

Operator's manual



**Basic machine
Park Ranger 2150**

Introduction

Dear Customer

Congratulations with your Egholm product

The Park Ranger 2150 is a Danish designed and manufactured utility machine, which allows you to take a very flexible approach to maintaining outdoor areas.

Optimal use of your Park Ranger 2150 utility machine

To ensure optimal performance from your Park Ranger 2150 utility machine, please read this manual carefully before using the machine. Failure to do so can result in personal injury and damage to the machine.

Safety

The utility machine is equipped with various devices to ensure optimal operational safety both for the user and for the surroundings. We ask you to pay particular attention to section 1.1 Safety. The machine must only be serviced by professionals.

The utility machine is designed for professional use only. On delivery, the user will receive thorough training to become a competent operator.

Do not lend the machine to anyone who has not been thoroughly trained and has not read this manual carefully.

The operator's manual should be considered a vital accessory to the utility machine and so must remain with it if the machine is sold.

Warnings

Some items in this operator's manual are marked with this warning symbol.

The warning indicates areas where extra care has to be taken to avoid personal injury or damage to the machine and its accessories. The warning also explains how you should pay special attention to the aspect in question.



Reservations

As it is the Egholm policy to make continuous improvements, we reserve the right to alter the specifications and equipment at any time without notice.

Egholm accepts no liability for errors or shortcomings in the operator's manual.

Contact Egholm

Should you have any questions regarding your Egholm product, do not hesitate to contact Egholm.

Best regards

Egholm A/S

Transportvej 27 · DK-7620 Lemvig

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Egholm app - easy access to useful material

Download our Egholm app, enter the serial number of your machine and possibly add attachments, and get access to videos, manuals, technical specifications and much more.

If you agree to receive notifications, you will be notified about product and service information, offers etc. The app is available for Apple and Android mobile phones.

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Introduction

**Honest
Machines**

The Park Ranger 2150 utility machine

The Park Ranger 2150 is an Egholm utility machine with a complete range of special attachments designed to allow you to perform outdoor maintenance work all year round. Sweeping and vacuuming in spring and autumn, mowing grass and lawn-edge cutting in the summer, and sweeping snow, and spreading gravel and sand in the winter.

Easy attachment changeover

Attachments can be changed quickly and easily in less than four minutes.

General information

**Honest
Machines**

General information

1.1 Safety



Make sure no-one is standing close to the machine while it is in use

Make sure that no one is near the machine while it is in use as there is a danger of crushing.



NB

As it is articulated, the rear end of the machine swings out when turning. Make sure that no one is standing near the machine while it is in use. (Picture 1)



Turn the steering wheel carefully

The Park Ranger 2150 is articulated and the steering mechanism is extremely responsive. (Picture 2)



Avoid accidents with battery acid and gases

Batteries contain explosive gases and acid. Please take the greatest care when handling batteries. (Picture 3)



Avoid accidents with exhaust fumes

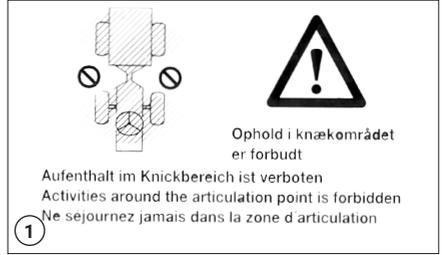
Exhaust fumes can cause illness or even death. If the engine is to run in an enclosed room, the exhaust fumes must be led outside – using an exhaust hose, for example. If there is no ventilation system in the room, the doors and windows must be left open to allow fresh air to enter.



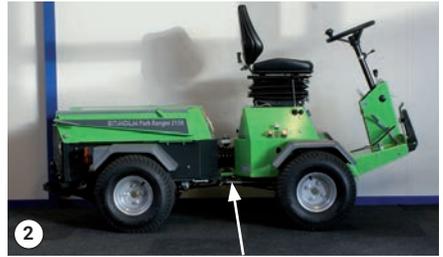
Avoid roll-overs

Do not drive the machine in places where there is a risk that it may slide, tip or roll. Do not drive on slopes with an incline of more than 10°. (Picture 4)

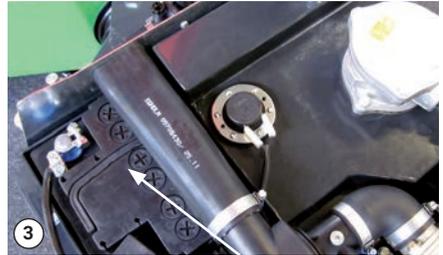
Keep children away from the machine when the engine is running.



1 Prevent people from standing in the working area



2 Articulated joint



3 Battery



4 Do not drive on slopes with an incline of more than 10°

General information

Avoid crushing fingers

Keep your hands and fingers away from areas where there is a danger of crushing.

The A-frame

Take care not to catch your fingers in the A-frame for the various tools. (Picture 1)

Exhaust pipe

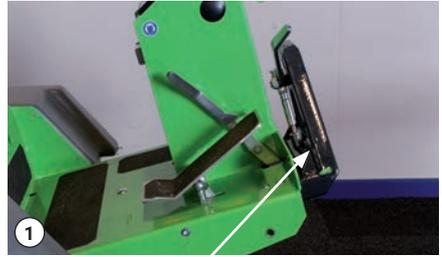
Make sure not to touch the exhaust pipe as this becomes very hot when the machine is operating. (Picture 2)

The Engine

Caution! All components in the Engine can become very hot!

Fan belt

Make sure not to catch your fingers in the fan or the fan belt. (Picture 2)



Avoid crushing fingers



Exhaust pipe

Fan

1.2 EC Declaration of Conformity

Manufacturer: **Egholm A/S**
Address: **Transportvej 27 · DK-7620 Lemvig**
Telephone: **+45 97 81 12 05**

hereby declares that

Machine: **Park Ranger 2150**
Type: **UHM 2150A0 XX (year of manufacture)**
A XXXXX (serial number)

has been manufactured in conformity with Directive 2006/42/EU.

Any alteration, rebuilding or addition of implements, accessories or other equipment not manufactured by Egholm automatically results in the cancellation of type approval, CE approval, any other approval, as well as any warranty on machine and attachments.

Unless otherwise agreed in writing between the operator, customer and Egholm, Egholm is the data originator (data originator) of all data generated by the machine and attachments during use.

Person authorized to compile the technical documentation:
Mr. Rainer Flanz
Egholm A/S
Transportvej 27 · DK-7620 Lemvig

Place: Lemvig
Date: _____
Signature: 
Rainer Flanz, R&D Manager

General information

1.3 Technical data

Dimensions

Length (L).....	2,225 mm
Width (W).....	1,015 mm
Height with cab.....	1,935 mm
Height without cab.....	1,210 mm
Max. speed.....	16 km/h

Weight

Weight.....	485 kg
Max. permitted weight for:	
Utility machine.....	1,300 kg
Machine and trailer without brakes.....	1,750 kg
Machine and trailer with overrunning brakes.....	2,650 kg
Trailer without brakes.....	750 kg
Trailer with overrunning brakes.....	1,500 kg
Permitted axle load, front.....	740 kg
Permitted axle load, rear.....	740 kg

Tyres

Tyre size.....	18 x 9,5-8
Tyre pressure.....	1.6 bar or 24 psi

Motor

Type/manufacturer.....	Perkins Diesel
Type.....	403D-11
Motor power.....	28 hp or 21 kW at 3,400 rpm
Cylinders.....	3
EU Norm.....	Stage IIIA

Please refer to the engine operator's manual for additional technical data

Fuel

Fuel.....	Diesel
Fuel tank capacity.....	20 l diesel
At 2,400 rpm.....	approx. 2.8 l/h
At 3,400 rpm.....	approx. 4.6 l/h

1.3 Technical data - continued

Lubricating system

Lubricating system	Pressure-lubricating system with filter
Lubricants Motor oil:	approx. 3 l, synthetic 5W-40 API CF, CF-4, CG-4, CH-4
Air filter	Dry, replaceable element filter
Cooling system.....	Liquid coolant

Electrical system

Starter system	Electric starter with glow plugs
Charging system	Generator
Charging capacity	12 volt, 65 amp
Battery	12 Volt, 44 AH

Hydraulic oil

Hydraulic oil, type.....	Texaco Rando HDZ 68
Tank capacity.....	15 l
Working pressure.....	Up to 180 bar

Brakes

Operating brakes.....	Hydrostatic
Parking brakes.....	Mechanical

Sound measurements

Running, Directive 2009/63/EF	78 dB(A)
Pass-by, Directive 2009/63/EF	80 dB(A)
Machine operator position, open windows, 2009/76/EF.....	85 dB(A)
Machine operator position, closed windows, 2009/76/EF	84 dB(A)

Vibration test

Whole body, EN 13059.....	0.6 m/s ²
Hand/arm, EN 13059.....	2.4 m/s ²

Turning radius

Park Ranger 2150 has an extremely small turning radius	1.5 m
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Information plate

Mounted on the right side of the front chassis.

Attention

Specifications may change without notice.

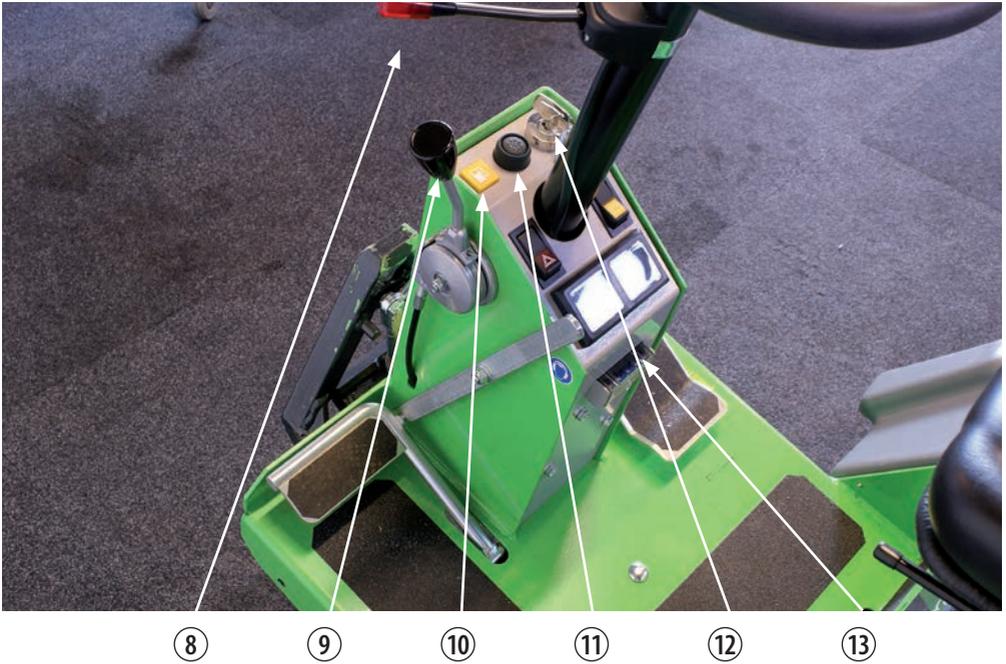
General information

1.4 Steering column



1. Hazard lights
2. Timer
3. Load control lamp
If this symbol lights up at any time other than during ignition, stop the engine and identify the cause.
4. Pre-heater indicator
Does not light up together with the three other warning lights. It does not light up until the key has been turned to "pre-heating" position. When the light goes out, turn the key to the next position to start the machine.
5. Switch – electrical socket
6. Oil pressure warning light. If this lamp lights up during operation, stop the machine immediately, switch off the engine and check the oil level. Refill immediately if the oil level is low.
7. Overheating warning light. This light is not lit when the coolant temperature is normal. If this light comes on, the engine temperature is too high. Switch off all the attachments and leave the engine to run at half power (i.e. half revolution speed) for approx. 2 minutes. If necessary, clean the radiator grilles.

1.4 Steering column - continued



8. Indicator switch/stalk
9. Throttle. When starting the machine, pull the throttle open to approx. 1/4 of its capacity. It is then easy to start the engine.
10. Fuel control light. Comes on when 5 litres remain in the tank – sufficient for approx. 1½ hours' operation. This light is only lit when the machine is switched on.
11. Horn
12. Ignition key
13. Fuses. See Section 1.11

General information

1.5 Operating levers and pedals

1. Lever A (Picture 1)

For raising and lowering front-mounted attachments on the A-frame:

Top position: Raises the attachment

Middle position: Locks the attachment in a given position

Bottom position: Lowers the attachment

2. Lever B (Picture 1)

Activation of hydraulic connectors B1 and B2 – for attachments.

Pos. 1: Locked – oil flow activated = attachment operating

Pos. 0: Neutral (depends on the attachment)

Pos. 2: The attachment operates in the reverse direction.

3. Lever C (Pictures 1+2)

Activation of hydraulic connectors C1 and C2 for rear-mounted attachments:

Pos. 1: Raises/tilts the attachment (depends on the attachment)

Pos. 0: Neutral (depends on the attachment)

4. Lever D (Picture 3)

Starts up attachments (depending on hydraulic connectors D1 and D2):

Pos. 1: Attachment operating

Pos. 0: Neutral – attachment stopped

Pos. 2: Attachment operating in the reverse direction (depends on the attachment)

Quick action coupling D3:

Drain connection for various attachments (female – 1/4")

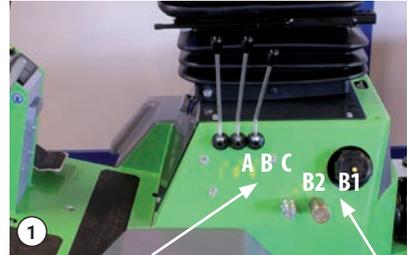
5. Speed regulation of attachments (defined by the attachment)

Regulates the oil flow in hydraulic connectors D1 and D2.

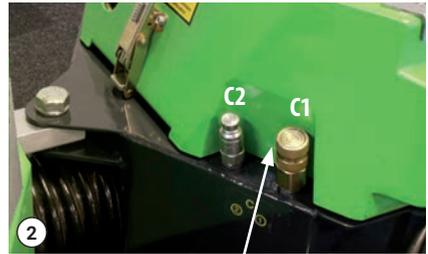


Warning

Keep the quick action couplings clean of dirt



Levers A, B, C Hydraulic connectors B1, B2



Hydraulic connectors C1, C2

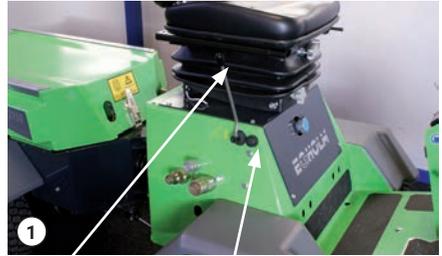


Hydraulic connectors D1, D2, D3 Lever D
Speed regulation

1.5 Operating levers and pedals - continued

Operation of attachments when the operator is not sitting in the driver's seat (exclusively for external vacuum hose)

- A) Park the basic machine and lock the parking brake
- B) Keep the start button for attachment operation (Picture 1) depressed while operating lever D.



Lever D Manual start button

6. Parking brake (Picture 2)

Activation of parking brake: press the brake pedal to its lowest position. The parking brake can then be slid forward. Release the brake pedal, and the utility machine is locked.

7. Brake pedal (Picture 2)

Activated in its lowest position.

8. Drive pedal (Picture 3)

The drive pedal can only be activated when the brake pedal is in its highest position. The speed regulation is stepless.

- Drive forward: Press the pedal forward
- Reverse: Press the pedal backward

The pedal returns to its neutral position automatically.

To drive at full speed, push the throttle all the way forward.

9. Transport lock (Pictures 3+4)

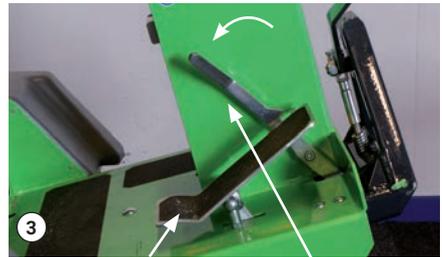
The transport lock must be deactivated when the utility machine is operating.

The transport lock must always be activated when the utility machine is being driven from one location to another.

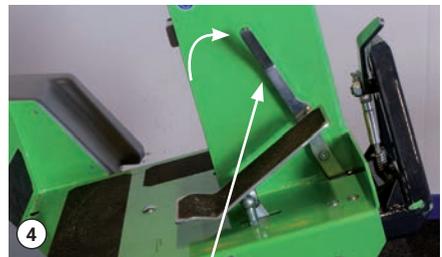
The transport lock locks the A-frame in place so that the A-frame cannot be lowered during driving. It also locks the drive pedal so that the utility machine cannot reverse.



Brake pedal Parking brake



Drive pedal Transport lock deactivated



Transport lock activated

General information

1.5 Operating levers and pedals - continued

10. Towing lever (Pictures 1+2)

The towing lever under the machine is for moving the utility machine manually.

When the towing lever is in open position, the machine can be towed without starting the engine. The towing lever is in open position when the lever is horizontal.

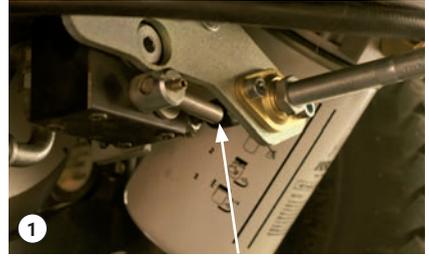


Warning!

When the towing lever is in open position, there is no powered steering!

The towing lever must be in closed position for the utility machine to be able to operate when the engine is started. The towing lever is in closed position when the lever is vertical.

The towing lever is fitted to the transmission pump and is located under the rear chassis of the Park Ranger 2150.



Towing lever open



Towing lever closed

1.6 Fitting a cab (optional)

1. Lower the cab onto the utility machine. Use a crane with a lifting strap that passes through the cab frame. (Picture 1)

2. Fasten the cab to the utility machine chassis using two bolts at the front and two bolts at the back. (Picture 2)

3. Connect the cab to the electrical system of the utility machine. Remove the black cover on the right-hand side of the instrument panel, pull out the electric plug and connect it to the socket in the cab. (Picture 3)

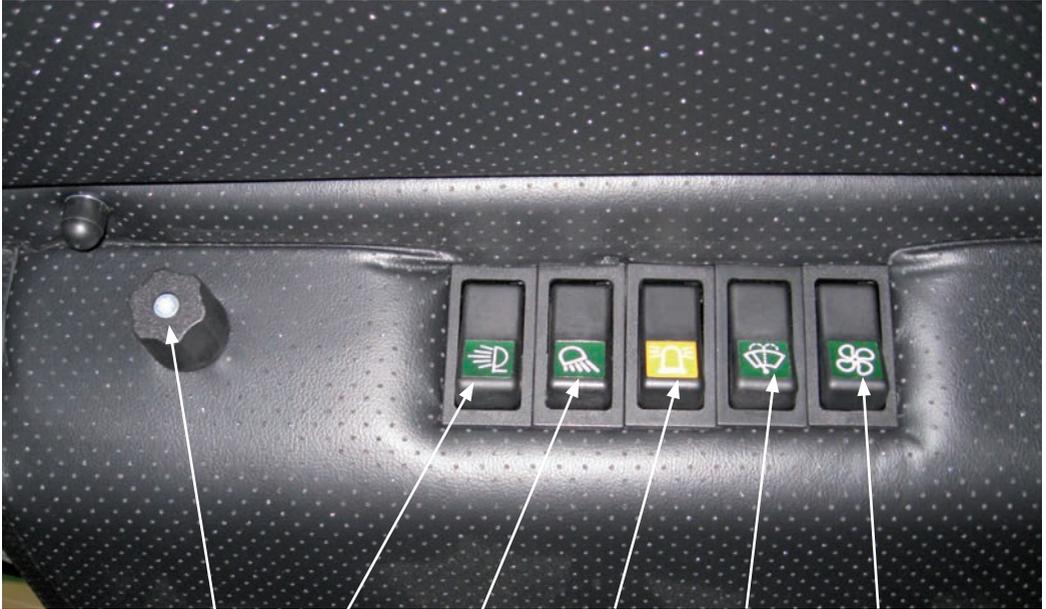
4. Connect the hoses for the heating unit. Remove the oil cooler cover. Connect the two hoses from the cabin to the two hose ends behind the oil cooler cover. (Picture 4)

5. Fill coolant into the utility machine. Open the heat regulation system in the cab. Start the machine and let it run in neutral for 5 minutes. Stop the machine. Refill coolant, see Section 3.7.



General information

1.7 Operating panel, cab (optional)



①

②

③

④

⑤

⑥

1. Heat regulation in the cab
2. Light switch:
Position 1. Parking lights
Position 2. Driving lights
3. Work light, rear
4. Rotary light
5. Windscreen wipers:
Position 1. Wipe
Position 2. Wipe and wash
6. Cab heater:
Position 1. Half power
Position 2. Full power

General information

1.8 Removable load carrier (optional)

Removing the load carrier

A) Move the locking lever to "released" position. To do this, pull the lever out firmly while turning it to the right.

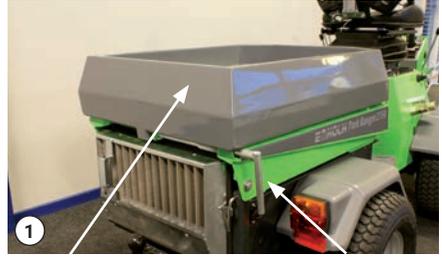
B) Pull the load carrier towards the back.

Fitting the load carrier

A) Fit the load carrier from the rear of the Park Ranger 2150. Push it into place so that it is seated in the locking brackets on the frame.

B) Pull the locking lever out and turn it to the left while the load carrier is pushed into position.

C) Make sure that the locking lever is locked in position in the locking eye. Pull the load carrier to make sure that it is locked in position.



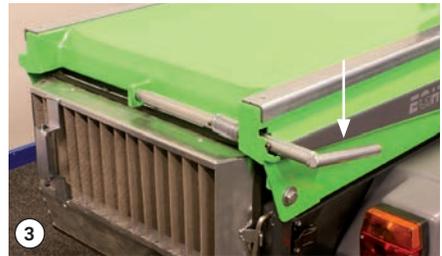
Load carrier

Locking handle



Locking eye

Locking bracket



Locking lever in "released" position



Locking lever in "locked" position

General information

1.9 Driver's seat

Adjust the seat to suit the driver.

Height: use lever 1 to adjust the height

Weight: use lever 2 to adjust for weight

Forward/back: use lever 3 to move the seat forward or back

1.10 Oil cooler cover

Removal

A) The oil cooler cover is removed downwards at an angle.

Fitting (Picture 2):

A) Insert the top edge of the oil cooler cover at an angle under the rim of the opening in the Park Ranger 2150.

B) Push the oil cooler cover into position.



Adjustment levers for the driver's seat



Fitting the oil cooler cover

General information

1.11 Fuses and main switch

Fuses in the steering wheel panel

1. 7.5 Amp Charging lamp
2. 15 Amp Fan for oil cooler, safety net, magnetic valve for engine cut-off, seat switch and parking lights
3. 15 Amp Warning lights, horn and tank gauge
4. 15 Amp Electrical socket (trailer)

Main fuse

To access the main fuse, open the engine cover. The fuse (60 Amp) is located on the right-hand side, just behind the hydraulic oil tank.

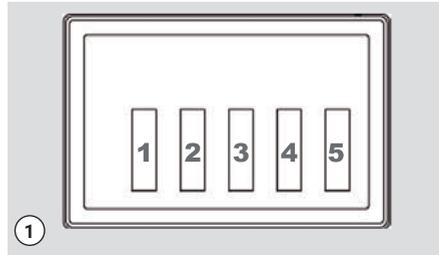
Fuses in the cab

1. 7.5 Amp Right parking light
2. 7.5 Amp Left parking light
3. 20 Amp Cab heater
4. 20 Amp Rotary light, wiper motor and washer pump
5. 20 Amp Driving lights and rear work light

Main switch

For it to be possible to start the Park Ranger 2150, the main switch on the left-hand side of the machine must be ON.

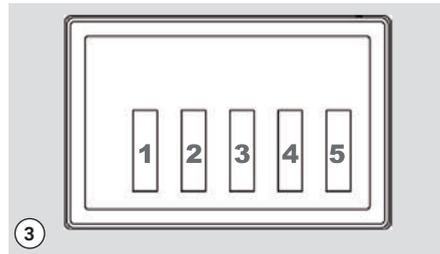
The main switch controls all power to the machine.



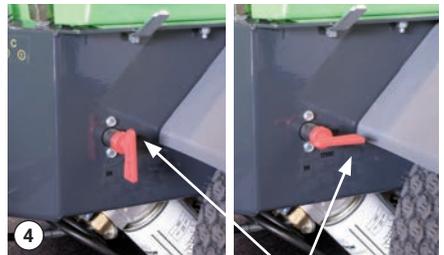
Fuses in the steering wheel panel



Main fuse – 60 Amp



Fuses in the cab



Main switch ON/OFF

Operator's manual

**Honest
Machines**

2.1 Daily checks before start-up

Before carrying out the daily checks, open the engine cover:

- A) Remove the removable load carrier. See Section 1.8
- B) Remove the radiator cover. See Section 3.1
- C) Open the engine cover lock by pushing the locking button 1) down and then opening the catch 2).
- D) Open the motor cover.

It is important to check the following before starting the machine

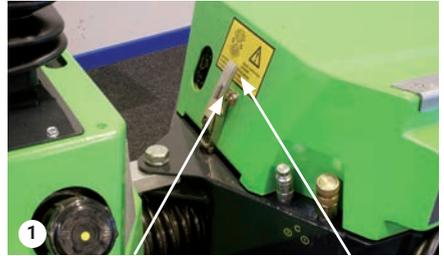
Hydraulic oil

Must be visible in the glass.

Filling – see "Maintenance", Section 3.4.

Motor oil

The oil level must be between the two lines on the dipstick. Filling – see Section 3.5.



Cover lock

Locking button Catch



Hydraulic oil



Motor oil

Operator's manual

2.1 Daily checks before start-up - continued

Diesel oil

Tank capacity: 20 litres.

The control light comes on when 5 litres remain = sufficient for approx. 1½ hours.

This light can only work when the Park Ranger 2150 is switched on.

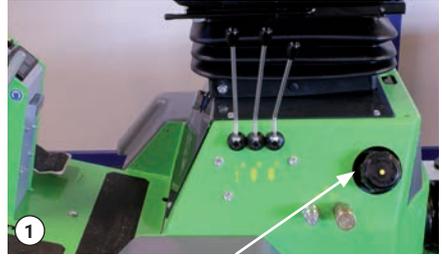
Check the coolant

Remove the radiator cap and check that the fluid comes all the way up to the filling opening.



Warning

Never remove the radiator cap when the engine is hot.



Diesel



Control light for diesel oil



Check coolant

2.2 Starting, operation and stopping

The following conditions must be met before the engine can be started:

A) Make sure that control levers A, B, C and D are in position "0" (i.e. in the middle position). (Pictures 1+2)

B) Make sure that the towing lever is in "closed" position. (Picture 3)

C) Make sure that you (the driver) are sitting in the driver's seat.

D) Press the brake pedal (1) down to its lowest position and slide the parking brake (2) back. (Picture 4)

E) Pull the throttle (3) approx. 1/4 of the distance.

F) Turn the key (4) clockwise until the pre-heater indicator (5) lights up along with the other warning lights. When the pre-heater indicator goes out, turn the key farther clockwise and the Park Ranger 2150 will start.

G) Release the brake pedal (1) to its top position.

H) You can now activate the drive pedal (6).

Drive forward: Press the pedal forward
Reverse: Press the pedal backward



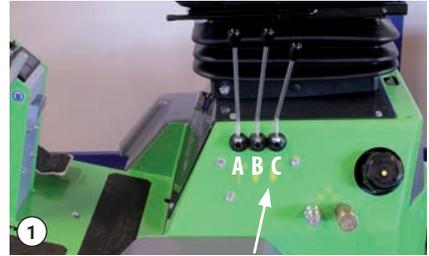
Warning

Out of consideration for the hydraulic system, it is important that the machine reaches operating temperature BEFORE the engine is operated at full revolutions.

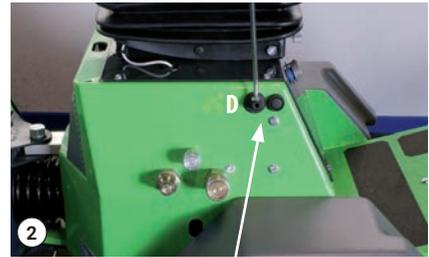


Warning

Turn the steering wheel carefully – the Park Ranger 2150 is articulated and the steering mechanism is extremely responsive.



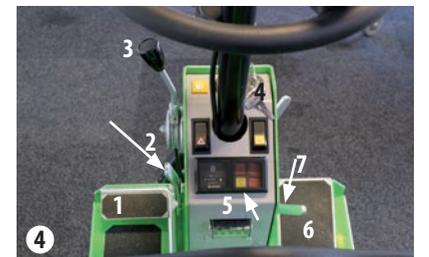
Levers A, B, C



Lever D



Towing lever in "closed" position



Operating controls

Operator's manual

2.2 Starting, operation and stopping - continued

Stopping the Park Ranger 2150

- A) Make sure that control levers A, B, C and D are in position "0".
- B) Throttle back so that the engine is running in neutral.
- C) Press the brake pedal (1) down to its lowest position and slide the parking brake (2) forward.
- D) Stop the Park Ranger 2150 by turning the key back to the starting position.

Operation with front-mounted attachments

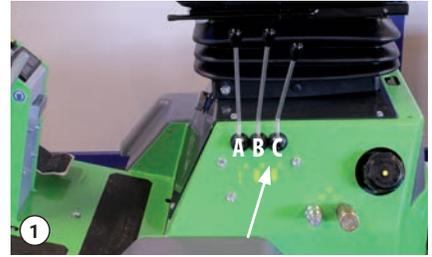
If an attachment is fitted to the Park Ranger 2150, it must be raised above the ground before the machine is driven.

To lift the attachment, push lever A to the top position. Release lever A once the attachment has reached the appropriate height.

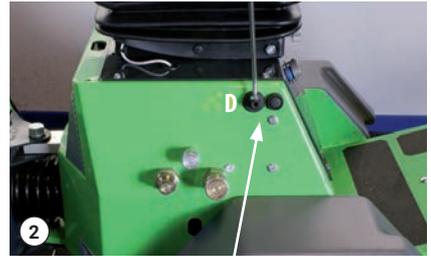
For transport over long distances, the transport lock (7) must be activated.

Fitting attachments, front and rear

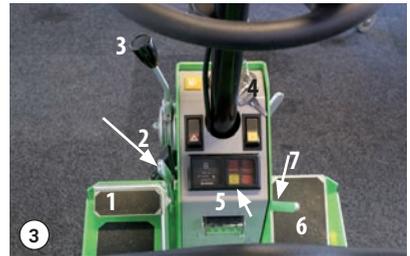
Please refer to the operator's manuals for the individual attachments.



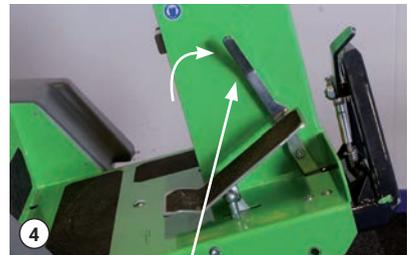
Levers A, B and C



Lever D



Operating controls



Transport lock activated

Service and Maintenance

**Honest
Machines**

Service and Maintenance

3.1 Daily maintenance

The daily maintenance of the Park Ranger 2150 is simple and straightforward – but very important. Three operations need to be performed: cleaning of the radiator, oil cooler and air filter.

Cleaning the radiator

- A) Remove the radiator cover by turning the two spring-loaded handles out to the side. (Picture 1)
- B) Blow the radiator fins and the cover clean with compressed air.
- C) The radiator fins can be washed with clean water.



Warning

Do not use hard implements when cleaning the body of the radiator, as this can damage the fins.

Cleaning the oil cooler

- A) Remove the oil cooler cover
- B) Blow the cover and the cooler clean with compressed air.



Warning

The cooler must be cleaned with compressed air before the machine is washed, otherwise dirt will stick to it.

Air filter housing and air filter element

Clean the air filter housing with a clean cloth, and blow the element clean from the inside with compressed air.



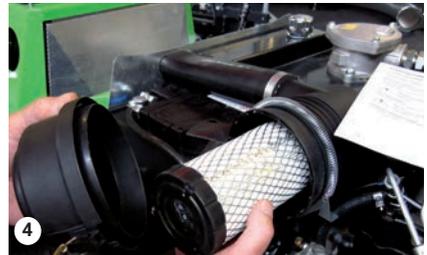
1 Removing the radiator cover



2 Oil cooler cover



3 Loosen the filter housing



4 Remove the air filter element

Service and Maintenance

3.2 Lubrication

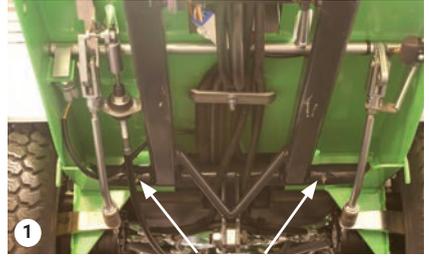
Lubricating nipples

Lubricate the lubricating nipples on the machine with one or two shots of good quality grease – every 15 hours or so.

There are two lubricating nipples by the A-frame, and four by the steering cylinders.

Cables and moving parts

Lubricate with a few drops of oil every 15 hours or so.



Lubricating nipples, A-frame



Lubricating nipples, steering cylinders

Service and Maintenance

3.3 Service and maintenance chart for the Park Ranger 2150

		Service plan										
Service aspects	Measures	Hours										
		Daily	50	400	800	1200	1600	2000	2400	2800	3200	3600
Motor oil	Check	•										
	Replace		•	•	•	•	•	•	•	•	•	•
Hydraulic oil	Check	•										
	Replace		•	•	•	•	•	•	•	•	•	•
Air filter (1) (8)	Check	•										
	Replace		•	•	•	•	•	•	•	•	•	•
Motor oil filter	Replace		•	•	•	•	•	•	•	•	•	•
Fuel filter	Replace		•	•	•	•	•	•	•	•	•	•
Transmission fluid filter	Replace		•	•	•	•	•	•	•	•	•	•
Tank filter, hydraulic	Replace		•	•	•	•	•	•	•	•	•	•
Coolant (2)	Check		•	•	•	•	•	•	•	•	•	•
	Replace				•		•		•		•	
Fan belt (3)	Check	•										
	Replace				•		•		•		•	
Bearings, articulated joint	Check		•	•	•	•	•	•	•	•	•	•
Fuel hoses (4)	Check		•	•	•	•	•	•	•	•	•	•
Radiator (1)	Clean	•										
Oil cooler (1)	Clean	•										
Cooling hoses (5)	Check		•	•	•	•	•	•	•	•	•	•
Temperature alarm, engine	Check		•	•	•	•	•	•	•	•	•	•
Thermostat, oil cooler	Check		•	•	•	•	•	•	•	•	•	•
Fan, oil cooler	Check		•	•	•	•	•	•	•	•	•	•
Adjustment of throttle cable	Check		•	•	•	•	•	•	•	•	•	•
Adjustment of driving cable	Check		•	•	•	•	•	•	•	•	•	•
Brakes	Check		•	•	•	•	•	•	•	•	•	•
Battery (6)	Check		•									
Lubrication (7)	Perform	(•)										
Lights and mirrors	Check	•										
Check and tighten wheel bolts	Check		•		•		•		•		•	
Tyre pressure	Check		•	•	•	•	•	•	•	•	•	•

- 1) More frequent services may be necessary if the machine is operated in very hot or dusty environments.
- 2) Replace the coolant at least once a year or after every 800 hours.
- 3) Replace the fan belt every year or after every 800 hours.
- 4) Replace the fuel hoses every year.
- 5) Replace the radiator and cooler hose clips and hoses every year.
- 6) Replace the battery every two years.
- 7) Lubricate the machine for every 15 hours of operation.
- 8) We recommend replacing the air filter for every 200 hours

We recommend that service and maintenance procedures are carried out by authorised Egholm dealers.

Service and Maintenance

3.3 Service and maintenance chart for the Park Ranger 2150 - continued

		Service plan										
Service aspects	Measures	Hours										
		Daily	4000	4400	4800	5200	5600	6000	6400	6800	7200	7600
Motor oil	Check	●										
	Replace		●	●	●	●	●	●	●	●	●	●
Hydraulic oil	Check	●										
	Replace		●	●	●	●	●	●	●	●	●	●
Air filter (1) (8)	Check	●										
	Replace		●	●	●	●	●	●	●	●	●	●
Motor oil filter	Replace		●	●	●	●	●	●	●	●	●	●
Fuel filter	Replace		●	●	●	●	●	●	●	●	●	●
Transmission fluid filter	Replace		●	●	●	●	●	●	●	●	●	●
Tank filter, hydraulic	Replace		●	●	●	●	●	●	●	●	●	●
Coolant (2)	Check		●	●	●	●	●	●	●	●	●	●
	Replace		●		●		●		●		●	
Fan belt (3)	Check	●										
	Replace		●		●		●		●		●	
Bearings, articulated joint	Check		●	●	●	●	●	●	●	●	●	●
Fuel hoses (4)	Check		●	●	●	●	●	●	●	●	●	●
Radiator (1)	Clean	●										
Oil cooler (1)	Clean	●										
Cooling hoses (5)	Check		●	●	●	●	●	●	●	●	●	●
Temperature alarm, engine	Check		●	●	●	●	●	●	●	●	●	●
Thermostat, oil cooler	Check		●	●	●	●	●	●	●	●	●	●
Fan, oil cooler	Check		●	●	●	●	●	●	●	●	●	●
Adjustment of throttle cable	Check		●	●	●	●	●	●	●	●	●	●
Adjustment of driving cable	Check		●	●	●	●	●	●	●	●	●	●
Brakes	Check		●	●	●	●	●	●	●	●	●	●
Battery (6)	Check		●		●		●		●		●	
Lubrication (7)	Perform	(●)										
Lights and mirrors	Check	●										
Check and tighten wheel bolts	Check		●		●		●		●		●	
Tyre pressure	Check		●	●	●	●	●	●	●	●	●	●

-  Full service
-  Full service
-  One-off service

Service and Maintenance

3.4 Hydraulic system

Hydraulic oil

Check the level of hydraulic oil while the oil is cold.
The oil must be visible in the glass.

If there is no oil visible in the glass, refill the hydraulic oil tank.



Warning

Clean the area around the bleeding and filling spigot before removing the filler cap to prevent dirt entering the hydrostatic system, where it may cause damage.

Refilling hydraulic oil

- Park the Park Ranger 2150 on a level surface.
- Turn off the engine.
- Remove the bleeding and filling cap and pour in Texaco Rando HDZ 68 oil.
- Replace the cap and start the engine.
- Check that the oil fills 3/4 of the glass while the engine is running.

Tank filter

Replace the filter and clean the housing during service procedures.

Hydraulic oil filter

- Remove the oil filter under the Park Ranger 2150 and let the oil run out until the tank is empty.
- Lubricate the gasket with oil.
- Fit the new filter.
- Pour in approx. 16 litres of Texaco Rando HDZ 68 oil. Check that the oil fills 3/4 of the glass.



1 Bleeding/filling cap

Viewing glass



2

Tank filter



3

Tank filter housing



4

Hydraulic oil filter

3.5 Engine maintenance



Warning

Always switch off the engine before checking the oil level and when changing the oil and the oil filter.

Check the motor oil. (Picture 1)

1. Park the Park Ranger 2150 on a level surface.
2. Check the oil level before starting the engine.
3. Pull out the dipstick, wipe it clean and then replace it.
4. Pull out the dipstick again and check whether there is sufficient oil in the engine.
5. The oil level must be between the two lines on the dipstick.
6. Add oil if the oil level is below the bottom line.
7. Always check to make sure that the oil level is correct.

Filling with motor oil

1. Remove the oil cap. (Picture 2)
2. Pour in oil until the engine contains approx. 3 litres.
3. Wait approx. 5 minutes after pouring in the oil.
4. Then check the oil level again. It may take a little time for the oil to reach the oil pan.

Changing the oil in the engine.

Change the oil after the first 50 hours of operation. It is easiest to do this while the engine is warm.

1. Remove the bottom screw and let the old oil run out. (Picture 3)
2. Remember to replace the bottom screw!
3. Fill with new motor oil until the level reaches the top line on the dipstick. Approx. 3 litres of oil.



Check the oil level



Motor oil cap



Remove the bottom screw

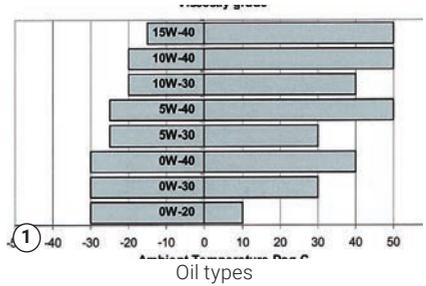
Service and Maintenance

3.5 Engine maintenance - continued

Recommendations concerning oil

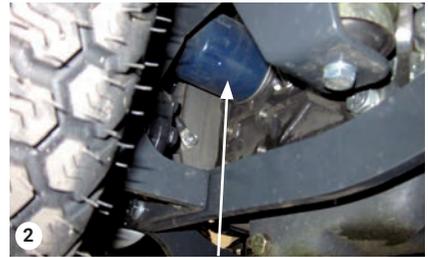
For the best engine performance, we recommend approved Perkins engine oils. Other high-quality oils may be used if they have one of the following API classifications: CF, CF-4, CG-4 or CH-4. Never use special additives.

NB! Always ensure that the viscosity of the lubrication oil used matches the temperature range in the surroundings where the machine is operating. (Picture 1)



Changing the motor oil filter

1. Use a filter spanner to remove the oil filter. (Picture 2)
2. Apply a thin layer of oil to the new filter gasket.
3. Fit the new filter by hand. DO NOT use a filter spanner, as this will over-tighten the filter.
4. Turn the engine on and let it run for a while to check that the filter seal is tight.
5. Switch off the engine and check the level of motor oil.
6. Add oil if the level of motor oil drops after the filter has been changed.



Motor oil filter

3.6 Fuel



Warning

Always switch off the engine before filling up with fuel. Make sure there are no naked flames nearby because diesel oil is highly flammable.

Fuel

ONLY use diesel as fuel. (Picture 1)

Important when filling up with fuel!

Make sure to keep the area free from dirt when filling up – dirt can cause problems in the injection pump.

Do not let the engine run out of fuel, as this can create air bubbles in the fuel system

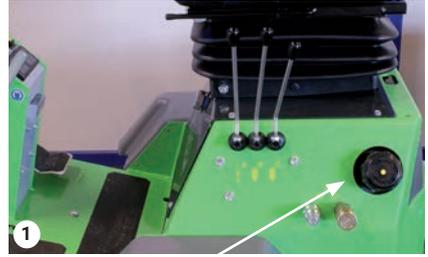
Cleaning and replacing the fuel filter

Always clean the filter in a clean area.

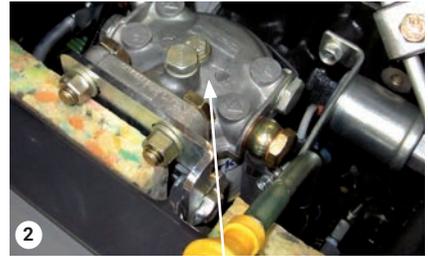
1. Unscrew the filter. (Picture 2)
2. Fit the new filter.
3. Bleed the fuel system.

It is important to bleed the fuel system

1. When the fuel filter and hoses have been removed and then replaced.
2. If the engine has run out of fuel.



Diesel cap



Fuel filter

Service and Maintenance

3.6 Fuel – continued

Bleeding the fuel system/the fuel filter

1. Switch on the machine to start the electric fuel pump
2. Loosen the bleeding screw on the fuel filter. (Picture 1)
3. When fuel starts to run out, close the bleeding screw.
4. Turn the ignition key until the engine starts.



Bleeding screw on the fuel filter



Warning!

Do not bleed the system while the engine is very hot. If fuel is spilled on a hot exhaust manifold, it can cause a fire.



Warning!

Switch off the engine before checking or replacing fuel hoses. Damaged fuel hoses can cause a fire.

Checking the fuel hoses during every service.

- 1) Check for loose clips. Apply a little oil to the screw and tighten.
- 2) If any fuel hoses or clips appear worn, replace them immediately.
- 3) Bleed the fuel system after replacing hoses.

3.7 Radiator

Warning when removing the radiator cap!

Never remove the radiator cap while the engine is hot, as the hot coolant may spray out and cause serious burns. Wait to remove the radiator cap for at least 10 minutes after the engine has been switched off.

Check the level of coolant every day

- A) Remove the radiator cap
- B) Check that the level of coolant reaches all the way up to the filling opening. (Picture 1)



Warning!

Always switch off the engine before filling up with coolant.

Filling coolant

- A) Remove the radiator cap and pour coolant into the expansion container so that the level of coolant reaches all the way up to the filling opening of the expansion container.
Capacity: approx. 4 litres.
- B) The coolant should consist of 50% pure water and 50% radiator fluid, or as described on the label on the packaging.
- C) Replace the radiator cap carefully after filling up with coolant.
- D) Start the Park Ranger 2150 and let it run until it reaches operating temperature.
- E) Stop the engine and add coolant. (Picture 2)

Check the radiator/cooler hoses

Replace the hoses and clips every two years – or more often if they are damaged.



Coolant expansion container cap



Filling up with coolant

Service and Maintenance

3.7 Radiator - continued

Precautions against overheating

If the warning light illuminates, switch off all attachments immediately and let the engine run at half throttle. Clean the air intake grilles in the rear covers and try to identify the cause of the overheating. If you are in doubt about the cause, contact your nearest dealer.

Cleaning the radiator

Clean the engine cooling system as described in Item 3.1.

3.8 Air filter

Cleaning the air filter

- A) Open the vacuum valve every day to remove large particles of dirt and dust when the Park Ranger 2150 is being used in dusty environments.
- B) Open the air filter housing.
- C) Remove the filter unit.
- D) Clean the air filter housing with a clean cloth.
- E) Carefully blow the unit clean from the inside with compressed air.
- F) Replace the filter unit and close the filter housing. (Pictures 1+2)



Air filter housing



Vacuum valve

3.9 Battery



Warning!

Always take the following precautions when removing the battery.

- A) Make sure the ignition is switched off.
- B) Always remove the cable from the battery's negative (-) pole first.
- C) Make sure not to touch the two battery poles at the same time with any metal tools or object, and be careful to prevent the positive (+) pole from coming into contact with the machine. The short-circuit caused by this happening will generate sparks.
- D) Avoid sparks and naked flames. Do not smoke.
- E) When replacing the battery, always connect the positive (+) cable first and then the negative (-) cable.

Service and Maintenance

3.9 Battery - continued



Warning!

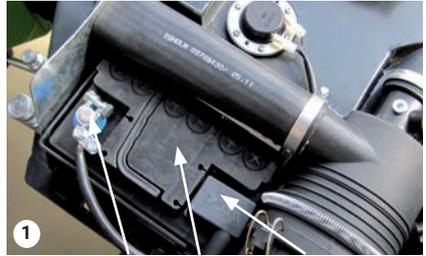
Both the explosive gases and the sulphuric acid that the battery contains can cause blindness and serious burns.

Charging

Connect the positive (+) terminal of the charger to the positive (+) pole of the battery, and connect the negative (-) terminal to the negative (-) pole.

Fluid level

Check the level once a year. Top up as necessary with ONLY distilled water. (Picture 1)



- pole Battery + pole

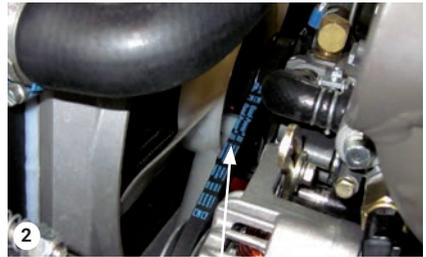
3.10 Fan belt

Adjustment and tightening

An insufficiently tightened fan belt can result in the engine overheating and insufficient charging of the battery.

A) To check the tightness of the fan belt, press it in the middle with your finger. It should “give” approx. 7–9 mm (under 10 kg of pressure).

B) Also check the fan belt for cracks and tears. (Picture 2)



Fan belt

Regulation of tension

Loosen the two bolts that hold the generator in place, and adjust its position to provide the necessary tension. Remember to retighten the nuts and bolts after adjustment.



Articulated joint

3.11 Articulated joint

If there is any play in the articulated joint, the bearings need to be replaced.

To check for play, rock the front chassis. (Picture 3)

Conditions

**Honest
Machines**

4.1 Warranty

The warranty period for the materials and manufacture of this suction sweeper is 12 months from the date of purchase.

In case of errors or defects on the machine within the warranty period, Egholm will carry out the necessary repairs at no charge to the customer, including materials and working hours, in accordance with the terms and conditions listed below.

The scope of warranty

1. The Egholm warranty is only valid on presentation of the original receipt, supplied with model description, serial number and date of purchase.
2. Regular checks, adjustments, services and technical alterations are not covered by the warranty.
3. All inquiries concerning the warranty are to be addressed to the place where the machine was purchased.
4. This warranty does not cover faults and defects which cannot be traced back to defects in material or production errors.
5. This warranty is valid for persons who have legally acquired the machine within the warranty period.
6. In the event of failure to perform and substantiate service in accordance with the applicable instructions, Egholm reserves the right to reject any claim made within the warranty period.
7. Egholm reserves the right to make improvements and design-related alterations to the machine without being obliged to modify previously delivered models in relation hereto.

The warranty does not cover

- Wear and tear, accidents, damage to the equipment caused by operating errors, negligence, changes to the construction of the machine or use of non-Egholm spare parts or attachments.
- Machines with illegible serial numbers.
- Damage caused by force majeure such as lightning, flood, fire, war, civil disturbance, etc. as well as damage resulting from incorrect or insufficient maintenance, consequential damage or other causes over which Egholm has no control.

Conditions

4.2 Complaints

All inquiries regarding the machine should be made at the distributor from whom the machine was purchased. This applies to inquiries concerning normal use, service, maintenance and spare parts as well as to any complaints.

We wish you many years of safe and satisfactory use of your machine.

Best regards
Egholm A/S

4.3 Disposal

When, many years from now, your Park Ranger 2150 comes to the end of its working life, it should be disposed of in a responsible manner and in accordance with the relevant disposal regulations.

1. Hydraulic oil, motor oil, diesel oil, coolant and AC coolant should be taken to the municipal site for the disposal of oil and chemical waste.
2. Remove the plastic and rubber parts and dispose of them in accordance with the applicable environmental legislation.
3. After the parts mentioned have been removed, the machine is ready to be handed over to an authorised municipal scrap merchant.

Wearing parts

**Honest
Machines**

Wearing parts

5.1 Wearing parts – Park Ranger 2150



01100250 Tyres and wheels



90501643 Filter kit 2150



01006500 Air filter



01020020 Oil filter



04003050 Hydraulic filter



01020010 Fuel filter



04003060 Hydraulic oil filter



E50000656 Fan belt 2150



05001080 Bulb, main light



05001050 Bulb, rotary light

5.1 Wearing parts – Park Ranger 2150 - continued



05001030 Bulb, tank gauge



05001090 Bulb, indicator switch



05001110 Bulb, brake light



05001010 Bulb, indicator



05001060 Bulb, rear work light



05001040 Bulb, parking light, front



05001020 Bulb, parking light, rear



04501200 Hydraulic connector, male, 1/4"



04501210 Hydraulic connector, male, 3/8"



04501220 Hydraulic connector, male 1/2"

Wearing parts

5.1 Wearing parts – Park Ranger 2150



04501230 Hydraulic connector, female, 1/4"



04501240 Hydraulic connector, female, 3/8"



04501250 Hydraulic connector, female 1/2"



01006505 Safety element, air filter

Honest Work.

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