



A member of the Turfmech group



— Grounds Care Machinery —

Buffalo 20, 24 & 27”

OPERATOR & PARTS MANUAL

For Serial number:

BU20/4-XX-XXX onwards

BU24/4-XX-XXX onwards

BU27/4-XX-XXX onwards

(AM81589 Issue B March 2013)

English version

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READ THIS MANUAL BEFORE USING AN ALLETT BUFFALO CYLINDER
MOWER.

YOUR SAFETY IS INVOLVED

IT IS ESSENTIAL THAT OPERATORS STUDY THIS DOCUMENT FOR THEIR
OWN SAFETY.

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1.0 Introduction

The Buffalo lawn mower range is designed as a professional lawn and sports turf mower.

The lawn mower is powered by a petrol engine, it is self propelled via a belt and chain drive to the land roll. The land roll has an internal geared differential. Power is transferred to the cutting cylinder via toothed belt drive.

The Buffalo mowers are designed for the management of high quality turf. Use in any way other than that stated is considered contrary to the intended use. Compliance and strict adherence to the conditions of operation, service and repair as specified in this manual also constitute essential elements of the intended use.

The way in which the Buffalo mower is operated and maintained will have a profound effect on its performance and reliability.

A Buffalo mower should be operated, serviced and repaired only by persons who are familiar with its particular characteristics and who are familiar with the relevant safety procedures.

The safety precautions outlined in this manual and all other generally recognised regulations on safety must be observed at all times.

Any modifications carried out to a Buffalo mower will relieve Turfmech Machinery Limited of liability for any resulting damage or injury.

This manual is based on information available at the time of publication.

Turfmech Machinery Limited reserves the right to amend product specifications without prior notification.

1.1 Model type and serial number

The model can be found in two places:


1. On the top cover of the mower.
2. On the serial number plate located on the right side of the mower chassis.

The serial number can be found on the serial plate.

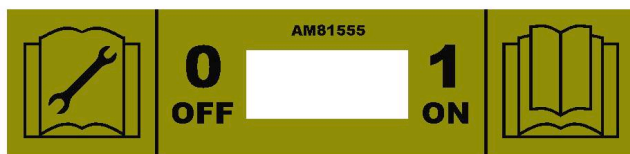
Please enter your information below

Model:

Serial Number:

TURFMECH MACHINERY LTD.		
Hanger 5, Hixon, Staffordshire, U.K ST18 0PJ Tel: 01889271503 www.turfmech.co.uk		
MODEL	<input type="text"/>	
SERIAL No.	<input type="text"/>	
YEAR OF MAN'F	<input type="text"/>	UNLADEN WEIGHT Kg <input type="text"/>

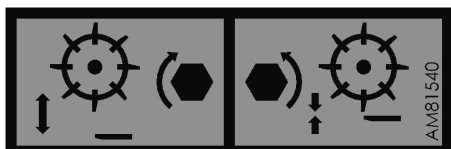
2.0 Pictograms and Decals



Refer to manual before carrying out maintenance, Engine On/Off switch, Read manual before starting



Guaranteed Sound power level emitted by the mower



Bottom blade to cylinder adjustment



Flying debris, keep bystanders away. Warning, sharp blades, do not touch rotating blades. The blades continue to rotate after the mower is switched off

3.0 Safety notes

Read these instructions carefully, be familiar with the controls and the proper use of the lawnmower.

Learn how to stop the lawnmower quickly in an emergency.

Never allow children or people unfamiliar with these instructions to use the lawnmower. Local regulations may restrict the age of the operator.

Never mow while people, especially children or pets are nearby

Never pick up or carry the lawnmower while the motor is running.

Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

Whilst mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.

Wear appropriate protective clothing and equipment when you are operating the lawnmower, such as safety glasses, long trousers, substantial footwear and ear protection. Long hair, loose clothing or jewellery can get tangled in moving parts. Thoroughly inspect the area where the lawn mower is to be used and remove all objects that may be thrown by the machine.

WARNING - petrol is highly flammable.

- Store fuel in containers especially designed for this purpose
- Refuel outdoors only and do not smoke while refuelling
- Add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol whilst the engine is running or the engine is hot.
- If petrol is spilt, do not attempt to start the engine, move the machine away from the area of spillage and avoid creating any source of ignition until petrol vapours have dissipated.
- Replace the fuel tank and container caps securely

- Replace faulty silencers
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Before using, always visually inspect to see that the cutting cylinder is not worn or damaged.

Mow only in daylight or in good artificial light.

Avoid operating the lawnmower in wet grass, where feasible.

Always be sure of your footing on slopes.

Walk, never run.

Mowing on banks can be dangerous:

- Mow across the face of slopes – never up and down.
- Be particularly careful of your footing on slopes or wet grass.

Exercise extreme caution when changing direction on slopes.

Do not mow excessively steep slopes.

- Use extreme caution when stepping back or pulling the lawnmower towards you.

Stop the blades if the lawnmower has to be tilted for transportation when crossing surfaces other than grass and when transporting the lawnmower to and from the area to be mowed.

Do not tilt the lawnmower when engaging the blades, except if the lawnmower has to be tilted for starting in long grass. In this case, do not tilt it more than absolutely necessary and lift only the part which is away from the operator. Always ensure that both hands are in the operating position when returning the mower to the ground.

Never operate the lawnmower with defective guards or without the safety devices, for example deflectors and grass catchers in place.

Do not change the engine governor settings or overspeed the engine. Operating an engine at excessive speed may increase the hazard of personal injury.

Disengage all blade drive clutches before starting the engine

Start the engine carefully according to instructions and with feet well away from the blades. Do not tilt the mower when starting. Keep clear of the discharge opening at all times. Never pick up or carry a lawnmower while the engine is running.

Do not put hands or feet near or under rotating parts while the lawnmower is being operated.

Stop the engine and disconnect the spark plug lead:

- Before checking, cleaning or working on the lawnmower
- After striking a foreign object, inspect the lawnmower for damage and make repairs before restarting and operating the lawnmower.
- If the lawn mower starts to vibrate abnormally (check immediately).
- Before making height of cut adjustment

Stop the engine:

- Whenever you leave the machine
- Before refuelling
- Before checking blockages
- Before making a height of cut adjustment

Reduce the throttle setting during engine shut-down and turn the fuel off at the conclusion of mowing.

Keep all nuts, bolts and screws tight to be sure that the lawnmower is in safe working condition.

Never store the lawnmower with petrol in the tank inside a building where fumes may reach an open flame or spark.

Allow the engine to cool before storing in any enclosure.

To reduce the fire hazard, keep the engine, silencer and fuel storage area free of grass, leaves or excessive grease.

Check the grassbox frequently for wear or deterioration.

Replace worn or damaged parts for safety.

Go slow when using a trailing seat, especially when cornering.

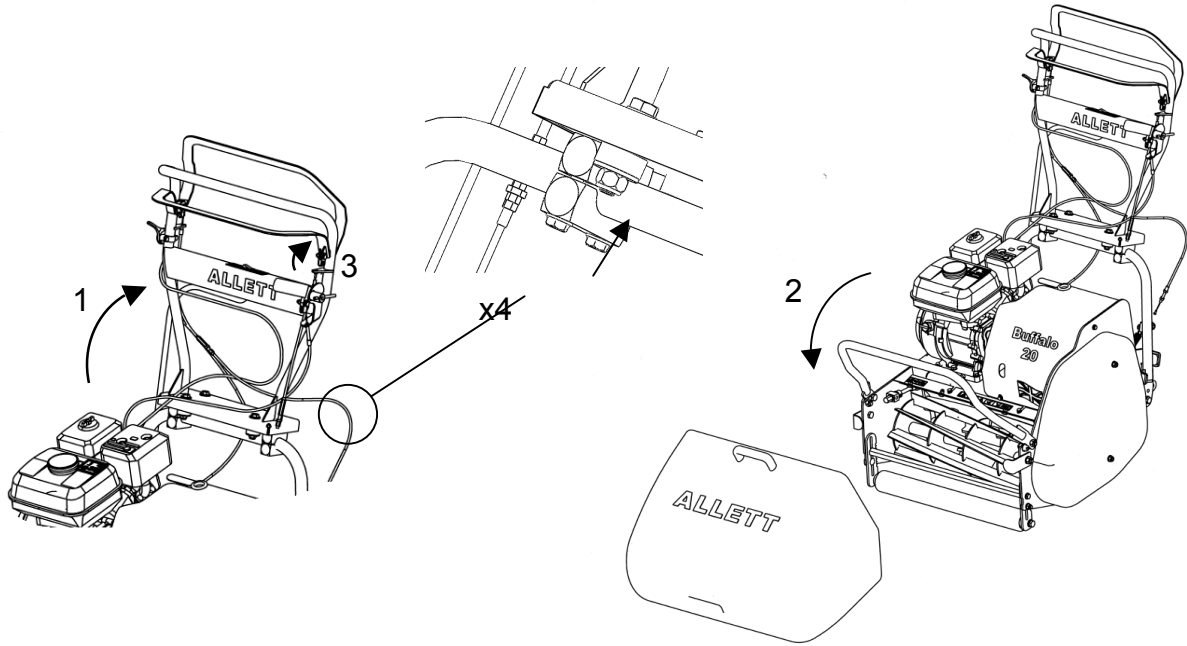
If the fuel tank has to be drained, this should be done outdoors.

Be careful during the adjustment of the lawnmower to prevent entrapment of the feet and hands between moving blades and fixed parts of the lawnmower.

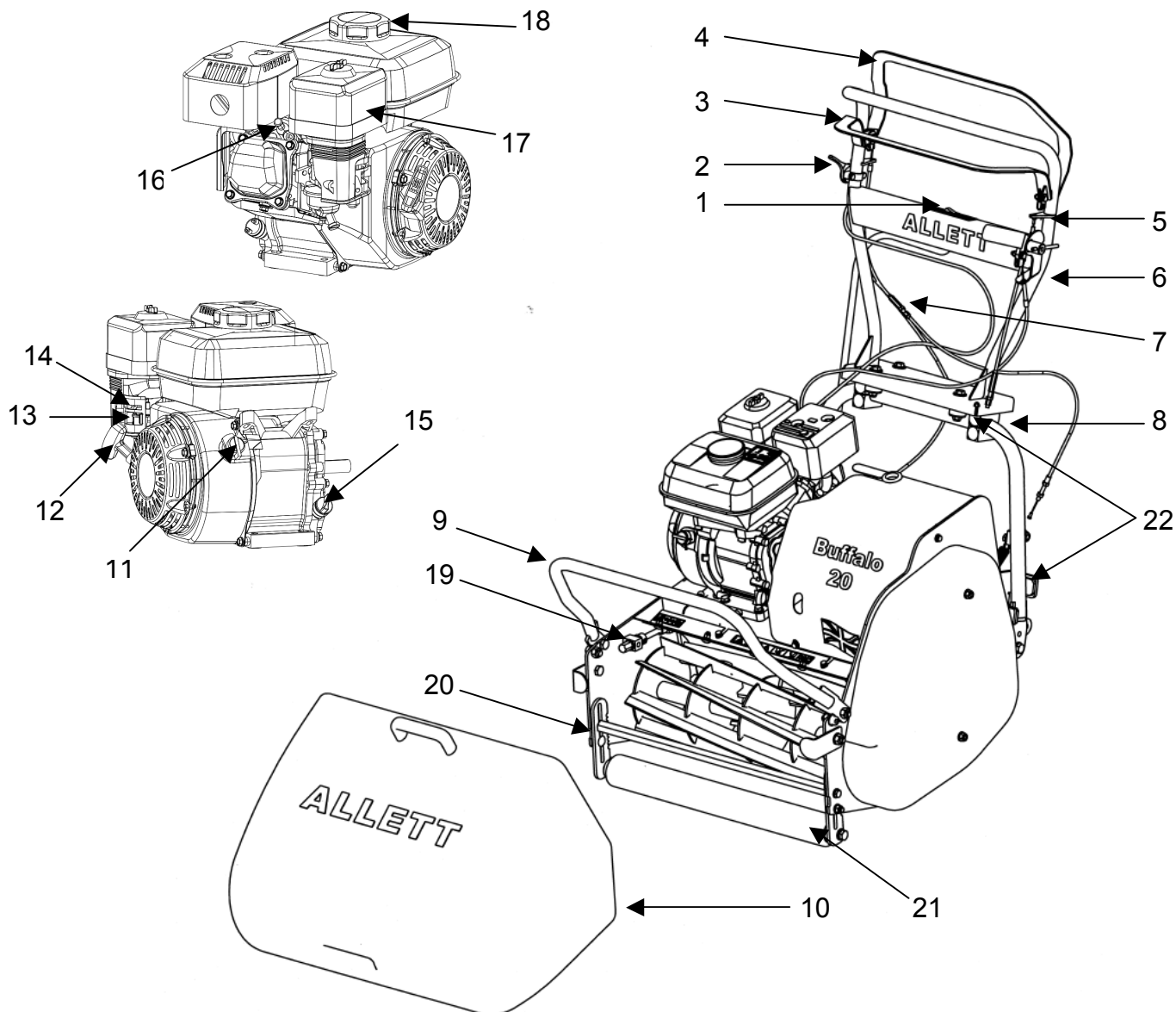
Ensure replacement parts fitted are manufacturer's original or approved by the manufacturer.

4.0 Assembly

- 1) Fold handles back to a comfortable operator height and tighten 4 bolts
- 2) Fold down grass box cradle and fit grass box
- 3) Release the handbrake



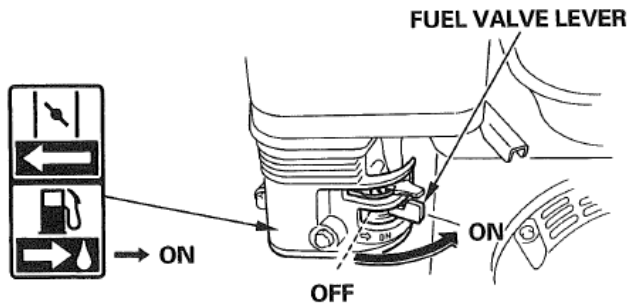
5.0 Operating controls



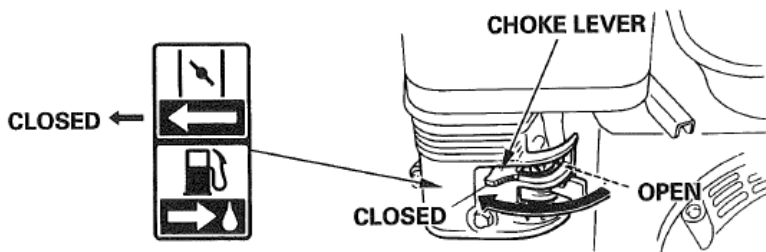
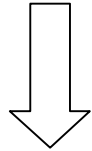
- | | |
|--------------------------------|---------------------------|
| 1) Handle bar ON/OFF switch | 12) Starter grip |
| 2) Throttle | 13) Fuel valve lever |
| 3) Cutting cylinder engagement | 14) Choke lever |
| 4) Land roll engagement | 15) Oil dipstick |
| 5) Park brake | 16) Spark plug |
| 6) Top handle bar | 17) Air filter |
| 7) Cable adjuster | 18) Fuel filler cap |
| 8) Bottom handle bar | 19) Bottom blade adjuster |
| 9) Grass box hoop | 20) Front roller adjuster |
| 10) Grass box | 21) Front roller |
| 11) Engine ON/OFF switch | 22) Vibration mounts |

6.0 Using your mower

6.1 Starting

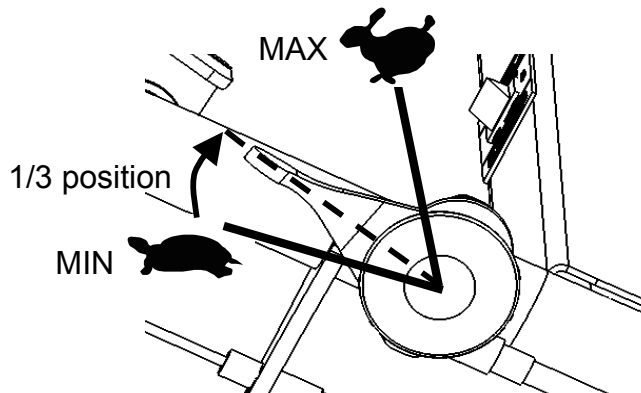
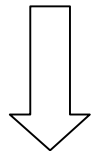


- 1) Move the fuel valve lever to the ON position

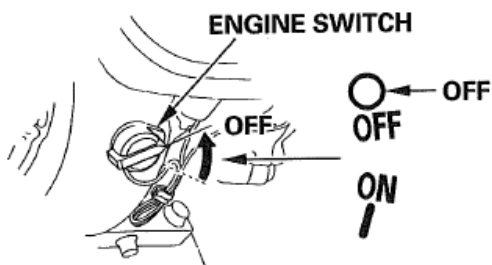
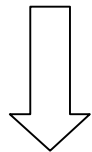


- 2) For a cold ❄️ start move the choke lever to the CLOSED position [\]

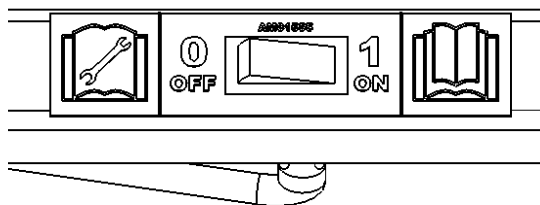
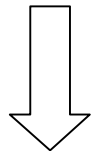
To restart a warm ☀️ engine leave the choke lever in the OPEN position



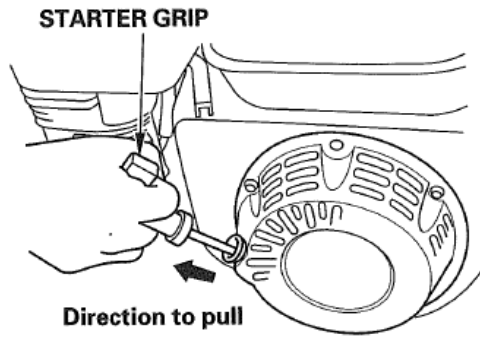
- 3) Set the throttle to 1/3 position between MIN and MAX



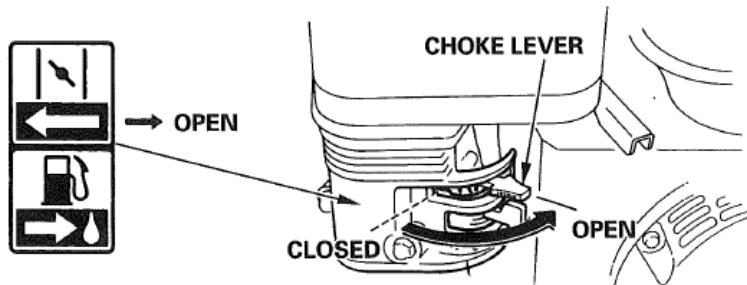
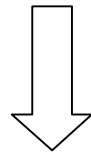
- 4) Turn the engine switch to the ON position





- 5) Move the handle bar mounted engine switch to the ON position



6) Pull the starter grip lightly until you feel resistance, then pull briskly. Return the starter grip gently



7) If the choke lever was moved to the CLOSED position  to start the engine, gradually move it to the OPEN position  as the engine warms up

6.2 Stopping

- 1) Move the throttle lever to MIN position
- 2) Move the handle bar mounted stop switch to OFF
- 3) Turn the petrol tap OFF

To stop in an emergency move the handle bar mounted stop switch to OFF

6.3 Adjusting the bottom blade - setting "on cut"

The bottom blade is correctly adjusted when the cutting cylinder lightly brushes the bottom blade as the cylinder is turned. Contact should be made across the full width of the bottom blade.

The blades act like a pair of scissors, as a test correctly adjusted blades will cleanly cut a piece of good quality writing paper across the width of the blade. The bottom blade should be adjusted if the grass is not cut cleanly and evenly.

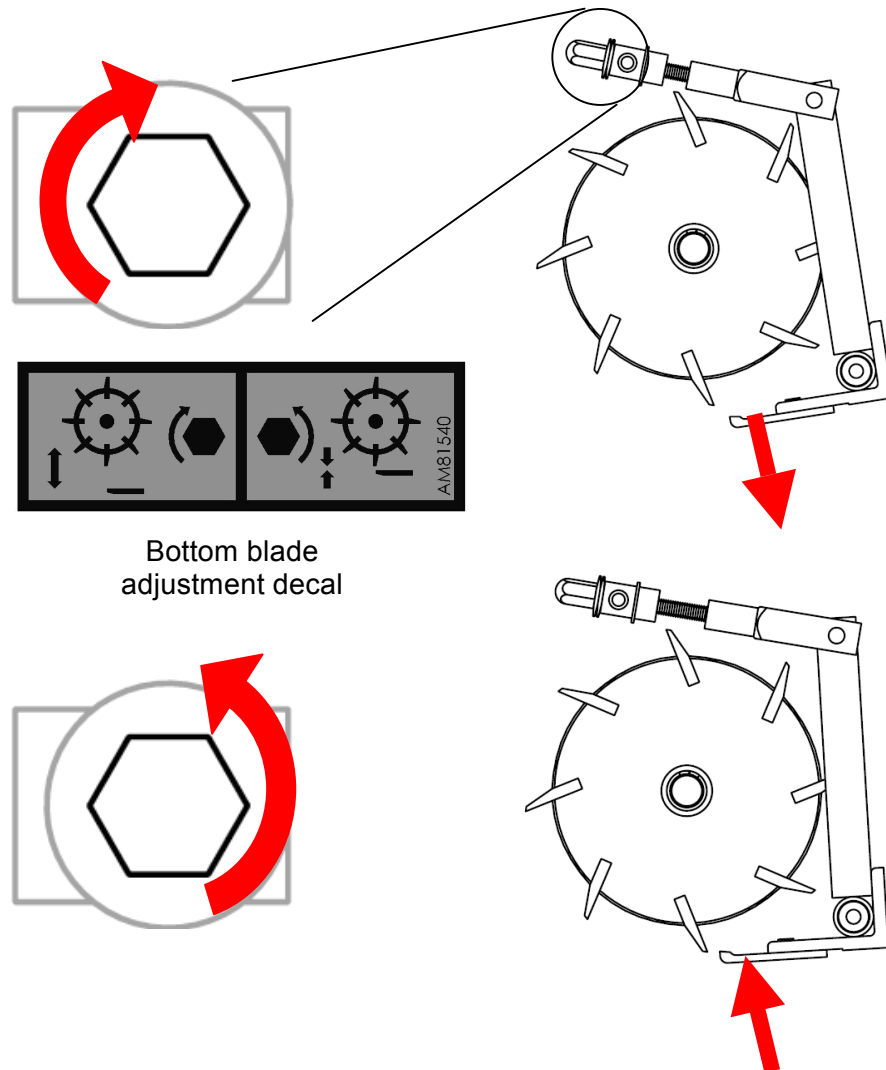
WARNING – Blades are sharp always wear gloves

To set the cutting cylinder on cut:

- 1) Tilt the mower back and wedge securely
- 2) Turn the adjuster screws anti clockwise to move the bottom blade closer to the cylinder

Turn the adjuster screws clockwise to move the bottom blade further from the cylinder

- 3) When making adjustments to the bottom blade frequently check progress by cutting a piece of paper

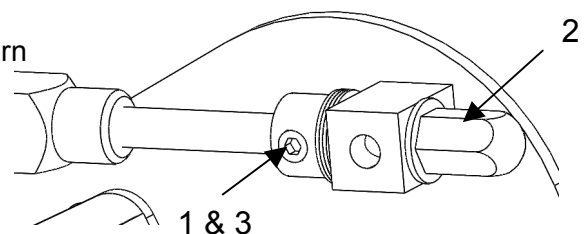


Do not over tighten the bottom blade – the cylinder should be able to spin with little resistance

If you are still unable to cleanly cut paper, inspect the bottom blade and cylinder. If they appear rounded, damaged or excessively worn they may need to be reground or replaced. New bottom blades should always be reground attached to the bottom blade carrier. For bottom blade grinding angles see the section 7.6

The bottom blade adjusters can sometimes become very tight and may be hard to turn. If this is the case:

- 1) Slacken off the grub screw on the collar
- 2) Rotate the adjuster anti-clockwise 1/8th of a turn
- 3) Tighten the grub screw

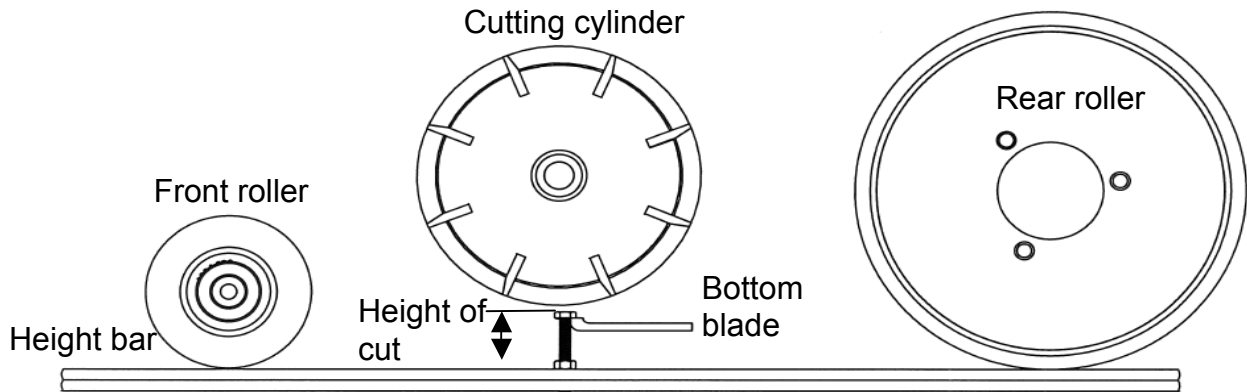


6.4 Height of cut adjustment

The height of cut is set by altering the position of the front roller.

WARNING - blades are sharp, always wear gloves

- 1) Set "on cut" first, refer to section 6.3
- 2) Adjust and lock the bolt on the height setting bar to your desired height of cut
- 3) Slacken the four front roller fasteners
- 4) Tilt the mower back and wedge securely
- 5) With the height setting bar near one end of the bottom blade, locate the bolt head on top of the bottom blade and under the rear roller
- 6) Adjust the front roller so it makes contact with the height setting bar
- 7) Tighten the front roller fasteners on the side you have adjusted
- 8) Move the height setting bar to the other end of the bottom blade and repeat steps 5-8



6.5 Engaging drive to the cylinder

- 1) Gradually squeeze the cylinder bail bar towards the top handle – see section 5.0)
- 2) Release the bail bar to stop the cylinder

6.6 Engaging drive to the land roll

- 1) Gradually squeeze the drive bail bar towards the top handle – see section 5.0
- 2) Release the bail bar to stop forward movement

6.7 Park brake

To engage the park brake:

- 1) Pull and hold the red lever on the top handle bar
- 2) Tighten the lock handle

6.8 Mowing

- 1) Before mowing check the engine oil level and fill the petrol tank (see maintenance section)
- 2) Start the engine – see section 6.1
- 3) Engage drive to the cylinder
- 4) Release the park brake
- 5) Engage drive to the land roll

7.0 Maintenance

WARNING – Stop the engine and remove the spark plug cap

To ensure long and reliable service, carry out the following maintenance regularly:

Regularly check for obvious defects such as a loose, dislodged or damaged blades, loose fixings and worn or damaged components.

Check that covers and guards are undamaged and correctly fitted. Carry out necessary maintenance or repairs before use..

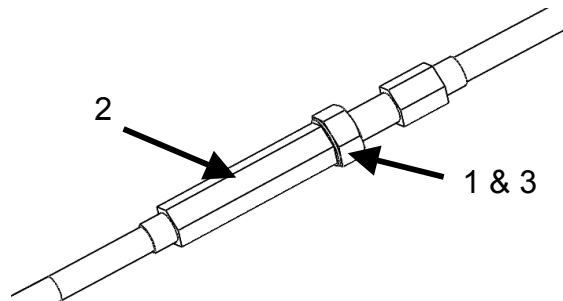
Clean the exterior of the machine thoroughly using a soft brush and cloth. Remove all debris, especially from the air filter and engine fins.

If the mower should happen to fail despite the care taken in manufacture and testing, repair should be carried out by an authorised Allett dealer.

7.1 Adjusting land drive and cylinder cables

If the mower or cylinder doesn't drive adequately it may be necessary to adjust the drive cable as follows:

- 1) Slacken lock nut
- 2) Turn the adjuster a few times clockwise
- 3) Retighten the adjuster with the lock nut

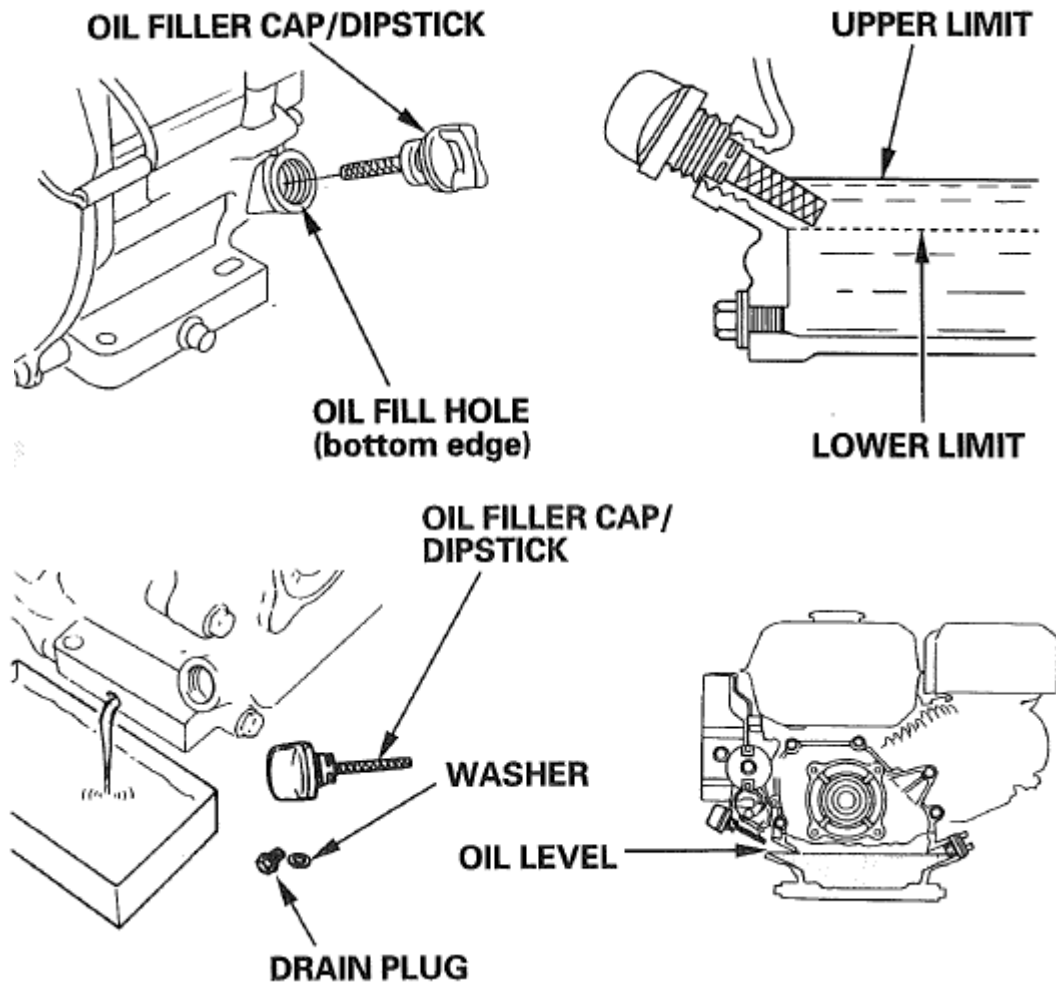


When correctly adjusted, drive to the land roll or cylinder is engaged when the bail bar is squeezed against the top handle. When released drive MUST disengage.

7.2 Checking the engine oil

Change the engine oil after the first 8 hours of use. The oil should then be changed every 50 hours or at the end of each season before storage, whichever is sooner.

- 1) With the mower standing on level ground, unscrew and remove the engine oil filler dipstick (15)
- 2) Wipe the oil filler dipstick clean: insert the oil dipstick, then remove it again. Do not screw it in.
- 3) Check the oil level
- 4) Add a good quality SAE 10W-30 oil in small quantities at a time, allowing it to settle. Repeatedly add oil and check the level until it reaches the upper limit.



SAE 10W-30 oil is recommended for general use. It is important to use the recommended oil to avoid damage to your engine. Engine oil capacity is 0.6L

7.3 General engine maintenance

Check and clean the air filter (17), replace if necessary. See engine manual for details.

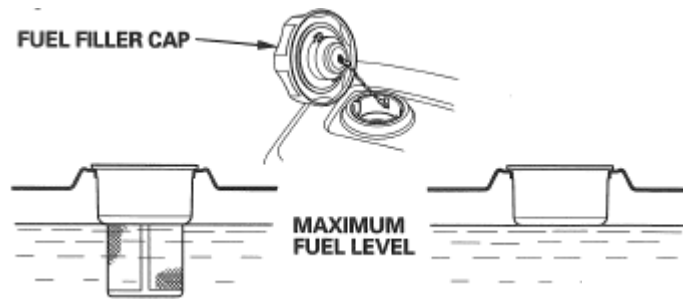
Check and clean the fuel sediment bowl and spark plug. See engine manual for details.

For all other engine adjustments and maintenance refer to the engine manual.

7.4 Fuel

Petrol deteriorates over time. Engine starting may be difficult if you use petrol kept for more than 30 days. Always run the fuel tank dry when storing over 30 days.

- 1) Remove the petrol filler cap (18), slowly add unleaded petrol to the tank, fill to approximately the top of the strainer gauze.
- 2) Replace petrol filler cap
- 3) Wipe up any spilt petrol from the engine before starting the mower



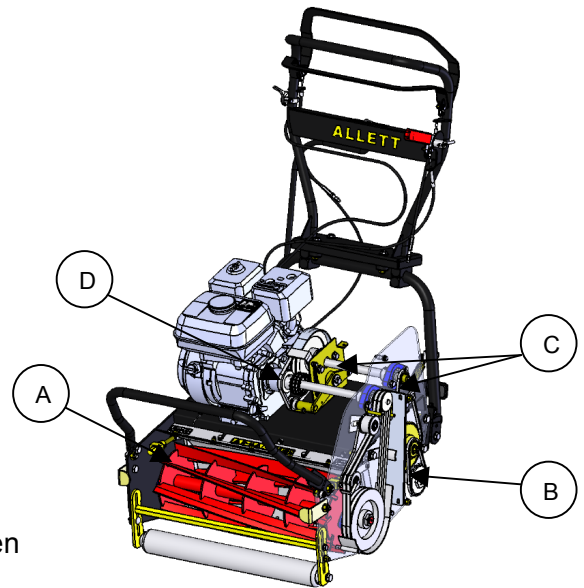
7.5 Grease points



8 Grease points in total
(Remove covers to access grease points)

- A) 2 cylinder bearings (1 pump every 1-2 weeks)
- B) 2 rear roller bearings (1 pump every month)
- C) 3 drive shaft bearings (1 pump every 1-2 weeks)
- D) 1 idler pulley bearing (1 pump every 1-2 weeks)

Recommended best practice is to grease little and often

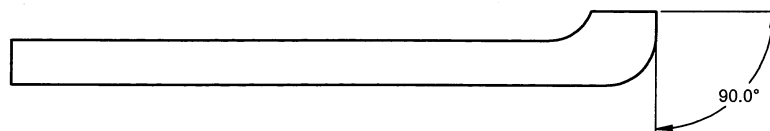


7.6 Bottom blade grinding angles

The cutting performance of the Buffalo 34 is highly dependent on the condition of both the cylinder and bottom blade. Poorly maintained parts will lead to a poor quality of cut.

Newly fitted bottom blades will need to be ground when bolted to the blade carrier to ensure a perfectly flat cutting edge.

It is advisable that grinding/reconditioning is carried out by an authorised Allett dealer to the angles shown below.



7.7 Inspection of safety critical components

The below parts are critical to the safe operation of your lawnmower, before each use check that:

When the park brake is engaged the mower can not move.

The guards, deflectors and the grass box are in good condition and secured in place

The On/off engine switch stops the mower in case of an emergency

When the bail bars are released the cylinder and land roll drive stop immediately

7.8 Maintenance schedule

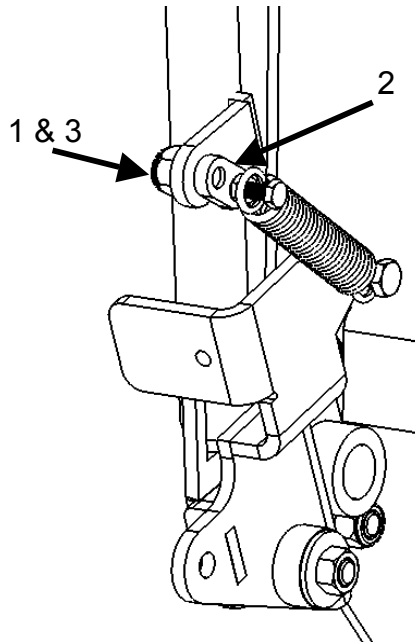
Activity	Task	Daily	Weekly	Monthly	Yearly
Check					
	Engine oil level	●			
	Fuel level	●			
	Air cleaner condition	●			
	Guards in place	●			
	Cutting cylinder	●			
	Fasteners		●		
	Chain and belt tension			●	
	Spark plug			●	
Clean					
	Debris/grass from mower	●			
	Engine cooling fins	●			
	Fuel sediment bowl				●
	Air filter elements		●		
	Inside guards		●		
Test					
	Parking brake	●			
	On/off switches	●			
	Drive engagement/disengagement	●			
Replace					
	Engine oil				●
	Spark plug				●
	Air filter elements				●

8.0 Making adjustments to your mower

8.1 Floating handle bars

The upper and lower handle bars are isolated with rubber vibration mounts. The lower handle bar is also suspended via springs. The sprung lower handle bar is designed to “float” off the rubber stops when in use. The spring tension can be adjusted by rotating the spring anchor.

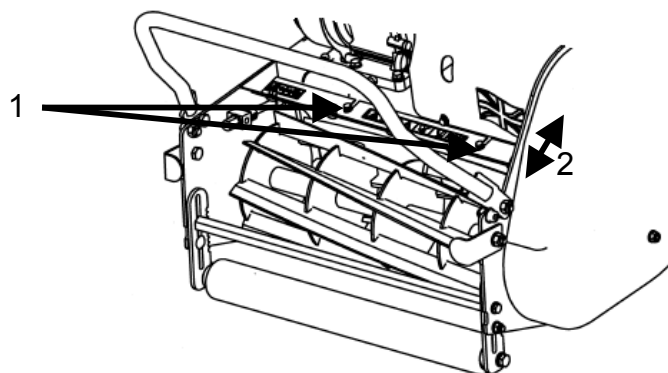
- 1) Slacken the locking nut
- 2) Rotate the spring anchor to adjust spring tension
- 3) Tighten the locking nut



8.2 Delivery plate

The delivery plate covering the rear of the cylinder can be adjusted to alter the grass trajectory into the grass box.

- 1) Loosen the 2 delivery plate screws
- 2) Adjust the delivery plate forwards or backwards then tighten the screws



9.0 Vibration reduction

Best practices for reducing vibration emission:

The mower is designed to operate at low engine speeds. Adequate performance can be achieved at little over idle speed.

Inspect the rubber vibration mounts for signs of wear and deterioration, replace if necessary. Properly adjust the sprung floating handle bars to improve operator comfort and further limit vibration transmission (See section 8.1).

A well maintained mower with an accurately ground and balanced cylinder is recommended to limit vibration emission. Forcing the mower to cut longer grass than intended or mowing on unsuitable surfaces will result in higher levels of vibration and wear.

10.0 Noise reduction

Best practices for reducing noise emission:

This mower is designed to operate at low engine speeds. Adequate performance can be achieved at little over idle speed. Setting minimal contact between the cylinder and bottom blade will also help reduce noise emissions. Forcing the mower to cut longer grass than intended or setting it to work at great depths may cause higher levels of noise emission.

Damaged exhausts or loose guards can increase noise emissions. Therefore, before use inspect the exhaust system for signs of wear and ensure the guards are securely attached and in good condition.

11.0 EC Declaration of conformity

We: **Turfmech Machinery Limited**

of: Hangar 5, New Road, Hixon, Staffordshire, ST18 0PJ, UK

declare that:

Equipment: Lawn mower

Model name/number: Buffalo 20, 24 & 27 (Cutting width 0.51, 0.61 & 0.69m)

in accordance with the following directives:

2004/108/EC	Conforms with the essential protection requirements of the Electromagnetic Compatibility Directive and its amending Directives.
2006/42/EC	Conforms with the essential requirements of the Machinery Directive and its amending Directives.
2000/14/EC	Conforms with the essential requirements of the Noise Directive and its amending Directives. The conformity assessment procedure followed was in accordance with Annex VI of the Directive

Has been designed and manufactured to the following standards:

EN ISO 12100-1:2003+A1:2009

Safety of machinery. Basic concepts, general principles for design. Basic terminology, methodology.

EN ISO 12100-2:2003+A1:2009

Safety of machinery. Basic concepts, general principles for design. Technical principles.

BS EN 836:1997

Garden equipment – Powered lawnmowers – Safety

Measured Sound Power Level (2000/12/EC, BS EN 836 Annex H): 93dB L_{WA}

Guaranteed Sound Power Level (2000/14/EC): 98dB L_{WA}

Uncertainty K = 2.5dB

Sound Pressure Level (BS EN 836 Annex H): Buffalo 20 – 83dB L_{PA},

Buffalo 24/27 – 84dB L_{PA}

Wear hearing protection!

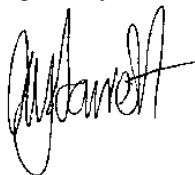
Vibration test code BS EN 836 Annex G, xx m/s/s xx uncertainty

Notified body: AV Technology, Handforth, Cheshire

Technical construction file is kept by: Turfmech Machinery Ltd, Hangar 5, New Road, Hixon, Staffordshire, ST18 0PJ, UK

I hereby declare that the equipment named above has been tested and found to comply with the relevant sections of the above referenced specifications. The unit complies with all essential requirements of the Directives

Signed by:



Name: Austin Jarrett

Position: Managing Director

Done at: Turfmech Machinery Ltd

On: 30th January 2013

12.0 Fault finding when mowing

Problem	Possible cause	Remedy
Occasional blades of uncut grass.	Ground speed too fast. Height of cut too high Poorly adjusted bottom blade. Blunt cutting cylinder/bottom blade. Drive belt slipping.	Reduce forward travel speed. Reduce height of cut. Re-adjust bottom blade. Grind/recondition as necessary. Adjust belt tension.
Strips of uncut grass between adjacent runs.	Overlap between runs too small.	Increase overlap between runs.
Uneven cut on uneven ground.	Uneven ground conditions.	Reduce forward travel speed, change direction of cut.
Scalping of grass.	Height of cut too low for conditions. Uneven ground conditions.	Increase height of cut. Increase height of cut, change direction of cut.
Ribbing of grass perpendicular to direction of travel.	Forward travel speed too fast.	Reduce forward travel speed.
Tram lining of grass in the direction of forward travel.	Bottom blade in ground contact. Poor cylinder to bottom blade adjustment. Worn cylinder bearings.	Increase height of cut. Re-adjust bottom blade. Replace worn parts.
Excessive bottom blade wear.	Bottom blade in heavy ground contact. Blunt cutting edge. Cylinder in heavy contact with bottom blade. Excessively abrasive ground conditions.	Increase height of cut. Grind/recondition. Re-adjust the bottom blade to cylinder clearance. Increase height of cut.
Cylinder knocks while rotating.	High spots on the cutting edges. Worn cylinder bearings.	Grind/recondition cylinder and bottom blade. Replace worn parts.

13.0 Specification

Model name	Buffalo 20 Lawn Mower	Buffalo 24 Lawn Mower	Buffalo 27 Lawn Mower
Cutting width	510mm (20")	610mm (24")	686mm (27")
Engine	Honda GX120	Honda GX160	Honda GX160
Engine fuel/oil capacity	2.0L Unleaded fuel, 0.6L oil SAE 10W-30	3.1L Unleaded fuel, 0.6L oil SAE 10W-30	3.1L Unleaded fuel, 0.6L oil SAE 10W-30
Power output (Net)	2.6kW (3.5hp) @ 3,600rpm	3.6kW (4.8hp) @ 3,600rpm	3.6kW (4.8hp) @ 3,600rpm
Handlebar	Adjustable with anti-vibration mountings		
Land roll engagement	Handle mounted lever engaging V belt via cable		
Cylinder engagement	Handle mounted lever engaging V belt via cable		
Rear roller	Rubber covered, 2 piece steel roller with steel bevel gear differential		
Front roller	Single piece aluminium roller on sealed bearings		
Weight	111kg	122kg	138kg
Dimensions (W x L x H)	675x1280x1010mm	??x1280x1010mm	??x1280x1010mm
Height of cut	10 – 40mm		
Grass box	Rotational moulded plastic		
Machine options	N/A	Trailing seat	Trailing seat

14.0 Guarantee

Turfmech/Allett guarantees this product against manufacturing defects. We will repair (or replace at our option) if a manufacturing defect occurs within the guarantee period as long as it has not been subjected to rental/hire use. The engine fitted to this mower is covered by the engine manufacturer. See engine manuals for details.

The guarantee period is 2 years for parts and labour costs from the date of purchase. A 3rd year extended guarantee is available only if the lawnmower has been registered within in 90 days of purchase and is serviced annually by an authorised Allett service agent.

To obtain a repair under this guarantee:

- Take your lawnmower to an Allett approved service agent
- Show your dated proof of purchase
- Show the guarantee page

This guarantee does not apply if:

- The product has been resold by the original purchaser (this does not apply in the Republic of Ireland) or has been used under hire.
- The product has been modified to change the manufacturers specification, or if non-genuine spares have been fitted
- If any previous repair has been undertaken by anyone other than an Allett approved service agent
- The fault is due to maladjustment, abuse, neglect or accidental damage
- The fault is due to lack of lubrication or maintenance
- The failure is due to normal wear

The following parts are considered as wearing parts. Their life is dependent on regular servicing and they are not therefore normally considered by the guarantee:

Blades, drive chains, bearings, belts, rubber on the rear roller and cables.

The cost of routine maintenance of the product is not covered by the guarantee.

It is in your best interest to follow the operating instructions for your lawnmower as a properly cared for product should give many years of excellent service cutting grass.

Always insist on genuine Allett spares or parts. Any damage caused to the product through the fitting of parts not made or approved by Allett is not covered by the guarantee.

Your statutory rights are not affected by this guarantee.

When the time comes to dispose of this product please consider the environment and take it to a recognised recycling facility.

15.0 Parts section

Buffalo 20/4, 24/4 & 27/4

PARTS SECTION

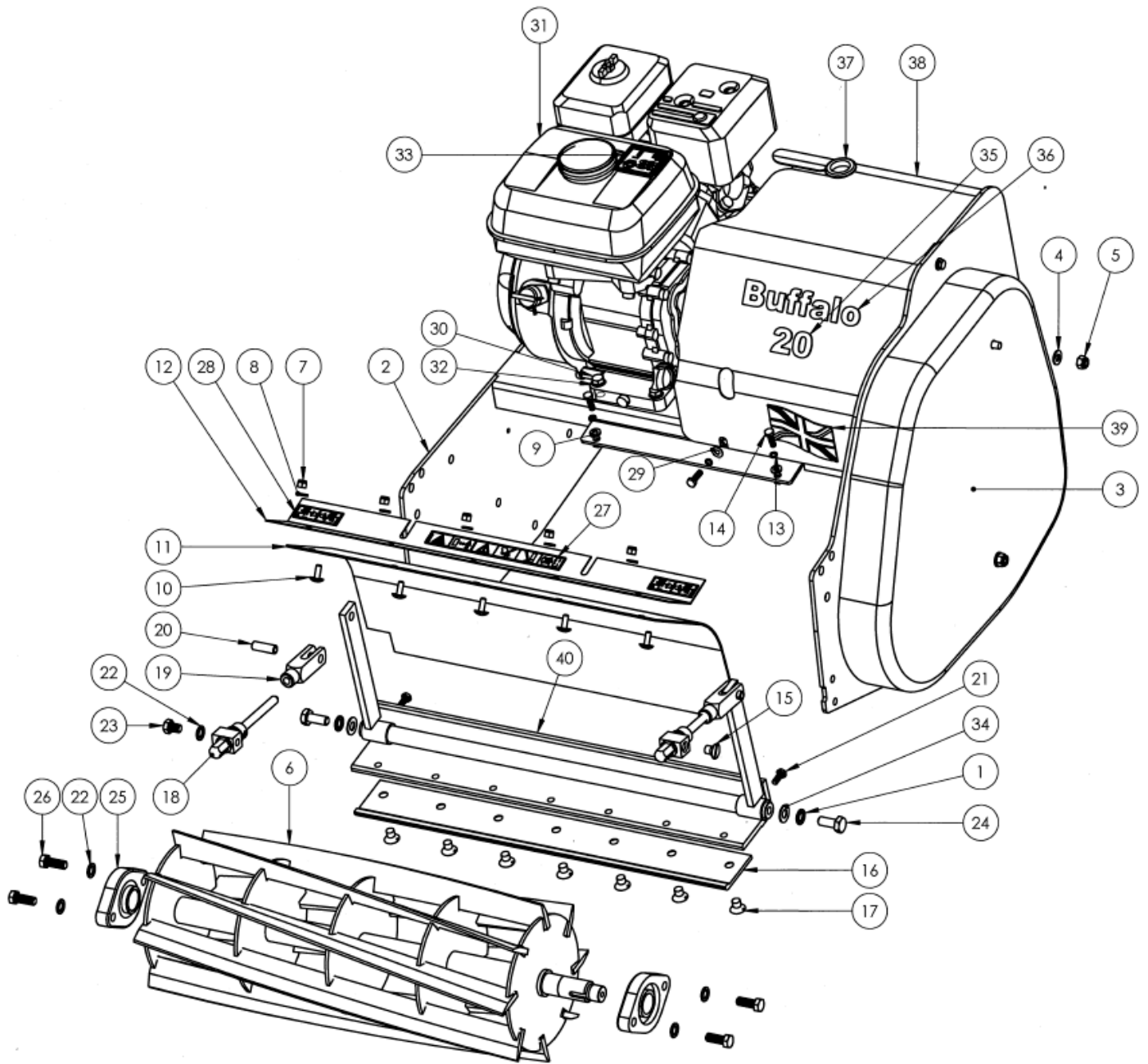
For:

BU20/4-XX-XXX onwards

BU24/4-XX-XXX onwards

BU27/4-XX-XXX onwards

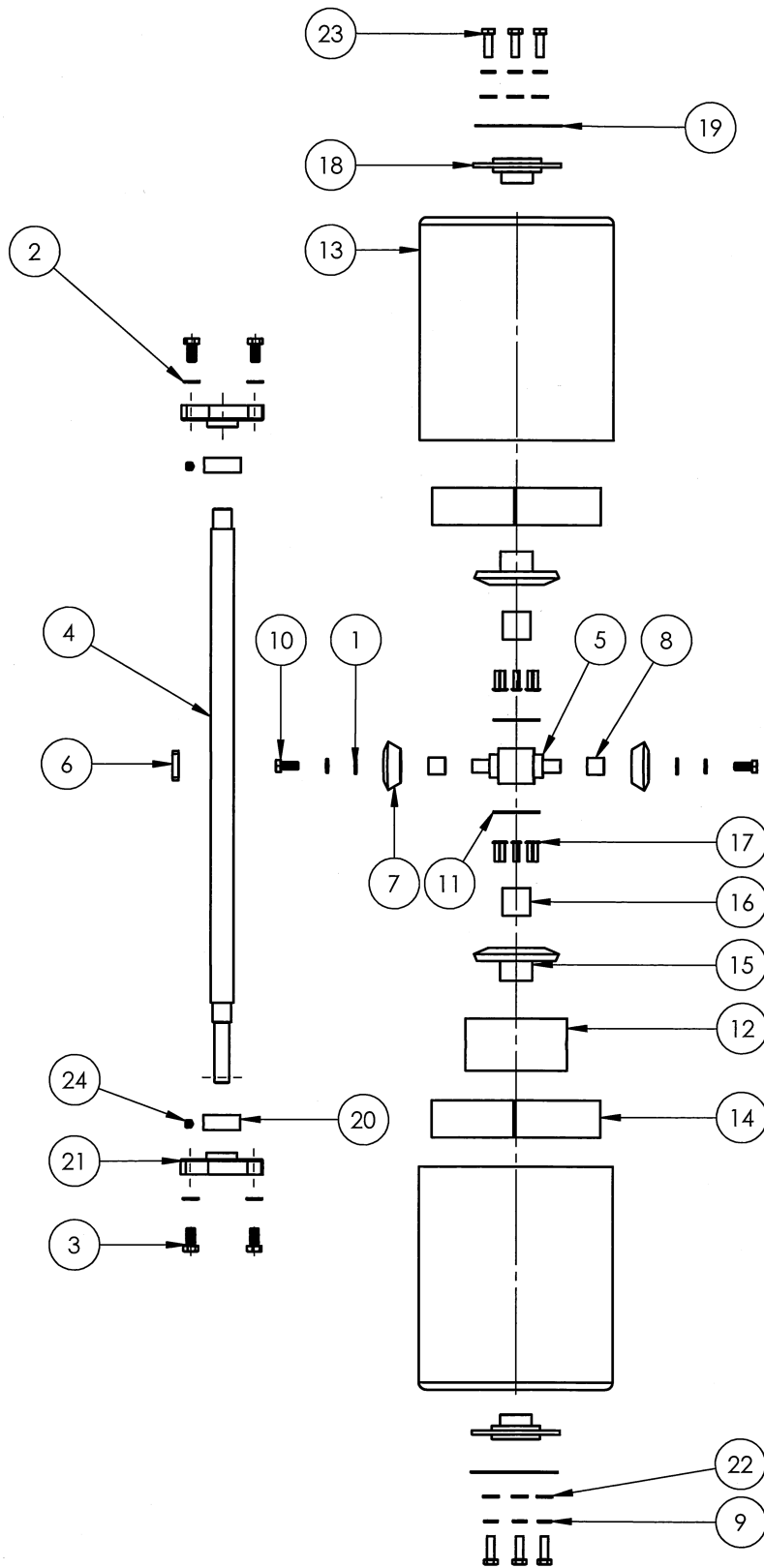
MODEL BU20, BU24 & BU27:- Mainframe Assembly BOM (FIG 1)



**MODEL BU20, BU24 & BU27:- Main Frame Assembly BOM
(FIG 1)**

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	SPRING WASHER M10	SWM10			2
2	CHASSIS	AB084	AB085	AB086	1
3	CHAINCASE	AB003			1
4	WASHER M8 FORM A	WM8A			6
5	NYLOC NUT M8	NNM8			2
6	BUFFALO CYLINDER	AB014-8	AB015/8	AB016/8	1
7	NUT M6 NYLOC	NNM6			5
8	WASHER M6 FORM A	WM6A			1
9	WASHER M6	WM6			6
10	SCREW M6 x 16 ROOFING BOLT ZC	S11060			5
11	DELIVERY PLATE	BG1032-D	BG1033	BG1034	1
12	BUFFALO DELIVERY PLATE BRACKET	BSG1129	BSG1130	BSG1131	1
13	SPRING WASHER M6	SWM6			7
14	M6X20 SET SCREW	SM620			7
15	BLTTOM BLADE SCREW	S11032			1
16	BOTTOM BLADE	AM92112	AM82111	AM92110	1
17	3/8 x 1/2 CSK	S11051			1
18	ADJUSTER ASSY (LESS FORK)	AB079			2
19	ADJUSTER FORK	AB1004			2
20	ROLL PIN M10 x MBK x 30	AM89341			2
21	SET SCREW M6 x 16	SM616			4
22	WASHER M10	WM10			5
23	3/8" UNF x 1/2"	S11011			1
24	SET SCREW M10x20	SM1025			2
25	BEARING	AM81009			2
26	SET SCREW 3/8 X 1 UNF	S11014			4
27	CYLINDER BLADE CAUTION DECAL	AM81541			1
28	BOTTOM BLADE ADJUSTMENT DECAL	AM81540			2
29	WASHER M6 FORM D	WM6D			4
30	SET SCREW M8 x 35 ZC	SM835			4
31	HONDA ENGINE 4.0HP	GX120			1
32	SPRING WASHER M8	SWM8			4
33	DECAL 98dB	AM81433			1
34	WASHER M10 FORM Z/C	WM10			2
35	20", 24" & 27" DECAL	AM81557	AM81556	AM81554	1
36	BUFFALO NAME DECAL	AM81560			1
37	GROMMET PVC	AM81264			1
38	TUNNEL GUARD	BSG1125	BSG1126	BSG1127	1
39	UNION FLAG DECAL	AM81525			1
40	BOTTOM BLADE CARRIER 20	AB007			1

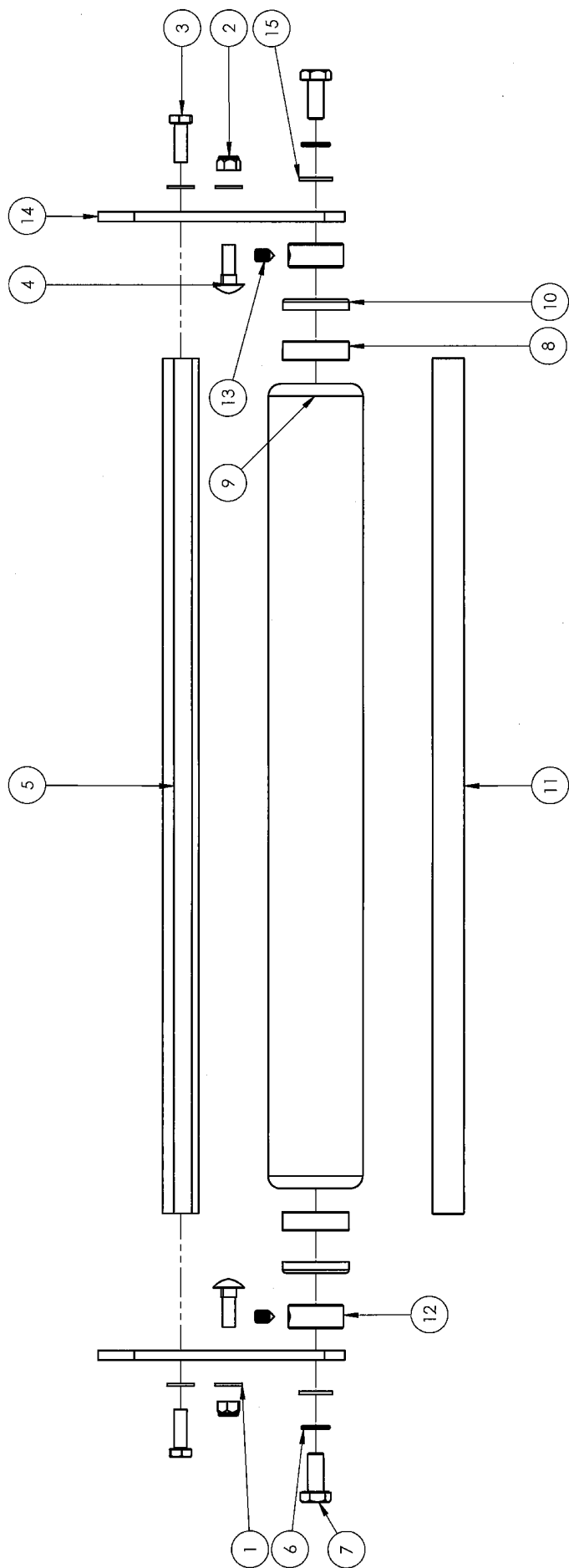
MODEL BU20, BU24 & BU27:- Rear Roller Assembly (FIG 2)



**MODEL BU20, BU24 & BU27:- Rear Roller Assembly BOM
(FIG 2)**

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	WASHER M8 FORM A	WM8A			2
2	3/8 SPRING WASHER				4
3	3/8 x 3/4 UNF	S11011			4
4	REAR ROLLER SHAFT	BG1025	BG1024	BG1023	1
5	DIFFERENTIAL CARRIER	BSG024			1
6	KEY 1/4" x 1.1/4" FORM A	AM92888			1
7	PINION GEAR STEEL	BSG1101			1
8	OILITE BUSH	BSG1102			2
9	SPRING WASHER	SWM8			6
10	SET SCREW 5-16 UNF x 3-4 ZY	S11015			2
11	SPACER	BSG1046			2
12	REAR ROLLER DIFF SHROUD	BSG1083			1
13	REAR ROLLER 20" MACHINE	BG022	BG023	BG014	1
14	REAR ROLLER SEALING BAND	BSG1045			2
15	BEVEL GEAR STEEL	BSG1100			2
16	BRONZE BUSH	AM81143			2
17	POP RIVET 4.8 X 20	PR4820			16
18	BEARING - 25mm	AM81049			2
19	REAR ROLLER TAB WASHER	BSG1320			2
20	REAR ROLLER LOCKING COLLAR	BSG016			2
21	BEARING 20MM FLANGED LFTCB11010	AM81008			2
22	M8 PLAIN WASHER	WM8			6
23	SET SCREW M8 x 25	SM825			6
24	GRUB SCREW M8 x 8	ACGM8			2

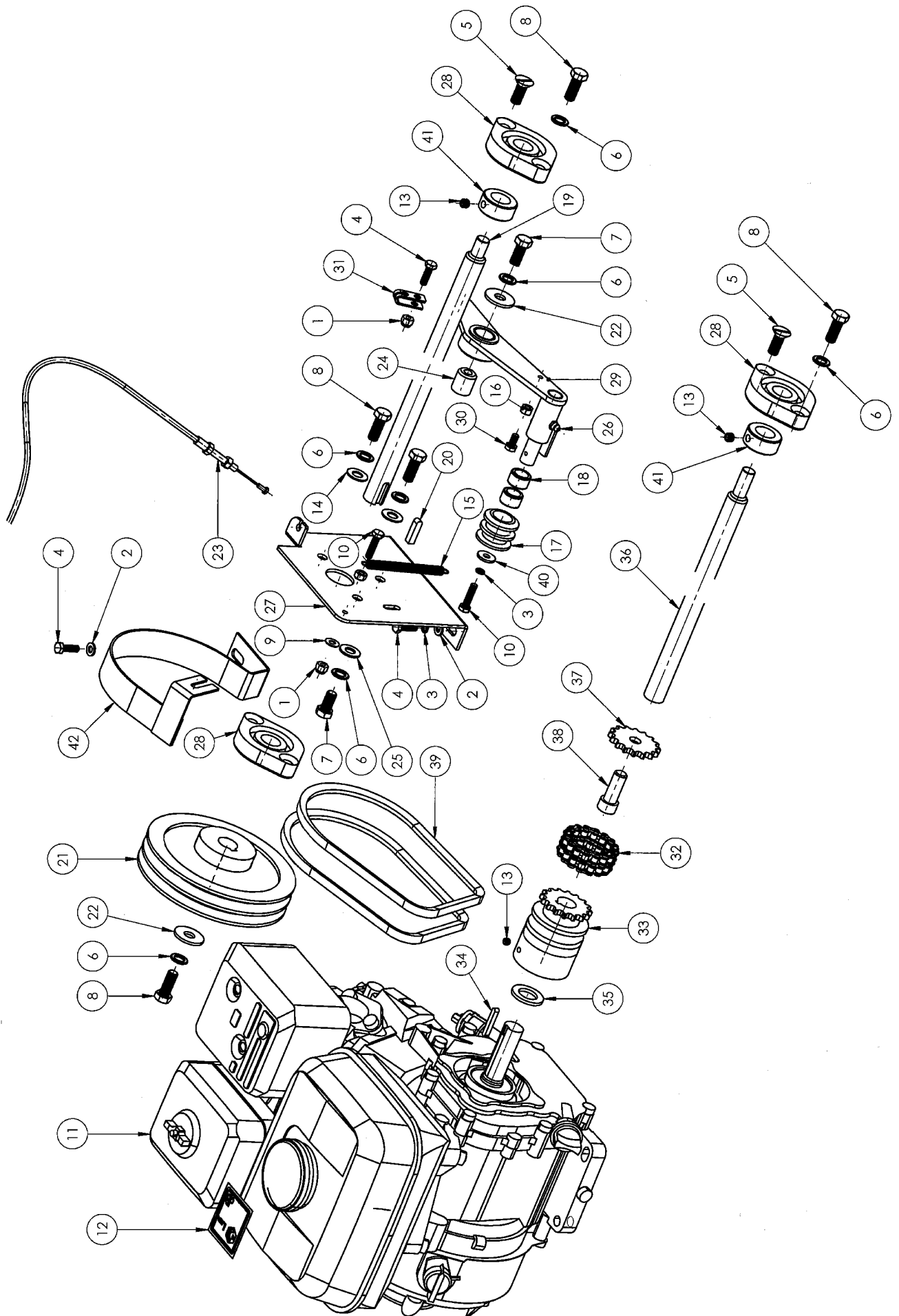
MODEL BU20, BU24 & BU27:- Front Roller Assembly (FIG 3)



**MODEL BU20, BU24 & BU27:- Front Roller Assembly BOM
(FIG 3)**

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	WASHER M8 FORM A	WM8A			4
2	NUT M8 NYLOC	NNM8			2
3	SET SCREW M8 x 25	SM825			2
4	COACH BOLT M8 x 25 ZY	BCM825			2
5	BRACING BAR	BG1026	BG1027	BG1028	1
6	M10 SPRING WASHER	SWM10			2
7	SET SCREW M10 x 20	SM1025			2
8	BEARING 20mm 6004 2RS	AM81007			2
9	FRONT ROLLER	BSG1264	BSG1265	BSG1266	1
10	GREASE SEAL TC 20 42 10	AM81513			2
11	FRONT ROLLER SHAFT	BG1007	BG1008	BG1009	1
12	LOCKING COLLAR	BG003			2
13	SCREW GRUB 5/16 UNF x 3/8	S11053			2
14	FRONT ROLLER ADJUSTER BRACKET	AB1072			2
15	M10 FLAT WASHER	WM10			2

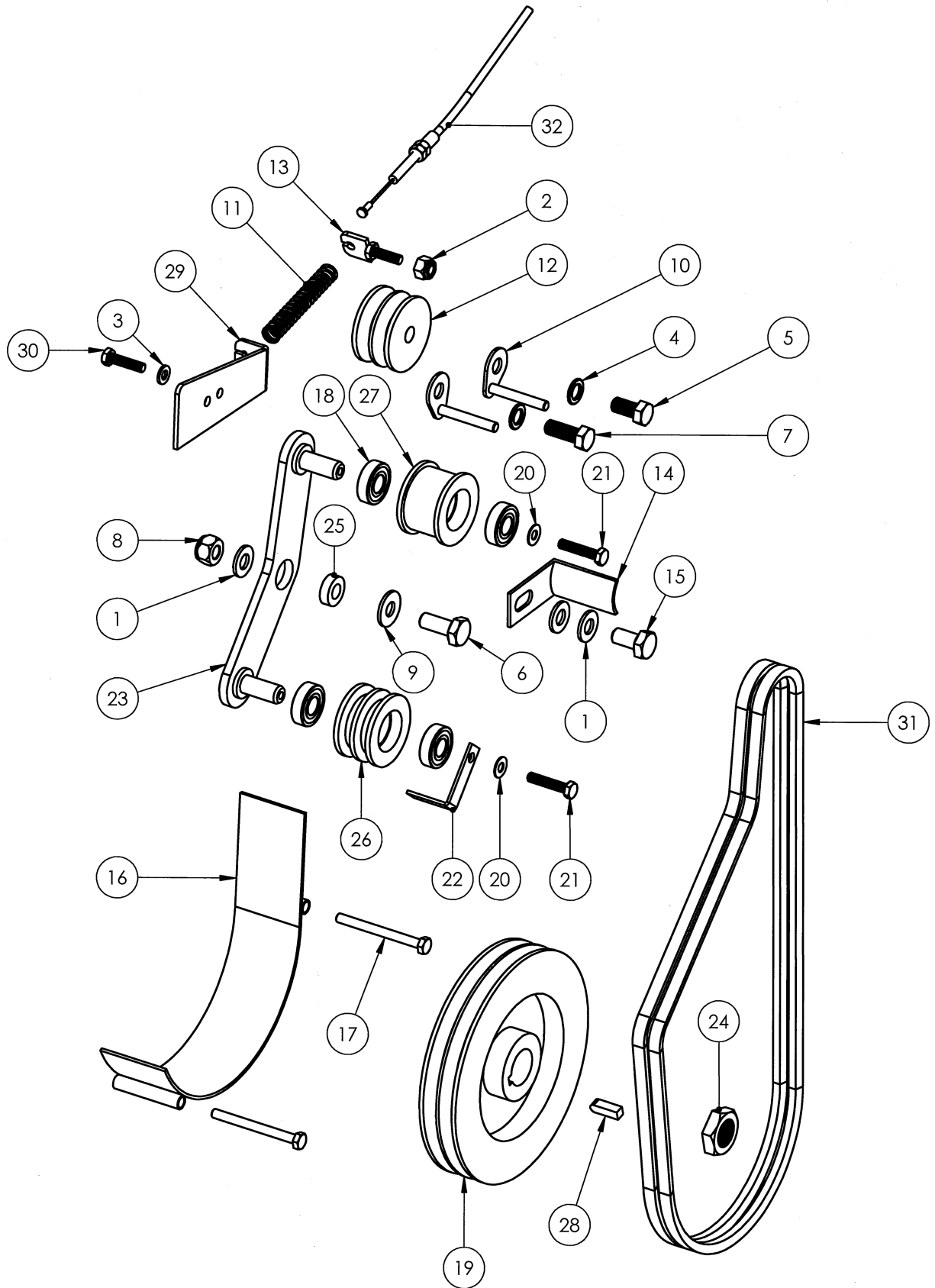
MODEL BU20, BU24 & BU27:- Countershaft Assembly (FIG 4)



**MODEL BU20, BU24 & BU27:- Countershaft Assembly BOM
(FIG 4)**

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	NUT M6 NYLOC	NNM6			2
2	WASHER M6	WM6			3
3	SPRING WASHER M6	SWM6			3
4	M6X20 SET SCREW	SM620			4
5	3/8 x 1 UNF CSK SLOTTED	S11010			2
6	3/8 SPRING WASHER				7
7	3/8 x 1/2 UNF SCREW				1
8	3/8 x 1 UNF SET SCREW	S11014			6
9	WASHER M6 FORM D	WM6D			1
10	SET SCREW M6 x 25 ZC	SM625			2
11	HONDA ENGINE	GX120	GX160	GX160	1
12	DECAL 98dB	AM81433			1
13	GRUB SCREW M6 x 6	ACGM6			4
14	WASHER M10 FORM Z/C	WM10			2
15	SPRING	AM85343			1
16	NUT M6 PLAIN	NM6			2
17	DRIVE CLUTCH JOCKEY PULLEY	BSG018			1
18	NEEDLE ROLLER HK1412	AM81002			2
19	ROLLER DRIVE SHAFT	BSG1035	BSG1036	BSG1037	1
20	KEY 1/4 X 26 LG FORM C	AM81055			1
21	PULLEY DRIVE ALUMINIUM	AM89495			1
22	WASHER M10 FORM G	WM10G			2
23	CABLE ROLLER DRIVE	BSG1078			1
24	CLUTCH ARM SWIVEL	BSG017			1
25	3-8 WASHER				1
26	GREASE NIPPLE M6	GNM6			1
27	SHAFT RETAINING PLATE	BSG003			1
28	BEARING 20MM FLANGED LFTCB11010	AM81008			3
29	DRIVE CLUTCH ARM ASSY	BSG064			1
30	M6 X 12 SET SCREW	SM612			1
31	YOKE ANCHOR POINT	BSG1024			1
32	CHAIN3/8 DUPLEX 16 LINKS	AM89475			1
33	BAR - SMALL FLYWHEEL PULLEY	AM89478	AM81412	AM81412	1
34	KEY 3/16 x 1.1/4 FORM C	AM83273			1
35	DISTANCE PIECE ENGINE SHAFT	SG1001			1
36	CYLINDER DRIVE SHAFT	BSG1030	BSG1031	BSG1032	1
37	PLATEWHEEL 16T 3/8 MODIFIED	BSG1052			1
38	SCREW CAP HEAD 1/2 UNF x 1 1/4 ZC	S11022			1
39	BELT ENGINE DRIVE	AM89482			2
40	FLAT WASHER M6 FORM G	WM6G			1
41	LOCKING COLLAR 20-20-EC	AM81000			2
42	PRIMARY BELT GAURD ASSEMBLY	BSG004			1

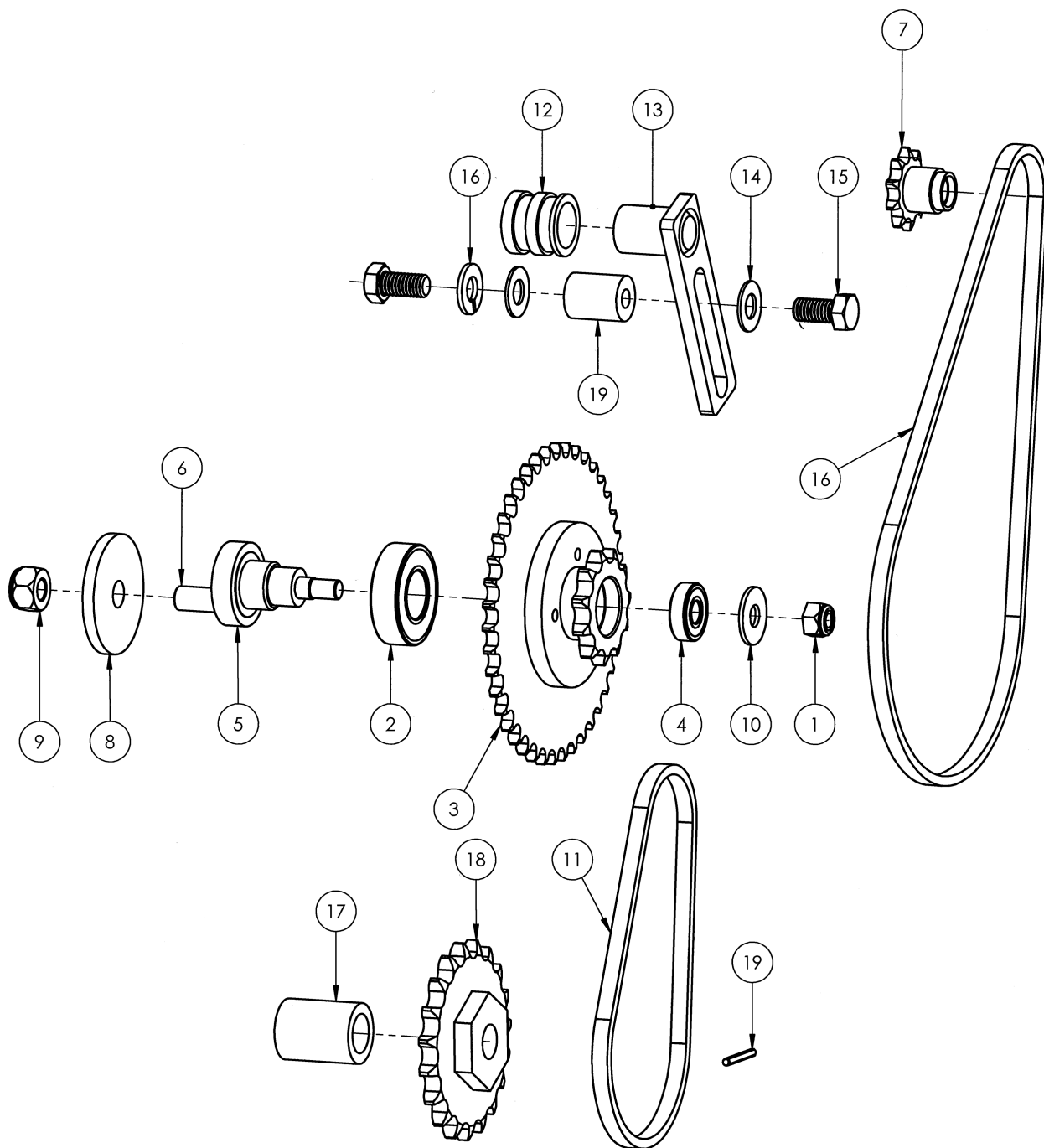
MODEL BU20, BU24 & BU27:- Cylinder Drive Assembly (FIG 5)



**MODEL BU20, BU24 & BU27:- Cylinder Drive Assembly BOM
(FIG 5)**

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	M10 FLAT WASHER	WM10			3
2	NUT M8 NYLOC	NNM8			1
3	WASHER M6	WM6			1
4	3/8 SPRING WASHER				2
5	3/8 x 3/4 UNF	S11011			1
6	M10 x 20 SET SCREW	SM1025			1
7	3/8 x 1 UNF SET SCREW				1
8	M10 NYLOC NUT	NNM10			1
9	WASHER M10 FORM C Z/C	WM10C			1
10	TOP BELT GUIDE FAB	AB029			2
11	SPRING	AM90519			1
12	PRIMARY CUTTER TWIN PULLEY	AM89408	AM94027	AM94027	1
13	CABLE ANCHOR PLATE FAB	BSG012			1
14	MIDDLE BELT GUIDE	AB1000			1
15	M10 x 20 SET SCREW	SM1020			1
16	BOTTOM BELT GUIDE ASSY	AB009			1
17	SET SCREW M6 x 45 ZC	SM645			2
18	BEARING 12mm 6001 2RS	AM82104			4
19	V-BELT PULLEY	AM92406			1
20	WASHER M6 FORM D	WM6D			2
21	SET SCREW M6 x 30 ZC	SM630			2
22	L' SHAPED BELT GUIDE	BG007			1
23	CUTTER CLUTCH ARM FAB	BSG002	BG015	BG015	1
24	3/4 LOCKNUT	N11013			1
25	CUTTER CLUTCH PIVOT	BSG1041			1
26	PULLEY - CUTTER CLUTCH JOCKEY	BSG1034	BG1022	BG1022	1
27	CUTTER CLUTCH JOCKEY	BSG1033	BG1021	BG1021	1
28	1/4" X 21mm KEY	AM81011			1
29	CABLE RETAINING PLATE	AB008			1
30	SET SCREW M6 x 25 ZC	SM625			1
31	CUTTER BELT	AM91451			2
32	CABLE CUTTER CLUTCH	BSG1077			1

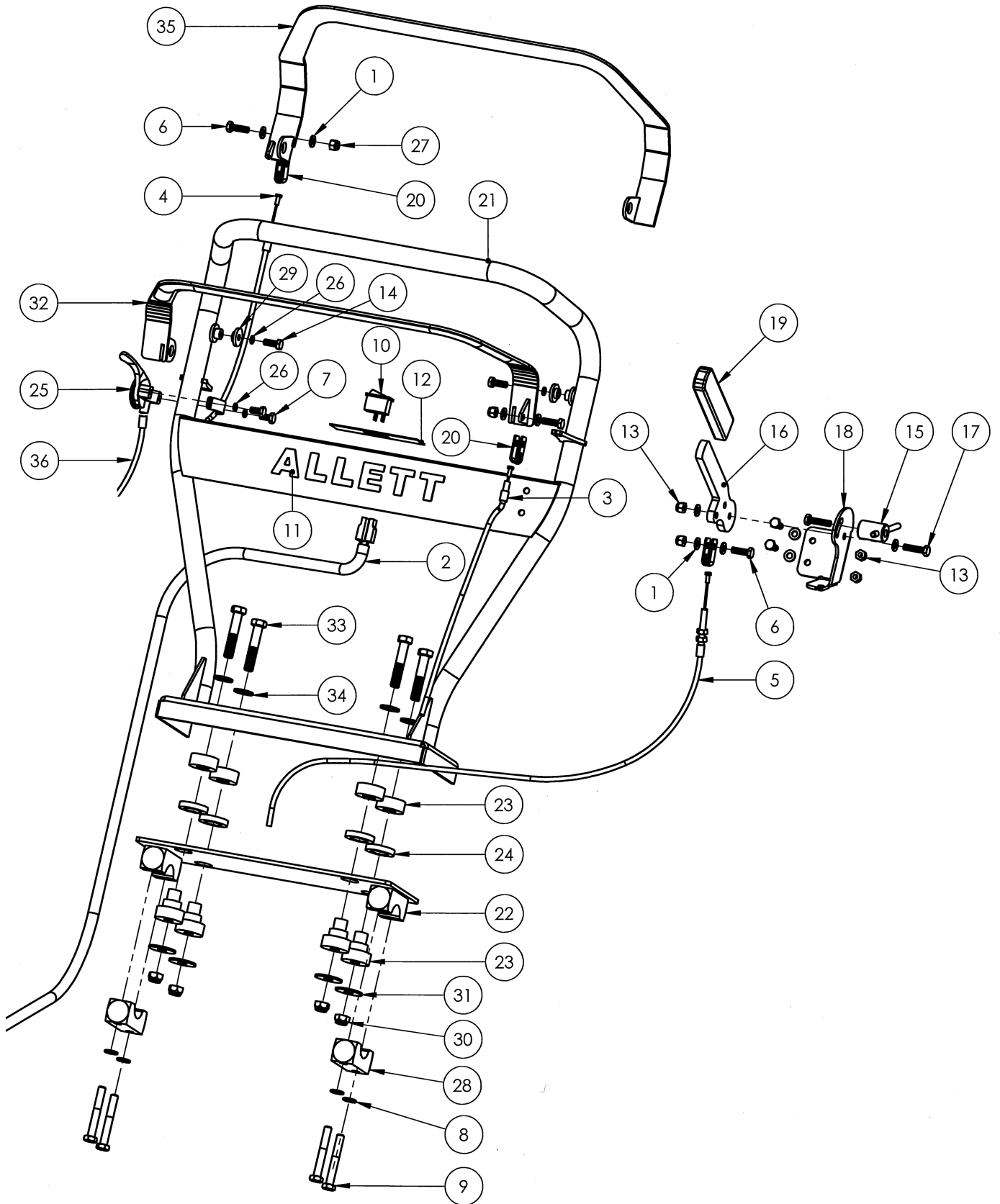
MODEL BU20, BU24 & BU27:- Rear Roller Drive Assembly (FIG 6)



**MODEL BU20, BU24 & BU27:- Rear Roller Drive Assembly
BOM (FIG 6)**

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	NUT M8 NYLOC	NNM8			1
2	BEARING 20mm 6004 2RS	AM81007			1
3	SMALL COMPOUND	BSG025			1
4	9mm BEARING	AM90513			1
5	COMPOUND CENTRE	BSG008			1
6	COMPOUND STUD 3/8 x 33	BSG1069			1
7	TOP SPROCKET	BSG022			1
8	SPACER FLYWHEEL 50 x 11.2 x 5mm	AFK1201			1
9	NUT 3/8 UNF NYLOC	N11002			2
10	M8 FLAT WAHSER FORM C	WM8C			1
11	SECONDARY DRIVE CHAIN	AM89436			1
12	CHAIN TENSIONER SLEEVE	BSG1038			1
13	CHAIN TENSIONER FAB	AC010			1
14	WASHER M10 FORM B	WM10B			2
15	SET SCREW 3/8 x 3/4	S11011			1
16	SPRING WASHER M10	SWM10			1
17	DISTANCE PIECE (REAR ROLLER)	BSG1044			1
18	REAR ROLLER SPROCKET WITHOUT EXTENSION	BG008			1
19	GROOVED PIN 3mm DIA	AM81577			1

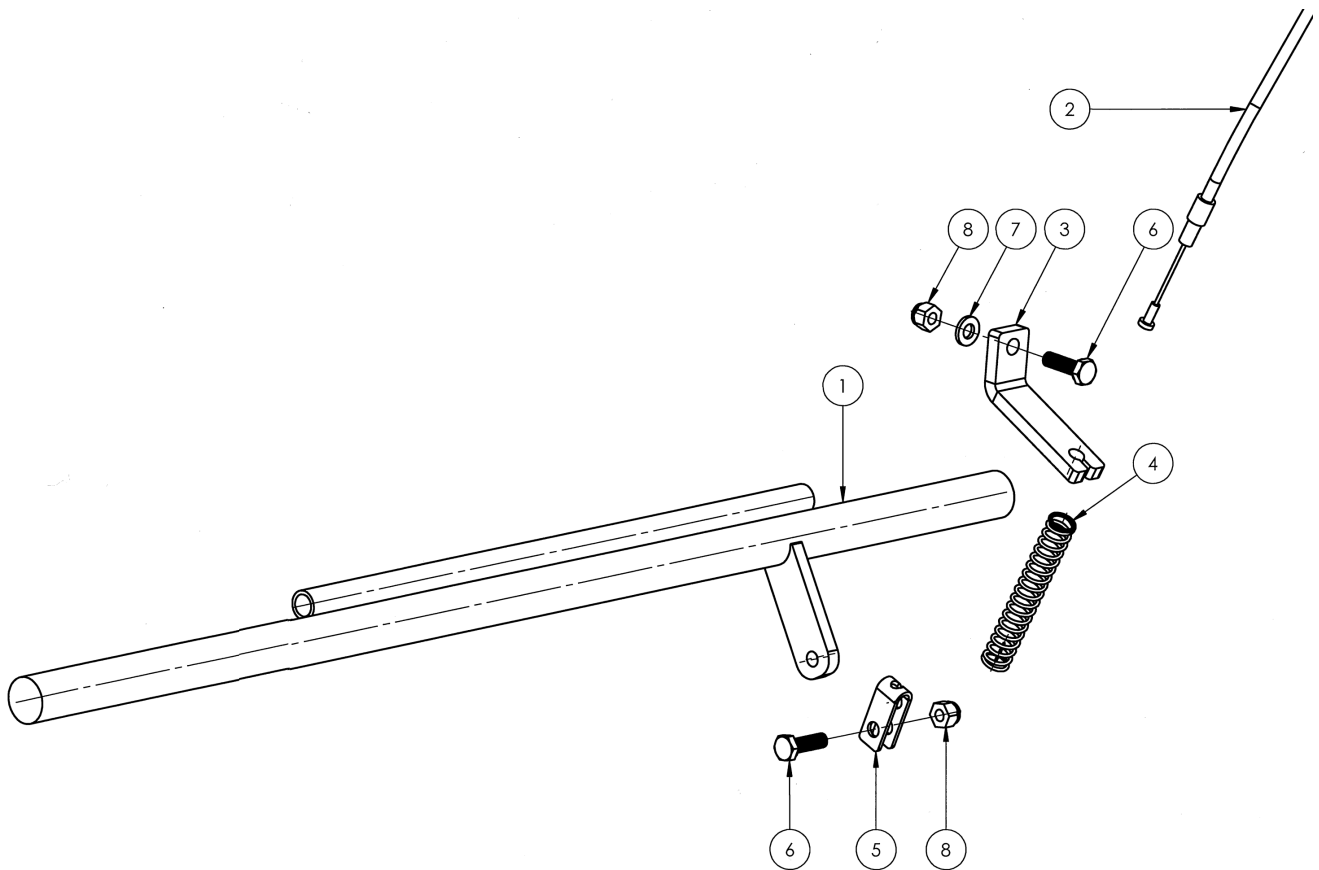
MODEL BU20, BU24 & BU27:- Top Handle Assembly (FIG 7)



**MODEL BU20, BU24 & BU27:- Top Handle Assembly BOM
(FIG 7)**

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	WASHER M6	WM6			6
2	ON-OFF SWITCH HARNESS ASSEM	BSG035			1
3	CABLE CUTTER CLUTCH	BSG1077			1
4	CABLE ROLLER DRIVE	BSG1078			1
5	CABLE CUTTER CLUTCH	BSG1077			1
6	HEX SET SCREW	SM620			3
7	M6 X 12 SET SCREW	SM612			2
8	SRING WASHER M8	SWM8			4
9	5/16 UNF X 2 1/4"	B11001			4
10	SWITCH ON-OFF ROCKER	AM85043			1
11	ALLETT HANDLEBAR DECAL	AM81543			1
12	ON OFF SWITCH DECAL	AM81555			1
13	NUT M6 NYLOC	NNM6			4
14	SET SCREW M6X16 Z/C	SM616			2
15	SCREWLOCK BODY FAB	BSG046			1
16	BRAKE LEVER	BSG1090			1
17	SET SCREW M6 x 25 ZC	SM625			1
18	BRAKE LEVER BASS PLATE	BSG1089			1
19	FLAT CAP	AM81140			1
20	YOKE ANCHOR POINT	BSG1024			1
21	TOP HANDLE FAB	BSG093			1
22	LOWER AV PLATE FAB	BSG094			1
23	UNIVERSAL MOUNT	AM81320			4
24	SPACER FOR A/V MOUNTING	BSG1207			4
25	THROTTLE LEVER RH	AM82177			1
26	SPRING WASHER M6	SWM6			4
27	NUT NYLOC M6	NNM6			2
28	HANDLE BAR CLAMP	BSG1020			2
29	BAR - LEVER MOUNT	BSG1081			2
30	NUT NYLOCK 3-8 UNF BZP	N11002			4
31	FLAT WASHER M10 FORM G	WM10G			4
32	CUTTER LEVER	BSG038			1
33	BOLT 3/8 UNF x 2 ZC	B11009			4
34	M10 FLAT WASHER	WM10			4
35	ROLLER DRIVE LEVER FAB	BSG039			1
36	THROTTLE CABLE	AM81576			1

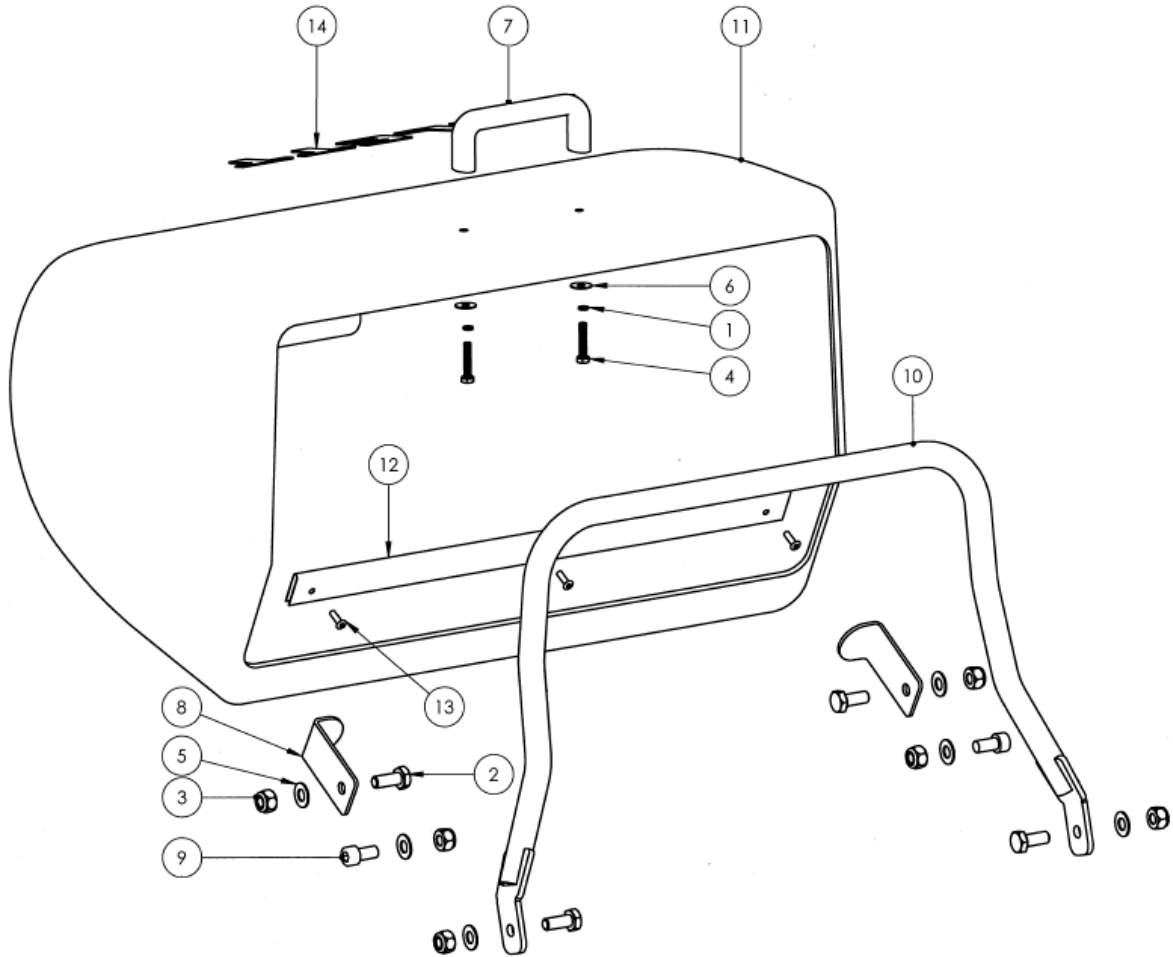
MODEL BU20, BU24 & BU27:- Brake Assembly (FIG 8)



MODEL BU20, BU24 & BU27:- Brake Assembly BOM (FIG 8)

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	BRAKE SWIVEL FAB	BSG043	BSG044	BSG034	1
2	CABLE CUTTER CLUTCH	BSG1077			1
3	BRAKE CABLE RETAINER	BS1002			1
4	SPRING	AM90519			1
5	YOKE ANCHOR POINT	BSG1024			1
6	SET SCREW M6 x 20	SM620			2
7	WASHER M6	WM6			1
8	NUT M8 NYLOC	NNM6			2

MODEL BU20, BU24 & BU27:- Grassbox Assembly (FIG 9)



MODEL BU20, BU24 & BU27:- Grassbox Assembly BOM (FIG 9)

ITEM NO.	DESCRIPTION	PART 20"	PART 24"	PART 27"	USED
1	SPRING WASHER M6	SWM6			2
2	SET SCREW M10 x 25	SM1025			4
3	M10 NYLOC NUT	NNM10			6
4	SET SCREW M6 x 30	SM630			2
5	WASHER M10	WM10			6
6	WASHER M6 FORM G	WM6G			2
7	GRASSBOX HANDLE	EL1086			1
8	GRASSBOX BRACKET STOP	AB1103			2
9	M10 x 20 CAP HEAD	SCM1020			2
10	GRASSBOX HOOP FAB	BSG213			1
11	GRASSBOX	AM89511	AM89510	AM92510	1
12	GRASSBOX STIFFENER	BSG006			1
13	POP RIVET 4.8 DIA x 16mm STEEL	PR4816			3
14	ALLETT GRASSBOX DECAL	AM81544			1

Notes