

# DANARM

55 Mk. III AUTOMATIC

55 Mk. III AUTO-L.H.

55 Mk. III PROFESSIONAL

ANTI-VIBRATION MODEL

## CHAIN SAWS

INSTRUCTION BOOK

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### CODE OF PRACTICE FOR ONE MAN CHAIN SAWS

The chain saw is essentially a tool for cutting through timber quickly. The cutting action is provided by a toothed chain travelling at high speed round a grooved bar. The cutter chain is almost completely unguarded; in inexperienced hands this can make the chain saw a dangerous tool.

Experience comes only with use, but if note is taken of the following important points, some of the dangers will be lessened.

1. Before using the saw, read the manufacturer's handbook.
2. **MAINTENANCE**—A blunt or badly sharpened chain will increase the vibration and cause the saw to kick and jump. Keep the chain sharp and at the correct tension. Never allow the saw to be used with worn, broken or defective parts. Do not touch the chain unless the engine is stopped.
  - a) **Chain Tension:** Correct chain tension is essential to proper maintenance and efficiency. Too tight a chain will result in excessive wear, shortening the life of the bar and chain. Too loose a chain will have a tendency to jump off the bar and result in damage to the sprocket teeth. The following instructions are important and will add to the life of your chain.
    - (i) Soak the chain in oil before use.
    - (ii) Install chain properly with recommended tension.
    - (iii) Run chain at slow speed for five minutes, giving plenty of oil.
    - (iv) Re-check tension until chain is fully run in.
    - (v) Keep chain well lubricated when in use.
    - (vi) Keep chain sharp. Always use a new file on a new chain.
  - b) **Sharpening:** Saws in daily use should be lightly filed at least three times a day, and sharpened to regain angles once a week. Saws used for limited periods only should be lightly filed before use and sharpened when necessary.
3. **CLOTHING**—Close fitting overalls are ideal, but in any case avoid unbuttoned jackets, loose trouser bottoms, scarves and ties, as these can easily catch in the chain, or on other parts of the saw. Boots with steel toe caps are advisable, or other footwear giving protection to the lower leg. A safety helmet is essential if there is danger of falling trees or dead limbs.
4. **WORKING**—Contact with twigs and undergrowth can cause the saw to jump and kick. A clear place to work and a firm foothold is essential. The saw must be held firmly, but not too tightly, in both hands and pivoted on the dogs whenever possible. Do not allow a second man near the saw to push over the tree when felling, or lift the tree close to the saw when cross cutting. If the saw jams in the cut, STOP THE ENGINE, and use a wooden or plastic wedge to free it.
5. **SAFETY**—During operation keep bystanders clear at all times. Before starting the motor, examine the lean of the tree. Look up for loose limbs, bark or intertwined branches.

Whenever possible, place the pivot grip against the tree or log before starting to cut. Before you start the motor, make sure the chain is not touching anything.

Release throttle and ensure chain is stopped before removing the saw from a cut.

When operating a chain saw, be relaxed but in full control at all times.

Keep saw free of saw dust.

Cut away from the body at all times, changing your position if necessary to work safely.

Never carry your saw with the motor running when walking through a bushy area, and always carry it by the handle bar.

*Continued on inside back cover*

# DANARM CHAIN SAW

## INSTRUCTION BOOK

### NOTE

The Danarm '55' Chain saw is available in three versions.

This comprehensive book is intended to cover parts lists and instructions for all three models. i.e.

- (I) 55 Mk III AUTOMATIC (with R.H. starter)
- (II) 55 Mk III AUTO-L.H. (with L.H. starter)
- (III) 55 Mk III PROFESSIONAL ANTI-VIBRATION MODEL (with L.H. starter)

All parts which are unique to L.H. starter models and anti-vibration models are to be found on pages 31, 32, 34, 35 and 36. All other parts are common to all three machine models with the exception of those indicated.

The Auto-L.H. and Professional models are available with a Chain Brake arrangement as an optional extra. Details of this safety feature are shown on pages 38, 39 and 40.

### SPARES ORDERS

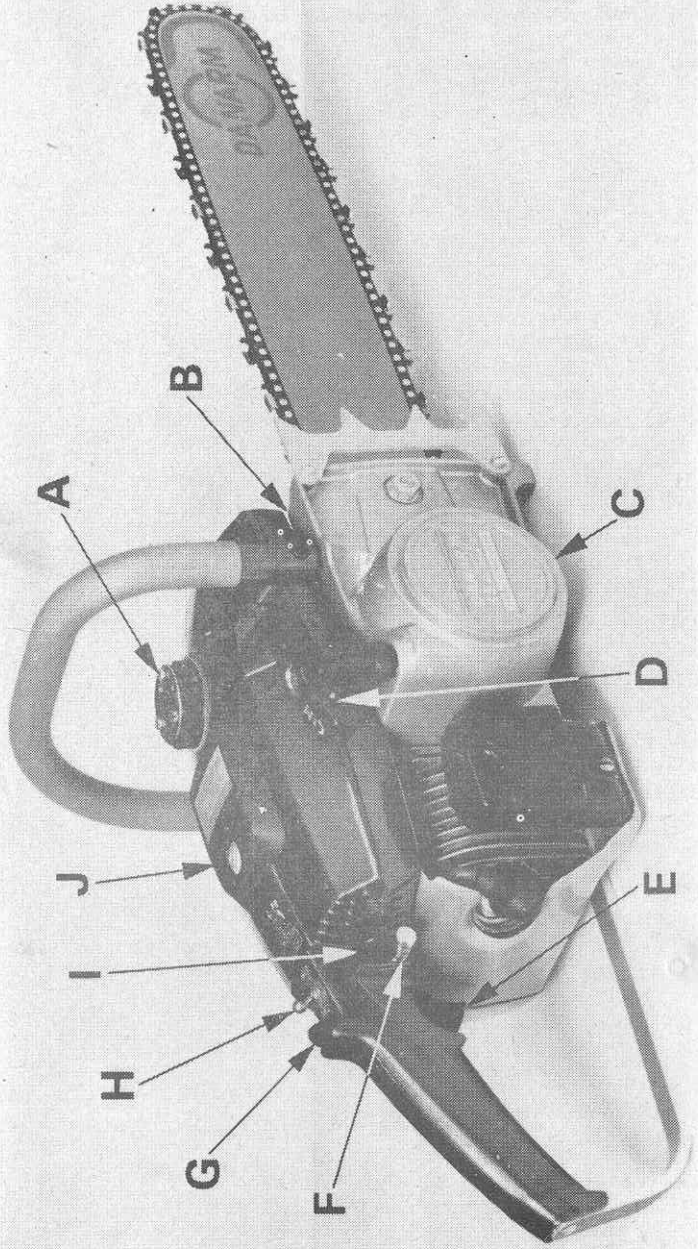
When ordering spare parts it is important to quote part numbers and descriptions together with your machine number to avoid delays in dispatching correct items.

Date of issue—January 1982

### DANARM LTD.

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TELEPHONE STROUD 2451—STD Code 045 36 2451  
TELEX 437161





THE DANARM '55' MK III AUTOMATIC CHAIN SAW

- A. Fuel Filler Cap
- B. Oil Filler Cap
- C. Sprocket Guard
- D. Starter Handle
- E. Throttle
- F. Throttle Stop
- G. Oil Pump Button
- H. Ignition Switch
- I. Choke
- J. Air Filter Cover

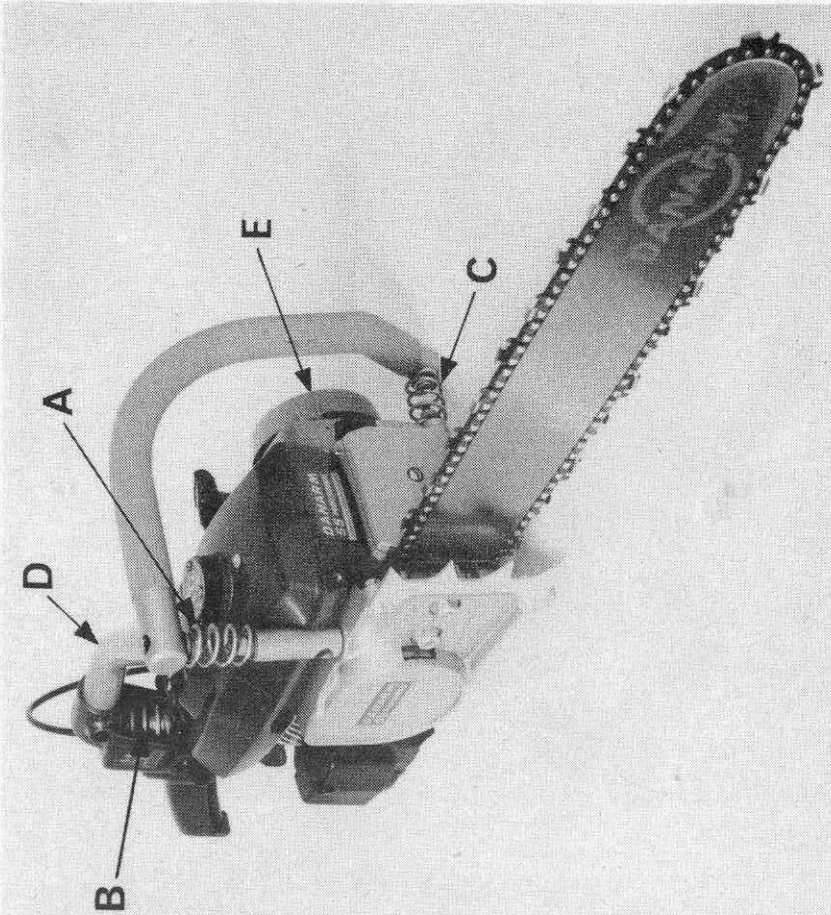
FIGURE 1



The Danarm 55 Mk III Auto-L.H. chain saw shown with chain brake



- A Vertical Shock Absorber Spring
- B Rear Handle Shock Absorber Spring
- C Horizontal Shock Absorber Spring
- D Danarm Anti-Vibration Handle Bar
- E Left Hand Easy Start



PARTS UNIQUE TO ANTI-VIBRATION MODEL MAY BE FOUND ON PAGES 34, 35 AND 36. L.H. STARTER ASSY. PARTS ON PAGES 32 AND 33. ALL OTHER PARTS AS LISTED.

**THE DANARM 55 PROFESSIONAL A/V CHAIN SAW**

**THE DANARM 55 AUTOMATIC MARK III CHAIN SAW**

This Danarm Chain Saw is fitted with the latest type Tillotson carburettor incorporating a new design of governor designed to function at an engine speed of approximately 9,500 r.p.m. The apparent change in engine note at this speed merely confirms the correct functioning of the governor.

At this speed additional fuel is introduced into the carburettor by way of a ball valve in the governor plug, and it is important that no attempt should be made to override the operation of the governor by weakening the fuel/air mixture on the main jet.

The main jet of the carburettor must be set in accordance with our carburettor adjustment instructions on page 11 (but with points gap of .018/.020 inches) with final adjustment under load as on page 10 of the Instruction Book: the governor will then provide for optimum performance with minimum engine wear.

**RUNNING IN A NEW ENGINE**

This Danarm Chain Saw has been tested and set before leaving the factory. Further running in of a new engine is, however, strongly recommended.

Run your engine for the first few minutes at one-third throttle. Increase speed to about half throttle and run for a few minutes longer. Cut a few small branches or logs at first. Make small cuts and get the feel of your saw. Check your chain tension frequently and at this stage make frequent use of your hand chain oiler button.

Remember your chain saw is a precision machine. Your treatment of it during the first hour or two of operation will determine to a considerable extent its long-term life and performance.

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## UNPACKING AND ASSEMBLING

The fitting of the chain and cutter bar should be carried out as follows (see Fig. 2 opposite):

Remove the sprocket guard with its two nuts and washers, also the outer side plate.

Install the cutter bar on the two studs, sliding it back as far as it will go.

Loop the chain over the drum and on to the sprocket behind (taking care the teeth are sharp), with the teeth pointing away from the machine on the **top** of the bar. Then carefully fit the heels of the drive links into the groove on the bar all the way round, then pull the bar and chain away from the machine to tighten the chain on the bar.

Fit the outer side plate in place.

Install the sprocket guard (being careful to see that the tensioning spigot on the sprocket guard fits into its mating hole in the cutter bar). If necessary, adjust the tensioning screw (see Fig. 2).

When the spigot has entered and the sprocket guard is flush with the cutter bar, fit the two washers and nuts, leaving the bar just free enough to slide. Tighten the tensioning screw (clockwise) thus pulling the bar and chain away from the machine. When the chain is tight, slacken the tensioning screw so that the heel of the drive link can be lifted just clear of the centre of the bar then tighten the two nuts and re-check. Hold the bar up when tensioning chain. With the correct tension it should be possible to pull the chain freely around the cutter bar with the finger and thumb.

**Note.** When installing the sprocket guard, it helps the starter dogs to engage if you give the starter handle a gentle pull as you are fitting it.

## FUEL AND LUBRICATION

The only source of lubrication for this type of engine is by means of oil previously mixed in the fuel. On no account should neat petrol be used otherwise damage to the engine will occur.

Any brand of Regular grade, low lead content petrol (gasoline) can be used. Continued use of high lead (Ethyl) content fuel will cause trouble. SAE 30 motor oil or any good grade of two-stroke lubricating oil can be used, but your service dealer should be consulted in case of doubt. The proportions should be 20 parts of fuel to **one** part of lubricating oil, i.e. 5%.

The fuel and oil should be thoroughly mixed in a separate, **clean** container, and well stirred or shaken. If the oil is not thoroughly mixed it will settle to the bottom, and when you fill the engine tank you will leave the oil behind. So make sure that thorough mixing is achieved, **particularly in the Winter when the oil is thick.**

**Always** clean the sawdust away from the filler caps before unscrewing, lest sawdust could get into the tanks.

**Always** use a funnel with a fine mesh filter.

The chain oil tank is at the front of the machine, and can be filled with any ordinary machine oil of about SAE 30 consistency. In very cold weather, or with resinous wood, the oil may be mixed with paraffin (kerosine)—4 parts of oil to 1 part of paraffin.

**ALWAYS USE CLEAN OIL.**

**ALWAYS PRIME THE AUTOMATIC OILER AFTER REFILLING BY USING THE HAND OILER A FEW TIMES.**

KEY TO FIGURE 2  
1. Bar Tensioning Spigot  
2. Bar Tensioning Hole  
3. Chain Tension Adjustment Screw

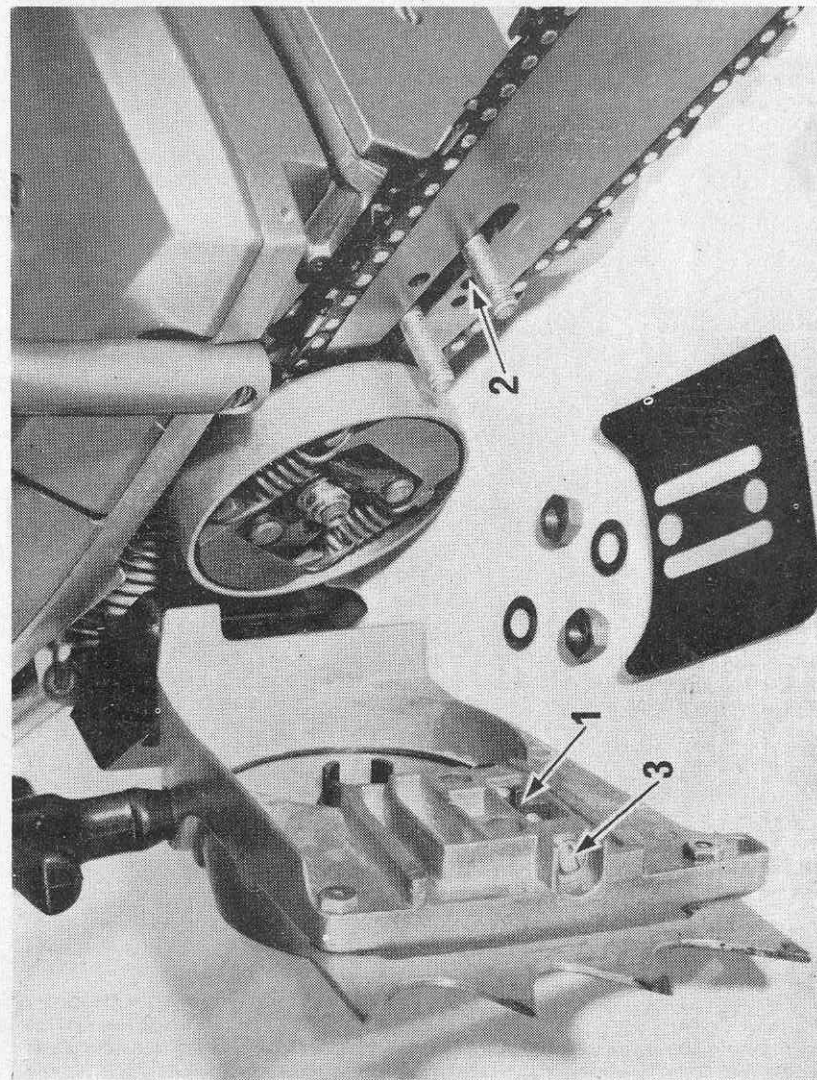


FIGURE 2



### CHAIN OILING

The automatic oiler is adjusted at the factory to deliver a volume of oil suitable for average cutting conditions. A change in volume may be desired when cutting dry and hard woods, heavy pitch or sap, and in sandy or abrasive cutting areas. Oil output may be increased or decreased by an adjusting screw in the end of the pump body (see Fig. 3). Turning the screw clockwise decreases the rate of flow; turning screw anti-clockwise increases the flow. To make any adjustment the oil must be drained from the tank, remove the tank cover and loosen the locknut on the adjusting screw, make the adjustment with the saw upside down to avoid loss of tiny valve ball and spring.

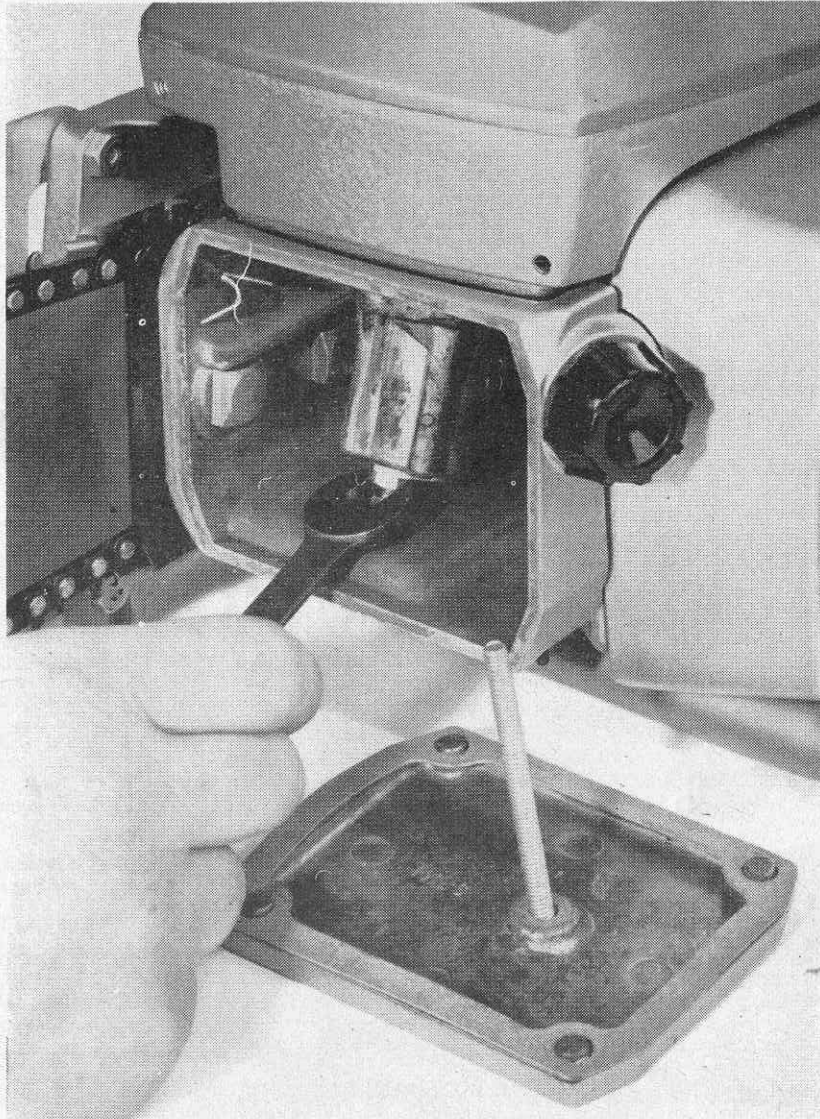


FIGURE 3

### STARTING FROM COLD

When starting in the morning, especially on cold days, it is advantageous to pull the engine over several times, with the ignition off and the choke on, in order to free the engine. The standard starting procedure, as described below, should then be followed (see Fig. 1 for identification of controls).

- (1) Place the saw in a convenient position on the ground, where it will sit firmly.
- (2) Apply the choke by pulling the knob outwards. Move the ignition switch to ON.
- (3) Open the throttle fully, press the throttle stop button inwards and release the throttle. (The throttle will then remain partly open, held by the button.)
- (4) Hold the machine down with the left hand on the front handle bar, pull the starter handle until it engages, then pull up sharply.
- (5) Repeat until the engine fires. The choke should then be moved to the RUN position and repeat instruction 4. When the engine is running the throttle stop should be disengaged by momentarily opening the throttle.
- (6) Run the engine just fast enough to turn the chain, and operate the hand oil plunger until the chain is thoroughly lubricated.

### STARTING FROM HOT

The procedure is the same except that the choke may not be necessary. If, however, three pulls will not start the engine, then apply the choke. (If the engine has stopped through running out of fuel, the choke will definitely be needed after refuelling to prime the system.)

**Note.** If it is suspected that the engine will not start due to over-choking, set the choke at RUN position and, with the throttle wide open, pull the engine over several times. It should start in two or three pulls.

### OPERATING INSTRUCTIONS

If you have not previously used a chain saw, it would be wise for you to obtain instruction from your dealer, or from an experienced user. If this is not possible, get as much practice as you can making crosscutting cuts, before attempting the more difficult felling operation.

Always ensure you have a good clear working area around the log. It is preferable for the log to be off the ground, as you are sure to damage the cutting edge of the chain if it is allowed to contact the ground. Always examine the log for stones or sand embedded in the bark, and for nails or wire (especially when cutting hedgerow timber) which may damage the chain.

For preliminary oiling of the chain, operate the pump lever several times while the engine is at a standstill.

With the engine idling, rest the saw chain on the log, with the machine against the front of the log. Fully open the throttle and proceed to cut by slight forward and downward pressure on the front handlebar. Always try to cut the log on the far side, as this tends to prevent the log falling towards you, should it accidentally move.

Do not allow the engine speed to fall too low, causing the clutch to slip: ease the pressure on the chain and allow the speed to increase.

Should the chain get pinched because slight log movement has closed up the cut, do not keep the throttle open and the clutch slipping, but let the engine idle while you are freeing the saw. If you keep the throttle open while slipping the clutch, the clutch will overheat and perhaps be damaged. Do not pull violently on the saw handles when the chain is pinched.



The automatic oiler will take care of most situations, but it is wise to use the hand oiler every now and then, making sure that there is plenty of oil in the tank and that the passage ways are clear. If the oil is hard to pump in cold weather, dilute it with a little paraffin (see page 6).

With a new chain, use the hand oiler liberally, also check the chain tension every few cuts and re-adjust. There is an initial stretching and bedding-in during the first few hours of use.

The carburettor is set by the manufacturer, and instructions are given on page 9 for the complete adjustment procedure, but some slight additional adjustment of the high-speed jet could be necessary.

If the engine smokes and shows a reluctance to get up to speed or to fire regularly after cutting has started, it is probably getting too much fuel, so the adjustment should be closed by slightly rotating it clockwise—no more than one-eighth of a turn.

If the engine tends to stall in the cut, although the speed comes up easily and it readily fires evenly after the cut has been started, then it is not getting enough fuel; the same adjustment should be opened by slightly rotating it anti-clockwise.

The adjustment can be reached by removing the airfilter and its cover when the carburettor is exposed (see Fig. 4.) There are two screws on the left-hand side, the upper one of which is the high-speed adjustment, and is marked with H just above it.

## ROUTINE MAINTENANCE

This saw is very reliable and, with very little care, will have a long life. Regular maintenance, which does not take much time, will prove most rewarding in performance, economy and extended life. The periods given hereunder are just a rough guide.

### DAILY

Clean the machine off thoroughly and examine for loose nuts, wires, etc.

Clean the air filter, if necessary, as described hereunder.

Sharpen the chain, as described on page 13.

### WEEKLY

Remove the fan housing and clean out the sawdust from the cylinder fins. Tighten all screws and nuts, particularly the exhaust and handlebar.

Clean the air filter by first loosening the screw in the centre of the air filter cover which can then be removed, exposing the filter element (make sure that the outside is clean, so that sawdust cannot fall into the cavity when the cover is removed). The element should be washed in clean petrol, or petroleum solvent. Replace everything when the element is dry, ensuring element is correctly seated when screwing down the cover.

Remove the chain and cutter bar, clean out the bar groove, replacing in the reversed position so as to distribute the wear.

## MONTHLY

Remove the spark plug, examine for fouling and set the points to a gap of .018"/.020" inches. Bend the outside electrode only. If the plug is dirty, you may be running with too rich a carburettor setting, too much oil in the fuel or else badly mixed, an unsuitable oil, or a choked air filter.

Clean the fuel tank filter. It can be reached by removing the fuel filler cap and lifting out the end of the rubber tube which has the felt, leaving the other end attached. Remove the felt, wash it well in petrol, and replace.

## CARBURETTOR ADJUSTMENT (see Fig. 4)

Sometimes the carburettor inadvertently gets badly out of adjustment, and it is wise then to start again from the basic settings. There are three adjustments:

1. The Idle Speed throttle screw which controls the amount that the throttle is open when idling, and hence the idle speed.
2. The High Speed mixture screw controls the needle which sets the proportion of fuel and air when at full throttle. The body is marked H adjacent to this screw, which is the uppermost of the pair.
3. The Idle Mixture screw which controls the needle which sets the proportion of fuel and air when idling. The body is marked L (for low speed) adjacent to the screw, which is the lowest one of the pair.

The basic settings are obtained as follows:

- (a) Unscrew the Idle Speed screw until it no longer touches the lever, then screw it in until it just touches the lever, then give it a further one turn. This will be a little too fast—purposely, as will be seen later.
- (b) Turn the Idle Mixture screw in fully (clockwise) without forcing (forcing will damage its aluminium seat), then unscrew it about seven-eighths of a turn.
- (c) Turn the High Speed mixture screw in fully in the same manner, and unscrew it about seven-eighths of a turn.

Start the engine and, when it is warm, see if the engine accelerates nicely from idling. If it hesitates, unscrew the Idle Mixture screw very slightly and try again, but it should **never** be more than one turn open. This will probably have slowed down the idling, which is why the idle speed screw was set rather high initially. **Note:** If it seems necessary to open the Idle Mixture Screw more than one full turn, there is probably an air leak somewhere which should be attended to.

With the engine now accelerating nicely, the idling speed may be a little high, so slow it down by unscrewing the Idle Speed screw until the chain stops and the engine idles smoothly.

The final adjustments to the carburettor must be made when cutting, and is outlined on page 11.

## CHAIN MAINTENANCE

When it is necessary to use pressure on a chain to get it to cut, it is a sure sign that the chain is dull. This should be corrected **immediately**. **Never** cut with a dull chain—this will ruin the chain, cutter bar, sprocket, and engine.

### FILE LITTLE BUT OFTEN.

To file the chain in place, tighten it on to the cutter bar by means of the tension adjustment, sharpen all the accessible teeth, then slacken and move the chain around to another section. Continue until all the teeth are filed.



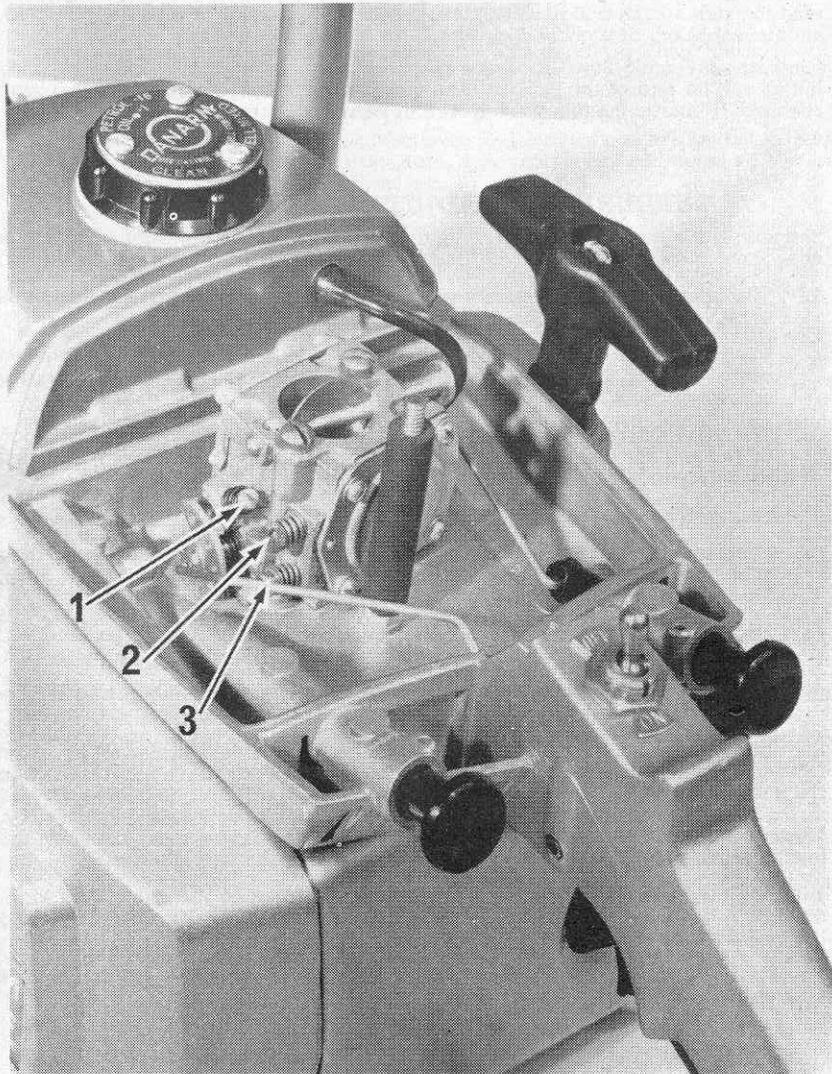


FIGURE 4

1. Idle Speed Throttle Screw
2. High Speed Mixture Screw
3. Idle Mixture Screw

Use a sharp file and the file holder provided. Take a firm grip and make a steady pass through the tooth without rocking. The file angle should be as shown in the diagram, and the file should be held horizontally. If anything, the handle end should be slightly down from the horizontal—**never** up.

When a chain has been filed several times, the teeth recede and the depth gauges must be filed accordingly. If you file too much off the depth gauges the chain will become fierce and rough.

Watch that the angles and measurements are the same on both sides of the chain. If there is very much difference the saw will cut to one side.

If the chain does not seem to be cutting as freely as it should it is wise to replace it for later examination, thus a spare chain will allow you to continue working.

Most professionals start the day with three sharp chains. One is a spare against accidental damage, and the two used are sharpened after work.

It is essential to use the correct file. A wrong file may ruin a chain. The correct file for the  $3/8$  pitch chain is  $3/8$  in. diameter round, parallel.

### CHAIN TROUBLES

Trouble can be experienced in three different ways, which are as follows:

1. The chain requires pressing into the cut more than usual and the sawdust does not come out in large, clean-cut shavings, but contains a lot of fine powdery dust. Pick up a handful and examine it.
2. The saw will not cut straight, but runs to one side, perhaps so much that the engine slows because the chain at the top of the bar is being pressed against the side of the cut. (In rare cases this just happens at the far end of a cut due to a bent cutter bar, but is not a fault of the chain.)
3. The chain is very rough, and is hard to feed smoothly and without grabbing

IN THE CASE OF (1) above the following are the usual causes:

- (a) Chain not sharp.
- (b) Insufficient depth gauge clearance (see Fig. 5).
- (c) Top angle too steep (see Fig. 5).

Chains are often rubbed off on the outer curved side of the cutter by abrasion (contact with sand, gravel or metal, or excessive cutting with a dull chain). This brings the cutting edge of the chain inwards and out of contact with the timber, so it is necessary then to file the teeth back until this condition is removed. Fig. 6 shows how the chain looks when this condition exists. This is probably the most common beginners difficulty, as they are very prone to let the chain dig into the ground thus creating this condition which will not respond to a single sharpening.

IN THE CASE OF (2) above the chain cuts better on the one side than the other and the following are the usual causes:

- (a) Teeth dull on one side, perhaps by abrasion.
- (b) Insufficient depth gauge clearance on one side.
- (c) Top angle too steep on one side.
- (d) Main angle on left and right not the same.
- (e) Side angle incorrect on one side.



IN THE CASE OF (3) above, there is only one common cause, which is that the main angle is hooked, as shown in Fig. 5. This cannot occur if the correct size of file is used in the file holder supplied. Roughness can also be caused by the depth gauges having been filed down too far.

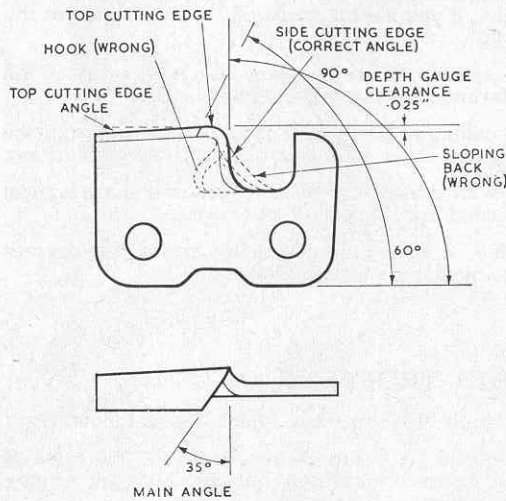
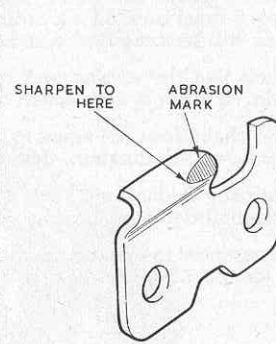


FIGURE 5



AFTER CORRECTING THE TOOTH WHICH SHOWS THE GREATEST WEAR, ALL OTHER TEETH MUST BE FILED BACK TO THE SAME LENGTH. DEPTH GAUGES MUST THEN BE FILED TO THE CORRECT DIMENSION

FIGURE 6

**MAGNETO**

The following settings should be maintained to give maximum performance :-  
 SPARK PLUG—POINTS GAP .018/.020in.  
 CONTACT BREAKER—POINTS GAP .018in./0.020in.  
 AIR GAP BETWEEN CORE ARM AND FLYWHEEL .010/.012in.

DANARM FAULT FINDING CHART																			
	Insufficient oil	Dull chain	Chain too loose	Chain too tight	Side cutting edge sloping back	Side cutting edge sloping forward (hook)	Top cutting edge too square	Top cutting edge too fine	Main angle too square	Main angle too fine	Abrasion, earth, sand, etc.	Worn or incorrect sprocket	Insufficient depth gauge clearance	Too much depth gauge clearance	Unequal or unbalanced filing	Unequal or unbalanced depth gauge clearance	Worn or plugged groove in cutter bar	Cutter bar bent or worn	
Will not feed easily																			
Will not cut straight																			
Chain grabs																			
Chain loose and worn																			
Link bottoms hammered																			
Link bottoms hammered front																			
Link bottoms worn curved																			
Link bottoms worn flat																			
Link bottoms heel worn																			
Cracked rivet holes																			
Link notch hammered																			
Heel of drive link damaged																			
Bottom of drive link hammered																			
Bottom of drive link worn																			
Bottom of drive link rough																			
Bottom of drive link one side worn																			
Bottom of drive link both sides worn																			
Bottom of drive link grooved																			
Side of chain polished																			



## ENGINE TROUBLE CHART

IF THE ENGINE WILL NOT START yet is free and easy and has good compression the cause is among the following:

- (1) Shortage of fuel. Check the fuel tank.
- (2) Choke or ignition switch in wrong position.
- (3) Choke used too much. See starting instructions.
- (4) Carburettor incorrectly set (see carburettor instructions). (Note that the carburettor will not get out of adjustment by itself, so this point can be eliminated if the carburettor has not been interfered with.)
- (5) Insufficient spark.
- (6) Frozen water in filter or carburettor.

If the engine is very stiff to turn over (of course it will be stiffer in the winter), it should be examined by a competent mechanic. If the compression is very poor, a mechanic is again indicated, but first check the spark plug for tightness.

If the spark is suspected, this can be checked by removing the plug and re-attaching the wire. Resting the plug on the machine, metal to metal, turn the engine over (it is now very easy to turn) with the ignition switch on. A blue spark should jump across the points even when the engine is pulled over quite slowly. If it doesn't, or if you have to pull very smartly to get a spark, then something is wrong. Try another plug; if that is not any better, the magneto is at fault.

IF THE ENGINE WILL NOT RUN AT FULL THROTTLE yet starts readily, one of the following will be the cause:

- (1) High speed mixture adjustment incorrectly set.
- (2) Fuel filter clogged.
- (3) Dirty air filter.
- (4) Exhaust clogged with carbon.
- (5) Blocked air vent in filler cap.
- (6) Faulty or mal-adjusted carburettor.
- (7) Mis-firing caused by faulty plug or magneto.

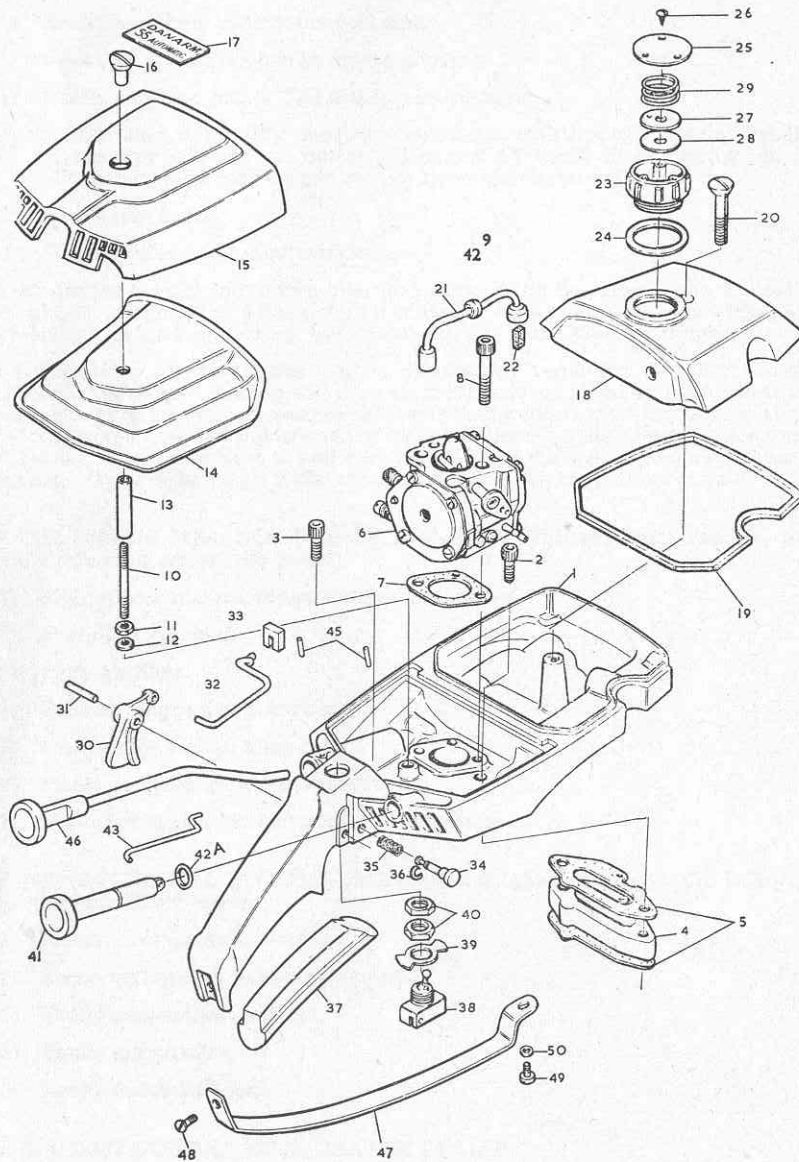
IF THE ENGINE WILL NOT IDLE yet runs at full speed properly, the following are the most likely causes:

- (1) Incorrect carburettor settings.
- (2) Loose carburettor mounting screws.
- (3) Faulty carburettor gaskets.
- (4) Faulty carburettor.
- (5) Leaky crankshaft seal.

IF IN DOUBT CONSULT YOUR DANARM DEALER

## NOTES





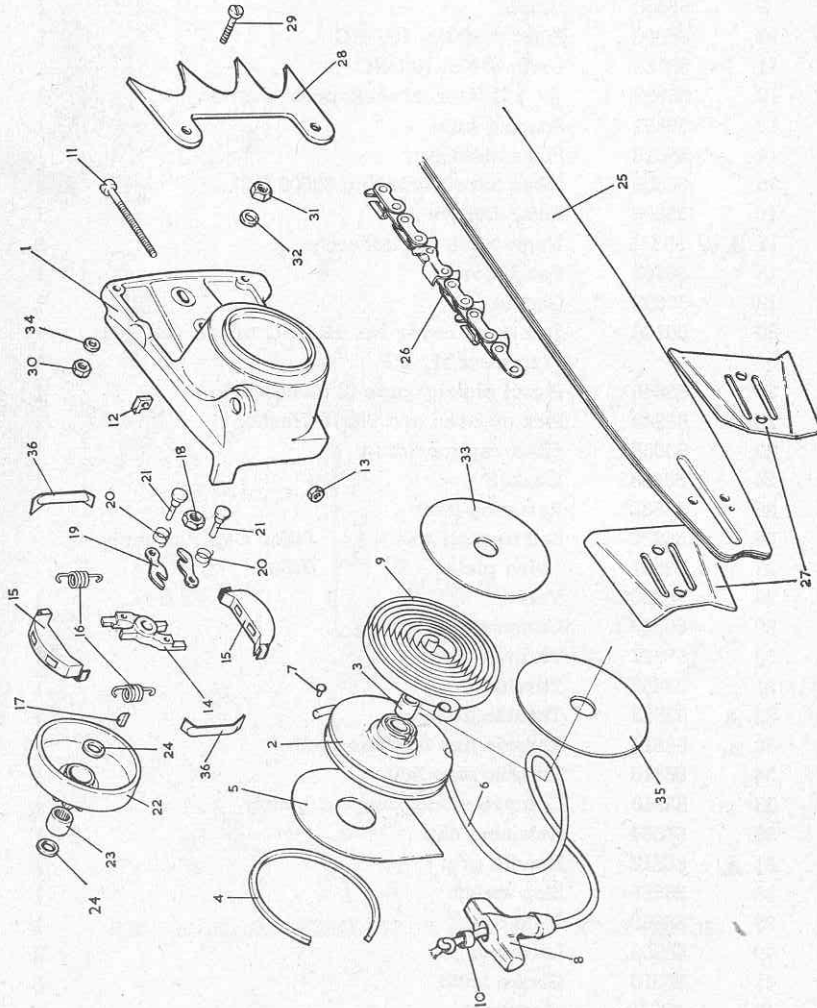
REAR HANDLE, PETROL TANK AND CONTROLS GROUP

REAR HANDLE, PETROL TANK AND CONTROLS GROUP

Index No.	Part No.	Description	No. req.
1 ▲	55561	Rear handle, petrol tank	1
2	55746	Cap screws No. 10 UNC x 1" LG	2
3	55752	Capscrew No. 10 UNC x 1/8" LG	1
4	55505	Heat insulating block	1
5	55550	Gaskets	2
6	55545A	Carburettor (governed)—See separate break down of parts	1
7	55512	Carburettor gasket	1
8	55707	Screws No. 10 UNC x 1 1/8" LG Filister Head	2
9	55585	Nipple	1
10	55506	Filter stud No. 10 UNC	1
11	55722	Locknut No. 10 UNC	1
12	55732	3/8" 1/D internal shakeproof washer	1
13	55551	Spacing tube	1
14	55510	Filter element	1
15	55503	Filter cover including 55508 (16)	1
16	55508	Filter captive nut	1
17 ▲★	55544	Name plate self adhesive	3
18	55502	Petrol cover	1
19	55552	Gasket	1
20	55708	Screw for cover No. 12 UNC raised CSK HD screw x 1 1/4" LG	1
21	55546	Petrol pick up pipe (2 pieces 3" lg.)	1
22	55543	Pick up head and 55547 Washer	1
23	55535	Filler cap moulding	1
24	55533	Gasket	1
25	55532	Retaining plate	1
26	55730	Self tapping screw	Filler Cap Assembly 55509
27	55531	Valve plate	
28	55530	Valve	
29	55529	Compression spring	1
30	55527	Throttle lever	1
31	55553	Throttle pin	1
32 ▲	55513	Throttle link	1
33 ▲	55514	Throttle link insulating felt	1
34	55515	Throttle stop button	1
35	55516	Compression spring for button	1
36	55554	Retaining clip	1
37 ▲	55517	Handle grip	1
38	55555	Stop switch	1
39	55558	Plate on/off	1
40	55559	Locknuts	2
41	55518	Choke knob	1
42	55810	Grommet	1

42A	55451	Friction ring for choke knob	1
43	55520	Choke link	1
45	55556	Stop pins	2
46 ▲	55519	Pump operating rod and knob	1
47 ▲	55521	Tank strap	1
48 ▲	55719	Screw No. 10-24 UNC x 1/2" LG CSK HD	1
49 ▲	55747	Screw No. 10-24 UNC x 3/4" LG cap screw	1
50 ▲	55735	3/8" I/D plain washer	1
51	55536	Carburettor settings transfer (not illustrated)	1

▲ Indicates not required for Professional A/V model. See page 34, 35 and 36.  
 ★ Indicates not required for Auto-L.H. model. See pages 32 and 33.  
 All other parts common to all three machine models.



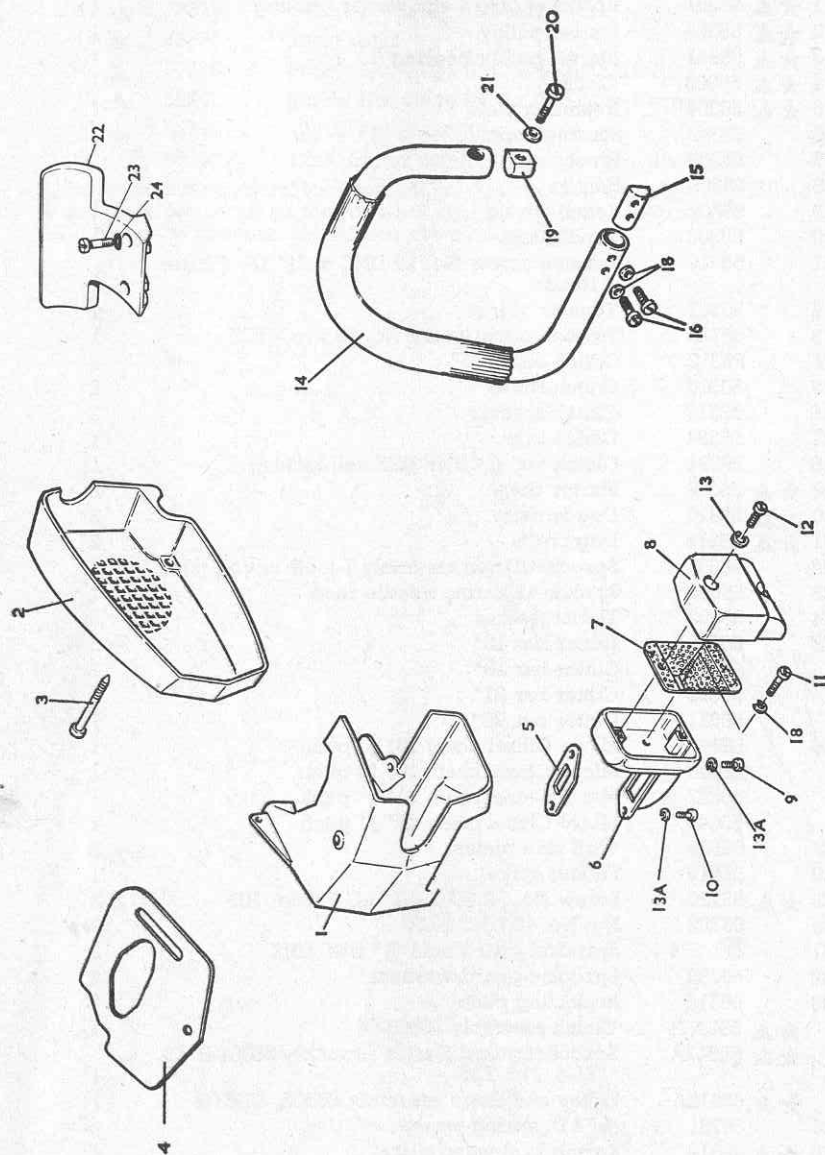
CLUTCH, STARTER AND CUTTING ATTACHMENTS GROUP

## CLUTCH, STARTER & CUTTING ATTACHMENTS GROUP

Index No.	Part No.	Description	No. req.
1	★▲ 55301	Sprocket guard and starter housing	1
2	★▲ 55302	Starter pulley	1
3	★▲ 55351	Starter pulley bearing	1
4	★▲ 55303	Circlip	1
5	★▲ 55304	Retaining plate	1
6	55352	Starting rope	1
7	55353	Rivet	1
8	55305	Handle	1
9	55308	Recoil spring	1
10	55306	Handle cap	1
11	55710	Tension screw No. 10 UNC x 2 1/4" LG Filister Head	1
12	55307	Tension spigot	1
13	55723	Tension nut self-lock No. 10 UNC HEX	1
14	55312	Clutch driver	1
15	55313	Clutch shoes	2
16	55314	Clutch springs	2
17	55354	Clutch key	1
18	55724	Clutch nut 5/16" UNF HEX self-locking	1
19	★▲ 55309	Starter dogs	2
20	★▲ 55310	Dog springs	2
21	★▲ 55311	Dog rivets	2
22	55601	Sprocket/Drum assembly 7-tooth spur 3/8" pitch	1
23	55652	Sprocket bearing needle race	1
24	55602	Thrust washer	2
25	55603	Cutter bar 12"	1
	55605	Cutter bar 16"	1
	55607	Cutter bar 21"	1
	55611	Cutter bar 25"	1
26	55645	Micro Chisel chain 12" 3/8" pitch	1
	55646	Micro Chisel chain 16" 3/8" pitch	1
	55647	Micro Chisel chain 21" 3/8" pitch	1
	55648	Micro Chisel chain 25" 3/8" pitch	1
27	55609	Well side plates	2
28	55610	Felling spike	1
29	★▲ 55720	Screw No. 10 UNC x 7/8" LG Filister HD	2
30	55722	Nut No. 10 UNC HEX	2
31	D07954	Sprocket guard nuts 5/16" UNF HEX	2
32	55733	Sprocket guard washers	2
33	55315	Protecting plate	1
	★▲ 55316A	Clutch assembly 55309-14	1
	★▲ 55317A	Sprocket guard/Starter assembly 55301-8 15-51-3, 710, 723	1
	★▲ 55318A	Pulley and Rope assembly 55302, 55351-3	1
34	55731	3/8" I.D. spring washer	4
35	★▲ 55319	Spring protecting plate	1
36	55320	Clutch spring support plate	2

▲ Indicates not required for Professional A/V model. See pages 34, 35 and 36  
 ★ Indicates not required for Auto-L.H. model. See pages 32 and 33.  
 All other parts common to all three machine models.





FRONT HANDLE, SILENCER AND COVERS GROUP

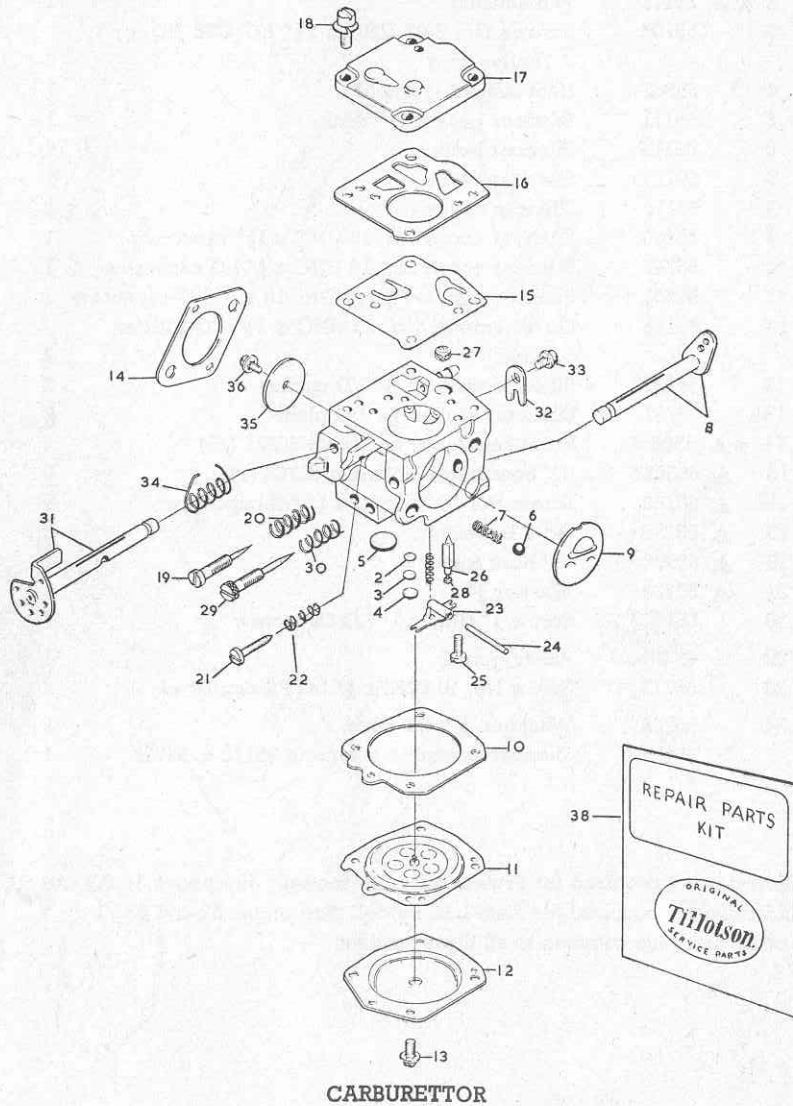
## FRONT HANDLE, SILENCER AND COVERS GROUP

Index No.	Part No.	Description	No. req.
1	55128	Engine shroud	1
2	★▲ 55116	Fan housing	1
3	55705	Screws No. 8-32 UNC x 2¼" LG CSK HD or Fan housing	3
4	55548	Heat insulating shield	1
5	55111	Silencer gasket ⅛" thick	1
6	55112	Silencer body	1
7	55113	Silencer baffle	1
8	55114	Silencer cover	1
9	55750	Silencer screw No. 10 UNC x 1½" capscrew	1
10	55747	Silencer screw No. 10 UNC x ¾" LG capscrew	1
11	55751	Silencer support screw No. 10 x ⅝" LG capscrew	1
12	55715	Cover screws No. 10 UNC x 1¼" LG Filister Head	2
13	55731	Silencer washer ⅝" 1/D spring	2
13A	55737	Silencer washer ⅝" 1/D plain	2
14	★▲ 55524A	Front handlebar including 55523 (19)	1
15	▲ 55522A	'D' Boss large including 55722 (17)	1
16	▲ 55752	Screw No. 10-24 UNC x ⅜" LG capscrew	2
18	▲ 55735	⅝" 1/D washer	2
19	▲ 55523	'D' Boss small	1
21	▲ 55739	Washer ¼"	1
20	55749	Screw ¼" UNC x 1" LG Capscrew	1
22	07431	Safety guard	1
23	55717	Screw No. 10 UNC x ¾" LG Filister Head	2
24	55735	Washers ⅝" 1/D plain	2
	55117A	Silencer assembly complete 55112-4, 55715	1

▲ Indicates not required for Professional A/V model. See pages 34, 35 and 36.

★ Indicates not required for Auto-L.H. model. See pages 32 and 33.

All other parts are common to all three models.

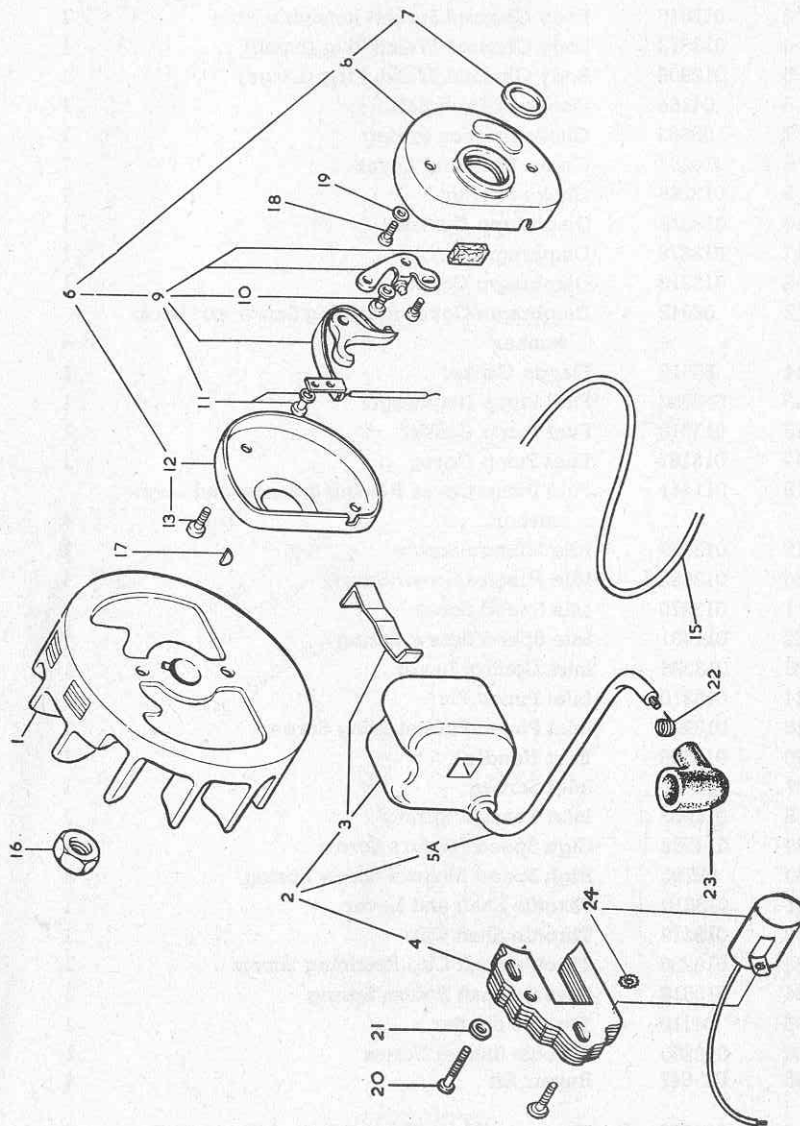


### CARBURETTOR PARTS FOR MODEL HS57A

Index No.	Part No.	Description	No. req.
2	012884	Body Channel Screen	1
3	012345	Body Channel Screen Retaining Ring	1
4	013372	Body Channel Welch Plug (Small)	1
5	012809	Body Channel Welch Plug (Large)	1
6	04784	Choke Friction Ball	1
7	08805	Choke Friction Spring	1
8	014251	Choke Shaft and Lever	1
9	013263	Choke Shutter	1
10	013215	Diaphragm Gasket	1
11	013278	Diaphragm	1
12	013216	Diaphragm Cover	1
13	08942	Diaphragm Cover Retaining Screw and Lock-washer	4
14	55512	Flange Gasket	1
15	013652	Fuel Pump Diaphragm	1
16	013218	Fuel Pump Gasket	1
17	013167	Fuel Pump Cover	1
18	011441	Fuel Pump Cover Retaining Screw and Lock-washer	4
19	013959	Idle Mixture Screw	1
20	013692	Idle Mixture Screw Spring	1
21	013270	Idle Speed Screw	1
22	011431	Idle Speed Screw Spring	1
23	013395	Inlet Control Lever	1
24	013210	Inlet Pinion Pin	1
25	013269	Inlet Pinion Pin Retaining Screw	1
26	013396	Inlet Needle	1
27	012727	Inlet Screen	1
28	011503	Inlet Tension Spring	1
29	014252	High Speed Mixture Screw	1
30	08793	High Speed Mixture Screw Spring	1
31	013610	Throttle Shaft and Lever	1
32	013219	Throttle Shaft Clip	1
33	010280	Throttle Shaft Clip Retaining Screw	1
34	013518	Throttle Shaft Return Spring	1
35	04119	Throttle Shutter	1
36	010280	Throttle Shutter Screw	1
38	RK-847	Repair Kit	1
	014950	Governor Valve Assembly (not illustrated)	1
	010404	Gasket (not illustrated)	1

All parts listed above are common to all three machine models.



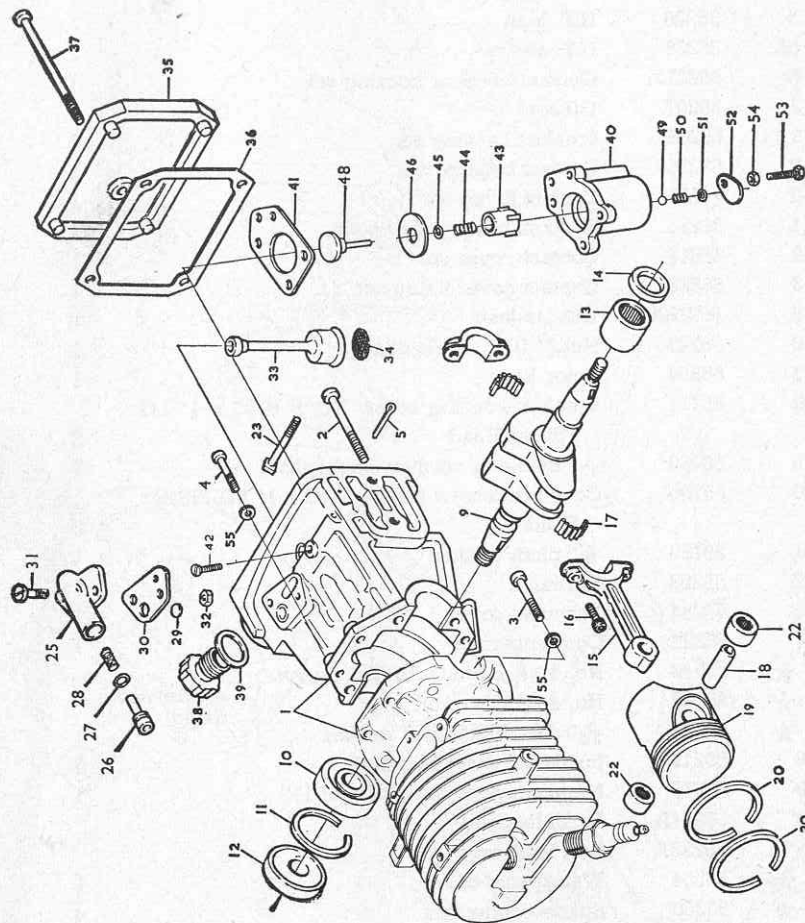


MAGNETO GROUP

**MAGNETO GROUP**

Index No.	Part No.	Description	No. req.
1	55219	Flywheel unit	1
2	55226A	Coil and core group	1
3	55227	Coil	1
4	55204	Coil core	1
5	55228	H.T. lead	1
5A	55229	H.T. sleeve	1
6	55237A	Contact breaker housing set	1
7	55207	Oil seal	1
8	55208	Breaker housing set	1
9	55236	Contact breaker set	1
10	55210	Contact fixing set	1
11	55211	Breaker bracket fixing set	1
12	55212	Contact cover set	1
13	55213	Contact cover fixing set	1
15	55266A	Cut out lead	1
16	55721	Nut $\frac{3}{8}$ " UNF self-locking	1
17	55354	Rotor key	1
18	55711	Breaker housing screw No. 8 UNC x $\frac{1}{2}$ " LG Filister Head	2
19	55736	$\frac{5}{16}$ " diameter washer, shakeproof	2
20	55706	Core arm screw No. 10 UNC x 1" LG Filister Head	2
21	55735	$\frac{1}{16}$ " plain washer	2
22	55253	Terminal	1
23	55254	Terminal cover	1
24	55235	Condenser set	1
★	55743	No. 4 BA x $\frac{1}{4}$ " LG Rd. Hd. screw	} condenser fixing
★	55744	No. 4 BA. Hex. nut	
★	55736	$\frac{5}{16}$ " dia. shakeproof washer	
28	55217	Insulating disc (part of 9)	1
29	55218	Metal support plate (part of 11)	1
	55224A	Earth lead assy.	
	55223A	L.T. lead assy.	
★	55234	Waterproof cover	1
★	55260	Spade connectors	4
★	55264	Earth lead	1

\*Not shown on illustration



ENGINE AND OIL PUMPS GROUP

## ENGINE AND OIL PUMPS GROUP

Index No.	Part No.	Description	No. Req.
1	55130	Cylinder/crankcase assembly	1
2	55701	Capscrews Jointing for 55130	4
3	55716	Screw No. 10-24 UNC x 1 3/8" LG Filister HD Jointing screw for 55130	1
4	55717	Screw No. 10-24 UNC x 3/4" LG Filister HD Jointing screws for 55130	3
5	55159	3/8" dia. splitpin x 1/2" LG	1
9	55104	Crankshaft	1
10	55152	Main bearing—fan side	1
11	55153	Circlip	1
12	55154	Main seal—fan side	1
13	55155	Main bearing—drive side	1
14	55156	Main seal—drive side	1
15	55105	Connecting rod	1
16	55704	Jointing screws No. 8-26 UNF x 1/2" LG	2
17	55157	Big end needle rollers	20
18	55106	Gudgeon pin	1
19	55131	Piston assy (with gudgeon pin, rings and bearings)	1
20	55132	Piston ring	2
22	55158	Gudgeon pin bearing needle race	1
23	D07118	Cutter bar bolts	2
24	55257	Spark Plug "Champion" CJ6 (For light working conditions use CJ8)	1
25	55401	Manual pump body	1
26	55403	Pump plunger	1
27	55451	'O' ring	1
28	55404	Compression spring	1
29	55405	Valve disc	1
30	55406	Gasket	1
31	55711	Screws No. 8-32 UNC x 1/2" LG Filister HD	2
32	55726	Nut hexagon No. 8-32 UNC	1
33	55408	Pick up pipe	1
34	55409	Oil filter gauze	1
35	55419	Oil tank cover	1
36	55420	Oil tank gasket	1
37	55714	Screw No 10-24 UNC x 2 3/8" LG Large Filister HD	1
37A	55422	Fibre washer (not illustrated)	1



38	55421	Oil filler cap	1
39	55456	Cap seal 'O' ring	1
40	55402	Auto pump body	1
41	55410	Gasket	1
42	55712	Screws No. 8-32 UNC x $\frac{1}{2}$ " LG Raised CSK HD	3
43	55411	Oil adjustment sleeve	1
44	55412	Compression spring	1
45	55452	'O' ring	1
46	55413	Piston plate	1
48	55415	Plunger bush with Pin 55416	1
49	55454	Valve ball $\frac{3}{8}$ " diameter	1
50	55417	Compression spring	1
51	55455	'O' ring	1
52	55418	Cover plate	1
53	55713	Screw No. 8-32 UNC x 1" LG HEX HD	1
54	55726	Nut No. 8-32 UNC HEX	1
55	55731	Spring washer	4
56	55547	Washer for 55701 (not illustrated)	4

All parts listed above are common to all three machine models.

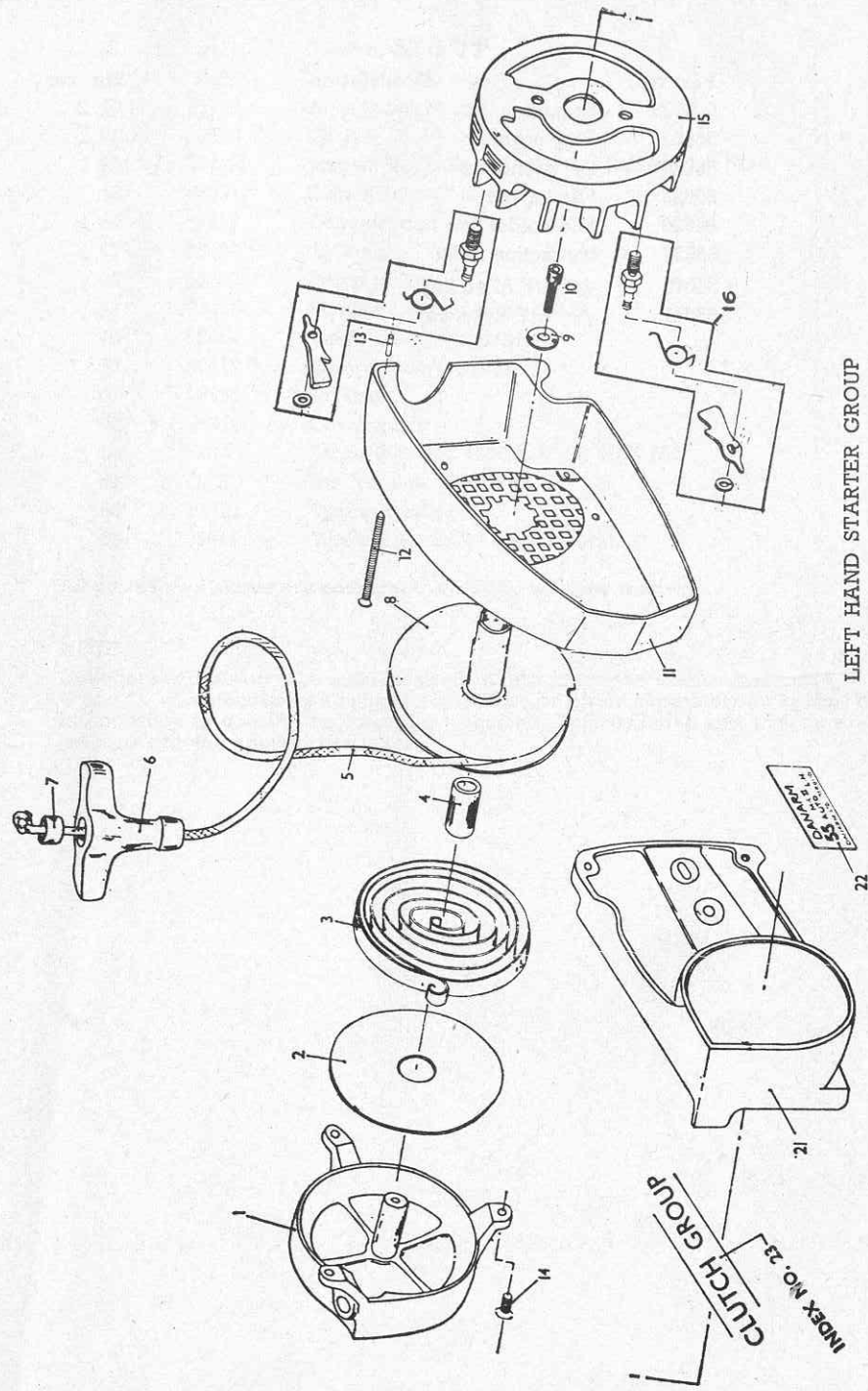
**NOTE**

Cylinders and pistons are manufactured in four tolerance grades marked A, B, C and D. When ordering a cylinder/crankcase or piston separately for spares it is important to specify the tolerance required. Both cylinder and pistons are marked with the appropriate letter.

**TOOLS**

Part No.	Description	No. req.
DA803	Spanner	1
55622	Plug spanner	1
55624	$\frac{7}{8}$ " round file	1
55625	File handle	1
55626	File holder	1
55627	Instruction book	1
55640	$\frac{3}{16}$ " A/F Allen key	1
55641	$\frac{9}{32}$ " A/F Allen key	1

**55 MARK II AUTO—L.H. MODEL & PROFESSIONAL MODEL  
L.H. STARTER GROUP**



Index No.	Part No.	Description	No. req.
1	55323	Starter body	1
2	55315	Shim protecting plate	1
3	55308	Starter spring	1
4	55357	Starter pulley bearing	1
5	55352	Starter rope	1
6	55305	Handle	1
7	55306	Handle cap	1
8	55321	Starter pulley	1
9	55327	Pulley retaining washer— $\frac{3}{8}$ " i/d x $\frac{1}{2}$ " o/d	1
10	55751	Retaining cap screw—No. 10 UNC x $\frac{1}{8}$ " lg.	1
11	55129	Fan housing	1
12	55705	Fan housing screw	3
13	55754	Location dowel $\frac{5}{16}$ " dia.	3
14	55753	Starter body screw—No. 10 UNC x $\frac{1}{8}$ " lg. c'sk hd.	3
15	55219	Flywheel unit	1
16	55322A	Starter dog pillar assembly	2
17	55330	Tab washer for 55322A	2
18	55765	Washer for 55705	3
19	55766	Washer for 55753	3
20	55331	Cooling air screen	1
21	55326	Sprocket guard	1
22	▲ 55563	Name decal	3
23	55328A	Clutch assembly	1
	55312	Clutch driver	1
	55313	Clutch shoe	2
	55314	Clutch spring	2
	55320	Clutch spring support plate	2
24	▲ 55562A	Front handlebar (not illustrated)	1
25	55329A	Starter body assembly	1
26	55353	Starter rope rivet	1
27		$\frac{3}{16}$ " Dowel starter body	1
28	55717	Felling dog screws	2

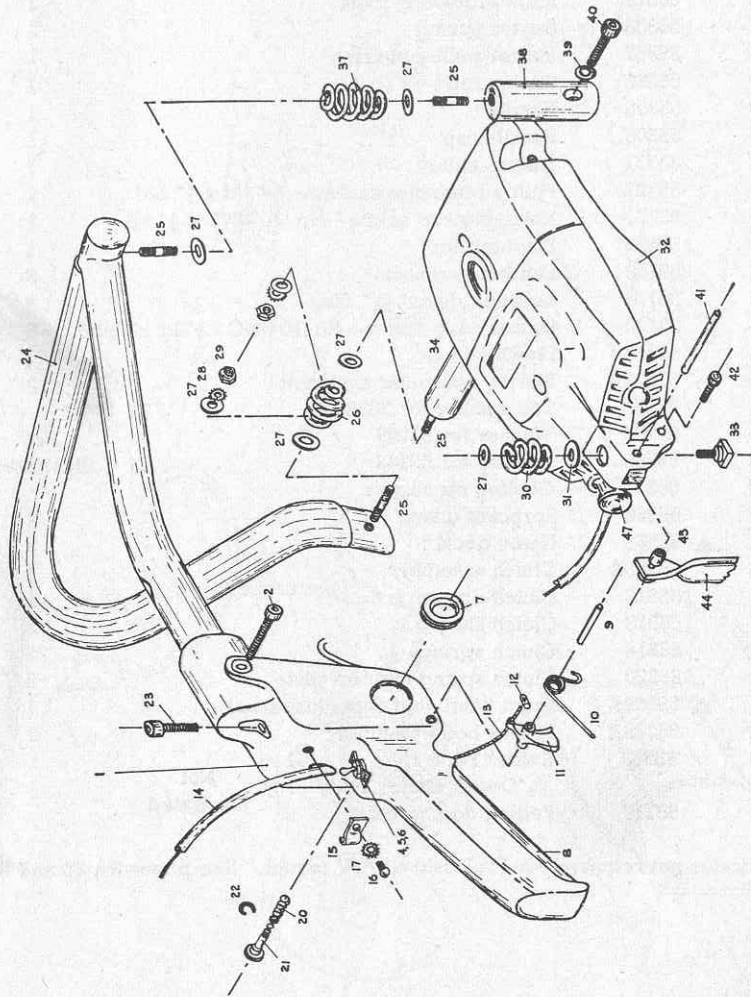
Not illustrated

Not illustrated

▲ Indicates not required for Professional A/V model. See pages 34, 35 and 36.



**'55' PROFESSIONAL ANTI-VIBRATION MODEL ONLY**

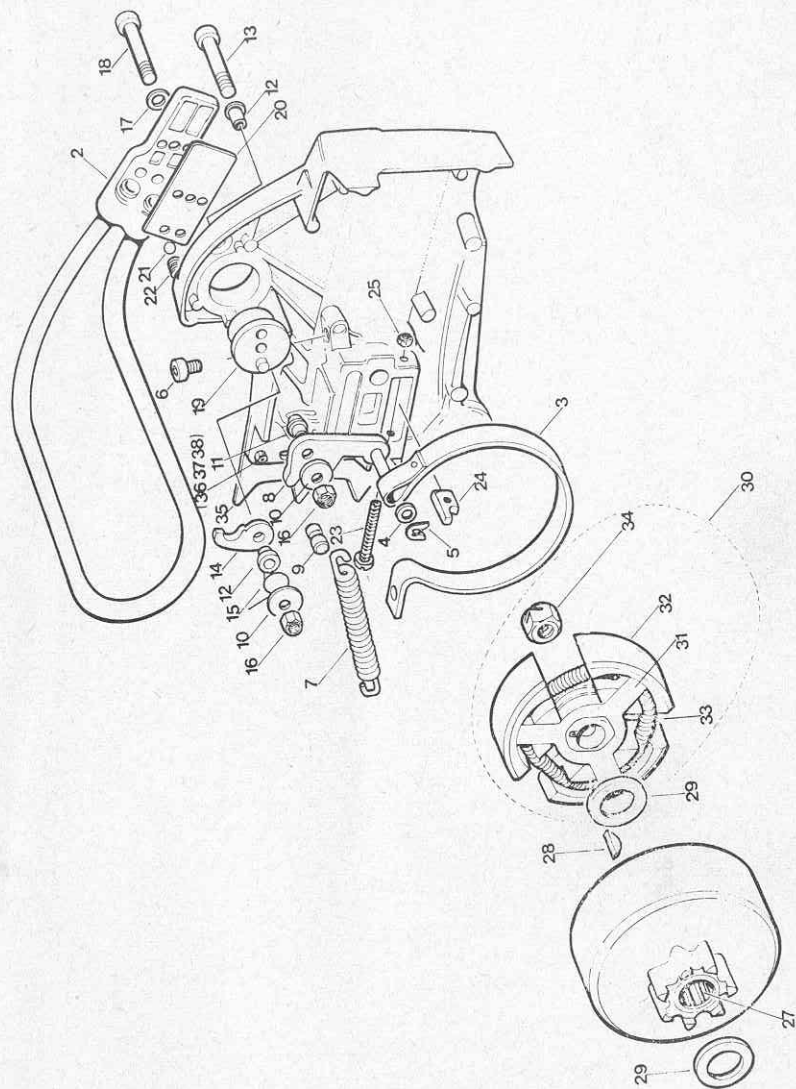


Index No.	Part No.	Description	No. req.
1	55567	Rear handle casting	1
2	55760	Capscrew $\frac{1}{4}$ UNC x $1\frac{1}{2}$ Lg.	1
4	55555	On/off switch complete	1
5	55558	Switch on/off plate	1
6	55559	Switch locknut	2
7	55802	Grommet	2
8	55580	Handle rubber-grip	1
9	55553	Throttle pin	1
10	55569	Throttle return spring	1
11	55527	Throttle lever	1
12	55807	Throttle cable rear end nipple	1
13	55804	Throttle inner cable	1
14	55805	Throttle outer cable	1
15	55808	Cable clamp	2
16	55761	Rd. head screw—No. 10-24 UNC x $\frac{3}{8}$ lg.	2
17	55762	$\frac{1}{8}$ Ext. shakeproof washer	2
18	55570	Carburettor connecting link	} Not Illustrated
19	55806	Cable forward nipple	
20	55516	Throttle stop spring	1
21	55515	Throttle stop button	1
22	55554	Retaining clip	1
23	55763	Capscrew $\frac{1}{4}$ UNF x $\frac{1}{2}$ lg.	1
24	55577	Handlebar frame	1
25	55755	$\frac{1}{4}$ UNC/UNF Stud	4
26	55579	L.H. front spring	1
27	55757	Washer plain $\frac{1}{4}$ i/d	11
28	55758	Washer $\frac{1}{4}$ i/d ext. shakeproof	6
29	55756	Hex. self-locking nut $\frac{1}{4}$ UNF	6
30	55572	Rear spring	1
31	55759	Rear spring seating washer	1
32	55566	Main tank casting	1
33	55576	Rear spring anchor screw	1
34	55573	L.H. spring mounting bar	1
35	55752	Capscrews No. 10 UNC x $\frac{3}{8}$ lg. for 55573	} Not Illustrated
36	55735	Washers for 55752	
37	55571	R.H. front spring	1
38	55574	R.H. spring mounted bar	1
39	55739	Washer $\frac{1}{4}$ i/d	1
40	55749	Capscrew $\frac{1}{4}$ UNC x 1" lg.	1
41	55803	Limiting pin $\frac{1}{8}$ " roll pin x $1\frac{1}{2}$ lg.	1
42	55752	Capscrew No. 10-24 UNC x $\frac{3}{8}$ lg.	1
43	55568	Strap spacer	

44	55575	Strap		1
45	55747	Capscrew No. 10-24 UNC x $\frac{1}{4}$ lg.	} Strap Forward	1
46	55735	Washer $\frac{3}{8}$ i/d		} Fixing (not ill.)
47	55423	Oil pump lever		1
48	55565	Name decal (not illustrated)		3

NOTES





### CHAIN BRAKE GROUP

Optional on L.H. and Professional Models

Index No.	Part No.	Description	No. req.
1	55901	Chain Brake Cover	1
2	55907	Guard Bracket Assembly	1
3	07525	Brake Band	1
4	07527	Washer	1
5	55915	Circlip	1
6	07907	Capscrew	1
7	07524	Spring	1
8	55911	Arm Assembly	1
9	55914	Anchor Pin	1
10	07520	Washer	2
11	07505	Pivot Bush	1
12	07506	Bush	2
13	07925	Capscrew	1
14	07517	Pawl	1
15	07519	Torsion Spring	1
16	07521	Nut	2
17	07976	Washer	1
18	55910	Capscrew	1
19	97514	Hub Assembly	1
20	55908	Sole Plate	1
21	07510	Spring	1
22	07511	Ball	1
23	55710	Chain Tension Screw	1
24	55307	Chain Tension Spigot	1
25	55723	Nut	1
26	55906	Sprocket/Drum Assembly (with bearing)	1
27	55651	Sprocket Bearing	1
28	55354	Key	1
29	55602	Thrust Washer	2
30	55902A	Clutch Assembly—complete	1
31	55902	Clutch Hub	1
32	55903	Clutch Shoe	3
33	55904	Clutch Spring	1
34	55905	Clutch Nut	1
35	55610	Felling Spike	1
36	55717	Screw	2
37	55731	Spring Washer	4
38	55722	Nut	2

The following parts are not required for machines fitted with a Chain Brake arrangement.

Part No.	Description	No. req.
55601	Sprocket Drum Assembly	1
55328A	Clutch Assembly Complete	1
55326	Sprocket Guard	1
07431	Safety Guard	1
55717	Screw	2
55735	Washer	2

Guard against the saw coming in contact with stones or dirt.  
Inspect the saw regularly for loose-nuts or bolts.  
Never ask anyone to hold the saw while starting the motor.  
Never start cutting until you have a clear space, a secure stance, and a safe exit from a falling tree.  
Never operate a chain saw in a closed room, exhaust fumes can be deadly.  
Never touch or try to stop a moving chain.  
Never operate a saw with a dull chain or one in need of repair.  
Never attempt to sharpen or remove chain with the engine running.  
Do not leave the saw idling while unattended.

6. FIRE PREVENTION—Refuel your saw with the aid of a funnel on an area of bare ground and away from any naked lights.  
If fuel is spilled on the motor, wipe it off, and move saw from any fuel before starting the motor.

Let a hot saw cool before refuelling.

Keep all electrical connections tight.

Clean carbon from exhaust regularly.

Never operate a chain saw without a silencer.

Do not use a saw that is back firing.

Do not wait for the engine to run out of fuel before refuelling.

7. GENERAL—Saws for use in Agriculture must be fitted with one or other of the guards specified in the "Agricultural (Field Machinery) Regulations 1962, Statutory Instrument 1962, No. 1472".

8. When transporting saw, fit chain cover.

9. Read the Forestry Safety Council Leaflet, FSC.10.

10. Wear ear defenders and eye protection when operating a chain saw.

ALL BEGINNERS SHOULD RECEIVE INSTRUCTION IN THE  
SAFE USE OF A CHAIN SAW BY A PROFESSIONAL OR  
EXPERIENCED OPERATOR BEFORE ATTEMPTING TO USE  
A SAW