

Fire Fighting

Operator's & Parts Manual



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Please note: All information in this operator's manual is based on the latest product information available at the time of printing. The policy of Goldacres is one of continuous improvement and as such, Goldacres reserve the right to alter any specifications and designs without notice and without incurring any obligation regarding such changes. No part of this manual may be reproduced without written permission from Goldacres. All photographs and technical information remain the property of Goldacres.

General Information & Specs

Chassis:

The chassis is an all steel construction, that is fully welded for superior strength. The chassis is shot blasted, primed and then protected by the Goldacres paint process for excellent chemical resistance and durability.

Paint Colours:

Steel work: G13 Dark Green

Tank:

All tanks are constructed from UV resistant polyethylene. Polyethylene tanks have a very high chemical resistance.

Due to the rotomoulding process, there can be a variance in the overall dimensions of the tank which in turn results in variations to the tank capacity. For this reason, calibration markings should be used as a guide only.

Honda Engine

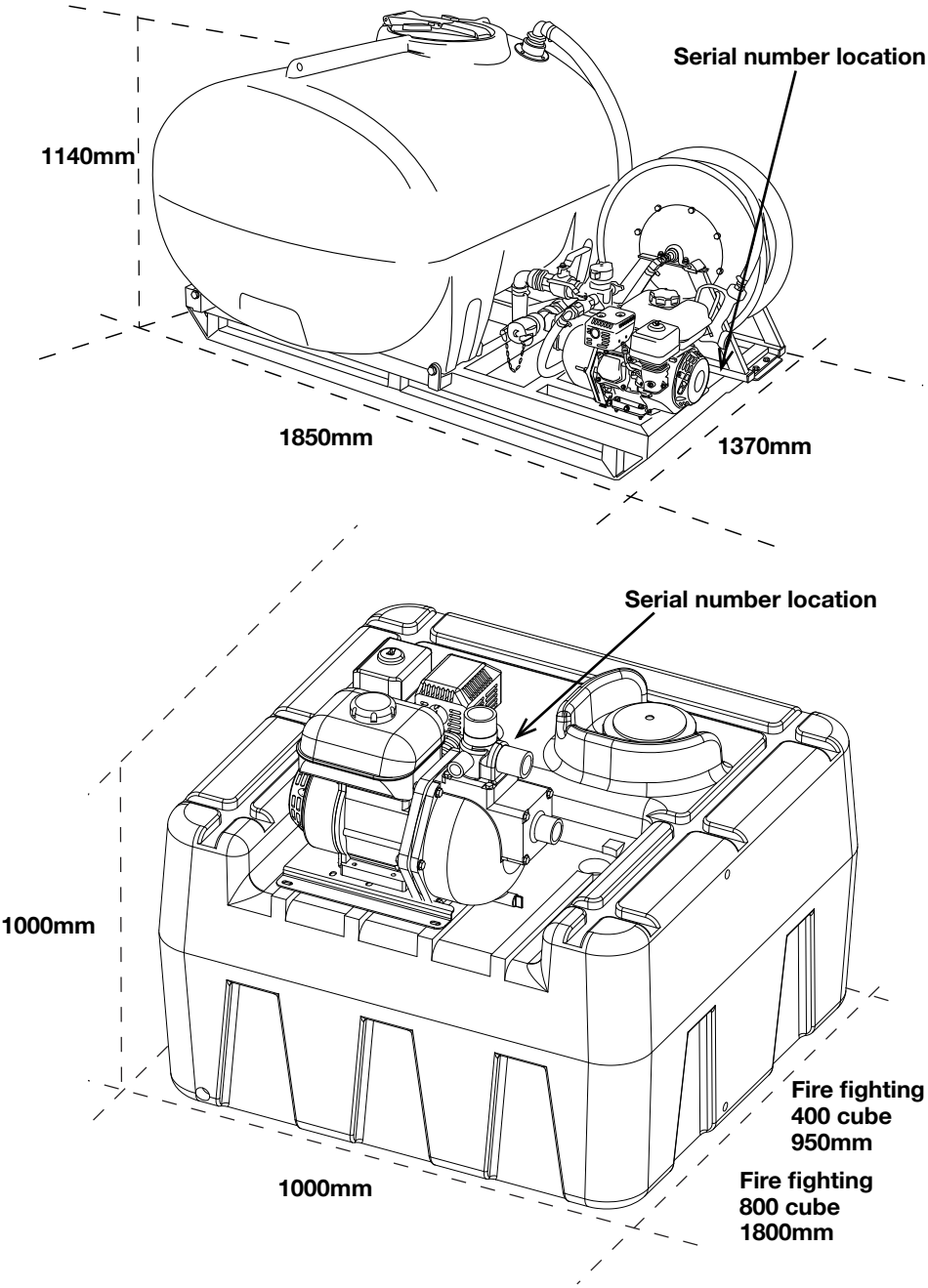
Engine Oil

- Engine oil is a major factor affecting engine performance and service life. Non-detergent oils and vegetable oils are not recommended.
- Be sure to check the engine on a level surface with the engine stopped.

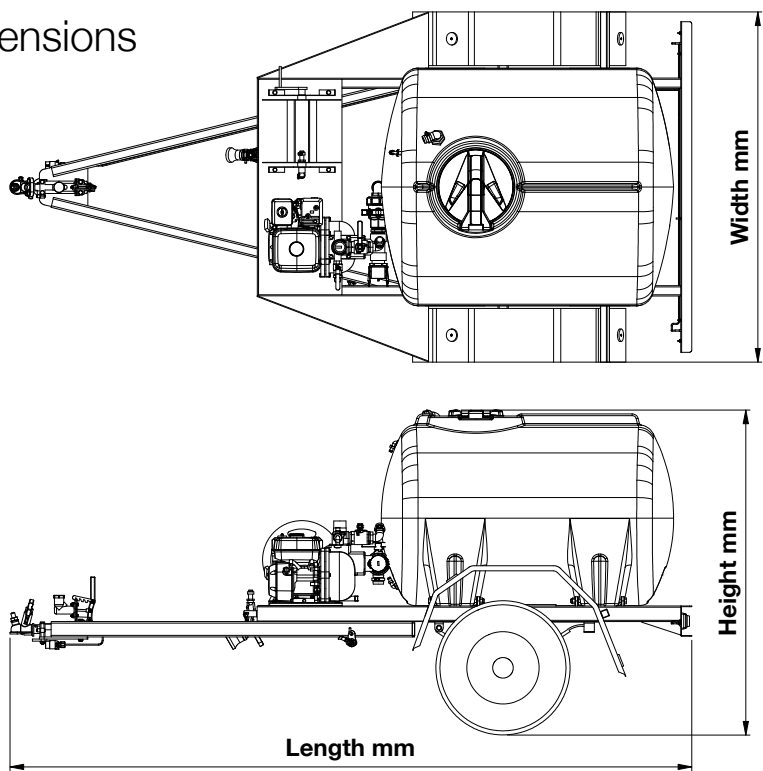
Use Honda 4-stroke oil or an equivalent high-detergent, premium quality motor oil certified to meet or exceed U.S. automobile manufacturer's requirements for Service Classification SG.SF/CC.CD. Motor oils classified SG.SF/CC.CD. will show this designation on the container. SAE 10W-30 is recommended for general, all-temperature use. Ambient temperature use. Other viscosities may be used when the average temperature in your area is above the recommended range for SAE 10W-30.

NOTE: Running the engine with insufficient oil can cause serious damage.

Dimensions



Dimensions



Trailer Type	Length mm	Width mm	Height mm
1000L Farm Pack Eco Trailer Work Ready	3300	1695	1573
1200L Fire Fighting Trailer	3500mm	1820mm	1600mm (approx)
2000L Fire Fighting Tandam Trailer	3900mm	1820mm	1900mm (approx)

Specifications

Trailer Type	Tare weight	Gross trailer weight
Fire fighting water cart 800 litre	370 kg	1170 kg
Fire fighting water cart 1000 litre	370 kg	1370 kg
Fire fighting water cart 1200 litre	385 kg	1585 kg
Fire fighting water cart 2000 Litre (tandem)	680 kg	2680 kg
Fire fighting 450 cube	60 kg	510.kg
Fire fighting 800 cube	90 kg	890.kg
Fire fighting 1000 skid	100 kg	1100.kg

Tyre size	Tyre pressure	Max loaded speed
750x16 - 8 ply (4WD Tyres)	400 kpa (60 PSI)	80 km/h
245/75R16	450 kpa (65 PSI)	80 km/h

Connecting to the vehicle

Prior to connecting your vehicle or mounting the fire fighting unit, it is important that the operator has read and fully understands this manual.

Ensure that the vehicle is suitably rated to safely tow/carry the fire fighting unit and that the tow ball and tail light connections match the vehicle.

Transporting Instructions

All relevant transport regulations must be adhered to when transporting the fire fighting unit / water cart (ie. speed regulations, oversize signs, flashing light etc). It is the operator's responsibility to know the relevant regulations.

Make sure the fire fighting unit / water cart is securely hitched to the towing vehicle.

Ensure that the tail/indicator lights on the unit are connected via the 7 pin trailer plug (if fitted).

CAUTION: Take care when reversing the fire fighting unit /water cart. If driver visibility is restricted use another adult, with a clear view to the rear of the equipment, to give reversing directions.

It is the operator's responsibility to know the tare weight and gross weight of the fire fighting unit/water cart and tow vehicle combination. Indicative tare weights are provided herein. If any alterations are made to the equipment, it is the operator's responsibility to know the tare weight and the gross weight of the modified equipment at all times.

Operation

Prepare for use

1. Inspect the unit to ensure there is no damage or wear which could lead to injury, further damage or reduce its performance.
2. Check all hoses and fittings, including hose on hose reel and nozzle, for leaks or damage.

3. Check all bolts and nuts to make sure they are tight and secure.
4. Check tyre pressures if applicable.
5. Check engine as per included manufacturer's operator manual.
6. Check pump as per included manufacturer's operator manual.

Instructions - Trailed

CAUTION: Do not run pump dry as this may cause damage to the pump.

NOTE: Ensure you operate the unit on level ground to prevent oil alert being activated.

1. Follow steps in "Prepare for use" instructions as above.
2. Remove quick release coupling cap
3. Connect suction hose (option) to quick fill coupling point.
4. Turn the suction tap on ball valve to the OFF position. Lever cross ways.
5. Turn ON. Lever in line. The large handle tap.
6. Follow instructions for use of the pump for filling as per pump manufacturers operators manual included.
7. Start the engine.
8. Fill the tank with the required amount of water.
9. Replace the quick release coupling cap.
10. Turn the suction tap on ball valve to the ON position. Lever in line.
11. Turn ON. Lever in line. The small tap to the hose reel.
12. Turn Off. Lever cross ways. the large handle tap.
13. Unwind the entire hose from hose reel to ensure maximum performance.
14. Open nozzle to create desired spray pattern.

End of day tasks

If the fire fighting unit/water cart is to be removed from the tow vehicle:

- Ensure the main tank and any other tanks fitted are empty. (To drain the main tank follow the instructions below.)
- Chock wheels appropriately to prevent movement.
- Lower the jockey wheel/landing leg and wind up until weight is taken off tow vehicle.
- Release ball coupling from tow ball.
- Release safety chains and remove tail light plug.
- Where fitted, disconnect all lines between the equipment and the tow vehicle (i.e: hydraulic lines, foam marker lines, etc.)

NOTE: Store the equipment in a suitable location to prevent freezing. If the equipment is to be left where freezing may occur, cover the pump with a material bag and empty pump of all water by removing the bung in the bottom of the pump. Make sure any ice has thawed before using. Open all ball valves to prevent cracking of the ball valve housing by ice.

Drain the main tank

CAUTION:

- The quick-drain is to be used solely for draining. Do not fill through the quick-drain line.
- If this unit has been used with chemicals be careful where the drainage from the tank is being deposited as it may contain chemical residue.

The main tank should be drained through the quick-drain ball valve. This line drains from the side of the tank sump and almost all the tank liquid will drain through this line. To drain, open the quick-drain ball valve. When finished draining, make sure the quick-drain ball valve is closed.

Engine & Pump Safety Alert

To get the best out of your Aussie Pump these important warning notices need to be observed.

- 1 Four stroke petrol engines supplied with Aussie Pump products use unleaded gasoline.
- 2 **Pump must be primed** before starting. Fill pump body with liquid. Pump must not be allowed to run without liquid passing through the casing. **DO NOT** run pump either dry or with insufficient water supply. Pump supply or delivery lines must not be shut off.
- 3 Do not use the pump in a gaseous or hazardous environment or near combustible material.
- 4 Do not use the pump in an enclosed area, engine exhaust could build up and cause asphyxiation.
- 5 Do not refuel engine while operating. Shut engine down before refueling.
- 6 Do not run pump dry.
- 7 Some engine components will get hot during operation. Do not touch engine components while engine is running or immediately after operation. For details check engine operator's manual.
- 8 Do not let children operate the pump.
- 9 Familiarise yourself with the pump's controls with emphasis on how to stop the pump quickly.
- 10 Always refuel in a well ventilated area, do not smoke or allow flames or sparks in the refuelling area or where gasoline is stored.
- 11 Do not over fill the fuel tank, as spilled fuel can ignite if it comes into contact with hot engine parts or sparks. After refueling, make sure tank cap is closed properly and is secure.
- 12 Protect your pump from pressure spikes by installing a by-pass or pressure relief valve if sudden shut off of the water flow is likely to occur.
- 13 If your pump is supplied with an Absorbed Glass Mat dry cell battery gel battery,

the battery **must** be recharged using a **Trickle Charge battery charger**. Contact a battery specialist for further assistance.

- 14 Do not pump hydrocarbons with this pump.

For maximum performance, efficiency and life, operate the pump at the best efficiency point ... 85% of total pump head.

Start Up & Installation

When installing an Aussie self priming pump, always remember that the closer the pump is placed to the source of supply the better the performance will be.

To ensure maximum capacity select a site that will permit the shortest and most direct suction piping and smallest vertical lift.

Connecting the Suction Hose

Use commercially available hose, hose connector and hose bands. The suction hose must be of reinforced non collapsible construction. Suction hose length should not be longer than necessary as the longer the suction hose, the less delivery performance of the pump. Self priming time is also proportional to suction hose length!

A strainer should always be used on the end of the suction hose to keep solids out of the pump.

Check carefully to make sure there are no air leaks in the suction line and that the rubber gaskets are in good condition.

Priming

Remove the priming cap at the top of the delivery port. Fill pump body with water and refit priming cap tightly.

Open gate valve on delivery line if fitted, turn on engine and run at full speed during priming. Allow up to 3 minutes to prime.

Never attempt to operate pump without priming first. Extended dry operation will destroy pump seal.

If unit has been run dry, stop the engine immediately, allow the pump to cool before adding priming water.

Hydraulic Shock

If the water flow is suddenly terminated by closing a valve, without stopping the pump first, it can cause hydraulic shock. This can travel back to the pump causing serious damage. To prevent pump damage install a by-pass or safety relief valve.

Cavitation

Your pump is cavitating if knocking noises and vibrations can be heard when it is operating. If you continue to operate your pump when it is cavitating, it will be damaged.

How to avoid cavitation

- Minimise the number of valves and bends in suction line
- Suction length should be as short as possible
- Suction pipe should be at least the same diameter as the pump inlet connection
- Use long radius bends
- Do not allow air into the suction line
- Ensure adequate submergence, at least 5.3 times the suction hose diameter

Handy service hints

1. To maximize pump life, drain pump after use and flush out with clean, fresh water.
2. Read engine manufacturer's owner's manual thoroughly and service as recommended.
3. Store pump in a dry, safe location when not in use.
4. If storing for long periods, drain fuel from engine and tank.
5. Aussie Quik Prime pumps are specifically designed to pump water. Pumping other liquids may shorten life and impact on warranty.
6. Pumping water containing solids will prematurely wear pump components, and may impact warranty.
7. Ensure that the correct size strainer is installed on the suction hose at all times, even on trash pumps.

Engine & Pump - Troubleshooting

Symptom	Possible Problem	Solution
Pump does not take on water.	Not enough priming water in the housing?	Add water
	Engine speed too low?	Increase throttle
	Strainer plugged?	Clean strainer
	Suction hose damaged?	Replace or repair hose & clamps
	Air leak at suction port?	Check that fittings are tight & sealed
	Pump is located too high above water line?	Move pump closer to water
	Debris collecting in pump housing?	Clean pump housing
	Too much distance between impeller and volute.	Adjust clearance by adding shims or replace impeller. Min. .010" -Max. .020
	Water leaking out weep hole between pump and engine?	Check condition of mechanical seal & gaskets, between pump end and engine housing
	Suction lift or discharge head too high.	Check hose/pipe installation
Pump takes in water, little or no discharge.	Engine speed too low?	Increase throttle speed
	Suction strainer partially plugged?	Clean strainer
	Impeller/volute worn?	Adjust clearance by adding shims or replace impeller/volute
Suction hose leaks at inlet	Fittings/clamps are not sealed properly?	Tighten, replace or add clamp. (Keep extra seals on pump)
	Hose diameter is too large?	Use smaller diameter hose or replace hose
Discharge hose does not stay on coupling.	Pressure too high?	Check pressure, add additional clamp
	Hose kinked or end blocked?	Check hose
Impeller does not turn, pump is hard to start.	Impeller jammed or blocked?	Open pump cover and clean dirt and debris from inside housing
	Impeller and volute binding?	Adjust clearance by removing shim from behind impeller

Engine & Pump Warranty

Aussie QP 5 year warranty

Australian Pump warrants all Aussie QP self priming centrifugal pumps, whether used for domestic or commercial applications, to be free of faulty workmanship or material for a period of 5 years from the date of supply to the end user.

Aussie will replace or repair, at our discretion, any faulty pump free of charge subject to the following conditions.

Engine Warranty

Warranty for engines fitted to Aussie Pump products is the responsibility of the engine manufacturer or his representative and subject to their terms and conditions, and operating instructions included with the product.

The Aussie Pump 5 year warranty naturally does not cover the following:-

1. Normal wear and tear, misuse, improper installation, negligent handling, failure to follow operating instructions or to carry out maintenance.
2. Pumping of chemicals, salt or corrosive fluids.
3. Unauthorised repair or attempted repair (i.e. not authorised by Australian Pump)
4. Shipping or transit damage
5. Use of non-genuine parts.

The warranty is valid only for the original consumer purchaser and non transferable.

NOTE:- This warranty is limited to the cost of the product and does not include third party costs including pump installers, plumbers etc. unless expressly authorised by Australian Pump Industries in writing.

Contact your Goldacres Dealer to arrange a warranty claim



Trailed Fire Fighters Maintenance & Troubleshooting

General

1. Hitch Reversing Latch: Flip this latch over onto the shaft when reversing.

WARNING: Once finished reversing return the latch to the folded-out position.

2. Grease nipples: Grease once every 1600kms or once per year, whichever comes first.
3. Brake adjustment bolt: Adjust to have a clearance between 3 to 6mm. Tighten the lock nut once adjusted.
4. Brake fluid reservoir: Use Dot 3 brake fluid. Check once every 1000kms or once per year, whichever comes first. Replace every 2 years.
5. Hand brake handle and latch: To activate pull the lever towards the tow hitch end and flip the latch over to hold the lever forward.



WARNING: Release the hand brake before moving the trailer by pulling the lever forward and flip the latch back as shown the above illustration.

6. Loosen the lock-nut and tighten the screw clock-wise till the adjustment bolt touches the ball and loosen ½ turn. If the latch is difficult to remove from the ball loosen ¼ turn more.

Brake Adjustment

If your trailer is equipped with hydraulic drum brakes, the brakes are activated by the surge actuator/coupler located on the front end of the trailer tongue. When the tow vehicle stops, the trailer pushes into the tow vehicle, compressing the master cylinder that is located inside the actuator. The master cylinder forces brake fluid to the drum brakes. Inside each drum brake is a wheel cylinder that expands with the surge of brake fluid,

pushing the brake shoes against the inside of the brake drum.

Drum brakes must be periodically adjusted. Recommended service intervals are after the first 800 kms and then every 1600 kms. Drum brakes also must be flushed when submerged in salt water or towed in road conditions where salting of the roads is done to improve driving conditions. Many marine and trailer accessory companies offer drum brake flush kits.

If you use your trailer in these conditions, it is recommended that you install a flush kit, if your trailer did not come equipped with the flush kit.

To Adjust Your Drum Brakes

(Applies to Both Electric & Hydraulic Brakes):

Position the trailer on a stable and LEVEL working surface. If possible, leave the tow vehicle hooked to the trailer in order to limit movement as well as keeping the front end supported and level. If the trailer is not supported on the tow vehicle, it MUST be blocked directly to the ground at the frame/tongue junction.

Under no circumstances is the trailer to be supported by the jack while being raised at the wheels!

Block the wheels opposite the side being worked on both front and rear so that the trailer cannot roll.

NOTE: Using an adequate capacity floor or scissors jack, raise the side of the trailer.

NOTE: Check under frames for brake lines BEFORE lifting. DO NOT position jack in areas that may damage brake lines, etc.

NOTE:

A. Tandem and tri-axle trailers should be jacked on the frame between the wheels, or directly under the axle within 8" of the backside of the tire.

B. Single axle trailers can be lifted on the frame just behind the axle or directly under the axle within 8" of the backside of the tire (if lifting at the axle).

CAUTION: Always support the trailer with adequate capacity support stands.

DO NOT rely on the jack as the only means of support.

Hydraulic Drum Brakes Initial Adjustment of Brakes (Applies to Both Electric & Hydraulic Brakes)

Adjust the brakes before removing the jacks.

1. With trailer wheel off the ground and tire mounted. Remove the rubber access hole plugs from the rear of the brake backing plate.
2. Inserting a brake spoon or flat screwdriver through the access hole(s), tighten the star adjuster while rotating the wheel in the forward direction.

NOTE: Always spin wheel in the forward direction as if the trailer was traveling forward on the road. Tighten the star adjuster until the wheel reaches a point where the brake shoes start to engage.

3. Loosen the star adjuster one click at a time while turning the wheel in a forward rotation. Continue adjusting one click at a time until the wheel rotates with little effort.
4. Replace the rubber access hole plugs.
5. Repeat this procedure for all braking wheels.

Bleeding the brake system

(Hydraulic Brakes Only)

Use only DOT-3 heavy duty fluid. Do not re-use brake fluid. Do not use any other type of brake fluid other than DOT-3. If pressure bleeding equipment is available, follow the manufacturer's instruction in bleeding the system.

Use only DOT-3 heavy-duty hydraulic fluid in the actuator. If using a pressure type brake bleeder to bleed brakes. (This type of brake bleeder is available at your local automotive shop.) Follow manufacturer's directions.

If manually bleeding the brakes using a heavy duty flat blade screwdriver inserted in the hole provided on top of the actuator near the front. Insert the screwdriver and use a pumping action to activate the master cylinder in order to bleed the brakes.

To bleed master cylinder and brakes, install bleeder hose on first wheel cylinder to be bled; if tandem axle trailer, bleed furthest axle first, and the furthest brake on that axle first. Use a loose end of hose from the bleeder

valve submerged in a glass container of brake fluid to observe bubbling (hose must be submerged into clean brake fluid to keep air from traveling back into the brake cylinder).

Loosen the bleeder screw located in the wheel cylinder one turn, the system is now open to the atmosphere. The bleeding operation for that brake is complete when bubbling stops.

Be sure to tighten bleeder screw securely. Each wheel cylinder must be bled until all air is out of the lines. Replenish the brake fluid during the bleeding process so the level does not fall below half full level in the master cylinder reservoir.

When bleeding and testing is completed, make sure master cylinder is filled and the reservoir and filler cap is securely in place. When using drum or disc brakes on tandem axle trailers, both axles must be installed with brakes, failure to install brakes on both axles will result in loss of braking performance, overheating of brakes & wheel hub, and significantly reduce brake pad life.

WARNING: Brakes should always be rinsed with fresh water after using trailer in corrosive conditions. This includes salt water, fertilizers and other corrosive materials. Before storing trailer remove brakes and clean thoroughly. It is also wise to repack the bearings at the same time.

WARNING: DO NOT REUSE BRAKE FLUID.

Always use fresh DOT 3 fluid from a fresh container.

Failure to maintain proper levels of fluid will cause brake failure.



Electric drum brake information

Electric brakes are activated by a brake controller located in the tow vehicle. This is generally an accessory that must be purchased separately. Some controllers work better with different brand tow vehicles. Electric brakes are individually adjusted in the same way the hydraulic drum brakes are adjusted that is covered in this manual. The electric drum brakes work by an electrical

current going to the brakes and activating a magnet. The magnet is then attracted to the inside wall of the drum hub. This drags the magnet and pushes the brake shoes out against the drum hub.

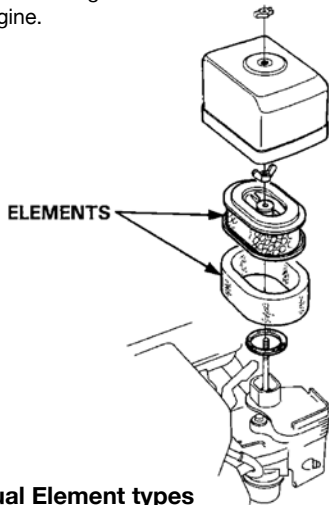
The brake controller is generally adjustable to regulate the amount of current given to the magnets/drum brakes. This adjustment controls the amount of braking force applied.

Braking - Troubleshooting

Problem/Symptom	Possible cause:
Noise or brake chatter.	<ul style="list-style-type: none">- Improper brake adjustment.- Brake fluid or grease on lining.- Improperly adjusted or worn wheel bearing.- Drum out of round.- Dirt on drum or lining surface.- Dust in rivet holes.- Lining glazed or worn.- Scored drum.- Loose backing plate.- Weak or broken return springs.
Only one brake is activating.	<ul style="list-style-type: none">- Improper brake adjustment. (see brake adjustment).- Brake line is restricted.- Improperly adjusted or worn wheel bearing.- Drum out of round.- Loose backing plate.- Faulty wheel cylinder.- Weak or broken shoe return spring.- Glazed or worn lining.- Loose lining.- Air in hydraulic system.- Dirty brake fluid.
All brakes drag.	<ul style="list-style-type: none">- Faulty actuator.- Mechanical resistance at actuator or shoes.- Brake lines restricted.- Dirty brake fluid.- Faulty back up solenoid (if used).
Brakes do not apply.	<ul style="list-style-type: none">- Leaks or insufficient brake fluid.- Air in hydraulic system.- Improper brake adjustment.- Faulty actuator.- Lining glazed or worn.- Brake fluid or grease on lining.- Dirty brake fluid.
Leaking wheel cylinder.	<ul style="list-style-type: none">- Check and replace wheel cylinder and bleed brakes.
Seized wheel cylinder piston.	<ul style="list-style-type: none">- Check and replace wheel cylinder and bleed brakes.

Air Cleaner

Never run the engine without the air cleaner. Rapid engine wear will result from contaminants, such as dust and dirt, being drawn through the carburetor and into the engine.

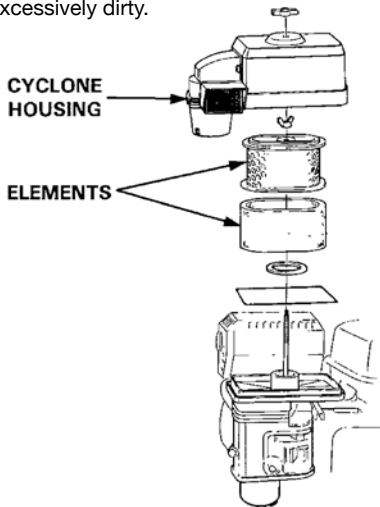


Dual Element types

Check the air cleaner elements to be sure they are clean and in good condition. Clean or replace the elements if necessary.

Cyclone Type

Check the air cleaner element to be sure they are clean and in good condition. Clean or replace the elements if necessary. Check the cyclone housing, and clean it if it is clogged or excessively dirty.



Fuel

Fuel tank capacity: GX160: 3.6 litre.

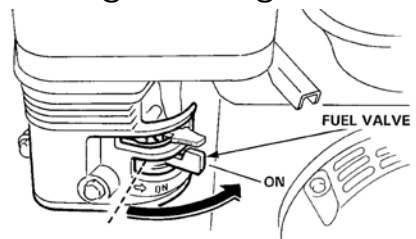
Your engine is designed to use any petrol that has a pump octane number of 86 or higher, or that has a research octane number of 91 or higher. We recommend that you use unleaded fuel because it produces fewer engine and spark plug deposits and extends the life of exhaust system components.

Never use stale or contaminated petrol or an oil/petrol mixture. Avoid getting dirt, dust or water in the fuel tank. Use of a lower octane petrol can cause persistent "pinging" or heavy "spark knock" (a metallic rattling noise) which, if severe, can lead to engine damage.

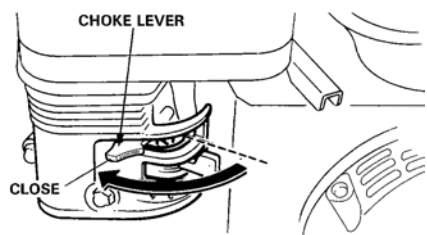
If "spark knock" or "pinging" occurs at a steady engine speed under normal load, change brands of petrol. If spark knock or pinging persists, consult your authorized Honda dealer. Failure to do so is considered misuse. Honda's Limited Warranty does not cover damage caused by misuse.

Occasionally you may experience light spark knock while operating under heavy loads. This is no cause for concern; it simply means your engine is operating efficiently.

Starting the Engine

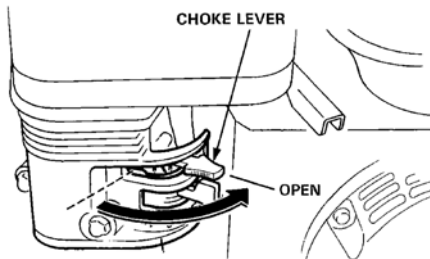


1. Turn the fuel valve to the ON position.
2. Move the choke lever to the CLOSE position. NOTE: The choke may not be needed if the engine is warm or the air temperature is high.

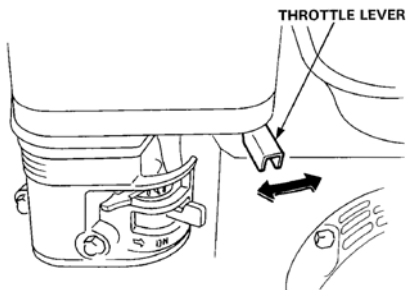


3. Move the throttle lever slightly to the left.
4. Turn the engine switch to the ON position. Pull the starter grip lightly until resistance is felt, then pull briskly. Do not allow the starter grip to snap back against the engine. Return it gently to prevent damage to the starter.

Operation



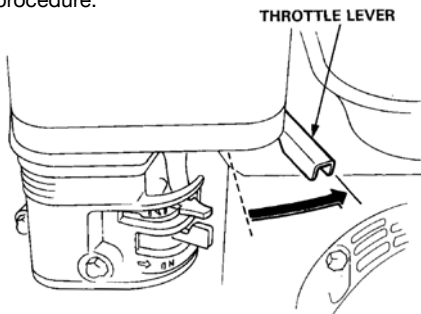
1. As the engine warms up, gradually move the choke lever to the OPEN position.



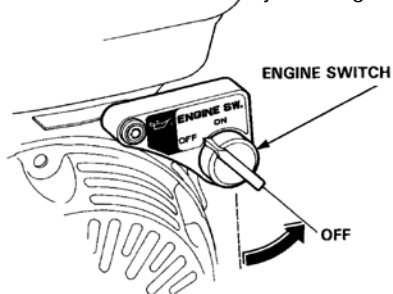
2. Position the throttle lever for the desired engine speed.

Stopping the Engine

To stop the engine in an emergency, turn the engine switch to the OFF position. Under normal conditions, use the following procedure:



1. Move the throttle lever fully to the right.



2. Turn the engine switch to the OFF position.
3. Turn the fuel valve to the OFF position.

High altitude operation

At high altitude, the standard carburetor air-fuel mixture will be excessively rich. Performance will decrease, and fuel consumption will increase. High altitude performance can be improved by installing a smaller diameter main fuel jet in the carburetor and readjusting the pilot screw. If you always operate the engine at altitudes higher than 6000 feet above sea level, have your authorized Honda Engine dealer perform these carburetor modifications. Even with suitable carburetor jetting, engine horsepower will decrease approximately 3.5% for each 1000 foot increase in altitude. The effect of altitude on horsepower will be greater than this if no carburetor modification is made.

NOTE: Operation of the engine at an altitude lower than the carburetor is jetted for may result in reduced performance, overheating, and serious engine damage caused by an excessively lean air/fuel mixture.

Maintenance

Oil change

Drain the oil while the engine is still warm to assure rapid and complete draining.

1. Remove the oil filler cap and drain plug to drain the oil.
2. Install the drain plug and tighten it securely.
3. Refill with the recommended oil (see page 3) and check the oil level.
4. Install the oil filler cap.

Air filter - Dual element type

1. Remove the wing nut and the air cleaner cover. Remove the elements and separate them. Carefully check both elements for holes or tears and replace if damaged.
 - a) Foam element: Wash the element in a solution of household detergent and warm water, then rinse thoroughly, or wash in PAPER nonflammable or high flash point solvent. Allow the element to dry thoroughly. Soak the element in clean engine oil and squeeze out the excess oil. The engine will smoke during initial start-up if too much oil is left in the foam.
 - b) Paper element: Tap the element lightly several times on a hard surface to remove excess dirt, or blow compressed air through the filter from the inside out. Never try to brush the dirt off; brushing will force dirt into the fibers. Replace the paper element if it is excessively dirty.

Fuel sediment cup cleaning

Turn the fuel valve to OFF. Remove the sediment cup and O-ring and wash in nonflammable or high flash point solvent. Dry them thoroughly and reinstall securely. Turn the fuel valve ON and check for leaks.

NOTE: If any fuel is spilled, make sure the area is dry before testing the spark plug or starting the engine. Fuel vapor or spilled fuel may ignite.

Spark Plug Service

Recommended spark plug: BPRGES (NGK) or W20EPR-U (ND)

NOTE: Never use a spark plug of incorrect heat range.

To ensure proper engine operation, the spark plug must be properly gapped and free of deposits.

1. Remove the spark plug cap and use a spark plug wrench to remove the Plug.
2. Visually inspect the spark plug. Discard it if the insulator is cracked or chipped. Clean the spark plug with a wire brush if it is to be reused.
3. Measure the plug gap with a feeler gauge. The gap should be 0.7-0.8 mm (0.028-0.031 in). Correct as necessary by bending the side electrode.

4. Check that the spark plug washer is in good condition and thread is clean.
5. After the spark plug is seated, tighten with a spark plug wrench to compress the washer.

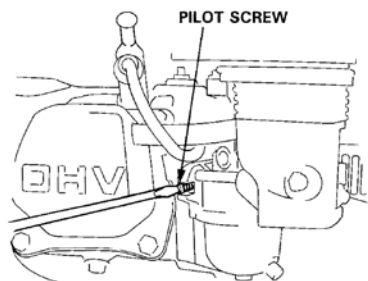
NOTE: When installing a new spark plug, tighten $\frac{1}{2}$ turn after the spark plug seats to compress the washer. When reinstalling a used spark plug, tighten $\frac{1}{8}$ - $\frac{1}{4}$ turn after the spark plug seats to compress the washer.

Carburetor adjustment

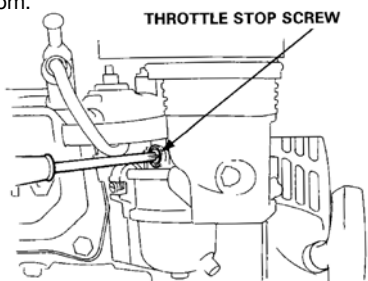
1. Start the engine and allow it to warm up to normal operating temperature.
2. With the engine idling, turn the pilot screw in or out to the setting that produces the highest idle rpm. Usually the correct setting will be found to be:

GX160	
Dual element type	3 turns
Oil bath type	
Cyclone type	2 $\frac{1}{2}$ turns

NOTE: Do not tighten the pilot screw against its seat; this will damage the pilot screw or seat.



3. After the pilot screw is correctly adjusted, turn the throttle stop screw to obtain the standard idle speed or 1400 rpm +/- 100 rpm.



Maintenance Schedule

REGULAR SERVICE PERIOD		Each use	First month or 20 Hrs	Every 3 months or 50 Hrs	Every 6 months or 100 Hrs	Every year or 300 Hrs	Every 2 years
ITEM Performed at every indicated month or operating hour interval, whichever comes first.							
Engine oil	Check level	●					
	Change		●		●		
Reduction gear oil (applicable models only)	Check level	●					
	Change		●			●	
Air cleaner	Check	●					
	Clean			●(1)			
Sediment cup	Clean				●		
Spark plug	Check Clean				●		
Spark arrester (optional part)	Clean				●		
Valve clearance	Check - Adjust					●(2)	
Fuel tank and strainer	Clean					●(2)	
Fuel line	Check (Replace if necessary)						●(2)

NOTE: 1) Service more frequently when used in dusty areas.
 (2) These items should be serviced by an authorized Honda dealer, unless the owner has the proper tools and is mechanically proficient. See the Honda Shop Manual.

Transport / Storage

NOTE: When transporting the engine, turn the fuel valve to the OFF position and keep the engine level to prevent fuel spillage. Fuel vapor or spilled fuel may ignite.

Before storing the unit for an extended period:

1. Be sure the storage area is free of excessive humidity and dust.
2. Drain the fuel:
 - a) With the fuel valve in the OFF position, remove and empty the sediment cup.
 - b) Turn the fuel valve to the ON position and drain the gasoline from the fuel tank into a suitable container.
 - c) Replace the sediment cup and tighten securely.
 - d) Drain the carburetor by loosening the drain screw. Drain the gasoline into a suitable container.
3. Change the engine oil.
4. Remove the spark plug and pour about a tablespoon of clean engine oil into the cylinder. Crank the engine several revolutions to distribute the oil, then reinstall the spark plug
5. Pull the starter rope slowly until resistance is felt. Continue pulling until the notch on the starter pulley aligns with the hole on the recoil starter. At this point, the intake and exhaust valves are closed and will help protect the engine from internal corrosion.
6. Cover engine to keep out dust.

Troubleshooting

Engine will not start using recoil starter:

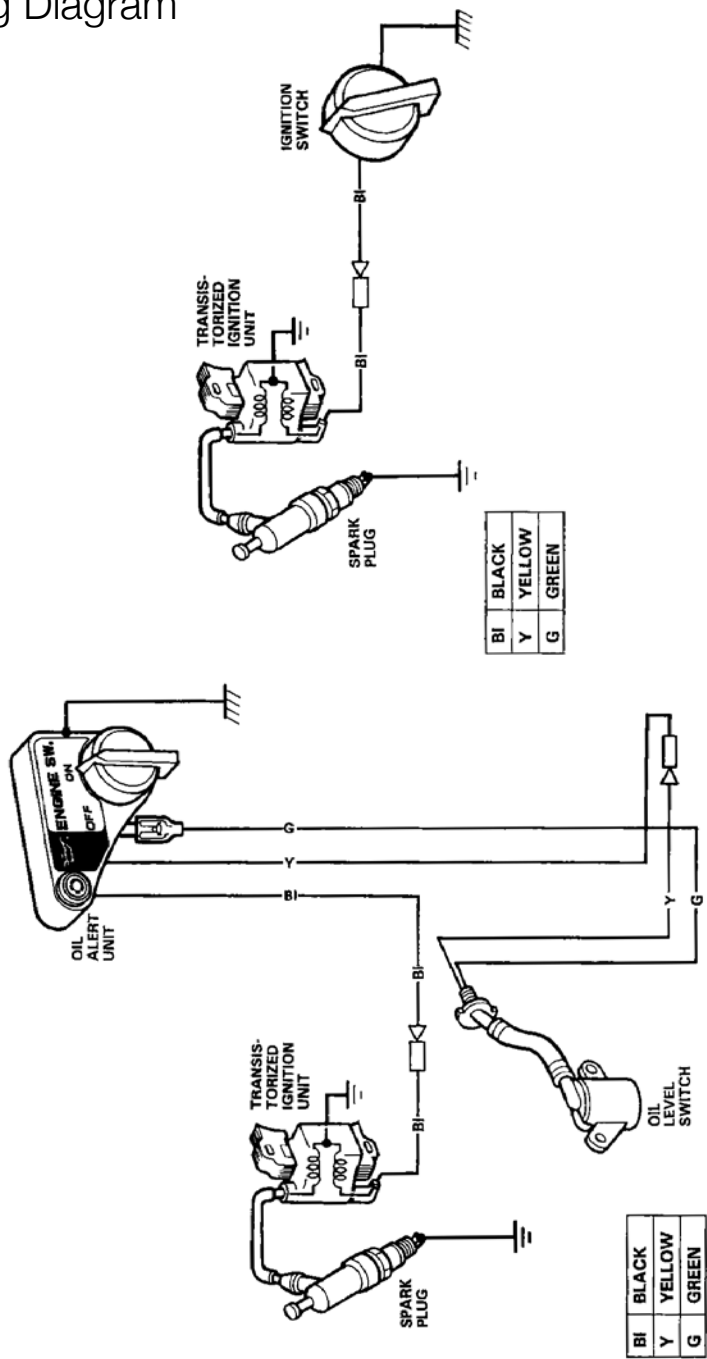
1. Is the engine switch in the ON position?
2. If equipped with oil alert, does the oil alert lamp flash when the starter is operated?
3. Is the fuel valve on?
4. Is there fuel in the fuel tank?
5. Is petrol reaching the carburetor? To check, loosen the drain screw with the fuel valve on.
6. Is there a spark at the spark plug?
 - a) Remove the spark plug cap. Clean any dirt from around the spark plug base, then remove the spark plug.
 - b. Install the spark plug in the plug cap.
 - c. Turn the engine switch on.
 - d. Ground the side electrode to any engine ground, and pull the recoil starter to see if spark jumps across the gap.
 - e. If there is no spark, replace the plug. If OK, reinstall the spark plug and try to start the engine again according to the instructions.
7. If the engine still does not start, take the engine to an authorized Honda dealer.

Specifications

Dimensions And Weight		GX160
Description code		GC02
Length x Width x Height		305 x 365 x 335 mm (12.0 x 14.4 x 13.2 in)
Dry weight		14.0 kg (30.9 lb)
Engine type		4-stroke, overhead valve, single cylinder
Displacement		163 cc (9.9 cu in)
[Bore x Stroke]		[68 x 45 mm (2.7 in x 1.8 in)]
Max. output		5.5 HP/3,600 rpm
Max. torque		1.1 kg (8.0 ft-lb)/2,500 rpm
Fuel consumption		230 g/PS h
Cooling system		Forced air
Lignition system		Transistorized magneto
PTO shaft rotation		Counterclockwise

NOTE: Specifications may vary according to the types, and are subject to change without notice.

Wiring Diagram

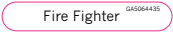


Safety Decals

Understanding safety decals and their purpose assists in the safe operation of your sprayer. Safety decals are there for your protection and it is the responsibility of the owner operator to replace damaged and/or missing safety decals.

Regularly review safety decals with operators. It is very important to ensure that all new machine components and replacement parts include current hazard identification decals.

Replacement safety decals can be ordered from all Goldacres dealers.



GA5063371 decal

36m manual hose reel



Ref. no	Part No	Description
1	GA4906855	36m manual hose reel

High flow fire fighting hose reel



Ref. no	Part No	Description
1	GA4906070	36m manual hose reel
2	GA5052655	Fire branch nozzle
3	HOS20F-20	¾" high volume fire fighting hose

Safety

General

The following pages outline important safety information. At Goldacres safety is a high priority. These safety and warning instructions **MUST** be followed to ensure the safe operation of your Goldacres equipment.

Explanation of key terms used in this operator's manual are:

DANGER - You will be killed or seriously hurt if you don't follow instructions

WARNING - You can be seriously hurt if you don't follow instructions

CAUTION - You can be hurt if you don't follow instructions

NOTE - Is used to notify people of installation, operation or maintenance information that is important but not hazard related.

The Operator

All operators of this equipment should be adequately trained in the safe operation of this equipment. It is important that all operator's have read and fully understand the operators manual prior to using this equipment.

All new operators should be trained in an area without bystanders or obstructions and become familiar with the sprayer prior to operation.

Safety Precautions

WARNINGS

- Any unauthorised modifications to this equipment may affect its function and create a serious safety risk.
- Never attempt to clean parts or nozzles, by blowing with mouth.
- Never attempt to siphon chemicals, or substances, by sucking.
- It is imperative that the vehicle manufacturer's specifications be checked and all instructions for use when transporting, or towing, be adhered to at all times.
- If trailer brakes (hydraulic or electric) have

been fitted to this equipment, ensure they are regularly checked and inspected for correct performance.

- Care should be taken when transferring liquid into the tank to ensure that the gross weight of the equipment does not exceed the safe working load for the operator.
- Water weighs 1kg per litre, however conversion factors must be used when spraying liquids that are heavier or lighter than water. Example: liquid urea has a density of 1.28 kg/L and will therefore be significantly heavier than water if the tank is filled completely.
- Regularly check the pump mounting bolts. (The pump will always vibrate to some degree when operating, and this may work the bolts loose.)
- Suitable care should be taken when driving with the equipment attached to the vehicle. Consideration should be given to both the carrying capacity of the vehicle and the gradient of the terrain when determining the speed at which the vehicle can be driven safely.
- Ensure that the maximum speed of the vehicle, when loaded, is within the vehicle manufacturers limitations.
- Ensure equipment is securely fastened, or attached, to the vehicle at all times.
- Keep clear of overhead obstructions - especially powerlines as contact can be fatal.
- Never work under a raised boom unless properly supported and secure.

CAUTIONS

- A supply of fresh water should be with the equipment at all times.
- Standard polyethylene tanks are not designed for use with diesel fuel or any flammable liquid.
- Do not use this machine in ambient temperatures exceeding 40 degrees Celsius.
- Do not use access steps or ladders on this equipment unless it is safely supported.

Notes

- Always read and understand the

operator's manual prior to operation of this equipment.

- It is the responsibility of the operator to ensure that there are no decals missing from the equipment and that any damaged or missing decals are replaced prior to operation.
- Goldacres equipment ordered or operated, outside the guideline limitations may not be warranted by Goldacres for successful performance. Operators working outside these limitations do so at their own risk, unless specific advice has been sought from and provided by Goldacres in writing.
- Inspect the equipment thoroughly for damage and wear before operation.
- Do not operate the equipment while under the influence of any drugs, alcohol or if excessively tired.
- Make sure that the equipment complies with all relevant road regulations when transporting.
- Not all Goldacres fire fighting units/water carts are legal for road use. The Goldacres Road pack includes changes to the trailer specification for road use. The addition of lights to a trailer that has been built for off road use only may not be sufficient to satisfy requirements for road use.
- After reading the operator's manual if there is any thing that you do not understand please contact your Goldacres dealer or Goldacres.

Personal Protective Equipment (PPE)

Always wear close fitting clothing and safety equipment designed for the job.

Chemicals can be harmful to humans, appropriate PPE should be used when handling chemicals. Always refer to the chemical manufacturers label for guidelines on the appropriate PPE to use with the chemicals you are using.

Goldacres also suggest that you read and understand the following Australian standards:

- Australian Standard for Chemical protective clothing AS3765
- Australian Standard for Respiratory protection devices AS1715

Fluids under pressure

Do not disconnect any hoses, nozzles or filters while equipment is operating. Disconnecting these components while under pressure may result in uncontrolled fluid discharge which may be hazardous.

When the repair is complete ensure that all fittings and lines are secured before re-applying pressure.

Warranty

How to make a warranty claim

In the event of a fault or breakdown with your product, that you believe to be a warranty issue, the following steps must be taken.

1. Ensure that you have read the Operator's Manual and gone through the troubleshooting procedure.
2. If you continue to experience problems then please contact Goldacres on 03 5342 6399. The operator will advise the method of warranty service for your product.

Warranty exclusions

Machines must be registered for warranty before a warranty can be requested. All information on delivery and installation must have been submitted before a claim can be requested. If follow up inspections are required these must have been carried out before warranty is requested as well.

Goldacres 12 month standard warranty

Some common exclusions:

- Pump diaphragms
- Pump Seals
- Pump check valves
- Pump o-rings
- Filters and filter screens
- Filter o-rings
- Chemical Hoses
- Nozzle Bodies
- Nozzle Body Brackets
- Nozzle Diaphragms and seals
- Solenoid Diaphragms
- Hand Gun, lance or wand seals and o-rings
- Consumables, oil, chemicals, coolant or fuels.
- Hose reel seals and o-rings
- Pressurised sprayer seals and o-rings
- Belts drive chains.
- Wire cables
- Springs
- Shockers and dampeners
- Adjustment of components.
- Damaged items.
- Items controlled by or fitted to Non Genuine parts or devices

Goldacres Warranty Statement

This warranty is the only warranty applicable to Goldacres new products (Products) and to the maximum extent as permitted by law, is expressly in lieu of any other conditions or warranties expressed or implied in relation to the Product.

In Australia, Goldacres Products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

This Warranty gives you additional protection for your Goldacres product and identifies a preferred approach to resolving warranty claims which will be the quickest and simplest for all parties subject to the exclusions, terms and conditions below.

Goldacres warrants its authorized Dealers who in turn warrants the original purchaser (Owner) that each new Goldacres Product will be free from proven defect in materials and workmanship for twelve (12) months from the date of delivery to the first owner according to conditions outlined herein.

Subject only to legislative obligations to the contrary, Goldacres shall not be liable for incidental or consequential damage resulting from ownership or use of a Product.

Goldacres does not authorize any person to create for it any other obligation or liability in connection with these products.

The repair of the defective Product qualifying under this warranty will be performed without charge for labour and parts by any authorized Goldacres service outlet within a reasonable time following the delivery of the Product, at the cost of the owner, to the service outlet / place of business advised

Goldacres in its absolute discretion may choose to pay the cost of replacement or repair of the product.

If the Product will be repaired or replaced, using parts as supplied by Goldacres, repair may include, at Goldacres discretion, the replacement of parts with functionally equivalent remanufactured, reconditioned or new parts.

Goldacres may request failed parts to be returned to the factory.

Conditions of Warranty Coverage

The warranty covers only conditions resulting directly from defects in workmanship or materials used under normal use and service conditions.

The Warranty is not transferable.

The owner is responsible for the performance of regular maintenance and service as specified in the owner's / operators manual applicable to the product. Failure to follow regular maintenance as advised may

invalidate the warranty.

The owner must provide the Goldacres Dealer with prompt written notice of the defect (within 14 days of it occurring) and allow reasonable time for repair and/or replacement.

Goldacres warranty cover excludes:

- Claims resulting from misuse, use of incompatible chemical or fluids, exceeding the Product's specifications including overloading, impact damage, negligence, accidental damage or failure to perform recommended service or service intervals or use the Product with good care.
- Failure due to faulty or inadequate electrical sources of power. 12 volt power sources must be checked for suitability to operate the product.
- The time taken to remove and re-install warranted parts, products or components fitted to other than Goldacres brand products will not be covered by Goldacres Warranty. Only labour and parts directly attributable to the repair of the Goldacres unit is covered.
- The cleaning of parts or products before or after the warranty repair. Cleaning time is considered a customer expense.
- Any Goldacres Product which has been repaired by other than an authorized Goldacres dealer in a way which, in the sole and absolute judgment of Goldacres, adversely affects its performance or reliability.
- The replacement of maintenance items such as diaphragms, batteries, belts, etc.
- Loss of time, inconvenience, loss of use of the product, liability to third parties or any other consequential damages including damage to crops, profits or revenue, other commercial losses inconvenience or cost of rental or replacement equipment.
- Incidental costs associated with a warranty repair including any travel costs, out of hours labour charges, transportation costs, freight costs or any communications costs.
- Goldacres products purchased at auction or in used condition.

Procedure for claiming:

Claims must be made through a Goldacres Dealer. To make a claim under this Warranty, you should

- Contact your local Goldacres Dealer,
- Phone 1300 301 853 to locate a Goldacres Dealer.

Owners returning products to a Goldacres Dealer will require the original Dealer tax invoice, a copy of the tax invoice or delivery docket and any instruction manuals, information booklets or guides that were shipped with the Product.

Terms and Conditions

Interpretation

1. In terms and conditions:
 - (1) "Goldacres" means Goldacres Trading Pty. Ltd. A.C.N. 061 306 732 trading as Goldacres Agricultural Equipment (its successors and assigns) which is the seller of the Goods;
 - (2) "Purchaser" means the purchaser of the Goods;
 - (3) "Goods" means the products and, if any, the services sold or provided by Goldacres to the Purchaser;
 - (4) "GST Act" and "GST" are given the meanings referred to in a New Tax System (Goods and Services Tax) Act 1999.
 - (5) "PPSA" means the Personal Property Securities Act 2009 (Cth) (as amended);
 - (6) Nothing in these terms and conditions shall be read or applied so as to exclude, restrict or modify or have the effect of excluding, restricting or modifying, any condition, warranty, guarantee, right or remedy implied by law (including the Competition and Consumer Act 2010) and which by law cannot be excluded, restricted or modified.

General

2. (1) The Goods and all other products or services provided by Goldacres are provided subject to these terms and conditions. These terms and conditions and any terms and conditions incorporated herein by virtue of clause 3 hereto shall prevail over all other terms and conditions of the Purchaser or otherwise to the extent of any inconsistency.

- (2) These terms and conditions may not be modified or amended without the expressed written consent of Goldacres endorsed by the Managing Director of Goldacres Trading P/L.

Additional Terms and Conditions

3. From time to time Goldacres may provide additional or extended warranties in respect of certain goods and/or services. Where such additional or extended warranties are provided to a Purchaser in writing they will be incorporated into these terms and conditions provided that in the event of any inconsistency between these terms and conditions and the terms of any additional or extended warranty, the provisions of the additional or extended warranty shall prevail.

Goldacres quotations.

4. Unless previously withdrawn, Goldacres quotations are open for acceptance within the period stated therein or, when no period is stated, with 14 days only of the quotation date. Goldacres reserves the right to refuse any order based on any quotation within 7 days of receipt of the order.

Packing

5. The cost of any special packing and packing materials used in relation to the Goods shall be at the Purchaser's expense notwithstanding that such cost may have been omitted from any quotation.

Shortage

6. The Purchaser waives any claim for shortage of any Goods delivered if a claim in respect thereof has not been lodged with Goldacres within (7) seven days from the date of receipt of the Goods by the Purchaser.

Specifications, etc. Catalogues, etc. Quantities

7. All specifications, (including but not limited to: drawings, particulars of weights, volumes, capacities, dimensions, load factors) are approximate only and any deviation shall not be taken to vitiate any contract with Goldacres or form any claim against Goldacres. The descriptions, illustrations, and performances contained in catalogues, price lists and other advertising matter do not form part of the contract of sale of the Goods. Where specifications, drawings or other particulars are supplied by the Purchaser, Goldacres' price is made on estimates of quantities required. Should there be any adjustments in quantities above or below the quantities estimated by Goldacres and set out in a quotation, then any such increase or decrease shall be adjusted on a unit rate basis according to unit prices set out in the quotation.

Performance, Capacities, Chemicals, Liquids, Application Methods, Environmental Effects

8. Any performance, volumes, and/or capacity figures given by Goldacres are estimates only. Goldacres shall be under no liability for damages for failure to obtain such figures unless specifically guaranteed in writing and any such written guarantee shall be subject to the recognised tolerances applicable to such figures. The suitability of chemicals and other liquids for any application and the application methods and the environmental effects shall be the sole decision and responsibility of the Purchaser and the user of the Goods. Goldacres gives no warranty as to the suitability of any chemicals or other liquids for any application, nor the application methods nor the environmental effects, which may result from the use of the Goods. Goldacres shall be under no liability for damages arising out of the use of any chemicals, liquids, or mixtures in the Goods nor for any application, nor for the application methods nor for the environmental effects, which may result from the use of the Goods.

Delivery/Service Times

9. The delivery times and service times made known to the Purchaser are estimates only and Goldacres shall not be liable for late delivery, non-delivery or delay and under no circumstances shall Goldacres be liable for any loss, damage or delay occasioned by the Purchaser or its customers arising from the late or non-delivery or late installation of the Goods.

Loss or damage in transit

10. Goldacres is not responsible for any loss or damage to Goods in transit. Goldacres shall render the Purchaser such assistance as may be necessary to press claims on carriers provided that the Purchaser shall have notified Goldacres and the carriers immediately the loss or damage is discovered on receipt of Goods and shall lodge a claim on the carrier within three days of the date of receipt of the Goods. Insurance of Goods in transit is the responsibility of the Purchaser.

Limit of Liability

11. (1) Goldacres liability for Goods manufactured by it is limited to:
 - (a) where the law implies consumer guarantees into these terms and conditions pursuant to Part 3.2 Division 1 of Schedule 2 to the Competition and Consumer Act 2010 (Cth) ("consumer guarantees") which cannot be excluded and Goldacres breaches a consumer guarantee, the loss and damage the Purchaser is entitled to at law which cannot be excluded by these terms and conditions;

and, in all other cases

- (b) making good any defects by repairing the same or at Goldacres option by replacement within a period not exceeding either 1000 hours or twelve calendar months, whichever comes first, after the Goods have been dispatched provided that:
 - (i) the defects have arisen solely from faulty materials or workmanship;
 - (ii) the Goods have not received maltreatment, inattention or interference;
 - (iii) accessories of any kind used by the Purchaser are manufactured or approved by Goldacres;
 - (iv) where applicable, the seals on the Goods remain unbroken;
 - (v) there has been no improper adjustment, calibration or operation;
 - (vi) the use of accessories including consumables, hardware or software (not manufactured by Goldacres) has been approved in writing by Goldacres;
 - (vii) no contamination or leakage has been caused or induced;
 - (viii) any modification to the Goods have been authorised in writing by Goldacres;
 - (ix) there has been no inadequate or incorrect use, storage, handling or application of the Goods;
 - (x) there has been no use or operation of the Goods outside of the physical, electrical or environmental specifications of the Goods;
 - (xi) there has been no inadequate or incorrect site preparations;
 - (xii) there has been no inadequate or improper maintenance of the Goods;
 - (xiii) it has not been caused by fair wear and tear; and
 - (xiv) firstly the Goods have been thoroughly inspected and any damage (from whatever cause) to the Goods (and in particular – the structure, welding, seams, bolts, booms) has been repaired prior to the Goods being operated, used driven or moved and on each occasion the tanks are filled; and
 - (xv) there has been no failure to comply with the requirements of all present or future laws or regulations relating to the Goods and/or the use and/or the operation of the Goods; and there has been no failure to maintain a record of hours of operation (which record shall contain full details of all inspections, repairs and maintenance) and produce same to Goldacres at the time of the claim;
 - (xvii) the defective Goods or any damaged part of the Goods are promptly returned free of cost to Goldacres or a representative of Goldacres;
 - (xviii) all warranty related repairs have been carried out with the prior authorisation of Goldacres;
- (2) If Goods or any part thereof are not manufactured by Goldacres, in particular engines, engine accessories, transmissions, transfer cases, differentials, tyres, tubes, batteries, radios and UHF's, the guarantee of the manufacturer thereof shall be accepted by the Purchaser and is the only guarantee given to the Purchaser in respect of the Goods or that part provided always that this clause does not seek to exclude the consumer guarantees;
- (3) In the case of hydraulic systems, Goldacres shall replace defective parts in accordance with clause 11(i) of these conditions, provided that the failure of the part was not related to contamination within the system, Goldacres shall not be liable for labour in the case of repairing hydraulic system defects;
- (4) Goldacres will not accept liability for damage attributed to fair wear and tear including but not limited to fair wear and tear to nozzles, chains, belts, filters, brake pads, polyethylene bushes and liquid pump valves, valve O-rings, diaphragms and seals;
- (5) Goldacres shall not be liable for and the Purchaser releases Goldacres from any claims in respect of faulty or defective design of any Goods supplied unless such a design has been wholly prepared by Goldacres and the responsibility for any claim has been specifically accepted by Goldacres in writing and in any event Goldacres liability hereunder shall be strictly limited to the replacement of defective parts in accordance with paragraph 11(i) of these conditions provided always that this clause does not seek to exclude the consumer guarantees;
- (6) Except as provided herein, all express and implied warranties, guarantees and conditions under statute or general law as to the merchantability, description, quality, suitability or fitness of the Goods for any purpose or as to design, assembly, installation, materials or workmanship or otherwise are hereby expressly excluded and Goldacres shall not be liable for physical or financial injury, loss or damage or for consequential loss or damage of any kind arising out of the supply, layout, assembly, installation or operation of the Goods or arising out of Goldacres negligence or in any other way whatsoever;
- (7) The benefit of any warranty provided under these terms and conditions shall only be available to the Purchaser and shall not be transferable by the Purchaser;
- (8) The warranties provided under these terms and conditions do not extend to second hand or used Goods that may be sold by Goldacres.
12. Goldacres liability for breach of a consumer guarantee is hereby limited (in the case of goods and services not used for personal, domestic or household purposes) to:
 - (1) in the case of Goods, any one or more of the following:
 - (a) the replacement of the Goods or the supply of equivalent Goods;
 - (b) the repair of the Goods;
 - (c) the payment of the cost of replacing the Goods or acquiring the equivalent Goods;
 - (d) the payment of having the Goods repaired; or
 - (2) in the case of services;
 - (a) the supplying of the services again; or
 - (b) the payment of the cost of having the services supplied again.

Prices

13. (1) Unless otherwise stated in writing by Goldacres, all prices quoted by Goldacres are inclusive of GST for supplies within Australia and exclusive of GST for exports outside of Australia. Prices quoted are those ruling at the time of quotation or the date the price is given and are based on rates of freight, insurance, customs, duties, taxes, exchange, shipping expenses, sorting and stacking charges, cartage, cost of materials and other charges affecting the cost of production ruling on that date and any alterations thereto either before acceptance of or during currency of the contract shall be to the Purchaser's account.
- (2) For the purpose of 38-185 of the GST Act, the day upon which the seller gives the invoice for the supply shall be the date of the invoice.

Payment

14. (1) The purchase price in relation to the Goods and the cost of the service shall be payable without deduction and or set off and payment thereof shall be made on or before the

- thirteenth day of the month following the delivery of the Goods or performance of the services unless other terms of payment are expressly stated in writing.
- (2) A decreasing or increasing adjustment and or the issuing of an adjustment note, pursuant to Division 21 and Division 29-C of the GST Act, shall not, in any way, constitute a release, waiver, and or forgiveness of the debt incurred by the Purchaser.

Interest on overdue payments

15. If Goldacres is not paid for any Goods or services on the due date specified in this agreement without prejudice to any other right or remedy, all outstanding money shall bear interest at the rate set, pursuant to the Penalty Interest Rates Act, Victoria, 1986, as such money, together with interest shall be recoverable forthwith from the Purchaser.

Rights in relation to Goods.

16. (1) At all times until the Debts have been paid in full the Purchaser shall be responsible for any loss or damage occasioned to the supplied Goods howsoever occasioned on a strict liability basis and shall indemnify Goldacres against any such loss or damage and shall insure and keep insured the Goods in the name of both the purchaser and Goldacres against such loss or damage to the full extent of the purchase price and shall provide a copy of such Insurance Policy to Goldacres.
- (2) The Purchaser shall have the right to resell Goods but only as fiduciary agent and trustee for Goldacres by way of bona fide sale at full market value and in the ordinary course of its business.
- (3) Until all the Debts have been paid in full:
- (a) the Purchaser shall take custody of the Goods as trustee, fiduciary agent and bailee for Goldacres;
- (b) the Purchaser shall keep the Goods separate from any other goods and properly marked, stored, protected and insured;
- (c) the Purchaser must hold all of the money it receives ("Proceeds"):
- (i) from the sale of any property into which Goods supplied have been incorporated; and
- (ii) from the sale of Goods or provision of services including the Goods supplied by the Goldacres as bailee, fiduciary agent and trustee for Goldacres, but the Purchaser need not hold on trust any money exceeding the amount of the Debts at the time the money is received.
- (d) The Purchaser expressly acknowledges that it is bound by the fiduciary obligation created in the preceding paragraph and acknowledges that:
- (i) it must hold the Proceeds on trust for Goldacres;
- (ii) it must place the whole of the Proceeds in an account separate from its own moneys (the "Proceeds Account");
- (iii) it must maintain the Proceeds Account separate from its own moneys at all times.
- (iv) it must maintain proper records for the Proceeds Account.
- (v) it must not assign or encumber any book debts arising from sales made in circumstances set out in clauses 16(c)(i) and (ii) or do any other act in derogation of Goldacres' legal or beneficial interests; and
- (vi) it must account to Goldacres on demand for all moneys standing to the credit of such account.
- (e) For the purposes of identification of different consignments of Goods purchased from Goldacres and receipt of Proceeds, the Purchaser agrees that the principle of "Last In, First Out" shall be applied to any items that cannot be distinguished.
- (f) Goldacres may trace the Proceeds in equity.
- (4) Goldacres may at any time, without notice to the Purchaser and without prejudice to any other rights which it may have against the Purchaser, terminate any contract connected with the Goods and the bailment referred to in clause 16(3) and enter upon any premises owned or occupied by the Purchaser where Goldacres reasonably believes the Goods may be stored, and repossess the Goods without liability for any damaged caused, and subsequently dispose of the Goods at Goldacres' discretion if:
- (a) the Debts are not paid in accordance with these terms and conditions or any other contract or arrangement between Goldacres and the Purchaser; or
- (b) Goldacres receives notice of or reasonably believes that:
- (i) a third person may attempt to levy execution against the Goods; or
- (ii) the Purchaser is insolvent (within the meaning of the Corporations Act 2001) or bankrupt; or
- (iii) the Purchaser has entered into any arrangement or composition with its creditors, gone into liquidation, or has appointed a receiver, a receiver and manager or administrator.
- (5) If after repossession under clause 16(4) Goldacres sells the Goods, Goldacres shall account to the Purchaser for any proceeds of sale (less expenses of repossession and sale) that exceeds the amount of the outstanding Debts.
- (6) If any Goods belonging to Goldacres are disposed of by the Purchaser or an insurance claim is made in respect of them, Goldacres shall be entitled to trace the sale or insurance proceeds, which proceeds shall be held by the Purchaser in a separate bank account on trust for Goldacres.
- (7) The Purchaser agrees and acknowledges that in the event it sells Goods to a third party on account, it will include in its terms and conditions of sale a provision under which the Purchaser retains title to the Goods until such time that the total amount due in respect of the Goods and all monies owing to the Purchaser have been paid in full by that third party debtor. The Purchaser also agrees and acknowledges that in these instances, it will register its PMSI in accordance with the PPSA in respect of its security interest in the Goods.

PPSA provisions

17. (1) The Purchaser acknowledges that these terms and conditions constitute a security agreement for the purposes of section 20 of the PPSA and that a security interest exists in all Goods (and any associated Proceeds from their sale) previously supplied by Goldacres to the Purchaser (if any) and in all future Goods (and any associated Proceeds from their sale) that may be supplied to the Purchaser by Goldacres.
- (2) The Purchaser acknowledges that Goldacres has a first ranking purchase money security interest ("PMSI") (as defined in section 14 of the PPSA) in the Goods and the Purchaser must not jeopardise such ranking (whether by act or omission).
- (3) The Purchaser acknowledges that it has received value as at the date of first delivery of the Goods and has not agreed to postpone the time for attachment of the security interest (as defined in the PPSA) granted to Goldacres under these terms and conditions.
- (4) The Purchaser will execute documents and do such further acts as may be required by Goldacres to register the security interest granted to Goldacres under these terms and conditions under the PPSA.

- (5) Until ownership of the Goods passes, the Purchaser must not give to Goldacres a written demand or allow any other person to give Goldacres a written demand requiring Goldacres to register a financing change statement under the PPSA in respect of Goldacres' interest in the Goods.
- (6) The Purchaser must indemnify Goldacres and on demand reimburse Goldacres for all costs and expenses incurred by Goldacres in respect of these terms and conditions including but not limited to Goldacres registering its security interest in the Goods, lodging, discharging or amending any financing statement or financing change statement, or otherwise complying with the PPSA.
- (7) The Purchaser agrees (other than as provided in these terms and conditions) not to sell, lease, mortgage, deal with, dispose of or create or attempt to create any other security interest in or affecting the Goods unless and until the Purchaser's Debts have been satisfied.
- (8) The Purchaser waives its rights under the following provisions of Chapter 4 of the PPSA:
- (a) to receive a notice on enforcement action against liquid assets (section 121(4)),
- (b) to receive a notice to seize collateral (section 123);
- (c) to receive a notice of disposal of Goods by Goldacres purchasing the Goods (section 129);
- (d) to receive a notice to dispose of Goods (section 130);
- (e) to receive a statement of account following disposal of Goods (section 132(2));
- (f) to receive a statement of account if no disposal of Goods for each 6 month period (section 132(4));
- (g) to receive notice of any proposal of Goldacres to retain Goods (section 135(2));
- (h) to object to any proposal of Goldacres to either retain or dispose of Goods (section 137(2));
- (i) to redeem the Goods (section 142);
- (j) to reinstate the security agreement (section 143);
- (k) to receive a notice of any verification statement (section 157(1) and section 157(3));
- (9) The rights Goldacres may have under the PPSA are supplementary and in addition to those set out in these terms and conditions and do not derogate from the rights and remedies of Goldacres under these terms and conditions or under any other statute or under general law.
- (10) The Purchaser must give 10 business days prior written notice of any proposed change in the Purchaser's name or other identifying characteristics and details.

Purchasers property

18. Any property of the Purchaser under Goldacres's custody or control shall be entirely at the Purchaser's risk as regards loss or damage caused to the property or by it.

Storage

19. Goldacres reserves the right to make a reasonable charge for storage if delivery instructions are not provided by the Purchaser within (14) fourteen days of a request by Goldacres for such information.

Returned Goods

20. Goldacres shall not be under any obligation to accept Goods returned by the Purchaser and will do so only on terms to be agreed in writing in each individual case.

Goods sold

21. All Goods to be supplied by Goldacres shall be described on the purchase order agreed by Goldacres and the Purchaser and the description on such purchase order modified as so agreed shall prevail over other descriptions including any Purchaser's specification or enquiry.

Cancellation

22. No order may be cancelled except with the consent in writing and on terms, which will indemnify Goldacres against all losses.

No waiver

23. The failure of any party to enforce the provisions of these terms and conditions or to exercise any rights expressed in these terms and conditions shall not be a waiver of such provisions or rights and shall not affect the enforcement of this agreement. The exercise by any party of any of its rights expressed in this agreement shall not preclude or prejudice such party from exercising the same or any other rights it may have irrespective of any previous action taken by that party.

Force Majeure

24. If by reason of any fact, circumstance, matter or thing beyond the reasonable control of Goldacres is unable to perform in whole or in part any obligation under these terms and conditions then Goldacres shall be relieved of that obligation under these terms and conditions to the extent and for the period that it is so unable to perform and shall not be liable to the Purchaser in respect of such inability.

Passing of risk

25. Risk in the Goods shall pass to the Purchaser upon delivery of the Goods to the Purchaser or collection of the Goods by the Purchaser's agent or carrier as the case may be.

Exclusion of liability

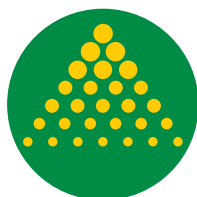
26. To the extent permitted by law Goldacres shall not be liable to the Purchaser in contract or in tort arising out of, or in connection with, or relating to, the performance of the Goods or any breach of these conditions or any fact, matter or thing relating to the Goods or error (whether or not it is negligent or a breach of contract) in information supplied to the Purchaser or a user before or after the date of the Purchaser's or user's use of the Goods and Goldacres shall be under no liability for damages arising out of the use of any chemicals, liquids, or mixtures in the Goods, nor for any application, not for the application methods nor for the environmental effects, which may result therefrom or from the use of the Goods.

Exclusion of representations and arrangements

27. To the extent permitted by law the terms and conditions supersede and exclude all prior and other discussions, representations (contractual or otherwise) and arrangements relating to the supply of the Goods or any part thereof including, but without limiting the generality of the foregoing, those relating to the performance of the Goods or any part thereof or the results that ought to be expected from using the Goods.

Place of contract

28. The contract for sale of the Goods and the provision of the services is made in the State of Victoria and the Purchaser agrees to submit all disputes arising with Goldacres to the courts of such State and any court competent to hear appeals therefrom.



GOLDACRES

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