FROM MACHINE NUMBER 216/56539

Hayter

Instruction and Spare Parts Book

HAYTER
19" HARRIER 2

BRIGGS & STRATTON ENGINE

HAYTERS P.L.C.

BISHOP'S STORTFORD · HERTS · ENGLAND · CM23 4BU

FIFTEEN PENCE

INTRODUCTION

The 19" HAYTER HARRIER 2 is robustly constructed and designed to give an efficient economical performance, combined with ease of operation. The correct operation and attention to routine maintenance as recommended will ensure long and efficient service from the machine. It is important that the machine is not abused or neglected.

The machine is carefully checked at our works prior to despatch and every effort is made by Hayters to see that the machine arrives in perfect condition. Your dealer will ensure this on delivery. It is recommended that you permit the dealer to go through the operating instructions with you.

Due to the possible settling in of new components, it is essential that after a short period of use all securing nuts and bolts be checked and tightened if necessary.

GUARANTEE

The machine is guaranteed against faulty workmanship and materials for a period of 12 months from the date of purchase. In the case of components not manufactured by HAYTERS P.L.C., no guarantee is given but the purchaser shall be entitled to the benefit of any guarantee given by the manufacturers of such components. Any claim under guarantee should be referred to the Agent through whom the machine was originally supplied, quoting the machine Serial Number which is located on the throttle control cable clamping bracket, on the engine.

The guarantee becomes void if any parts not made or supplied by Hayters are fitted to the machine. In the case of machines being used for hiring out purposes no guarantee of any kind is given or is to be implied.

ASSEMBLY INSTRUCTIONS

Remove the grassbox and machine from the carton and pivot the upper handlebar assembly until it is line with the lower handlebar section. Secure the upper handlebar to the lower by means of the locking knob situated at the base of the upper handlebar assembly. The locking knob being turned in a clockwise direction until tightly secured.

To fit the grassbox, raise the grass deflector plate, and fit the grassbox over the ridge provided on the mainframe casting.

OPERATING INSTRUCTIONS

See the engine manufacturers' handbook and carefully carry out the recommendations for starting the engine, ensuring that engine sump is filled to the correct level with one of the recommended grades of lubricating oils. It is most important that oil other than those grades recommended should not be used in this engine. See recommended lubrication chart affixed to the engine.

The engine as fitted to this machine incorporates an automatic choke device, when starting the engine set the throttle control lever to a position midway between 'FAST' and 'SLOW'. The engine is governed to run at the maximum speed of 3,200 r.p.m. and this speed is obtained by setting the throttle control lever in the 'FAST' position. Should any adjustments be made to the engine it is essential that the maximum governed speed of 3,200 r.p.m. is strictly adhered to.

CLUTCH LEVER

The Clutch mechanism is now an integral part of the engine and incorporates a 'fail-safe' device, i.e: the machine will only move forward whilst the clutch lever, which is situated on the handlebar is manually sustained. Release of the lever will cause the machine to stop.

CUTTING HEIGHT ADJUSTMENT

The cutting height range is from $\frac{1}{2}$" to 2" with seven settings. To increase the height of cut, the height adjusting lever must be moved towards the rear of the machine until the required cutting height is obtained.

HINTS ON OPERATION

The Hayter Harrier 2 is a self propelled machine having a forward speed of 2·6 m.p.h. and although primarily designed for lawn mowing, it will deal efficiently with runaway growth on lawns and other areas and also for Autumn leaf collection.

The machine is capable of giving long and efficient service, observance of the following 'Hints on Operation' will ensure this.

When the machine is used without the grassbox, the grass deflector will automatically lower to cover the discharge chute aperture and will deflect cuttings downwards and away from the operator. Under no circumstances must the machine be used with the deflector plate removed.

HINTS ON OPERATION

Lawns: Fit grassbox, raise cutting to maximum (2 ") and cut area. This will help to predetermine the height setting for the next cut and also eliminate the possibility of 'scalping' occurring on any high spots in the lawn.

Borders: The inset wheels permit mowing over lawn edges. Edge grasses should be cut with edging cutters first, the cuttings will then be collected as the lawn is mown.

Walls, Fences and other Obstructions: The machine can be safely used to cut close up to obstructions.

Runaway Growth on Lawns: Set cutting height to maximum, remove grassbox and cut area. The cuttings can then be collected by fitting grassbox and working over area a second time; if cuttings are wet, leave to dry and collect later.

Hidden Obstructions: When mowing overgrown areas, if practicable survey area first, removing any large items of debris. Should an obstruction be encountered whilst mowing the attention of the user will immediately be drawn by the frictional noise which is set up; draw the machine backwards without raising the front. Stop the engine and remove the spark plug, examine the cutting mechanism. If undamaged remove obstruction or proceed to work round it. Should, however, the cutterbar be broken or badly damaged it should be replaced immediately.

Blockage in the Discharge Chute Aperture: Observance of the preceding 'Hints' should eliminate the possibility of a blockage occurring in the Discharge Chute Aperture, for it is usually caused by attempting to remove too much grass initially with a low cutting height setting, especially, when conditions are wet, or from allowing the grassbox to become overfilled. Remember that, whatever the conditions, it is better to cut higher and more frequently than to try and cut low at the first cutting. It is most important that the engine is stopped and the sparking plug removed before attempting to clear a blockage or examine the cutting mechanism.

Under Deck Cleanliness: The underside of the mainframe casing is designed to permit the cutting mechanism to work efficiently and safely and also to provide the correct volume of air to pass through the casing to carry the cuttings through the rear aperture and into the grassbox or, alternatively, deflected downwards and on to the ground. After a period of use, and more especially when conditions are wet, grass cuttings can accumulate on the underside of the casing and if allowed to remain will eventually build up and greatly impair the efficiency of the machine. Regular cleaning of the underside of the casing by hosing or scraping off the debris will prevent this. Before attempting to clean the underside of the casing, stop the engine and remove the spark plug , the machine may then be turned on its side with the Silencer uppermost.

Grassbox: The grassbox requires minimal attention; ensure that the interior of the box is kept clean and that the air vents in the sides of the box are kept clear.

MAINTENANCE

Lubrication:

Height Adjustment Linkage Points: Apply a small amount of oil to the linkage and pivot points occassionally.

Throttle Control Cable: Apply a light application of oil to the inner cable occasionally.

Deflector Plate: Apply a light application of oil to the deflector plate hinge points occasionally.

Wheels: The wheel bearings are sealed units and are pre-packed with grease sufficient to last a long period of time, should however, further lubrication be required remove wheel covers and run in a little lubricating oil.

Clutch Cable: Apply a small quantity of light oil by means of an oilcan to the inner cable at the point where the cable connects with the clutch lever. Oil penetration down the cable will be facilitated if the clutch lever is worked backwards and forwards as the oil is applied.

Drive Mechanism: Lubrication of the drive mechanism is best carried out with the machine turned on its side, silencer uppermost and when the fuel tank is nearly empty, otherwise spillage will occur.

The points requiring lubrication are shown in Figure 1 and it is recommended that the revolving parts be turned whilst the lubricant is applied. Disconnect plug lead, remove the spark plug before carrying out this operation. The correct lubrication and frequency of application as shown in Figure 1.

MAINTENANCE

Lubrication:

Engine: See engine manufacturer's handbook and carefully carry out the recommended instructions, paying particular attention to the lubricating instructions. Cover up the machine when not in use.

The use of an upper cylinder lubricant is recommended where the machine is infrequently used and also towards the end of the season before Winter storage. When storing the machine, disconnect the spark plug lead, remove the spark plug. Insert a small quantity of oil into the cylinder and turn the engine, by means of the recoil start, a few times to distribute the oil. Replace spark plug, ensuring that the piston is at the top of its compression stroke and that both the inlet and exhaust valves are closed.

Adjustments:

Drive Chain

Do not run chains too tight. Correct adjustment will give $\frac{1}{2}$" free play at a centre point between sprockets. The sprockets should be turned and the movement tried in several places. To adjust slacken off tensioner retaining nut, and slide tensioner along it's slot until correct adjustment is found. Re-tighten tensioner retaining nut, and re-check adjustment.

Clutch Adjustment: To adjust the clutch, engage the clutch lever to its fullest extent and secure to the handlebar with a rubber band or tape.

Slacken locknut 'B' (see Fig. 2) and adjust nut 'A' until the clutch operating quadrant is hard up against the back stop. Securely tighten locknut 'B' and release the clutch lever.

Securing Nuts and Bolts: It is essential that all securing nuts and bolts are examined periodically and tightened if necessary.

Cutterbar: The Hayter cutterbar is friction driven by the dished bottom plate when in use. In the event of the cutterbar striking an obstruction the cutter bar is free to move relative to the bottom plate to a new position at which it will continue to cut. Regular inspection of the cutting mechanism is recommended to ensure that the cutterbar is in good condition. Should the cutterbar be damaged to the extent that it is likely to become out of balance it should be replaced immediately, ensuring that the new cutterbar is fitted exactly as shown in Fig. 3 and that the retaining setscrew, Item No. 84 is tightened securely. The cutterbar may be resharpened, ensuring that both cutting edges are evenly sharpened to maintain the balance.

It is important, when examining, cleaning or making any adjustment to the cutting mechanism that the engine be stopped and the sparking plug removed.

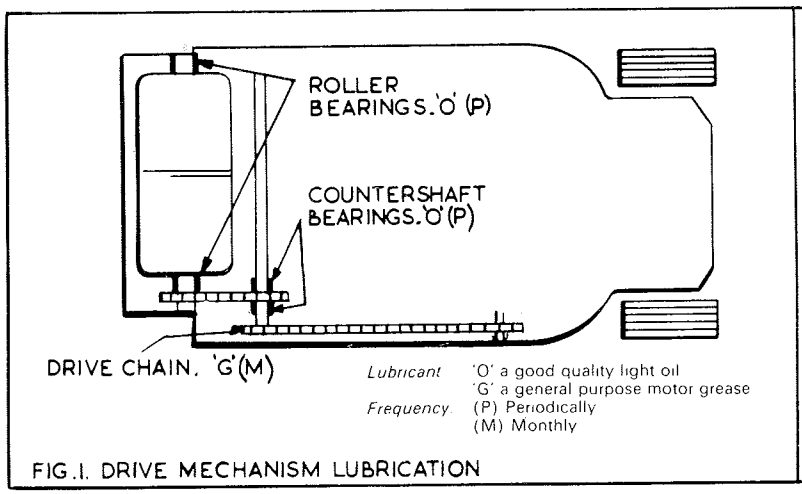


FIG.1. DRIVE MECHANISM LUBRICATION

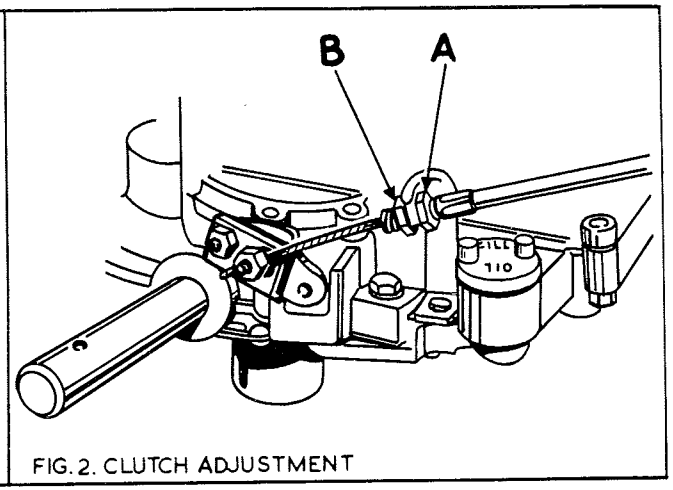


FIG.2. CLUTCH ADJUSTMENT

SAFETY PRECAUTIONS
(As recommended in B.S.5107:1974)

- Know your controls. Read the owner's manual carefully. Learn how to stop the engine quickly in any emergency.
- Make sure the lawn is clear of sticks, stones, bones, wire and debris. They could be thrown by the blade.
- Stop the engine and disconnect spark plug wire before checking or working on the mower.
- Damaged cutterbars and loose fixing bolts are major hazards. Before using, always visually inspect the cutting mechenism to ensure that it is in good condition. A damaged cutterbar should be replaced immediately, using only Hayter replacement cutterbars. Cutterbars can be re-sharpened, ensure that both cutting edges are evenly sharpened to maintain the balance.
- Always be sure the mower is in safe operating condition. Check all nuts, bolts and screws often. Use only replacement parts made and guaranteed by HAYTERS P.L.C.
- Add fuel BEFORE starting the engine. Avoid spilling petrol and do not fill the tank while the engine is running or while you are smoking.
- Do not mow whilst people, especially children, or pets are in the mowing area.
- 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.
- 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 grass by pulling the mower towards you.
- Do not overspeed the engine or alter governor settings. Excessive speed is dangerous and shortens mower life.
- Store fuel in a cool place in a container specifically designed for the purpose. In general, plastic containers are unsuitable.
- Warning : Blades continue to rotate after machine is switched off.
- When using the machine without the grassbox, do not lift the deflector plate whilst the machine is in operation.
- Never insert hand into grass discharge chute whilst the engine is running.
- Stop the engine before pushing the mower across gravel drives, walks or roads.
- Never pick up or carry a mower when it is operating.

The Hayter Harrier 2 is perfectly safe if used correctly. Failure to observe these simple precautions may result in serious injury.

SPARE PARTS LIST
(Subject to revision without notice)

FROM MACHINE NUMBER 216/56539

All spares must be ordered through an authorised Hayter Agent.
When ordering spares please quote the SERIAL NUMBER of your machine and the PART NUMBER, not the ITEM NUMBER, of the required part.

Item No.	Part No.	No. Off	DESCRIPTION
			MAINFRAME ASSEMBLY Fig. 3
1	354	2	Bush
2	1428	1	Circlip
3	1662	1	Key
4	2708	2	Tru-arc bowed retainer
5			
6	4331	1	Felt Seal
7	5725	1	Clutch Lever
8	3064	2	Bush
9	3997	1	Roll Pin
10	6020	1	Chain Tensioner
11	5430	2	Axle Pivot Bolt Assembly
12	3296	1	Bush
13	3354	1	Roll Pin
14	3667	2	Rivet
15	5454	1	Grass Deflector Plate
16	3958	1	Upper Handlebar
17	3959	2	Handlegrip
18	5614	1	Throttle Control and Cable
19	5426	1	15T Sprocket
20	5455	2	Deflector Plate Spring
21	3966	1	Cable Strap
22	3967	1	Height Adjusting Ratchet Plate
23	3971	2	Roller Bearing Housing
24	3973	1	Final Drive Chain
25	3974	1	Final Drive Guard
26	5421	1	Tension Spring
27			
28			
29			
30	4012	1	Friction Disc Assembly

continued overleaf

SPARE PARTS LIST (Cont'd)

Item No.	Part No.	No. Off	DESCRIPTION
31	4013	1	Cutterbar
32	4014	1	Cutterbar Distance Piece
33	4017	2	Nylon Washer
34	4020	1	Push Fix Clip
35	5631	1	Mounting Block
36	5411	1	Friction Disc
37	5415	1	Friction Disc Boss
38	4478	1	Front Axle
39	4479	1	N/S Axle Arm
40	5218	2	7" × 1¾" Wheel c/w Bearing
41	5221	A/R	Bearing
226013 42	5671	1	Knob
43	4897	2	Lower Handlebar Block
44	5220	2	Wheel Cover
45	5232	2	Height Adjusting Lever Handle (Half)
46	5416	1	Mainframe Casting
47	5930	1	Engine B. and S. Spec. No. 110988
48	5267	1	Rear Roller Frame
49	5268	1	Rear Roller
50	5269	1	Final Drive Sprocket
51	5425	1	12T Sprocket
52		1	
53	3096	1	Circlip
54	5723	1	Drive Shaft Assembly
55	5418	1	Chain (76 links)
56			
57	5724	1	Bearing Housing
58	5726	1	Cable Clamp Screw & Nut
59			
60	5722	1	Clutch Cable
61			
62	5868	1	Lower Handlebar
63	5417	1	Connecting Rod
64	5283	1	Cover Plate
65	5284	1	Primary Chain Cover
66	5285	1	Grassbox
67	5286	1	Grass Deflector Lug
68	5321	1	Key
69			

Item No.	Part No.	No. Off	DESCRIPTION
70	5323	1	Grass Deflector Stop
71	3969	1	Spring Handle
72		1	
73	5424	1	Idler Sprocket Sleeve
74	6130	1	Lever Plate
75	9014	1	2 BA × 1" RD. HD. Screw
76	9038	4	⅝" × ¼" UNF. Setscrew
77	9039	3	¾" × ¼" UNF. Setscrew
78	9373	1	M8 × 25 mm Coach Bolt
79	9070	3	¾" × 5/16" UNF. Setscrew
80	9073	4	1" × 5/16" UNF. Setscrew
81	9349	3	⅜" UNC × 1¼" Screw
82	9086	2	1¾" × 5/16" UNF. Bolt
83	9094	1	2¾" × 5/16" UNF Bolt
84	9116	1	1¼" × ⅜" UNF Bolt
85	9191	3	2 BA Plain Nut
86	9201	3	¼" UNF. Nyloc Nut
87	9202	5	¼" UNF. Philidas Lock Nut Ex. Thin
88	9209	6	5/16" UNF. Nyloc Nut
89	9231	2	½" UNF. Lock Nut T Type
90	9443	1	M8 Plain Nut
91	9269	1	5/16" S/P Washer
92	9261	2	¼" Plain Washer
93	9266	6	5/16" Plain Washer
94	9267	2	5/16" × Large O/D Washer
95	9273	1	⅜" S/C Spring Washer
96	9268	1	5/16" S/C Spring Washer
97	9336	4	¼" Dia. × ⅝" Flat HD. Rivet
98	9358	2	M5 × 30mm Screw
99	9019	1	2BA × ½" Screw

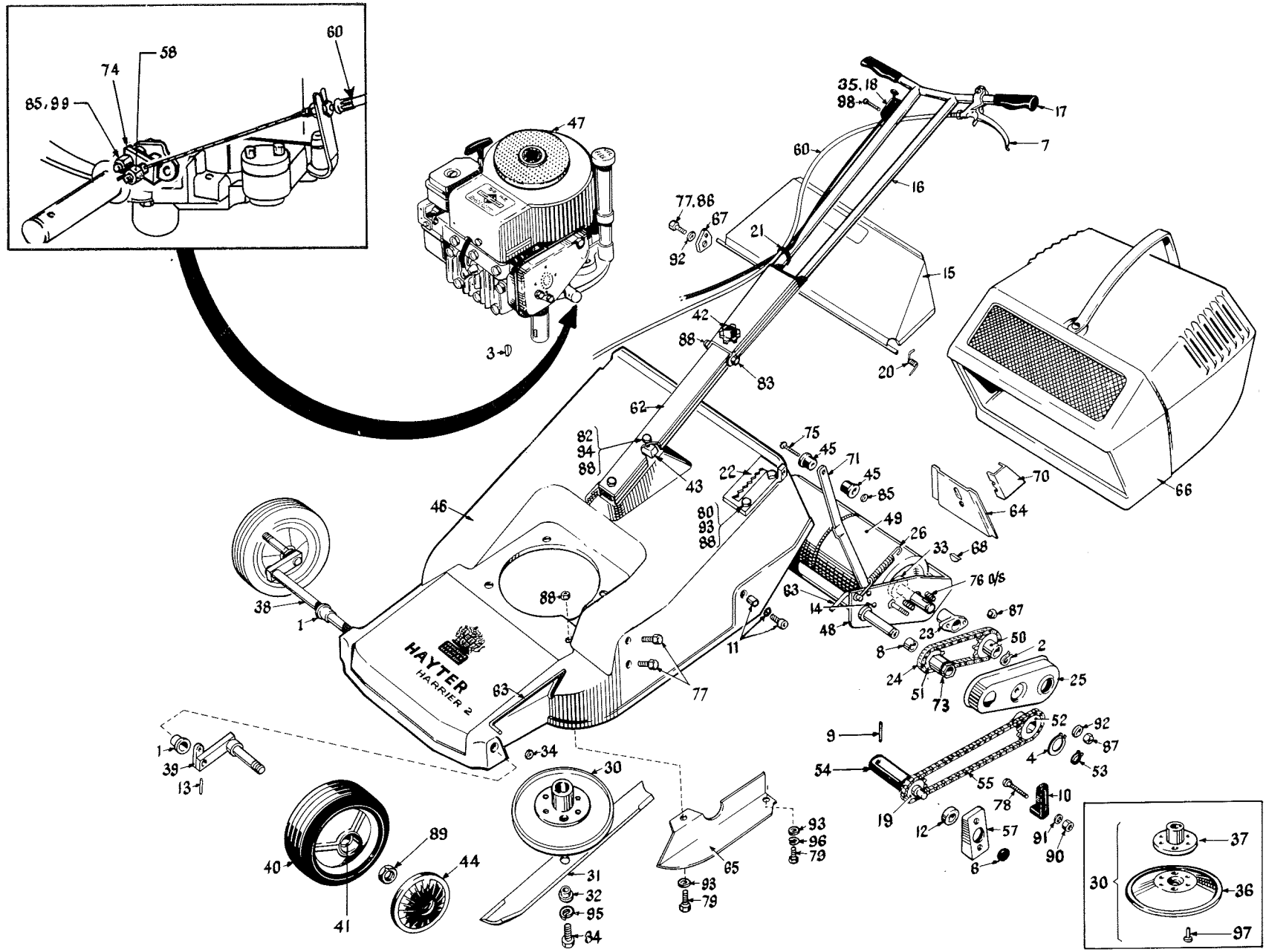


Fig. 3 Mainframe Assembly

Saffron Press Ltd.
West Rd., Saffron Walden

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