

Operator's manual



**Basic machine
City Ranger 2200**

Introduction

Dear Customer

Congratulations with your Egholm product

The City Ranger 2200 is a Danish designed and manufactured product which offers a very flexible way of maintaining outdoor areas.

Optimal use of your Egholm utility machine

To ensure optimal performance of your Egholm 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 the surroundings. We ask you to pay particular attention to section 1.1 Safety. The machine must only be serviced by professionals.

The City Ranger 2200 is designed only for use by professionals. 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 as a permanent part of the machine and so must remain with the machine if it 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 shows what you should pay special attention to.



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 A/S accepts no liability for errors or omissions in the operator's manual.

Contact us

Do not hesitate to contact Egholm A/S should you have questions of any kind regarding your new Egholm product.

Best regards

Egholm A/S

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Introduction

The utility machine City Ranger 2200

The City Ranger 2200 is an outdoor utility machine with a complete range of special attachments that allows you to work outdoors, all year round. Sweeping and vacuuming in spring and autumn, mowing grass and lawn-edge cutting in the summer, sweeping snow, and spreading gravel and sand in the winter. The City Ranger 2200 is market tested, effective and professional. Designed for versatility, this user-friendly machine is extremely reliable and exceedingly comfortable to operate.

Easy attachment changeover

Attachments can be changed quickly and easily. The new attachment system has a single lock and release lever. Use the lever – one click and the attachment is on. In less than a minute. Hoses and couplings are hidden (thus well-protected) and the hydraulics and water supply, power and vacuum hoses connect automatically.

Maintenance

Open a single side cover to check the water, oil, air filter and battery. No need to remove attachments.

Environment

The City Ranger 2200 is environmentally sound – today and tomorrow. Quiet when operating and practically vibration-free. It is designed for use with an exhaust particle filter and catalytic converter, and can use biological hydraulic oil. The machine is far less harmful to the environment than the minimum levels set by the EU.

Comfort

The City Ranger 2200 is an ergonomically-designed outdoor utility machine. The cab is spacious, with good visibility on all sides, and the entry-opening is low and wide. The wheel and seat are fully-adjustable to suit the operator. The seat has suspension (with optional pneumatic suspension) and is very comfortable. All the operating controls – including the joystick for controlling the attachments – are positioned optimally for the operator. Optional air conditioning.

Introduction

**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.



Attention

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 City Ranger 2200 is articulated – it turns sharply, immediately. (Picture 2)



Do not inhale exhaust gas

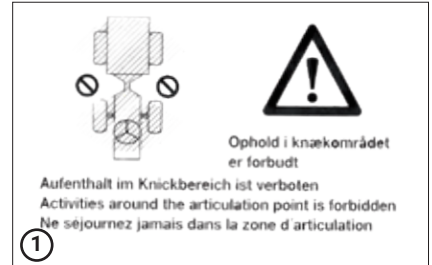
Motor vehicle exhaust gas is hazardous to health and can even be fatal. If the machine is run in a confined space, the exhaust gas must be adequately ventilated out of the room or area, using an exhaust hose, for example. Otherwise doors and windows must be opened, to allow fresh air inside.



Avoid roll-overs

Do not drive the machine in a place where it can slide, tip or roll. Do not drive on slopes with an incline of more than 10°. (Picture 3)

Make sure there is no one close to the machine when it is running.



Prevent people from standing in the working area



Hinged joint



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

General information

1.1 Safety - continued

Avoid crushing fingers

Keep your hands and fingers away from areas where there is a danger of crushing. (Picture 1)

A-frame

Keep fingers and hands away from the A-frame as there is a danger of crushing.

Exhaust pipe

Do not touch the exhaust pipe as it becomes very hot when the machine is running. (Picture 2)



Avoid crushing fingers



Exhaust pipe

General information

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 **City Ranger 2200**
Type: **UHM 2200A0 XX (manufacturing year)**
A XXXXX (serial number)

· has been manufactured in conformity with the provisions of Machinery Directive 2003/37/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.

Place: Lemvig
Date: _____
Signature: 

Knud Olsen, Senior Engineer

1.3 Technical data:

Dimensions	Attached
Length (L).....	2,400 mm
Width (W).....	1,040 mm
Height with cab.....	1,960 mm
Height including roll bar.....	2,000 mm
Max. speed.....	21 km/h

Weight

Machine weight (including cab).....	820 kg
Unladen weight - Egholm 2200 with roll bar.....	760 kg
Max. permitted weight:	
Utility machine.....	1,610 kg
Machine and trailer without brakes.....	2,050 kg
Machine and trailer with overrunning brakes.....	2,500 kg
Trailer without brakes.....	750 kg
Trailer with overrunning brakes.....	,500 kg
Permitted axle load, front.....	790 kg
Permitted axle load, back.....	820 kg

Tyre

Tyre size.....	20 x 10-10
Tyre pressure.....	1.5 bar or 22 PSI

Motor - turbo

Type/manufacturer.....	Daihatsu Diesel
Type:.....	DM 950 DTH
Motor power.....	34 hp or 25 kW at 3,600 rpm

Cylinders.....	3
EU standard.....	Euro IIIA

Refer to the motor operator's manual for further technical data.

General information

1.3 Technical data: - continued

Fuel

Fuel.....	Diesel
Fuel tank capacity.....	38 l diesel
Fuel consumption	
At 2,400 rpm.....	approx. 3.9 l/h
At 3,600 rpm.....	approx. 5.8 l/h

Lubricating system

Lubricating system.....	Pressure-lubricating system with filter
Lubricants.....	Motor oil: approx. 3.3 l synthetic 5W-30
.....	API CF, CF-4, CG-4, CH-4
Air filter.....	Dry, replaceable filter
Cooling system.....	Liquid coolant

Electrical system

Start system.....	Electrical starter with glow plugs
Charging system.....	Generator
Charging capacity.....	2 V, 60 A
Battery.....	12 V, 55 AH battery

Hydraulic oil

Type.....	Texaco Rando HDZ 46
Tank capacity.....	22 l
Brakes.....	Front-wheel drum brakes

1.3 Technical data: - continued

Turning radius

Turning circle inside/outside00/1,640 mm

Information plate

Mounted on the right side of the front chassis

Attention

Specifications may change without notice.

General information

1.4 Steering column



③ ② ①

Ignition lock and light switch

1. Ignition lock
2. Position light/light switch
3. Instrument panel

Automatic alarm

Turning the ignition key activates the alarm for three seconds, to show that the alarm is working.

The alarm sound is repetitive (three seconds – beep ; thirty seconds - pause etc.)

General information

1.4 Steering column - continued

Instrument panel

4. The pre-heater light is activated when the ignition key is turned, showing that the motor pre-heater is on. When the light goes out, the ignition key can be turned all the way to start the City Ranger 2200.

5. Handbrake indicator

6. Charging light.

Normally lights on ignition or when the motor starts. If the light stays on, stop the motor and find the cause. Check the fan belt.

7. Dimmed headlight indicator

8. Indicator-light indicator

9. Hydraulic filter alarm (when lit indicates filter must be replaced). Hydraulic oil low: Hydraulic oil required.

10. Oil alarm. If the light is on during operation, **stop the motor immediately and check the oil**. If the oil is low, it must be topped-up immediately.

11. Temperature alarm

If on it indicates the motor temperature is too high. Switch off all attachments and let the motor run on half-power (rpm) for approx. two minutes. If necessary, clean the radiator grills.

12. Air filter blockage alarm (optional)

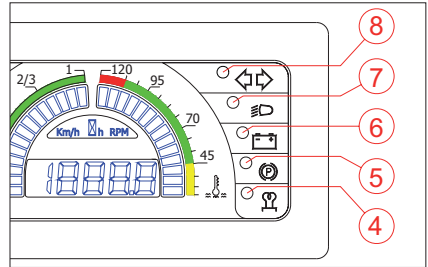
13. Fuel tank indicator. Lights up when there is less than five litres of fuel left in the tank

14. Fuel tank level

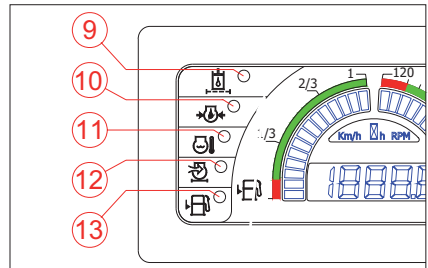
15. Time/rpm/speed counter. Time shown on start-up. Automatically switches over to show rpm

16. Shows rpm or km/h

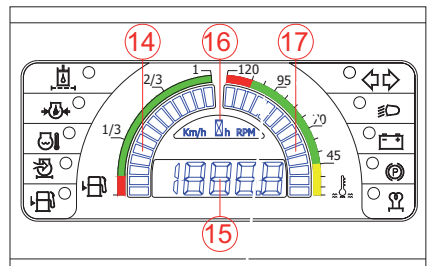
17. Motor temperature indicator



Instrument panel – right



Instrument panel – left



Instrument panel – centre

Sound alarm activates in case of 6, 10, 11, 12 and 13.

General information

1.4 Steering column - continued



18

19

20

21

22

Steering column

- 18. Instrument panel switch to switch between rpm and km/h
- 19. Indicator-light switch/arm
- 20. Horn switch
- 21. Transport lock (disengaged position)
ON: handle must be moved up to the highest position. As the A-frame lifts, the transport lock is automatically activated. OFF: Unhitch the handle and lift the A-frame to the uppermost position. The attachment can now be lowered again.
- 22. Handbrake
The handbrake is engaged by: Press the brake pedal all the way down. Lift the handle up. Release the brake pedal again. To disengage the handbrake: Press the brake pedal. This frees the handle.

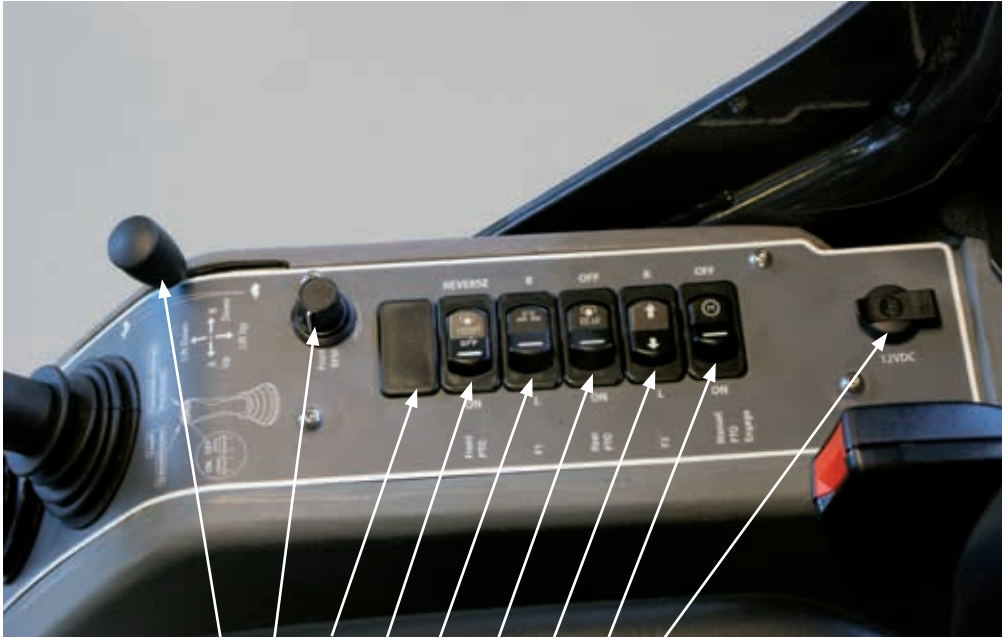
1.5 Operational features



1. Work light, front
2. Work light, rear
3. Rotary light
4. Windscreen wipers
5. Washer
6. Fan heater
7. Air conditioning (option)
8. Hazard lights
9. Radio/CD player

General information

1.6 Joystick console



1. Throttle
2. Attachment speed adjustment (attachment specific)
3. Blank (unused)
4. Front PTO ON/OFF
5. Function (F1), (attachment specific)
6. Rear PTO ON/OFF
7. Function (F2), (attachment specific)
8. Manual start-up:
To start-up an attachment while not sitting in the cab, do the following:
A) Push the throttle all the way forward (full rpm).
B) Hold the switch (8) down, at the same time turning on the attachment. (3) and/or (5)
C) Release the switch after five seconds.
D) Note: If the seat sensor is activated, the PTO will stop.
9. 12 V connector

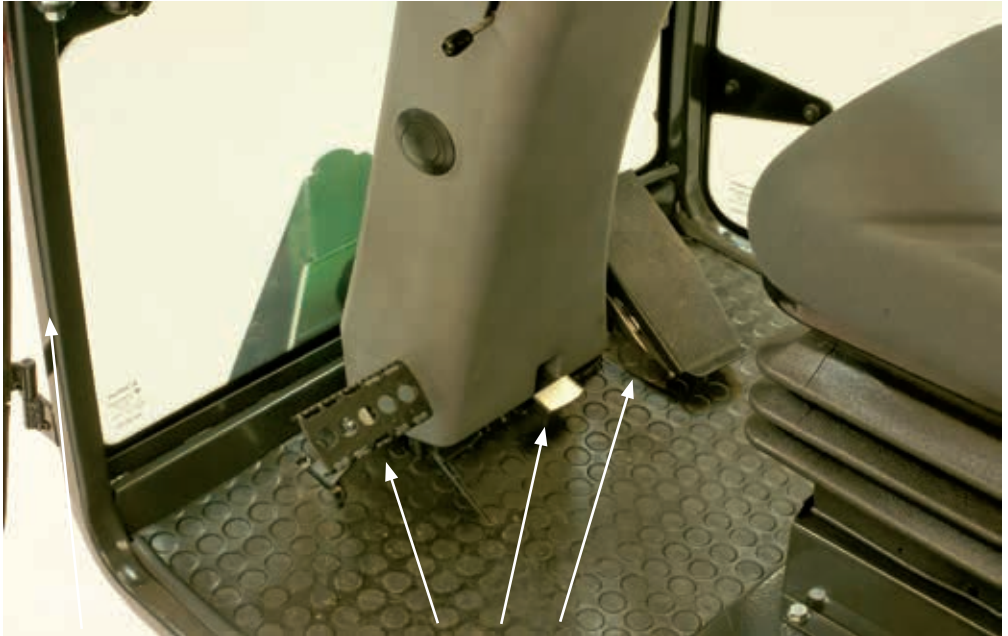
1.6 Joystick console - continued



10. Joystick for A-frame
To lift A-frame: move the joystick up.
To lower A-frame: move the joystick down.
Sideways movement of joystick is dependant on attachment
11. Function-change switch for front attachment (attachment dependant)
12. Weight distribution ON/OFF switch
13. Joystick for the rear attachment and hydraulics on the back end. The functions are attachment-dependant. See the attachment operator's manual.
14. Adjusting weight distribution
15. Safety cover

General information

1.7 Pedals



1. Brake pedal. Depress to brake
When the brake pedal is pushed all the way down, the drive pedal is de-activated.
Handbrake: See section 1.4, point 22.
2. Steering wheel pedal. Push pedal down to adjust steering wheel.
3. Drive pedal. The speed of the machine is variably controlled by the throttle.
When the drive pedal is engaged acceleration is automatic (motor rpm).
Forward drive: Move the pedal forward
Reverse drive: Move the pedal backwards
The pedal automatically returns to the neutral position.
To drive at full speed, the throttle should be moved all the way forwards.

Advice when driving on a steep slope

Users of City Ranger 2200 have reported that, from time to time, they feel that the machine does not accelerate properly when driving up an incline. The machine is designed to drive on an incline of no more than 22%. However, from experience we know that, under certain conditions, this machine can in fact cope with a steeper incline. Egholm has the following advice when driving up a steep incline:

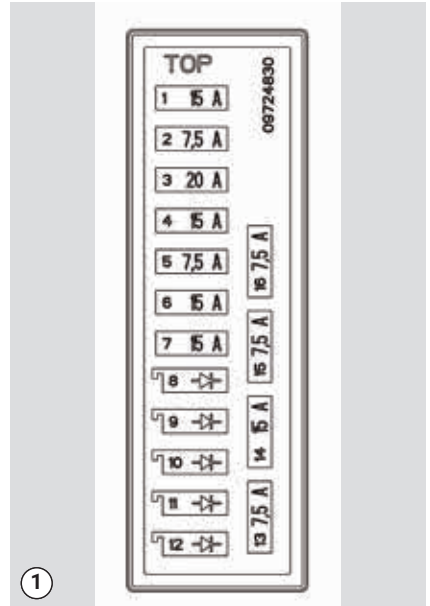
- Set the throttle in the full-speed position
- Then regulate the speed of the machine using the foot pedal
- The function of the foot pedal can be compared to changing gear up or down. The more you press down on the pedal, the higher the gear - the less you press down on the pedal, the lower the gear
- The motor should never run at less than about 3300 rpm.

General information

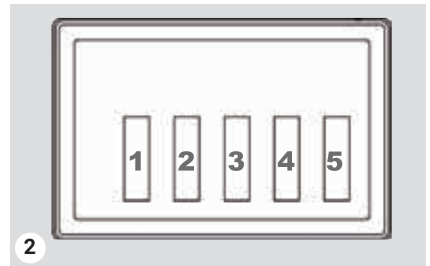
1.8 Fuses

1. 15 Amp Right-side parking light, control current for dimmed headlights, hazard flash
2. 7.5 Amp Weight distribution relay, front-brush change relay, joystick
3. 20 Amp Main current for fan heater relay, AC
4. 15 Amp Safety contact pin 1, seat contact, control current, dump valve on the drive pump
5. 7.5 Amp Instrument panel, MCP1500, generator
6. 15 Amp Polarity reverser contact, indicator and horn contact, primary current for relay for dimmed headlights
7. 15 Amp Brake lights, harting B-frame Pin 3. AUX on the trailer plug (centre), contact J37, water for front brush
8. Diode (rectifier)
9. Diode (rectifier)
10. Diode (rectifier)
11. Diode (rectifier)
12. Diode (rectifier)
13. 7.5 Amp Parking lights, right side
14. 15 Amp Instrument panel lighting, manoeuvring console, left-side parking lights, cabin instrument lighting
15. 7.5 Amp Motor and wheel RPM inductive sensor, electronic amplifier plug
16. 7.5 Amp 12V connector on manoeuvring console
17. Empty

1. 15 Amp Rotary hazard light
2. 20 Amp Windscreen wiper/sprinkler
3. 15 Amp Fan heater, cab light
4. 15 Amp Lights front and back
5. Diode (rectifier)



Fuses



Fuses



Fuses – Roof

General information

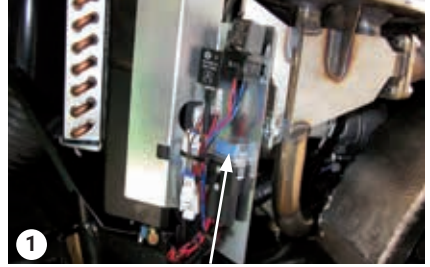
1.8 Fuses - continued

Main fuse

The left rear screen must be opened to access the main 60 Amp fuse. See Section 1.16. (Picture 1)

Main switch

To start the City Ranger 2200, the main switch on the right side of the machine must be set to ON. (Pictures 2 and 3)



Main fuse



Main switch – ON



Main switch – OFF

1.9 Towing fixture

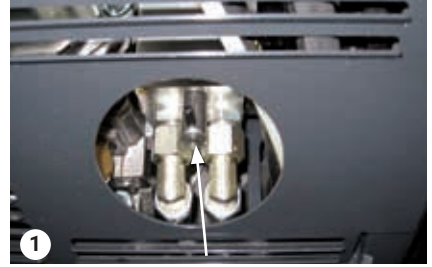
Towing fixture

The towing fixture located under the rear of the machine is used for manual towing of the machine. (Picture 1)

Towing Switch the motor off
 Unscrew the towing fixture
 (anti-clockwise), until it cannot
 turn any more.
 Tow the machine.

After towing: Screw the towing fixture back
(clockwise) until it cannot turn anymore.

The towing fixture must be locked before the
machine can drive again.



Towing fixture



Warning!

Do not start the machine before the
towing screw has been closed.



Attention!

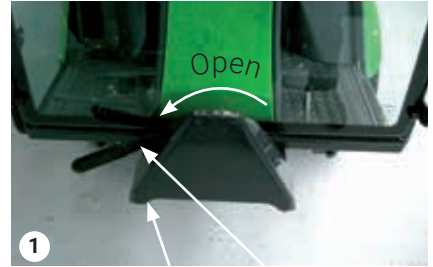
When towing, there is no servo
system.

General information

1.10 Front attachment frame – A-frame

The A-frame locking handle must be in the open position if no attachment is attached. This protects the hydraulic couplings from dirt. (Picture 1)

Attaching an attachment: see the attachment operator's manual.



A-frame locking handle

1.11 Rear attachment frame – B-frame

The B-frame locking handle must be in the open position if no attachment is attached. (Picture 2)

Attaching an attachment: see the attachment operator's manual.



B-frame locking handle

General information

1.12 Cab seat – mechanical or pneumatic suspension

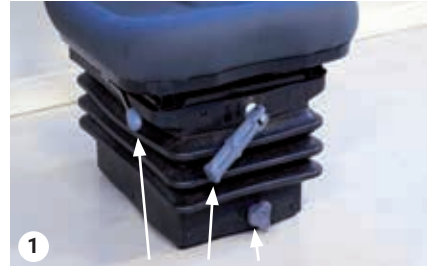
Adjust the seat to suit the driver.

Mechanical (Picture 1)

Height: (Adjust using the handle 1)
Anti-clockwise: higher
Clockwise: lower

Weight: (Adjust using the handle 2)
Anti-clockwise: Softer suspension
Clockwise: Firmer suspension

Forwards/backwards: (Adjust using the handle 3)

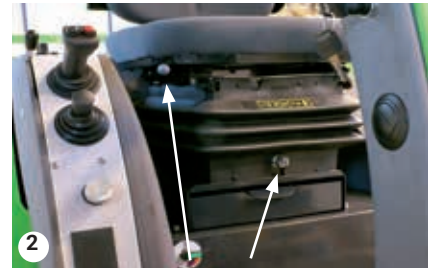


Suspension (Picture 2)

Higher: (Adjust by gradually pressing the handle 1)
The suspension becomes firmer

Lower: (Adjust by gradually releasing the handle 1)
The suspension becomes softer

Forwards/backwards: (Adjust using the handle 2)



General information

1.13 Cab heating

To switch on cab heating, turn the lever under the seat until it is parallel with the seat edge. (Picture 1)

1.14 Cab ventilation

Open the air damper behind the seat to ventilate the cabin. Use the handle on the left side of the seat. Push the handle away from the seat to open the air damper. (Picture 2)

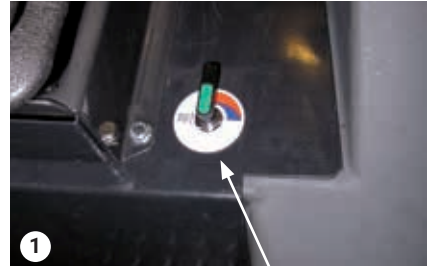
1.15 Air conditioning

Air conditioning can be used if the cabin is too warm and if the windscreen and windows steam up in humid weather conditions.

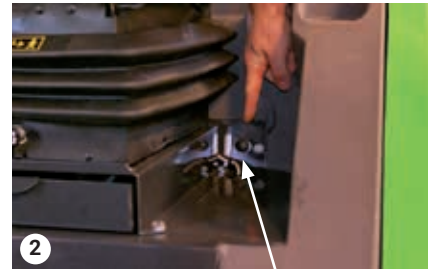
To activate the air conditioning, the cabin fan must be running at level 1 or 2.

It is recommended the air conditioning is serviced at least once a year, to ensure it operates optimally.

Attention: The cab's air conditioning filter and the water condensation drainage pipe must be serviced once a year to avoid any build-up of health-hazardous bacteria.



Adjusting temperature



Air damper handle

General information

1.16 Opening and removing side screens

Opening side screens

1. Press the screen release button. (Picture 1)
2. Open the screen

Removing the side screen

The side screen can be unhooked, for easier machine servicing. (Pictures 2 and 3)



Release button



Removing the side screen catch



Removing side cover

General information

1.17 Opening the loading frame

The loading frame can be opened when checking the motor oil and servicing the machine.

1. Pull the release handle back. (Picture 1)
2. Pull the loading frame back all the way (until it cannot move further)

The safety handle must first be lifted before the loading frame can be closed. (Picture 2)



Release handle



Safety lock

General information

1.18 Removing the cab/roll bar

1. Remove the doors from the cab to reduce the weight to be lifted (cab only)
2. Remove the air-intake grate on the rear of the front covers
3. Disconnect the three connectors on the cables leading to the cab/roll bar. (Picture 1)
4. Unscrew the four bolts behind the driver's seat (two on each side), and remove the safety belt and lock. (Picture 2)
5. Loosen the two bolts under the base plate at the front of the machine. (Picture 3)
6. Tip the cabin/roll bar forwards and chock in place so that the sealing strip can be removed. (Picture 4)



3 connectors behind grate



Loosen the 2 bolts on each side



Bolts under base plate



Chock, remove strip

General information

1.18 Removing the cab/roll bar - continued

7. Remove the sealing strip
8. Pull out the cables. (Picture 1)
9. Tilt the cab/roll bar back into position
10. Remove the two bolts under the base plate at the front of the machine. (Picture 2)
11. Lift off the cab/roll bar (min. 2 people). (Picture 3)



Pull out the cables



Bolts under base plate



Lift off cab/roll bar

1.19 Fitting the cab/roll bar

1. Lift the cab (without doors to reduce weight)/ roll bar up over the steering wheel and seat and place in position (min. 2 people). (Picture 1)
2. Insert the two bolts under the base plate and attach the nuts (but do not tighten). (Picture 2)
3. Tip the cabin/roll bar forwards and chock in place so that the sealing strip can be attached. (Picture 3)
4. Attach a new sealing strip. Ensure that the four bolts behind the driver's seat can be inserted through the holes. Trim off some of the width of the strip adjacent to the holes if necessary
5. Position spacers. (Picture 4)



Lift cab/roll bar



Bolts under base plate



Chock, attach strip



Position spacers

General information

1.19 Fitting the cab/roll bar - continued

6. Insert the cable into position. (Picture 1)

7. Tilt the cab/roll bar back into position

8. Re-insert the four bolts behind the driver's seat and tighten them. Due to tolerances, it may be necessary to guide the holes into the correct position (remember seat belt and lock). (Picture 2)

9. Connect the three connectors on the cables. (Picture 3)

10. Fit the filter and grate.

11. Attach the two rubber strips between the base plate and cab frame (cab only). (Picture 4)

12. Attach the doors to the cab (cab only)



1 Insert the cables



2 Insert the 2 bolts on each side



3 3 connectors behind grate



4 Rubber strips

Operator's manual

**Honest
Machines**

Operator's manual

2.1 Daily checks before start-up

Open the right-hand side rear screen

1. Press the screen release button. (Picture 1)
2. Open the screen all the way or remove the screen

Special attention must be given to the following checks:

Hydraulic oil

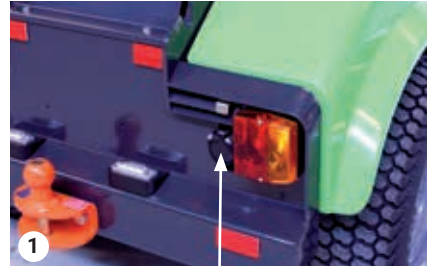
Must be visible in the sight glass. (Picture 2)

Topping-up – see maintenance section 3.4

Motor oil

The oil level must be between the two lines on the dipstick. (Picture 3)

Topping-up – see maintenance section 3.5



Release button



Hydraulic oil – sight glass



Motor oil – dipstick

2.1 Daily checks before start-up - continued

Diesel oil

Tank capacity 38 l.

The oil lamp (see section 1.4) is on when only 5 l of oil are left in the tank = fuel for approx. 1.5 hours of use. (Picture 2)

The oil lamp will only light when the machine is on.

Check coolant

Remove the coolant cover and check that the expansion tank is $\frac{3}{4}$ full.

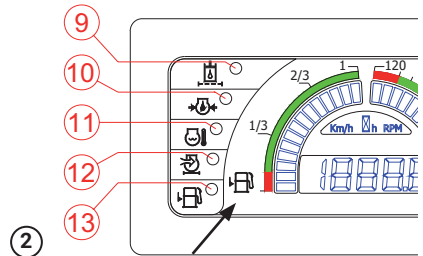


Attention!

Never remove the water cover when the motor is hot.



Topping-up diesel



Diesel oil lamp



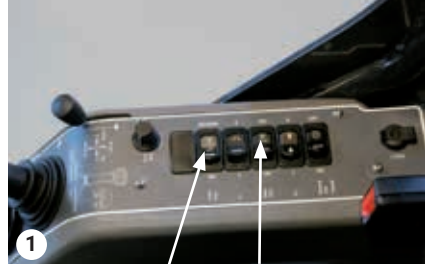
Expansion tank – check coolant

Operator's manual

2.2 Start, drive and stop

Before start-up the following must be done:

1. The PTO front and PTO rear contacts must be engaged. (Picture 1)
 2. Towing fixture must be closed. (Picture 2)
 3. Operator must sit in the cab seat
 4. The brake pedal must be pushed all the way down (section 1.7), or the handbrake engaged (section 1.4)
 5. Turn the ignition key (clockwise) until the pre-heater indicator and other indicators light up. (section 1.4)
Once the pre-heater light goes out, the ignition-key can be turned further to start the City Ranger 2200
 6. Release the brake pedal/handbrake
 7. The drive pedal can now be engaged
- Pedal movements:
Forward – throttle up
Mid-position – Stop
Backwards – throttle down
Speed is variably adjusted. See section 1.7



PTO front - PTO rear



Towing fixture



Warning:

To protect the hydraulic oil system, it is important that the machine is warmed up BEFORE the motor is run at full rpm.



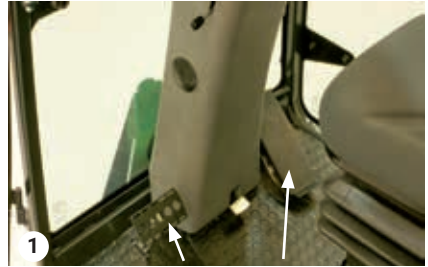
Warning:

The City Ranger 2200 is articulated – it turns sharply, immediately. Turn the steering wheel carefully.

2.2 Start, drive and stop - continued

Turning off the City Ranger 2200:

1. The PTO front and PTO rear contacts must be disengaged
2. Pull the throttle back so the motor is idling
3. Push the brake pedal down (Picture 1) down, lift the parking lock up (Picture 2) and release the brake pedal. (See Section 1.4)
4. Turn off the City Ranger 2200 by turning the key back to the key-release position.



Brake pedal Drive pedal

Operating with front attachments

Before the City Ranger 2200 can drive, the fitted attachments must be lifted clear of the ground.

Pull the joystick back until the attachment is lifted all the way. (Picture 3)

If longer transport distances are involved, the transport lock must be activated. (See Section 1.4)



Transport lock Parking lock

Fitting attachments on the front and back:

Read the operator's manual for the relevant attachment(s).



Joystick

Service and maintenance

**Honest
Machines**

Service and maintenance

3.1 Daily maintenance

Daily maintenance of the City Ranger 2200 is simple, easy and very important. Three things are required: Cleaning the water cooler, oil cooler and air filter, and cleaning of the condenser where air conditioning is fitted. (See Section 3.3)

Cleaning the A-frame

Keep the A-frame clean. (Picture 1)



1 Top of A-frame

Cleaning the hydraulics

A-frame. (Picture 2)

1. Turn the locking handle on the A-frame (the same as when connecting an attachment) – the snap couplings are now accessible
2. Wipe the coupling clean with a soft cloth
3. Turn the locking handle back



2 Clean the snap couplings – A-frame

B-frame. (Picture 3)

1. Push the snap couplings' spring-loaded protective cover down
2. Wipe the couplings clean with a soft cloth



3 Clean the snap couplings – B-frame

Cleaning water/oil cooler (and condenser, if fitted)

1. Open or remove the side screen if necessary – see section 1.15
2. Using compressed air, clean the cooler fins of the water/oil cooler, and the condenser if fitted. (Picture 4)
3. The cooler fins can be washed with clean water.

N.B! The condenser can be removed for cleaning.



4 Clean coolers using compressed air



Attention!

Do not use hard implements or high-pressure cleaners when rinsing the cooler as this may damage the fins.

Service and maintenance

3.1 Daily maintenance - continued

Air filter housing and air filter element

1. Wipe the air filter housing with a clean cloth
2. Remove the element and clean using compressed air. (Picture 1)



Warning!

Always switch off the engine before washing the machine



Filter housing / air filter element

3.2 Lubricating

Cables and movable parts

Lubricate with a little oil approx. every 15 hours.

Service and maintenance

3.3 City Ranger 2200 service and maintenance chart

Operation		Service schedule										
		Daily	50	200	400	600	800	1000	1200	1400	1600	1800
Cabin filter	Replace		•	•	•	•	•	•	•	•	•	•
Filter housing / air filter element	Inspect	•										
Motor oil	Replace		•	•	•	•	•	•	•	•	•	•
Hydraulic oil and filter	Inspect	•		•		•		•		•		•
	Replace		•				•		•		•	
Air filter (1)	Inspect	•										
	Replace		•	•	•	•	•	•	•	•	•	•
Cooling water (2)	Inspect	•	•	•	•	•	•	•	•	•	•	•
Lubricating A/B-frame	Inspect				•				•			
Fan belt (3)	Inspect		•	•	•	•	•	•	•	•	•	•
Hydraulic couplings	Inspect	•	•	•	•	•	•	•	•	•	•	•
Electrical system	Inspect		•		•		•		•		•	
Motor oil filter	Replace		•	•	•	•	•	•	•	•	•	•
Lights and mirrors	Inspect	•	•	•	•	•	•	•	•	•	•	•
Tyre pressure	Inspect	•	•	•	•	•	•	•	•	•	•	•
Fuel filter	Replace		•									
Fuel hoses (4)	Inspect		•		•		•		•		•	
Cooler (5)	Clean	•	•	•	•	•	•	•	•	•	•	•
Oil cooler (6)	Clean	•	•	•	•	•	•	•	•	•	•	•
Water cooler thermostat	Inspect		•		•		•		•		•	
Cooler hoses (7)	Inspect		•		•		•		•		•	
Temperature warning	Inspect		•	•	•	•	•	•	•	•	•	•
Fan adjustment	Inspect				•				•			
Throttle adjustment	Inspect		•				•		•		•	
Throttle cable adjustment	Inspect		•				•		•		•	
Brakes	Inspect		•	•	•	•	•	•	•	•	•	•
Wheel bolts tightening	Inspect		•				•		•		•	
Battery (8)	Inspect		•				•		•		•	
A/C Service												
AC drivebelt	Inspect			•	•	•	•	•	•	•	•	•
AC drivebelt	Replace										•	
AC coolant	Inspect						•		•		•	
AC drier (9)	Replace										•	
AC heat overflow	Clean				•		•		•		•	

1) If the machine is operated in a very hot or dusty environment, more frequent servicing may be necessary.

2) Coolant water should be changed after 800 hours of operation or at least once a year.

3) The fan belt should be replaced after 1,200 hours of operation or at least once a year.

4) Fuel hoses should be replaced once a year.

5) If the machine is operated in a very hot or dusty environment, more frequent servicing may be necessary.

6) If the machine is operated in a very hot or dusty environment, more frequent servicing may be necessary.

7) Cooler hoses and hose clamps should be replaced every two years.


8) Battery should be replaced every two years.

9) Should be changed every three years.

Attention: All liquids (oil, coolant, hydraulic fluid, etc.) must be changed every year.

Service and maintenance

		Service schedule											
Operation		Hours											
		Daily	2000	2200	2400	2600	2800	3000	3200	3400	3600	4000	
Cabin filter	Replace		*	*	*	*	*	*	*	*	*	*	*
Filter housing / air filter element	Inspect	*											
Motor oil	Replace		*	*	*	*	*	*	*	*	*	*	*
Hydraulic oil and filter	Inspect	*		*		*		*		*		*	
	Replace		*	*	*	*	*	*	*	*	*	*	*
Air filter (1)	Inspect	*											
	Replace		*	*	*	*	*	*	*	*	*	*	*
Cooling water (2)	Inspect	*	*	*	*	*	*	*	*	*	*	*	*
Lubricating A/B-frame	Inspect		*	*	*	*	*	*	*	*	*	*	*
Fan belt (3)	Inspect		*	*	*	*	*	*	*	*	*	*	*
Hydraulic couplings	Inspect	*	*	*	*	*	*	*	*	*	*	*	*
Electrical system	Inspect		*	*	*	*	*	*	*	*	*	*	*
Motor oil filter	Replace		*	*	*	*	*	*	*	*	*	*	*
Lights and mirrors	Inspect	*	*	*	*	*	*	*	*	*	*	*	*
Tyre pressure	Inspect	*	*	*	*	*	*	*	*	*	*	*	*
Fuel filter	Replace		*	*	*	*	*	*	*	*	*	*	*
Fuel hoses (4)	Inspect		*	*	*	*	*	*	*	*	*	*	*
Cooler (5)	Clean	*	*	*	*	*	*	*	*	*	*	*	*
Oil cooler (6)	Clean	*	*	*	*	*	*	*	*	*	*	*	*
Cooler hoses (7)	Inspect		*	*	*	*	*	*	*	*	*	*	*
Cooler hoses (7)	Inspect		*	*	*	*	*	*	*	*	*	*	*
Temperature warning	Inspect		*	*	*	*	*	*	*	*	*	*	*
Fan adjustment	Inspect		*	*	*	*	*	*	*	*	*	*	*
Throttle adjustment	Inspicer		*	*	*	*	*	*	*	*	*	*	*
Throttle cable adjustment	Inspect		*	*	*	*	*	*	*	*	*	*	*
Brakes	Inspectr		*	*	*	*	*	*	*	*	*	*	*
Wheel bolts tightening	Inspect		*	*	*	*	*	*	*	*	*	*	*
Battery (8)	Inspect		*	*	*	*	*	*	*	*	*	*	*
A/C Service													
AC drivebelt	Inspectr		*	*	*	*	*	*	*	*	*	*	*
AC drivebelt	Replace		*	*	*	*	*	*	*	*	*	*	*
AC coolant	Inspect		*	*	*	*	*	*	*	*	*	*	*
AC drier (9)	Replace		*	*	*	*	*	*	*	*	*	*	*
AC heat overflow	Clean		*	*	*	*	*	*	*	*	*	*	*
			*	*	*	*	*	*	*	*	*	*	*
			*	*	*	*	*	*	*	*	*	*	*

 Basic service

 Full service

 One-off service

Service and maintenance

3.4 Hydraulic system

Hydraulic oil

The hydraulic oil must be checked when it is cold. The oil must be visible in the sight glass. If the oil is not visible it should be topped-up. (Picture 1)



Attention!

The area around the ventilation and oil inlet must be cleaned BEFORE the oil cover is removed, to prevent potentially damaging dirt and contamination entering the hydraulics.



Hydraulic oil – sight glass Filling cap

Hydraulic oil top-up

1. Park the City Ranger 2200 on a level surface.
2. Switch the motor off.
3. Remove the oil cover and top-up with Texaco Rando HDZ 46 oil.
4. Replace the filling cap
5. Check that the oil fills half the sight glass when the oil is cold (maximum)

Please note that the rear attachment must be closed during the oil check.

Tank filter/hydraulic oil filter

The City Ranger 2200 is mounted with a combined filter. The filter is replaced and filter housing cleaned during service.

Service and maintenance

3.5 Motor maintenance



Attention!

Always switch off the motor when checking the oil and when changing the oil and the oil filter.

Motor oil check. (Picture 1)

1. Park the City Ranger 2200 on a level surface.
2. Check the oil level before the motor starts.
3. Take the dipstick out, dry and put back.
4. Take the dipstick out again to read the oil level.
5. The oil level must be between the two lines on the dipstick.
6. Top-up with oil if the level shown on the dipstick is below the line.
7. Always make sure the machine has enough oil.

Topping-up the motor oil /Filling with motor oil:

1. Remove the cap at the end of the oil filling hose. (Picture 2)
2. Fill oil until the oil reaches the top line on the dipstick
3. Wait approx. 5 minutes after adding the oil
4. Then check the oil level again. It may take a little time for the oil to reach the oil pan

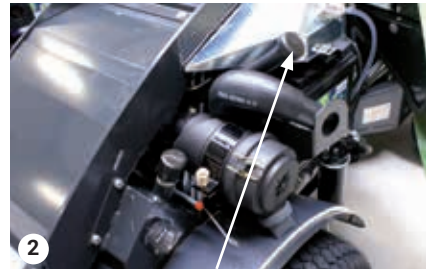
Motor oil change

The motor oil should be changed after the first 50 hours of use. Changing the oil is easier when the motor is warm.

1. Remove the oil pan bottom seal, to allow the old oil to run out. (Picture 3)
 2. Remember to put the bottom seal back again.
 3. Fill with new motor oil until the level reaches the top line on the dipstick.
- Approx. 3.3 litres if the oil filter has been changed, otherwise approx. 3.1 litres of oil



Check the oil level



Motor oil cap



Removing the bottom seal

3.5 Motor maintenance - continued

Recommendations concerning oil:

For best engine performance, we recommend using warranty-certified Briggs & Stratton engine oils. Other high-quality oils may be used if they have CF or CF-4 engine oil classification. Never use special additives.

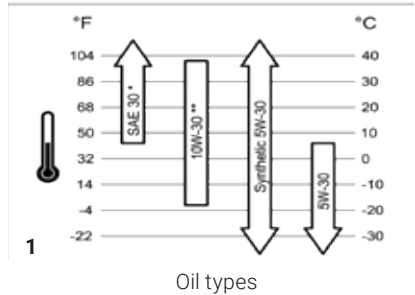
The outdoor temperature determines if the oil viscosity is correct for the engine. Use the table to select the best viscosity for the expected outdoor temperature range. (Picture 1)

If an SAE oil is used at temperatures below 40°F(4°C), the engine will be difficult to start.

At temperatures below 80°F (27°C), the use of 10W-30 oil will mean that oil consumption will be greater than normal. Check oil level more frequently.

Replacing the oil filter:

1. Remove the bottom plate.
2. It is recommended that the right rear wheel is removed, as this makes replacing the filter much easier.
3. Remove the right wheel screen. (Picture 2)
4. Remove the oil filter using the filter spanner.
5. Lubricate the new filter packing with a thin layer of oil.
6. Attach the new filter by hand.
7. Do not use the filter spanner, as that will over tighten the filter.
8. Check that the filter is tight by letting the motor running
9. Stop the motor and check the oil level.
10. Top-up with oil if necessary, as the oil level drops when the oil filter is replaced.
11. Attach the rear screen, rear wheel and bottom plate again. (Picture 3)



Service and maintenance

3.6 Fuel



Attention!

Always stop the motor before refuelling. Avoid flames and sources of ignition. Diesel oil is highly flammable.

Fuel

Use ONLY diesel oil. (Picture 1)

Important when refuelling!

Be aware of dirt and contamination when refuelling as this can lead to problems with the fuel injection pump. The motor must never run dry of diesel as this allows air to enter the fuel system.

Cleaning and replacing the fuel filter

Cleaning must take place in a clean environment.

- 1) Unscrew the filter. (Picture 1)
- 2) Attach a new filter.
- 3) Prime the fuel filter using the pump on the filter housing

Fuel tank

The fuel tank is an integrated part of the cab around the seat and joystick console.



Warning!

Never screw a bracket or other object onto the fuel tank.

Removing air from the fuel system/fuel pump

- 1) Open the bleed fixture on the fuel filter. (Picture 1)



Diesel cover



Fuel filter

Service and maintenance

3.6 Fuel - continued

- 2) Engage the pump handle until fuel begins to escape.
- 3) Close the bleed fixture.
- 4) Turn the ignition key until the motor starts.



Attention!

If the motor is very warm, do not attempt to bleed the fuel system. If fuel spills onto a very hot exhaust manifold, it may ignite.



Attention!

Switch the motor off before checking/replacing fuel hoses. Damaged fuel hoses can cause fire.

Fuel hoses must be checked every time the machine is serviced.

- 1) Check for loose hose clamps – lubricate with a little oil on the clamp screw and tighten.
- 2) If hoses and hose clamps are worn, they should be immediately replaced.
- 3) Remove air from the fuel system, if fuel hoses have been replaced.



Bleeding screw on the fuel pump

Service and maintenance

3.7 Cooler

Removing the cooler cover: attention!

Never remove the cover when the motor is hot, as hot water can escape and cause serious burns. Wait for at least ten minutes after the motor has been switched off and then remove the cooler cover.

Check the coolant daily

- A) Remove the cooler cover
- B) Check that the tank is $\frac{3}{4}$ full and top-up if necessary. (Picture 1)



Attention!

Always switch the motor off before topping-up with coolant!

Topping-up the coolant

- A) Remove the cooler cover and fill the cooler and tank until approx. $\frac{3}{4}$ full. Max. capacity 7.6 l.
- B) Coolant mixture must be 50 % pure water and 50 % coolant or as described on the product label.
- C) Carefully replace the cooler cover.
- D) Start the Egholm 2200 and run the machine until it is sufficiently warm.
- E) Switch the motor off and add more coolant. (Picture 2)

Important – when filling coolant:

- 1. After repair
or
- 2. After the expansion tank has been empty
check the bleed valve on the water pump to ensure there is no air in the cooling system.

Checking coolant hoses

Hoses and hose clamps must be replaced every two years or earlier, if they are damaged or worn.



Cooler cover on cooler tank



Topping-up the coolant/ Filling up with coolant

Service and maintenance

3.7 Cooler - continued

Preventing overheating:

If the warning light is ON, all attachments must be switched off and the motor must be run at half-throttle. The air-intake grill in the rear screen must be cleaned and the source of overheating located. If in doubt, contact your Egholm dealer.

Cleaning the water cooler:

Described in section 3.1



Air filter housing

Vacuum valve

3.8 Air filter

Cleaning the air filter:

- A) When the Egholm 2220 is operating in dirty and dusty conditions, open the vacuum valve every day to get rid of larger grit and dust particles.
- B) Open the air filter housing.
- C) Remove the filter element.
- D) Wipe the air filter housing with a clean cloth.
- E) Carefully clean with compressed air from the inside.
- G) Put the air filter element back and close the filter housing. (Picture 1)

3.9 Battery



Attention!

Observe the following when removing a battery:

- A) The machine must be switched off.
- B) Remove the cables from the battery terminals first.
- C) Avoid short-circuits across the battery terminals or inadvertently connecting/short-circuiting the battery + terminal to some other part of the machine. (Short-circuiting will cause sparks.)
- D) Avoid sparks, fires, and other sources of ignition. Do not smoke.
- E) When the battery is to be reconnected, connect the + terminal first, followed by the – terminal.



Attention!

Sulphuric acid is hazardous and can cause loss of sight or serious burns and generates volatile gases.

Service and maintenance

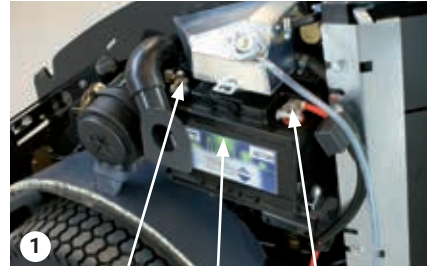
3.9 Battery - continued

Battery charging:

The battery charger's terminals are connected to the battery so that the + terminal is connected to the battery's + terminal, and the - terminal is connected to the battery's - terminal.

Battery fluid level:

The level should be checked once a year. Only distilled water may be added (Picture 1)



- terminal Battery + terminal

3.10 Fan V-belt

Adjusting and tightening:

An inadequately tightened fan belt can cause the motor to overheat and the battery to be insufficiently charged.

A) Check the V-belt by pressing the middle section with a finger to see if there is approx. 7–9 mm slack (about 10 kg of pressure).

B) Check the V-belt for wear and tear.

Tightening:

Loosen the two bolts that hold the generator, and then adjust/tighten them until the V-belt is at the required tension. Remember to tighten the bolts and nuts after adjusting!

Service and maintenance

3.11 Adjusting the brakes

1. Lift the front end using a jack and remove both front wheels
2. Turn the brake drum until the adjustment screw inside the drum is visible through the inspection hole. (Picture 1)
3. Tighten the adjustment screw through the inspection hole using a screwdriver. (Picture 2)
4. Tighten the adjustment screw until the brake drum begins to resist free rotation. (Picture 3)
Perform this adjustment on both sides.



Inspection hole



Service and maintenance

3.11 Adjusting the brakes - continued

5. Check the brake pedal play. The pedal should depress 3-5 cm before it encounters resistance. (Pictures 1+2)

6. Re-fit the front wheels



Check the pedal has 3-5 cm play



Check the pedal has 3-5 cm play

Conditions

**Honest
Machines**

Conditions

4.1 Warranty

The warranty period for the materials and manufacture of this City Ranger 2200 is 12 months from the date of purchase. In case of errors or defects on the machine within the warranty period, Egholm A/S will carry out the necessary repairs without charge for materials and working hours in accordance with the terms and conditions listed below.

The scope of the 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 distributor from whom 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 A/S 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, changes to the construction of the machine or use of non-Egholm spare parts or implements.
- Machines with illegible serial numbers.
- Damage caused by force majeure such as lightning, flood, fire, war, civil disturbance, etc. or other causes over which Egholm A/S has no control.

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 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 City Ranger 2200 has reached the end of its working life, it should be disposed of in a responsible manner that conforms with relevant disposal regulations.

1. Used hydraulic oil, motor oil, diesel oil, coolant and AC coolant are to be delivered at an approved waste disposal facility or site.
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 approved scrap merchant.

Wearing parts

**Honest
Machines**

5.1 Wearing Parts - City Ranger 2200



01100260 Tyre and wheel



90501645 Filter kit



01006500 Air filter



01006580 Oil filter



01002000 Hydraulic filter



01006520 Fuel filter



01007000 Cab filter 2200



01604030 AC-belt 2200



05004250 Drying filter



01006770 Fan belt 2150/2200

Wearing Parts

5.1 Wearing Parts - City Ranger 2200



05001150 Bulb, rear work light



05001180 Bulb front work light



05001050 Lightbulb, rotating flash



05001010 Lightbulb, main light - 281



05001060 Lightbulb, main light - 285



05001040 Lightbulb, main light - 286



05001140 Lightbulb, main light - 287



04501320 Hydraulic couplings
A+B frame, 1/4"



04501330 Hydraulic couplings A+B frame, 3/8"



04501200 Hydraulic couplings rear tap, male

5.1 Wearing Parts - City Ranger 2200



04501230 Hydraulic couplings
rear tap, female

Notes

Honest Work.

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