



Magnum II MK II

**Owner's Manual**

# Dear Puch Owner

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This is your riding, maintenance and warranty guide. By following the instructions described in this booklet, we at Puch know you will enjoy many miles of pleasurable Moped Riding.

Should a need ever exist for parts or service, simply contact your Puch dealer. He also has available for your purchase a Service Manual under the part Nr. 907.2.71.894.5 0180

Thank you for joining the Puch family, please ride safely and have fun.

*Steyr Daimler Puch of America Corporation*

P.O. BOX 7777    Greenwich, Ct. 06830

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## **THE WARRANTY – Terms & Conditions**

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Subject to the terms set forth below, the Puch motorized bicycle is warranted to be free from defects in material and workmanship for a period of 6 months from the date of original consumer purchase. While under this warranty, Steyr Daimler Puch of America, hereafter SDPA, will, at its discretion, replace or repair without charge, any product or part which an authorized service representative determines is defective in material or workmanship.

This warranty applies to the original consumer purchaser only.

This warranty gives the original consumer purchaser specific legal rights. The original consumer purchaser may also have other rights which vary from state to state.

## **EXTENT OF WARRANTY COVERAGE**

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The warranty will not be extended to any machine that has been subject to mis-use, negligence, alteration, use of non-authorized spare parts, improper maintenance (including improper fuel mix ratio, lack of oil, or use of poor quality oil) or modification of assembly. Additionally, this warranty will not apply if the machine is damaged by fire, flood, accident, acts of God or any other cause of a similar nature beyond SDPA's control.

Under no circumstances will SDPA be liable for damages due to loss of use, loss of business or profits or for any other incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply.

This warranty will be **null and void** if:

1. Any part of the serial numbers are removed, defaced or altered;
2. If any unauthorized modification or alteration is made;
3. If any unauthorized or non-standardized spare part is installed;
4. If any maintenance or repair is performed during the warranty period by anyone other than an authorized Puch Dealer.

## **EXCLUSIONS:**

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Normal wear parts are excluded from this warranty.

Normal wear parts include:

Tires, tubes, spark plugs, brake linings, clutch hub, chains, spokes, sprockets, ignition points, condenser, brake cables, throttle cable, air filter.

Routine maintenance.

No one has the authority to orally change the terms, conditions or exclusions of this warranty or make any representations or express warranties other than those contained here.

SDPA is proud and confident of its dealers and products, and wants to assure that each new Puch owner receives full satisfaction. In the event satisfaction is not obtained at the dealer level however, the original consumer is invited to contact SDPA directly at P.O. Box 7777, Greenwich, Connecticut 06830

# WARRANTY REGISTRATION

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The Warranty Registration form should be completed by the dealer and the consumer purchaser at the time of sale.

Part 1 shall be kept by the selling dealer.

Part 2 should be kept by the original purchaser in his/her possession.  
ANY CLAIM MADE UNDER THIS WARRANTY MUST BE ACCOMPANIED BY PART 2 OF THE WARRANTY REGISTRATION FORM.

Part 3 which is self-addressed and stamped, must be mailed to Steyr Daimler Puch of America Corporation, P.O. Box 7777, Greenwich, Connecticut 06830 not later than ten (10) days after purchase of vehicle.

All information on the Form must be written legibly. The serial numbers on the Registration Form must agree with those on the Moped.

## A) SERIAL NUMBER LOCATION

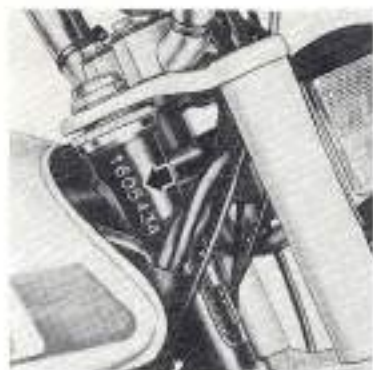
The engine number is stamped on top of the right crankcase half.



The specification plate is secured to the steering head.







The frame serial number is stamped on the steering head, just above of the vehicle identification number plate.



**IMPORTANT!**

Write down  
key-number at once.  
This saves time,  
money and  
annoyance if the  
keys are lost.

My key number is \_\_\_\_\_

P 75 11

## **B) OPERATING CONTROLS**

The positions of the controls are shown in the enclosed technical data sheet.

Following some operating controls described in detail:

### **Locking and unlocking your moped**

To lock, move the handlebar to the right. Insert key into lock. Turn key to the left, push in and turn key to the right. Remove key.

Unlock in reverse order.

### **Fuel tank filler cap**

To open, turn filler cap counter clockwise.





### **Fuel valve**

The fuel valve is located on the left side of the fuel tank. The positions are clearly indicated on the tank. In the event you should run out of fuel, the reserve position should give you adequate range to get you to a filling station. Always turn the fuel valve to the "Off" position when the moped is not in use.



### **Carburetor**

- 1) The primer is operated by depressing the black rod extending through the left engine cover.
- 2) The choke is operated by depressing the metal thrust pin which extends upward toward the opening in the left engine cover.

### **Air pump and tools**

The air pump is located on the left side of the luggage carrier. The tool kit is stored behind the cover in the rear of the seat.



### **Brake levers**

The brake control levers are mounted on the handlebar.

Left (1) lever controls the rear wheel brake.

Right (2) lever controls the front wheel brake.

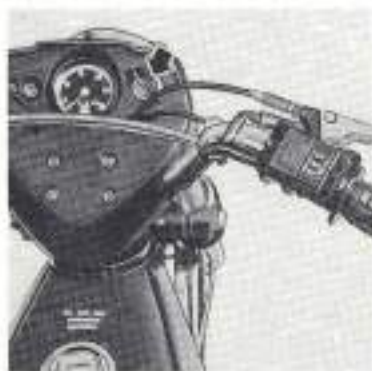




### **Starting lever**

The starting lever is located on the left side of the handlebar and is used for starting the engine.

Please refer to operating procedure on page 17.



### **Light and ignition switch**

The Magnum MK II has a two step combination key switch located on the right top side of the instrument panel.

A key is needed for switching.

Fully to the left – ignition and lights off

Step 1 to the right – ignition on

Step 2 to the right – ignition and lights on

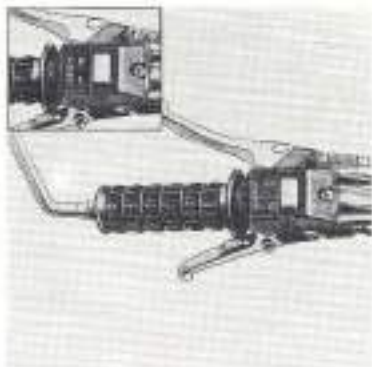
### **Horn button/Light switch and horn button**

The Magnum MK II has a two function switch located on the left side of the handlebar which incorporates the (red) horn button and the directional light switch.

The Magnum MK II is pre-wired for the use of a turn signal kit (p/nr. 321.1.54.890.9) which is available for purchase through your PUCH dealer.

The Magnum II has a two function switch located on the left side of the handlebar which operates the lights and horn.

The thumb lever on the end of the switch activates the lights and the small (red) push button operates the horn.



### **Engine stop switch**

This two position thumb switch is located on the right side of the handlebar. The center position, marked RUN, is used to start and run the engine. The lower positions are marked OFF and are used to interrupt the ignition, which stops the engine.

### **NOTE**

The Magnum MK II has an ignition switch also – please refer to page 12.



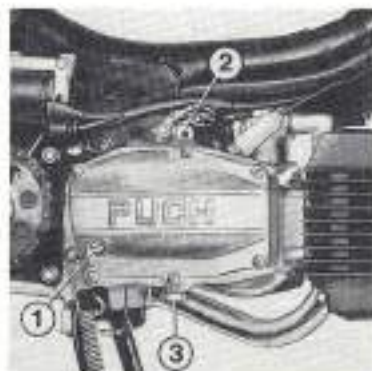


### **C) TIRE PRESSURE**

Recommended tire pressure

Front 26 psi (1.8 bar)

Rear 32 psi (2.25 bar)



### **D) OIL, GAS/OIL MIXTURE**

#### **Checking transmission oil level**

The oil level control screw (1) on the 2-speed automatic, is located on the clutch cover. The oil filler hole (2) is through the top of the right crankcase half. The drain plug (3) is located on the lower portion of the right crankcase half.

9 $\frac{1}{2}$  fl. oz. (280 cc) of ATF "TYPE F" is used for refill.

#### **CAUTION**

The moped must be upright when filling oil. Do not overfill. Leave oil level control screw removed until excessive ATF drains off. Oil change after the first 300 miles of operation is highly recommended.

## Filling up with two stroke mixture

### Gas/oil mixture on model without oil pump - Magnum II

The Magnum II engine must be run with a gas/oil mixture (regular gas). The recommended mixing ratio is 50 : 1 when using special Maxi Mix two stroke moped oil. If another oil is used please refer to the fuel mixing chart.

NOTE: DO NOT USE UNLEADED GASOLINE

### 50 : 1 OIL MIXING TABLE WITH PUCH MAXI MIX

To 5 gallons gasoline add 12 fl. oz. (355 cc) oil

To 1 gallon gasoline add 2,4 fl. oz. (71 cc) oil

To 1 quart gasoline add .6 fl. oz. (18 cc) oil



### NOTE

To reduce carbon build-up within the engine and exhaust system, we strongly recommend the use of the special 2 stroke MAXI MIX oil, 50 : 1 ratio. However as an emergency measure, a regular 2 stroke oil can be mixed in a 25 : 1 ratio as shown below.

### 25 : 1 OIL MIXING TABLE WITH REGULAR TWO STROKE OIL

To 5 gallons of gasoline add 24 fl. oz. (710 cc) oil

To 1 gallon of gasoline add 4,8 fl. oz. (142 cc) oil

To 1 quart of gasoline add 1,2 fl. oz. (36 cc) oil







## Using cup to measure gas/oil mixing ratio

### MAGNUM II (without oil pump)

When measuring oil for the gas/oil mixture, use one cupful of Maxi Mix to one gallon of fuel.

**NOTE:** When using other grades of 2 stroke oil, please refer to previous page.



### MAGNUM MK II only (with oil pump)

Use pure regular grade gasoline only. Check oil level in the oil tank each time you refuel your machine.

#### **CAUTION**

If oil level in oil tank drops to half, top off with Maxi Mix. Should you notice that no oil is passing through oil feeder hose, although sufficient oil is in tank, stop engine. Drain gas and refuel with gas/oil mixture. See Oil Mixing Table on page 15.

#### **WARNING**

**NEVER REFUEL WITH THE ENGINE RUNNING!  
DO NOT SMOKE OR ALLOW OPEN FLAMES OR SPARKS  
IN THE AREA, WHERE YOUR MOPED IS REFUELED  
AND/OR WHERE GASOLINE IS STORED!**

## E) OPERATING INSTRUCTION

1. Prop the moped on its stand.
2. Unlock fork.
3. Magnum MK II only. Turn on ignition – 1st step to the right on the switch.
4. Turn fuel valve to the ON position.
5. Be sure that the engine stop switch is in the RUN position.
6. If engine is cold, depress the choke and depress the primer button on the carburetor until fuel drips from carburetor.

**CAUTION:** After completing step 6 do not open the throttle control, as this will deactivate the choke. After the engine has started and warming up, open throttle gently to the full position briefly. This will disengage choke. Avoid racing engine.

7. Keep both hands on the handlebar with the weight of the moped centered on the front wheel. Apply the front brake and fully depress the starting lever located on the left side of the handlebar. Position the pedal approx. parallel to the chain guard. While holding the starter lever, push the pedal to start engine.
8. Alternate starting method:  
The moped may also be started by pedalling as a bicycle. When momentum has been gained, pull the start lever and gently open the throttle. Release the start lever after the engine starts.





### Throttle

The speed of the moped is controlled with a twist grip on the right side of the handlebar. To accelerate twist the throttle towards you; to decelerate release slowly.

**NOTE:** Depending on engine RPM, clutch will engage or disengage automatically. Shifting into or from 2. gear, depending on engine RPM and road speed, will occur automatically also.



### Braking

To slow down, release the throttle control and apply equal pull to both brake levers. Application of both brakes at the same time is essential to prevent premature brake wear and/or loss of vehicle control.

**CAUTION:** Be alert when riding on wet or sandy surfaces. Loss of traction between tire and road can occur under these conditions. Be careful when braking, turning or accelerating under adverse conditions.

## To stop and park

Release the throttle and simultaneously apply both brakes to stop.  
Switch off engine with stop switch.  
Magnum MK II only. Turn off ignition and remove key.  
Close fuel valve.  
Rest moped on stand and lock.



## Securing your moped

Please refer to page 9.

A high security locking device is recommended. See your Puch dealer for advice.



### **WARNING**

After the engine has been run, the exhaust pipe and muffler will become hot, avoid contact with them.



## F) RIDING INSTRUCTION

1. It is suggested to wear bright clothing, utilize eye protection and proper shoes or boots when riding your moped.
2. Wearing a helmet is optional in most areas. See your PUCH dealer for advise.
3. Be sure to switch on headlight at low visibility and/or where required by law.
4. The moped is designed to carry ONE person. Do not carry a passenger or very heavy cargo. Approved PUCH saddle bags and baskets are available through your dealer.
5. Obey all traffic regulations. Use hand signals when turning or changing lanes. Please respect property of others and ride carefully. Keep your feet on the pedals at all times. Keep the pedals level, especially on turns.
6. After reaching maximum speed, reduce the throttle opening to 3/4. While the reduction in speed will hardly be noticeable, fuel consumption however will be considerably reduced.
7. Closed throttle will slow down moped when riding downhill.
8. To ensure engine lubrication on long downhill rides, open throttle occasionally.

## G) TROUBLE SHOOTING

Engine will not start or stops running

### Cause

1. Fuel valve closed
2. Fuel tank empty
3. Stop switch in "Off" position
4. Spark plug is fouled
5. Spark plug defective
6. Ignition cable has worked loose from spark plug
7. Engine is too cold
8. Engine is flooded
9. Fuel valve is clogged or main jet is clogged

### Remedy

- Open fuel valve or switch valve to reserve position
- Switch valve to reserve or refill tank with gas/oil mixture (Magnum II)  
On model with oil pump use pure regular grade gasoline (Magnum MK II)
- Switch to "RUN" position
- Clean spark plug or replace
- Replace
- Note: Spark plug gap  
.016— .020 in (0,4—0,5 mm)
- Reconnect it to spark plug
- Apply choke
- Clean spark plug
- Have it cleaned at your Puch dealer

## Poor Performance

<b>Cause</b>	<b>Remedy</b>
1. Choke working all the time	Disengage it by opening throttle fully
2. Exhaust clogged	Have dealer clean exhaust
3. Spark plug defective or fouled	Clean or replace it
4. Clutch slips	See your Puch dealer
5. Air filter is clogged	Clean air filter
6. Fuel mixture incorrect	Drain tank and refuel with correct mixture Note: see mixture chart on page 15

Please refer all questions, you may have about your Puch, to your authorized Puch dealer. He is trained and qualified to properly service your machine and can best advise you on its maintenance and care.

## H) OWNER MAINTENANCE

### Spark plug

To check if plug is functioning properly, proceed as follows:

Disconnect plug wire from plug  
Unscrew plug  
Reconnect plug wire to plug and ground same on cylinder head

**WARNING** ENSURE THAT NO FUEL IS ON  
**WARNING** ENGINE AND/OR FLOOR  
**WARNING** BEFORE PROCEEDING

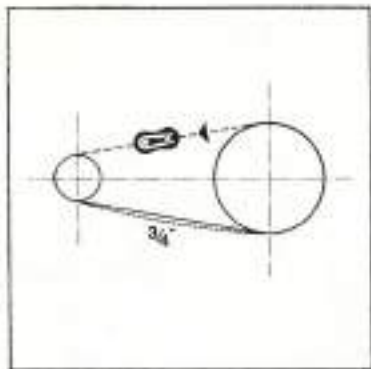
Continue as if starting engine and check for a strong blue spark at electrode  
If no spark, clean or replace spark plug  
Note: Gap .016-.020 in. (0.4-0.5 mm)



### Recommended spark plugs

	1 hp	1,5 hp	2 hp
Bosch	W 10 A (W 95 T 1)	W 7 A (W 175 T 1)	W 7 A (W 175 T 1)
NGK	B-4H	B-6H or B-6HS	B-6H or B-6HS
Champion	L 90	L 86	L 86





## Chains

Engine drive-and pedal chain should be kept clean. Every few hundred miles wipe chains thoroughly clean with a cloth. Lubricate with chain lubricant, or oil SAE 90.

Always keep chains properly tensioned. The proper slack of the drive chain should be  $\frac{3}{4}$ ".

To adjust drive chain, loosen the axle nuts and tighten or loosen the adjuster nuts. Once chain is properly adjusted, tighten the axle nuts. Make sure that wheel is properly aligned.



If pedal chain tensioner catches or travels roughly as pedals are operated, realign tensioner so chain travels smoothly.

### NOTE

Always keep brake cables properly adjusted and lubricated to ensure safe riding. The play in the brake levers should not exceed 1" after adjustment.

## I) SUGGESTED MAINTENANCE AND LUBRICATION CHART

A regular maintenance and lubrication schedule will help to ensure a long, useful life for your moped. Please refer to the mileage and lubrication chart for detailed information.

**NOTE:** Above mileage schedule applies to moped used on dry paved surface. If used in wet, muddy or sandy area, maintenance intervals should be more frequent. Always check controls and lights before using your moped.

### Frequency

	First 300 miles	600	900	1000	3600	7200	OPERATIONS TO PERFORM
RECOMMENDED SERVICE	•	•	•	•	•	•	Tire wear and condition
	•				•	•	Throttle cable adjustment
	•	•	•	•	•	•	Check tire pressure
	•		•	•	•	•	Check transmission ATF level
	•		•	•	•	•	Clean and lubricate chains
	•			•	•	•	Clean air filter
	•				•	•	Change transmission ATF
	•		•	•	•	•	Check spark plug
				•	•	•	Decarbonize engine
				•	•	•	Clean exhaust baffle
	•			•	•	•	Retighten screws and nuts
					•	•	Clean fuel valve and lines
	•			•	•	•	Clean carburetor
	•			•	•	•	Idle speed adjustment
	•				•	•	Check ignition timing
•				•	•	Adjust clutch	
•		•	•	•	•	Check brakes / linings	
				•	•	Check / lubricate hub bearings	
				•	•	Lubricate front fork *)	
•		•	•	•	•	Steering bearing adjust/lubrication	
•		•	•	•	•	Lubricate control cables	
•		•	•	•	•	Adjust chain tension	

\*) Hydraulic front fork - Magnum MK II

## J) CONSUMER INFORMATION

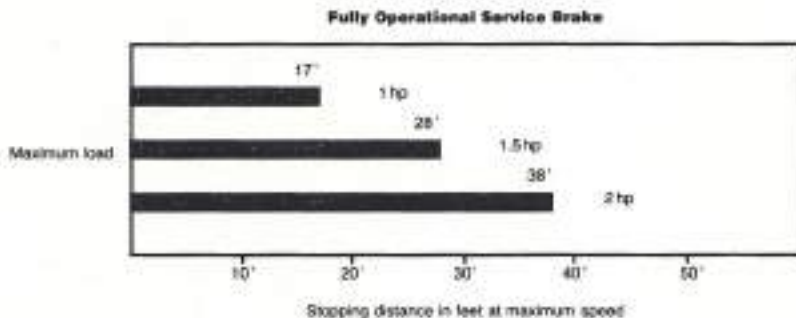
### CONSUMER INFORMATION

#### Stopping Distance

Vehicle minimum stopping distance on dry ground

This figure indicates braking performance that can be met or exceeded by the vehicles to which it applies, without locking the wheels, under maximum condition of loading. The information presented represents results obtainable by skilled drivers under controlled road and vehicle conditions, and the information may not be correct under other conditions.

Description of vehicles to which this table applies: MAGNUM



## ACCELERATION AND PASSING ABILITY

THIS FIGURE INDICATES PASSING TIMES AND DISTANCES THAT CAN BE MET OR EXCEEDED BY THE VEHICLES TO WHICH IT APPLIES, IN THE SITUATIONS DIAGRAMMED BELOW

THE LOW-SPEED PASS ASSUMES AN INITIAL SPEED OF 20 MPH AND A LIMITING SPEED OF 25 MPH  
THE HIGH-SPEED PASS ASSUMES AN INITIAL SPEED OF 50 MPH AND A LIMITING SPEED OF 55 MPH

NOTICE: THE INFORMATION PRESENTED REPRESENTS RESULTS OBTAINABLE BY SKILLED DRIVERS UNDER CONTROLLED ROAD AND VEHICLE CONDITIONS, AND THE INFORMATION MAY NOT BE CORRECT UNDER OTHER CONDITIONS

DESCRIPTION OF VEHICLES TO WHICH THIS TABLE APPLIES: MAGNUM

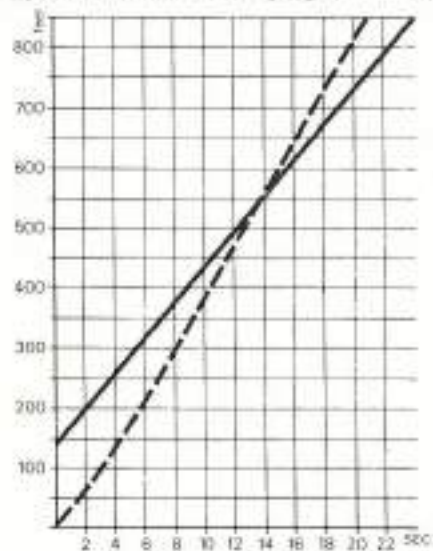
### SUMMARY TABLE

MAGNUM 21g		MAGNUM 1.8 1g		MAGNUM 1.6g	
LOW-SPEED PASS*	390 FEET, 13.3 SECONDS	LOW-SPEED PASS**	190 FEET, 22 SECONDS	LOW-SPEED PASS***	NOT CAPABLE
HIGH-SPEED PASS	NOT CAPABLE	HIGH-SPEED PASS	NOT CAPABLE	HIGH-SPEED PASS	NOT CAPABLE

- \* Maximum speed attainable is 25 mph
- \*\* Maximum speed attainable is 25 mph
- \*\*\* Maximum speed attainable is 25 mph

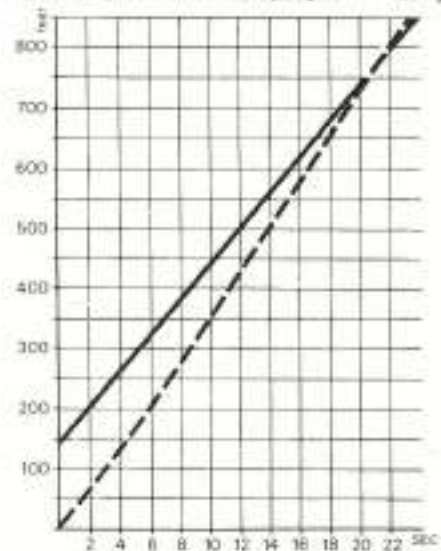
# GRAPHIC DETERMINATION OF PASSING TIME AND DISTANCE

LOW SPEED PASS MAGNUM 2hp



HIGH SPEED PASS NOT CAPABLE

LOW SPEED PASS MAGNUM 1.5hp

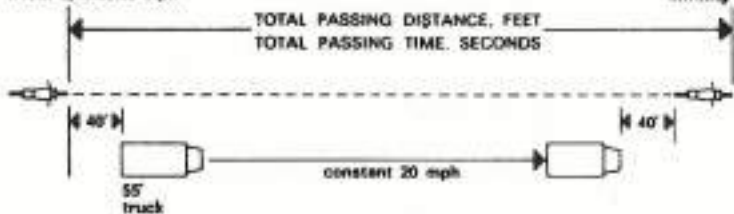


HIGH SPEED PASS NOT CAPABLE

### LOW SPEED

initial speed, 20 mph

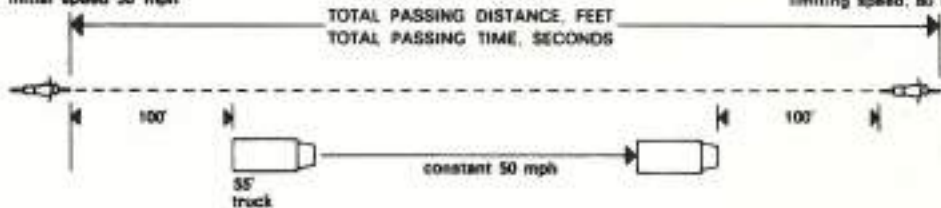
limiting speed, 35 mph



### HIGH-SPEED

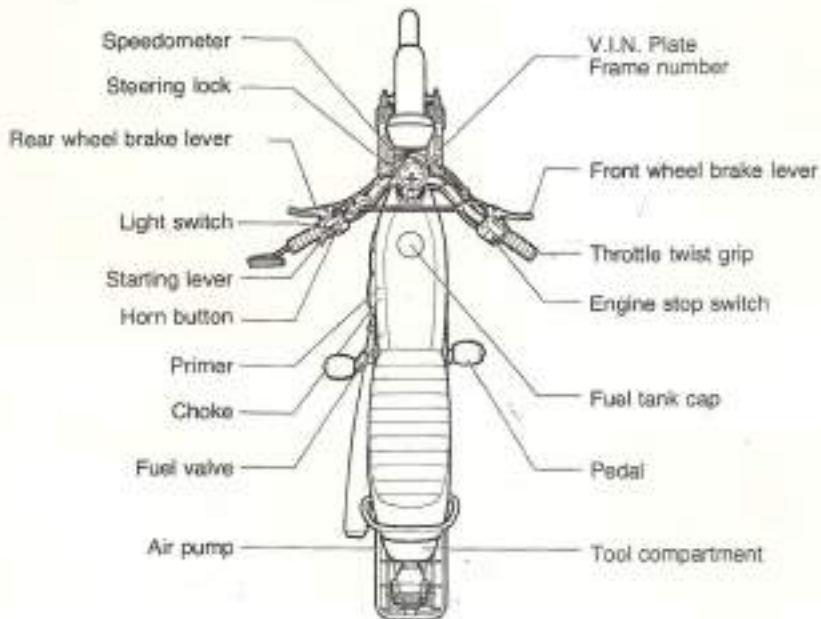
initial speed 50 mph

limiting speed, 80 mph





## CONTROLS



## ENGINE

Maximum output	2 hp at 5000 rpm
Maximum torque	2.36 ft. lbs (0.33 mkg) at 4500 rpm
Compression ratio	6.4 : 1 (8.5 : 1)
Bore	1.496 in (38 mm)
Stroke	1.603 in (43 mm)
Displacement	2.97 cu. in (48.8 cc)
Cooling	air cooled
Lubrication	gas/oil mixture
Carburetor	Bing 1/12/322
Main jet	60 (58 by-packed)
Needle jet	2.12 A
Needle position	1st notch from top
Needle size	2
Throttle slide	S1
Ignition	magneto ignition
Breaker point gap	.016 - .020 in (0.4 - 0.5 mm)
Ignition timing	.062 - .067 in (1.3 - 1.7 mm) BTDC = 18 - 21°
Spark plug	Bosch W 7 A, Champion L 86
Spark plug gap	.016 - .020 in (0.4 - 0.5 mm)
Generator	flywheel magneto Bosch RDP1 6V, 26-5/10W
Ignition coil	special coil for magneto ignition
Cylinder material	Alu-alloy with cast iron liner

## POWER TRANSMISSION

Clutch	2 separate centrifugal clutches running in ATF
Transmission	2 speed automatic, 1st, 16 : 70, $i = 4.375$ 2nd, 22 : 64, $i = 2.909$
Engine/Transmission reduction	helical gears 14 : 31, $i = 2.214$
Transmission/Rear wheel drive	chain 1/2 x 3/16 in, 18 : 40, $i = 2.22$
Pedalling drive	chain 1/2 x 1/8 in, 26 : 23, $i = 1.13$

## CHASSIS

Frame	tubular frame
Front wheel suspension	telescopic fork, 2.95 in (75 mm) travel
Rear wheel suspension	control arm, 2.36 in (60 mm) travel
Brakes	internal expanding brake shoes
Dia. of brake drum	3.15 in (80 mm)
Width of brake lining	.70 in (18 mm)
Total effective brake surface	8.06 sq in (52 cm <sup>2</sup> )
Tire size front and rear	2 1/2 - 17
Tire pressure front/rear	26/32 psi (1.8/2.25 bar)
Fuel tank	1.85 US gal. (7 l)



**DIMENSIONS AND WEIGHTS**

Overall length	70.9 in (1800 mm)
Overall width	32.3 in (820 mm)
Overall height	45.3 in (1150 mm)
Wheelbase	45.3 in (1150 mm)
Ground clearance	6.3 in (160 mm)
Dry weight	128.6 lbs. (58.5 kg)

**ELECTRICAL EQUIPMENT**

Headlight bulb	6V, 21W
Tail/Stop light bulb	6V, 5W/6V, 10W
Speedometer light bulb	6V, 6W
Warning device	horn

**PERFORMANCE AND CONSUMPTION**

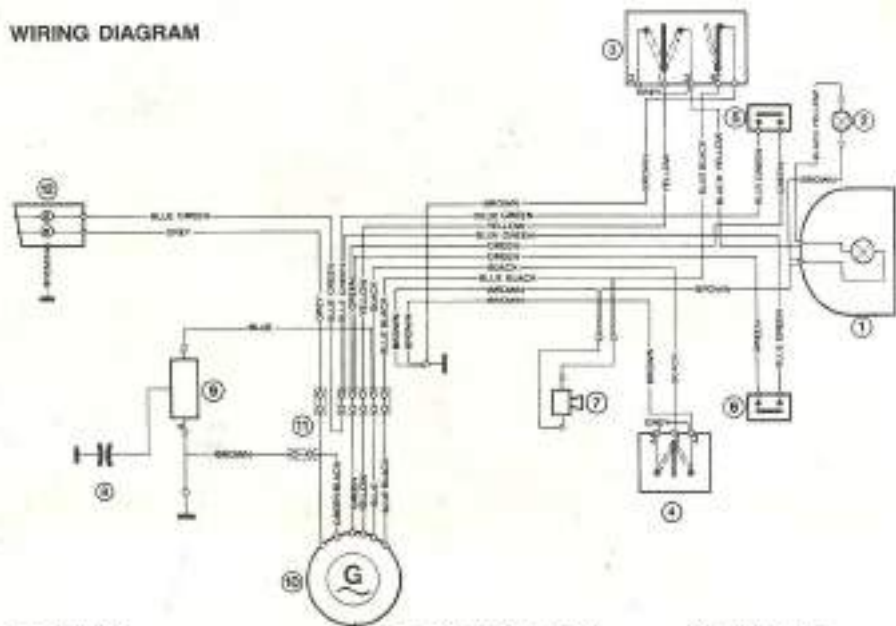
Top speed	30 mph (48 km/h)
Hill climbing ability	22%
Fuel consumption (DIN 70030)	150 mpg (1.8 l/100 km)

Test conducted on a flat track in top gear at 3/4 top speed. Track of 6.2 miles (10 km) is used both ways and may have very short upward and downward grades of maximum 1.5%. The vehicle must be adjusted to specification, with tires correctly inflated. Riders weight not more than 143 lbs. (65 kg). The measured consumption is increased by 10%, taking unfavourable conditions into account. New vehicles may vary up to 5% from this value.

**CAPACITY AND QUALITY OF LUBRICANTS (see Owners Manual)**

ENGINE	Mixture of regular grade gasoline with special 2 stroke oil (MAXI MIX) - 50 : 1 DO NOT USE UNLEADED GASOLINE
TRANSMISSION	8 1/2 fl. oz (260 cc) Automatic-Transmission-Fluid "TYPE F"
GREASE NIPPLE	Use grease or oil SAE 90
CABLE	Lubricate cables with oil SAE 30
WHEEL BEARING	Lithium base grease
CHAIN	Oil SAE 90
FRONT FORK	Lithium base grease

# WIRING DIAGRAM



- 1 Headlamp
- 2 Speedometer bulb
- 3 Light switch / Horn button
- 4 Engine stop switch

- 5 Brake light switch
- 6 Brake light switch
- 7 Horn
- 8 Spark plug

- 9 Ignition coil
- 10 Generator
- 11 Wire connector
- 12 Tail-/Stop light

# OEM PARTS & ACCESSORIES

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Click on links below

[OEM parts & online schematics \(EU\)](#)

[OEM parts & online schematics \(US\)](#)

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