JACOBSEN
A Textron Company

Safety, Operation and Maintenance Manual

Jacobsen GP400™ Ride on Greens Mower

Engine Range - Kubota D722-E3B D722-E4B
Briggs and Stratton Vanguard 350447

GP400 Gasoline / Series: GZ / Product code:USAG004
GP400 Gasoline (USA only) / Product code:62706
GP400 Diesel (Kubota E3B) / Series: GY / Product code:USAD004
GP400 Diesel (Kubota E4B) / Series: GY4 / Product code:USAD004
GP400 Diesel (Kubota E4B) / Series: GY5 / Product code:USAD004

⚠ WARNING

WARNING: If incorrectly used this machine can cause severe injury. Those who use and maintain this machine must be trained in its proper use, warned of its dangers and must read the entire manual before attempting to set up, operate, adjust or service the machine.

JACOBSEN
A Textron Company

When Performance Matters.™

GB
United Kingdom

RJL 100 July 2018

1 CONTENTS

Ransomes Jacobsen Limited reserves the right to make design changes without obligation to make these changes on units previously sold and the information contained in this manual is subject to change without notice.

3.1 IMPORTANT

The JACOBSEN GP400 is available as a Petrol or Diesel engined self propelled Reel mower. The hydraulic systems are for the traction drive, the cutting unit lift and the lower and cutting unit drives and steering.

IMPORTANT: Do the maintenance indicated in this manual to make sure that the quality of cut is kept at a high level.

This SAFETY AND OPERATORS MANUAL is part of the machine and must stay with the machine always. Suppliers of both original and used machines need to keep the documentation that comes with the machine.

You must use the machine to cut the grass only and not for any other purpose. Compliance with the conditions of operation, service and repair specified by the manufacturer, are understood to be part of the correct use.

ALL operators **MUST** read through this manual and understand the Safety Instructions, controls, lubrication and maintenance procedures.

Make sure that you obey all safety and road traffic regulations.

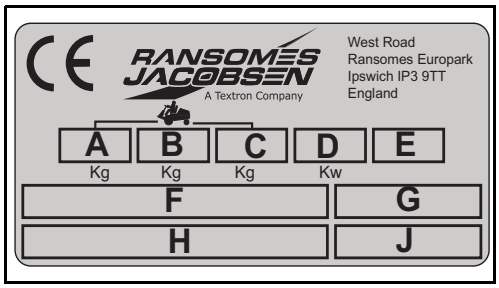
You must not make any changes to the machine that the manufacturer does not approve. This type of change can release the manufacturer from the liability for any damage or injury.

Discard worn parts, taking note of the environmental result, use the systems available in the country where the machine is used. When the machine is at its end of life, there are guidelines in this manual for the removal of the machine from use.

Use only Ransomes Jacobsen Genuine spare parts to make sure that European conformity is controlled.

2006/42/EC
These instructions are the Original instructions confirmed by Ransomes Jacobsen Limited

3.2 PRODUCT IDENTIFICATION



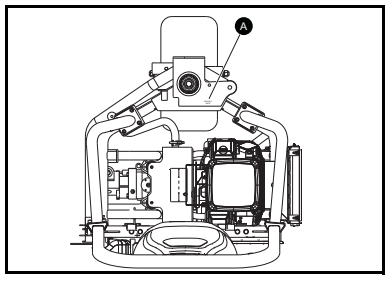
A Maximum front axle load in Kg (for machines being driven on the highway)
B Gross weight (mass) in Kg
C Maximum rear axle load in Kg (for machines being driven on the highway)
D Power in Kw
E Date code
F Machine type (Designation)
G Product code
H Product name
J Serial number

Location of Serial number plate

The serial number plate (A) is found on the chassis under the position for the operator seat.

Chassis Stamp

The Serial number and date code (B) are marked on the chassis under the seat plate



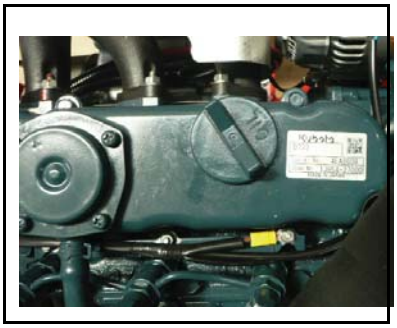
Engine Identification

Serial Plate

Location of Serial number plate

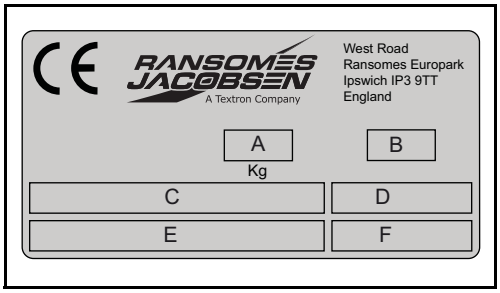
The engine serial number is found on the top of the valve cover toward the front of the mower. Label shows the engine group and serial number.

The engine serial number is also found on the engine block.



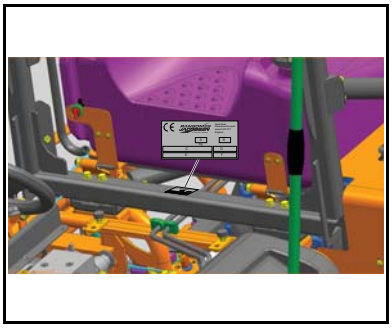
ROPS Serial Plate

A	Weight of ROPS
B	Date Code
C	Standard Used
D	Part Number
E	Used on Product
F	Serial Number



ROPS Serial Plate Location

The ROPS serial plate (C) is located at the base of the front of the ROPS main beam.



3.3GUIDELINES FOR THE DISPOSAL OF SCRAP PRODUCTS

3.3.1 DURING SERVICE LIFE

Used oil, oil filters and engine coolant are hazardous materials. Recommended procedures must be followed for their safe removal.

If a fluid leaks, contain the spill to make sure that the leak does not flow into the ground or drainage system. Follow the local laws to make sure that leaks are controlled safely.

The maintenance procedures in this manual make sure that the damage that the machine can cause in the local environment is controlled safely.

When the machine completes its full service life, the following actions must be taken.

3.3.2 END OF SERVICE LIFE

These guidelines must be used with applicable Health, Safety and Environmental laws. Always use the approved local waste disposal and agencies for recycled materials.

- Park the machine in a location to use all of the necessary lifting equipment.
- Use correct tools and Personal Protective Equipment (PPE) and take instruction from the technical manuals applicable to the machine.
- Remove and store correctly
  1. Batteries
  2. Fuel
  3. Engine coolant
  4. Oils
- Disassemble the structure of the machine and refer to the technical manuals where applicable. Give attention to parts that have mechanical pressure or tension applied to the part in the machine, including springs.
- Items that continue to have a service life must be separated and returned to the local store.
- Items that are worn must be separated into the material groups and removed according to the agencies for recycled materials that are available. Common types are as follows:
  - Steel
  - Non ferrous metals
    - Aluminium
    - Brass
    - Copper
  - Plastic materials
    - Identified
    - Can be recycled
    - Can not be recycled
    - Not identified
  - Rubber
  - Electrical and Electronic Components
- If an item is not easily separated into different material groups, the material must be added to the “General discarded materials” area.
- Do not burn discarded materials.

Change the machinery records to show that the machine is not in service and is discarded. Supply this serial number to Ransomes Jacobsen Warranty Department to close their records.

3.4 PARTS MANUAL

In compliance with the ISO14001 standard, Ransomes Jacobsen Limited does not send a paper parts manual with every product.

To refer to a parts list for this mower you have four options:

1. Website – www.Ransomes Jacobsen.com. Select the “CUSTOMER CARE” tab.You now have access to Parts drawings and lists to help with the identification of spare parts.

2. Website – www.Ransomes Jacobsen.com. Select the “SUPPORT” tab.You now have access to a PDF version of the parts manual.

3. Complete the form included in the technical manual pack supplied with the machine for one of the two options below
   a. A disc that contains an electronic copy of the Parts Book.
   b. A paper copy of the parts manual.

3.5 KEY NUMBERS

Record the key numbers shown below:

Starter Switch:- -

Diesel tank:- -

Record the machine and engine numbers shown below:
The machine serial number is found on the registration plate and the engine serial number can be found on the rocker cover.

Machine Number:- -

Engine Number:- -

3.1 HOW TO OPERATE SAFELY

⚠ WARNING

EQUIPMENT OPERATED INCORRECTLY OR WITHOUT TRAINING CAN BE DANGEROUS.

Know the location and correct operation of controls. Operators without experience must receive instruction from another person that knows the correct operation of the equipment before you operate the mower.

Only use parts, accessories and attachments approved by Jacobsen.

3.1.1 Safe Operation

a Read the Operator's Manual and other training material. If the operator or technician can not read this manual, the owner is responsible to describe this material to the operators and technicians. Manuals in additional languages may be available on the Jacobsen or RansomesJacobsen website.

a Read all of the instructions for this mower carefully. Know the controls and the correct operation of the equipment.

b Children or persons who do not understand these instructions must not use the mower. The local regulations can limit the age of the operator.

c Never use a mower near persons, including children or animals.

d Remember that the operator or owner is responsible for accidents or hazards that occur to other persons or their property.

e Never carry passengers.

f Never allow persons to operate or service the mower or its attachments without correct instructions.

g Do not operate equipment while tired, sick or after you use alcohol or drugs.

3.1.2 Preparation

a When you operate the mower, wear correct clothing, slip resistant work shoes or boots, work gloves, hard hat, safety glasses and hearing protection. Long hair, loose clothing or jewelry can be caught in moving parts.

b Do not operate the equipment with the Interlock System disconnected or the system does not operate correctly. Do not disconnect or prevent the operation of any switch.

c Never operate equipment that is not in correct order or without decals, guards, shields, deflectors or other protective devices fastened. When you mow with a side discharge deck, **DO NOT** operate the cutting unit without the discharge chute installed.

d Inspect the mower before you operate the mower. Check the tire pressure, engine oil level, the radiator coolant level and the air cleaner indicator. Fuel is flammable. Use caution when you add the fuel to the mower.

e Operate the mower in daylight or in good artificial light. Use caution when you operate the mower during bad weather. Never operate the mower with lightning in the area.

f Inspect the area to select the accessories and attachments that are needed to correctly and safely do the job. Only use parts, accessories and attachments approved by Jacobsen.

g Be careful of holes in the terrain and other hazards that are not visible.

h Inspect the area where the equipment is operated. Remove all objects you can find before you operate. Be careful of obstructions above the ground (low tree limbs, electrical wires) and also underground obstacles (sprinklers, pipes, tree roots). Enter a new area carefully. Look for possible hazards.

i Inspect the cutting system before you start the mower. Make sure the blades are free to rotate. When you rotate one blade, other blades can rotate.

3.1.3 Operation

a Never operate the engine without enough ventilation or in an enclosed area. The carbon monoxide in the exhaust fumes can increase to dangerous levels.

b Never carry passengers. Keep other persons or animals away from the mower.

c Disengage all drives and engage the parking brake before you start the engine. Only start the engine with the operator in the seat. Never start the engine with persons near the mower.

d Keep your legs, arms and body inside the operator compartment while the mower is in operation. Keep your hands and feet away from the cutting units.

e Do not use on the slopes greater than the safe slope limit for the equipment.

f To guard against over turning or loss of control:

– Operate the mower up and down on the face of slopes (vertically), but not across the face (horizontally).

– Do not start or stop suddenly on slopes.

– Decrease the speed when you operate on slopes or when you must turn. Use caution when you change direction. Turf condition can change the mower stability.

– Use caution when you operate the mower near drop-offs, ditches or embankments.

– Be careful of holes in the terrain and other hazards that are not visible.

g When you drive in the reverse direction, look behind you and down to make sure the path is clear. Do not operate the cutting units when you drive in the reverse direction.

h Use caution when you go near corners, trees or other objects that can prevent a clear view.

i Equipment must meet the current regulations to be driven on the public roads.

j Before you move across or operate on the paths or roads, turn off the PTO switch, lift the mowers and travel at decreased speed. Look for traffic.

k Stop the blades when the mower is on any surface that is not grass.

l Do not release the cut grass in the direction of persons or allow persons near the mower while in operation.

m Do not operate the mower with damaged guards or without safety devices in position.

n Do not change the engine governor setting or over-speed the engine. Never change or tamper with adjusters that are closed with a seal for the engine speed control.

o Before you leave the operator compartment, for any reason:

– Disengage all the drives and lower attachments to the ground.

– Engage the parking brake.

– Stop the engine and remove the key.

p When you hit an object or mower starts to cause the vibration that is not normal, inspect the mower for damage and make repairs.

q Decrease the throttle setting before you stop the engine.

r Do not use this equipment for uses that the mower was not made for.

3.1.4 ROPS

a The ROPS is a safety device. Keep the ROPS in the vertical and locked position. Always use the seat belt when you operate the mower. Make sure the seat belt can be released quickly in an emergency.

b Only operate the mower with the ROPS in the folded position on flat and level surfaces when necessary. Do not operate the mower with the ROPS in the folded position on slopes, near sharp edges or near water. There is no roll over protection with the ROPS in the folded position.

c Check for clearance before you drive below objects. Do not contact tree branches, electrical wires or other objects with the ROPS.

d Do not use the seat belt with the ROPS in the folded position.

e Inspect the ROPS for damage. Keep the ROPS hardware fastened.

f Do not weld, drill, change or bend the ROPS. Replace a damaged ROPS. Do not try to correct a damaged ROPS.

g Do not remove the ROPS from the mower.

h Jacobsen must approve any changes to the ROPS.

3.1.5 Safe Handling of Fuels

a The fuel and the fuel vapors are flammable. Use caution when you add the fuel to the mower. The fuel vapors can cause an explosion.

b Never use the containers that are not approved to keep or transfer fuel.

c Never keep the mower or fuel containers near an open flame or any device that can cause the ignition of fuel or fuel vapors.

d Never fill the fuel containers inside a vehicle or on a truck or trailer with a plastic liner. Always put the fuel container on the ground away from your vehicle before you fill the container.

e Refuel the mower before you start the engine. When the engine is in operation or while the engine is hot, never remove the fuel cap or add fuel to the mower.

f Refuel outdoors only and do not smoke when you add fuel. Extinguish all types of ignition.

g The fuel nozzle must touch the rim of the fuel tank when you add fuel to the mower. Do not use a device to lock the fuel nozzle in the open position.

h Do not over fill the fuel tank. Leave at least 1 inch (25 mm) below the filler neck.

i Always tighten the fuel tank cap and container cap after you add fuel.

j If the fuel spills on your clothing, change your clothing immediately.

3.1.6 Maintenance and Storage

a Before you clean, adjust or repair this equipment, push PTO switch to the OFF position, lower the cutting unit to the ground, engage the parking brake, stop the engine and remove the key.

b Make sure the mower is parked on a solid and level surface.

c Never work on a mower that is lifted only by the jack. Always use the jack stands.

d Never allow persons to service the mower or its attachments without correct instructions.

e When the mower is parked, put into storage or left without an operator, lower the cutting device unless a positive mechanical lock is used.

When you put the mower on a trailer or put the mower in storage, close the fuel valve. Do not keep fuel near flames or drain the fuel inside a building.

f Disconnect the battery before you service the mower. Always disconnect the negative battery cable before the positive battery cable. Always connect the positive battery cable before the negative battery cable.

g Charge the battery in an area with good airflow. The battery can release hydrogen gas that is explosive. To prevent an explosion, keep any device that can cause sparks or flames away from the battery.

h Disconnect the battery charger from the power supply before you connect or disconnect the battery charger to the battery. Wear protective clothing and use insulated tools when you service the battery.

i Be careful and wear gloves when you check or service the cutting unit blades. Replace any damaged blades, do not try to correct a damaged blade.

j Keep your hands and feet away from parts that move. Do not adjust the mower with the engine in operation, unless the adjustment needs the engine in operation.

k Carefully release the pressure from components with stored energy.

l To prevent injury from the hot, high pressure oil, never use your hands to check for oil leaks. Use the paper or cardboard to find leaks.

m The hydraulic fluid pressure can have enough force to enter your skin. If hydraulic fluid has entered your skin, a doctor must remove the hydraulic fluid surgically within a few hours or gangrene can occur.

n When you service the hydraulic system, make sure the hydraulic fittings, tubes and hoses are tightened to the correct torque. Make sure the hydraulic system is in good condition before you start the engine.

o Keep the mower and the engine clean.

p Allow the engine to become cool before storage and always remove the ignition key.

q Keep all nuts, bolts and screws tight to make sure the equipment is in safe condition.

r Replace worn or damaged parts for safety. Replace damaged or worn decals. Only use parts, accessories and attachments approved by Jacobsen.

s To decrease the fire hazard, remove materials that burn from the engine, muffler, battery tray and fuel tank area.

t Disconnect the battery and controller connectors before you weld on this mower.

3.1.7 When you Put the mower on a trailer

a Be careful when you load or unload the mower on a trailer. Trailer must be wider than the mower and can carry the weight of the mower.

b Use a full-width ramp to load or unload the mower on a trailer.

c Use straps, chains, cables or ropes to fasten the mower to the trailer. Both front and rear straps must be sent down and toward sides of trailer.

Make sure that all latches are correctly fastened.

3.1.8 Important Safety Notes

This safety alert symbol is used to alert you to possible hazards.

DANGER:
Indicates a dangerous condition that WILL cause death or injury unless it is prevented.

WARNING:
Indicates a dangerous condition that CAN cause death or injury unless it is prevented.

CAUTION:
Indicates a dangerous condition that can cause injury and property damage unless it is prevented. Also, the label can indicate work procedures that are not safe.

IMPORTANT:
Only drive the machine at road speed when you are on a highway. You must not select road speed on grass areas or rough roads and gravel tracks.

Some illustrations in this manual can show shields, guards or plates removed for clearness. This equipment must not be operated without these devices correctly fastened in position.

⚠ WARNING

The Interlock System on this mower prevents the starting of the mower unless a.) The parking brake is Engaged. b.) The mow switch is in the OFF position, c.) The traction pedal is in the Neutral position. d) The operator is in the seat. The system stops the engine when the operator leaves the seat a.) without the parking brake engaged or b.) the mow switch is not in the OFF position. NEVER operate the mower unless the Interlock System is working.

⚠ WARNING

1. Before leaving the operator's position for any reason:
   a. Return traction pedal to the Neutral position.
   b. Disengage all drives.
   c. Lower all implements to the ground.
   d. Engage parking brake.
   e. Stop the engine and remove the ignition key.
2. Keep your hands, feet, and clothing away from moving parts. Wait for all movement to stop before you clean, adjust, or service the machine.
3. Keep the area of operation clear of all persons and animals.
4. Never carry any passengers.
5. Never operate the equipment without a correctly fastened grass deflector in position.

By following all instructions in this manual, you increase the life of your machine and keep its maximum performance. Adjustments and maintenance must always be done by an approved technician.

If additional information or service is needed. Contact your Authorized Ransomes Jacobsen Dealer, who knows the latest methods to service this equipment and can give that service.

⚠ WARNING

California Proposition 65
Engine Exhaust, Some Of Its Constituents, And Some Vehicle Components Contain Or Release Chemicals Known To The State Of California To Cause Cancer And Birth Defects Or Other Reproductive Harm.

⚠ WARNING

To Prevent Injury From The Hot Oil At High Pressure, Do Not Use Your Hands To Check For Oil Leaks. Make Sure That You Use Paper Or Cardboard.
Release Of Hydraulic Fluid At High Pressure Has Enough Force To Enter Through The Skin. If The Fluid Enters Through The Skin, The Fluid Must Be Surgically Removed Within Hours By A Specialist Doctor Or Gangrene May Result.

⚠ WARNING

When The Machine Is Driven Off-Road, A Seat Belt Must Be Worn Only When A Rops Frame Is In Position. This Warning Is Because A Seat Belt Must Be Worn With A Rops To Follow The Machinery Directive, 2006/42/EC Sections 3.2.2, Seating & 3.4.3, Rollover. (ANSI B71.4-2012 section 20.7)
Ransomes Jacobsen Limited Recommends That The Owner/User Of The Machine Completes A Local Risk Assessment Of The Machine To Find Any Conditions That Do Not Follow This Rule. E.g. When You Drive The Machine Next To Water Or On The Highway.

⚠ WARNING

Explosive Gases Are Released By Batteries. The Battery Contains Corrosive Acid And Supply An Electrical Current That Is High Enough To Cause Burn Injuries To The Body.

⚠ WARNING

You Must Not Use This Machine To Tow Other Vehicles.

⚠ WARNING

Ear Protection Must Be Worn When You Operate Machines With An Operator Ear Noise Level Of More Than 85 db(A) Leq.

⚠ WARNING

Vibration Exposure Limits
Exposure limits are calculated as a combination of the vibration level (magnitude) of the tool and the Daily Exposure Time (Trigger Time). E.g. A product with 5m/s² vibration can be used up to 2 hours/day to reach the EAV and up to 8 hours/day to reach the ELV.
Exposure Action Value (EAV) - Daily vibration exposure A(8) = 2.5m/s²
Where daily vibration exposure A(8) is below 2.5m/s² the risk is relatively low and no action need be taken
Exposure Limit Value (ELV) - Daily Vibration Exposure A(8) = 5.0m/s²
If several tools are use the exposure values must be combined:
Total exposure is then the combined value of the activities

⚠ WARNING

Never Mow If There Is A Risk Of Lightning Or You Hear Thunder. If You Are In The Middle Of Mowing, Stop In A Safe Place, Turn Off The Engine And Go Inside a Building.

⚠ CAUTION

When You Do Any Welding On The Machine, The Battery, Controller And Display Must Be Disconnected Before You Start. You Must Not Open The Controller. If The Controller Is Opened, This Can Cancel All Of The Warranties And Can Cause The Failure Of The Machine.

⚠ CAUTION

Personal Protective Equipment (PPE), For Example Safety Glasses, Leather Work Shoes Or Boots, A Hard Hat, Leather Work Gloves And Ear Protection Must Be Used After The Owner/User Completes A Local Risk Assessment Of The Mower, To Prevent Injury.
Training In All Manual Operations Must Be Given By An Approved Person Before The Machine Is Used The First Time.

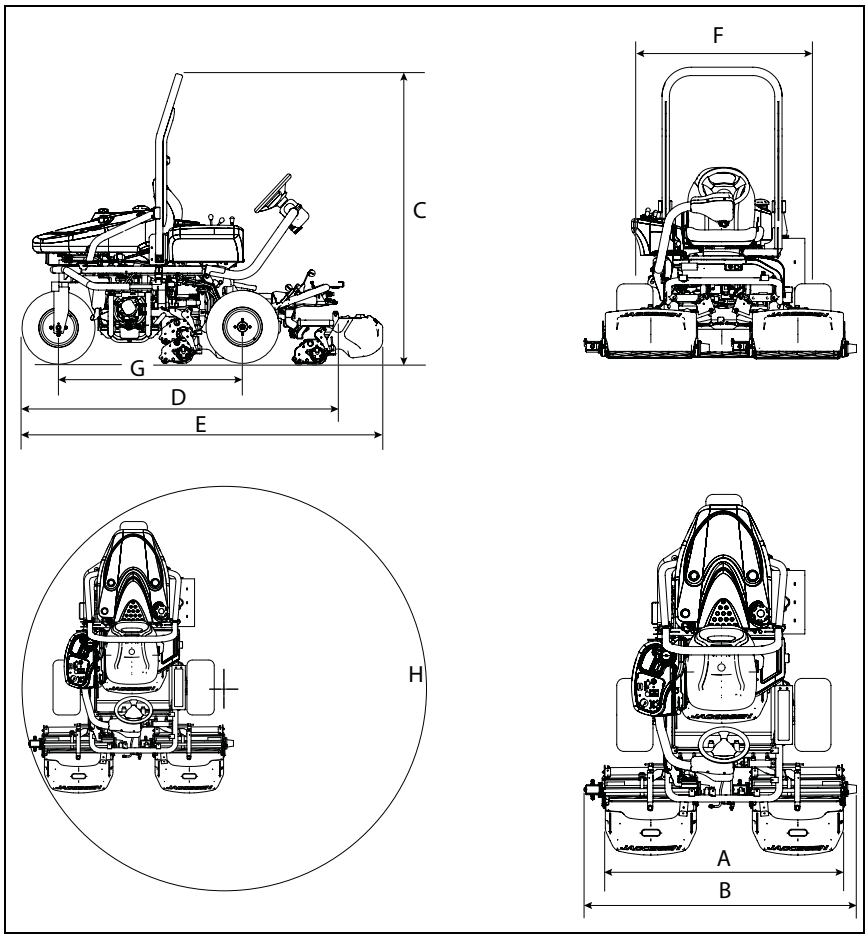
4.1 ENGINE SPECIFICATION

Kubota		
Model	D722-E3B	D722-E4B
Type	Vertical, water-cooled, 4-cycle diesel engine.	
Number of Cylinders	3	
Bore & Stroke	67mm x 68mm (2.64 x 2.68)	
Total Displacement	719cm³	
Combustion Chamber	Spherical type (E-TVCS)	Spherical type (E-TVCS,NA)
Gross Intermittent Power	13.2kW (17.7hp) @ 3200rpm	
Maximum Speed:	3400 ± 50 RPM (No load)	3500 ± 50 RPM (No load)
Idle Speed:	1700 ± 100 RPM	1800 ± 50 RPM
Order of Firing	1-2-3	
Direction of Rotation	Counter-clockwise (viewed from flywheel side)	
Injection Pump	Bosch MD type mini pump	
Injection Pressure	13.73 MPa (140kgf/cm²)	
Injection Timing (Before T.D.C.)	21°	20°
Compression Ratio	23:1	23.5:1
Fuel:	No. 2-D Diesel fuel (ASTM D975)	
Lubrication (API Classification)	Above CF grade	
Oil Sump Capacity:	3.2 litres (0.85 gallon US)	
Dimensions (length x width x height)	435.1mm x 404mm x 564.1mm (17.12 x 15.90 x 22.20)	
Dry Weight	63.1kg	
Starting System	Cell starter (with glow plug)	
Starting Motor	12V, 0.8 kW	12V, 1.0kW
Charging Generator	12V, 450w	12V, 40A

Briggs & Stratton	
Model	Vanguard 350447
Type	V Twin type 1294, 4 stroke air cooled
Number of Cylinders:	2
Gross Intermittent Power:	13.2kW (17.7hp) @ 3400rpm
Total Displacement:	574 cm³
Maximum Speed:	3400 RPM (No load)
Idle Speed:	1700 ± 100 RPM
Oil sump capacity:	1.4 litres (0.37 gallon US)
Fuel:	Unleaded gasoline minimum 87 octane

4.2 DIMENSIONS & WEIGHTS

A	Width of Cut:	160 cm	63 inches
B	Overall Width Cutting:	188 cm	74 inches
	Overall Width Transport (minimum):	186 cm	73.25 inches
C	Overall Height with ROPS Frame:	196.5 cm	77.38 inches
D	Overall Length Without Grass Boxes:	219 cm	86.2 inches
E	Overall Length With Grass Boxes:	250 cm	98.4 inches
F	Wheel Track:	121.7 cm	48 inches
G	Wheel Base 2 Wheel Drive:	133.2 cm	52.44 inches
G	Wheel Base 3 Wheel Drive:	125.5 cm	49.5 inches
H	Turning Circle 2 Wheel Drive:	368 cm	144.88 inches
H	Turning Circle 3 Wheel Drive:	393.8 cm	155 inches
	Weight of Diesel Machine, No Fuel, Plus ROPS:	630.5 kg	1390 lbs
	Weight of Gasoline Machine, No Fuel, Plus ROPS:	560.5 kg	1236 lbs
	Weight of one Cutting Unit 11 Knife	31.6 kg	69.6 lbs
	Weight of one Brush & Groomer Kit:	7 kg	15.4 lbs
	Weight Diesel Fuel 54l (14.25 US Gallons)	46 kg	101 lb
	Weight of Gasoline Fuel 54 litres (14.25 US Gallons)	40 kg	87 lb



TYRE PRESSURE						
Product	Front Wheel			Rear Wheel		
	Tyre Size	Tyre Type	Tyre Pressure	Tyre Size	Tyre Type	Tyre Pressure
GP400	20 x 10.00 - 10	OTR Smooth	0.7 bar (10 psi)	20 x 10.00 - 10	OTR Smooth	0.7 bar (10 psi)

4.3 MACHINE SPECIFICATION

Frame construction:Welded tubular steel chassis.

Cutting unit drive:Direct Drive hydrostatic reel drive pump, bi-directional hydraulic gear motor with reel control and Backlap valves.

Transmission:Variable displacement hydrostatic pump with low speed high torque wheel motors
.
Speeds:
Cutting:0 - 6 km/h (0 - 3.7 mph) Forward
0 - 3 km/h (0 - 1.9 mph) Reverse

Transport: 0 - 12 km/h (0 - 7.5 mph) Forward
0 - 3 km/h (0 - 1.9 mph) Reverse

Steering:Hydrostatic power steering 2.5 turns lock to lock, with 330mm (13 inches) dia steering wheel.

Ground pressure:1 kg/cm² (14 psi) (Dependent on tyre pressures and accessories fitted)

Brakes: Hydrostatic braking with 152mm (6 inches) Caliper disc parking brakes on front wheels.

Battery: Exide 093 (SAE 500) 12volt

4.4 VIBRATION LEVEL

The machine was tested for hand/arm vibration levels. The operator was in the normal position to drive the vehicle, with two hands on the steering mechanism. The engine was in operation and the cutting device was in rotation, while the machine was not moving.

The Machinery Safety Directive 2006/42/EC
By compliance to:
The Lawnmower Standard BS EN ISO 5395
Referenced to Hand/Arm: BS EN ISO20643:2008

Information Supplied for Physical Agents Directive 2002/44/EC
By reference to:
Hand/Arm Standards: BS EN ISO 5349-1 (2001)
BS EN ISO 5349-2 (2002)

GP400 Diesel Hand / Arm Acceleration Level	Series GY with ROPS
	Max. LH or RH Accelerations m/s²
	Mean Value of X, Y, Z Aeq
	0.77 ± 0.40

GP400 Gas Hand / Arm Acceleration Level	Series GZ with ROPS
	Max. LH or RH Accelerations m/s²
	Mean Value of X, Y, Z Aeq
	0.42 ± 0.40

The machine was tested for Whole Body vibration levels. The operator was in the normal position to drive the vehicle, with two hands on the steering mechanism. The cutting device was in rotation with the machine driven in a straight line at 6 Km/hr on a level and cut lawn.
The Machinery Safety Directive 2006/42/EC
By compliance to:
Whole Body EN1032:2003

Information Supplied for Physical Agents Directive 2002/44/EC
By reference to:
Whole Body Standards BS EN ISO 2631-1 (1997)
measurements according to the requirements of BS EN ISO 5395

GP400 Diesel Whole Body Acceleration Level	Series GY with ROPS
	Max. Seat Accelerations m/s²
	Mean Value of X, Y, Z Aeq
	0.43 ± 1.57

GP400 Gas Whole Body Acceleration Level	Series GZ with ROPS
	Max. Seat Accelerations m/s²
	Mean Value of X, Y, Z Aeq
	0.72 ± 1.57

4.5 NOISE LEVEL

The Machinery Safety Directive 2006/42/EC
And
Exposure Of Workers To The Risks Arising From Physical Agents (Noise) Directive 2003/10/EC

By compliance to:
The Lawnmower Standard BS EN ISO 5395:2013
And
Sound Pressure Standard EN ISO 3746: 2010

GP400 Gas Measured Sound Pressure 82 dB(A) ± 0.86 LWA
GP400 Diesel Measured Sound Pressure 86 dB(A) ± 0.86 LWA

When the machine was tested for sound power (Noise in the Environment).

The Machinery Safety Directive 2006/42/EC
And
Noise Emission In The Environment By Equipment For Use Outdoors
Directive 2000/14/EC

By compliance to:
Sound Power Standard EN ISO 3744:2010

GP400 Gas Measured Sound Power 101 dB(A) ± 0.86 LWA
GP400 Diesel Measured Sound Power 101 dB(A) ± 0.86 LWA

4.6 SLOPES

DO NOT USE ON SLOPES GREATER THAN 16°. The 16° slope was calculated using static stability measurements according to the requirements of BS EN ISO 5395-2013

4.7 CUTTING UNIT SPECIFICATION

	7 Blade	9 Blade	11 Blade	15 Blade	Verticut
Construction	Fabricated steel construction				
Reel Length	559mm (22 in)	559mm (22 in)	559mm (22 in)	559mm (22 in)	559mm (22 in)
Number of Knives	7	9	11	15	N/A
Number of Blades	N/A	N/A	N/A	N/A	26
Reel Diameter (New)	127mm (5 in)	127mm (5 in)	127mm (5 in)	127mm (5 in)	N/A
Minimum Reel Diameter (Before Replacement)	117.5mm (4.6 in)	117.5mm (4.6 in)	117.5mm (4.6 in)	117.5mm (4.6 in)	N/A
Height of Cut True-Set™ Reel (Standard Blade)	1.6mm - 11.1mm (1/16 in - 7/16 in)				
Height of Cut Classic XP™ Reel (Standard Blade)	2.5mm - 16mm (0.1 in - 0.63 in)				
Height of Cut Classic XP™ Reel (Tournament Blade)	2mm - 16mm (0.78 in - 0.63 in)				
Bedknife to Reel adjustment TrueSet™ Reel	Micro-adjusters				
Bedknife to Reel adjustment Classic XP™ Reel	Opposed Set Screw				
Rolls (Smooth & Grooved)	50 mm (2 in) Diameter				
Height of Cut Adjustment TrueSet™ Reel & Classic XP™ Reel	Screw adjusters on front roll				
Transmission	By hydraulic motor direct to reel.				
Maximum Reel Speed at Maximum PTO Speed	2200rpm				

NOTE These cutting units are designed to cut grass of maximum height 12mm (15/32 in) down to the available height of cut range, removing no more than 1mm (3/64 in) to 2mm (5/64 in) with each pass.

4.8 CUTTING PERFORMANCE

	Frequency of Cut @ 2200rpm reel speed		Clip rate @ 2200rpm reel speed	
Blades	mm/kph	inches/mph	Cuts/metre @ 6.04 kph	Cuts/yard @ 3.74mph
7	1.247	0.079	41	37
8	0.963	0.061	52	48
11	0.789	0.050	64	59
15	0.584	0.037	87	80

4.9 RECOMMENDED LUBRICANTS

Engine oil:

Diesel:Should be to MIL-L-2104C or to A.P.I. Classification CD grades. [10W-30]

Gasoline:Should be to MIL-L-2104C or to A.P.I. Classification SE/SF grades. [10W-30]

TEMPERATURE	VISCOSITY
Above 4°C (39°F)	SAE30
Below 4°C (39°F)	SAE5W-30 or SAE10W-30

Grease: For rear axle: K NATE (RJL No. 4213860), or equivalent to MIL-G-23549C, MIL-G-2345C, DIN 51 825, DIN 51 818.

General: Lithium based general purpose grease.

4.10 ACCESSORIES

Orange Touch-up Paint (12 oz. spray) 554598
Rear Roller Cleaner 62820
Turf Groomer 1/4” Spacing 67912
Turf Groomer 1/2” Spacing 67914
High Cut Roller Kit.....68634
Motor Adapter Kit 894991

Magknife Kit
22 in. Medium Section Magknife Kit.....4266571
22 in. Tournament Magknife Kit.....4266551
22 in. Super Tournament Magknife Kit.....4266570

Solid Rollers
22 in. with Scraper (Light) 68530
22 in. with Scraper 68641
22 in. Solid Tube Rear Roller 1004990

Grooved Rollers
22 in. Assembled Disc.....68527
22 in. Machined Aluminum.....68614
22 in. Machined Steel.....68613
22 in. Segmented Roller68673

4.11 CERTIFICATES OF CONFORMITY

DECLARATION OF CONFORMITY ▪ ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ ▪ PROHLÁŠENÍ O SHODĚ ▪ OVERENSSTEMMELSESERKLÆRING ▪ CONFORMITEITSVERKLARING ▪ VASTAVUSDEKLARATSIOON ▪ VAATIMUSTENMUKAISUUSVAKUUTUS ▪ DECLARATION DE CONFORMITE ▪ KONFORMITÄTSERKLÄRUNG ▪ ΔΗΛΩΣΗ ΣΥΜΜΟΡΦΩΣΗΣ ▪ MEGFELELŐSÉGI NYILATKOZAT ▪ DICHIARAZIONE DI CONFORMITÀ ▪ ATBILSTĪBAS DEKLARĀCIJA ▪ ATITIKTIES DEKLARACIJA ▪ DIKJARAZZJONI TAL-KONFORMITÀ ▪ DEKLARACJA ZGODNOŚCI ▪ DECLARAÇÃO DE CONFORMIDADE ▪ DECLARAŢIE DE CONFORMITATE ▪ VYHLÁSENIE O ZHODE ▪ IZJAVA O SKLADNOSTI ▪ DECLARACIÓN DE CONFORMIDAD ▪ DEKLARATION OM ÖVERENSSTÄMMELSE ▪ SAMRÆMISYFIRLÝSING ▪ KONFORMITETSERKLÆRING ▪ 符合性声明 ▪ SAMRÆMISYFIRLÝSING ▪ 適合宣言 ▪ 적합성 선언서 ▪ UYGUNLUK BEYANI ▪ ДЕКЛАРАЦІЯ ПРО ВІДПОВІДНІСТЬ

Business name and full address of the manufacturer • Търговско име и пълен адрес на производителя • Obchodní jméno a plná adresa výrobce • Producentens firmanavn og fulde adresse • Bedrijfsnaam en volledig adres van de fabrikant • Tootja ärinimi ja täielik aadress • Valmistajan toiminimi ja täydellinen osoite • Nom commercial et adresse complète du fabricant • Firmenname und vollständige Adresse des Herstellers • Επωνυμία και ταχυδρομική διεύθυνση κατασκευαστή • A gyártó üzleti neve és teljes címe • Ragione sociale e indirizzo completo del fabbricante • Uzņēmuma nosaukums un pilna ražotāja adrese • Verslo pavadinimas ir pilnas gamintojo adresas • Isem kummerċjali u indirizz sħiħ tal-fabbrikant • Nazwa firmy i pełny adres producenta • Nome da empresa e endereço completo do fabricante • Denumirea comercială şi adresa completă a producătorului • Obchodný názov a úplná adresa výrobcu • Naziv podjetja in polni naslov proizvajalca • Nombre de la empresa y dirección completa del fabricante • Tillverkarens företagsnamn och kompletta adress • Fyrirtækisheiti og fullt heimilisfang framleiðanda • Firmanavn og full adresse for produsenten • 制造商的商业名称和完整地址 • Nafn fyrirtækis og fullt heimilisfang framleiðanda • 商号およびメーカーの正式住所 • 제조자의 상호명 및 주소 • İmalatçının ticari ünvanı ve açık adresi • Фірмове найменування і повна адреса виробника	Ransomes Jacobsen Limited West Road, Ransomes Europark, Ipswich, England, IP3 9TT
Product Code • Код на продукта • Kód výrobku • Produktkode • Productcode • Toote kood • Tuotekoodi • Code produit • Produktcode • Κωδικός προϊόντος • Termékkód • Codice prodotto • Produkta kods • Produkto kodas • Kodiċi tal-Prodott • Kod produktu • Código do Produto • Cod produs • Kód výrobku • Oznaka proizvoda • Código de producto • Produktkod • Vörunúmer • Produktkode • 产品代码 • Framleiðslunúmer • 製品コード • 제품 코드 • Ürün Kodu • Код виробу	USAD004 USAG004
Machine Name • Наименование на машината • Název stroje • Maskinnavn • Machinenaam • Masina nimi • Laitteen nimi • Nom de la machine • Maschinenbezeichnung • Ονομασία μηχανήματος • Gépnév • Denominazione della macchina • Iekārtas nosaukums • Mašinos pavadinimas • Isem tal-Magna • Nazwa urządzenia • Nome da Máquina • Numele echipamentului • Názov stroja • Naziv stroja • Nombre de la máquina • Maskinens namn • Heiti tækis • Maskinnavn • 机器名称 • Nafn vélar • 機械名 • 기기 명칭 • Makine Adı • Назва машини	Jacobsen GP 400
Designation • Предназначение • Označení • Betegnelse • Benaming • Nimetus • Tyyppimerkintä • Pažymėjimas • Bezeichnung • Χαρακτηρισμός • Megnevezés • Funzione • Apzīmējums • Lithuanian • Denominazzjoni • Oznaczenie • Designação • Specificaţie • Označenie • Namen stroja • Descripción • Beteckning • Merking • Konstruksjon •名称 • Útnefning • 用途 • 지정 • Tanımı • Позначення	Ride on Reel Mower
Serial Number • Сериен номер • Sériové číslo • Serienummer • Seriennummer • Seerianumber • Valmistusnumero • Numéro de série • Seriennummer • Σειριακός αριθμός • Sorozatszám • Numero di serie • Sērijas numurs • Serijos numeris • Numru Serjali • Numer seryjny • Número de Série • Număr de serie • Sériové číslo • Serijska številka • Número de serie • Serienummer • Raðnúmer • Serienummer •序列号 • Raðnúmer • シリアル番号 • 일련 번호 • Seri Numarası • Серійний номер	GY000301 - GY999999 GY400301 - GY499999 GZ000301 - GZ999999
Engine • Двигател • Motor • Motor • Motor • Mootor • Moottori • Moteur • Motor • Μηχανή • Modulnév • Motore • Dzinējs • Variklis • Saħħa Netta Installata • Silnik • Motor • Motor • Motor • Motor • Motor • Vél • Motor • 发动机 • Aflvél • エンジン • 엔진 • Motor • Двигун	Kubota D722-ET04 and D722-EF01 Briggs & Stratton 3Vanguard 350447 Type 1294
Net Installed Power • Нетна инсталирана мощност • Čistý instalovaný výkon • Installeret nettoeffekt • Netto geïnstalleerd vermogen • Installeeritud netovõimsus • Asennettu nettoteho • Puissance nominale nette • Installierte Nettoleistung • Καθαρή εγκατεστημένη ισχύς • Nettó beépített teljesítmény • Potenza netta installata • Paredzētā tīkla jauda • Grynoji galia • Wisa' tal-Qtugħ • Moc zainstalowana netto • Potência instalada • Puterea instalată netă • Čistý inštalovaný výkon • Neto vgrajena moč • Potencia instalada neta • Nettoeffekt • Nettóafl vélar • Netto installert kraft • 装机净功率 • Netuppsetningarorka • 搭載する正味出力 • 정미 출력 • Net Kurulu Güç • Корисна встановлена потужність	13.2 kW @ 3200 RPM (Kubota) 13.2 kW @ 3400 RPM (Briggs & Stratton)
Cutting Width • Широчина на рязане • Šířka řezu • Skærebredde • Maaibreedte • Lõikelaius • Leikkuuleveys • Largeur de coupe • Schnittbreite • Μήκος μισνέζας • Vágási szélesség • Larghezza di taglio • Griešanas platums • Pjovimo plotis • Tikkonforma mad-Direttivi • Szerokość cięcia • Largura de Corte • Lățimea de tăiere • Šírka záberu • Širina reza • Anchura de corte • Klippbredd • Skurðbreidd • Klippebredde • 剪草宽度 • Breidd sláttar • 刈り取り幅 • 절단 폭 • Kesme Genişliği • Ширина різання	160 cm
Conforms to Directives • В съответствие с директивите • Splňuje podmínky směrnic • Er i overensstemmelse med direktiver • Voldoet aan de richtlijnen • Vastab direktiividele • Direktiivien mukainen • Conforme aux directives • Entspricht Richtlinien • Ακολουθήστε πιστά τις Οδηγίες • Megfelel az irányelveknek • Conforme alle Direttive • Atbilst direktīvām • Atitinka direktyvų reikalavimus • Valutazzjoni tal-Konformità • Dyrektywy związane • Cumpre as Directivas • Respectă Directivele • Je v súlade so smernicami • Skladnost z direktivami • Cumple con las Directivas • Uppfyller direktiv • Samræmist tilskipunum • I samsvar med direktiv • 符合指令 • Í samræmi við reglugerðir • 適合指令 • 규정 준수 • Şu Yönergelere Uymaktadır • Відповідає директиві	2006/42/EC (Machinery Directive) 2014/30/EU (EMC) 2000/14/EC (Noise in the Environment) 2003/10/EC (Noise Physical Agents) 2002/44/EC (Vibration Physical Agents) 97/68/EC (NRMM Engine Emissions)
Conformity Assessment • Оценка за съответствие • Hodnocení plnění podmínek • Overensstemmelsesvurdering • Conformiteitsbeoordeling • Vastavushindamine • Vaatimustenmukaisuuden arviointi • Evaluation de conformité • Konformitätsbeurteilung • Διαπίστωση Συμμόρφωσης • Megfelelőség-értékelés • Valutazione della conformità • Atbilstības novērtējums • Atitikties įvertinimas • Livell tal-Qawwa tal-Ħoss Imkejjel • Ocena zgodności • Avaliação de Conformidade • Evaluarea conformității • Vyhodnotenie zhodnosti • Ocena skladnosti • Evaluación de conformidad • Bedömning av överensstämmelse • Samræmismat • Konformitetsvurdering • 符合性评估 • Samræmismat • 適合性評価 • 적합성 평가 • Uygunluk Değerlendirmesi • Оцінка відповідності	2006/42/EC Annex VIII
Measured Sound Power Level • Измерено ниво на звукова мощност • Naměřený akustický výkon • Målte lydstyrkeniveau • Gemeten geluidsniveau • Mõõdetud helivõimsuse tase • Mitattu äänitehotaso • Niveau de puissance sonore mesuré • Gemessener Schalldruckpegel • Σταθμισμένο επίπεδο ηχητικής ισχύος • Mért hangteljesítményszint • Livello di potenza sonora misurato • Izmērītais skaņas jaudas līmenis • Iżmatuotas garso stiprumo lygis • Livell tal-Qawwa tal-Ħoss Iggarantit • Moc akustyczna mierzona • Nível sonoro medido • Nivelul măsurat al puterii acustice • Nameraná hladina akustického výkonu • Izmerjena raven zvočne moči • Nivel de potencia sonora medido • Uppmätt ljudeffektsnivå • Mælt hljóðaflsstig • Mált lydeffektnivá • 測得声功率级 • Mældur hljóðstyrkur • 音出力レベル測定値 • 측정된 음향 파워 레벨 • Ölçülen Ses Gücü Düzeyi • Виміряний рівень звукової потужності	103 dB(A) ± 0.74 LWA Engine Speed 3295 rpm
Guaranteed Sound Power Level • Гарантирано ниво на звукова мощност • Garantovaný akustický výkon • Garanteret lydstyrkeniveau • Gegarandeerd geluidsniveau • Garanteeritud helivõimsuse tase • Taattu äänitehotaso • Niveau de puissance sonore garanti • Garantierter Schalldruckpegel • Εγγυημένο επίπεδο ηχητικής ισχύος • Szavatolt hangteljesítményszint • Livello di potenza sonora garantito • Garantētais skaņas jaudas līmenis • Garantuotas garso stiprumo lygis • Livell tal-Qawwa tal-Ħoss Iggarantit • Moc akustyczna gwarantowana • Nível sonoro farantido • Nivelul garantat al puterii acustice • Garantovaná hladina akustického výkonu • Zajamčena raven zvočne moči • Nivel de potencia sonora garantizado • Garanterad ljudeffektsnivå • Hljóðaflsstig sem ábyrgð er tekin á • Garanter lydeffektnivå • 保证声功率级 • Tryggður hljóðstyrkur • 音出力保証レベル • 보장된 음향 파워 레벨 • Garantili Ses Gücü Düzeyi • Гарантований рівень звукової потужності	105 dB(A) LWA
Conformity Assessment Procedure (Noise) • Оценка за съответствие на процедурата (Шум) • Postup hodnocení plnění podmínek (hluk) • Procedure for overensstemmelsesvurdering (Støj) • Procedure van de conformiteitsbeoordeling (geluid) • Vastavushindamismenetlus (müra) • Vaatimustenmukaisuuden arviointimenettely (Melu) • Procédure d'évaluation de conformité (bruit) • Konformitätsbeurteilungsverfahren (Geräusch) • Διαδικασία Αξιολόγησης Συμμόρφωσης (Θόρυβος) • Megfelelőség-értékelési eljárás (Zaj) • Procedura di valutazione della conformità (rumore) • Atbilstības novērtējuma procedūra (troksnis) • Atitikties įvertinimo procedūra (garsas) • Proċedura tal-Valutazzjoni tal-Konformità (Ħoss) • Procedura oceny zgodności (poziom hałasu) • Processo de avaliação de conformidade (nível sonoro) Procedura de evaluare a conformității (zgomot) • Postup vyhodnocovania zhodnosti (hluk) • Postopek za ugotavljanje skladnosti (hrup) • Procedimiento de evaluación de conformidad (ruido) • Procedur för bedömning av överensstämmelse (buller) • Samræmismatsaðferð (hávaði) • Prosedyre for konformitetsvurdering (støy) • 符合性评估程序（噪声） • Aðgerð fyrir samræmismat (Hávaði) • 適合性評価の手順（騒音） • 적합성 평가 절차(소음) • Uygunluk Değerlendirme Prosedürü (Gürültü) • Регламент оцінки відповідності (шум)	2000/14/EC Annex VI Part 1
UK Notified Body for 2000/14/EC • Нотифициран орган в Обединеното кралство за 2000/14/EO • Úřad certifikovaný podle směrnice č. 2000/14/EC • Det britiske bemyndigede organ for 2001/14/EF • Engels adviesorgaan voor 2000/14/EG • Ühendkuningriigi teavitatud asutus direktiivi 2000/14/EÜ mõistes • Direktiivin 2000/14/EY mukainen ilmoitettu tarkastuslaitos Isossa-Britanniassa • Organisme notifié concernant la directive 2000/14/CE • Britische benannte Stelle für 2000/14/EG • Κοινοποιημένος Οργανισμός Ηνωμένου Βασιλείου για 2000/14/EK • 2000/14/EK – egyesült királyságbeli bejelentett szervezet • Organismo Notificato in GB per 2000/14/CE • 2000/14/EK AK reģistrētā organizācija • JK notifikuotosios įstaigos 2000/14/EC • Korp Notifikat tar-Renju Unit għal 2000/14/KE • Dopuszczona jednostka badawcza w Wielkiej Brytanii wg 2000/14/WE • Entidade notificada no Reino Unido para 2000/14/CE • Organism notificat în Marea Britanie pentru 2000/14/CE • Notifikovaný orgán Spojeného kráľovstva pre smernicu 2000/14/ES • Britanski priglašeni organ za 2000/14/ES • Cuerpo notificado en el Reino Unido para 2000/14/CE • Anmält organ för 2000/14/EG i Storbritannien • Tilkynntur aðili í Bretlandi fyrir 2000/14/EC • Britisk teknisk for 2000/14/EF • 英国 2000/14/EC 认证机构 • Bretland Upplýsingar fyrir 2000/14/EB • UK（英国）公認機関、2000/14/EC • 2000/14/EC에 대한 영국 인증 기관 • 2000/14/EC için BK Onaylı Kuruluş • Британський уповноважений орган для 2000/14/EC	Number: 1088 Sound Research Laboratories Limited Holbrook House, Little Waldingfield Sudbury, Suffolk CO10 0TH

4 SPECIFICATIONS

Operator Ear Noise Level • Оператор на нивото на доловим от ухото шум • Hladina hluku v oblasti uší operátora • Støjniveau i førers ørehøjde • Geluidsniveau oor bestuurder • Müratase operaatori kõrvas • Melutaso käyttäjän korvan kohdalla • Niveau de bruit à hauteur des oreilles de l'opérateur • Schallpegel am Bedienerohr • Επίπεδο θορύβου σε λειτουργία • A kezelő fülénél mért zajszint • Livello di potenza sonora all'orecchio dell'operatore • Trokšņa līmenis pie operatora auss • Dirbančiojo su mašina patiriamo triukšmo lygis • Livell tal-Ħoss fil-Widna tal-Operatur • Dopuszczalny poziom hałasu dla operatora • Nível sonoro nos ouvidos do operador • Nivelul zgomotului la urechea operatorului • Hladina hluku pôsobiaca na sluch operátora • Raven hrupa pri ušesu upravljavca • Nivel sonoro en el oído del operador • Ljudnivå vid förarens öra • Hávaðastig fyrir stjórnanda • Støynivå ved operatørens øre • 操作员耳旁噪声级 • Hljóðstyrkur fyrir stjórnanda • オペレータが感じる騒音レベル • 사용자 청각 소음 레벨 • Operatör Kulak Gürültü Düzeyi • Рівень шуму, що впливає на оператора	GP400 Gas with Standard Cutting reels 82 dB(A) ± 0.74 Leq (2006/42/EC) GP400 Gas with Standard Cutting reels plus Groomer and brush kit 83 dB(A) ± 0.74 Leq (2006/42/EC) GP400 Diesel with Standard Cutting reels 86 dB(A) ± 0.74 Leq (2006/42/EC) GP400 Diesel with Standard Cutting reels plus Groomer and brush kit 86 dB(A) ± 0.74 Leq (2006/42/EC) Engine Speed 3295 rpm
Harmonised standards used • Използвани хармонизирани стандарти • Použité harmonizované normy • Brugte harmoniserede standarder • Gebruikte geharmoniseerde standaards • Kasutatud ühtlustatud standardid • Käytetyt yhdenmukaistetut standardit • Normes harmonisées utilisées • Angewandte harmonisierte Normen • Εναρμονισμένα πρότυπα που χρησιμοποιήθηκαν • Harmonizált szabványok • Standard armonizzati applicati • Izmantotie saskaņotie standarti • Panaudoti suderinti standartai • Standards armonizzati użati • Normy spójne powiązane • Normas harmonizadas usadas • Standardele armonizate utilizate • Použité harmonizované normy • Uporabljeni usklajeni standardi • Estándares armonizados utilizados • Harmoniserade standarder som används • 所采用的协调标准 • Samstilltir staðlar notaðir • 整合規格 • 적용되는 조화 표준 • Kullanılan uyumlu standartlar • Використані гармонізовані стандарти	EN ISO 5395-2013 (Garden Equipment Safety) EN ISO 14982:2009 (EMC) EN ISO 3744:2010 (Sound Power) EN ISO 3746:2010 (Sound Pressure) EN 1032:2003+A1:2008 (Vibration W/B) EN ISO 20643:2008 (Vibration H/A)
Technical standards and specifications used • Използвани технически стандарти и спецификации • Použité technické normy a specifikace • Brugte tekniske standarder og specifikationer • Gebruikte technische standaards en specificaties • Kasutatud tehnilised standardid ja spetsifikatsioonid • Käytetyt tekniset standardit ja eritelmät • Spécifications et normes techniques utilisées • Angewandte technische Normen und Spezifikationen • Τεχνικά πρότυπα και προδιαγραφές που χρησιμοποιήθηκαν • Műszaki szabványok és specifikációk • Standard tecnici e specifiche applicati • Izmantotie tehniskie standarti un specifikācijas • Panaudoti techniniai standartai ir techninė informacija • Standards u speċifikazzjonijiet tekniċi użati • Normy i specyfikacje techniczne powiązane • Normas técnicas e especificações usadas • Standardele tehnice şi specificaţiile utilizate • Použité technické normy a špecifikácie • Uporabljeni tehnični standardi in specifikacije • Estándares y especificaciones técnicas utilizadas • Tekniska standarder och specifikationer som används • Samræmdir staðlar sem notaðir eru • Benyttede • harmoniserte standarder • 所采用的技术标准和规范 • Tæknistaðlar og -kröfur notaðar • 技術規格および仕様書 • 적용되는 기술 표준 및 규격 • Kullanılan teknik standartlar ve şartnameler • Використані технічні стандарти і умови	EN 1033:1996(Vibration H/A) BS ISO 2631-1:1997 (Vibration W/B) EN ISO 21299 (ROPS)
The place and date of the declaration • Място и дата на декларацията • Místo a datum prohlášení • Sted og dato for erklæringen • Plaats en datum van de verklaring • Deklaratsiooni väljastamise koht ja kuupäev • Vakuutuksen paikka ja päivämäärä • Lieu et date de la déclaration • Ort und Datum der Erklärung • Τόπος και ημερομηνία δήλωσης • A nyilatkozat kelte (hely és idő) • Luogo e data della dichiarazione • Deklarācijas vieta un datums • Deklaracijos vieta ir data • Il-post u d-data tad-dikjarazzjoni • Miejsce i data wystawienia deklaracji • Local e data da declaração • Locul şi data declaraţiei • Miesto a dátum vyhlásenia • Kraj in datum izjave • Lugar y fecha de la declaración • Plats och datum för deklarationen • Tæknistaðlar og tæknilýsingar sem notaðar eru • Benyttede tekniske standarder og spesifikasjoner • Staður og dagsetning yfirlýsingar • Sted og dato for erklæringen • 声明的地点与日期 • Staður og dagsetning yfirlýsingarinnar • 宣言場所および日付 • 선언 장소 및 일자 • Beyan yeri ve tarihi • Місце і дата укладення декларації	Ransomes Jacobsen Limited West Road, Ransomes Europark, Ipswich, England, IP3 9TT 1st April 2016
Signature of the person empowered to draw up the declaration on behalf of the manufacturer, holds the technical documentation and is authorised to compile the technical file, and who is established in the Community. Подпис на човека, упълномощен да състави декларацията от името на производителя, който поддържащ техническата документация и е оторизиран да изготви техническия файл и е регистриран в общността. Podpis osoby oprávněné sestavit prohlášení jménem výrobce, držet technickou dokumentaci a osoby oprávněné sestavit technické soubory a založené v rámci Evropského společenství. Underskrift af personen, der har fuldmagt til at udarbejde erklæringen på vegne af producenten, der er indehaver af dokumentationen og er bemyndiget til at udarbejde den tekniske journal, og som er baseret i nærområdet. Handtekening van de persoon die bevoegd is de verklaring namens de fabrikant te tekenen, de technische documentatie bewaart en bevoegd is om het technische bestand samen te stellen, en die is gevestigd in het Woongebied. Ühenduse registrisse kantud isiku allkiri, kes on volitatud tootja nimel deklaratsiooni koostama, kes omab tehnilist dokumentatsiooni ja kellel on õigus koostada tehniline toimik. Sen henkilön allekirjoitus, jolla on valmistajan valtuutus vakuutuksen laadintaan, jolla on hallussaan tekniset asiakirjat, joka on valtuutettu laatimaan tekniset asiakirjat ja joka on sijoittautunut yhteisöön. Signature de la personne habilitée à rédiger la déclaration au nom du fabricant, à détenir la documentation technique, à compiler les fichiers techniques et qui est implantée dans la Communauté. Unterschrift der Person, die berechtigt ist, die Erklärung im Namen des Herstellers abzugeben, die die technischen Unterlagen aufbewahrt und berechtigt ist, die technischen Unterlagen zusammenzustellen, und die in der Gemeinschaft niedergelassen ist. Υπογραφή ατόμου εξουσιοδοτημένου για την σύνταξη της δήλωσης εκ μέρους του κατασκευαστή, ο οποίος κατέχει την τεχνική έκθεση και έχει την εξουσιοδότηση να ταξινομήσει τον τεχνικό φάκελο και ο οποίος είναι διορισμένος στην Κοινότητα. A gyártó nevében meghatalmazott személy, akinek jogában áll módosítania a nyilatkozatot, a műszaki dokumentációt őrzi, engedéllyel rendelkezik a műszaki fájl összeállításához, és aki a közösségben letelepedett személy. Firma della persona autorizzata a redigere la dichiarazione a nome del fabbricante, in possesso Della documentazione tecnica ed autorizzata a costituire il fascicolo tecnico, che deve essere stabilita nella Comunità. Tās personas paraksts, kura ir pilnvarota deklarācijas sastādīšanai ražotāja vārdā, kurai ir tehniskā dokumentācija, kura ir pilnvarota sagatavot tehnisko reģistru un kura ir apstiprināta Kopienā. Asmuo, kuris yra gana žinomas, kuriam gamintojas suteikė įgaliojimus sudaryti šią deklaraciją, ir kuris ją pasirašė, turi visą techninę informaciją ir yra įgaliotas sudaryti techninės informacijos dokumentą. Il-firma tal-persuna awtorizzata li tfassal id-dikjarazzjoni f'isem il-fabbrikant, għandha d-dokumentazzjoni teknika u hija awtorizzata li tikkompila l-fajl tekniku u li hija stabbilita fil-Komunità. Podpis osoby upoważnionej do sporządzenia deklaracji w imieniu producenta, przechowującej dokumentację techniczną, upoważnioną do stworzenia dokumentacji technicznej oraz wyznaczonej ds. wspólnotowych. Assinatura da pessoa com poderes para emitir a declaração em nome do fabricante, que possui a documentação técnica, que está autorizada a compilar o processo técnico e que está estabelecida na Comunidade. Semnătura persoanei împuternicite să elaboreze declaraţia în numele producătorului, care deţine documentaţia tehnică, este autorizată să compileze dosarul tehnic şi este stabilită în Comunitate. Podpis osoby poverenej vystavením vyhlásenia v mene výrobcu, ktorá má technickú dokumentáciu a je oprávnená spracovať technické podklady a ktorá je umiestnená v Spoločenstve. Podpis osebe, pooblaščene za izdelavo izjave v imenu proizvajalca, ki ima tehnično dokumentacijo in lahko sestavlja spis tehnične dokumentacije, ter ima sedež v Skupnosti. Firma de la persona responsable de la declaración en nombre del fabricante, que posee la documentación técnica y está autorizada para recopilar el archivo técnico y que está establecido en la Comunidad. Undertecknas av den som bemyndigad att upprätta deklarationen å tillverkarens vägnar, innehar den tekniska dokumentationen och är bemyndigad att sammanställa den tekniska informationen och som är etablerad i gemenskapen. Undirskrift aðilans sem hefur umboð til að gera yfirlýsinguna fyrir hönd framleiðandans, hefur undir höndum tæknigögnin og hefur leyfi til að taka saman tækniskýrsluna, og er viðurkenndur innan evrópska efnahagssvæðisins. Signaturen til personen som har fullmakt til å utferdige erklæringen på vegne av produsenten, er i besittelse av den tekniske dokumentasjonen, har autorisasjon til å utarbeide den tekniske filen og som har tilhold i EU. 获得授权代表制造商起草声明者的签名，此人保留技术文档并获授权编译技术文件，且是社区中获得认可者。 Undirskrift starfsmanns sem hefur heimild til að rita yfirlýsinguna fyrir hendi framleiðandans, hefur umsjón með tæknigögnum og hefur heimild til að setja saman tæknilega skýrslu og sem er tengdur inn í samfélagið. メーカーを代表して宣言書を起草し、技術文書を保有し技術ファイルを編集する権限を有し、地域において確固たる地位を築いている人物の署名。 제조자를 대신하여 선언서를 작성하도록 위임받은 서명자는 기술 문서를 보유하고 기술 자료 수집의 허가를 받았으며 지역 공동체 내에 속해 있습니다. İmalatçı adına beyanı hazırlama yetkisi olan, teknik dokümantasyonu elinde bulunduran ve teknik dosyayı derleme yetkisine sahip, Topluluk içinde yerleşik kişinin imzası. Підпис особи, що уповноважена укласти декларацію від імені виробника, має технічну документацію, уповноважена укласти технічний паспорт і має добру репутацію в суспільстві.	 Christian D Clifford Engineering Director 1st April 2016 Ransomes Jacobsen Limited West Road, Ransomes Europark, Ipswich, England, IP3 9TT
Certificate Number • Номер на сертификат • Číslo osvědčení • Certifikatnummer • Certificaatnummer • Sertifikaadi number • Hyväksyntänumero • Numéro de certificat • Bescheinigungsnummer • Αριθμός Πιστοποιητικού • Hitelesítési szám • Numero del certificato • Sertifikāta numurs • Sertifikato numeris • Numru taċ-Ċertifikat • Numer certyfikatu • Número do Certificado • Număr certificat • Číslo osvedčenia • Številka certifikata • Número de certificado • Certifikatsnummer • Númer skírteinis • Sertifikatnummer • 证书编号 • Skírteinisnúmer • 認証番号 • 인증 번호 • Sertifika Numarası • Номер сертифіката	4240862 (Rev.4)

DECLARATION OF INCORPORATION • ДЕКЛАРАЦИЯ ЗА ОБЕДИНЕНИЕ • PROHLÁŠENÍ O ZALOŽENÍ SPOLEČNOSTI • INKORPORERINGSERKLÆRING • INCORPORATIEVERKLARING • KINNITUS ÜHENDAMISE KOHTA • ASENNUSTODISTUS • DECLARATION D'INCORPORATION • EINBAUBESCHEINIGUNG • ΔΗΛΩΣΗ ΜΗ ΣΥΜΜΟΡΦΩΣΗΣ • BEÉPÍTÉSI NYILATKOZAT • DICHIARAZIONE DI INCORPORAZIONE • NOFORMĒŠANAS DEKLARĀCIJA • PRIJUNGIMO DEKLARACIJA • DIKJARAZZJONI TA' INKORPORAZZJONI • DEKLARACJA ZGODNOŚCI DLA PODZESPOŁU • DECLARAÇÃO DE INCORPORAÇÃO • DECLARAŢIE DE ÎNCORPORARE • VYHLÁSENIE O ZABUDOVANÍ SÚČASTI • IZJAVA ZA VGRADNJO • DECLARACIÓN DE INCORPORACIÓN • INBYGGNADSDEKLARATION • YFIRLÝSING UM ÍSETNINGU • PRODUSENTENS ERKLÆRING

Business name and full address of the manufacturer • Търговско име и пълен адрес на производителя • Obchodní jméno a plná adresa výrobce • Producentens firmanavn og fulde adresse • Bedrijfsnaam en volledig adres van de fabrikant • Tootja ärinimi ja täielik aadress • Valmistajan toiminimi ja täydellinen osoite • Nom commercial et adresse complète du fabricant • Firmenname und vollständige Adresse des Herstellers • Επωνυμία και πραγματική διεύθυνση κατασκευαστή • A gyártó üzleti neve és teljes címe • Ragione sociale e indirizzo completo del fabbricante • Uzņēmuma nosaukums un pilna adrese • Verslo pavadinimas ir pilnas gamintojo adresas • Isem kummerċjali u indirizz sħiħ tal-fabbrikant • Nazwa firmy i pełny adres producenta • Nome da empresa e endereço completo do fabricante • Denumirea comercială şi adresa completă a producătorului • Obchodný názov a úplná adresa výrobcu • Naziv podjetja in polni naslov proizvajalca • Nombre de la empresa y dirección completa del fabricante • Tillverkarens företagsnamn och kompletta adress • Fyrirtækisheiti og fullt heimilisfang framleiðanda. • Firmanavn og full adresse for produsenten.	Ransomes Jacobsen Limited West Road, Ransomes Europark, Ipswich, England, IP3 9TT

Description and identification of the partly completed machinery. • Описание и идентификация на частично завършените машини. • Popis a identifikace částečně dokončeného strojního zařízení. • Beskrivelse og identifikation af den delvist fremstillede maskine. • Beschrijving en identificatie van de gedeeltelijk voltooide machinerie. • Osaliselt komplekteeritud masina kirjeldus ja määratlus. • Osittain kootun laitteiston kuvaus ja määritely. • Description et identification de la quasi-machine. • Bezeichnung und Identifizierung der teilgefertigten Vorrichtung • Περιγραφή και προσδιορισμός ημιτελούς μηχανήματος. • A részlegesen megépített gép leírása és meghatározása. • Descrizione e identificazione della quasi-macchina • Daļēji pabeigtas iekārtas apraksts un identifikācija. • Dalinai užbaigtos įrangos aprašymas ir identifikacija. • Deskrizzjoni u identifikazzjoni tal-makkinarju li jkun lest parzjalment. • Opis i oznaczenie częściowo ukończonego urządzenia • Descrição e identificação do equipamento parcial • Descrierea şi identificarea echipamentului finalizat parţial • Opis a identifikácia podzostavy strojného zariadenia • Opis in identifikacija delno dokončanega stroja. • Descripción e identificación de la maquinaria parcialmente completada. • Beskrivning och identifiering av maskindelarna. • Fyrirtækisheiti og fullt heimilisfang framleiðanda. • Lýsing og auðkenni hálfsamsetta vélbúnaðarins. • Erklæring og identifikasjon for det delvis ferdigstilte maskineriet.

Product Code	Serial Number	Description
67135	##	Cutting Unit, 11 blade, Greens
67136	##	Cutting Unit, 9 blade, Greens
67137	##	Cutting Unit, 7 blade, tees
67138	##	Cutting Unit, Verticut
62834	6283401651 ~ 6283402999	GP400 22 in. (559 mm) 7 Blade TrueSet™ Reel
62835	6283501651 ~ 6283502999	GP400 22 in. (559 mm) 9 Blade TrueSet™ Reel
62836	6283601651 ~ 6283602999	GP400 22 in. (559 mm) 11 Blade TrueSet™ Reel
62849	6284901651 ~ 6284902999	GP400 22 in. (559 mm) 15 Blade TrueSet™ Reel

We undertake to transmit, in response to a reasoned request by the national authorities, relevant information on the partly completed machinery. This shall be by hardcopy and shall be without prejudice to the intellectual property rights of the manufacturer of the partly completed machinery.

Ние обещаваме да предадем, в отговор на основателно искане от националните органи, съответна информация за частично завършените машини. Това ще се осъществи чрез документ и няма да бъде в нарушение на правата за интелектуална собственост на производителя на частично завършените машини.

Zavazujeme se na základě zdůvodněné žádosti ze strany národních úřadů poskytnout příslušné informace o částečně dokončeném strojním zařízení. Informace budou předány v tištěné podobě a nepoškodí práva k duševnímu vlastnictví výrobce týkající se částečně dokončeného strojního zařízení.

Som svar på en begrundet anmodning fra de nationale myndigheder forpligter vi os til at videregive oplysninger om den delvist fremstillede maskine. Dette bliver gjort i papirudgave og med forbehold for de immaterielle rettigheder, som indehaves af producenten af den delvist fremstillede maskine.

We zijn van plan, in reactie op een redelijk verzoek van de nationale autoriteiten, relevante informatie over de gedeeltelijk voltooide machinerie te verzenden. Dit wordt gedaan in de vorm van fysieke kopieën en deze kopieën zullen onder alle voorbehoud behoren tot de intellectuele eigendomsrechten van de fabrikant van de gedeeltelijk voltooide machinerie.

Me kohustume riigisiseste asutuste põhjendatud nõudmisel edastama asjakohast teavet osaliselt komplekteeritud masina kohta. Andmed edastatakse paberkandjal ning sellega ei tohi piirata osaliselt komplekteeritud masina tootja õigusi intellektuaalsele omandile.

Sitoudumme toimittamaan osittain koottua laitteistoa koskevat olennaiset tiedot vastineena kansallisten viranomaisten perusteltuun pyyntöön. Tiedot toimitetaan paperitulosteena. Ne eivät rajoita valmistajan osittain koottua laitteistoa koskevia immateriaalioikeuksia.

Nous nous engageons à fournir, en réponse à une demande rationnelle des autorités nationales, toute information appropriée concernant la quasi-machine. Ceci se fera par copie papier et sans préjuger des droits de propriété intellectuelle du fabricant de la quasi-machine.

Wir verpflichten uns, auf eine begründete Aufforderung durch die nationalen Behörden hin, relevante Informationen über die teilgefertigte Maschine zu übersenden. Diese werden als Ausdruck übersandt und dürfen sich nicht nachteilig auf die Rechte am geistigen Eigentum des Herstellers der teilgefertigten Maschine auswirken.

Αναλαμβάνουμε να μεταβιβάσουμε, προς απάντηση εύλογης αίτησης των εθνικών αρχών, τις σχετικές πληροφορίες όσον αφορά το ημιτελές μηχάνημα. Αυτό θα πρέπει να γίνει γραπτώς και δίχως να θίγει τα πνευματικά δικαιώματα του κατασκευαστή του ημιτελούς μηχανήματος.

Vállaljuk, hogy átadjuk – a nemzeti hatóságok megalapozott kérésére válaszul – a részlegesen megépített gépre vonatkozó információkat. Az információkat nyomtatott példányban adjuk át. A nyomtatott példány átadása a részlegesen megépített gép gyártójának szellemi tulajdonjogaira tett kötelezettség nélkül történik.

Ci impegniamo a trasmettere, in risposta ad una richiesta adeguatamente motivata delle autorità nazionali, informazioni pertinenti sulla quasi-macchina. L'impegno sarà redatto in forma cartacea e lascerà impregiudicati i diritti di proprietà intellettuale del fabbricante della quasi-macchina.

Atsaucoties uz pamatotu valsts iestāžu pieprasījumu, mēs apņemamies nodot saistīto informāciju par daļēji pabeigtu iekārtu. Tā būs cietā kopija un neradīs kaitējumus daļēji pabeigtās iekārtas ražotāja intelektuālā īpašuma tiesībām.

Atsakydami į nacionalinių valdžios organų užklausą, pateikiame informaciją apie dalinai užbaigtus mechanizmus. Šis dokumentas yra atspausdintas elektroninio originalo variantas ir be jokio išankstinio nusistatymo neturi tikslo pažeisti dalinai užbaigto mechanizmo gamintojo intelektualinės nuosavybės teisių.

Aħna nwieghdu li nipprezentaw, meta mitlubin mill-awtoritajiet nazzjonali, l-informazzjoni relevanti dwar il-makkinarju li jkun lest parzjalment. Din l-informazzjoni għandha tkun f'forma stampata u mingħajr preġudizzju għad-drittijiet tal-proprjetà intellettwali tal-fabbrikant tal-makkinarju li jkun lest parzjalment.

Na uzasadnioną prośbę instytucji państwowych zobowiązujemy się do przekazania wszelkich informacji na temat częściowo ukończonego urządzenia. Będą one przekazane na piśmie. Strona przekazująca w/wym. dokumentację nie będzie rościła sobie żadnych praw do własności intelektualnej producenta częściowo ukończonego urządzenia.

Na sequência de pedido razoável por parte das autoridades nacionais, comprometemo-nos a transmitir informações importantes sobre o equipamento parcial. Tal será feito por meio de hardcopy e sem prejuízo para os direitos de propriedade intelectual do fabricante do equipamento parcial.

Ne angajăm să transmitem, ca răspuns la o solicitare motivată a autorităţilor naţionale, informaţii relevante privind echipamentul finalizat parţial. Aceasta se va efectua în format hârtie şi fără a aduce atingere drepturilor de proprietate intelectuală ale producătorului echipamentului finalizat parţial.

Zavažujeme sa, že na základe odôvodnenej požiadavky národných orgánov predložíme dôležité informácie o podzostave strojného zariadenia.

Musí to byť v tlačenej forme a bez ujmy na právach duševného vlastníctva výrobcu podzostavy strojného zariadenia.

Zavezujemo se, da bomo na utemeljeno zahtevo nacionalnih organov predložili zadevne informacije o delno dokončanem stroju. Informacije bodo v tiskani obliki in ne bodo posegale v pravice intelektualne lastnine proizvajalca delno dokončanega stroja.

Nos comprometemos a transmitir, en respuesta a una petición razonada por parte de las autoridades nacionales, información relevante sobre la maquinaria parcialmente completada. Ésta será transmitida en copia impresa y no afectará a los derechos de propiedad intelectual del fabricante de la maquinaria parcialmente completada.

Vi åtar oss att vidarebefordra relevant information om maskindelarna vid en motiverad förfrågan från nationella myndigheter. Informationen ska erhållas i form av papperskopior och ska vara utan men för maskindelstillverkarens immateriella rättigheter.

Berist okkur rökstudd beiðni frá landsyfirvöldum um að senda mikilvægar upplýsingar um hálfsamsetta vélbúnaðinn, munum við verða við slíkri beiðni. Beiðnin skal vera í prentriti og gilda með fyrirvara um hugverkarétt framleiðanda hálfsamsetta vélbúnaðarins.

Vi vil, på anmodning fra nasjonale myndigheter, formidle all relevant informasjon om det delvis ferdigstilte maskineriet. Informasjonen vil bli formidlet i papirutgave og skal være uten prejudise for åndsrettighetene til produsenten av det delvis ferdigstilte maskineriet.

4 SPECIFICATIONS

Partly completed machinery must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of Directive 2006/42/EC.	These accessories have been designed to be fitted to the jacobsen GP400 USAG0004 / USAD004
Частично завършените машини не трябва да бъдат пускана в употреба, докато крайните машини, в които са вградени, не са приведени в съответствие с постановленията на директива 2006/42/ЕО.	
Částečně dokončené zařízení nesmí být uvedeno do provozu, dokud konečné zařízení, do kterého bylo uvedené zařízení namontováno, neodpovídá ustanovením Směrnice č. 2006/42/EC.	
Delvist fremstillede maskiner må ikke indsættes i driften, før den endelige maskine, som den skal inkorporeres i, er blevet erklæret I overensstemmelse med bestemmelserne i Direktiv 2006/42/EF.	
Gedeeltelijk voltooide machinerie mag niet in dienst worden genomen, totdat er voor de definitieve machinerie, waarvan gedeeltelijk voltooide machinerie onderdeel uitmaakt, een conformiteitsverklaring is ontvangen onder de voorwaarden van Richtlijn 2006/42/EG.	
Osaliselt komplekteeritud masinat ei tohi kasutusele võtta enne, kui lõplikult komplekteeritud masin, millega see ühendatakse, on tunnistatud direktiivi 2006/42/EÜ sätetele vastavaks.	
Osittain koottua laitteistoa ei saa ottaa käyttöön, ennen kuin lopullinen laitteisto, johon se asennetaan, on vakuutettu direktiivin 2006/42/EY säännösten mukaiseksi.	
La quasi-machine ne doit pas être mise en service avant que la machine finale dans laquelle elle doit être incorporée n'ait été déclarée conforme aux dispositions de la directive 2006/42/CE	
Die teilgefertigte Vorrichtung darf erst in Betrieb genommen werden, wenn die Konformität der Maschine, in die sie eingebaut wird, entsprechend den Bestimmungen der Richtlinie 2006/42/EG erklärt worden ist.	
Θα πρέπει να εκτελεστεί σέρβις στο ημιτελές μηχάνημα μέχρι το τελικό μηχάνημα στο οποίο θα ενσωματωθεί να έχει τη δήλωση συμμόρφωσης, σύμφωνα με τις διατάξεις της Οδηγίας 2006/42/ΕΚ.	
A részlegesen megépített gépet tilos üzembe helyezni mindaddig, amíg a 2006/42/EK irányelv rendelkezéseivel összhangban a részlegesen megépített gépet be nem építik a végleges változatba, és erről nem nyilatkoznak.	
La quasi-macchina non deve essere messa in servizio finché la macchina finale in cui deve essere incorporata non è stata dichiarata conforme, nel caso, alle disposizioni della Direttiva 2006/42/CE.	
Daļēji pabeigtu iekārtu nedrīkst nodot ekspluatācijā, līdz galīgā iekārta, kurā tā ir jāiebūvē, ir deklarēta atbilstoši direktīvas Nr. 2006/42/EK noteikumiem.	
Dalinai užbaigto mechanizmo negalima paleisti kol kiti mechanizmai, kurie dar bus prijungti, nebus patvirtinti kaip atitinkantys 2006/42/EC Direktyvos reikalavimus.	
Il-makkinarju li jkun parzjalment lest ma għandux jibda jitħaddem sakemm il-makkinarju finali li fih ikun se jiġi inkorporat ikun ġie ddikjarat konformi mad-dispożizzjonijiet tad-Direttiva 2006/42/KE.	
Urządzenia częściowo ukończonego nie wolno użytkować aż do orzeczenia zgodności urządzenia w postaci kompletnej z wymaganiami dyrektywy 2006/42/WE.	
O equipamento parcial não poderá entrar em funcionamento antes do mecanismo final no qual vai ser incorporado ser declarado como estando em conformidade com as condições da Directiva 2006/42/CE.	
Echipamentul finalizat parțial nu trebuie pus în funcțiune până ce echipamentul final în care va fi încorporat nu este declarat ca fiind conform cu prevederile Directivei 2006/42/CE.	
Podzostava strojného zariadenia nesmie byť uvedená do prevádzky, pokiaľ finálne strojné zariadenie, ktorého sa stane súčasťou, nebude vyhlásené ako zhodné s ustanoveniami smernice 2006/42/ES.	
Delno dokončanega stroja ni dovoljeno dati v obratovanje, dokler se dokončani stroj, v katerega se vgradi delno dokončani stroj, ne potrdi kot skladen z določbami Direktive 2006/42/ES.	
La maquinaria parcialmente completada no debe ponerse en servicio hasta que la maquinaria final a la que debe incorporarse cumpla con las provisiones de la Directiva 2006/42/CE.	
Maskindelarna får ej tas i bruk förrän maskinen som delen tillhör har deklarerats som överensstämmande med föreskrifterna I direktivet 2006/42/EG.	
Hálfsamsettan vélbúnað má ekki taka í notkun fyrr en vottað hefur verið að endanlegi vélbúnaðurinn sem setja á hann í samræmist ákvæðum tilskipunar 2006/42/EC. Delvis ferdigstilt maskineri skal ikke tas i bruk før det endelige maskineriet som dette skal integreres i, er erklært å være i overensstemmelse med bestemmelsene i direktiv 2006/42/EF.	
The place and date of the declaration • Място и дата на декларацията • Místo a datum prohlášení • Sted og dato for erklæringen • Plaats en datum van de verklaring • Deklaratsiooni väljastamise koht ja kuupäev • Vakuutuksen paikka ja päivämäärä • Lieu et date de la déclaration • Ort und Datum der Erklärung • Τόπος και ημερομηνία δήλωσης • A nyilatkozat kelte (hely és idő) • Luogo e data della dichiarazione • Deklarācijas vieta un datums • Deklaracijos vieta ir data • Il-post u d-data tad-dikjarazzjoni • Miejsce i data wydania deklaracji • Local e data da declaração • Locul şi data declaraţiei • Miesto a dátum vyhlásenia • Slovenian • Lugar y fecha de la declaración • Plats och datum för deklarationen • Staður og dagsetning yfirlýsingar • Sted og dato for erklæringen	Ransomes Jacobsen Limited West Road, Ransomes Europark, Ipswich, England, IP3 9TT 1st September 2014
Signature of the person empowered to draw up the declaration on behalf of the manufacturer, holds the technical documentation and is authorised to compile the technical file, and who is established in the Community.	 C. D. Clifford Engineering Director 1st September 2014 Ransomes Jacobsen Limited West Road, Ransomes Europark, Ipswich, England, IP3 9TT
Подпис на човека, упълномощен да състави декларацията от името на производителя, който поддържащ техническата документация и е оторизиран да изготви техническия файл и е регистриран в общността.	
Podpis osoby oprávněné sestavit prohlášení jménem výrobce, držet technickou dokumentaci a osoby oprávněné sestavit technické soubory a založené v rámci Evropského společenství.	
Underskrift af personen, der har fuldmagt til at udarbejde erklæringen på vegne af producenten, der er indehaver af dokumentationen og er bemyndiget til at udarbejde den tekniske journal, og som er baseret på stedet.	
Handtekening van de persoon die bevoegd is de verklaring namens de fabrikant te tekenen, de technische documentatie bewaart en bevoegd is om het technische bestand samen te stellen, en die is gevestigd in het Woongebied.	
Ühenduse registrisse kantud isiku allkiri, kes on volitatud tootja nimel deklaratsiooni koostama, kes omab tehnilist dokumentatsiooni ja kellel on õigus koostada tehniline toimik.	
Sen henkilön allekirjoitus, jolla on valmistajan valtuutus vakuutuksen laadintaan, jolla on hallussaan tekniset asiakirjat, joka on valtuutettu laatimaan tekniset asiakirjat ja joka on sijoittautunut yhteisöön.	
Signature de la personne habilitée à rédiger la déclaration au nom du fabricant, à détenir la documentation technique, à compiler les fichiers techniques et qui est implantée dans la Communauté.	
Unterschrift der Person, die berechtigt ist, die Erklärung im Namen des Herstellers abzugeben, die die technischen Unterlagen aufbewahrt und berechtigt ist, die technischen Unterlagen zusammenzustellen, und die in der Gemeinschaft niedergelassen ist.	
Υπογραφή ατόμου εξουσιοδοτημένου για την σύνταξη της δήλωσης εκ μέρους του κατασκευαστή, ο οποίος κατέχει την τεχνική έκθεση και έχει την εξουσιοδότηση να ταξινομήσει τον τεχνικό φάκελο και ο οποίος είναι διορισμένος στην Κοινότητα.	
A gyártó nevében meghatalmazott személy, akinek jogában áll módosítania a nyilatkozatot, a műszaki dokumentációt őrzi, engedéllyel rendelkezik a műszaki fájl összeállításához és a közösségben letelepedett személy.	
Firma della persona autorizzata a redigere la dichiarazione a nome del fabbricante, in possesso della documentazione tecnica ed autorizzata a costituire il fascicolo tecnico, che deve essere stabilita nella Comunità.	
Tās personas paraksts, kura ir pilnvarota deklarācijas sastādīšanai ražotāja vārdā, kurai ir tehniskā dokumentācija, kura ir pilnvarota sagatavot tehnisko reģistru un kura ir apstiprināta Kopienā.	
Asmuo, kuris yra gana žinomas, kuriam gamintojas suteikė įgaliojimus sudaryti šią deklaraciją, ir kuris įą pasirašė, turi visą techninę informaciją ir yra įgaliotas sudaryti techninės informacijos dokumentą.	
Il-firma tal-persuna awtorizzata li tfassal id-dikjarazzjoni f'isem il-fabbrikant, għandha d-dokumentazzjoni teknika u hija awtorizzata li tikkompila l-fajl tekniku u li hija stabbilita fil-Komunità.	
Podpis osoby upoważnionej do sporządzenia deklaracji w imieniu producenta, przechowującej dokumentację techniczną, upoważnioną do stworzenia dokumentacji technicznej oraz wyznaczonej ds. wspólnotowych.	
Assinatura da pessoa com poderes para emitir a declaração em nome do fabricante, que possui a documentação técnica, que está autorizada a compilar o processo técnico e que está estabelecida na Comunidade.	
Semnătura persoanei împuternicite să elaboreze declaraţia în numele producătorului, care deţine documentaţia tehnică, este autorizată să compileze dosarul tehnic şi este stabilită în Comunitate.	
Podpis osoby poverenej vystavením vyhlásenia v mene výrobcu, ktorá má technickú dokumentáciu a je oprávnená spracovať technické podklady a ktorá je umiestnená v Spoločenstve.	
Podpis osebe, pooblaščene za izdelavo izjave v imenu proizvajalca, ki ima tehnično dokumentacijo in lahko sestavlja spis tehnične dokumentacije, ter ima sedež v Skupnosti.	
Firma de la persona responsable de la declaración en nombre del fabricante, que posee la documentación técnica y está autorizada para recopilar el archivo técnico y que está establecido en la Comunidad.	
Undertecknas av någon som bemyndigad att upprätta deklarationen å tillverkarens vägnar, innehar den tekniska dokumentationen och är bemyndigad att sammanställa den tekniska informationen och som är etablerad i gemenskapen.	
Undirskrift aðilans sem hefur umboð til að gera yfirlýsinguna fyrir hönd framleiðandans, hefur undir höndum tæknigögnin og hefur leyfi til að taka saman tækniskýrsluna, og er viðurkenndur innan evrópska efnahagssvæðisins. Signaturen til personen som har fullmakt til å utferdige erklæringen på vegne av produsenten, er i besittelse av den tekniske dokumentasjonen, har autorisasjon til å utarbeide den tekniske filen og som har tilhold i EU.	
Certificate Number • Номер на сертификат • Číslo osvědčení • Certifikatnummer • Certificaatnummer • Sertifikaadi number • Hyväksyntänumero • Numéro de certificat • Bescheinigungsnummer • Αριθμός Πιστοποιητικού • Hitelesítési szám • Numero del certificato • Sertifikāta numurs • Sertifikato numeris • Numru taċ-Ċertifikat • Numer certyfikatu • Número do Certificado • Număr certificat • Číslo osvedčenia • Številka certifikata • Número de certificado • Certifikatsnummer • Númer skírteinis • Sertifikatnummer	4283731-r1

GB United Kingdom · BG Bulgaria · CH Switzerland · CZ Czech Republic · DK Denmark · NL Netherlands · EE Estonia · ES Spain · FI Finland · FR France · DE Germany · GR Greece · HU Hungary

IS Iceland · IT Italy · LI Liechtenstein · LV Latvia · LT Lithuania · MT Malta · NO Norway · PL Poland · PT Portugal · RO Romania · SE Sweden · SK Slovakia · SI Slovenia

NOTES

5.1 SAFETY DECALS

D

A E C B J

F

G

H

K

L

M

N

P

A. Read Operator's Manual.

B. Keep a Safe Distance from the Machine.

C. Maximum permissible working slope. (See Accessories section for correct limit with various accessories).

D. Seat Belt Must be Worn When ROPS is Deployed. Do Not Wear Seat Belt When ROPS is Lowered. Read Operators Manual.

E. Caution, Stop Engine & Remove the Starter Key Before Pressure Washing

F. Stay Clear of Hot Surfaces.

G. Do Not Open or Remove Safety Shields While the Engine is Running.

H. Caution Rotating Blades.

J. Avoid Fluid Escaping Under Pressure. Read Operators Manual for Service Procedures.

K. Do Not Remove Safety Shields While Engine is Running.

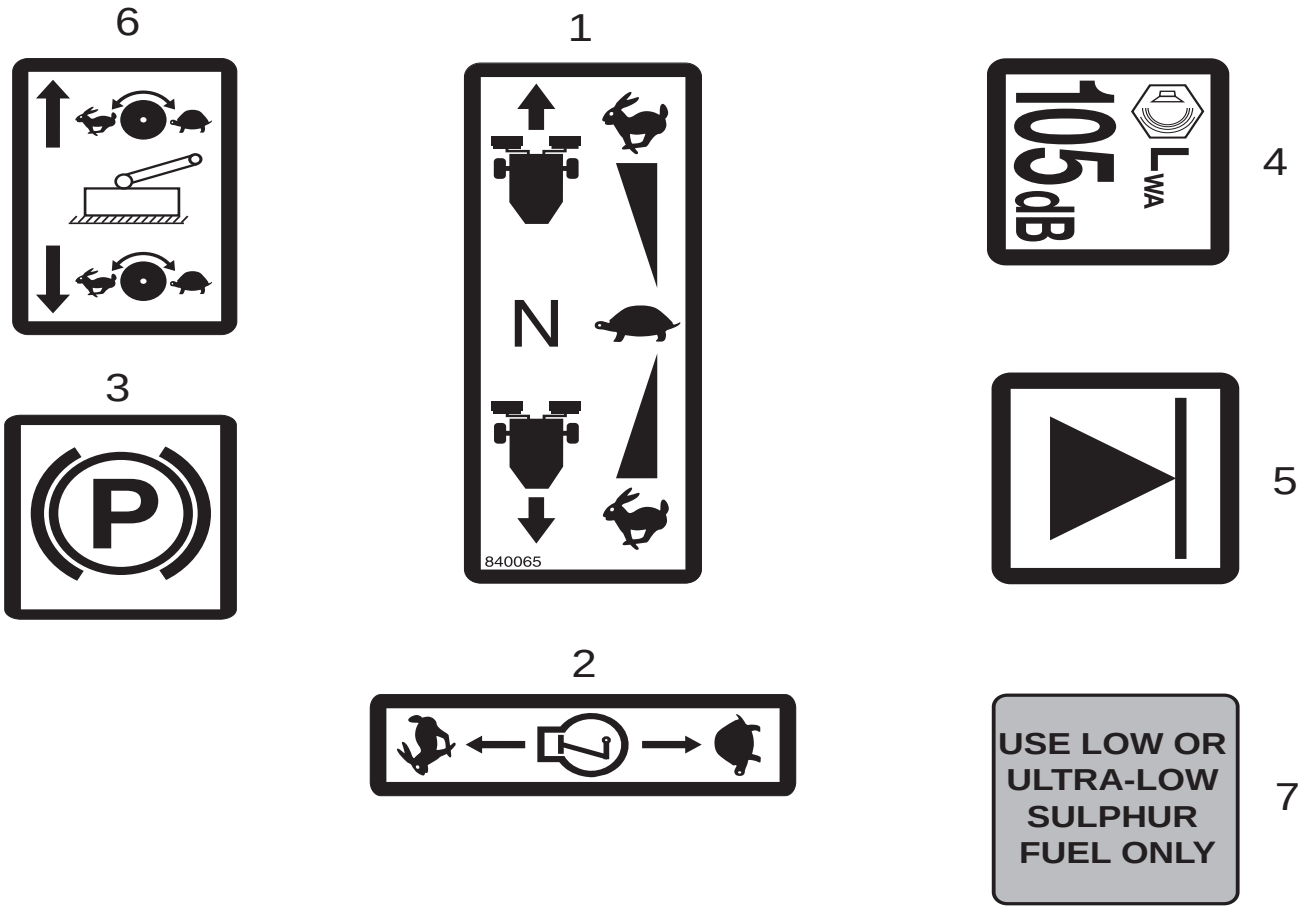
L. Danger of Explosion if the Battery Terminals are Short Circuited.

M. Caution Diesel Fuel

N. Caution Unleaded Gasoline

P. Caution Engine Coolant under Pressure

5.2 INSTRUCTION DECALS



1 Speed Control (Foot Pedal)

2 Engine Speed Control.

3 Parking Brake ‘P’.

4 Maximum Sound Power Level.

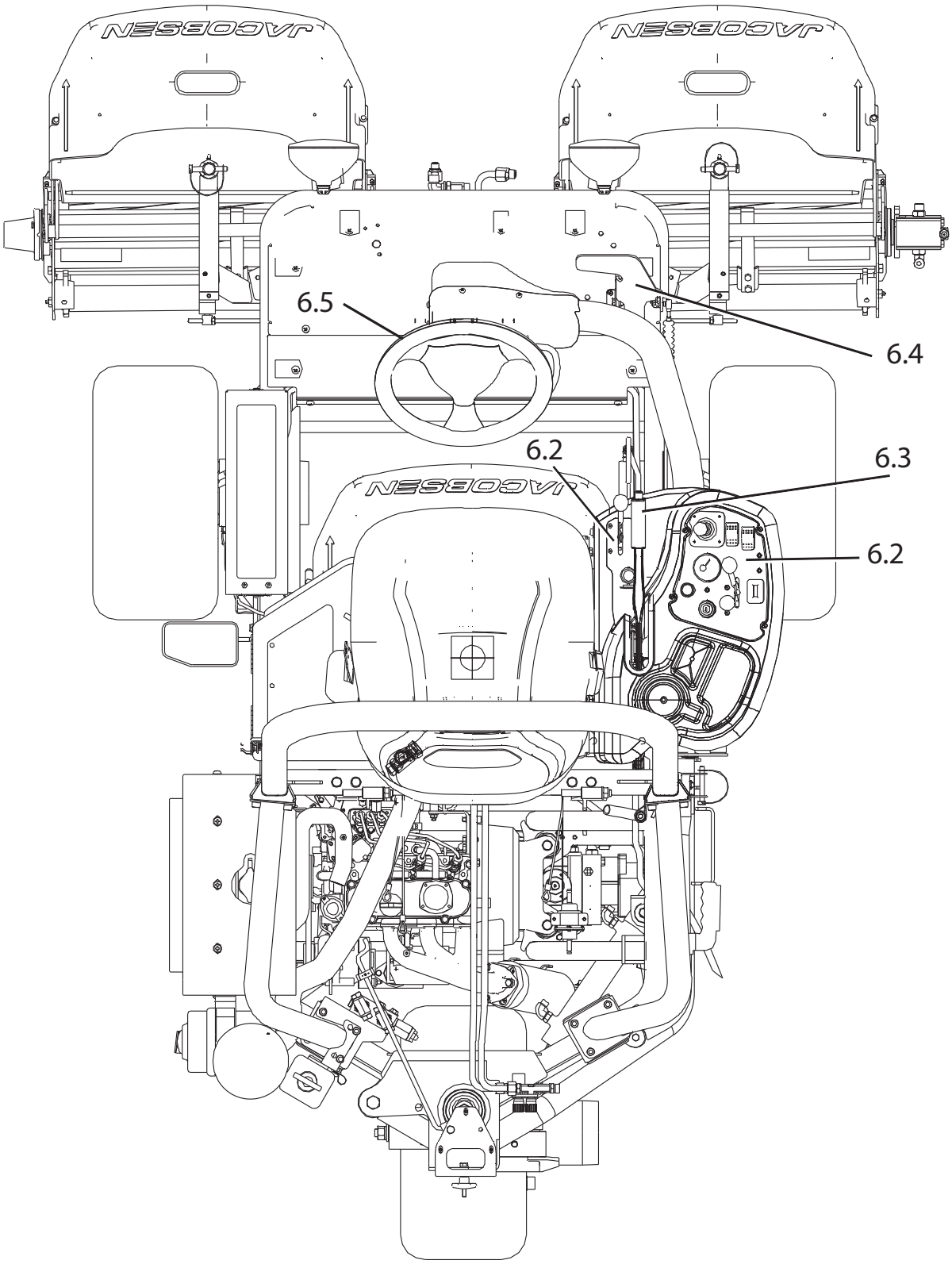
5 Jacking Point

6 Centre Unit raise / Lower Speed Adjustment

7 Use Low Or Ultra-low Sulphur Fuel

NOTES

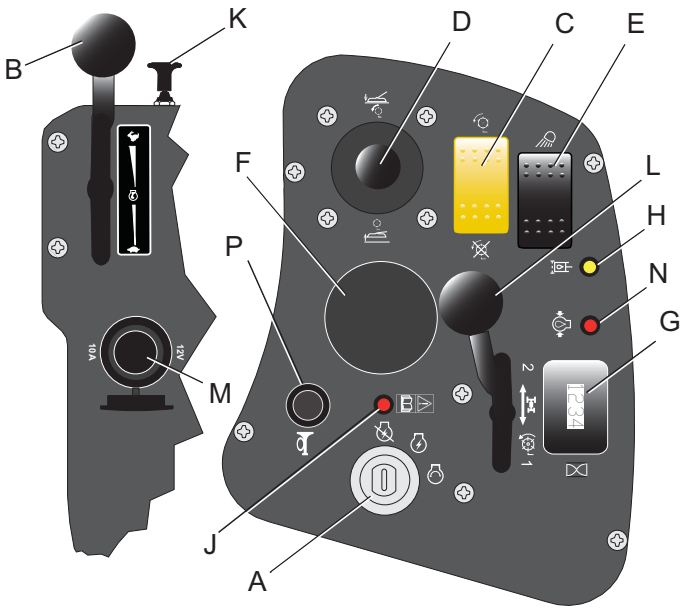
6.1 OPERATOR WORKSTATION



6.2 INSTRUMENT PANEL

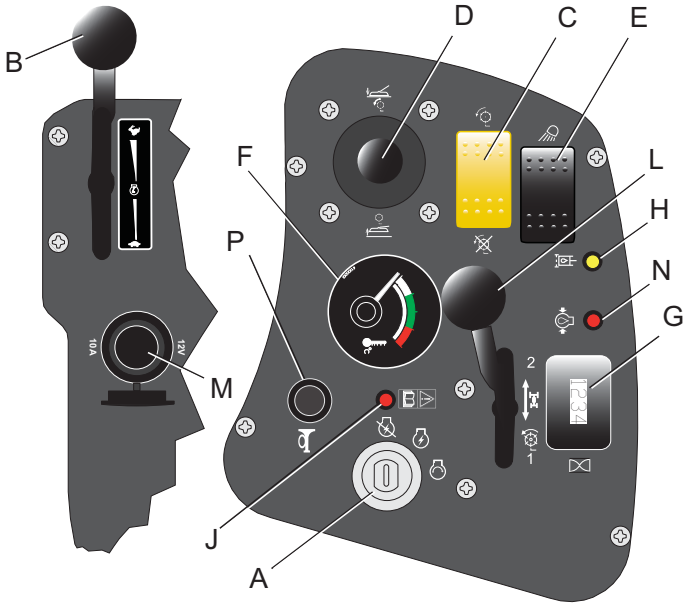
GASOLINE

A: Starter Key Switch
B: Throttle Control Lever
C: Cutting Unit Switch (PTO)
D. Joystick
E: Working Lights
F. Blanking Plug
G: Hour Meter
H: Blocked Hydraulic Filter Warning Light
J. Ignition Warning Light
K. Choke Control
L. Mow / Transport Lever
M Power Outlet
N. Engine Oil Pressure
P. Horn



DIESEL

A: Starter Key Switch
B: Throttle Control Lever
C: Cutting Unit Switch (PTO)
D. Joystick
E: Working Lights
F. Engine Coolant Temperature
G: Hour Meter
H: Blocked Hydraulic Filter Warning Light
J. Ignition Warning Light
L. Mow / Transport Lever
M Power Outlet
N. Engine Oil Pressure
P. Horn



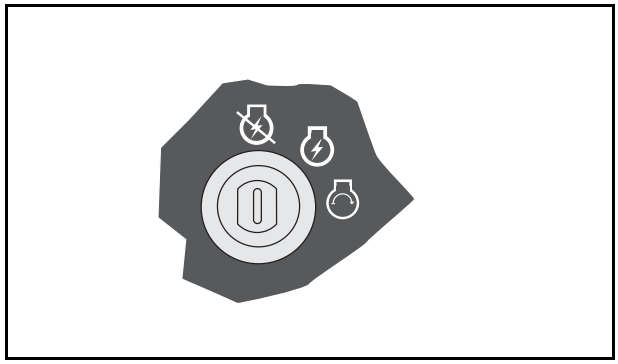
6.2A STARTER KEY SWITCH

The key switch has three positions:

OFF - prevents all electrical functions from operating. Switch must be in the OFF position to remove the key.

ON - Illuminates the red indicator lamp. This position is also for normal operation.

START - Activates the glow plugs & automatically cranks the engine after the glow plugs have pre-heated. Release the key after engine starts (the switch automatically returns to ON).

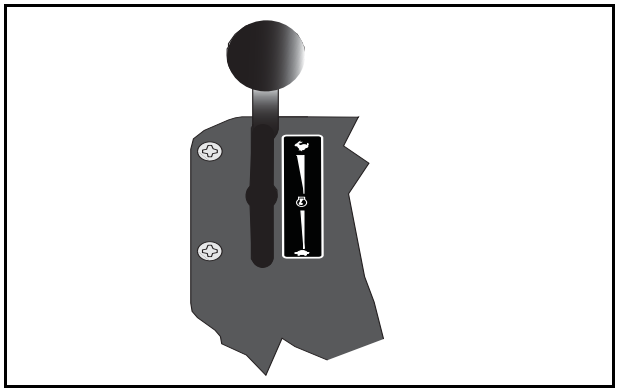


NOTE
If the engine fails to start, or if it “dies” for any reason, the ignition switch must be returned to the OFF position before restarting is attempted. This feature prevents damage to the starter and flywheel teeth that can occur if the starter is engaged while the engine is running. Wait 30 seconds before restarting engine.

6.2B THROTTLE CONTROL LEVER

The lever should be moved towards the front of the machine to increase the engine speed and towards the rear of the machine to decrease the engine speed.

NOTE: Engine should be used at full speed



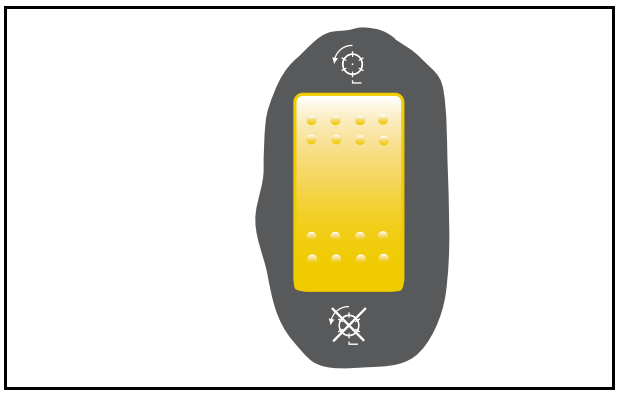
6.2C CUTTING UNIT SWITCH (PTO)

Colour Yellow.
To commence cutting ensure mow / transport lever is in mow position and the units have been lowered.

Push bottom of the rocker switch and move joystick towards the lower position.

To stop cutting unit rotation push top of rocker switch.

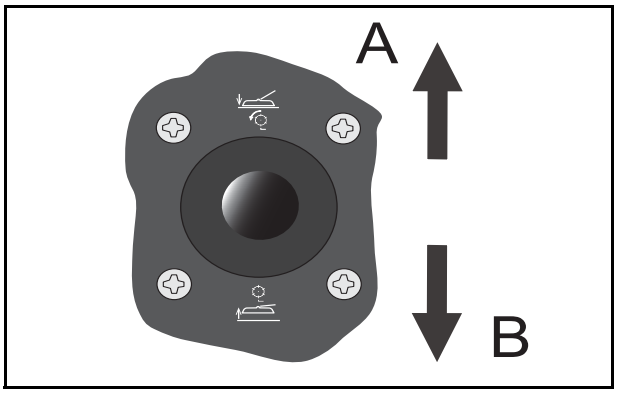
Cutting units stop rotating automatically when raised or the operator leaves the seat.



6.2D CUTTING UNIT SWITCH (PTO)

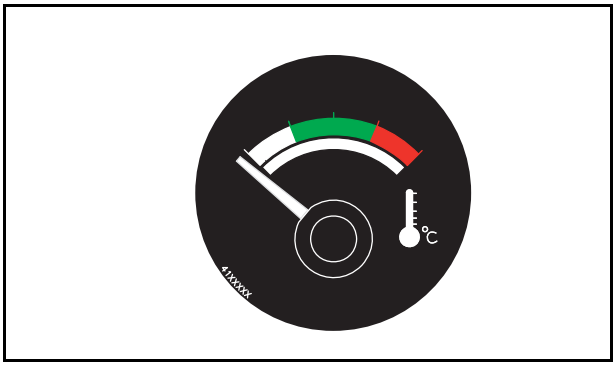
The Mow/ Lift Joystick lowers and raises the cutting heads.
To Lower the Heads:
Move the joystick forwards (A) to lower the cutting heads. If reel enable switch is on, reel rotation starts when the heads are lowered.

To Raise the Heads:
Move the joystick backwards (B) to raise the cutting heads. Reel rotation stops when the heads are raised.



6.2E ENGINE COOLANT TEMPERATURE (DIESEL ONLY)

Gauge indicates engine coolant temperature.



6.2F WORKING LIGHTS

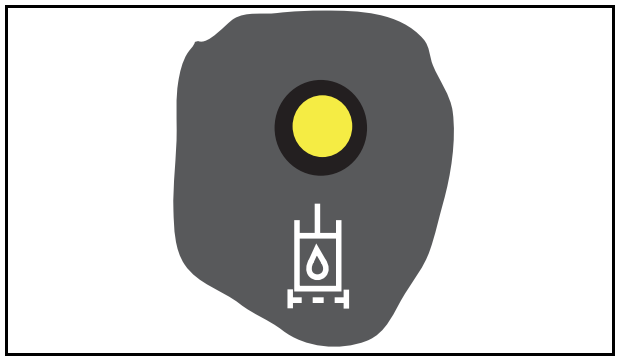
Colour Black.
The Working light Switch turns the two working lamps on and off.

6.2G HOUR METER

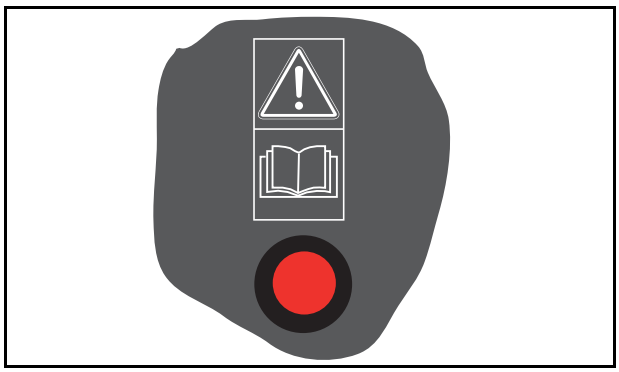
Records the number of hours the engine has run. Use the hour meter to manage a good scheduled maintenance program (refer to the Maintenance Guide).

6.2H BLOCKED HYDRAULIC FILTER WARNING LIGHT

Monitors Hydraulic filter condition. Coloured yellow, Illuminates prior to filter bypass valve operating, when illuminated filter requires changing. Under cold start conditions the LED may illuminate for 15 - 20 minutes until the hydraulic oil reaches normal operating temperature. This is normal, only if the LED remains illuminated after this period should the element be changed.

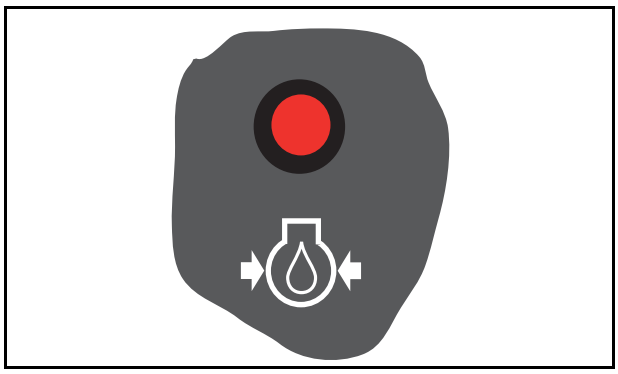


6.2I MULTIFUNCTION WARNING LIGHT



When the ignition key is in the ON position, the red LED is on continuously. When any of the safety interlocks are not in their neutral position, the red LED flashes the applicable code.
One flash every two seconds - Seat switch is not activated.
Two flashes every two seconds - Parking brake is not applied.
Three flashes every two seconds - Reel drive engaged.
If the red LED continues to flash, the engine will not start.
The red LED flashes to indicate the operation of the glow plugs on diesel engines only and the engine starts. The red LED stays illuminated for two to three seconds, then goes out. If the engine is over temperature (Diesel Only), the red LED flashes and the buzzer sounds twice every four seconds.

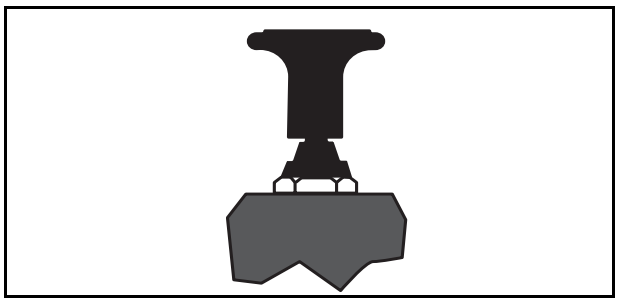
6.2J OIL PRESSURE WARNING LIGHT



Colour red

a. On when the engine oil pressure is too low for operation.

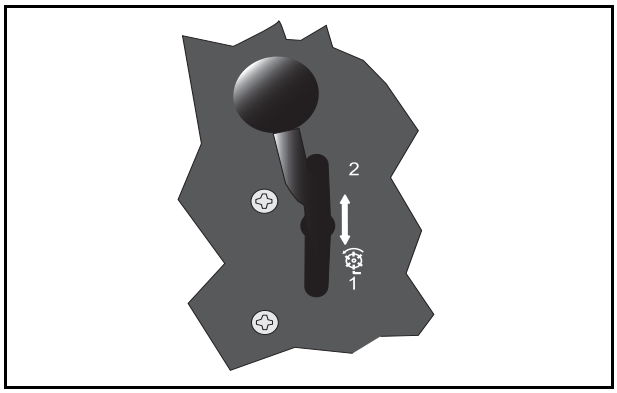
6.2K CHOKE CONTROL (GASOLINE ONLY)



Pull the choke control out to start the engine. In warm weather, move the choke control slowly to the off position. In cold weather allow the engine to run smoothly before moving the choke control to the off position.

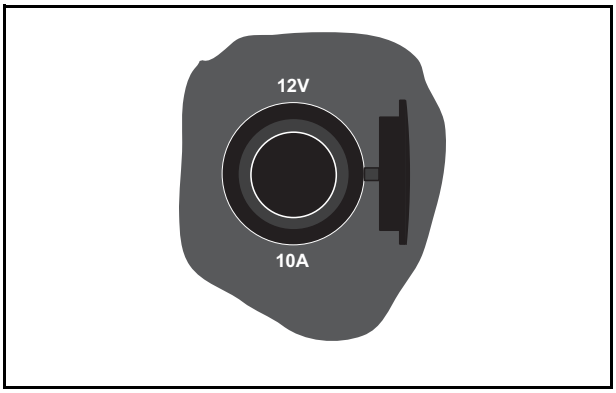
6.2L MOW / TRANSPORT LEVER

This lever limits the maximum traction speed for cutting and allows engagement of reels.



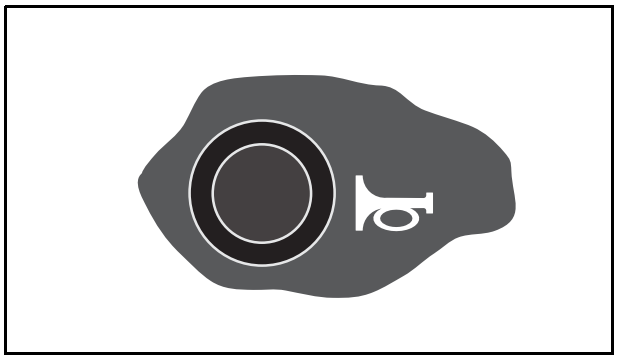
6.2M POWER OUTLET

Provides a 12 volt 10amp power supply for accessories.



6.2N HORN BUTTON

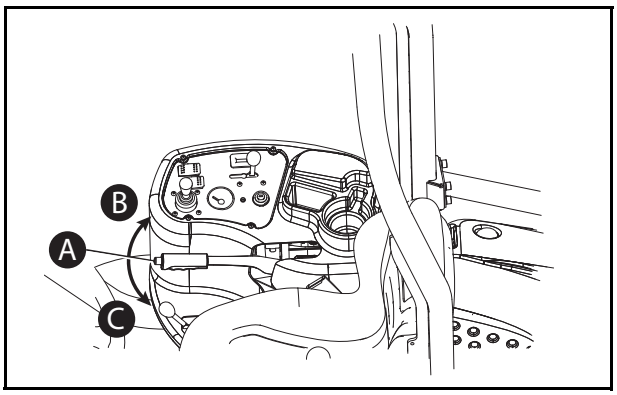
Situated on rear of the control panel. Press to sound warning.



6.3 PARKING BRAKE

The Parking Brake can be engaged by depressing button A and pulling the lever upwards to position B.

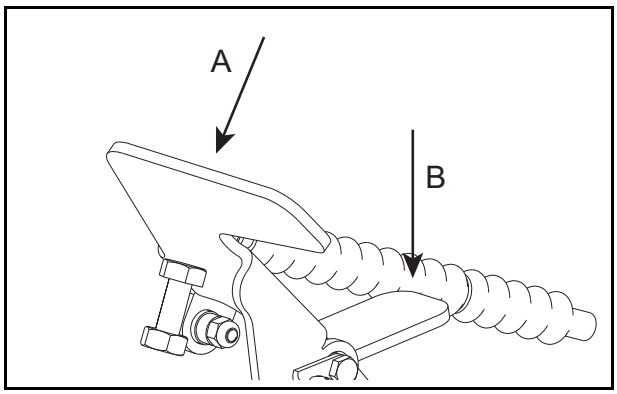
To release the parking brake depress button A and lower lever to position C.



6.4 TRACTION PEDAL

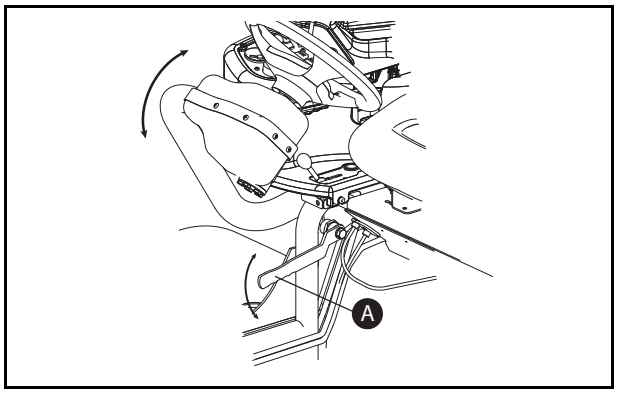
The Direction/Speed Pedal controls speed and direction. Depress front of pedal (A) to go forward, depress back of pedal (B) to go backward. Increased movement of the pedal will increase speed. To slow and stop the machine, ease the pedal back to the neutral position. Proper braking is provided by hydrostatic pressure.

NOTE
To reduce fatigue during normal forward operation, the operator's heel should rest on the floorboard next to the pedal (not on the lower part of the pedal).



6.5 STEERING WHEEL

The steering wheel is fitted to an adjustable arm to adjust its height. Loosen the Locking Lever (A) to allow the steering wheel and control arm to be adjusted up or down. Tighten the locking lever when steering wheel is at the desired position.



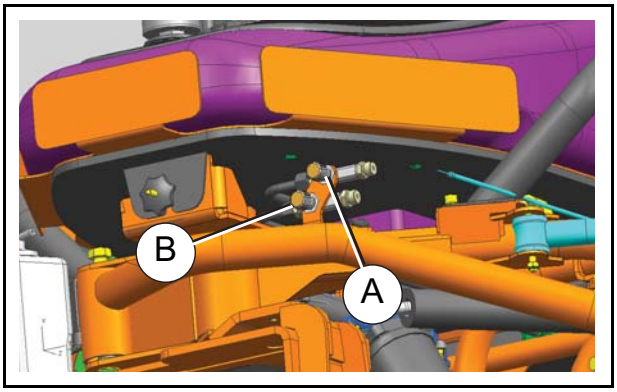
6.6 LIFT & LOWER RATE & SYNCHRONISATION CONTROL

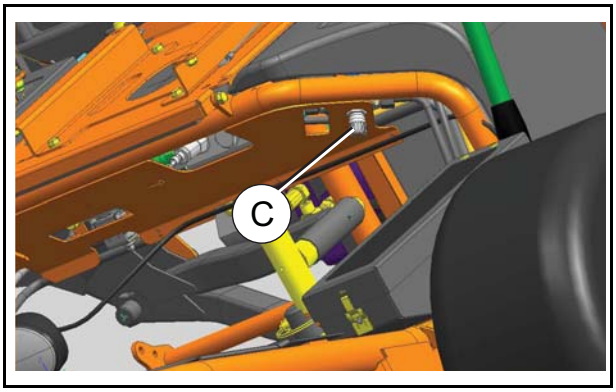
The drop rate of the cutting units can be adjusted using these controls.

Valves 'A' & 'B' are used to control the rate of lift and lower for the centre cutting unit.

Valve 'C' is used to control the lift and lower rate for the front cutting units.

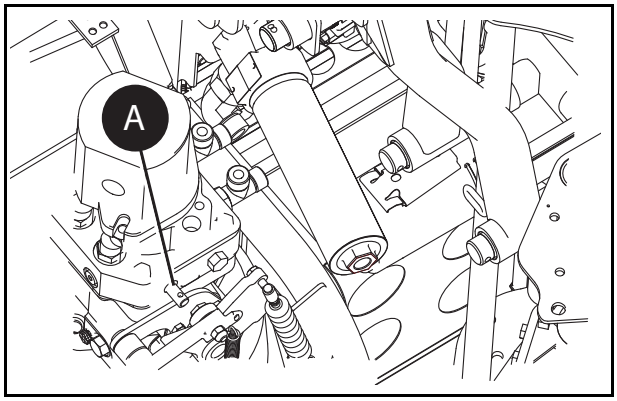
Refer to section 7.4.3 for more detailed instructions on setting and adjusting the soft drop.





6.7 FREE WHEEL

1. To push the machine, disengage the parking brake
2. Turn screw (A) located on the underside of the transmission pump 180º counterclockwise. Set the steering wheel so that the rear wheel is pointing straight ahead.
3. After pushing the machine, return the screw (A) on the pump to its operating position.



⚠ WARNING

THE FREE WHEEL FACILITY IS FOR RECOVERY PURPOSES ONLY.

Do Not Tow The Machine For More Than A Few Metres, Or Allow The Machine To Free Wheel Down Slopes Even When Unloading Down Ramps.

7.1 DAILY INSPECTION

⚠ CAUTION

The Daily Inspection Should Be Performed Only When The Engine Is Off And All Fluids Are Cold. Lower Implements To The Ground, Engage Parking Brake, Stop Engine And Remove Ignition Key.

1. Perform a visual inspection of the entire unit, look for signs of wear, loose hardware and missing or damaged components. Check for fuel and oil leaks to ensure connections are tight and hoses and tubes are in good condition.

2. Check the fuel supply, radiator coolant level, crankcase oil level and air cleaner is clean. All fluids must be at the full mark with the engine cold.

3. Make sure all cutting units are adjusted to the same height of cut.

4. Check all tyres for proper inflation.

5. Test the operator presence and safety interlock system.

7.2 OPERATOR PRESENCE AND SAFETY INTERLOCK SYSTEM

1. The operator presence & safety interlock system prevents the engine from starting unless the parking brake is on, and the mowing device is switched off. The system stops the engine if the operator leaves the seat with the parking brake disengaged. If the operator leaves the seat with the mowing device engaged and the parking brake on the mowing device will stop.

⚠ WARNING

Never Operate The Equipment With The Operator Presence & Safety Interlock System Disengaged Or Malfunctioning. Do Not Disconnect Or Bypass Any Switch.

2. Perform each of the following tests to ensure the operator presence & safety interlock system is functioning properly. Stop the test and have the system inspected and repaired if any of the tests fail as listed below:

- The engine does not start in test 1;
- The engine does start during tests 2 or 3.
- The engine stops during test 4.

3. Refer to the chart below for each test and follow the check (✓) marks across the chart. Shut engine off between each test.

   Test 1: Represents normal starting procedure. The operator is seated, parking brake is on, the operators feet are off the pedals and the mower engagement device is off. The engine should start.

Test 2: The engine must not start if the mower engage device is on.

Test 3: The engine must not start if the parking brake is not applied.

Test 4: Start the engine in the normal manner, then turn mower engage device on and lift your weight off the seat. -

Test	Operator Seated		Parking Brake Switch		Mower Switch		Engine Starts	
	Yes	No	On	Off	On	Off	Yes	No
1	✓		✓			✓	✓	
2	✓		✓		✓			✓
3	✓			✓		✓		✓
4	✓	✹	✓		✓		✹	

✹ Lift your weight off the seat. The cutting units must stop rotating within seven (7) seconds. Unless the backlap lever is engaged.

+ If Mow/Transport speed lever is in mow mode the Panel switch could still be engaged and the engine will not start.

7.3 OPERATING PROCEDURE

1. Under no circumstances should the engine be started without the operator seated on the tractor.

⚠ CAUTION

To Help Prevent Injury, Always Wear Safety Glasses, Leather Work Shoes Or Boots, A Hard Hat And Ear Protection.

2. Do not operate tractor or attachments with loose, damaged or missing components. Whenever possible mow when grass is dry

3. First mow in a test area to become thoroughly familiar with the operation of the tractor and controls.

Note:

To prevent damage to the reel and bottom blade never operate the reels when they are not cutting grass. Excessive friction and heat can develop between the bottom blade and reel and damage the cutting edge.

4. Study the area to determine the best and safest operating procedure. Consider the height of the grass, type of terrain, and condition of the surface. Each condition will require certain adjustments or precautions.

5. Never direct discharge of material toward bystanders, nor allow anyone near the machine while in operation. The owner/operator is responsible for injuries inflicted to bystanders and/or damage to their property.

6. Use discretion when mowing near gravel areas (roadway, parking areas, cart paths, etc.). Stones discharged from the implement may cause serious injuries to bystanders and/or damage the equipment.

7. Disengage the cutter motors and raise the implements when crossing paths or roads. Look out for traffic.

⚠ CAUTION

Remove All Debris From The Site Before Mowing. Enter A New Area Cautiously Always Operate At Speeds That Allow You To Have Complete Control Of The Mower.

8. Stop and inspect the equipment for damage immediately after striking an obstruction or if the machine begins to vibrate abnormally. Have the equipment repaired before resuming operation.

⚠ CAUTION

Before You Clean, Adjust, Or Repair This Equipment, Always Disengage All Drives, Lower Implements To The Ground, Engage Parking Brake, Stop Engine And Remove Key From Ignition Switch To Prevent Injuries.

⚠ WARNING

DO NOT USE ON SLOPES GREATER THAN 16°

9. Slow down and use extra care on hillsides. Read Section 3.7. Use caution when operating near drop off points.

10. Never use your hands to clean cutting units. Use a brush to remove grass clippings from blades. Blades are extremely sharp and can cause serious injuries

11. Always operate the machine with grass catchers attached to prevent discharge from the centre unit hitting the operator.

7.4 SETTING UP THE MACHINE

⚠ WARNING

Setup procedures must be performed as specified by properly trained service personnel only.

Check the hydraulic system. Make sure the connections are tight and all hoses and lines are in good condition before pressurizing the system. Hydraulic system should be allowed to warm-up and re-check connections for leaks.

⚠ WARNING

If a leak is suspected, use a piece of cardboard or wood, NOT your hand, to check for leaks.
Hydraulic Fluid escaping under pressure can penetrate skin and do serious damage. Immediate medical assistance must be sought.
Serious infection or reaction can develop if proper medical treatment is not administered immediately.

NOTE: Any reference to the right, left, front, or rear of the unit will always be determined from the operators seated position.

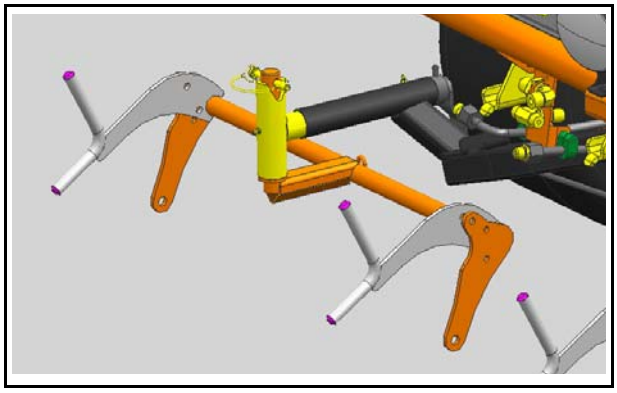
7.5 MOUNTING THE CUTTING HEADS

Review the "OPERATION" section before mounting the cutting units.

NOTE: All Ransomes Jacobsen cutting heads are backlapped at the factory, but the bedknife adjustment must be performed before the unit is put into use. Refer to the Bedknife Adjustment Procedure as described in section 8.4 in this manual.

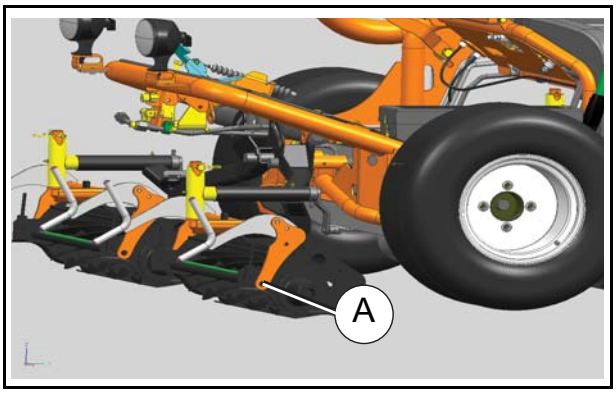
⚠ CAUTION

Take care when handling the cutting heads. Injury may result from contact with the sharp edges of the reel blades.



1. Cut all shipping straps holding the front pull frames in place and position the pull frames so the up stop bumpers contact the up stop brackets. Set cutting head drive motors and hoses away from the lift arms.

2. With the reel enable switch in the "OFF" position, lower all three cutting head lift arms and turn off the unit and remove ignition key.



3. Align the cutting head at the front of the yoke frame. Secure cutting head to either side of the yoke frame using the shoulder bolt (A) on each side of the cutting head.

4. To remove the cutting head, undo shoulder bolts, applied in step 3.

7.6 REEL MOTOR MOUNTING

1. The cutting head motor mounting adaptor, coupling and hardware are shipped in the step located above the left front wheel. Install a 1.49" i.d. x .07" (38mm x 1.7mm) O-ring on the male side of motor adapter plate and a 1.99" i.d. x .07" (50mm x 1.7mm) O-ring on the reel motor mount face.

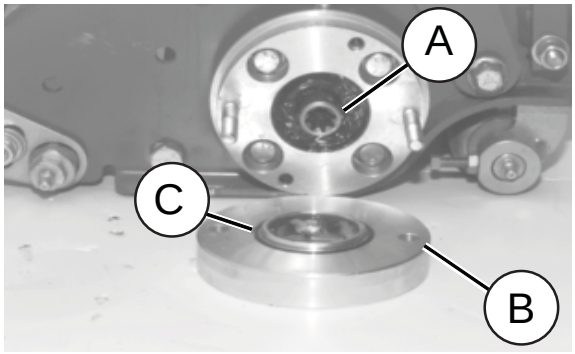
2. Remove and discard screws holding the shipping cover to cutting head (retain the shipping cover to protect the bearings whenever the motor is removed from the cutting head).

3. Install coupler (A) on cutting head shaft.

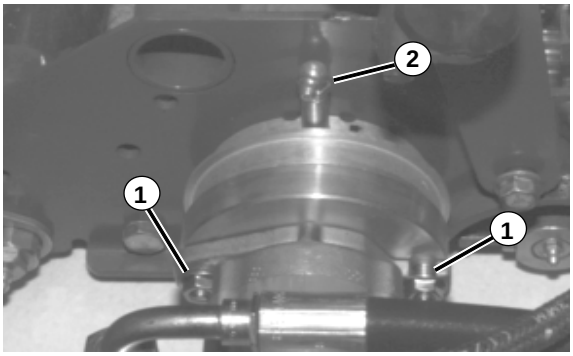
4. Install motor adapter plate (B) positioning the male face and O-ring (C) toward the cutting head.

5. Install two (2) 5/16-18 x 1 1/2” screws (with washer and lock washer) loosely into the mounting holes.

6. Align the splines on the motor shaft with the coupler (A) and slide the motor into place rotating approximately 45° away from the mounting screws. With motor face against adapter plate (B), rotate the motor mounting flange into place engaging the screws into the motor mounting flange slots. Tighten screws to 18ft/lbs (24 N·m).



Motor Mounting



Motor Mounting Screws & Lubricator

7. Add lithium based lubricant to the bearing housings at BOTH ends of the reels bearings at both ends are partially packed with lubricant at the factory, but additional lubricant is required once assembled. Use a grease gun to add lubricant until it starts to escape from the fittings. Wipe off any excess lubricant.

   NOTE: Check to MAKE SURE when the cutting heads are lowered to the turf, they must contact the turf evenly across the entire length of the cutting head. If the front cutting heads contact the level surface unevenly, refer to the adjustment section in the parts and maintenance manual.

7.7 CUTTING CYLINDER LIFT & LOWER RATE & SYNCHRONISATION

The valves that control the rate and sequence in which the cutting units rise and fall are set at the factory, however they can be reset or altered using the following steps.

1. Start the machine and run the engine at full throttle for 15-20 minutes to ensure that the oil is at the optimum temperature.

2. To set up sequencing lift/lower of the front & rear unit. Open all three valves fully. Screw the single front unit adjuster (C) in until the rate of lift/lower is acceptable.

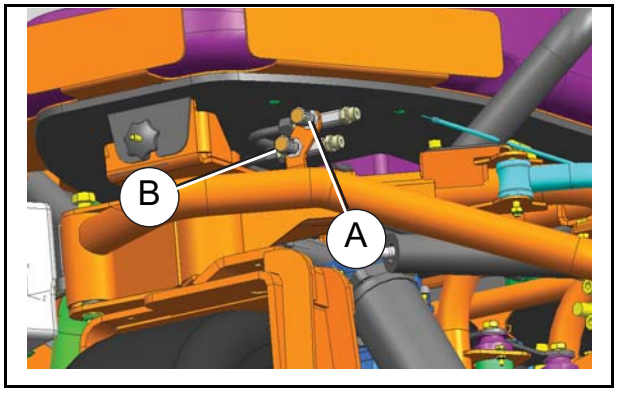
3. Use the two rear valves the upper valve (A) for lower and the lower valve (B) for lift to provide the sequencing of the centre unit.

4. Cycle the cutting units to check the synchronisation. The centre cutting unit should lower and lift slightly after the front cutting units.
   If the cylinders drop too quickly or are not synchronised correctly then they should be adjusted accordingly.

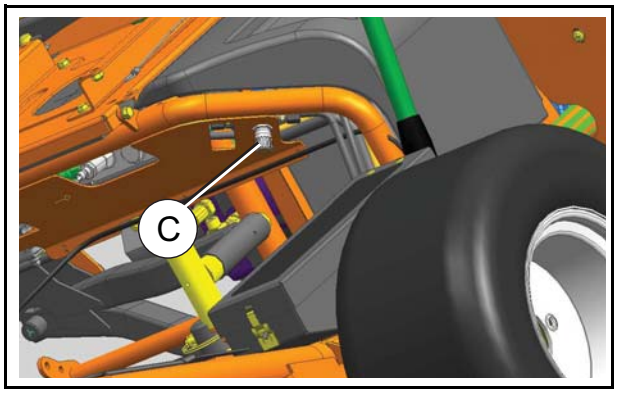
   The upper valve (A) at the rear of the machine adjusts the rate at which the centre cutting unit lowers.

   The lower valve (B) at the rear adjusts the rate at which the centre cutting unit lifts.

   The valve (C) under the operators seat adjusts the rate at which the front cutting units lower.



Centre Unit Lift & Lower Valves



Front Unit Lower Valve

5. If it is not possible to get the sequencing of the rear cutting unit correct this may be because the front cutting units are set to lower too slowly. Try increasing the speed of drop slightly.

6. Once the cutting units are lifting and lowering correctly tighten each of the grubscrews found on the valves to lock the settings.

7.8 OPERATION OF THE MACHINE

BEFORE OPERATING FOR THE FIRST TIME

- Check and adjust tyre pressure, if necessary, see section 4.2 Specification.
- Add fuel to the fuel tank if necessary.
- Check engine oil and top-up, if necessary.
- Check radiator coolant and top-up, if necessary (50% antifreeze solution).
- Make sure you understand the information contained in the previous sections.

7.9 STARTING THE ENGINE

The following procedure is for starting cold engines.

1. Ensure the FWD/REV pedal is in the neutral position, the mow switch is off, the throttle setting is in a mid position.

2. Turn the ignition switch fully clockwise and hold until the engine starts (approximately 5-10 sec.)

3. The glow plugs are auto timed depending on the coolant temperature for operating the starter motor (This should only take a few seconds)

4. When the engine starts, release the key immediately and it will return to the RUN position.

5. If the engine does not start, return key to the OFF position and try again.

NOTES:
- If the engine fails to start after two attempts, wait 20 seconds and try again.
- The starter motor should never be run continuously for longer than 30 seconds or it may fail.
- If the red LED's on the display flash whilst starting one of the safety interlock switches has not been set correctly.

7.10 DRIVING

- Release brake - Make sure the parking brake is released before attempting to go forward or reverse.
- Forward - Gently depress the top A of the FWD/REV foot pedal to reach desired ground speed.
- Reverse - Gently depress the bottom B of the FWD/REV foot pedal to reach desired ground speed.
- To stop - Gently return the FWD/REV foot pedal to the neutral position.
- To hold the vehicle stationary on a slope it may be necessary to apply a certain amount of reverse traction.

NOTES:
- Use complete foot to operate both forward and reverse.
- Do not move pedal suddenly–always operate slowly and smoothly. Never move pedal violently from forward to reverse or vice versa.
- Always keep foot firmly on the foot pedal–a too relaxed foot control may result in a jerky motion.

7.11 MOWING PROCEDURE

NOTE: Always remove the flag and inspect the green before mowing. Remove debris or other objects that may damage the reels and/or bedknives. Operators should practice mowing in a clear area to become familiar with raising and lowering the mowing heads. They should be aware that the centre cutting head raises and lowers slightly later than the front ones, allowing the centre cut to begin and end at the same point as the two side cuts. Practising will help the operator become proficient at starting and stopping each pass within a foot or two of the edge of the green. Then only one final pass around the green will be required to finish the operation.

Several factors may determine the direction of the mowing pattern, sand traps or other hazards near the green, trees etc. that can restrict where turns are made. The terrain of the green may also be a factor, but if conditions allow, always try to mow the green in a different direction than the last time it was mowed.

1. Stop the unit just before reaching the green. Make sure the reel enable switch is in the "ON" position and the mow / transport lever is in position 1 (mow). Proceed onto the green at mowing speed and lower the mowing heads as the front grass catchers cross the leading edge of the green. At the end of the pass, raise the heads as the front grass catchers cross the trailing edge of the green.

2. Always make mowing passes across the green in a straight line. DO NOT start to make the turn for the next pass until the rear wheel is completely off the green, this will eliminate the possibility of the tires tearing the turf during the turn.

3. Each successive pass should overlap the previous one by two or three inches (51 or 76mm) (a painted mark two or three inches (51 or 76mm) in from the outer edges of the two front grass catchers will help align each overlapping pass).

4. After all of the straight passes have been made, make one final pass around the outer edge of the green. This final pass should always be in the opposite direction from the last time the green was mowed.

5. With the engine stopped or the reel enable switch in the "OFF" position, empty the grass catchers before proceeding to the next green.

NOTE: To avoid damage to the green, NEVER stop the forward motion of the mower on the green with the reels turning. Stopping the mower on a wet green may cause wheel indentations.

7.12 TO STOP THE ENGINE

1. Disengage drive to the cutting units with the cutting unit switch.
2. Return the FWD/REV pedal to the neutral position.
3. Set the parking brake.
4. Move the throttle control lever to the SLOW position.
5. Turn the ignition key to OFF.

7.13 HOW TO REMOVE A BLOCKAGE FROM CUTTING UNITS

⚠ CAUTION
It is important to note: there will be remaining hydraulic pressure within the system that can cause the cutting cylinder to rotate when the obstruction is removed. Therefore keep your hands, feet and clothing away from cutting units at all times.

1) Disengage the power to the cutting units with the cutting unit switch.
2) Keep the cutting units lowered to the ground (Wait for the remaining cutting cylinders to stop rotation).
3) Lift the cutting units into the “Transport Position”, lock in position use the transport latches fitted on your product.
4) Remove your foot from the forward/reverse pedal.
5) Set the parking brake.
6) Move the throttle control lever to the slow position.
7) Turn the ignition key to the off position and remove the key.

NOTE
Make sure correctly selected PPE is worn before you clear the obstruction.

8) use the Ransomes Jacobsen “Cutting Unit Tool” part number 4184540 See below or stout stick, put into the cutting cylinder between the blades.

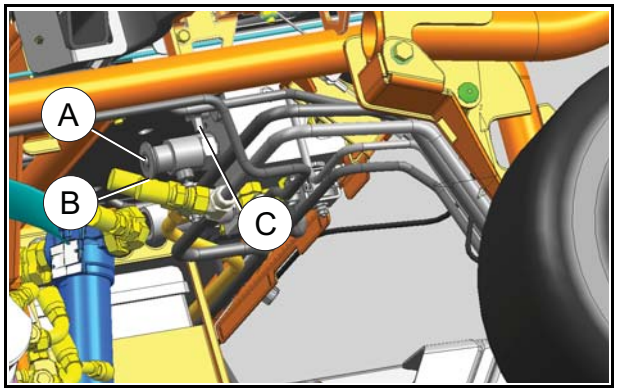
9) Rotate the cylinder with either the “Cutting Unit Tool” or “Stout Stick” until the obstruction has been removed.

10) Inspect all the cutting surfaces for damage, when necessary replace the damaged components.

7.14 BACKLAPPING

This mower is fitted with the ability to allow the reels to be driven in reverse for backlapping.

- Backlapping is a process which will lightly grind the reel to the bedknife whilst mounted on the mower.
- If significant amounts of metal are to be removed then the cutting unit should be reground on a specialised grinding machine.
- Before any backlapping is carried out, Ransomes Jacobsen recommends that the backlapping process should be risk assessed as a workshop process by the manager of the machine.
- Backlapping should only be carried out by trained staff.
- Ransomes Jacobsen recommend that grinding paste is only applied to the reel when it is stationery, the engine is off and the parking brake applied.
- When applying grinding paste the reel should only be rotated by appropriately sized piece of wood and not by hand.
- Place reels in the most accessible position for applying the paste.



- After applying the grinding paste the person backlapping should return to the seat, engage the relevant controls and run the reels in reverse.
- When the desired finish is achieved switch off the mower, clean off any surplus paste, reset the reel to bedknife and return the controls to the normal mow positions.

Ransomes Jacobsen grinding paste:

Grinding Paste	**Part Number**
80 grit grinding paste, 4.5kg tin	5002488
120 grit grinding paste, 4.5kg tin	5002489
80 grit grinding paste, 9kg tin	5002490
120 grit grinding paste, 9kg tin	5002491

7.15 BACKLAPPING PROCEDURE

Before starting the backlap procedure, release the centre unit and swing it out. The backlap valve is located under the seat plate on the right hand side. It can be accessed from under the machine when the centre unit is swung out

1. Apply an even coat of backlapping compound to the entire length of each blade of the reels.

2. While pressing the centre red button (A) on the reel valve pull yellow plunger (B) away from the valve.

4. Start the engine and set the throttle to low idle. Lower heads by operating the Joystick or paddle.

5. Slowly turn the restriction valve knob (C) clockwise until the desired reel rotation speed is attained. It should be slow enough so that the reel will not throw off the backlapping compound as it spins.

6. Once all the blades on the reel are uniformly sharp, shut off the engine and push yellow plunger (B) back towards the valve. Set the reel speed valve (C) to mow speed.

NOTE
To ensure proper reel rotation, make sure valve (C) is completely closed.

7. Wash all of the backlapping compound from all of the heads. Once they are thoroughly cleaned and dry, apply a light film of oil to the cutting edges to help prevent rust.

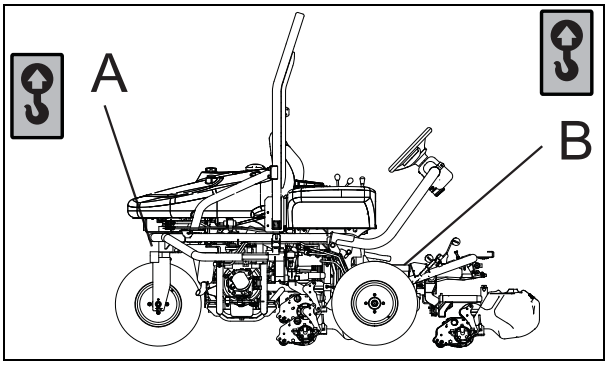
8. After backlapping, the bedknife adjustment should be made again.

7.16 TRANSPORTING ON A TRAILER OR FLATBED

The machine has hard-point tie-down loops front (A) and rear (B). Fasten the mower to the transport vehicle.

Make sure that all tie down straps are tight. Make sure that the decks are locked in the transport position. Check the fuel and hydraulic tank caps are tight. Make sure that no part of the mower can fall during transport.

Always follow the given maximum transport load weight for the vehicle used.

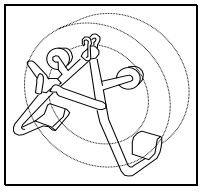


Do Not carry more than the maximum weight shown on the transport vehicle plate.

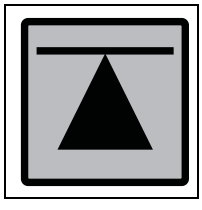
Read the safety and operation manual of the transport vehicle before you load.

7.17 SLINGING AND JACKING THE MACHINE

Slinging
When slinging the machine use the tie down loops front and rear.



Jacking
The machine has three jacking points, one at the rear chassis engine mount and two on the front chassis wheel motor mounting.



7.18 MOWING ON SLOPES

The mower has been designed for good traction and stability under normal mowing conditions. Use caution when operating on slopes, especially when the grass is wet. Wet grass reduces traction and steering control.

⚠ WARNING

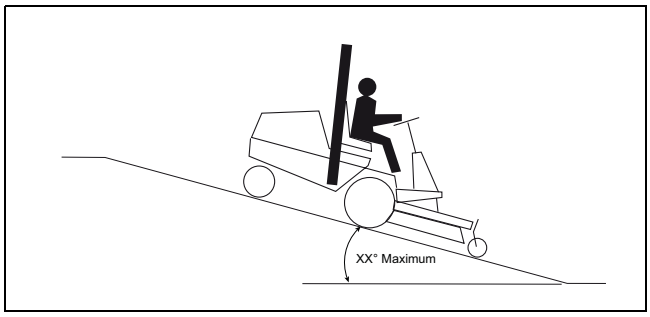
To Minimize The Possibility Of Overturning, The Safest Method For Operating On Hills And Terraces Is To Travel Up And Down The Face Of The Slope (Vertically), Not Across The Face (Horizontally). Avoid Unnecessary Turns, Travel At Reduced Speeds, And Stay Alert For Hidden Hazards.
To Ensure best Stability Always Load The Left Hand Storage Rack First And Cut With All Three Units Powered.

1. Always mow with the engine at full throttle, control forward speed using traction foot pedal to maintain proper cutting.
2. Use weight transfer control as required to improve weight distribution between decks and mower.
3. If the mower tends to slide or the tyres begin to mark the turf, angle mower into a less steep slope until traction is regained or tyre marking stops.
4. If mower continues to slide or mark the turf, the slope is too steep for safe operation. Do not make another attempt to climb, and back down slowly.
5. When descending a steep slope, always lower implements to the ground to reduce the risk of mower overturning.

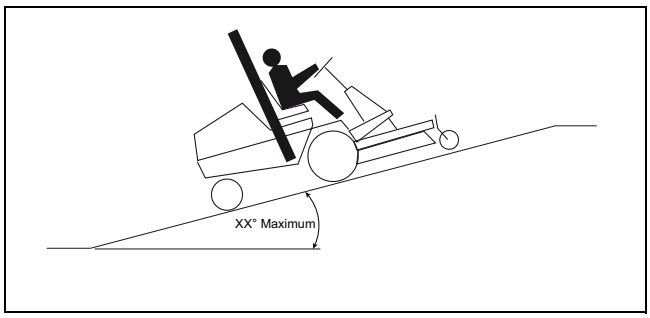
Correct tyre pressure is essential for maximum traction. See Specification.

⚠ WARNING

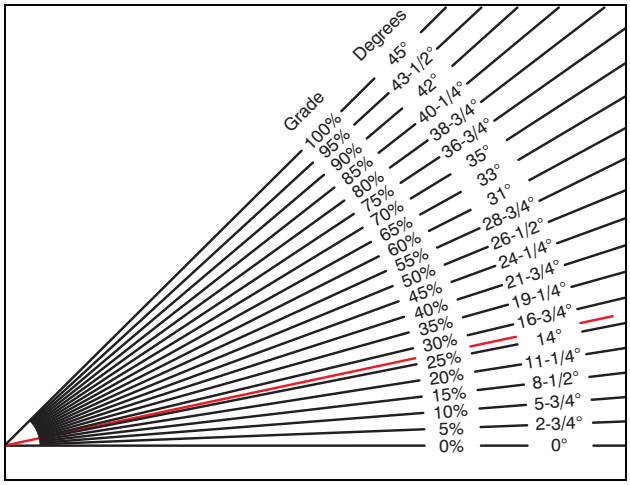
DO NOT USE ON SLOPES GREATER THAN 16°



A = Maximum Allowable Slope



A = Maximum Allowable Slope



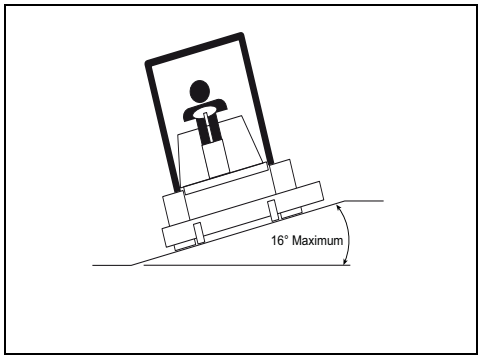
Degrees are shown to the nearest 1/4”.

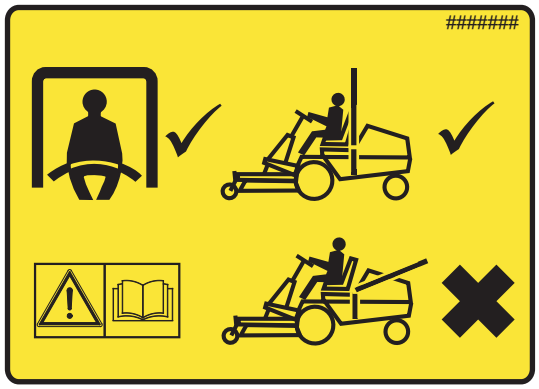
General slope of roadway embankment - 45°
Steepest grass area - 31°
Slope of average roof - 19.25°
2nd class highway maximum grade 4.5°
Toll road or freeway - 1.75°

⚠ WARNING

When The Machine Is Being Used, Whether Cutting Grass Or Not, On Slopes, The ROPS Frame Should Be Deployed And The Seat Belt Used.this Rationale Is Based On The Fact That A Seat Belt Must Be Worn With A ROPS To Comply With The Machiney Directive 2006/42/EC Sections 3.2.2, Seating & 3.4.3, Rollover

Ransomes Jacobsen Limited Recommends That A Local Risk Assessment Is Completed By The Owner/User Of The Machine To Determine The Risks Associated With Working On Slopes.

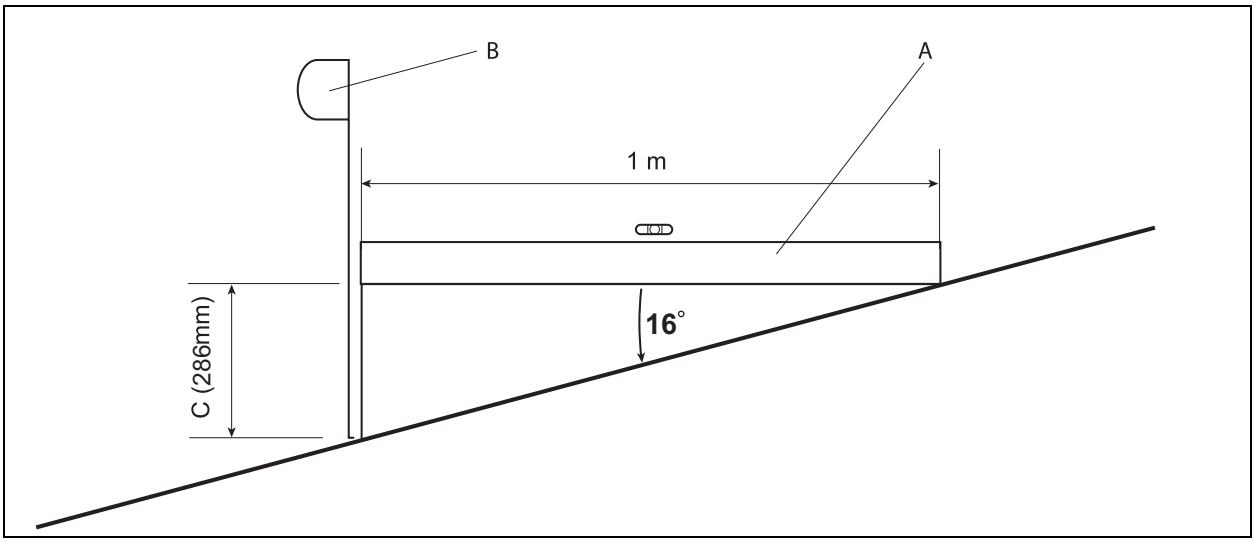




How to calculate a slope

Tools:
Spirt level 1 metre long.
Tape measure.

With the spirt level (A) positioned horizontally measure the distance (C) with tape measure (B) Use the chart to calculate either the slope angle or the% grade D of the slope.

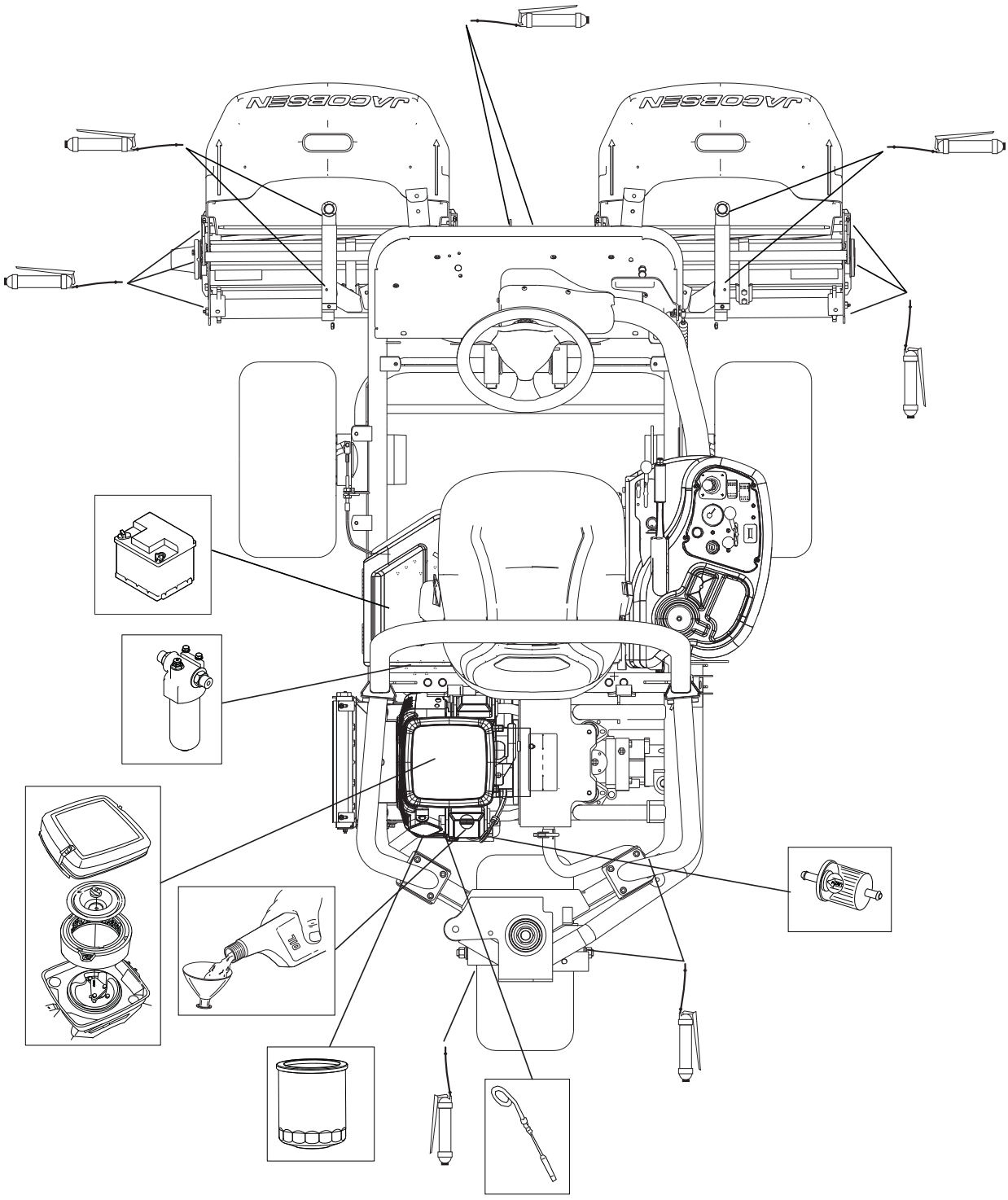


SLOPE CALCULATION CHART

Use Either of these columns but not both		The result of what you are measuring	
Height ‘C’ in inches measured with a 1 yard horizontal edge ‘A’	Height ‘C’ in millimeters measured with a 1 metre horizontal edge ‘A’	Slope Angle ‘D’ measured in Degrees	Slope Angle ‘D’ measured in Grade%
3		4.8	8.3
	100	5.7	10.0
	150	8.5	15.0
6		9.5	16.7
	200	11.3	20.0
7.5		11.8	20.8
	225	12.7	22.5
9	250	14.0	25.0
	275	15.4	27.5
10		15.5	27.8
	300	16.7	30.0
11		17.0	30.6
	325	18.0	32.5
12		18.4	33.3
	350	19.3	35.0
13		19.9	36.1
	375	20.6	37.5
14		21.3	38.9
	400	21.8	40.0
15		22.6	41.7
	425	23.0	42.5
16		24.0	44.4
	475	25.4	47.5
18	500	26.6	50.0
20		29.1	55.6
	600	31.0	60.0
25		34.8	69.4
	800	38.7	80.0
30		39.8	83.3
	900	42.0	90.0
36	1000	45.0	100.0

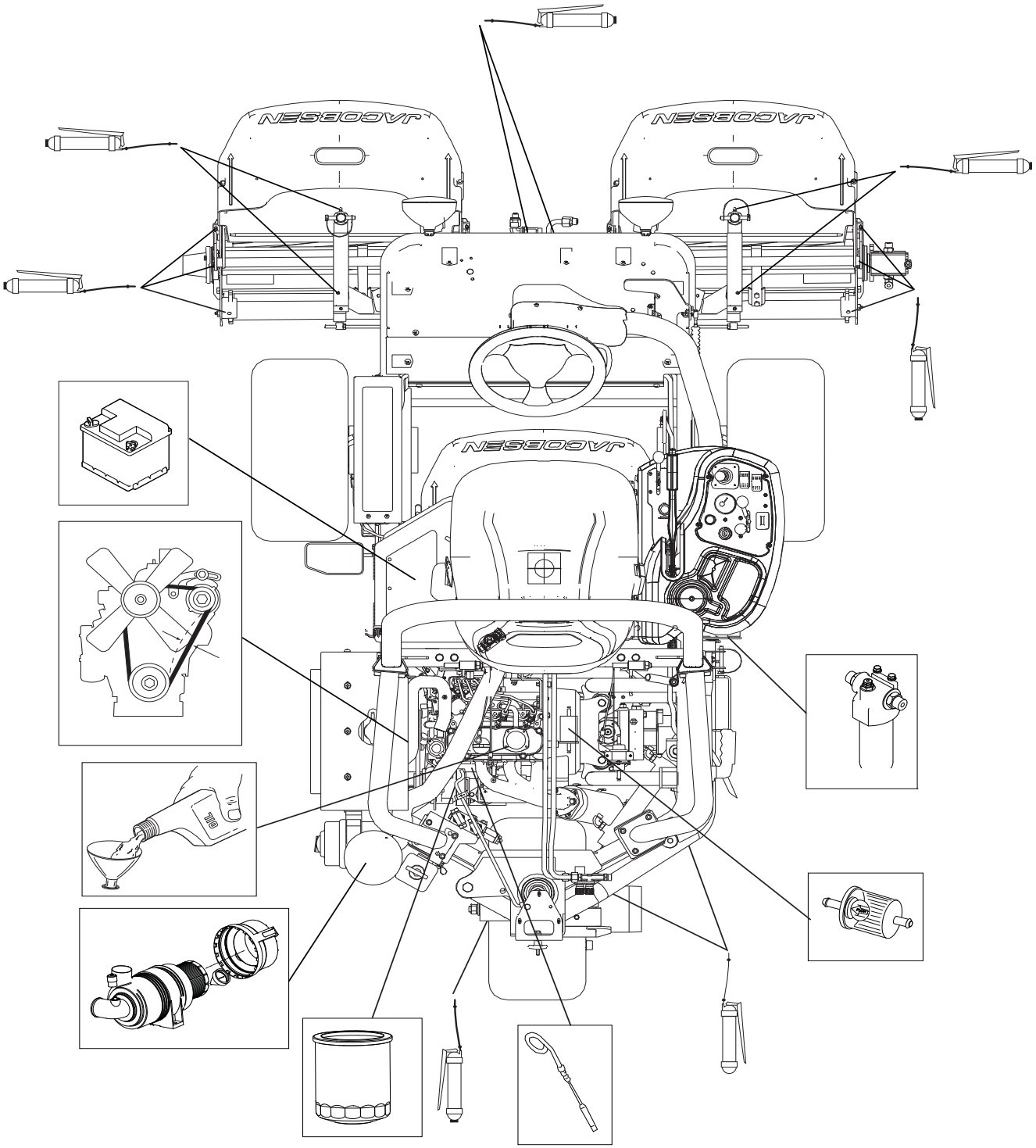
8.1 MAINTENANCE AND LUBRICATION CHART

GASOLINE MAINTENANCE AND LUBRICATION CHART	
Interval	Item
First 5-8 hours	● Change Engine Oil.
Daily 10 hours	● Check Engine Oil Level. ● Check Safety Interlock System. ● Check Hydraulic Fluid Level. ● Check for Hydraulic Leaks. ● Check Tyre Pressure. ● Check Oil Cooler Screen. ● Check Oil Cooler Fins. ● Check Bedknife & reel Blades.
Every 25 hours	● **Check & Clean Air Filter Element*.**
First 50 hours	● **Change Hydraulic Oil Filter.**
Weekly Every 50 hours	● **Change Engine Oil.** ● Check for Loose Components. ● Check Engine Bay For Debris. ● Check Battery Condition.
Every 100 hours	● Change Engine Oil Filter.
Every 200 hours	● Change Inline Fuel Filter.
Every 250 hours	● Check & adjust Engine Valve Clearance ● Change Hydraulic Oil & Filters
End of season Every 1000 hours	● Check Parking Brake Operation. ● Check Brake pads. ● Drain & Clean Fuel Tank
Lubricate all Grease fittings weekly A = Lift Arm Pivot, B =Cutting Unit Pivot, C = Cutting Unit Bearing Housing, D = Steering Ram Ball Joint, (see diagram)	
* Check more often in dirty conditions	
IMPORTANT Refer to Engine Manufacturers Manual for Additional Engine Maintenance Procedures	



FLUID REQUIREMENTS			
		Quantity	Type
A	Engine Oil (with filter)	1.4 litres	SAE30, SAE5W 30, 10W 30
B	Hydraulic Oil (with filter)	22 litres	GreensCare ISO VG 46
D	Fuel	55 litres	Lead Free Minimum 85 Octane

DIESEL MAINTENANCE AND LUBRICATION CHART	
Interval	Item
First 50 hours	● Change Engine Oil & Filter. ● Check Fan Belt Tension. ● Change Hydraulic Oil Filter.
Daily 10 hours	● Check Engine Oil Level. ● Check Safety Interlock System. ● Check Engine Coolant Level ● Check Hydraulic Fluid Level ● Check Tyre Pressure. ● Check Air Filter Tell Tail Indicator*. ● Check for Hydraulic Leaks. ● Check Oil Cooler Screen. ● Check Oil Cooler Fins. ● Check Bedknife & reel Blades.
Weekly Every 50 hours	● Check for Loose Components. ● Check Fan Belt Tension. ● Check Engine Bay For Debris. ● Check Battery Condition.
Every 100 hours	● Change Engine Oil Filter. ● Check Fuel Filter For Water Contamination.
Every 200 hours	● Change Engine Oil. ● Change Inline Fuel Filter.
Every 250 hours	● Change Hydraulic Oil & Filters.
Every 400 hours	● Change Air Filter Element*. ● Change Fuel Filter Element.
End of season Every 1000 hours	● Check Parking Brake Operation. ● Check Brake pads. ● Drain & Clean Fuel Tank ● Drain & Replace Engine Coolant
Lubricate all Grease fittings weekly A = Lift Arm Pivot, B =Cutting Unit Pivot, C = Cutting Unit Bearing Housing, D = Steering Ram Ball Joint, (see diagram)	
* Check more often in dirty conditions	
IMPORTANT Refer to Engine Manufacturers Manual for Additional Engine Maintenance Procedures	



FLUID REQUIREMENTS			
		Quantity	Type
A	Engine Oil (with filter)	3.2 litres	10W 30
B	Hydraulic Oil (with filter)	40 litres	GreensCare ISO VG 46
C	Radiator Coolant	3.8 litres	50% Anti-Freeze
D	Fuel	55 litres	No 2-D (ASTM D975) Diesel

8.2 ENGINE ACCESS

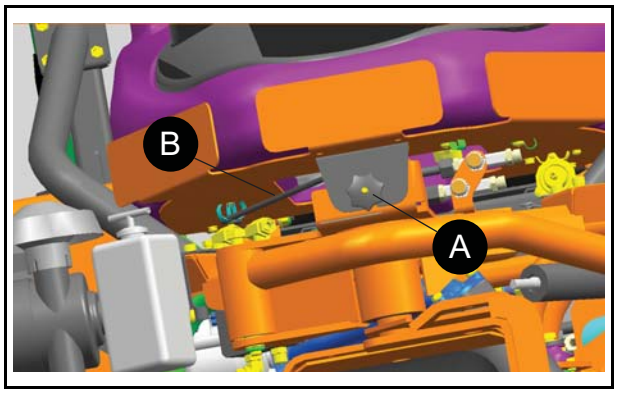
The Fuel & Hydraulic Tanks can be raised for better access to the engine.

a. Tilt the seat forwards.

b. Turn fuel tap OFF (C) (Gasoline machines only)

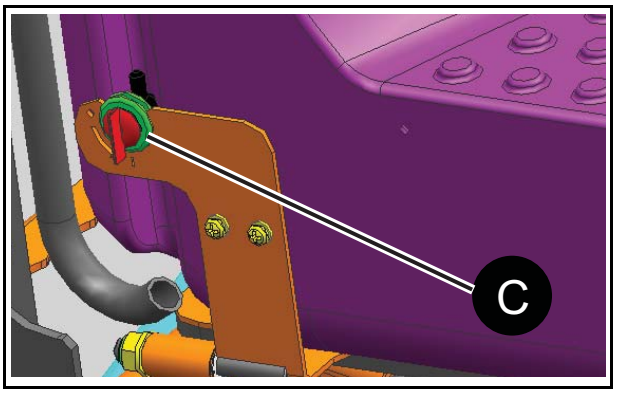
c. Loosen the locking hand wheel (A), under the tank above the rear axle.

d. Raise the tanks.



Lifting The Tank

Support the tanks by pivoting the stay (B) beneath the tank and secure in the hole provided.



⚠ WARNING

DO NOT remove the fuel tank cap while the tank is in the raised position.

⚠ CAUTION

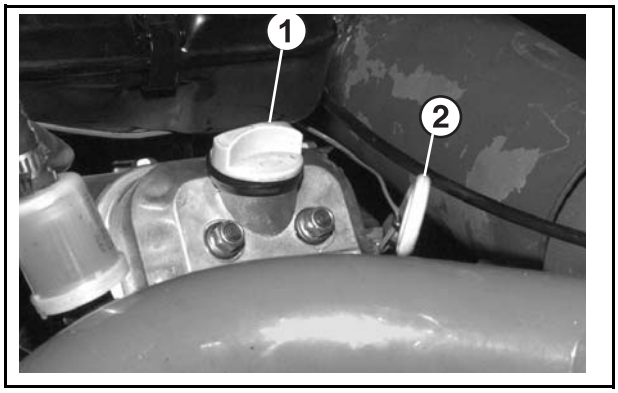
When raising the tanks have a second person available to locate the stay in the hole provided.

8.3 ENGINE OIL LEVEL - GASOLINE

Damage to engines due to improper maintenance or use of incorrect oil quality and/or viscosity is not covered by the engine warranty (refer to the engine operator's manual for crankcase capacity and recommended oil grade and weight).

Unit must be on a level surface to obtain an accurate oil level reading.

The oil level must be kept between the two marks on the dipstick.



NOTE: DO NOT overfill. Engine overheating and damage may result.

8.4 ENGINE OIL CHANGE- GASOLINE

Change engine oil.

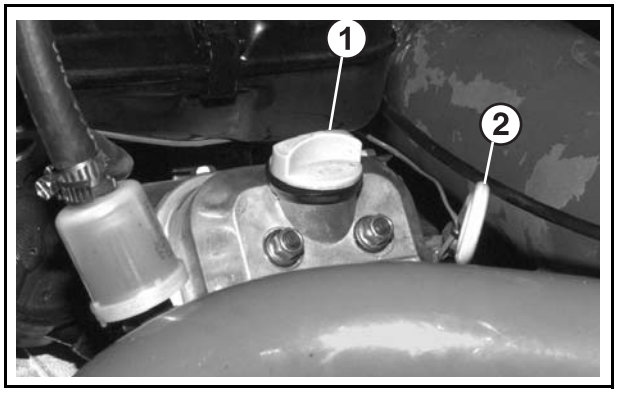
1 After first warming up the engine remove the drain plug and drain all the oil from the crankcase sump.

2 Clean plug and replace.

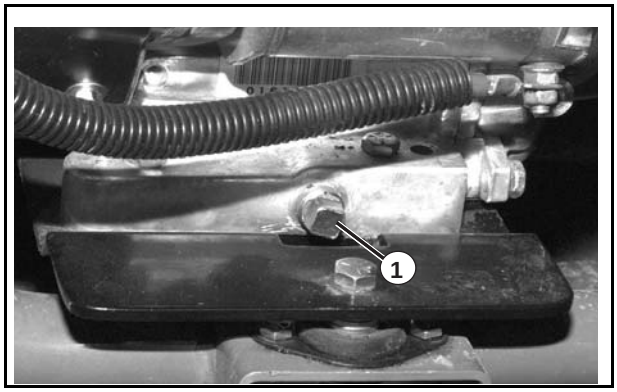
3 Remove the filler cap (1) and refill with fresh oil up to the maximum level on the dipstick (2).
See Specification for oil grade and amount.

4 Replace filler cap securely.

NOTICE: DO NOT overfill. Engine overheating and damage may result.



1. Filler Cap
2. Dipstick



1. Drain Plug

⚠ CAUTION

Contact With Engine Oil Can Damage Your Skin. Use Gloves When Working With Engine Oil. If You Come In Contact With Engine Oil, Wash It Off Immediately.

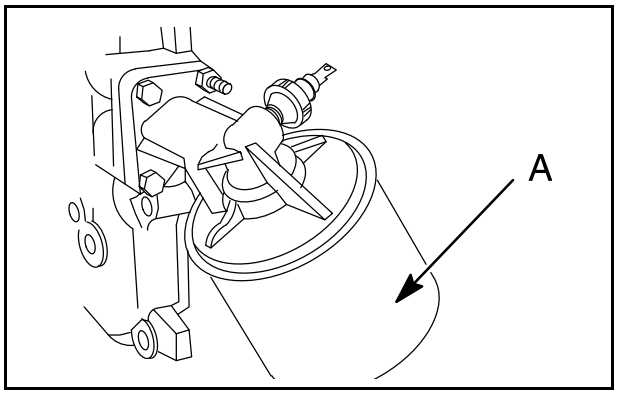
⚠ CAUTION

Dispose Of Used Engine Oil In Accordance With Local Regulations

8.5 ENGINE OIL FILTER- GASOLINE

Change Engine Oil Filter

1. Drain engine oil and remove oil filter.
2. Before installing new filter, lightly oil filter gasket with fresh, clean oil.
3. Screw filter on by hand until gasket contacts filter head. Tighten 1/2 to 3/4 turn more.
4. Add fresh oil. Fill to FULL line on dipstick.
5. Start and run engine at idle and check for leaks.
6. Stop engine, leave for 15 minutes, re-check oil level. Add oil if required.



A. Oil Filter

8.6 AIR FILTER - GASOLINE

NOTICE
DO NOT use bent or dented air cleaner housing.
DO NOT use bent or dented air cleaner elements.

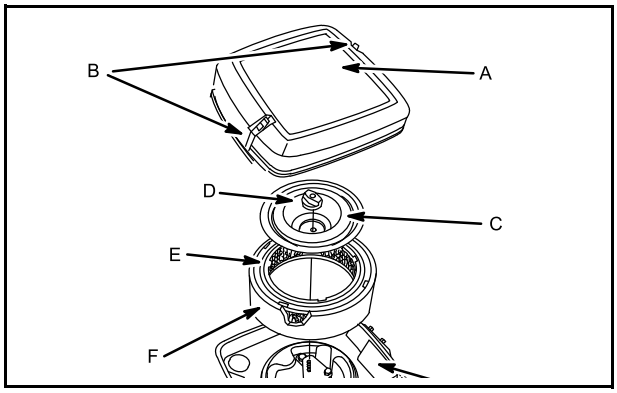
IMPORTANT!
WE RECOMMEND THAT THE FILTER ELEMENT BE REPLACED BEFORE ENGINE PERFORMANCE IS AFFECTED. THIS MAY OCCUR EARLIER IN DUSTY CONDITIONS.

CHECKING THE ELEMENT
To check for damage, pin holes, etc. shine a light source into the end of the element. If light CANNOT be seen through the paper, a new element should be installed. Likewise, if pinholes of bright light appear in the paper, the element should be replaced.

Pre-Cleaner
To clean the pre cleaner, separate it from the cartridge and wash in liquid detergent and water. Squeeze dry in a clean cloth.

Removing / Installing Air Cleaner

1. Unhook clips on both sides of cover and remove cover.
2. Remove knob and plate. Carefully remove air cleaner assembly to prevent debris from entering carburettor.
3. Reassemble clean (or new) pre-cleaner on clean (or new) cartridge.
4. Reinstall air cleaner assembly, plate and knob.
5. Replace cover and reattach clips to body.



A. Cover, B. Clips, C. Plate, D. Knob
E. Cartridge, F. Foam Pre-Cleaner, G. Body

⚠ CAUTION

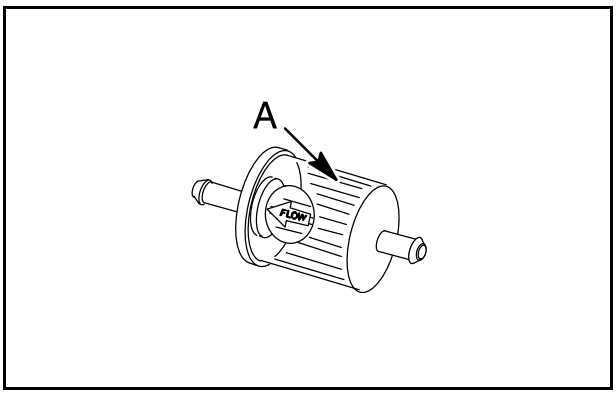
DO NOT use pressurized air or solvents to clean cartridge. Pressurized air can damage cartridge; solvents will dissolve cartridge.

8.7 ENGINE FUEL FILTER - GASOLINE

Replace fuel filter

(a) Release clamp bands either side of in-line filter (A) and remove fuel pipes.

(b) Fit new in-line filter (A) to fuel pipes and replace clamp bands.



A. Fuel filter

8.8 OIL COOLER GASOLINE MACHINE

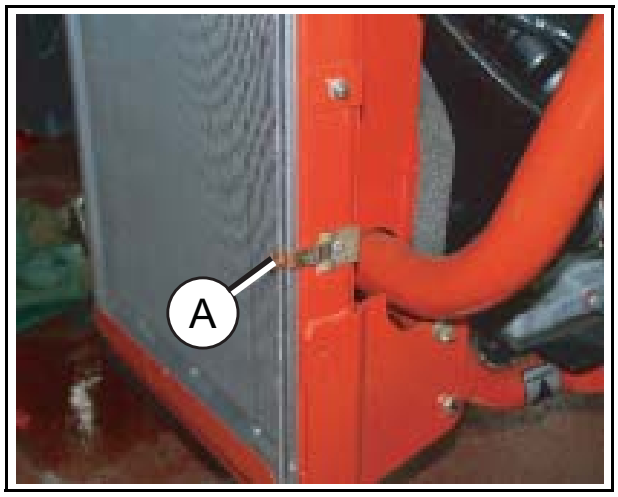
a. Release the catch “A” retaining the oil cooler screen.

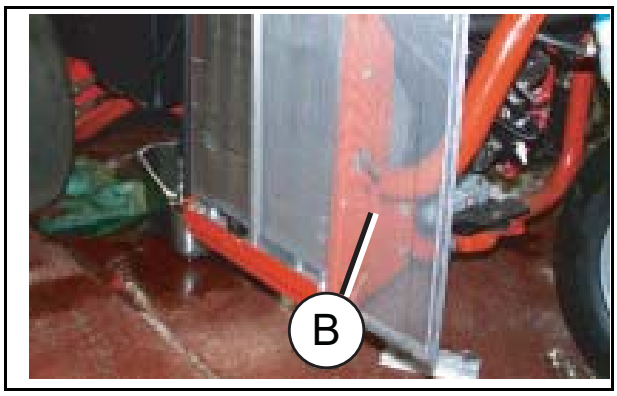
b. Slide the screen “B” towards the rear of the machine and remove.

c. Clean screen and check oil cooler for debris.

d. Replace screen in the runners and slide into position.

e. Secure using latch “A”.



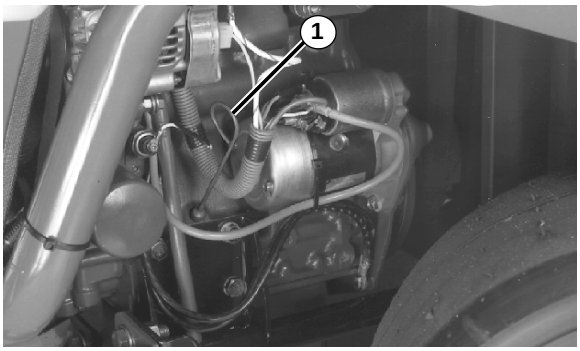


8.9 ENGINE LUBRICATION - DIESEL

Check Engine Oil Level

Check the engine oil level before starting or more than five minutes after stopping the engine.

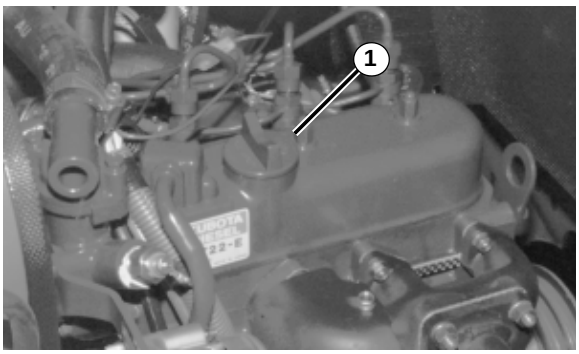
(a) With the machine on level ground, remove the dipstick 1, wipe it clean and replace.
(b) Take the dipstick 1 out again, and check the oil level. It should be between level marks on dipstick.



1. Dipstick

Change Engine Oil.

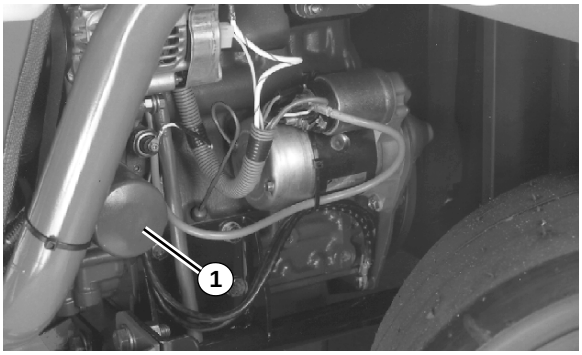
(a) Warm up the engine first and then shut it off. Remove oil drain plug from the bottom of the crankcase and wipe it off.
(b) Drain engine oil in to a suitable container.
(c) Replace the drain plug and fill engine with the correct quantity & grade of oil through the filler (1).



1. Oil Filler Port

Change Engine Oil Filter

(a) Remove single-unit cartridge (1)
(b) Collect engine oil in a suitable container.
(c) Clean area on crankcase.
(d) Apply thin coat of oil to cartridge gasket before installing.
(e) Tighten filter by hand only.
(f) Check for oil leaks around the cartridge gasket after engine is started.



1. Oil Filter

⚠ CAUTION

Contact With Engine Oil Can Damage Your Skin. Use Gloves When Working With Engine Oil. If You Come In Contact With Engine Oil, Wash It Off Immediately.

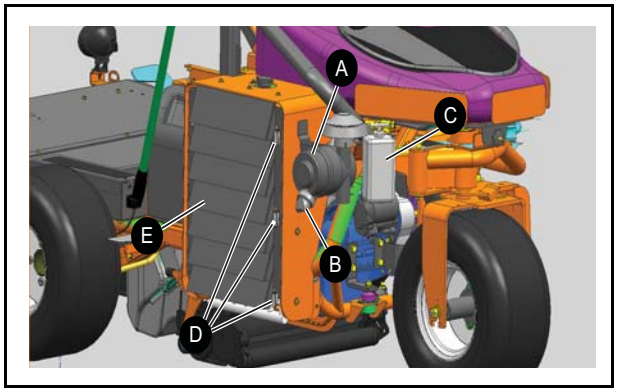
⚠ CAUTION

Dispose Of Used Engine Oil In Accordance With Local Regulations

8.10 AIR FILTER - DIESEL

Clean Air Filter Element

Note: Check the air filter condition indicator situated on the underside of the outlet elbow at regular intervals. If the indicator shows red either clean or replace the air filter element.

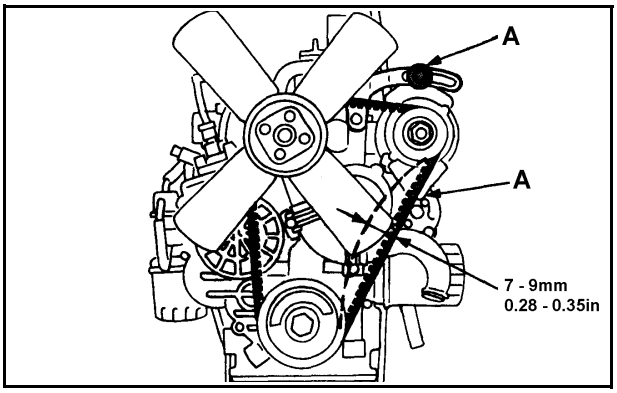


A. Cover, B. Evacuator valve

1. As the element of the air cleaner employed on this engine is a dry type, never apply oil to it.
2. Open the evacuator valve once a week under ordinary conditions-or daily when used in dusty conditions to get rid of large particles of dust and dirt.
3. Avoid touching the element except when cleaning.
4. When dry dust adheres to the element, blow compressed air from the inside turning the element. Pressure of compressed air must be under 7kgf/cm2 (100psi). Wear the appropriate personal protective equipment
5. When carbon or oil adheres to the element, soak the element in detergent for 15 minutes then wash it several times in water, rinse with clean water and dry it naturally. After the element is fully dried, inspect inside of the element with a light and check if it is damaged or not. (referring to the instructions on the label attached to the element.)

8.11 ENGINE: FAN BELT - DIESEL

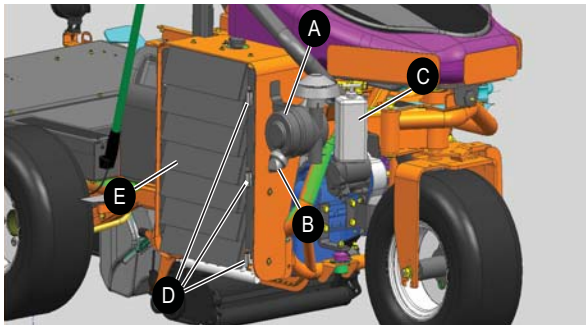
Check & Adjust Fan Belt.
The fan belt is adjusted so that it has sufficient tension to avoid undue stress on alternator bearings but does not slip on the alternator pulley. Use the following procedure to check the belt tension at the mid-point of the belt between crank shaft and alternator pulleys.



1. Loosen alternator bolt (A) and pivot bolt on the underside of the Alternator.
2. Move the alternator to tighten or loosen the belt so that a deflection of 7 to 9 mm is achieved at the mid-span (B) with a load 10Kgf (98N/22lbs) for a new belt, and 8 to 10mm for a used belt.
3. Re-tighten bolts.

8.12 ENGINE COOLANT - DIESEL

Check Engine Coolant Level



(a) The level of coolant in the expansion tank (C) should be between the MAX and MIN level indicators when cold.
(b) If topping up is required, remove the plastic cap and top up using the correct anti-freeze mixture.
(c) Replace the plastic cap when finished.

Changing Coolant

(a) To drain coolant, open cock on engine block and remove hose from radiator.
(b) Close drain cock on engine block and replace hose back on to radiator. Ensure all hose clips are tight.
(c) Refill the cooling system with the correct anti-freeze mixture. Fill system through expansion tank.
(d) The level of coolant in the expansion tank should be between the MAX and MIN level indicators when cold.
(e) Run the engine for approximately 5 minutes or until the thermostat opens.
(f) Check level of coolant in expansion tank and top up if necessary

⚠ CAUTION

Contact With Anti-freeze Can Damage Your Skin. Use Gloves When Working With Anti-freeze. If You Come In Contact With Anti-freeze, Wash It Off Immediately.

⚠ CAUTION

Dispose Of Used Anti-freeze in Accordance With Local Regulations

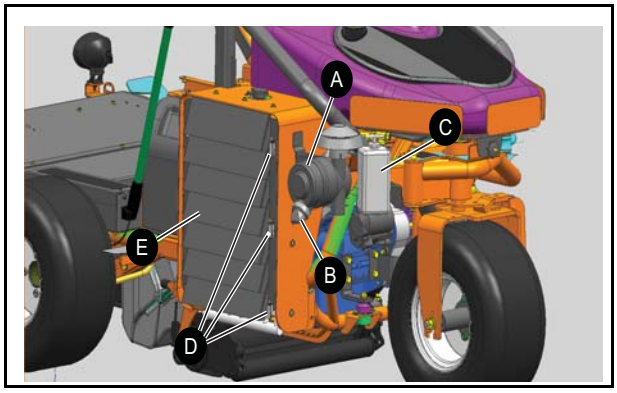
8.13 OIL COOLER AND RADIATOR - DIESEL

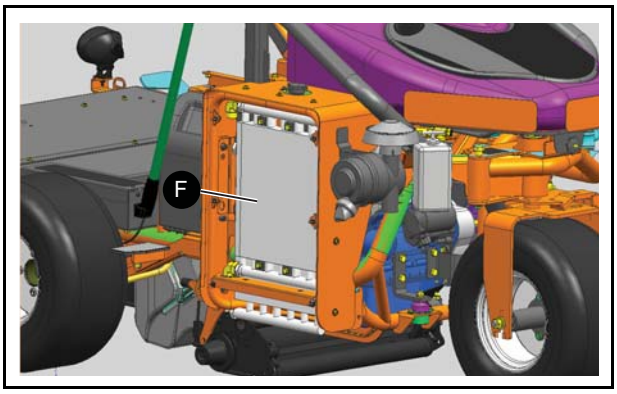
a. Release the 6 Swell latches (D) holding the radiator/ oil cooler Louvers (E) to the cowling.

b. Remove screen and clean.

c. Remove any debris from inside of cowling and around oil cooler and radiator F.

d. Replace screen, secure with swell latches.

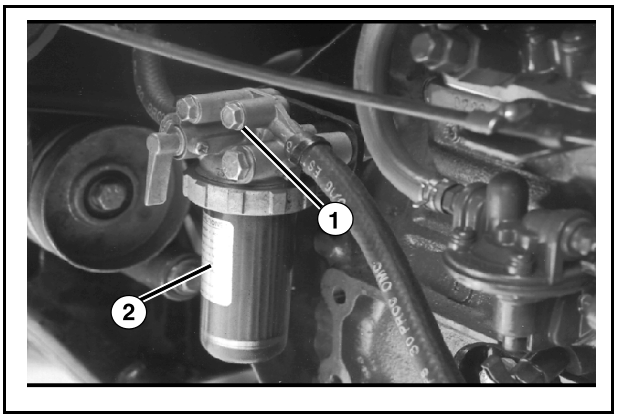




8.14 BLEEDING THE FUEL SYSTEM - DIESEL

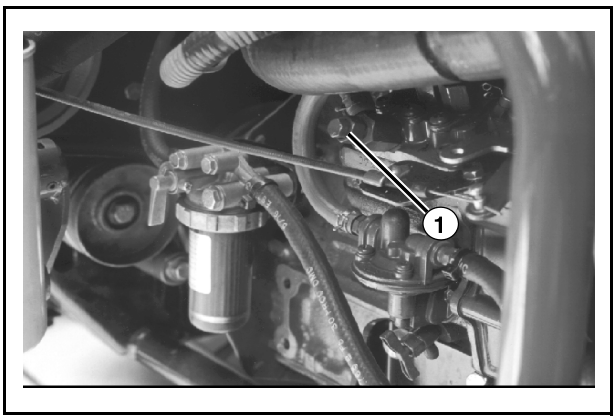
The fuel system must be bled when:

- Starting the engine for the first time.
- The fuel tank becomes completely empty.
- The engine has not been used for an extended period of time.
- The fuel filter and/or fuel lines have been loosened, removed or replaced.



1. Fuel Filter Air Vent
2. Secondary fuel filter

1. Fill the fuel tank.
2. Open the air vent on top of the fuel filter.
3. Turn the ignition switch to START to operate the fuel pump. Allow the pump to run until a steady stream of fuel is coming out of the fuel filter air vent. Stop the pump and close the air vent.
4. Open the air vent on top of the injection pump, open air vent only when engine is NOT running.
5. Turn the ignition switch to START to operate the fuel pump. Allow the pump to run until a steady stream of fuel is coming out of the injection pump air vent. Stop the pump and close the air vent.



1. Injection Pump Air Vent

⚠ CAUTION

Contact With Diesel Fuel Can Damage Your Skin. Use Gloves When Working With Diesel Fuel. If You Come In Contact With Diesel Fuel, Wash It Off Immediately.

⚠ CAUTION

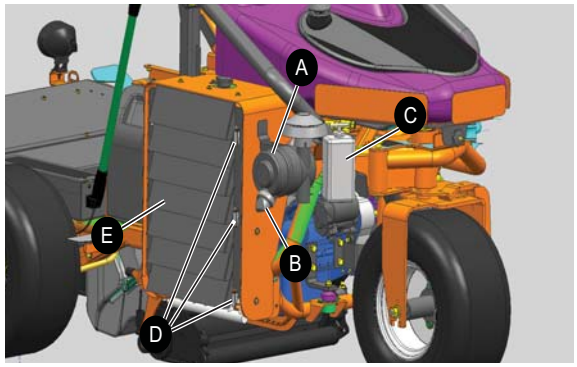
Dispose Of Used Diesel Fuel In Accordance With Local Regulations

8.15 AIR CLEANER - DIESEL

Changing the air filter

NOTE:After 6 cleanings replace the filter element.

(a) Remove end cap of air filter cartridge.
(b) Remove loose dirt from element with compressed air working from the clean to dirty side, using compressed air max 6 bar, with nozzle 5cm from element.
(c) Reinstall filter element (press firmly against rear shoulder)
(d) Replace end cap and fasten with clips

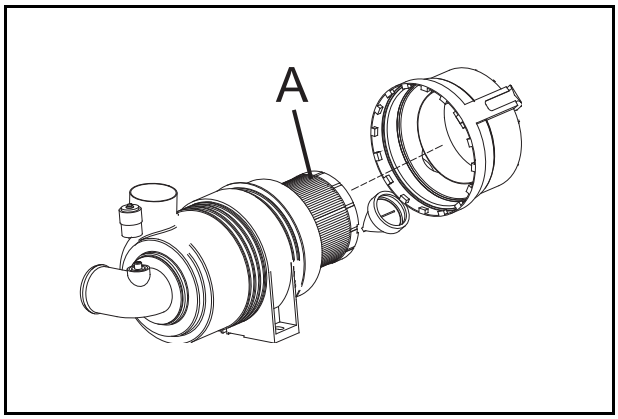


A. Cover, B. Evacuator valve

Change air filter (A) Raise engine cover.

(a) Remove end cap of air filter cartridge.
(b) Remove accumulated dust or dirt.
(c) Remove filter element (A) (pull straight out firmly)
(d) install new filter element (press firmly against rear shoulder)
(e) Replace end cap and fasten with clips

NOTE: Extensive damage to engine can result from an inadequate air supply.



8.16 BATTERY - GAS & DIESEL

(a) Keep fluid levels above battery plates.
(b) Keep battery post corrosion free

⚠ WARNING

Batteries produce explosive gases and contain corrosive acid and supply levels of electrical current high enough to cause burns.

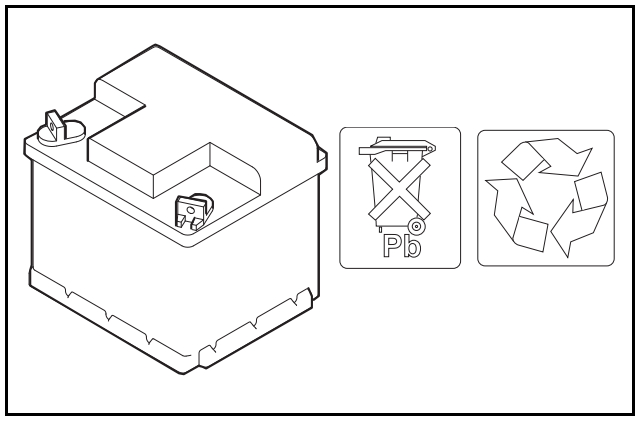
⚠ CAUTION

Dispose Of Used Batteries In Accordance With Local Regulations

⚠ WARNING

Battery posts, terminals and related accessories contain lead and lead compounds.

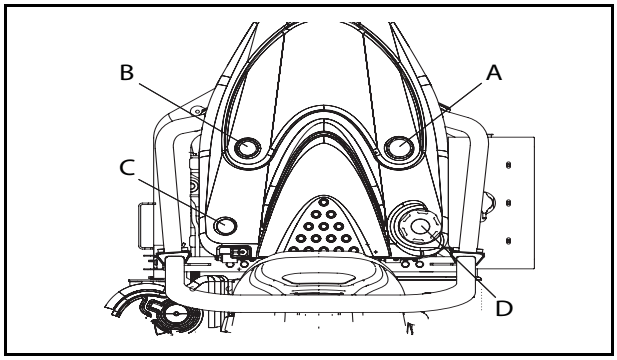
WASH HANDS AFTER HANDLING



⚠ WARNING

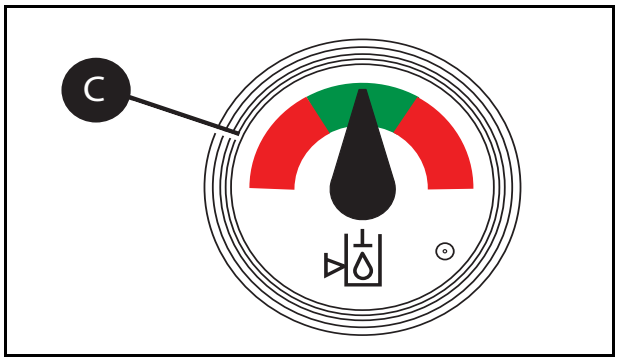
Wear eye protection when servicing battery.

8.17 HYDRAULIC SYSTEM - GAS & DIESEL



Check Hydraulic Oil Level

Check hydraulic oil level using sight gauge (C).

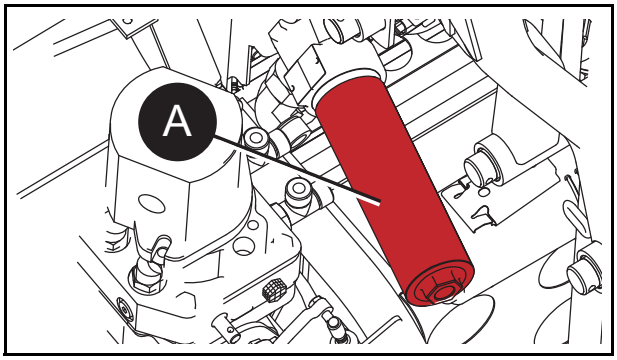


Change Hydraulic Oil

(a) Clean around hose in bottom of Hydraulic tank and remove.
(b) Allow tank to drain into a suitable container and replace hose.
(c) Refill tank with the correct quantity and grade of Hydraulic Oil through the filler cap. (D).

IMPORTANT-Whenever the closed loop transmission circuit has been broken into, it is essential that the circuit is flushed prior to use. Absolute cleanliness must be observed when filling the hydraulic tank. Oil must be filtered through a 25 micron filter before entering the hydraulic tank.

Change Hydraulic Oil Filter



(a) Wipe filter canister (A) and housing to remove any dirt present.
(b) Place a suitable drip tray under the filter.
(c) Unscrew filter and dispose of safely.
(d) Replace with new filter canister (A).
(e) Coat the top outside lip of the filter canister with a thin film of oil, fill filter with clean hydraulic fluid and refit the filter canister.
(f) Filter should be replaced before refilling hydraulic tank.

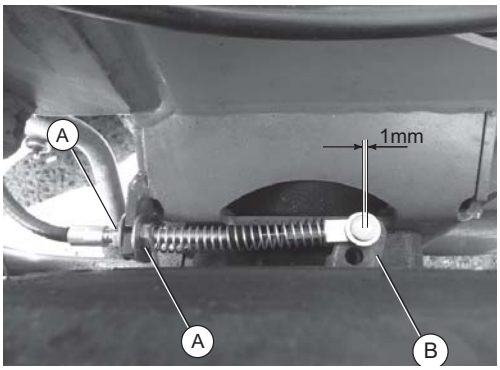
⚠ CAUTION

Contact With Hydraulic Oil Can Damage Your Skin. Use Gloves When Working With Hydraulic Oil. If You Come In Contact With Hydraulic Oil, Wash It Off Immediately.

⚠ CAUTION

Dispose Of Used Hydraulic Oil In Accordance With Local Regulations

8.18 HANDBRAKE - GAS & DIESEL



Place the front axle on axle stands and remove the front wheels. Inspect the discs and pads for wear and replace if necessary. Remove all debris from around the brake assembly and ensure the calliper is free to float.

To Adjust

a. Release locknut's A.

b. Adjust cable until 1mm of movement is obtained at caliper lever B when the hand brake is NOT applied.

c. Adjust both brake calipers equally.

d. Tighten nuts A.

e. Check hand brake operation. The hand brake lever should raise between eight and eleven clicks on the ratchet with a force of 33kgf

8.19 TYRES - GAS & DIESEL

Keep tires properly inflated to prolong tire life. Check inflation pressure while the tires are cool. ""Use an accurate, low pressure tyre gauge.

Keep tires inflated to the air pressure specified

⚠ CAUTION

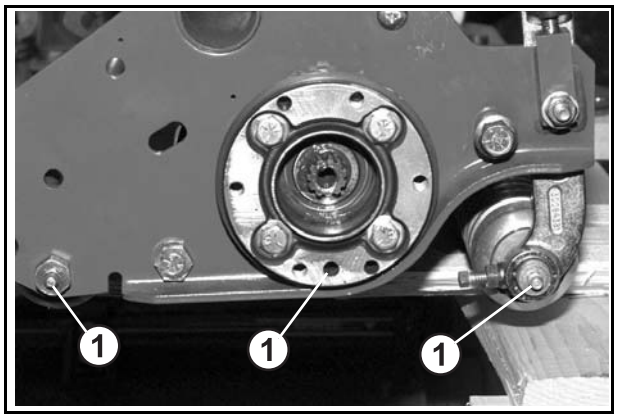
Caution must be used when inflating a low pressure tyre to the recommended pressure. Check pressure with a low pressure tyre gauge before connecting an air hose to a partly inflated tyre.

Due to the low air volume requirements of a small tyre, over inflation may be reached in a matter of a few seconds, which could cause the tyre to explode.

8.20 MACHINE MAINTENANCE GENERAL - GAS & DIESEL

Other Regular Service.

- Verify proper operation of safety interlock switches (Seat switch, etc.)
- Ensure nuts and bolts remain tight.
- visually inspect for hydraulic leaks.
- Keep engine bay clear of debris.
- Keep tyre pressure at correct level. See section 4
- Follow the engine manufacturer's maintenance recommendations.
- If a label becomes worn or removed, see the LABELS section of this manual or the tractor Parts Manual for replacement information.



NOTE: When washing machine with pressure spray washers or steam cleaners, avoid washing bearing areas because cleaning solutions might penetrate bearing seals and cause premature bearing failure.

CAUTION

Stop Engine & Remove the Starter Key Before Pressure Washing

Storage

- Store petrol or diesel fuel in an approved container in a cool dry place.
- Keep the machine and fuel containers in a locked storage place to prevent tampering and to keep children from playing with them.
- Do not store fuel or petrol/diesel fuel powered equipment in any closed area where heating appliances, pilot lights or any sort of open flame is present.
- Before storing, allow the engine to cool, and drain fuel completely from fuel tanks and containers.
- When the vehicle is not being used for an extended period, the tyre pressures must be increased. Inflate to the maximum rating on the tyre wall to make sure that flat spots do not occur. Decreased the tyre pressure before the vehicle is put into operation.
- Maximum safety and best mowing results can only be expected if the mower is maintained and operated properly.

8.21 LUBRICATION OF CUTTING UNIT

CLEANING

The cutting heads should be washed after use each days and dried as well as possible to prevent rust. All cutting surfaces (reel and bedknife) should be given a light coating of oil or other anti-rust compound.

LUBRICATION

The lubrication fittings at each end of both the front and rear rollers, as well as the reel bearings at each end should be lubricated periodically (approximately once each week). Use only enough lubricant to keep the bearings from drying out. Too much lubricant may drop from mower onto turf, causing damage to the grass.

NOTES

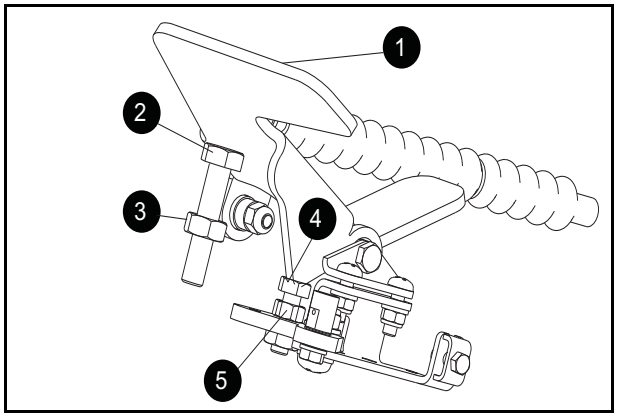
9.1 TRACTION CONTROL PEDAL

ADJUSTING MOW SPEED

To determine mow speed, run a time check on how fast the unit travels in a distance of 50’ (15.24 M). Prepare a level surface with enough room to start and end beyond the 50’ marks.

Place a stake in the ground where you want to begin timing the unit. Measure and place another stake at a distance of 50’ (15.24 M). Lower the cutting heads and press the direction pedal forward so the unit is traveling at full throttle (the cutting heads should be in the neutral position when timing the unit).

Begin timing the unit when the centre of the front tire aligns with the first stake. Stop timing when the centre of the front tire aligns with the stake placed at 50’ (15.24 M). Estimated time for 3.8 mph (6.1 Km/hr) will be approximately 8.8 to 9.2 seconds. If there is a significant difference in the times listed above, you can adjust the mow speed as follows.



1. Direction/Speed Pedal
2. Transport Stop
3. Locknuts
4. Mow Stop
5. Locknuts

To Adjust Transport Speed Stop.

a. Loosen locknuts (3).
b. Adjust bolt (2).
c. Tighten locknuts (3).

To Adjust Mow Speed Stop.

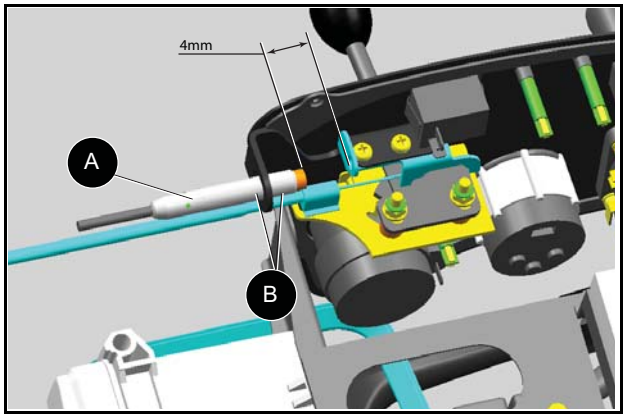
a. Loosen locknuts (5).
b. Adjust screw (4).
c. Tighten locknuts (5).

9.2 ADJUSTING SPEED CONTROL SWITCH

The speed control sensor is positioned under the control panel. The mechanism is activated when the speed control lever is cycled from the transport and mow positions.

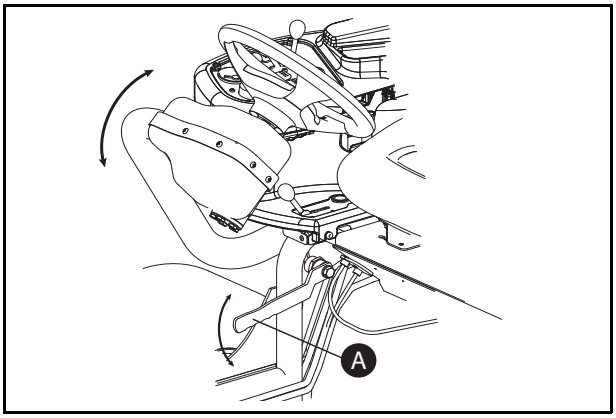
To set the sensor (A), position the control lever in the “mow” position, loosen nuts (B), and adjust sensor until a gap of 4mm is achieved. Tighten nuts. Cycle control lever to the “transport” position, to ensure bolt head is clear of switch.

To ensure correct set-up, the cylinders MUST only rotate when the switch is activated. i.e the Mow position.



9.3 STEERING ARM ADJUSTMENT

Support the control arm to avoid a sudden drop while adjusting its height. Loosen the Locking Lever (A) to allow the steering wheel and control arm to be adjusted up or down. Tighten the locking lever when steering wheel is at the desired position.



⚠ WARNING

DO NOT attempt to adjust the control arm position while the machine is moving. The operator may loose control, causing possible injury to themselves or bystanders.

9.4 REAR SWING OUT ARM

NOTE:The rear swing out arm is to allow you easy access to the rear cutting head. The cutting heads must be in the raised position. DO NOT swing the arm out with the cutting heads in the lowered position.

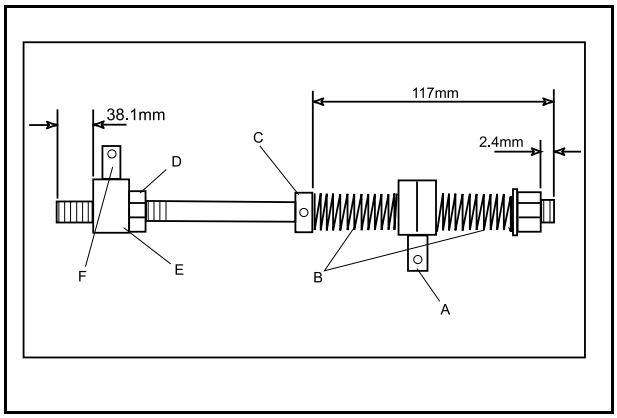
1. The grass catcher MUST BE removed before you swing the arm out.
2. Release the latch (1).
3. Pull the handle (2) and swing the rear arm and cutting head out.
4. After you are properly seated in the operator's seat, restart the unit and lower the cutting heads.
5. Shut off the unit and remove the rear cutting head for service.
6. After you have completed your servicing, secure the cutting head to the rear arm.
7. After you are properly seated in the operator's seat, restart the unit and raise the cutting heads.
8. Shut off the unit and swing the rear arm back under the unit and secure the arm with the draw latch.
9. Install the grass catcher.

⚠ WARNING

To avoid the possibility of serious injury, ALWAYS be properly seated in the operator's seat while the engine is running.

NEVER attempt to drive the machine while the rear arm is not secured by the draw latch. Driving the machine with the rear arm out, will result in damage to the machine and/or cause serious injury or death of the operator and/or bystanders.

9.5 LEVELLING LINKAGE FOR THE FRONT CUTTING HEADS



NOTICE

- The dimensions in the figure are factory preset and the levelling linkage should not need adjusting. After some time the linkage may require some adjusting. If it is required, only make adjustments on the adjusting connector (E).

1. With the unit on a level surface (recommend concrete surface), place cardboard underneath all three of the cutting heads.

2. An additional person is needed to stand 3 meters in front of the unit to check on how level the front heads are when lowering. Lower the cutting heads and ensure the entire width of the front heads are parallel with the level surface as the heads touch the cardboard.

3. If they do not touch evenly, make an adjustment using the adjusting connector. Repeat procedure as needed until the two front heads touch evenly on the level surface.

⚠ WARNING

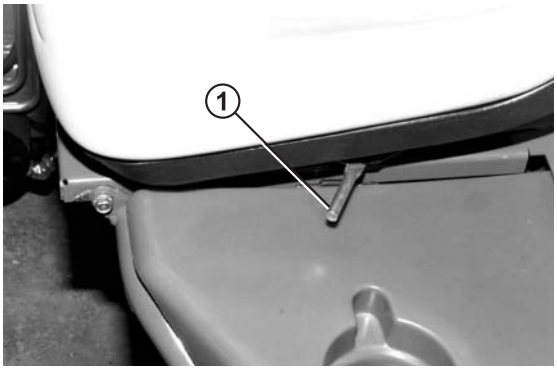
This procedure must be performed as specified and only by properly trained service personnel.

During this entire procedure the reel enable switch must be in the off position. Turning on the reel enable switch will result in damage to the unit and/or serious personal injury or death to you the operator or bystanders

9.6 SEAT ADJUSTMENT

Milsco XB200

Pull out on the adjustment lever located under the left side of the seat. Slide the seat to the desired position and release the lever.



Grammer MSG 65

Safety

Driver's seats that have been adjusted incorrectly have a smaller moving area. In order to prevent any personal injury, the seat must be adjusted for the driver's weight

To prevent injury, no objects should be placed within the moving area of the driver's seat.

To eliminate any risk of accident, the settings must be checked to ensure they are correctly engaged before the vehicle is driven.

Adjustments must not be made While driving.

Only touch the handle for setting the fore/aft adjustment at the indented grip provided for that purpose (do not put your whole hand around it). Risk of crushing.

After removal of the backrest upholstery, the backrest frame must be supported, for example held in place, before the backrest adjuster is operated. If you fail to do so, there is a danger that the backrest frame may jerk forward and cause injury.

Any changes to the series standard of the seat (for example fitting parts which are not original Grammer AG parts) may impair the safety standard to which it has been tested. Functions may be impaired, threatening your safety. For this reason, any changes in design of the seat must be approved by Grammer AG.

Do not hold onto the covers for lifting the driver's seats. If you do so anyway, there is an increased risk injury due to loosening or breaking covers.

Before you remove the driver’s seat, disconnect all plug-in connections between the seat and the vehicle supply network. When you replace the plug-in connectors, make sure they are tight (dust, water)

Seatbelts are fitted or can be retrofitted to the driver’s seat. Seatbelts may only be fitted on approval of the vehicle manufacture, as they increase the load in the seat mounting area. Seatbelts must be fitted in accordance with specific national regulations and guidelines, and must be approved by Grammer AG.

Seatbelts must be fastened before driving.
The seatbelts must be replaced after an accident.
Where seatbelts are fitted to the driver's seat, the seat and seatbelt mounting must be checked additionally by specialist personnel after an accident has occurred.
Fasteners must be checked regularly for tight seat. If the seat wobbles, there may be loose bolts or other faults.

If you notice that the seat does not function correctly (for example a defective suspension of the driver's seat; improper curvature of the lumbar support or damaged bellows), contact a specialist workshop immediately to arrange for repairs to be carried out. If you fail to do so, your health may be affected and the risk of an accident increased.

Before the vehicle is used, switches that might be in the seat (for shutting down mechanical equipment when the driver leaves his/her seat) must be checked for proper function. If malfunctions are detected, the vehicle must not be driven.

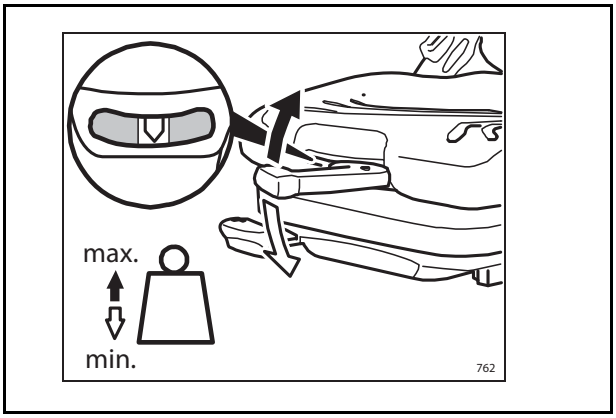
Loads must not be placed on seats with a built in switch, except for the driver’s weight during normal use, as the vehicle may otherwise start to move by itself. If you take off the weight from the seat while driving, this will cause the vehicle to stop.

Do not indent the bellows while there is load on the driver’s seat.

Make sure that the interior of the drivers seat remains free of foreign objects or liquids.

Seat functions and operation

Weight adjustment

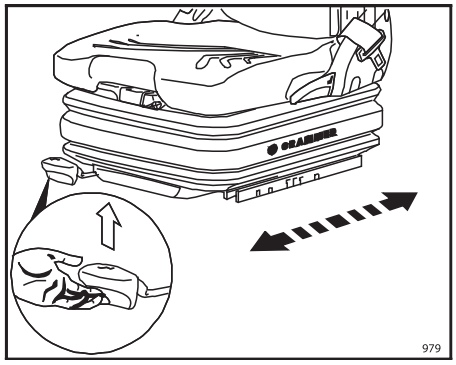


The seat is adjusted for the driver’s weight with the driver sitting on the seat. Fold out the weight adjustment lever completely, hold it at the front and move it upwards or downwards (10 movements from minimum to maximum). Before every new movement, bring the lever back to the starting position (audible locking sound). The driver’s weight has been set correctly, when the arrow is in the middle of the viewing window.

- To prevent damage to the health and material, the setting for the driver’s weight must be checked and adjusted as necessary before the vehicle is driven.
- When the minimum/maximum has been reached, you can notice an empty movement in the handle.
- When you have set the weight, fold the lever completely into the locking.

Fore/aft adjustment

The fore/aft adjustment is released by lifting the locking lever.



⚠ WARNING

Risk of accident.
Do not operate the locking lever while driving.

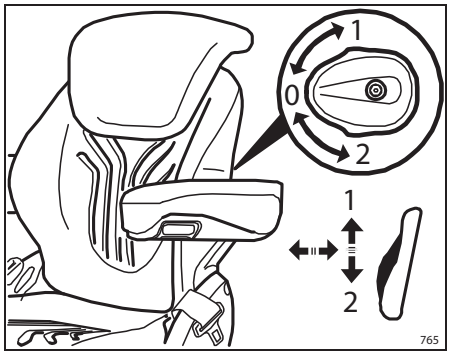
⚠ WARNING

Risk of crushing.
only touch the lever at the indented grip, do not reach back under the lever.

- After the adjustment, the locking lever must latch into the desired position with an audible click. It should not be possible to move the driver's seat into another position when it is locked.
- Do not lift the locking lever with your leg or calf.

Lumbar support

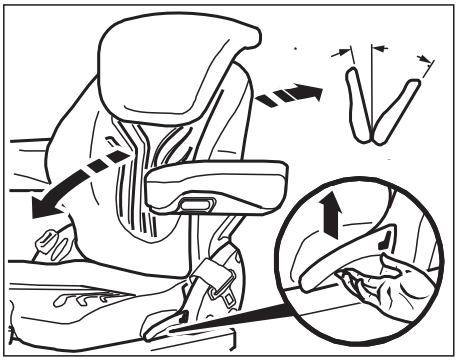
The lumbar support increases both the seating comfort and the performance of the driver. By turning the adjustment knob upwards, the curvature in the upper part of the backrest cushion can be adjusted. By turning the knob downwards, the curvature in the lower part of the backrest cushion can be adjusted.
0 = No curvature
1 = Max. curvature at the top
2 = Max. curvature at the bottom.



Backrest adjustment

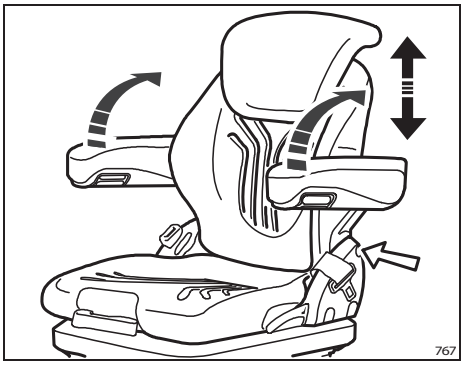
Pull up the locking lever to release the backrest catch. When releasing the backrest catch, do not apply load to the backrest by pressing against it. By exerting pressure on or off the front or rear part of the seat pan it can be moved to the desired position. Release the locking lever to lock the backrest.

- It should not be possible to move the backrest into another position after it has been locked.



Armrests

The armrests can be folded back if required and the height individually adjusted. To adjust the armrests for height, separate the round cap (see arrow) from the cover, loosen the hexagon nut (size 13 mm) behind it and adjust the armrests to the desired position (5-steps) and tighten the nut again (25Nm). Replace the cap onto the nut.

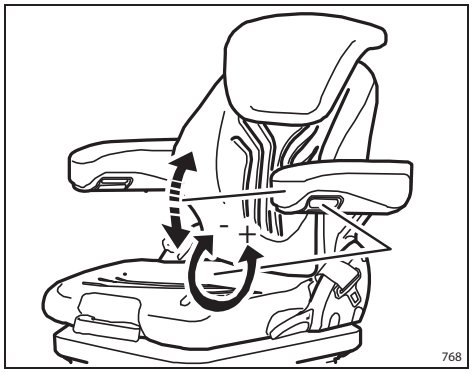


⚠ WARNING

If the belt roller is fitted, do not install the armrest in the lowest position as otherwise the belt roller might not function correctly. Carry out a functional test of the belt roller.

Armrest adjustment

The inclination of the armrests can be modified by turning the adjustment knob. When turning the knob to the outside (+) the front part of the armrest will be lifted, when turning the knob to inside (-) it will be lowered.

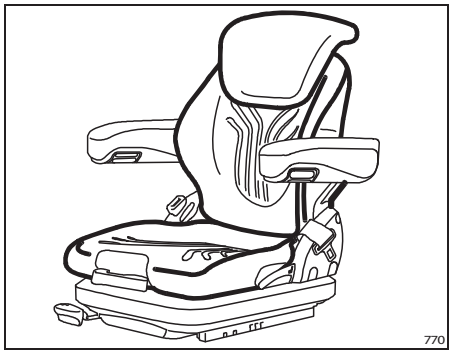


Maintenance

Dirt can impair the function of the seat, So make sure you keep your seat clean. Upholstery does not need to be removed from the seat frame for cleaning.

⚠ CAUTION

take care with the backrest - it may jerk forward and cause injury.
When cleaning the backrest cushion, the backrest must be held in place when operating the backrest lever.



ATTENTION: Do not cleanthe seat with a pressure washer.

When claening the upholstry, make sure the upholstery is not soaked.

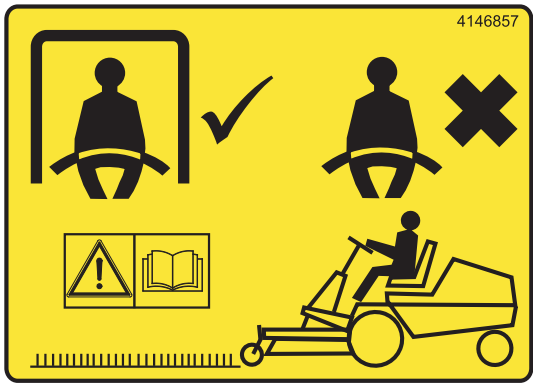
Use standard commercially available upholstery or plastics cleaning agent. Test first for compatibility on a small, concealed area.

⚠ DANGER

When The Machine Is Being Used Off Road, Whether Cutting Grass Or Not, The Seat Belt Should Only Be Worn When A Rops Frame Is In Place And Deployed.

This Rationale Is Based On The Fact That A Seat Belt Must Be Worn With A ROPS To Comply With The Machinery Directive 98/37/EC Sections 3.2.2, Seating & 3.4.3, Rollover.

Ransomes Jacobsen Limited Recommends That A Local Risk Assessment Is Completed By The Owner/ User Of The Machine To Determine Any Exceptions To This Seat Belt Wearing Rule. e.g. Use Of The Machine Next To Water Or On The Highway.



9.7 BEDKNIFE-TO-REEL TRUESET™ REEL
(Pre-adjustment Check)

1. Check the reel bearings for end play or radial play. There should be no end play or radial play. See Section 4.9.

⚠ CAUTION

To prevent personal injury and damage to the cutting edges, wear gloves and handle the reel and bedknife with extreme care.

2. Inspect the reel blades and bedknife to insure good sharp edges without bends or nicks.
   a. The leading edge of the reel blades must be sharp, free of burrs and show no signs of rounding off.
   b. The bedknife and bedknife backing must be securely tightened. The bedknife must be straight and sharp.
   c. A flat surface of at least 1/32 in. (0.8 mm) minimum must be maintained on the front face of the bedknife. Use a standard flat file to dress the bedknife.
3. If wear or damage is beyond the point where the reel or bedknife can be corrected by the lapping process, they must be reground.
4. Proper reel-to-bedknife adjustment is critical. A gap of 0.001 to 0.003” (0.025 to 0.076 mm) must be maintained across the entire length of the reel and bedknife.
5. The reel must be parallel to the bedknife. An improperly adjusted reel will lose its sharp edges prematurely and may result in serious damage to the reel and bedknife.
6. Grass conditions will also affect the adjustment.
   a. Dry, sparse conditions will require a wider gap to prevent heat buildup and damage to the reel and bedknife.
   b. High quality grass with a good moisture content requires a closer gap (near zero).

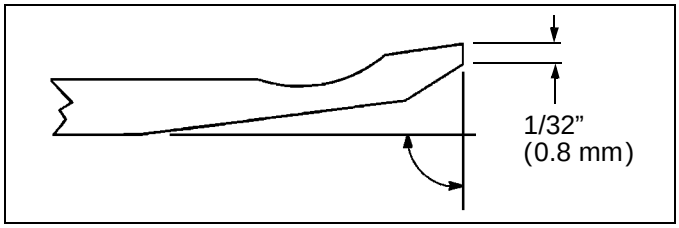


Figure 9A

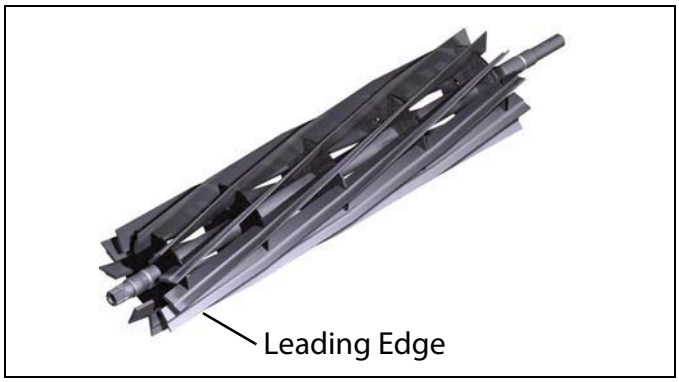


Figure 9B

9.8 BEDKNIFE ADJUSTMENT TRUESET™ REEL

1. Read Section 9.7 before making the adjustment.
2. Start adjustment at the leading end of the reel, followed by the trailing end. *The leading end of the reel blades is that end which passes over the bedknife first during normal reel rotation.*
3. Use adjusters **(B** and **C)**, to adjust gap. Rotate adjusters (Clockwise) to close gap. Each click of the adjuster moves the bedknife 0.001” (0.025 mm) closer to the reel.
   a. Slide a feeler gauge or shim stock 0.001” - 0.003” (0.025 - 0.075 mm) between the reel blade and the bedknife. Do not turn the reel.
   b. Adjust the trailing end of the reel to the same gap in a similar manner then recheck the adjustment at the leading end.
   c. When the reel is properly adjusted to the bedknife, the reel will spin freely and you should be able to cut a piece of newspaper, along the full length of the reel, when the paper is held at 90° to the bedknife.

NOTICE

Avoid excessive tightening or serious damage may result to bedknife and reel blades. Reels must turn freely.

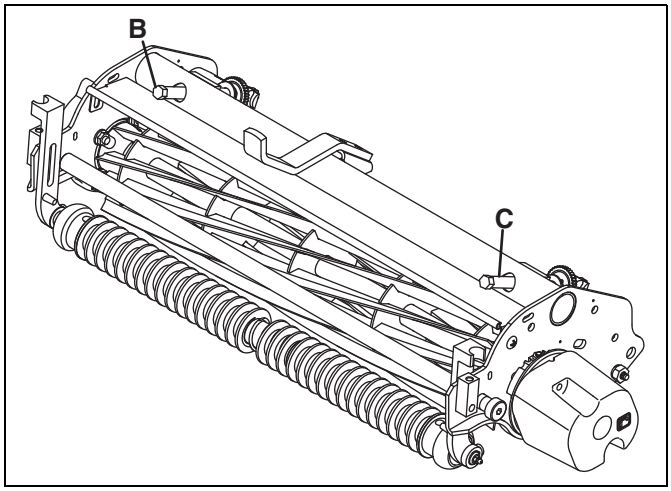


Figure 9C

9.9 CUTTING HEIGHT TRUESET™ REEL

Note: *Always make the reel to bedknife adjustment before adjusting height of cut. (Sections 9.7 and 9.8)*.

1. Set desired cutting height on the gauge **(E)**.
   a. Measure distance between the underside of screw head and gauge block surface **(F)**.
   b. Adjust screw **(H)** to obtain desired height then tighten the wing nut.
2. Loosen the nuts on the front roller brackets **(G)** just enough to allow the adjuster knob **(K)** to raise or lower the front roller.
3. Place gauge **(E)** across bottom of front and rear rollers near one end of roller.
4. Slide the head of gauge screw **(H)** over the bedknife **(L)** and adjust the knob **(K)** to close the gap between the screw head and bedknife. Then tighten locknut **(G)**.
5. Repeat Steps 4 and 5 on opposite end. Complete adjustment to one end before adjusting opposite end.
6. Tighten nuts **(G)** and recheck each end.

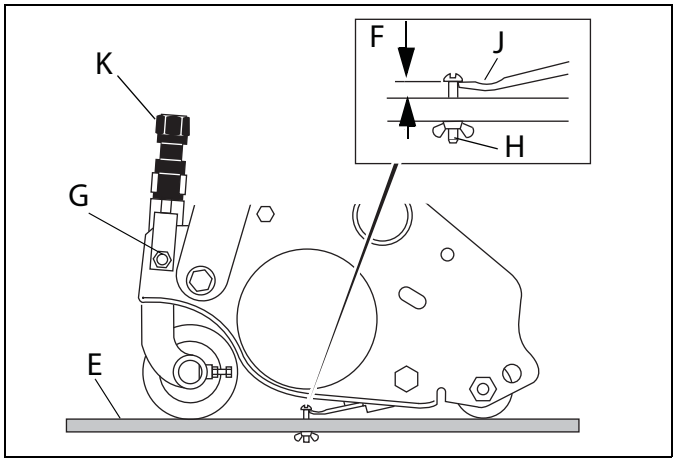


Figure 9D

9.10 REEL BEARING TRUESET™ REEL

Any radial play or excessive end play indicates bad bearings, a weak tension spring or a backed off nut.

1. Check bearing housing mounting hardware. Tighten or replace components as required. Carefully clean threads with degreaser.
2. Apply a medium strength grade of Loctite to nut **(P)**, then thread nut onto the reel shaft until the nut is 1-27/32" (46 mm) from the end of the reel shaft.
3. Fill reel bearing housings with NLGI - Grade O grease after adjusting spring.

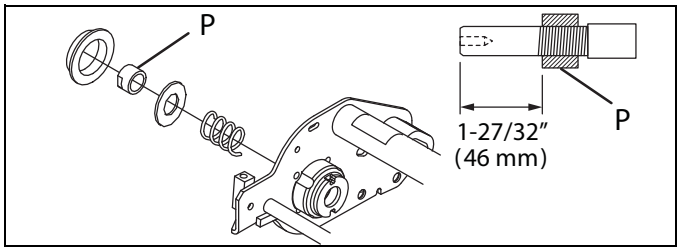


Figure 9E

9.11 BEDKNIFE ADJUSTER SPRING TRUESET™ REEL

For proper operation, bedknife adjuster spring should be compressed to a dimension of 1-7/16 - 1-1/2 in. (36.5-38 mm).

To adjust spring compression, loosen or tighten nut **(R)** to obtain a distance of 1-7/16 - 1-1/2 in. (36.5-38 mm).

After adjusting spring, check reel to bedknife adjustment.

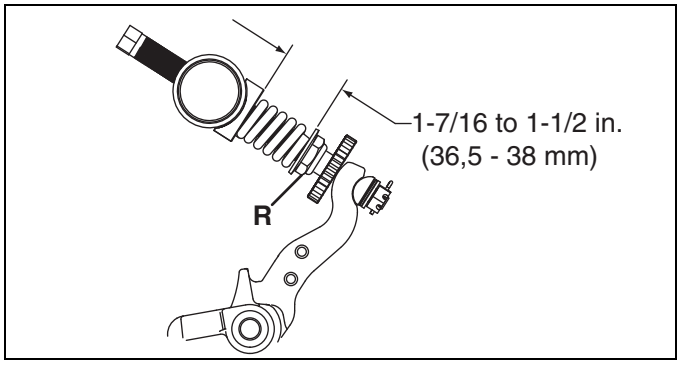


Figure 9F

9.12 BEDKNIFE ADJUSTER TENSION TRUESET™ REEL

NOTICE

Over tightening slotted nut **(S)** will make bedknife adjuster rod **(T)** difficult to adjust.

Remove cotter pin **(U)** and fully loosen, then tighten slotted nut **(S)** to remove clearance (no end play) between components. Continue to tighten nut until next slot in nut aligns with hole in bedknife adjuster rod **(T)**. Install new cotter pin.

Check torque required to rotate adjuster rod **(T)**. Maximum torque should be 24 in. lb. (2 ft. lb.) (2.7 Nm).

After adjusting nut, check reel to bedknife adjustment.

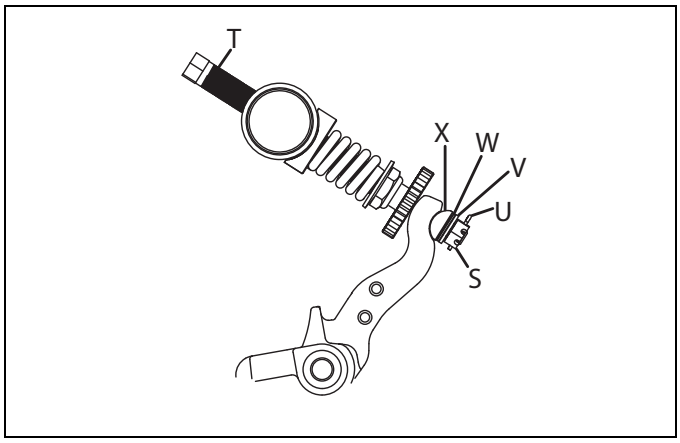


Figure 9G

9.13 GRINDING BEDKNIFE TRUESET™ REEL

Bedknife can be lowered out of the reel for grinding without completly removing the bedknife assembly.

1. Remove cotter pin **(U)**, slotted nut **(S)**, bellville washer **(V)**, shim washer **(W-If required)**, and half trunnion **(X)**. **See Figure 9G**

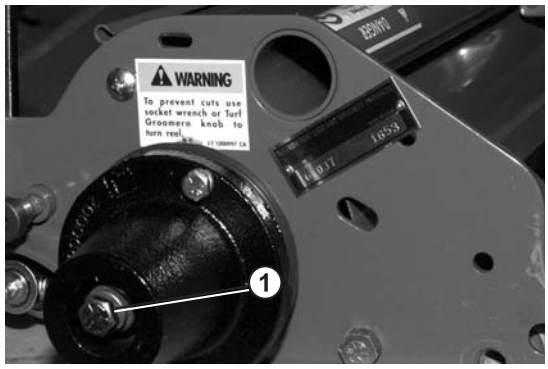
4. Press down on adjuster end of rod **(T)** to rotate other end of the adjuster out of the bedknife finger.
5. Rotate bedknife backing to access the reel and bedknife for grinding.
6. After grinding, assemble bedknife using reverse order of removal. Check adjustment of bedknife adjuster tension **(Section 9.12)**, and reel to bedknife adjustment **(Section 9.8)**.

9.14 BEDKNIFE ADJUSTMENT CLASSIC XP™ REELS

Any adjustment to the clearance between the reel blades and the bedknife should be done at the leading end of the reel first (the end at which each individual blade first crosses the bedknife). Then at the opposite end of the reel.

1. Loosen the lower adjustment screws at each end by turning them approximately 1/4 turn counterclockwise.

2. While rotating the reel backwards, turn the upper adjustment screws (leading end first) until there is approximately .001, (.025mm) clearance. After adjusting both ends, recheck the leading end.



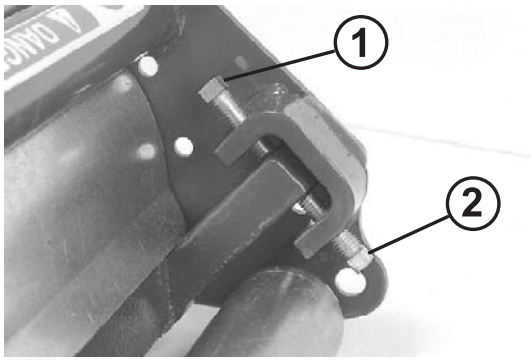
1. Rotate Cutting Reel with this Screw Head

NOTE:Too much clearance between the bedknife and the blades will result in poor cutting quality. Too little clearance will cause excessive wear to the cutting edges and may cause damage to the bedknife, reel blades or other components.

3. Using a wrench rotate the reel forward. The reel must turn freely and you should just be able to hear the reel blades making slight contact with the bedknife.

4. After the bedknife is properly adjusted, tighten the lower adjustment screw at each end.

5. Test the cutting head by holding two strips of newsprint perpendicular to the bedknife. Rotate the reel with a wrench. The reel must turn freely and each blade on the reel should cut one of the two strips of paper.



1. Upper Adjustment Screw
2. Lower Adjustment Screw

⚠ WARNING

To avoid the possibility of serious injury, NEVER attempt any cutting head adjustments while the engine is running.

⚠ WARNING

NEVER rotate the cutting reel by pushing it with your hands or fingers. Fingers can become caught between the reel and the frame resulting in serious injury. Use a ratchet with a 9/16" socket on the end of the reel shaft to rotate it during adjustments and testing.

9.15 HEIGHT OF CUT CLASSIC XP™ REELS

Work Bench Setting

NOTE: All three cutting heads MUST be accurately set at the same height of cut to insure an even cut.

Bedknife adjustment must be made before setting the height of cut.

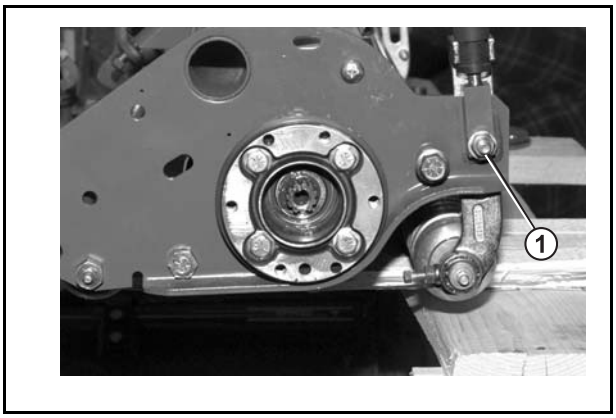
1. Set the height of cut on the gauge block (Part No. 892010) by turning the wingnut until the distance between the bottom of the screw head and the top of the gauge block equals the desired height of cut.

2. Loosen the locking nut on one of the front roller adjusting brackets just enough to allow adjustment.

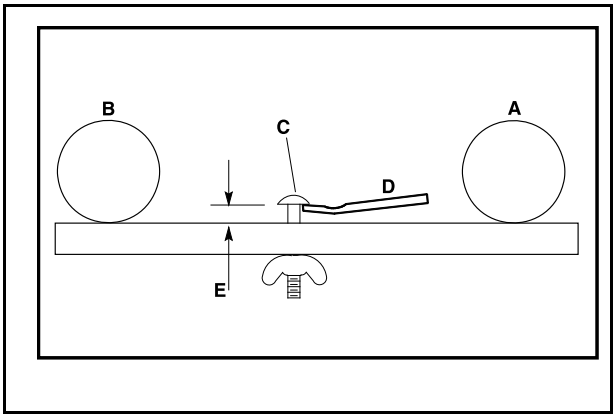
3. Hold the gauge block (Part No. 892010) across the bottom of both the front and rear rollers near the roller adjustment bracket and adjust the front roller until the cutting edge of the bedknife comes up to touch the bottom of the gauge screw head.

4. Tighten the locking nut and repeat the procedure at the other end. After adjustment has been made at both ends, go back and recheck both ends.

5. Make sure all three cutting heads are set without changing the height of the gauge screw.



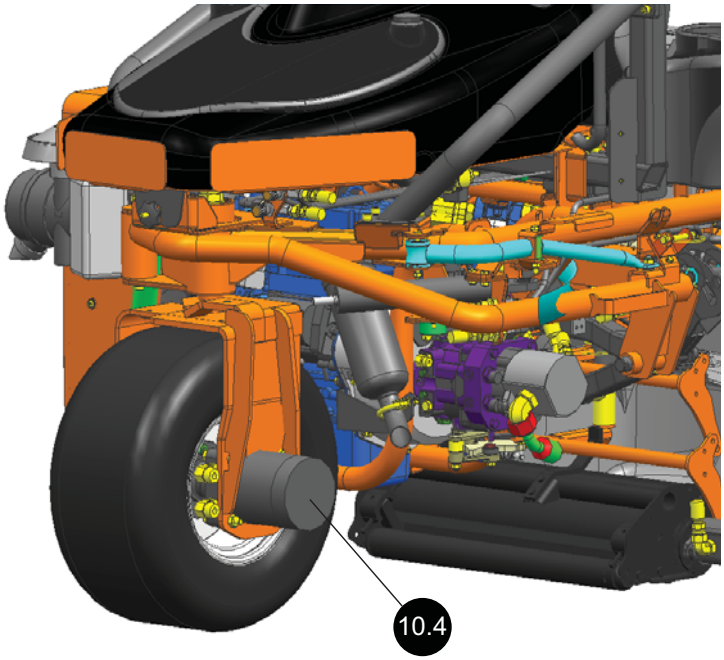
1. Loosen Locking Nut



Height of Cut Adjustment
A = Rear Roll
B = Front Roll
C = Gauge Screw Head
D = Bedknife
E = Height of Cut

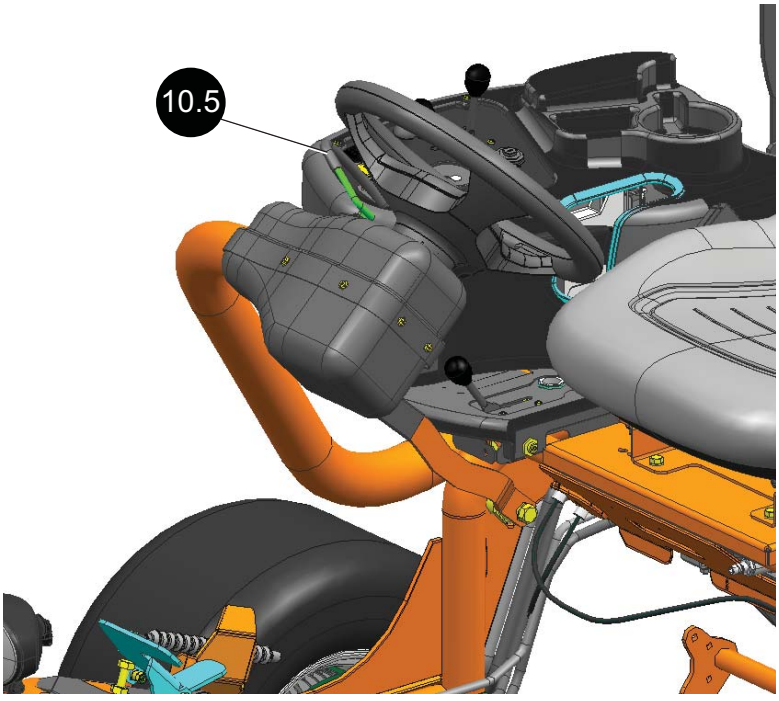
10.1 THREE WHEEL DRIVE KIT

Kit number LMAC418



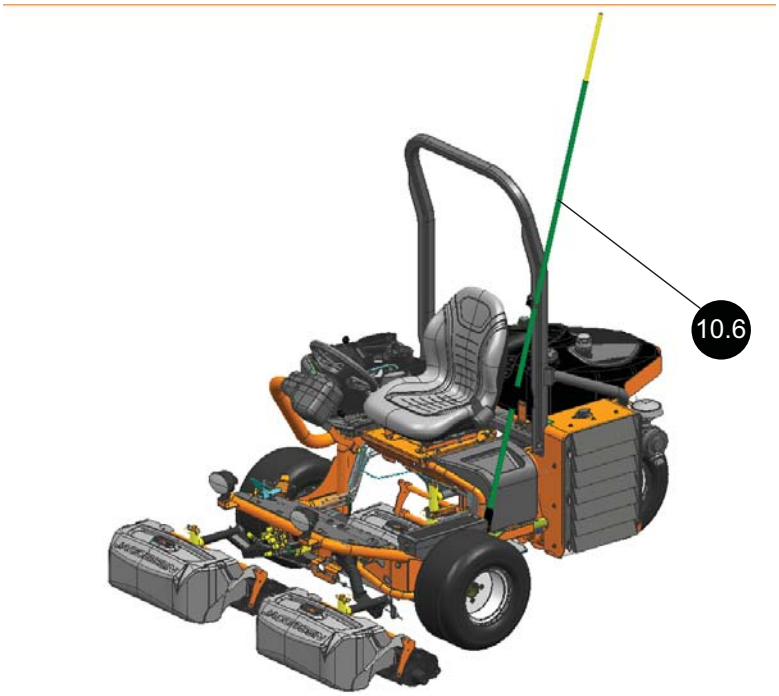
10.2 PADDLE KIT

kit Number LMAC412



10.3 DEW WHIP KIT

Kit number LMAC415



10.4 GROOMER KIT

Kit number 6.3mm spacing: 067912
Kit number 12.7mm spacing: 067914

NOTES

11.1 PROBLEM SOLVING GENERAL

Problems	Possible Causes	Action
Engine will not start	The glow plug has not timed out	Reset the ignition switch and allow the glow plug to time out before cranking engine.
	Battery low on charge or defective.	Inspect the condition of battery and battery connections.
	Fuel tank empty or fuel contaminated.	Fill the tank with clean fuel. Change filter, Bleed air from lines.
	Blown fuse.	Replace the Fuse.
	Defective starter relay.	Test and replace the relay if necessary.
	Mow switch set to cut.	Set mow switch the OFF position.
	Transport pedal not in neutral.	Remove the foot from pedal, check pedal returns to the Neutral position.
Engine hard to start or runs poorly.	Fuel tank empty or fuel contaminated.	Fill the tank with clean fuel. Change filter, Bleed air from lines.
	Air Cleaner blocked or dirty.	Check the air cleaner, replace as necessary.
	Injectors, fuel pump.	Refer to the engine manual.
	Other Engine Problem.	Refer to the engine guide for problems.
Engine Stops	Fuel tank empty.	Fill with clean fuel and bleed the lines.
	Interlocks not set before leaving operators seat.	Make sure the Parking Brake is on and the Mow switch is in the OFF position.
Engine Overheating	Coolant level low.	Inspect and add 50/50antifreeze solution if needed
	Radiator air intake restricted.	Clean the wire mesh guard at radiator.
	Waterpump/alternator belt or fan belt loose or broken.	Inspect the Waterpump/alternator belt and fan belt. Tighten if necessary.
The battery not holding charge. Battery light on	Loose or corroded battery terminals.	Inspect the terminals, clean and tighten as required.
	Low electrolyte level in battery.	Refill the battery with distilled water.
	Alternator belt loose or broken.	Inspect the Waterpump/alternator belt. Tighten if necessary.
	Alternator has defects.	See the engine manual.
Decks cut unevenly Poor quality of cut.	Cutting blades are worn.	Replace the blades.
	Engine speed too low.	Check engine speed, run the engine at full throttle.
	Cutter motors worn.	Check case drain leakage and flow check cutting circuit.
	Ground speed to high.	Set work speed stop.

12.1 QUALITY OF CUT TROUBLESHOOTING

It is recommended that a “test cut” be performed to evaluate the mower’s performance before beginning repairs.

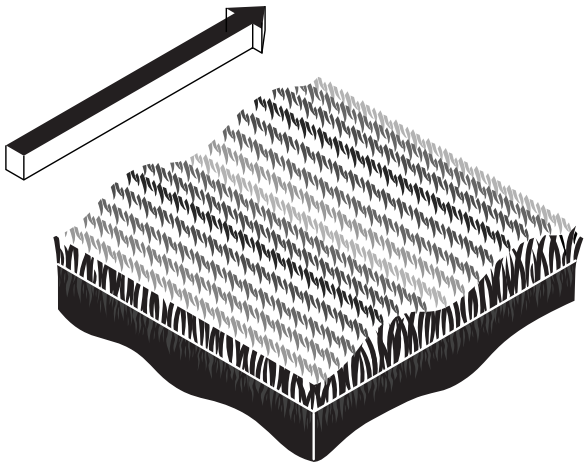
An area should be available where “test cuts” can be made. This area should provide known and consistent turf conditions to allow accurate evaluation of the mower’s performance.

Another “test cut” should be performed after the completion of the repairs and/or adjustments to verify the mower’s performance.

Before performing a “test cut” to diagnose cut appearance and mower performance, the following items should be verified to ensure an accurate “test cut.”

1. Mowing (Ground) Speed.
2. Reel Bearing Condition and Pre-Load (End Play) Adjustment.
3. Reel and Bedknife Sharpness.
4. Bedknife Alignment to Reel.
5. Reel-to-Bedknife Contact.
6. Height-of-Cut (HOC).
7. Roller and Roller Bearing Condition.

12.2 WASHBOARDING



TN0159

NOTE: *Arrow indicates direction of travel.*

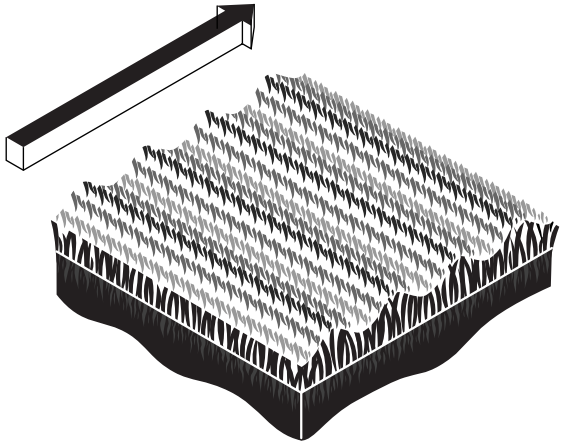
Washboarding is a cyclical pattern of varying cutting heights, resulting in a wave-like cut appearance. In most cases, the wave tip-to-tip distance is approximately
6—8 in. (15—20 cm). Colour variation (light-to-dark) may also be noticed.

This condition is usually caused by a rocking motion in the cutting unit(s). This condition is found mostly on mowers with multiple (suspended) cutting units, but other causes can produce the same result.

Washboarding may also be caused by variations in the turf.

Probable Cause	Remedy
Mowing (ground) speed is too fast.	Reduce mowing (ground) speed.
Grass build-up on roller.	Clean the roller and use scrapers or brushes.
Roller is out of round.	Replace roller.
Mowing in the same direction.	Change mowing direction regularly.
Use of a groomer on cleanup pass.	Groomers should be used only in a straight line.

12.3 MARCELLING



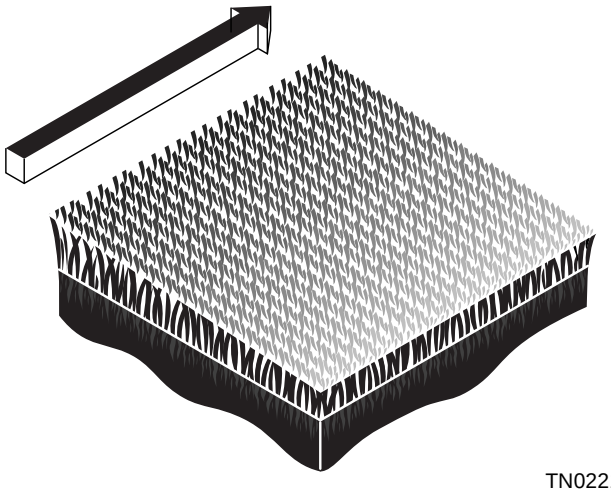
TN0220

Marcelling, like washboarding, is a cyclical pattern of varying cutting heights, resulting in a wave-like cut appearance. In most cases, the wave tip-to-tip distance is 2 in. (5 cm) or less.

NOTE: *Arrow indicates direction of travel.*

Probable Cause	Remedy
Mowing (ground) speed is too fast.	Reduce mowing (ground) speed.
HOC (height-of-cut) setting is too low for turf conditions.	Check/adjust HOC to turf conditions.
Cutting reel diameter is worn.	Check cutting reel diameter and replace if worn.

12.4 STEP CUTTING



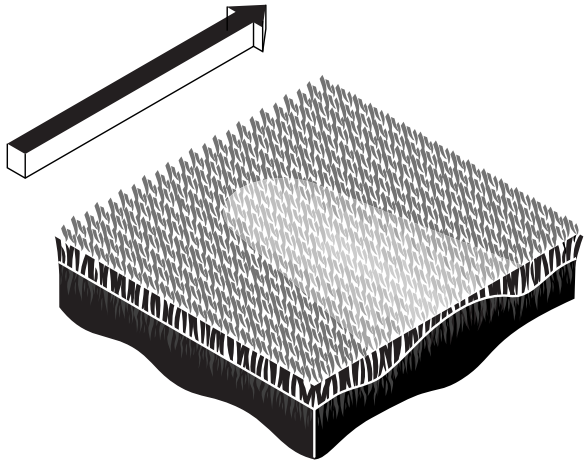
TN0221

Step cutting occurs when grass is cut taller on one side of a reel than the other or one cutting unit to another. This is usually caused by mechanical wear or an incorrect roller or HOC (height-of-cut) adjustment.

NOTE: *Arrow indicates direction of travel.*

Probable Cause	Remedy
HOC (height-of-cut) settings are different from one side of a reel to the other or from one cutting unit to another.	Check HOC adjustment of cutting units.
Worn front roller bearings.	Check/replace front roller bearings.
Reel-to-bedknife contact is different from one side of the cutting unit to the other or from one cutting unit to another.	Check reel-to-bedknife contact.
Cutting reel movement is restricted.	Check/remove cutting reel movement obstruction.
Variations in turf density.	Change mowing direction.
Machine weight distribution is uneven.	Check/adjust tire inflation pressure.

12.5 SCALPING



TN0222

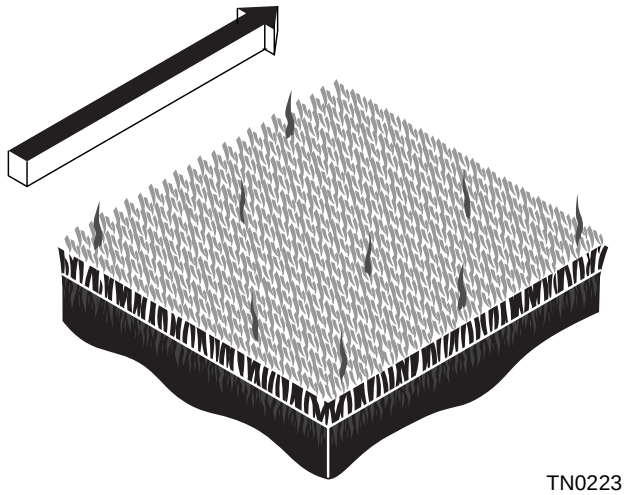
Scalping is a condition in which areas of grass are cut noticeably shorter than the surrounding areas, resulting in a light green or even brown patch. This is usually caused by an excessively low height-of-cut (HOC) setting and/or uneven turf.

NOTE: *Arrow indicates direction of travel.*

Probable Cause	Remedy
HOC (height-of-cut) settings are lower than normal.	Check/adjust the HOC settings.
Improper reel-to-bedknife adjustment.	Adjust reel-to-bedknife setting for desired HOC.
Turf too uneven for the mower to follow.	Change mowing direction.
Cutting too much grass at one time.	Mow more often.
Mowing (ground) speed is too fast.	Reduce mowing (ground) speed.

12.6 STRAGGLERS

Stragglers are scattered blades of uncut or poorly cut grass.



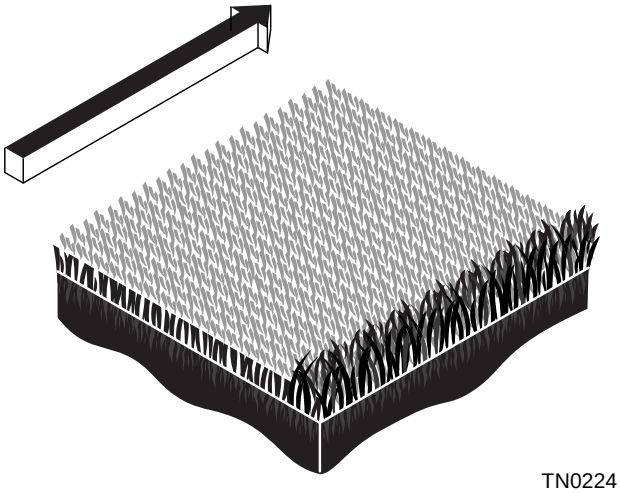
TN0223

NOTE: *Arrow indicates direction of travel.*

Probable Cause	Remedy
Bedknife improperly adjusted.	Adjust reel-to-bedknife setting.
Dull reel or bedknife cutting edges.	Sharpen or replace reel blade and bedknife as necessary.
Mowing (ground) speed is too fast.	Reduce mowing (ground) speed.
Grass is too tall.	Mow more often.
Mowing in the same direction.	Change mowing direction regularly.
Nicks in reel or bedknife.	Grind, sharpen or replace reel blades and bedknife as necessary.

12.7 STREAKS

A streak is a line of uncut grass. This is usually caused by a nicked or bent bedknife.

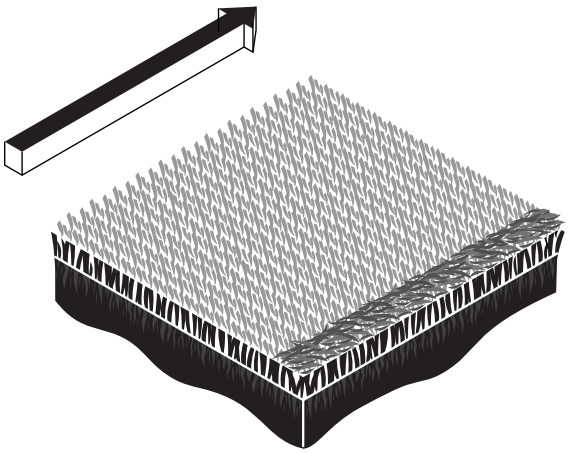


TN0224

NOTE: *Arrow indicates direction of travel.*

Probable Cause	Remedy
Damaged bedknife.	Replace bedknife.
Damaged or unevenly worn reel.	Inspect reel. Replace as needed.
Loose or missing bedknife fasteners.	Check bedknife screws. Tighten loose screws; replace missing screws.
Turning too aggressively. Cutting units don't overlap around turns or on side hills.	Turn less aggressively to allow cutting units to overlap. Change mowing direction or pattern on side hills.
Tire mats down grass before it is cut.	Check/adjust tire inflation pressure.
Wet grass is matted down before it is cut.	Mow when grass is dry.

12.8 WINDROWING



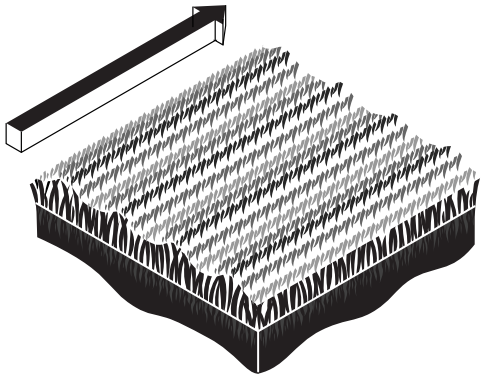
TN0225

Windrowing is the deposit of clippings concentrated at one end of cutting unit(s) or between two cutting units, forming a line in the direction of travel.

NOTE: *Arrow indicates direction of travel.*

Probable Cause	Remedy
Grass is too tall.	Mow more often.
Mowing while grass is wet.	Mow when grass is dry.
Grass built up on roller(s).	Clean roller(s) and scraper(s).
Grass collecting on bedknife.	Adjust reel-to-bedknife setting.

12.9 RIFLING OR TRAMLINING

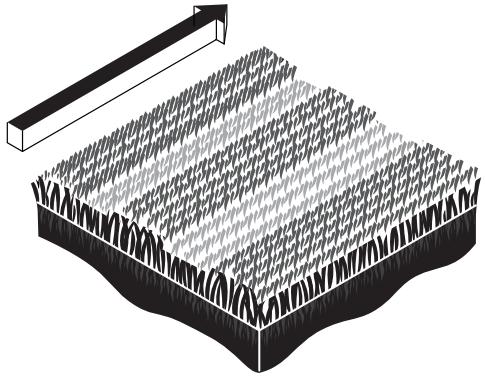


Rifling or tramlining is a pattern of varying cutting heights, resulting in a wave-like cut appearance, usually due to heavy contact points across a reel and/or bedknife.

NOTE: *Arrow indicates direction of travel.*

Probable Cause	Remedy
Reel and/or bedknife unevenly worn.	Inspect bedknife and reel. Sharpen or replace reel and bedknife as necessary.
Missing, loose, or over torqued bedknife screws.	Install, replace or tighten bedknife screws to proper torque setting.
Mowing (ground) speed is too fast.	Reduce mowing (ground) speed.

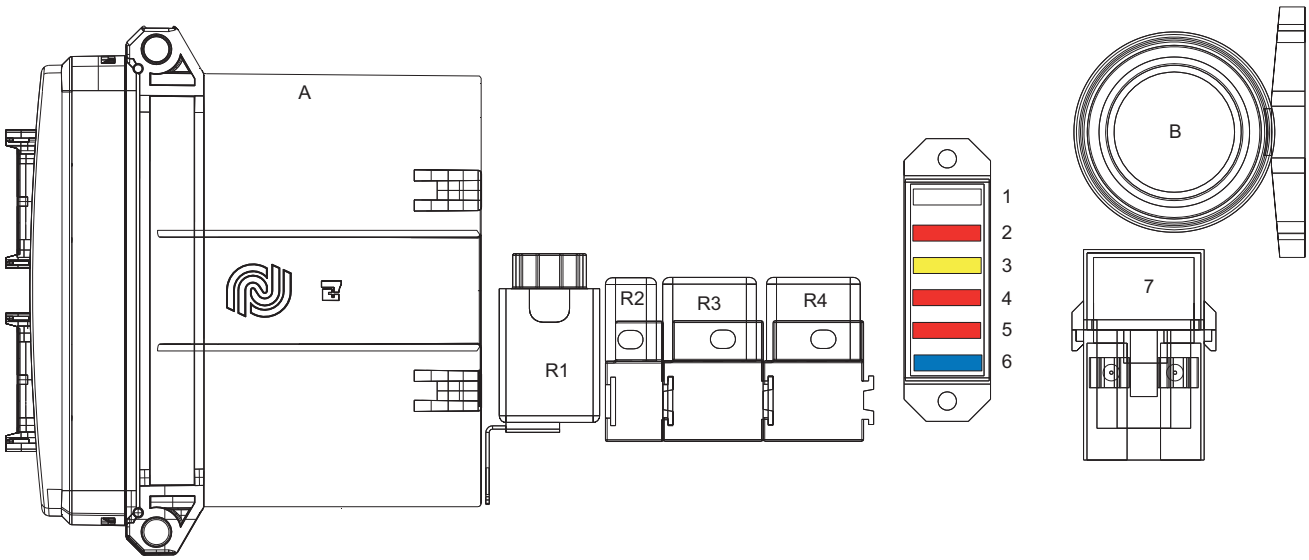
12.10 MATCHED CUTTING UNITS



Mismatched cutting units is a pattern of varying cutting heights, resulting in a stepped cut appearance, usually due to mismatched HOC (height-of-cut) adjustment from one cutting unit to another.

NOTE: *Arrow indicates direction of travel.*

Probable Cause	Remedy
HOC inconsistent from one cutting unit to another.	Check/adjust HOC on cutting units.
Difference in mower ride height side to side.	Check/adjust tire inflation pressure.


A
R1
R2
R3
R4
1
2
3
4
5
6
B
7

13.1 FUSE AND RELAY IDENTIFICATION

Fuse Number	Colour	Amps	Function
1			Accessory
2	Red	10	Air Seat
3	Yellow	20	Plus 1 Controller
4	Red	10	PTO Switch
5	Red	10	Accessory Socket
6	Blue	15	Working Lights
7	Orange	40	Glow Plugs (Diesel)

Relay Number	Function
R1	Engine Stop Relay (Diesel)
R2	Starter (Gasoline)
R3	Glow Heater (Diesel)
R4	Starter (gasoline & Diesel)

Item	Description
A	Plus 1 Controller
B	Audible Alarm

NOTES

14.1 WARRANTY

Warranty is subject to specific terms and conditions, e.g. wearing parts, unapproved modifications, etc. are not included. For a full set of warranty conditions, contact your local dealer or distributor.

14.2 SERVICE

A network of authorised Sales and Service dealers has been established and these details are available from your supplier.
When service attention, or spares, are required for the machine, within or after the warranty period your supplier or any authorised dealer should be contacted. Always quote the registered serial number of the machine.
If any damage is apparent when delivery is made, report the details at once to the supplier of the machine.

14.3 EVAPORATIVE EMISSION CONTROL WARRANTY STATEMENT

EVAPORATIVE EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

This evaporative emissions-related warranty is in addition to the standard Jacobsen warranty for its GreensKing IV, GreensKing IV Plus, G-Plex III/GP400, Groom Master II, GreensAire 24, and Eclipse 322.

The US EPA, California Air Resources Board and Jacobsen, a Textron Company are pleased to explain the evaporative emission control system (EECS) warranty on your GreensKing IV, GreensKing IV Plus, G-Plex III/GP400, Groom Master II, GreensAire 24, and Eclipse 322. In California, new equipment that use small off-road engines must be designed, built and equipped to meet the State's stringent anti-smog standards. Jacobsen must warrant the EECS on your equipment for the period of time listed below provided there has been no abuse, neglect or improper maintenance of your equipment.

Your EECS may include parts such as the fuel lines, fuel caps, canisters, vapor hoses, clamps, connectors, and other associated emission-related components.

Where a warrantable condition exists, Jacobsen will repair your equipment at no cost to you including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:
This EECS is warranted for two years. If any evaporative emission-related part on your equipment is defective, the part will be repaired or replaced by Jacobsen.

OWNER'S WARRANTY RESPONSIBILITIES:
As the equipment owner, you are responsible for performance of the required maintenance listed in your owner's manual. You may choose any qualified repair shop or person to maintain, replace, or repair emission control devices and systems with original or equivalent replacement parts. Jacobsen recommends that you retain all receipts covering maintenance on your equipment, but Jacobsen cannot deny warranty solely for the lack of receipts.

However, warranty, recall and all other services paid for by Jacobsen must be performed at an authorized Jacobsen service provider. As the equipment owner, you should however be aware that Jacobsen may deny your warranty coverage if your equipment or a part has failed due to abuse, neglect, or improper maintenance or unapproved modifications.

You are responsible for presenting your equipment to an authorized Jacobsen dealer or distributor as soon as the problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days. If you have a question regarding your warranty coverage, you should contact the Service Department for Jacobsen at 1-800-848-1636.

GENERAL EMISSIONS WARRANTY COVERAGE:

Jacobsen warrants to the ultimate purchaser and each subsequent purchaser that the equipment is: Designed, built and equipped so as to conform with all applicable regulations; and
Free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to that part as described in Jacobsen's application for certification.

The warranty period begins on the date the equipment is delivered to an ultimate purchaser or first placed into service. The warranty period is two years.

Subject to certain conditions and exclusions as stated below, the warranty on emission-related parts is as follows:

(1) Any warranted part that is not scheduled for replacement as required maintenance in the written instructions supplied, is warranted for the warranty period stated above. If the part fails during the period of warranty coverage, the part will be repaired or replaced by Jacobsen according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period.

(2) Any warranted part that is scheduled only for regular inspection in the written instructions supplied is warranted for the warranty period stated above. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.

(3) Any warranted part that is scheduled for replacement as required maintenance in the written instructions supplied is warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part will be repaired or replaced by Jacobsen according to subsection (4) below. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.

(4) Repair or replacement of any warranted part under the warranty provisions herein must be performed at a warranty station at no charge to the owner.

(5) Notwithstanding the provisions herein, warranty services or repairs will be provided at all of our distribution centers that are franchised to service the subject engines or equipment.

(6) The equipment owner will not be charged for diagnostic labor that is directly associated with diagnosis of a defective, emission-related warranted part, provided that such diagnostic work is performed at a warranty station.

(7) Jacobsen is liable for damages to other engine or equipment components proximately caused by a failure under warranty of any warranted part.

(8) Throughout the equipment warranty period stated above, Jacobsen will maintain a supply of warranted parts sufficient to meet the expected demand for such parts.

(9) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of Jacobsen.

(10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any non-exempted add-on or modified parts by the ultimate purchaser will be grounds for disallowing a warranty claims. Jacobsen will not be liable to warrant failures of warranted parts caused by the use of a non-exempted add-on or modified part.

(11) Jacobsen shall provide any documents that describe the warranty procedures or policies within five working days of request by the Air Resource Board.

WARRANTED PARTS:

The repair or replacement of any warranted part otherwise eligible for warranty coverage may be excluded from such warranty coverage if Jacobsen demonstrates that the cause of the need for equipment repair or replacement was abuse, neglect, improper maintenance, improper parts, improper use or continued use when a problem is evident. That notwithstanding, any adjustment of a component that has a factory installed, and properly operating, adjustment limiting device is still eligible for warranty coverage. The following emission warranty parts are covered:

(1) Fuel Cap
(2) Fuel Line
(3) Fuel Tank
(4) Valves
(5) Carbon Canister
(6) Fittings, clamps, gaskets, grommets, and mounting hardware associated with systems above

The exclusive remedy for breach of this limited warranty shall be, at the exclusive option of Jacobsen, repair or replacement of any defective materials, components or products. THE REMEDIES SET FORTH IN THIS LIMITED WARRANTY ARE THE ONLY REMEDIES AVAILABLE TO ANY PERSON FOR BREACH OF THIS EMISSIONS WARRANTY. JACOBSEN SHALL HAVE NO LIABILITY TO ANY PERSON FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY DESCRIPTION, WHETHER ARISING OUT OF EXPRESS OR IMPLIED WARRANTY OR ANY OTHER CONTRACT, NEGLIGENCE OR OTHER TORT OR OTHERWISE. THIS EXCLUSION OF CONSEQUENTIAL, INCIDENTAL, AND SPECIAL DAMAGES IS INDEPENDENT FROM AND SHALL SURVIVE ANY FINDING THAT THE EXCLUSIVE REMEDY FAILED OF ITS ESSENTIAL PURPOSE. ALL IMPLIED WARRANTIES (INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) ARE LIMITED IN DURATION TO THE WARRANTY PERIOD DESCRIBED HEREIN.

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