OPERATING INSTRUCTIONS AND PARTS LIST FOR

MOTOR SCOOTER

MODEL NUMBER 788.94495

This is the Model Number of your Allstate Motor Scooter. It will be found on a plate fastened to chassis under the fuel cock. Always mention this number when communicating with us regarding the Scooter, or when ordering parts.

HOW TO ORDER REPAIR PARTS

All parts listed herein may be ordered through any Sears retail or mail order store. In ordering parts by mail from the mail order store which serves the territory in which you live. Selling Prices will be furnished on request or parts will be shipped at prevailing prices and you will be billed accordingly.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

1. - The Part Number in this List.
2. - The Part Name in this List.
3. - The Model Number of the item.

This list is valuable. It will assure your being able to obtain proper parts service at all times. We suggest you keep it with other valuable papers.

SEARS, ROEBUCK AND CO.

N. DIS. 88422 M - 2200/6112

DITTA GIUSEPPE LANG - S.P.A. - GENOA (PRINTED IN ITALY)

INTRODUCTION

This model of motor scooter has a new and modern type of engine in which the distribution is realised by the crankshaft (rotary valve distribution).

The carburettor, installed on the crankcase, is in direct communication with the pre-compression chamber in corrispondence to the external diameter of one of the crankshaft flywheels (see fig. 11): the periphery of the flywheel rotates very close to the crankcase, without touching it; a portion in the periphery of said web is ground off, and controls the fuel flow to the pre-compression chamber, thus acting as a rotary valve.

The recess on the web periphery has been shaped in such a way as to give the maximum volumetric efficiency, an asymmetrical distribution diagram being achieved.

It must be noted that crankweb and crankcase are kept gas tight by the film of oil which forms between them and not by direct contact; in this way the system is not subject to wear by friction, as is usually the case with similar devices.

The intake pipe is very short; it is therefore only the carburettor which slows down the flow of fresh charge to the engine.

The advantages of a correct feeding system are therefore clear; more power with low revs, and so a more elastic engine. The intake pipe leads therefore into the pre-compression chamber and the fresh charge contacts directly the con. rod big end; in this way the bearings are so efficiently lubricated as to permit reducing, the percentage of oil in the gasoline (2%).

The improvement which the rotary valve brings to the thermo-dynamic performance of the engine can be appreciated by considering the flatness of the power curve; this, as is well known, makes the engine capable of functioning on a wide rpm range and of adjusting itself automatically, with slight variation of speed, to all forms or resistance which the scooter must overcome (head wind, gradients etc.).

The proverbial climbing ability of this motor scooter is enhanced in this model. All gradients normally encountered on main roads can easily be climbed in 3rd gear, even with two people on board; any slope can be climbed at speed in 2nd gear, while the 1st gear gives initial acceleration and is particularly useful on bad surfaces and side roads.

Another advantage of the rotary valve is that it eliminates back pressure, i. e. prevents some of the fresh fuel from being pushed back from the pre-compression chamber towards the carburetttor and wasted, at the beginning of the downward stroke of the piston.

Engine performance is also improved by the adoption of a spherical headed piston and a combustion chamber on the cylinder head of a special form which gives rise to higher turbulence, thus resulting in higher compression ratio and thence increase in both specific power and out-put.

Finally the carburettor, which is housed in the air cleaner, is similar to those used in the car industry, with plate-shaped slide valve and immersed jets: this has reduced fuel consumption and improved the general performance of the engine.

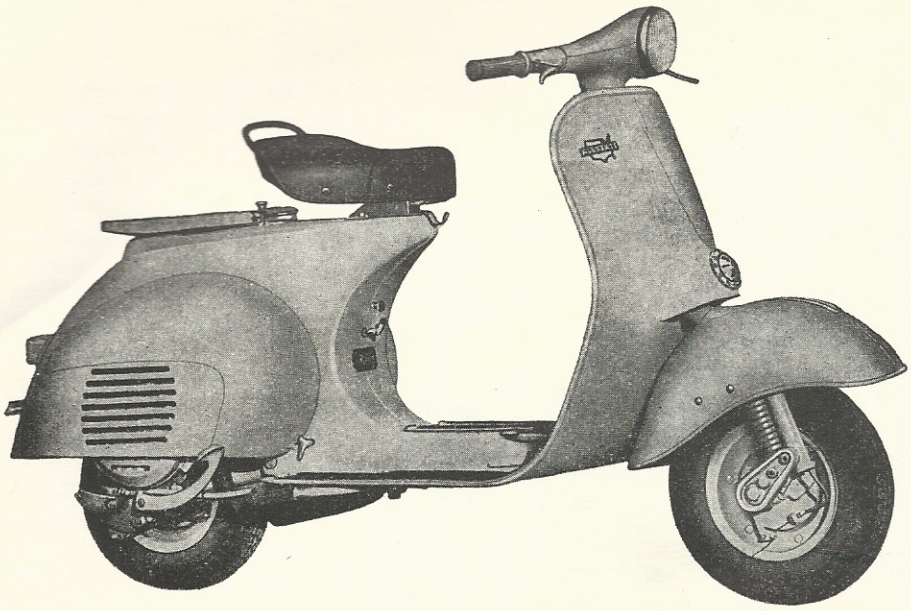


Fig. 1 — ALLSTATE « Cruisaire » Motor Scooter

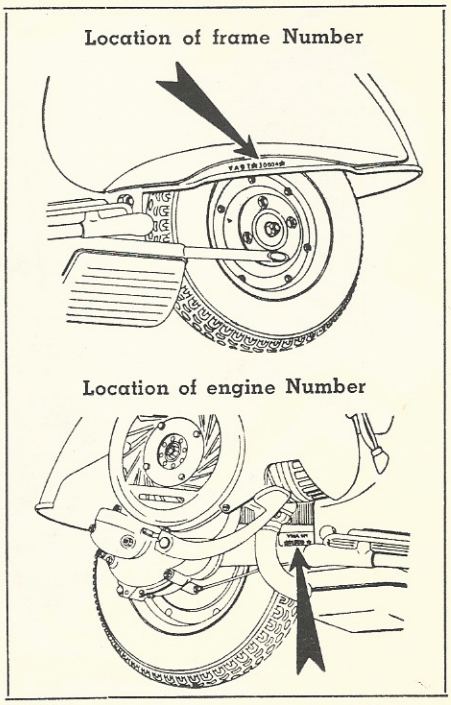


Fig. 2 - Location of serial numbers.
Serial numbers are preceded by prefixes: VA 12 T, for frame; VNB 1 M, for engine.

WARNING

In order to keep your ALLSTATE Scooter in perfect running condition and not to void the guarantee, always have your machine repaired at a Sears, Roebuck and Co. Store.

Special care should be taken with regard to the fuel mixture which should be **regular gasoline** and oil of the make, grade and in the amount prescribed in this booklet.

Ethyl gasoline should never be used.

Do not use Allstate compounded motor oil or other Premium Heavy Duty Motor Oil with detergents.

The inexperienced operator should exercise caution in applying front wheel brake, to avoid locking.

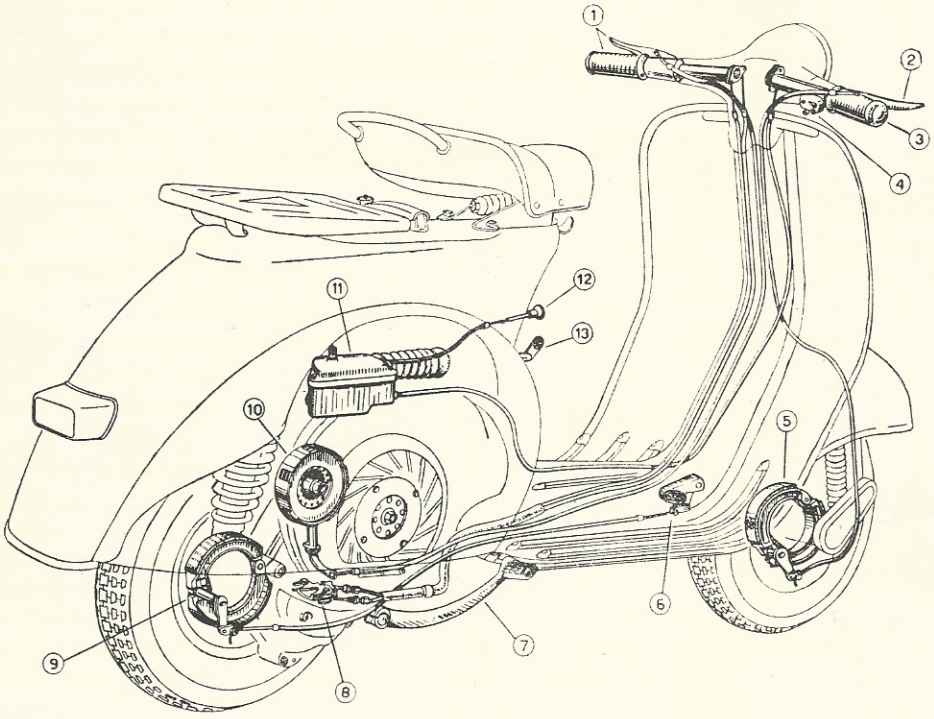


Fig. 3 - Controls of Allstate Scooter

1. Gear change twistgrip with clutch control lever - 2. Front brake lever - 3. Throttle control grip - 4. Light and dimmer switch - 5. Front brake jaws. - 6. Rear brake pedal - 7. Kickstarter - 8. Gear shifter - 9. Rear brake jaws. 10. Clutch - 11. Carburettor, air cleaner - 12. Choke control lever - 13. Fuel cock.

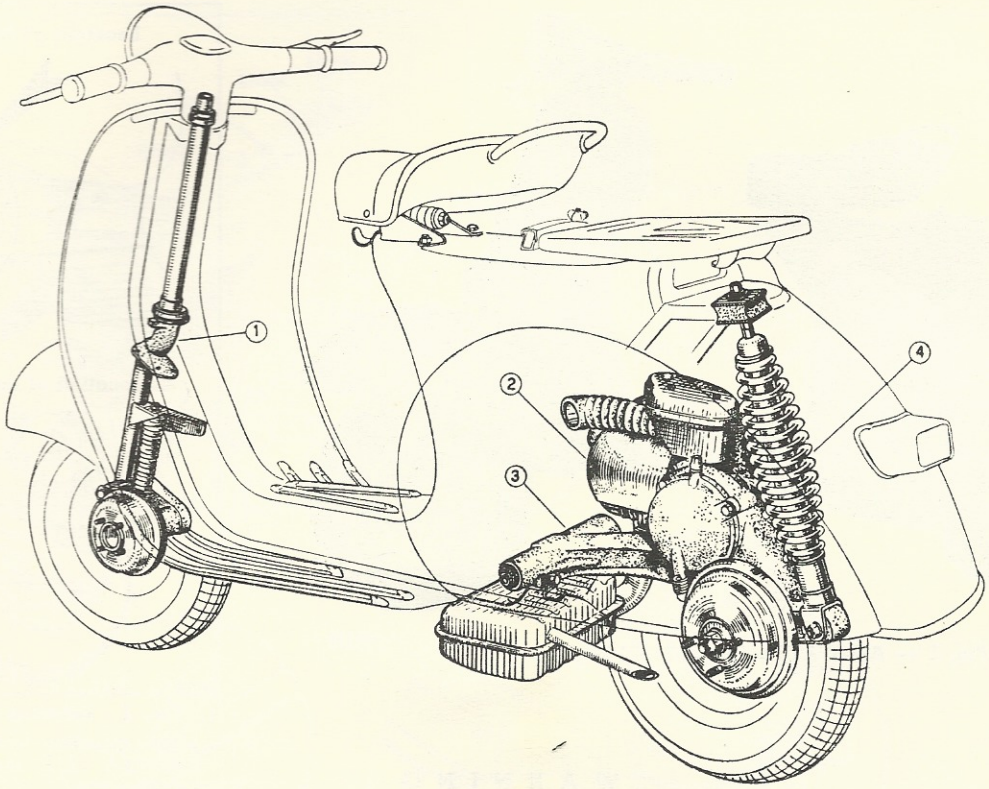


Fig. 4 - Engine installation and suspensions.

1. Steering column and front suspension - 2. Engine - 3. Crankcase half, clutch side, with swinging arm - 4. Rear suspension spring with hydraulic damper.

MAIN SPECIFICATIONS

Fuel consumption:

(Gasoline - oil mixture)	130 miles per gal.
Max. speed	46.6 m.p.h.
Wheel base	46.4 in.
Max. width on handlebars	25.7 in.
Max. length of the scooter	68.3 in.
Max. height	38.7 in.
Min. height of floorboard	8 in.
Turning circle	59 in.
Weight (unladen)	182 lbs.

Frame. - Of pressed and spot-welded steel sheet, with stream-lined monocoque-type structure.

Suspension. - Front wheel: coil spring. Rear wheel: coil spring and coaxial hydraulic shock absorber.

Engine. - Two-stroke, flat cast iron cylinder and cast aluminium alloy cylinder head. Cooling effected by centrifugal fan.

Displacement	123.4 cc. (7.53 cu. in.)
Bore	52.5 mm. (2.06 in.)
Stroke	57 mm. (2.24 in.)
Effective power at 5000 rpm	4.6 HP.
Compression ratio	7 : 1

Transmission. - Directly from engine to rear wheel through clutch, cushion drive and gear box.

Starting. - By means of kickstarter, right hand side of scooter.

Gear box. - 3-speed drive with mesh gears in oil bath. Its two-cable control is coupled with that of the clutch, on left hand side of handlebars.

Engine to wheel transmission ratios:

First	12.2 to 1
Second	7.6 to 1
Third	4.85 to 1

Clutch. - Wet type; multiplate, with facings of cork composition applied to the driving discs.

Ignition. - By flywheel magneto.

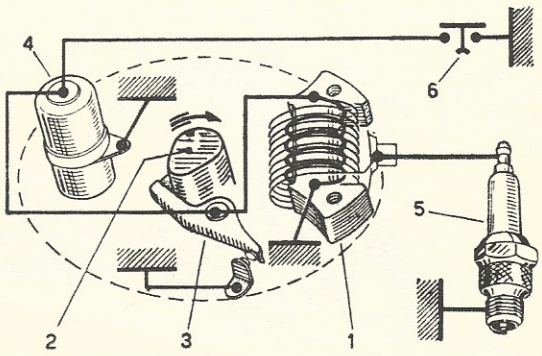


Fig. 5 - Ignition diagram

1. Ignition coil in flywheel magneto - 2. Rotor cam - 3. Breaker - 4. Condenser - 5. Sparkplug - 6. Engine cut-out on switch.

Lubrication. - By oil the in fuel mixture for piston, cylinder, wrist pin, con. rod, cranshaft, main bearings. Both clutch and gear box operate in oil bath.

Carburettor. - With float-chamber (see fig. 11); air cleaner mounted on the engine. Air goes to the carburettor through a large inlet tube and a silencing chamber with filter having incorporated choke valve.

Model of carburettor: Dell'Orto SI 20/15 B - Venturi 15 mm (0".59) - Main jet 82/100 (0".0323) - Idler jet 42/100 (0".0163) - Air-vent for main jet 100/100 (0".0394) - Air hole on mixer top 150/100 (0".059) - Mixer type E 2. - Air-vent to idler jet 160/100 (0".063) - Spray nozzle 200/100 (0".0788) - Float chamber fuel level 20.5 ± 1 mm. (0".87) - Oil recovery vent 50/100 (0".0197).

Feeding. - Fuel feed to the carburettor is provided for by gravity (see fig. 11) with gasoline-oil mixture.

Fuel tank. - Total capacity: 2,03 gals.;
Reserve: ~ ⅓ gal.;
Three--way cock: « open » - « closed » - « reserve »

Muffler. - Expansion and absorption combined type.

Handlebars. - Consisting of two arms in steel tube, clamped in a support which is fixed to the steering column. The central part of handlebars is completed by two shells in pressed steel sheet. The headlamp is installed therein. All control cables and electric wires, to be connected to the handlebars, are concealed inside it.

Steering column. - The steering column bears the handlebars, clamped on its top end, and the front wheel swinging hub, pivoted at its bottom end through a stub axle.

Lighting and horn. - By flywheel magneto, feeding both head lamp (two-beam), tail lamp, horn and stop light (see fig. 9).

Brakes. - Expanding type.

Front brake: control lever on right hand side of handlebars.

Rear brake: control pedal on right hand side of floorboard.

Wheels. - Of pressed steel sheet, interchangeable and easily removable, since they are assembled in an automobile-like system.

Tires: dia. 3.50 × 8 in.

Steering Lock. - A suitable security lock is arranged on the frame, near the handlebars. Turning the key counter-clockwise and the handlebars to the left, the lock engages the lugs welded on the steering column, so that the machine can only turn around. Turn the key clockwise and the handlebars back to normal position for releasing the steering system (see Fig. 7). Do not attempt to ride the machine unless the key is in, and remains in the lock, and the handlebars are moving freely.

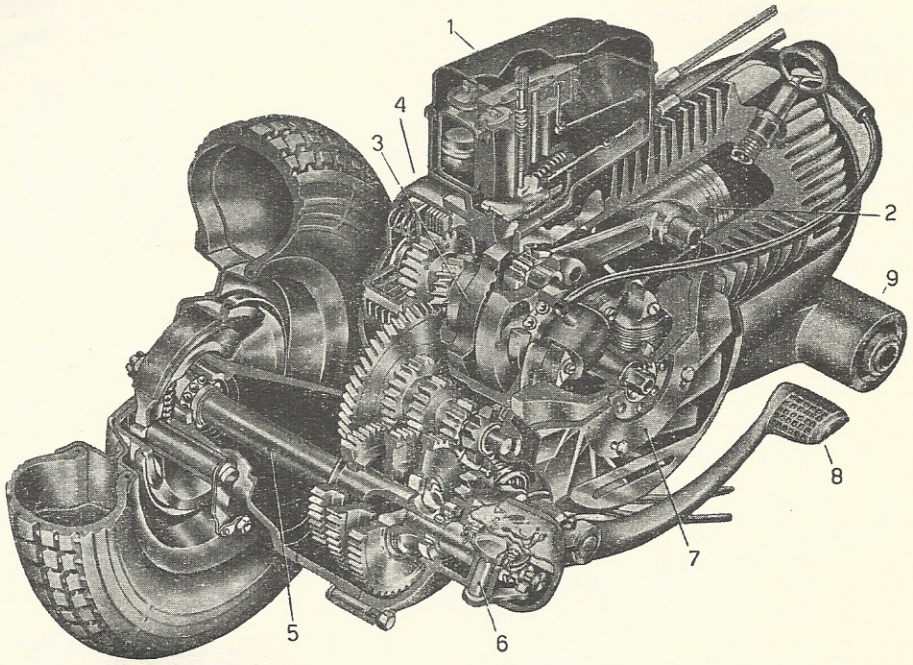


Fig. 6 - Section of engine
1. Air cleaner and carburettor - 2. Piston - 3. Crankshaft 4. Clutch - 5. Mainshaft 6. Gear shifter - 7. Flywheel magneto 8. Kickstarter 9. Crankcase half, clutch side, with swinging arm.

Do not lubricate the steering lock.

Central Stand. - A two-legged stand is arranged under the floorboard. A strong return spring holds it in contact with the floorboard and keeps it from vibrating while the scooter is being ridden.

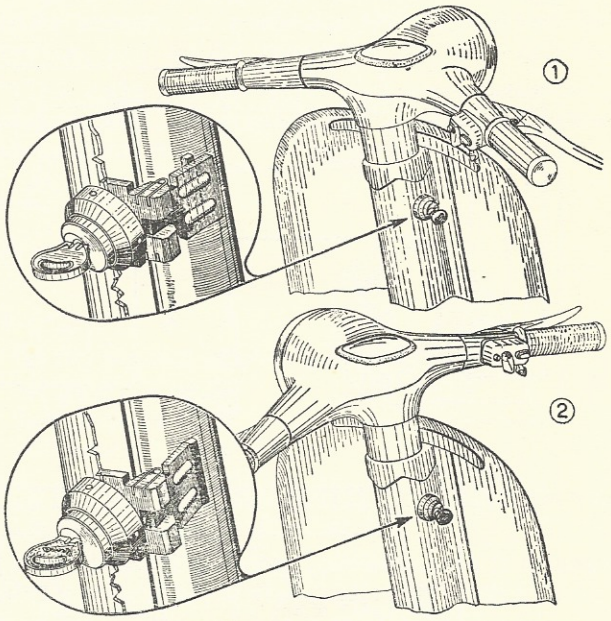


Fig. 7 - Security lock
1. Normal position - 2. Closed

Tool Kit. - 1 four-end box wrench (11 - 14 - 21 - 22 mm); 1 double open-ended wrench (8 - 14 mm); 1 single open-ended wrench (7 mm); 1 screw-driver. These hand tools are contained in a canvas roll which is placed in the left wing.

Accessories (See Table XX). - On request the **Allstate** scooter can be equipped with the spare wheel (and bracket) and speedometer.

Spare wheel and bracket (see fig. 8). - The wheel bracket sheet steel pressing, can be secured to the scooter frame behind luggage carrier (see Table XX, « Spare parts list »).

It is very robust and simple and holds the wheel in such a position where it is easily accessible.

Speedometer. - The speedometer has its housing in the middle of the handlebars and adds to the performance and appearance of the scooter.

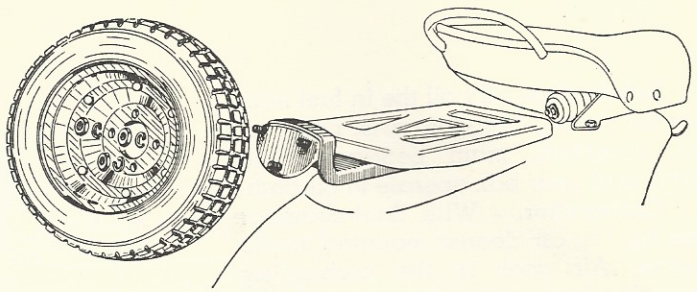


Fig. 8 - Spare wheel and bracket

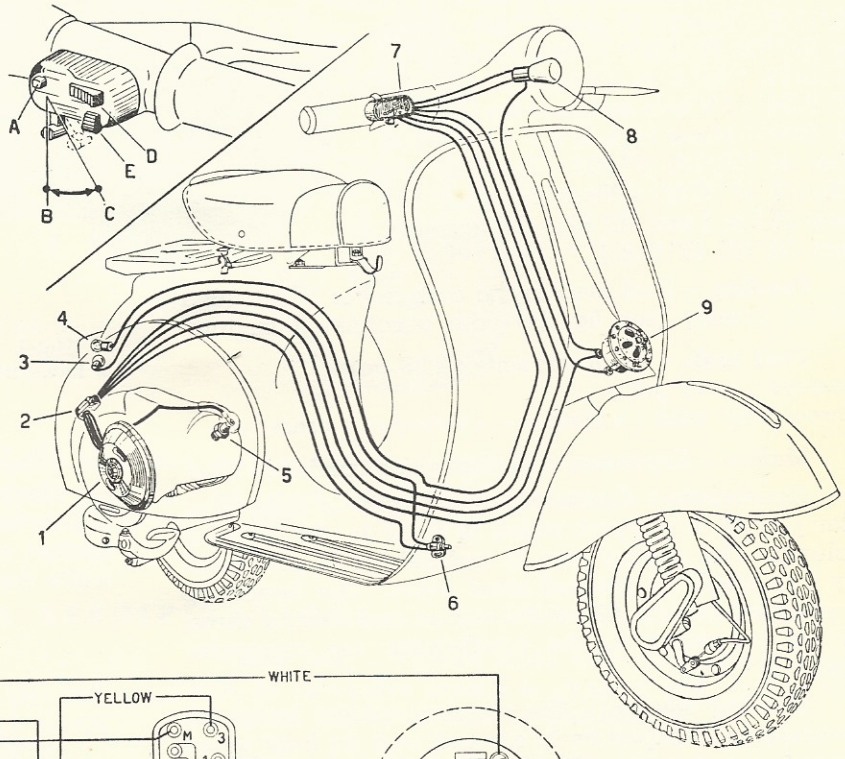
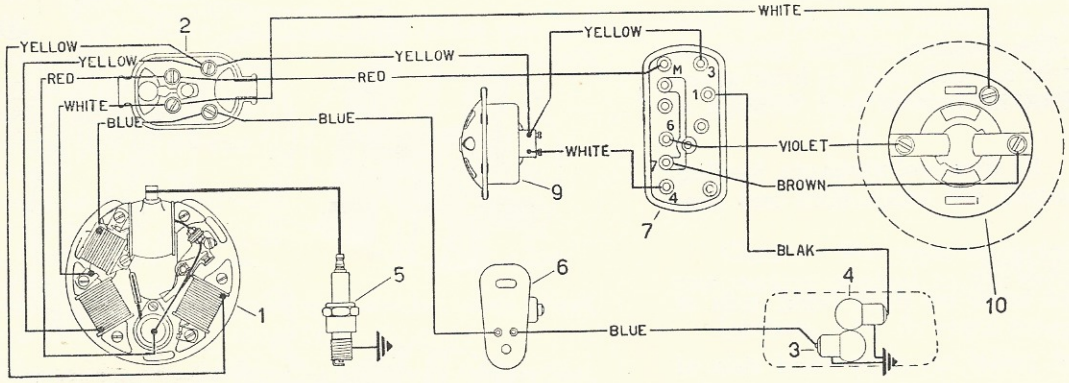
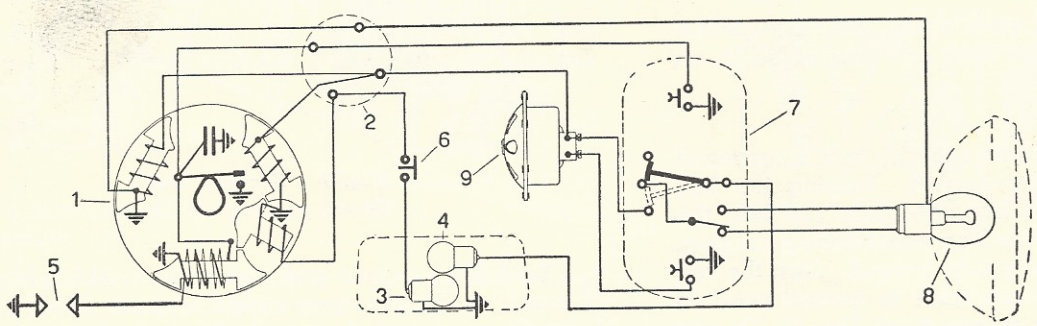


Fig. 9 - Scheme of Electric Wiring

1. Flywheel magneto - 2. Low tension terminal - 3. STOP light (6 V - 3 W bulb) - 4. Tail lamp (6 V - 3 W bulb) - 5. Sparkplug - 6. STOP switch - 7. Light and dimmer switch - 8. 6 V - 22/22 W double filament bulb - 9. Horn - 10. Inside view of head lamp - A: Engine cut-out - B: Lights off - C: Head lamp and tail lamp on - D: Lever for country and traffic beam - E: Horn button.





HOW TO ASSEMBLE THE SPEEDOMETER (WITH MILE DIAL)

(See fig. 10)

— Take off the head lamp and disengage the top shell of handlebars from the inside hub, then remove the cover of the speedometer housing from the top shell.

— With the help of a pilot wire slide in into the steering column from the top end the sheath « A » for the flex drive, until it emerges from the bottom end (indicated with an arrow in the figure).

— Assemble packing « C » and then the speedometer head « B » on the upper shell of handlebars; fit the packing « D » and support « E » on speedometer boss, then secure firmly with nut « F ».

— Pull the pilot wire out of the sheath, grease the flex drive generously and slide it in.

— Place the upper end of the flex drive into housing in the speedometer head and secure both flex drive and sheath by means of knurled ring « G ».

— Re-assemble the upper shell and head lamp.

— Unscrew the plug « H » from the swinging hub.

— Fill up hub with grease the in order to lubricate the portion of the wheel spindle meshing with the speedometer drive pinion « I ».

— Mate the pinion « I » to the support bush « L », then mount ring (with lubricator) « K » on the latter; screw the support bush « L » on the wheel hub.

— Slide the rubber cap « N », the threaded ring « O » and biconical ring « P » over the sheath end; fit the washer « Q » on the cable portion which protrudes from the sheath, pass the latter between the front brake control cable and the wheel, then screw and tighten threaded ring « O » on bush « L » and position rubber cap « N ».

— Make sure that the end of the flex drive enters the square section hole of the speedometer drive pinion.

— Rotate the wheel by hand for several times in order to make sure that it turns freely.

— Grease pinion « I » - support bush « L » assy through lubricator on ring « K ».

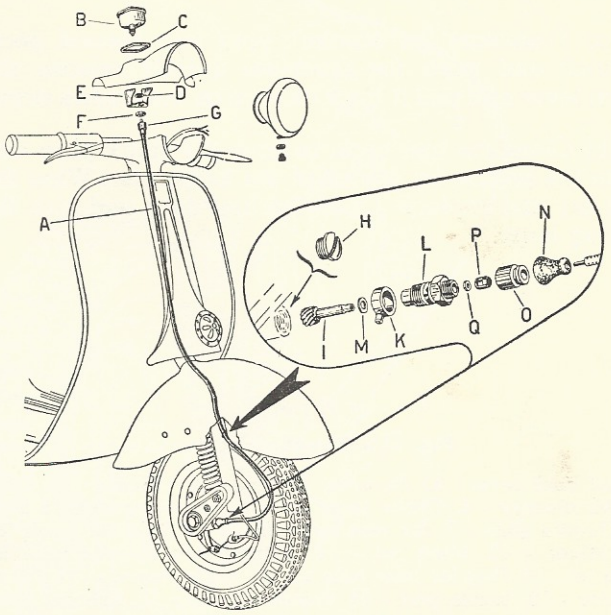


Fig. 10 - How to assemble the speedometer unit

Due to the simple and conventional design of the Allstate scooter, no particular skill is required for its operation, nor skilled personnel for its maintenance.

The tasks can be quite well carried out by any customer, even unexperienced, by carefully following some general rules.

OPERATION

Fuel supply. - Fuel mixture, both during and after running in, should be composed of regular gasoline and pure mineral oil SAE 30 at 2%, i.e.:

— ¼ pint of oil to 1½ gallons of gasoline.

When using pre-diluted or additive oils, or oils for outboard motors, mix ¼ pint of oil per gal.

Keep the breather of filling cap clean.

Oil level. - Remove the level screw, on crankcase, marked « OLIO » as indicated on page 11 Fig. 20, to check oil level in gear box before starting the engine. The scooter standing upright, oil should just be about to flow out; otherwise top up with ALLSTATE REGULAR S.A.E. 30.

Running-in. - Important rules to be followed while running-in (1200 miles):

— Do not exceed following speeds:
1st gear 9.5 mph
2nd gear 19 mph
3rd gear 31 mph

— Do not hold these max speeds for long periods neither use full throttle opening up-hill.

— Change oil in the gear box and check that nuts and bolts are not slack after the first 600 miles.

Starting. - Open the fuel valve, put the gear box in neutral and slightly open the throttle in slow running position, kick the starting lever.

With cold engine, lift the choke rod. Push said rod back as soon as the engine fires.

See Fig. 11; note the three positions of the fuel valve: open, closed, reserve.

Caution. - Do not open throttle wide when releasing clutch.

In case of starting troubles, due to engine being flooded (unvaporized fuel mixture has reached the cylinder and combustion becomes therefore very difficult), proceed according to either one of the following methods :

a) Push-start the scooter : shift into second gear, declutch and push the machine; quickly release the clutch lever and pull it back as soon as the engine starts.

b) Close the fuel cock, remove the spark plug and rotate the engine by means of the kickstarter. Wipe the plug dry and replace. Open the fuel cock and kick the starting lever.

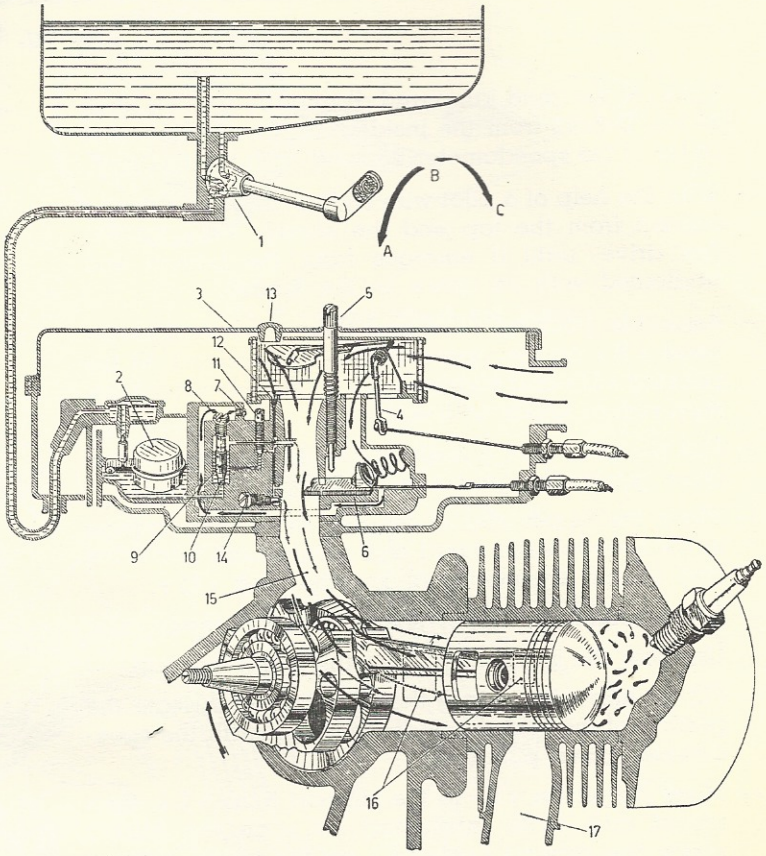


Fig. 11 - Feeding circuit

1. Fuel cock lever : A) Reserve, B) Open, C) Closed - 2. Float - 3. Air cleaner - 4. Choke lever - 5. Set screw for throttle slide - 6. Throttle slide - 7. Air vent for main jet - 8. Hole on mixer top - 9. Mixer - 10. Main jet - 11. Idling jet - 12. Air vent for idling jet - 13. Plug for inlet hole for oil: for laying up - 14. Idling adjuster - 15. Intake port - 16. Transfer ports - 17. Exhaust duct.

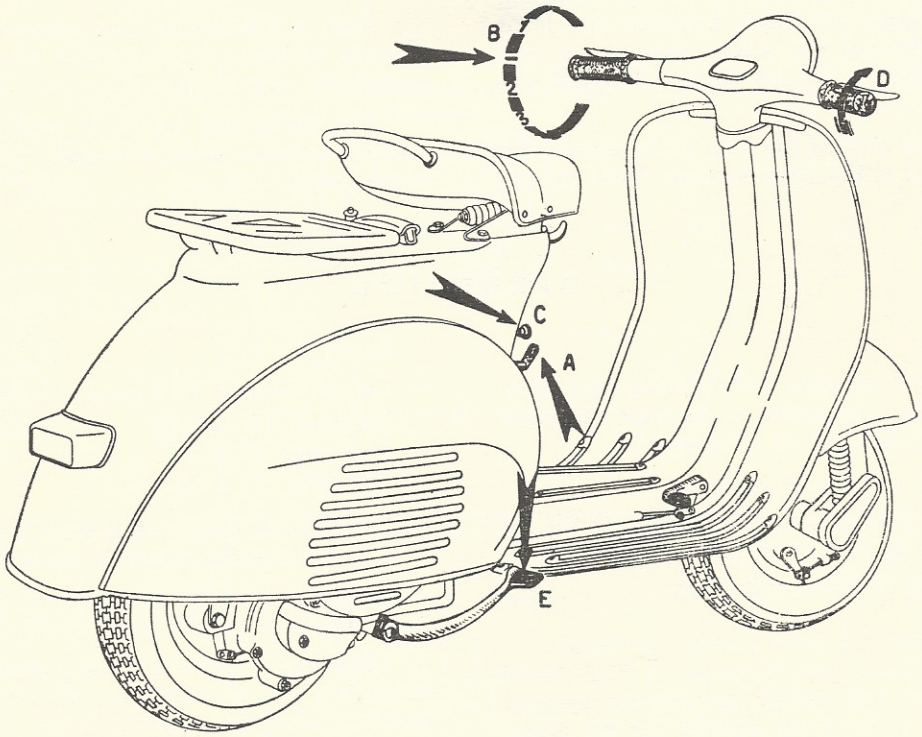


Fig. 12 - Operations to carry out for starting the engine

A : open the fuel cock - B : select « neutral » - C : choke (with cold engine) - D : throttle control grip in idling position - E : depress the kickstarter and turn grip « D » by short strokes.

For access to the engine, take off the engine cowling, then proceed as follows.

— Pull the lever « 1 » (Fig. 13)) and turn it so as to release it from bonnet. Then move the bonnet slightly outwards ,until front pivot « 2 » disengages from the hole on the frame.

— Push the bonnet from the front upwards and turn it (see position indicated by dotted line), thus releasing the fixing hook « 3 » from frame.

— Move bonnet outwards round its hooked pivot « 4 » until the latter disengages from the hole on frame. Thus the bonnet is removed.
For re-assembly, follow the reverse procedure.

Setting the machine in motion. - Let the engine idle, depress the clutch and turn the gear change twistgrip so that the line engraved on it coincides with the figure « 1 » (1st gear) engraved on handlebars (see Fig. 14). Now let in the clutch gently, while opening the throttle gradually to set the machine in motion.

Gear change. - On attaining the required speed in 1st gear, quickly close the throttle, release the clutch

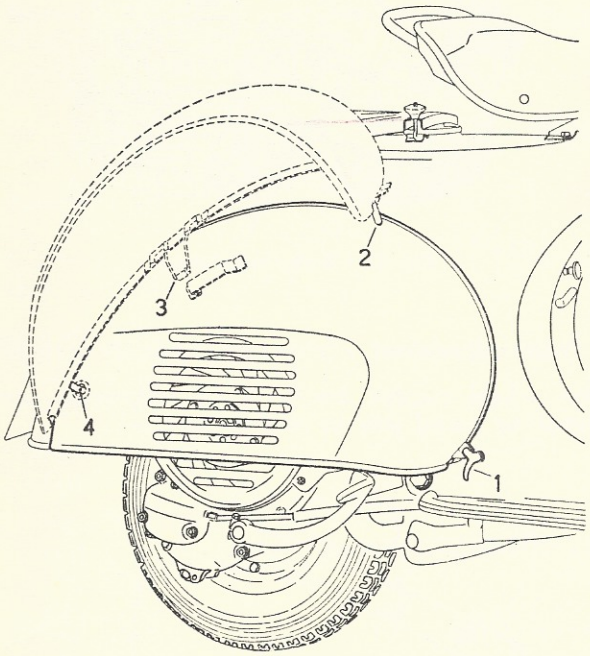


Fig. 13 - Engine bonnet removal

1. Engine bonnet blocking lever - 2. Front pivot - 3. Fixing hook - 4. Hooked pivot

and turn the gear change twistgrip so that the engraved line coincides with figure « 2 » (2nd gear); let in the clutch and open the throttle.

Repeat this procedure for changing into 3rd gear and for changing down.

See the drive system on Fig. 14.

When you reduce the speed of your machine, change down without delay to avoid irregular engine running and stalling at low revs.

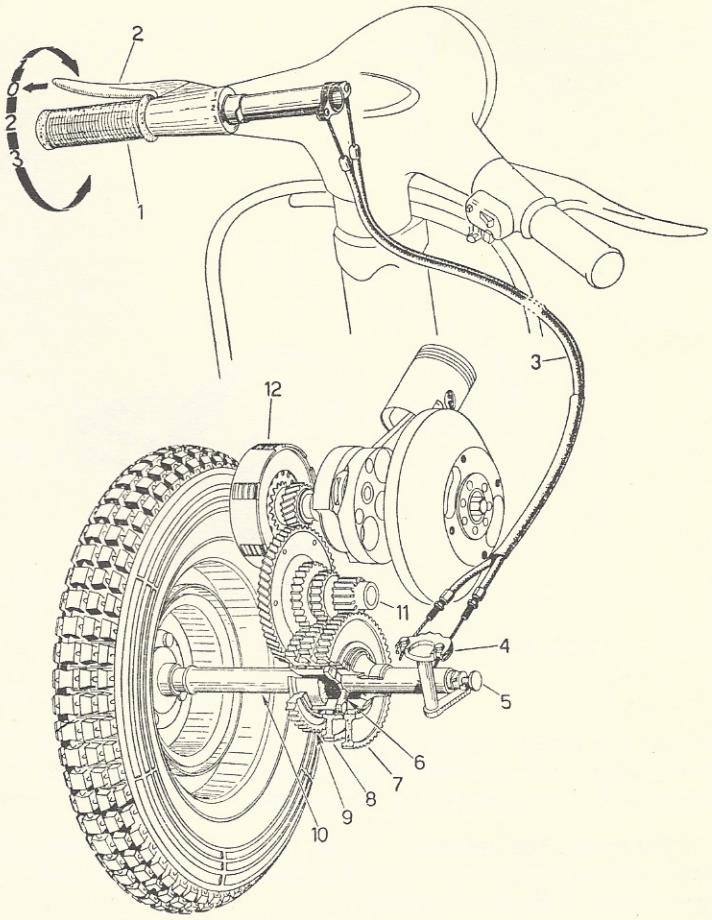


Fig. 14 - Drive system

1. Gear change twistgrip - 2. Clutch control lever - 3. Gear change control cables - 4. Gear shifter - 5. Selector stem - 6. Selector - 7. 1st gear - 8. 2nd gear - 9. 3rd gear - 10. Mainshaft - 11. Cush gear - 12. Clutch.

N.B. - Positions 1-2-3 of the gear change twistgrip correspond to 1st, 2nd and 3rd gear respectively; « 0 » indicates the neutral position.

Do not turn the gear change twistgrip while the engine is not running.

As soon as gear change troubles arise, particularly when the control becomes hard, customers should have their machines adjusted by a Sears Store.

Slow running adjustment. - No hand tool is required for this job. Idling revs can be raised or reduced respectively by simply tightening or slackening the knurled slotted screw on air cleaner steel sheet cover (No. 5, Fig. 11). This screw controls the throttle slide valve.

The adjuster screw for the throttle control cable is installed on the air cleaner case. This screw is to be reset only when necessary and while dismantling and re-assembling. Opposite to said adjuster screw there is on the air cleaner case a plugged hole for access to another screw (spring loaded); see Fig. 11 No. 14. This screw controls the flow of carburated air through the duct from the idling jet, and consequently the idling revs. We recommend that customers refrain from re

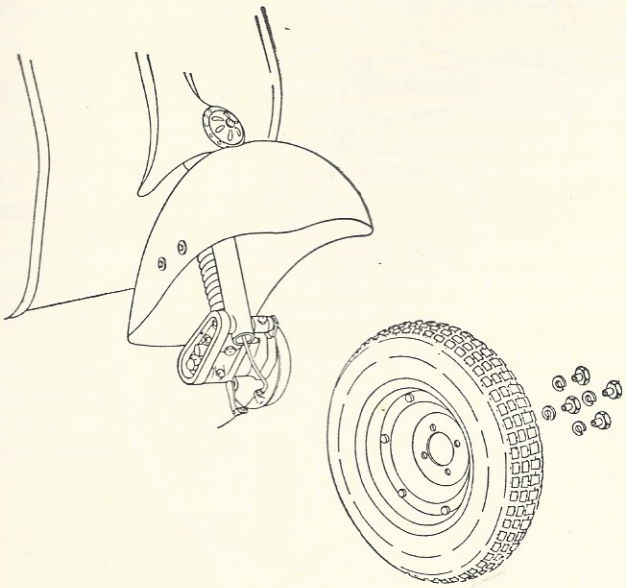


Fig. 15 - Dismantling the front wheel.

setting this screw unless absolutely necessary or during dismantling and re-assembling operations that should, anyway, be entrusted to a Sears Store.

Stopping the engine. - Push the earthing button. This will leave the cylinder full of fuel vapours, and the next start will be much easier.

Tires. - The wheels are interchangeable, i. e. they can be assembled either in front or rear, provided of course that they are inflated to pressures respectively hereunder prescribed.

When a flat tire is to be replaced, unscrew the four nuts which secure the wheel to its flange, pull wheel sideways off the studs (see Fig. 15), repair it or replace with spare wheel.

To remove the tube, first deflate, then separate the felloe from the ring by unscrewing the nuts which join them (see Fig. 16).

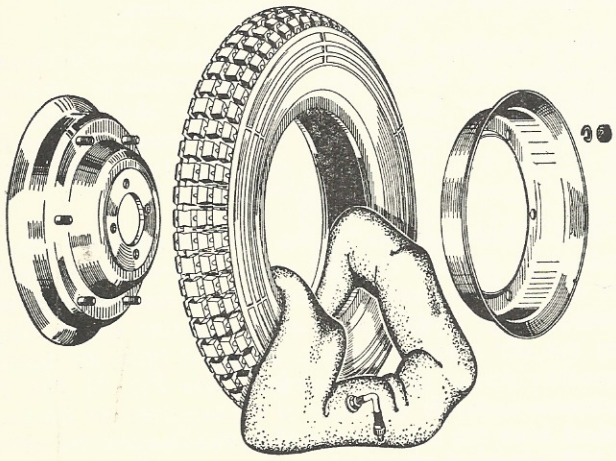


Fig. 16 - Removing the inner tube

Tire pressure should be 18÷20 psi on rear wheel, 14÷15,5 psi on front wheel. If the Allstate is ordinarily ridden by both driver and passenger, the pressure of the rear tire should be 28,5÷31 psi.

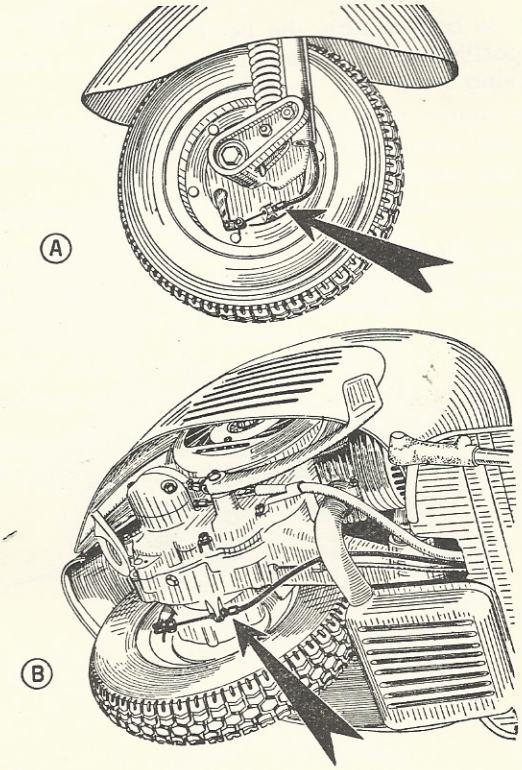


Fig. 17 - Brake adjustment

Brake adjustment. - Brakes are properly adjusted if:

— the wheel rotates freely when respective control lever or pedal are in resting position;

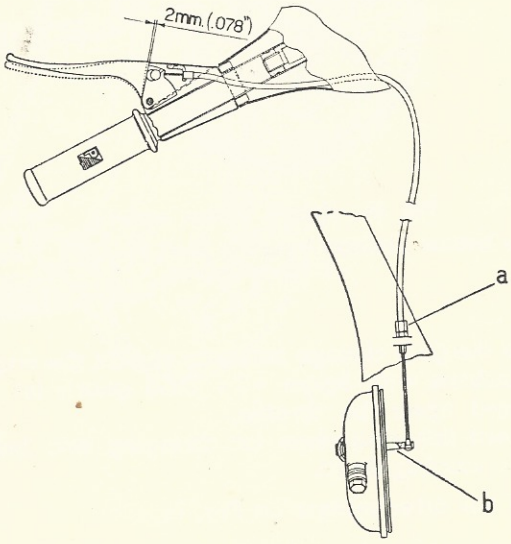


Fig. 18 - Adjustment of clutch control

a) Adjusting nut - b) Clutch lever, engine side

— the braking action starts as soon as respective controls are operated .

These conditions are achieved adjusting the cables by means of screws indicated with an arrow in Fig. 17.

Adjustment of clutch control. - Adjustment of clutch controls is achieved operating on adjusting nut (a), screwed to the engine bracket (see Fig. 18), by means of open end wrench 82199 in the tool roll.

The cable is to be tensioned or loosened, as the case may be so that control lever, on handlebars, makes a stroke of 2 mm. (0.078") before lever (b), on engine, starts moving.

Wrong play in the control may cause the clutch plates burning out even in normal riding conditions.

MAINTENANCE

Cleaning the scooter. - Brushing kerosene and wiping dry with clean rags is advisable for external cleaning of engine.

All painted surfaces should be washed with water, rinsed by means of a sponge and wiped dry with a chamois. Do not use kerosene on such surfaces, since it damages paint and turns it dull.

If necessary, blow the head lamp reflector clean or wipe off dust with a very soft feather. Do not use a cloth and keep your fingers off reflector surface.

Before setting the machine in motion, (if it has been delivered directly to the customer by the Factory) check oil level in gear box by unscrewing from the crankcase the level screw marked « OLIO » (see Fig. 21). The scooter standing upright, oil should just be about to flow out.

After the first 600 miles. - Replace oil in the gear box by the procedure as explained in the lubrication chart, page 13. The crankcase can be drained through the hole indicated in Fig. 21.

Every 2.500 miles :

(1) - Remove the air cleaner from the carburettor and wash it in a 30% gasoline-oil bath.

(2) - Check oil level in the gear box (see above).

(3) - Grease all joints on the brake controls.

(4) - Clean the sparkplug electrodes with very fine emery cloth or suitable files, and adjust the gap to 0.6 mm. (0.023").
Inspect the insulation material of sparkplug; replace the latter if the porcelain is cracked. Wash with neat gasoline.
Use the sparkplug type Marelli CW 230 A-T; Marelli CW 225 N-T; Marelli CW 225 A-T; Bosch W 225 T1; Champion L. 86; AC 43 F; KLG F 70 or F 75.
Important: using the proper type of sparkplug will eliminate many engine troubles.

(5) - Grease the felt which lubricates the cam of flywheel magneto.

(6) - Clean the two lubricators on front wheel hub and refil them by means of a grease gun.
N.B. - All operations indicated hereunder should be carried out by a SEARS store.

(7) - Lubricate the speedometer drive pinion and flex drive (if mounted).

(8) - Clean the muffler and decarbonize the engine as explained hereunder. Remove the muffler, the cooling hood, the cylinder head and the cylinder (see Fig. 20). Decarbonize the piston crown and the cylinder ports from all carbon deposits. Decarbonize the inner side of the cylinder head. Carefully clear the cylinder carbon deposits.
Heat the exhaust pipe of the muffler and clean it either by scraping internally with a hooked wire or blowing air through from the other orifice; in both cases the muffler should be held so that the exhaust pipe is turned downwards.

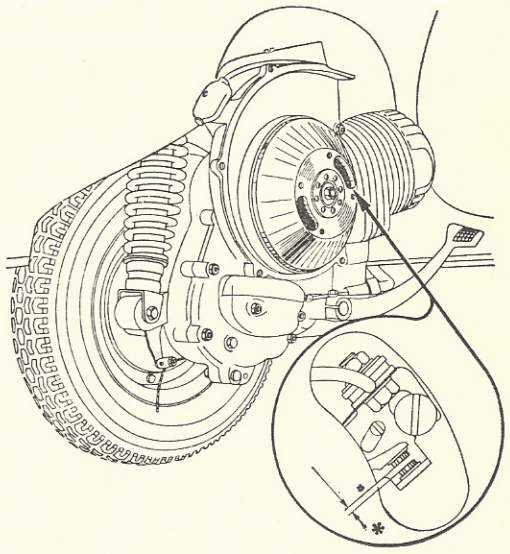


Fig. 19 - Breaker points
* Max. gap of breacker points should be 0.011" —0.019"

In case of shock-absorber troubles, overhaul or simply clean the assembly and change oil.

These operations should be carried out by your SEARS store.

Every 5.000 miles :

(1) - Clean the breaker points.
In order to avoid ignition troubles or abnormal running, have the breaker points adjusted in a use Sears stores; the gap should not be more than 0.011"-0.019" (see Fig. 19) and the points should begin to open when the current in the primary ignition circuit has attained its peak value.

(2) - Grease the control cables.

(3) - Change the oil in the gear box, as stated on page 13.

(4) - Grease the ratchet quadrant of the gear shifter.

Disuse :

(1) - In such a case, cleaning the scooter throughly is advisable.

(2) - With engine not running and with throttle control twistgrip completely rotated, (full throttle opening) pump 40 cc. of **Allstate-Regular Oil SAE 30** or **Allstate Outboard Motor Oil** through hole in the air cleaner cover into the carburettor intake, by means of an oiler. Then operate the kickstarter three of four times.

(3) - Rest the floorboard on two wooden blocks in order to take the weight off the tyres.

(4) - Drain all fuel from both tank and carburettor.

(5) - Grease all unpainted metal parts.

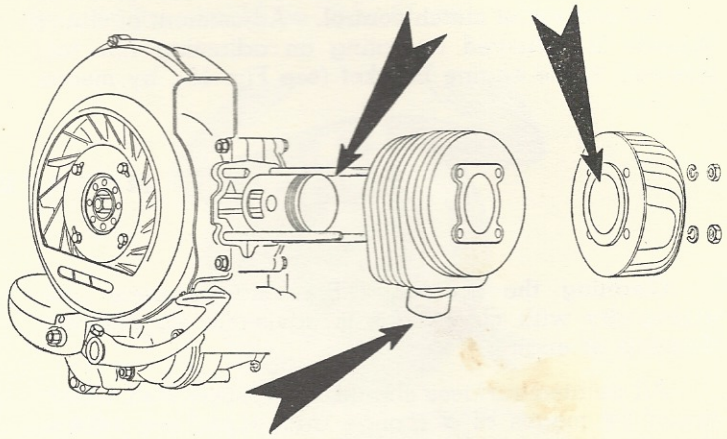


Fig. 20 - Cleaning the cylinder head, cylinder and piston

LUBRICATION CHART FOR ALLSTATE

PART TO BE LUBRICATED	OPERATION	TIME	TYPE OF LUBRICANT
Engine	Mix gasoline with the following amount of lubricating oil : — ¼ pint of oil to 1½ gallons of gasoline. N.B. - With pre-diluted or additive oils, mix ¼ pint of oil to each gallon of gasoline.	At each refilling of the fuel tank	Pure mineral oil SAE 30
Gear Box	Warm up the engine and drain off all oil. Pour some fresh oil in and run the engine for a few seconds. Drain again and refill with new oil (about 7 oz.). Refill with new oil to oil level hole.	After the first 600 miles and every 5000 miles Every 5000 miles	Allstate Regular SAE 30
Front wheel hub Speedometer flex drive and pinion	Lubricate with grease gun.	Every 2500 miles	High Pressure Chassis Grease
Joints on brake controls	Grease.	Every 2500 miles	Allstate all - purpose Gear Lubricator SAE 140
Shock-absorber	Change oil.	Only when the shock-absorber is out of order	Allstate Shock Absorber Fluid
Control cables	Clean and lubricate.	Every 5000 miles	Allstate all - purpose Gear Lubricator SAE 140
Felt of flywheel cam	Small spot of grease on the felt.	Every 2500 miles	Allstate Bearing Grease
Ratchet quadrant of gear shifter	Grease.	Every 5000 miles	Allstate all - purpose Gear Lubricator SAE 140

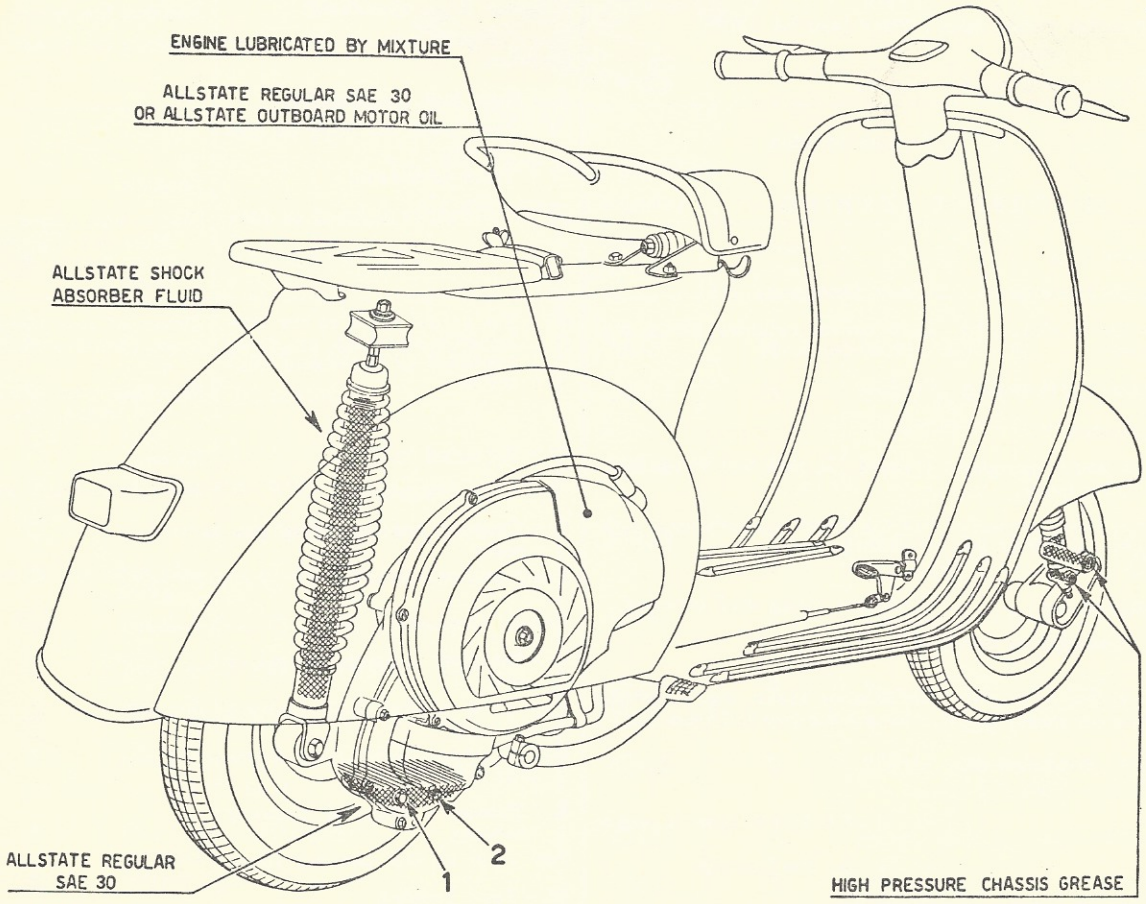


Fig. 21 - Lubrication scheme

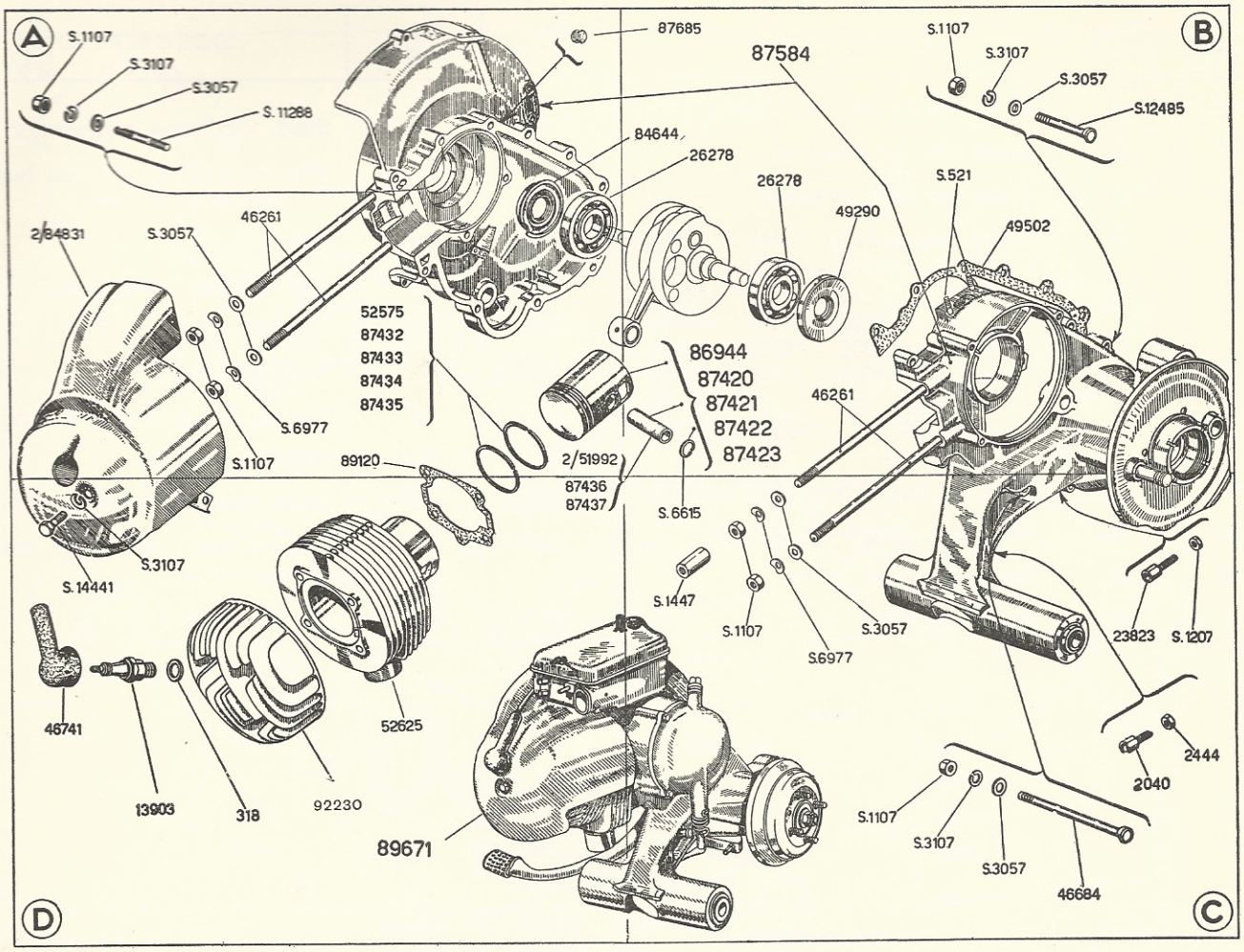
1. Filling hole - 2. Draining hole

LOCATING TROUBLES AND RUNNING IRREGULARITIES

Carry out following checks when the engine does not start easily or runs irregularly.

Locating the trouble	Remedies
DIFFICULT STARTING	
1. - Fuel system	
Fuel tank empty	Turn to « reserve ». Refill as soon as possible.
Filter on carburettor, Fuel tap body, Carburettor body, Main jet, Atomizer, Packing of fuel tap — Clogged, dirty	Remove and wash in gasoline - Blow dry
2. - Carburation	
Engine flooding	See page 8
Float perforated	Replace
Air cleaner choked or dirty	Clean (see page 11)
Choke flap sticking in position « closed »	Release
3. - Ignition	Disconnect the plug lead. Check if sparking occurs between lead and crankase when the kickstarter is operated.
Sparkplug dirty	Clean. Correct gap to 0.6 mm. (.023")
Porcelain of sparkplug cracked	Replace the plug
Breaker points dirty, partially worn or pitted	Clean with suitable files or very fine emery paper
Gap between breaker points incorrect	Correct (see fig. 19)
Breaker points completely worn or pitted	Replace
Timing wrong	Re-time ignition
INCORRECT RUNNING	
1. - Lack of power	
Muffler outlet pipe carbonized	Clean (see page 11)
Exhaust port partially closed by carbon deposit	Decarbonize cylinder, piston and cylinder head
Cylinder base gasket not sealing	Replace
2. - Poor compression	
Sparkplug not well screwed down in cylinder head	Tighten (21 mm box wrench)
Cylinder head not fitting properly into the spigot on top of cylinder	Set the head properly and tighten the nuts
Piston rings gummed up	Clean the rings and grooves
3. - Explosions at muffler or carburettor	
Sparking plug carbon-coated or with excessive electrode gap	Replace or clean the plug and correct the gap to 0.6 mm (.023")
Carbon pearls on sparkplug insulation	Clean
Pre-ignition	a) Fit on a proper type of sparkplug b) Re-time the ignition
Tip of contact breaker loose	Replace
Condenser screw loose	Tighten
Not enough mixture flowing to the carburettor	See paragraph « Difficult starting », No. 1

Locating the trouble	Remedies
4. - Clutch troubles	
a) Clutch snatches : Gear pinions not lubricated properly	Top up oil level. Tighten the screw on draining hole
b) Clutch slips : Springs feeble	Replace
Plates worn or burnt	Replace both plates and springs
c) Clutch does not disengage completely : Excessive play on control cable	Adjust (see fig. 18)
5. - Gear pinions disengage of own accord	
Gear change control cables out of adjustment	Adjust Should the control have excessive play in neutral, tension control cables by screwing back the respective adjuster screw (on cable sheath end, ratchet quadrant side) with an 8 mm open ended wrench. If the cable tension in neutral is correct but the reference marks of the handlebars do not tally, tighten one of the adjuster screw and unscrew the other one to the same extent, so that the cable tension is not altered.
Spring of stirrup broken, feeble or missing	Replace
Selector arms chamfered	Replace the selector
Dogs of gear pinions chipped or worn	Replace the pinions
6. - High fuel consumption	
I - Fuel level too high in carburettor : Float perforated	Replace
II - Air cleaner chocked or dirty	Clean with pure gasoline and blow dry. Dip the metal wadding into a 30% gasoline-oil bath
III - Jets or air vents of the carburettor blocked or dirty; incorrect or increased diameter	Dismount and clean carburettor in gasoline and compressed air. For type and diameter of jets and vents, see page 5.
IV - Retarded ignition	Re-time
V - Poor compression.	See No. 2 of this paragraph
7. - Controls not operating properly	
Inner cables rusted	Lubricate or, if necessary, replace
Excessive play	Adjust
8. - Steering column becomes stiff	
Top race of top ball bearing too tight	Slacken
Bottom races of the two bearings pitted	Replace
9. - Excessive play of steering column	
Top race of top bearing loose	Tighten
10. - Poor braking	
Stroke of pedal or lever too long	Adjust (see Fig. 17)
Brake linings oily or worn down	Wash with gasoline or replace
Brake drums and linings scratched	Replace



PARTS LIST FOR ENGINE

Crankcase - Cylinder

(TABLE I)

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
318	D	**Gasket,** copper, of sparkplug	2/84831	A	**Hood,** cooling
2040	C	**Adjuster** of clutch	84644	B	**Seal,** spring loaded, for crankcase, flywheel side
2444	C	**Nut**	86944	B	**Piston,** with standard wrist pin (with 2/51992 - S. 6615)
13903	D	**Sparkplug,** with gasket	87420	B	**Piston,** 1st oversize, with wrist pin (with 2/51992 - S. 6615)
23823	C	**Adjuster** of rear brake	87421	B	**Piston,** 2nd oversize with wrist pin (with 2/51992 - S. 6615)
26278	B	**Ball** bearing, of crankshaft	87422	B	**Piston,** 3rd oversize with wrist pin (with 2/51992 - S. 6615)
46261	A-B	**Stud,** long, cylinder fastening	87423	B	**Piston,** 4th oversize with wrist pin (with 2/51992 - S. 6615)
46684	C	**Bolt,** securing crankcase halves	87432	A	**Ring,** piston, 1st oversize
46741	D	**Cap,** rubber, for sparkplug	87433	A	**Ring,** piston, 2nd oversize
49290	B	**Seal,** spring loaded, for crankcase, clutch side	87434	A	**Ring,** piston, 3rd oversize
49502	B	**Gasket,** crankcase			
2/51992	A	**Wrist** pin			
52575	A	**Ring,** piston, normal			
52625	A	**Cylinder**			

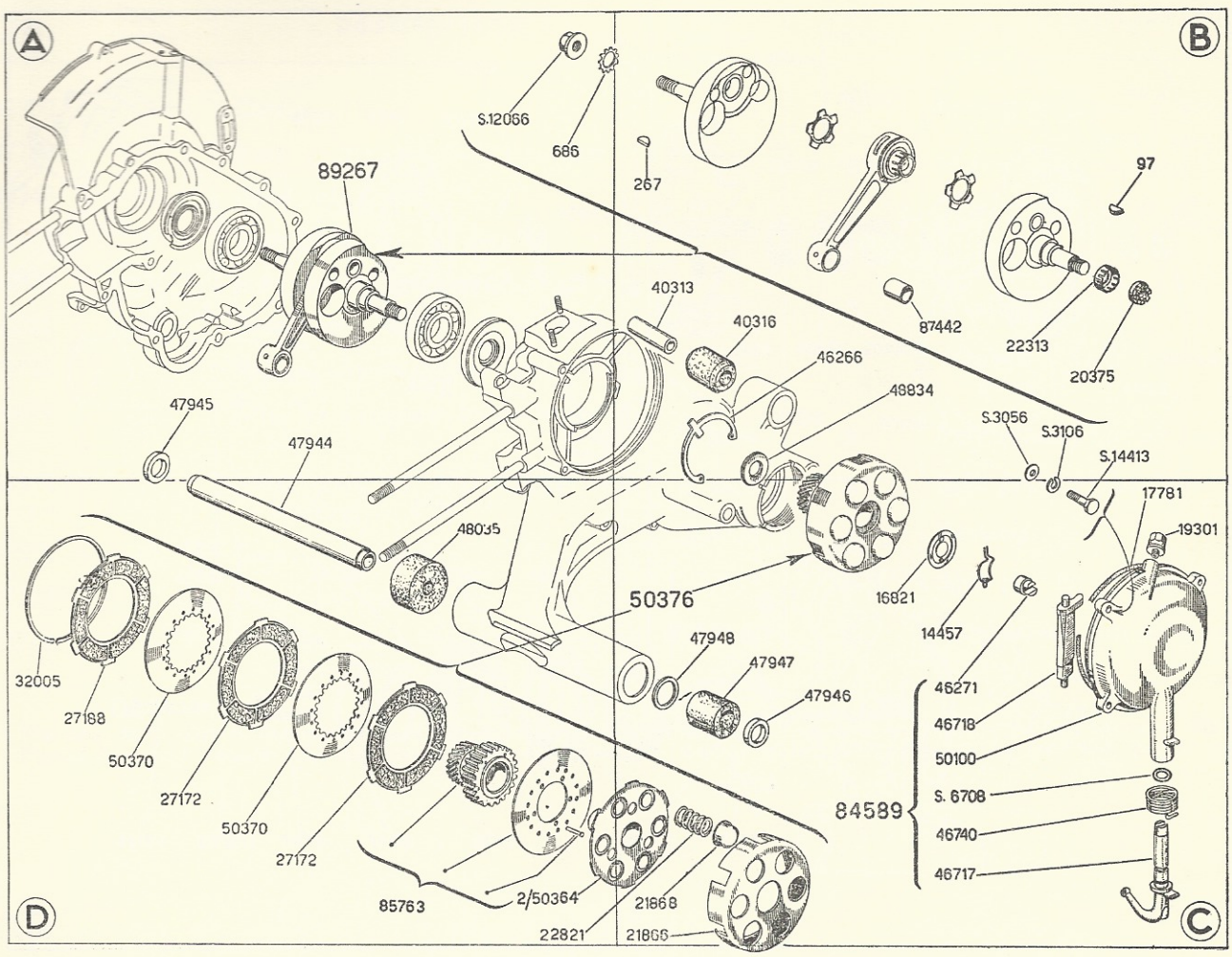
Part Number	Table Section	DESCRIPTION
87435	A	**Ring,** piston, 4th oversize
87436	D	**Wrist** pin, 1st oversize
87437	D	**Wrist** pin, 2nd oversize
87584	B	**Crankcase** halves (Parts n. 12869 - 40313 - 40316 - 46261 - 46631 - 46684 - 47160 - 47161 - 47944 - 47945 - 47946 - 47947 - 47948 - 48000 - 48002 - 48035 - 49502 - 51255 - 54071 - 81842 - 82086 - 87685 - S. 521 - S. 1107 - S. 3057 - S. 3107 - S. 10790 - S. 11288 - S. 12485)
87685	B	**Plug,** on crankcase, flywheel side
89120	A	**Gasket,** cylinder base
89671	D	**Engine,** g. a.
92230	D	**Head,** cylinder
S. 521	B	**Stud,** for fixing carburettor
S. 1107	A-B-C	**Nut,** for locking cylinder head and crankcase halves
S. 1207	C	**Nut**
S. 1447	C	**Nut,** spacer, hood fixing
S. 3057	A-B-C	**Washer,** plain
S. 3107	A-B-C-D	**Washer,** spring
S. 6615	C	**Circlip,** for locking wrist pin
S. 6977	A-C	**Washer,** spring
S. 11288	A	**Stud,** securing crankcase halves
S. 12485	B	**Bolt,** short, securing crankcase halves
S. 14441	D	**Screw,** hood fixing

PARTS LIST FOR ENGINE

Crankshaft - Clutch

(TABLE II)

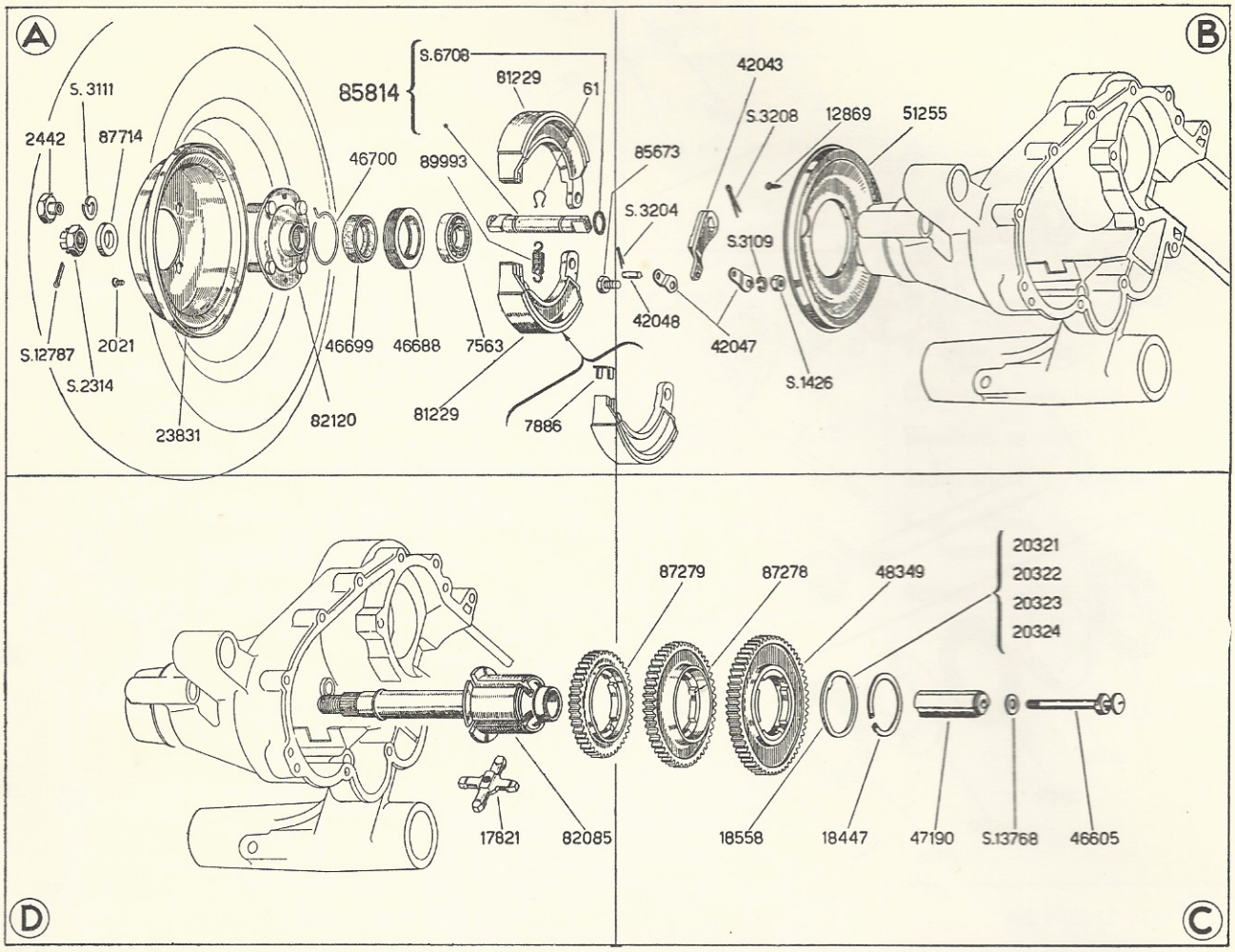
Part Number	Table Section	DESCRIPTION
97	B	**Key,** woodruff, for crankshaft (clutch side)
267	B	**Key,** woodruff, for crankshaft (flywheel side)
686	A	**Washer,** shake proof, for nut securing flywheel
14457	C	**Spring,** for fixing clutch centralizing plate
16821	C	**Plate,** clutch centralizing
17781	C	**Gasket,** between clutch cover and crankcase
19301	C	**Breather,** with inserts
20375	B	**Nut,** castle, for securing clutch
21866	D	**Body** clutch
21868	D	**Cup,** clutch spring
22313	B	**Washer** spring, for castle nut securing clutch
22821	D	**Spring,** clutch
27172	D	**Plate,** clutch, with linings
27188	D	**Driving** disc, external, of clutch
32005	D	**Ring,** elastic, for stopping clutch plates
40313	B	**Spindle,** hollow, for hydraulic shock-absorber
40316	B	**Bush,** bottom, rubber, of shock-absorber
46266	B	**Circlip,** locking spacer
46271	C	**Piston,** slotted thrust, of clutch
46717	C	**Lever,** outer, clutch control
46718	C	**Lever,** inner, clutch control
46740	C	**Spring,** return, of outer clutch control lever
47944	A	**Spindle,** hollow, for engine suspension
47945	A	**Spacer,** flywheel side
a) 47946	C	**Spacer,** clutch side
47947	C	**Bush,** rubber, clutch side
47948	C	**Washer,** plain



Parts list for engine — Crankshaft - Clutch - Continued

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
48035	D	**Bush,** rubber, flywheel side	87442	B	**Bronze** bush of con. rod small end
48834	B	**Washer,** shim, of clutch gear	**89267**	A	**Crankshaft** (with part n. 87442)
50100	C	**Cover,** clutch, with inserts	S. 3056	B	**Washer,** plain, for securing clutch cover
2/50364	D	**Plate,** spring, of clutch	S. 3106	B	**Washer,** spring
50370	D	**Plate,** smooth, of clutch	S. 6708	C	**Packing,** between clutch cover and outer lever
50376	C	**Clutch,** g. a. (Parts n. 21866 - 21868 - 22821 - 27172 - 27188 - 32005 - 2/50364 - 50370 - 85763)	S. 12066	A	**Nut,** securing flywheel
84589	C	**Cover,** clutch with lever and thrust piston (Parts n. 19301 - 46271 - 46717 - 46718 - 46740 - 50100 - S. 6708)	S. 14413	B	**Screw,** securing clutch cover
85763	D	**Gear,** clutch			

a) Parts 48988 or 48989 can be assembled instead of spacer 47946, to attain an axial force in the bush 47947 to give 0 ÷ 1,5 mm. (0 ÷ .06") compression.



PARTS LIST FOR ENGINE

Gear box - Rear wheel flange

(TABLE III)

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
61	A	**Clip,** spring, for brake jaws	a) 20322	C	**Washer,** shoulder 2nd oversize (thickness: 2,35 mm. = 0".092)
2021	A	**Screw,** for joining brake drum to flange	a) 20323	C	**Washer,** shoulder 3rd oversize (thickness: 2,50 mm. = 0".098)
2442	A	**Nut,** for securing wheel	a) 20324	C	**Washer,** shoulder 4th oversize (thickness: 2,65 mm. = 0".104)
7563	A	**Ball** bearing of mainshaft	23831	A	**Drum,** rear brake
7886	A	**Pad**	42043	B	**Arm,** rear brake control
12869	B	**Screw,** for dust cover	42047	B	**Link,** brake
17821	D	**Selector,** gear	42048	B	**Pin,** for rear brake links
18447	C	**Circlip,** retaining shoulder washer	46605	C	**Stem,** selector
a) 18558	C	**Washer,** shoulder, normal, of gear pinions	46688	A	**Ring,** locking ball bearing
a) 20321	C	**Washer,** shoulder, 1st oversize (thickness: 2,2 mm. = 0".086)	46699	A	**Seal,** spring - loaded of mainshaft

a) The total axial play of the assembly of the 3 gear pinions in respect to their seat must be contained between .006" and .012". Should this play exceed said tolerances, the normal shoulder washer must be replaced by another with proper oversize.

Part Number	Table Section	DESCRIPTION
46700	A	**Circlip**
47190	C	**Bush,** guide, of selector stem
a) 48349	C	**Gear,** low speed
51255	B	**Dust** cover
81229	A	**Jaw,** rear brake, with lining
a) 82085	D	**Mainshaft**
82120	A	**Flange,** female spline, with inserts
85673	B	**Bolt,** for securing cable to brake links
85814	A	**Axle,** cam, of rear brake with packing S. 6708
a) 87278	C	**Gear,** 2nd speed
a) 87279	C	**Gear,** 3rd speed
87714	A	**Washer,** plain, for nut securing wheel flange
89993	A	**Spring,** return, of brake jaws
S. 1426	B	**Nut,** on bolt securing brake links
S. 2314	A	**Nut,** castle, for securing wheel flange
S. 3109	B	**Washer,** spring
S. 3111	A	**Washer,** spring, for nut securing wheel
S. 3204	B	**Split pin,** on pin for brake links
S. 3208	B	**Split pin,** for cam axle
S. 6708	A	**Packing**
S. 12787	A	**Split** pin, for locking castle nut
S. 13768	C	**Washer,** tab, on selector stem

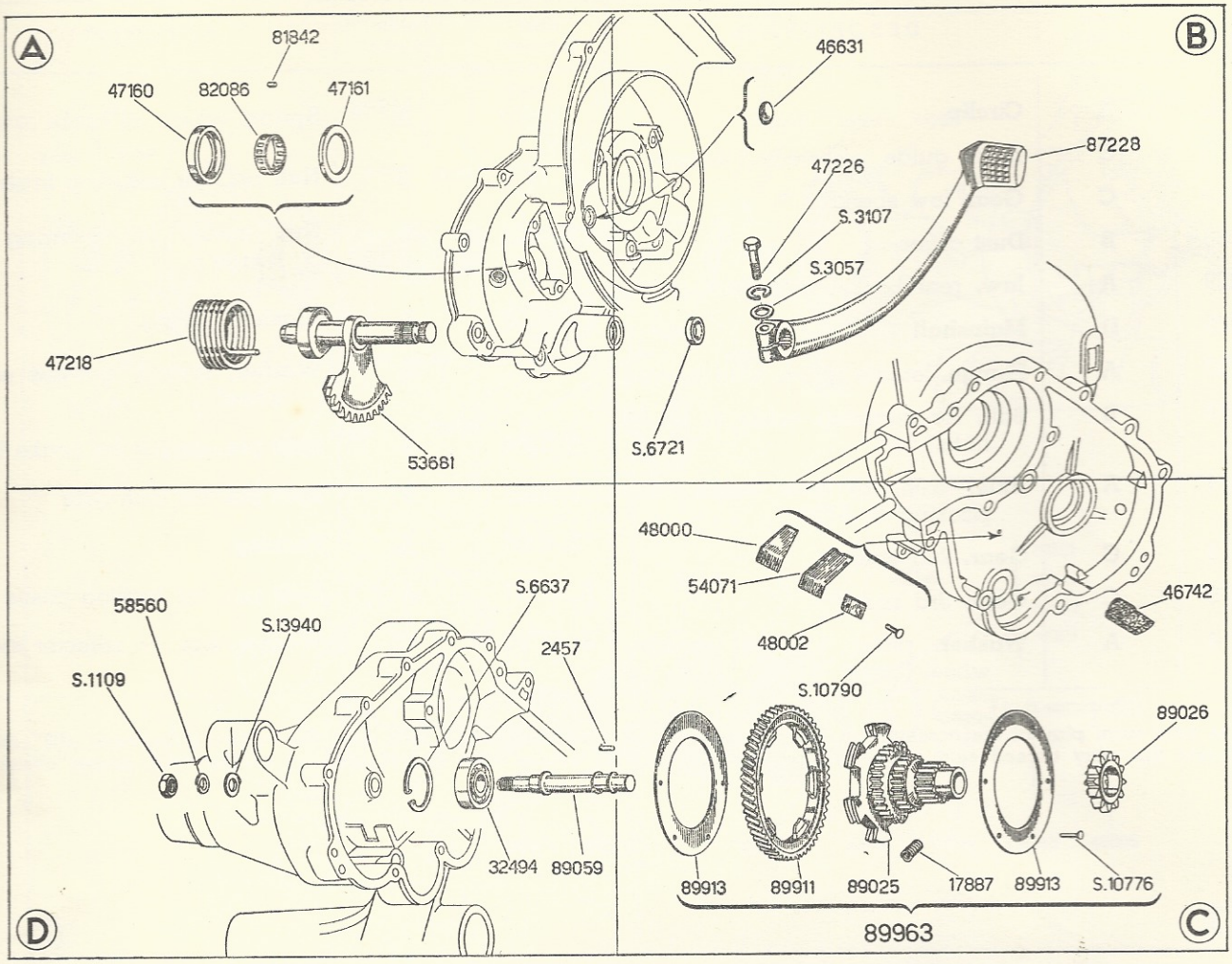
a) The total axial play of the assembly of the 3 gear pinions in respect to their seat must be contained between .006" and .012". Should this play exceed said tolerances, the normal shoulder washer must be replaced by another with proper oversize.

PARTS LIST FOR ENGINE

Cush gear - Kickstarter

(TABLE IV)

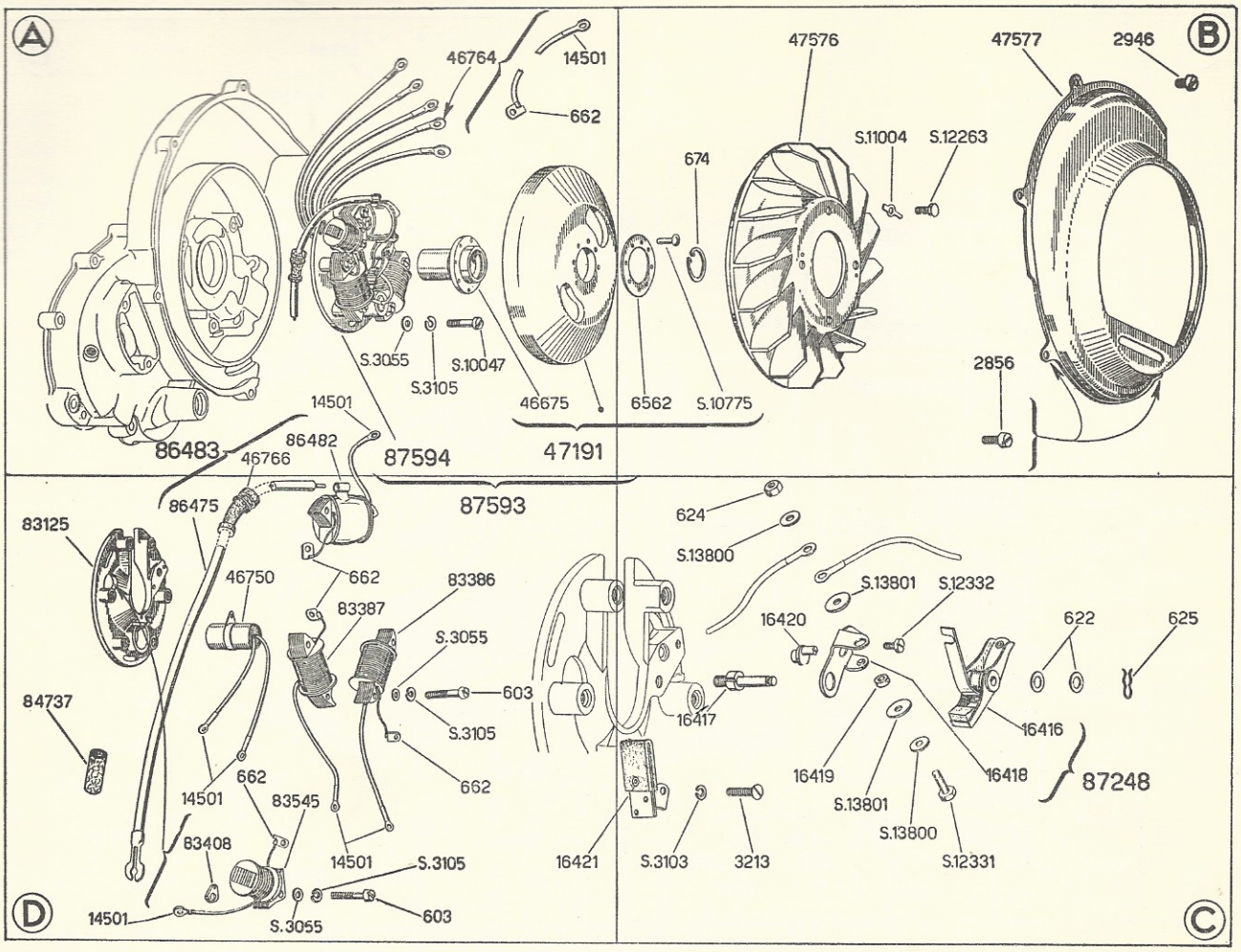
Part Number	Table Section	DESCRIPTION
2457	D	**Roller,** for multiple gear
17887	C	**Spring,** of cush drive
32494	D	**Ball** bearing, of multiple gear
46631	D	**Plug**
46742	B	**Buffer,** for starting sector
47160	C	**Race,** roller bearing of mainshaft
47161	A	**Washer,** shoulder, roller bearing
47218	A	**Spring,** return, of kickstarter
47226	A	**Screw,** securing kickstarter
48000	B	**Blade,** short, for starting sector
48002	C	**Pad,** blades
53681	C	**Sector,** starting
54071	A	**Blade,** long, for starting sector
58560	C	**Washer,** spring, for nut securing layshaft
81842	A	**Roller**
82086	A	**Cage,** roller bearing
87228	B	**Kickstarter**
89025	C	**Gear,** multiple
89026	C	**Gear,** starting
89059	D	**Layshaft**
89911	C	**Gear,** outer, of cush drive
89913	C	**Washer,** plate, of cush drive springs
89963	C	**Drive,** cushion, g.a. (Parts n. 17887 - 89025 - 89911 - 89913 - S. 10776)
S. 1109	D	**Nut,** for securing layshaft
S. 3057	B	**Washer,** plain, of kickstarter
S. 3107	B	**Washer,** spring
S. 6637	D	**Circlip,** for locking multiple gear ball bearing
S. 6721	B	**Packing**
S. 10776	C	**Rivet,** for securing plate washer
S. 10790	C	**Rivet,** for securing blades
S. 13940	D	**Washer,** plain, for nut securing layshaft



PARTS LIST FOR ENGINE
Flywheel Magneto - Fan

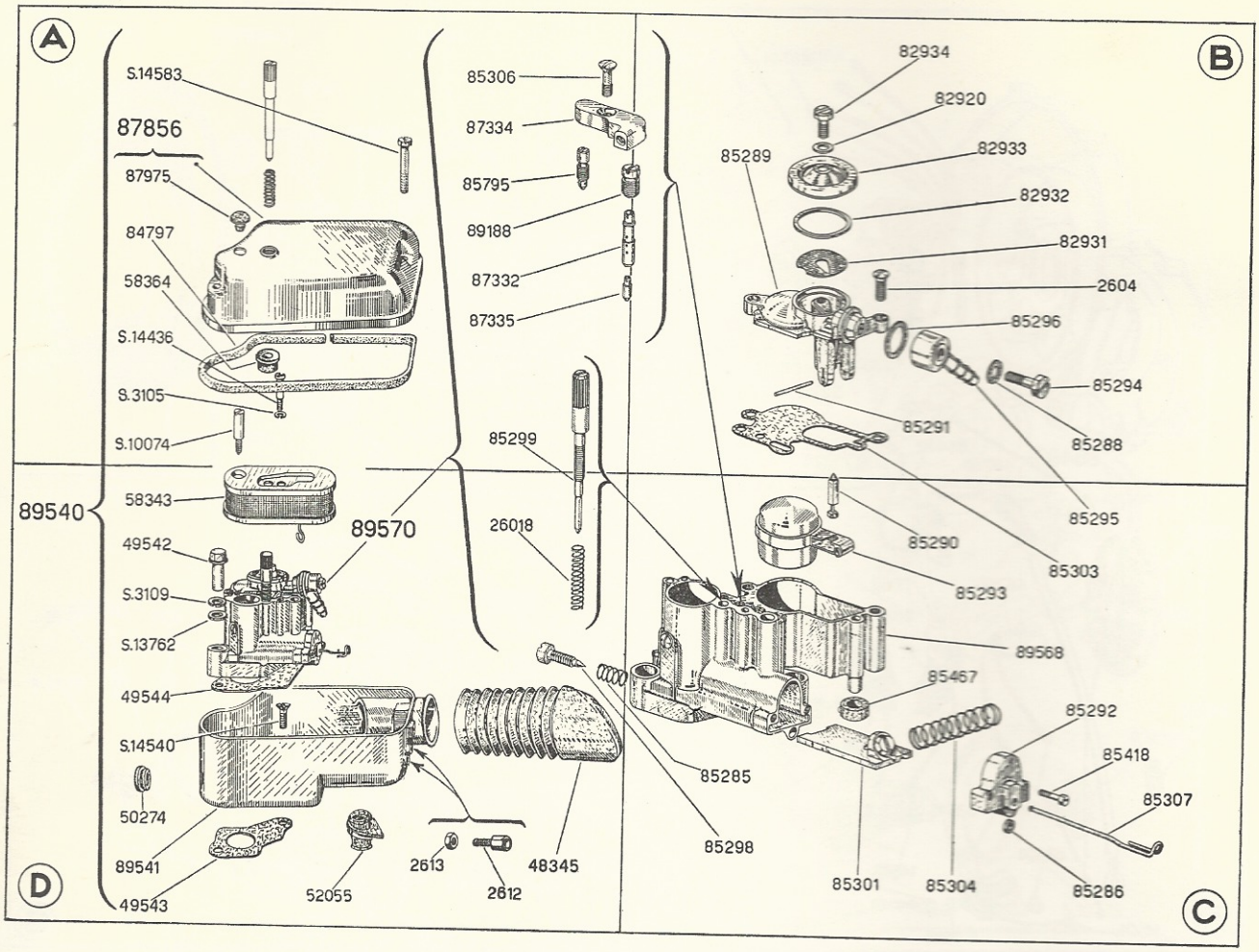
(TABLE V)

Part Number	Table Section	DESCRIPTION
603	D	**Screw,** for securing coils
622	C	**Washer,** shim, of breaker
624	C	**Nut**
625	C	**Fork** spring
662	A-D	**Terminal**
674	B	**Circlip,** for flywheel extraction
2856	B	**Screw,** long, for securing fan casing cover
2946	B	**Screw,** short, for securing fan casing cover
3213	C	**Screw,** securing condenser and felt blade
6562	B	**Washer,** plain, of cam
14501	A-D	**Terminal**
16416	C	**Breaker,** with platinum point
16417	C	**Axle,** breaker
16418	C	**Gusset,** contact
16419	C	**Ring,** insulating
16420	C	**Cam**
16421	D	**Blade** felt, with inserts
46675	A	**Cam**
46750	D	**Condenser**
46764	A	**Cable,** earth, with terminal
46766	A	**Grommet**
47191	A	**Flywheel,** with inserts (Parts n. 6562 - 46675 - S. 10775)
47576	B	**Fan**
47577	B	**Cover,** fan casing
83125	D	**Stator**
83282	A	**Link**
83386	D	**Coil,** low tension, No. 1



Parts list for engine — Flywheel Magneto - Fan - Continued

Part Number	Table Section	DESCRIPTION
83387	D	**Coil,** low tension, No. 2
83408	D	**Pad,** securing low tension coil No. 3
83545	D	**Coil,** low tension, No. 3
84737	D	**Tube,** for part 86475
86475	D	**Lead,** plug, with inserts
86482	A	**Coil,** H.T.
86483	A	**Coil,** ignition, g. a. (Parts n. 46766 - 86475 - 86482)
87248	C	**Gusset-breaker** assy (Parts n. 16416 - 16418)
87593	D	**Flywheel,** magneto g. a. (Parts n. 47191 - 87594)
87594	A	**Stator,** g. a. (Parts n. 603 - 622 - 624 - 625 - 3213 - 16416 - 16417 - 16418 - 16419 - 16420 - 16421 - 46750 - 46764 - 83125 - 83386 - 83387 - 83408 - 83545 - 86482 - S. 3055 - S. 3103 - S. 3105 - S. 12331 - S. 12332 - S. 13800 - S. 13801)
S. 3055	A-D	**Washer,** plain, for screws securing stator and coils
S. 3103	C	**Washer,** springs for belt blade
S. 3105	A-D	**Washer,** spring, for screw securing stator
S. 10047	A	**Screw,** for securing stator
S. 10775	B	**Rivet,** for securing cam
S. 11004	B	**Washer,** tab, for screw securing fan
S. 12263	B	**Screw,** securing fan
S. 12331	C	**Bolt,** retaining coil terminals, condenser and breaker blade
S. 12332	C	**Screw,** securing blade with cam greasing felt
S. 13800	C	**Washer,** plain
S. 13801	C	**Washer,** insulating



PARTS LIST FOR ENGINE
Carburettor - Air Cleaner

(TABLE VI)

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
2604	B	**Screw,** for securing float chamber cover	82920	B	**Packing,** for screw of float chamber cover cap
2612	D	**Adjuster**	82931	B	**Filter,** mixture
2613	D	**Nut,** for adjusting screw	82932	B	**Packing,** mixture filter
26018	D	**Spring,** for screw 85299	82933	B	**Cap,** mixture filter
48345	D	**Bellows**	82934	B	**Screw,** for mixture filter cap
49542	D	**Screw,** for securing carburettor	84797	A	**Packing,** air cleaner
49543	D	**Joint**	85285	C	**Spring,** for adjuster screw
49544	D	**Gasket,** for carburettor	85286	C	**Packing**
50274	D	**Plug**	85288	B	**Packing,** for pipe 85295
52055	D	**Grommet,** on air cleaner	85289	B	**Cover,** float chamber
58343	A	**Choke,** body	85290	C	**Valve,** needle
58364	A	**Packing**	85291	B	**Needle,** of float

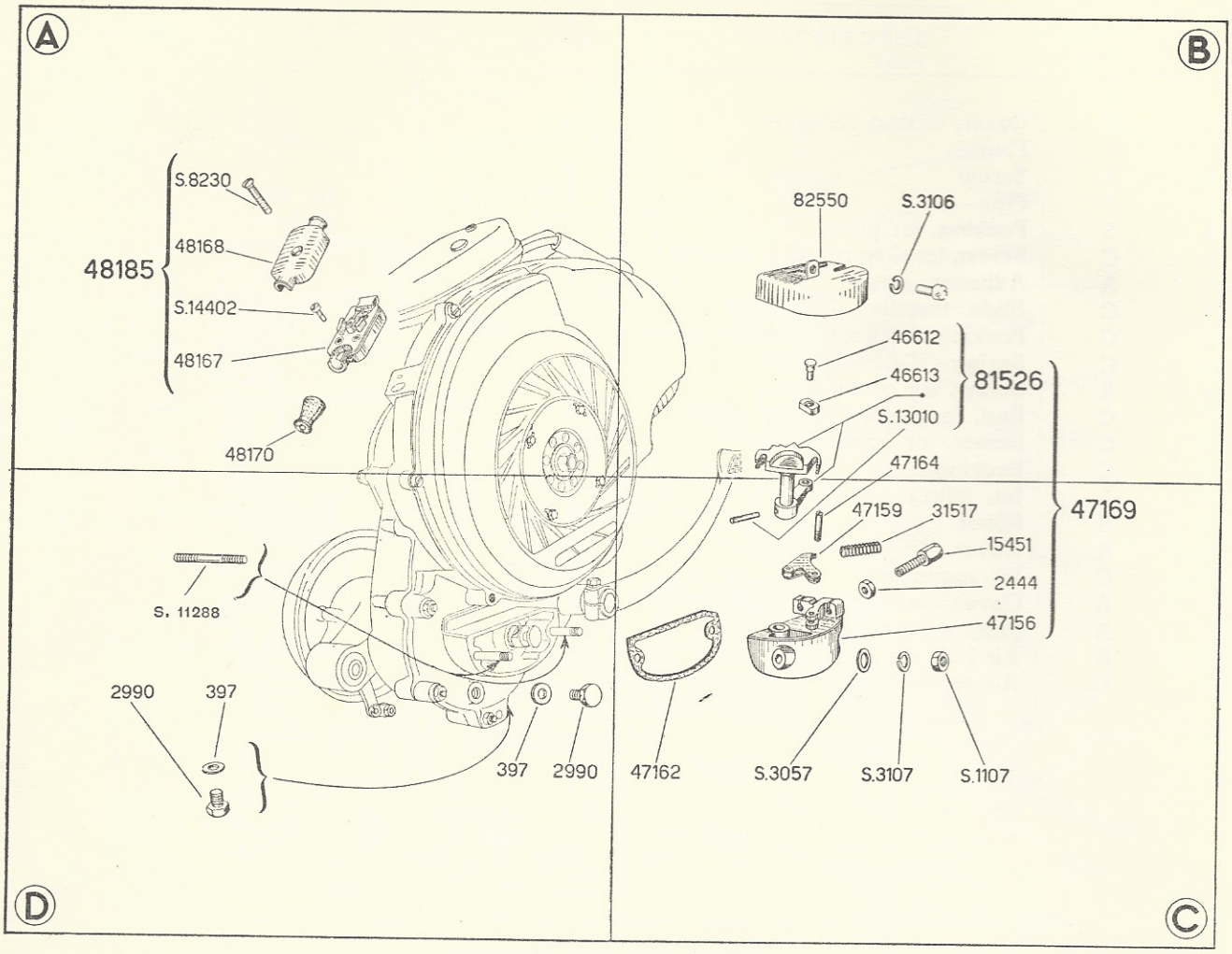
Part Number	Table Section	DESCRIPTION
85292	C	**Cover,** mixing chamber
85293	C	**Float**
85294	B	**Screw**
85295	C	**Pipe**
85296	B	**Packing,** for pipe
85298	C	**Screw,** for slow running adjustment
85299	A	**Adjuster,** screw
85301	C	**Slide,** throttle
85303	C	**Packing,** for float chamber cover
85304	C	**Spring,** of throttle slide
85306	A	**Screw,** for cover of jets
85307	C	**Rod,** for throttle control cable
85418	C	**Screw,** for cover 85292
85467	C	**Packing**
85795	A	**Jet,** idling
87332	A	**Mixer**
87334	A	**Cover,** for jets
87335	C	**Jet,** maximum
87856	A	**Cover,** air cleaner, with plug 87975
87975	A	**Plug,** on air cleaner
89188	A	**Air hole** on mixer top
89540	D	**Air cleaner,** g. a. (Parts n. 50274 - 52055 - 58343 - 58364 - 84797 - 87856 - 89541 - S. 3105 - S. 10074 - S. 14436 - S. 14583)
89541	D	**Air cleaner,** body
89568	C	**Body,** carburettor
89570	D	**Carburettor,** Dell'Orto SI 20/15 B - Type g. a. (Parts n. 2604 - 26018 - 82920 - 82931 - 82932 - 82933 - 82934 - 85285 - 85286 - 85288 - 85289 - 85290 - 85291 - 85292 - 85293 - 85294 - 85295 - 85296 - 85298 - 85299 - 85301 - 85303 - 85304 - 85306 - 85307 - 85418 - 85467 - 85795 - 87332 - 87334 - 87335 - 89188 - 89568)
S. 3105	D	**Washer,** spring
S. 3109	A	**Washer,** spring
S. 10074	A	**Screw,** for air cleaner body
S. 13762	D	**Washer,** plain
S. 14436	A	**Screw,** for air cleaner body
S. 14540	D	**Screw,** for air cleaner body
S. 14583	A	**Screw,** for air cleaner

PARTS LIST FOR ENGINE

Gear shifter - Low tension socket

(TABLE VII)

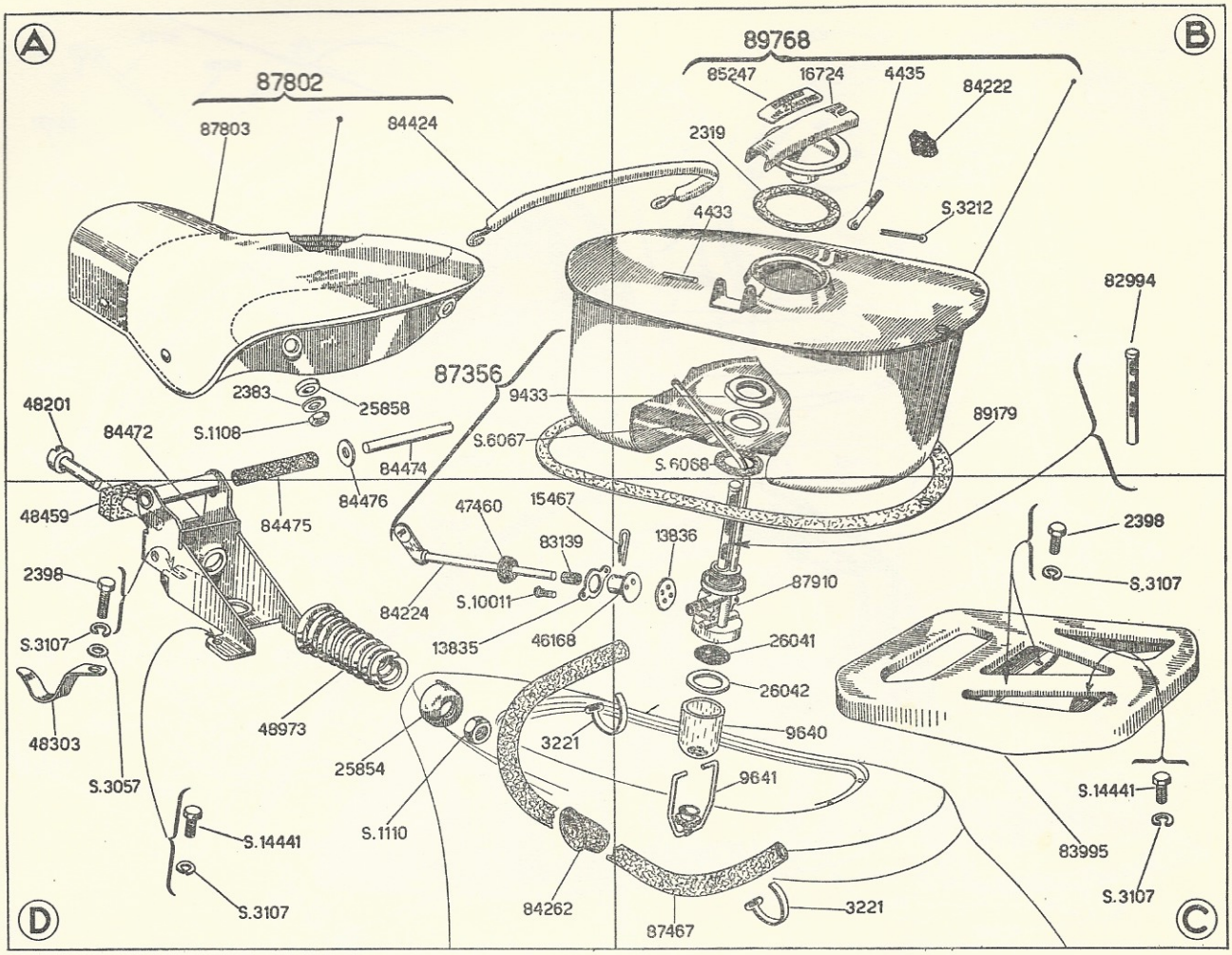
Part Number	Table Section	DESCRIPTION
397	D	**Packing,** oil filling and draining holes
2444	C	**Nut**
2990	D	**Cap,** oil filling
15451	C	**Adjuster**
31517	C	**Spring,** of roller carrying stirrup
46612	B	**Pivot,** of gear shifting skid
46613	B	**Skid,** gear shifting
47156	C	**Support,** gear shifter
47159	C	**Stirrup,** roler carrying, of gear shifter
47162	C	**Gasket,** between support and crank-case
47164	B	**Pin,** for roller stirrup
47169	C	**Support** g. a. (Parts n. 2444 - 15451 - 31517 - 47156 - 47159 - 47164 - 81526)
48167	A	**Socket,** low tension, for earth and lighting cables
48168	A	**Cover,** low tension terminal
48170	A	**Cap,** for low tension socket
48185	A	**Terminal,** low tension g. a. (Parts n. 48167 - 48168 - S. 8230 - S. 14402)
81526	B	**Quadrant,** ratchet with skid, pivot and pin (Parts n. 46612 - 46613 - S. 13010)
82550	B	**Cover,** support gear shifter
S. 1107	C	**Nut**
S. 3057	C	**Washer,** plain
S. 3106	B	**Washer,** spring, for support cover
S. 3107	C	**Washer,** spring, for gear shifter support
S. 8230	A	**Screw,** for locking L. T. terminal
S. 11288	D	**Stud,** securing gear shifter support
S. 13010	B	**Pin,** taper
S. 14402	A	**Screw,** on low tension socket



PARTS LIST FOR CHASSIS

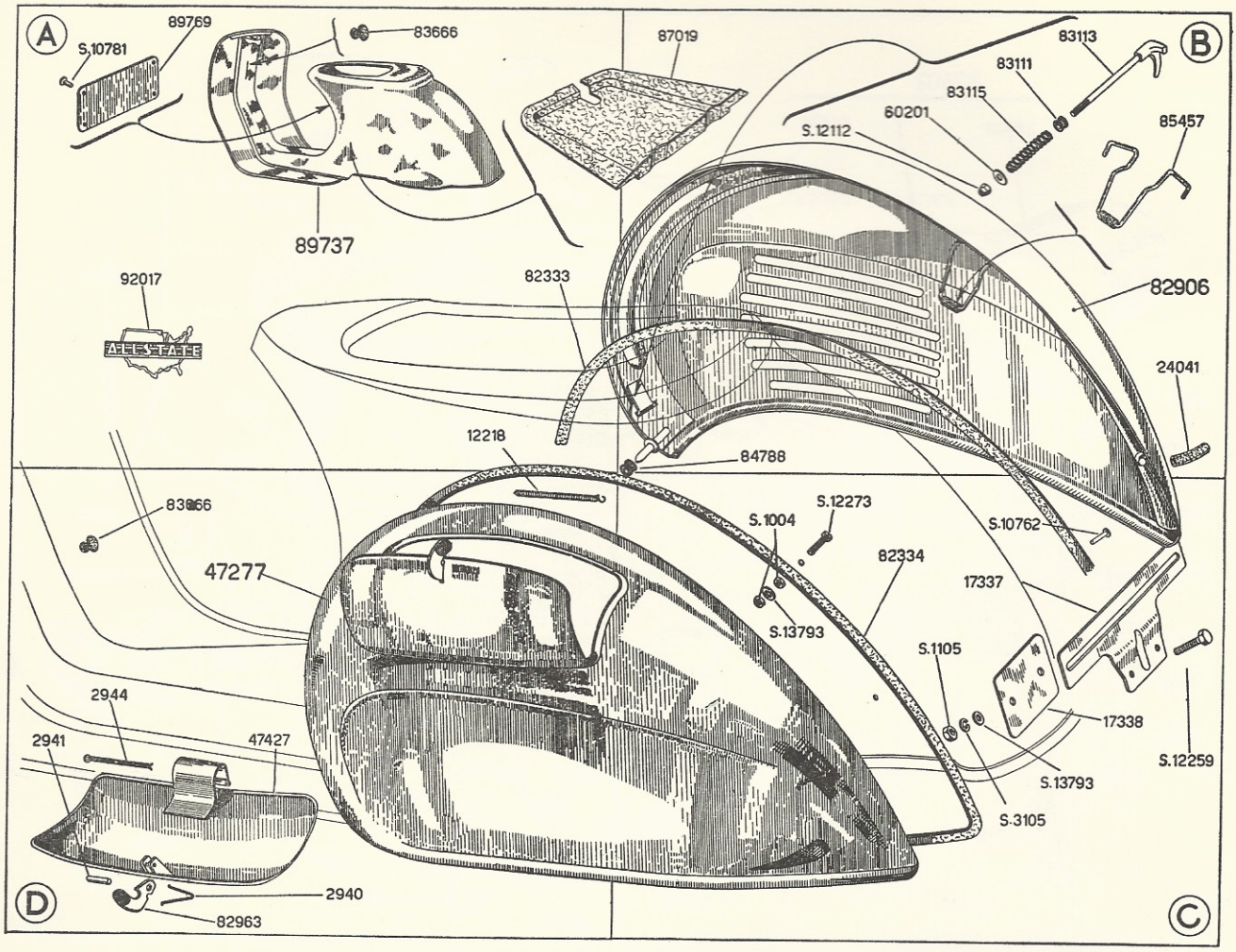
Saddle - Fuel tank - Luggage carrier (TABLE VIII)

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
2319	B	**Packing,** of filler cap	26041	C	**Filter**
2383	A	**Washer,** plain, for grip attachment	26042	C	**Packing**
2398	D	**Screw,** securing saddle	46168	C	**Cover,** mixture distributor
3221	C-D	**Strap,** pipe fastening	47460	D	**Grommet,** rod fuel tap
4433	B	**Pivot**	48201	A	**Bolt,** securing saddle spring
4435	B	**Screw,** tie, of filler cap	48303	D	**Hook,** purse hanging
9433	A	**Nut,** securing fuel tap to tank	48459	D	**Buffer,** saddle
9640	C	**Sediment** bowl	48973	D	**Spring,** conical, of saddle
9641	C	**Sediment** bowl tie-rod	82994	B	**Filter,** mixture
13835	D	**Flange,** tap fuel	83139	D	**Hose,** for tap fuel rod
13836	C	**Packing,** tap fuel	83995	C	**Carrier,** package
15467	D	**Clip**	84222	B	**Nut,** wing, for filler cap
16724	B	**Cap,** filler, of fuel tank, with inserts	84224	D	**Rod,** tap fuel
25854	D	**Cup,** saddle spring	84262	C	**Grommet**
25858	A	**Spacer**			



Parts list for chassis — Saddle - Fuel tank - Luggage carrier - Continued

Part Number	Table Section	DESCRIPTION
84424	A	**Grip,** on saddle
84472	A	**Bracket,** saddle, with inserts
84474	A	**Pin,** saddle bracket
84475	D	**Plastic,** tube
84476	D	**Shoulder** washer
85247	B	**Transfer,** indicating gas-oil ratio of fuel
87356	A	**Tap,** fuel g. a. (Parts n. 9433 - 9640 - 9641 - 13835 - 13836 - 15467 - 26041 - 26042 - 46168 - 82994 - 83139 - 84224 - 87910 - S. 6067 - S. 6068 - S. 10011)
87467	C	**Pipe,** plastic, from fuel tap to carburettor
87802	A	**Saddle,** g.a. (Parts n. 2383 - 25854 - - 25858 - 48201 - 48459 - 48973 - 84424 - 84472 - 84474 - 84475 - 84476 - 87803 - S. 1108 - S. 1110)
87803	A	**Cover,** saddle
87910	C	**Body,** tap
89179	B	**Packing,** between chassis and fuel tank
89768	B	**Tank,** fuel, with filling cap (Parts n. 2319 - 4433 - 4435 - 16724 - 84222 - 85247 - S. 3212)
S. 1108	A	**Nut,** securing grip
S. 1110	D	**Nut,** saddle spring
S. 3057	D	**Washer,** plain
S. 3107	C-D	**Washer,** spring, for securing carrier and fuel tank
S. 3212	B	**Split** pin for supporting tie screw
S. 6067	A	**Washer,** plain, under nut securing fuel tap
S. 6068	B	**Packing,** between fuel tap and tank
S. 10011	D	**Screw,** fuel tap clip
S. 14441	C-D	**Screw,** securing carrier and fuel tank

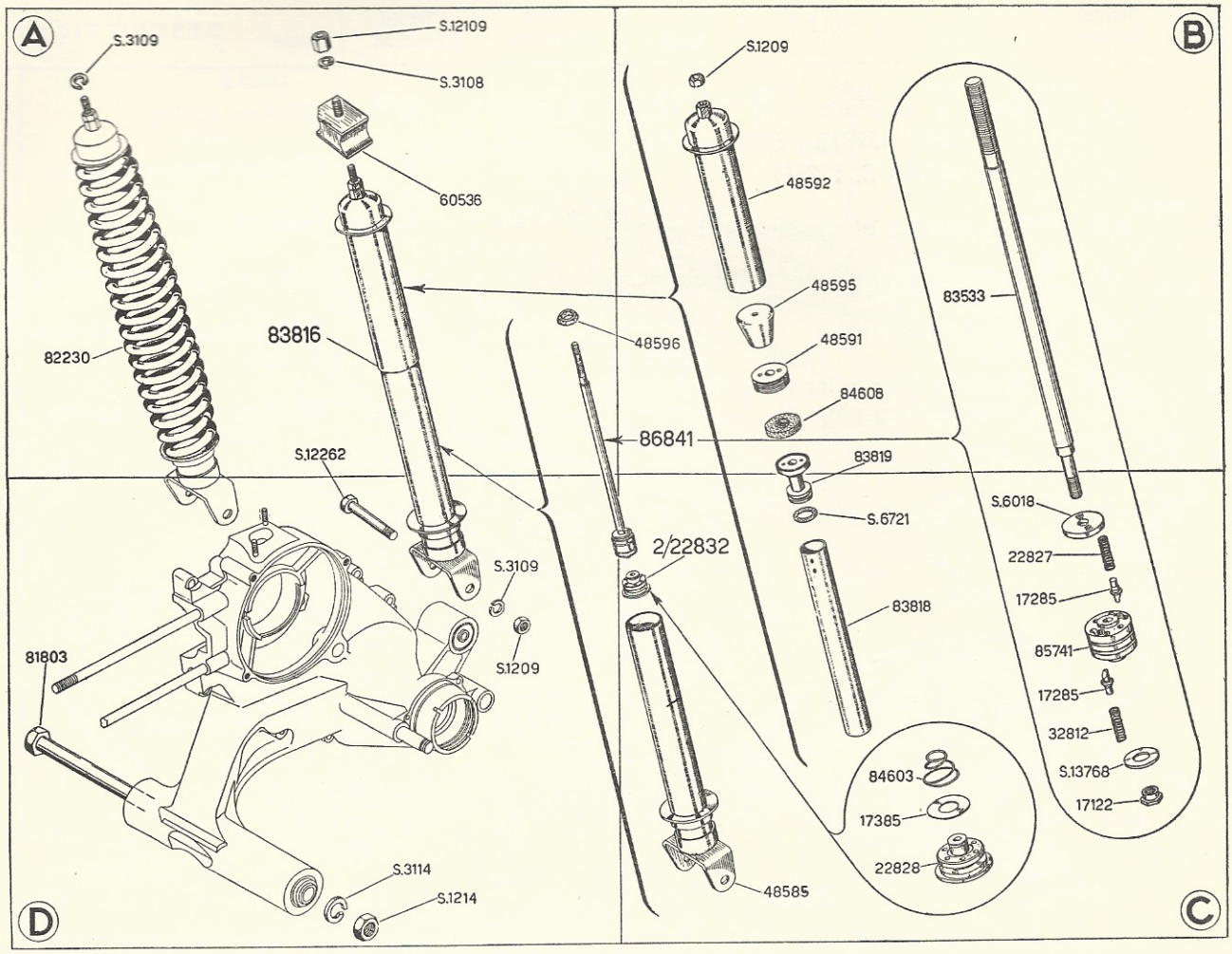


PARTS LIST FOR CHASSIS

Chassis - Tool Box - Engine bonnet

(TABLE IX)

Part Number	Table Section	DESCRIPTION
2940	D	**Spring,** of tool box shutter
2941	D	**Pin,** for lock lever
2944	D	**Split,** pin, hinge, of tool box shutter
12218	A	**Spring,** for supporting canvas roll
17337	C	**Holder,** rear licence plate
17338	C	**Plate,** strengthening, for licence plate holder
24041	B	**Buffer,** bonnet
47277	D	**Tool box,** g. a. (with parts n. 2940 - 2941 - 2944 - 47427 - 82963)
47427	D	**Shutter,** tool box, with inserts
60201	B	**Washer,** plain
82333	A	**Beading,** rubber, for engine bonnet
82334	C	**Beading, rubber, for tool box**
82906	B	**Bonnet,** engine (with parts n. 24041 - 85457)
82963	D	**Lever** lock, of tool box shutter
83111	B	**Grommet,** grip
83113	B	**Grip**
83115	B	**Spring,** grip
83666	A-D	**Plug**
84788	B	**Bush**
85457	B	**Hook**
87019	B	**Plate**
89737	A	**Chassis** of motor-scooter (Parts n. 89769 - 92017 - S. 10781)
89769	A	**Plate,** model number
92017	A	**Plate,** name « Allstate »
S. 1004	C	**Nut,** for bolt securing tool box
S. 1105	C	**Nut,** for securing rear licence plate
S. 3105	C	**Washer,** spring
S. 10762	C	**Rivet,** for fixing rubber beading
S. 10781	A	**Rivet,** for securing number plate
S. 12112	B	**Nut,** self-locking
S. 12259	C	**Bolt,** for licence plate holder
S. 12273	C	**Bolt,** for securing tool box
S. 13793	C	**Washer,** plain



PARTS LIST FOR CHASSIS

Rear suspension spring - Rear damper **(TABLE X)**

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
17122	C	**Ring,** lock, of piston	60536	A	**Bracket,** elastic
17285	C	**Pin,** valve	81803	D	**Bolt,** securing engine to chassis
17385	C	**Washer,** seal	82230	A	**Spring,** rear suspension
22827	C	**Spring,** for valve pin	**83816**	A	**Shock - absorber,** hydraulic, rear, g. a. (Parts n. 2/22832 - 48585 - 48591 - 48592 - 48595 - 48596 - 83818 - 83819 - 84608 - 86841 - S. 1209 - S. 6721)
22828	C	**Valve** discharging, with inserts			
2/22832	C	**Valve,** discharge g. a. (Parts n. 17385 - 22828 - 84603)			
32812	C	**Spring,** for valve pin	83818	C	**Tube,** inner, of hydraulic shock-absorber
48585	C	**Body,** shock-absorber	83819	B	**Bush,** guide, of shock-absorber stem
48591	B	**Cap,** threaded, of shock-absorber	83533	B	**Stem** of shock-absorber
48592	B	**Tube,** protection, of shock-absorber	84603	C	**Spring,** of seal washer
48595	B	**Buffer**	84608	B	**Seal,** of shock-absorber
48596	B	**Buffer**	85741	C	**Piston,** of shock-absorber

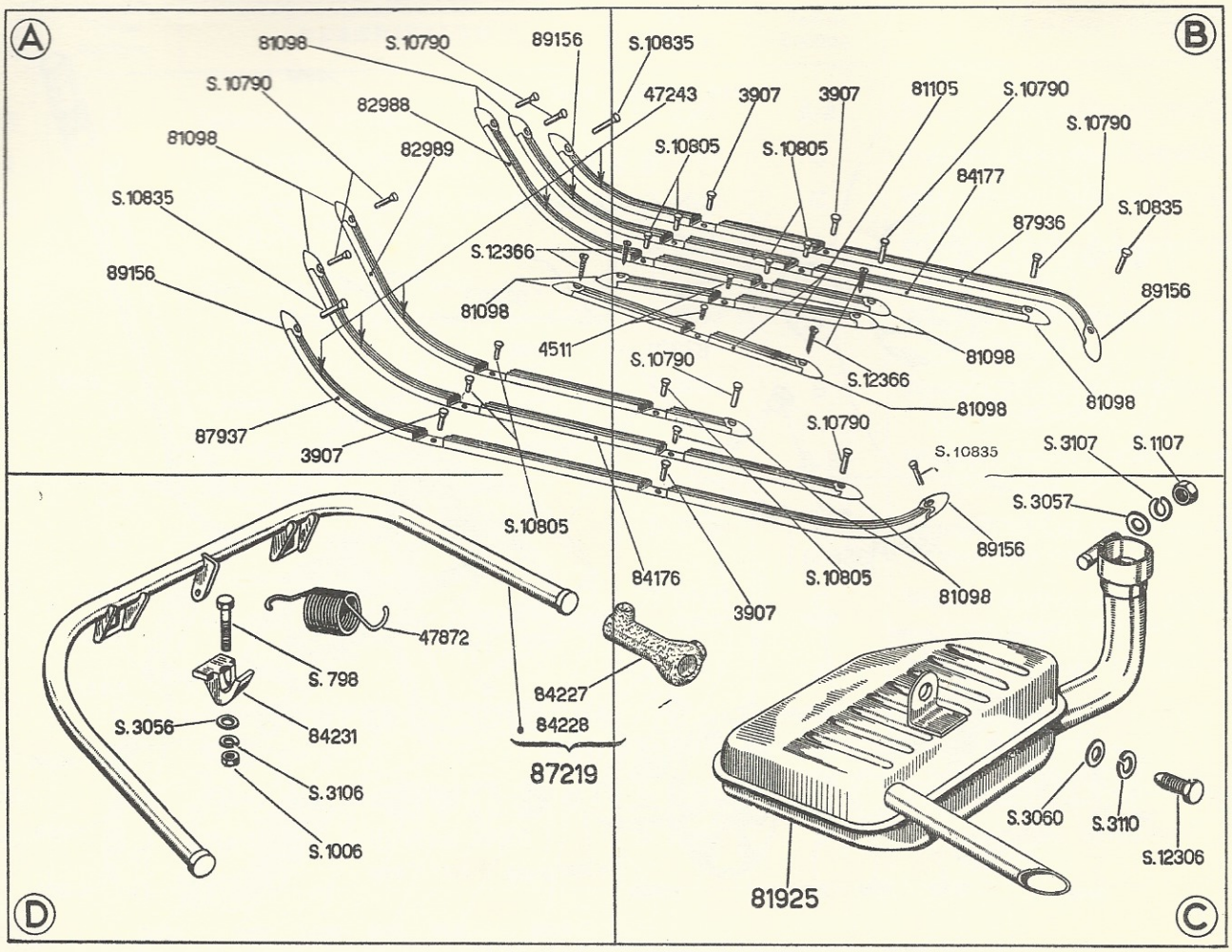
Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
86841	**B**	**Stem,** g. a. (Parts n. 17122 - 17285 - 22827 - 32812 - 83533 - 85741 - S. 6018 - **S. 13768**)	S. 3114	**D**	**Washer,** spring
			S. 6018	**C**	**Washer,** support, spring
S. 1209	**B-D**	**Nut,** spacer, of shock-absorber	S. 6721	**C**	**Packing**
S. 1214	**D**	**Nut,** for securing engine to chassis	S. 12109	**A**	**Nut,** securing bracket to frame
S. 3108	**A**	**Washer,** spring	S. 12262	**A**	**Bolt,** securing shock-absorber bottom
S. 3109	**A-D**	**Washer,** spring, for shock-absorber anchoring pin	S. 13768	**C**	**Washer,** support, spring

PARTS LIST FOR CHASSIS

Channels - Center stand - Silencer **(TABLE XI)**

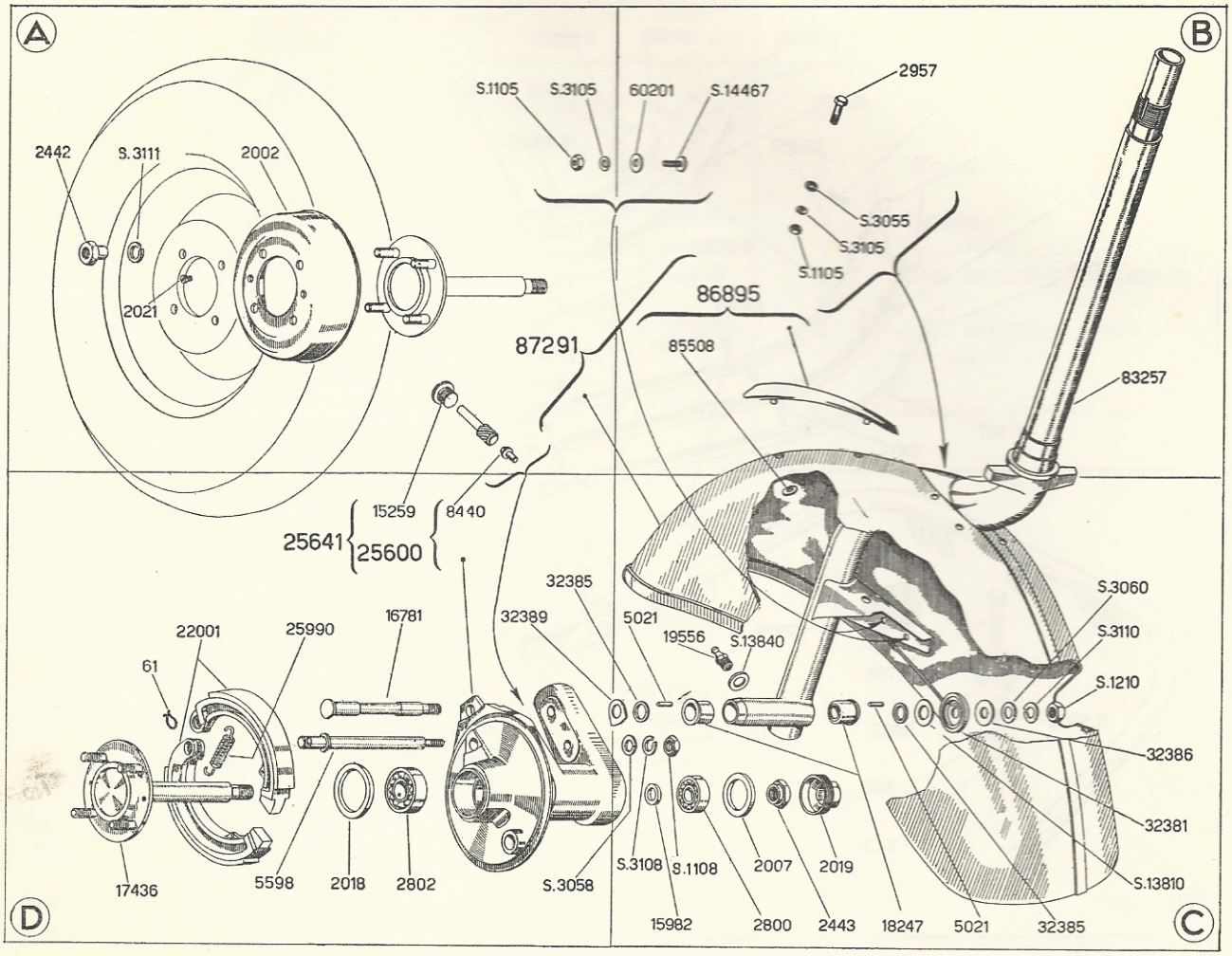
Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
3907	**A-B-C**	**Rivet,** securing outer strips of floorboard	84176	**C**	**Channel,** L. H. (inner)
			84177	**B**	**Channel,** R. H. (inner)
4511	**A**	**Rivet,** securing longeron strips	84227	**D**	**Shoe,** R. H.
a) 47243	**B**	**Strip,** rubber, of floorboard	84228	**D**	**Shoe,** L. H.
47872	**D**	**Spring,** return, of stand legs	84231	**D**	**Clip,** of center stand
81098	**A-B-C**	**Cap,** strip	**87219**	**D**	**Stand,** with rubber shoes (Parts n. 84227 - 84228)
81105	**B**	**Channel,** longeron			
81925	**C**	**Muffler,** with parts n. S. 1107 - S. 3057 - S. 3107)	87936	**B**	**Channel,** R. H. (outer)
			87937	**A**	**Channel,** L. H. (outer)
82988	**A**	**Strip,** short, of floorboard, R. H.	89156	**A-B-C**	**Cap,** strip
82989	**A**	**Strip,** short, of floorboard, L. H.	S. 798	**D**	**Bolt,** securing stand

a) Order rubber tread 47243 by meters or feet.



Parts list for chassis — Channels - Center stand - Silencer - Continued

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
S. 1006	D	**Nut,** for securing stand	S. 3107	C	**Washer,** spring, for securing muffler to cylinder
S. 1107	B	**Nut,** for securing muffler to cylinder	S. 3110	C	**Washer,** spring, for securing muffler to engine
S. 3056	D	**Washer,** plain	S. 10790	A-B	**Rivet,** securing inner strips cap of floorboard
S. 3057	C	**Washer,** plain	S. 10805	B-C-D	**Rivet,** securing inner strip of floorboard
S. 3060	C	**Washer,** plain, for screw securing muffler to engine	S. 10835	A-B	**Rivet,** securing outer strips cap of floorboard
S. 3106	D	**Washer,** spring, for center stand attachment	S. 12306	C	**Bolt,** securing muffler to engine
			S. 12366	A-B	**Screw,** for caps of longeron strips



PARTS LIST FOR STEERING COLUMN

Steering column - Mudguard - Front Wheel hub **(TABLE XII)**

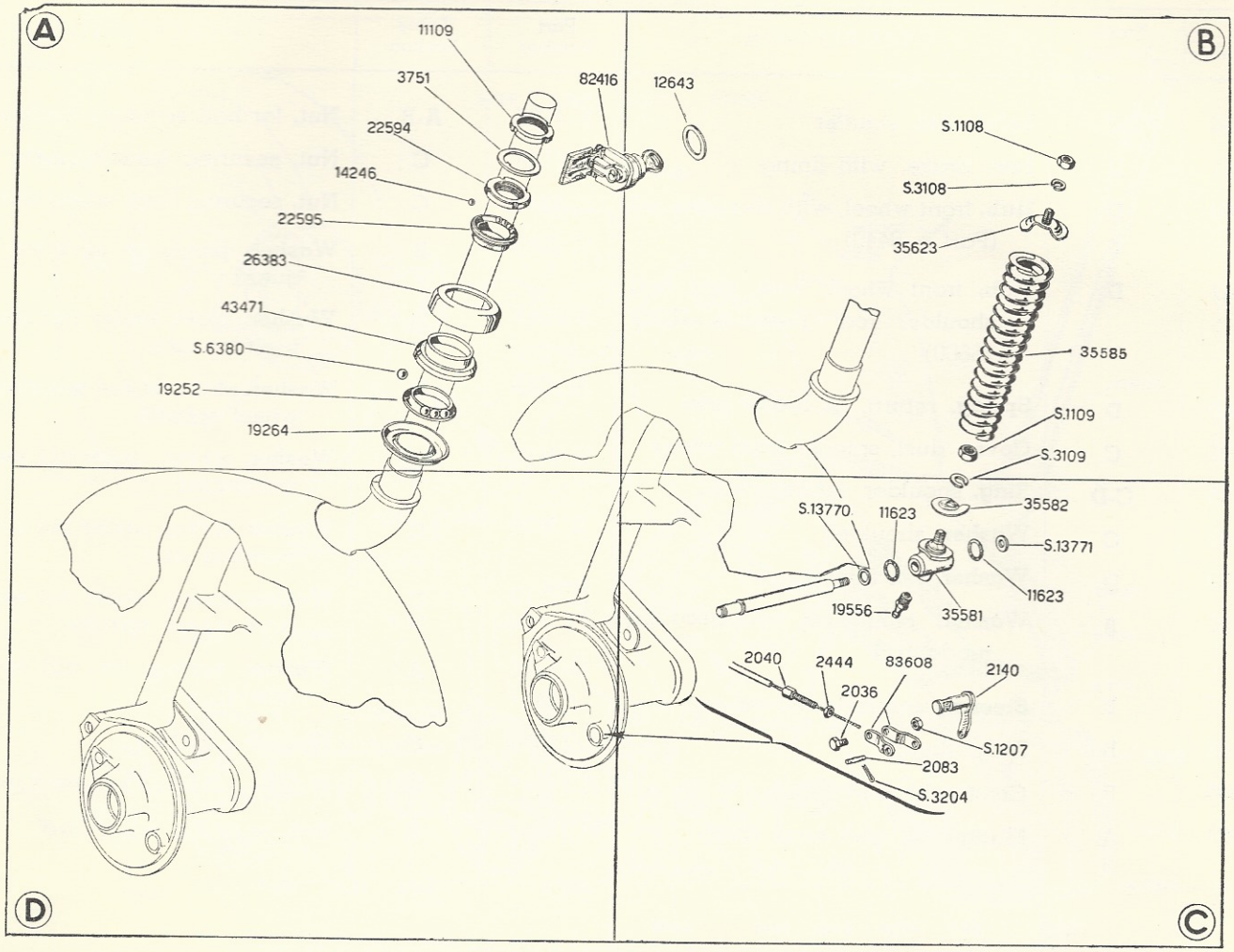
Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
61	D	**Clip,** spring, for brake jaws	2957	B	**Bolt,** for securing mudguard to steering column
2002	A	**Drum,** front brake	5021	C	**Roller** ,bearing, of front wheel
2007	C	**Washer,** lock, for ball bearing	5598	D	**Axle,** anchoring truunion and brake jaws
2018	D	**Seal,** front wheel axle	8440	D	**Shoulder,** rod
2019	C	**Nut,** locking ball bearing	15259	D	**Plug** (on machines without speedometer)
2021	A	**Screw,** clamping brake drum	15982	C	**Washer,** spacer
2442	A	**Nut,** securing wheel	16781	D	**Spindle,** front wheel
2443	C	**Nut,** securing front wheel axle	17436	D	**Axle,** front wheel with inserts
2800	C	**Ball bearing,** for front wheel axle - R. H. side	18247	C	**Bush,** for front wheel bearing rollers
2802	D	**Ball bearing,** for front wheel axle - L. H. side			

Part Number	Table Section	DESCRIPTION
19556	C	**Lubricator,** stauffer
22001	D	**Jaw,** brake, with lining
25600	D	**Hub,** front wheel, with shoulder rod (Part n. 8440)
25641	D	**Hub,** front wheel, with plug and **shoulder** rod (Parts n. 15259 25600)
25990	D	**Spring,** return, of brake jaws
32381	C	**Cover,** dust, spindle front wheel
32385	C-D	**Ring,** shoulder, for rollers
32386	C	**Washer,** shoulder
32389	D	**Washer,** shoulder
60201	B	**Washer,** plain, for bolt securing mudguard
83257	B	**Steering** column, with inserts
85508	B	**Ring,** clamp
86895	B	**Crest,** with part 85508
87291	A	**Mudguard,** with crest 86895
S. 1105	A-B	**Nut,** for bolt securing mudguard
S. 1108	C	**Nut,** securing trunnion axle
S. 1210	C	**Nut,** securing front wheel spindle
S. 3055	B	**Washer,** plain, for securing mudguard
S. 3058	D	**Washer,** plain, under nut securing trunnion axle
S. 3060	B	**Washer,** plain, for nut securing front wheel spindle
S. 3105	A-B	**Washer,** spring, under nut securing mudguard
S. 3108	C	**Washer,** spring, under nut securing trunnion axle
S. 3110	C	**Washer** spring, under nut securing front wheel spindle
S. 3111	A	**Washer,** spring, for nut securing wheel
S. 13810	C	**Washer** shoulder
S. 13840	C	**Washer,** plain, for stauffer lubricator
S. 14467	B	**Bolt,** securing mudguard

PARTS LIST FOR STEERING COLUMN

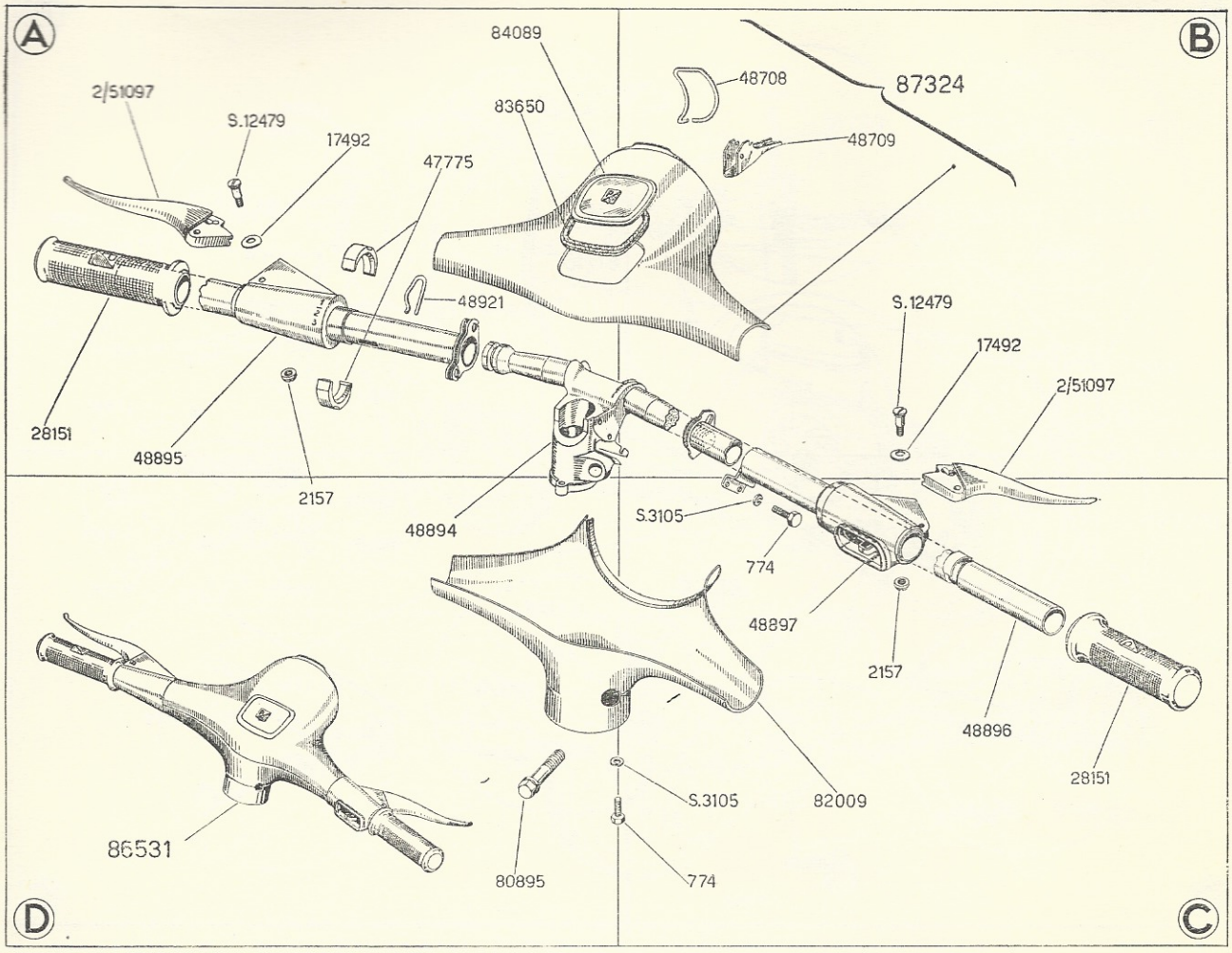
Front suspension - Security lock **(TABLE XIII)**

Part Number	Table Section	DESCRIPTION
2036	C	**Bolt,** securing cable to brake links
2040	C	**Adjuster** of front brake
2083	C	**Pin,** for brake links
2140	C	**Lever,** front brake
2444	C	**Nut,** jam, for front brake adjuster
3751	A	**Washer,** lock, of steering column to ball bearing
11109	A	**Ring,** threaded, for locking steering column top ball bearing
11623	C	**Packing,** for trunnion
12643	B	**Washer,** for threaded ring of security lock
14246	A	**Ball,** for steering column top bearing
19252	A	**Seat,** lower, of steering column bottom ball bearing
19264	A	**Washer,** protection, of steering column bottom ball bearing
19556	C	**Lubricator,** stauffer



Parts list for steering column — Front suspension - Security lock - Continued

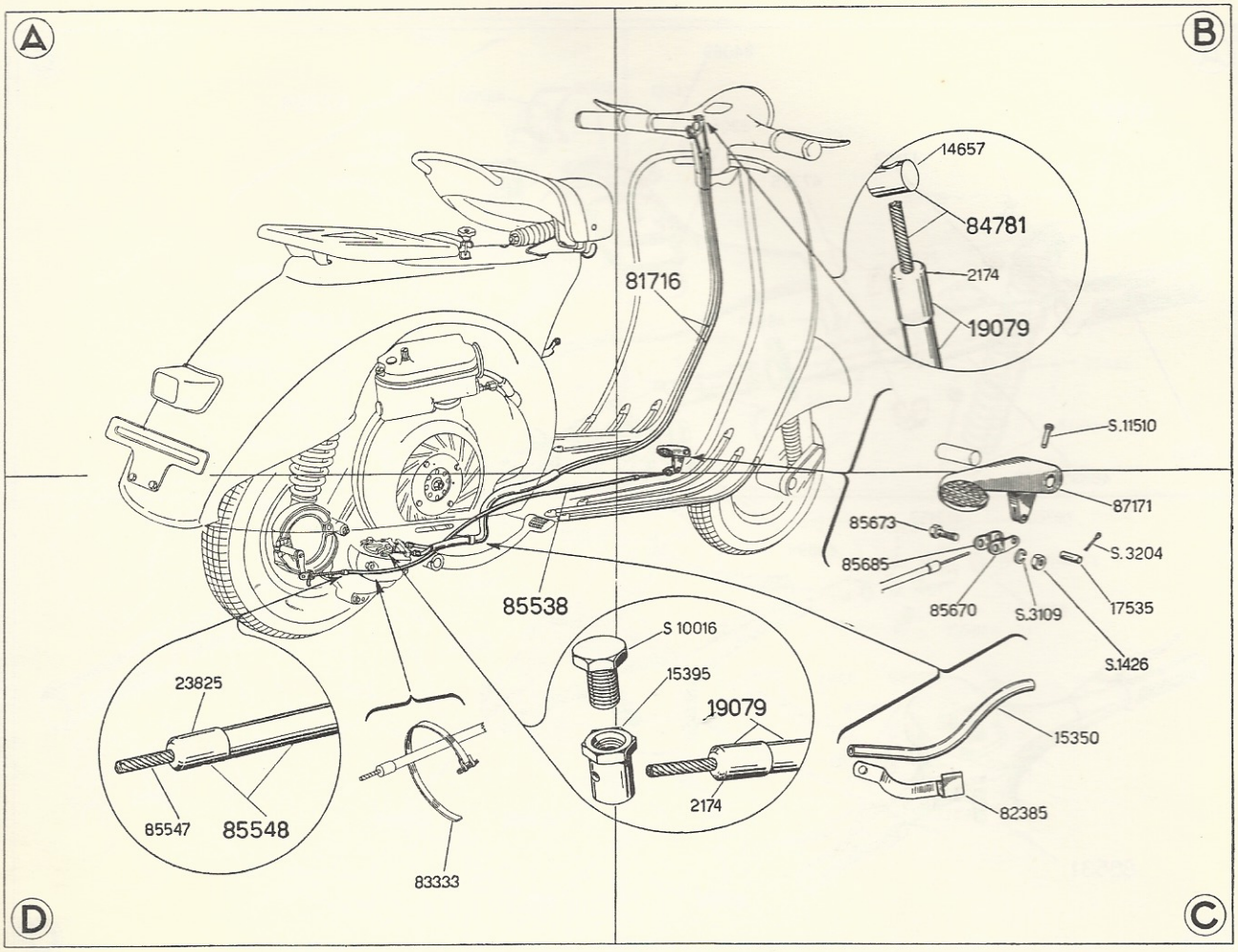
Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
22594	A	**Seat,** upper, of steering column top ball bearing	S. 1108	B	**Nut,** securing front suspension spring
22595	A	**Seat,** lower, of steering column top ball bearing	S. 1109	B	**Nut,** securing spring bottom
			S. 1207	C	**Nut,** on bolt securing brake links
26383	A	**Cover,** dust	S. 3108	B	**Washer,** spring, under nut securing spring top
35581	C	**Trunnion** for front suspension spring			
35582	C	**Plate,** bottom	S. 3109	B	**Washer,** spring, under nut securing spring bottom
35585	B	**Spring,** front suspension			
35623	B	**Plate,** top	S. 3204	C	**Split pin,** on pin for brake links
43471	A	**Seat,** upper, of steering column bottom ball bearing	S. 6380	A	**Ball,** for steering column bottom bearing
82416	A	**Lock,** security	S. 13770	C	**Washer,** plain, for trunnion
83608	C	**Link,** front brake	S. 13771	C	**Washer,** plain, for trunnion



PARTS LIST FOR HANDLEBARS

Handlebars - Controls (TABLE XIV)

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
774	C	**Screw,** handlebars	2/51097	A-B	**Lever,** clutch and front brake control
2157	C-D	**Nut,** for screw securing control levers	80895	D	**Bolt,** securing handlebars to steering column
17492	A-B	**Washer,** spring, for securing control levers	82009	C	**Shell,** bottom
28151	A-C	**Rubber,** twistgrip	83650	A	**Packing,** for speedometer housing cover
47775	A	**Bush,** half	84089	A	**Cover,** speedometer housing
48708	B	**Spring,** securing top shell	**86531**	D	**Handlebars,** g. a. (Parts n. 774 - 2157 - 17492 - 18699 - 28151 - 47775 - 48894 - 48895 - 48896 - 48897 - 48921 - 2/51097 - 80895 - 82009 - 83650 - 84089 - 87324 - S. 3105 - S. 12479)
48709	B	**Lever**			
48894	D	**Hub,** handlberas			
48895	A	**Tube,** with inserts, for gear change control	**87324**	B	**Shell,** top (with parts n. 48708 - 48709)
48896	C	**Tube,** for throttle control			
48897	C	**Tube,** outer, of handlebars	S. 3105	C	**Washer,** spring
48921	A	**Clip**	S. 12479	A-B	**Screw,** securing control levers



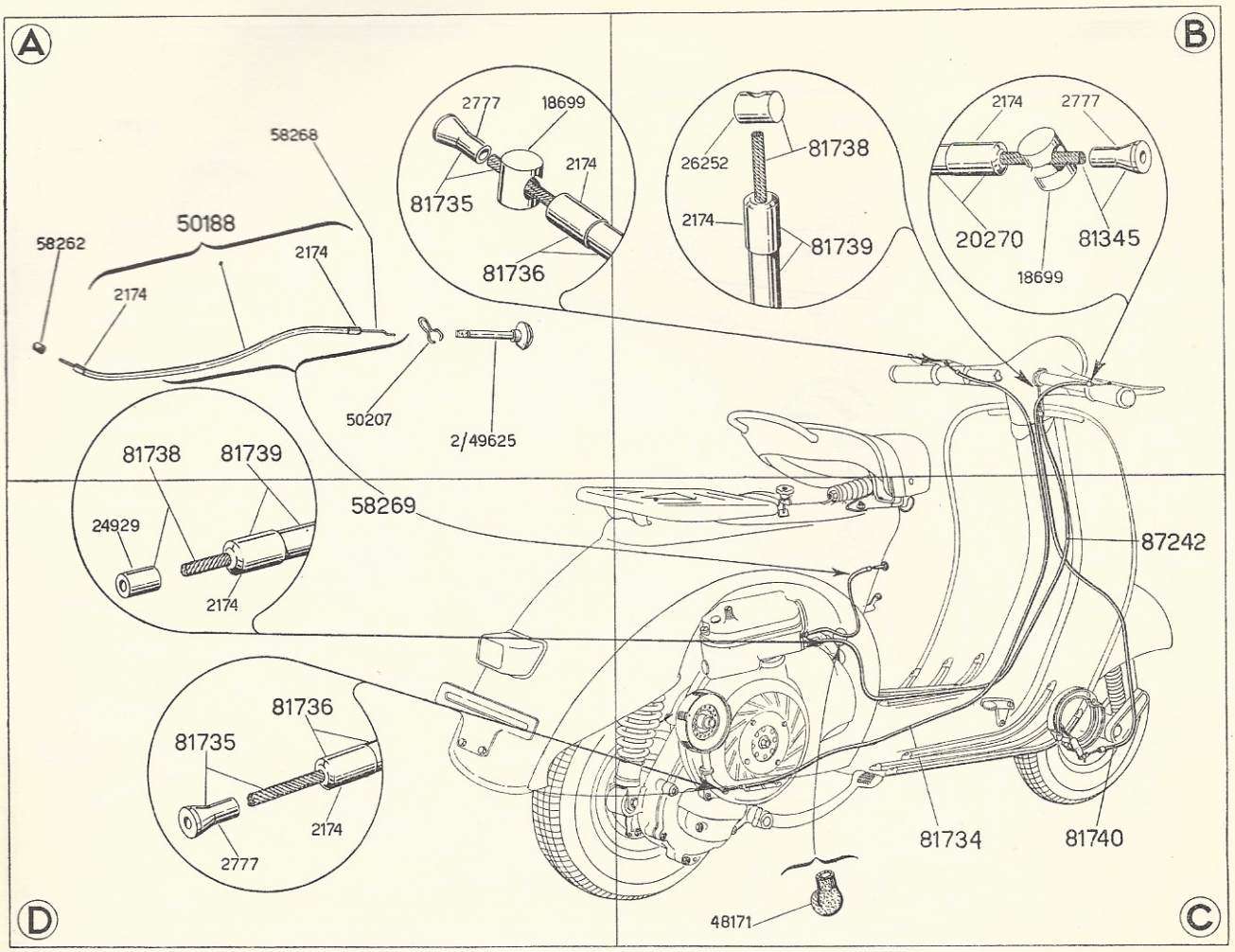
PARTS LIST FOR CONTROLS

Gear change and rear brake control cables - Pedal

(TABLE XV)

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
a) 2174	B-C	**Ferrule**	85547	D	**Cable,** rear brake control
14657	B	**Nipple**	**85548**	D	**Sheath,** gear change control cable, with ferrule 23825
15350	C	**Tube,** protection			
15395	C	**Nipple,** threaded	85670	C	**Link,** rear brake, R. H.
17535	C	**Pin,** for brake links	85673	C	**Bolt,** securing cable to brake links
19079	B-C	**Sheath,** for clutch and gear change control cables, with ferrule 2174	85685	C	**Link,** rear brake, L. H.
			87171	C	**Pedal,** rear brake control
a) 23825	D	**Ferrule**	S. 1426	C	**Nut,** for bolt securing cable to brake links
81716	B	**Wire,** gear change control, g. a. (Parts n. 19079 - 84781)			
82385	C	**Clip,** gear change control	S. 3109	C	**Washer,** spring
83333	D	**Clip,** rear brake	S. 3204	C	**Split** pin
84781	B	**Cable,** gear change control, with nipple 14657	S. 10016	C	**Screw,** clamp, for gear change control cable
85538	D	**Wire,** rear brake, g. a. (Parts n. 85547 - 85548)	S. 11510	B	**Pin,** locking, for rear brake pedal

a) Ferrules No. 2174 and 23825 must be slightly squashed on the cable sheath at the assembly.

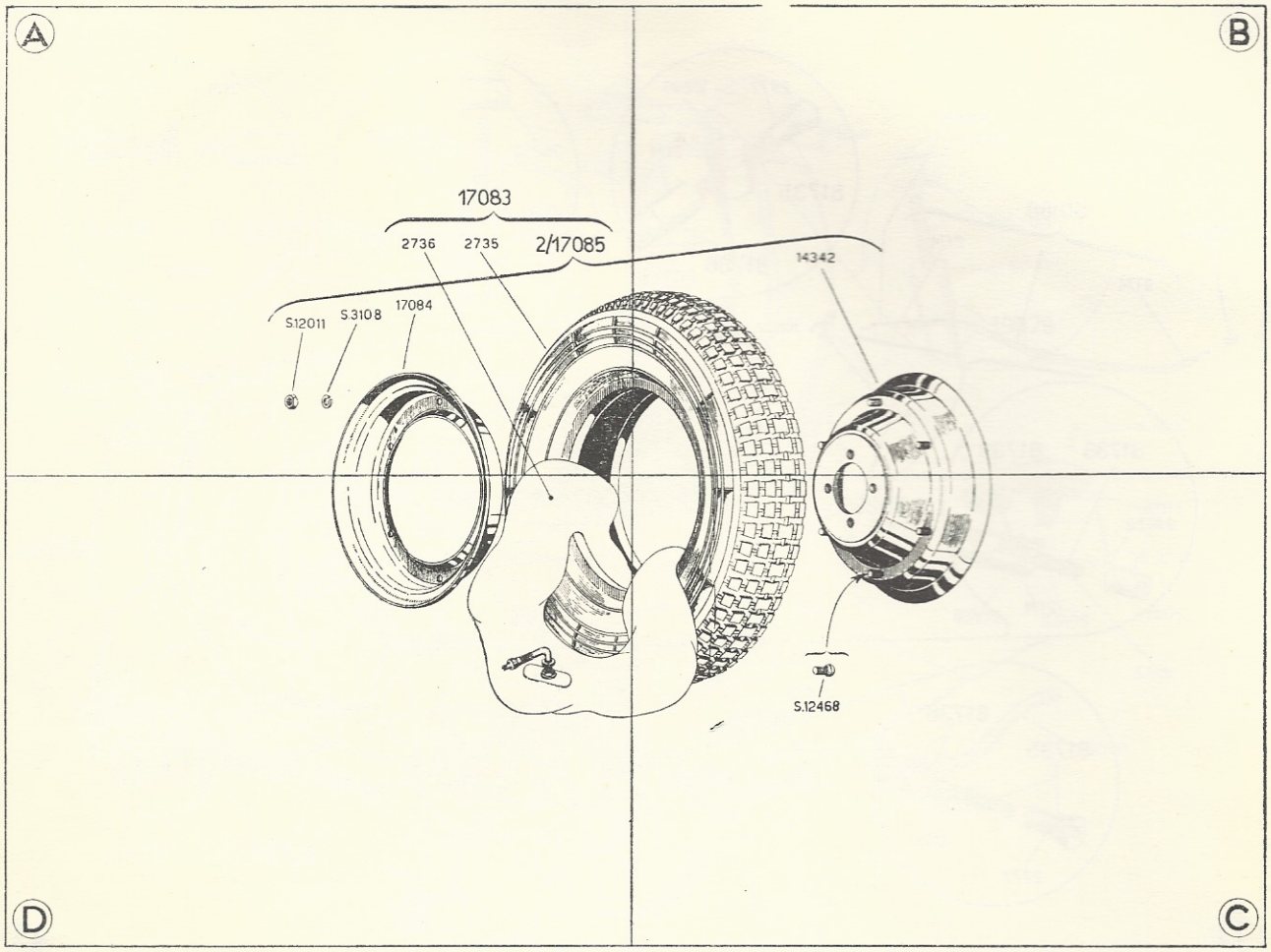


PARTS LIST FOR CONTROLS

Front brake, throttle, clutch control cables - Choke **(TABLE XVI)**

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
a) 2174	**A-B-D**	**Ferrule**	**81345**	**B**	**Cable,** front brake control, with nipple 2777
2777	**A-B-D**	**Nipple**	**81734**	**C**	**Wire** clutch control, g. a. (Parts n. 2777 - 81735 - 81736)
18699	**A-B**	**Nipple,** on front brake and clutch control cables	**81735**	**A-D**	**Cable,** clutch control, with nipples 2777
20270	**B**	**Sheath,** for front brake control cable, with ferrule 2174	**81736**	**A-D**	**Sheath,** throttle control, with ferrule 2174
24929	**D**	**Nipple,** carburettor side	**81738**	**A-B**	**Cable,** throttle control, with nipples 26252
26252	**B**	**Nipple,** handlebars side	**81739**	**A-B**	**Sheath,** throttle control, with ferrule 2174
48171	**C**	**Grommet**	**81740**	**C**	**Wire,** front brake control, g. a. (Parts n. 20270 - 81345)
2/49625	**A**	**Strangle** control rod	**87242**	**C**	**Wire,** throttle control, g. a. (Parts n. 24929 - 81738 - 81739)
50188	**A**	**Sheath,** choke, with ferrule 2174			
50207	**A**	**Spring,** strangle control rod			
58262	**A**	**Nipple,** for choke cable			
58268	**A**	**Cable,** choke			
58269	**A**	**Wire,** choke, g. a. (Parts n. 50188 - 58268 - 58262)			

a) Ferrules No. 2174 must be slightly squashed on the cable sheath at the assembly.



PARTS LIST FOR WHEEL

Rim - Type **(TABLE XVII)**

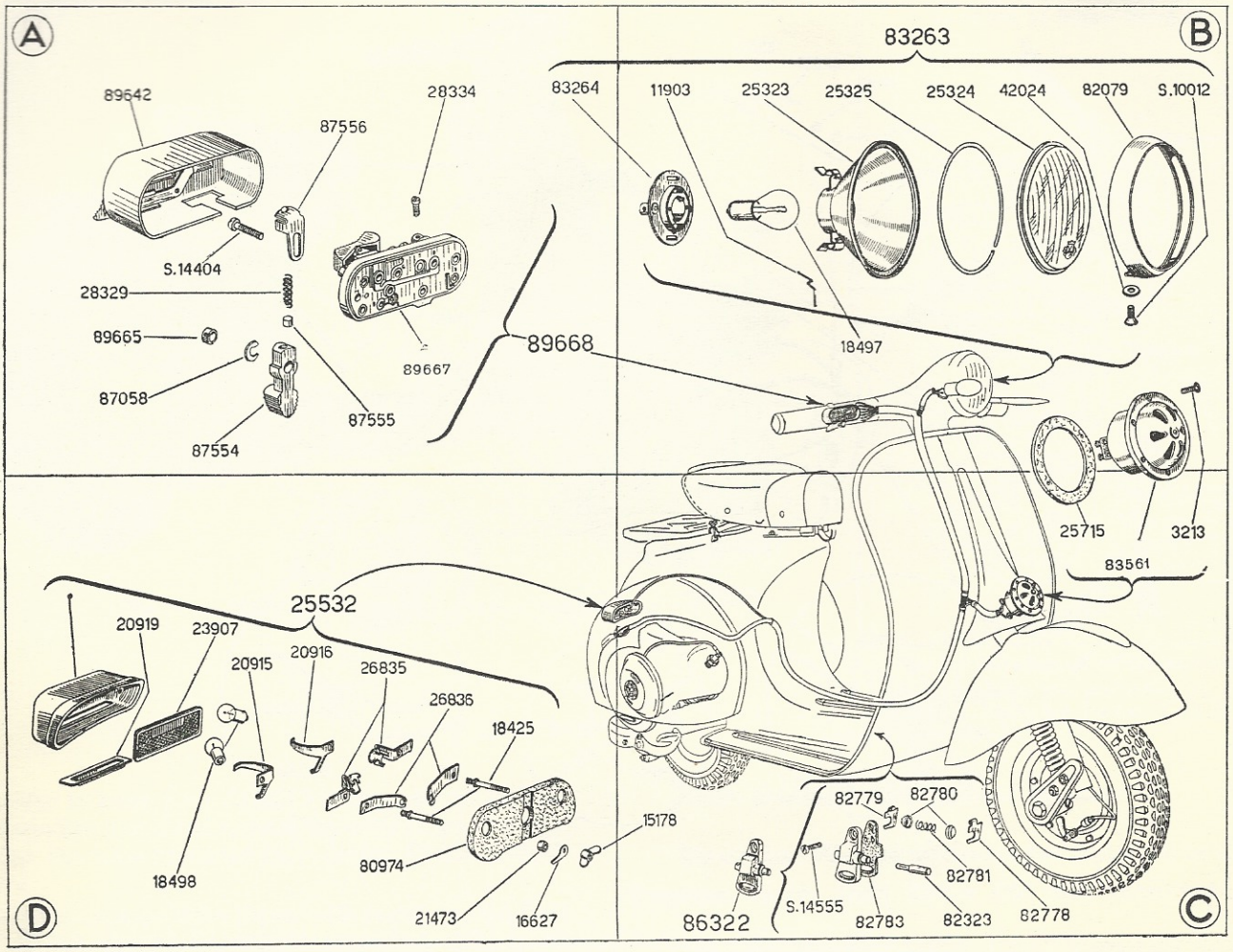
Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
2735	**A**	**Tire,** 3,50 × 8" motor-scooter type	**2/17085**	**A**	**Rim,** g. a. (Parts n. 14342 - 17084 - S. 3108 - S. 12011)
2736	**A**	**Tube,** inner			
14342	**B**	**Rim,** with inserts	S. 3108	**A**	**Washer,** spring
17083	**A**	**Wheel,** g. a. (Parts n. 2735 - 2736 - 2/17085)	S. 12011	**A**	**Nut**
17084	**A**	**Flange**	S. 12468	**C**	**Bolt**

PARTS LIST FOR ELECTRIC EQUIPMENT

Head lamp - Tail lamp - Horn - Switch - Stop **(TABLE XVIII)**

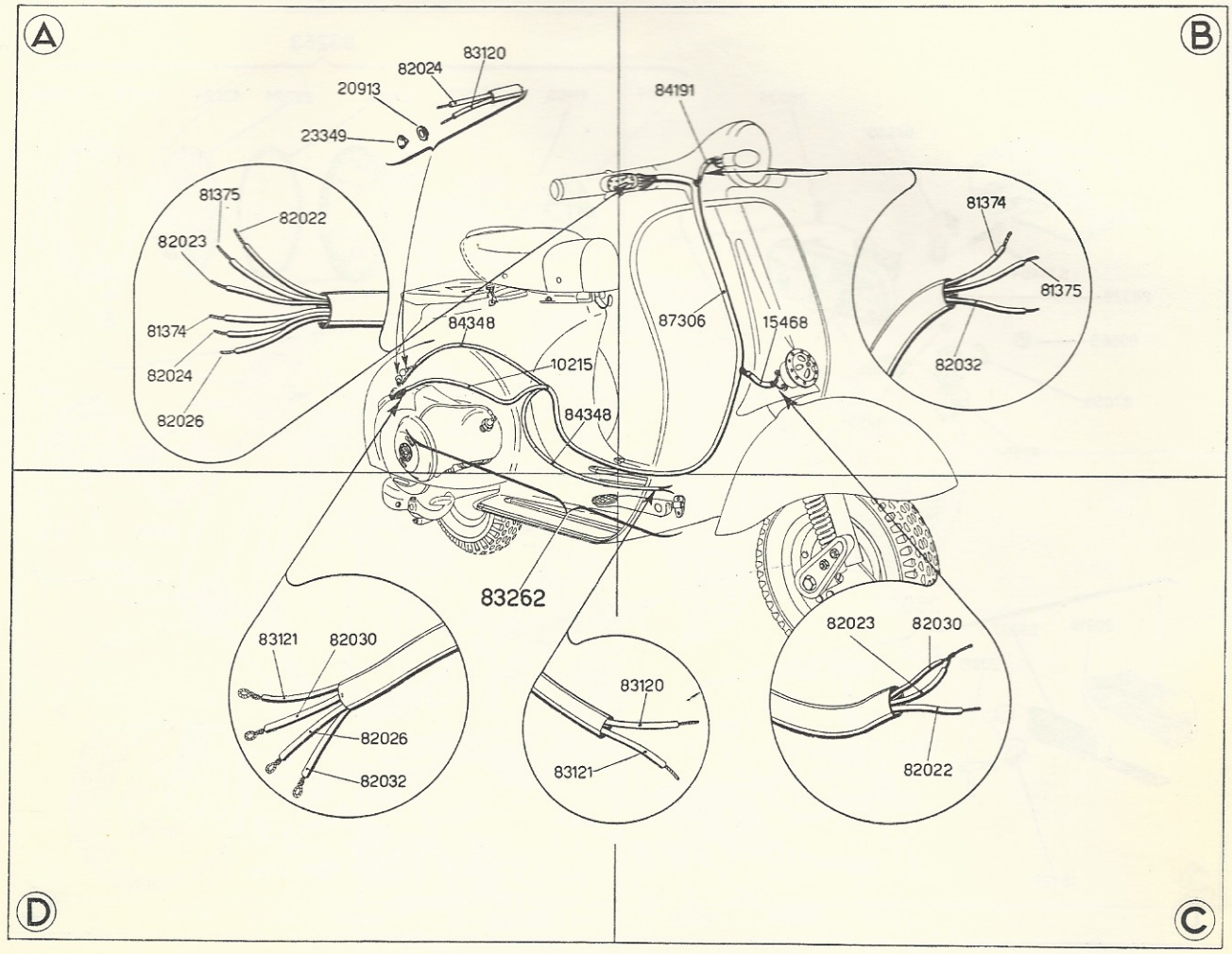
a) 1502 (or 18498)	**D**	**Bulb,** tail lamp	20916	**D**	**Spring,** L. H., retaining reflecting glass
a) 1517 (or 18497)	**B**	**Bulb,** two beam, for head lamp			
3213	**C**	**Screw,** securing horn	20919	**D**	**Glass,** bottom, of tail lamp
11903	**B**	**Spring,** retaining head lamp glass	21473	**D**	**Spacer,** tail lamp
15178	**D**	**Nut,** wing, securing tail lamp	23907	**D**	**Glass,** tail lamp
16627	**D**	**Washer,** spring, under wing nut securing tail lamp	25323	**B**	**Reflector,** head lamp
			25324	**B**	**Glass,** head lamp
18425	**D**	**Stud,** for tail lamp attachment to chassis	25325	**B**	**Packing,** between glass and reflector
			25532	**D**	**Tail** lamp, g. a. (Parts n. 18425 - 20915 - 20916 - 20919 - 23907 - 26835 - 26836)
20915	**D**	**Spring,** R. H., retaining reflecting glass			

a) Regular Sears stock item.



Parts list for electric equipment — Head lamp - Tail lamp - Horn - Switch - Stop - Continued

Part Number	Table Section	DESCRIPTION
25715	C	**Packing,** horn
26835	D	**Carrier,** bulb, with inserts, R. H.
26836	D	**Carrier,** bulb, with inserts, L. H.
28329	A	**Spring,** switch
28334	A	**Screw,** switch clamps
42024	B	**Washer,** spacer
80974	D	**Gasket,** between chassis and tail lamp
82079	B	**Rim,** head lamp
82778	C	**Contact,** L. H.
82779	C	**Contact,** R. H.
82780	C	**Plate,** for STOP switch pin
82781	C	**Spring,** STOP switch
82783	C	**Gasket,** STOP switch
83263	B	**Head** lamp g. a. (Parts n. 11903 - 25323 - 25324 - 25325 - 42024 - 82079 - 83264 - S. 10012)
83264	A	**Socket,** bulb
83561	C	**Horn**
86322	D	**Switch** STOP, g. a. (Parts n. 82323 - 82778 - 82779 - 82780 - 82781)
86323	C	**Pin,** STOP switch
87058	A	**Washer,** spring
87554	A	**Dipping** lever
87555	A	**Pin**
87556	A	**Contact**
89642	A	**Cover,** switch
89665	A	**Cap,** insulating
89668	B	**Switch,** g. a. (Parts n. 28329 - 28334 - 87058 - 87554 - 87555 - 87556 - 89642 - 89665 - 89667 - S. 14404)
89667	A	**Board,** clamp
S. 10012	B	**Screw,** securing head lamp
S. 14404	A	**Screw,** securing switch to handlebar
S. 14555	C	**Screw,** securing STOP switch

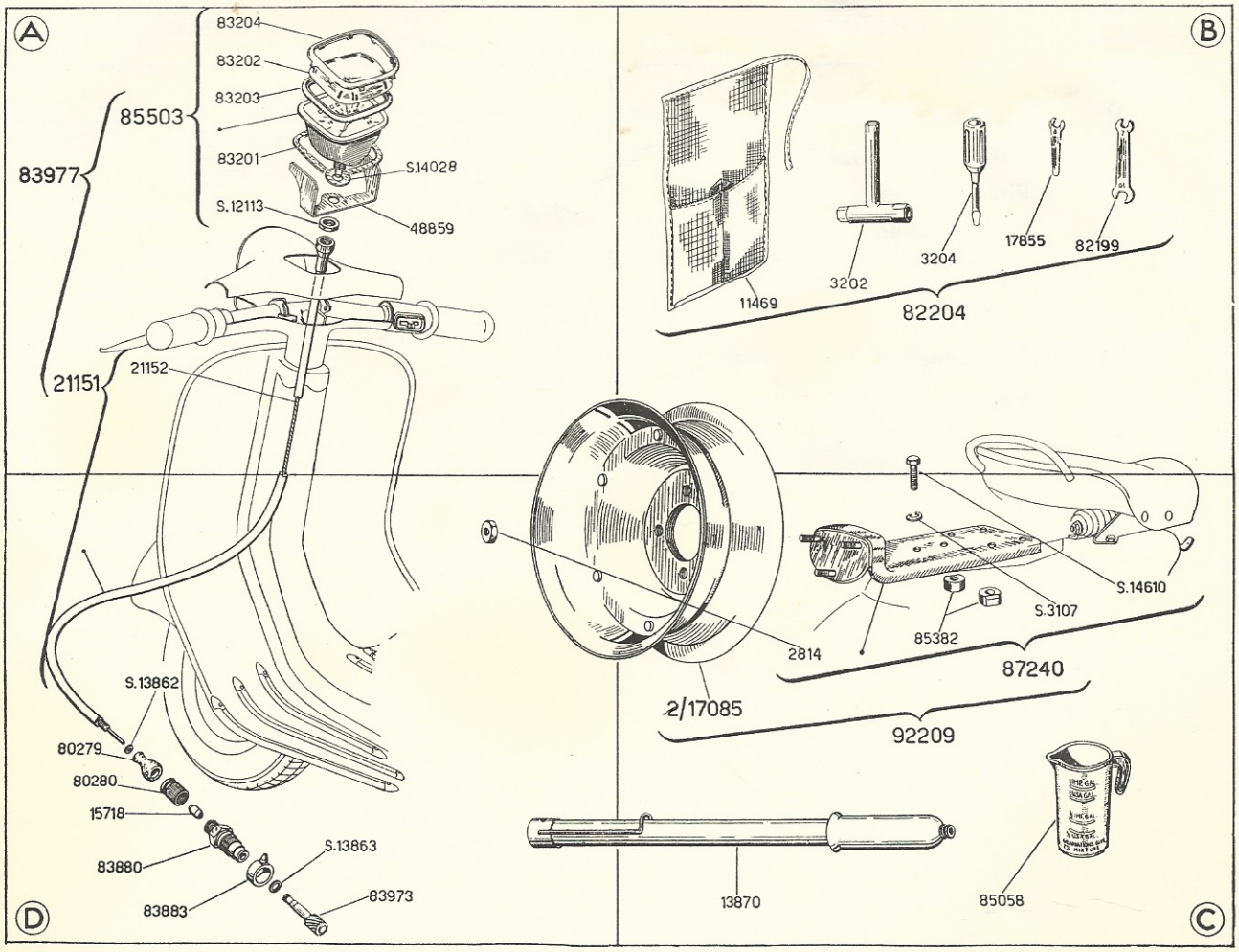


PARTS LIST FOR ELECTRIC EQUIPMENT

Cable harness

(TABLE XIX)

Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
10215	A	**Tube,** insulting, for cables of low tension socket	83120	C	**Cable,** from STOP switch to tail lamp
15468	B	**Tube,** protection	83121	D	**Cable,** from low tension socket to **STOP** switch
20913	A	**Plate,** insulation			
23349	A	**Tag,** contact	**83262**	D	**Wiring,** g. a. (Parts n. 10215 - 15468 - 20913 - 23349 - 81374 - 81375 - 82022 - 82023 - 82024 - 82026 - 82030 - 82032 - 82036 - 83120 - 82030 - 82032 - 83120 - 83121 - 84191 - 84348 - 87306)
81374	A-B	**Cable,** from switch to head lamp			
81375	A-B	**Cable,** from switch to head lamp			
82022	A-C	**Cable,** from switch to horn			
82023	A-C	**Cable,** from horn to switch			
82024	A	**Cable,** from switch to tail lamp			
82026	A-D	**Cable,** from switch to low tension socket	84191	B	**Tube,** insulating, for head lamp cables
82030	C-D	**Cable,** from low tension socket to horn	84348	A	**Tube,** insulating, for tail lamp cables
82032	B-D	**Cable,** from head lamp to low tension socket	87306	B	**Sheath,** insulating

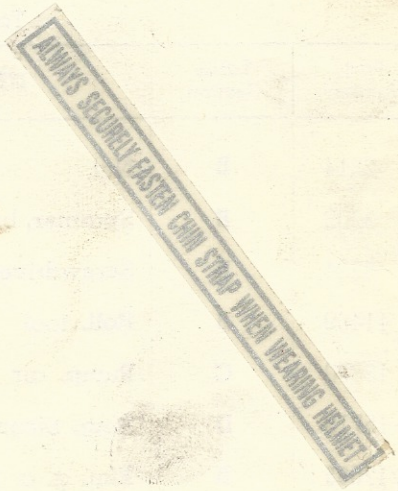


PARTS LIST FOR HAND TOOLS AND ACCESSORIES

Tool kit - Speedometer - Spare wheel and bracket **(TABLE XX)**

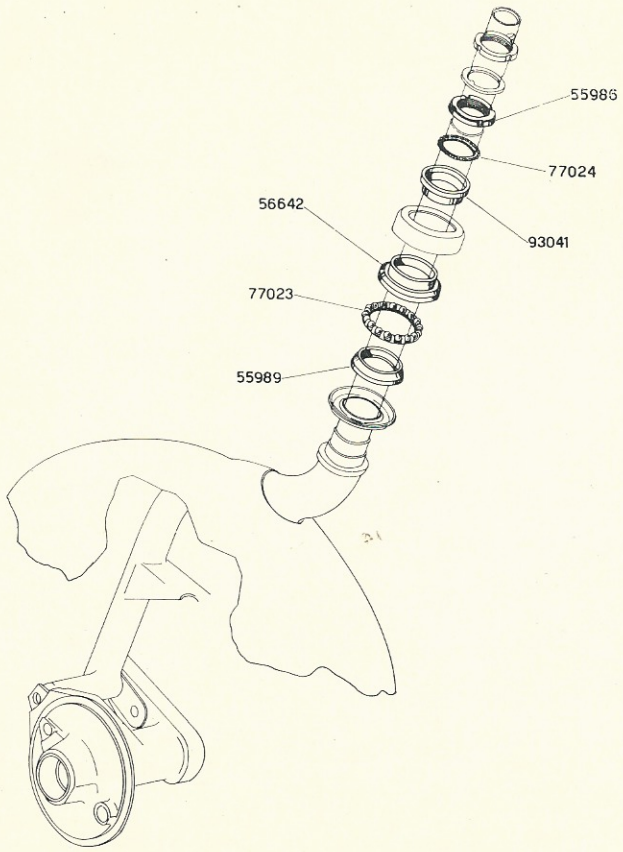
Part Number	Table Section	DESCRIPTION	Part Number	Table Section	DESCRIPTION
2814	B	**Nut**	48859	A	**Support,** speedometer
3202	B	**Spanner,** box (11-14-21 and 22 mm)	80279	D	**Cap**
3204	B	**Screwdriver**	80280	D	**Ring,** threaded, for sheath
11469	B	**Roll,** tool	82199	B	**Spanner,** double open end (8 - 14 mm)
13870	C	**Pump,** air	**82204**	B	**Roll,** tool, complete (no air pump) (Parts n. 3202 - 3204 - 11469 - 17855 - 82199)
15718	D	**Ring,** biconical			
2/17085	B	**Rim,** g. a. (see Table XVII)	83201	A	**Packing,** for speedometer housing cover
17855	B	**Spanner,** single open end (7 mm)	83202	A	**Glass,** for speedometer
21151	A	**Flex,** drive (Parts n. 21152 - 80279 - 80280 - 15718)	83203	A	**Packing,** between glass and frame
21152	A	**Cable,** flex drive	83204	A	**Frame,** for speedometer glass

Part Number	Table Section	DESCRIPTION
83880	D	**Bush,** for speedometer drive pinion
83883	D	**Ring,** with lubricator
83973	D	**Pinion,** drive of speedometer
83977	A	**Speedometer,** g. a. (Parts n. 21151 - 48859 - 83973 - 83880 - 83883 - 85503 - S. 13862 - S. 13863 - S. 14028)
85058	C	**Measure,** for fuel mixture
85382	B	**Spacer**
85503	A	**Speedometer,** miles (with 83201 - 83202 - 83203 - 83204 - S. 12113)
87240	B	**Bracket,** for spare wheel (with parts 2814 - 85382 - S. 3107 - S. 14610)
92209	B	**Bracket-rim,** assy (87240 - 2/17085)
S. 3107	A	**Washer,** spring
S. 12113	B	**Nut**
S. 13862	D	**Washer,** stop, on flex drive
S. 13863	D	**Washer**
S. 14028	A	**Packing**
S. 14610	B	**Bolt**



ALLSTATE - MOTOR SCOOTER

Model Number 788.94495



NOTICE

On this vehicle, the balls of steering column bearings are contained in a cage, instead of being loose as indicated in the table XIII of the spare parts catalogue.

The details that vary are as follows:

Upper ball race ring nut	drg.	N. 55986
Cage for upper bearing	»	N. 77024
Lower ball race of upper bearing	»	N. 93041
Outer race of lower bearing	»	N. 56642
Cage for lower steering column bearing	»	N. 77023
Internal race of lower bearing	»	N. 55989

N. B. - The upper and lower bearing assemblies can be also mounted on previous type vehicles.

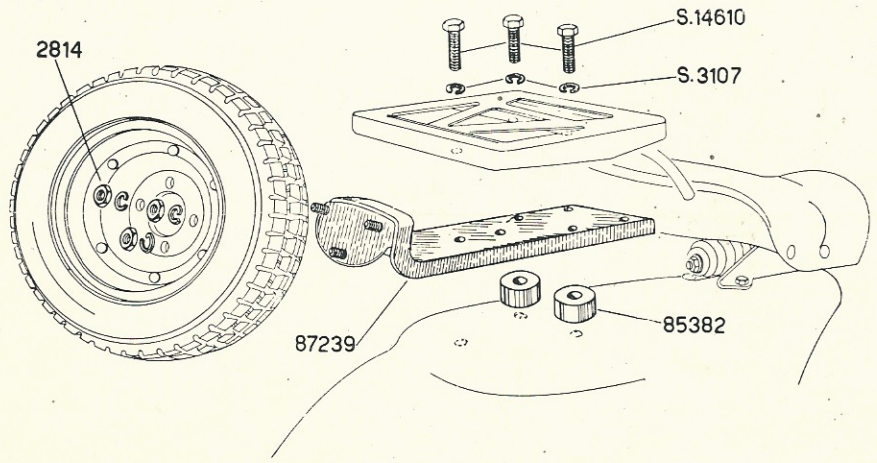
APPLICATION OF REAR SUPPORT BRACKET FOR SPARE WHEEL

Remove the three bolts which fix luggage carrier to the frame and substitute with those S. 14610, (of major length) and relative washers S. 3107.

— Position the support so that three of the six holes drilled in it coincide with those on the frame, contemporaneously interposing two distance pieces, drg. 85382 in correspondence to the two holes at the rear of the tank edge.

— Remount the luggage carrier in its original position and block the above mentioned three bolts.

— Apply the spare wheel as indicated on the figure, positioning it onto the overhanging portion of the support by means of the projecting bolts and blocking with the relative nuts.



Dis. n. 88482 - 2500/6203