

By Appointment to  
Her Majesty the Queen  
Manufacturers of  
Motor Mowers  
Charles H. Pugh Ltd.



# ATCO



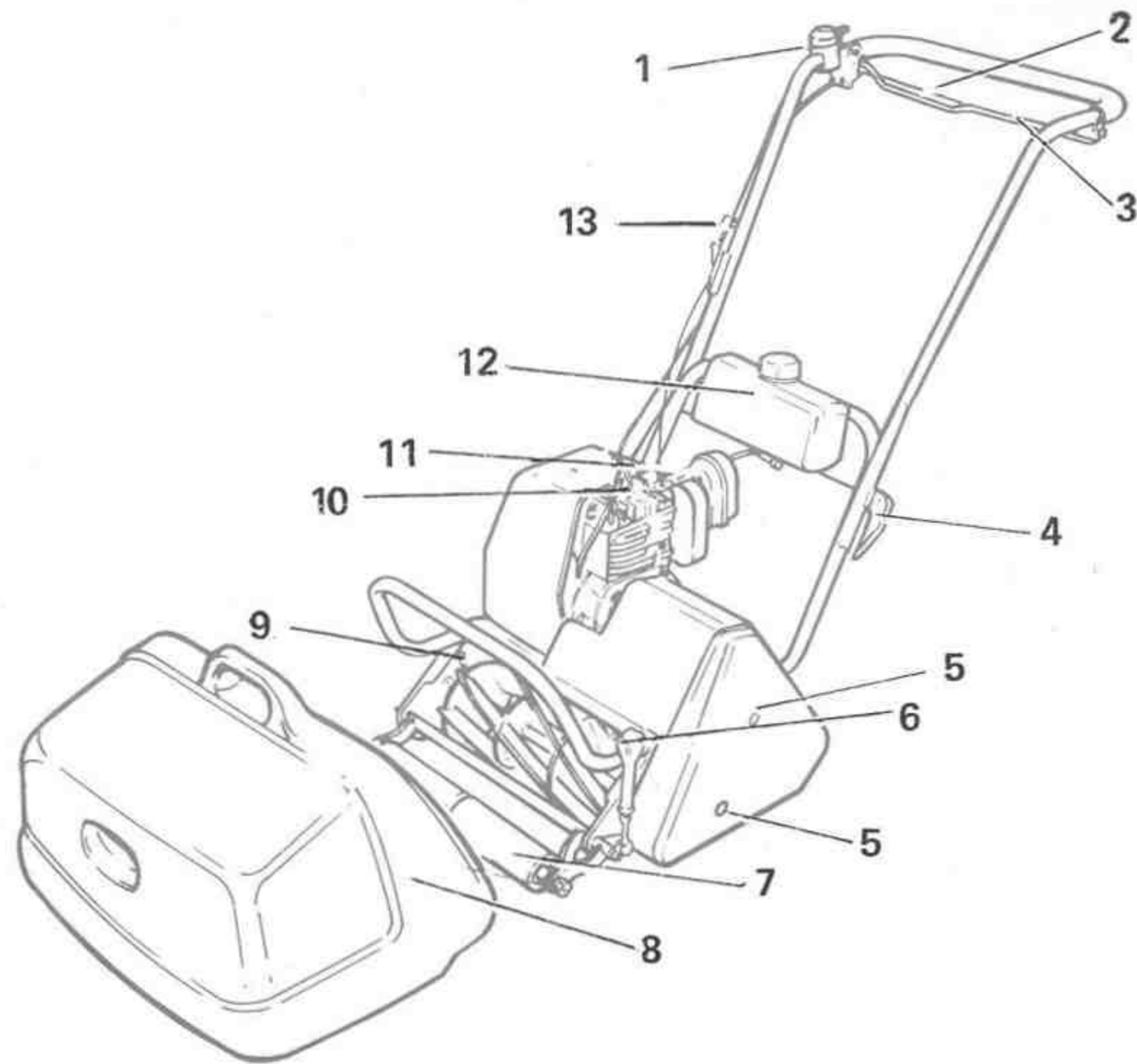
## COMMODORE B14 B17 B20

Operating  
Instructions



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**1** Remove your mower from its packaging and examine it for any obvious defects. These must be reported IMMEDIATELY to your supplier, or one of our Approved Service Agents. (See list enclosed).

## 2 Handle

Unfold handle and secure with the locking lever (A Fig.3).

To adjust the handle height see page 4.

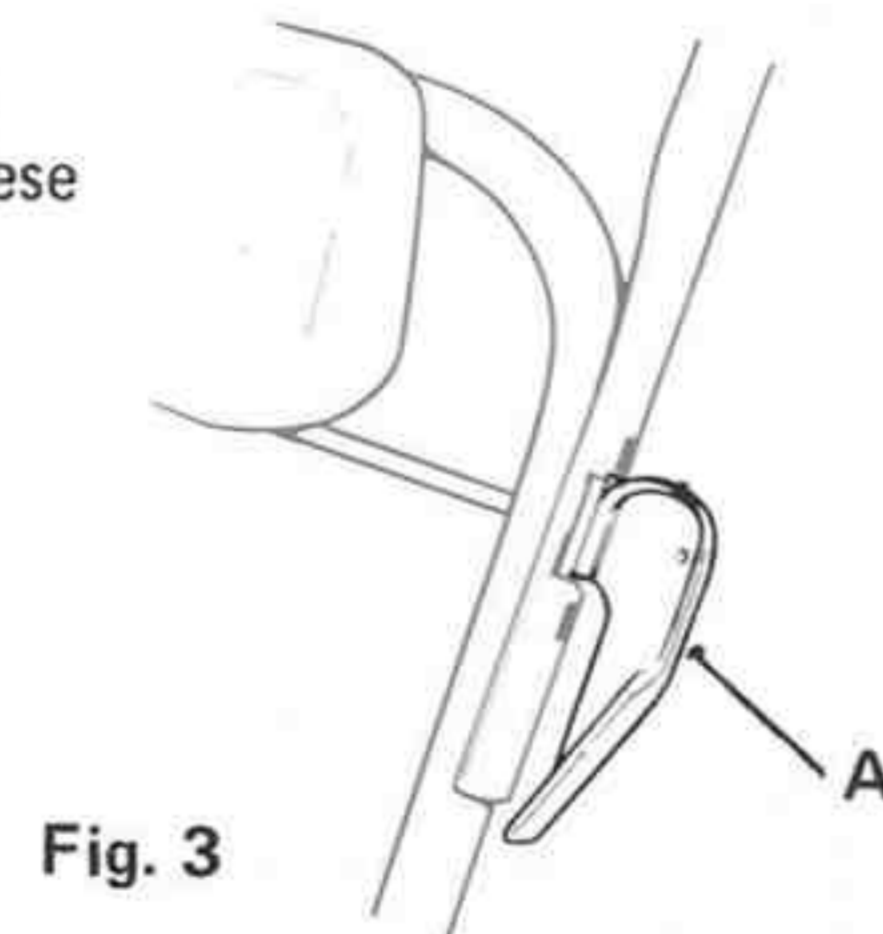


Fig. 3

## 3 Engine

**REMOVE SPARK PLUG CAP.**

Remove the oil filler plug (A Fig.4) and put in 0.28 litres (½ pint) of good quality multi grade 20/50 oil to just below the filler hole lip.

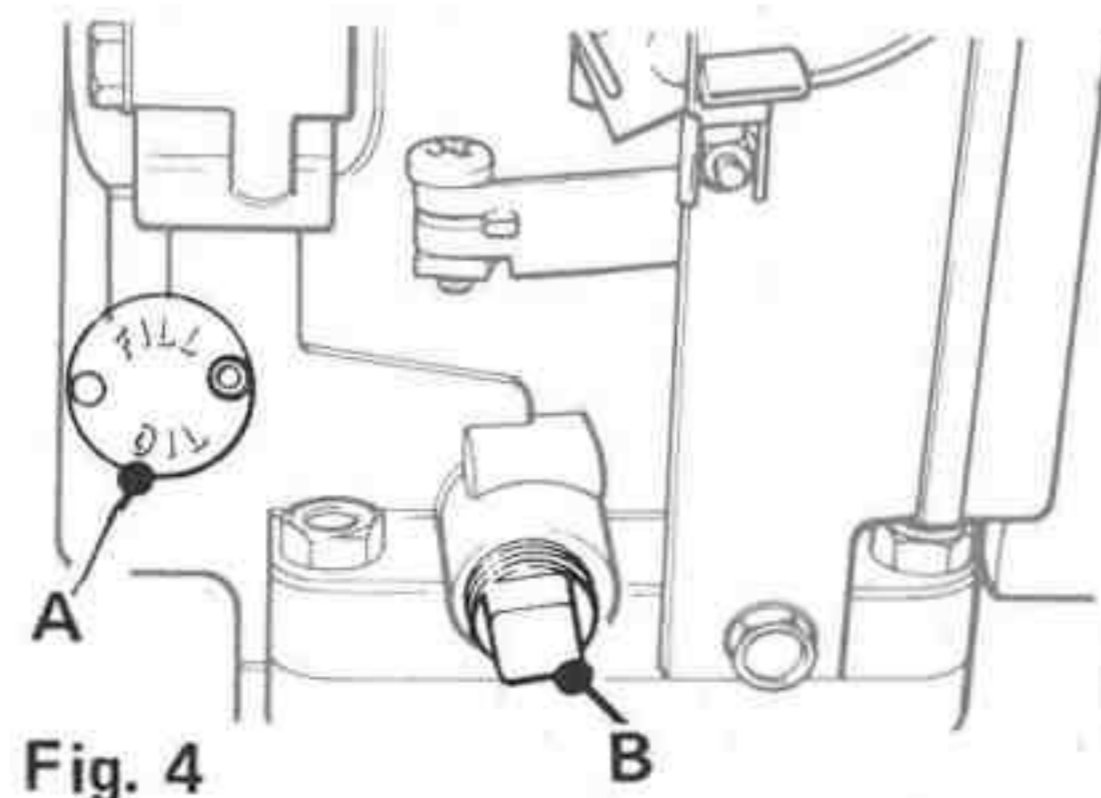


Fig. 4

Drain oil from the sump after the first 5 hours of mowing by removing the drain plug (B). Tilt the mower to help drain out the oil. This is best done when the engine is warm. Refill with fresh oil. Thereafter change the oil after every 30 hours of use (or once a year, whichever is sooner).

- DO** Turn the engine slowly by hand, when filling with oil to expel air. Keep the area around the filler hole clean. Check the oil level before each mowing and top up if necessary. Ensure the engine is level when filling with oil.

**DON'T** Fill with oil while the engine is running.

## 4 Petrol

Fill tank with **clean** petrol (92 octane-2 star preferred). The tank holds approximately 3 pints (1¼ litres), sufficient for about 3 hours work.

- DO** Use **clean** petrol (preferably use a funnel with a filter in it to fill the tank). Replace petrol cap securely after filling.
- DON'T** Use 2-stroke fuel, high octane petrol, or petrol mixed with oil. Fill the tank while the engine is running. Smoke while filling the tank.

## 5 Before Mowing

**Height of cut** - adjust as necessary, see page 4.

**Cutter blade adjustment** - Please check the cutting action of your mower before you first use it. All new mowers are checked before despatch from our factory, but occasionally they go out of adjustment during transit. To reset the cutters see "Cutter Adjustment", page 5. Poorly set cutters will give a rough, ragged looking finish.

**Grassbox** - if required, place grassbox on support by simply hooking the top lip over the supporting bar above the front of the mower.



# Safety Rules



Look for this symbol. It means **ATTENTION! BE ALERT! A HAZARD TO OPERATOR, BYSTANDER, PROPERTY OR MOWER MAY EXIST.**

⚠ Know your controls. Read this owner's manual carefully. Learn how to stop the engine quickly in an emergency.

⚠ Make sure the lawn is clear of sticks, stones, bones, wire and debris. They could be thrown by the blades.

⚠ Stop engine and disconnect spark plug cap before checking or working on the mower.

⚠ Always be sure the mower is in a safe operating condition. Before using always visually inspect to see that the blade, blade bolts and cutter assembly are not worn or damaged and there are no loose nuts, bolts or screws.

⚠ Use only replacement parts made and guaranteed by the original manufacturer of your mower.

⚠ Petrol is highly inflammable, so add fuel **BEFORE** starting the engine. Avoid spilling petrol and do not fill the tank whilst the engine is running or whilst you are smoking. Store fuel in a cool place, in a container specifically designed for the purpose.

⚠ Should your machine strike a solid object, stop the machine and inspect the cutting mechanism. Repair any damage before restarting and operating the machine.

⚠ Do not mow whilst people, especially children, or pets are in the mowing area.

⚠ Beware of trapping fingers etc. between fixed and moving blades.

⚠ Never use the mower unless the guards provided by the manufacturers are in position.

⚠ Do not mow barefoot or in open sandals.

⚠ Start the engine carefully with feet well away from the blades.

⚠ Do not operate the engine in a confined space where exhaust fumes (carbon monoxide) can collect.

⚠ Stop the engine whenever you leave the mower.

⚠ Stop the engine before pushing the mower across surfaces other than grass.

⚠ Do not allow children or people unfamiliar with these instructions to use the mower.

⚠ On slopes or wet grass, be extra careful of your footing.

⚠ Never cut the grass by pulling the mower towards you.

⚠ Do not overspeed the engine or alter the governor setting. Excessive speed is dangerous and shortens mower life.

⚠ Never pick up or carry a mower when it is operating.

## Using Your Mower

### Starting from Cold

1 Open the petrol tap by pulling the red knob (Fig.5). Check that the spark plug cap is firmly in place.

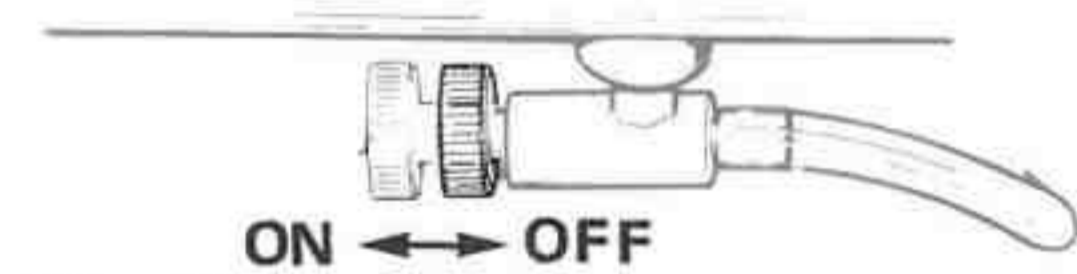


Fig. 5

2 Close the choke lever to position marked 'C' (Fig.6).

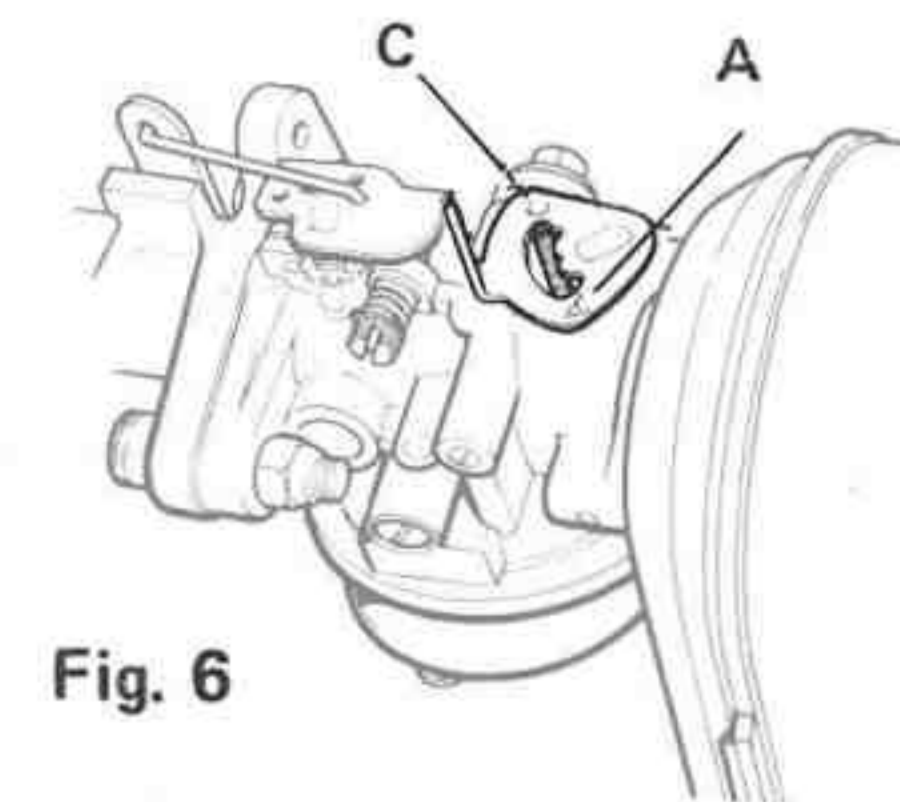


Fig. 6

3 Open the throttle lever (Fig.7) to about halfway.



Fig. 7

4 Stand behind the mower, grip the rubber handle and pull the recoil starter (D Fig.8) with a smooth action, not a jerky snatch. After each pull let the recoil go back in under control.

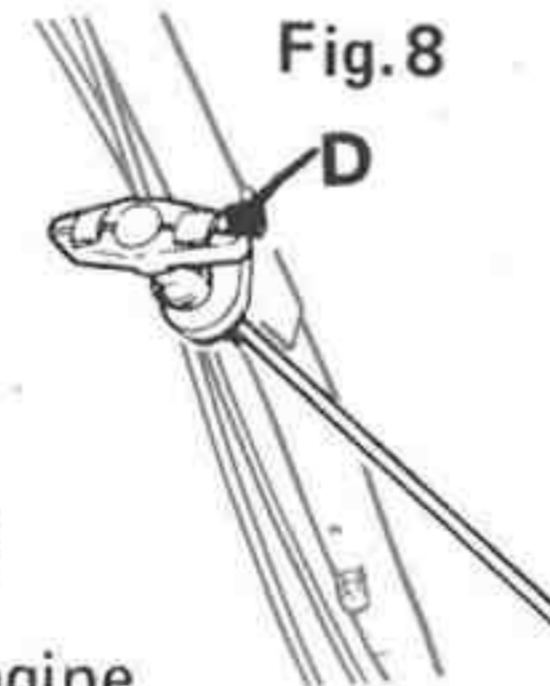


Fig. 8

5 When the engine starts, open the choke to midway between the closed position 'C' and open position marked 'A'. When the engine is warm, fully open the choke to position 'A' (Fig.6).

**Note:** It is better to under-choke the engine rather than over-choke and flood it.

### To Stop the Engine

Move the throttle lever firmly to the stop position marked 'O' (Fig.7) (you will hear a click when this is reached).

**Note:** If the engine does not stop with the lever in this position, adjust the throttle control, see page 6.

⚠ In an emergency, if the engine cannot be stopped, close the choke to position 'C' (Fig.6), or remove spark plug cap.

### Starting from Hot

Start in the same way as from cold, but do not close the choke.

If the engine will not start, carry out the checks listed under 'Fault Finding' (see page 8).

### Operating the Mower Controls

Stand behind the mower. Start the engine as detailed. Set the throttle control (A Fig.9) to the desired engine speed.

To drive both the cutters and the rear roller, firmly grip and lift the main clutch lever (B), to engage the cutters.

To drive the cutters alone, lift clutch lever (C) only.

**To Stop the Mower** - simply release the clutch levers.

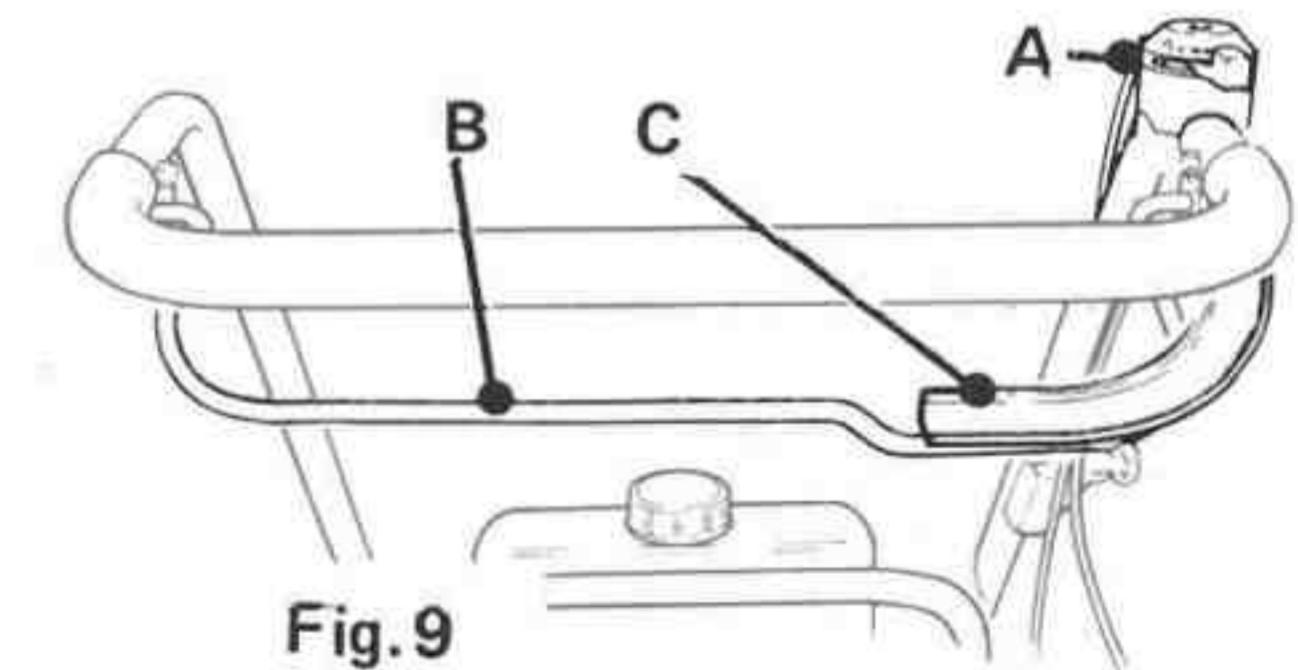


Fig. 9

### Restarting

Under very heavy cutting conditions (e.g. long, wet grass) it is advantageous to either pull the mower half a pace backwards onto the already cut area or to engage lever (C) first before engaging clutch lever (B) to clear the cutters of any excess grass before starting forward again.

⚠ **DON'T** pull the mower backwards with the main clutch lever (B) lifted.



# Adjustments and Maintenance

## Height of Cut

The microset adjuster (A Fig.10) will raise or lower the front of the mower to vary the height of cut.

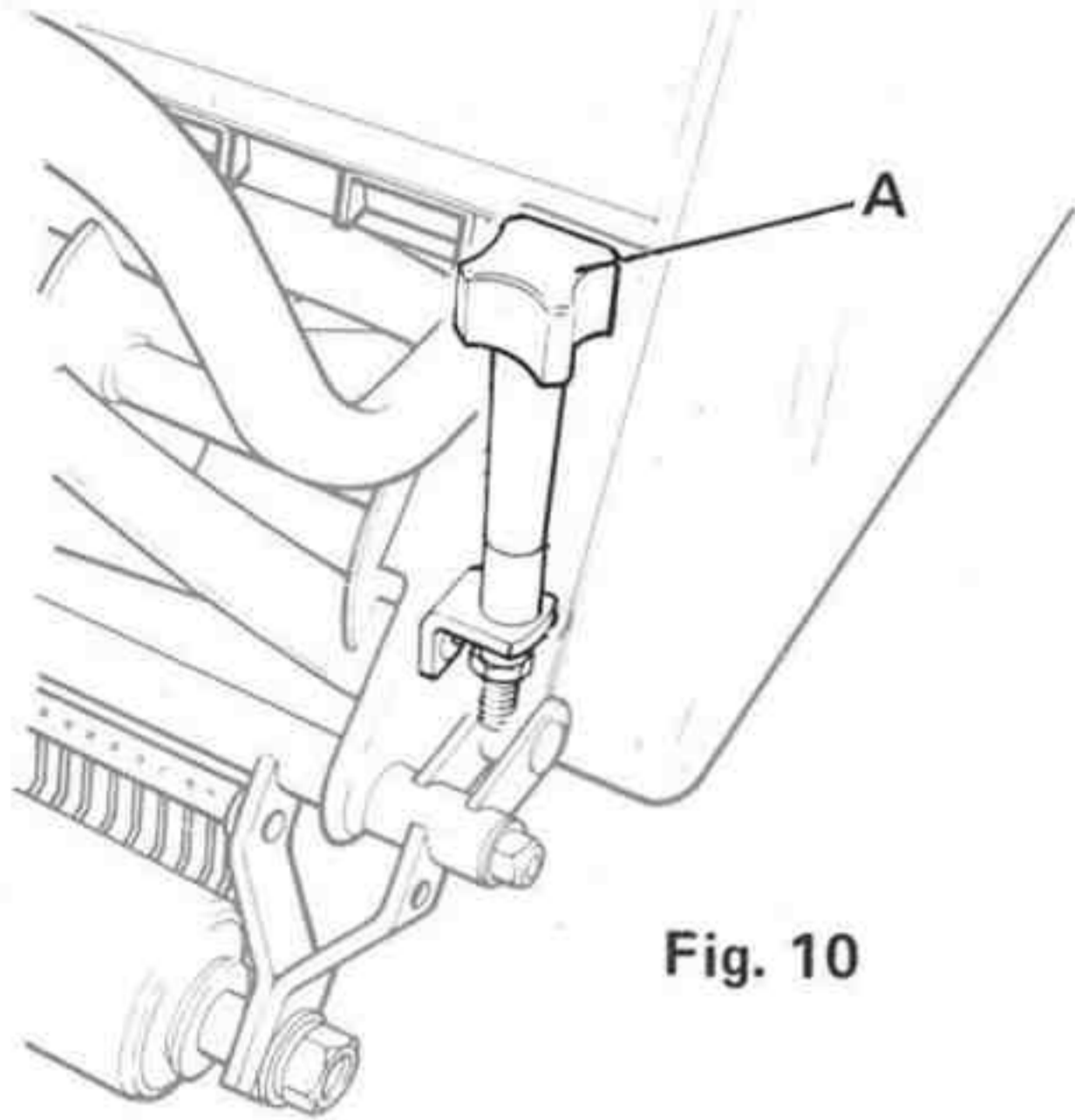


Fig. 10

## Cutting Long Grass

Your Atco mower is fitted with a full width front roller. This is suitable for normal lawns and allows you to mow over edges. If you want to mow long grass, exchange the front roller for the side wheels supplied with your mower, (also remember to remove the grass rake) as follows:

1 Switch off the petrol tap, remove the spark plug cap and grassbox.

2 Tip the mower back on its handles and prop securely.

3 Remove the nuts (B) and lift out the rollers and axle (C and D Fig. 11).

4 Remove the axle from the rollers and replace the axle in the forks of the front roller support arms (E Fig. 11).

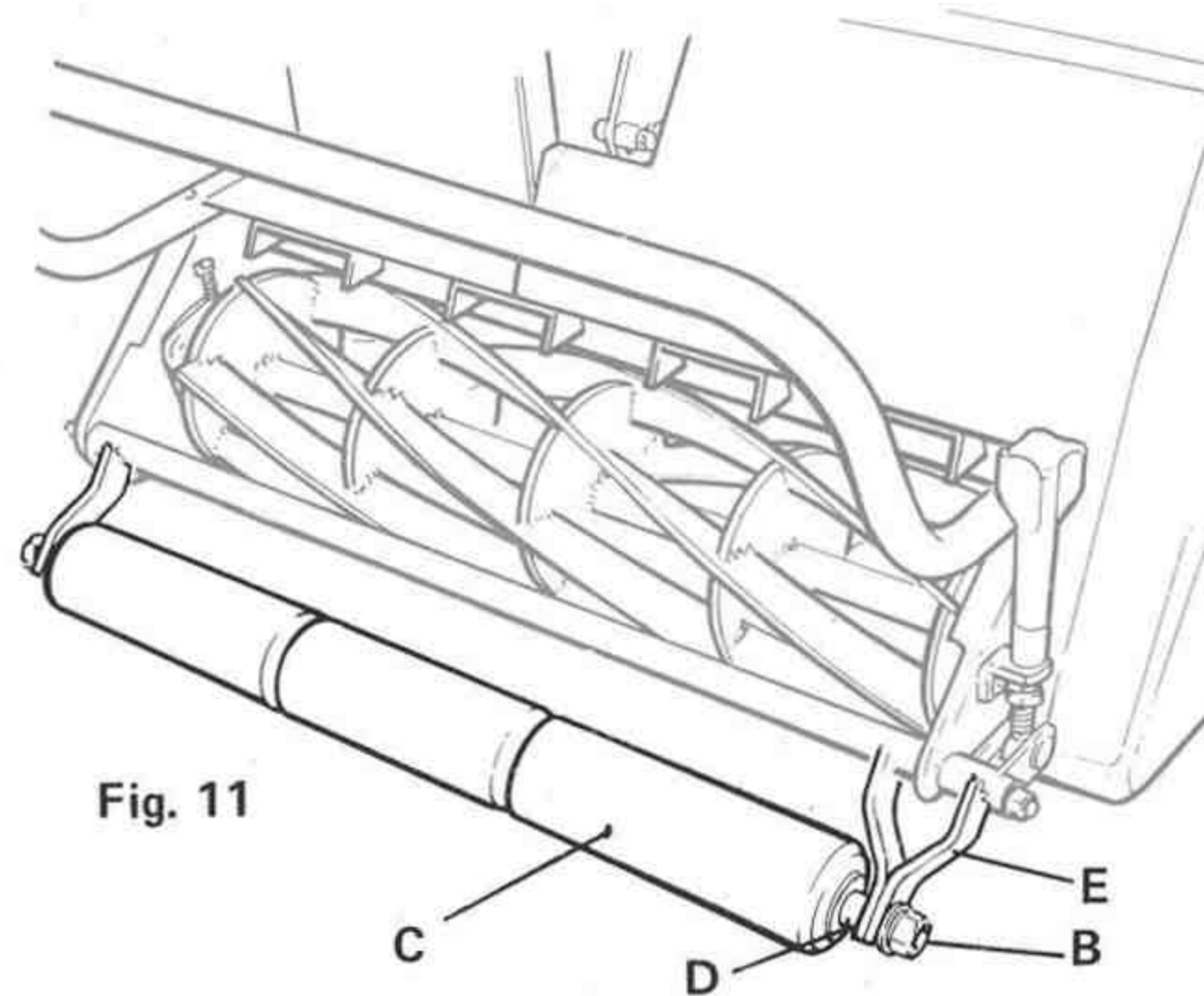


Fig. 11

5 Screw the sidewheel assemblies (F) firmly on to each end of the axle (D), ensuring the axle is seated correctly on the forks (Fig.12).

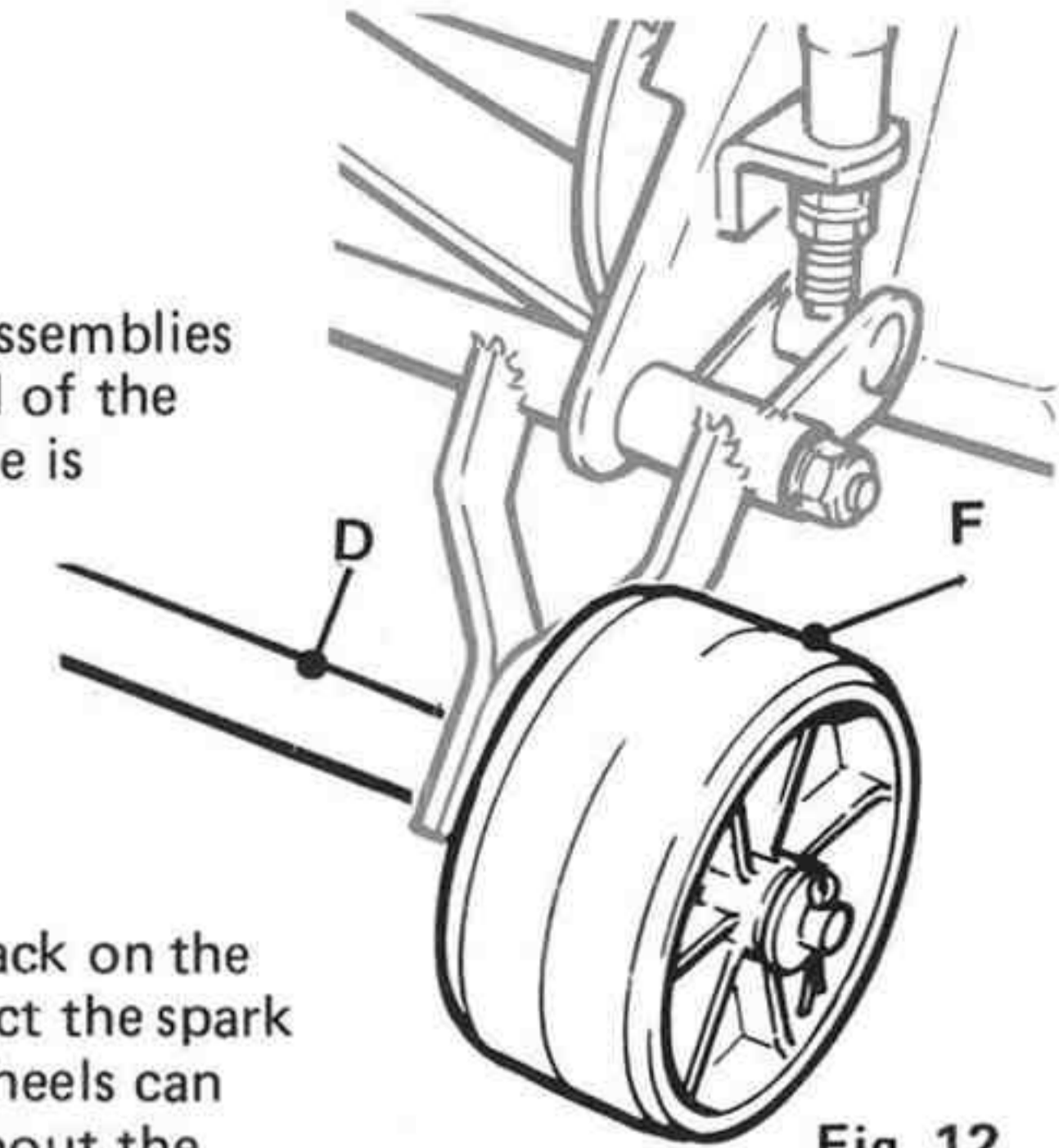


Fig. 12

6 Set the mower back on the ground and reconnect the spark plug cap. The sidewheels can be used with or without the grassbox.

## Use of Rake

Your mower comes complete with an easily fitted lawn rake to help maintain the best possible grass condition on short, well kept lawns.

The rake, which is fitted behind the front roller, automatically adjusts to whatever height of cut is selected, and is kept in contact with the ground by two springs attached to the front roller spindle.

**NOTE:** The use of the rake is **NOT** recommended when cutting longer grass and should be confined for use on short, well tended lawns.

**TO FIT:** Remove the slotted screw (A) from the rake assembly and slide the rake down and into the left hand roller support bracket. Working through the left hand roller bracket, reinsert screw (A) and tighten. The springs should now be clipped to the lugs on the front roller spindle and the rake is now ready for use.

To remove, reverse the above procedure.

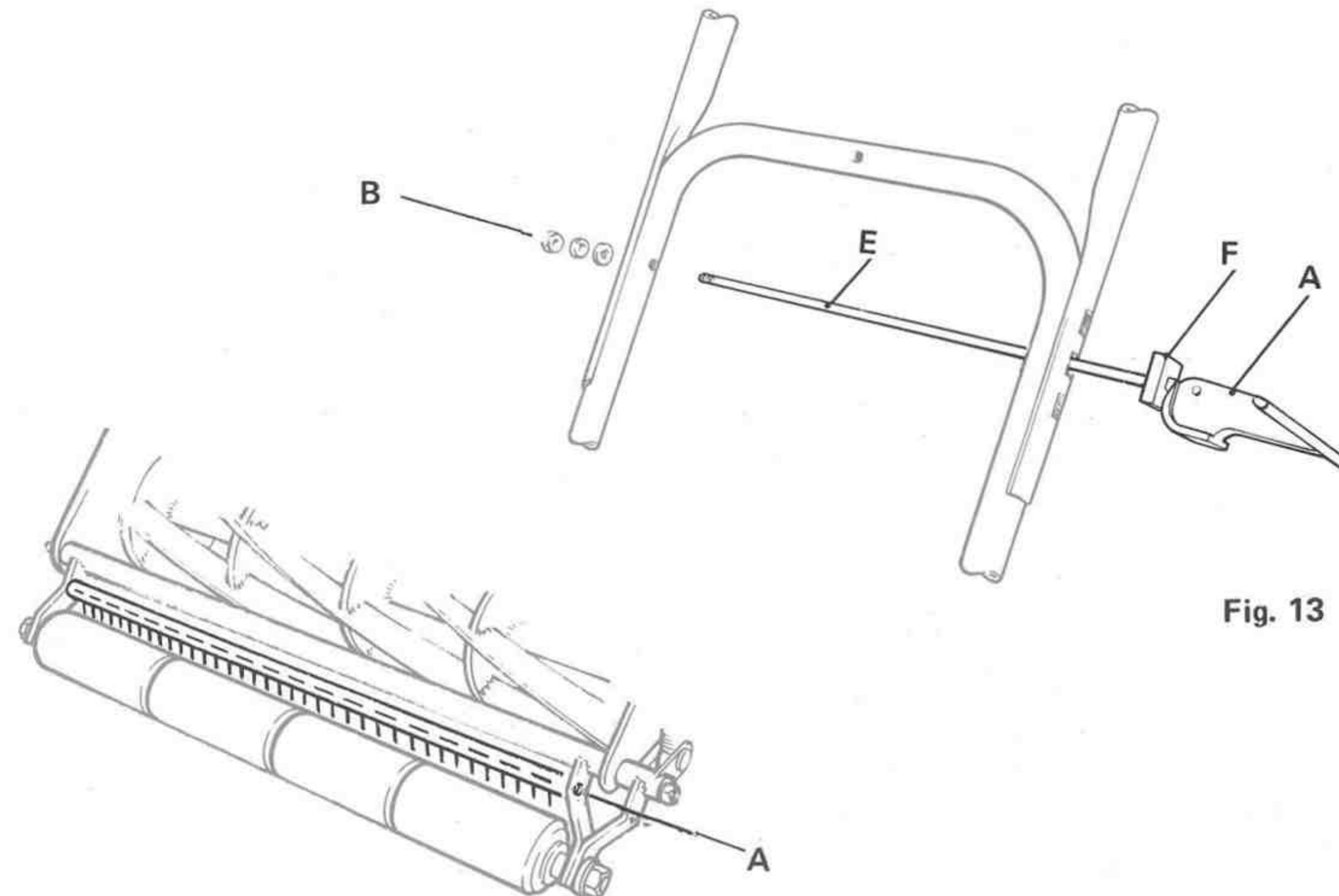


Fig. 13

## Handle Height

- 1 Release the locking lever (A Fig.13) and fold the handle forward.
- 2 Unscrew dome nut (B) and remove with washers.
- 3 Pull out cam rod (E) from the handle and petrol tank fixing lugs.
- 4 Reposition the cam rod in the selected hole in the handle top to achieve the desired height, pushing it through the holes in the handle bottom, making sure that the rod is fed through the petrol tank fixing lugs in the process.
- 5 Refit the dome nut and washers.
- 6 Return the handle top to normal and clamp down the locking lever (A).



# Cutter Adjustments

Adjust the cutters if the mower does not cut the grass cleanly and evenly.

To adjust the cutters:

- 1 Remove the spark plug cap.
- 2 Slacken the drive chains (see page 6)
- 3 Adjust the cutting cylinder closer to the bottom blade by turning the screws (A, Fig. 14) clockwise on each side of the mower a little at a time. The blades are correctly adjusted when the cutting cylinder lightly brushes the bottom blade evenly across its full width as the cylinder is turned.  
(The cutters work like a pair of shears and when well adjusted will cut a piece of good quality paper)
- 4 Readjust the drive chains
- 5 Replace the spark plug cap.

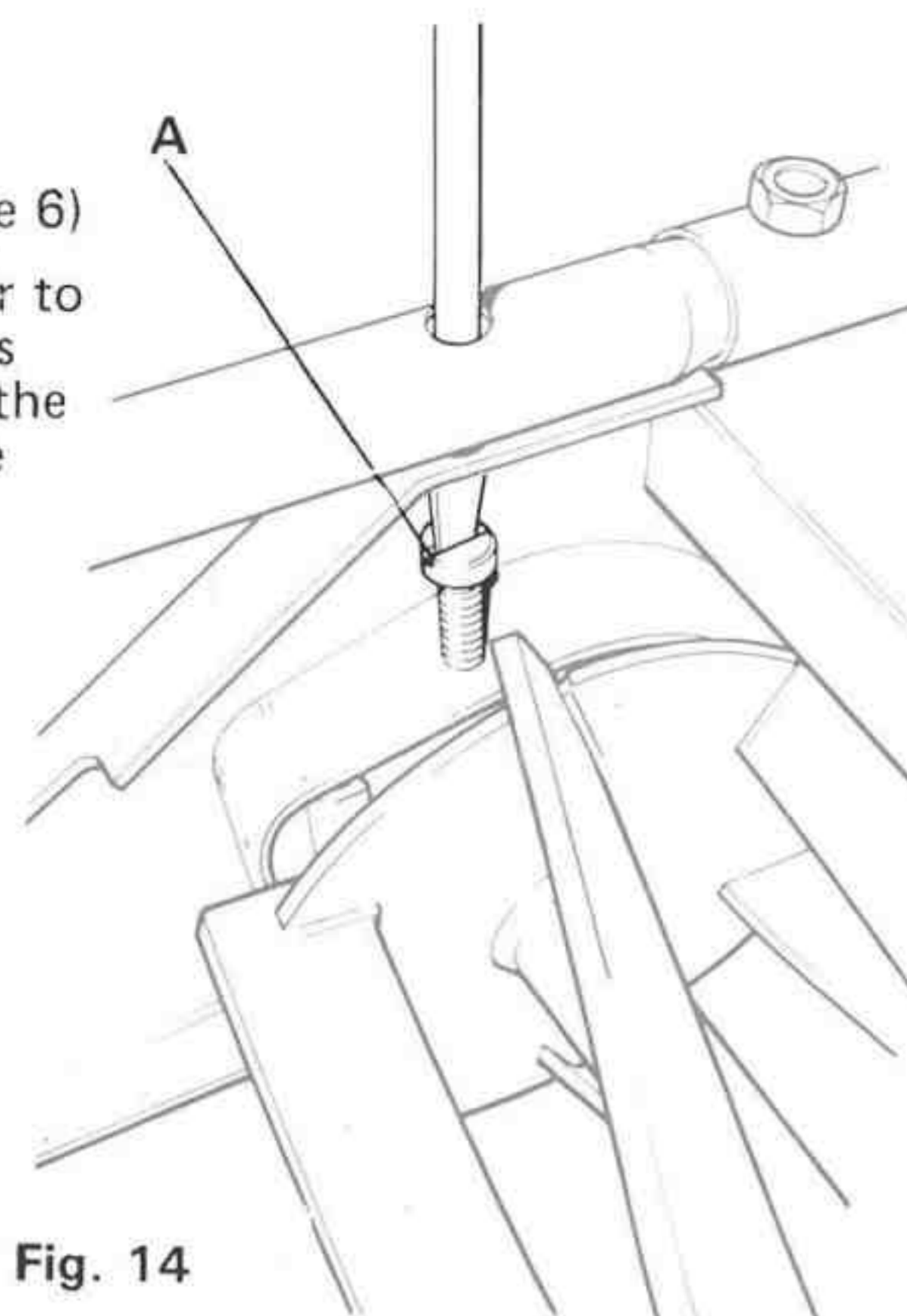


Fig. 14

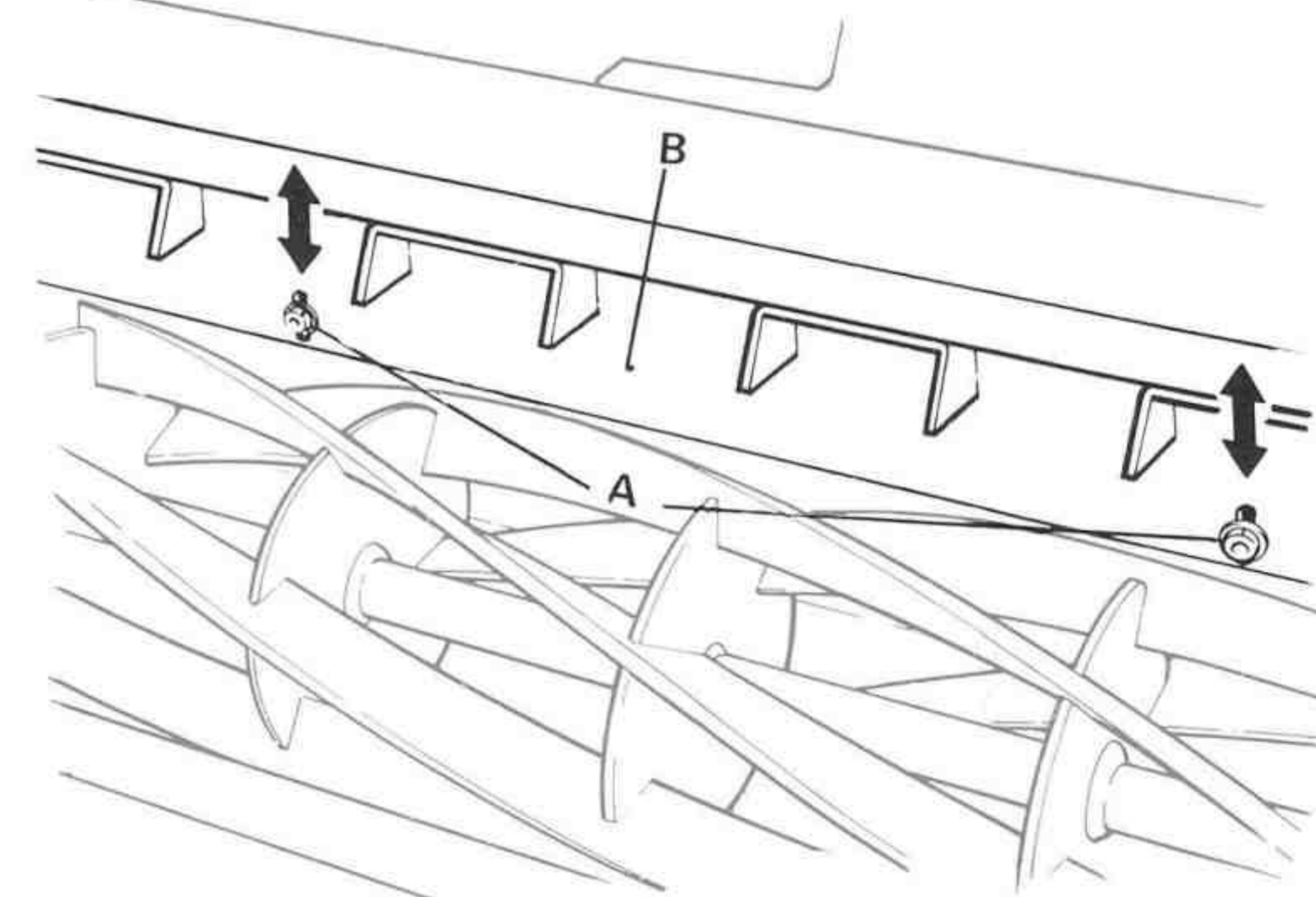
**⚠** Take care when turning the cylinder – the blades can be sharp.

**⚠** DO NOT ADJUST THE CYLINDER TOO TIGHTLY TO THE BOTTOM BLADE as this may damage the cutter drive and bearings.

After considerable usage it is possible that this adjustment will no longer provide for the clean and even cutting of grass because the blades have lost their edge. We then recommend you contact one of our Service Agents to have your mower re-sharpened.

# Grass Delivery

If the grass cuttings are not thrown properly into the grassbox, the angle of the delivery plate may be altered by loosening the two screws at the top of the plate (A Fig.15) and the five screws at the bottom (see illustration on page 18), sliding the delivery plate (B Fig.15) up or down a little, as necessary, then tightening the screws again.



# Clutches

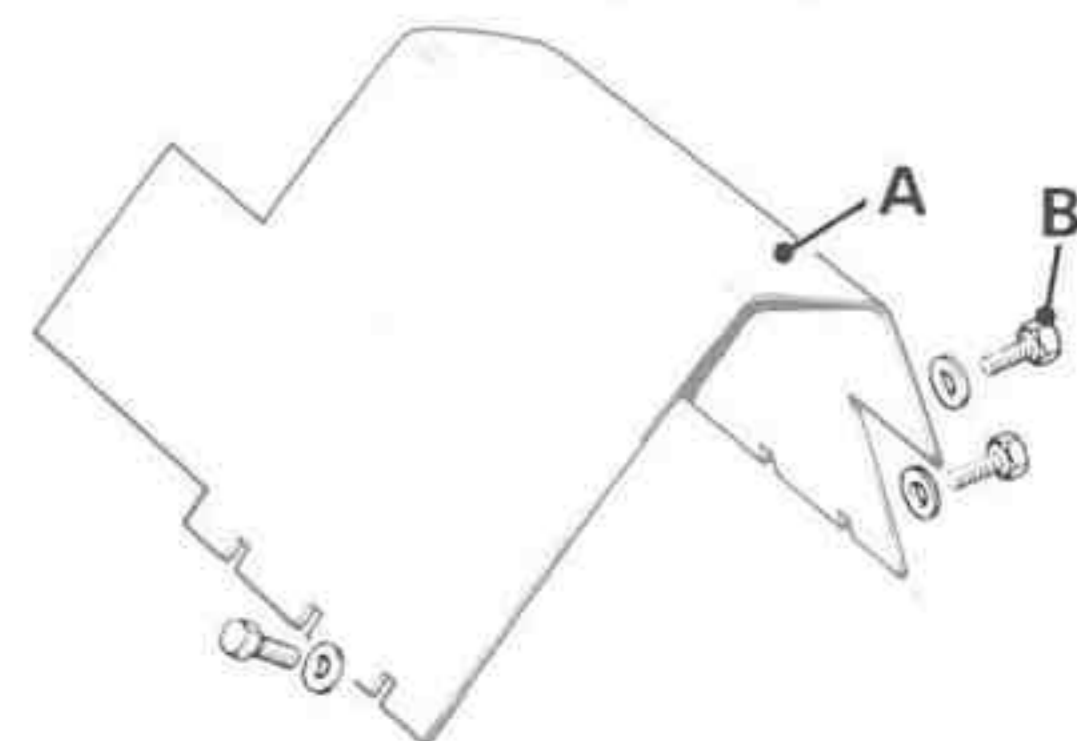
The mower is fitted with two clutches:

- The engine clutch disconnects the engine from all the transmission. It is under the clutch cover between the engine and the transmission.
- The traction clutch disconnects the rear roller from the rest of the transmission.

Both clutches are the 'deadmans type' – i.e. if the control levers are released, the mower and the cutters stop automatically. This is a safety feature of your Atco Commodore.

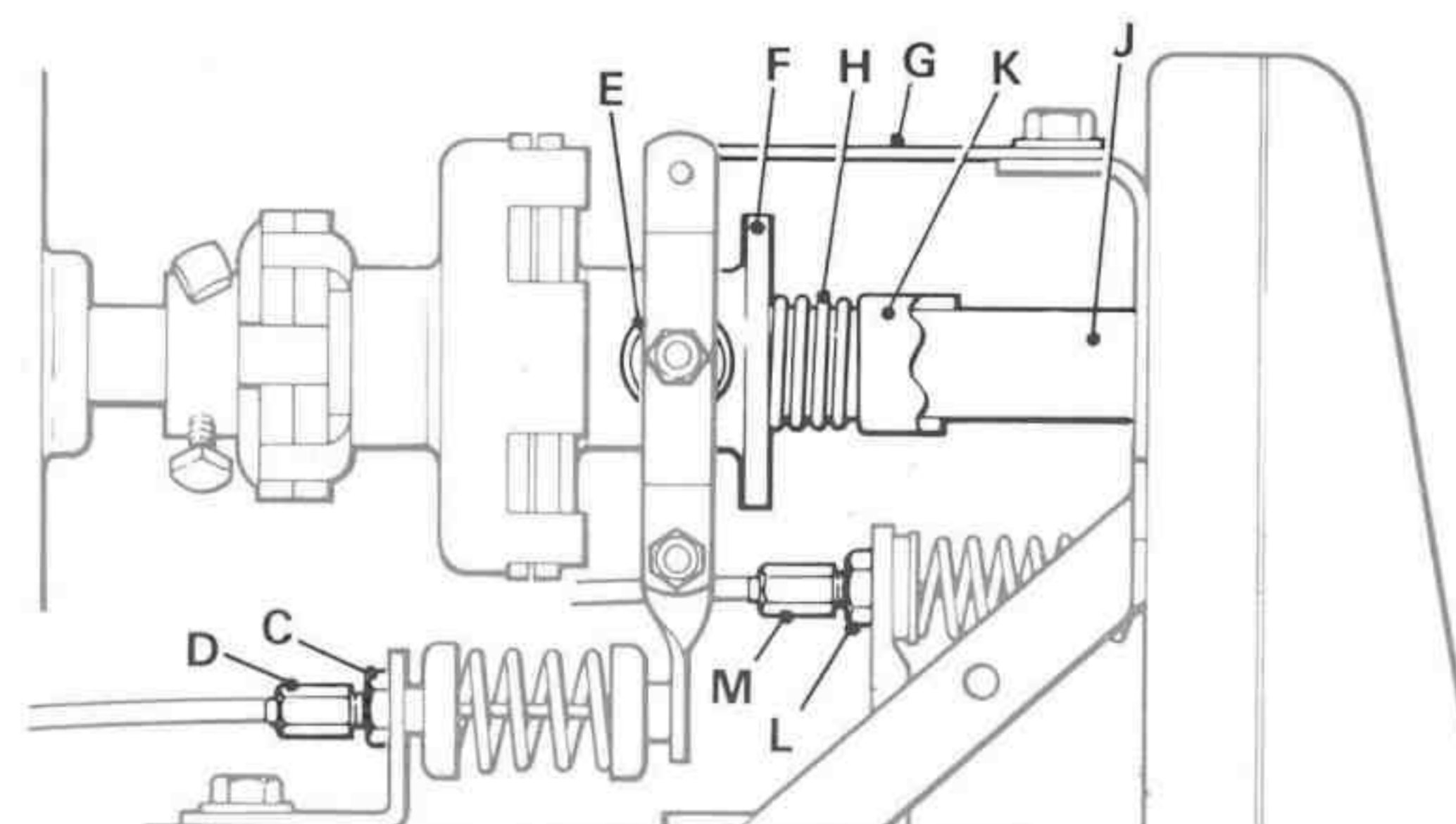
To adjust the clutches:

- 1 Remove the spark plug cap.
- 2 Remove clutch cover (A) by loosening the securing screws (B) and sliding the cover off.



- 3 Adjust the engine clutch by loosening the locknut (C) and turning adjuster (D). Correct adjustment is when the release bearings (E) clear the withdrawal collar (F) by 1 mm when the operating lever is fully engaged. If sufficient adjustment is not obtained by using adjuster (D), then further adjustment is available by adjusting bracket (G).

Retighten locknut (C) after adjustment.



- 4 On 17" and 20" models it is possible to adjust the tension in the spring (H) on the clutch shaft (J) by rotating collar (K).

- 5 Adjust the traction clutch by loosening the locknut (L) and turning adjuster (M).

Correct adjustment is when there is 1 mm of free play between the inner and outer cable.


Re-tighten locknut after adjustment.

- 6 Check the action of the clutches, then replace the clutch cover and tighten the securing screws firmly.

- 7 Replace the spark plug cap.



# Chains

 1 Remove the spark plug cap

2 Remove the chain case cover by undoing the screws and pulling it off.

3 Tension the primary chain (A Fig.16) by loosening bolt (B) and moving tensioner (C) until there is 1/2" (12 mm) of slack on the rear run of the chain. Slide the tensioner stay (D) up to hold the tensioner in position and lock bolt (B) firmly.

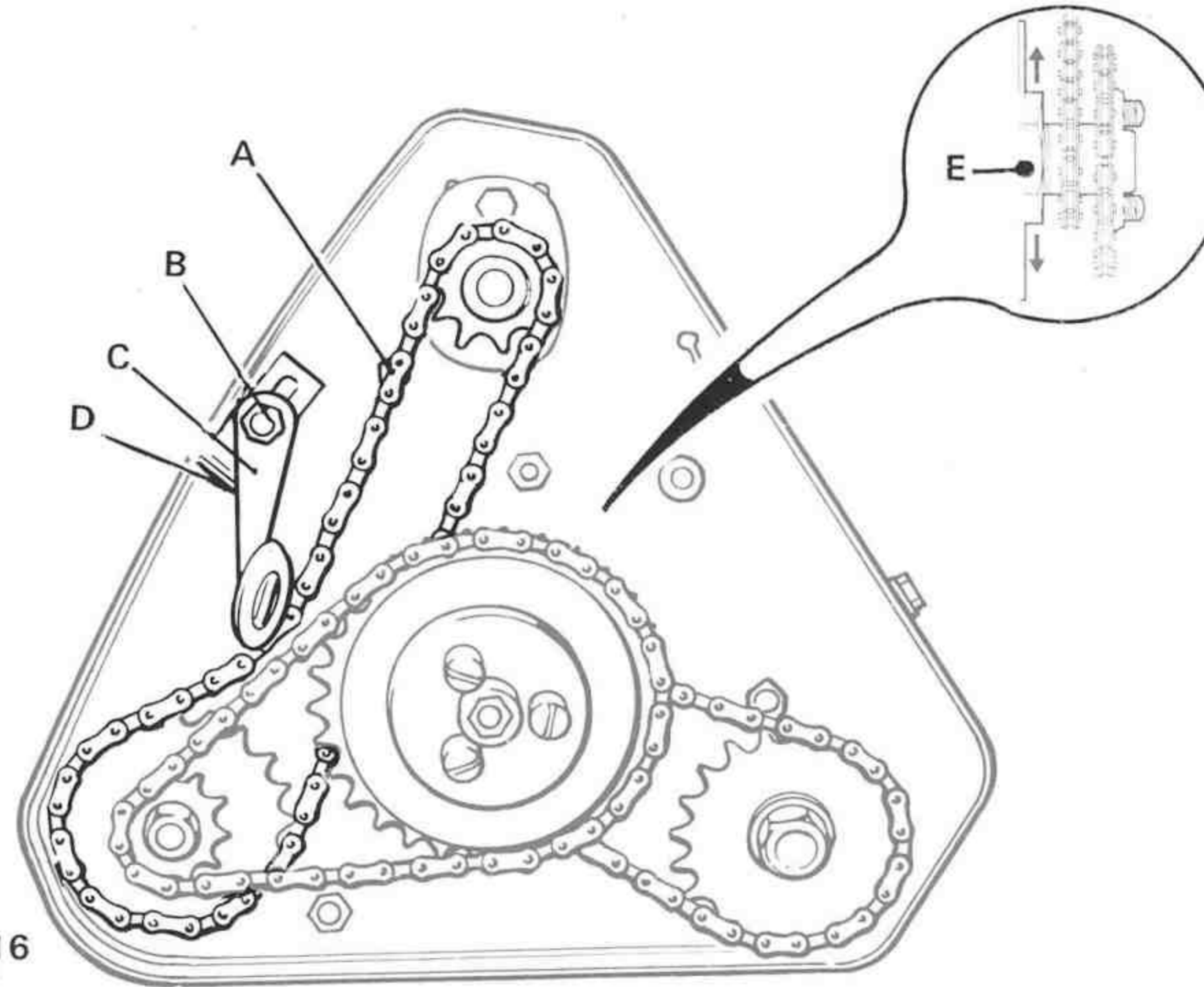



Fig. 16

4 To adjust the other two chains, slacken the roller drive clutch spindle by loosening the securing nut (E) and slide up the slot in the sideplate. Correct tension is when there is about 3/8" (10mm) of slack on the rear run of the chains.

 Only loosen nut (E) by 2 1/2 turns maximum. Tighten firmly after adjustment.

5 Refit the chaincase cover and retaining screw and replace the spark plug cap.

## Engine, Carburettor and Ignition

The only adjustments to be made on the engine are cleaning the air filter, adjusting the idling speed and on rare occasions the cut out and slow idling jet setting on the carburettor. These are set before the engine leaves the factory, but some slight adjustment may be needed to suit the usage.

The engine is fitted with a **breakerless electronic ignition system** so no electrical adjustments are needed, other than cleaning and setting the spark plug. In the unlikely even of ignition failure, contact your Service Agent.

### Idling Speed

- 1 Run the engine until it is thoroughly warmed up.
- 2 Adjust the idling speed by turning the throttle stop screw (A Fig.17) clockwise to increase speed and anti-clockwise to decrease it. Correct setting is when the engine just ticks over gently.

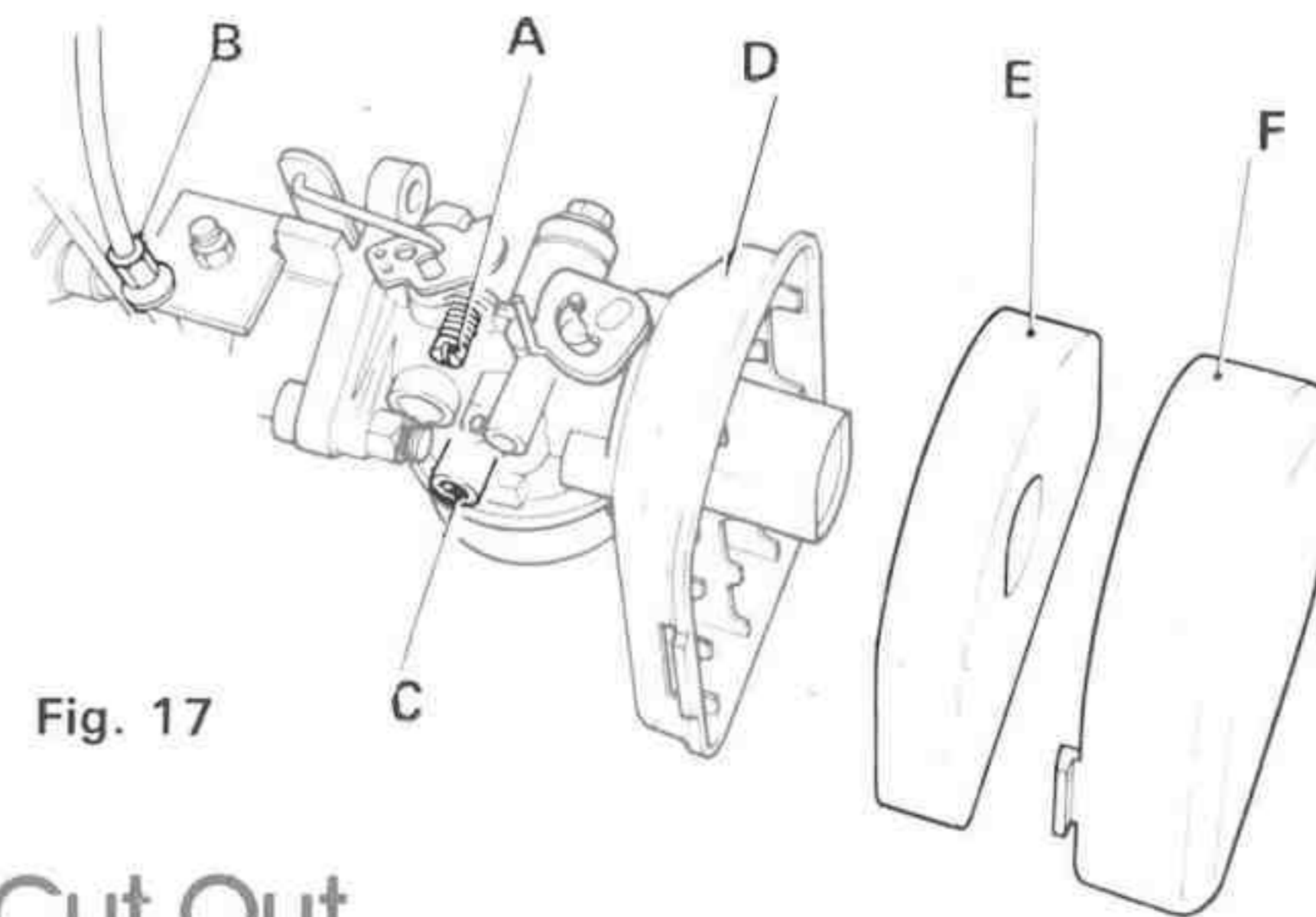


Fig. 17

### Cut Out

The engine should cut out when the throttle control lever is returned to the 'O' position. If this does not happen, loosen the locknut and adjust the throttle cable adjuster (B) until the engine cuts out. Re-tighten the locknut.



### Slow Idling Jet

- 1 Run the engine until it is thoroughly warm, then set the throttle control to slow speed.
- 2 Adjust the slow idling jet screw (C) anti-clockwise to enrich the mixture and clockwise to weaken it. Too rich or too weak will cause the engine to splutter or miss. Set the adjustment at a point where the engine idles fastest, (this is normally 7/8 turn from the fully screwed in position); then turn the screw a quarter of a turn anti-clockwise to get ideal setting.

Re-adjust the throttle stop screw (A) so that the engine just ticks over gently. When all the adjustments have been made correctly, the engine should accelerate smoothly without hesitation.





### Cleaning Air Filter

Unclip the filter foam (F) from the housing (D) and pull out the foam element (E). Wash the foam in clean petrol or detergent and allow to dry thoroughly. (Replace foam if it is damaged or very dirty.)

Refit the foam element and clip on the filter cover. If for any reason the housing was removed from the carburettor, ensure that it is refitted with the inlet holes facing downwards.



Your Atco Commodore is a quality product, with a little care it will give you many years of good service.

FREQUENCY	ITEM
Every Mowing	<p>Check that engine oil level is just below filling hole lip.</p> <p>Remove grass and debris from around the engine cowl and the air filter inlet holes. Also clear any build up of grass from the ends of the cutting cylinder spindle adjacent to the bearing housings.</p> <p>Check for loose bolts etc.</p> <p>Check clutches release correctly and engine stops at correct throttle setting.</p> <p>Check cutter cuts cleanly and adjust if necessary.</p>
Every 2 months (or 10 hours use):	<p>Lightly oil front roller spindle.</p> <p>Lightly oil transmission chains and check adjustments.</p> <p> <b>Do not oil clutches.</b></p> <p><b>Very</b> lightly oil control cables at each end and clutch release lever pivots.</p> <p>Remove and clean air filter (this may need doing more frequently in dusty conditions).</p>
Winter Storage (or 30 hours use):	<p>Clean mower down thoroughly.</p> <p>Lightly oil cutting edges and carry out lubrication as 2 monthly maintenance.</p> <p>Change engine oil.</p> <p>Clear spark plug and adjust gap to 0.040" (1mm). Replace if badly worn.</p> <p> <b>Do not overtighten the spark plug.</b></p> <p><b>Store mower in a dry place.</b></p> <p> <b>It is best to run the engine a couple of times during the winter. If this is not possible, put a teaspoonful of oil in the spark plug hole and turn the engine over by hand before storing, to spread a film of oil over the piston and bore.</b></p> <p> <b>Avoid using 'stale' petrol from the previous season. The petrol can may not be completely sealed, in which case the volatile content of the petrol can evaporate over winter, leading to poor starting at the beginning of the next mowing season.</b></p>
Every 3 years (or 90 hours use):	<p>Replace air filter foam (may need replacing more frequently in dusty conditions).</p>
Every 5 years (or 150 hours use):	<p>We suggest that the engine is overhauled by one of our service agents.</p>

**NOTE:** The same oil as is used for the engine can be used to lubricate the rest of the mower.

Warranty is according to the details stated on the accompanying guarantee.

If you require assistance, service, or replacement parts you should contact:  
Your nearest Service and Parts Centre or Approved Service Agent listed in the 'After Sales Service' pamphlet supplied with your mower.

When ordering spares always give the following information (DO NOT use the illustration reference number).

- The part number
- The part name
- The quantity required
- The model type and serial number. (These are shown on the rear of the engine cowl for the engine and the rear of the mower for the chassis).

Where parts are made left hand (L.H.) and right hand (R.H.) these are as viewed from behind the mower.

### Radio Interference

This mower is manufactured to conform to the Wireless and Telegraph Regulations 1973, No.1217 and BS833 : 1970.

Every effort is made to ensure that this booklet is up-to-date. However, due to our policy of continued product development, changes in production specification may have been made. If in doubt, contact your nearest authorised dealer, or this company direct.



## SYMPTON

### 1) Engine will not start:

## INVESTIGATION

Is there petrol in the tank?  
 Is the petrol tap open (i.e. pulled out position)?  
 Is petrol reaching the carburettor? Pull the petrol pipe off the carburettor inlet to check. Unscrew petrol tap from tank and clean filter gauze if blocked.  
 Is the throttle control set **off** the **STOP** ('O') position?  
 Is there a spark? Ensure that there is no excess petrol or petrol vapour in the vicinity of the engine. Remove spark plug and lead, lay it on a bare piece of metal on the engine and turn the engine over. You should see a spark between the spark plug electrodes if the ignition is working correctly. If there is no spark, check the lead is correctly fitted to the spark plug cap. If there is still no spark, please contact one of our Service Agents.  
 If there is a spark, clean the electrodes with a wire brush, wash the plug in petrol and reset the gap to 0.040" (1mm). Dry the plug thoroughly, reconnect the spark plug cap and check for the spark. Refit and try to start the engine.



**DO NOT** overtighten the spark plug.

Is the air filter blocked by dirt?  
 Is the engine flooded? (The exhaust smells strongly of petrol when the engine is turned over and the spark plug electrodes look wet).  
 If it is flooded, remove and dry off the spark plug. Turn the engine over three or four times to expel vapour from the spark plug hole, replace plug and start with choke in position (A Fig.6).

If petrol is flowing, check carburettor float chamber and jets are clean. Switch off the petrol tap and tip the mower so that it is supported on the grassbox support. Carefully undo the supporting nut (A) (Fig.18) and remove the float bowl (B). Carefully pull out the float pin (C) and remove the float (D) and control needle (E). Unscrew the petrol feed banjo (F) and blow through the passage to clean any dirt. Check if jet (G) is blocked, unscrew and blow clean if required.

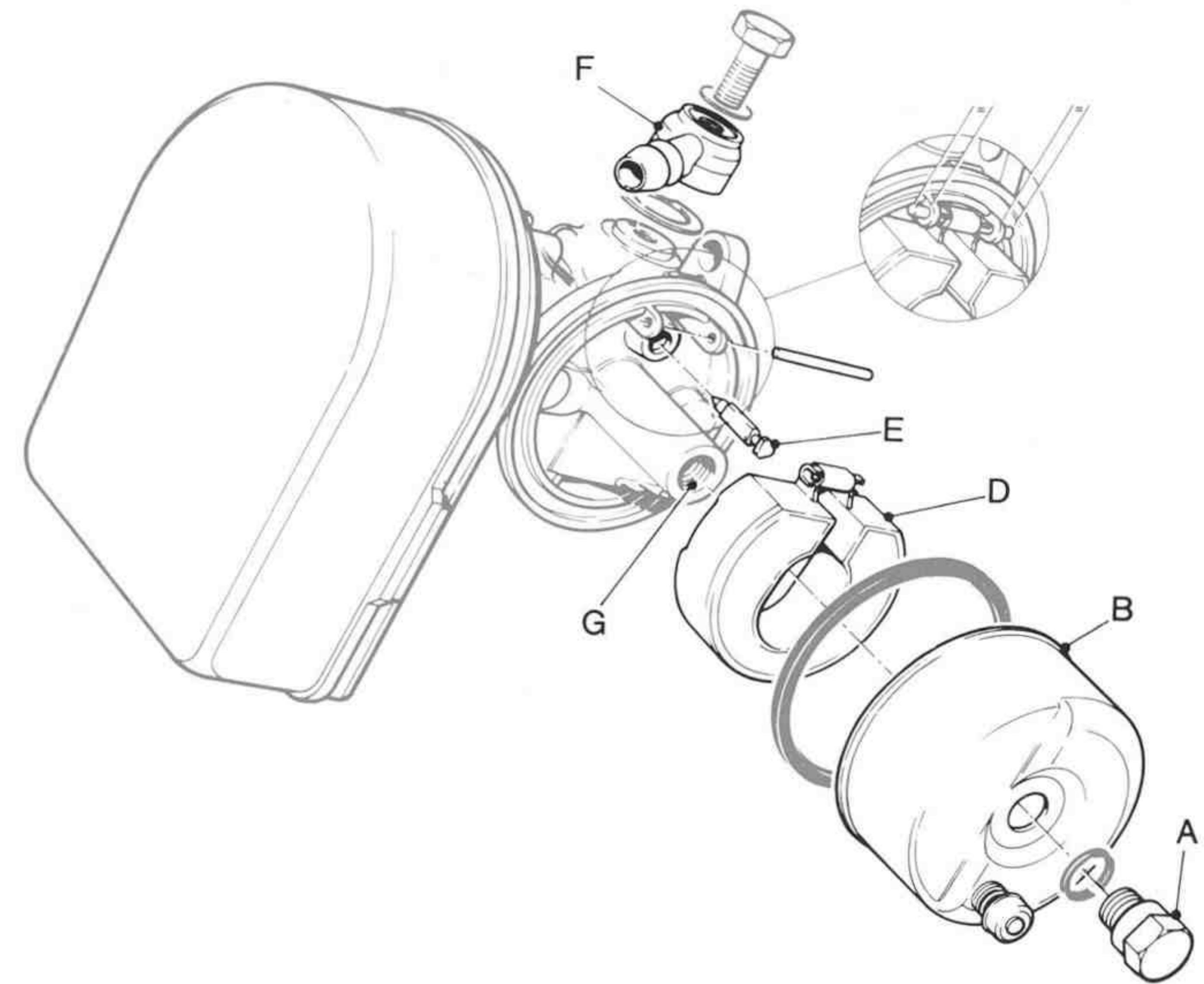


Blow jets and orifices clean. **DO NOT** push pieces of wire, pins, etc. through them.

Re-assemble the carburettor by reversing the above procedure.

### 2) Engine will not stop:

Check throttle adjustment with throttle control set to stop position ('O'). (See page 6).



## SYMPTON

### 3) Engine will not run smoothly and evenly:

## INVESTIGATION

Is the spark plug in good condition, clean and correct?  
 Is the filter in the petrol tap clean? (Unscrew the tap from the tank and inspect).  
 Is the slow idling jet correctly adjusted? (See engine adjustments).  
 Are you using clean petrol?

### 4) Blades will not turn:



Are they jammed? Stop engine, remove spark plug cap and turn the blades back to clear.  
 The blades are sharp. Use a wooden stick or gloves to protect your hands.  
 Check cutter adjustment before starting to mow (see page 5).  
 Is the engine clutch correctly adjusted? (See page 5).

### 5) Mower leaves ragged finish:

Check cutter adjustment (see page 5).  
 Check bottom blade screws for tightness and cylinder bearings for play.

### 6) Mower will not propel itself along:

Check adjustment of clutches.



If in doubt, please contact one of our Service Agents.



# Specifications

## Engine

<b>Type :</b>	Suffolk 4-stroke petrol engine, type A114 - 1A
<b>Bore:</b>	2.25 ins. (57.15mm)
<b>Stroke:</b>	1.77 ins. (45.0mm)
<b>Capacity:</b>	6.95 cu.ins. (114 c.c.)
<b>Compression Ratio:</b>	5.6 : 1
<b>Ignition</b>	Flywheel magneto with breakerless electronic ignition
<b>Ignition timing:</b>	23° to 25° before t.d.c.
<b>Valves:</b>	Sidevalve
<b>Valve clearances:</b>	Exhaust 0.010 ins. (0.25mm) inlet 0.006 ins. (0.15mm)
<b>Crankshaft:</b>	One piece heavy duty S.G. iron
<b>Camshaft:</b>	One piece gear driven
<b>Piston:</b>	Low expansion aluminium alloy 1 Compression ring 1 Scraper ring 1 Oil control ring
<b>Connecting rod:</b>	Aluminium alloy
<b>Cylinder block:</b>	Aluminium alloy
<b>Cylinder head:</b>	Aluminium alloy
<b>Main bearings:</b>	Aluminium alloy
<b>Governor</b>	Mechanical
<b>Maximum governor speed:</b>	2,800 r.p.m.
<b>Carburettor:</b>	Dellorto FCH20 - 13A
<b>Main jet size:</b>	0.75mm (fixed)
<b>Choke:</b>	Manual set on carburettor
<b>Air cleaner:</b>	Polyurethane foam
<b>Lubrication:</b>	Splash and mist
<b>Sump oil capacity:</b>	Half pint Imperial (0.284 litres)
<b>Recommended fuel:</b>	2-star petrol (92 octane)
<b>Fuel consumption:</b>	1 pint/B.H.P./hour
<b>Starting:</b>	Recoil starter
<b>Rotation:</b>	Clockwise looking at recoil starter
<b>Spark plug:</b>	Champion J.8 14mm
<b>Spark plug gap:</b>	0.040 ins. (1 mm)
<b>Dry weight:</b>	20 lbs. (9 kg.)

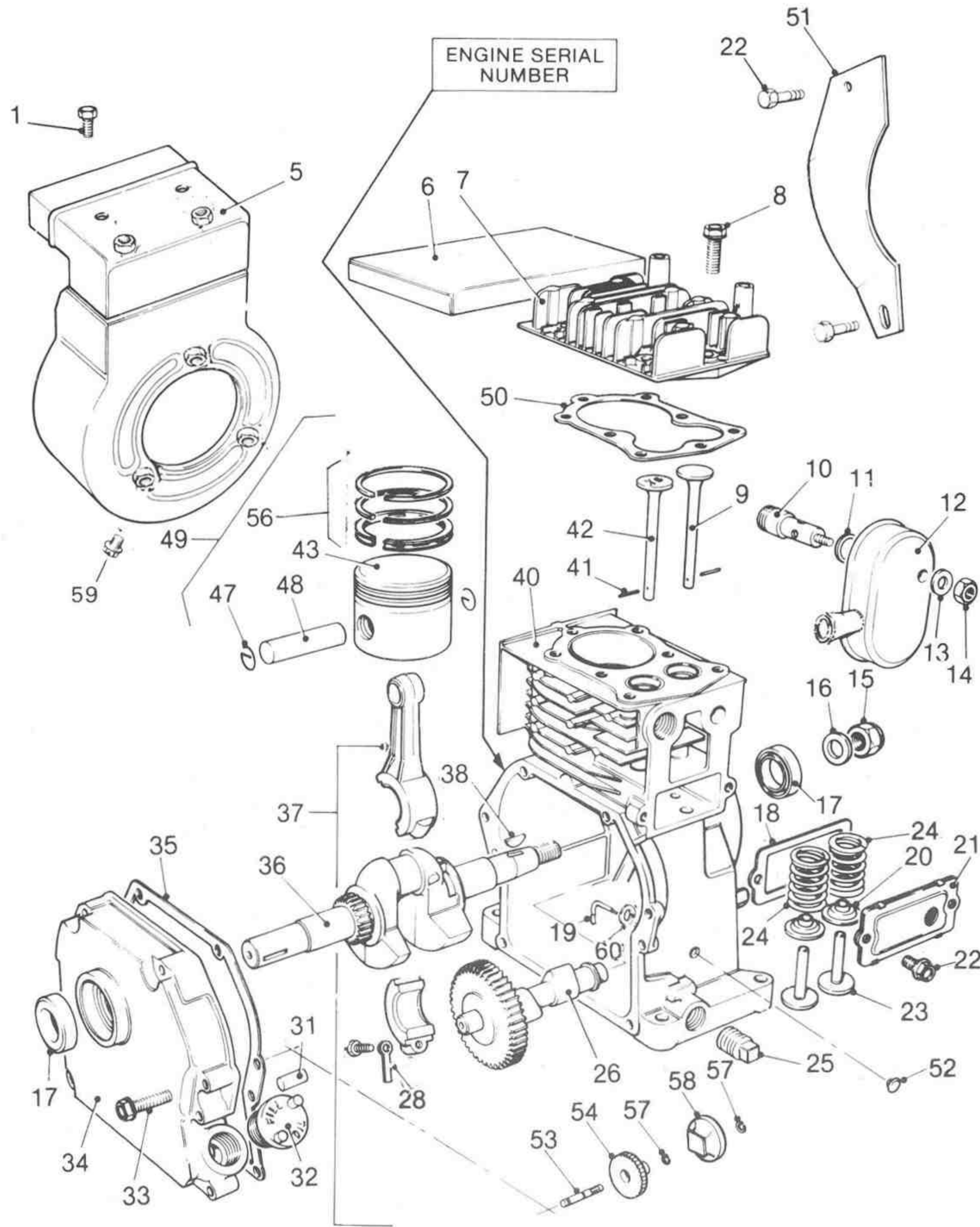
## Torque Wrench Settings

<b>Cylinder head bolts:</b>	150 lbs. ins. (17 Nm)
<b>Crankcase cover bolts:</b>	100 lbs. ins. (11.3 Nm)
<b>Big end bolts:</b>	100 lbs. ins. (11.3 Nm)
<b>Flywheel nut:</b>	28 lbs. ft. (38 Nm)

## Mower

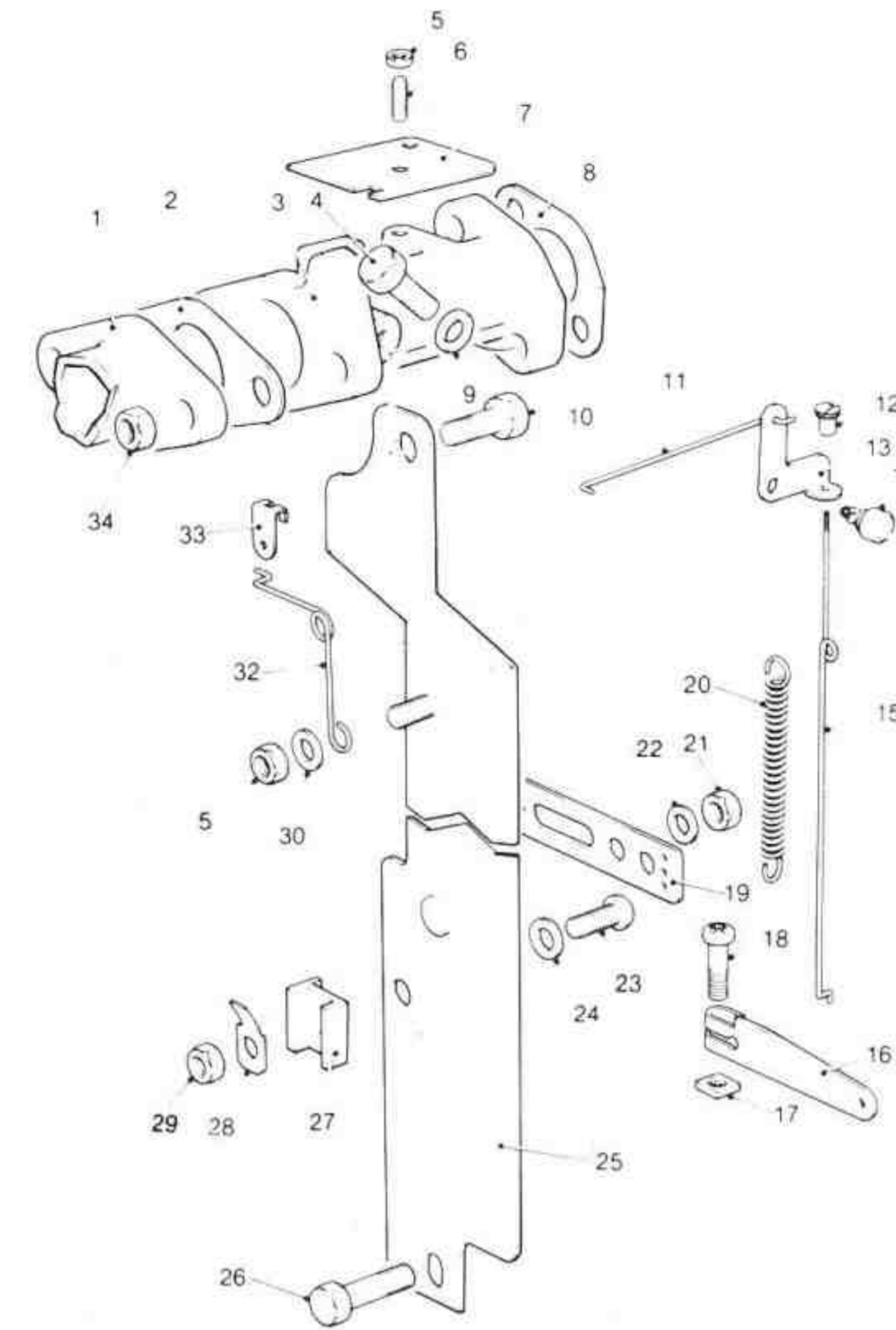
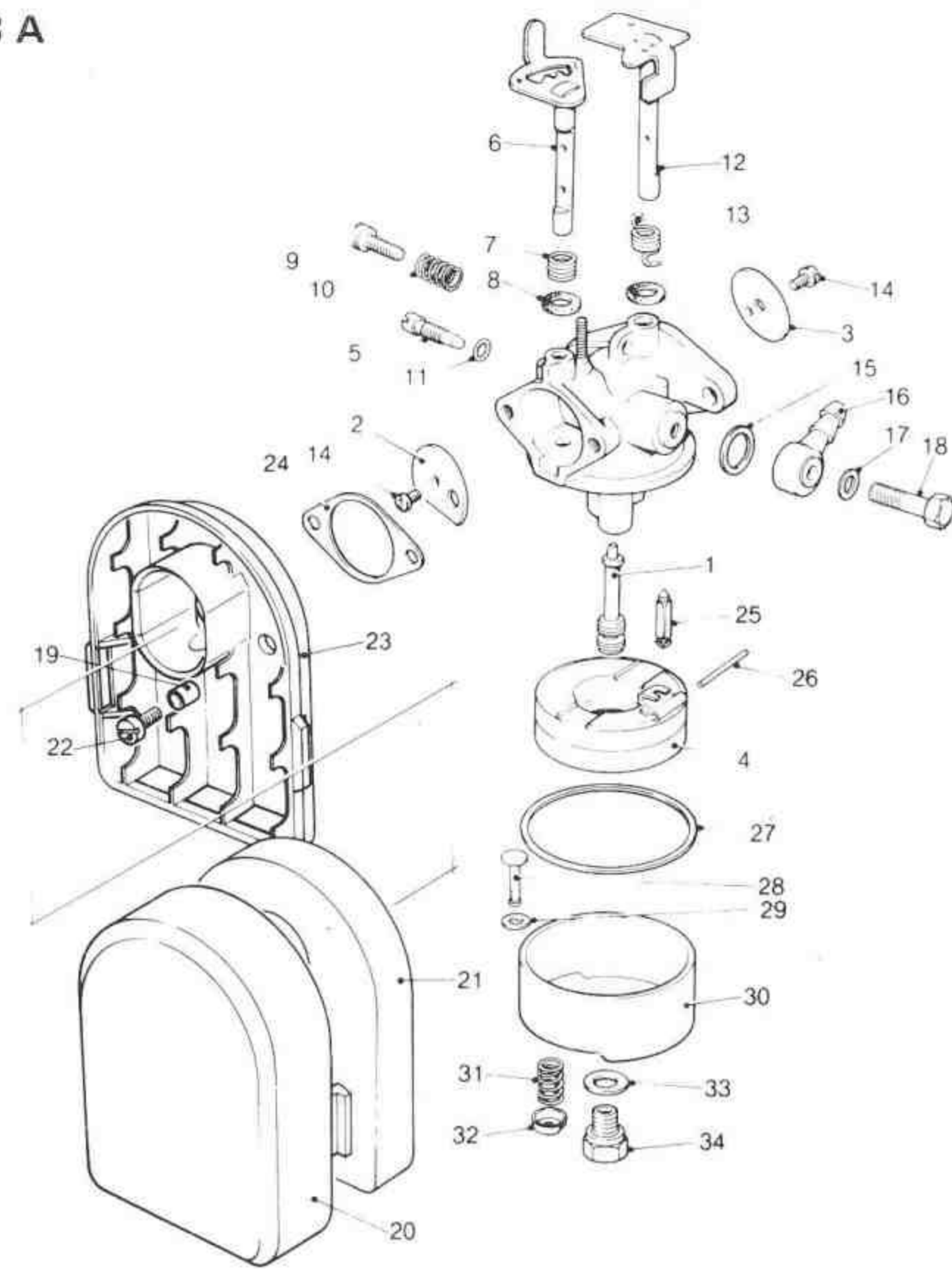
<b>Maximum overall width of cut:</b>	B14 : 14" (35cm) B17 : 17" (43cm) B20 : 20" (51cm)
<b>Chassis:</b>	Pressed steel and bolted construction
<b>Bottom blade:</b>	One-piece steel hardened and ground
<b>Cutting cylinder</b>	All steel welded construction, hardened and ground
<b>Maximum cylinder regrind allowance:</b>	4mm on diameter
<b>Cylinder support/adjustment:</b>	Ball bearings in sliding plummer blocks with screw adjustment
<b>Transmission</b>	½" pitch chain throughout, grease/oil lubricated
<b>Primary clutch:</b>	Dryplate type with 2 friction discs biased off. 2 ball bearing clutch release bearings
<b>Land drive clutch:</b>	Single plate dryplate type biased off. Single ball release bearing with ball-type over-run bearing
<b>Front roller:</b>	Segmented wooden rollers. Optional moulded side front wheels
<b>Rear roller:</b>	B14 : Single piece welded steel roller. B17/B20 : Split rear roller with differential action ratchet.
<b>Height of cut adjust.:</b>	Atco manually adjusted stepless microset system
<b>Height of cut range:</b>	a) With front rollers: 5/16" - 1-1/8" (8 - 29mm) b) With side front wheels: 5/8" - 1-9/16" (16 - 39mm)
<b>Grassbox:</b>	One piece moulded type with carrying handle
<b>Grassbox support:</b>	One piece steel tube
<b>Handles:</b>	Pram type with grips
<b>Handle release:</b>	Camlock release to allow handle top to fold down without tools
<b>Handle adjustment:</b>	Adjusted on cam lock release
<b>Handle height adjustment range:</b>	35" - 35¼" - 36½" (886 - 908 - 930 mm)
<b>Throttle control:</b>	Manual set and leave type with "click" off position
<b>Clutch controls:</b>	Bail bar master lever across rear of handle to give combined control of cutter and traction drive. Separate lever linked with master lever to operate cutters only. 'Deadman' (fly off) action on both clutch controls.
<b>Control cables:</b>	Flexible stranded wire type.
<b>Control cable adjustment:</b>	a) Throttle cable: on governor assembly b) Clutch cables : at clutches
<b>Petrol tank:</b>	One piece moulded type approximately 3-pint (1¼ litre) capacity.
<b>Approximate mowing time:</b>	About 3½ hours per tankful of petrol.
<b>Petrol tap:</b>	Pull open/push shut type with integral filter screwed into tank.
<b>Paint colour:</b>	Atco Standard Green.
<b>Maximum overall width:</b>	B14 : 20" (51 cm) B17 : 23¼" (59 cm) B20 : 25½" (65 cm)
<b>Weight in running order:</b>	B14 : 93lbs (42.5 kg.) B17 : 111lbs (50.5 kg.) B20 : 118lbs (53.5 kg.)





Illus. No.	Description	Part No.	No. per set
1	Bolts for cowl	L11377	2
5	Cowl sub assembly	L100315	1
6	Gasket set	L22536	1
7	Cylinder head	L17863	1
8	Bolt - cylinder head	L11367	8
9	Inlet valve	L17805	1
10	Connecting pipe	L22487	1
11	Washer gasket	L08691	1
12	Silencer sub assembly	L100121	1
	Silencer assembly (incl. items 10, 11, 12, 13 and 14)	Q02780	1
13	Washer for silencer	L08912	1
14	Nut for silencer	L21749	1
15	Nut for crankshaft	L17845	1
16	Washer for crankshaft	L17849	1
17	Oil seal	L03813	2
18	Breather gasket	L12273	1
19	Bobbin follower	L23465	1
20	Valve spring retainer	L03968	2
21	Breather assembly	L21822	1
22	Screw for breather & front cover plate	L11366	4
23	Tappet	L03535	2
24	Valve spring	L03528	2
25	Drain plug	L03822	1
26	Camshaft	L21540	1
28	Oil splasher	L22491	1
31	Dowel pin	L17953	2
32	Oil filler plug	L17844	1
33	Screw for crankcase cover	L11370	6
34	Crankcase cover sub-assy. (includes No. 53)	L22851	1
35	Gasket - crankcase cover	L17842	1
36	Crankshaft	L22488	1
37	Connecting rod assembly	L19841	1
38	Key for flywheel	L03597	1
40	Cylinder block	L22492	1
41	Cotter pin valves	L03531	2
42	Exhaust valve	L17804	1
43	Piston	L17862	1
47	Wire circlip	L21516	2
48	Gudgeon pin	L19845	1
49	Piston assembly	L22535	1
50	Cylinder head gasket	L17843	1
51	Front cover plate	L100050	1
52	Ratchet plate	L22502	1
53	Spindle (not supplied separately)		1
54	Gearwheel assembly	L22494	1
56	Piston ring set	L22171	1
57	Circlip	L22500	2
58	Bobbin	L22499	1
59	Screws for cowl	L11366	2
60	Tufnol washer	L23464	1



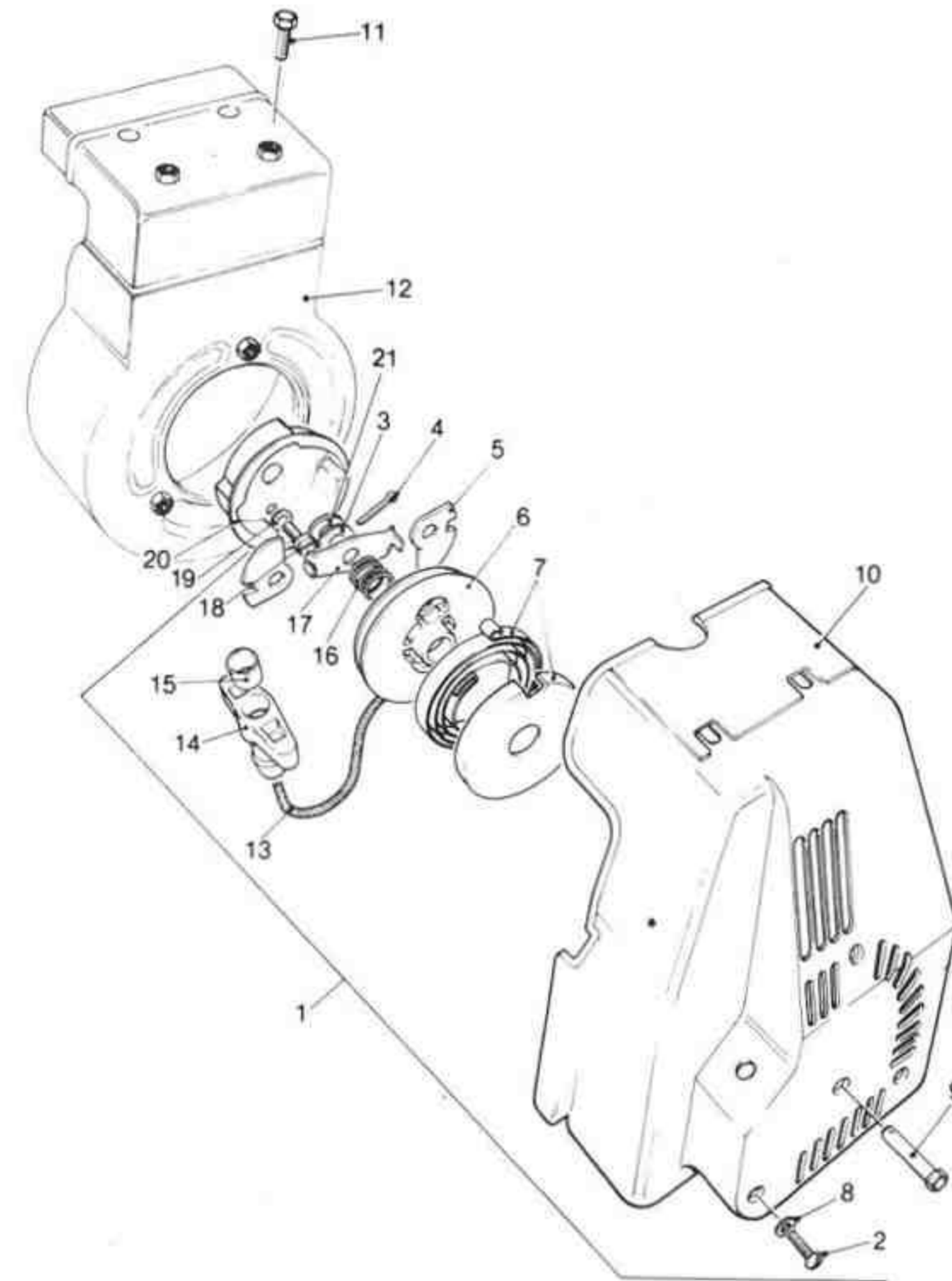


Illus. No.	Description	Part No.	No. per set	Illus. No.	Description	Part No.	No. per set	Illus. No.	Description	Part No.	No. per set
1	Idle emulsion tube-main jet	Q00994	1	18	Screw	Q01082	1	16	Governor lever	L22503	1
2	Air valve	Q01045	1	19	Spacing tube	Q01004	2	17	Square nut	L22504	1
3	Throttle valve	Q01063	1	20	Air filter cover	Q01002	1	18	Screw - governor lever	L11382	1
4	Float	Q01064	1	21	Foam element	Q01003	1	19	Throttle lever	L22511	1
5	Screw	Q01065	1	22	Screw	Q01095	2	20	Governor spring	L22510	1
6	Spindle	Q01068	1	23	Air filter housing	Q01001	1	21	Locknut M4	L21759	1
7	Spring	Q01069	1	24	Gasket	Q01097	1	22	Washer	L18301	1
8	Gasket	Q01071	2	25	Needle	Q01101	1	23	Screw	L11330	1
9	Screw	Q01072	1	26	Float pin	Q01104	1	24	Washer	L22484	1
10	Spring	Q01073	1	27	Gasket	Q01105	1	25	Fixing plate sub-assy.	L100123	1
11	Gasket	Q01074	1	28	Rod	Q01106	1	26	Screw - fixing plate	L11366	1
12	Spindle	Q01075	1	29	Gasket	Q01107	1	27	Cut-out insulator	L22485	1
13	Spring	Q01076	1	30	Float chamber	Q01108	1	28	Cut-out contact	L22574	1
14	Screw	Q01078	1	31	Spring	Q01109	1	29	Locknut M4	L11228	1
15	Gasket	Q01079	1	32	Pushbutton	Q01110	1	30	Washer - spring location	L22537	1
16	Fuel inlet banjo	Q01080	1	33	Gasket	Q01112	1	32	Throttle return spring	L22516	1
17	Gasket	Q01081	1	34	Plug	Q01113	1	33	Throttle connector	L22284	1
					<b>Carburettor - complete</b>	<b>L22478</b>		34	Nut - carburettor fixing	L10074	2

Illus. No.	Description	Part No.	No. per set	Illus. No.	Description	Part No.	No. per set
1	Carburettor	L22478	1	16	Governor lever	L22503	1
2	Gasket - carburettor	L22483	1	17	Square nut	L22504	1
3	Inlet manifold	L22517	1	18	Screw - governor lever	L11382	1
4	Bolt for manifold fixing	L11382	2	19	Throttle lever	L22511	1
5	Locknut M5 (support plate-1; return spring-1)	L11220	2	20	Governor spring	L22510	1
6	Stud	L14779	1	21	Locknut M4	L21759	1
7	Cable support bracket sub assembly	L100122	1	22	Washer	L18301	1
8	Gasket manifold to engine	L08589	1	23	Screw	L11330	1
9	Washer	L18139	2	24	Washer	L22484	1
10	Bolt - carb. to manifold	L22482	2	25	Fixing plate sub-assy.	L100123	1
11	Horizontal link	L22508	1	26	Screw - fixing plate	L11366	1
12	Link adjuster nut	L22506	1	27	Cut-out insulator	L22485	1
13	Bell crank	L22507	1	28	Cut-out contact	L22574	1
14	Governor pivot	L22509	1	29	Locknut M4	L11228	1
15	Vertical link	L22505	1	30	Washer - spring location	L22537	1

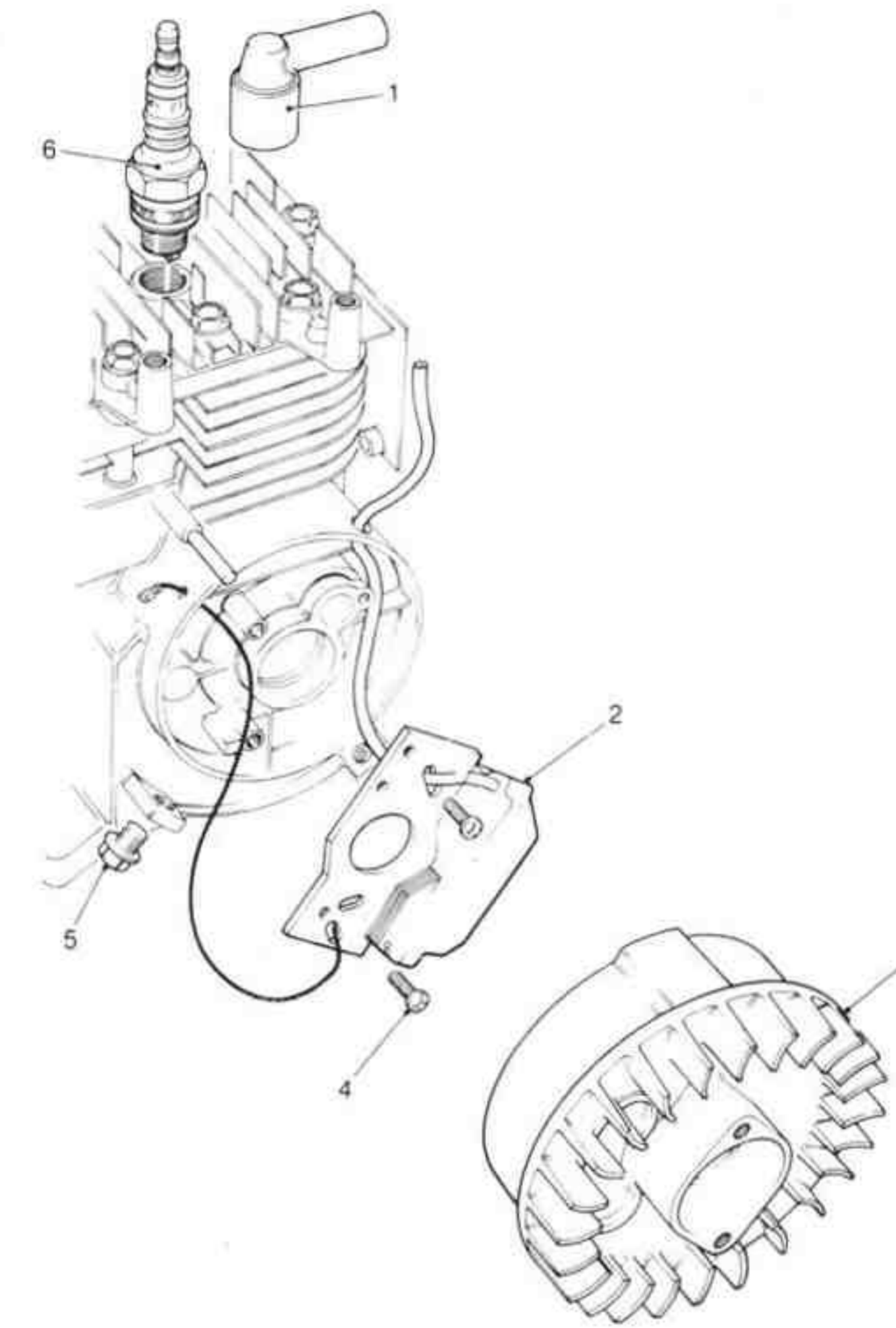


## Recoil Starter Assembly



Illus. No.	Description	Part No.	No. per set
1	Outer cowl and recoil sub assembly complete	L22672	1
2	Screw - outer cowl fixing bottom	L22482	3
3	Washer (1mm thick)	L22993	as required
4	Split pin	L13230	1
5	Pawl	L09330	2
6	Starter pulley	L22665	1
7	Recoil spring and housing	L21131	1
8	Washer	L18129	3
9	Starter spindle	L22666	1
10	Outer cowl sub assembly	L22670	1
11	Screw - fixing cowls	L11377	4
12	Inner cowl sub assembly	L100315	1
13	Rope	L22664	1
14	Rubber handle	L11932	1
15	Ferrule for handle	L22692	1
16	Compression spring	L09331	1
17	Activator	L21107	1
18	Screw for driving hub	L18176	2
19	Washer for driving hub	L18174	2
20	Driving hub	L09332	1
21	Washer (1.5 thick)	L32412	as required

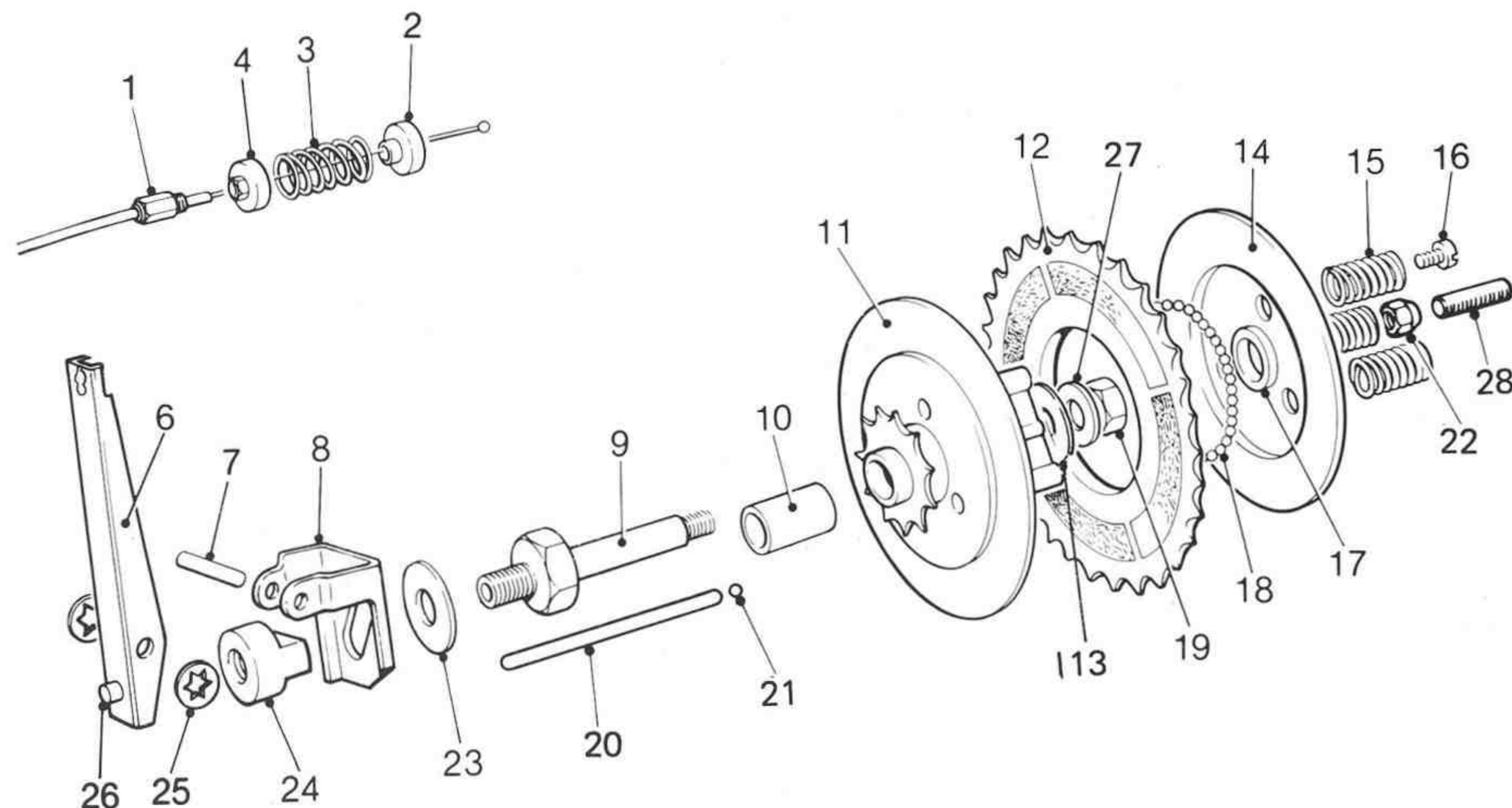
## Ignition Assembly



Illus. No.	Description	Part No.	No. per set
1	Suppressor cap	L11606	1
2	Electronic ignition unit	L21876	1
3	Flywheel	L21875	1
4	Screw for ignition unit	L22033	2
5	Screw for cowl	L11366	2
6	Spark plug	L08400	1



# Traction Clutch

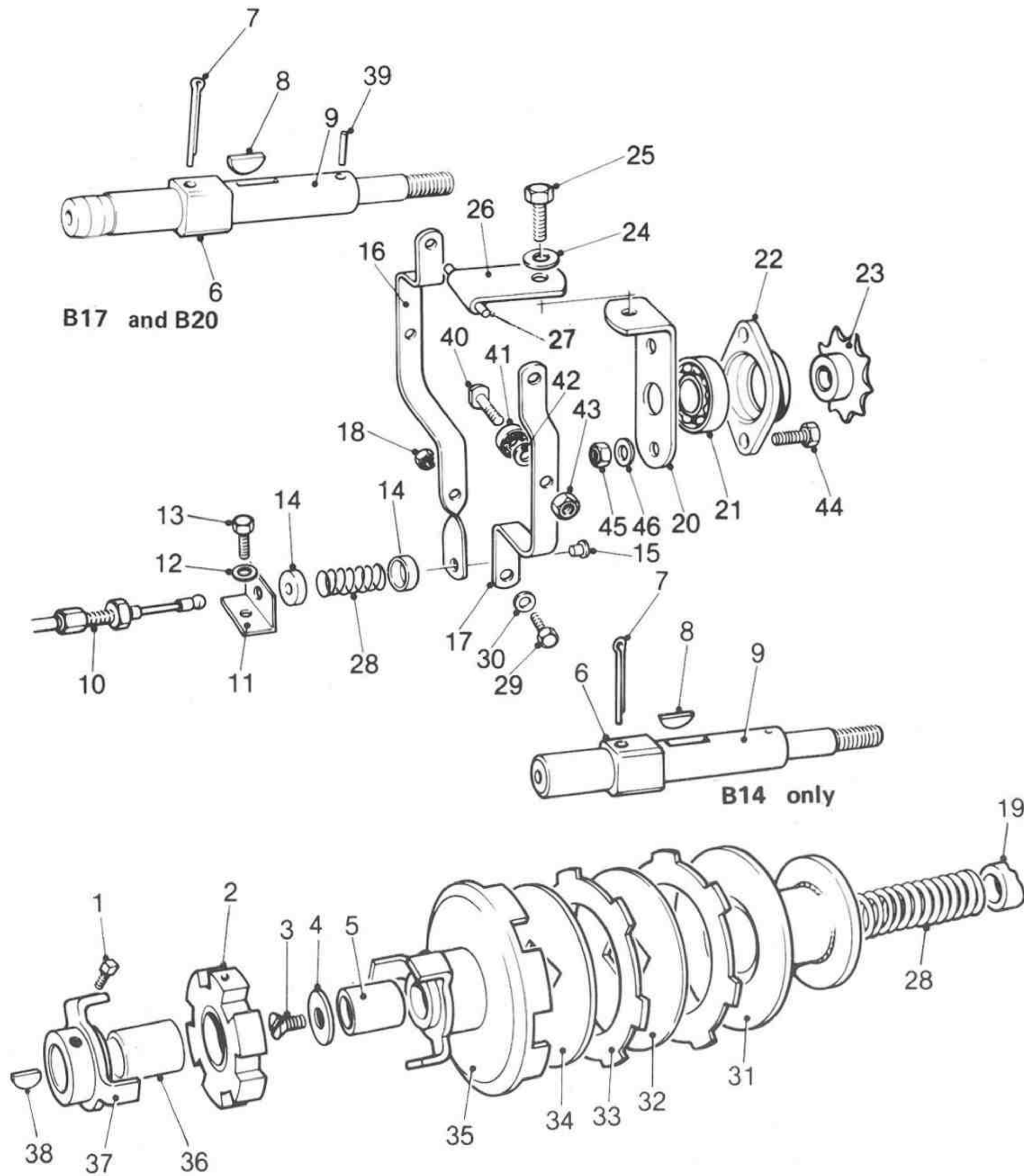


Illus. No.	Description	Part No.	No. per set
1	Traction clutch cable (B14)	L22714	1
	Traction clutch cable (B17)	L22715	1
	Traction clutch cable (B20)	L22605	1
2	Spigot washer	L09746	1
3	Compression spring	L22681	1
4	Spring cup	L100343	1
6	Operating lever	L22601	1
7	Fulcrum pin	L09528	1
8	Fulcrum bracket	L100344	1
9	Spindle	L20249	1
10	Oilite bush	L09463	1
11	Clutch boss and sprocket assembly	L20203	1
12	Chainwheel and cork assembly	L09452	1
13	Tufnol washer	L09470	1
14	Outer pressure plate	L09455	1

Illus. No.	Description	Part No.	No. per set
15	Clutch spring	L22968	3
16	Screw for clutch spring	L20205	3
17	Cup for outer pressure plate	L24632	1
18	Ball bearing	L09712	52
19	Locknut	L09676	1
20	Push rod	L24633	1
21	Thrust ball	W25794	1
22	Locknut	W25806	1
23	Plain washer	L09472	1
24	Nut (clutch to frame)	L20250	1
25	Spirefix washer	L09343	2
26	Pressure pad	L09450	1
27	Steel washer	L09473	1
28	Grub screw	W25797	1



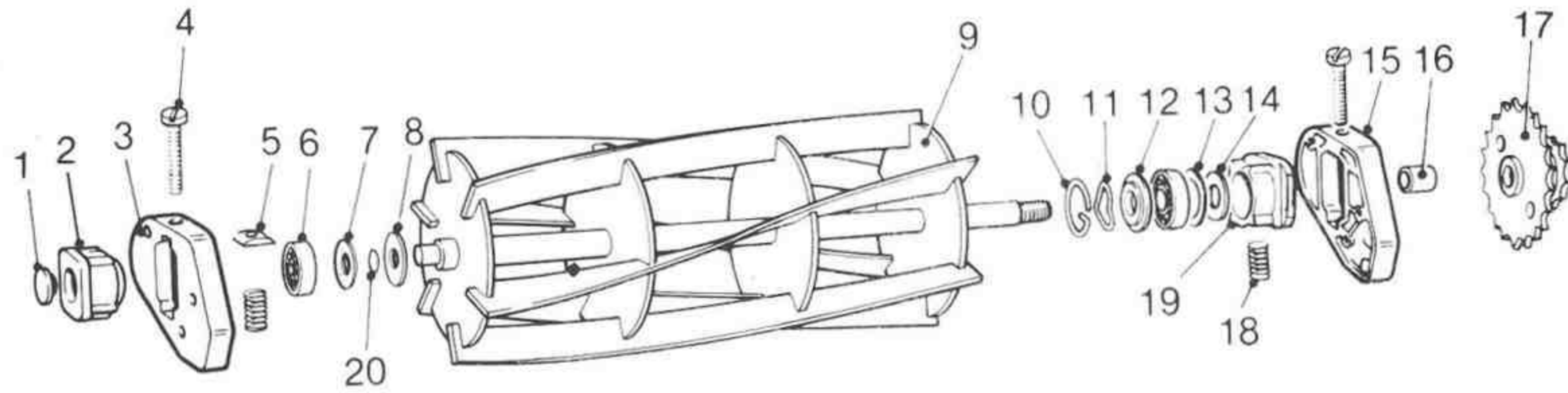
# Engine Clutch



Illus. No.	Description	Part No.	No. per set
1	Screw for engine coupling	L03846	1
2	Rubber coupling	L09518	1
3	Screw for clutch shaft (B14 only)	L20208	1
4	Washer for bearing retainer (B14 only)	L09501	1
5	Bush for boss	L09497	1
6	Driving square	L09495	1
7	Split pin	L09496	1
8	Key for shaft	L09494	1
9	Clutch shaft (B14 only)	L20207	1
	Clutch shaft (B 17 only)	L12193	1
	Clutch shaft (B20 only)	L12194	1
10	Cable assembly	L22691	1
11	Clutch cable bracket	L100342	1
12	Washer - bracket fixing	L09684	1
13	Screw - bracket fixing	L18049	1
14	Spring cup	L100341	2
15	Spigot washer	L09746	1
16	Clutch fork upper	L22598	1
17	Clutch fork lower	L22597	1
18	Nut - clutch fork clamping	L18175	1
19	Adjusting collar (B14 only)	L09421	1
	Adjusting collar B17 & B20)	L09422	1
20	Clutch fulcrum assembly	L100328	1
21	Ball race	L03730	1
22	Bearing housing	L100325	1
23	Clutch sprocket & boss assembly	L09476	1
24	Plain washer	L09684	1
25	Set-pin (fulcrum to bracket)	L18049	1
26	Clutch fulcrum assembly (B14 only)	L100326	1
	Clutch fulcrum assembly (B17 only)	L100355	1
	Clutch fulcrum assembly (B20 only)	L100367	1
27	Pin for fulcrum	L09509	1
28	Clutch spring	L09482	2
29	Screw - clutch fork	L18178	1
30	Washer - clutch fork	L18090	1
31	Withdrawal sleeve assembly	L100329	1
32	Driving plate - thin	L09492	1
33	Friction plate (Ferodo)	L09491	2
34	Driving plate (thick)	L09493	1
35	Driving member assembly	L100330	1
36	Bush for coupling (B17 & B20 only)	L12222	1
37	Engine coupling assembly (B14 only)	L100332	1
	Engine coupling assembly (B17 & B20 only)	L100357	1
38	Key	L03845	1
39	Roll pin (B17 & B20)	L09498	1
40	Shoulder bolt	L22677	2
41	Bearing	L22675	2
42	Plain washer	L12114	2
43	Nut	L10074	2
44	Screw - bearing housing	L18718	2
45	Nut - bearing housing	L18175	2
46	Washer - bearing housing	L18090	2

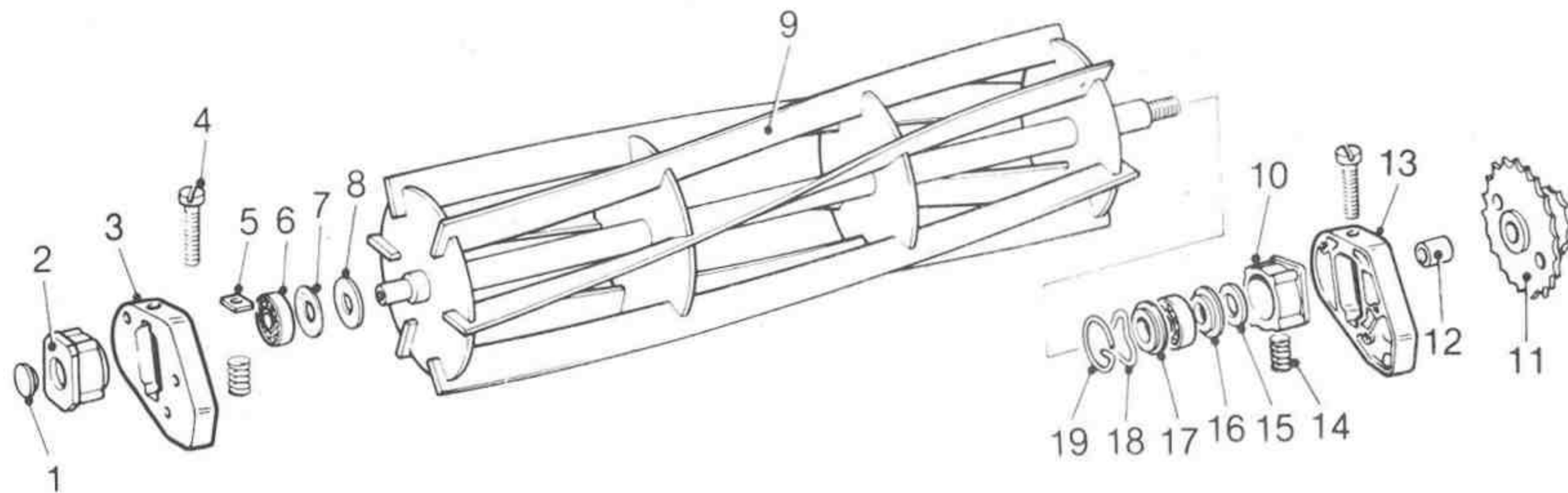


### Cutter Unit 14"



Illus. No.	Description	Part No.	No. per set
1	Closing plug	L09623	1
2	Bearing housing R.H.	L24627	1
3	End bracket R.H.	L100351	1
4	Screw for cylinder adjustment	L21758	2
5	Nut for cylinder adjustment	L20303	2
6	Bearing	L05150	2
7	Plastic seal R.H. bearing	L09619	1
8	Washer for cutter seal(R.H.)	L09679	1
9	Cutting cylinder	L100066	1
10	Circlip L.H. bearing housing	L09624	1
11	Wave washer	L09621	1
12	Plastic seal L.H. bearing	L09620	1
13	Dished washer L.H. bearing	L09625	1
14	Felt seal	L09626	1
15	End bracket L.H.	L100350	1
16	Spacing tube	L09641	1
17	Cutter chainwheel assembly	L09479	1
18	Cutter adjustment spring	L100124	2
19	Bearing housing L.H.	L24629	1
20	Spacer R.H. bearing seal	L09647	1

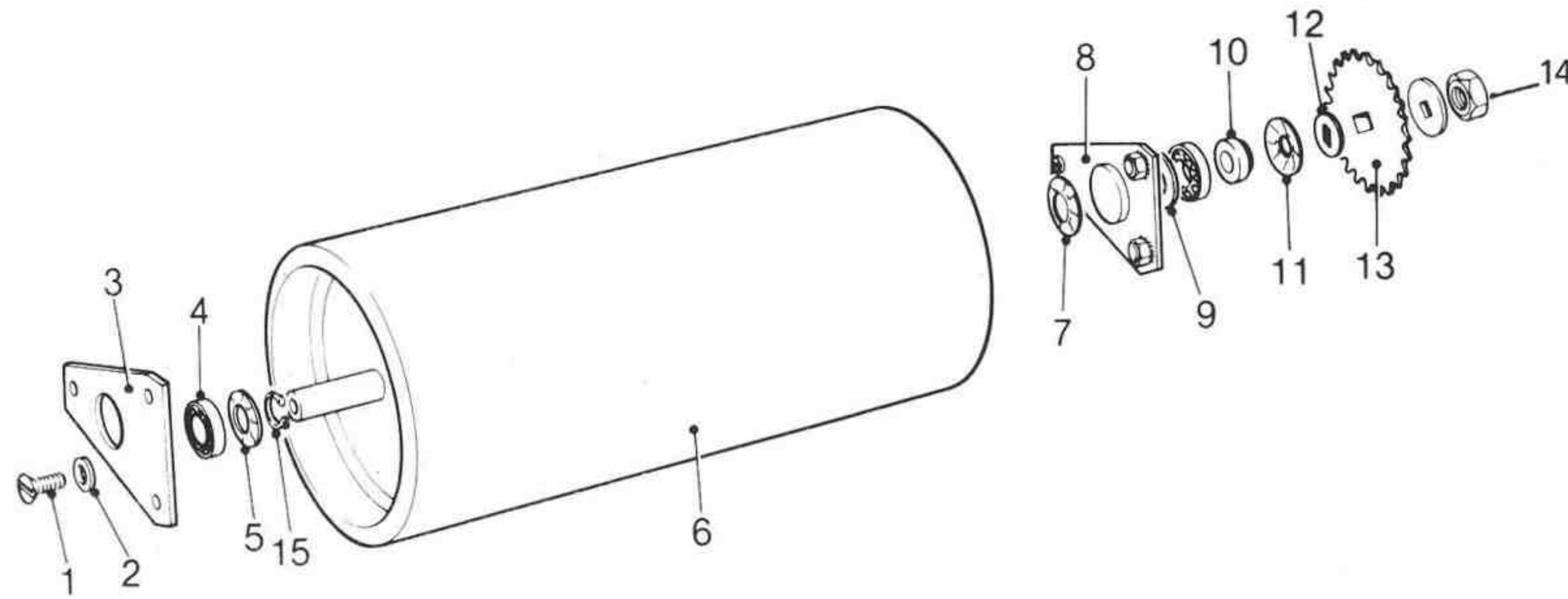
### Cutter Unit 17" & 20"



Illus. No.	Description	Part No.	No. per set
1	Closing plug	L09623	1
2	Bearing housing R.H.	L24627	1
3	End bracket R.H.	L100351	1
4	Screw for cutter adjustment	L21758	2
5	Nut for cylinder adjustment	L20303	2
6	Bearing	L05150	2
7	Plastic seal R.H. bearing	L09619	1
8	Washer for cutter seal	L09685	2
9	Cutting cylinder (17" only)	L100093	1
	Cutting cylinder (20" only)	L100111	1
10	Bearing housing L.H.	L24629	1
11	Cutter chainwheel assembly	L09479	1
12	Spacing tube	L09641	1
13	End bracket L.H.	L100350	1
14	Cutter adjustment spring	L100124	2
15	Felt seal	L09626	1
16	Dished washer L.H. bearing	L09625	1
17	Plastic seal L.H. bearing	L09620	1
18	Wave washer	L09621	1
19	Circlip for L.H. bearing housing	L09624	1

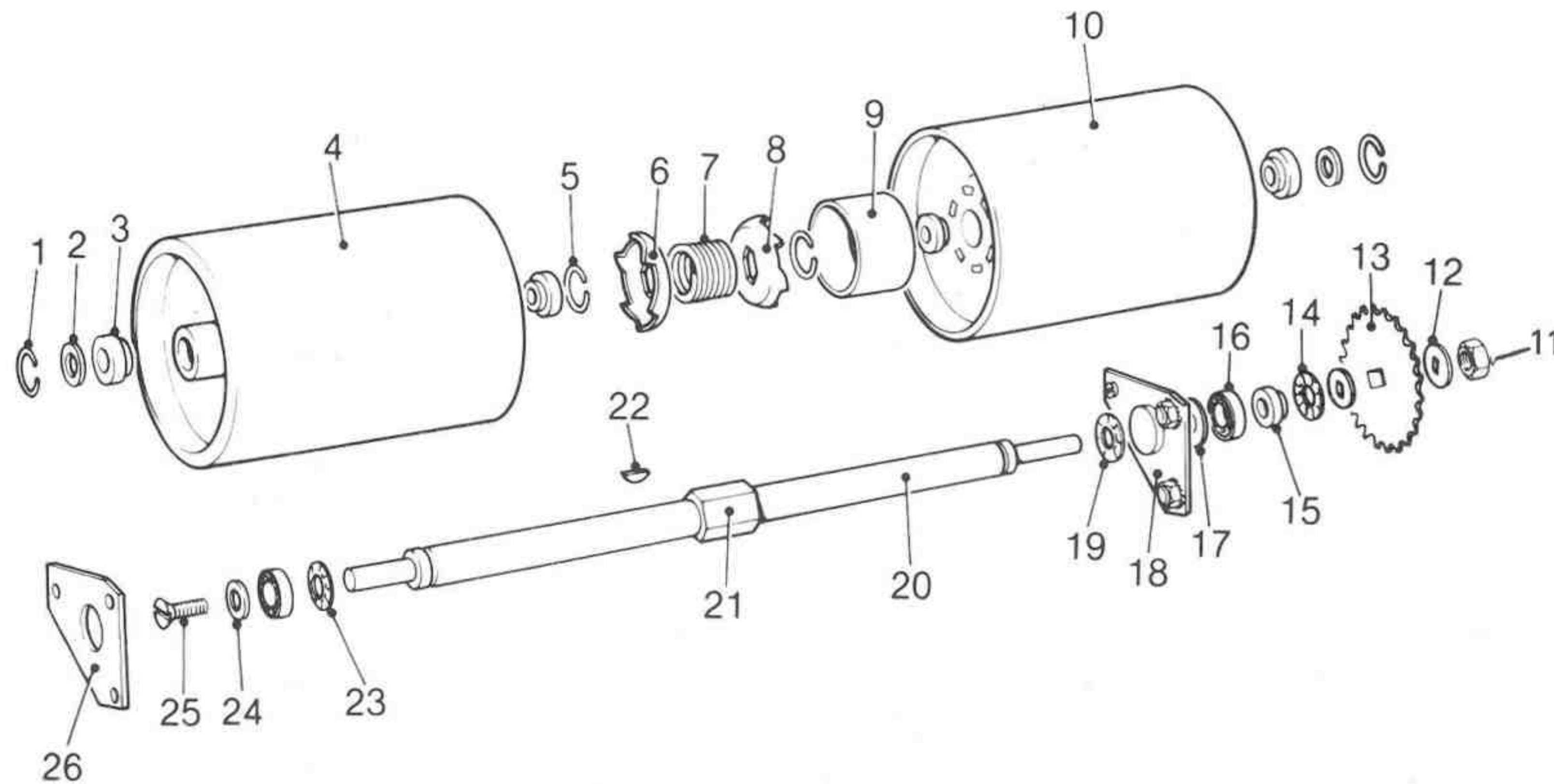


### Rear Roller Assembly 14"



Illus. No.	Description	Part No.	No. per set
1	Screw for shaft end	L20263	1
2	Washer for shaft end	L09682	1
3	Bearing housing R.H.	L100339	1
4	Bearing (rear roller)	L06856	2
5	Bearing seal R.H.	L09628	1
6	Rear roller - sub assembly	L100331	1
7	Bearing seal L.H. (inner)	L09646	1
8	Bearing housing L.H.	L100338	1
9	Sealing ring (rear roller)	L09631	1
10	Collar for seal (outer)	L09647	1
11	Bearing seal L.H. (outer)	L09645	1
12	Washer for rear roller chainwheel	L09683	2
13	20 Tooth sprocket	L09693	1
14	Locknut for rear roller shaft	L20261	1
15	Circlip	L04976	1

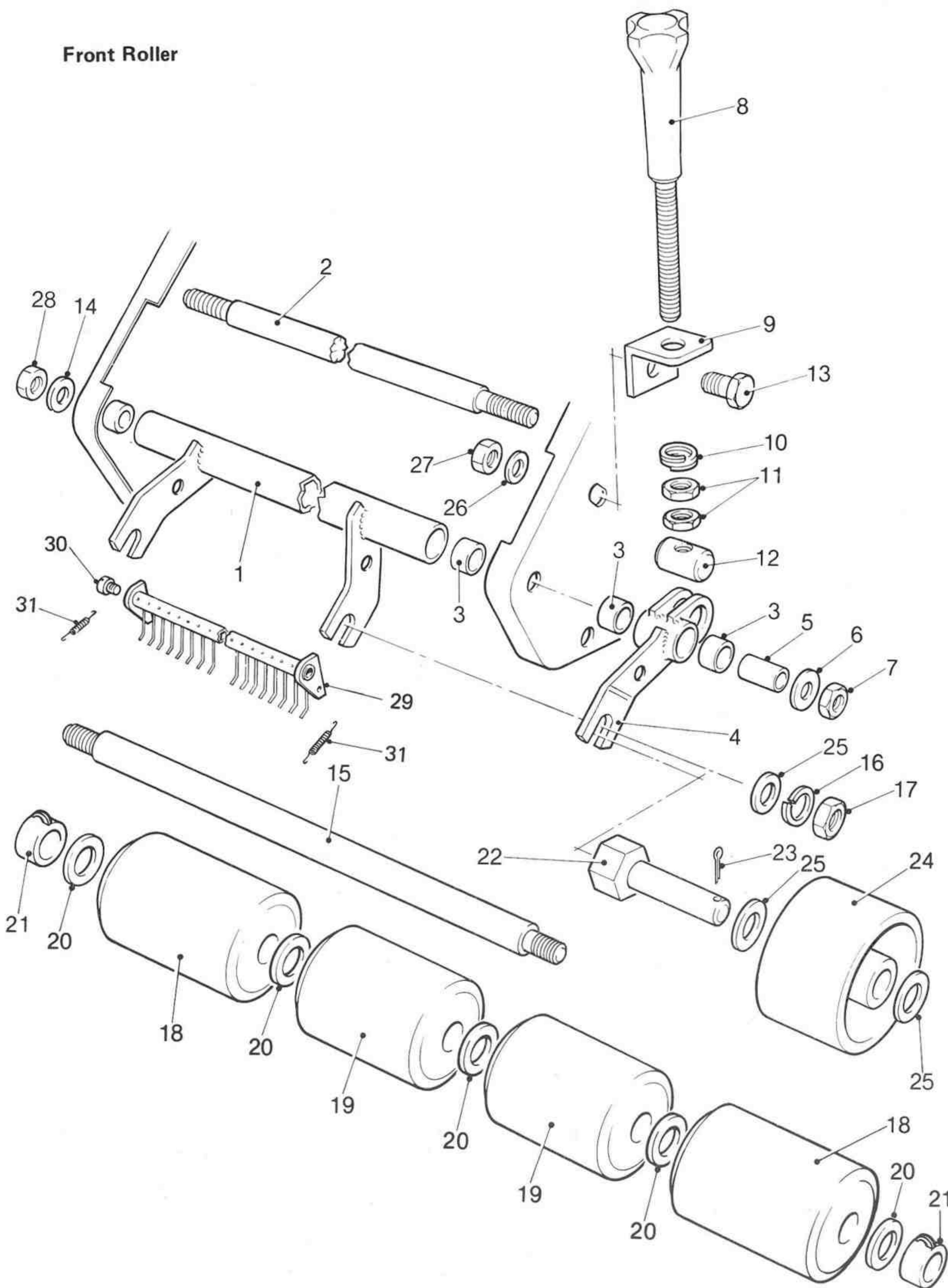
### Rear Roller Assembly 17" & 20"



Illus. No.	Description	Part No.	No. per set
1	Circlip (rear roller) outer	L11931	2
2	Shim washer	L06072	3
3	Bush for roller halves	L04399	4
4	Roller half R.H. (17" only)	L100103	1
	Roller half R.H. (20" only)	L100109	1
5	Circlip for ratchets	L09636	2
6	Ratchet R.H.	L09429	1
7	Spring	L09635	1
8	Ratchet L.H.	L09428	1
9	Dust cover	L22280	1
10	Roller half L.H. (17" only)	L100090	1
	Roller half L.H. (20" only)	L100108	1
11	Locknut	L20261	1
12	Washer for rear roller chainwheel	L09683	2
13	20 Tooth sprocket	L09693	1
14	Bearing seal L.H.(outer)	L09645	1
15	Collar for seal (outside frame)	L09647	1
16	Bearing	L06856	2
17	Sealing ring	L09631	1
18	Bearing housing L.H.	L100338	1
19	Bearing seal L.H. (inner)	L09646	1
20	Rear roller shaft (17" only)	L20284	1
	Rear roller shaft (20" only)	L20285	1
21	Driving hexagon	L09432	1
22	Woodruff key	L09633	1
23	Bearing seal R.H.	L09628	1
24	Washer for shaft end	L09682	1
25	Screw for shaft end	L20263	1
26	Bearing housing R.H.	L100339	1



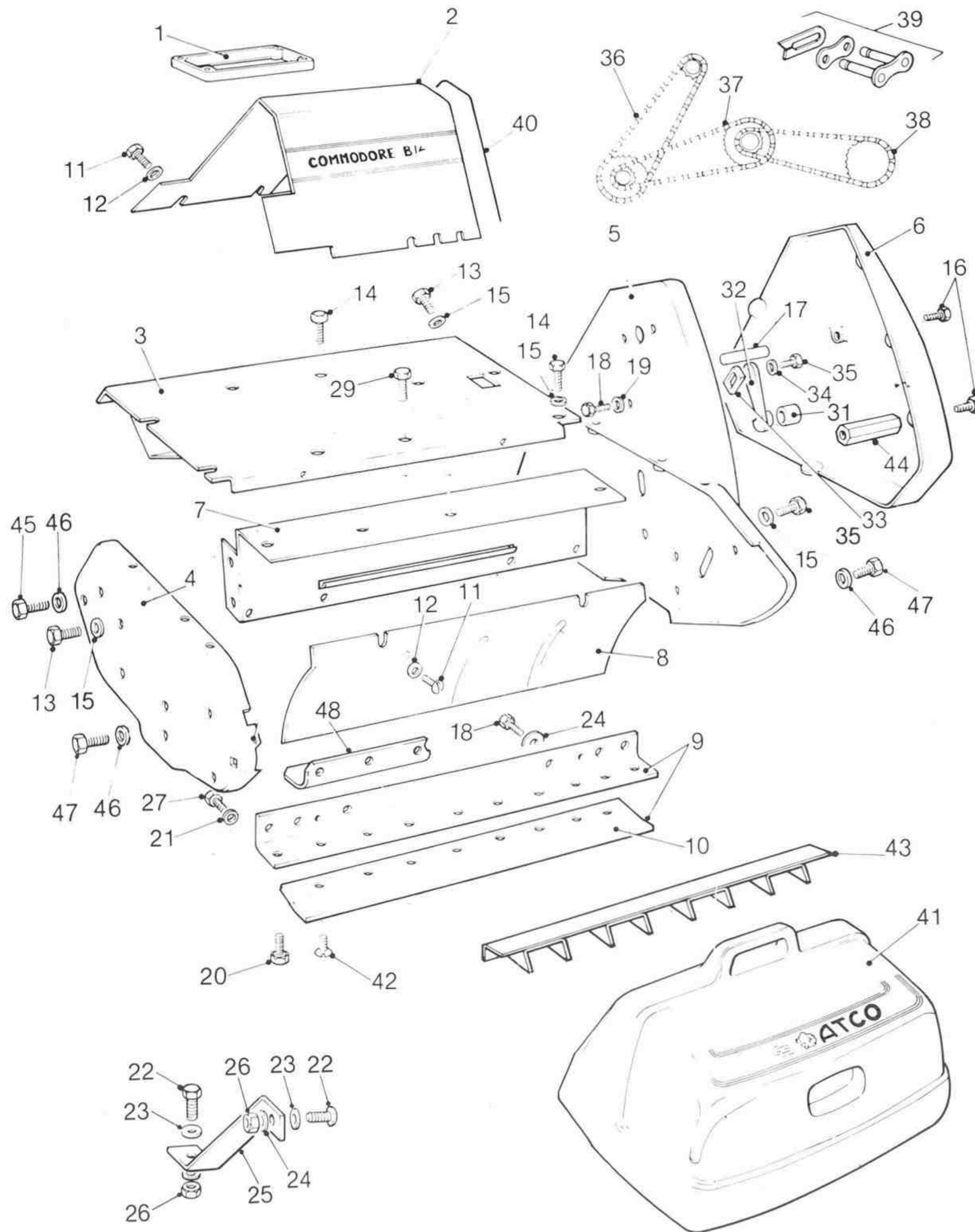
**Front Roller**



Illus. No.	Description	Part No.	No. per set
1	Front roller carrier sub assembly 14"	L101036	1
	Front roller carrier sub assembly 17"	L101037	1
	Front roller carrier sub assembly 20"	L101038	1
2	Front tie rod 14"	L22385	1
	Front tie rod 17"	L22386	1
	Front tie rod 20"	L22387	1
3	Bush	L07771	4
4	Adjuster assembly	L101039	1
5	Spacer tube	L22389	1
6	Washer for tie rod L.H.	L06084	1
7	Nut for tie rod L.H.	L06955	1
8	Adjusting screw sub assembly	L22407	1
9	Anchor bracket	L101040	1
10	Spring washer double coil	L13288	1
11	Thin nut	L18728	2
12	Trunnion nut	L13910	1
13	Bolt for anchor bracket	L20346	1
14	Washer for tie rod R.H.	L18181	1
15	Front roller spindle 14"	L22390	1
	Front roller spindle 17"	L22391	1
	Front roller spindle 20"	L22392	1
16	Washer - front roller spindle	L18182	2
17	Nut - front roller spindle	L20239	2
18	Wood roller (14")	L24638	4
18A	Wood roller (17")	L24638	2
19	Wood roller (17")	L24663	2
	Wood roller (20")	L24663	4
20	Washer	L09602	5
21	Spacer sub assembly	L101041	2
25	Washer - front roller spindle	L18025	2
26	Washer - anchor bracket	L18177	1
27	Nut - anchor bracket	L06955	1
28	Nut for tie rod R.H.	L20303	1
29	Grassrake assembly (14")	L101042	1
	Grassrake assembly (17")	L101043	1
	Grassrake assembly (20")	L101044	1
30	Shouldered screw	L24650	2
31	Spring	W25764	2
	<b>Auxiliary Wheel</b>		
22	Auxiliary wheel spindle	L22395	2
23	Split pin	L10121	2
24	Auxiliary wheel	L12303	2
25	Washer	L18025	4



Main Frame

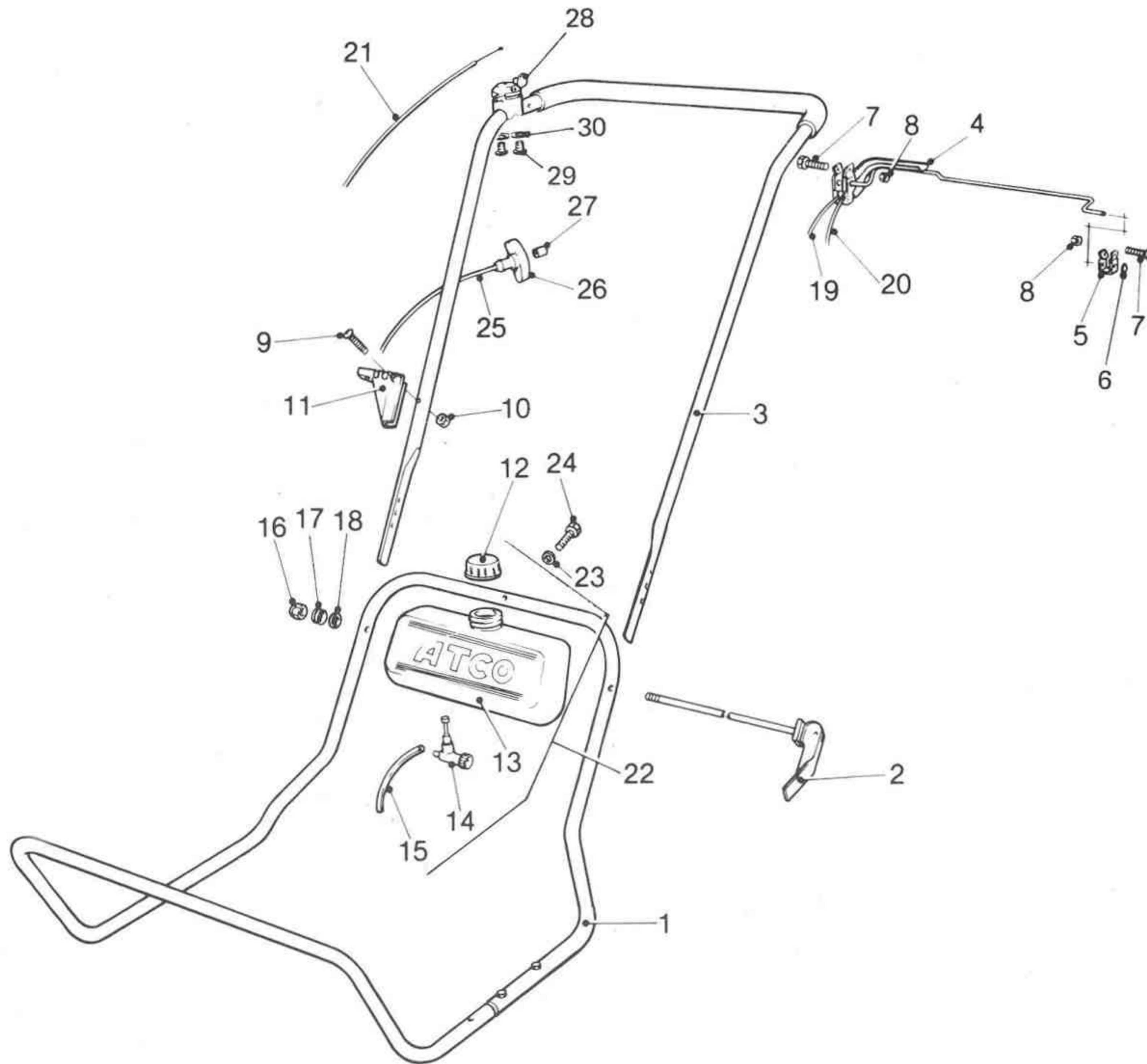


Illus. No.	Description	Part No.	No. per set
1	Spacing block	L100060	1
2	Clutch cover 14"	L101045	1
	Clutch cover 17"	L101046	1
	Clutch cover 20"	L101047	1
3	Engine platform sub assembly 14"	L101048	1
	Engine platform sub assembly 17"	L101049	1
	Engine platform sub assembly 20"	L101050	1
4	Sideplate sub assembly R.H.	L101051	1
5	Sideplate & inner chaincase sub assy. L.H.	L101052	1
6	Chain cover	L101053	1
7	Chassis strengthener sub assy. 14"	L100353	1
	Chassis strengthener sub assy. 17"	L100365	1
	Chassis strengthener sub assy. 20"	L100376	1
8	Delivery plate 14"	L100352	1
	Delivery plate 17"	L100364	1
	Delivery plate 20"	L100375	1
9	Carrier sub-assembly - B14	L100333	1
	Carrier sub-assembly - B17	L100356	1
	Carrier sub-assembly - B20	L100368	1
10	Bottom blade - B14	L101012	1
	Bottom blade - B17	L101013	1
	Bottom blade - B20	L101014	1
11	Screw (clutch cover 2 & del.plate top 2)	L20254	4
12	Washer (clutch cover 2 & del.plate top 2)	L09640	4
13	Screw (rear platform 2, strengthener 2)	L18049	4
14	Screw (engine fixing 2(rear); platform fixing 4)	L18691	6
15	Washer (platform fix.screw 6; strengthener 3)	L09684	9
16	Screw (chain cover)	L20259	2
17	Chain cover pillar top	L24677	1
18	Screw (chain cover pillar 1; delivery plate 5)	L18167	6
19	Washer (chain cover pillar)	L12417	1
20	Screw (bottom blade carrier to sides)	L32528	2
21	Washer (carrier fixing screws - rear)	L18204	2
22	Screw (support bracket)	L18718	2
23	Washer (support bracket 2)	L18090	2
24	Washer (delivery plate 5; support brckt.2)	L09680	7
25	Support bracket	L100327	1
26	Nut (support bracket fixing)	L18208	2
27	Screw (bottom blade carrier fixing-rear)	L32529	2
29	Bolt (engine fixing - front)	L22577	2
31	Slipper	L07063	1
32	Chain tensioner	L09538	1
33	Chain tensioner stay	L22260	1
34	Spring washer	L18204	1
35	Screw (chain tensioner 1, strengthener 1)	L20252	2
36	Chain	L10721	1
37	Chain	L03734	1
38	Chain	L09704	1
39	Connecting link	L07127	1
40	Clutch cover edging strip	L22435	1
41	Grassbox sub-assembly (B14)	L22540	1
	Grassbox sub-assembly (B17)	L22539	1
	Grassbox sub-assembly (B20)	L22538	1
42	Screw, bottom blade	L20248	7 (14") 9 (17") 10 (20")

(continued on page 19)



# Handle Assembly



Illus. No.	Description	Part No.	No. per set
1	Lower handle B14	L101054	1
	Lower handle B17	L101055	1
	Lower handle B20	L101056	1
2	Cam-loc handle & spindle sub assembly	L22697	1
3	Top handle	L32878	1
4	Clutch lever (bracket sub assembly)	L22707	1
5	Clutch lever saddle L.H.	L22592	1
6	Capped ratchet plate	L22704	1
7	Screw (clutch lever brackets)	L22702	2
8	Nut (clutch lever brackets)	L10074	2
9	Screw (recoil handle bracket)	T40945	1
10	Nut (recoil handle bracket)	L11228	1
11	Recoil handle bracket	L22695	1
12	Tank cap (including washer)	L22812	1
13	Petrol tank	L22531	1
14	Petrol tap	L22731	1
15	Petrol tube	L22733	1
16	Domed nut	L22701	1
17	Double coil spring washer	L22700	1
18	Plain washer	L18129	2
19	Traction clutch cable B14	L22714	1
	Traction clutch cable B17	L22715	1
	Traction clutch cable B20	L22605	1
20	Engine clutch cable	L22691	1
21	Throttle cable	L22777	1
22	Petrol tank assembly ( complete with items 12, 13, 14 & 15)	L22530	1
23	Washer (tank fixing)	L12417	1
24	Screw (tank fixing)	L10069	1
25	Starter rope	L22664	1
26	Starter handle	L11932	1
27	Ferrule	L22692	1
28	Throttle lever sub assembly	L22758	1
29	Screw (throttle fixing)	L22759	2
30	Washer (throttle fixing)	T41073	2

## Main Frame (continued from page 18)

Illus. No.	Description	Part No.	No. per set
43	Delivery plate ext. sub-assembly (14")	L101057	1
	Delivery plate ext. sub-assembly (17")	L101058	1
	Delivery plate ext. sub-assembly (20")	L101059	1
44	Chain cover pillar bottom	L20251	1
45	Screw for bearing housings	L18049	6
46	Washer for bearing housings	L09684	12
47	Screw	L20851	6
48	Stiffener support (14")	L100354	1
	Stiffener support (17")	L100366	1
	Stiffener support (20")	L100377	1