

SPORTS GREEN HAND MOWER

INSTRUCTIONS TO THE USER

THE J·P ENGINEERING COMPANY, LIMITED

Manufacturers of J·P Super Lawnmowers

MEYNELL ROAD · LEICESTER · ENGLAND

FOREWORD

The J.P. 16" SPORTS GREEN HAND MOWER has specific design features to give a high speed cutting performance to produce a close cut and fine finish required in the mowing of Sports Green areas.

The design incorporates the J.P. detachable cutter unit, together with a higher transmission speed to give high cutting frequency.

The machine is produced to precision engineering standards and with proper care and maintenance will give an efficient cutting performance and reliable service.

Instructions and illustrations have been made as simple as possible, but modification in design may affect the specification necessitating some alteration without incurring to us any liability for such alteration to be made on machines already delivered.

J.P. Lawnmowers are fully guaranteed for replacement only of any part against failure proved to be due to faulty material or workmanship.

J·P

THE J.P. ENGINEERING COMPANY LIMITED

Makers of Quality Lawnmowers

MEYNELL ROAD . LEICESTER . ENGLAND

Telegrams: "Superlamo" Leicester

Telephone: 67542 (2 lines)

SPORTS GREEN J-P HAND MOWER

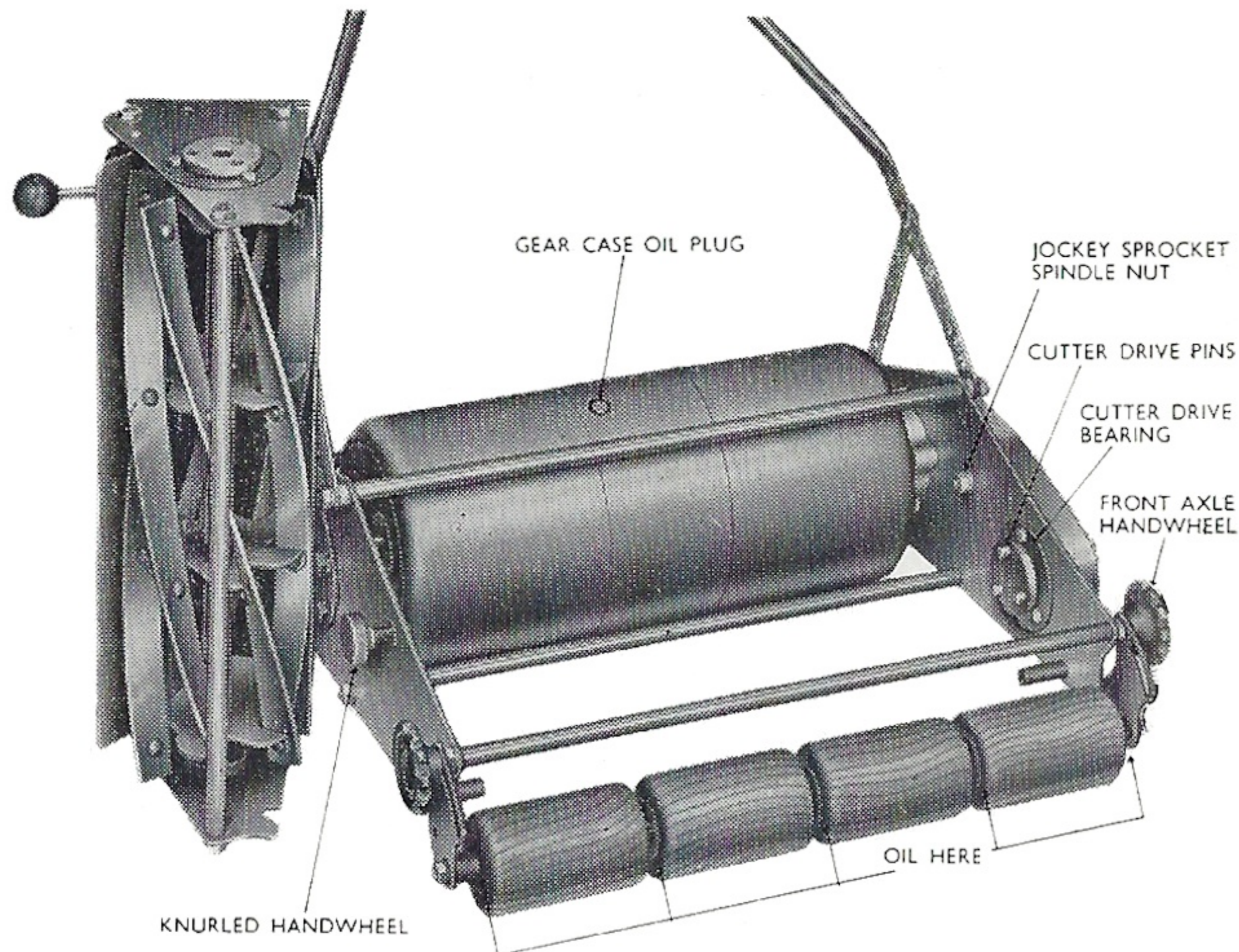


Fig. 1

INSTRUCTIONS

SECTION 1 LUBRICATION

The following oiling points on the machine should receive frequent attention when in regular use:

- (1) **Front Rollers** apply oil at the space provided between each roller. To assist the feed of oil, tip the machine on each side. (Medium grade oil every week). Fig. 1.
- (2) **Rotary Cutter Bearings**, first remove detachable unit. Now place the unit carefully on its side when a rubber plug will be seen in the bearing cover. This should be removed and oil applied to the bearing, afterwards replace.
Then turn the opposite end upwards when an oil hole will be seen through one of the three large coupling holes. Oil to the bearing should be applied at this point. (Medium grade oil every two weeks). Fig. 2.
- (3) **Front Cutter Drive Bearing** located in the main side frame by first removing the cutter unit. The oil hole will be seen through the large hole in the flange of the cutter coupling. (Medium grade oil every two weeks). Fig. 1.
- (4) **Rear Axle Drums and Bearings**. Lubricate by first standing the machine upright with the handlebars against a wall. A grease gun lubricator will then be seen each side in the aluminium bearing housings and grease should be applied with the grease gun.
Now slowly revolve each drum when an oil lubricator will be seen projecting from each drum face. Oil should be applied here to lubricate the drive plungers. Grease and oil with medium grade every two months.
- (5) **Chain Transmission and Sprockets**. Oil should be applied at the lubricating point seen on top of the aluminium transmission cover.

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- (6) **Rear Roller Assembly.** The centre section gear case chamber of the rear roller is an assembly in two halves and contains the epicyclic speed up gears which run in an oil bath inside the gear case chamber. The chamber should be topped up once during the season by applying a charge of oil (about a small eggcupful) into the gear case. Access to the oiling point is made by first unscrewing the hexagon brass cover screw seen in the recess of the centre section rear roller, Fig. 1.

Care should be taken to clean away all dirt and grit before removing the hexagon screw. Replace the screw and tighten up securely.

The chamber should be drained annually and replenished with a full charge of fresh oil. (Quantity not more than half pint).

The type of oil to be used for the rear roller should be Castrol XL... or oil of similar viscosity. Do not use thin oil.

SECTION 2

SETTING AND ADJUSTMENT, PREPARATORY TO USE

Cutter Setting and Blade Contact Adjustment

Adjust the shear blade to the rotary cutter by moving the round headed adjusting lever (Fig. 2) in the direction towards the rear roller as far as it will go as permitted by the cutter setting stop; this will bring the bottom blade into a LIGHT AUDIBLE CONTACT with the rotary cutter which is the correct adjustment for cutting.

Adjustment for Height of Cut

This adjustment is made by the front axle hand wheels (Fig 1). First unscrew both hand wheels for a turn. The adjustment of the front roller axle can then be set to the desired position in accordance with the close setting required.

At the commencing part of the season when there may be some extra winter growth and also greens have not firmed to normal standard, it is not advisable to set the cut too close.

Later as the green cuts harder and growth more even the adjustment may be set further back in the traverse slot, the machine will then cut to a very close degree and fine finish. After making the adjustment be careful to re-tighten the hand wheels carefully to prevent the adjustment from moving.

Handlebar Adjustment

The handlebar can be adjusted to the suitable height required. First unscrew for a couple of turns the two rear tie bar nuts. The slot in the handlebar supporting strut enables the bars to be adjusted to the position required, after which the tie bar nuts should be screwed up and tightened to the supporting strut.

Before making the handlebar adjustment it is always advisable to ensure that the front roller adjustment is in the position for cutting as if this adjustment is made afterwards it will alter the position of the height of the handlebars.

Fixing the Grassbox

To fix the grassbox into position, first insert the two metal wings between the chassis side frame. The box can then be lowered, with the bottom slot of the wing engaging in each of the unit supporting pegs, and the upper slot resting on the front cross tie bar.

Mowing Action

When mowing push down in the direction of the rear roller, and not onto the front rollers; this will facilitate ease of movement in the working of the machine.

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SECTION 3 MAINTENANCE ADJUSTMENTS

References in the instruction to left or right hand side of the machine is always understood to be taken when standing in the working position.

Cutter Setting Stop

The machine is fitted with a cutter setting stop (Fig. 2), the feature of which is a great assistance insofar that after the mowing is completed, the cutting contact of the shear blade and rotary cutter can be released by moving the round headed lever forward away from the rear roller; subsequently when the machine is to be used again, it is only necessary to move the round headed adjusting lever as far as it will go up to the setting stop which will bring the cutter setting in the pre-adjusted position.

Special Note

On any future occasion of the cutters being reground, or the machine dismantled, it is important to see that the cutter setting stop is re-adjusted and the procedure should be as follows:

- (1) First unscrew the locking nut of the setting stop screw a couple of turns to release the stop and make it free on the tube.
- (2) Now set the bottom shear blade parallel to the rotary cutter. (Please refer to the instructions, reference Parallelism of Cutters)
- (3) Adjust the bottom shear blade to a **LIGHT AUDIBLE CONTACT** with the rotary cutter by moving the round headed lever in the direction of the rear roller.
- (4) With the cutters adjusted to a **LIGHT AUDIBLE CONTACT**, the cutter setting stop should be rotated and positioned so that the bottom end of the stop contacts up against the back of the grass shield. The lock nut and screw should then be tightened securely in position. A light audible contact between the rotary cutter and the shear blade will give the best cutting results. Too harsh a contact will only cause unnecessary wear and make the machine harder to push.

Chain Adjustment

Any necessary adjustment required for the driving chain can be made by highering or lowering the small jockey sprocket which will be seen after removing the aluminium transmission cover.

The jockey sprocket will be seen positioned between the two driving sprockets and can be released for adjustment by first unscrewing the nut of the jockey sprocket spindle on the inside of the side frame (Fig. 1).

After the adjustment is made the nuts should be securely tightened. Do not make the chain adjustment too tight as that will cause resistance to free movement. There should always be a little slackness in a correctly adjusted chain.

Parallelism of Cutters

The cutter unit is set and inspected before despatch to cut equally along the whole length of the rotary cutter when the contact adjustment with the bottom shear blade is made, and no attention to correct any mis-alignment should be necessary unless the machine has been dismantled or subjected to excessive shock or through fouling an obstruction.

Out of alignment of the bottom shear blade with the rotary cutter can be corrected by the following adjustment:—

First remove the cutter unit from the chassis, on the right hand side of the unit will be seen a knurled headed adjuster which is connected to the top tie bar by a flat link (Fig. 2).

The tie bar nut should be unscrewed a couple of turns and the knurled adjuster should then be turned; this action will higher or lower the knife frame to which is attached the shear blade and will enable the bottom shear blade to be adjusted into parallel relationship with the rotary cutter.

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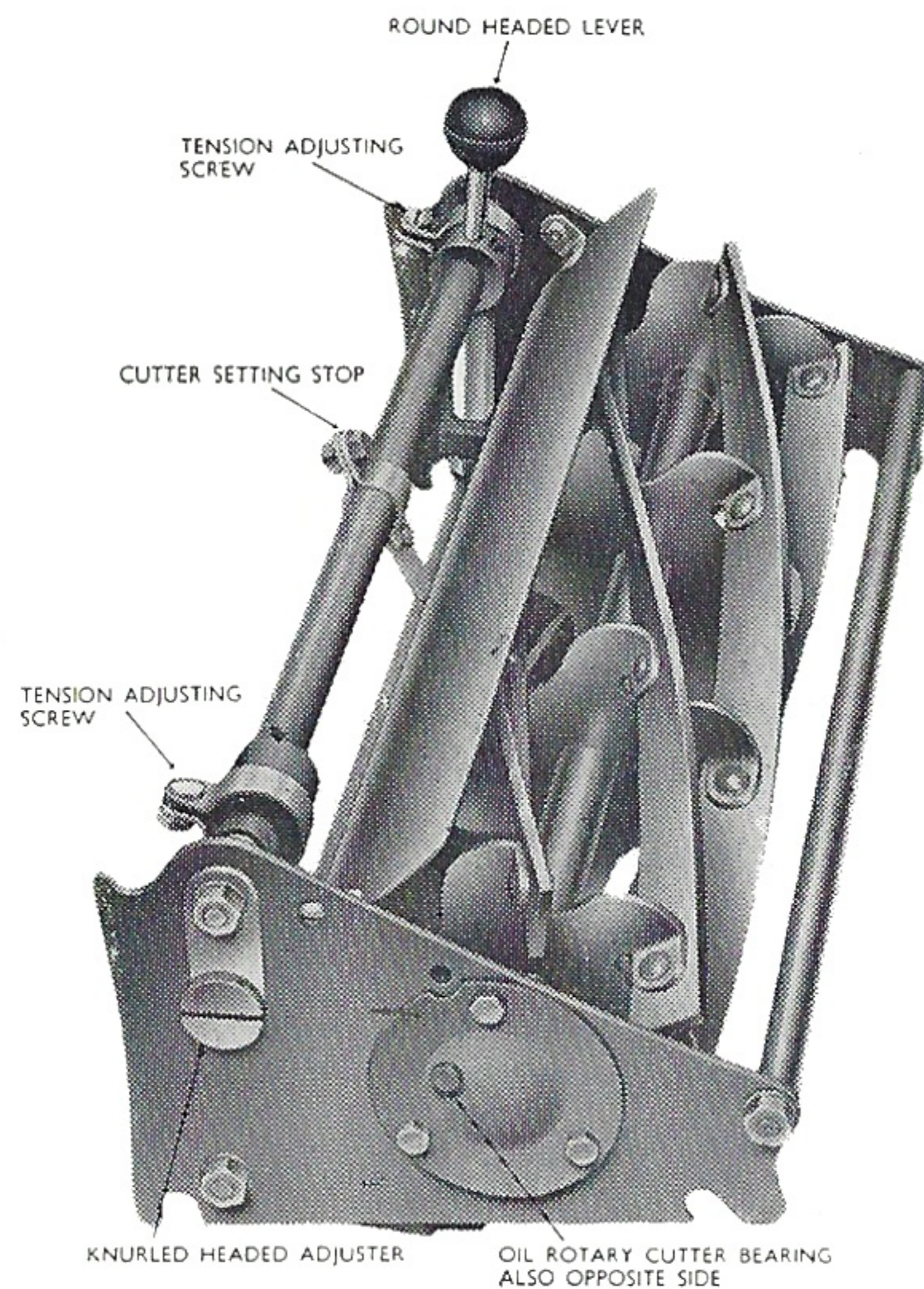


Fig. 2

To ensure that the adjustment has been made correctly, the setting should be tested with a strip of ordinary brown paper by cutting from end to end on each blade of the rotary cutter.

The cutting test should be made with the shear blade adjusted to a light audible contact with the rotary cutter. Ref: Cutter Setting Stop.

After adjustment, tighten up the tie bar locknut securely.

Tension of the Shear Blade Adjuster

The tension of the round headed lever adjuster for bringing the blades into contact can be adjusted by the screws which secure the two knife frame straps in position (Fig. 2).

Under the holding screws is a compression washer which permits tension adjustment to be made. The two holding screws should always be reasonably tight to give a moveable tension to the eccentric adjustment which is operated by the lever. The correct tension adjustment is important as it ensures against any disturbance of the cutter setting through vibration.

Cleaning and Removing the Rotary Cutter Unit

Upon completion of the mowing, clean off all the clinging grass and dirt and store in a dry tool shed. NEVER USE WATER.

To clean the machine thoroughly, the cutter unit can easily be detached from the chassis by unscrewing the knurled handwheel seen on the right hand side frame (Fig. 1).

The cutter unit can then be moved over to the left as far as it will go, clear of the engaging drive pins and then lifted out from the chassis (Fig. 1). Care should be exercised when cleaning the unit to keep the fingers away from the bottom shear blade and the rotary cutter blades. Handle the unit carefully and do not bump or subject it to shock otherwise the parallel cutting adjustment may be disturbed.

Replacing the Cutter Unit

First place the unit between the chassis side frames with the front slots of the unit side plates engaging and resting on the two projecting studs seen one on each side of the chassis. Then lower the unit until the rear slots of the unit bracket engage and sit on to the cross tie bar.

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Now move the cutter unit as far as it will go until the drive of the two halves of the coupling is engaged. The knurled handwheel on the right hand side frame should then be screwed up until it engages in the hole of the unit side plate.

To remove the Rear Roller Assembly

First remove the transmission cover, by unscrewing the three retaining screws, take off the driving chain by removing the spring clip, and the chain connecting link. The freewheel can now be taken off by first unscrewing the hexagon nut and then withdrawing the freewheel in an endwise direction, clear of the axle shaft.

The four hexagon bolts, which hold the bearing housings on each side of the chassis, can now be removed to allow the complete axle to be taken out by passing the projecting end of the shafts down the slots in the side frame.

To re-assemble, the reverse procedure should be adopted.

AFTER SERVICE AND INSTRUCTIONS FOR ORDERING SPARE PARTS

- 1 We have available a first class overhaul and repair Service Department, fully equipped with modern facilities.
Always see that the machines and cutters returned for overhaul and regrinding are properly packed and labelled with the name and address of the sender securely attached. On request, we will despatch a crate for the return of your machine for works overhaul and service attention.
- 2 The main parts are listed on page 7 with the respective part numbers. Always give part number and description in full.
- 3 When ordering spare parts, always quote the serial number of the machine, which you will find stamped on the front edge of the main chain case side frame; it is important that the prefix letters and the serial number reference are quoted in full to ensure that the correct parts are despatched. **ALWAYS QUOTE THE MACHINE NUMBER IN CORRESPONDENCE.**
- 4 All machines and component parts must be consigned to us, carriage paid, addressed to the Service Department; goods returned by rail are consigned carriage paid. Old and worn out parts sent as patterns which we consider are obsolete and of no further use are not returned unless we are specially requested to do so at the time they are sent to us.
- 5 If required, we are prepared to submit an estimate before proceeding with any repairs.
- 6 Estimates must be treated as approximate only. We reserve the right to include additional parts should they be found necessary on further examination to make the repair a satisfactory job.

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PART NUMBERS AND DESCRIPTION FOR 16" SPORTS GREEN MODEL

<i>Part No.</i>	<i>Description</i>	<i>Part No.</i>	<i>Description</i>
G1-1c/1	Setscrew B.R.G. Housing	G2-11/1	Jockey Pin
FG1-10A/B	Handlebars	BG2-35	Jockey Sprocket
G1-12A	Clip Top (Handlebar)	G2-17	Bush—Jockey Sprocket
G1-12B	Clip Bottom (Handlebar)	D2-41	Cutter Coupling (Male)
G1-13	Bolt—Handlebar Clip	D2-42	Rubber Friction Disc
G1-17/1	Rubber Grip	B2-43	Plug—Oil Rear Axle
BG1-20	Transmission Cover	B2-43W	Fibre Washer
BG1-21	Setscrew Trans. Cover	19-1-1A	Grease Nipple
D1-25	Unit Retaining Screw	BG3-1	Cutter
XD2-1	Drum	D3-5	Cutter Coupling (Female)
19-2-2	Plunger Pawl	X19-4-1	Shear Blade
19-2-3	Taper Pin	No. 3	
19-2-4	Plunger Spring	G4-2	Screw—Shear Blade
BG2-7B	Planet Half Gear Case	H4-6	Locking Bolt
XD2-7C/D	Tube Planet Gear Case	G4-6W	Rubber Packing Washer
BG2-8B	Annular Gear Case	G4-8	Adjusting Handle
XD2-8C/D	Tube Annular Gear Case	G4-9	Knob—Adjusting Handle
D2-9	Screw—Gear Case	H4-12A	Cutter Setting Stop (Lower)
19-2-11A	Washer Planet Gear	H4-12B	Cutter Setting Stop (Upper)
19-2-11B	Split Pin—Planet Axle	XD4-16	Deflector Plate
D2-12	Planet Gear	19-9-9B	Screw Deflector Plate)
D2-13	Annular Gear	D5-1BG	Front Roller (Aluminium)
BG2-16	Annular Gear Shaft	D5-1B	Bush
BG2-17	Pinion Gear	XD5-2	Front Axle
D2-18	Pinion Shaft	G5-9	Handwheel
D2-40	Freewheel	D6-0	Grassbox complete
BG2-34	Chain	RL.5	Cutter Bearing
19-3-5SU	Sprocket—Cutter Drive	RLS.5	Cutter Drive Bearing
		EE.9	Rear Axle Bearing
		RL.8	Freewheel Sleeve Bearing

