



## HEIDEN HC20-A & HC20-B OPERATING AND MAINTENANCE MANUAL



**HEIDEN LLC** 4624 Expo Drive, Manitowoc, WI 54220  
www.heidencrane.com . Phone: 888-682-5779 . Fax: 920-682-3174

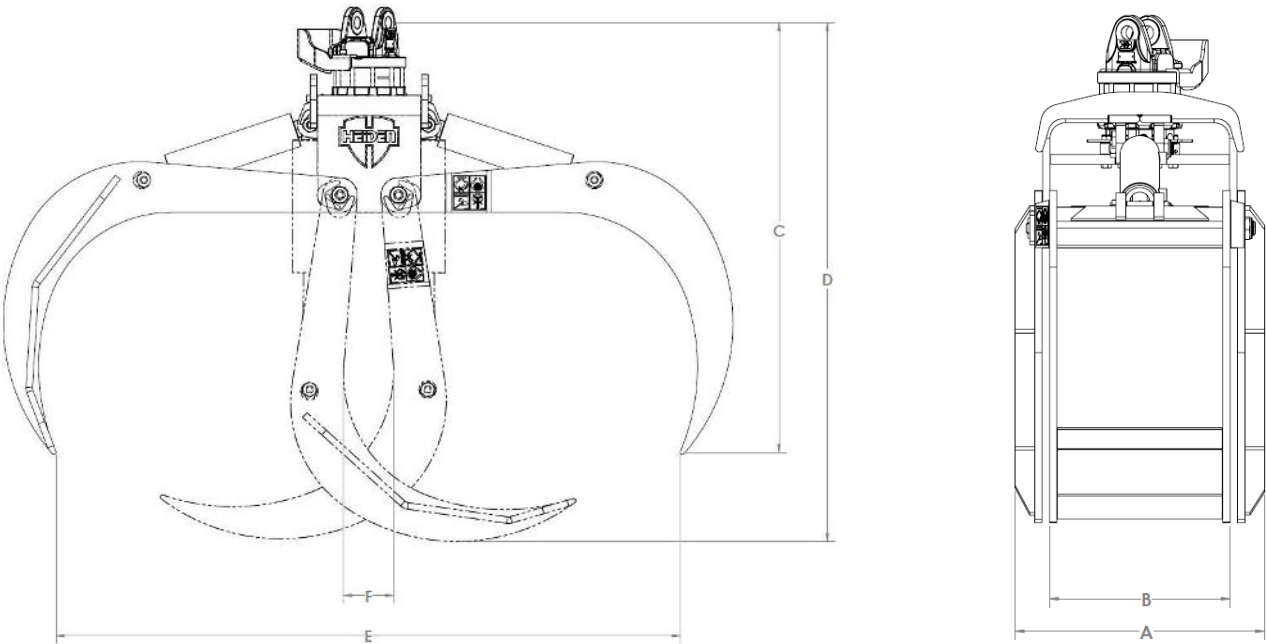


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1. Identifying unit model number

1.1

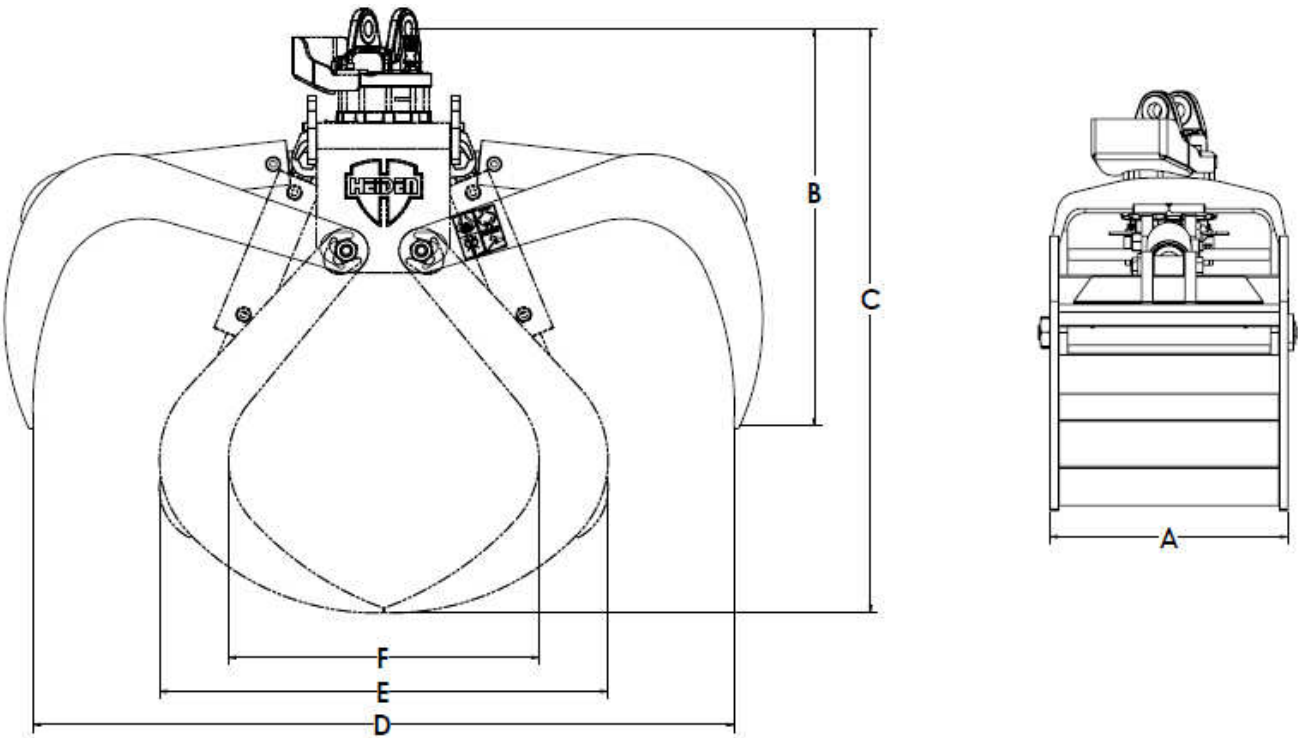


MODEL NUMBER

MODEL	WEIGHT W/ROT.	MAX OPER. PRESSURE	A	B	C	D	E	F	CAPACITY
HC20-A-2	915 LBS	3000 psi	25.5"	18.375"	57"	65"	88"	6.5"	1/2 CORD
HC20-A-2.5	800 LBS	3000 psi	25.5"	18.375"	54"	60"	70"	6"	2/5 CORD
HC20-A-3	750 LBS	3000 psi	25.5"	18.375"	50"	57"	60"	6"	1/3 CORD
HC20-A-4	700 LBS	3000 psi	25.5"	18.375"	48"	52"	49"	6"	1/4 CORD

\*Includes  
weight of  
grapple

1. Identifying unit model number



MODEL NUMBER

MODEL	WEIGHT W/ROT.	MAX OPER. PRESSURE	A	B	C	D	E	F	CAPACITY
HC20-B-2	920 LBS	3000 psi	21.5"	48"	74"	92"	55"	41"	1/2 CORD
HC20-B-2.5	875 LBS	3000 psi	21.5"	44"	64"	78"	49"	34"	2/5 CORD
HC20-B-3	790 LBS	3000 psi	21.5"	42"	60"	70"	45"	32"	1/3 CORD
HC20-B-4	790 LBS	3000 psi	21.5"	39"	56"	62"	41"	28"	1/4 CORD

\*Includes  
weight of  
grapple



## 1.2 Identification Plate

Locate the Identification Plate on top of your Attachment. This plate will have the Model number and Serial number of your Attachment. This information is important when contacting your dealer/Heiden with questions or if you need to order replacement parts for your Attachment.

## 2. General information

These instructions apply to load bearing devices in lifting areas and affects products made by Heiden LLC, USA.

The statutory safety and accident prevention regulations apply to load bearing devices. Special mounting information, bearing capacities, permitted operating pressure and maintenance information along with lists are provided in this manual.

### 2.1 Prohibited methods of operation:



#### **Warning!**

Designates a possible dangerous situation.

Instructions must be observed and followed.

Disregarding this information may result in serious injury.

**Disregarding the operating instructions may result in accidents, downtime and may void warranty.**

- Equipment must be used in accordance with all regulations.
- All equipment is generally designed for use near the ground (up to a lifting height of 6').
- It is prohibited to control the equipment by hand.
- It is prohibited to conduct the equipment above people.
- It is prohibited to transport a person with any attachment!
- **Observe the operating instructions!**

#### **General information:**

Users must refer to the operating instructions to familiarize themselves with the machine before operating it.

The operating instructions are meant for the users. Please refer to the corresponding documents for descriptions and maintenance for other machine components and the base machine.

## 2.2 Installation note

An upper suspension that permits suspension by gimbals is used to mount the corresponding hydraulic rotator or the rotator mount to the base machine's main frame.

- The machine may only be mounted by authorized personnel.
- Do not exceed the vehicle's total permitted weight when mounting the machine.
- The machine may only be fitted to suitable base machines.

### Attaching the hydraulic rotator:

Rotators are mounted either with a reducer (motors with a shaft) or directly to the bottom plate of the rotator mount.

The rotator mount may only be attached to suitable hydraulic rotators.

The hydraulic hoses should be kept as short as possible.

When assembly has been completed, check that the machine functions properly and that the hydraulic hoses do not leak.

## 2.3 Warranty

**HEIDEN** warrants each new product, made by **HEIDEN**, to be free from defects in materials and workmanship. Its obligation and liability under this warranty being expressly limited to repairing or, at **HEIDEN's** option, replacing free of charge at its factory any part proving defective under normal use and service for a period of 12 months from the day of delivery to the customer. Parts claimed to be, if defective and for which repair or replacement is desired, shall be, if requested by **HEIDEN**, returned transportation prepaid to **HEIDEN's** factory for inspection. **HEIDEN** will cover 60% of reasonable and agreed upon labor for the repair. \*Note: electrical components are subject to 30 day warranty only.

Any operation beyond rated capacity or the improper use or application of the crane attachment or the substitution upon it of parts not approved by **HEIDEN** or any alteration or repair by others in such manner as, in **HEIDEN's** judgement, to affect the product materially and adversely shall void this warranty. No representative of **HEIDEN** at any time shall change or extend this warranty in any way. This warranty covers only new and unused products by **HEIDEN**. Products manufactured by others are covered only by such warranties as are extended to **HEIDEN** by its suppliers.

## 2.3 Warranty Disclaimer

*THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, AND THE OBLIGATION AND LIABILITY OF MANUFACTURER UNDER THIS WARRANTY SHALL NOT INCLUDE ANY TRANSPORTATION OR OTHER CHARGES OR ANY LIABILITY FOR DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR DELAY RESULTING FROM THE DEFECT.*

## 3. Conditions of use

### 3.1 Operating conditions

The attachment is intended for use on truck mounted crane.

The attachment is designed for its intended purpose.

All other applications used with this attachment will be at the owner's full risk.

Please check with your dealer for special attachments for other uses.

The usual environmental conditions for construction machinery apply.

Ambient temperature range: -15° C to 40° C.

#### **Warning!**



**Using it any other way is not suitable.**

**Operating authority is liable for any danger or damages resulting in the misuse of this equipment.**



## Operating safety notes

All persons using the equipment should be familiar with the operation of the grapple before commissioning the machine.



**It is prohibited to wield the equipment by hand. Danger of injury!**

The operator is legally obliged by government regulations for the prevention of accidents to have an expert inspect the equipment for cracks, wear, corrosion and functional safety at least once a year or more, depending on operating conditions.



**Replace the hydraulic hoses every two years.**

Observe the permitted total weight when loading vehicles and trailers (vehicle documentation).

### 3.3 Transporting the unit

During transport the grapple must be placed on the vehicle or trailer and secured in such a manner to minimize excessive movement.

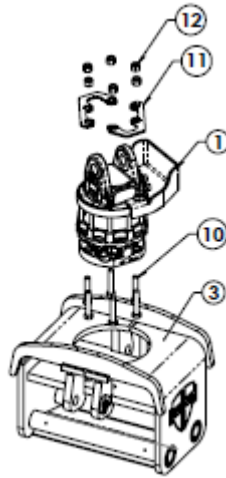
## 4. Assembly instructions

### 4.1 Rotator Installation

#### 4.1.1 Mounting rotator to the grapple swivel mount.



Clean all contact points of lacquer before fitting the rotator.



Place rotator (1) onto the swivel mount (3) and fasten with six bolts (10) and six locknuts (12) (torque to 150ft lbs).



#### **Note**

Clean hydraulic connections.

Connect the hoses for “Open” and “Close” coming from the cylinder to the rotator.

Activate the functions “Open Equipment” and “Close Equipment” one after the other and hold briefly.

No oil should exude from connections; re-tighten connections if necessary.

#### 4.1.2 Removing the rotator from the grapple

Set the grapple down on suitable level ground.

Power off hydraulic system and actuate operating lever several times in both directions to “bleed off” or reduce the pressure.

Clean hydraulic connections on the rotator, unscrew and close connections.

Collect leaking oil.

Undo nuts and bolts and remove rotator from mount.

## 4.2 Hydraulic cylinder replacement

### 4.2.1 Removal

Set the grapple down on suitable level ground.

Open the grapple completely and brace the head to prevent it from falling.

Power down the hydraulic system and actuate the operating lever several times in both directions to “bleed off” or reduce pressure.

Undo hydraulic connections on the screw connections of the cylinder.

Collect leaking oil.

Loosen and remove nuts (#9). Figure below.

Remove pin(#8). Figure Below.

Swing cylinder free from grapple assembly and remove pin (#8) to remove cylinder.

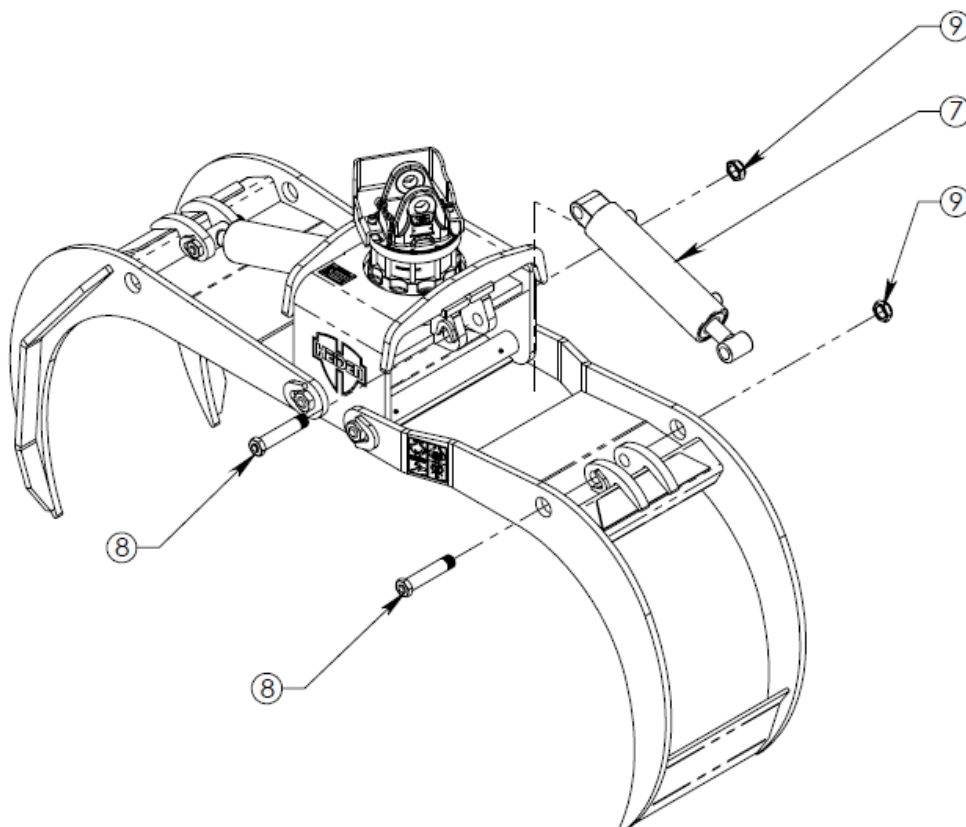
### 4.2.2 Installation

To install the hydraulic cylinder proceed in reverse order.

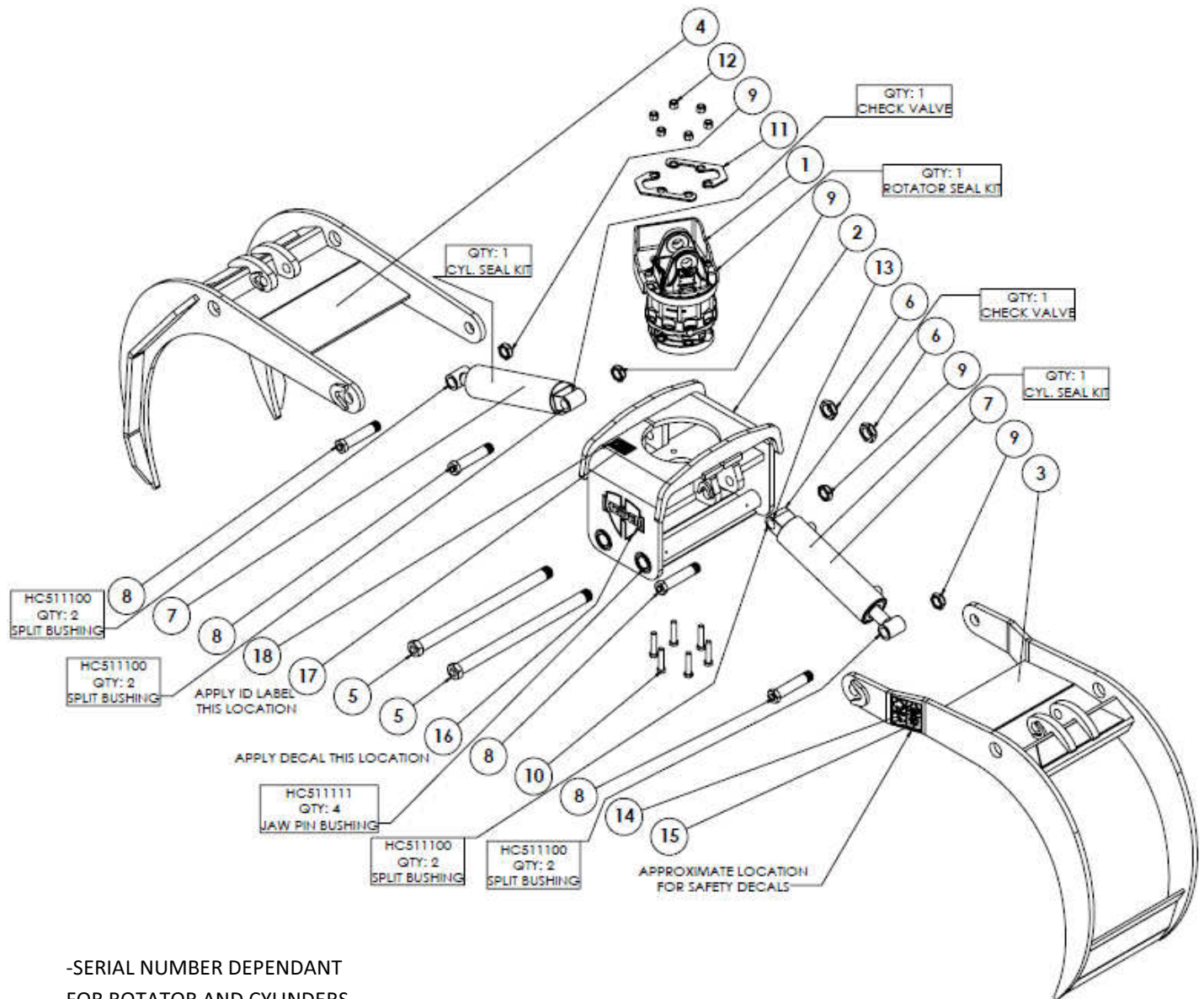
Connect hydraulic hoses and test the functioning of the equipment.

Check for leaks at the connections.

Lubricate the bearings.



## 4.3 Parts Breakdown



-SERIAL NUMBER DEPENDANT  
FOR ROTATOR AND CYLINDERS

-HOSE KITS ARE AVAILABLE UPON  
REQUEST

SERIAL NUMBER: \_\_\_\_\_

## 5. Maintenance and Repairs

### 5.1 General Notes

Thorough regular maintenance is essential for prolonged life of the grapple as well as limiting down time due to repairs.

Strict cleanliness must be observed in all maintenance operations including collection and proper disposal of fluids.

Before disconnecting hydraulic connections, thoroughly clean the area surrounding the connections to reduce the risk of contaminating fluids.

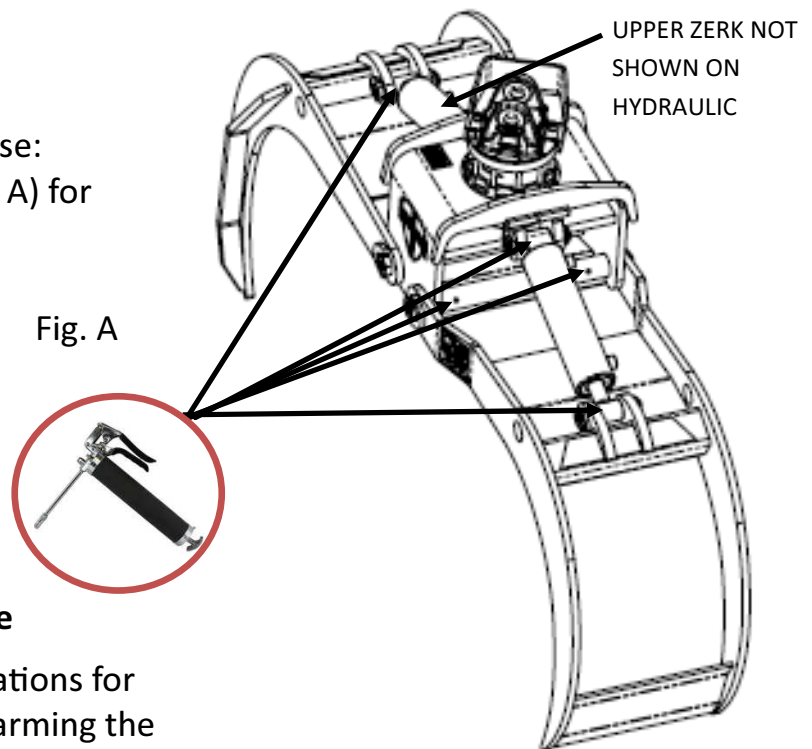
Clean grease zerks before greasing.

Maintenance intervals must be reduced if the equipment is being operated under severe conditions (e.g. on a building site with excessive dust)

### 5.2 Fluids and Lubricants

#### Grease

Use Hi-temp Multi purpose grease:  
NLGI GC-LB ISO 220 #2 , see (fig. A) for  
zerk locations



### 5.3 Disposing of used oil and grease

Most countries have strict regulations for disposing of used oils without harming the environment.

#### Hydraulic fluid

Disposal in approved containers.  
Do not mix with used engine oil.

## 5.4 Maintenance Intervals

Maintenance Operation	Every 50 Operating Hours	Yearly
Clean and lubricate grease zerks	X	
Check screw connections, tighten if necessary	X	
Check hydraulic lines and hoses for damage	X	
Check hydraulic components and connectors for leaks Tighten leaky connectors Have leaking components repaired	X	
Check for cracks, wear, corrosion and functional safety (to be carried out by qualified personnel)		X

## 5.5 Repairs

If the equipment is found to be faulty, it must be repaired without delay or suitable measures must be taken to comply with all safety regulations.

Hydraulic hoses must be replaced every two years taking into consideration usage hours and operating conditions.

Any welding on the unit is generally prohibited unless performed by a qualified individual and is performed per industry standards and do not compromise the integrity of the unit. Welding repairs on the grapple may void warranty and is at the discretion of Heiden LLC. It is advised to contact Heiden LLC before performing such repairs.



\*Heiden LLC reserves the right to change these specifications without notice and without incurring any obligation relating to such changes.

