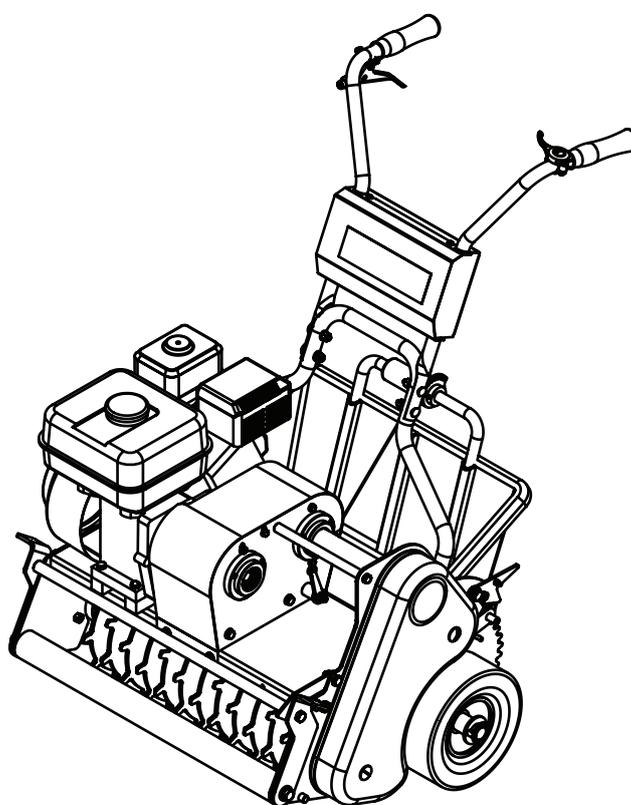


DENNIS

S500 PLUS



INSTRUCTION MANUAL

DENNIS, Ashbourne Road, Kirk Langley, Derby, DE6 4NJ, United Kingdom

Telephone:- 01332 824777

Fax:- 01332 824 525

E-mail:- sales@dennisuk.com

E-mail:- spares@dennisuk.com

www.dennisuk.com

SP20002_REV_1
10/12

Product Application Matrix

Application	FT	Razor Range	Razor 560	Simplex Ultra 560	G560 Range	SuperSix: G680	G660/G760 Range	Premier G860	Contractor Range	Bray Hand	S500 Tools	Gang Plus	Mower
Bowling Green		✓	✓	✓			✓			✓	✓	✓	
Cricket Ground Maintenance: square	wicket	✓	✓	✓						✓	✓	✓	
Cricket Ground Maintenance: outfield	✓				✓	✓	✓	✓					
Football Pitch							✓	✓				✓	✓
Golf Course Maintenance: Greens	Tees	✓			✓	✓	✓	✓		✓	✓		
Golf Course Maintenance: Greens	✓	✓	✓						✓	✓	✓		
Ornamental	✓			✓	✓	✓	✓						
Croquet Green		✓	✓	✓	✓		✓	✓		✓		✓	
Grass Tennis Court		✓	✓	✓			✓			✓	✓	✓	
Race Course Maintenance: Ornamental	Parade Ring	✓			✓	✓	✓	✓	✓	✓			✓
Rugby Pitch							✓	✓				✓	
Hockey Pitch							✓	✓					
Sports Club Maintenance		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Schools, Colleges & University Grounds		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cemetery Maintenance				✓	✓	✓	✓						
Contractors, Private Lawns & Commercial		✓			✓	✓	✓	✓		✓			✓
Local Authority & Government Contracts		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ornamental Lawn		✓			✓	✓	✓	✓	✓	✓			✓



NOTE

THIS INFORMATION IS INTENDED FOR GUIDANCE PURPOSES ONLY. WE RECOMMEND THAT YOU DISCUSS YOUR SPECIFIC REQUIREMENT WITH OUR HEAD OFFICE, SALES MANAGERS OR YOUR LOCAL DENNIS DEALER.

Certificate of Conformity

Cylinder mowers powered by Honda GX Petrol Engine

Manufacturer:- Howardson Ltd, Howardson Works, Kirk Langley, Derby, DE6 4NJ. UK

Owner of Technical Document:- Mr I.D. Howard, Howardson Ltd, Howardson Works Kirk Langley, Derby, DE6 4NJ, UK

I the under signed Declare that these machines:-

Model	Operating Width	Power (Honda)	Measured Sound Power Level	Guaranteed Sound Power Level	Serial Number
S500 Plus	20" (508mm)	GX120	91dB Lwa	94dB Lwa	See Product ID range

Tested at:- Howardson Works test site September 2011

Complies with the applicable requirements of:-

- Machine Directive 2006/42/EC
- Noise Directive 2000/14/EC (Annex V)

Managing Director



Ian Howard

Serial Numbers



NOTE

MAKE A NOTE OF THE SERIAL NUMBERS OF YOUR MACHINE & ENGINE AND ALWAYS QUOTE THEM IN ANY COMMUNICATION WITH PERSONNEL AT DENNIS.

MACHINE SERIAL NUMBER

ENGINE SERIAL NUMBER

Introduction

The reliability and quality of performance of this machine depends upon some simple care maintenance carried out regularly. This manual has been prepared to allow the user to carry out all such work.

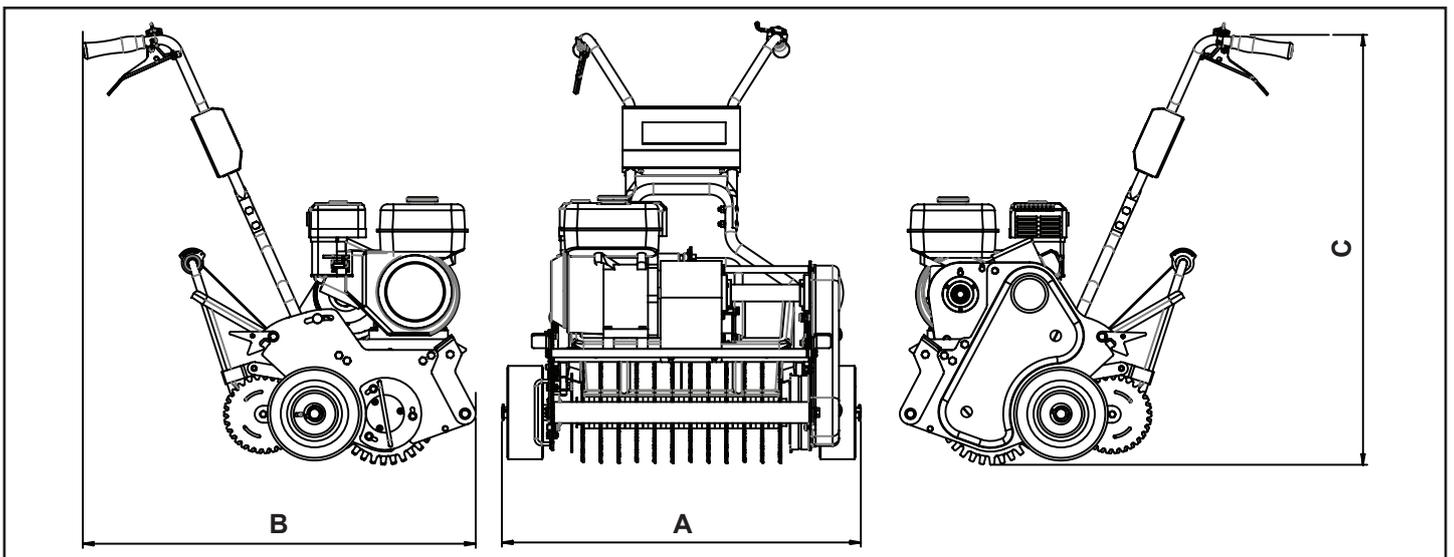
It is advisable to read the instructions carefully. Proper care and attention will enable the machine to give a continuous, satisfactory, and reliable service. Failure to carry out regular lubrication and maintenance as outlined in this manual may render any guarantee or warranty invalid.

In the case of any difficulty, or if further information or advice is required, our Service Department is always at your call. In the interests of speed and accuracy of information please quote the serial numbers of the machine and engine when making enquiries.

For the machine, this is to be found on a plate attached to the engine deck. The engine number is stamped on either the crank case or the gear casing facing towards the front of the machine. We suggest you write the numbers on the front page of this book.

	Page
Product Application Matrix.....	2
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Serial Numbers.....	3
Introduction.....	3
Technical Data.....	4
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General Adjustments.....	10
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General Lubrication.....	12
Notes.....	13 & 21
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Technical Data

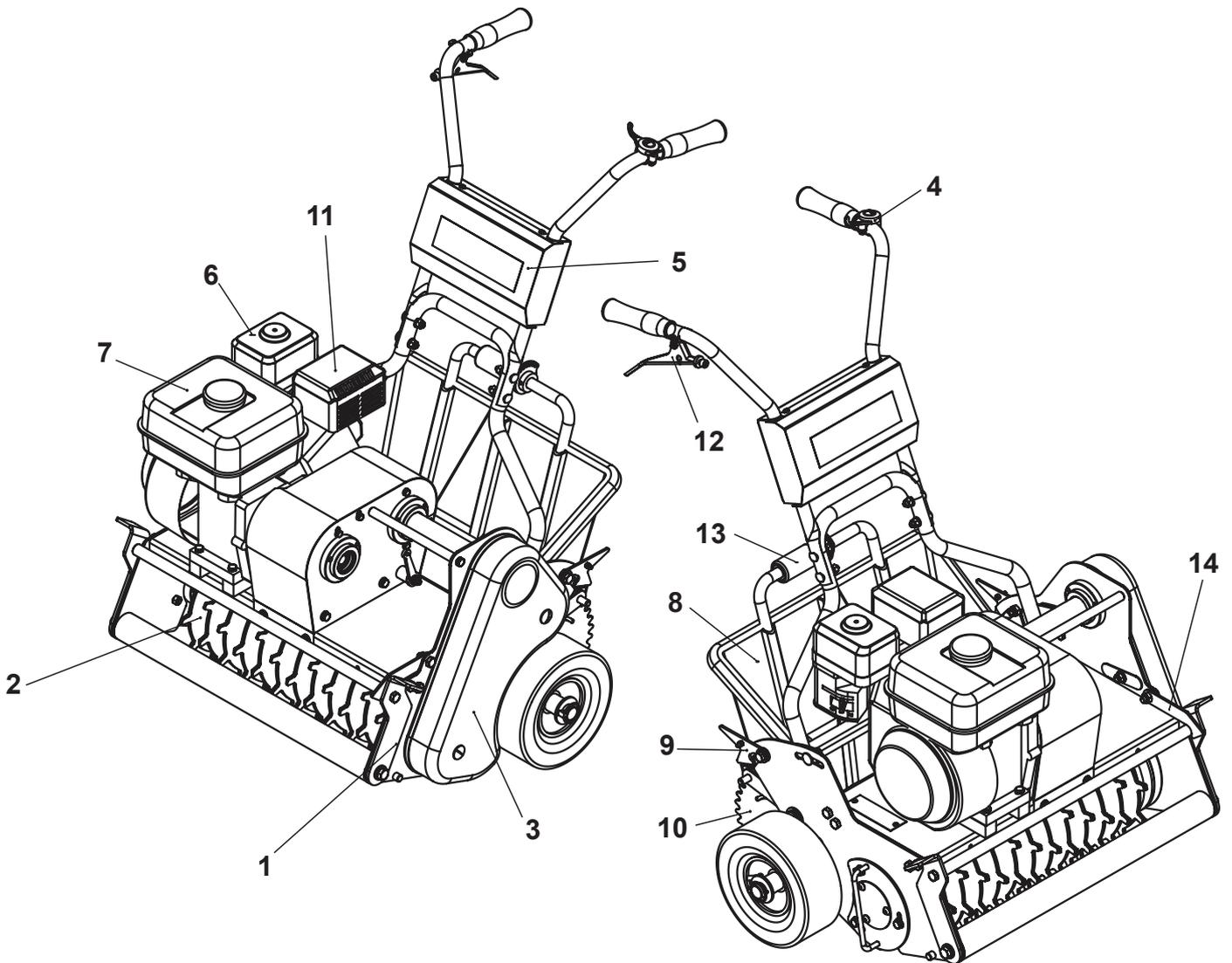


Model	S500 Plus
A - Width (mm)	840
B - Length with Grassbox (mm)	919
C - Height (mm)	1014
Weight (Kg)	110
Working Width (mm)	560
Engine	Honda GX120
Drive System	"V" Belt
Final Drive	Poly "V" high performance belts under constant tension
Hand Arm Vibration (m/sec ²)	2.5
Measured Sound Power Level dB(A) LWA	91
Guaranteed Sound Power Level dB(A) LWA	94

Machine Description

Manufactured with a 20" (51cm) reel width, this machine is powered by a 4 h.p. air cooled, single cylinder, four stroke, petrol engine. The drive is via a clutching belt.

In the design of the machine, special attention has been given to the importance of easy service and maintenance, with the construction based on a sectional assembly system. These are: "Reel", "Handle Bar" and "Drive system", all of which can be readily removed from the "Chassis unit".



1. Stand
2. Reel
3. Belt Guard
4. Throttle Lever
5. Handle Bar
6. Air Filter
7. Fuel Tank

8. Seeder Box
9. Latch
10. Seeder Drive Wheel
11. Exhaust
12. Clutch Lever
13. Seeder Control
14. Stand Latch

INTERCHANGABLE REELS

There are 2 types of interchangeable reels that can be swapped in less than 2 minutes.

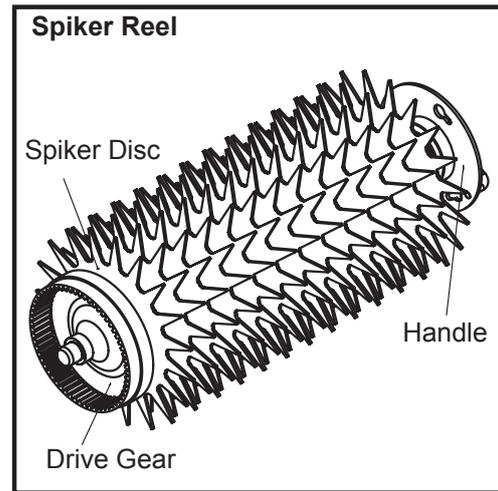
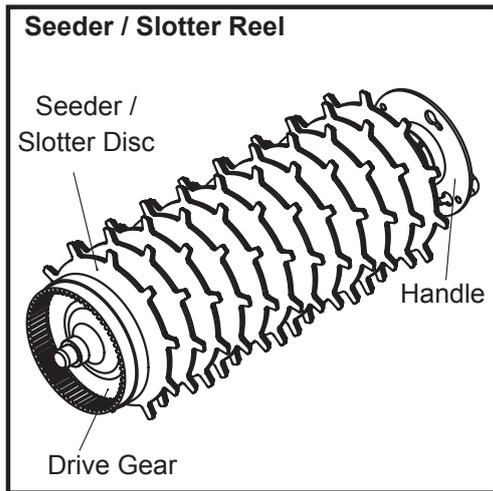
Seeder / Slotter Reel

The Seeder / Slotter reel creates germination pockets reducing seed wastage and improving the chances of survival.

Spiker Reel

The Spiker Reel is for surface aeration, punching through the surface pan and allowing water and fertiliser to penetrate to the root zone.

The 3mm x 20mm slots gives a massive 3% of holes on any green.



Important Safety Instructions

In order to operate the machine safely please follow these Health and Safety guidelines.

TRAINING



CAUTION

*READ THE INSTRUCTIONS CONTAINED IN THIS MANUAL WITH CARE. IF YOU ARE IN ANY DOUBT PLEASE ASK YOUR EMPLOYER OR CONTACT US DIRECT AT **DENNIS**.*

- Be familiar with the controls and the proper use of the equipment.
- Never allow children or people unfamiliar with these instructions to use the mower. Local regulations or insurance may restrict the age of the operator.
- Never mow while people, especially children, or pets are nearby.
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.

PREPARATION

- While operating always wear substantial footwear and long trousers. Do not operate the mower barefoot or in open sandals.
- Thoroughly inspect where the equipment is to be used and remove all stones, sticks, wire, bones and other foreign objects.



WARNING *PETROL IS HIGHLY FLAMMABLE AND WILL DAMAGE GRASS IF SPILT.*

- A) Store fuel in containers specifically designed for this purpose.
 - B) Refuel out doors and do not refuel whilst smoking.
 - C) Add fuel before starting the engine. Never remove the cap of the fuel tank or add petrol while the engine is running or when the engine is hot.
 - D) If petrol is spilled do not attempt to start the engine but move the machine away from the area of spill and avoid creating any sources of ignition until the vapours have dissipated.
- Replace damaged or faulty silencers.
 - Before using the machine always inspect the safety devices including the cut off switch and the blades for excessive wear or damage. Replace if necessary.

OPERATION

- Do not operate the engine in a confined space where dangerous **CARBON MONOXIDE** fumes can collect.
- Operate only in daylight or good artificial light.
- Always be sure of your footing on slopes.
- Walk. Never run.
- Walk across the face of slopes, never up and down.
- Exercise extreme care on slopes when changing direction.
- Do not operate excessively steep slopes.
- Use extreme caution when reversing or pulling the machine towards you.
- Never operate with defective guards or shields.
- Do not change the engine governor settings or overspeed the engine.
- Start the engine carefully following the instructions with feet well away from the blades.
- Do not tilt the machine when starting the engine.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Never pick up or carry the machine while the engine is running.

FOR THE LOCATION OF CONTROLS AND COMPONENTS REF. "MACHINE DESCRIPTION" PAGE 5.

ON / OFF SWITCH (Mounted on the Engine)

This switch stops the engine and can be used to do so at anytime during the operation of the machine. Ensure it is in the "ON" position before attempting to start the engine.

THROTTLE CONTROL (Item 4)

This controls the RPM of the engine and the resultant speed of the machine. Pushing the lever forwards will increase the RPM, pulling it back returns the engine to idle.

CLUTCH (Drive Control)

This controls the machines movment. Pulling the lever towards the handle will engage the belt drive and cause the Reel to rotate, driving the machine forwards

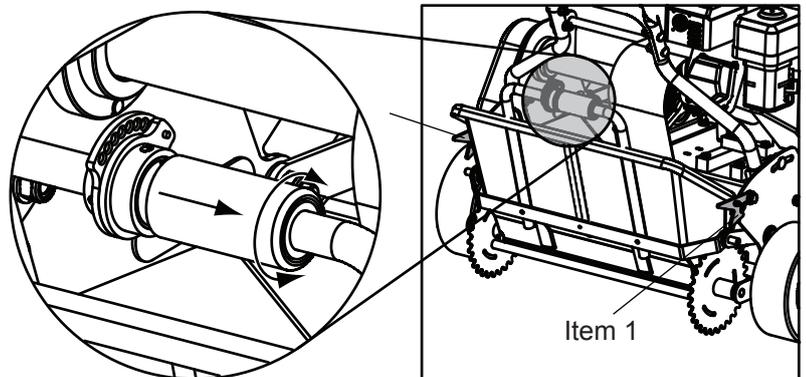
SEEDER CONTROL (Item 13)

For the seeder to operate it must be in the down position (wheels in contact with ground) see diagram.

To achieve this, release the latches on both sides (item 1). The seeder box is now free to float, following the contours on the ground.

The quantity of seed delivered can be varied using the control on the seeder box handle. By sliding the control to the right and twisting it forwards / backwards it can be locked in any of 9 positions to give the required amount of seed.

When seeding is complete, simply push down on the handle bars causing the machine to lean backwards and latching onto the seed box. Return the machine to the upright position and the seed box will raise off the ground.





CAUTION

BEFORE YOU OPERATE THIS MACHINE YOU MUST READ AND STUDY THIS MANUAL. IF YOU ARE IN ANY DOUBT PLEASE ASK YOUR EMPLOYER OR CONTACT US DIRECT.

FOR THE LOCATION OF CONTROLS AND COMPONENTS REF. "MACHINE DESCRIPTION" PAGE 5.

PREPARATION FOR USE

- Ensure the turf is free from stones or other obstructions which may damage the reel.
- Check the machine (inc. engine) is serviceable, has all guards in place and has no visible damage.
- Check the engine oil level. (Full details are given in the ENGINE Manual supplied)
- Fill the fuel tank 3/4 full with unleaded petrol.
- Ensure the drive is disengaged.



CAUTION

IMPORTANT INFORMATION PLEASE READ ALL THE DETAILS IN THIS SECTION AND FAMILIARIZE YOURSELF AND ALL MACHINE OPERATORS WITH THE CONTENTS.

STARTING THE ENGINE

- Switch on the fuel tap.
- Switch the cut off switch to "**ON**" (Mounted on Engine)
- Set the throttle control to a half open.
- Shift the choke lever to the "**Closed**" position. (Note: The choke is not required if the engine is warm or the air temperature high.)
- Grasp the recoil start handle until resistance is felt, then pull it with force.
- Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.
- Once the engine is started, gradually "**Open**" the choke lever. (Warm-up running of 3-5 minutes is recommended.)
- Set the throttle control back to the idle position.

STOPPING THE ENGINE

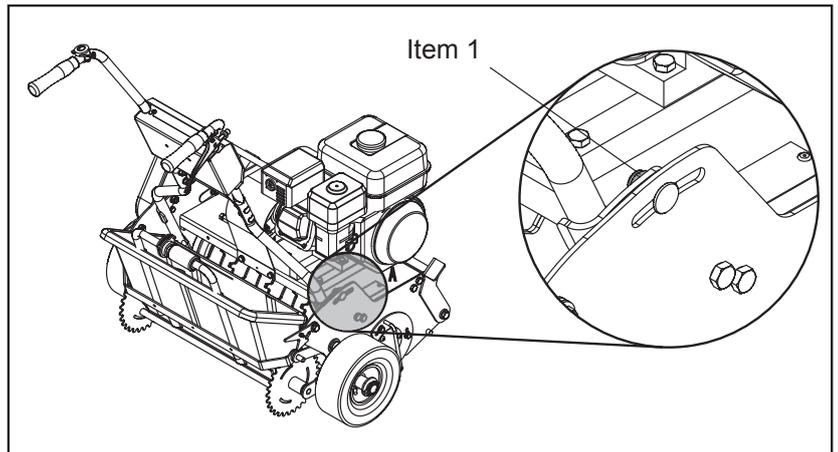
- Set the throttle control to the idle position.
- Switch the cut off to **OFF** (Mounted on Engine)
- Close the fuel tap.

HANDLE BAR ADJUSTMENT

The “**Handle bars**” are adjustable to achieve the correct working height for the operator.

To set:

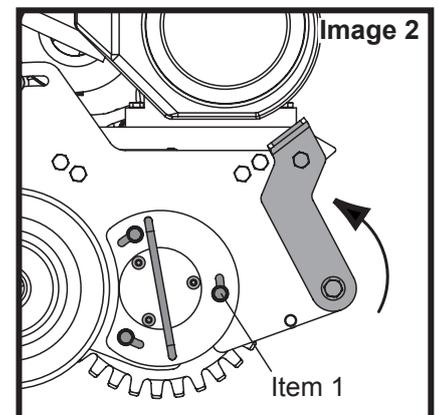
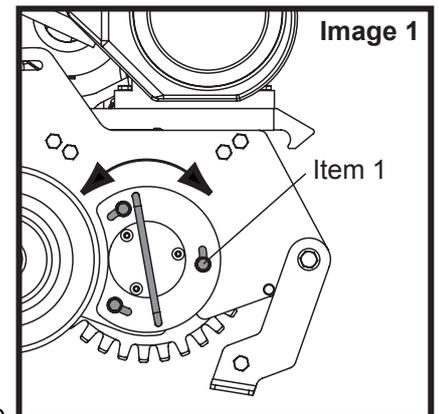
- Slacken 2-off nuts (Item 1) $\frac{1}{4}$ ” turn [17mm spanner]
- Raise / lower the “Handle Bar” to the desired position”
- When set, tighten the nuts (Item 1).



CHANGE A REEL

The Reel can be removed easily for maintenance or to fit an interchangeable unit.

- With the stand in the “Down” position (see image 1), slacken the 3-off bolts (item 1) [13mm spanner]
- Rotate the Reel handle to align the large holes with the bolt heads.
- Pull the handle, this will cause the drive to disengage and the reel to rest on the floor.
- Move to the back of the machine, push down on the handles causing the front of the machine to lift.
- Put the stand in the “Up” position (see image 2) and simply maneuver the machine off the Reel. Leaving it on the ground.
- To fit the new Reel, reverse the above.



ENGINE

The machine is fitted with a Honda GX120 petrol engine.

For full specifications please refer to the manufacturers instruction manual included.

Area	Maintenance	First 4 Hours	First Month / 20 Hours	3 Months / 50 Hours	6 Months / 100 Hours
Engine Oil	Check Level	✓			
Engine Oil	Change		✓		✓
Air Filter	Check Condition / Clean		✓		✓
Spark Plug	Change				✓

OIL / FUEL TYPE & QUANTITY - SPARK PLUG TYPE

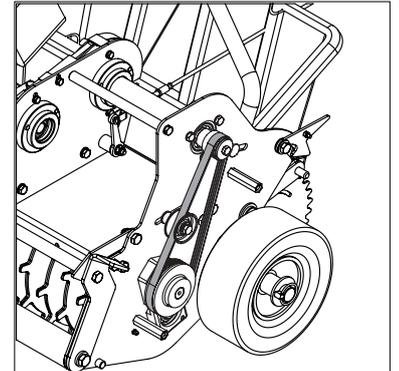
Engine Model	Oil Type	Quantity (Ltr)	Fuel Type	Capacity (Ltr)	Spark Plug Type	Electrode Gap (mm)
Honda GX120 Petrol	SAE 10W-40	0.6	Unleaded	2.5	BM6ES or BPR6ES	0.7 - 0.8

DRIVING BELTS

The final drive to reel is via hard wearing TBA poly-V type belts which provide for smooth trouble free operation. To ensure the best performance the following instructions should be carefully followed.

Belt tension is the single most important factor necessary for long, satisfactory service life of any belt drive.

Under-tensioning leads to belt slip causing rapid wear; over tensioning means excessive strain on belt and bearings. Between these two extreme conditions is a reasonable range of tension within which the belt will operate. Belt tension can be assessed by the 'deflection' method.



NOTE

CORRECTION CAN BE MADE BY ADJUSTMENT OF THE BELT TENSIONERS. REMOVE THE DRIVING BELT COVER. THE BELT TENSIONERS ARE RETAINED IN A SLOTTED HOLE ALLOWING ADJUSTMENT TO BE MADE ONCE THE HOLDING HEXAGON HEADED BOLTS HAVE BEEN LOOSENED. WHEN ADJUSTED CORRECTLY THE TENSIONERS SHOULD STILL ROTATE EASILY WITH FINGER PRESSURE. ENSURE THE TENSIONER BOLTS ARE SECURE BEFORE REPLACING THE COVER.

"Belts will be sufficiently tensioned if the deflection force applied at mid span to produce a deflection equal to 16mm per meter of span distance falls between 5 and 9 Newtons per Rib" (TBA Belting).

In practical terms this relates to about 5mm of deflection under moderate finger pressure on the non tensioner side.

If fitting new belts it is advisable to observe the drive for the first 20-30 minutes. It may be necessary to make an adjustment to compensate for the normal drop in tension during the run-in period.

CLUTCH CABLE ADJUSTMENT

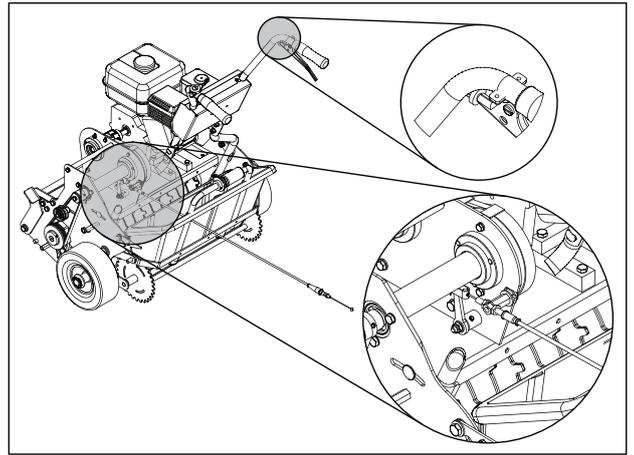
Over time the cables that operate the drive will need adjusting. This adjustment can be done at the “**Handle Bar**” or at the “**Chassis**”.

To set at “**Handle Bar**”

- Remove rubber cover from lever.
- Slacken lock nuts on cable [10mm and 7/16” spanner]
- Adjust cable to desired tension.
- When set, tighten the lock nuts.

To set at “**Chassis**”

- Slacken 2-off lock nuts on relevant cable [2-off 13mm spanners]
- Adjust cable to desired tension.
- When set, tighten the lock nuts.



NOTE

ENSURE THE LOCK NUTS ARE TIGHT AND SECURE AND CHECK OPERATION IS SATISFACTORY BEFORE REPLACING THE CLUTCH COVER AND SCREWS.

Storage

The machine should always be kept in a clean dry place, free from condensation. After use ensure that the machine is thoroughly clean, dry and free from grass and mud.

Under no circumstances must the machine be steam cleaned as this may remove grease from the pre packed bearings.

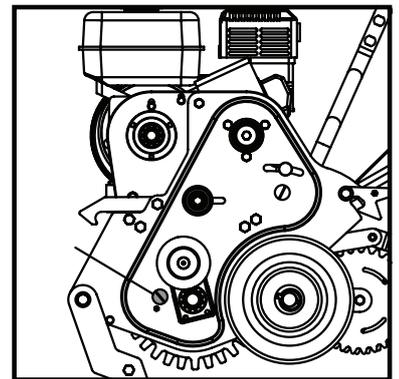
Because of the nature of lead free petrol we recommend that if the machine is being left unused for more than 2 weeks the carburetor is run dry. Allow the engine to run out of fuel with the fuel tap switched off.

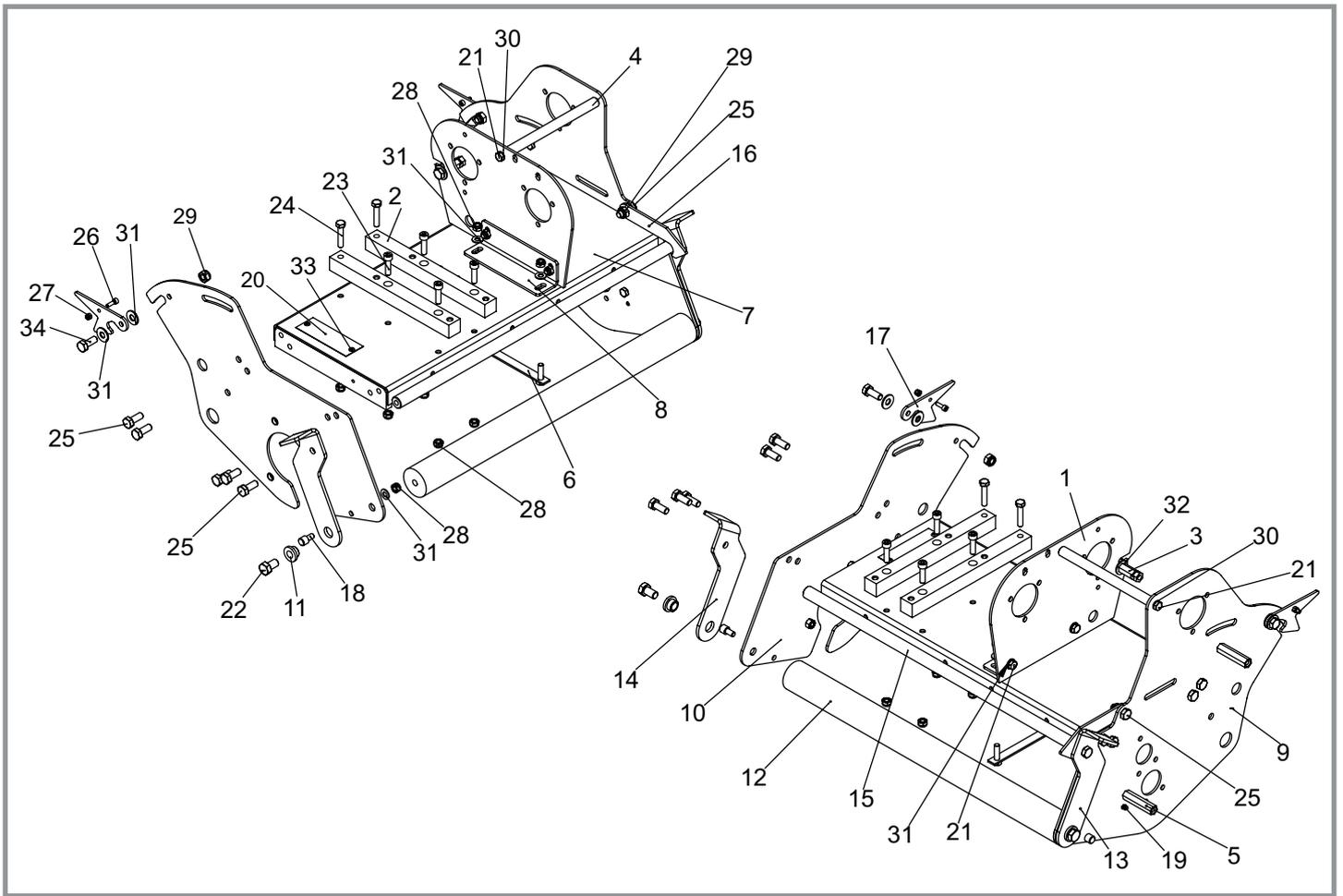
General Lubrication

REEL

(1-Month)

A grease point is located under the belt guard on the side plate of the machine. This is to lubricate the internal spur gear that provides drive to the reel. Apply one pump of grease. Do not over grease.

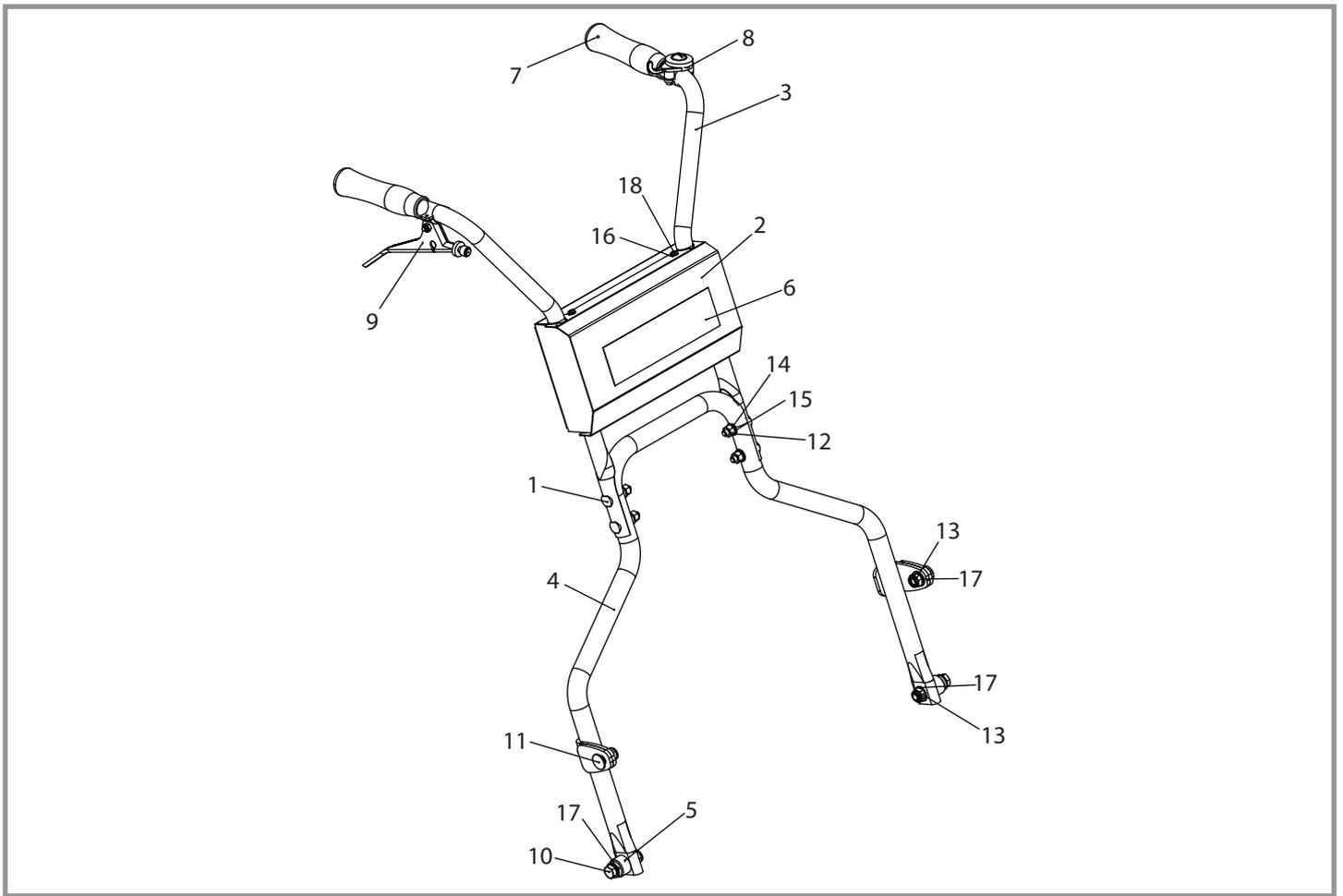




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Chassis

Item No.	Part No.	Description	Quantity
1	229000	Support Plate	1
2	229004	Engine Bearers	2
3	229005	Cable Stop	1
4	229089	Tie Bar 20" - 22"	1
5	229115	Chain Case Stud	2
6	229492	Retaining Plate Assembly	1
7	229811	Engine Bed 20" (Simplex)	1
8	230004	Support Bracket	1
9	250001	Side Plate L.H. (Slotter)	1
10	250002	Side Plate R.H. (Slotter)	1
11	250021	Collar Front Tie Bar	2
12	250023	Weight Bar	1
13	250024	Stand Leg L.H. (Slotter)	1
14	250025	Stand Leg R.H. (Slotter)	1
15	250026	Stand Leg Brace (Slotter)	1
16	250066	Stand Latch	1
17	250089	Seeder Latch	2
18	J20023	Unit Limiting Stud	2
19	J20064	Grease Nipple 1/4" UNF	1
20	J20297	Serial Number Plate	1
21	SP01009	Hex Set Screw M8 x 20	6
22	SP01021	Hex Set Screw M12 x 20	2
23	SP01025	Cap Head Screw M8 x 30	4
24	SP01027	Hex Set Screw M8 x 40	2
25	SP01035	Hex Set Screw M10 x 25	12
26	SP01043	Cap Head Screw M5 X 16	2
27	SP02002	Nut M5 Nyloc	2
28	SP02006	Nut M8 Nyloc	12
29	SP02008	Nut M10 Nyloc	3
30	SP03004	Washer M8 Toothed	2
31	SP03008	Washer M8 Form A	10
32	SP03016	Washer M10 Form C	3
33	SP05001	Rivet 4.8 x 10	2
34	SP01045	Hex Set M8 x 25	2



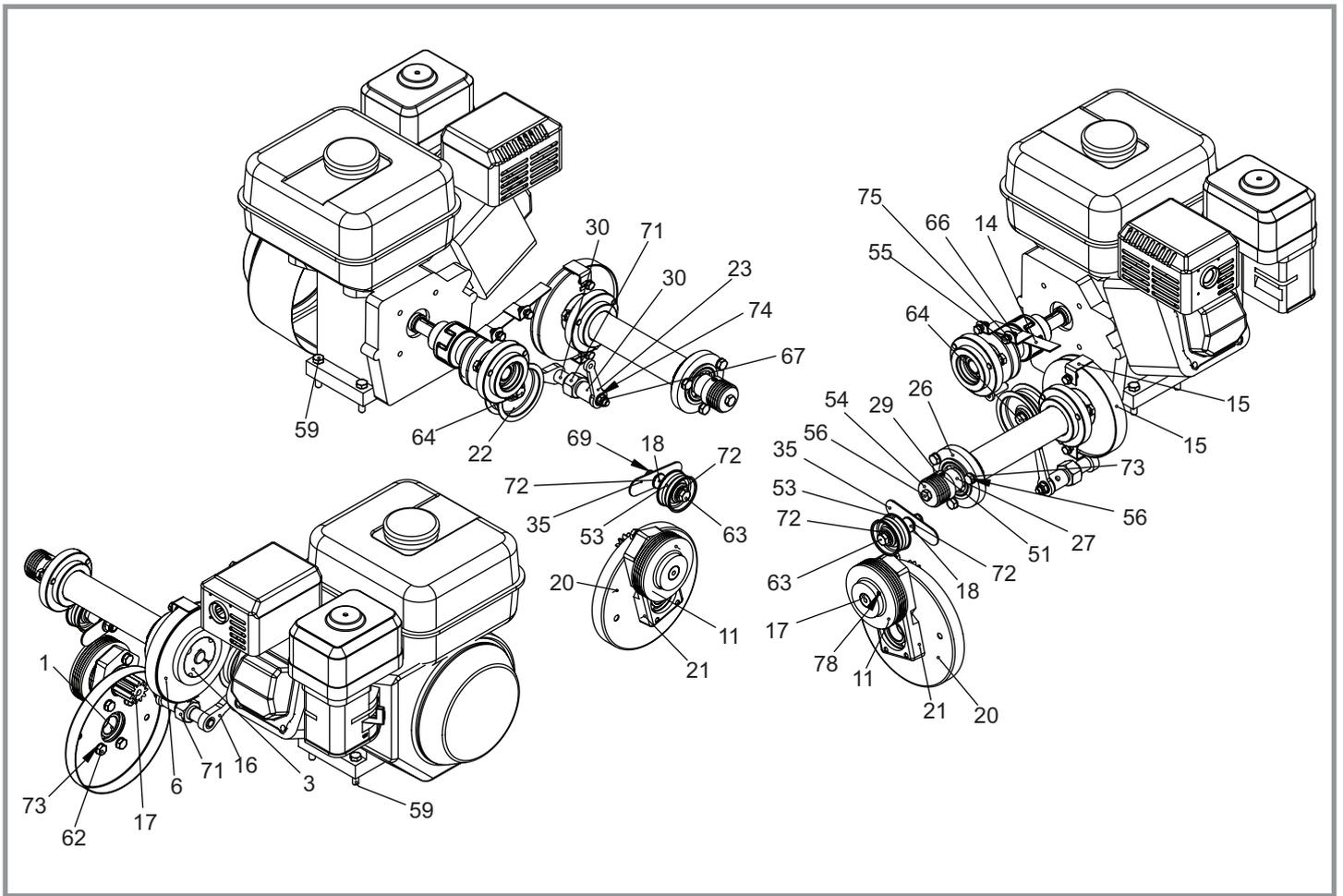
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Handle

Item No.	Part No.	Description	Quantity
1	228093	Bolt Saddle M8 x 43	4
2	230013	Console Cover (No Switch)	1
3	230040	Handle Upper W.A.	1
4	250010	Lower Handle Assembly (Slotter)	1
5	250016	Handle Boss (Slotter)	2
6	B32902	Decal Dennis	1
7	J20107	Handle Grip Rubber	2
8	J20108	Throttle Control Lever	1
9	J20109	Brake Band Lever	1
10	SP01031	Hex Set Screw M10 x 50	2
11	SP01044	Coach Bolt M10 x 25	2
12	SP02005	Nut M8 STD	4
13	SP02008	Nut M10 Nyloc	4
14	SP03004	Washer M8 Toothed	4
15	SP03008	Washer M8 Form A	4
16	SP03009	Washer M5 Form A	4
17	SP03011	Washer M10 Form A	6
18	SP04001	Screw M5 x 16 Slotted	4

NOT SHOWN

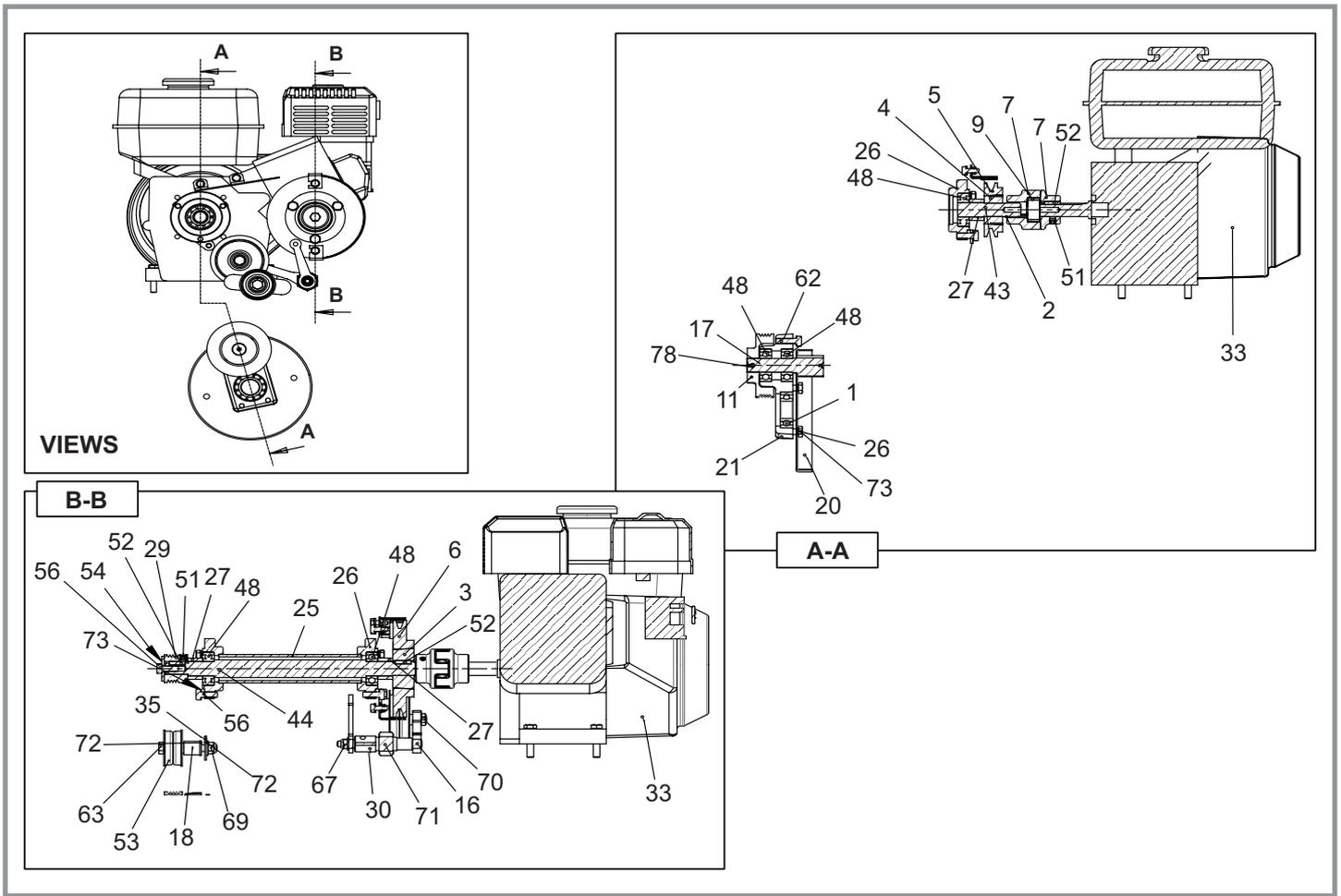
-	J20112	Throttle Cable	1
-	229723	Drive Cable	1



3.01

Engine & Drive Assembly 1

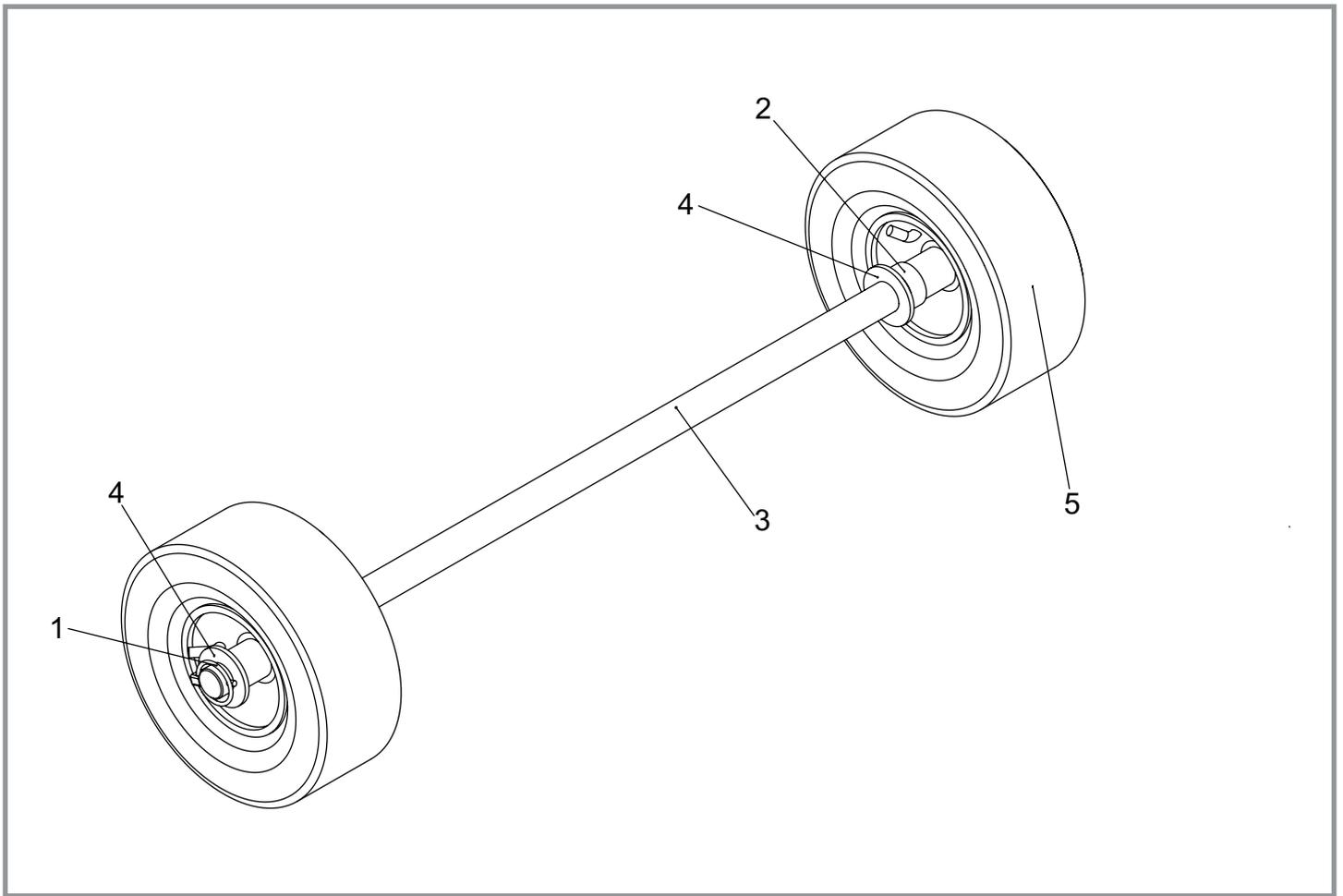
Item No.	Part No.	Description	Quantity	Item No.	Part No.	Description	Quantity
1	062662	Bearing 6205-2rs 3	1	40	250024	Stand Leg L.H. (Slotter)	1
2	073445	Key 3/16" x 3/16" x 1 1/2" Rd End	1	41	250025	Stand Leg R.H. (Slotter)	1
3	228001	Tapered Bush 1610 - 3/4"	1	42	250026	Stand Leg Brace (Slotter)	1
4	228002	Tapered Bush 1108 - 3/4"	1	43	250035	Drive Shaft Engine (Slotter)	1
5	228004	Pulley SPZ-71	1	44	250036	Drive Shaft Drive (Slotter)	1
6	228005	Pulley SPZ-132	1	45	250066	Stand Latch	1
7	228011	Coupling Half (3/4")	2	46	250089	Seeder Latch	2
9	228103	Coupling Element	1	47	J20023	Unit Limiting Stud	2
10	229000	Support Plate	1	48	J20052	Bearing 6204-2RS 3	5
11	229003	Drive Pulley Land Roll	1	49	J20064	Grease Nipple 1/4" UNF	1
12	229004	Engine Bearers	2	50	J20297	Serial Number Plate	1
13	229005	Cable Stop	1	51	J20467	Grub Screw M8 x 8	3
14	229006	Belt Guide Roller Clutch Top	1	52	J209030	Key 3/16" x 3/16" x 3/4" Rd End	3
15	229007	Belt Guide Roller Clutch Pulley	1	53	J209047	Tensioner Pulley	1
16	229009	Drive Idler Arm	1	54	J209249	Washer 9 x 35 x 3	1
17	229011	Pinion Shaft 11T	1	55	SP01008	Hex Set Screw M6 x 16	4
18	229013	Pulley Spacer	1	56	SP01009	Hex Set Screw M8 x 20	16
19	229014	Belt Guide Peg	1	57	SP01021	Hex Set Screw M12 x 20	2
20	229031	Dirt Excluder	1	58	SP01025	Cap Head M8 x 30	4
21	229033	Roller Bearing Housing Oblong	1	59	SP01027	Hex Set Screw M8 x 40	6
22	229038	Tensioner Pulley	1	60	SP01035	Hex Set Screw M10 x 25	14
23	229044	Idler Lever	1	61	SP01043	Cap Head M5 x 16	2
24	229089	Tie Bar 20" - 22"	1	62	SP01045	Hex Set Screw M8 x 25	5
25	229090	Layshaft Guard 20" - 22"	1	63	SP01068	Hex Set Screw 3/8" UNF x 2 1/2"	1
26	229091	Bearing Housing	3	64	SP01071	Hex Set Screw 3/8" UNF x 1 1/2"	1
27	229092	Bearing Spacer	3	65	SP02002	Nut M5 Nyloc	2
28	229115	Chain Case Stud	2	66	SP02004	Nut M6 Nyloc	4
29	229322	4 Groove Drive Pulley	1	67	SP02006	Nut M8 Nyloc	13
30	229382	Brg Housing	1	68	SP02008	Nut M10 Nyloc	3
31	229492	Retaining Plate Assy	1	69	SP02018	Nut 3/8" UNF Nyloc	1
32	229811	Engine Bed 20" (Simplex)	1	70	SP02033	Nut 3/8" UNF Lock (Thin)	1
33	229900	Engine 4.5 Hp Honda GX120 Q9 Type	1	71	SP02034	Nut 3/4" UNF Std	1
34	230004	Support Bracket	1	72	SP03002	Washer 3/8"	3
35	240088	Slot Blank	1	73	SP03004	Washer M8 Toothed	16
36	250001	Side Plate L.H. Slotter	1	74	SP03008	Washer M8 Form A	7
37	250002	Side Plate R.H. Assy (Slotter)	1	75	SP03010	Washer M6 Form A	6
38	250021	Collar Front Tie Bar	2	76	SP03016	Washer M10 Form C	7
39	250023	Weight Bar	1	77	SP05001	Rivet 4.8 x 10	2
				78	SP05008	Pin Spirol M5 x 50	1



3.02

Engine & Drive Assembly 2

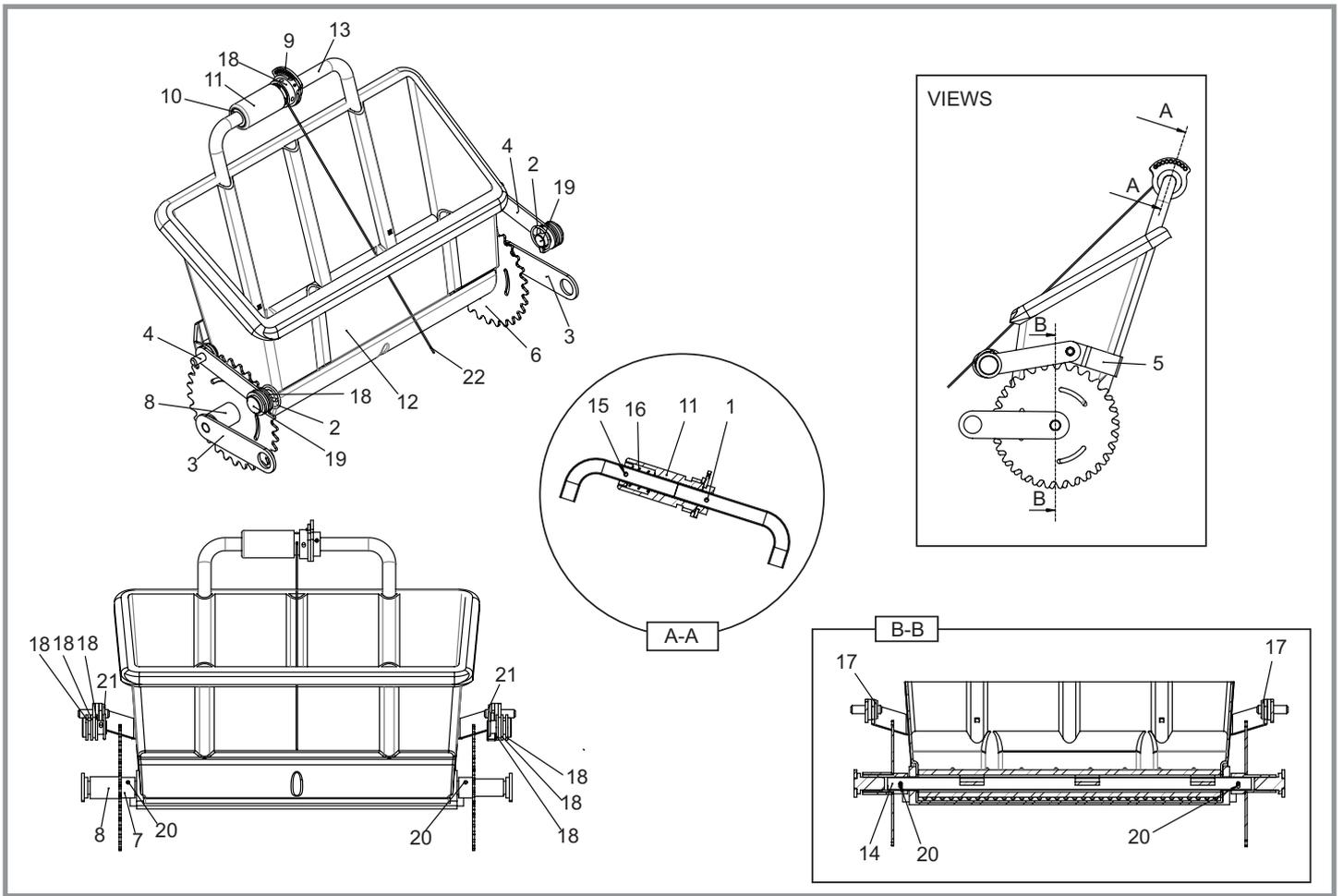
Item No.	Part No.	Description	Quantity	Item No.	Part No.	Description	Quantity
1	062662	Bearing 6205-2RS 3	1	40	250024	Stand Leg L.H. (Slotter)	1
2	073445	Key 3/16" x 3/16" x 1 1/2" Rd End	1	41	250025	Stand Leg R.H. (Slotter)	1
3	228001	Tapered Bush 1610 - 3/4"	1	42	250026	Stand Leg Brace (Slotter)	1
4	228002	Tapered Bush 1108 - 3/4"	1	43	250035	Drive Shaft Engine (Slotter)	1
5	228004	Pulley SPZ-71	1	44	250036	Drive Shaft Drive (Slotter)	1
6	228005	Pulley SPZ-132	1	45	250066	Stand Latch	1
7	228011	Coupling Half (3/4")	2	46	250089	Seeder Latch	2
9	228103	Coupling Element	1	47	J20023	Unit Limiting Stud	2
10	229000	Support Plate	1	48	J20052	Bearing 6204-2RS 3	5
11	229003	Drive Pulley Land Roll	1	49	J20064	Grease Nipple 1/4" UNF	1
12	229004	Engine Bearers	2	50	J20297	Serial Number Plate	1
13	229005	Cable Stop	1	51	J20467	Grub Screw M8 x 8	3
14	229006	Belt Guide Roller Clutch Top	1	52	J209030	Key 3/16" x 3/16" x 3/4" Rd End	3
15	229007	Belt Guide Roller Clutch Pulley	1	53	J209047	Tensioner Pulley	1
16	229009	Drive Idler Arm	1	54	J209249	Washer 9 x 35 x 3	1
17	229011	Pinion Shaft 11T	1	55	SP01008	Hex Set Screw M6 x 16	4
18	229013	Pulley Spacer	1	56	SP01009	Hex Set Screw M8 x 20	16
19	229014	Belt Guide Peg	1	57	SP01021	Hex Set Screw M12 x 20	2
20	229031	Dirt Excluder	1	58	SP01025	Cap Head M8 x 30	4
21	229033	Roller Bearing Housing Oblong	1	59	SP01027	Hex Set Screw M8 x 40	6
22	229038	Tensioner Pulley	1	60	SP01035	Hex Set Screw M10 x 25	14
23	229044	Idler Lever	1	61	SP01043	Cap Head M5 x 16	2
24	229089	Tie Bar 20" - 22"	1	62	SP01045	Hex Set Screw M8 x 25	5
25	229090	Layshaft Guard 20" - 22"	1	63	SP01068	Hex Set Screw 3/8" UNF x 2 1/2"	1
26	229091	Bearing Housing	3	64	SP01071	Hex Set Screw 3/8" UNF x 1 1/2"	1
27	229092	Bearing Spacer	3	65	SP02002	Nut M5 Nyloc	2
28	229115	Chain Case Stud	2	66	SP02004	Nut M6 Nyloc	4
29	229322	4 Groove Drive Pulley	1	67	SP02006	Nut M8 Nyloc	13
30	229382	Brg Housing	1	68	SP02008	Nut M10 Nyloc	3
31	229492	Retaining Plate Assy	1	69	SP02018	Nut 3/8" UNF Nyloc	1
32	229811	Engine Bed 20" (Simplex)	1	70	SP02033	Nut 3/8" UNF Lock (Thin)	1
33	229900	Engine 4.5 Hp Honda GX120 Q9 Type	1	71	SP02034	Nut 3/4" UNF Std	1
34	230004	Support Bracket	1	72	SP03002	Washer 3/8"	3
35	240088	Slot Blank	1	73	SP03004	Washer M8 Toothed	16
36	250001	Side Plate L.H. Slotter	1	74	SP03008	Washer M8 Form A	7
37	250002	Side Plate R.H. Assy (Slotter)	1	75	SP03010	Washer M6 Form A	6
38	250021	Collar Front Tie Bar	2	76	SP03016	Washer M10 Form C	7
39	250023	Weight Bar	1	77	SP05001	Rivet 4.8 x 10	2
				78	SP05008	Pin Spirol M5 x 50	1



4.01

Wheels

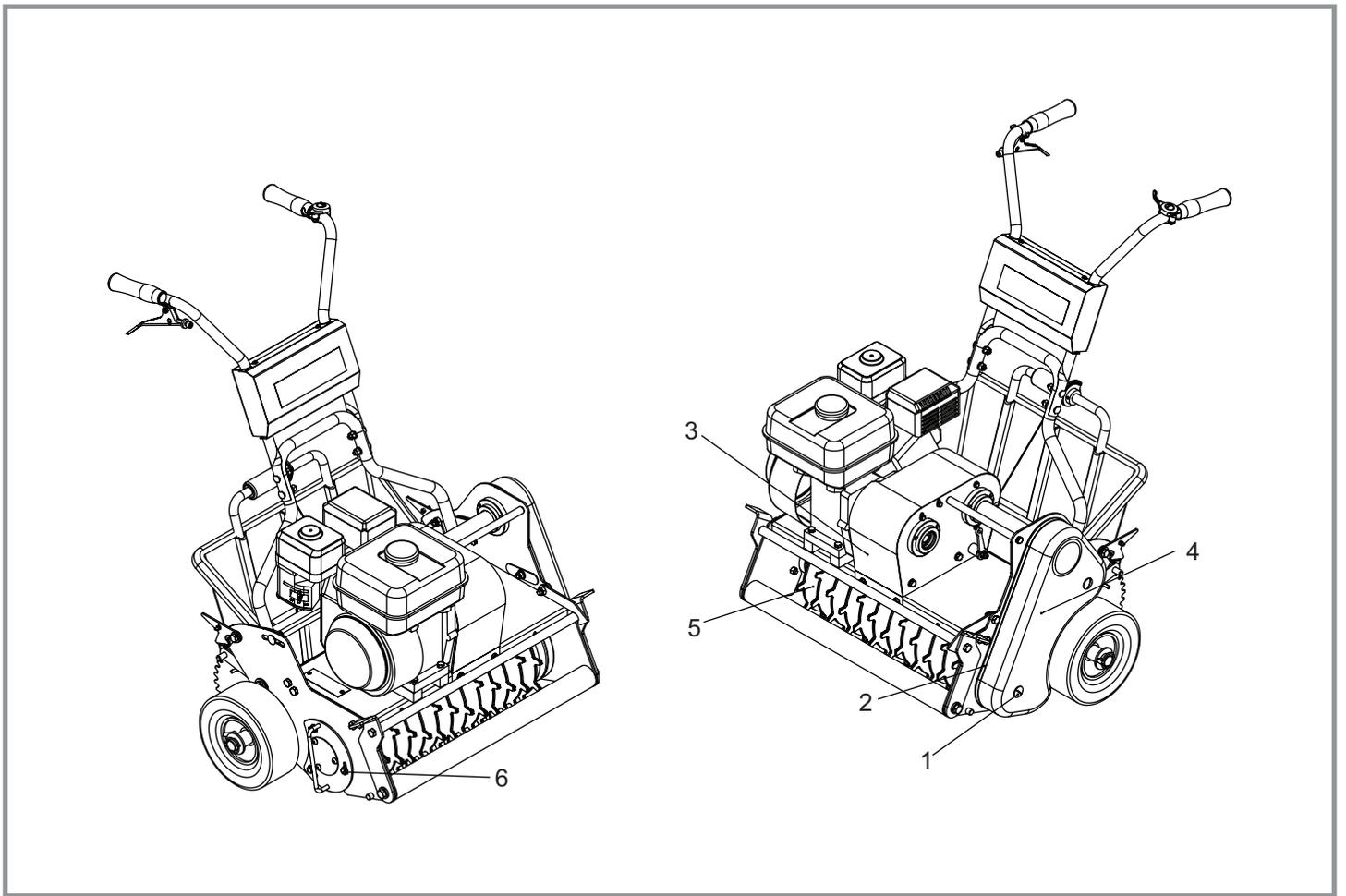
Item No.	Part No.	Description	Quantity
1	228071	Pin Linch	2
2	250019	Wheel Spacer	2
3	250045	Axle (Slotter)	1
4	SP03001	Washer ID25 4 Form C	4
5	SP09002	Wheel Assembly 9 3.50 - 4.4PR	2



5.01

Seeder Assembly

Item No.	Description	Part Number	Quantity
1	060174	Pin Spirol M5 x 35	1
2	228071	Pin Linch 89410	2
3	250060	Link Pivot Assy	2
4	250063	Top Link Assy	2
5	250071	Brace Plate	1
6	250080	Seeder Drive	1
7	250082	Seeder Drive Shaft	1
8	250085	Seeder Support Assy	1
9	250090	Index Plate Assy	1
10	250092	Stop Plate	1
11	250099	Index Grip Assy	1
12	250111	Scott Seeder Box	1
13	250119	Scott Seeder Handle Mod	1
14	250120	Scott Seeder Axle Mod	1
15	J20404	Pin Spirol M5 x 24	1
16	J209246	Top Drive SPring	1
17	SP03017	Washer M12 Form C	2
18	SP03022	Washer M20 Form A	6
19	SP05012	Clevis Pin 20 x 30	2
20	SP05013	Pin Spirol M5 x 30	2
21	SP07001	Starlock 12mm	2
22	SP12006	Cable Seeder	1



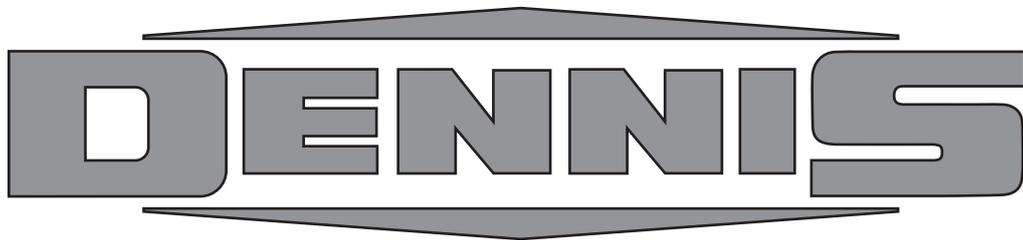
6.01

Guards

Item No.	Description	Part Number	Quantity
1	194946	Chain Case Screw	2
2	228031E	Chain Case Seal	1
3	229093	Transmission Guard W.A.	1
4	250100	Guard Drive Belt	1
5	D136-1	Slotter Reel	1
6	SP01066	Hex Taptite Screw M8 x 20	9

NOT SHOWN

-	D136-2	Spiker Reel	1
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DENNIS, Ashbourne Road, Kirk Langley, Derby, DE6 4NJ, United Kingdom

Telephone:- 01332 824777

Fax:- 01332 824 525

E-mail:- sales@dennisuk.com

E-mail:- spares@dennisuk.com

www.dennisuk.com