



KROMAG
Pinto

INSTRUCTIONS

FOREWORD

This manual is your guide to the basic operation and maintenance of your new vehicle. Please read it carefully, because the performance and life of your bike depends on your care.

Your service station will be glad to provide you with assistance and is fully equipped to handle your service needs.

Thank you for selecting this vehicle. We wish you many miles of riding pleasure and many years of satisfactory performance.

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A) PRE-DELIVERY INSTRUCTIONS

1. After the vehicle has been removed from crate, adhere to the following procedure.
2. Twist fork tubes clockwise until spring tension is set then rotate counter clockwise until fender mounting lugs face forward. Install front fender using four 5 mm hex bolts and 4 split lock washers. Tighten the 2 top fork mounting bolts.
3. Install front wheel with speedometer drive on right hand side (operator's view). Speedo drive should be horizontal and cable exit must face rear. Assure that brake stops on fork leg and brake backing plate interlock. Install fender brace on each side of axle and secure with flat washer and nut on outside of the fork legs.
4. Place handlebar in position over the top fork bridge being certain that the cables and wires are not twisted.

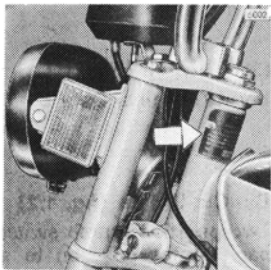
- Place the 2 clamps and 4 hex sockets screws over the handlebar and tighten just snugly.
- Center the handlebar and insure that the handlebar up-rights are centered and parallel to the front fork.
- Tighten securely with a 5 mm hex wrench.
5. Secure electrical wiring to handlebar at lower bends of bar using the two (2) tie-raps provided. Do not tie down cables.
 6. Install speedometer cable in speedometer drive on front wheel. Rotate the wheel to insure that the square end of the cable indexes properly into the drive. Briskly spin the front wheel to insure speedometer operation.
 7. Install the front brake cable at the wheel and adjust at the brake lever on the handlebar (see page 34).
 8. Install the right and left pedals and tighten securely. Please note that the pedals are clearly marked **R** and **L**. The left pedal is left hand threaded. Be careful that they are not reversed, as damage to the threads will result.
 9. Invert the seat on a flat surface and install the tool bag by the following procedure:
 - a) Install one of the rectangular plastic retainers on each tool bag strap.
 - b) Pass the tool bag straps through the loops under the seat.
 - c) Pass the straps back through the retainers and then through the loops on the tool bag to hold the flap closed.
 - d) Pull the straps tight and slide the retainers up against the loop under the seat.
 - e) On some applications, the tool bag may be stored in the right-hand chain guard.
 10. Install the seat, on seat post, in the frame (see page 33). Adjust as required and secure. The forward or backward position of the seat may be adjusted by rotating the mounting clamp to the front or the rear.
 11. Adjust rear brake cable (if necessary) using adjuster on brake lever on the handlebar (see page 34).
 12. Check adjustment of starter cable. There should be

- approximately 3/4" free-play measured at the end of the starter lever. If adjustment is required, loosen cable adjuster on right lower side of frame and lengthen or shorten cable as required (see page 33).
13. Check the adjustment of the drive chain with the machine loaded (1 person, 155 lbs. average) (1/2" slack midway between sprockets) and change if necessary by loosening or tightening the chain adjusters as required. Ensure that the rear wheel is centered between the two sides of the swingarm and re-tighten the axle nuts (see page 21 and 33).
 14. Check the chain guide on the pedal chain tensioner to ensure that it is pointing straight down. Adjust if necessary.
 15. Check all other nuts and bolts and tighten if necessary.
 16. Install the rear view mirror on the left side of the handlebar. The mounting clamp should be just below the switch assembly and should not interfere with wires or cables.
 17. Remove the gearbox oil filler plug on the right engine case. Engine is without oil. Therefore refill with automatic transmission fluid, Type F. Gearbox capacity: 170 cc's (see page 9).
 18. Check tire pressure and inflate if necessary. Front tire 26 P.S.I.; rear tire 32 P.S.I.
 19. Put properly mixed fuel into fuel tank (50:1 (see page 10) and test run engine. When engine is warm adjust idle speed so that bike does not creep when idling, but not so as to cause a stall condition (see page 29).
 20. With engine running check all light functions and adjust headlights using the following method (see page 41):
 - a) On a wall mark a vertical line and a horizontal line crossing it at a height of 20".
 - b) Place the bike on the level ground 20 ft. from the wall in line with the horizontal line.
 - c) The top of the beam should be 2" below the horizontal line.
 21. Road test for top performance.
 22. Thoroughly clean the bike (see page 43).

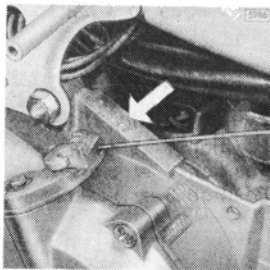
B) MACHINE NUMBERS

Position of specification plate, engine number and frame number.

The identification plate is fixed to the steering head tube.



The engine number is engraved on the right hand side of the crankcase.



The frame number is engraved beside the identification plate.



C) CONTROLS

The position of the controls may be seen in the technical data enclosed.

Light switch (fig. 1/1)

See "Technical Data".

Cut-Out-Switch (fig. 1/2)

Two position thumb switch located on right side of handlebar. Center position to start and run the engine. Lower position interrupts ignition, stops the engine, and coasts the moped to a halt.

Fuel valve (fig. 2)

Position 1 = open

Position 2 = closed

Position 3 = reserve

Air pump and tools

The air pump and the tools are stored under the right hand side engine covering.

Steering lock

To lock, move handlebar to the right, insert key into the lock, turn to the left and together with lock cylinder push down, turn to the right and remove key. Unlock by reversed procedure.

Fig. 1

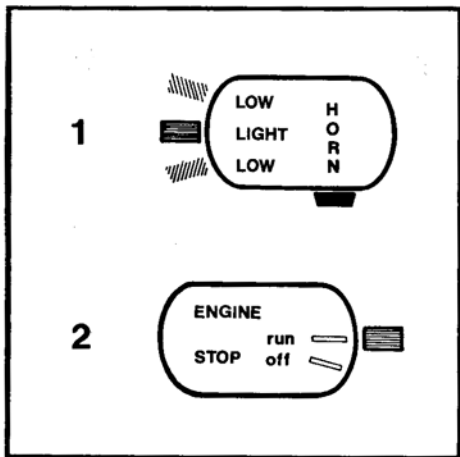
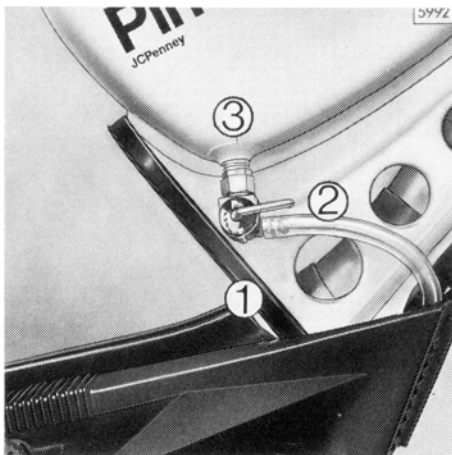


Fig. 2



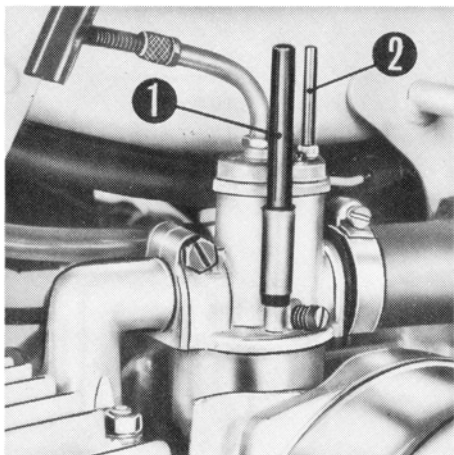


Fig. 3

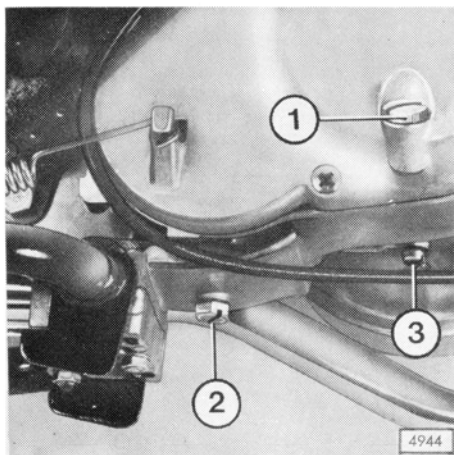


Fig. 4

Carburetor (fig. 3)

1 = tickler

2 = choke: is operated by depressing it (see starting the engine, page 10).

D) RUNNING-IN PROCEDURE

Checking machine numbers

Prior to using the machine, check that the various numbers (see page 5) correspond with your log book.

Checking gearbox oil level

An oil level screw (at the same time being filler plug) is fitted in the right gearbox cover (fig. 4/1). The oil level is correct if when the machine is sitting level the oil reaches the lower edge of the screw hole. If too low, add oil until it overflows. Excess oil must be drained off (fig. 4/2). Oil quality (automatic transmission fluid, Type F) and quantity see enclosed "Technical Data".

Checking the tire pressure

Refer to "Technical Data" for correct pressure.

Oil-Gasoline-Mixture (fig. 5)

With two stroke oils in a ratio 1:50 (1 filler cap of oil and 1 liq qt of gasoline) with engine oil in a ratio 1:25 (2 filler caps of oil SAE 30—50 and 1 liq qt of gasoline).

Gasoline mixture

Our two stroke engines should be run on a gasoline mixture in a ratio of 50:1.

Use of this mixing ratio reduces formation of exhaust gas results in smaller deposits, extends the intervals of cleaning, and decreases air pollution.

It is recommended to mix gasoline with the oils listed in the "Technical Data" or "Lubrication Chart." Not all filling stations sell special two stroke oils. Therefore take care when refueling. If so, you should adhere to the previous usual mixing ratio of 25 to 1.

Remember! Never fill up with pure gasoline

Check brakes and lights for function.

E) RIDING INSTRUCTIONS

Starting the engine:

1. Unlock moped
2. Open fuel valve (see fig. 6)

Fig. 5

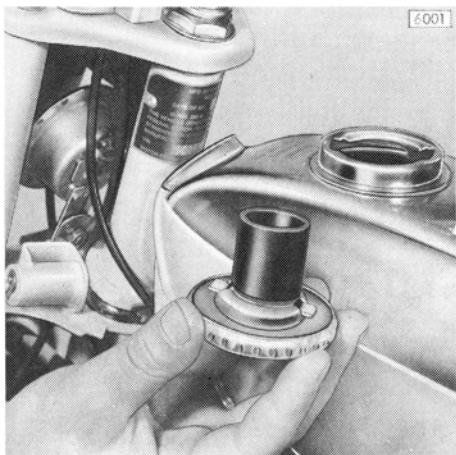
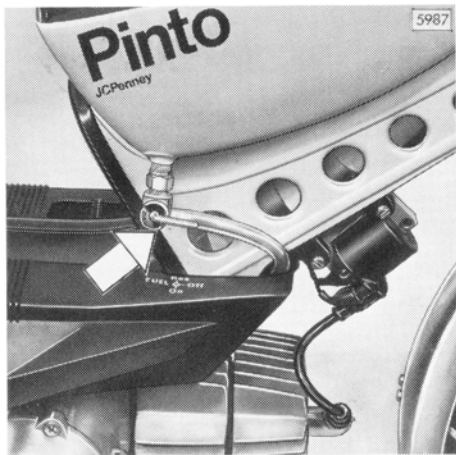


Fig. 6



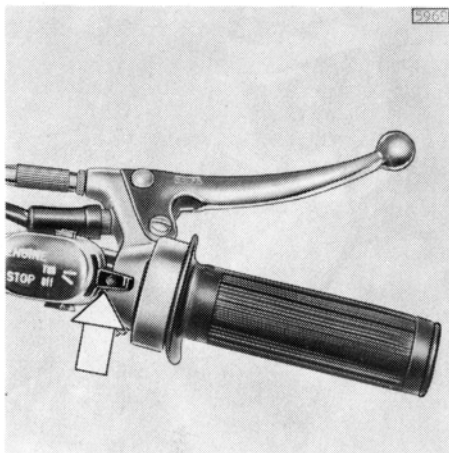


Fig. 7



Fig. 8

3. Engine stop switch should be in "run" position (see fig. 7).

4. If engine is cold, depress choke (see fig. 8/1) and apply primer briefly (see fig. 8/2).

5. Starting method (see fig. 9, arrows). Keep both hands on the handlebars with the weight of the bike forward, hold front-brake on and kick start the engine. Be sure clutch-engage lever is squeezed while starting the engine and released once engine is running.

DO NOT OPEN THROTTLE!

Choke will not function once throttle is opened. Allow engine to warm up before operating throttle.

Or-mount the moped and begin pedalling as you would a bicycle. Once under way squeeze the clutch-engage lever until the engine starts and then release.

Riding your vehicle

Throttle

Your speed is controlled by the throttle twist grip (see fig. 10, arrow). To accelerate, open the throttle gradually. To slow down, close the throttle.

Fig. 9

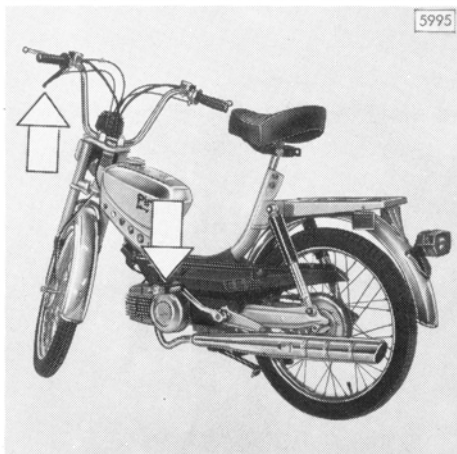
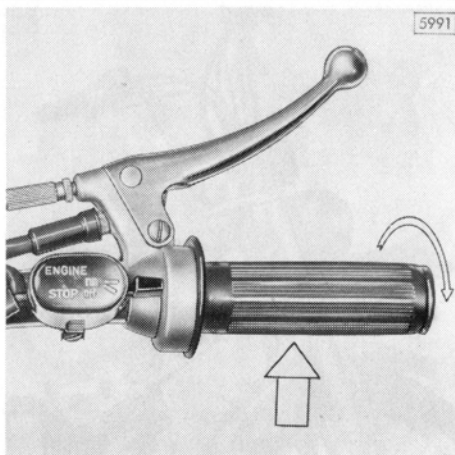


Fig. 10



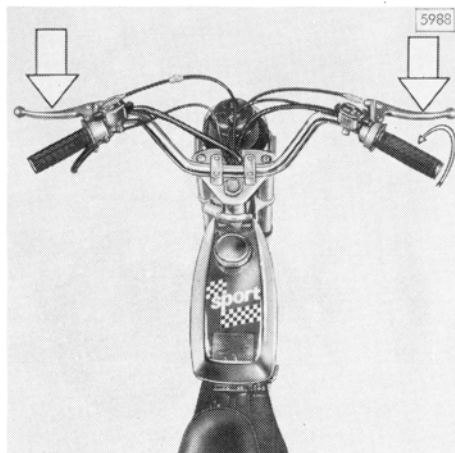


Fig. 11



Fig. 12

Braking

When slowing down, coordinating the throttle and brakes is important. Close throttle and apply both brakes equally. (see fig. 11, arrows.)

Note

When riding on wet roads OR on sandy areas, the friction contact between the tires and road is greatly reduced. Extreme caution should be used when accelerating, braking and turning.

To stop and park.

Throttle down.
Apply brakes to stop.
Switch off ignition switch.
Close fuel valve.

Locking vehicle (see fig. 12)

To lock, move handlebar to the right, insert key into the lock, turn key to the left, push down, turn to the right and remove key. Unlock by reversed procedure.

Riding hints (fig. 13)

After reaching maximum speed, reduce throttle to 3/4 open. While the decrease in speed is hardly noticeable, your fuel consumption is considerably reduced.

When riding downhill, the engine acts as a brake, while the throttle is closed. On long hills however, be sure to open the throttle occasionally to ensure sufficient lubrication.

For safe riding wear bright clothing, eye-protection, shoes or boots.

Switch on light in fog and anytime, when visibility is poor. If you attach baskets or saddle bags to your moped, carry light cargo and distribute the weight equally.

Obey all laws and traffic regulations.

Use hand signals, when turning or changing lanes (fig. 13).

Respect property, ride carefully.

Keep both pedals on equal level.

F) LUBRICATION AND MAINTENANCE

1. Lubrication

Changing gearbox oil.

- a) Warm up the engine./Stop engine.
- b) Remove the oil filling plug (fig. 14/1) and oil drain plug (fig. 14/2).
- c) Drain oil by inclining the machine to the right.
- d) Refit drain plug.
- e) Fill with fresh automatic transmission fluid (approx. 170 cc), follow procedure checking gearbox oil level (page 9), see enclosed lubrication chart (page 42).
- f) Refit oil filling plug.

Fig. 13

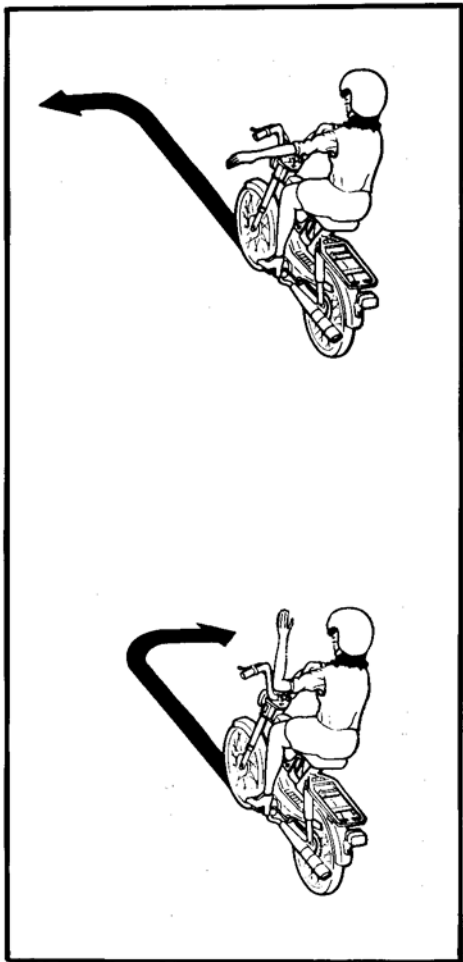


Fig. 14

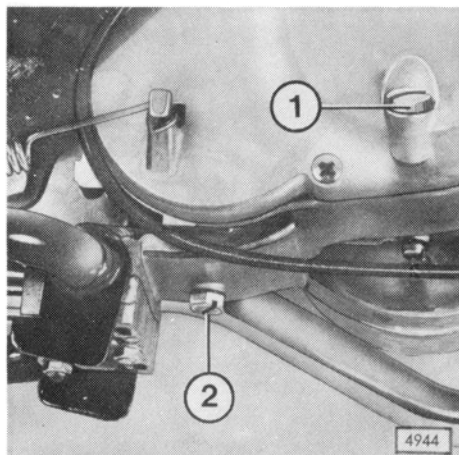
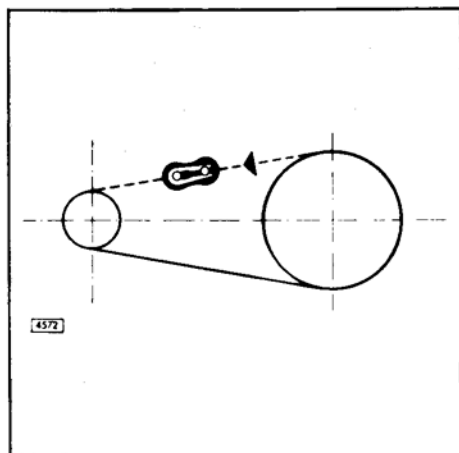


Fig. 15



Cleaning and oiling chains

The long life of chains depends to a great extent on care and maintenance. Chains should always be cleaned and greased regularly. When refitting the chains take care that the tension is correct and the connecting links are properly placed —

with the closed end pointing in the direction of chain travel (fig. 15).

Greasing cycle parts

By means of lubricating grease

(for quality see lubrication chart) (page 42)

- a) At the lubrication nipple (fig. 16:1) for the speedometerdrive, one or two strokes out of the grease gun.
- b) Central bearing.
Remove the stand spring. Remove 3 hexagon bolts. Remove stand. Grease both halves of the stand pivot.
- c) Pedal shaft.

By means of oil

- a) Brake adjusting screw on front and rear wheel
- b) Adjusting screw for cable starting
- c) Chain tensioning screws
- d) Working surfaces of both brake levers
- e) Bowden cables

Lubricating the ignition cam:

Lubricate the grease felt using Bosch grease Ft 1 v 4. The lubricant must not reach the breaker points as this would cause premature and excessive wear.

2. Maintenance

Please contact with an authorized service station for work you do not wish to carry out yourself. The agent will be pleased to advise and help.

Checking spark plugs

Unscrew spark plug, connect to High Tension lead and place plug body to earth, for instance on the cylinder head. A strong spark must be visible between the spark plug electrodes when operating the starter. Oiled up plugs or dirty electrodes do not spark and must be cleaned first with a piece of wood or a steel wire brush. Fit only replacement plugs having a heat value in accordance with the enclosed "Technical Data".

The electrode gap should be from (0,0157—0,0197 in) 0,4 to 0,5 mm, if larger, adjust by bending the earth electrode. When refitting the spark plug, ensure thread matches properly and the plug can be screwed in easily. Never apply force. Screw in plug by hand for 2 to 3 turns before using the spark plug spanner. See "Technical Data" for recommended spark plug.

Decarbonizing the engine (fig. 17)

Carbon deposits on the cylinder head, piston crown and in the exhaust ports are normal with all two-stroke engines and can eventually lead to trouble if not removed in time. Combustion deposits from oil as well as from fuel must therefore be removed regularly.

Cylinder head and piston head

Carbon deposits on the cylinder head and piston crown should be removed only with a soft, blunt-edged instrument to avoid damage to the light alloy casting. Scratching should be avoided since every new scratch will harbour more carbon in future use.

Fig. 16

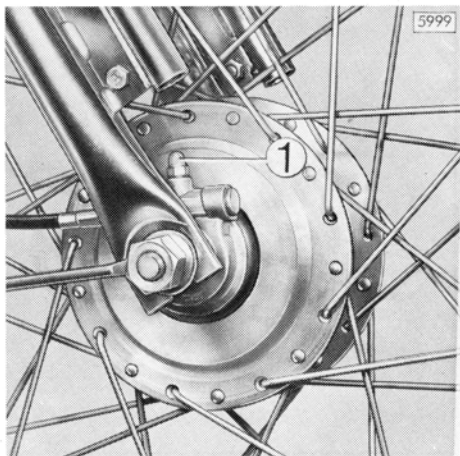


Fig. 17

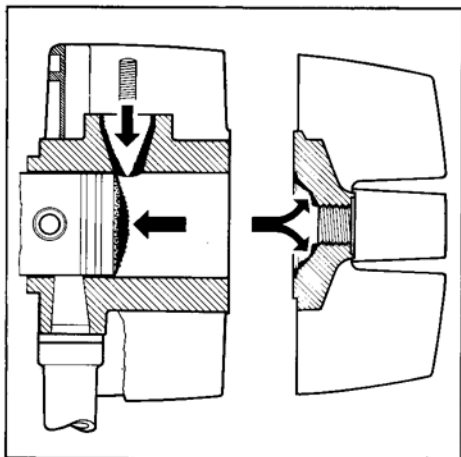


Fig. 18

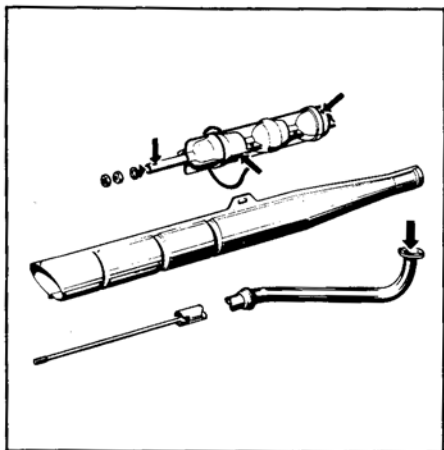
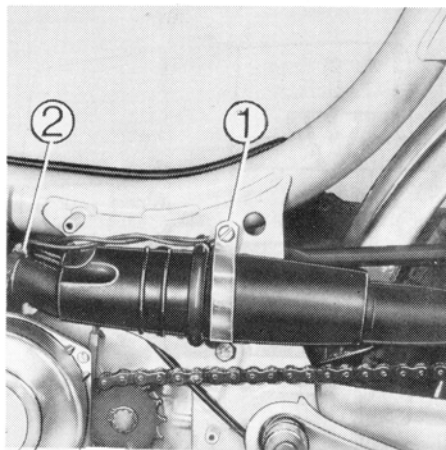


Fig. 19



Only scaly deposits need be removed from the piston crown; there is no need to disturb the piston if it is covered only by a uniform layer of oil carbon. Before refitting the cylinder head thoroughly, remove all carbon deposits and scrapings from the cylinder wall with a non-fraying soft cloth and smear the surface lightly with motor oil. Before assembly turn over the engine a few times to make sure it runs easily. Then clean the jointing surfaces with a clean rag. Tighten the four cylinder head nuts cross-wise (6,50—7,25 ft/lb).

Exhaust port

In order to clean the exhaust port remove the exhaust pipe. By cranking turn the engine over (with the spark plug removed to reduce compression) until the piston reaches its lowest point. Remove the oil carbon from the exhaust port. Cautiously take care not to damage the piston or cylinder working surfaces. When cleaning the exhaust port it is also a good idea to clean out the muffler.

Cleaning the muffler (fig. 18)

Unscrew and pull off the exhaust endpiece. Remove oil-carbon deposits from the inside of the muffler using a scraper. Also remove carefully the oil deposits from the fastening device and from the pipes of the exhaust endpiece. Replace the gaskets if necessary. The machine has been standardized with original mufflers only.

Cleaning the air cleaner

Remove left hand cowling. Loosen screw (fig. 19/1 and 19/2) of the clip for intake muffler and pull intake muffler from the carburetor. Remove front part of the intake muffler, and using a drift, carefully push out filter screen. Wash filter screen in petrol, dip it briefly into motor oil and let it drip off. Fit again damper pipe, filter screen and intake muffler.

Cleaning the fuel pipes and lines

Empty the fuel tank.

Pull the fuel pipe from the fuel valve and carburetor and blow it clear. Unscrew the fuel valve.

Clean the valve and strainer by means of gasoline.

Cleaning the carburetor

Maintenance operations on the carburetor need specialized knowledge and should be entrusted to an authorized service station.

Cleaning the main jet, needle jet and float chamber

- a) Close the fuel valve.
- b) Remove the left hand side covering.
- c) Remove the intake silencer.
- d) Loosen carburetor clamping screw (fig. 20/1).
- e) Pull the fuel pipe from the carburetor.
- f) Turn the carburetor with its float chamber (bottom) towards the clutch side and pull off.
- g) Undo screws and pull out the top parts with throttle piston and choke (fig. 20/2).
- h) Screw off the float chamber.
- i) Unscrew the main jet (fig. 21/5) being screwed in the needle jet (fig. 21/4) and clean by blowing through or by using a stiff bristle. Never use a piece of wire. Also unscrew needle jet and clean.
- j) Clean the float chamber (fig. 21/8) with gasoline.
- k) Wash carburetor body and blow through. Make sure that the bores are not clogged with dirt.
- l) When refitting the jets tighten them properly.

Fig. 20

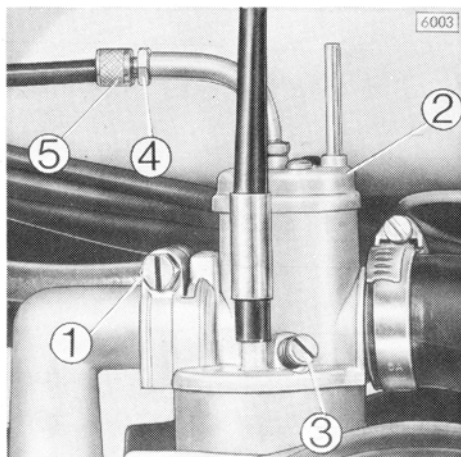
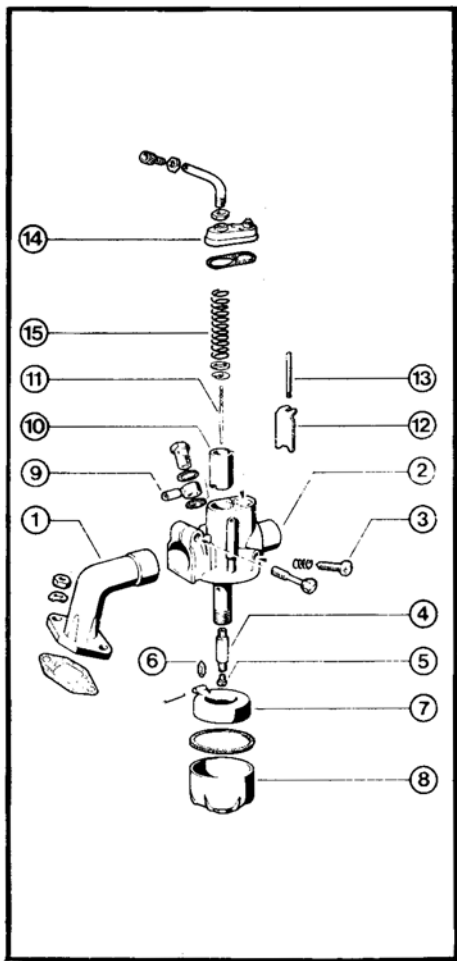


Fig. 21



Adjusting the idling speed

- a) Warm up the engine.
- b) Completely close the twist grip (throttle down).
- c) If the engine threatens to stall, screw in the adjuster (fig. 20/3) until the engine in warm condition regains its even tickover.

Now, with this idling adjustment, adjust the play of the throttle control cable.

- a) Loosen counter nut of the cable adjuster (fig. 20/4).
- b) Screw out cable adjuster (fig. 20/5) until there is a play on both the throttle cable and the throttle twist grip. (The cover of the throttle cable can be pulled out from the cable adjuster by appr. 0,0076 in. (2 mm), before the throttle slide is lifted, i. e. before the engine starts running faster.
- c) Maintain position of the adjuster and tighten the counter nut.

Exploded view of the carburetor (see fig. 21).

- 1 Carburetor stud
- 2 Carburetor body
- 3 Throttle slide stop screw
- 4 Needle jet no. 2,20.
- 5 Main jet.
- 6 Float needle
- 7 Float
- 8 Float housing
- 9 Hose swivel connector
- 10 Throttle slider
- 11 Jet-needle
- 12 Choke valve
- 13 Choke lever
- 14 Top cover
- 15 Slide spring

Checking the ignition system

Ignition timing

The engine will reach maximum output only if the ignition is correctly adjusted. This is a very specialized operation and should be left to your service station.

For correct ignition timing the following points should be taken into account:

- a) Contact breaker points gap.
- b) Firing point.

Contact breaker points gap (for recommended gap see "Technical Data", fig. 22)

Check and adjust the gap through the windows in the flywheel magneto (after removing the cover). When adjusting the breaker gap (fig. 22/1) loosen the fastening screw (fig. 22.3) enabling the anvil (fig. 22/2), fixed contact, to be removed. For readjusting the position of the anvil put a screwdriver into the setting seat (fig. 22/4). If the gap has been modified it is necessary to check the ignition point.

Firing point

Ignition timing is exactly adjusted if both marks (fig. 23/1, 2) coincide at the moment the breaker points start opening. When checking turn flywheel in the operating direction of the engine (fig. 23/3) — i. e. clockwise on top view —. A difference on coinciding the two marks is admissible, if this difference is within the "from-to" range of the crank degrees.

If, however, the contacts open earlier (advanced ignition) turn the base plate (3 fixing screws) in the operating direction of the engine.

Vice versa, if the contacts open later (retarded ignition) turn the base plate against the operating direction. If by this procedure the correct ignition timing is not obtained adjust the break gap within the specified tolerances (see "Technical Data"). Smaller break gap results in retarded ignition, larger break gap in advanced ignition. After every adjustment ignition timing must be checked. If an adjustment is impossible replace the contact breaker.

Ignition timing

0,0315—0,0472 in (0,8—1,2 mm) in advance of TDC.

Crank degree

14—17,5.

Fig. 22

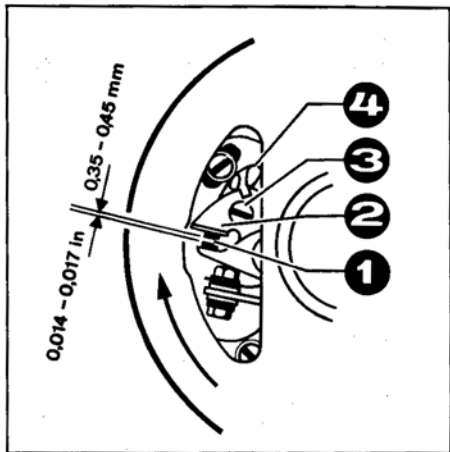
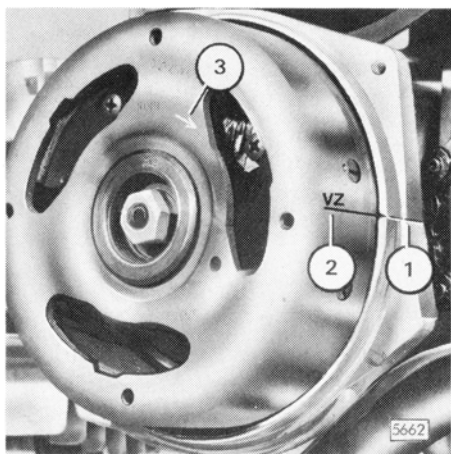


Fig. 23



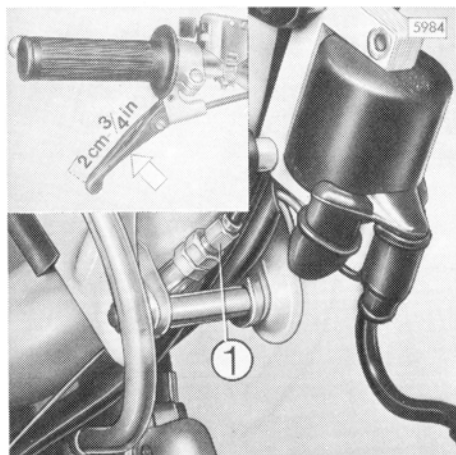


Fig. 24



Fig. 25

Checking drive chain tension

The proper slack of the chain midway between the sprockets should be (0,4—0,6 in.) 10 to 15 mm. To readjust the chain loosen both axle nuts and tighten both chain adjusters uniformly. This procedure enables the back wheel to be kept in track. Retighten both axle nuts.

Adjusting the starting lever

When originally adjusting or readjusting the control cables, necessary due to expanding of the cables, it is expedient to have this done in a service workshop. The play of the starting device lever (measured at the end of the lever (fig. 24, arrow), should be 2 cm (3/4 in). Correct play is achieved by the adjusting (fig. 24/1).

Adjusting height of seat

Loosen screws (fig. 25/1) and adjust seat and seat post as required.

Checking the brakes (fig. 26, arrows)

Front brake.

The correct adjusted travel measured at the end of the handbrake lever is 0,8 in (2 cm) (fig. 26). For readjustment use the adjusting screws (fig. 26/1 or 26/2).

Brake linings

Pry plastic inspection plugs from wheel hub. Insert a feeler gauge between brake drum and brake lining. Gap should not exceed 0,40", at either inspection hole. If gap exceeds this measurement contact your service station for lining replacement. Do not operate your moped.

Rear brake

The correct travel (measured at the end of the handbrake lever is 0,8 in. (2 cm). Readjust by means of the adjusting screw (fig. 27/1 or 2).

Checking and greasing the hub bearings

Remove the hub bearings (contact your service station for doing this). Then clean and check the bearings. Before reassembling grease them with fresh antifriction grease (see "Technical Data").

Checking and greasing the steering head bearings

Remove the steering bearings, clean and check (contact your service station for doing this). Grease with new grease (see "Technical Data").

Retighten nuts and bolts

Check nuts and bolts for tightness. Above all be sure that the engine fixing bolts, the wheel axles and the shock absorber bolts are tight.

Fig. 26

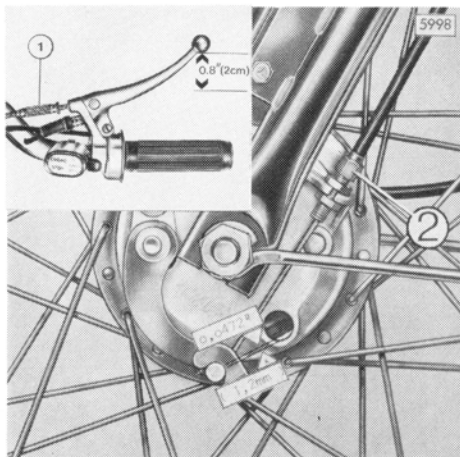
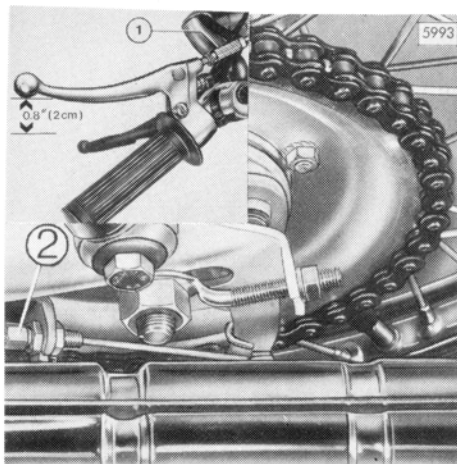


Fig. 27



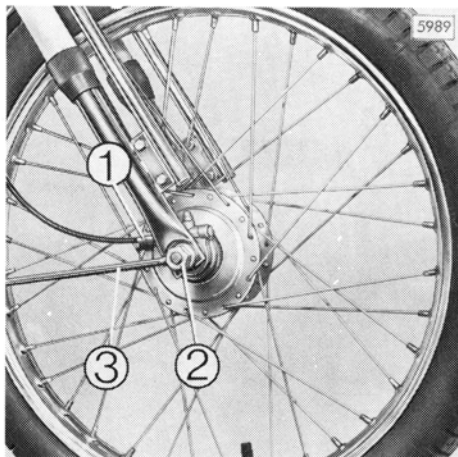


Fig. 28

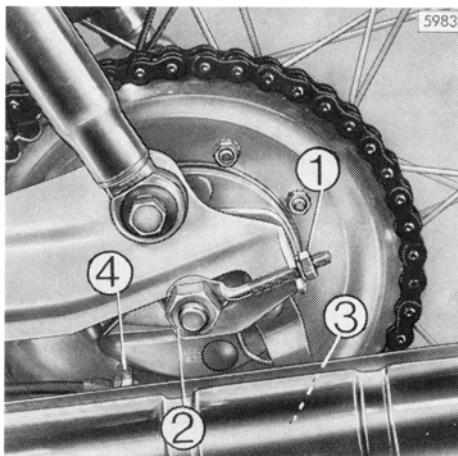


Fig. 29

Removing the front wheel

Unscrew speedometer drive shaft (fig. 28/1). Disengage brake cable. If necessary, loosen set screw. Remove axle nuts (fig. 28/2). Remove mudguards stays from axle (fig. 28/3).

Removing the rear wheel

Loosen chain adjusters (fig. 29/1). Loosen both axle nuts (fig. 29/2). Disengage brake cable from brake lever (fig. 29/3) and from cable sleeve support (fig. 29/4). Turn chain adjusters out from the grooves.

Push wheel forward. Remove driving chain and pedal chain from their sprockets. Incline the machine to the left, pull the rear wheel out, for this purpose press pulley slightly forward.

Changing tires (fig. 30)

To remove tire, unscrew valve cap, depress valve needle to let out the air, unscrew rim nut and completely press back valve. Loosen the steel wire reinforced tire section from the rim and press the tire opposite the valve into the center groove of the rim. This gives sufficient space to lift the tire at the valve end over the rim with the tire lever.

Hold the tire outside the rim with the tire lever and work round the rim with the second lever until the whole circumference of the tire is outside the rim.

Now remove inner tube. When assembling, fit lightly pumped up inner tube coated with chalk into the tire, having already fitted half of the tire over the rim. Ensure the tube is not jammed or twisted and make sure that the rim band separating the tube from the spokes is flat in the rim center well.

Replacing the headlight bulb

Undo adjusting screw (fig. 31/1) to loosen the headlamp reflector. Open spring (fig. 31/2) and pull out bulb holder. Replace bulb.

Fig. 30

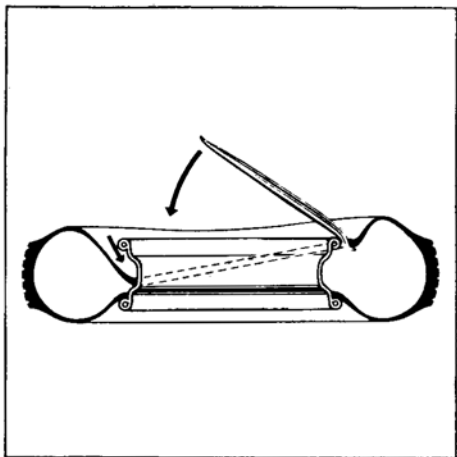
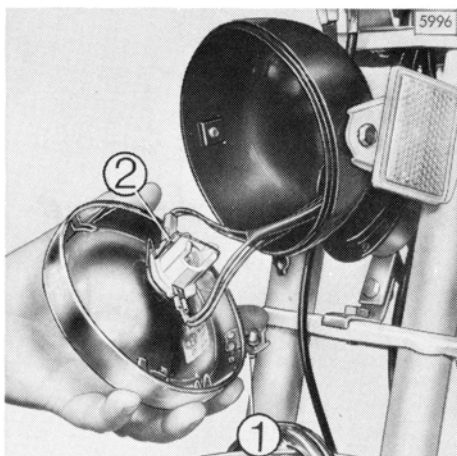


Fig. 31



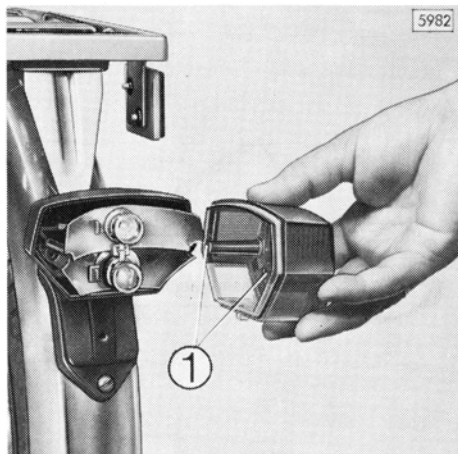


Fig. 32

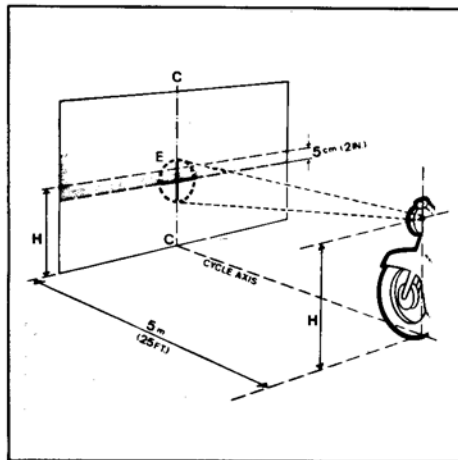


Fig. 33

Replacing rear light bulb and stop light bulb

Unscrew fixing screw (fig. 32/1) and remove housing. Replace bulb and fit in reverse procedure.

Stop light bulb (top)
and rear light bulb (bottom)

Adjusting the headlamp (fig. 33)

Place the machine on level ground at a distance of (20 ft.) 5 m from a vertical wall.

Chalk on the wall a vertical line corresponding to the center of the machine and a horizontal crossing line at H above ground level.

The main beam should correspond with the adjusting cross. Loosen the handlamp bracket screw to adjust the beam manually as necessary. Retighten the screw. Check the dipped beam after checking the main beam. The dipped beam is correct if the cut-off above the beam is (2 in.) 5 cm below the horizontal line of the adjusting cross.

Adjust the dimming light of models with continuous dimming as mentioned above.

When continuously dimming, adjust dimming light as mentioned above.

G) LUBRICATION AND MAINTENANCE CHART

Lubricating and maintenance chart									
+ to be performed by owner					× to be performed by your service station				
After miles			Every miles					OPERATIONS TO PERFORM	
300	600	900	600	900	1800	3600	7200		
+			×						Tire wear and condition
	×						×	×	Throttle cable adjustment
	×	+		+			+	+	Check tire pressure
		+		+			+	+	Check gearbox oil level
	×			+			+	+	Clean and lubricate chain
	×				+		+	+	Clean air filter
	×						+		Change gearbox oil
	×	+		+			+	+	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
	×							×	Steering bearing adjust / lubrication
	×			+			+	+	Lubricate control cables

NOTE: Above time schedule applies to moped use on dry paved surfaces. If moped is used in wet, muddy or sandy areas, maintenance should be more frequent. Always check controls and lightening before any trip.

H) CLEANING THE MACHINE

Cleaning is advisable before undertaking any maintenance work. Avoid sharp water jets which are detrimental to the paintwork and also entail the danger of water penetrating the bearings and brakes or into the carburetor and ignition system where it may cause all sorts of troubles. A big soft sponge is recommended for outside cleaning. Use water liberally for the first cleaning as the dried dirt and sand will scratch the paint surface and cause it to lose its high gloss finish. Use a chamois leather cloth to wipe dry. Application of a mild lacquer preservative is advisable. Especially during winter also the chromium parts should be cleaned from time to time using a non-acid grease.

After some period of operation the engine unit will naturally become dirty and it is best to clean it with a good degreasing agent. If gasoline is used be careful not to get any on the seat. A dry clean cloth will do for cleaning the plastic parts. We recommend cleaning the plastic from time to time with commercial plastic cleaning agents. By applying a good quality compound a splendid glossy, antistatic finish is achieved.

I) STORAGE

If you want to lay up your machine or to keep it off the road during winter or at any other time of the year follow these instructions:

Warm up the machine thoroughly, drain oil from the gear box. Fill with fresh oil.

Clean the machine thoroughly to remove dust, oil and dirt. Remove all rust.

Treat all bright metalwork with non-acid grease.

Grease all lubricating points.

Clean the chain thoroughly and grease with a high-viscosity oil. Treat all painted parts with lacquer preservative. In order to prevent the tank from rusting it is recommended to fill it with gasoline. If the garage is not fire-proof flush the tank with oil. Close the fuel valve in either case. Remove the spark plug, take off the carburetor, put the piston to TDC position, fill the cylinder with 30 cc of motor oil. Screw in the spark plug and fix the carburetor. Inflate the tires to the correct pressure.

Jack up the machine in a dry room. Cover it with tarpaulin or wrapping paper. It is very dangerous to let the engine run for a short time only after the machine has been laid up as the engine will not be sufficiently warmed up and water vapor, created inevitably by the combustion process, will condense and will cause the rusting of the bearings.

Using the machine again

Open the breather screw (fig. 4/3) and let the oil drip off. Insert the breather screw, open the fuel valve and start the engine, allowing it to get fully warmed up.

J) TROUBLE SHOOTING

Cause	Remedy
Engine does not start or running engine stops	
1. Fuel valve closed	Open fuel valve or switch over to "Reserve"
2. Fuel tank is empty	Switch fuel valve over to "Reserve" or fill up with gasoline mixture
3. Spark plug is contaminated	Clean spark plug
4. Spark plug is defective	Replace spark plug
5. Spark plug gap is not correct	Adjust gap by bending the earth electrode
6. Ignition cable has worked loose or came off	Properly plug spark connector
7. Too much or too little gas	Open throttle about 1/3
8. a) Vehicle put out of operation with open fuel valve	Start with throttle wide open. If the engine is badly flooded open drain plug of the crankcase (fig. 4/3) and drain fuel
b) Choke operated with warm engine	Remedy as above
9. Fuel pipe is clogged	Blow through the fuel pipe
10. Fuel valve is clogged	Have it cleaned by a workshop
11. Main jet is clogged	Clean main jet
12. Impurities at the valve seat of the float needle	Clean valve seat
13. Float needle not fixed in its notch	Remove float needle, and engage it

CONSUMER INFORMATION

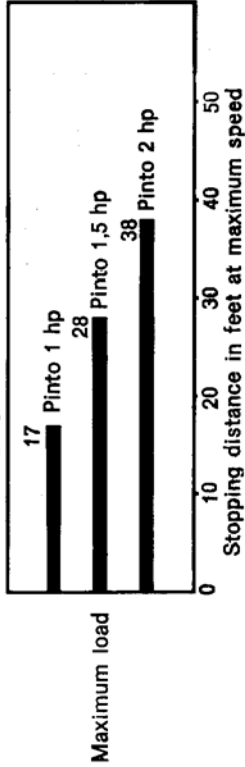
Stopping Distance and Passtime

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.

Fully Operational Service Brake



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 35 mph.

The high speed pass assumes an initial speed of 50 mph and a limiting speed of 80 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.

Summary table

Pinto 2 hp	Pinto 1.5 hp	Pinto 1 hp
Low speed pass * 530 feet: 13.3 seconds	Low speed pass ** 785 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 30 mph

** Maximum speed attainable is 25 mph

*** Maximum speed attainable is 20 mph

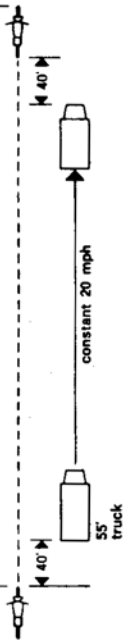
LOW SPEED

initial speed, 20 mph

limiting speed, 35 mph

TOTAL PASSING DISTANCE, FEET

TOTAL PASSING TIME, SECONDS



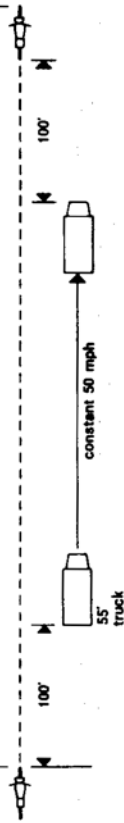
HIGH-SPEED

initial speed 50 mph

limiting speed, 80 mph

TOTAL PASSING DISTANCE, FEET

TOTAL PASSING TIME, SECONDS





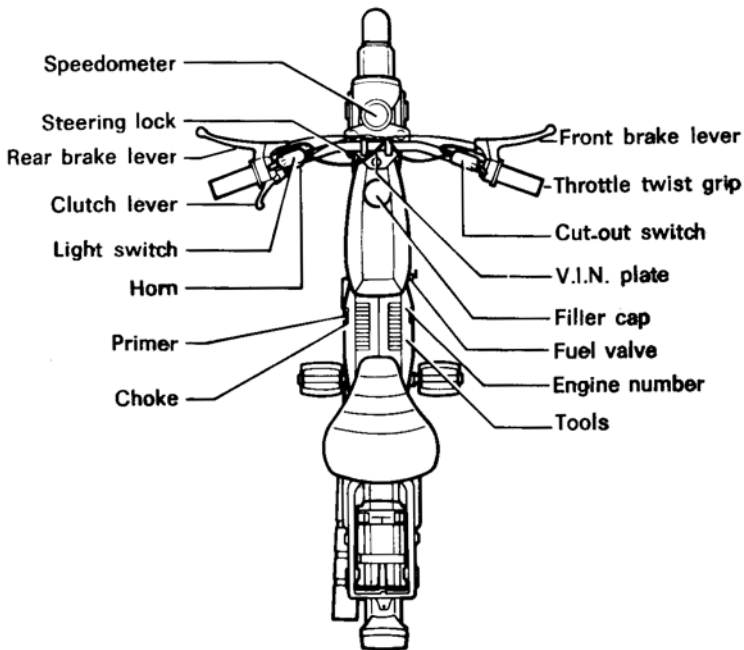
TECHNICAL DATA

Pinto

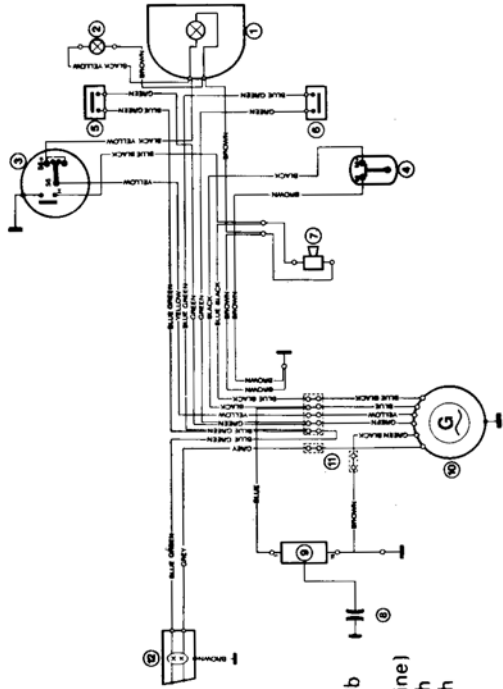
1,0 hp

1,5 hp

2,0 hp



WIRING DIAGRAM



- 1 Headlamp
- 2 Speedometer bulb
- 3 Light switch
- 4 Stop switch (engine)
- 5 Brake light switch
- 6 Brake light switch
- 7 Horn
- 8 Spark plug
- 9 Ignition coil
- 10 Flywheel magneto
- 11 Conductor terminal
- 12 Tail stop license plate

CHASSIS

Frame	tubular frame
Front wheel suspension	telescopic fork; 1,96 in (50 mm) spring travel
Rear wheel suspension	shock absorbers 1,96 in (50 mm) spring travel
Brakes	Internal expanding shoe brakes
Dia. of brake drum	3,15 in (18 mm)
Width of brake lining	0,70 in (18 mm)
Total effective braking surface	8,06 sq in (52 cm ²)
Tire size front and rear	2 1/4—17
Tire pressure front/rear	26/32 psi (1,8/2,5 kg/cm ²)
Fuel tank	0,845 US gal. (3,5 litres)

WEIGHTS AND DIMENSIONS

Wheelbase	42,5 in (1080 mm)
Overall length	66,9 in (1700 mm)
Overall width	27,1 in (690 mm)
Overall height	40,1 in (1020 mm)
Ground clearance	3,9 in (100 mm)
Dry weight	10,3 lb (47 kg)

ELECTRICAL EQUIPMENT

Headlamp bulb	6 V, 21 W
Rearlamp/Stoplamp bulb	6 V, 5/10 W
Speedometer lamp	6 V, 0,6 W
Warning device	buzzer

PERFORMANCE AND CONSUMPTION

Top speed	1,0 hp 20 mph (32 km/h)
	1,5 hp 25 mph (40 km/h)
	2,0 hp 30 mph (45 km/h)

Hill climbing ability 13%

Standard fuel consumption

(DIN 70030) 150 ml/US gal. (1,6 litres/100 km)

Test commences on a flat track in top gear at 2/3 speed. The track length of 6,2 m (10 km) is used either way and may have very short upward and downward gradients of a maximum of 1,5%. The vehicle must be adjusted to specification and tires must have correct pressure. The rider must not weigh more than 134,32 lb (65 kg). Under unfavourable conditions the measured consumption is increased by 10%.

CAPACITY AND QUALITY OF LUBRICANTS

ENGINE	Mixture of economy gasoline 1 or 2 star with a branded motor oil of SAE 40—50. Mixture ratio 25 : 1 (= 4%) or 50 : 1 with special two stroke oil.
GEARBOX	5,74 oz (170 cc) Automatic-Transmission-Fluid
GREASE NIPPLES, CABLES	Summer and winter grease. For lubrication of the grease nipples also SAE 90 can be used. For lubrication of the cables also SAE 30 can be used.
WHEEL BEARING	Summer and winter Lithium base grease.
CHAIN	Summer and winter SAE 90.

ENGINE

Maximum output	1,0 hp	at 3500 r.p.m.
Maximum torque		1,63 ft/lb (0,22 mkp) at 3000 r.p.m.
Compression ratio		7,75 : 1
Maximum output	1,5 hp	at 4500 r.p.m.
Maximum torque		2,08 ft/lb (0,28 mkp) at 3000 r.p.m.
Compression ratio		9,2 : 1
Maximum output	2,0 hp	at 5000 r.p.m.
Maximum torque		2,6 ft/lb 0,285 mkp) at 4500 r.p.m.
Compression ratio		9,2 : 1
Bore		1,49 in (38 mm)
Stroke		1,69 in (43 mm)
Displacement		48,8 cc
Cooling		air cooled
Lubrication		oil-in-gasoline lubrication
Carburetor	1,0 hp	Bing 1/12
Main jet		50
Needle jet		2,22
Needle position		3rd notch from top
Carburetor	1,5 hp	Bing 1/12
Main jet		72
Needle jet		2,20
Needle position		2nd notch from top
Carburetor	2,0 hp	Bing 1/14
Main jet		72
Needle jet		2,17
Needle position		2nd notch from top
Ignition		magneto ignition
Breaker point gap		0,0137—0,0177 in (0,35—0,45 mm)
Ignition timing		0,0315—0,0472 in (0,8—1,2 mm)
		B.T.D.C.
Spark plug	1,0 hp	Bosch W 95 T1
Spark plug	1,5 hp	Bosch W 124 T1
Spark plug	2,0 hp	Bosch W 175 T1
Spark gap		0,016—0,020 in (0,4—0,5 mm)
Dynamo		Flywheel magneto Bosch RCP 1 6 V, 26-5/10 W
Ignition coil		outside the generator

POWER TRANSMISSION

Gearbox	single speed automatic
Clutch	centrifugal
Primary transmission	helical gears
Secondary transmission	chain 1/2" x 3/16"
Peddaling chain	chain 1/2" x 1/8"

GEAR RATIOS

Engine gear	1,0 hp	106 : 21; i = 5,05
Gear-rear wheel		45 : 13; i = 3,46
Peddaling transmission		28 : 23; i = 1,217
Engine gear	1,5 hp	106 : 21; i = 5,05
Gear-rear wheel		45 : 14; i = 3,21
Peddaling transmission		28 : 23; i = 2,217
Engine gear	2,0 hp	106 : 21; i = 5,05
Gear-rear wheel		45 : 16; i = 2,81
Peddaling transmission		28 : 23; i = 1,217

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