

# AgriQuip



## HYDRASPLITTER

TPL & VTL models

OPERATING INSTRUCTIONS & SPARE PARTS MANUAL

Read carefully before operating machine

Mar 2023

## Introduction

Thank you for deciding to purchase a quality AgriQuip Hydrasplitter. Please follow the following connection, operation, maintenance and safety instructions to get the best use of your splitter.

This operating manual contains basic instructions that must be followed during connection, operation and maintenance. Read this manual before attempting to operate the Hydrasplitter.

*NOTE! Agriquip reserves the right to introduce modifications to its products and/or to perfect them, without any obligation to apply the modifications to products previously manufactured.*

**Keep this manual handy at all times**



## TPL Specifications

|                               |          |
|-------------------------------|----------|
| Length                        | 1700 mm  |
| Width                         | 880 mm   |
| Height                        | 540 mm   |
| Maximum Jaw Opening           | 400 mm   |
| Hydraulic Supply Requirements | 30 L/min |



## VTL Specifications

|                               |          |
|-------------------------------|----------|
| Depth                         | 900 mm   |
| Width                         | 1200 mm  |
| Height                        | 1650 mm  |
| Maximum Jaw Opening           | 400 mm   |
| Hydraulic Supply Requirements | 30 L/min |

## **Qualification and Training of Personnel**

The Hydrasplitter must only be used, serviced and maintained by personnel that are familiar with the machine and are informed about its dangers.

The owner is responsible for the competence and supervision of the operator. If the operator does not have the necessary knowledge, they must be trained and instructed, failing this they must be 100% supervised. It is not just sufficient to give the operator this manual, the owner must be completely satisfied that the operator fully understands the contents of this operating manual.

Maintenance work that is not described in this operating manual must only be conducted by authorised qualified workshops.

## **Safety Instructions & Warning Signs**

Failure to heed the safety instructions and warning signs will place people and the environment at risk, as well as compromising the operation of the machine.

Failure to comply with the instructions and precautions given in this manual will invalidate the warranty in respect of claims for damage.

Failure to comply with the instructions for service and maintenance and failure to heed the safety instructions and warning signs can lead to the following:

- ◆ Hazards to people due to non-secured work areas
- ◆ Failure of important machine functions
- ◆ Hazards to people and environment due to mechanical and chemical influences
- ◆ Invalidation of warranty

## Connection

The Hydrasplitter is designed to mount to the three point linkage of a tractor.

To install the machine onto your tractor:

- 1) Place the splitter on a firm and stable platform at a minimum of 300mm high.
- 2) Remove the lynch pins from the lower two link pins and remove the top link pin and set aside.
- 3) Reverse tractor to the splitter and mount the lower link arms to the lower link pins using bushes if need be.
- 4) Connect the top link to the top link pin in the splitter, ensuring all three lynch pins are returned and locked in place.
- 5) Adjust the top link pin to make the splitter level.
- 6) Connect the two hoses to the tractor hydraulics. (For optimum performance connect return line from valve to a free dump port returning oil directly to transmission)

**NOTE:** A pressure and return circuit is necessary as well as a detent on the hydraulic remote control lever on the tractor

## Operation

**Ensure the tractor hand brake is engaged**

You can now start your splitting operation.

- 1) Start the tractor and engage the hydraulic control to give you oil flow to the splitter.
- 2) Place wood rings close to the anvil, remove all hands from the splitting area and move the lever to the left (TPL), or down (VTL).
- 3) When the wood has split, move the lever to the hard right (TPL), or fully up (VTL), which will automatically return the ram and reset the lever to the neutral position.

**On completion of splitting the ram must be fully retracted so that the Hydrasplitter can be re-connected with the ram in this position.**

## Safety Precautions

- Before starting work, familiarise yourself with all equipment, operating parts and their functions – during operation there maybe no time to do this
- Avoid loosely fitting clothes
- Check the immediate area before moving and before starting operation for animals, children and bystanders.
- Start the Hydrasplitter only if all safety equipment and guards are attached and correctly positioned
- Keep hands well away from the working area
- Do not reach over the wedge when operating the machine
- All service, inspection and maintenance work detailed in this manual is carried out by trained personnel
- Inspection and maintenance work on the machine must only be carried out with the ram and lever in the neutral position, the tractor engine stopped and the Hydrasplitter firmly supported – do not rely on the tractor hydraulics
- Directly after maintenance and inspection, all safety equipment and guards must be reattached or made functional.

## Maintenance

### Removing Trapped Air from the Hydraulic System (Bleeding)

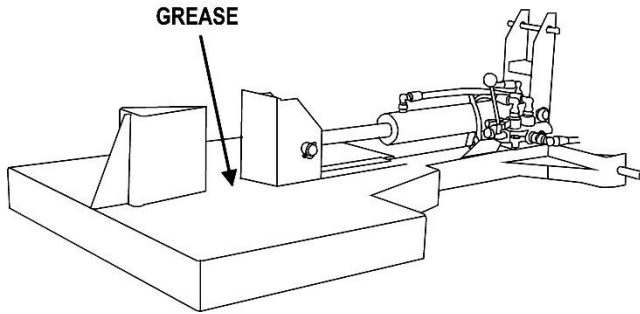
After connecting the splitter for the first time and after work has been performed on the hydraulic rams or valves, the Hydrasplitter will have to have any trapped air removed before putting it into service. This is known as “bleeding” the system.

To bleed the system perform the following steps:

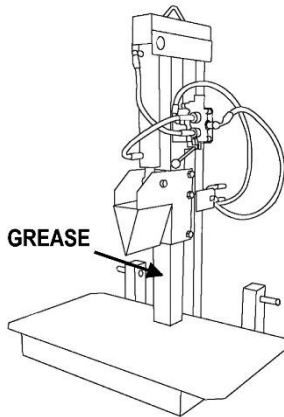
- 1) Keeping the control level in the neutral position leave the engine running for a few minutes (ensure that the oil reservoir has been filled first);
- 2) Speed the engine up to between 1200 rpm and 1400 rpm;
- 3) Alternatively move the control lever fully from one position to the other, repeating this a few times;

*Check the hydraulic oil level after this procedure, topping up if necessary.*

## Lubrication Points



TPL Lubrication Points



VTL Lubrication Points



## **Storage & Protection**

So that the Hydrasplitter continues to function efficiently and has a longer working life, follow these precautions:

- Do not twist or kink the hoses;
- Empty before storing;
- Always use a clean lint-free cloth for cleaning the hydraulic connections;
- Wash thoroughly with hose and remove all residues of gum, etc;
- Lower attachment to the ground when not in operation;
- Keep in a dry place.

## **Parts Replacement**

The owner must ensure that all replacement of parts and assembly work is carried out by AgriQuip authorised personnel.

Conversion of, or changes to, the machine will only be permitted after consultation with AgriQuip.

AgriQuip original spare parts and accessories prolong the useful life of the Hydrasplitter, ensure correct and efficient operator and do not compromise safety.

The use of other than AgriQuip original parts invalidates the warranty.

## Trouble Shooting

| PROBLEM   | CAUSE  | SOLUTION   |
|---|--|--|
| Quick couplers will not mate  | Fittings of different types                    | Change so that the male and female fittings are the same type          |
| Equipment cannot be put into operation or is put into operation with difficulty | Hydraulic hoses restricted                     | Clear or change the hoses  |
|   | Insufficient hydraulic pressure at the control | Adjust the relief valve using a pressure gauge.                        |
|   | Crossed or reversed hoses                      | Carry through a thorough examination and connect hoses correctly       |
|   | Defective hydraulic ram                        | Change or repair the ram   |
|   | Tractor has defective hydraulic system         | Consider changing to the equipment to another tractor and/or to fix it |
|   | Low oil level                                  | Fill the oil up to correct level                                       |
| Oil leaking from the hydraulic rams   | Damaged cylinders                              | Repair or replace cylinder   |
|   | Damaged piston *                               | Repair or replace  |
|   | Dirty oil                                      | Change the oil and filter  |
|   | Excessive oil pressure                         | Adjust the relief valve using a pressure gauge.                        |
| Oil leaking from the quick coupling   | Damaged coupling                               | Repair or replace coupling   |
| Hydrasplitter lowers when tractor controls are in neutral                       | Tractor hydraulic cylinder damaged             | Repair or replace cylinder   |

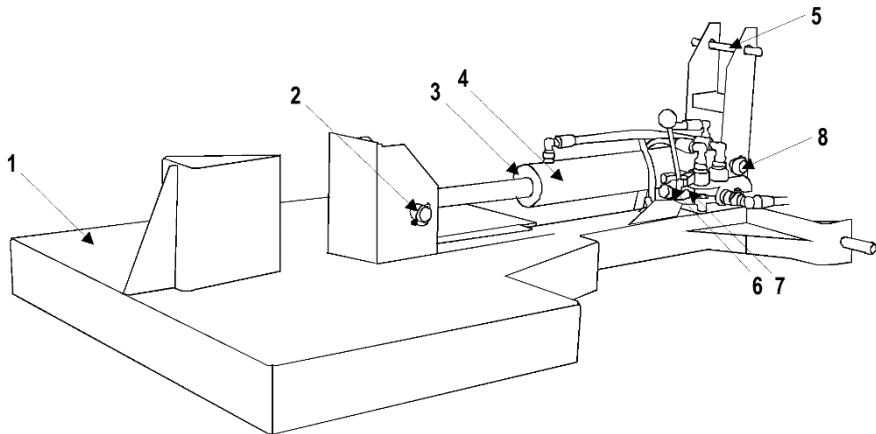
\* = to check for damage remove the piston and check for holes, cracks and burrs.

## Warranty Policy

1. All Agriquip machinery is covered by a comprehensive warranty against faulty materials and workmanship provided that:
  - (i) The machine is operated in normal use as set out in the parts and operating manual;
  - (ii) The machine is correctly serviced and maintained as specified in your operating manual;
  - (iii) The machine is worked within its stated capacity (i.e. horsepower limit and P.T.O speed);
  - (iv) The machine is not subjected to any modifications, including non-genuine parts, or defects resulting from repair or alteration performed by other than authorised Agriquip dealers;
  - (v) Agriquip is in receipt of duly signed pre-delivery and installation certificate;
  - (vi) The machine has not been damaged from improper use or by the use of non-genuine parts.
  
2. Agriquip guarantee, subject to the conditions mentioned above, that should any defect in workmanship or material occur in the goods of Agriquip, within 12 months from the date of original purchase, or 1,000 hours of machine operation (whichever comes first) we will repair or, at our option, replace the defective goods without making any charge for labour or materials. We will also allow provision within our terms and conditions a labour charge of \$65 (+GST) where repairs are to be carried out by an authorised dealer.
  
3. Machines sold into the hire industry shall be void of warranty.
  
4. The following items are not covered by Agriquip warranty:
  - (i) Power take-off shafts and clutches;
  - (ii) Blades, tynes, flails, knives, tyres, tracks, belts, etc.;
  - (iii) Freight costs;
  - (iv) Loss of income from the machine due to a warranty fault;
  - (v) Use of non-genuine parts to re-instate the machine;
  - (vi) Damage caused by loose bolts, nuts or fittings.
  
5. Definition of Warranty Period

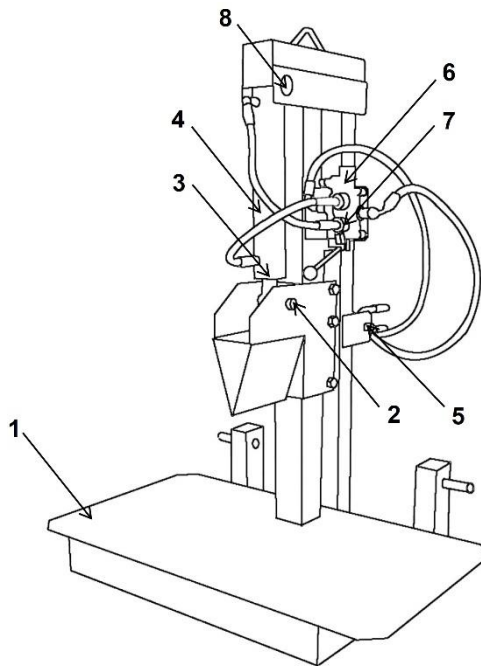
The warranty expiration date is determined by calendar months from date of delivery to the first owner/user and is not affected or prolonged because the machine is idle for any part of the warranty period.
  
6. Agriquip Warranty Procedure
  - (i) Phone Agriquip and discuss problem before attempting any repair;
  - (ii) Any parts required must be supplied by Agriquip unless authorised otherwise by Agriquip;
  - (iii) Work can only be carried out after authorisation from Agriquip.

## TPL Parts Manual



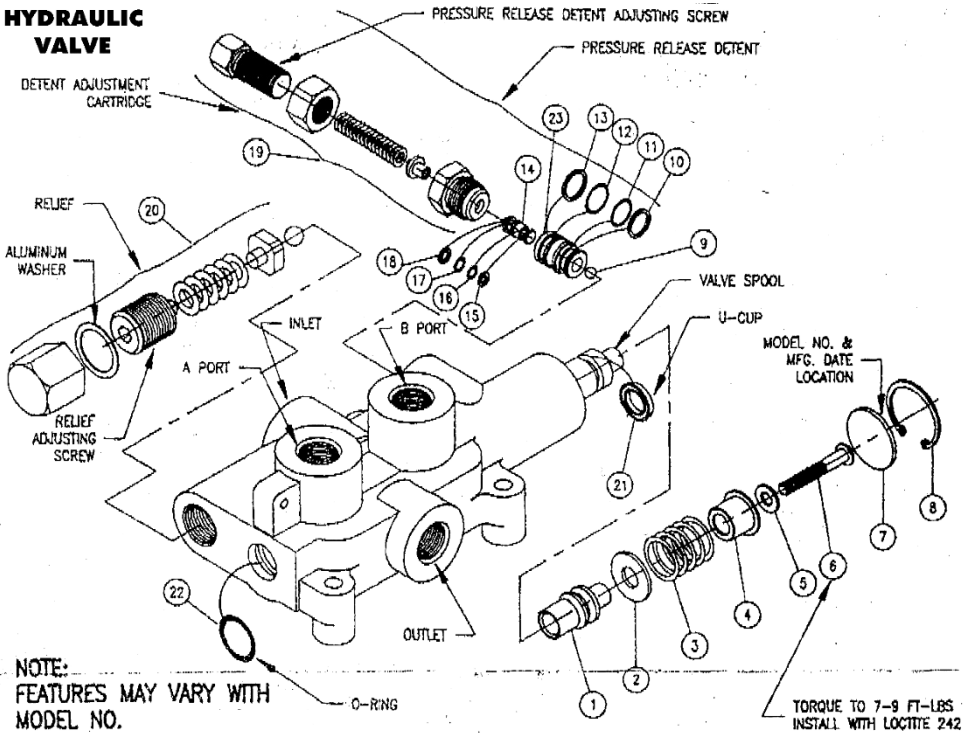
| Ref. | Part No. | Description    |
|------|----------|----------------|
| 1    | 49765    | Main frame     |
| 2    | 49766    | Rod end pin    |
| 3    | 49767    | Ram seal kit   |
| 4    | 49772    | Hydraulic Ram  |
| 5    | 49768    | Top link pin   |
| 6    | 49771    | Valve assembly |
| 7    | 49769    | Valve seal kit |
| 8    | 49770    | Ram pin        |

## VTL Parts Manual



| Ref. | Part No. | Description    |
|------|----------|----------------|
| 1    |          | Main frame     |
| 2    | 49766    | Rod end pin    |
| 3    | 49767    | Ram seal kit   |
| 4    | 49772    | Hydraulic Ram  |
| 5    | 49768    | Top link pin   |
| 6    | 49771    | Valve assembly |
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**HYDRAULIC VALVE**



| HYD. VALVE KITS & CARTRIDGES |     |                            |
|------------------------------|-----|----------------------------|
| ITEM                         | QTY | DESCRIPTION                |
| 1                            | 1   | DETENT SLEEVE              |
| 2                            | 1   | WASHER                     |
| 3                            | 1   | SPRING                     |
| 4                            | 1   | STOP CUP                   |
| 5                            | 1   | WASHER                     |
| 6                            | 1   | CAP SCREW                  |
| 7                            | 1   | SPACER                     |
| 8                            | 1   | SNAP RING                  |
| 9                            | 1   | STEEL BALL                 |
| 10                           | 1   | BACK-UP WASHER             |
| 11                           | 1   | O-RING                     |
| 12                           | 1   | O-RING                     |
| 13                           | 1   | BACK-UP WASHER             |
| 14                           | 1   | PISTON                     |
| 15                           | 1   | BACK-UP WASHER             |
| 16                           | 1   | O-RING                     |
| 17                           | 1   | O-RING                     |
| 18                           | 1   | BACK-UP WASHER             |
| 19                           | 1   | DETENT ADJUSTING CART.     |
| 20                           | 1   | RELIEF KIT                 |
| 21                           | 1   | U-CUP                      |
| 22                           | 1   | O-RING                     |
| 23                           | 1   | PISTON SLEEVE              |
|                              |     | SEAL KIT                   |
|                              |     | RELIEF KIT                 |
|                              |     | DETENT ADJUSTING CART.     |
|                              |     | PRESSURE RELIEF DETENT KIT |
|                              |     | COMPLETE HANDLE KIT        |

**PLEASE NOTE:**

**BEFORE REMOVING VALVE SPOOL OR SPOOL SLEEVE REMOVE DETENT ADJUSTING CARTRIDGE, DETENT PISTON AND STEEL BALL. INSERT SPOOL AND SPOOL SLEEVE BEFORE INSERTING STEEL BALL.**

**PRESSURE RELEASE DETENT**

This feature provides a pressure release detent for the spool "out" (handle in) position. When the spool is manually placed in the detent position oil is directed to the 'B' port (the port away from the handle). When the pressure in the 'B' port reaches a preset level the detent will release and the spool will centre. The factory setting is 1400 psi. The detent release pressure is adjustable by loosening the jam nut turning the adjusting screw. Turning the adjusting screw clockwise will increase the detent release pressure and counterclockwise will decrease the detent release pressure. **NOTE:** if the detent release pressure is set too high the spool will not centre. If the pressure is too low the detent will not hold. If cap screw (#6) becomes loose detent will not function properly.

**RELIEF VALVE**

An adjustable ball spring relief valve is standard on all Hydrasplitter hydraulic valves. The standard factory setting is 2250 psi @ 3 gpm and 120°F.

Other settings can be specified.

The relief pressure is adjusted by removing acorn nut, and turning the adjusting screw. Turning the adjusting screw clockwise will increase the pressure and counterclockwise will decrease the pressure (a pressure gauge must be installed in the inlet line whenever the relief pressure is adjusted). Do not back out adjusting screw to the point it falls out.



**WARNING: OVERPRESSURE MAY CAUSE SUDDEN AND UNEXPECTED FAILURE OF A COMPONENT IN THE HYDRAULIC SYSTEM RESULTING IN SERIOUS PERSONAL INJURY. ALWAYS USE A GAUGE WHEN ADJUSTING RELIEF VALVE.**





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