JAWA

# W O R K S H O P  M A N U A L

## JAWA MOPED MODEL 210

One Speed
Two Speed

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CONTENTS

## I. TECHNICAL SPECIFICATIONS

| | |
|---|---|
| Engine type | air cooled, two-stroke single cylinder |
| Displacement | 49 cc |
| Cylinder bore x piston stroke | 39 x 41 mm (1.535" x 1.614") |
| Engine power output | .9, 1.5, 2.0 HP |
| Clutches | automatic, dry, centrifugal |
| Gearbox | two-speed |
| Engine to rear wheel | 1st-speed overall ratio -1: 24.4231<br>2nd-speed overall ratio -1: 13.7305 |
| Primary transmission | indented belt |
| Secondary transmission | link chain |
| Pedal drive transmission ratio | 1:0.692 |
| Pedal-actuated starting gear | overall ratio 1:0.0504 |
| Front suspension | telescopic fork<br>60 mm stroke (2.3") |
| Rear suspension | telescopic suspension units<br>60 mm stroke |
| Brakes | internal expanding shoe - brakes controlled by levers on handle-bars |
| Brake dimensions | 85 x 20 mm (3.346 x 0.787") |
| Tires | 2-1/4 x 16" |
| Tire inflation pressures | |
| -front tire | 196 kPa-28 P.S.I. |
| -rear tire | 245 kPa-35 P.S.I. |
| Moped dry weight | 51 kg (112 lbs.) |
| Moped running weight | 54 kg (118.8 lbs.) |
| Road speed - maximum | 20, 25, 30 MPH |
| Fuel tank filling capacity | 1.05 US gal |
| Fuel reserve | 0.7 litres (.74 qt.) |
| Maximum climbable gradient with rider weighing 75 kg (165 lb.) | 25% |
| Noise | 70 decibels |
| Ignition system | 6-volt, contactless with semi-conductor elements |
| Spark plug | PAL N 7R, Champion L-89CM |
| Headlamp | 6 V/21W |
| Tail lamp | 6 V/5W, 6V/10W |
| Speedometer | 6 V/2W |
| Load capacity, maximum | 200 lbs. |

NOTE: When exceeding the load capacity, it is necessary to decrease the maximum speed proportionally.

## TORQUE SPECIFICATIONS

### Engine

| Tightening point | Thread dimension | Torque Nm | Torque FT/lbs. |
|---|---|---|---|
| Crankcase covers | 6 mm | 8 | 6 |
| Cylinder head | 6 mm | 7 | 5 |
| Starting clutch | 10 mm | 25 | 18 |
| 2nd-speed clutch drum | 10 mm | 20 | 15 |

### Frame

| | | | |
|---|---|---|---|
| Steering head nut | 12 mm | 40 | 29 |
| Handlebars | 6 mm | 10 | 7 |
| Front wheel axle | 12 mm | 50 | 36 |
| Rear wheel axle | 12 mm | 50 | 36 |
| Engine fastening screws | 8 mm | 30 | 21 |
| Saddle | 8 mm | 30 | 21 |
| Pedals | 14 mm | 65 | 47 |
| Pedals crank | 6 mm | 10 | 7 |
| Rear chain wheel | 6 mm | 19 | 14 |

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## LOCATION OF MOPED IDENTIFICATION NUMBER

a. on steering column
b. on bottom right-hand side of engine

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## IGNITION TIMING

1 to 1.5 mm B.T.D.C.

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## FUEL - GAS/OIL MIXING RATIO

25:1 during break in period (300 miles)
33:1 after break in period

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WHEN ORDERING SPARE PARTS, INDICATE THE YEAR OF MANUFACTURE AND ENGINE NUMBER

## II. GENERAL TECHNICAL DATA

### 1. Special Tools - Fig. 1

| Ref. No. | Part No. | Description | Purpose |
|---|---|---|---|
| 1 | 3T 210-10 000-14.5 | Crankcase splitter | Engine dismantling |
| 2 | 928-1000-1.5 | Clutch drum holder | Clutch drum loosening |
| 3 | 50-1200-1.1 | Wrist pin puller | Wrist pin removal and reinstallation |
| 4 | 4T 210-2100 | Washer | Starting clutch removal and re-installation |
| 5 | 4T 210-2200-01 | Clutch drum puller | Clutch drum removal |
| 6 | 975-1400.1.1 | Timing gauge | Timing adjustment |
| 7 | 4T 928-1200-01.03 | GUFERO seal protector | Protection of GUFERO seal ring during installation |
| 8 | 928-6000-1.1 | Alternator rotor | Rotor puller |
| 9 | MN 1100-7.1 | Hook | Installation of starting clutch springs |
| 10 | 4T 928-1200-01.4<br>4T 928-1200-01.5 | Pilot pin - A<br>Pilot pin - B | Piston removal and reinstallation |
| 11 | 4MT 28-1000-1.2 | Piston ring compressing sleeve | For compressing piston rings on installation |

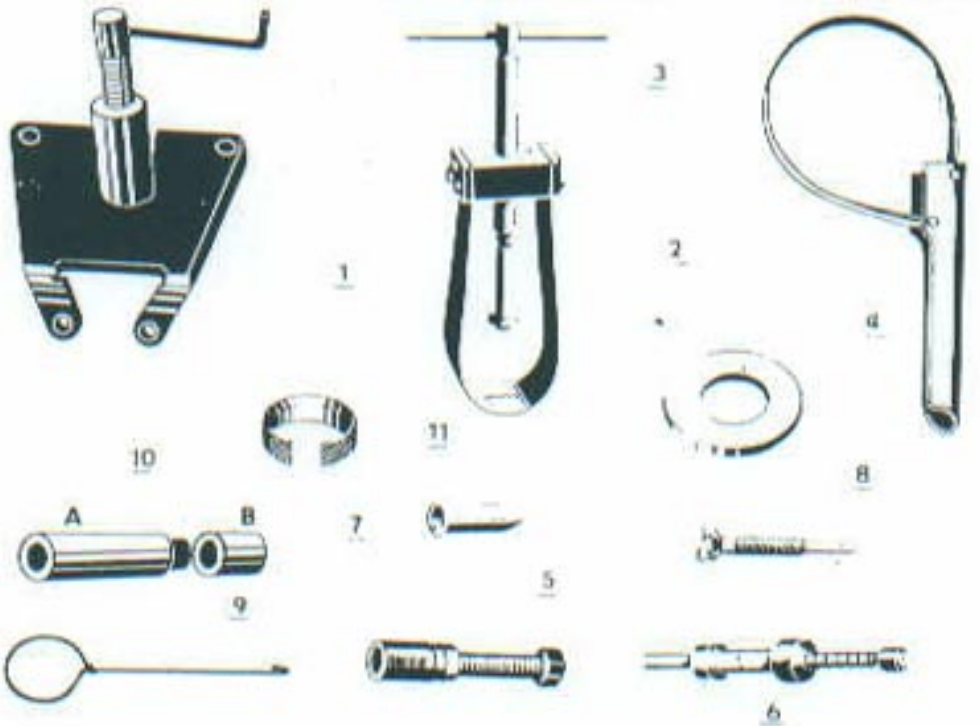



FIG. 1

2. Moped Lubrication Chart - Fig. 2

| Ref. No. | Lubrication Point | Lubricant | Note |
|---|---|---|---|
| 1 | Engine | Two-stroke engine oil - SAE 30 | Permanent lubrication with gas mixed with oil ratio 33:1, (25:1 during break-in) |
| 2 | Gearbox | Gear oil - SAE 30 | One speed filling - 225cc (7.5 fl. oz.)<br>Two speed filling - 75cc (2.5 fl. oz.) |
| 3 | Steering | Bearing grease | Wash dismantled parts and lubricate |
| 4 | Twistgrip | Lubricating grease | After washing, apply grease to sliding parts |
| 5 | Brake levers | Oil SAE 30 | |
| 6 | Bowden cables | Light oil | Fill into bowden casings |
| 7 | Wheel bearings | Bearing grease | Top up bearings |
| 8 | Brake cam pins, brake cams, brake-shoe pivots | Lubricating grease | After cleaning coat with light grease |
| 9 | Chains, sprocket | Graphite oil | Lubricate after cleaning |
| 10 | Pedal shaft | Oil SAE 30 | |
| 11 | Pedal shaft bearings | Oil SAE 30 | |
| 12 | Front fork telescopic | Oil SAE 30 | |
| 13 | Coaster pinion | Oil SAE 30 | |
| 14 | Speedometer drive cable | Light graphite oil | Fill into bowden tubing |

*To ensure safe function of the freewheel at very low temperatures, it is recommended to use the SAE 10 oil.

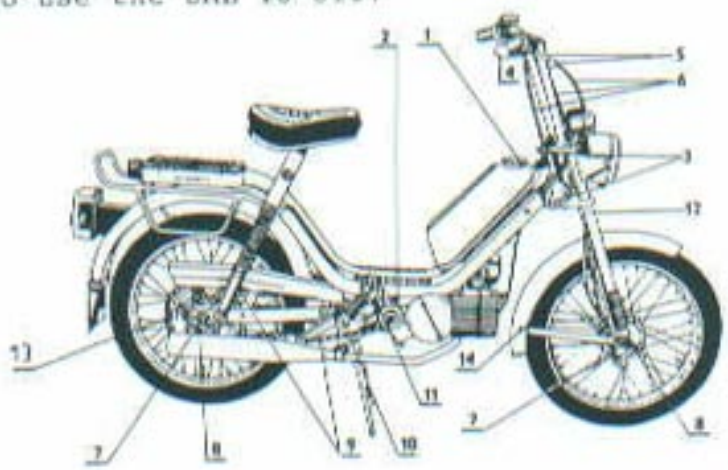
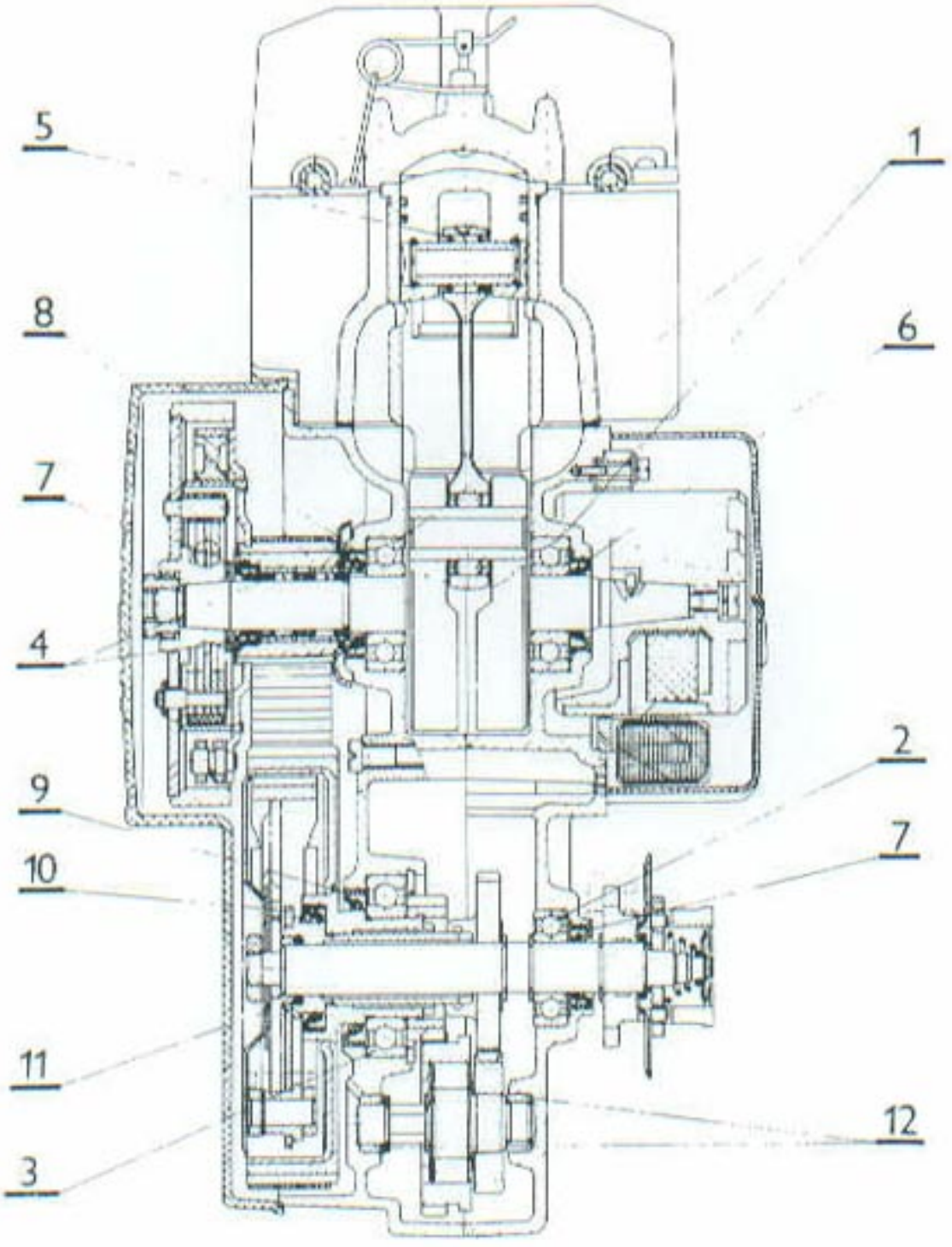


FIG. 2




JAWA TWO-SPEED

FIG. 3

3. List of Bearings, Seal Rings, and Bushings - Fig. 3

| Ref. No. | Part No. | Description | Dimensions mm | Pcs. |
|---|---|---|---|---|
| | | Engine bearings-2/S | | |
| 1 | 324 162 030 003 | Bearing No. 6203/C3 | 17x40x12 | 2 |
| 2 | 324 162 020 003 | Bearing No. 6202/C3 | 15x35x11 | 1 |
| 3 | 324 165 060 003 | Bearing No. 6006/C3 | 30x55x13 | 1 |
| 4 | 324 592 523 140 | Needle bearing | K 15x19x13 INA | 2 |
| 5 | 324 931 020 853 | Needle bearing | KBK 14x18x13 | 1 |
| | | Wheel bearings | | |
| | 324 165 010 000 | Bearing No. 6001 | 12x28x8 | 4 |
| | | Steering | | |
| | 324 912 050 052 | Recirculating ball, 5 | Dia. 5 | 42 |
| | | Seal rings in engine | | |
| 6 | 273 521 003 517 | GUFERO shaft seal ring | 17x28x7 | 1 |
| 7 | 273 521 002 617 | GUFERO shaft seal ring | 15x24x7 | 2 |
| 8 | 273 521 005 317 | GUFERO shaft seal ring | 22x32x7 | 1 |
| 9 | 273 521 009 517 | GUFERO shaft seal ring | 35x47x7 | 1 |
| 10 | 273 521 007 617 | GUFERO shaft seal ring | 28x38x7 | 1 |
| 11 | 273 111 010 104 | Seal ring | Dia. 19x13 | 2 |
| | 273 111 010 024 | Seal ring | Dia. 9x5 | 1 |
| 12 | 451 9 224 11 018 | Crankcase bushing, right-hand and left-hand | Dia. 12x18x8 | 2 |

4. Engine torque transmission - diagram and description - Fig. 4

Automatic Transmission

The diagram of the two-speed automatic transmission is shown in Fig. 4.

The torque is transmitted from the crankshaft (1) to the gears (2-2) over the starting clutch (B) by an indented belt.

1st-speed gearing:

It is formed by two pairs of gears (3,4,5 and 6) meshing with the freewheel (D) between the gears (4) and (5) on the layshaft. From the gear (6). The torque is transmitted over a force closed mechanism to the output shaft (7) and rear wheel by means of the secondary transmission chain.

2nd-speed gearing:

Parts (3), (6) and (7) are coupled with the clutch (C) so that they run at the same speed. The running of the layshaft gears 4 and 5 at different speeds is enabled by the freewheel (D). The gear change is effected by the automatic centrifugal clutch (C) provided with two shoes of the leading type. The operation of this clutch is controlled by force closing between the parts (2), (6) and (7).

From the output shaft (7), the torque is transmitted to the rear wheel by means of secondary transmission.

The force-closed clutch engages the respective gear depending on the road speed, the drive from the automatic transmission, the acceleration and deceleration, and the rolling resistances of the vehicle on the road.

The output shaft (7) with the gear-change mechanism runs on two ball bearings. The layshaft is supported by two bronze bushings.

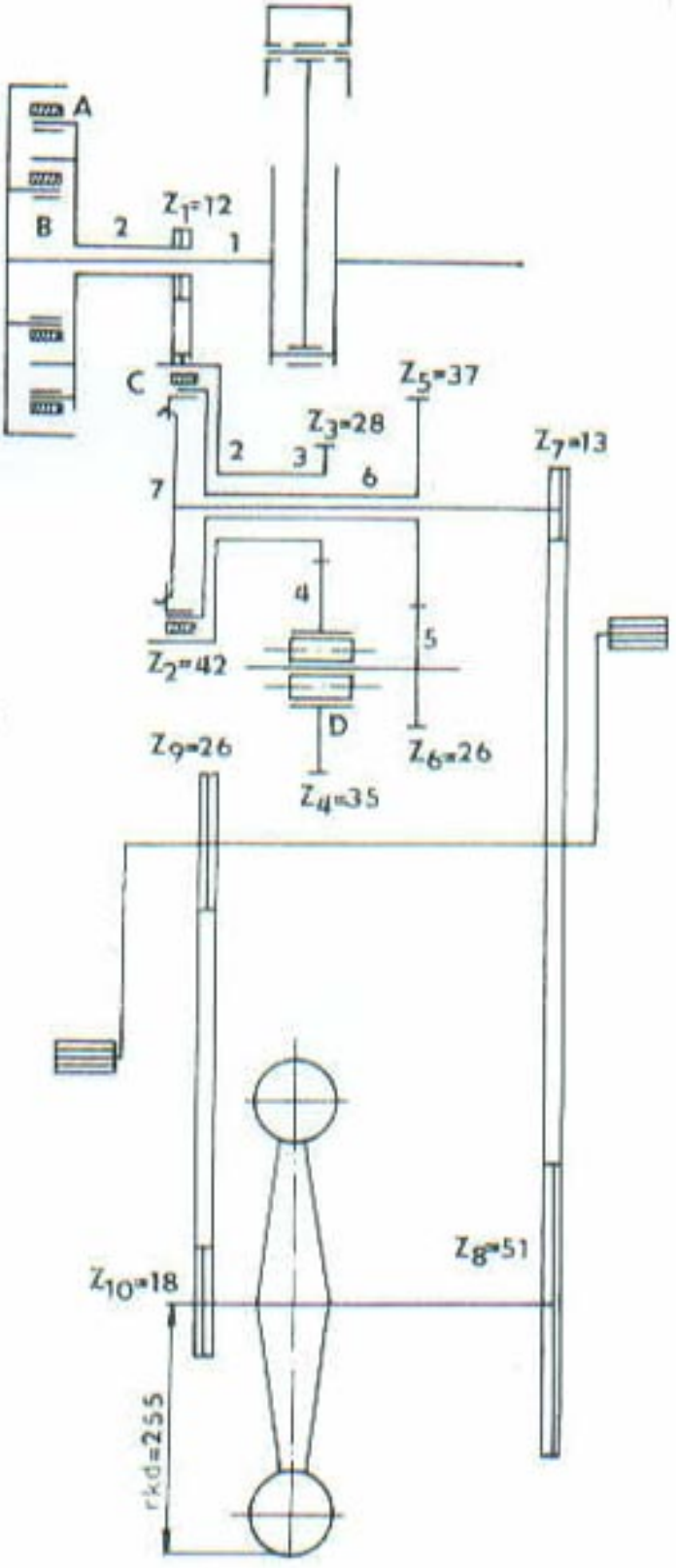



FIG. 4

## III. ENGINE

### A. Removing engine from frame - Fig. 5-16

1. Remove the engine cowlings.
2. Detach the spark plug cable, fuel hose, and throttle cable.
3. Disconnect the leads of the electrical equipment.
4. Disconnect the chain of the secondary transmission
5. Disconnect the exhaust pipe from the cylinder.
6. Remove screws fastening the engine to the frame, and pull off the engine.

Clean the surfaces of the engine, and drain the oil from the automatic transmission case. During engine dismantling, immediately clean all the parts and put them aside in the order of their removal so that they can be reassembled correctly in the shortest possible time.

### B. Removing cylinder head, cylinder and piston

1. Unscrew the four M6 nuts and lift them off the studs together with the washers.
2. Remove the cylinder head.
3. Remove the cylinder (Fig. 5)
4. Remove circlips securing the wrist pin and use the puller No. 50-12000-1.1 (Fig. 6) to drive out the wrist pin.

The maximum permissible gap of a piston ring is from 0.6 to 0.8 mm. (.0236 - .0314)

### C. Grading of cylinders and pistons.

CYLINDER CLASSIFICATION TABLE

| Cylinder Selection | A | B | C |
|---|---|---|---|
| Normal/Standard | 39.01+0.005 | 39.015+0.010 | 39.025+0.010 |
| 1st rebore | 39.26+0.005 | 39.265+0.010 | 39.275+0.010 |
| 2nd rebore | 39.51+0.005 | 39.515+0.010 | 39.525+0.010 |
| 3rd rebore | 39.76+0.005 | 39.765+0.010 | 39.775+0.010 |
| 4th rebore | 40.01+0.005 | 40.015+0.010 | 40.025+0.010 |

PISTON CLASSIFICATION TABLE

| Piston Selection | A | B | C |
|---|---|---|---|
| Normal/Standard | 38.950-0.01 | 38.960-0.01 | 38.970-0.01 |
| 1st rebore | 39.200-0.01 | 39.210-0.01 | 39.220-0.01 |
| 2nd rebore | 39.450-0.01 | 39.460-0.01 | 39.470-0.01 |
| 3rd rebore | 39.700-0.01 | 39.710-0.01 | 39.720-0.01 |
| 4th rebore | 39.950-0.01 | 39.960-0.01 | 39.970-0.01 |

Diameter for piston selection is 34.5 mm from the base of the piston (Fig. 7). The basic clearance between new cylinder and new piston is minimum 0.06 mm (.002352") maximum 0.075 mm (.0029527").

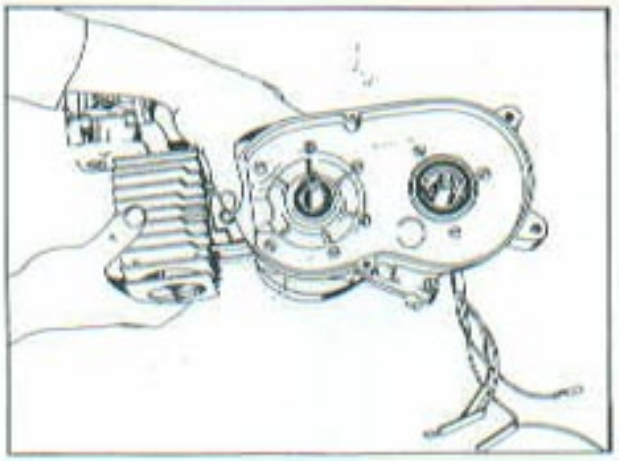


FIG. 5

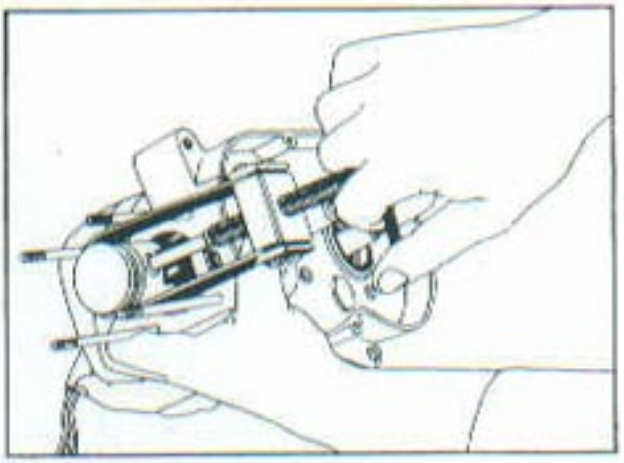


FIG. 6

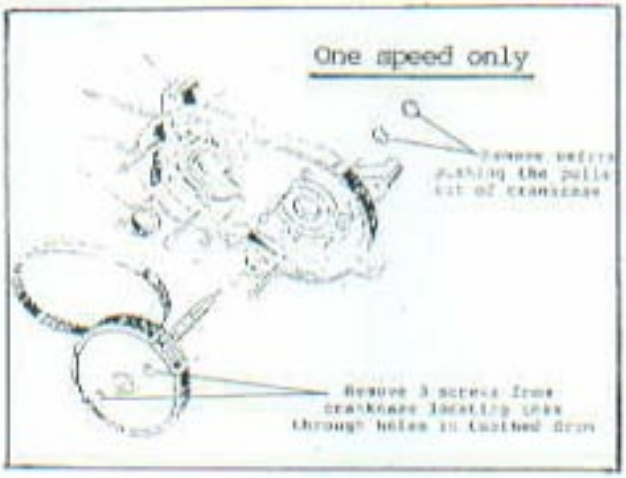



FIG. 7

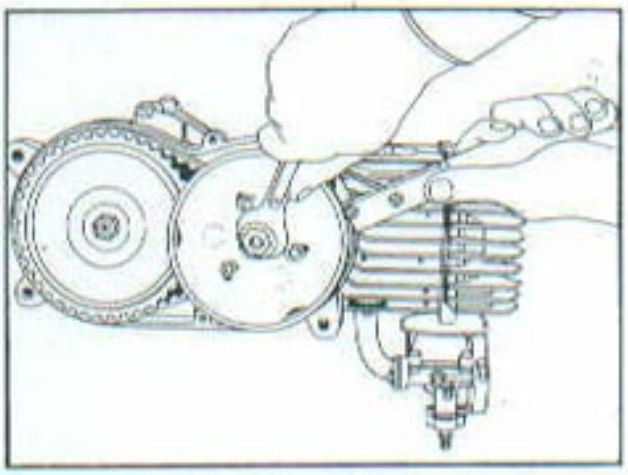


FIG 8

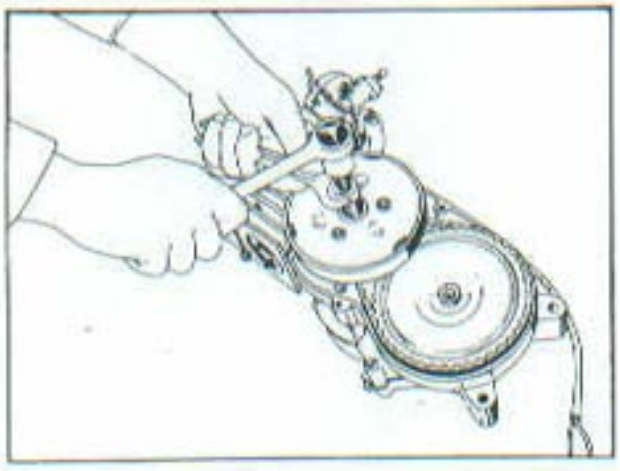


FIG. 9

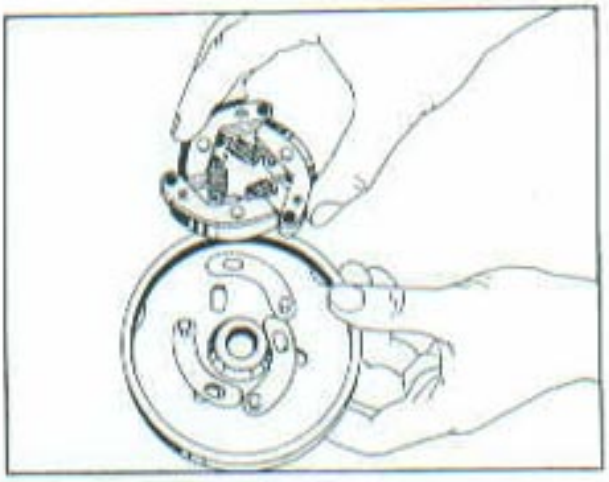


FIG. 10

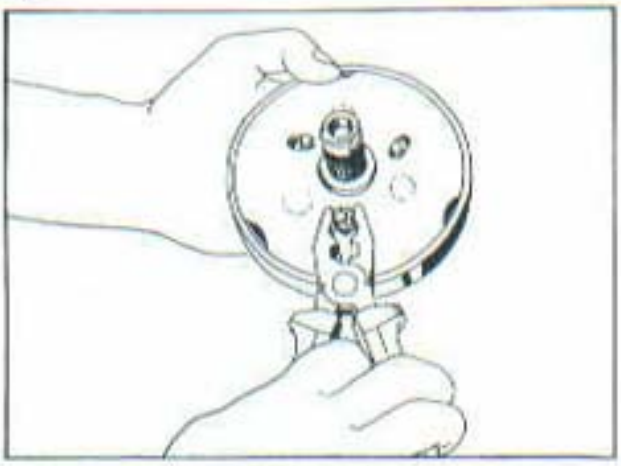


FIG. 11

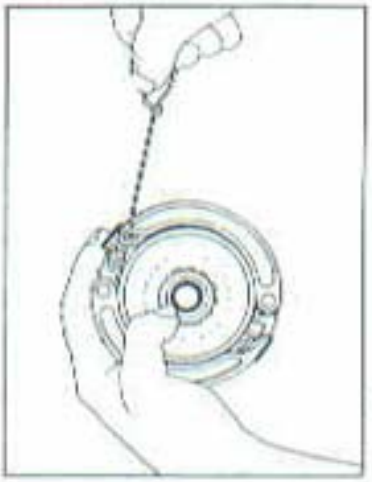


FIG. 12

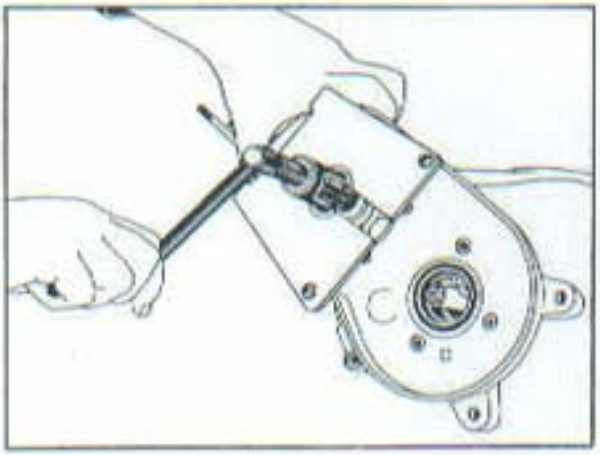


FIG. 13

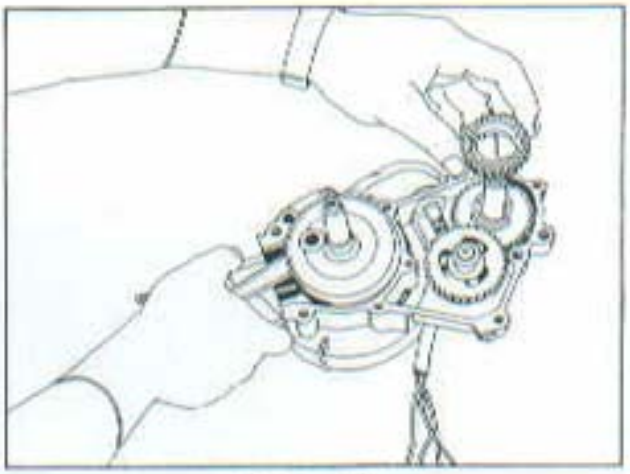


FIG. 14

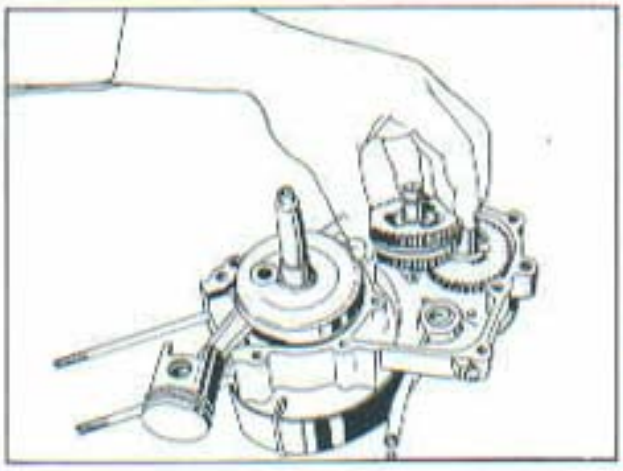


FIG. 15

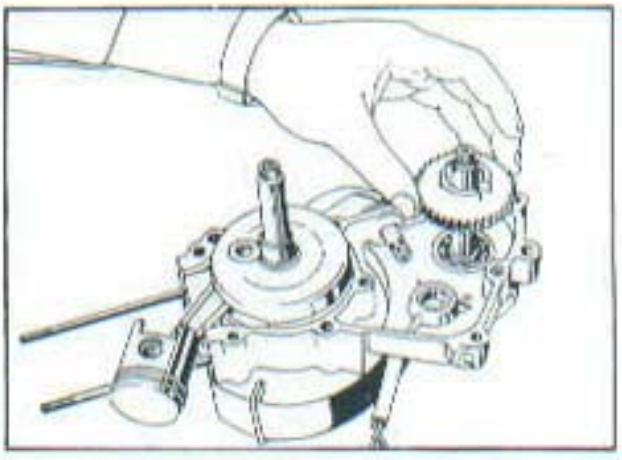


FIG. 16

D. Clutch dismantling - Fig. 17-20

After removing two M 5x30 screws, lift off the left-hand clutch cover.

Using the clutch drum holder No. 928-1000-1.5 hold the starting clutch drum and loosen the nut with spanner No. 17 (Fig. 8). Pull off the clutch drum using puller No. 4T 210-2200-01 (Fig. 9). With a screwdriver remove three circlips from the recesses to loosen the clutch starting shoes (Fig. 10). For reassembly use washer No. 4T 210-2100 and clutch drum puller No. 210-2200 and secure the clutch with the circlips (Fig. 11). After removing the drum with starting shoes, rotate and gently pull the starting drum with the small pulley to remove it together with the indented belt.

Work carefully so as not to damage the needle bearings and washers For the removal and refitting of the starting shoes use the hook No. MN 1100-7.1 (Fig. 12) or flat pliers. Loosen the nut of the drum housing the change-gear shoes with spanner No. 17 while holding the output shaft with spanner No. 10 on the side of the drive gear to prevent its rotation.

After unscrewing the nut and lifting off the cover, remove the circular packing piece and pull out the change-gear shoes together with their carrier (back plate) using two thin screwdrivers braced against the inner edge of the drum. Insert the tips of the screwdrivers under the top arms of the shoe near the pivots and opposite each other. By carefully pushing the screwdriver handles downward you will lift the carrier with the shoes out of the drum.

Wipe the oil off the parts immediately and put the parts in a clean place. If the drum or the shoe linings are stained with oil they have to be degreased thoroughly. Finally remove the drum out of the crankcase.

When removing and refitting the shoe carrier, take care not to damage or lose the distance and the (19x15) seal rings.

Splitting the crankcase

* a) **Unscrew and remove ten M 6 x 45 screws from the left side of the crankcase.**
b) Fit the crankcase splitter No. 3T 210-10 000-14.5 on the studs and fasten it by two screws on the left-side of the crankcase.
c) Pull off the left-side of the crankcase (Fig. 13).

Removing gears

a) Remove driving gear (28 teeth) from output shaft - Fig. 14
b) Remove shaft with gears - Fig. 15
c) Remove drive gear - Fig. 16

* **WARNING! ONE SPEED ENGINE ONLY.**

**BEFORE SPLITTING CRANKCASE OF SINGLE SPEED ENGINE — SEE PICTURE #7.**

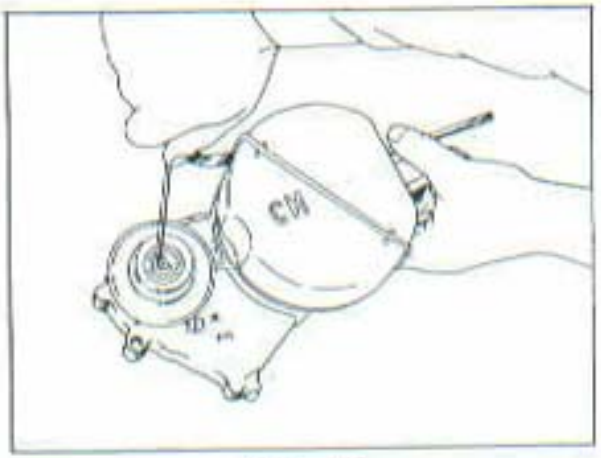


FIG. 17

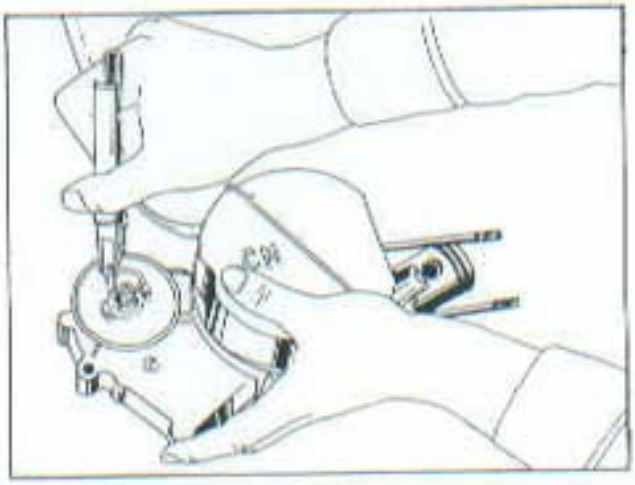


FIG. 18

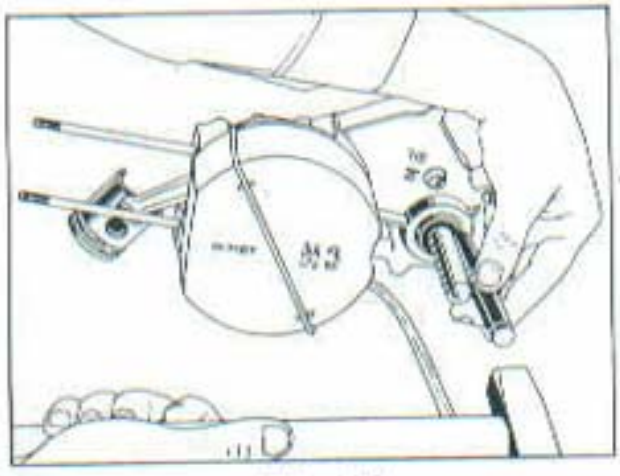


FIG. 19

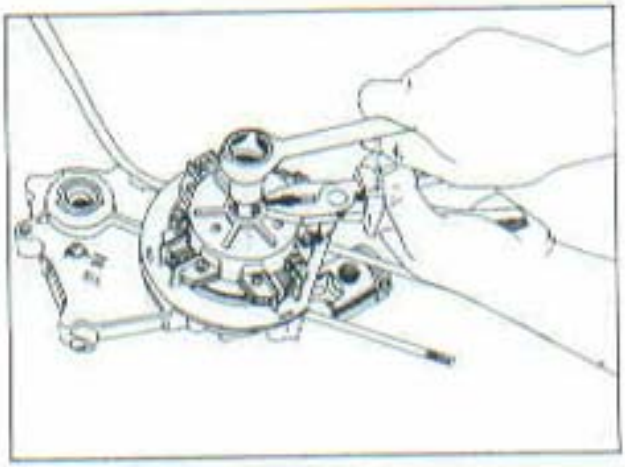


FIG. 20

Removing Drive Assembly

1) Loosen the circlip with a screwdriver and pull the washer, gear and complete drive off the output shaft (Fig. 17).

2) With pliers, loosen the circlip and pull the washer, cap, and sprocket off the shaft (Fig. 18).

3) After loosening the circlip, press the output shaft out of the case.

When reassembling the output shaft, use the seal ring installer (Fig. 19) to protect the shaft seal rings from damage.

Removing Alternator

1) Use a screwdriver to loosen the alternator cover retaining spring, and remove cover. Unscrew the M5 x 25 screw holding down the rotor.

2) With rotor puller, No. 928-6000-1.1, pull off the rotor (Fig. 20) and then loosen the lock pin.

3) Remove two M4 x 22 screws fastening the stator, and pull the stator out of the right side of the crankcase together with the leads.

After removing the transmission clutch and the alternator, press the crankshaft out of the crankcase.

Engine Reassembly

To reassemble the engine, reverse the above procedure.

1) Warm up the right side of the crankcase, about 158°F to 176°F and press in the crankshaft.

2) Reinstall the transmission.

3) Warm up the left side of the crankcase, about 158°F to 176°F and join it to the right side.

4) Reinstall the clutches.*

5) Reassemble alternator and assembly drive (engine drive engaging and disengaging device).

6) Reinstall the piston, the cylinder, and the cylinder head.

If any of the parts are worn beyond the acceptable gap, replace them with new ones.

*Reassembling 2nd-speed clutch

Observe utmost cleanliness during the clutch reassembly. Degrease the drum (large pulley) with a degreasing agent (i.e. alchohol, acetone, gas, etc) and wipe dry with a clean cloth. The surface of the drum must be polished with fine emery paper. A rougher surface has an unfavorable affect on the service life of the friction lining.

Make sure that the GUFERO seal ring (15x24x7) in the drum is not damaged.

Put the shoe carrier with the two 2nd-speed shoes mounted in position together with the regulating plate located between the shoes into the drum. All parts must be dry, without any traces of oil.

If oil has gotten between the joint faces during the dismantling, remove the 2nd-speed shoes and dip the carrier in a degreasing agent. Dry the carrier thoroughly

Rotate the shoe carrier together with the regulating plate counterclockwise and fit the parts in their position with a slight pressure of the hand. Never touch the friction lining or the friction surface of the drum with greasy hands. Place the two O-rings through the shaft, using a rigged tool made of copper tubing - 18mm O.D , 16mm I.D., to help push the O-rings firmly against the back plate of the shoe carrier. Lay the metal bushing over the O-rings and press together. Place the inside plate through the shaft. With the M10 x 1.25 nut, screw the flat metal washer and the clutch cover in place.

E. Carburetor - Fig. 21

The moped is fitted with the JIKOV 2912 DC carburetor with the following parts and adjustments:

| | |
|---|---|
| Main jet | 63 |
| Idling jet | 35 |
| Needle position | 2nd notch from top |
| Air screw backed off from the stop by 3/4 turn (1/4 turn for break in period) | |

Routine maintenance of the carburetor includes its removal, flushing with clean gas and blowing through with compressed air. Clean the jets only with gas (or acetone) and air. Never use lengths of wire or other hard objects which are apt to damage the calibrated holes.

To give the carburetor a thorough overhaul, proceed as follows:

1. Remove the carburetor from the engine, dismantle, and clean the individual components thoroughly.

2. Discard worn parts and replace them with new ones.

3. Check the level of the flange and true it, if necessary, on an emery cloth placed on a flat surface..

4. After trueing the flange, clean the carburetor body thoroughly again.

FIG. 21

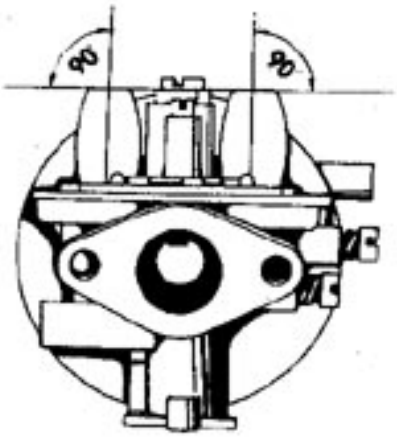


FIG. 22

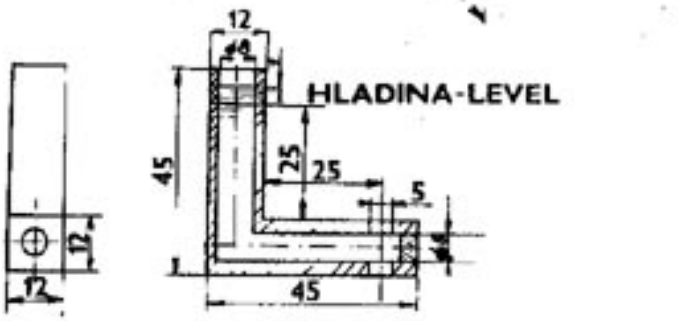




FIG. 22a

5. Check the jets and adjustments for compliance with the recommended values.

6. Adjust the needle and the fast-idling screw as recommended and finish the assembly procedure.

7. Install the carburetor in position on the engine. Start the engine, warm it up, and adjust the richness of the mixture by means of the air screw. Adjust the idling speed from 1,600 to 1,800 r.p.m. by means of the stop screw, and the needle valve and the free movement of the twistgrip by means of the throttle control.

Check and adjust the fuel level after every replacement of the fuel float. If the fuel leaks from the carburetor the leakage is not due to a defective float or needle.

Fuel Level Adjusting

1. Mechanical Adjustment - Fig. 22

With the carburetor removed from the engine, remove the float chamber cover. Turn the carburetor so that the floats are directed upwards. Check that the floats move freely on the spindle and that they are perpendicular to the carburetor center line. Also, check the height so that it reaches the level of the venturi tube top edge. If this is not the case, adjust the height of both floats by bending the spindle. Floats adjusted in this way should maintain the fuel in the float chamber at the correct level.

2. Check Fuel Level

After having adjusted the fuel level mechanically, the recommendation is to check the adjustment with the help of a tool which you can make of plexiglass according to the drawing (Fig. 22a). Screw the tool on to the float chamber (bottom drain screw) and allow fuel to run into the carburetor. Its level should reach the center index line with a tolerance of -1 mm. If this is not the case, adjust the floats by bending the spindle upward or downward as necessary. The fuel level adjusted in this way complies with the manufacturer's requirements. When checking the fuel level in the carburetor, when not fitted on the engine, it is necessary to observe the same height of the pressure column as exists between the fuel tank and carburetor when fitted on the engine.

F. Crankshaft

Removal and Reinstallation

1. Use a press with a pressure of about 10,000 lbs. prior to removing the crankshaft, marking the relative position of the crankshaft flywheels with check marks using a square.

2. Press the crankpin out of one-half of the crankshaft and then out of the other half.

3. Assemble the connecting rod, crankpin, and cage with needle rollers according to the classification table.

4. Clean all parts of the crankshaft thoroughly, especially the crankpins, which must be perfectly dry.

5. Press the crankpin into the flywheel till its face is flush with the outer surface of the flywheel.

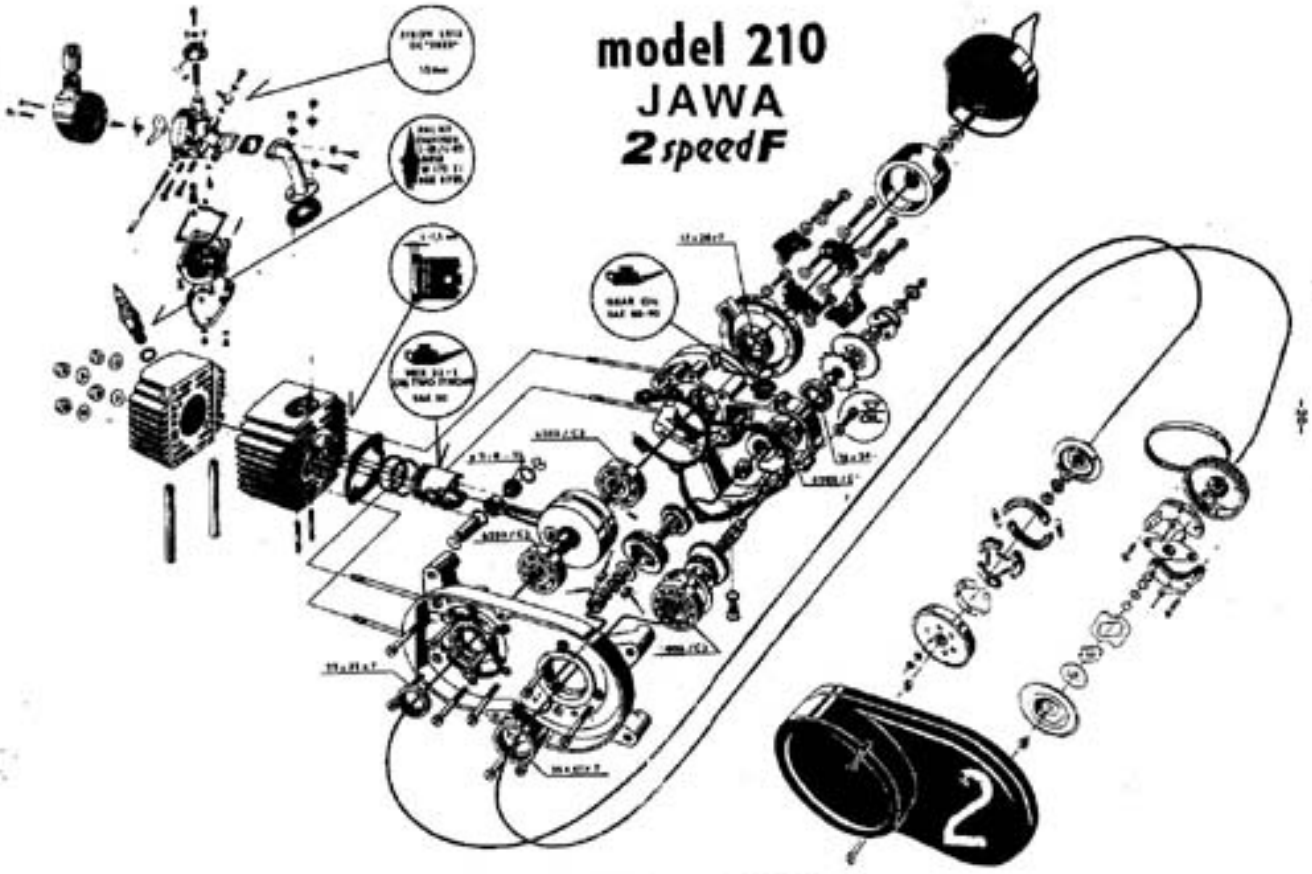
6. Install the cage with needle rollers and lubricate with mineral jelly.

7. Press the flywheels together - observing the check marks, made prior to removal of the crankshaft.

8. After reassembly, the crankshaft must be centered.

CLASSIFICATIONS TABLE

| Conrod | Assembly groups | | | | | | |
|---|---|---|---|---|---|---|---|
| I | 15 | 14 | 13 | 12 | 11 | roller | |
| | A | B | C | D | E | | pin |
| II | 14 | 13 | 12 | 11 | 10 | roller | |
| | A | B | C | D | E | | pin |
| III | 13 | 12 | 11 | 10 | 9 | roller | |
| | A | B | C | D | E | | pin |
| IV | 12 | 11 | 10 | 9 | 8 | roller | |
| | A | B | C | D | E | | pin |
| V | 11;12 | 10;11 | 9;10 | 8;9 | 7;8 | roller | |
| | A | B | C | D | E | | pin |
| VI | 10 | 9 | 8 | 7 | 6 | roller | |
| | A | B | C | D | E | | pin |
| VII | 9 | 8 | 7 | 6 | 5 | roller | |
| | A | B | C | D | E | | pin |
| VIII | 8 | 7 | 6 | 5 | 4 | roller | |
| | A | B | C | D | E | | pin |
| IX | 7 | 6 | 5 | 4 | 3 | roller | |
| | A | B | C | D | E | | pin |
| X | 6 | 5 | 4 | 3 | 2 | roller | |
| | A | B | C | D | E | | pin |

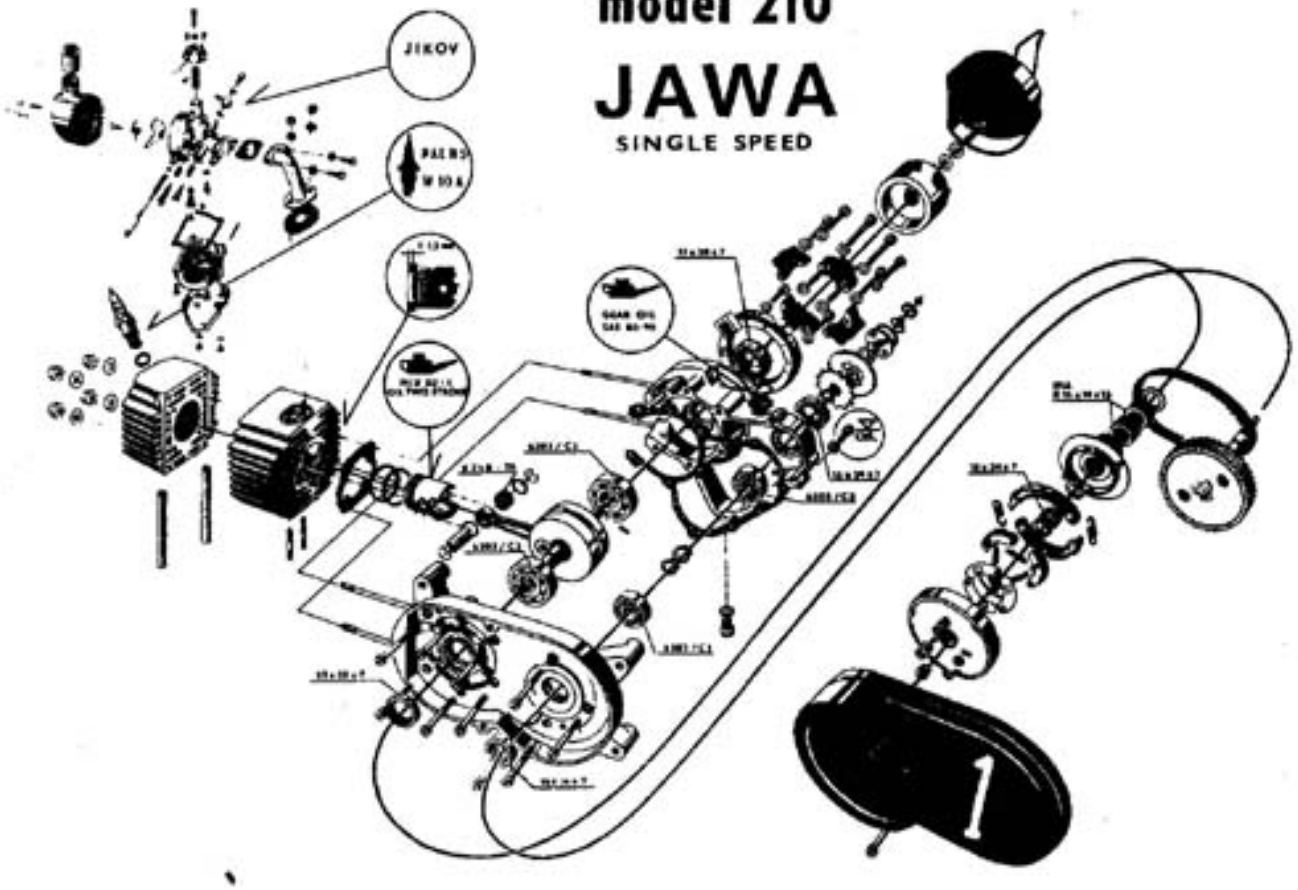



AMERICAN JAWA LTD.

# model 210

# JAWA

SINGLE SPEED

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## CRANKSHAFT ALIGNMENT PROCEDURE

Check axial alignment of the crankpins as per Fig. 23-1. If the two crankshaft halves are misaligned (out of parallel), take the shaft from between the center, place it on a suitable pad (copper, aluminum) and using a hammer of soft material or possibly a hand-operated crank press, proceed to align until the correct axial alignment of the crankpins is obtained.

The two crankshaft halves are not misaligned if the readings of the two dial indicators are equal while the shaft turns. After this check (if the respective out-of-true of the functional parts exceeds 0.015 mm (.00058"), align the center lines of the crankshaft by bending the two shaft halves as necessary.

The procedure can be seen in Fig 23, Ref. Nos. 2,3. According to the respective misalignment of the crankshaft center line (as per the dial indicator readings), bend the flywheels so as to converge (in case of -- readings), or so as to diverge (in case of ++ readings).

If necessary, proceed to align at several levels, other than as shown in the picture. For final alignment observe the specification 0,015 mm (.00058") regarding the permissible out-of-true of the functional points.

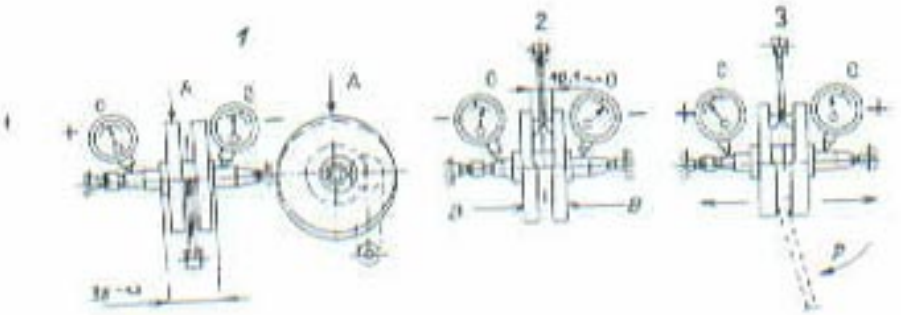



FIG. 23

IV. FRAME

1. Front Telescopic Forks

The front can be slid out of the frame head after loosening the center steering bolt. Before refitting the fork thoroughly lubricate the sliding parts with automotive grease.

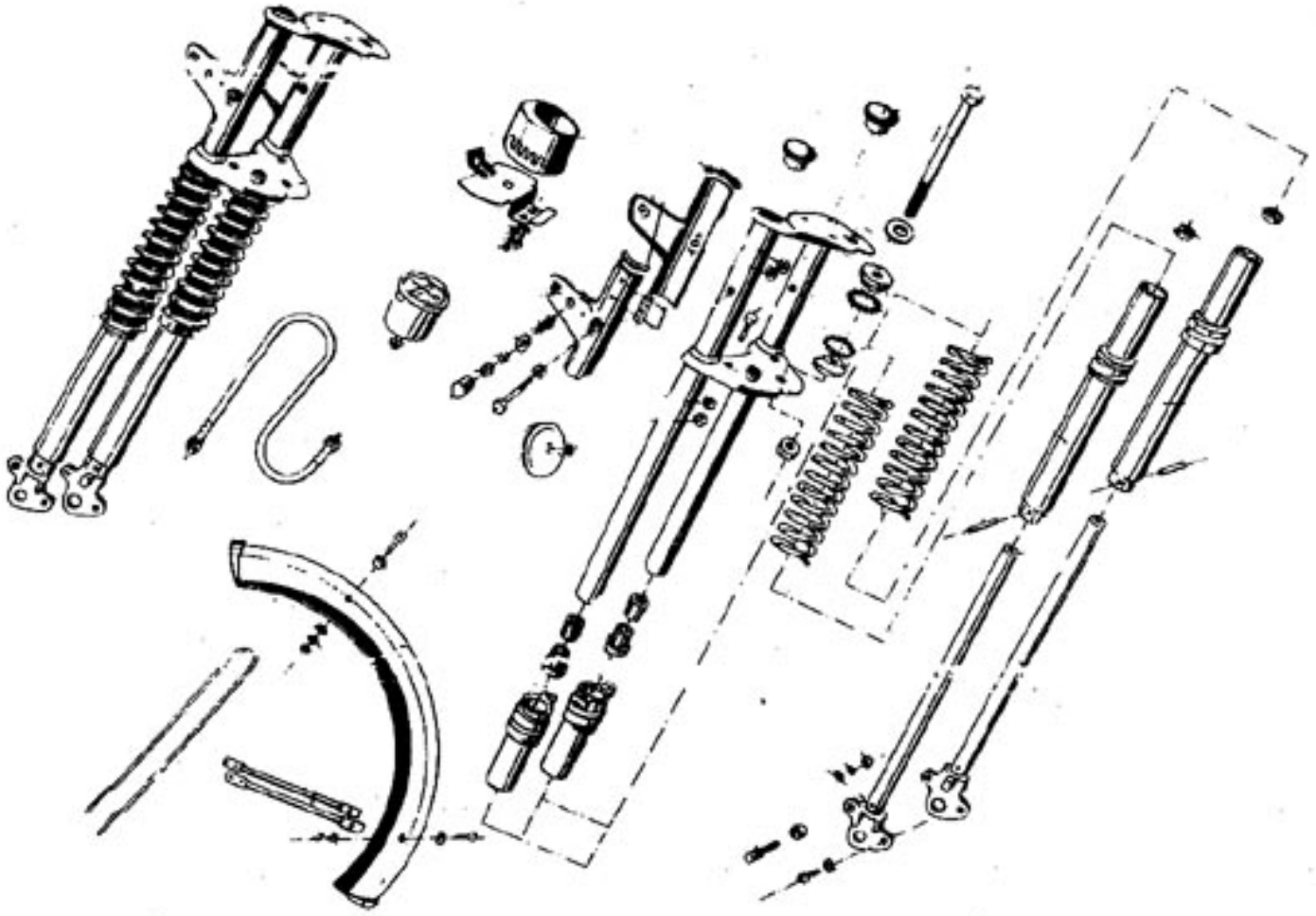


FIG. 24
Front Telescopic Fork

## 2. Front and rear wheel

The minimum dimensions (dia. 81.5mm) of the brake-shoe linings will ensure safe braking. Linings worn below this specification must be replaced.

FIG. 25
Exploded view of front and rear wheel

## 3. Rear wheel telescopic suspension

The moped has a rear telescopic suspension without shock absorbers. Their stroke is 60 mm, and they require no maintenance. Remove them by loosening the two M 8 nuts fastening them to the frame and to the rear swing arm.

### Dismantling telescopic suspension units

1. Unscrew the top spring retaining lug
2. Unscrew the spring from the bottom retaining lug.

Reverse the dismantling procedure to reassemble the telescopic suspension units. Before refitting, lubricate the top lug guide of each unit.

FIG. 26
Rear telescopic suspension unit

# V. ELECTRICAL EQUIPMENT

## 1. Alternator

Electric current is supplied from the alternator fitted with a rotor. The lamps are fed with current from two stator coils connected in series with an output of 35W at a voltage of 6V.

Another stator coil supplies current to the ignition coil and the thyristor block controlled by the pulse-forming stator coil.

| | | |
|---|---|---|
| Lamps: | Headlight | 6V/21W bulb |
| | Tail light | 6V/5W bulb and 6V/10W bulb |
| | Speedometer lighting (outside bulb fastening) | 6V/2W bulb |
| | Speedometer lighting (inside bulb fastening) | 6V/1.2W bulb |

The nominal gap between the rotor and the coils is 0.3 mm.

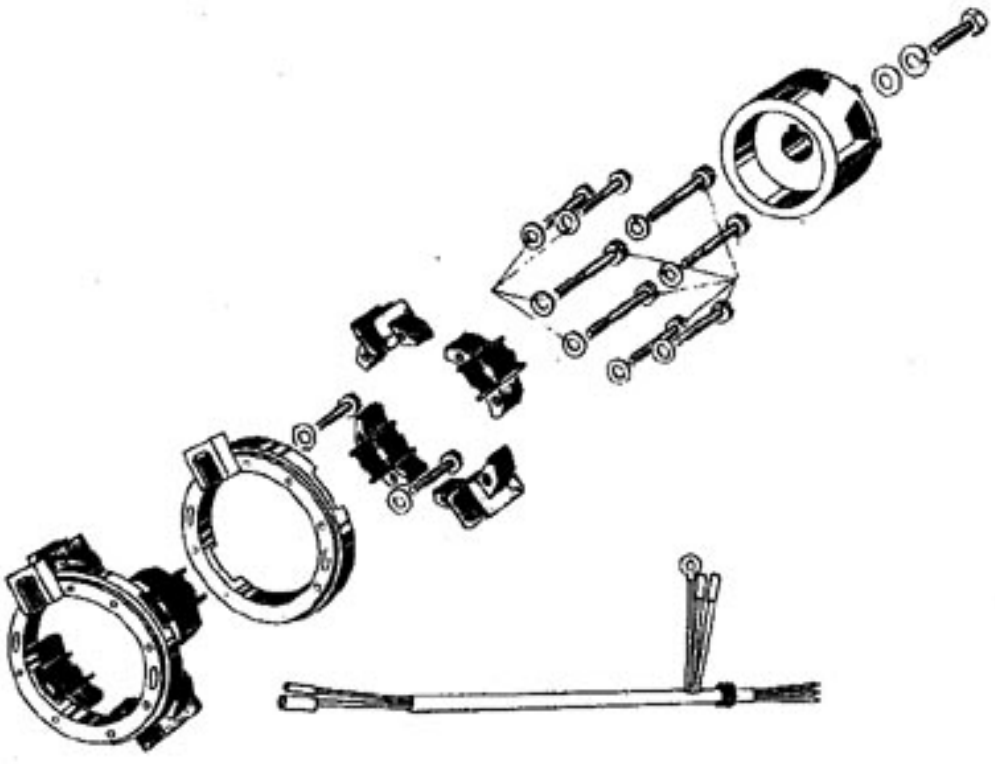


FIG. 27
Alternator

## 2. Ignition System

The moped is equipped with a non-contact semiconductor ignition system which does not require any maintenance except cleaning the spark plug. It is practically failproof and a defect can only be the result of unwarranteed interference on the part of the owner. Ignition adjustment is unnecessary since no mechanical wear can take place. Ignition advance should be adjusted only if the stator screws have become loose or after the removal of the alternator. We recommend, therefore, not to interfere with the ignition adjustment. In the case of a failure go to a specialized workshop.

| | |
|---|---|
| Feeding | - generator coil |
| Starting | - pulse-forming coil |
| Spark plug | - PAL N 7R, Champion L-89CM |
| Plug point gap | - 0.5 mm (.0196") |
| Ignition advance | - 1 - 1.5 mm (.0393 - .059) before T.D.C. |

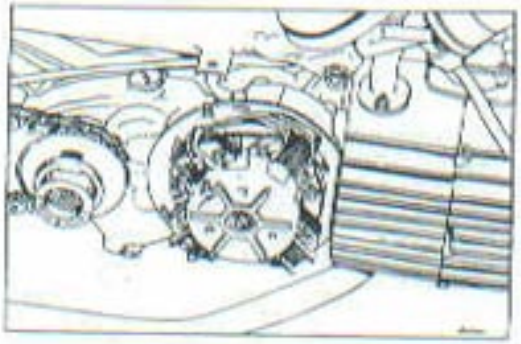


FIG. 28

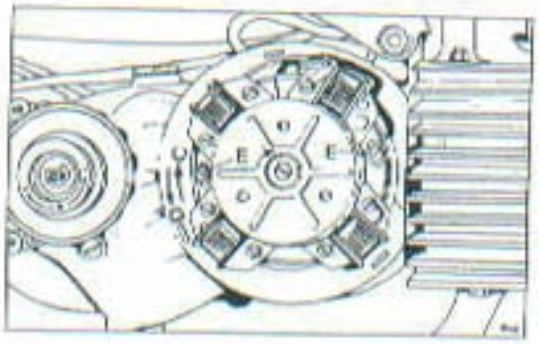
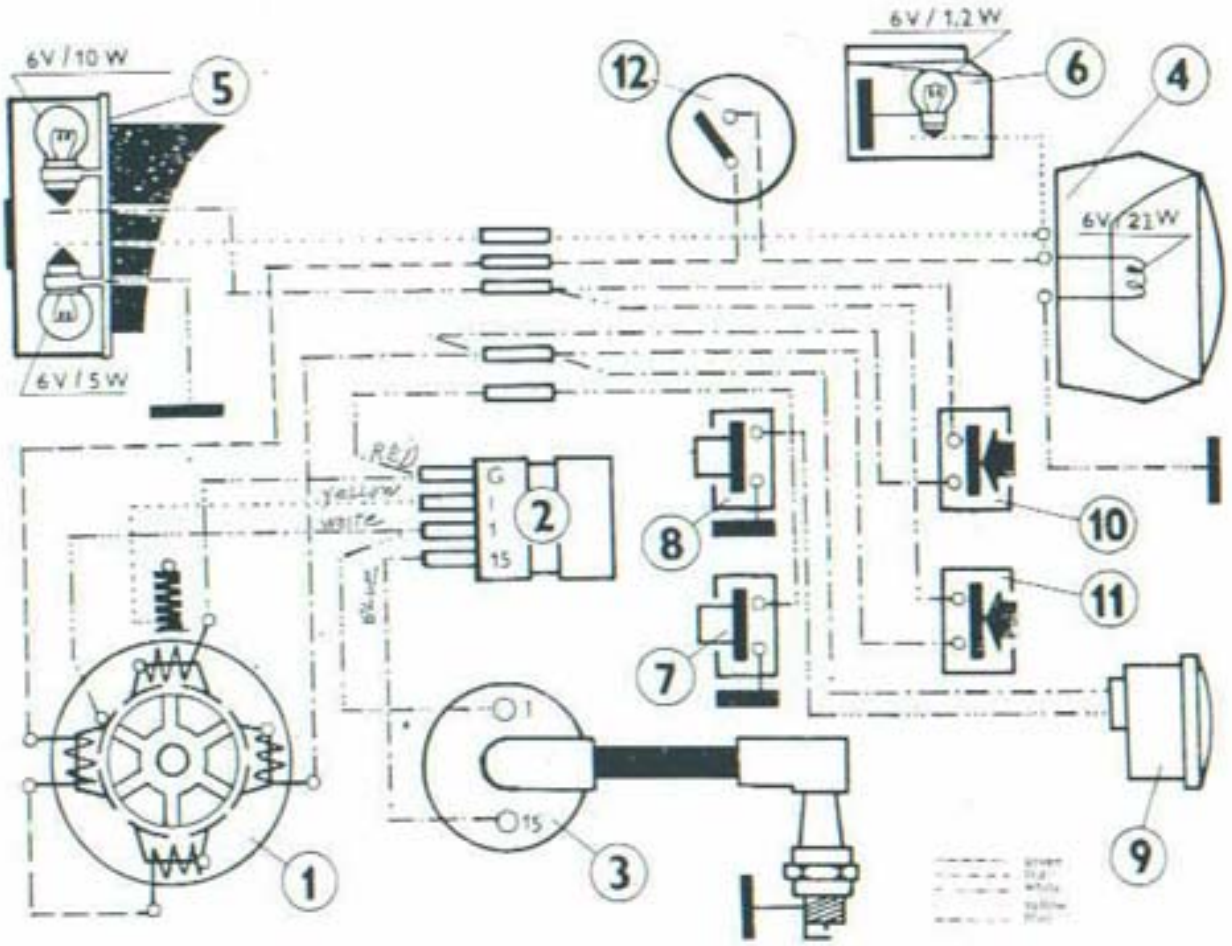



FIG. 29

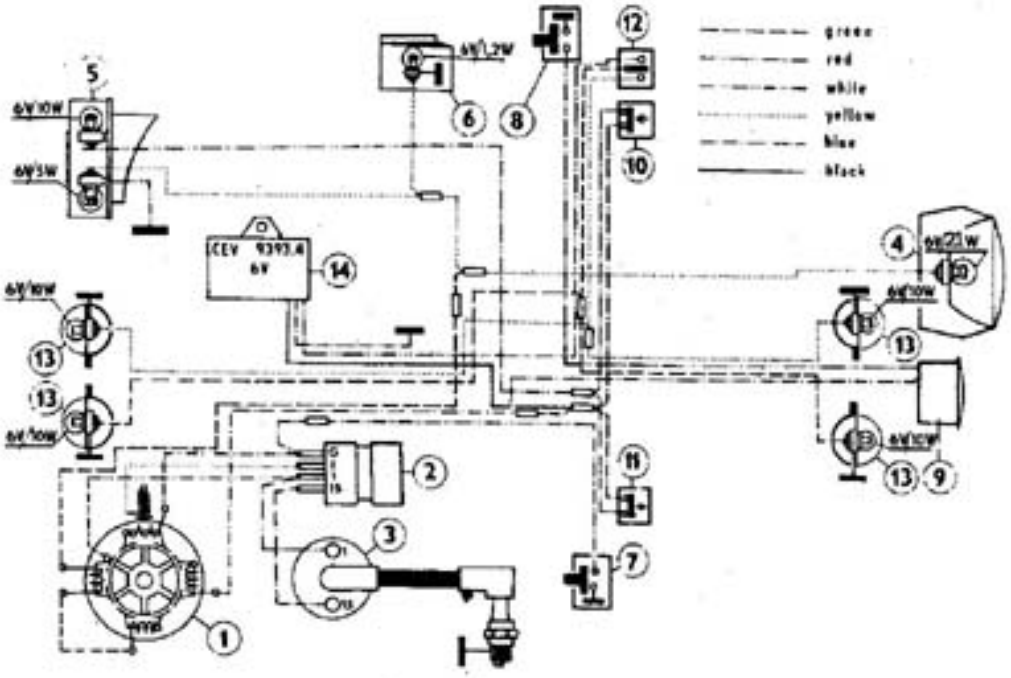
When adjusting the ignition advance, rotate the rotor in the direction of arrow "A" (Fig. 28) until timing marks "B" of the rotor and stator coincide. Insert dial indicator of a depth gauge into the spark plug hole and measure depth. Then continue rotating the rotor in the direction of arrow "A" until the piston reaches its top dead center position. The distance measured on the dial indicator from the alignment of the timing marks up to top dead center should be 1 to 1.5 mm (.0393 - .059). If this value is exceeded, loosen screws "E" (Fig. 29 ) and rotate the stator in the direction of arrow "C". If the value is less, rotate the stator in the direction of arrow "D".

## 3. Moped Wiring Diagram - Pg. 28 & 29




Wiring diagram - without turn signal

1. Alternator 2. Thyristor ignition unit 3. Ignition coil 4. Headlamp 5. Tail lamp 6. Speedometer 7 Engine kill switch 8 Horn switch 9. Horn 10. Stop-switch of rear brake 11. Stop-switch of front brake 12 Headlamp light switch




Wiring diagram - with turn signal

1 Alternator 2. Thyristor ignition unit 3. Ignition coil 4. Headlamp 5. Tail lamp 6. Speedometer 7 Engine kill switch 8. Horn switch 9. Horn 10. Stop-switch of rear brake 11. Stop-switch of front brake 12. Headlamp light switch 13. Direction -indication lamp

## VI. Trouble Shooting

### A. Engine Will Not Start

1. Shut pet cock.
2. Empty fuel tank.
3. Clogged fuel hose, fuel jet, strainer, or water in float chamber.
4. Faulty ignition - Carbon deposits on spark plug electrodes, defective spark plug insulator, excessive plug gap, defective thyristor device, defective ignition coil or stator plate.
5. Flooded engine. Shut off pet cock and turn the pedals while the machine is on its stand, or pedal, until the engine fires. Use the decompressor lever if the moped is fitted with it. Then open the pet cock. It may be necessary to unscrew the spark plug to clean it and to turn the engine several times to expel excessive fuel through the spark plug hole. Reinstall the spark plug and repeat the starting procedure.
6. Slipping or defective starting clutch. Remove the crankcase cover on the ignition side and while pedaling see whether the crankshaft with the rotor is rotating.

### Engine Runs Erratically

1. Overheated engine.
2. Faulty spark plug.
3. Partly obstructed fuel supply orclogged main jet.
4. Leaky crankcase.
5. Faulty ignition.
6. Faulty cable terminal.
7. Improperly vented fuel tank.

### Loss Of Power

1. Clogged air cleaner.
2. Clogged exhaust silencer.
3. Damaged crankcase seal ring.
4. Damaged piston, cylinder or piston rings.
5. Leaky cylinder head.
6. Poorly adjusted ignition.

Engine power is satisfactory, but acceleration is poor or peak speed cannot be attained.

1. Brake shoes are fouling the drums.
2. Under inflated tires.
3. Slipping starting clutch or 2nd-speed clutch.

B. Transmission - Trouble shooting

Optimum gear change in model 210 moped, 2nd gear - 25 MPH model at full throttle.

2nd-speed clutch warmed up to required temperature. After starting from idle, the 2nd gear is engaged within a distance of 28.6 yards. Engagement of 2nd gear begins at a distance of 19.8 yards and is completed in about 1.5 to 2 seconds.

According to speedometer readings, the moped should attain about 14.4 MPH, in 1st gear at full throttle and the change to the 2nd gear should be completed at a speed of about 16.8 MPH.

| Problem | Cause | Remedy |
|---|---|---|
| Engine will not start | Slipping 2nd-speed clutch | Degrease drum surface & lining |
| Faulty freewheel | Water on drum friction surface. | Dry drum surface & lining |
| | Regulating plate does not move and does not expand 2nd-speed shoes | Work free or replace regulating plate |
| | Worn lining of 2nd speed shoes. Regulating plate strikes against shoe pivot during starting and does not force shoes against drum inner surface. | Replace 2nd-speed shoes |
| Changing from 1st to 2nd gear takes very long or does not take place at all. When the 2nd speed clutch is sliding it is not allowed to drive more than 1/2 mile. High Temperature reduces the life-time of driving belt | Slipping 2nd speed clutch. Dirt or oil in friction areas. Water on friction area | Remove dirt, degrease drum & lining with suitable degreasing agent. Find cause (defective CUFERO sealing ring, O-ring) |

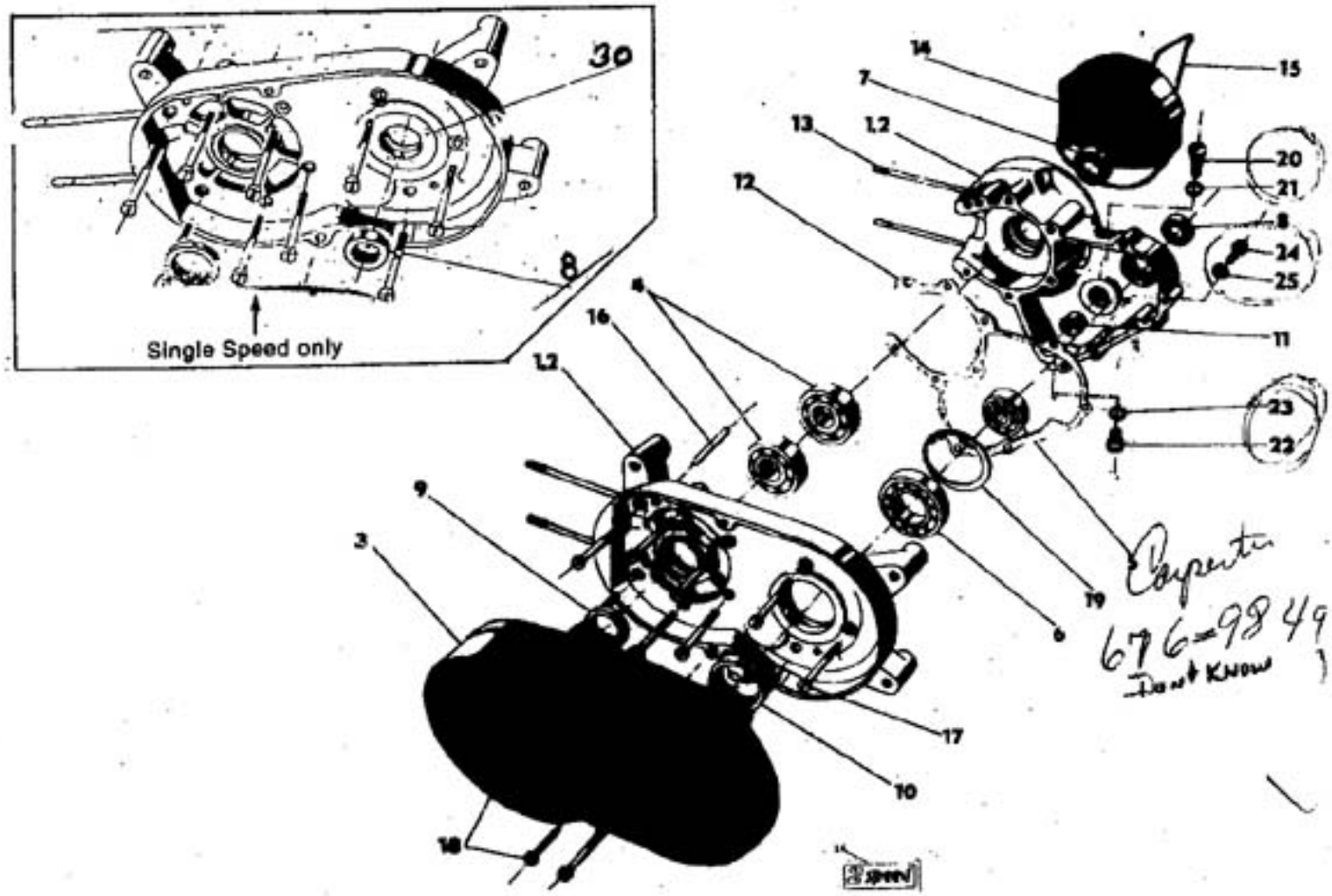
| Problem | Cause | Remedy |
|---|---|---|
| Charging from 1st to 2nd gear takes a shorter time than usual. | Imperfect control of retraction of 2nd-speed shoes by regulating plate | |
| Moped starts from idle into 2nd gear, or a change from 2nd to 1st gear is delayed when riding uphill. | Check movability of inner drive.<br><br>Damaged hard, chrome-plated ears on regulating plate | Replace regulating plate |

| TEST | READING OF TESTER | OHMMETER TESTS | CORRECTION |
|---|---|---|---|
| 1 | No Spark | Use ohmmeter feed 1.5 - 3V | Check spark plug and wire connectors |
| 2 | Field Coil Test<br>Part #207 61 005 | Resistance between the core and winding should be 220 + 10 OHMS | If Not, replace the coil |
| 3 | Impulse Coil Test<br>Part #210 61 004 | Resistance between armature bracket and impulse coil should be 17 + 1 OHMS | If Not, replace the coil |
| 4 | Test of Electronic Unit<br>Part #207 66 002 | Resistance between one and I should be in the range of 50-400 OHMS.<br><br>When reversing the poles while testing (+ and -), reading must vary slightly, but will stay in the same range of 50-400 OHMS<br><br>Defective electronic unit when the ohmmeter reading "0" or infinity for original or reverse polarity. | Replace defective unit |
| 5 | High Voltage Coil Test<br>Part #443-212-210-800 | Resistance between one and 15 has to be less than 1 OHM and high voltage outlet should be about 6000 OHMS | Replace defective unit |

## 1. CRANKCASE—(1/S, 2/S)

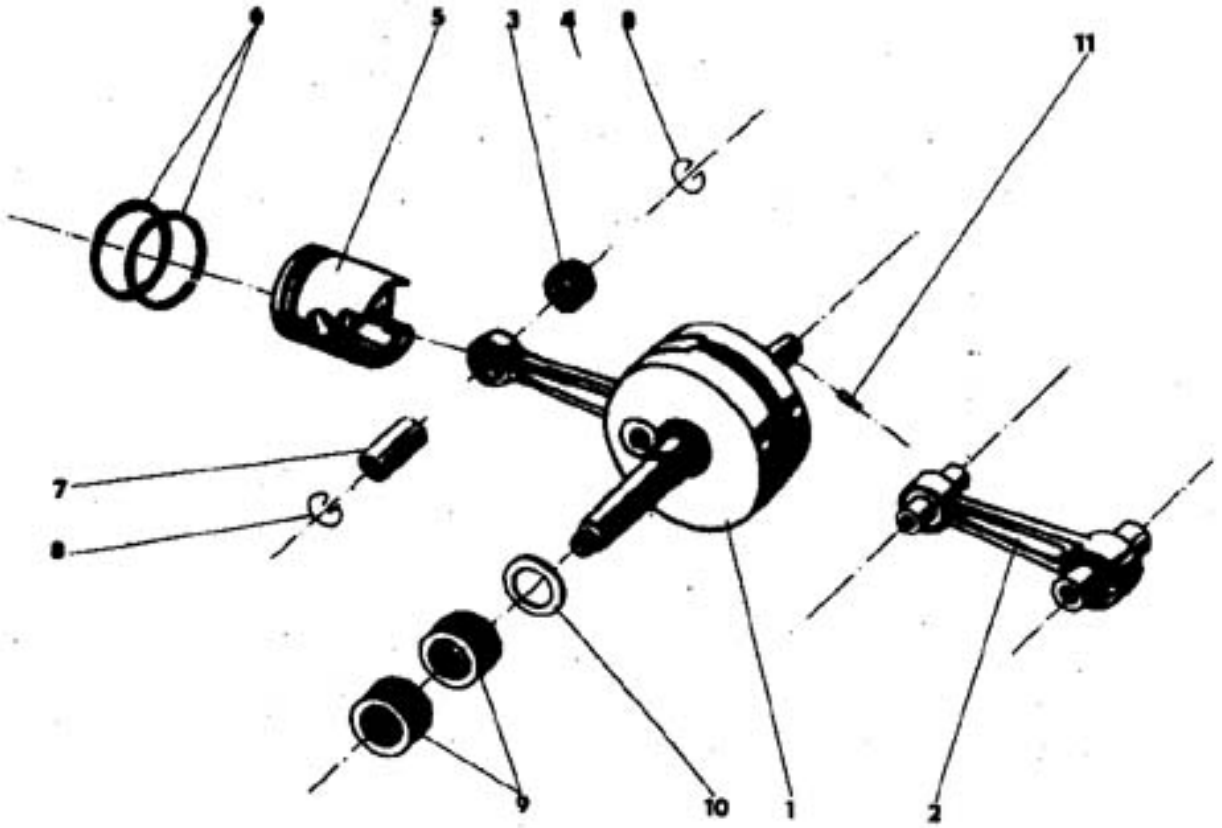
| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| — | 210 17 013 | Engine, complete with carb. | 1 | 14 | 28 1116 | Ignition Cover | 1 |
| | | | | 15 | 28 1119 | Spring | 1 |
| 1 | 210 11 001 | Crankcase Assy. | 1 | 16 | 311 515 003 040 | Dowel pin, 8 × 40 | 2 |
| 3 | 224 11 025 | Clutch cover | 1 | 17 | 20211 | Screw M6 × 45 | 10 |
| 4 | 43204 | Bearing No. 6203/C3 | 2 | 18 | 309 231 005 003 | Screw M5 ×30 | 2 |
| 5 | 324 162 020 003 | Bearing No. 6202/C3 | 1 | 19 | 311 733 100 550 | Circlip, 55 | 1 |
| 6 | 324 166 060 003 | Bearing No. 6006/C3 | 1 | 20 | 351 11 201 | Venting plug | 1 |
| 7 | 50112 | Seal 17 × 28 × 7 | 1 | 21 | 01 1119 | Fiber washer 14 ×20 | 1 |
| 8 | 50115 | Seal 15 × 24 × 7 | 1 | 22 | 550 10 012 | Capscrew | 1 |
| 9 | 273 521 005 317 | Seal 22 × 32 × 7 | 1 | 23 | 50005 | Packing ring 9 × 5 | 1 |
| *10 | 273521009517 | Seal 35 × 47 × 7 | 1 | 24 | 309 246 206 010 | Screw M 6 × 10 | 1 |
| 11 | 224 11 018 | Bushing | 2 | 25 | 722 923 110 201 | Fiber washer 6 × 10 | 1 |
| 12 | 210 11 005 | Gasket | 1 | *26 | 210 07 006 | Label Two Speed | 1 |
| 13 | 28-1112 | Stud bolt | 1 | 26a | 210 00028 | Label Single Speed | 1 |
| | | | | 30 | 215-11 059 | Bushing w/bearing & seal | 1 |

* DO NOT USE FOR SINGLE SPEED MODEL.



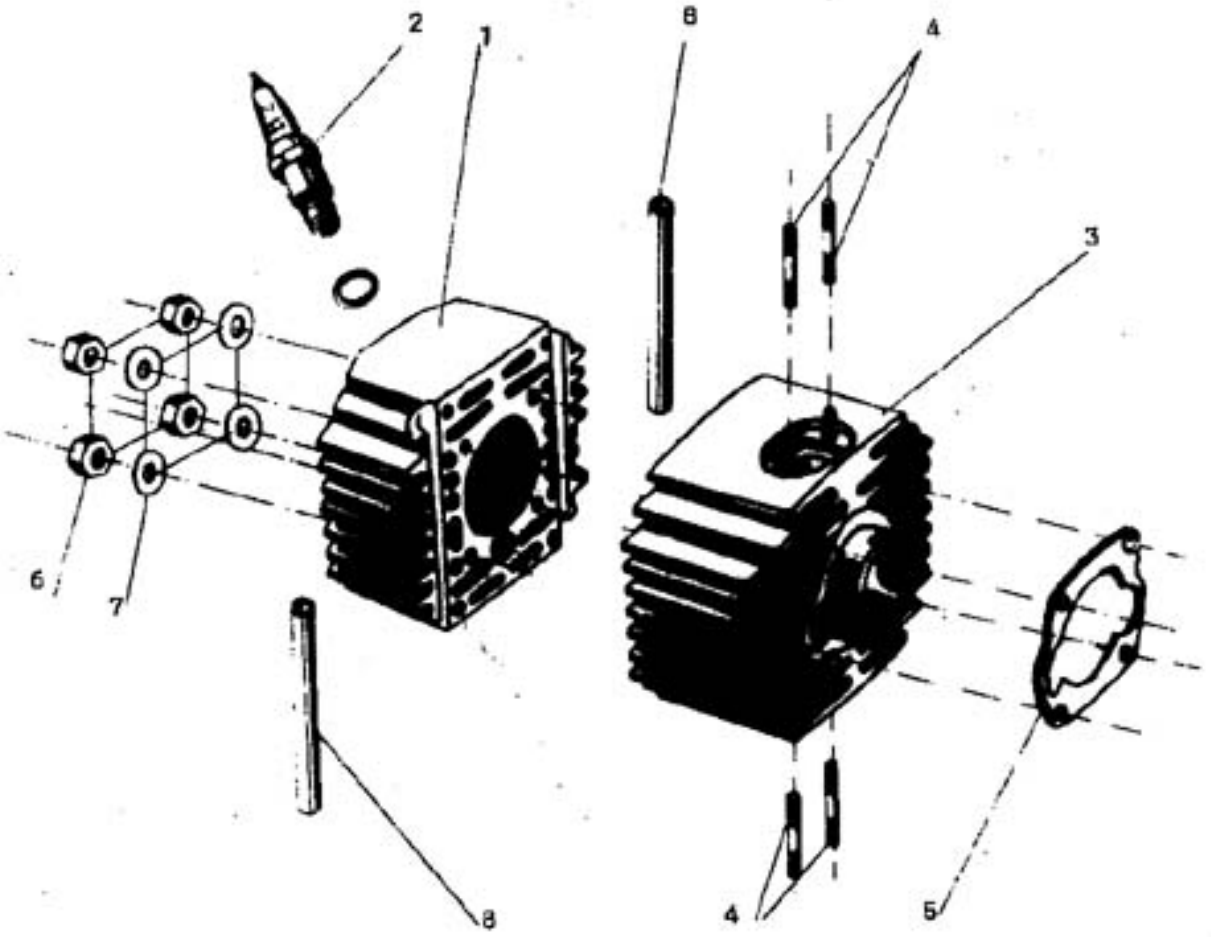
## 2. CRANKSHAFT MECHANISM—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 210 17 031 | Crankshaft Assy. w/o piston | 1 | 6 | 28 1220/1 | Piston ring 1st over | 2 |
| | | | | | 28 1220/11 | Piston ring 2nd over | 2 |
| 2 | 210 17 037 | Connecting Rod Comp. | 1 | | 28 1220/111 | Piston ring 3rd over | 2 |
| 3 | 210 17 032 | Needle cage bearing | 1 | 7 | 224 12 012 | Gudgeon pin | 1 |
| 5 | 319 231 000 280 | Piston | 1 | 8 | 05 1222 | Wire snap ring | 2 |
| | 319 231 000 281 | Piston 1st over | 1 | 9 | 70111 | Roller bearing 15 x 19 x 13 | 2 |
| | 319 231 000 282 | Piston 2nd over | 1 | | | | |
| | 319 231 000 283 | Piston 3rd over | 1 | 10 | 224 21 002 | Friction washer | 1 |
| 6 | 28 1220 | Piston ring 32 x 2 | 2 | 11 | 355 12 033 | Lock pin | 1 |



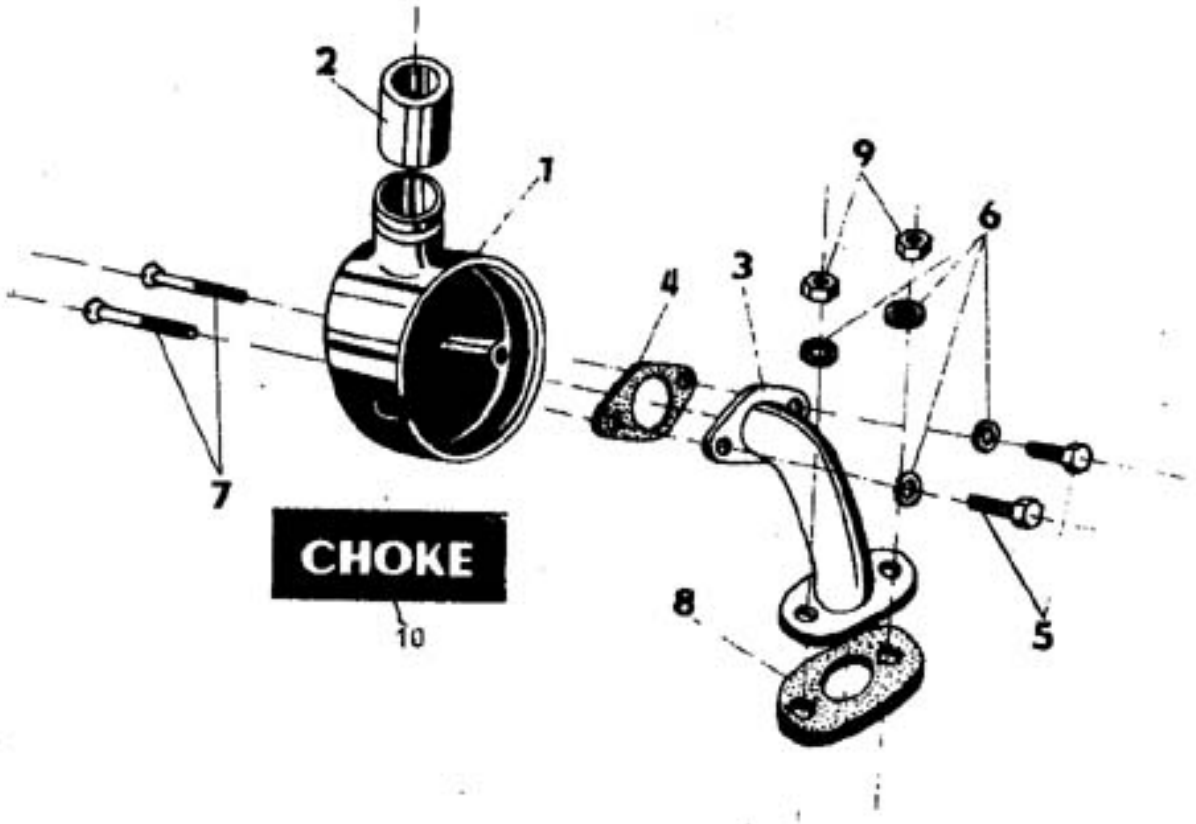
## 3. CYLINDER WITH HEAD—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 210 17 017 | Cylinder head | 1 | 5 | 28-1006 | Cylinder gasket | 1 |
| 2 | 62136 | Spark plug N7R | 1 | 6 | 25103 | Nut M6 | 4 |
| 3 | 224 13 100 | Cylinder Assy | 1 | 7 | 27007 | Washer 6.4 | 4 |
| 4 | 228 13 014 | Stud bolt | 4 | 8 | 272 312 055 095 | Hose | 2 |



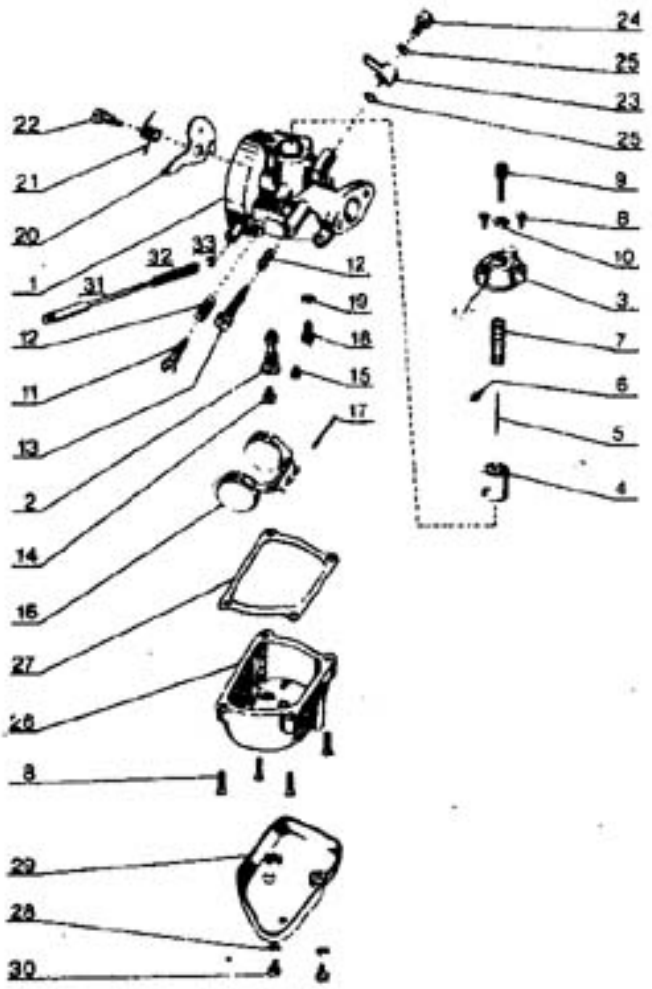
## 4. AIR CLEANER—(1/S 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 210 04 010 | Intake | 1 | 6 | 27401 | Washer 5.1 | 4 |
| 2 | 228 04 009 | Rubber Intake | 1 | 7 | 21020 | Screw M4 x 25 | 2 |
| 3 | 210 04 003 | Manifold | 1 | 8 | 210 10 017 | Gasket | 1 |
| 4 | 228 04 002 | Gasket | 1 | 9 | 25101 | Nut M5 | 2 |
| 5 | 25114 | Screw M5 x 12 | 2 | 10 | 207 07 035 | Choke label | 1 |



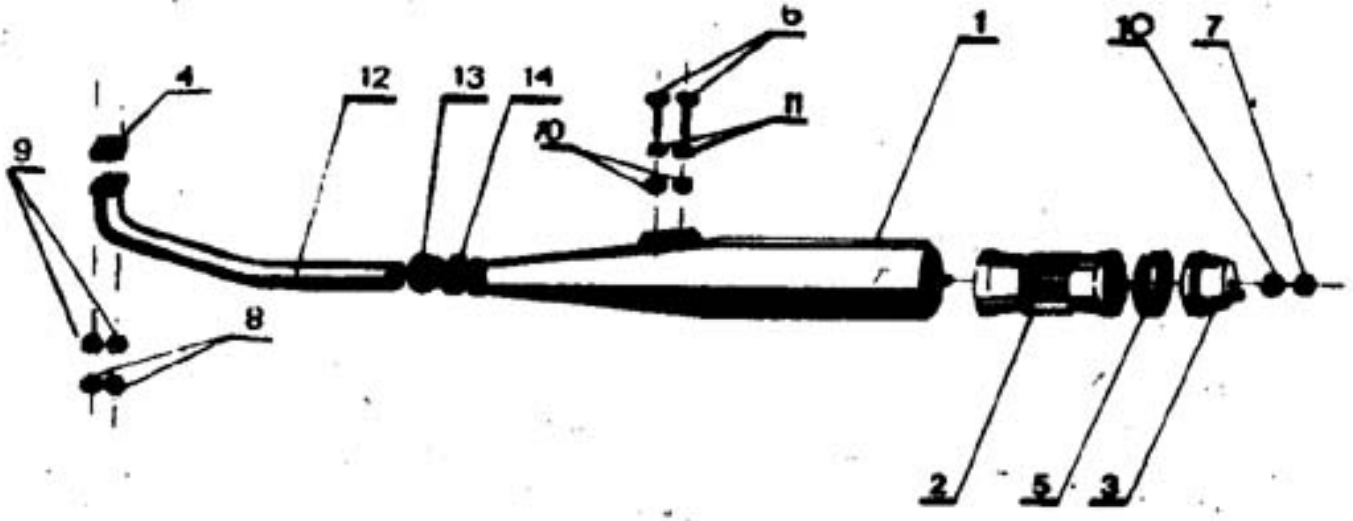
## 5. CARBURETOR—(1/S 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| — | 443 752 282 200 | Carburetor, JIKOV 12 | 1 | 17 | 2-31158 | Hinge Pin | 1 |
| 1 | 443 919 370 160 | Carburetor body Assy. | 1 | 18 | 2-65253 | Needle Valve Assy. | 1 |
| 2 | 23219 | Emulsion Tube | 1 | 19 | 2-5213 | Gasket seal | 1 |
| 3 | 443 919 371 610 | Lid Assembly | 1 | 20 | 443 918 448 102 | Orifice plate | 1 |
| 4 | 443 915 870 450 | Valve 12 | 1 | 21 | 2-4836 | Spring | 1 |
| 5 | 23-1155 | Valve needle | 1 | 22 | 443 911 018 702 | Screw | 1 |
| 6 | 2-3350 | Clip | 1 | 23 | 2-2491 | Connection | 1 |
| 7 | 2-4838 | Spring | 1 | 24 | 1-2596 | Screw | 1 |
| 8 | 1-2465 | Screw | 6 | 25 | 1-5209 | Seal | 3 |
| 9 | 2-2434 | Guide | 1 | 26 | 443 915 611 311 | Float Chamber | 1 |
| 10 | 2-2516 | Nut | 1 | 27 | 2-5312 | Gasket | 1 |
| 11 | 2-2558 | Stop Screw | 1 | 28 | 1-4308 | Washer 4.1 | 2 |
| 12 | 2-4825 | Spring | 2 | 29 | 210 04 011 | Dripping Tray | 1 |
| 13 | 2-2503 | Adjusting Screw | 1 | 30 | 1-4106 | Screw M4 × 8 | 2 |
| 14 | 1-3130/63 | Main Jet | 1 | 31 | 443 912 031 603 | Carburetor Pin Assy. | 1 |
| 15 | 2-3160/35 | Idle Jet | 1 | 32 | 315110004630 | Spring | 1 |
| 16 | 2-65257 | Double Float Assy. | 1 | 33 | 443916011907 | Clip | 1 |



## 6. SILENCER—(1/S 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| — | 210 07 013 | Exhaust pipe & Silencer Assy. | 1 | 7 | 25103 | Nut, M6 | 1 |
| | | | | 8 | 25101 | Nut, M5 | 2 |
| 1 | 207 07 308 | Silencer | 1 | 9 | 27401 | Washer, 5.1 | 2 |
| 2 | 228 01 048 | Silencer core | 1 | 10 | 27007 | Washer, 6.4 | 3 |
| 3 | 207 07 309 | Silencer Tail piece | 1 | 11 | 27402 | Washer, 6.1 | 2 |
| 4 | 228 10 004 | Gasket | 1 | 12 | 210 07 015 | Exhaust Pipe | 1 |
| 5 | 207 01 013 | Packing 2 × 180 | 1 | 13 | 207 01 312 | Packing Nut | 1 |
| 6 | 21103 | Bolt, M6 × 12 | 2 | 14 | 210 01 015 | Packing asbestos | 1 |

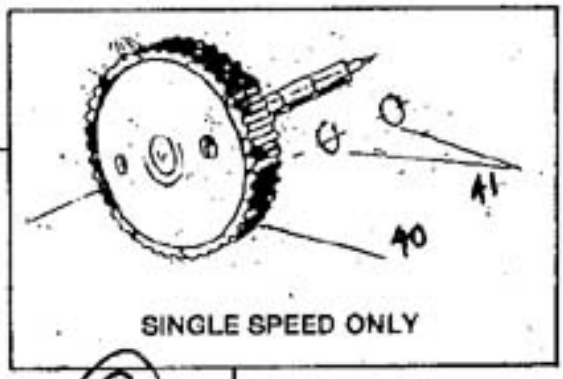


## 7. CLUTCH—(1/S 2/S)

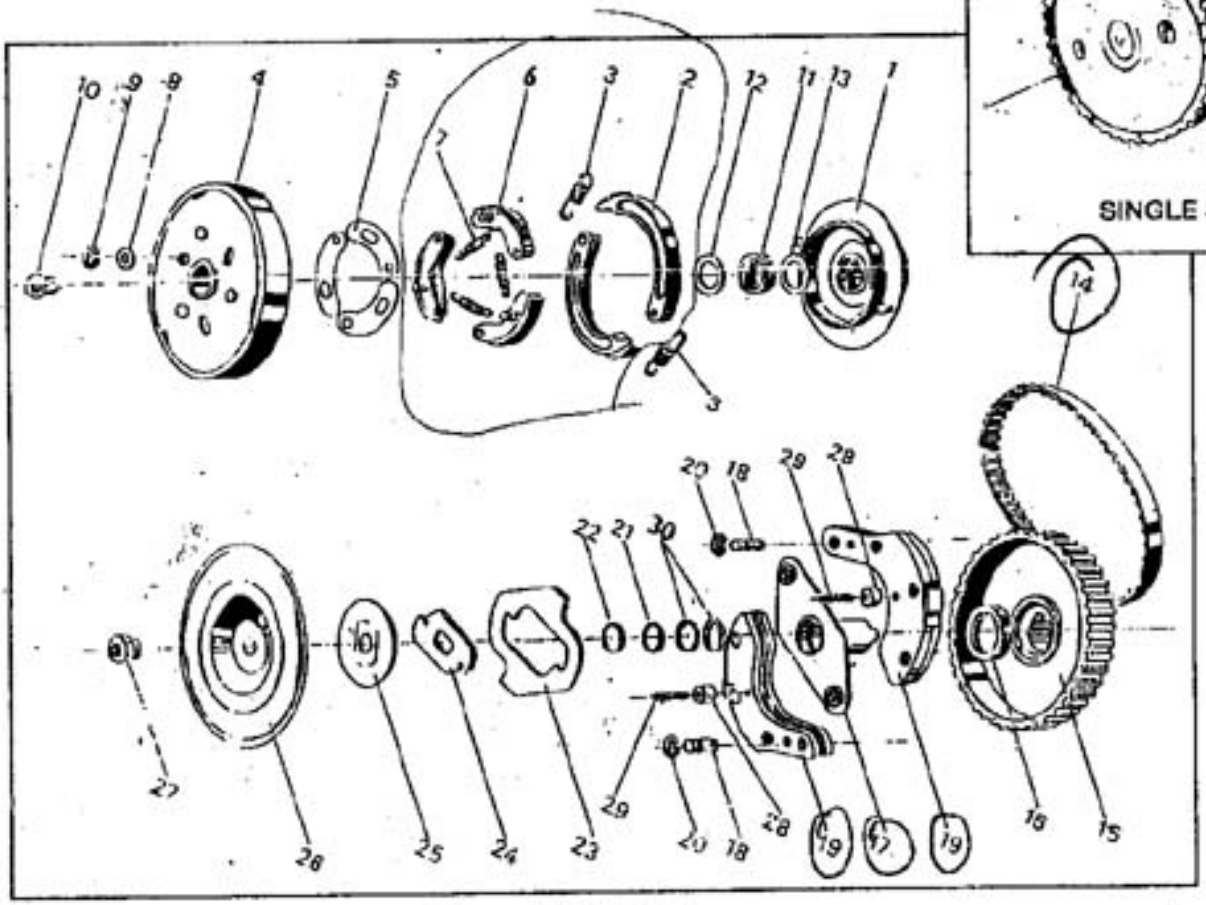
Clutch fills oil

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 224 21 013 | Driving Drum | 1 | *17 | 226 21 042 | Shifting Shoe Carrier | 1 |
| 2 | 226 21 015 | Starting Shoe Set | 2 | *18 | 226 21 091 | Hinge Pin | 2 |
| 3 | 315 116 127 170 | Spring | 2 | *19 | 226 21 074 | Second Gear Clutch Set | 2 |
| 4 | 224 21 021 | Starting Drum | 1 | *20 | 311 732 900 060 (34203) | Circlip 6 | 2 |
| 5 | 224 21 037 | Leaf Spring | 3 | *21 | 273 111 010 104 (50012) | Sealing Ring 19 × 15 | 2 |
| 6 | 224 21 030 | Driving Clutch Set | 3 | *22 | 224 21 056 | Spacer | 1 |
| 7 | 315 116 125 460 (224 21 033) | Spring | 3 | *23 | 226 21 093 | Regulating Plate | 1 |
| 8 | 224 21 038 | Washer-Brass Coating | 3 | *24 | 226 21 094 | Inner Driving Plate | 1 |
| 9 | 311 732 900 050 (34200) | Locking Washer | 3 | *25 | 224 21 065 | Thrust Plate | 1 |
| 10 | 224 10 007 | Nut | 1 | *26 | 210 10 018 | Cover | 1 |
| 11 | 50115 | Sealing Ring 15 × 24 × 7 | 1 | *27 | 311 120 319 100 | Nut M 10 × 1.25 | 1 |
| 12 | 224 21 001 | Washer | 1 | *28 | 226 21 092 | Roller | 2 |
| 13 | 224 21 003 | Washer | 1 | *29 | 324 938 042 053 | Needle 4 × 19.8 | 2 |
| 14 | 272 198 038 024 | Primary Belt | 1 | *30 | 224 21 002 | Washer | 2 |
| *15 | 226 21 061 | Toothed Drum | 1 | 40 | 215 22001 | Drum | 1 |
| *16 | 273 521 007 617 | Sealing Ring 28 × 38 × 7 | 1 | 41 | 34005 | Circlip | 2 |

*DO NOT USE FOR SINGLE SPEED MODEL




SINGLE SPEED ONLY

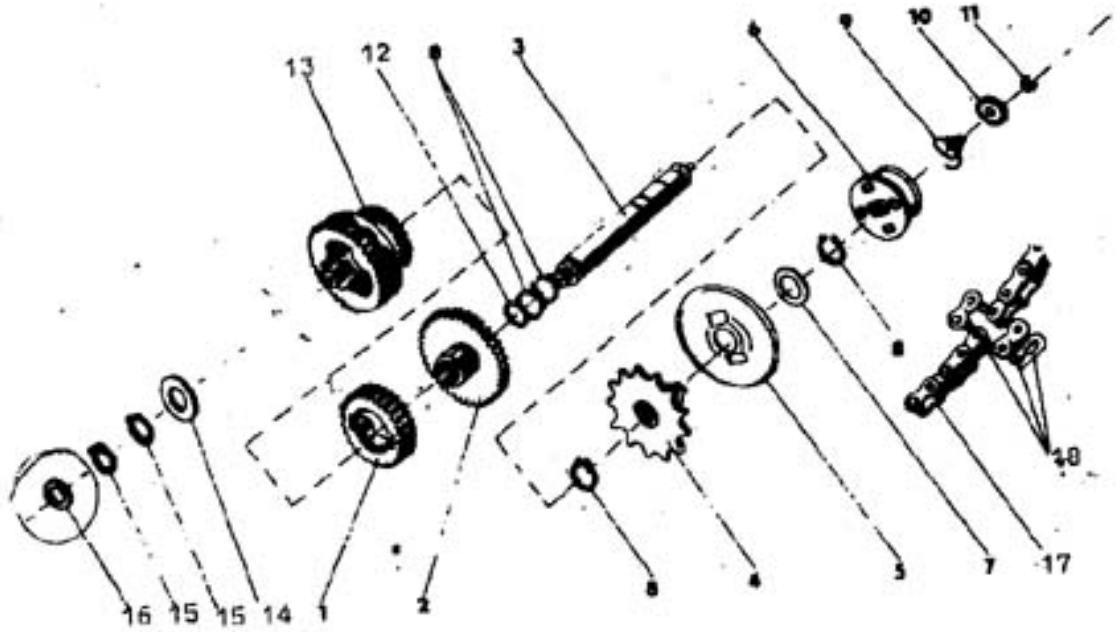



TWO SPEED

## 8. TRANSMISSION—(1/S, 2/S)

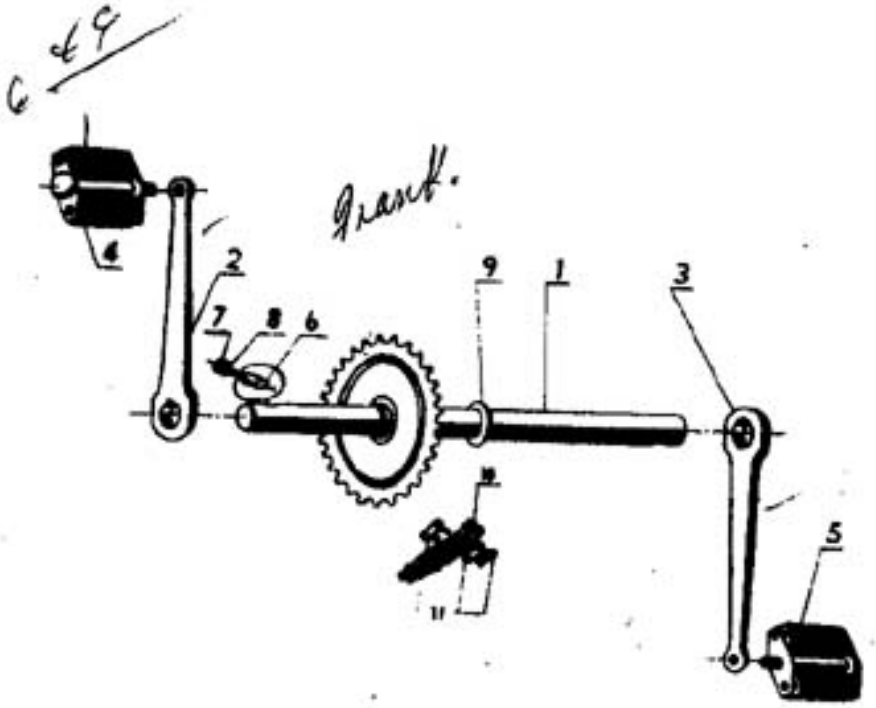
| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| *1 | 224 22 001 | Driving gear | 1 | 9 | 210 10 007 | Spring | 1 |
| *2 | 224 22 002 | Driving gear | 1 | 10 | 210 10 013 | Washer | 1 |
| *3 | 210 22 003 | Mainshaft | 1 | 11 | 34200 | Circlip, 5 | 1 |
| 4 | 210 17 012 | Sprocket 12T | 1 | *12 | 224 21 003 | Friction washer | 1 |
| | 210 10 012 | Sprocket 13T | 1 | *13 | 210 22 005 | Freewheel gear Assy. | 1 |
| | 210 17 009 | Sprocket 14T | 1 | *14 | 210 22 013 | Washer | 1 |
| 5 | 210 10 009 | Cover plate | 1 | *15 | 34006 | Circlip, 12 | 2 |
| 6 | 210 10 010 | Carrier complete | 1 | *16 | 224 22 011 | Washer | 1 |
| 7 | 210 10 014 | Washer | 1 | 17 | 318 11 062 112 | Chain, links | 1 |
| *8 | 34005 | Circlip, 15 | 4 | 18 | 45005 | Master Link | 1 |

*DO NOT USE FOR SINGLE SPEED MODEL



## 9. PEDALS AND CHAINS—(1/S, 2/S)

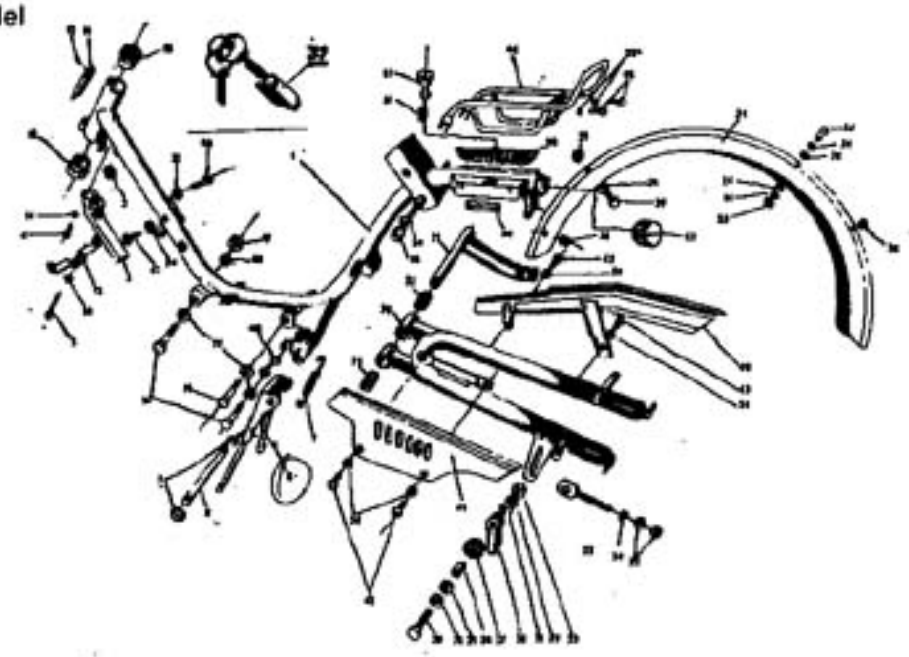
| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 210 26 010 | Pedal Shaft | 1 | 7 | 25103 | Nut M6 | 2 |
| 2 | 28-2260 | Pedal crank L. | 1 | 8 | 27007 | Washer 6.4 | 2 |
| 3 | 28-2259 | Pedal crank R. | 1 | 9 | 28-2268 | Washer, 17 | 2 |
| 4 | 70090 | Pedal L. H. | 1 | 10 | 318 111 042 082 | Chain 81 links | 1 |
| 5 | 70091 | Pedal R. H. | 1 | 11 | 45008 | Master Link | 1 |
| 6 | 35922038 | Crank pin | 2 | | | | |



## 10. FRAME—(1/S, 2/S)

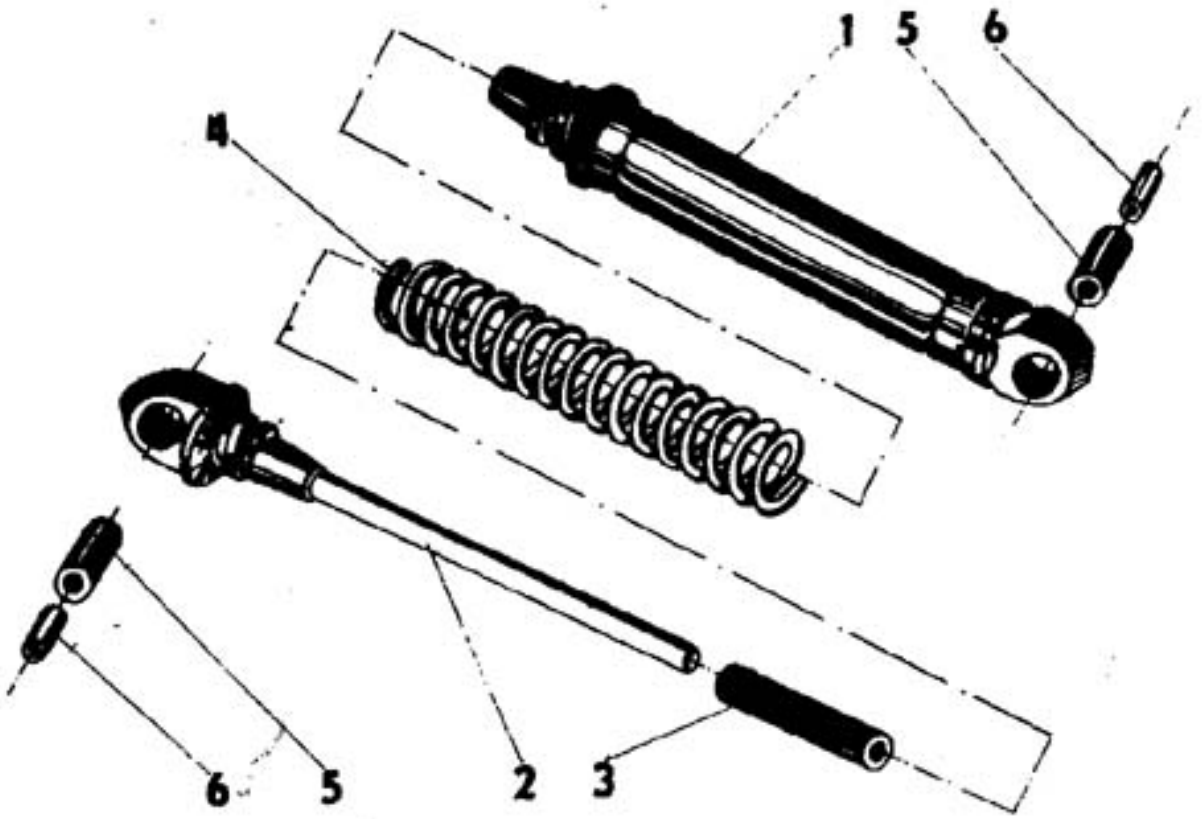
| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| *1 | 210 39 200 | Frame w/rear swinging fork | 1 | 30 | 309 203 206 030 | Bolt M6 × 30 | 1 |
| | | | | 31 | 27007 | Washer, 6.4 | 7 |
| | | | 1 | 32 | 27402 | Washer, 6.1 | 3 |
| 2 | 207 39558 | Intake silencer cover | 1 | 33 | 25103 | Nut, M6 | 5 |
| 3 | 207 07 550 (70105) | Filter | 1 | *34 | 210 39 010 | Rear fender | 1 |
| | | | | 35 | 210 00 025 | Washer | 3 |
| 4 | 20225 | Capscrew, M5 × 10 | 1 | 36 | 273 121 010 080 | Grommet 3.5 × 1 | 2 |
| 5 | 20205 | Capscrew, M5 × 40 | 1 | 37 | 70167 | Lock | 1 |
| 6 | 210 37 050 | Stand | 1 | 38 | 20309 | Screw, M5 × 12 | 2 |
| 7 | 28 3032 | Spring | 1 | 39 | 21103 | Screw, M6 × 12 | 1 |
| 8 | 210 30 020 | Stand hinge pin | 1 | 40 | 210 03 000 | Chainguard | 1 |
| 9 | 34201 | Lock ring, 7 | 2 | *41 | 210 03 010 | Chainguard | 1 |
| 10 | 359 31 011 | Cup | 2 | 42 | 20225 | Screw, M5 × 10 | 3 |
| 11 | 207 07 366 | ID plate | 1 | 43 | 309 146 000 514 | Screw, M5 × 16 | 1 |
| **12 | 311 519 503 006 | Nail 3 × 6 | 2 | 44 | 210 34 060 | Luggage carrier | 1 |
| 13 | 210 30 007 | Cover retainer | 1 | 45 | 20330 | Screw, M6 × 14 | 2 |
| 14 | 27401 | Washer, 5.1 | 5 | 46 | 309 231 206 018 | Screw, M6 × 18 | 2 |
| 15 | 309 201 208 050 | Bolt, M8 × 50 | 1 | 47 | 309 231 000 511 | Screw, M5 × 12 | 1 |
| 16 | 309 501 080 036 | Bolt, M6 × 70 | 2 | 48 | 210 00 006 | Fastening lug | 1 |
| 17 | 27003 | Washer, 8.4 | 3 | 49 | 210-3000 | Decoration Label | 2 |
| 18 | 27403 | Washer, 8.2 | 3 | 50 | 210 71 017 | Box cover | 2 |
| 19 | 25104 | Nut, M8 | 3 | 51 | 210 71 015 | Spring | 2 |
| 20 | 210 32 001 | Swing arm | 1 | 52 | 210 71 016 | Pin | 2 |
| 21 | 210 30 004 | Exhaust silencer bracket | 1 | 53 | 210 71 019 | Plug | 1 |
| 22 | 207 32 120 | Bushing | 2 | 54 | 27206 | Washer 8.4 | |
| 23 | 207 06 301 | Tensioning bolt | 2 | 55 | 70125 | Nut, M8 | 4 |
| 24 | 27007 | Washer, 5.3 | 8 | *56 | 210-300 | Identification label | 2 |
| 25 | 25101 | Nut, M5 | 2 | 57 | 207 39 381 | License Plate | 1 |
| 26 | 228 30 021 | Guide | 1 | 58 | 62109 | Insert (7 × 1) | 1 |
| 27 | 228 30 022 | Roller | 1 | 59 | 20157 | Screw M6 × 14 | 1 |
| 28 | 28-3206 | Busing | | 60 | 27402 | Washer 6.1 | 1 |
| 29 | 207 30 111 | Spacer | 1 | | | | |

*Specify Model



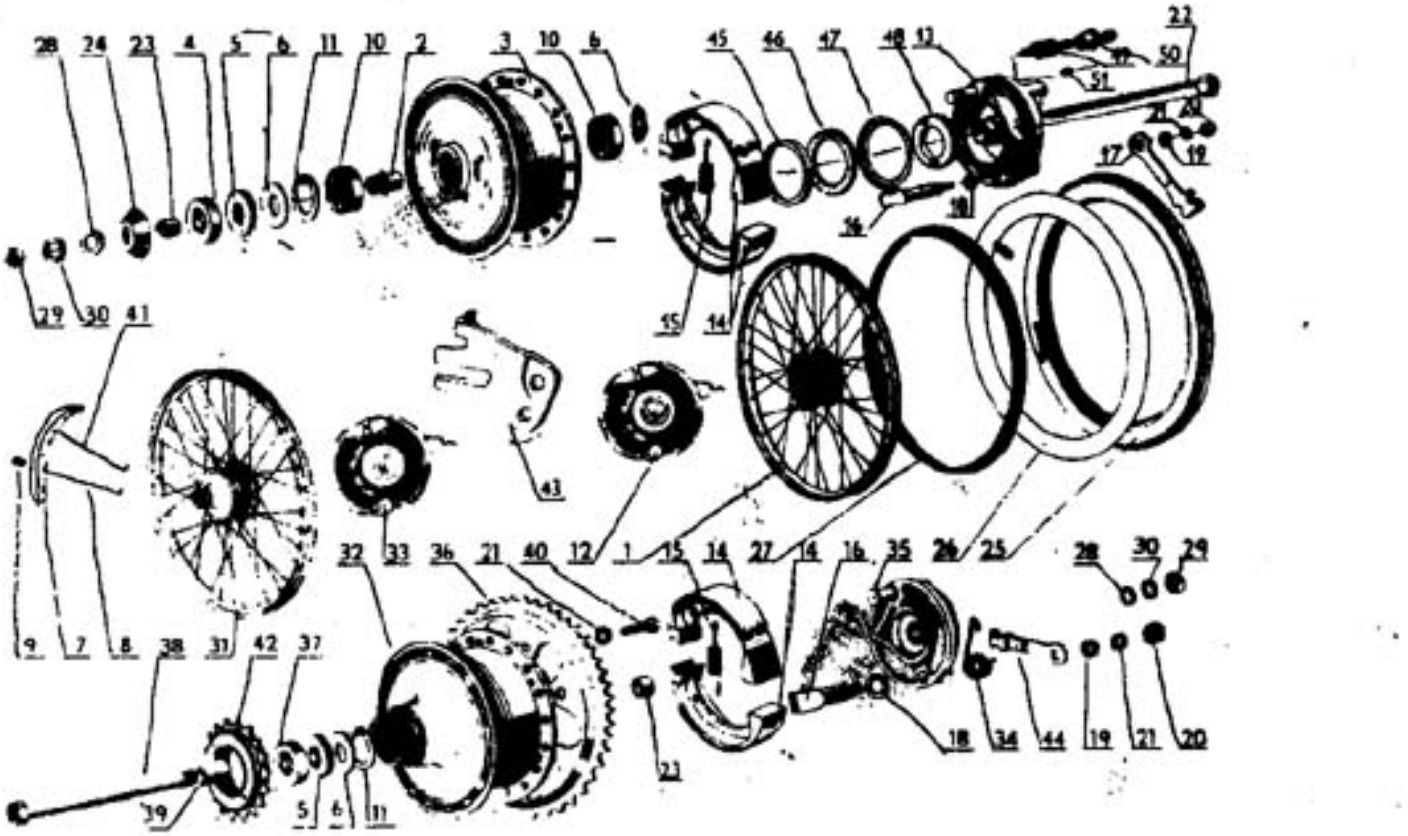
## 11. REAR SHOCK ABSORBERS—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| — | 210 35 000 | Rear shock assy. | 2 | 3 | 207 35 112 | Rubber stop | 2 |
| 1 | 210 35 001 | Bottom lug with sleeve assembly | 2 | 4 | 210 35 016 | Coil spring | 2 |
| | | | | 5 | 200 35 008 | Inner bushing | 4 |
| 2 | 210 35 009 | Top lug with push rod | 2 | 6 | 200 35 009 | Spacer | 4 |



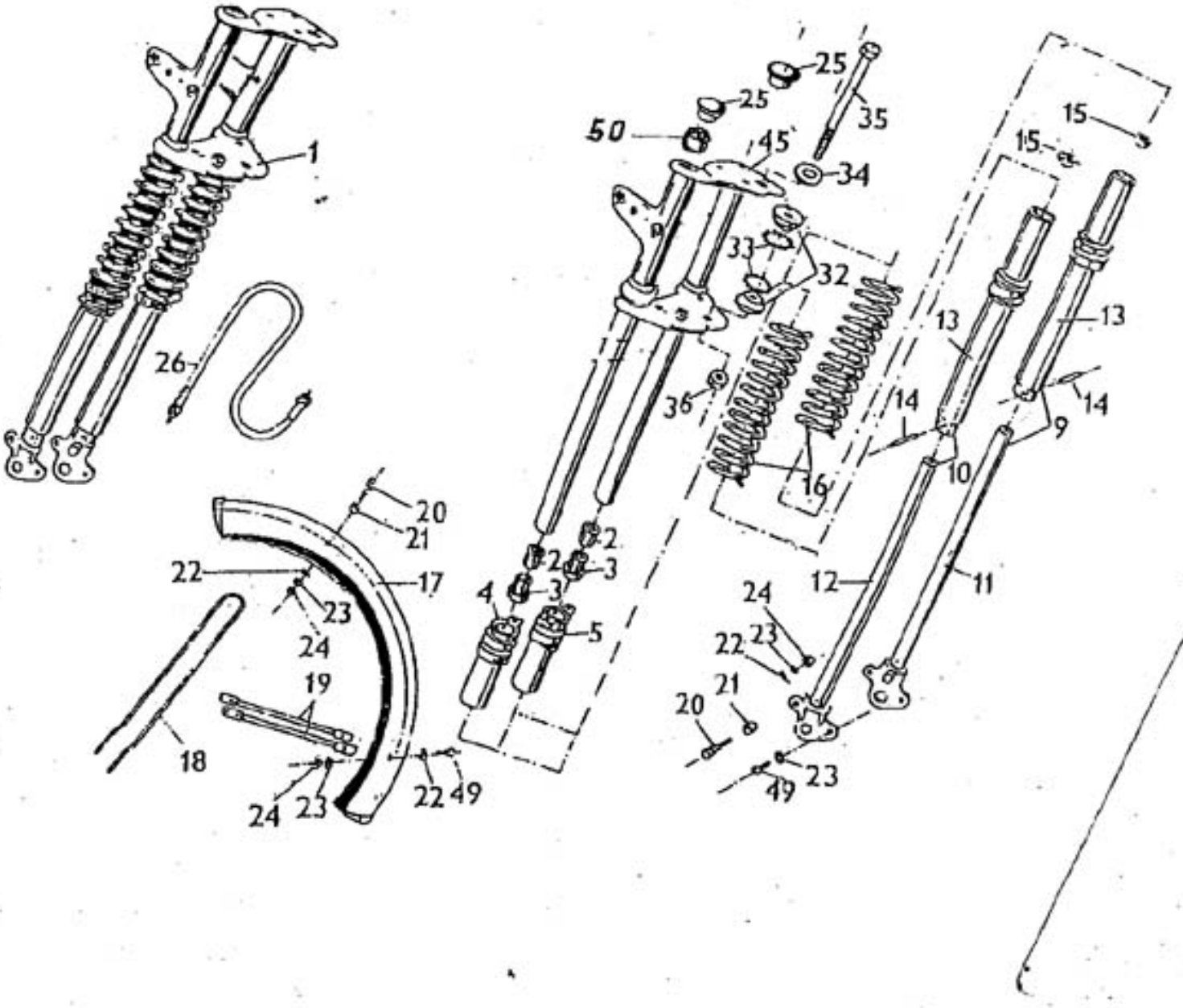
## 12. WHEELS—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 210 57 011 | Front Wheel Assy. | 1 | 28 | 27011 | Washer, 13 | 2 |
| 2 | 228 51 002 | Spacer | 2 | 29 | 26101 | Nut, M 12 × 1.5 | 2 |
| 3 | 210 51 003 | Front Wheel hub | 1 | 30 | 27405 | Washer, 12.2 | 2 |
| 4 | 228 51 006 | Packing ring cup | 2 | 31 | 207 57 023 | Rear wheel assembly | 1 |
| 5 | 685 931 218 600 | Packing ring | 3 | 32 | 210 57 007 | Rear wheel hub | 1 |
| 6 | 228 51 008 | Washer | 3 | 33 | 210 56 009 | Rear brake cover assy. | 1 |
| 7 | 207 57 019 | Rim, 2¼ × 16" | 2 | 34 | 28-4073 | Spring | 1 |
| 8 | 074016 | Spoke, M3 × 160 | 36 | 35 | 207 57 022 | Rear brake cover only | 1 |
| 9 | 25001 | Spoke nut, M3 | 72 | 36 | 210 56 006 | Chain wheel | 1 |
| 10 | 43001 | Bearing No. 6001 | 4 | 37 | 228 56 020 | Packing ring cup | 1 |
| 11 | 34104 | Circlip 28 | 3 | 38 | 28-4094 | Rear wheel axle | 1 |
| 12 | 210 57 004 | Front Cover Assy. | 1 | 39 | 210 56 032 | Spacer | 1 |
| 13 | 210 57 005 | Front cover only | 1 | 40 | 21402 | Screw, M6 × 14 | 6 |
| 14 | 28-4027 | Brake shoe | 4 | 41 | 207 51 002 | Wire spoke, M3 × 160 | 36 |
| 15 | 228 51 021 | Brake shoe spring | 4 | 42 | 70040 | Freewheel | 1 |
| 16 | 228 51 022 | Brake cam | 2 | 43 | 210 56 025 | Reaction stop plate | 1 |
| 17 | 210 51 008 | Brake lever | 1 | 44 | 210 56 016 | Rear brake lever | 1 |
| 18 | 228 51 024 | Washer, 10.2 | 2 | 45 | 228 57 015 | Sleeve, R.H. | 1 |
| 19 | 27007 | Washer 5.4 | 2 | 46 | 685 931 001 700 | Packing ring | 1 |
| 20 | 25103 | Nut, M6 | 2 | 47 | 228 57 016 | Sleeve, L.H. | 1 |
| 21 | 27402 | Washer, 6.1 | 8 | 48 | 210 51 013 | Internal driving gear of speedometer | 1 |
| 22 | 28-4036 | Front Axle | 1 | | | | |
| 23 | 28-4041 | Distance ring | 2 | 49 | 210 51 016 | Driving gear of speedometer | 1 |
| 24 | 228 51 028 | Ring | 1 | | | | |
| 25 | 55032 | Tire, 2¼ × 16" | 2 | 50 | 210 51 017 | Speedometer bearing | 1 |
| 26 | 55023 | Tube, 2¼ × 16" | 2 | 51 | 309 283 700 510 | Screw, M5 × 10 | |
| 27 | 55012 | Flap, 16" | 2 | | | | |



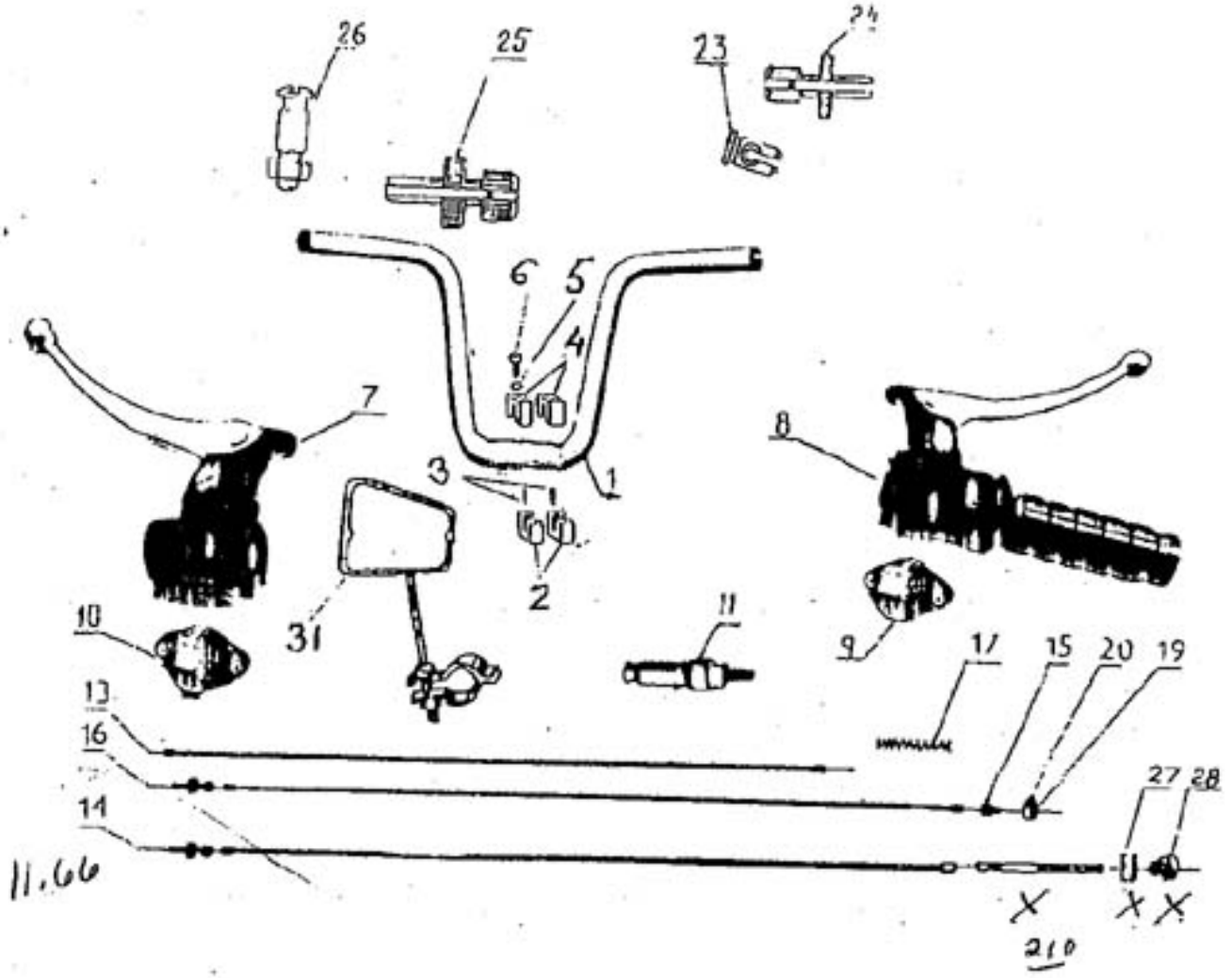
## 13. FRONT FORK—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 210 41 119 | Front Fork-Complete | 1 | 21 | 228 43 012 | Cup | 4 |
| 2 | 210 41 118 | Upper bushing | 2 | 22 | 311 210 211 053 | Washer 5.3 | 13 |
| 3 | 210 41 119 | Lower bushing | 2 | 23 | 311 214 010 051 | Washer 5.1 | 7 |
| 4 | 210 41 123 | L.H. spring support | 1 | 24 | 311 120 118 050 | Nut M5 | 7 |
| 5 | 210 41 122 | R.H. spring support | 1 | 25 | 210 00 119 | Plug | 2 |
| 11 | 210 41 141 | R.H. slider | 1 | 26 | 207 57 302 | Speedometer drive | 1 |
| 12 | 210 41 127 | L.H. slider | 1 | 29 | 14002 | Speedometer 48 mm | 1 |
| 13 | 210 41 134 | Slider's plastic cover | 2 | 32 | 207 41 336 | Race | 2 |
| 14 | 311 515 605 028 | Dowel pin 5 x 28 | 2 | 33 | 4003 | Ball 5 | 42 |
| 15 | 210 41 136 | Cushion | 2 | 34 | 27011 | Washer 12 | 1 |
| 16 | 315 116 167 190 | Spring | 2 | 35 | 207 41 337 | Steering Bolt | 1 |
| 17 | 210 46 001 | Front Fender | 1 | 36 | 26351 | Nut M12 | 1 |
| 18 | 210 43 103 | Upper reinforcement | 1 | 45 | 210 47 120 | Front fork | 1 |
| 19 | 210 43 102 | Lower reinforcement | 1 | 49 | 309 246 180 510 | Screw M 5 x 10 | 4 |
| 20 | 210 43 106 | Attachment screw | 1 | 50 | N/A | Bushing | 2 |



## 14. HANDLEBAR—(1/S, 2/S)

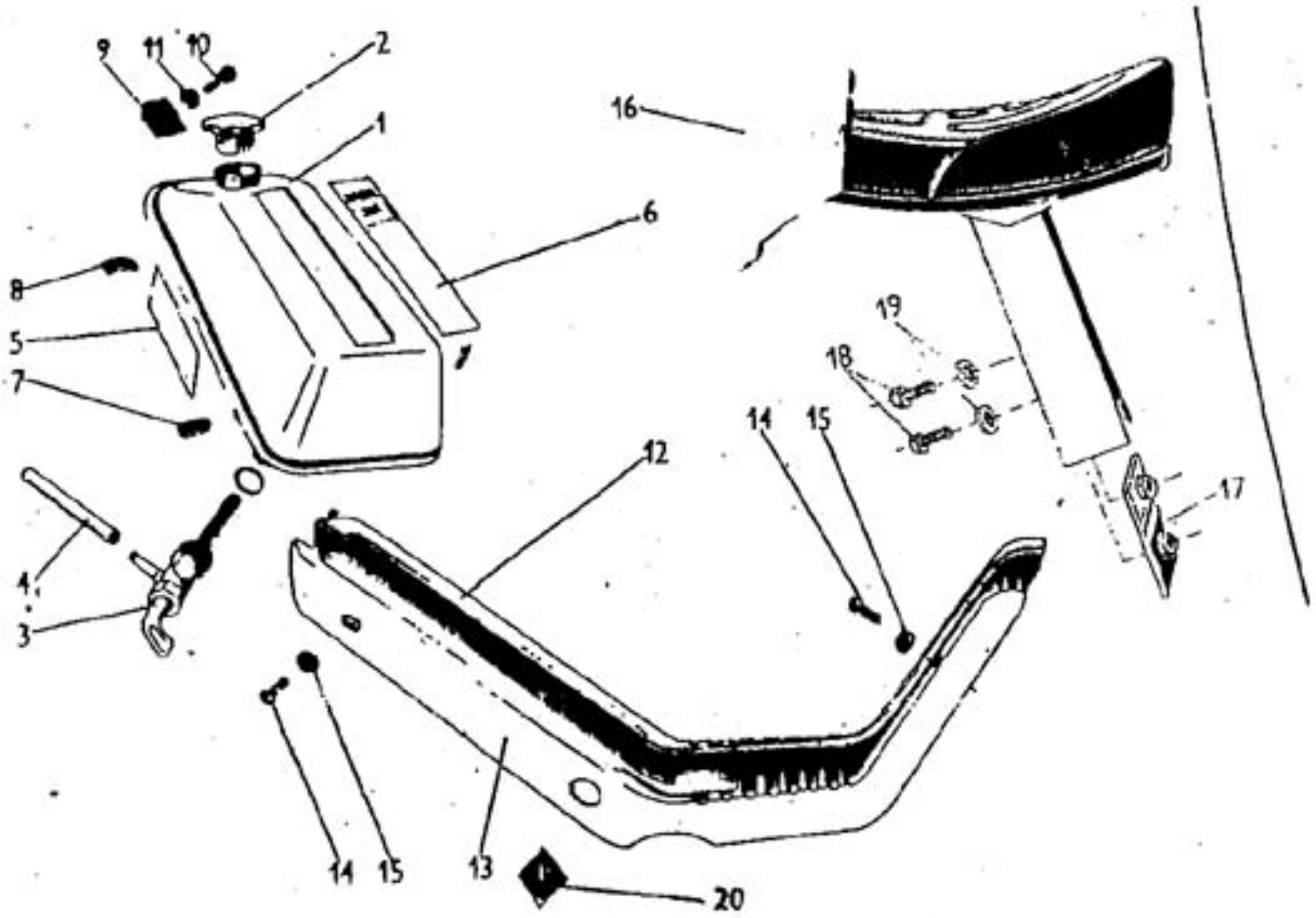
| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 210 47 209 | Handlebar | 1 | 16 | 210 47 022 | Front brake cable | 1 |
| 2 | 210 00 122 | Bottom yoke | 2 | 17 | 228 46 022 | Coil spring | 1 |
| 3 | 311 525 004 012 | PIN 4 × 12 | 2 | 19 | 353 46 031 | Adjustable end piece | 1 |
| 4 | 210 00 123 | Yoke | 2 | 20 | 550 46 030 | Screw | 1 |
| 5 | 27007 | Washer 5.4 | 4 | 23 | 70167 | Cable holdfast | 2 |
| 6 | 309 501 300 624 | Screw M6 × 40 | 4 | 24 | 70163 | Throttle cable adj screw | 1 |
| 7 | 701566 | Domino holder assy. L.H. | 1 | 25 | 70168 | Brake cable adj screw | 4 |
| 8 | 70158 | Twist grip assy. R.H. | 1 | 26 | 70169 | Brake Lever bolt | 2 |
| 9 | 8194 | Ign. kill switch CEV | 1 | 27 | 200 37 022 | Support | 1 |
| 10 | 8193 | Light & Horn switch | 1 | 28 | 200 37 023 | Nut | 1 |
| 11 | 9343 | Stop light switch CEV | 2 | 29 | 309 203 206 025 | Screw M6 × 25 | 4 |
| 13 | 210 47 023 | Throttle cable | 1 | 30 | 27402 | Washer 6.4 | 4 |
| 14 | 210 47 025 | Rear brake cable | 1 | 31 | 443 332 365 965 | Mirror | 1 |
| 15 | 228 46 033 | Cable stop piece | 1 | | | | |



## 15. COVERS, FUEL TANK & SEAT—(1/S, 2/S)

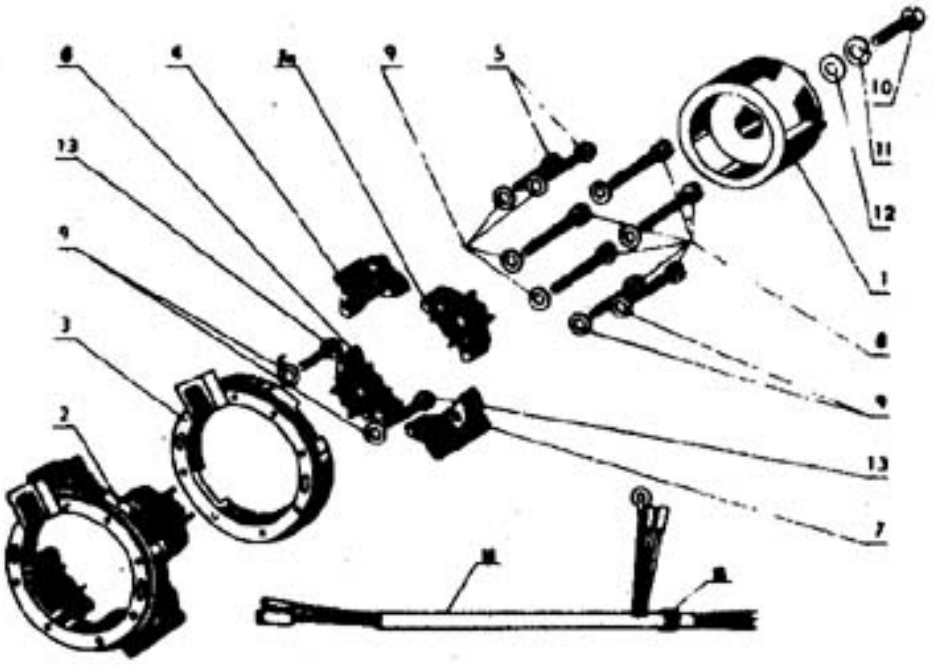
| ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|
| *1 | 210 38 001 | Fuel tank | 1 |
| 2 | 207 38 315 | Fuel cap | 1 |
| 3 | 70118 | Fuel tap | 1 |
| 4 | 283 362 405 000 | Fuel hose 1=110 | 1 |
| 5 | 210 38 023 | Label "Jawa" | 2 |
| 6 | 210 39 017 | Top sticker | 1 |
| 7 | 210 38 020 | Sleeve | 2 |
| 8 | 210 38 021 | Support | 1 |
| 9 | 210 00 005 | Fuel tank clip | 1 |
| 10 | 309 231 000 617 | Screw, M6 × 22 | 1 |
| 11 | 27402 | Washer, 6.4 | 1 |
| 12 | 210 71 005 | Cover, R.H. | 1 |
| 13 | 210 71 007 | Cover, L.H. | 1 |
| 14 | 20309 | Capscrew, M5 × 12 | 6 |
| 15 | 27003 | Washer, 5.3 | 6 |
| 16 | 210 77 018 | Seat 130-230 | 1 |
| 17 | 210 00 016 | Support | 1 |
| 18 | 309 503 160 814 | Bolt M8 × 16 | 2 |
| 19 | 27008 | Washer 8.4 | 2 |
| 20 | 210 71 010 | Label-Fuel on-off | 1 |
| 21 | 210 09 027 | Label Mix | 1 |
| 22 | 008 38 011 | Fuel Hose Clip | 2 |

* PLEASE INDICATE COLOR NEEDED



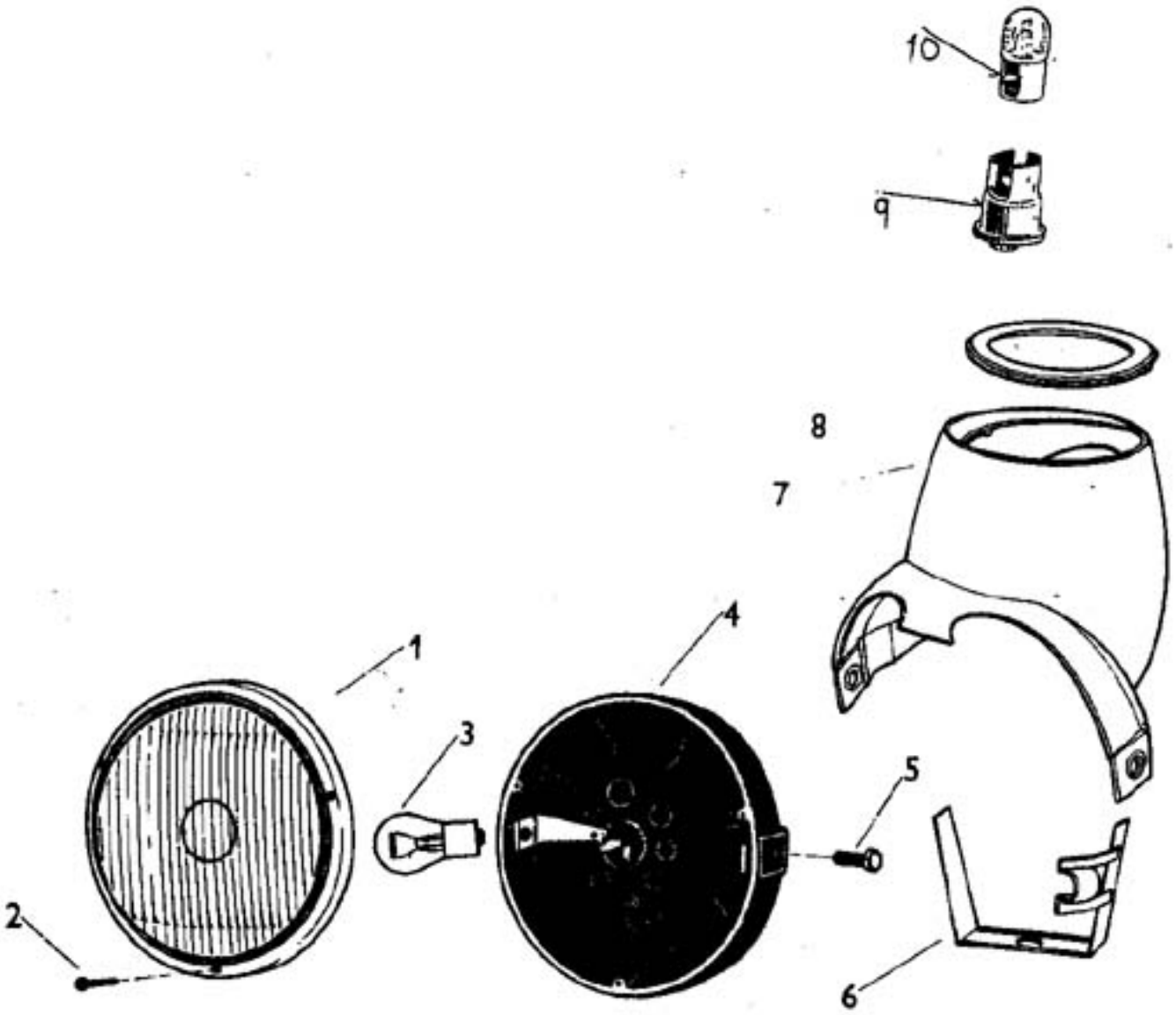
## 16. ALTERNATOR—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| — | 207 61 170 | Alternator Assy. | 1 | 8 | 20202 | Screw M4 × 30 | 6 |
| 1 | 228 61 002 | Rotor | 1 | 9 | 27400 | Washer, 4.1 | 10 |
| 2 | 210 61 002 | Stator Plate w/coil | 1 | 10 | 20131 | Screw, M5 × 25 | 1 |
| 3 | 210 61 004 | Stator w/Impulse coil | 1 | 11 | 27401 | Washer, 5.1 | 1 |
| 4 | 207 61 005 | Field coil | 1 | 12 | 27003 | Washer, 5.3 | 1 |
| 5 | 20231 | Screw, M4 × 14 | 2 | 13 | 20247 | Screw, M4 × 22 | 2 |
| 6 | 228 61 153 | Stop light coil | 1 | 14 | 210 60 002 | Harness | 1 |
| 7 | 207 61 173 | Lighting coil 11 | 1 | 15 | 150 49 005 | Grommet | 1 |
| 7a | 207 61 172 | Lighting coil 1 | 1 | | | | |



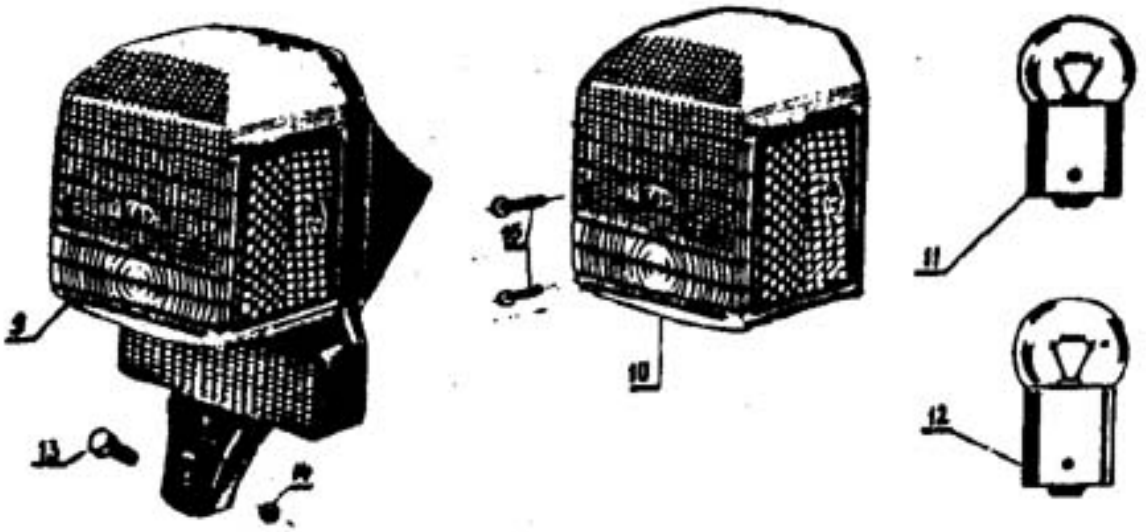
## 17. HEAD LAMP—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1, 2, 3, 4, 5 | 210 09 021 | Headlamp complete (CEV 1211) | 1 | 7 | 210 77 033 | Instrument board | 1 |
| | | | | 8 | 210 09 023 | Plastic ring | 1 |
| 3 | 60510 | Bulb 6V/21W | 1 | 9 | 207 57 000 | Bulb holder | 1 |
| 6 | 210 09 022 | Speedometer holder | 1 | 10 | 62102 | Bulb 6V/2W | 1 |



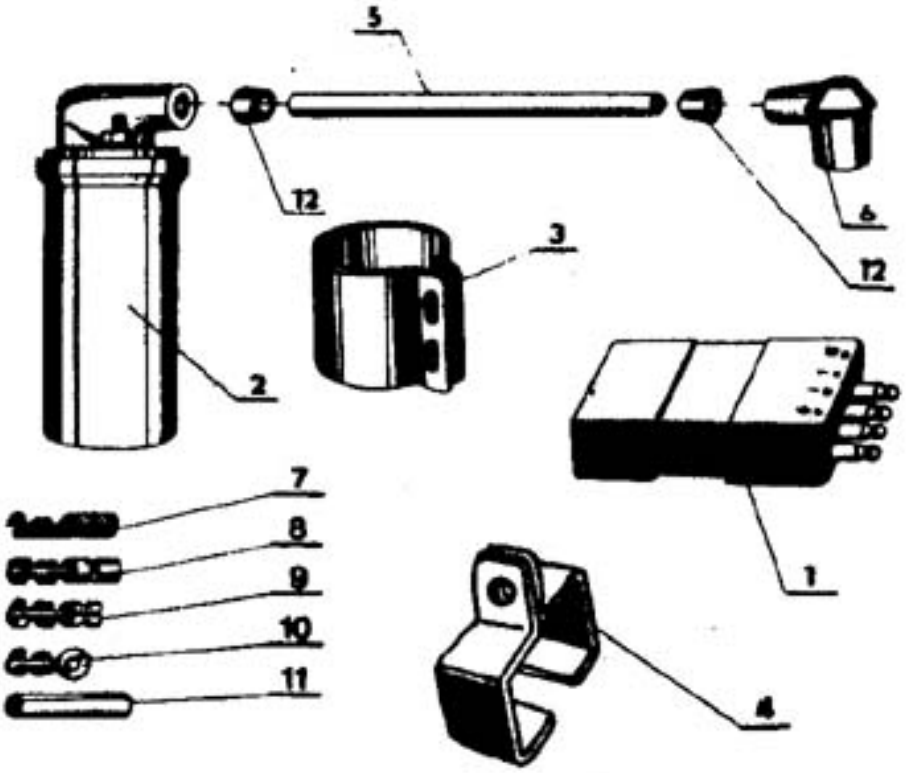
## 18. STOP & TAIL LAMP—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 9 | 94170 | Taillamp Assembly | 1 | 13 | 21103 | Screw, M6 × 15 | 2 |
| 10 | 94175 | Lens | 1 | 14 | 25103 | Nut, M6 | 2 |
| 11 | 60508 | Bulb 6V-5W | 1 | 15 | 94180 | Screw | 2 |
| 12 | 60509 | Bulb 6V-10W | 1 | | | | |



## 19. IGNITION AND WIRES—(1/S, 2/S)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 207 66 002 | Electronic Unit | 1 | 7 | 443 858 000 012 | Connector | 6 |
| 2 | 443 212 210 800 | Ignition Coil | 1 | 8 | 443 858 006 002 | Connector | 2 |
| 3 | 443 930 220 560 | Coil Holder | 1 | 9 | 443 858 006 032 | Connector | 3 |
| 4 | 210 66 016 | Bracket | 1 | 10 | 359 60 122 | Cable Eye | 1 |
| 5 | 210 60 093 | High Tension Wire | 1 | 11 | 228 60 015 | Insulating Tube | 6 |
| 6 | 62069 | Cup | 1 | 12 | 62036 | Protecting Cover | 1 |



## 20. PARTS SUPPLEMENT—(210 Sport Only)

| ITEM | PART NUMBER | DESCRIPTION | PCS | ITEM | PART NUMBER | DESCRIPTION | PCS |
|---|---|---|---|---|---|---|---|
| 1 | 210-39-089 | Gas tank | 1 | 8 | 210-39-092 | Hose L-170mm | 1 |
| 2 | 210-39-095 | Jawa label L.H. | 1 | 9 | 210-39-091 | Fuel hose L-400 mm | 1 |
| 2a | 210-39-094 | Jawa label R.H. | 1 | 10 | 210-77-035 | Seat | 1 |
| 3 | 70154 | Gas cap complete | 1 | 11 | 25103 | Nut M6 | 2 |
| 4 | 70151 | Rubber block | 2 | 12 | 21103 | Screw | 2 |
| 5 | 210-07-086 | Rubber washer | 1 | 13 | 210-39-090 | Carrier | 1 |
| 6 | 70155 | Fuel Tap | 1 | 14 | 223-36-000 | Tool box | 1 |
| 7 | N/A | Fuel tap gasket | 1 | 15 | 210-77-034 | Plastic cover | 1 |
| | | | | 16 | 008-38-011 | Clip | 2 |