HDV6000

OPERATORS

MANUAL

Issue: 1

Rev: A

Author: Jack Williams

Foreword and Reporting a Safety Defect

Foreword

This manual is an important part of the HDV6000.
It provides safety information and operation instructions to help you use and maintain your STG Global HDV6000.
Read this manual before using your equipment. Always keep this manual with the equipment for future reference.
If you sell your HDV6000, ensure this manual is given to the new owner.
If you require a replacement copy, please contact your STG Global dealer. If you need assistance in locating a dealer, visit our website at **stgglobal.net or on the STG App which you can find on the Apple store or Android store.**

Reporting a Safety Defect

If you believe that your vehicle has a defect you should **stop operating the machine immediately** and inform the Service department at STG Global Contact on **1300 998 784**

Overview

- Foreword
- Reporting Safety Defects
- Safety signs
- Daily checks/Prestart
- Unit Components
- Operational procedures
- SOP'S
- Trouble shooting
- Serial Number Location

Contents

Safety

DISCLAIMER

The STG Global Team take safety very seriously and expect our customers to ensure the same level of safety is used whilst operating all STG Global products.

STG Global is not responsible for how customers choose to use our products, the safety standards are suggested guidelines only.

PLEASE NOTE

Incorrect and unsafe use of STG Globals products can result in SERIOUS INJURY OR DEATH.

Safety signs

High pressure warning

Keep clear

Risk of fall

Do not drink

Confined space

Rotating part

Crush zone

Vehicle frequently stop

Do not drink

Risk of fall

High pressure warning

Beware of overheads

Erect handrail

Read ops manual

Isolate plant

Safety signs on the HDV6000

Vehicle frequently reversing

High pressure warning

Beware of overheads

Erect handrail

Read ops manual

Isolate plant equipment

Risk of fall

Rotating parts

Do not drink

Confined space

Keep clear

Crush Zone

Recommended PPE for Operating the HDV6000

- Steel cap boots
- Safety glasses
- Work appropriate gloves
- Hard hat
- Hearing protection (Ear plugs, Earmuffs ect.)

General Safety Precautions

- Do not operate the HDV6000 without 2-wheel chocks
- Do not operate the HDV6000 in a confined, non-ventilated space
- Do not operate the HDV6000 on an unstable / slippery surface
- Do not allow any children or untrained personnel operate the HDV6000
- Do not enter the Spoil Tank without a spotter and required ventilation equipment
- Do not enter the module without a spotter
- Do not Access the roof of the HDV6000 without a safety harness
- Do not put any body part including hands or feet near any moving part
- Do not release any hydraulic or engine oil while in operation as this can result in injury or even death
- Do not remove any shields unless servicing the HDV6000, ensure shields are out back into place and tightened before operating
- Do not allow anyone to ride outside of the cab of the vehicle
- Do not be in close proximity to the module while starting and running the engine
- Do not reverse without inspecting your surroundings
- Do not contact any moving or running part inside of the module while operating
- Do not operate the HDV6000 under the influence of any drugs or alcohol
- Do not come into contact with the Gerni nozzle or Powerheads under pressure as this can cause serious injury
- Do not come into contact with the inside of the boom hose under pressure or vacuum
- Do not come into contact with any hydraulic ram whist in operation
- Do not come into contact with the rear door while the door is opening or closing

Operation Set Up

- Ensure that The HDV6000 is on a flat harden surface as it can become highly dangerous if parked on an unstable surface
- Ensure that there is no power lines / any structure above your work area with the boom fully extended the HDV6000 will be 20ft high LOOK UP AND LIVE
- Ensure that the 2-wheel chocks are placed behind the rear wheels the HDV6000 comes standard with 2 wheel chocks
- Ensure that only trained personnel operate the HDV6000
- If equipment has been damaged, STG Global advise you do not continue using the faulty equipment.
- Wear all advised PPE (as seen on page 10)
- Ensure that your fuel level isn't critically low
- Ensure that your machine is in running order, download the STG Global app for a Pre-start check video

Prestart /daily check before use of the HDV6000 Part 1

Actions	Pass	Fail (add notes)
Step 1 On the right-hand side of the module Check all filters for leaks Check the floor of the module for any engine oil, grease or hydraulic oil. Check all reflectors/ indicators down the right-hand side for damage.		
Step2 Check that the water filters are clean. if not remove and clean the water filters and reinstall them. (please turn the water valve back open once reinstalled)		
Step 3 Check the water level via the sight pipes installed on the side of the water tanks. (make sure that you have enough water on board for the job)		
Step 4 Check the hose reel ensure that there isn't any damage to your reel or house. (Hose reel may be installed at the rear of the vehicle)		
Step 5 Check for damages to the Handrails and toolbox		

Step 6 Check the function and condition of the Gerni hose rollers. Check the water hose lines for any damages		
Step 7 Check all hydraulic fittings, rams and lines for leaks at the rear of the vehicle		
Step 8 That that all mudguards on the Right-hand side are in functional condition.		
Step 9 Check the function of the valves on both the rear dump valve and the vacuum suction point		
Step 10 Check the functionality of the E-stop that it engages and disengages Check all reflectors/ indicators down the Left-hand side for damage.		
Step 11 Check the functionality of the water tank pump valve.		
Step 12 Check the boom hose for any damages.		
Step 13 That that all mudguards on the left-hand side are in functional condition.		

Prestart /daily check before use of the HDV6000 Part 2

Actions	Pass	Fail (add notes)
Step 1 Climb the ladder to check the blower oil level via the sight glass. Minimum level of half full on the sight glass is acceptable		
Step 2 Climb down the ladder and check the hydraulic oil via the sight glass on the tank. Minimum level of half full on the sight glass is acceptable.		
Step 3 Check the Cat engine oil, Via the dip stick on the right-hand side of the block. Only check when the is on level ground, only top up the oil if the dip indicates L oil.		
Step 4 Check the coolant level via removing the cap coolant sound come up to the bottom of the filler neck.		
Step 5 Check the condition of the belts visually ensure here is no excessive slack in the belts.		
Step 6 Clean out the bag house filters With the provided wash gun.		
Step 7 Clean out the cyclone housing by remove the top lid and opening the bottom door wash the cyclone out with water.		

- STG Global advises that all
- trucks should be washed after use

Please note that the HDV6000 can be operated in 3 different ways, by the control panel, the wireless remote and the pendant remote

Before any operation of the HDV6000

- Before operating the HDV6000 ensure the module isolator is flicked over to on, the isolator switch is located on the right-hand side of the vehicle below the Cat engine

- As seen in this image the isolator is in the on position flick the switch up to power the HDV6000 down to power down

Disengage E-STOPS

- There are two E-Stops located on the left-hand side of the HDV6000, one on the back of the toolbox and another inside the module on the Cat motor screen control
- To disengage a E-STOP twist the stop to the left and pull

Start-up sequence for cat motor

Pull out the Red E stop

Press the power light button

Push up on the cat switch

Press the start button

Controlo RPM with the up and the down buttons

Press the compressor button to supply your air tanks with a additonal air supply

Press gerni if you would like to use the gerni

Ensure that all E Stops have been disengaged

CAT Motor User Control Screen

- The power on and off switch is used to turn on the screen and turn it off
- The menu button can be used at any time to return back to the main menu
- The Emergency stop button is used the power down the engine and screen in the event of a emergency. Please note if the Emergency Stop Button is engaged the CAT Screen and Motor will not power on.
- Up button is used to turn up your RPM, the maximum RPM the CAT Engine can go up to is 2150RPM. This increase in RPM will increase the output of the engine.
- Down button is used to decrease the RPM, this will lessen the CAT motor output
- The enter button is used to agree with a question that the CAT screen may ask you
- The start button is used to start the CAT engine once the screen is powered on
- The auto button is used to get your CAT engine up to a preset RPM which you can program into the CAT motor screen
- The stop button will power down the CAT motor

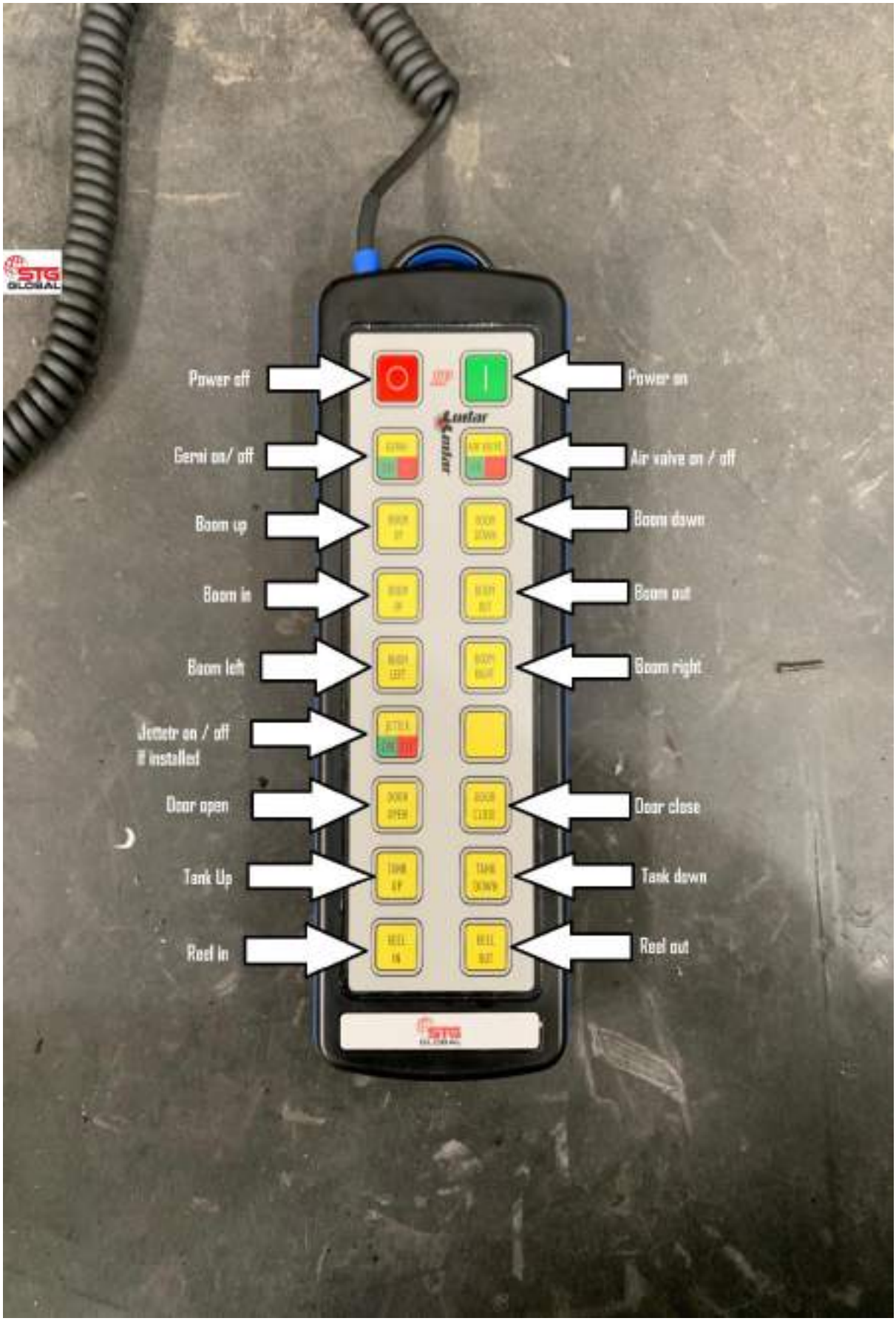
Control Panel Controls

- Every button on the control panel has a set function and is self-explanatory (E.G the work light button powers the work lights on the STG HDV6000)
- Before powering up your CAT engine, you must press the Exhaust Vacuum button seen here as the green emergency stop button, this will allow you to start the engine
- Air open close will open the air valve to allow you to have vacuum or pressure.
- The tank reel switch can be used if you have a reel installed on your HDV6000, press the switch and tank up/down this will make your reel extract and retract

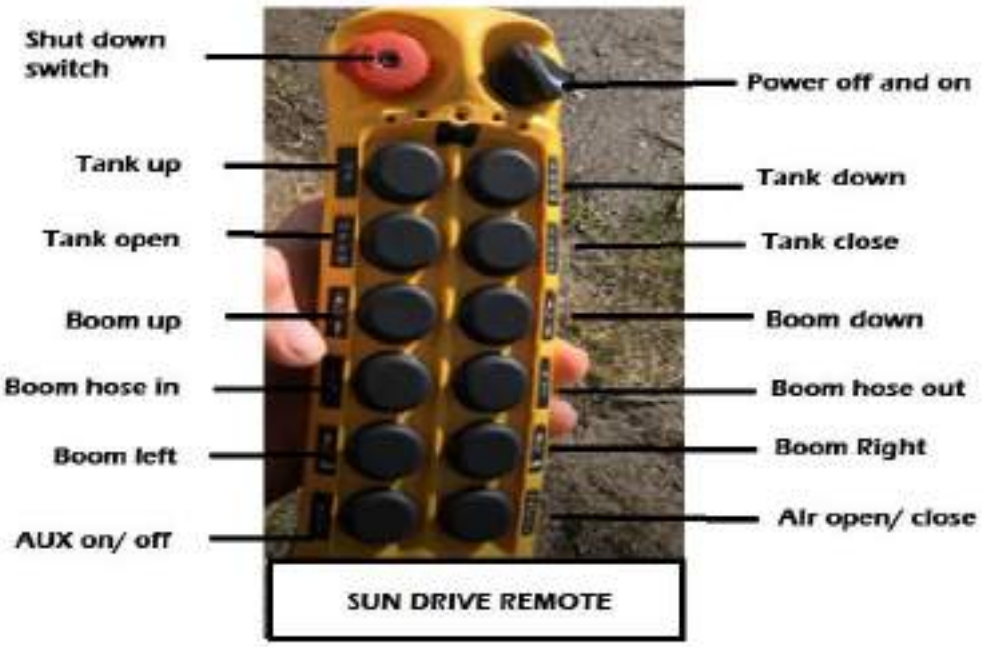
Remote Controls Loadar

Loadar Remote 1 Loadar Remote 2 Loadar Remote 3

- All remotes must be turned on using the green button, only one remote can be used at a time
- To switch between the remotes, you must press the red button on the top left-hand corner to power down the remote, then press the green button on the remote you want to use
- All the button on the remotes are the same as the control panel (see image on page 14), The Range of the remotes varies between 35M to 50M away from the Receiver Unit installed on the HDV6000
- The Loadar Unit runs off disposable battery's


Power off
Power on
Genni on/ off
Air valve on / off
Boom up
Boom down
Boom in
Boom out
Boom left
Boom right
Jettstr on / off
if installed
Door open
Door close
Tank Up
Tank down
Reel in
Reel out

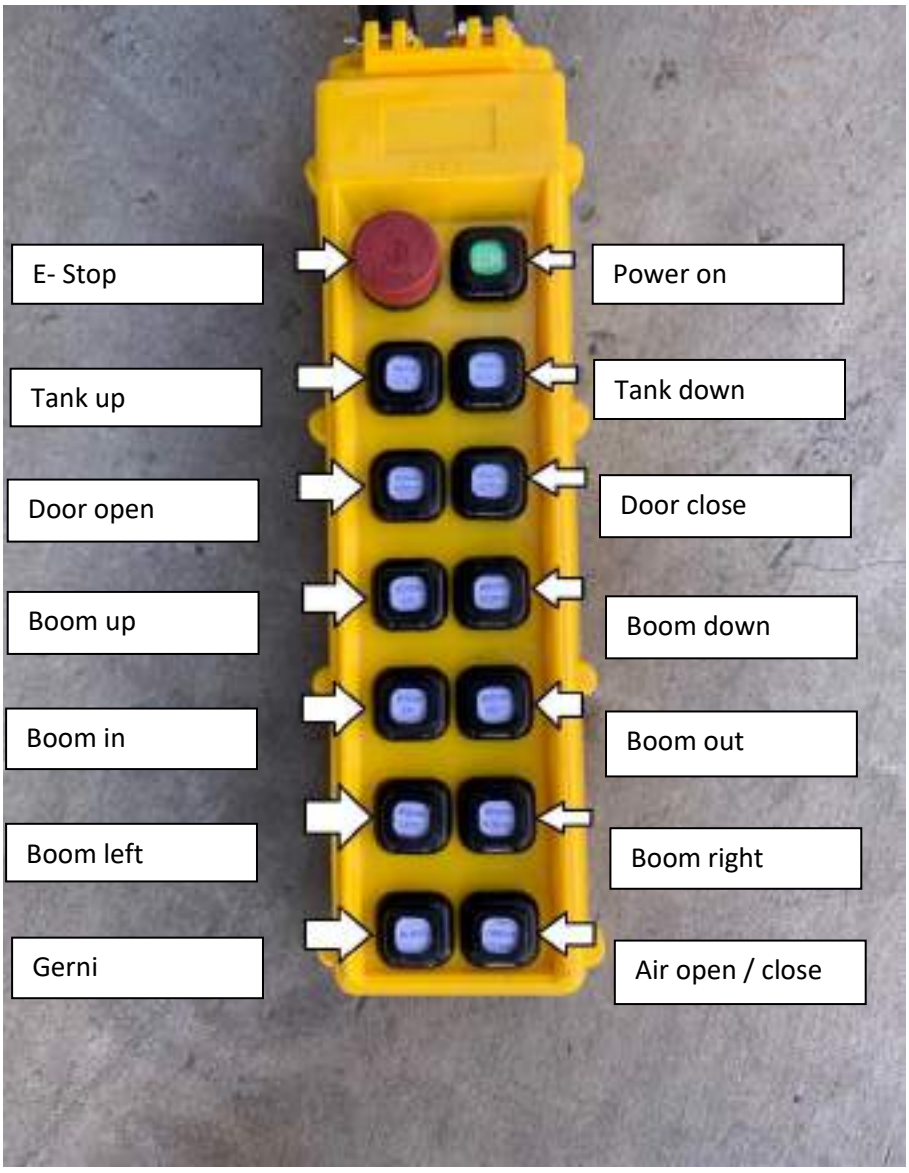
Remote Controls Sundrive



- The Range of the remotes varies between 25M to 40M away from the receiver unit installed on the HDV6000
- The symbols on the side of the remote are the same as the buttons on the control panel (as seen on page 14)
- The Sundrive remote is a rechargeable unit that comes with 2 chargers

Pendant Remote Wired Remote

- This remote has the same controls as the control panel
- This remote must be connected the bottom of the control panel
- The remote cord is 20m long



Prestart /daily check before use of the HDV6000

Front of vehicle

Left hand side of vehicle

Rear of vehicle

Right hand side of vehicle

Check for defects such as broken stg installed components, any unplug hydraulic lines and anything hanging off the vehicle.

Check the levels of the following, Engine oil, hydraulic oil, water level, spoil level via the sight glasses

Engine oil (ensure that all levels are checked on a flat surface)

The engine oil can be check only be check on the Cat motor inside of the module. The Cat is located on the right-hand side of the vehicle behind the cab.

Right hand side of vehicle

To Check the oil level pull the dip stick out of its housing located on the right hand side of the cat motor, wipe the dip stick with a rag and place the stick back into the housing, pull the dip stick back out of the house to check your oil level.

If the engine oil is low the oil can be topped up with 40 w15 engine oil via the filler located on top of the cat engine.

Hydraulic oil(ensure that all levels are checked on a flat surface)

To check your hydraulic level, you'll have to have to do a visual inspection of the hydraulic sight glass located on the hydraulic oil tank on the left-hand side of the module.

If the hydraulic oil is low, you top it up that the fill point located.

Located on the left-hand side of the vehicle below the module on the right hand side.

Water level (Ensure that all levels are checked on a flat surface)

The water levels on the two tanks can be check via that sight glasses located at the front and the rear of the water tanks. Tank one is located on the right-hand side of the Vehicle, and the other tank is on the left-hand side of the vehicle.

Spoil level

The Spoil level is can be checked by the sight glasses at the rear vehicle

Check that water filter ball valve is switched on

*please note that if the valve is switched off, and the water pumps are running this can wear out the water pump motor And void your STG warranty

Filters are located on the right-hand side behind the module.

Filters in the on position

Filters in the off position

Check the grease nipples on the vehicle regrease if needed

STG advise that all grease nipples are regrease regularly, Grease points are located below the module on the left-hand side of the vehicle. All rams are to be greased regularly there are grease nipple on all hydraulic rams at the rear of the Vehicle

Stg recommends using a hand pump.

Check the condition of all STG accessories such as the Lance guns

The accessories will be located in the toolboxes on the left and right-hand side of the vehicle

Check for any damage on the wash guns handles and nozzles.

Check module condition including hydraulic lines, wiring, buttons, switches and overall condition.

The module is located behind the cab and in front of the spoil tanks.

Check the condition of the buttons/ switches

Check for any wires exposed

Check for and hydraulic leaks

Open the control panel door via the handle on the right hand side and check if any electrical fittings have come loose.

Cleaning of the Cyclone housing

The cyclone filter is on the left-hand side of the HDV6000 behind the module.

There is a door on the bottom of the cyclone it has two wing nuts on the right-hand side of the door you'll need to loosen the nuts to open the door, the door is there so you can clean your cyclone.

*ENSURE THAT THE WING NUTS ARE TIGHT ONCE THE DOOR IS SHUT TO SEAL THE SYSTEM

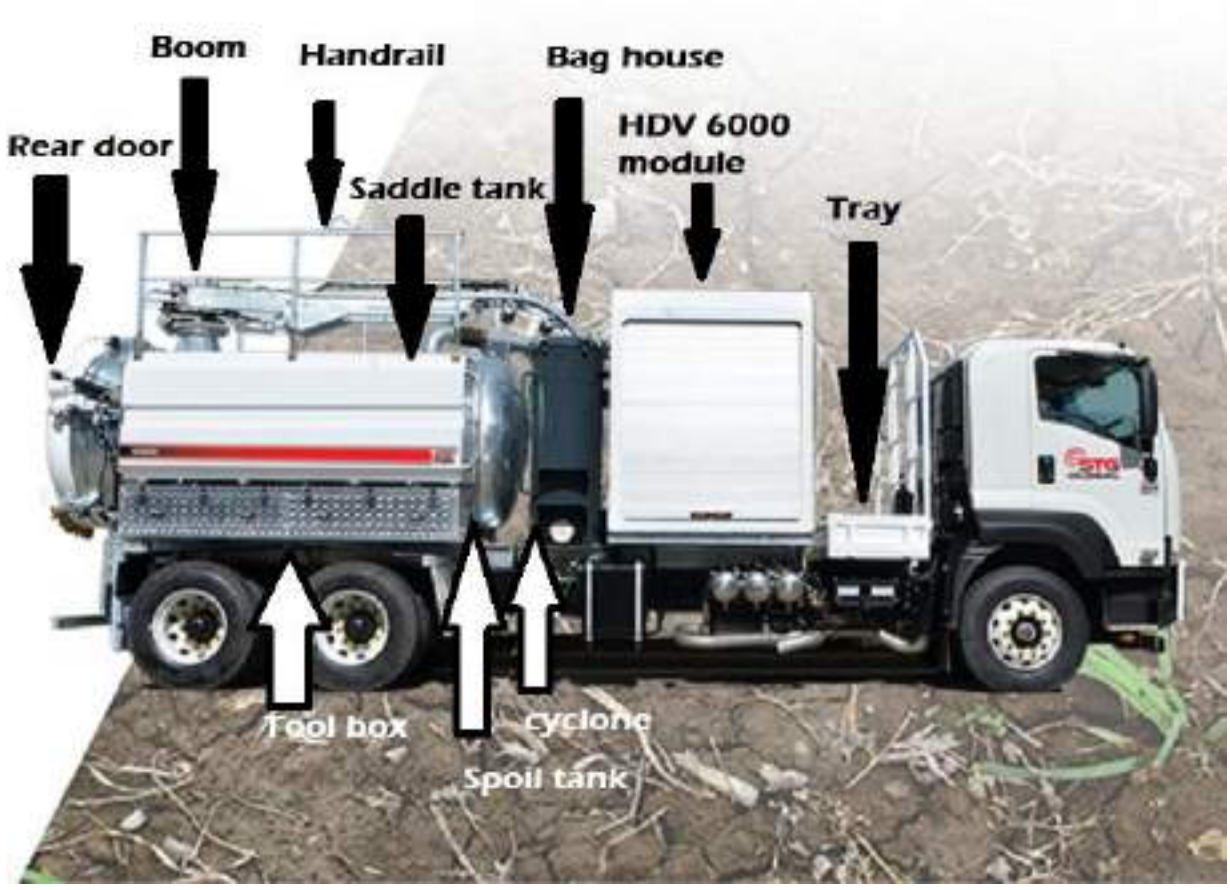
Check the function of the STG components such cat motor, Gerni, boom, tank up and down

- Please note that the cat motor must be running on idle (1000RPM) for the function test .

Unit components

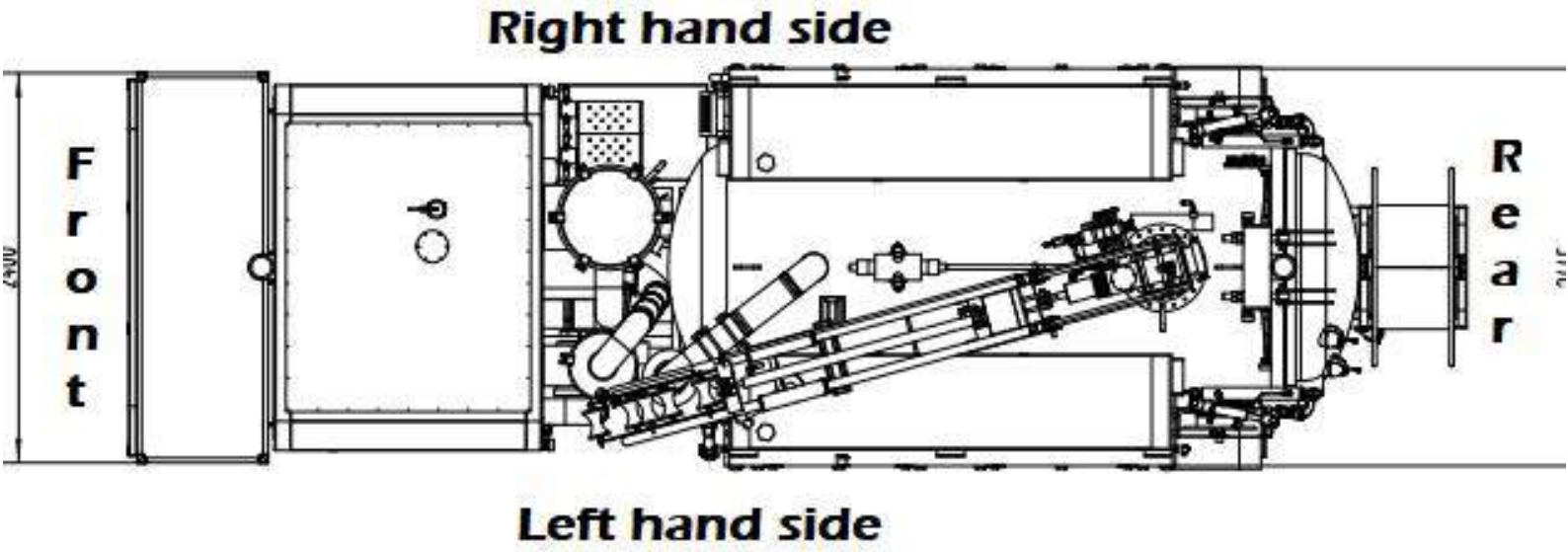
The Components in The HDV6000 are as follows:

Tray, HDV6000 Module, Bag House, Cyclone, Spoil Tank, Saddle Tank, Handrail, Tool box, Boom & the Rear Door.



Operator Orientation

HDV6000



To open the roller doors, push in on the key barrel and pull down on

The door by the handle. This will release and unlock the door, use the guide rope to control how fast the door opens

Each roller door comes with 2 keys the rollers can be locked with

Gauges

Pressure Gauges

Gerni Water Pressure Gauge

Vacuum and Pressure Gauge

- The Gerni Water Pressure Gauges are installed to give the user an accurate reading of the PSI being delivered through the Gerni.
- The Vacuum Pressure Gauge is a indicator of HG under Vacuum pressure and PSI under pressure. The HG and PSI can be increased by turning up the RPM on the Cat Engine (Ref to page 13 for more information)

Operation of the Boom

- To start the boom, you will need to start the CAT motor, you can do this by following the sequence the start up page
- The boom is can go up, down, left, right and the hose can retract, these controls are located on your remotes and control panel
- Ensure that there is no power lines / any structure above your work area with the boom fully extended the HDV6000 will be 20ft high LOOK UP AND LIVE
- If there is any confusion on how to use the boom to its fullest potential, you can watch operator's video found on the STG Global app.
- DO NOT stand directly underneath the boom
- Never put your hand or any other body part in the suction hose under pressure or vacuum
- To get suction or pressure through the boom press the air open/close button, then choose between vacuum or suction
  with the Pressure /vacuum switch

Operation of the Gerni

- Please refer to CAT motor start up page
- To power the Gerni after starting up the CAT motor press the Gerni button on the control panel . (If you turn the gerni on by the control panel is by passes the gerni off on function on the remotes)
- Connect your Gerni gun to the hose end before use pull have the metal sleave on the hose end and put it over the gerni end
- The higher the RPM the higher the pressure output, the pressure can also be controlled by the valve at the rear of the HDV6000 .
- Please turn off the Gerni while it isn't in use as this can wear out the unloader
- Squeeze the gun trigger to operate the Gerni
- These Gerni ends are not shovels, please do not jab the heads into the ground as this can result in damaging the heads

Operation of the Hose Reel

PLEASE NOTE

- When retracting the hose reel ensure that the operator walks the hose back onto the reel and doesn't let go of the hose while retracting.
  (LETTING GO OF THE HOSE CAN RESULT IN INJURY AND INCREASE THE CHANCE OF DAMAGING THE INTERNAL SPRING OF THE HOSE REEL.)

Operation of the Rear Reel and Tiger Tail

- Turn the Tank Reel Changeover switch to the right on the control panel, this changes the function of the door open and close button to a reel in and reel out button on all the remotes.
- The end of the Tiger Tail with the steel insert can be attached to the rear suction point of the HDV6000
- Please use provided Travis Clamp to secure hose

How to install Travis fittings

Place the Travis fitting on you desired point

After which use the clip the tight the fitting

Filling and Emptying the Water Tanks

- There are two fill points on the HDV6000, one the left-hand side of the Saddle Tank, and the hydrant fill point at the bottom of the left-hand side of the Saddle Tank.

- To empty the tanks there is a water release valve at the rear left-hand side of the vehicle, remove the cap and pull the ball valve to release the water.

Tank & Door Functions (Must be carried out at engine idle 1000RPM)

- To lift the tank, press the tank up button on your control panel and remotes

- To lower the tank, press the tank down button on your control panel and remotes

- To open the door, press the open-door button on your control panel and remotes

- To close the door, press the close door button on your control panel and remotes

- All buttons on see here are located on the left-hand side of the vehicle inside the module on the bottom left hand corner. (~~please see related images on the page over~~)
- Please note to empty the tank the rear door must be opened first then make the tank go up

Locations and explanations

Cat motor

The Cat motor is located on the right hand-side of the vehicle inside on the module ,

Please do not the touch the cat engine after use temperatures can exceed 95 degrees

Cat motor screen and control panel

PLEASE SEE INSTRUCTIONS ON HOW TO USE THE CONTROLS ON THE SCREEN ON PAGE

Spoil tank

The spoil tank is located at the middle to rear of the vehicle

The spoil tank is designed to tip to empty the load

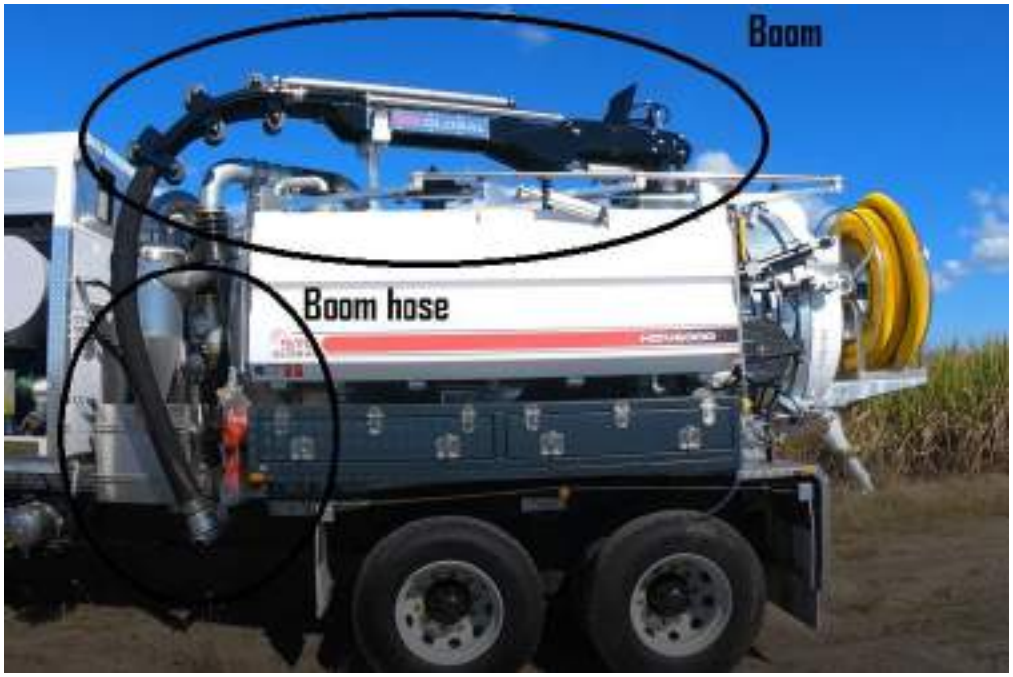
- Ensure that ram locks are put on the rams once the door is open (ensure that you remain 10 m away from the tank while dumping

Water tanks

There are two water tanks one on each side of the spoil tank

Boom and boom hose

The boom is stored on top of the vehicle and kept on the left hand side



Rear door

The rear door is on the back of the spoil tank at the rear of the vehicle

Toolbox and accessories

There is a toolbox on the left-hand side of the vehicle here how to open the locks, pull down on the lock and twist to the left the door is on struts and the door will lift open after being unlocked.

The contents of the tool box includes lance guns, Travis fittings and wheel chocks.

Control panel

The control panel is on the left-hand side of the vehicle inside of the module

You'll have to follow the open roller door procedure

The control panel is on left bottom corner of the module

Blower

The blower is located on the left-hand side of the module just behind the control panel, you'll have to follow the open roller door procedure to gain access

Please do not the touch the blower after use temperatures can exceed 65 degrees

Bag house

The bad house is on the right-hand side of the vehicle behind the module

To open the bag house filter there are 6 wing nuts you'll need to undo followed by 6 13mm bolts holding the filters down remove the 6 bolts and take the plate off to get your filters out

After you have carried out the filter remove STG advises that you clean out the filters daily

Here is what the filters will look like

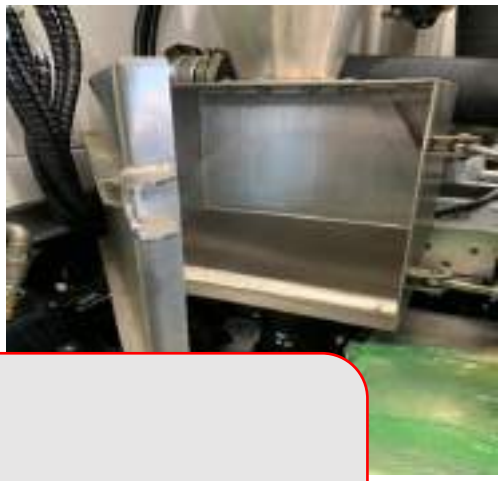
Stg advises that you use the wash all with water every 8 hours of use.

Cyclone

The cyclone filter is on the left-hand side of the HDV6000 behind the module

There is a door on the bottom of the cyclone it has two wing nuts on the right-hand side of the door you'll need to loosen the nuts to open the door, the door is there so you can clean your cyclone.

*ENSURE THAT THE WING NUTS ARE TIGHT ONCE THE DOOR IS SHUT TO SEAL THE SYSTEM



Hydraulic oil Tank

The hydraulic oil tank is on the left-hand side of the vehicle inside of the module on top of the blower (to open the roller door follow the procedure)

GFR Industries Pty Ltd
64 Success St
Acacia Ridge
Qld 4110
(07) 3216 7855

GFR Industries Pty Ltd
39 Tullamarine Park Rd
Tullamarine
Vic 3043
(03) 8336 1346

ABN: 85 082 352 458

www.gfrindustries.com.au

VEHICLE HYDRAULIC SERVICING SCHEDULE

The standard recommended Service schedule for a GFR Industries Vacuum Tanker hydraulic system application is as follows;

1. Daily;
   The Hydraulic System should be inspected for serviceability and obvious issues, leaks etc. by the vehicle operator at the start of each operation day.
   Before operation the Hydraulic Fluid level/s and quality should be checked and topped/corrected if needed.
   The Hydraulic Tank, Filters, associated hoses and drive elements should be inspected for serviceability.
   Any damage or fluid leaks should be reported immediately and the system not operated.
2. Monthly;
   The Hydraulic system should be visually checked every 30 days by a trained technician as per the daily inspection and additionally for serviceability and signs of wear or damage.
   Hydraulic Fluid levels, fluid quality, Hydraulic components and hosing checked for security, serviceability and hydraulic motor drive integrity.
3. 6 Monthly;
   The Hydraulic systems should be serviced by a trained technician as per the monthly inspection and additionally an individual component visual inspection.
   Hydraulic filter elements and Hydraulic tank filler breathers should be changed every 500hours or 6 months whichever occurs first.
4. Annually;
   The Hydraulic fluid to be changed on major service every 1000 hours or 12 months whichever occurs first and additionally to the 6 monthly inspection requirements. (Use only 46Cst or 68Cst Hydraulic fluid)
   The system should be operated after service and pressure and RPM should be recorded from system and operation of the systems checked as per operating parameters.
   The hydraulic motor drive coupling to water pump should be inspected.
5. Bi-Annually;
   In Addition to the Annual inspection and testing the Hydraulic motor drive couplings should be replaced every 24 months.

GFR Industries Pty Ltd
64 Success St
Acacia Ridge
Qld 4110
(07) 3216 7855

GFR Industries Pty Ltd
39 Tullamarine Park Rd
Tullamarine
Vic 3043
(03) 8336 1346

ABN: 85 082 352 458

www.gfrindustries.com.au

The above schedule is intended as a minimum servicing requirement.

Only authorized and trained personnel should operate and service the systems.

How to remove the water filters and clean them

- The water filters are located on the right-hand side of the vehicle below the bag house filter and behind the module

- Before removing the filters turn off the ball valve, after which twist the filter to the left to loosen

- After the water filter is removed wash the filter with water then re install the water filter back together the same was is was when removed.


- Re install the filter by spinning it on to the holder and turn the ball valve back on


Handrail

- The handrail is a safety feature on the HDV6000 that is installed on both sides of the roof

Please see the page over to see location of the switch and how to operate the handrails

Handrail switch location

- The handrail switch is located on the left-hand side of the vehicle inside the module next to the control panel

- You will have to follow the roller door procedure to open the module

Flick the handrail switch up to make the hand rails go up, flick the hand rail switch down to make the hand rails go down

Primary disconnects

- The primary disconnect is located on the left-hand side of the vehicle between the cyclone and the tanks

Fire extinguisher

- The fire extinguisher is located on the left side of the vehicle attached to the far left hand side of the of the toolbox

Watch your weight

- While driving between locates you may be forced to stop a government weigh bridges. If both you're saddle water tanks are filled and you have the spoil tank full of mud this can put you over the legal maximum Weight. This can result in large fines for both the operator and the company. STG Global advises that all truck should be installed with a Truck weigh system. The STG Global also advises that the water tanks should be emptied while traveling.

HOW TO EMPTY THE WATER TANK

- To empty the tanks there is a water release valve at the rear left-hand side of the vehicle, remove the cap and pull the ball valve to release the water.

Completing the Job

*DISCLAIMER

(STG Global highly recommend that all equipment is washed down daily with the supplied wash Gerni wash Gun)

Handy tools to keep in the HDV6000

- A adjustable shifter 300mm

- A socket set (¾ inch rachet with sockets from 7mm-32mm)

- A shovel

- Zip ties (4.8 mm by 400mm

- A hammer

- A spanner set (with spanners ranging from 8mm -24mm)

- Allen keys set (ranging from 1.5mm – 10mm

- safety glasses

- Safety boots

- Ear muffs

High pressure cleaner SOP

Personal Protective Equipment (PPE)

Rubber steel-toed boots | Metatarsal Guard | Rough wet grip gloves | Face Shield | Rain Suite | Hearing Protection | Head Protection

- Rings, watches, jewellery that may become entangled in machines must not be worn.
- Long and loose hair must be tied back.
- Only snug fitting clothes to be worn.

- *At operating pressures over 5,000 psi and above, employees are required to wear protective suits made of Kevlar.*

Hazards - What can cause harm?

- Exposure to ultra high pressure water - amputation
- Slip, trip and falls on uneven or slippery surface
- Slip, trip and falls on objects on ground
- Exposure to harmful substances – petrol
- Exposure to compressed air
- Struck by ejected object / flying debris
- Exposure to harmful environments
- Overexertion and bodily reaction:
  - Awkward, twisting, bending positions
  - Pushing, pulling, throwing, pressing objects
  - Repetitious movements

Precautions

Operator training should include:

- ✓ Workplace induction
- ✓ Safe operating procedures
- ✓ Manufacturer's instructions (read and understand)
- ✓ Controls on the machine
- ✓ Cutting action
- ✓ Hoses
- ✓ Use of hazardous chemicals/substances
- ✓ Use a safety observer/spotter
- ✓ Material/Safety Data Sheets (M/SDS) are available on site e.g. compressed air, lead (if stripping) etc.
- ✓ Manual handling
- ✓ Hazards involved with direct contact with high-pressure water
- ✓ Fitting of personal protective equipment
- ✓ Housekeeping
- ✓ First Aid
- ✓ Effective communication system

Restrict access to work area. Ensure:

- ✓ Exclusion zone surrounding work area using barricades and signage is in place
- ✓ Any other workers within the exclusion zone are wearing appropriate PPE
- ✓ Traffic control is in place
- ✓ A standby person (or spotter) should be allocated and used if required.

Pre-Operational Inspection: Follow the Pre-operational checklist in the manufacturer's operational manual.

- ✓ Fittings, hoses, guns and foot pedals are the correct pressure rating and undamaged
- ✓ Hoses and lines are protected from accidental damage
- ✓ Nozzles free from blockages
- ✓ Pump filter is clean and undamaged
- ✓ The hose run is flushed and air removed from the system
- ✓ Hook-up including pipes, hoses and connections is pressure tested with water at the maximum operating pressure
- ✓ Control systems are operating correctly
- ✓ Test emergency stops / Water supply is cool and clean

Operation

Horseplay with this equipment is strictly forbidden.

- **High-pressure water operation is usually performed using jet streams that can have a velocity greater than that of a 45-caliber bullet, and do as much damage**
- **Exercise extreme caution and strict compliance with procedures must be used to prevent the jet stream from striking the operator, other employees or delicate equipment**
- **No part of the body must ever be placed in front of the water jet. The jets of water can easily puncture and tear the skin, penetrate deeper causing infection or serious internal damage and amputation**
- **NEVER use on asbestos or asbestos containing material**

1. Set up a safety zone using a physical barrier and signs displayed where they are clearly visible:
    a. "ENTRY BY AUTHORISED PERSONS ONLY"
    b. "DANGER – HIGH PRESSURE WATER JETTING EQUIPMENT IN USE"
2. Set up of the Water Jet Cleaner within the safety zone, ensure:
    a. Place pump unit as close as possible to the work area, without being contaminated by debris from operations, to reduce the amount of hose used and the area covered by the operator
    b. Arrange hoses:
        i. To reduce tripping hazards
        ii. Suitably protected to prevent crushing or puncture damage
        iii. Not running across walkways, roadways or stairways
        iv. Restrained to restrict their movement in the event of a hose end failure
        v. Flushed with sufficient water to remove and contaminants before installing the nozzle
        vi. Nozzles checked and cleared of debris that could cause obstructions
        vii. Use a "Whip Check" if possible to reduce chance of hose whipping
        viii. Attachments should be fitted as per the manufacturer's recommendations
    c. Sufficient lighting and visibility
    d. No electrical hazards
    e. Safe access and egress
    f. Remove all objects such as rocks, broken glass, nails, wire, debris, toys, or anything that may become a hazard during Water Jet Cleaner operation
    g. Complete visibility of work area for Water Jet Cleaner operators
    h. Access to clean water supply for use with the Water Jet Cleaner. *USE SEDIMENT FREE WATER*
    i. Away from any ignition sources
3. Connect the water hose and check that it is secure
4. Connect the water supply hose to a mains water supply outlet
5. Connect the high-pressure hose and gun
6. Check the operation of the gun safety switch and trigger
7. ONLY turn on the Water Jet Cleaner once set up is completed and checked
8. Cleaning objects:
    a. Any objects to be cleaned must be secured against movement
    b. Small objects must be secured to a vice or similar tool
    c. Objects should never be held manually by a person
    d. Reaction forces should be considered and regulated based on the ability of the worker to maintain control of the jetting gun
9. Pipe cleaning:
    a. Check pipe cleaning jobs are set up so the nozzle cannot physically come out of the pipe when it is under pressure
    b. Use A foot control hold-to-activate device e.g. a foot pedal
    c. Use an anti-withdrawal device
    d. Hoses should be clearly marked at a suitable distance from the nozzle to indicate the location of the nozzle as it is withdrawn from the pipe or tube.

NEVER point the jet stream at a person or animal.

Maintenance is to be conducted as per manufacturer's instructions and by qualified persons only.

Truck Loading SOP

Personal Protective Equipment (PPE)

AS 1319-1994 Safety signs for the occupational environment reproduced with permission from SAI Global under licence 1210-c062. Standards may be purchased at http://www.saiglobal.com

Foot Protection

Hand Protection

Sun Protection

Protective Clothing

- Rings, watches, jewellery that may become entangled in machines must not be worn.
- Long and loose hair must be tied back.
- Only snug fitting clothes to be worn.

Hazards - What can cause harm?

- Operation of powered mobile plant/vehicles
- Load – materials being handled/moved
- Falling objects
- Work at height (truck)
- Awkward, twisting, bending positions, lifting, carrying, or putting down objects, pushing, pulling, throwing, pressing objects, repetitious movements.

Precautions

- Before delivery/pickup, the following information should be provided to the driver:
  - The restrictions on the types of vehicles that can be accepted
  - Presence of any overhead services / power lines
  - Delivery times
  - Site information, including loading/unloading area, parking facilities, reception, rest rooms etc.
  - Reporting procedures on arrival and departure
  - Safety procedures on site, such as wearing high-visibility clothing, using mobile phones etc.
  - Availability and use of equipment
  - Person in charge of loading/unloading
  - Emergency contact details.
- Where required provide adequate traffic management. Include:
  - Witches hats/barricades/line markings
  - Caution signs/convex mirrors/alarms etc.
  - Exclusion zone for pedestrians
  - Driver waiting area (visible to forklift operator)
- Ensure transport documentation completed;
  - Labels
  - Number of packages
  - Weight/volume
  - Signatures are obtained as required
  - Load is as documentation describes.

Pre-Operational Inspection: Follow the Pre-operational checklist in the manufacturer's operational manual.

- Check transport vehicle before use. Ensure:
  - Fluid levels ok (oil, coolant, brake, hydraulic, transmission etc.) and no leaks
  - Brake, indicator and emergency lighting functional
  - No wear or damage of tyres and pressure ok
  - Windscreen clear, undamaged
  - Cabin and dashboard clear of debris/ stored items
  - Brakes functional (including hand/park brake)
  - Seatbelt present and fully functional
  - Other items as specified in manufacturer's operating manual (such as tailgates, temperature controls, etc.) Inspect load restraint equipment
  - Ensure headboards, side gates, loading racks are strong enough for load and in good working order.

Ensure vehicle suitable for load. Check: Road worthy, Sufficient space for load, Gross Vehicle Mass (GVM), tyre and load capacity will not be exceeded, Correct design for type of load (long loads, correct load distribution)

Operation Sequence

1. Park in designated area. Designated area should be:
    a. Clear of overhead power lines
    b. Suitable ground (firm, compacted soil or concrete, no steep slopes etc.)
    c. Free from pedestrians
    d. Clear visibility and sufficient room for loading/unloading
2. Turn off engine and isolate power to vehicle

     Driver to notify/seek permission from Loading Operator if power is required for some elements of vehicle

3. Liaise with Load Operator to ensure specific procedure for loading is followed
4. Communication:
    a. Use an effective communication system between the mobile plant operator and the driver – e.g. hand signals may be suitable in some workplaces, two-way radios in others
    b. Use signs, lights, alarms and the like to indicate loading/unloading is in progress
5. Driver:
    a. Prepare vehicle for loading/unloading (e.g. open doors, canvas, remove blocking/bracing equipment)
    b. Check existing load (if relevant)
    c. Provide information to Loading Operator about type of existing load
    d. Remain in designated area away from loading/unloading during loading/unloading process
6. Load Operator:
    a. Ensure sufficient/correct load restraint equipment available
    b. Tie down points are identified by tie down decals where required
    c. Verify all tie down equipment (lashings, chains, shackles etc.) is rated for the task

     Ensure load is restrained using performance standards to ensure load is positioned correctly, able to withstand acceleration, deceleration in different directions and movement is limited sufficiently

7. Erect sturdy barriers, such as fences or gates, around the safety zone – or, if these are unavailable, use chains or tape
8. Allow driver time to inspect load during loading/unloading
9. Confirm with driver when loading/unloading is complete
10. Driver:
    a. Check completed load
    b. No free spaces between packages
    c. Ensure packages cannot move in any direction and sufficient lashings to secure load
    d. Load documentation matches load description, including weight, volume and types
    e. Prepare vehicle for transport (e.g.: close doors, canvas etc.)
11. Replace tarps/covers from ground level wherever possible. Avoid working at heights. Ensure sufficient friction. Check for oil, grease or excessive plastic packaging that could reduce friction and allow load movement
12. Consider use of tough rubber mats under load to increase friction where relevant
13. Ensure gaps or drop offs on loading docks are protected to prevent falls

     Tarpaulins and Tautliners are designed to protect loads from external elements and are not to be used for load restraint.

 **Maintenance is to be conducted as per manufacturers instructions and by qualified persons only.**

Vacuum excavator SOP

Personal Protective Equipment (PPE) AS 1319-1994 Safety signs for the occupational environment reproduced with permission from SAI Global under licence 1210-c062. Standards may be purchased at http://www.saiglobal.com

- Do not wear rings, watches, jewellery that may become entangled in machines.
- Long & loose hair must be tied back.
- Only snug fitting clothes to be worn.

Hazards - What can cause harm?

- Plant Roll-over
- Entrapment
- Struck by moving plant
- Overhead power lines, underground services
- Exposure to fluid under pressure
- Fire/explosion
- Noise
- Struck by water under pressure
- Hazardous Manual Tasks – lifting, carrying, setting down, vibration etc.

Precautions:

Operator training should include:

- Construction Induction Card
- Workplace induction
- Manufacturer's instructions
- Nature of hazards
- Communication
- Traffic Management Plan
- Exclusion Zones
- Safe Work Method Statements
- Fitting of PPE
- Manual handling
- First Aid.

Machine Licensing

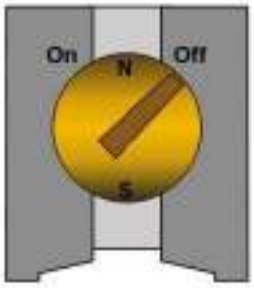
When the machine is to be operated on public roads, it must be registered and/or licensed as required by the relevant State or local authority.

Maintenance / Cleaning:

Follow LOTO procedures, record service/ repairs information in Maintenance Log.

1. ***Conduct Pre-start checklist*** prior to starting operations, check:
    a. Hoses and connections
    b. For leaks, damage and excessive wear
    c. All fluid levels
    d. All safety decals are in place and legible
    e. Filters and clean as required using the wash wand – *DO NOT USE THE POTHOLING LANCE TO CLEAN FILTERS OR ANY OTHER PART OF THE MACHINE*
    f. All guards are in place before starting the machine – *ONLY REMOVE GUARDS WITH THE MACHINE TURNED 'OFF' AND THE KEY REMOVED*

- *In an **EMERGENCY** turn the dial to the 'OFF' position to **STOP** the machine*

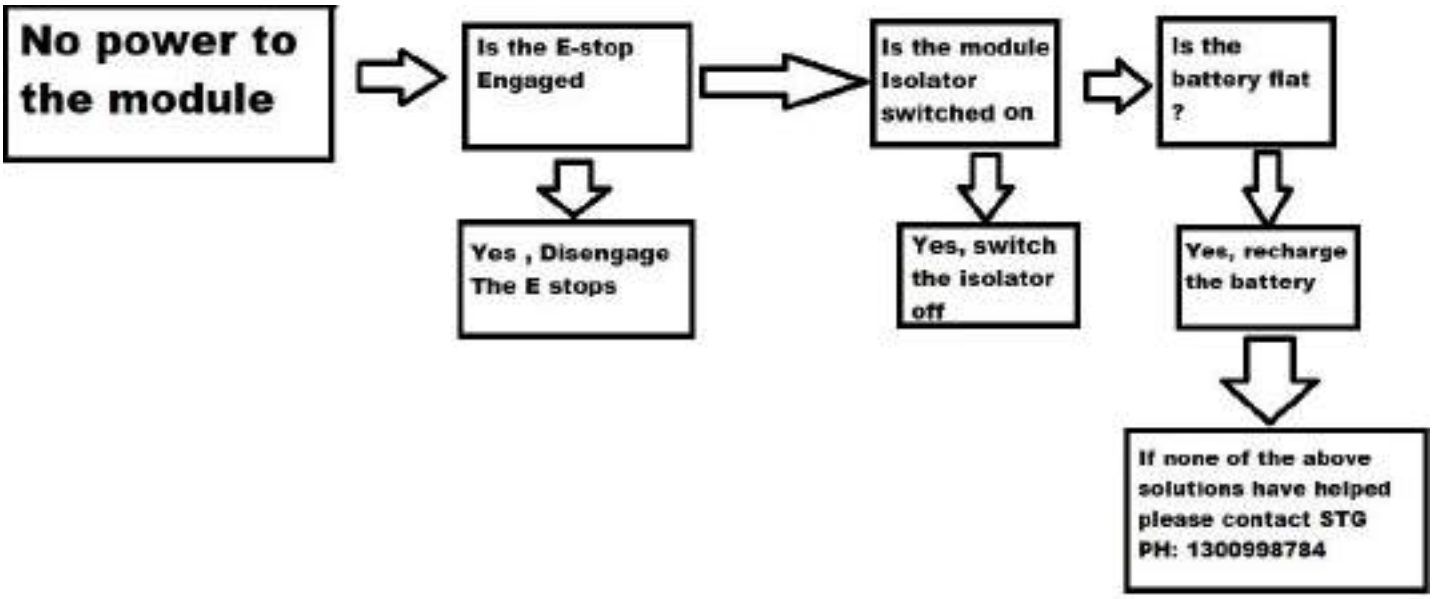


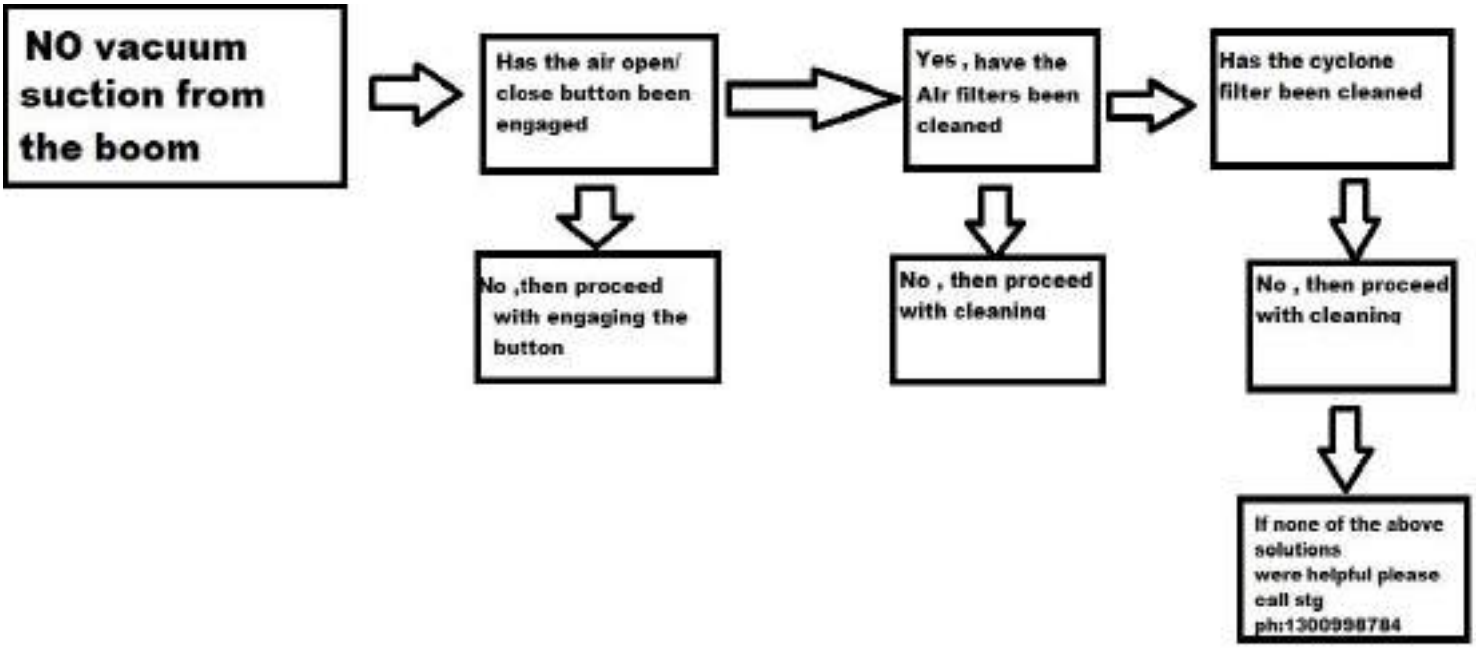
2. ***Connect the tooling.***
    a. Connect the suction hose to the tank
    b. Place the clamps around the back of the retaining ring and secure the locking lever
    c. Pull high-pressure hose from hose reel
    d. Connect suction tool to the suction hose
    e. Secure the high-pressure water hose to the potholing tool
3. ***Open*** the vacuum valve into the tank
4. ***Start the machine*** and when the engine is at operating speed, engage the high-pressure water switch. There is a second switch located at the rear of the machine
5. ***Switch the lever*** in the vacuum position
6. ***Commence excavation*** using the potholing lance, ensure:
    a. Wear PPE (hearing protection, face shield/eye goggles, steel cap boots, etc.)
    b. Clear ground of any loose material
        i. *Never point Potholing Lance at persons or use for any other purpose*
        ii. *Do not smoke during operation*
        iii. *Do not use mobile phone during operation*
7. ***Empty the spoil tank,*** with the engine running:
    a. Engage the machine hydraulics
        i. The tank must be under vacuum to release the door handle
    b. Release the lock by pushing the lever down
    c. Open the valve to relieve the vacuum
    d. Raise the door by pressing the door switch

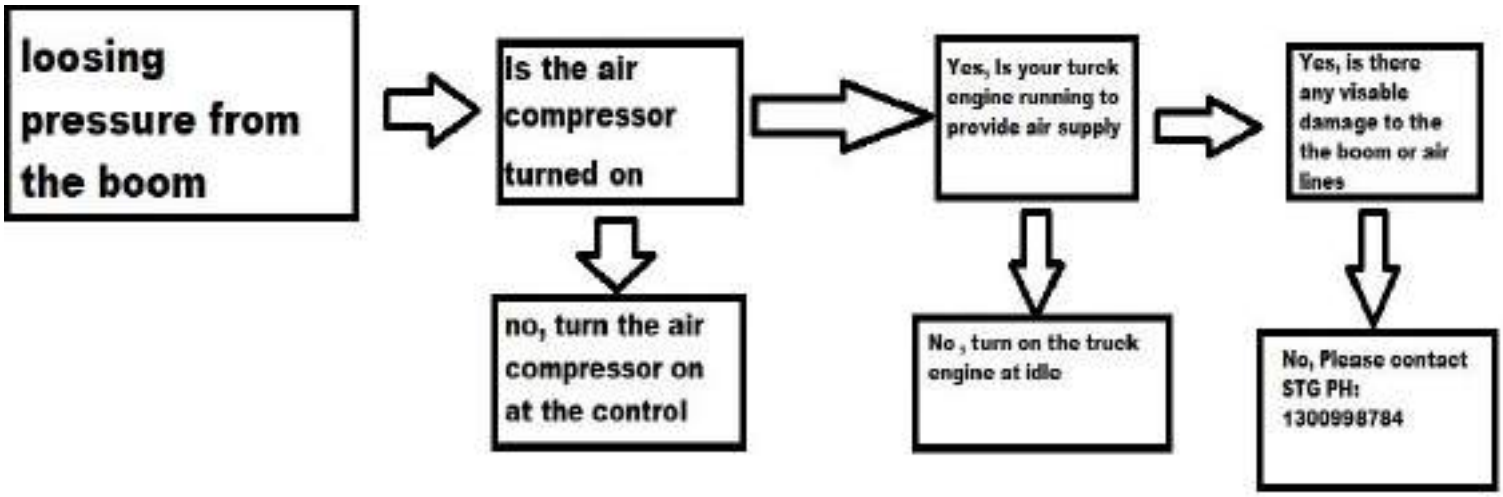
Raise the tank by pressing 'UP' on the tank tilt

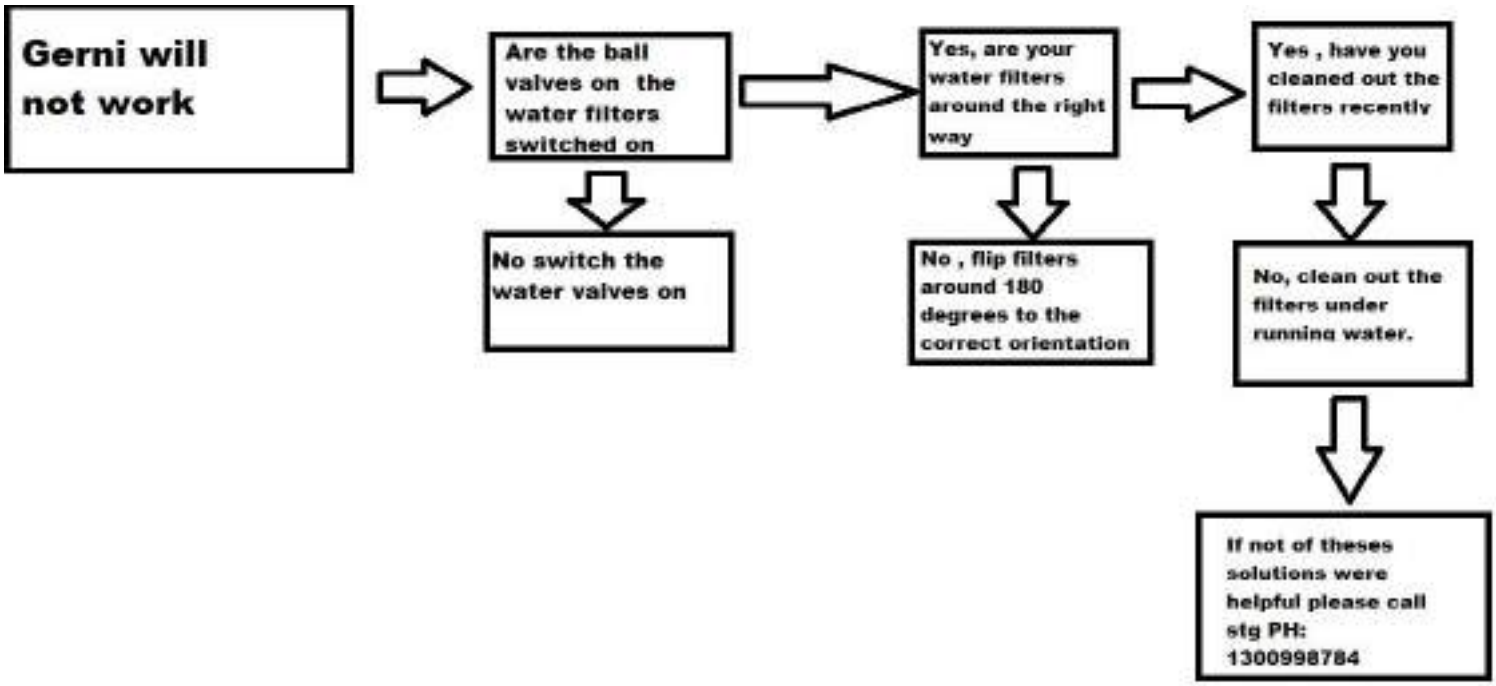
8. ***When the tank is empty,*** reverse the process and secure the door.

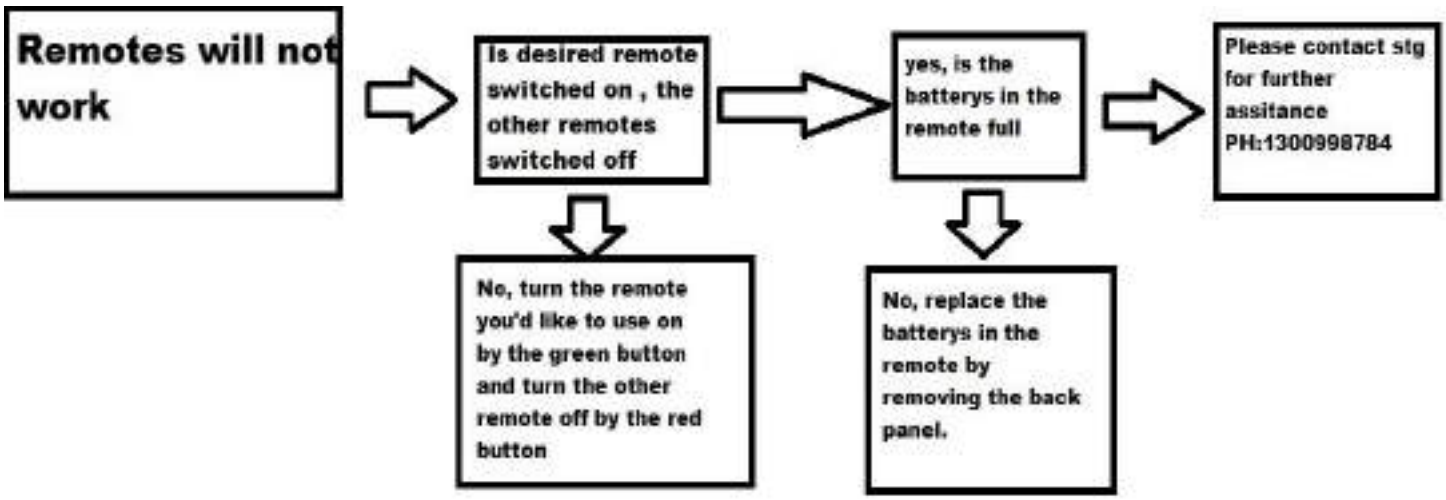
Troubleshooting






loosing pressure from the boom
Is the air compressor turned on
no, turn the air compressor on at the control
Yes, Is your turck engine running to provide air supply
No , turn on the truck engine at idle
Yes, is there any visable damage to the the boom or air lines
No, Please contact STG PH: 1300998784

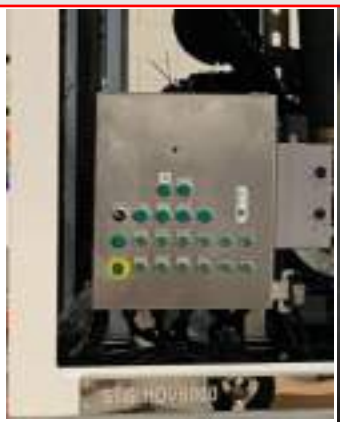

Gerni will not work
Are the ball valves on the water filters switched on
No switch the water valves on
Yes, are your water filters around the right way
No , flip filters around 180 degrees to the correct orientation
Yes , have you cleaned out the filters recently
No, clean out the filters under running water.
If not of theses solutions were helpful please call stg PH: 1300998784



Any further issues please contact STG Global PH:1300998784

Serial number Location

All components used in STG Globals Products have different serial numbers that go with the parts. For the customer convenience STG Global has created a Plaque that contains serial numbers, this plaque can be found inside of the control panel.



If this plaque isn't installed on your HDV 6000 you will find the following Serial Numbers here.

Engine Serial Number is located on the right-hand side of the Engine Block, just above the Oil Sump.

Blower Serial Number is located on the bottom right-hand side of the Blower.

Blower belt size will be located on the top side of the belts coming off the Blower

Gerni Model will be on the top side of the Water Pump

Gerni Belt size will be located on the top side of the belts coming off the Water pumps

Unloader model will be located on the Unloader Valve

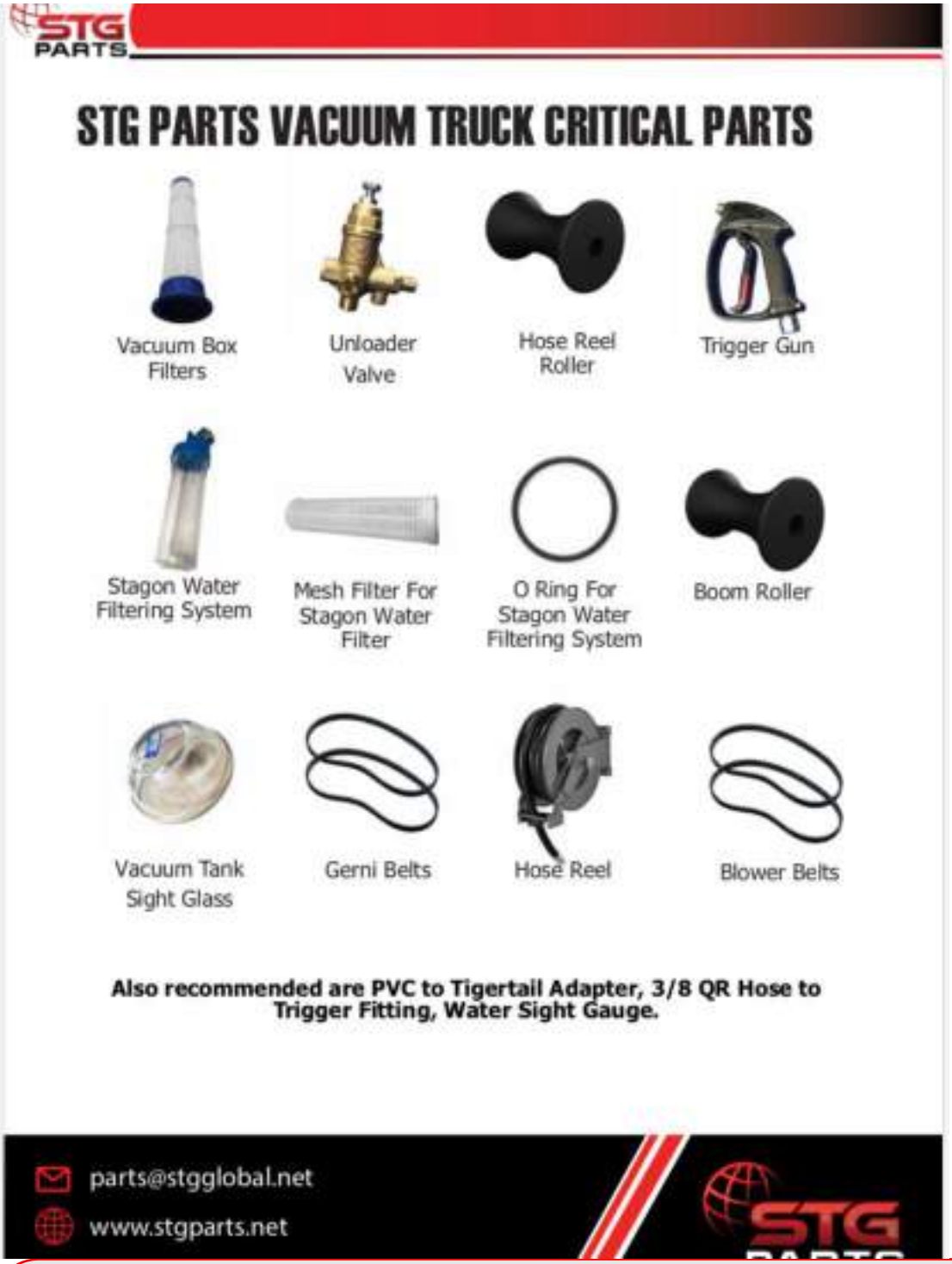
Remote Serial number will be located on a sticker on the back of the remotes

Sundrive and Loadar units both run off Auto Channelling System. (Remotes will be located in the cab of the truck)

Parts and Service

To book a service please go to the STG Global app or call 1300 998 784

Please visit the Parts Store on the STG Global app or www.stgparts.net



- STG Global advises that all HDV6000 operators keep all theses spares in the HDV6000 at all times
- To order these parts Please visit the Parts Store on the STG Global app or www.stgparts.net

Warranty

When purchasing a new HDV6000 the unit comes with a one year or 1000-hour Warranty whichever comes first on STG Global installed components.

If you have any questions regarding your factory warranty, please call 1300 998 784

JETTER TRUCKS

OPERATORS

MANUAL

Issue: 1
Rev: A
Author: Jack Williams

Foreword and Reporting a Safety Defect

Foreword

This manual is an important part of your Jetter Truck.
It provides safety information and operation instructions to help you use and maintain your STG Global Jetter Truck
Read this manual before using your equipment. Always keep this manual with the equipment for future reference.
If you sell your Jetter truck, ensure this manual is given to the new owner.
If you require a replacement copy, please contact your STG Global dealer. If you need assistance in locating a dealer, visit our website at **stgglobal.net or on the STG App which you can find on the Apple store or Android store.**

Reporting a Safety Defect

If you believe that your vehicle has a defect you should **stop operating the machine immediately** and inform the Service department at STG Global Contact on **1300 998 784**

Safety

DISCLAIMER

The STG Global Team take safety very seriously and expect our customers to ensure the same level of safety is used whilst operating all STG Global products.

STG Global is not responsible for how customers choose to use our products, the safety standards are suggested guidelines only.

PLEASE NOTE

Incorrect and unsafe use of STG Globals products can result in SERIOUS INJURY OR DEATH.

Recommended PPE for Operating the Jetter Truck

- Safety glasses
- Work appropriate gloves
- Hard hat
- Hearing protection (Ear plugs, Earmuffs ect.)
- Shin guards

High pressure SOP

Personal Protective Equipment (PPE)

Rubber steel-toed boots

Metatarsal Guard

Rough wet grip gloves

Face Shield

Rain Suite

Hearing Protection

Head Protection

- Rings, watches, jewellery that may become entangled in machines must not be worn.
- Long and loose hair must be tied back.
- Only snug fitting clothes to be worn.

⚠ *At operating pressures over 5,000 psi and above, employees are required to wear protective suits made of Kevlar.*

Hazards - What can cause harm?

- Exposure to ultra high pressure water - amputation
- Slip, trip and falls on uneven or slippery surface
- Slip, trip and falls on objects on ground
- Exposure to harmful substances – petrol
- Exposure to compressed air
- Struck by ejected object / flying debris
- Exposure to harmful environments
- Overexertion and bodily reaction:
  - Awkward, twisting, bending positions
  - Pushing, pulling, throwing, pressing objects
  - Repetitious movements

Precautions

Operator training should include:

- ✓ Workplace induction
- ✓ Safe operating procedures
- ✓ Manufacturer's instructions (read and understand)
- ✓ Controls on the machine
- ✓ Cutting action
- ✓ Hoses
- ✓ Use of hazardous chemicals/substances
- ✓ Use a safety observer/spotter
- ✓ Material/Safety Data Sheets (M/SDS) are available on site e.g. compressed air, lead (if stripping) etc.
- ✓ Manual handling
- ✓ Hazards involved with direct contact with high-pressure water
- ✓ Fitting of personal protective equipment
- ✓ Housekeeping
- ✓ First Aid
- ✓ Effective communication system

Restrict access to work area. Ensure:

- ✓ Exclusion zone surrounding work area using barricades and signage is in place
- ✓ Any other workers within the exclusion zone are wearing appropriate PPE
- ✓ Traffic control is in place
- ✓ A standby person (or spotter) should be allocated and used if required.

Pre-Operational Inspection: Follow the Pre-operational checklist in the manufacturer's operational manual.

- ✓ Fittings, hoses, guns and foot pedals are the correct pressure rating and undamaged
- ✓ Hoses and lines are protected from accidental damage
- ✓ Nozzles free from blockages
- ✓ Pump filter is clean and undamaged
- ✓ The hose run is flushed and air removed from the system
- ✓ Hook-up including pipes, hoses and connections is pressure tested with water at the maximum operating pressure
- ✓ Control systems are operating correctly
- ✓ Test emergency stops / Water supply is cool and clean

Operation

Horseplay with this equipment is strictly forbidden.

⚠ **High-pressure water operation is usually performed using jet streams that can have a velocity greater than that of a 45-caliber bullet, and do as much damage**

⚠ **Exercise extreme caution and strict compliance with procedures must be used to prevent the jet stream from striking the operator, other employees or delicate equipment**

⚠ **No part of the body must ever be placed in front of the water jet. The jets of water can easily puncture and tear the skin, penetrate deeper causing infection or serious internal damage and amputation**

⚠ **NEVER use on asbestos or asbestos containing material**

1. Set up a safety zone using a physical barrier and signs displayed where they are clearly visible:
    a. "ENTRY BY AUTHORISED PERSONS ONLY"
    b. "DANGER – HIGH PRESSURE WATER JETTING EQUIPMENT IN USE"
2. Set up of the Water Jet Cleaner within the safety zone, ensure:
    a. Place pump unit as close as possible to the work area, without being contaminated by debris from operations, to reduce the amount of hose used and the area covered by the operator
    b. Arrange hoses:
        i. To reduce tripping hazards
        ii. Suitably protected to prevent crushing or puncture damage
        iii. Not running across walkways, roadways or stairways
        iv. Restrained to restrict their movement in the event of a hose end failure
        v. Flushed with sufficient water to remove and contaminants before installing the nozzle
        vi. Nozzles checked and cleared of debris that could cause obstructions
        vii. Use a "Whip Check" if possible to reduce chance of hose whipping
        viii. Attachments should be fitted as per the manufacturer's recommendations
    c. Sufficient lighting and visibility
    d. No electrical hazards
    e. Safe access and egress
    f. Remove all objects such as rocks, broken glass, nails, wire, debris, toys, or anything that may become a hazard during Water Jet Cleaner operation
    g. Complete visibility of work area for Water Jet Cleaner operators
    h. Access to clean water supply for use with the Water Jet Cleaner. *USE SEDIMENT FREE WATER*
    i. Away from any ignition sources
3. Connect the water hose and check that it is secure
4. Connect the water supply hose to a mains water supply outlet
5. Connect the high-pressure hose and gun
6. Check the operation of the gun safety switch and trigger
7. ONLY turn on the Water Jet Cleaner once set up is completed and checked
8. Cleaning objects:
    a. Any objects to be cleaned must be secured against movement
    b. Small objects must be secured to a vice or similar tool
    c. Objects should never be held manually by a person
    d. Reaction forces should be considered and regulated based on the ability of the worker to maintain control of the jetting gun
9. Pipe cleaning:
    a. Check pipe cleaning jobs are set up so the nozzle cannot physically come out of the pipe when it is under pressure
    b. Use A foot control hold-to-activate device e.g. a foot pedal
    c. Use an anti-withdrawal device
    d. Hoses should be clearly marked at a suitable distance from the nozzle to indicate the location of the nozzle as it is withdrawn from the pipe or tube.

NEVER point the jet stream at a person or animal.

Maintenance is to be conducted as per manufacturer's instructions and by qualified persons only.

Steps of operation

Please not that all steps of operation will be explained in detail in the following pages

Step 1: turn the truck over, once the truck is idling in natural flick the PTO switch 
Step 2: turn the cat motor on the module on and leave the motor on idle, press the power light And the air open button on the control panel.
Step 3: walk to the rear of the unit and ensure that tvalve one is closed and valve two is open
Step 4: press the air engagement button on the side of the Jetter.
Step 5: reel out the hose by using the leaver you can also swivel the reel unit by using the secondary lever.
Step 6: reel out your Jetter into the desired pipe Please note a operator will have to consciously reel out the hose as it moves down the pipe.
Step 7: once your ready to go press the Jetter button on the remote or the control panel

Before any operation of the Jetter Truck

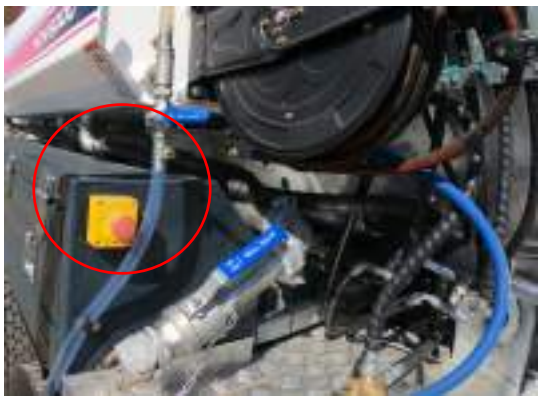
- Before operating the Jetter truck ensure the module isolator is flicked over to on, the isolator switch is located on the right hand side of the vehicle below the Cat engine

- As seen in this image the isolator is in the on position flick the switch up to power the HDV8000 down to power down

Disengage E-STOPS

- There are two E-Stops located on the left-hand side of the HDV8000, one on the back of the toolbox and another inside the module on the Cat motor screen control

- To disengage a E-STOP twist the stop to the left and pull



Start-up sequence for cat motor

Pull out the Red E stop

Press the power light button

Push up on the cat switch

Press the start button

Controlo RPM with the up and the down buttons

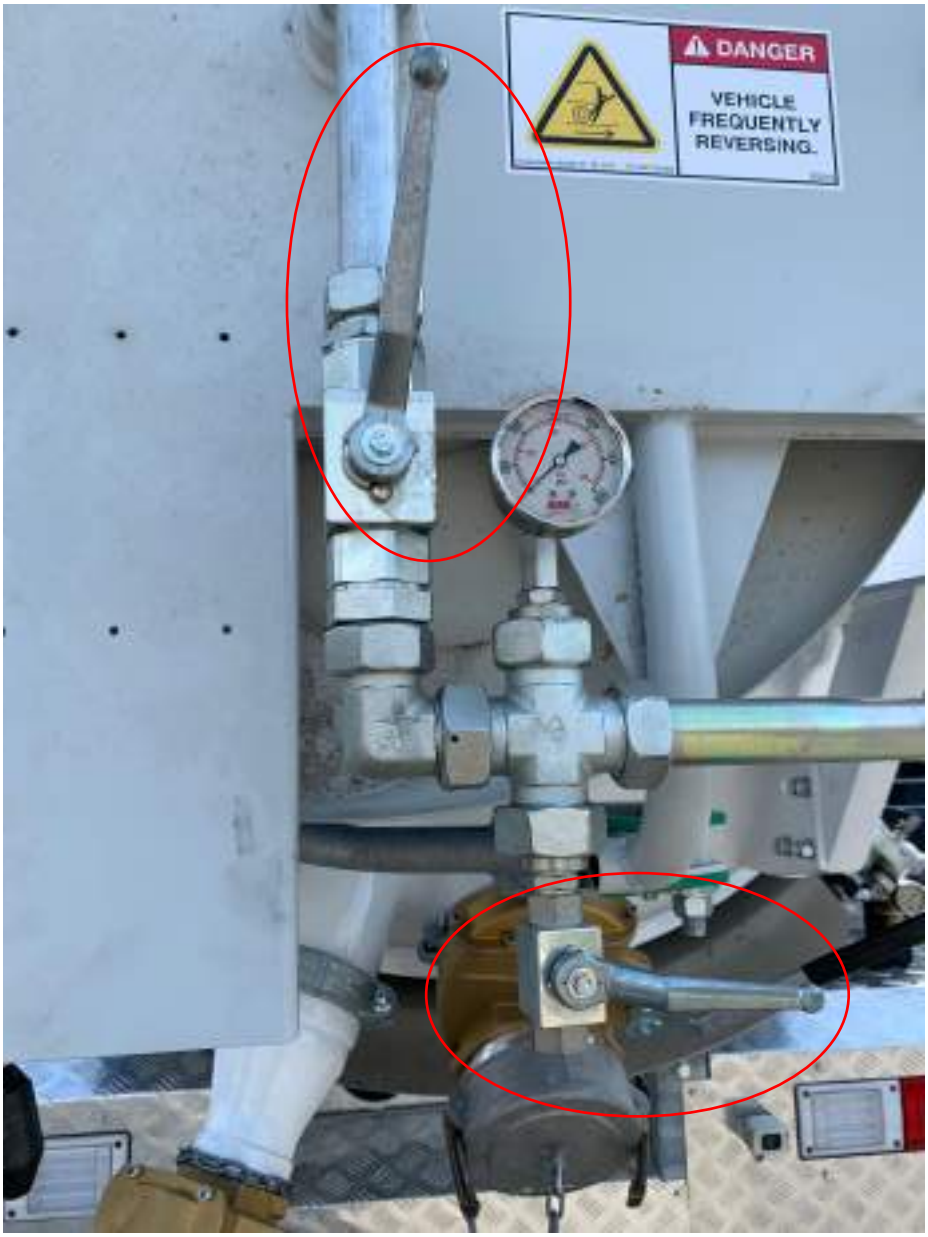
Press the compressor button to supply your air tanks with a additonal air supply

- Ensure that all E Stops have been disengaged
- Please note that the cat motor will have to be idling to use the Jetter unit

CAT Motor User Control Screen

- The power on and off switch is used to turn on the screen and turn it off
- The menu button can be used at any time to return back to the main menu
- The Emergency stop button is used the power down the engine and screen in the event of a emergency. Please note if the Emergency Stop Button is engaged the CAT Screen and Motor will not power on.
- Up button is used to turn up your RPM, the maximum RPM the CAT Engine can go up to is 2150RPM. This increase in RPM will increase the output of the engine.
- Down button is used to decrease the RPM, this will lessen the CAT motor output
- The enter button is used to agree with a question that the CAT screen may ask you
- The start button is used to start the CAT engine once the screen is powered on
- The auto button is used to get your CAT engine up to a preset RPM which you can program into the CAT motor screen
- The stop button will power down the CAT motor

Jetter Unit control

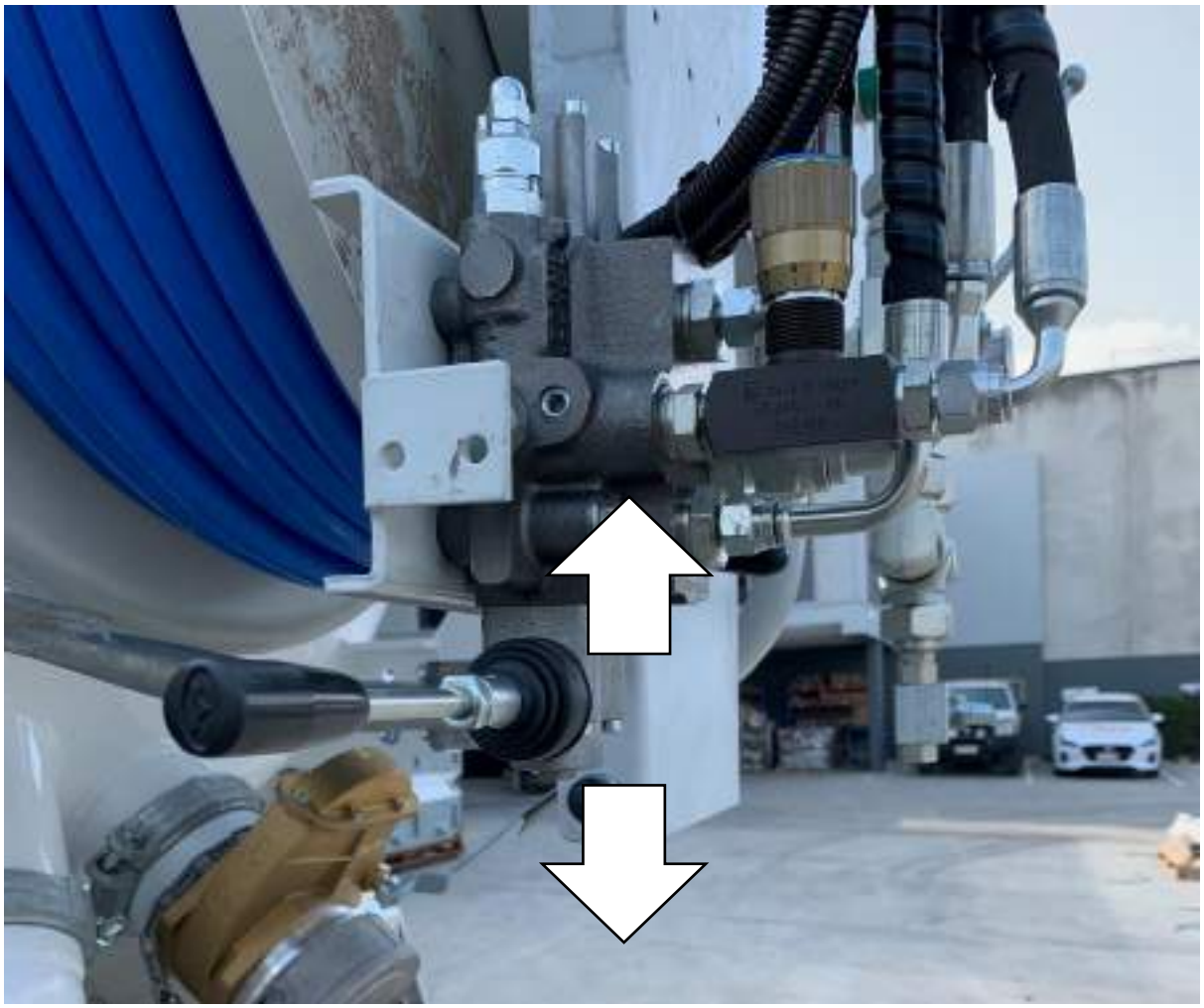


Ensure the bottom valve it switched close and top valve is open before use

Jetter Unit control

Engage the air control on the side of the unit by pressing the button in.

Jetter Unit control



To reel the hose out pull down on the leaver, to reel back in push the leaver up

⚠ Remember an operator will have to continuously pull down on the leaver for the Jetter end to make its way down the pipe

Jetter Unit control

Once the operator has put the Jetter end into the desired pipe

Press the Jetter on/off button on either the remote or the control panel to start jetting

After the once you have completed the job reel your hose back in.

Water level

⚠ When the Jetter is running consistently keep checking the water level via the sight glasses at the rear of the vehicle

⚠ Failure to do so can result in running your water pump dry which can cause critical damage.

Parts and Service

To book a service please go to the STG Global app or call 1300 998 784

Please visit the Parts Store on the STG Global app or www.stgparts.net

Maintenance

Vacuum Truck

Manual

Issue: 1
Rev: A
Author: Jack Williams

Index

Check belt alinement

Tools needed

Alignment laser

Straight edge ruler

Laser alignment check

Step 1. Turn laser on and remove the magnetic tabs

Step 2. Place the laser on one pulley and the tabs on the other

Step 3. You're your tab should have the laser running through the middle of them to indicated alignment.

Straight edge alignment check

Adjusting belt tension

Tools needed

10 mm hex head or 10 mm Allen key

There are 4 bolts located on each corner of the blower by adjusting these bolts you can move the blower left and right increasing and decreasing the tension on the belts

Checking belt tension

Tools needed

Belt tension Should be checked daily

By pressing on the belts with the tension the tool will give measurement of pound in relation to tension STG Global recommends blower belts should be set to 6 pounds.

Adjusting sync valves(Sync valves should be checked weekly)

Tools needed

4mm Allen key or hex head and a 15mm spanner

The sync valves located at the rear of the truck after removing the dust covers.

VEHICLE HYDRAULIC SERVICING SCHEDULE

The standard recommended Service schedule for a GFR Industries Vacuum Tanker hydraulic system application is as follows;

1. Daily;

The Hydraulic System should be inspected for serviceability and obvious issues, leaks etc. by the vehicle operator at the start of each operation day.

Before operation the Hydraulic Fluid level/s and quality should be checked and topped/corrected if needed.

The Hydraulic Tank, Filters, associated hoses and drive elements should be inspected for serviceability.

Any damage or fluid leaks should be reported immediately and the system not operated.

2. Monthly;

The Hydraulic system should be visually checked every 30 days by a trained technician as per the daily inspection and additionally for serviceability and signs of wear or damage.

Hydraulic Fluid levels, fluid quality, Hydraulic components and hosing checked for security, serviceability and hydraulic motor drive integrity.

3. 6 Monthly;

The Hydraulic systems should be serviced by a trained technician as per the monthly inspection and additionally an individual component visual inspection.

Hydraulic filter elements and Hydraulic tank filler breathers should be changed every 500hours or 6 months whichever occurs first.

4. Annually;

The Hydraulic fluid to be changed on major service every 1000 hours or 12 months whichever occurs first and additionally to the 6 monthly inspection requirements. (Use only 46Cst or 68Cst Hydraulic fluid)

The system should be operated after service and pressure and RPM should be recorded from system and operation of the systems checked as per operating parameters.

The hydraulic motor drive coupling to water pump should be inspected.

5. Bi-Annually;

In Addition to the Annual inspection and testing the Hydraulic motor drive couplings should be replaced every 24 months.

The above schedule is intended as a minimum servicing requirement.

Only authorized and trained personnel should operate and service the systems.

Hydraulic oil(ensure that all levels are checked on a flat surface)

To check your hydraulic level, you'll have to have to do a visual inspection of the hydraulic sight glass located on the hydraulic oil tank on the left-hand side of the module.

If the hydraulic oil is low, you top it up that the fill point located.

Located on the left-hand side of the vehicle below the module on the right hand side. Or through the fill point on the roof of the module.

To Check the oil level pull the dip stick out of its housing located on the right hand side of the cat motor, wipe the dip stick with a rag and place the stick back into the housing, pull the dip stick back out of the house to check your oil level.

If the engine oil is low the oil can be topped up with 40 w15 engine oil via the filler located on top of the cat engine.