The Fox 15mph) in order to avoid running the risk of any motor damage which would seriously affect its future performance.
- b) While the motor is being broken in, do not keep it for long periods of time at the maximum throttle.
- c) Minarelli Engine Only – Do not forget to check from time to time, the clutch oil level by means of the special

screw on the external R/H side of the clutch side cover (Fig. # 1, Screw #1, Page 3). If the oil is at the correct level, it will start to run out of the hole.

- d) Follow oil mixture ratio given in lubrication chart.

II AFTER THE FIRST 150 MILES or 30 DAYS

- a) The bike should be returned to an authorized SAFARI dealer for a complete initial service (See maintenance Schedule).

III FROM 150 MILES to 300 MILES

- a) Avoid running engine at full throttle for more than 2 or 3 miles at a time.

Full throttle may be used during acceleration or on hills -- just remember not to run at full speed mile after mile.

- b) Reduce the amount of oil being mixed with the fuel (See Lubrication Chart on Page 4).

- c) Check drive chain. Keep well lubed and adjusted. To adjust, loosen both rear axle nuts and tap the axle adjusters with a hammer until the chain is taut, NOT TIGHT. Retighten axle nuts.

- d) Check Tire Pressures. See specifications for P.S.I./tire.

IV AFTER THE FIRST 500 MILES

- a) Minarelli Engine Only -- Completely drain out the oil in the clutch case bearing in mind that this is done by unscrewing the oil drain screw on the lower R/H clutch side cover (Fig #1 Screw #3) After all oil is drained, reinstall drain screw (#3).

Refill by means of the oil fill plug located on the top part of the R/H clutch side cover using approximately 16 oz.

— S.A.E. 20 W oil (non detergent) (Fig.#1 Oil Cap#2)

Remove oil cap #2 and oil level screw #1. Pour S.A.E. 20W non-detergent oil into hole #2 until the oil starts to leak out of oil level hole #1.

Reinstall oil cap #2 and screw #1.

NOTE: Oil level should be periodically checked by removing oil screw #1 and leaning the bike a few degrees to the right. If oil does not leak out – ADD OIL.

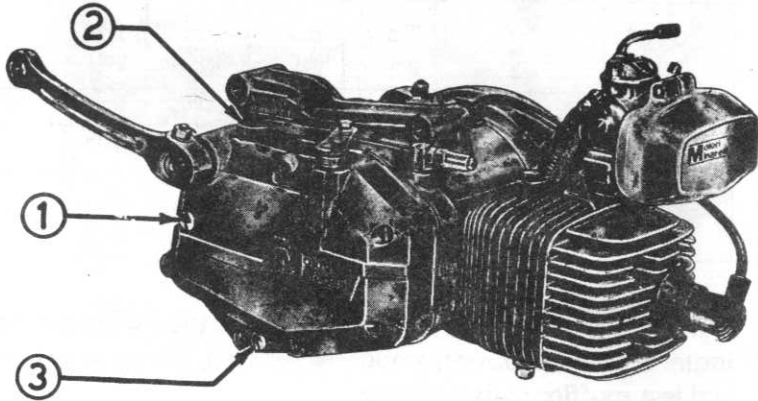


Figure 1

- b) Check the spark plug gap (.032 in.) and remove any carbon deposits by means of a wire brush.
- c) From now on use the fuel mixture recommended on the Lubrication Chart for motors that are broken in.

LUBRICATION

The motor is lubricated by the fuel, via a mixture of regular gasoline and petroleum oil or synthetic oil. (NOTE: Do not mix synthetic oil with petroleum oil.) The clutch and the transmission gears of the Minarelli are lubricated by the S.A.E. 20W oil (non-detergent) contained in the clutch case; i.e., approximately 16 oz. (1 Pt.).

LUBRICATION CHART

Please note that there are different types of 2 cycle oils on the market. Some are petroleum based, available in different viscosity weights, others are synthetic. Always use regular gas for maximum engine performance.

(High test fuel could cause excessive heat and erratic running. Remember, your motor is of a low compression nature and will always run best with 85⁺5 octane regular gasoline.)

MILES	GALLONS OF FUEL USED	PETROLEUM OIL			ONLY SYNTHETIC
		30w	40w	50w	
0-100	1st	7 oz/ gal.	6oz/ gal.	4 Oz/ gal.	3 oz./ gal.
200-300	2nd & 3rd	6 oz/ gal.	5 oz/ gal.	3 oz/ gal.	2½ oz./ gal.
300+	4th+	5 oz/ gal.	4 oz/ gal.	2.5 oz/ gal.	2 oz./ gal.

SAFARI recommends synthetic oil for all their machines to insure maximum power, smoother running, longer plug life and less muffler carbonization.

Please follow the correct proportion of oil specified in the lubrication chart. Just cross reference the type of oil mileage of the bike to find the correct amount of oil for one (1) gallon of gas.

STARTING PROCEDURE

SUPER EXTRA, COBRA, 300 MT, 400 MT-4 SPEED

- 1) Open the fuel tap.
- 2) If the motor is cold, depress the choke lever on the body of the carburetor. The choke lever will return to its normal position; i.e., upwards, once the throttle has been fully rotated to maximum throttle and the characteristic click is heard. A few seconds after the motor has been started and begins to warm up, release the choke to insure the motor is running properly and in order to prevent the plug from fouling up.
- 3) To start your moped from a standstill, prop it up on its stand, pull the starting lever on the L/H part of the handle bar as far as it will go, give a quarter turn on the throttle and pedal.

Once the motor has started, let go of the starting lever.

FUEL LEVER POSITION
 • RESERVE
 ON •
 • OFF

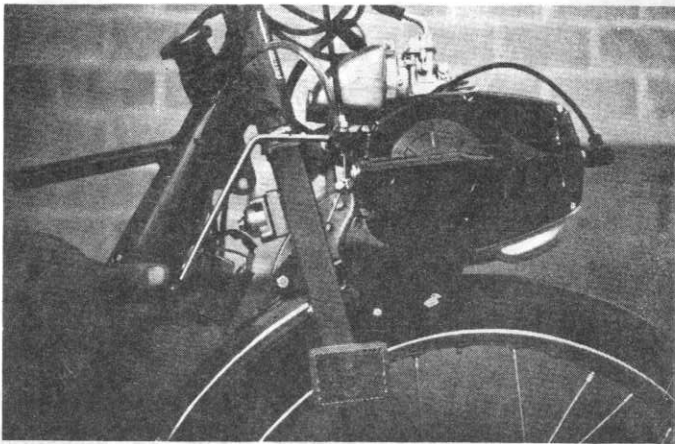
SAFARI MOTORIZED MOPED STARTING PROCEDURE



A) CHOKE

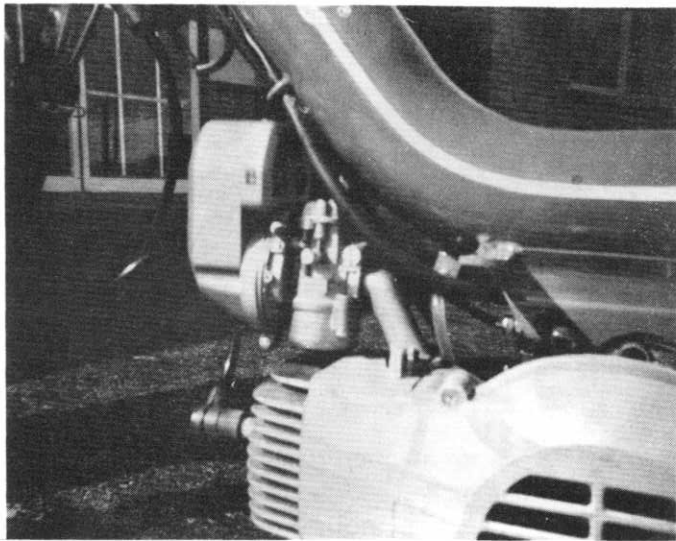
To operate choke, depress choke lever down until it locks in the down position (choke is now on). To release choke, turn twist grip counter-clockwise to full throttle.

NOTE: Choke is only needed when engine is cold.



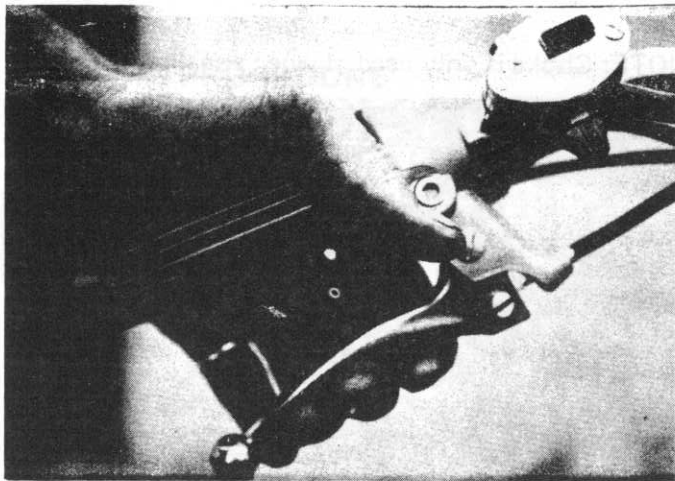
B) MOTOR LIFT HANDLE

This handle raises and lowers the motor. To operate motor, motor must be in **DOWN** position (handle up). To pedal, raise to **UP** position (handle down).



C) STARTING

With bike on kickstand and clutch engaged, kick down on peddles.



D) STARTING CLUTCH

With bike in motion (peddle while on kickstand) squeeze the clutch lever (lower left side).

NOTE: Do not hold lever once engine is running to avoid excess clutch wear.

- 4) To start your moped while the bike is in motion (either by pedaling or pushing) simply squeeze the clutch lever and release once engine starts.

TO SHUT ENGINE OFF

Shut the throttle off as far as it will go, then press the Engine stop button, and hold until the motor stops. Stop button located on R/H side of handle bars.

STARTING DIFFICULTIES

When the motor is behaving normally, starting should always be accomplished without any difficulty, even when the temperature is unfavorable.

If the motor will not start after repeated attempts, set about locating the problem:

A) CARBURETION

- 1) The tank is empty (even after switching to Reserve).
- 2) The fuel tap is blocked or there is a blockage in the fuel line.
- 3) The carburetor is dirty. (See Carburetor Maintenance).

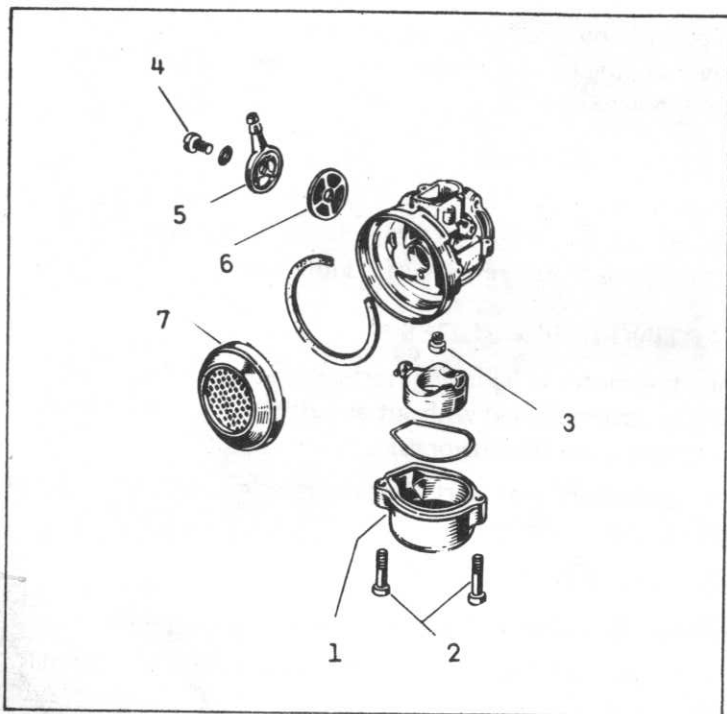
B) IGNITION SYSTEM

- 1) Check that the spark plug is clean. If necessary, clean with a wire brush or replace it.
- 2) Check that there is a spark when the plug is rested with its metal part touching the fins of the cylinder and the starting pedal is manually turned.
- 3) If no spark with new plug, see your SAFARI dealer.

CARBURETOR MAINTENANCE

Due to the presence of foreign material in either the carburetor or gasoline, it sometimes becomes necessary to clean the carburetor.

By following the simple step by step procedure outlined below, anyone can clean their carburetor with the need of only a screwdriver.



Remove float chamber (1) by removing float chamber screws (2). Unscrew Main Jet (3) and clean by means of an air blast. Never use a needle or any other similar object to clean it.

Remove screw (4) and remove fuel intake (5) and filter (6). Clean with gasoline and reinstall.

Remove air filter cover and remove air filter (7). Wash with gasoline and reinstall. When too clogged, replace it.

ADJUSTMENT OF CARBURETOR IDLE

Before adjusting the carburetor idle make sure that the throttle cable is taut. If not, adjust by means of the adjustment barrel located on the top of the carburetor.

To adjust carburetor idle, turn clockwise the idle adjustment screw (screw with spring) located on the left side of the carburetor. This adjustment will increase the idle speed. To reduce idle speed, turn idle screw counter clockwise.

ADJUSTMENT OF CABLES

The adjustment of brake cables is accomplished by turning counter clockwise the brake adjuster barrels located on the right side of both the front and rear brake drums. There should be at least 1 to 2 inches of play in both levers before the brake levers stop.

To take up slack on the clutch cable, turn counter clockwise the clutch adjustment barrel located on the top R/H part of the motor.

MAINTENANCE SCHEDULE

- ★ THE FOX 4-SPEED, 300 MT, 400 MT
- THE SUPER EXTRA, COBRA

MAINTENANCE SCHEDULE This maintenance schedule is based upon average riding conditions. Machines subjected to severe use, or ridden in unusually dusty areas, require more frequent servicing.		INITIAL SERVICE PERIOD	REGULAR SERVICE PERIOD Perform at every indicated month or mileage interval, whichever occurs first.			
			1 3 6 12	500 1,500 3,000 6,000	1 3 6 12	500 1,500 3,000 6,000
Month						
	Mile	150	500	1,500	3,000	6,000
	Km					
CLUTCH OIL—Change (600 gr.—SAE 20-30)		•	•	•	•	•
SPARK PLUG—Clean and adjust gap or replace if necessary.		✱•	✱•	✱•	✱•	✱•
* CONTACT POINTS AND IGNITION TIMING— Clean, check, and adjust or replace if necessary.		✱•			✱•	
AIR FILTER ELEMENT—Clean and oil			(service more frequently if operated in dusty areas.) ✱•			
* CARBURETOR—Check, and adjust if necessary.		✱•			✱•	
THROTTLE OPERATION— Inspect cable. Check, and adjust free play.		✱•			✱•	
FUEL FILTER SCREEN—Clean Is held by screw and it should be tightened after 100 miles.		✱•		✱	✱•	
FUEL LINES—Check This is part of break in job.					✱•	
DRIVE CHAIN—Check, lubricate, and adjust if necessary.		*** ✱•	✱•	✱•	✱•	✱•
* BRAKE SHOES—Inspect, and replace if Worn.					✱•	
BRAKE CONTROL LINKAGE— Check linkage, and adjust free play if necessary.		✱•			✱•	
* WHEEL RIMS AND SPOKES—Check. Tighten spokes and true wheels, if necessary.		✱•		✱•		✱•
TIRES—Inspect and check air pressure.		✱•	✱•	✱•	✱•	✱•
FRONT AND REAR SUSPENSION—Check operation.		•			•	
REAR FORK BUSHING—check for excessive looseness.					•	
* STEERING HEAD BEARINGS—Adjust.		✱•				✱•
LIGHTING EQUIPMENT—Check and adjust if necessary.		✱•	✱•			
ALL NUTS, BOLTS, AND OTHER FASTENERS— Check security and tighten if necessary.		✱•	✱•	•	✱•	•

Items marked * should be serviced by an authorized Safari dealer, unless the owner has proper tool and is mechanically proficient. Other maintenance items are simple to perform and may be serviced by the owner.

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		Month	1	3	6	12
		Mile	150	500	1,500	3,000
Km						
CLUTCH OIL—Change (600 gr.—SAE 20-30)	•	•	•	•	•	
SPARK PLUG—Clean and adjust gap or replace if necessary.	*•	*•	*•	*•	*•	
* CONTACT POINTS AND IGNITION TIMING— Clean, check, and adjust or replace if necessary.	*•			*•		
AIR FILTER ELEMENT—Clean and oil		(service more frequently if operated in dusty areas.) *•				
* CARBURETOR—Check, and adjust if necessary.	*•			*•		
THROTTLE OPERATION— Inspect cable, Check, and adjust free play.	*•			*•		
FUEL FILTER SCREEN—Clean Is held by screw and it should be tightened after 100 miles.	*•		*	*•		
FUEL LINES—Check This is part of break in job.				*•		
DRIVE CHAIN—Check, lubricate, and adjust if necessary.	*** *•	*•	*•	*•	*•	
* BRAKE SHOES—Inspect, and replace if Worn.				*•		
BRAKE CONTROL LINKAGE— Check linkage, and adjust free play if necessary.	*•			*•		
* WHEEL RIMS AND SPOKES—Check. Tighten spokes and true wheels, if necessary.	*•		*•		*•	
TIRES—Inspect and check air pressure.	*•	*•	*•	*•	*•	
FRONT AND REAR SUSPENSION—Check operation.	•			•		
REAR FORK BUSHING—check for excessive looseness.				•		
* STEERING HEAD BEARINGS—Adjust.	*•				*•	
LIGHTING EQUIPMENT—Check and adjust if necessary.	*•	*•				
ALL NUTS, BOLTS, AND OTHER FASTENERS— Check security and tighten if necessary.	*•	*•	•	*•	•	

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SPECIFICATIONS

SAFARI FOX

Dimensions	Overall length	65 in.
	Overall width	27 in.
	Overall height	42 in. to 46 in.
	Wheelbase	41 in.
	Min. ground clearance	7.5 in.
Weight	Dry (excl. oil, fuel)	69 lb.
Tires	Front	35 to 40 PSI
	Rear	35.5 PSI
Engine	Type	Rovet, gasoline, fan cooled, 2 cycle
	Cylinder arrangement	Single cylinder, horizontal
	Bore x stroke	40 x 37 (mm)
	Displacement	46.47 cc
	Compression ratio	7.64:1
	Max. horsepower	1 - 3,000 rpm
	Weight complete w/muffler	14 lbs. 2 oz.
	Idling speed	1200 \pm ₂₀₀ rpm (1200 rpm)
Starting method	Pedal	
Ignition system	Type	Magneto ignition
	Timing	.089 ^o Before top dead center
	Plug	Bosch WKA175T6
	Plug gap	.032"
	Point gap	.016 \pm .001
Fuel system	Air-cleaner	Metallic net
	Tank capacity	2 liters
	Carburetor type	Dell'Orto SHA 14-12
Carburetor setting	Max. Jet	52
Generator	Type—Voland Magnetic	AC type
	Voltage and output	6V 23W
Transmission system	Crankshaft-to Centrifugal automatic clutch	Clutch-Belt-Roller
Steering system	Steering angle	47 ^o
Brakes	Type Hand Drum 90mm	(Front) & Leading trailing (Rear)
Frame	Type	Steel tubing - Welded

SAFARI, SUPER EXTRA, COBRA, 300 MT, 400 MT 4 - SPEED

Dimensions	Overall length	165 cm
	Overall width	77 cm
	Overall height	107 cm
	Wheelbase	108 cm
	Min. ground clearance	12 cm
Weight	Dry (excl. oil, fuel)	105 lbs.
	Wet (incl. oil, fuel)	109 lbs.
Tires	Front	21.5 PSI
	Rear	35.5 PSI
Engine	Type	Minarelli V-1 Gasoline, fan cooled, 2 cycle
	Cylinder arrangement	Single cylinder, horizontal
	Bore x stroke	38.8 x 42
	Displacement	49.6 cc
	Compression ratio	8:1
	Max. horsepower	1.5e 4200 rpm
	Weight (wet) complete w/muffler	27 lbs 8 oz
	Idling speed	1200 ⁺¹⁰ / ₋₂₀₀ rpm (1200 rpm)
	Starting method	Pedal
Ignition system	Type	Magneto ignition
	Timing	23° Before top dead center .089"BTC
	Plug	Bosch W145T1
	Plug Gap	.032"
	Point Gap	.016" ±.001
Fuel system	Air-cleaner	Metallic net
	Tank capacity	3½ liters
	Carburetor type	Dell'Orto SHA 14-12
Carburetor setting	Max Jet	52
Generator	Type—Voland Magnetic	AC type
	Voltage and output	6V 23W
Transmission system	Crankshaft-to-oil bath Centrifugal automatic clutch Gear-reduction-ratio 3.533	3.53:1
Transmission Oil	SAE 20W Non-detergent	16 oz
Steering system	Steering angle	47°
Brakes	Type Hand Drum 90 mm	(Front), & Leading trailing (Rear)
Suspension	Front	Telescopic type
	Rear	Swing arm type
Frame	Type	Steel tubing · Welded

**MINARELLI
V1 AUTOMIX ENGINE**

**OPERATION
&
MAINTENANCE**



MINARELLI AUTOMIX ENGINE: OPERATION

This engine is lubricated by means of SAE 20 not synthetic oil for 2 stroke cycle engines which is contained in the oil tank. The factory recomends that it is absolutely necessary to use a filter at the outlet of the oil tank; you can use for this purpose a normal fuel tank filter. The right ratio between oil and gasoline is assured by means of a pump located under the right engine cover. This pump takes the oil from the tank and sends it towards a connector set on the carburator manifold.

Into this manifold there is a valve which lets oil pass through only if the pump is working: this device prevents the oil from passing through when the vehicle is stopped for a long time. Therefore, it is necessary to put into the fuel tank gasoline only.

WARNING: IF YOU DRIVE WITHOUT OIL IN THE TANK, YOU DAMAGE THE ENGINE VERY BADLY.

WHAT YOU HAVE TO DO IN ORDER TO START YOUR MINARELLI AUTOMIX ENGINE FOR THE FIRST TIME

Pour some oil-gas mixture at 3% into the fuel tank in order to effect the first lubrication of the engine. Then:

- 1) Replenish the oil tank with SAE 20 not synthetic oil for 2 stroke cycle engines.
- 2) Remove the pumpcover cap located on the right side of the engine by unscrewing No. 8 (see Fig. No. 1).
- 3) Unscrew the air drain screw completely (it is located on the pump, see No. 4 Fig. 1) in order to let the air move out.
- 4) Set the vehicle on the central stand and start the engine but keep it at low revolutions. In this position the rear wheel is allowed to rotate freely.
- 5) From the oil tank, the oil passes through a filter (No. 6, Fig. No. 1) located between tank and pump. When you see it spilling out from the drain hole (No. 4, Fig. No. 1) and with no air bubbles in it, close the hole by its screw. Immediately after you'll see the low and continuous refilling of the tube (No. 7, Fig. No. 1) connected to the carburator connector.
- 6) Only when the tube (No. 7, Fig. No. 1) is completely filled up, you can replenish the fuel tank with gasoline only.
- 7) Make sure that the grommets (No. 5 Fig. No. 1) set on the ends of the oil tubes are located in their right position, then replace pump cover cap on the right side of the engine (see No. 8, Fig. No. 1).
- 8) The filter (No. 6, Fig. No. 1) must be checked and cleaned up by some gasoline about every 1800 miles. After this control, should the filter turn out to be not correct, replace it by a new one.

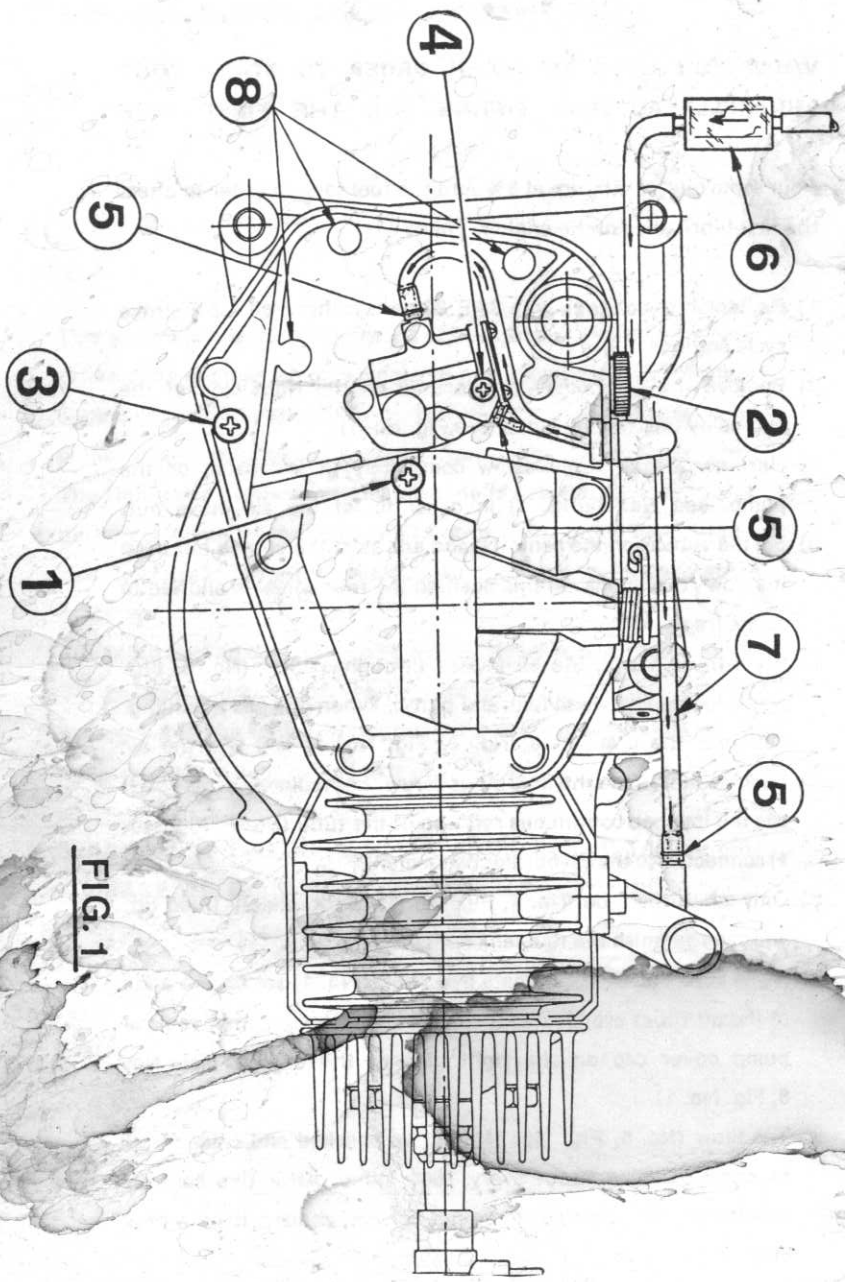


FIG. 1