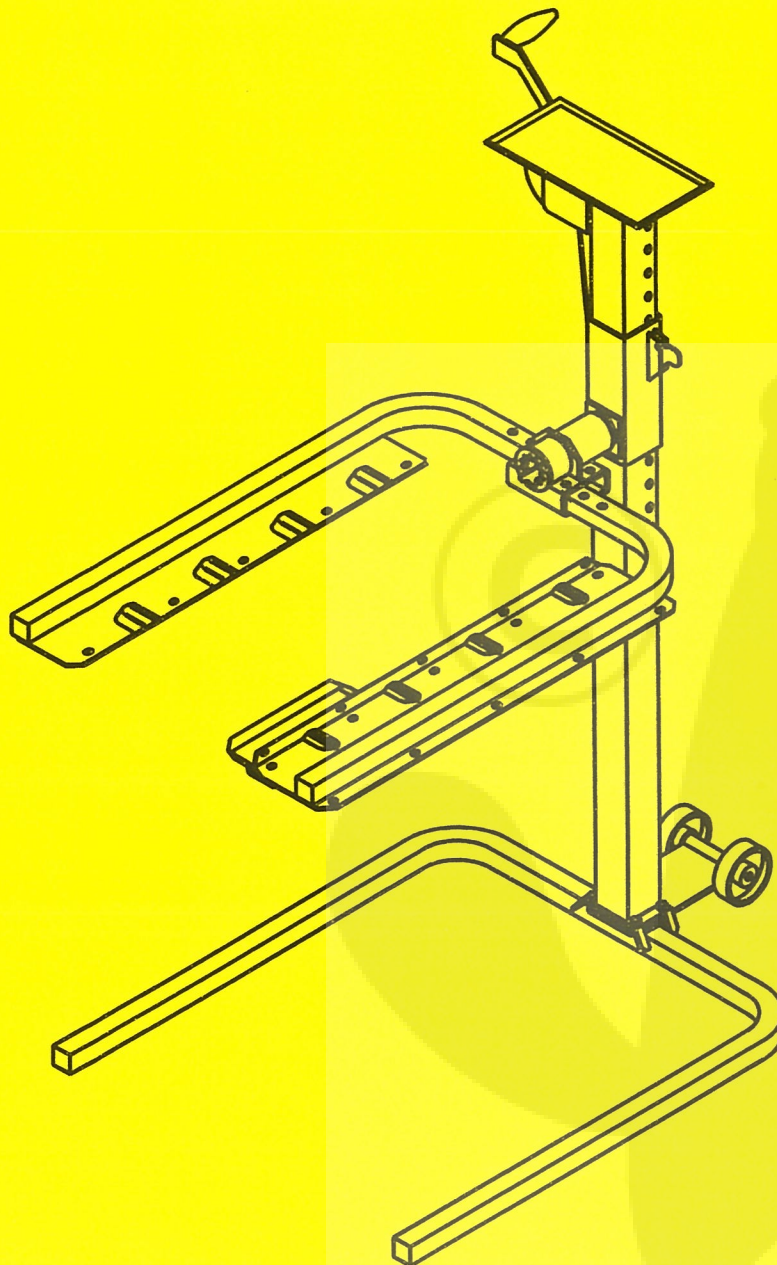


lit'l

HEFTEE

**OPERATORS MANUAL**  
**MODEL 250**



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**SAFETY CERTIFICATION:** This service lift does not come within the scope of any safety standard requirements. However, it does meet all of the known applicable requirements of standards relative to safety and that are under the control of the manufacturer. Winch conforms to ASAE S361.3.

Serial Number	Date	Description
	05/94	250# – HL250



# SPECIFICATIONS

## *Lit'L HEFTEE*

RATED LIFT CAPACITY .....	250# .....	91 Kg
OVERALL WIDTH .....	maximum: 37" .....	86 cm
OVERALL HEIGHT (MANUAL WINCH) .....	61" .....	55 CM
DEPTH - FRONT TO BACK (APPROX) .....	48" .....	122 CM
TREAD WIDTH TO OUTSIDE OF WHEELS .....	maximum: 34" .....	86 cm
TREAD WIDTH TO INSIDE OF WHEELS .....	minimum: 13" .....	33 cm
LIFT FRAME WIDTH ADJUSTABLE BY PINS .....	maximum: 37" .....	86 cm
LIFT FRAME WIDTH ADJUSTABLE BY PINS .....	mimum: 20" .....	51 cm
LIFT FRAME FORK LENGTH .....	39" .....	86 CM
LIFT HEIGHT TO BOTTOM OF WHEELS .....	maximum: 49" .....	125 cm
TREAD LENGTH (BETWEEN AXLE CENTERLINE) .....	maximum: 30" .....	76 cm
LIFT CABLE: 1/8" AIRCRAFT .....		32 cm
DROP SAFETY CONTROL SAFETY LOCK: each 1½" down to 21" height .....		
2 TRANSPORT WHEELS - USABLE WHEN UNIT IS TIPPED BACK .....	4" .....	10 cm dia
SHIPPING WEIGHT (BASIC MACHINE) .....	155# .....	64 Kg
SHIPPING BOX SIZE .....	1 BOX 53½ X 32 X 5½" .....	135 X 81 X 14 cm
LOAD TESTED AT: .....	1000 lbs .....	364 Kg
INSTALLATION: NONE REQUIRED FOR STANDARD FLOOR MODEL. USES SUPPORT LEGS.		
WINCH RATIO (EFFECTIVE) .....		APPROX. 1:10
WINCH ACTION: 10 TURNS TO FULL UP (APPROXIMATELY).		
WINCH TYPE: AUTOMATIC BRAKE - HANDLE STOPS WHEN RELEASED, EITHER UP OR DOWN. NO CHANGE REQUIRED. JUST CRANK UP, CRANK DOWN. MEETS ASAE SAFETY STANDARD FOR SAFETY WINCH. ASAE S361.3 SAFETY FOR PORTABLE AGRICULTURAL AUGER CONVEYING EQUIPMENT WHICH INCLUDES WINCH REQUIREMENTS:		

Patent Pending - Subject to change without notice.

**Lit'L HEFTEE**  
**A NEW GENERATION IN SERVICE SAFETY AND CONVENIENCE.**

**CHECK LISTS**

**PRE-USE CHECK LIST**

Inspect the *Lit'L HEFTEE* thoroughly after assembly to be certain that it is set up properly. The following checklist is a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment is made.

- Check all bolts to make sure that they are tight.  
**NOTE:** See assembly instructions.
- Be sure safety lock operates freely and snaps into place and hooks and locks properly.
- Be sure rotational safety lock swings into lock position freely.

**GENERAL CHECK LIST BEFORE EACH USE**

- Measure and be sure wheels of machine are centered in wheel cups before raising.
- On heavy loads, be sure weight is centered on lift as much as practical.
- Always tie machine to an arm on EACH side before performing any work, rotating, raising, etc.
- Check all bolts to make sure that they are tight.
- Be sure winch cable is wrapped evenly and secured to the lift lug. Also be sure the cable is free of kinks or frayed areas.

**GENERAL INFORMATION**

The purpose of this manual is to assist the operator in maintaining and operating the *Lit'L HEFTEE*. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable and safe performance. These operating and maintenance instructions have been compiled from extensive experience and engineering data.

The illustrations and data used in this manual were current at the time of printing. But due to possible in-line production changes your lift may vary slightly in detail. HEFTEE Industries LLC reserves the right to re-design and change the lift as may be necessary without notification.

**MAINTENANCE**

Keep tie downs and safety locks in good condition and working properly.



**TO THE OWNER:**

Read this manual before using your *Lit'L HEFTEE*. The information presented will prepare you to do a better, safer job. Keep this manual handy for ready reference and training of future users.

The *Lit'L HEFTEE* you have purchased has been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Service the *Lit'L HEFTEE* as specified. Observe all safety information in this manual and safety decals on the *Lit'L HEFTEE*.

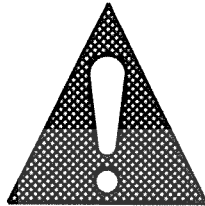
Use only genuine HEFTEE service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation. Record the model and serial number of your *Lit'L HEFTEE*.

Model: \_\_\_\_\_ Serial Number: (Located on the slider assembly of *Lit'L HEFTEE* frame) \_\_\_\_\_

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING**, and **DANGER** are used in conjunction with the Safety-Alert Symbol, ( a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety.

**SAFETY**

**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO THE INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**





THIS SYMBOL MEANS


**-ATTENTION!**

**-BECOME ALERT!**

**-YOUR SAFETY IS INVOLVED!**

 **CAUTION** Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

 **WARNING** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

 **DANGER** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

# SAFETY INFORMATION

*The Lit'L HEFTEE has been designed with every possible safety provision known, except a careful operator, but only you can assure proper and safe use.*

## TRAINING

- ☞ READ this manual especially the safety and operating instructions before using.
- ☞ Do not allow children to operate or play on machine and do not allow anyone to operate without proper instruction.
- ☞ Allow no one to be on or under machine while raising or lowering or operating the controls.

## OPERATIONAL SAFETY



**In addition to the design and the configuration of equipment, Hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.**

- ☞ Always wear safety glasses, safety shoes and proper clothing for the job.
- ☞ Never use drugs or alcoholic beverages when operating any mechanical equipment especially the *HEFTEE*.
- ☞ Replace any decals immediately if damaged. Clean area for decal with soap and water. Remove any dirt, grease or remnants of old decal. Re-apply pressure sensitive decal in same location.
- ☞ Position machine carefully with all wheels centered in wheel cups before raising. On heavy loads keep weight centered as much as feasible and close in to mast.
- ☞ Do not try to lift over 250# on *HL250*. If it will not easily raise the load, it is too heavy. Do not try to lift full load on end of arms.
- ☞ Read and observe all safety decals on the *Lit'L HEFTEE*.
- ☞ Never allow anyone on the equipment or under equipment when raising, lowering, or in any way operating control.
- ☞ Always lower lift onto safety locks before attempting any work and lower to floor before leaving.
- ☞ Tie machine securely to the lift arms or wheel cups on both sides before attempting any repairs. Use straps provided.
- ☞ Do not run machine engine while on lift. Disconnect spark plug wire before doing any service work.








# SAFETY INFORMATION


## REMEMBER "ONLY YOU CAN ASSURE A SAFE OPERATOR"


**DO NOT EVER** run engine while on the lift be sure attachments are disengaged, and machine is tied securely to the arms so it cannot move.


### **DANGER**

**Remove spark plug wire before doing any service work.**

-  Keep fire away from fuel.
-  Do not use as a man lift.
-  Hold the arms and load securely when rotating to maintain safe control.
-  If it is used for loading or as a work table, etc., fasten securely to lift arms to avoid tipping or sliding off.
-  Keep all locking devices in place and in good condition.

 Take all possible precautions when leaving *Lit'L HEFTEE* unattended, lower to ground.

 Periodically check the entire *Lit'L HEFTEE* carefully for cracks, bent or worn parts, proper cable adjustment, loose bolts, etc. Do not use until problems have been corrected. Retorque bolts periodically.

 Be sure cable is in good condition with no kinks or frayed areas.

### **CAUTION**

**Do not try to lift heavy load on the END of just one arm as this could cause failure of arm or pivot lock and possibly a falling load. KEEP LOAD CENTERED.**

## SAFETY DECALS

Replace Immediately If Damaged  
Order By Individual Decal

### **WARNING**

#### To Avoid Injury Or Death

- \* Lower Loads Before Leaving.
- \* NOT A MAN LIFT, DO NOT ALLOW ANYONE ON LIFT.
- \* Avoid Spilling Gas, Etc.
- \* Keep Feet Away From Lift Legs While Lowering.
- \* REMOVE SPARK PLUG WIRE WHILE ON LIFT.
- \* Do Not Use As A Hand Truck.
- \* Keep Load Close To Column and Centered.

**ANYTHING USED CARELESSLY  
CAN CAUSE AN ACCIDENT,  
EVEN A ROCK.**

HL108

### **WARNING**

#### To Avoid Injury Or Death

- \* Read Operator's Manual First.
- \* DON'T LIFT OVER 250#.
- \* Keep All Locking Devices In Place and In Good Condition.
- \* Use Only By Qualified Persons, NO CHILDREN. NOT A TOY.
- \* Strap Securely With 2 Straps Before Working On Or Tipping.
- \* NEVER OPERATE WITH A PERSON ON OR UNDER LIFT.
- \* Don't Run Engine While On Lift.
- \* No Smoking Or Fire Near Fuel.

**ANYTHING USED CARELESSLY  
CAN CAUSE AN ACCIDENT,  
EVEN A ROCK.**

HL107

# ASSEMBLY INSTRUCTIONS

## PREPARATIONS

Read this manual and refer to parts list & drawing on pages 12-13.

You have already opened the container to view this manual. Read this and safety section.

Open the winch box and remove small parts inside. Open all containers and spread out parts for easy access.

## **WARNING**

**Only qualified assemblers should work on this. No children. Be very careful. Use hard hats and safety shoes.**

## MAST BASE LEG ASSEMBLY

Rest the base tube assembly on the floor. Position the bottom of the mast tube onto the base tube mounting plate so that the holes line up. When looking into the mast tube and standing between the legs, the row of holes in the side of the mast tube must be on the right side. Refer to Assembly Drawing on page 13.

Insert four (4) 3/8 x 1 bolts downward through the four (4) attaching holes and secure with a flanged nut. Tighten securely. Your machine may be shipped with the slider removed from the mast. If so proceed as follows.

Install the slider down over the mast tube with the safety lock lined up with the holes on the right side. Note: Be sure the four (4) nylon buttons stay in their holes on the inside and do not fall out while installing.

## WINCH – TOOL TRAY ASSEMBLY

Mount the winch onto the mounting angle using four (4) 3/8 x 1" bolts positioned with the heads inward toward the mast and the flange nuts inside the winch. Tighten securely. Be sure the crank handle is positioned towards the rear (away from the legs).

Locate the winch mounting angle onto the two bolts on top of the mast with the winch mount on the side opposite the safety lock holes.

Position the tool tray on top of these bolts and secure with the 1/2" flange lock nuts. Tighten securely.

The hole in one corner of the tool tray is for mounting a trouble light if desired and should normally be positioned towards the legs (front).

## WINCH ASSEMBLY

Install the winch crank handle onto the pivot shaft and tighten the nut that is provided securely.

If cable is not installed:

Fasten the cable onto the winch drum following the winch instructions provided with the winch (reproduced on pages F1 - F2), so that the cable runs inside of and over the roller tube and downward next to the vertical mast tube. Tighten the cable locking clamps securely.

Slip the loop of the cable up over the lift lug on the side of the slider and crank upward to remove the slack and pull securely.

It is recommended that the lift lug be bent inward slightly, hitting it with a hammer, so that the cable cannot slip off inadvertently.

## WHEEL ASSEMBLY

The wheels are already loosely assembled onto the pivot shaft with washers and cotter pins. Remove a cotter pin, wheel and washers from one end, slide the assembly through the pivot tube on the back of the lift and replace with a washer on each side of each wheel, install the cotter pin and spread the ends to secure.

## LIFT ARM ASSEMBLY

To assemble the lift arm mount assembly merely slip it onto the pivot tube which extends forward from the vertical slide tube. Line the lock lug up with one of the grooves in the index plate, raise the lock lug up and slide the assembly inward until the lock drops down in one of the grooves and locks in front of the index plate to hold the entire assembly in position and prevent from rotation.

The arm mount tubes should be below the pivot tube as shown in the assembly drawing. This positions the arms lower to the floor and more nearly centers the load about the center pivot shaft for easier rotation and better balance.

To rotate the pivot arm assembly merely lift up on the lock lug and rotate until it drops into the desired position slot.

# ASSEMBLY INSTRUCTIONS

**NOTE:** It is not necessary to lubricate the pivot assembly, it will rotate rather hard with a heavy load but this is an advantage in holding it in position as one rotates. Lubricant may be used if desired.

Now slide the lift arms into the square sleeves on the arm mount assembly.

**NOTE:** Be sure the longer lift arm is on the left side as facing the vertical mast tube and the shorter one is on the right. This will put the ends of the arms approximately even. Slide them into desired position and secure with the 1/4" ball lock pins in the desired hole.

When preparing to lift a load, it is desirable to keep the lift arms approximately equally spaced from the center pivot so that the load will be centered.

## **WARNING**

**Tie any load securely on both sides before raising and remove the spark plug wire before servicing. DO NOT RUN ENGINE ON LIFT.**

**Be careful of fuel, oil or acid spillage when rotating and hold securely.**

**Do not allow fire close to an engine.**

**Keep all safety locks in place, secure and operating properly**

**Lower load (keeping feet away from the lift area) before leaving.**

Add on wheel cup. The wheel cup extension is a loose piece which may be positioned any place along either side to accommodate a wheel of a machine that has an odd (not evenly spaced) wheel positioning. This is particularly notable on the Lawn Boy, in which case the wheel cup should be positioned to the outer set of holes on the right side to accommodate the right inner rear wheel of the push mower. Bolt it in place with two (2) 3/8 x 1" bolts and flange nuts.

## CHECK OUT

The vertical slider should now slide freely up and down the column using the winch handle. It takes ten (10) turns to fully raise or lower.

**NOTE:** It is necessary to hold the safety lock away from the tube while lowering as it will stop in each hole as it lowers past it. The lower area has no holes to ease lowering once the load is out of the normal work range.

No lubrication is required on the vertical slider column. The rollers should roll freely and there will be no significant load on the slider washers except when a load is offset considerably to one side. Machine should now be ready for use.

## **CAUTION**

**Check to make sure that all parts are installed and positioned the same as shown on the parts drawing. Do not exceed 250# load and don't lift it all on one (1) arm.**

## CHECK OFF

Check the machine against the drawings and complete the pre-use check list on page 4. Read the operating instructions and check *Lit'L HEFTEE* to be sure all functions operate properly and safely.

## **CAUTION**

**Do not allow anyone on or under lift when operating.**

**Use *Lit'L HEFTEE* only on a level firm floor.**

# OPERATING INSTRUCTIONS

**Everything known has been done to make easy, convenient, and safe operation with a minimum of strain and time. No tools are required for any normal use adjustments or uses, except to bolt on the extension wheel cup if needed.**

## CAUTION

**Read the operator's manual. Any lifted load poses a potential hazard and if used carelessly or improperly can cause falling loads and serious injury.**

Review the "before operation" check list to make sure that everything is in proper condition, bolts are tight, etc. See page 4. Read and understand all items in safety section.

Position *Lit'L HEFTEE* for convenience in driving machines on or off and providing easy access to the lift controls.

Use *Lit'L HEFTEE* only on a firm level floor.

## WARNING

**Do not allow children or unqualified operators to use or work on this lift and do not use alcohol or drugs when using any equipment. Do not attempt to raise loads that exceed 250# and do not lift all of the load on the end of only one arm. Lower to floor before leaving.**

## WARNING

**Keep all safety locks in place and in good condition. Wear safety shoes and eye protection.**

Your *Lit'L HEFTEE* should now be ready to use to elevate a machine. Some general principals will make operation quicker, easier, and safer. As follows:

1. Measure the width of the outside of the machine wheels to be raised. Then position the wheel arms so the wheels of the lifted machine will rest in the center of the channels. Either lift arm may be moved inward or outward by removing the spring ball pin. Lift the end of the arm so it slides freely in its tube and reposition as needed. Be sure and position both arms so that the machine wheels fit securely in the channels and the load is as near centered on the lift as practical.

**NOTE:** Position so that on heavy machines the weight will be centered as well as practical.

**NOTE:** It is a good idea to keep the machine moved in closer to the mast as long as accessibility is not compromised, just to get more rigidity and stability.

2. Now most machines can just be pushed directly onto the *Lit'L HEFTEE* and into the wheel channels.

## WARNING

**Do not operate lift with anyone on the machine or under it. Use extra caution if anyone is near.**

3. For odd or uneven wheel tread machines it may be necessary to bolt on the extension wheel cup as needed.

4. TIE DOWN. It is most practical to raise the machine one to two feet for ease of access. Then tie the machine securely to the wheel channels using the two nylon tie straps provided. The best way usually is to run one strap length ways on each side and route inboard of the push arm mounts, wheels, etc.

If any wheels are to be removed, then tie so that the strap will not be in the way of the wheels nor will it be released when the wheel is removed. This may require tying crossways of the deck or even in an "X" pattern if appropriate.

5. The machine may now be raised to the desired working height and tilted as required.

## **MOWER SERVICE**

Some mower decks have a fixed discharge which extends out considerably beyond the wheels. In this case it will usually be desirable to lower the wheels (raise the deck) so the chute and deck do not rest on the arm tubes.

# OPERATING INSTRUCTIONS

## DANGER

Always tie down the machine securely on both sides before working on it. Operate and/or rotate carefully and use the standard tie downs always. When rotating be careful of spilling gasoline, oil, battery acid, etc. Do not smoke or allow fire near machine.

If oil and/or gas is to be drained from the machine by rotating or tipping, be very careful in placing the container to avoid spillage. Rotating a heavy machine should only be attempted with two (2) persons to provide control. Be certain the tie straps are tight before attempting any tipping.

## WARNING

Remove the spark plug wire from the engine before attempting any service. **AN ENGINE COULD START** merely by pulling a blade around in the removal or installation process.

Never attempt to run any engine while on the lift. The opportunities for injury are **SEVERE AND OBVIOUS.**

When positioning the mower for proper working height, raise to desired level, then lower enough so the safety lock is engaged in the hole. Leave the handle in this position so that the winch is also supporting the load.

**NOTE:** When operating the winch **KEEP CABLE TIGHT.** Any loose cable will cross and twist on the drum. Then when tightened, it may have slack areas which, as the load is lowered, will allow a short dropping of the load as the slack is taken up.

To lower, raise the winch high enough so the safety lock may be swung out of the tube, then, holding the lock raised with the left hand, lower the winch by cranking it counterclockwise with the right hand. There are no latches to reverse or any other action required. The handle will stop wherever released, either going up or down.

## CAUTION

Never try to use the lift as a hand truck. If a mower must be moved on the lift, lower it down near the floor level before tipping backwards on the wheels. Also, operate carefully so it does not roll off sideways. Keep feet away from the base tube

and out from under the lift arms while lowering. Wear safety shoes and other protective clothing as appropriate.

## OTHER USES

The *Lit'L HEFTEE* makes a very convenient lifting platform for raising a load to work on it.

## CAUTION

**Do not raise or lower the lift arms with anyone on or under it. Use it for a work table only when the lift has been lowered into the safety locks.**

Always use a pallet or other platform that is locked to the arms and under them so that it cannot tip or slip off of the forks.

A simple work platform with stirrups that go around the arms can make a real contribution to safety and productivity by raising such things as engines, tooling, or other hard to handle difficult objects to a level most convenient for working on etc.

## OTHER ATTACHMENTS

The entire lift arm and mount assembly may be slid off of the vertical slider merely by raising the pivot lock in one of the grooves and sliding the assembly off the end of the tube. To use the engine mount, chain saw, or string trimmer brackets, just remove the two (2) lift arms and insert the desired service bracket. The most convenient positions are shown in the brackets drawing.

As can be seen by the great extent to which safety has been considered on this machine, we sincerely hope that no one will ever be injured or hurt. We cannot guarantee that, as anything can cause harm if used improperly, even a rock. Any raised heavy object is a potential hazard if it should fall with someone underneath.

**PLEASE USE WITH CAUTION AND RESTRAINT.**

## CAUTION

Before leaving *Lit'L HEFTEE* always lower it to the ground to discourage unauthorized use by the careless, the unqualified, or children.

# PARTS LIST FOR *Lit'L HEFTEE* MAIN ASSEMBLY

REF. NO.	PART #	NO. REQ.	DESCRIPTION
1	HL129	1	BASE LEG TUBE ASSEMBLY
2	HF265	4	PLASTIC END PLUG
3	HL147	1	LONG LEFT LIFT ARM ASSEMBLY
4	HL146	1	SHORT RIGHT LIFT ARM ASSEMBLY
5	HL165	1	EXTENSION ADD-ON WHEEL CUP
6	HL150	1	ARM MOUNT ASSEMBLY
7	HL113	2	1/4" X 2" BALL SPRING PIN WITH RING
8	HL139	1	SWIVEL LOCK LATCH
9	HL132	1	SLIDER TUBE ASY w/ ROLLERS & BUSHINGS, ETC. COMPLETE
10	HL155	1	SWIVEL LOCK COMPRESSION SPRING
11	MF658	1	1/4 X 3/4 DRILLED PIVOT PIN
12	HL121	4	1-1/8" OD X 1/16 THICK NYLN FLANGE BEARING (SLIDER BUTTON)
OR USE 12* BELOW FOR MODELS AFTER 5-1-95 ~ these are included in HL123			
12*	SH2693	2 + 2-HL121	3/4" OD NYLON BEARING W/ 1/8 THICK FLANGE (used after 5/1/95)
13	HL218	1	1-1/8" OD X 2-7/8" LONG STEEL ROLLER W/BEARINGS (changed 5/98)
13A	HL123	1	SET OF 2 ROLLERS WITH BEARINGS & NYLON SIDE SPACERS
14	HL120	1	WINCH CABLE 1/8 X 62" LONG
15	HL119	1	1 TON SAFETY LOCK WINCH WITH HANDLE AND CABLE ROLLER (NO CABLE)
16	HL163	1	5/8 OD X 3-5/8" STEEL PIPE CABLE ROLLER
16A	HL162	1	7/16 x 3-3/4" FRAME SPACER SLEEVE
18	HL116	1	WINCH HANDLE
19	HL137	1	TOOL TRAY
20	HL143	1	WINCH MOUNT ANGLE
21	HL126	1	VERTICAL MAST TUBE ASSEMBLY
22	MF659	1	5/16 X 1-1/4" DRILLED LOCK PIN
23	HL138	1	SAFETY LOCK DOG
24	HL153	1	SAFETY LOCK TORSION SPRING
25	HL107	1	SAFETY DECAL
26	HL108	1	SAFETY DECAL
27	HL114	2	LIT'L HEFTEE DECAL
28	HL154	2	4" DIA. WHEEL
29	HL159	1	WHEEL AXLE ROD - WELD ON NOW - WAS SEPARATE ON PRIOR MODELS
30	ST151	1	PATENT DECAL
31	HL168	1	DECAL SET
32	HF235	2	NYLON TIE DOWN STRAPS

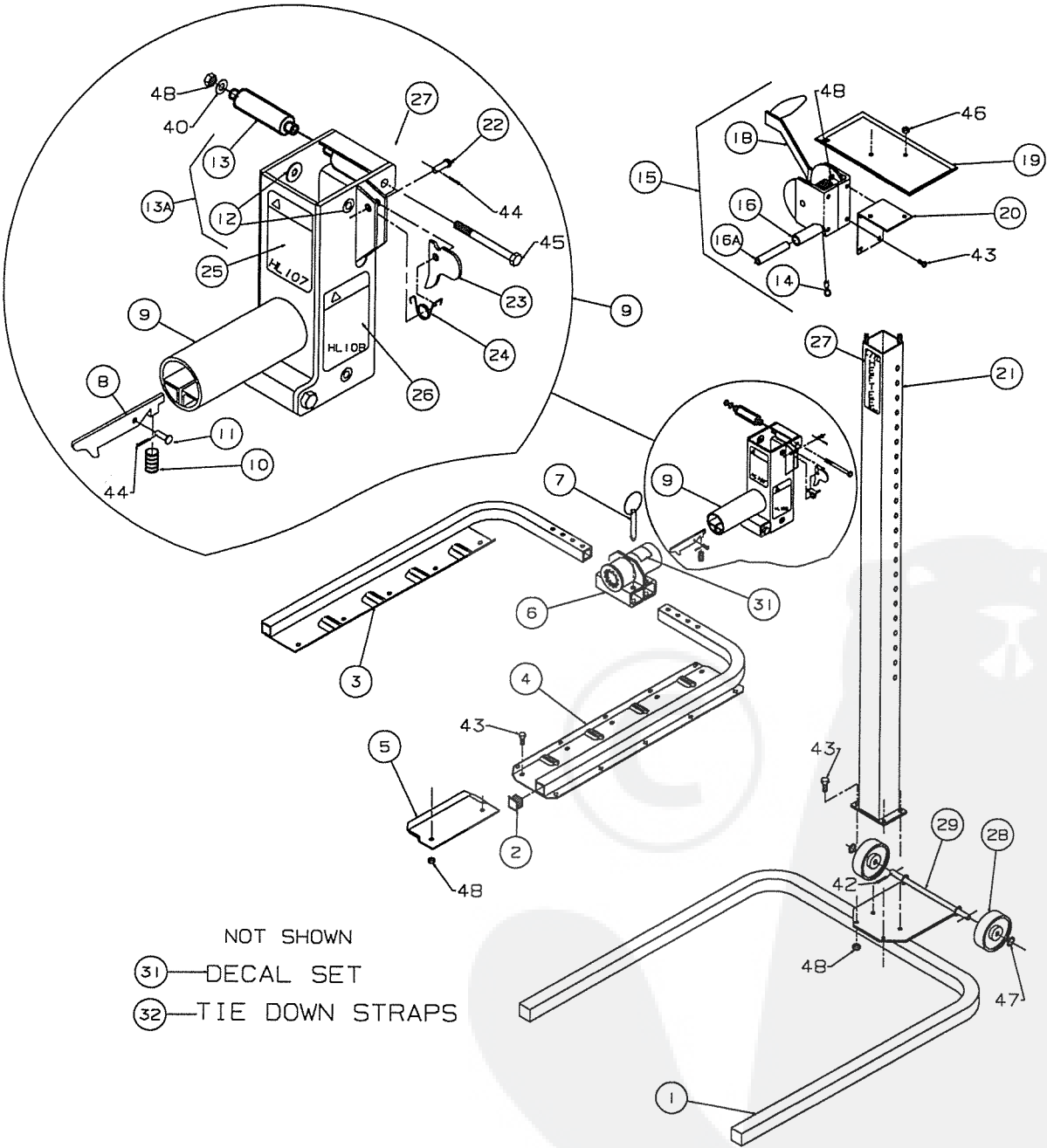
Always order in pairs

## HARDWARE

40 (early models)	O/L*	8	3/8" FLAT WASHER (used on early machines)
41	O/L*	10	3/8" NC FLANGE HEX LOCK NUT
42	O/L*	2	3/32 X 1-1/4" COTTER PIN
43	O/L*	10	3/8 NC X 1" HEX HEAD CAP SCREW
44	O/L*	2	1/16 X 3/4" COTTER PIN
45	O/L*	2	3/8 X 4-1/2" HEX HEAD CAP SCREW G5
46	O/L*	2	1/2" FLANGE HEX LOCK NUT
47	O/L*	2	1/2" SAE FLAT WASHERS
48	O/L*	6	3/8" FLANGE NON LOCK NUT
49	O/L*	2	3/8" TOP LOCK NUT

O/L\* - OBTAIN LOCALLY  
A/R\*\* - AS REQUIRED

# Lit'L HEFTEE MAIN ASSEMBLY



# SERVICE INSTRUCTIONS

## CAUTION

Read the operator's manual before trying to operate or service. Any lifted load poses a potential hazard and if used carelessly or improperly can cause falling loads and serious injury.

## WARNING

Do not allow children or unqualified operators to use or work on this lift and do not use alcohol or drugs when using any equipment. Do not attempt to raise loads greater than it will easily lift. Do not exceed 250#. Lower to floor before leaving.

The *Lit'L HEFTEE* has been designed to minimize service as much as possible. Refer to parts drawings and safety pages before working on *Lit'L HEFTEE*.

## INSPECTION

Periodically check your *Lit'L HEFTEE* carefully for loose bolts, proper cable lay and any sign of cracks, kinks or frayed areas. Replace if found. DO NOT USE if any problems are found. Your safety depends on it.

## LUBRICATION

1. The rollers used after 4-98 in the slider are solid steel with bronze bushings. These need to be removed or just remove the bolt and squirt grease into the base.
2. The rollers, refer to #16, page 13, on which the cable rods must be removed and insert grease to prevent wear and drag.
3. The arm holder, refer to #6, page 13, will rotate easily if grease is added to the bore.

## MAINTENANCE AND REPAIRS

Proceed as follows.

### SLIDER ROLLER BEARINGS.

If any portion of the slider tube comes within 1/32 of an inch, under load, of the vertical mast tube, it means the rollers or slider washers are worn or damaged and should be replaced. Repair as follows.

First, remove the arm assembly from the slider tube pivot shaft by lifting the rotation lock in one of the grooves and just pulling the assembly off the pivot shaft. It is easier to handle if the lift arms are removed from this assembly first, but may be done either way.

To replace, unhook the cable from the slider tube, this may require bending the tab out slightly as it may have

been bent in after installation. Remove the tool tray and winch from the top of the mast by removing the two (2) ½" nuts. Now slide the slider tube assembly off the top of the mast, being careful not to loose the nylon wear buttons or allow them to drop inside the tube.

Check the rollers and pivot bolt for clearance. If loose, floppy, worn, etc., replace these rollers. Merely remove the nut and slide the bolt out, insert new part. Grease the roller and slide the bolt back in and tighten the nut securely. Do not try to tighten it up solid against the rollers. See p. 13 for proper assembly.

To replace, the buttons hold them in place so they do not fall out. You may use silicone glue or grease to help hold in place. Next, lower the slider assembly back onto the vertical mast tube and replace the winch and tool tray, re-attach cable, and lower the slider tube till the cable is tight.

## CAUTION

Always wear safety shoes and safety glasses and proper clothing when doing service work on the *Lit'L HEFTEE* or anything else. Lower into safety locks before working on *Lit'L HEFTEE*.

## WARNING

Do not operate lift with anyone on the machine or under it. Use extra caution if anyone is near.

## CAUTION

Keep all safety locks in place and in good condition.

## SAFETY LOCKS

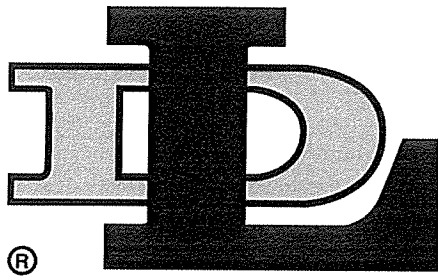
Check both safety lock pivot pins, springs and mounts to be sure they are in good condition and snap securely into locked position. Repair or replace as needed.

Replace any decals immediately if damaged. Clean area for decal with soap and water. Remove any dirt, grease or remnants of old decal. Reapply pressure sensitive decal in same location.

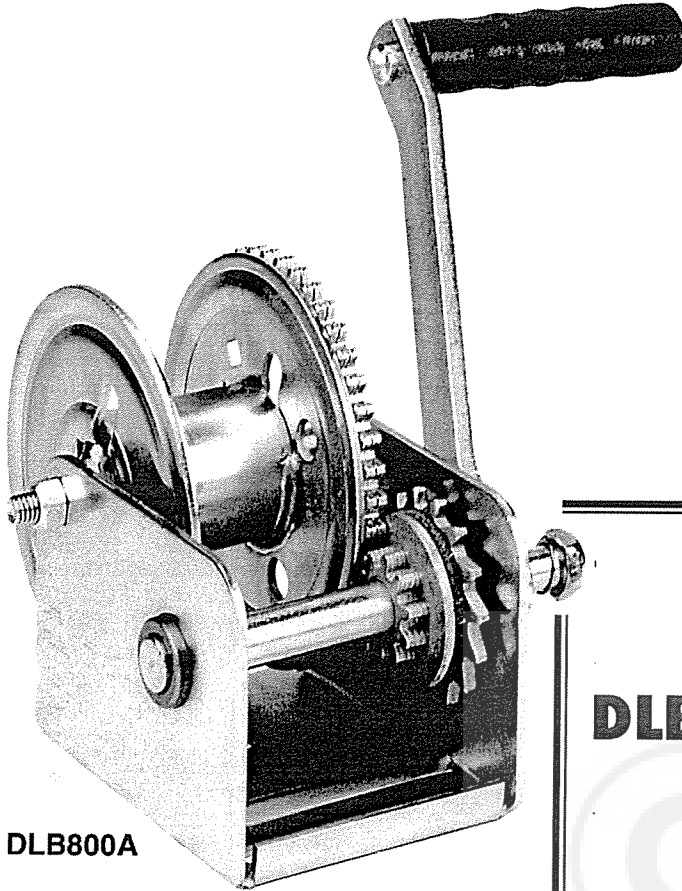
## WINCH REPAIR

See Fulton page 1-2 for instructions and parts. Order parts from McCanse Engineering using Fulton Part Numbers shown.



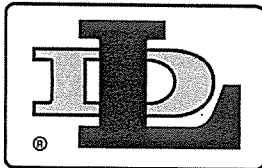


# BRAKE WINCHES



**DLB800A**

MANUFACTURED BY



**DUTTON-LAINSON**  
**COMPANY** *SINCE 1886*

MADE IN U.S.A.

451 West 2nd St. • Hastings, NE 68902-0729 • TEL: 402-462-4141 • FAX: 402-460-4612  
Web Site [www.dutton-lainson.com](http://www.dutton-lainson.com)

**! WARNING** READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THIS WINCH. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN SERIOUS OR FATAL INJURY. RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE.



### IMPORTANT SAFETY INFORMATION

- This brake winch is built for multi-purpose hauling and lifting operations. It is not to be used as a hoist for lifting, supporting or transporting people, or for loads over areas where people could be present.
- Respect this winch. High forces are created when using a winch, creating potential safety hazards. It should be operated and maintained in accordance with instructions. Never allow children or anyone who is not familiar with the operation of the winch to use it. A winch accident could result in personal injury.
- Check winch for proper operation on each use. Do not use if damaged. Seek immediate repairs.
- Never exceed rated capacity. Excess load may cause premature failure and could result in serious personal injury. This winch is rated on first layer of cable on the hub. Using more layers of cable increases the load on the winch.
- Never apply load on winch with cable fully extended. Keep at least three full turns of cable on the reel. Check cable on every use. Replace at the first sign of kinks, broken wires, deformation or any other damage.
- Secure load properly. When winching operation is complete, do not depend on winch to support load.
- Operate with hand power only. This winch should not be operated with a motor of any kind. If the winch cannot be cranked easily with one hand, it is probably over-loaded.
- If winch will be used in freezing, icy conditions, apply silicone spray to ratchet pawl and spacer items, V, W, X, or Y. Do not spray other brake mechanism parts.

**ASSEMBLY** – Thread the handle onto the winch drive shaft and be certain that a clicking noise is produced when the handle is turned clockwise. Install the spring and locknut (Items E and G) on the end of the drive shaft as shown on parts drawing. These parts may appear to serve no function, but they provide several important fail-safe features, and should not be altered or removed.

**WINCH MOUNTING AND CABLE ATTACHMENT** – For maximum strength and safety, this winch should be mounted with three 3/8" bolts (M10), washers and lock washers. Use Grade 8 for 1500 lb/680 kg or greater capacity. (See parts drawing). Using fewer bolts or alternate locations will result in damage to the winch base and the winch may malfunction.

Attach cable or rope by method shown in sketch.

**OPERATING INSTRUCTIONS** – Wind cable on winch reel by turning winch handle in clockwise direction. This should produce a loud, sharp, clicking noise. The load will remain in position when the handle is released. Wind cable off the winch reel by turning winch handle counterclockwise (no noise will be produced). The load will remain in position when the handle is released, but for extra security it is recommended that the handle be turned clockwise until at least two clicks are heard. This will add extra tightness to the brake mechanism. Always satisfy yourself that the winch is holding the load before releasing the winch handle.

**! IMPORTANT:** Sufficient load must be applied to the cable to overcome internal resistance and operate the brake properly, otherwise turning the crank handle counterclockwise will only remove the han-

dle from the shaft – the reel will not turn. The minimum operating load requirement is 50 lb (23 kg) for Models DLB350A, DLB350AG, DLB800A, DLB800AG, DLB1200A and DLB1200AG, 75 lb (34 kg) for DLB1500A and DLB1500AG, 175 lb (80 kg) for DLB2000AG and DLB2500A.

Models DLB805A, DLB1205A, DLB1505A & DLB2505A are equipped with a lockout lever for the purpose of 'freewheeling' cable out when there is no load on the winch. To 'freewheel' cable out, simply turn the handle counterclockwise until lockout lever can be engaged behind handle hub. In this condition cable can be easily pulled from the winch drum.

**! WARNING:** Never put winch in freewheel mode if any potential for a load on the cable exists. Engaging the lockout lever keeps the winch from stopping in the event that a load is accidentally applied.

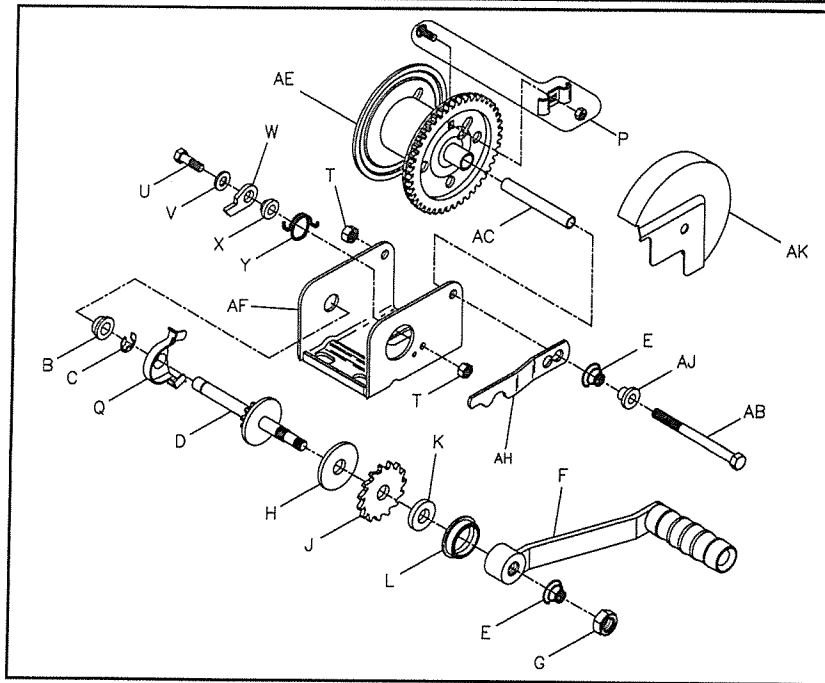
**WINCH MAINTENANCE** – In order to insure maximum performance, a periodic inspection for any necessary preventive maintenance should be made. Check at least once annually and more frequently when the winch is exposed to an environment which is particularly dirty or wet. For continued smooth performance and increased life, occasional grease gears, reel shaft and handle threads. An

occasional drop of oil on the drive shaft bearings is also recommended. If winch will be used in freezing, icy conditions, apply silicone spray to ratchet pawl and spacer items V, W, X or Y. **Note: Do not oil or grease brake mechanism items H and J.**

Keep winch in good working order. Damaged or severely-worn parts create unnecessary dangers and could result in personal injury or property damage.



# DLB800A & DLB800AG Winch

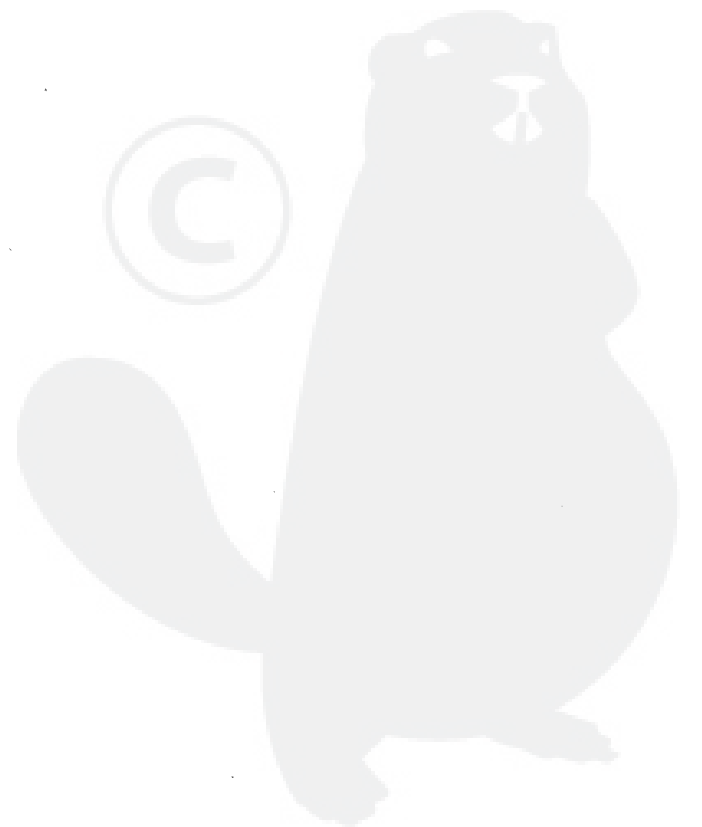


## PARTS LIST

Ref	Description	Part No.	Ref	Description	Part No.
A	Base	404900*	AH	Lockout Lever (optional)	404579
A	Base - DLB 350AG	404945*	AJ	Spacer (optional)	406160
B	Bushing	204012	AK	Gear Cover (optional)	
C	"E" Ring	205116		Painted Bronze	5240346
D	Drive Shaft	306061		Plated	5240361
E	Spring	204364	AL	Base	404896*
F	Handle - 7"	5703061		Base - DLB 1200AG	404897*
	Handle - 9-3/8"	5703103	AM	Bushing	204009
G	Nut	205033	AN	Gear Cover - "G" Series	406115
H	Pressure Plate	204362	AQ	Gear Cover (optional)	
H	Pressure Plate "G" Series	206620		Painted Bronze	5240122
J	Ratchet Wheel	404164		Plated	5240221
K	Pressure Washer	404163	AR	Spacer Washer	205120
L	Bushing	206328	AS	Reel	304754*
M	Nut	205316	AS	Reel - 1-7/8" (optional)	304768*
N	Bolt	205332	AT	Base	404891*
P	Rope Clamp Kit	5243506		Base - DLB 1500AG	404892*
Q	Gear Cover - "G" Series	406114	AU	Drive Shaft	304760
S	Reel	306075*	AV	Handle - 9-3/8"	5703103
	Reel - DLB350AG	306167		Handle - 12"	5703111
T	Locknut	204803	AW	Bolt	204804
U	Bolt	205167	AX	Reel Spacer	204808
V	Flat Washer	205055	AY	Gear Cover (optional)	
W	Pawl	404409		Painted Bronze	5240387
	Pawl - "G" Series	404190		Plated	5240403
X	Spacer	404166	AZ	Reel	304755*
	Spacer - "G" Series	404191	BA	Base - DLB2500A	406047*
Y	Spring	204363		Base - DLB 2000AG	404899*
	Spring - "G" Series	204460	BB	Spacer	404434
Z	Reel Spacer	207183	BC	Bolt	205006
AB	Bolt	203161	BD	Flat Washer	205139
AC	Reel Spacer	204807	BE	Intermed. Drive Shaft	306035
AE	Reel	306062*	BF	Nut	205014
AF	Base	404893*	BH	Reel	304756*
	Base - DLB 800AG	404895*	BJ	Drive Hub (Optional)	304562
			BM	Handle w/Lock Pin (Opt)	5703426
			BN	Handle Hub (Optional)	304630
			BP	Special Nut (Optional)	404970
			BQ	"E" Ring	206162
			BR	Bushing	206163
			BS	Bolt	205335

To order replacement parts contact:

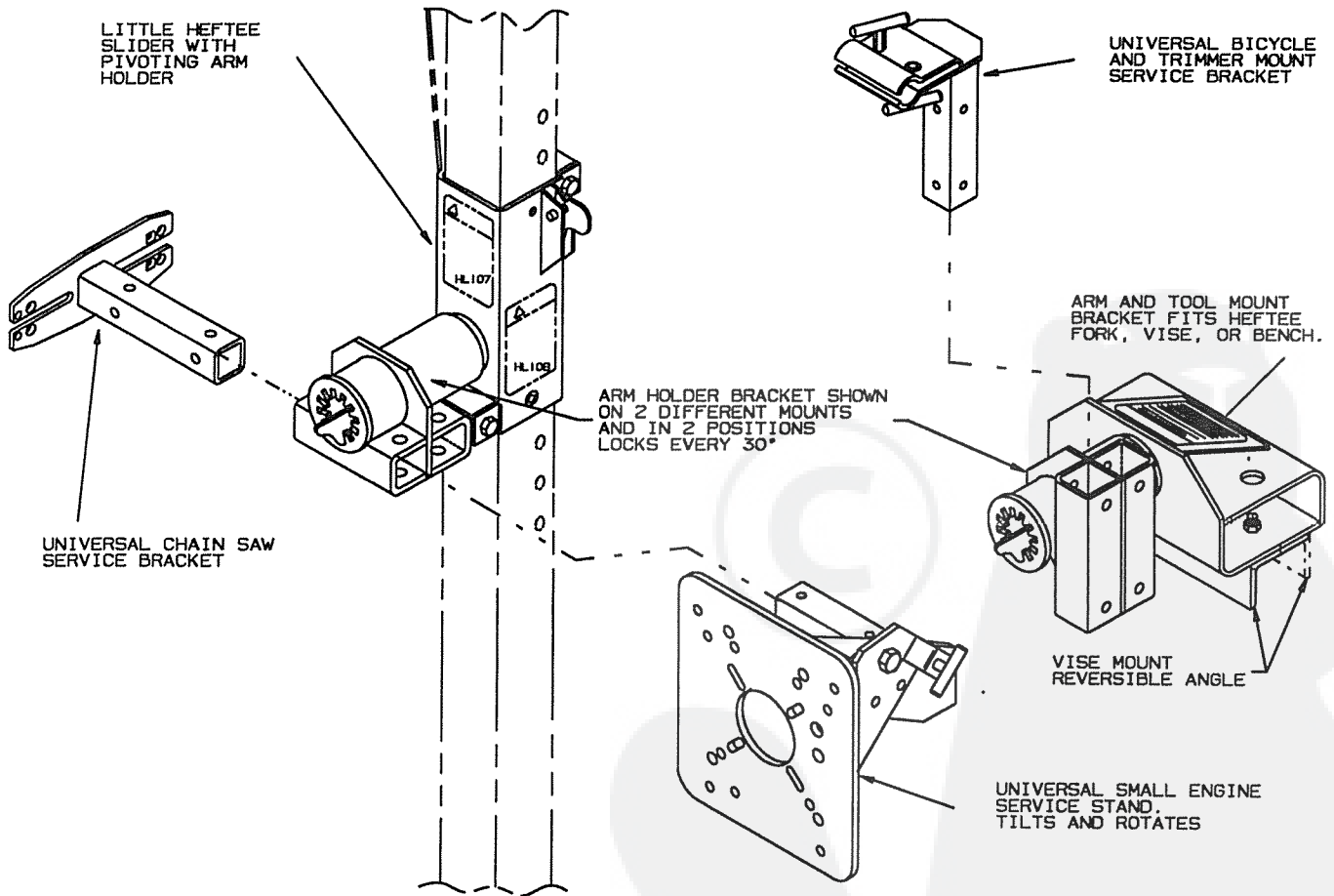
**Dutton-Lainson Company**  
 www.dlco.com  
 Tel: 800-569-6577  
 Fax: 402-460-4612  
 e-mail: DLsales@dutton-lainson.com



# HEFTEE

## SERVICE KITS

### OPERATORS MANUAL & KIT OF BRACKETS # HL200



EACH SERVICE BRACKET MOUNTS ONTO THE ROTATING ARM HOLDER. THE ARM HOLDER MOUNTS ONTO EITHER THE 'LITL' HEFTEE OR THE FORK - VISE - BENCH MOUNTING BRACKET

PO Box 218 ~ 107 S. Daysville Rd., Oregon, IL 61061  
 Phone: (815)732-7540 ~ Fax: (815)732-2052

**TO THE OWNER:**

Read this manual before using your *HEFTEE® Service Brackets*. The information presented will prepare you to do a better, safer job. Keep this manual handy for ready reference and training of future users.

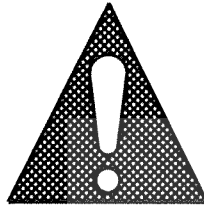
The *HEFTEE Service Brackets* you have purchased have been carefully engineered and manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and upkeep. Service the *HEFTEE Service Brackets* as specified. Observe all safety information in this manual and safety decals on the *HEFTEE Service Brackets*.

Use only genuine HEFTEE Industries LLC service parts. Substitute parts will void the warranty and may not meet standards required for safe and satisfactory operation.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING**, and **DANGER** are used in conjunction with the Safety-Alert Symbol, ( a triangle with an exclamation mark), to indicate the degree of hazard for items of personal safety.

**SAFETY**

**TAKE NOTE! THIS SAFETY ALERT SYMBOL FOUND THROUGHOUT THIS MANUAL IS USED TO CALL YOUR ATTENTION TO THE INSTRUCTIONS INVOLVING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN INJURY OR DEATH.**



THIS SYMBOL MEANS

**-ATTENTION!**

**-BECOME ALERT!**

**-YOUR SAFETY IS INVOLVED!**

**!** **CAUTION** Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

**!** **WARNING** Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

**!** **DANGER** Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations typically for machine components which, for functional purposes, cannot be guarded.

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# SPECIFICATIONS

## **HEFTEE® SERVICE BRACKETS**

RATED LIFT CAPACITY .....	150# .....	68 Kg
ROTATION .....	360°, LOCKS IN 30° INCREMENTS	
SHIPPING WEIGHT (BASIC SET OF 3 SERVICE BRACKETS) .....	20# .....	9 Kg
SHIPPING WEIGHT (SET OF 3 SERVICE BRACKET WITH VISE MOUNT KIT) .....	38# .....	17 Kg
SHIPPING BOX SIZE .....	14 X 11 X 6" .....	36 X 28 X 15 cm

### **HEFTEE® SERVICE BRACKETS**

#### **A NEW GENERATION IN SERVICE SAFETY AND CONVENIENCE.**

## CHECK LIST

### GENERAL CHECK LIST BEFORE EACH USE

- On heavy loads, be sure weight is centered on lift as much as practical.
- Be sure rotational safety lock swings into lock position freely and is locked securely.
- Be sure both retaining pins are in bracket before proceeding.
- Be sure engines are drained of fuel before working on or rotating.
- Check all bolts to make sure that they are tight.
- Be sure any machines being serviced is securely fastened into bracket.
- Be sure the rotating arm holder is kept in close to the slide frame so the rotational lock can drop freely into its notch and not interfere with rotation.

## GENERAL INFORMATION

The purpose of this manual is to assist the operator in maintaining and operating the *HEFTEE Service Brackets*. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable and safe performance. These operating and maintenance instructions have been compiled from extensive experience and engineering data.

The illustrations and data used in this manual were current at the time of printing. But due to possible in-line production changes your lift may vary slightly in detail. HEFTEE Industries LLC. reserves the right to re-design and change the lift as may be necessary without notification.

### MAINTENANCE

Keep safety locks in good condition and working properly.

Patent Pending



# SAFETY INFORMATION

*The HEFTEE® Service Brackets have been designed with every possible safety provision known, except a careful operator, but only you can assure proper and safe use.*

**REMEMBER "ONLY YOU CAN ASSURE A SAFE OPERATOR"**

## TRAINING

- ☞ READ this manual especially the safety and operating instructions before using.
- ☞ Do not allow children to operate or play on machine and do not allow anyone to operate without proper instruction.
- ☞ Allow no one to be on or under machine while raising or lowering or rotating.

## OPERATIONAL SAFETY

### CAUTION

In addition to the design and the configuration of equipment, Hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

- ☞ Always wear safety glasses, safety shoes and proper clothing for the job.
- ☞ Never use drugs or alcoholic beverages when operating any mechanical equipment especially the HEFTEE.
- ☞ Replace decal immediately if damaged. Clean area for decal with soap and water. Remove any dirt, grease or remnants of old decal. Re-apply pressure sensitive decal in same location.
- ☞ Do not try to lift over 150# on *Service Brackets*.
- ☞ Read and observe safety decal on the *Service Brackets*.
- ☞ Never allow anyone on the equipment or under equipment when raising, lowering, or rotating.
- ☞ Be sure machine or engine is securely fastened into brackets before proceeding.
- ☞ If you must run engine while on the lift, do so very carefully.

### DANGER

Remove spark plug wire before doing any service work.

- ☞ Avoid spilling fuel or oil.
- ☞ Keep fire away from fuel.
- ☞ Hold the load securely when rotating to maintain safe control.
- ☞ Keep all locking devices in place and in good condition.
- ☞ Take all possible precautions when leaving HEFTEE® Brackets unattended, lower equipment.
- ☞ Periodically check the entire HEFTEE® Brackets carefully for cracks, bent or worn parts.

## SAFETY DECAL

Replace Immediately If Damaged  
Order By Individual Decal

### WARNING

**To Avoid Injury Or Death**

- \* Read Operator's Manual First.
- \* DON'T LIFT OVER 150#.
- \* Keep All Locking Devices In Place and In Good Condition.
- \* Use Only By Qualified Persons, NO CHILDREN. NOT A TOY.
- \* Avoid Spilling Fuel or Oil.
- \* No Smoking Or Fire Near Fuel.
- \* NEVER OPERATE WITH A PERSON ON OR UNDER LIFT.
- \* Use Extreme Caution If You Must Run Engine While On Lift.
- \* Keep Heavy Loads Centered.

**ANYTHING USED CARELESSLY CAN CAUSE AN ACCIDENT, EVEN A ROCK.**

HL105

# ASSEMBLY & OPERATING INSTRUCTIONS

*Everything known has been done to make easy, convenient, and safe operation with a minimum of strain and time. No tools are required for any normal use adjustments or uses, except to bolt on the engine or chain saw.*

## **PREPARATIONS**

Read this manual and refer to parts list & drawing on page 8. Also refer to the Operating Instructions for the *HEFTEE* or *Lit'L HEFTEE* if being used to support these brackets.

All of the Service Brackets are shipped completely assembled. The only assembly necessary is in attaching them to the various optional mounts.

The arm holder bracket slides onto the pivot tube. When the rotational lock protrudes through the index washer, raise the lock enough that the index washer will slide past the lock dog and the lock will drop down on the outside of the index washer. This provides both a rotational lock and a lock to prevent the arm holder bracket from coming off of the pivot tube.

## **SERVICE BRACKET MOUNTINGS**

Each Service Bracket is mounted onto the arm holder bracket by sliding the square tube into the outer square socket of the arm mount bracket. This is the bracket with the rotational indexing washer attached to the outer end. This will be dealt with on the individual brackets below.

There are three basic mounting provisions for the Arm Mount Bracket.

### **1. Arm mount and support brackets**

WHEN USED ON THE *LIT'L HEFTEE*, the arm mount is already provided on the vertical slider bracket. Merely remove the lift arms and insert the bracket of your choice as explained below. Be sure to pin the service bracket into the outer arm socket using BOTH pins.

### **2. HEFTEE Arm Kit Attachment**

The *HL106 Lit'L HEFTEE* Arm Kit is offered as an option to be used on the *HEFTEE 2000* by sliding onto either of the lift forks. If you have this attachment, then merely remove the lift arms from the arm holder brackets and insert the service bracket of your choice. See below.

### **3. Optional Arm Mount and Vise Mount Bracket**

The arm support bracket and fork support bracket for

the arm mount are offered as an additional kit, either separately or in conjunction with the Service Bracket Kit. This is the same bracket that mounts onto the lift fork of the large *HEFTEE* and may be so used.

A second option is to bolt this bracket to a work bench in a convenient location using the holes provided in the bottom of this bracket.

A third option is to bolt the angle iron provided in this kit onto the bottom of the fork mount tube. This then can be clamped into a vise for easy mounting or removal, as needed. It is usually best to bolt the angle with the vertical flange to the back, thus extending the mount bracket further away from the vise and giving more clearance between it and the vise handle. This should be used however it works best on your application.

Now the service bracket of your choice may be inserted into the arm mount bracket and pinned securely with both pins as follows.

## **Mounting the Service Brackets Into the Arm Bracket**

The square tube provided on each Service Bracket can usually be mounted into the arm mount square receptacle in any desired position. However, there are certain positions that generally work best and provide the best accessibility. The following instructions are provided looking into the indexing end of the arm mount bracket.

### **1. String Trimmer/Bicycle Bracket**

It is usually best to rotate the arm holder so that the square tube receptacles are vertical and to the right of the pivot mount. Then insert the string trimmer bracket down into that socket with the clamp facing toward you, away from the mounting.

The clamp is then open and the tube of the string trimmer inserted into the clamp jaws. Either the cross tube or the vertical tube of a bicycle may be clamped for complete access for service. Then tighten very securely in the desired rotational position. Now the indexing provision may be utilized to rotate the bike or string trimmer as desired for best access. It can also be rotated within the clamp to give the best access.

### **2. Chain Saw Bracket**

To use the chain saw bracket, it is best to first remove

# ASSEMBLY & OPERATING INSTRUCTIONS

the bar and chain from the chain saw. Then fit the chain saw bracket onto the bar mounting bolt or bolts, using whichever end of the bracket best fits your saw. Generally one or the other will provide a good fit and adapt to the blade adjustment dog provided which should fit into one of the holes provided. It is usually desirable to use one or more small and/or large washers on both of the chain saw bolts to span the slot in the bracket. Then tighten securely.

Now slide the square tube of the chain saw bracket, along with the chain saw, into the left side of the arm holder bracket with the arm sockets horizontal and below the pivot access. This puts the chain saw away from the mounting bracket and the handle of the saw away from the pivot mount, giving complete access to the various areas of the saw and motor. Now the entire assembly may be rotated as desired depending on what part is to be accessed.

### 3. Motor Mount Bracket

The motor mount bracket is completely assembled. It is usually best to slide the square mounting tube from right to left into the outer tube socket with the tube mount below the pivot access and horizontal. The saw mount may be rotated itself in three positions which, when mounted as stated above, position the motor mount plate in a vertical, a 45° angle or horizontal (flat) and on top of the pivot area. Insert the tube into the arm mount bracket in this position and install both locking pins.

To mount the engine, it is usually desirable to position the motor mount plate in a horizontal and level plane. In this position, the engine crankshaft is inserted through the center hole of the motor mount plate and the motor rotated to find a pattern of holes that matches one of the hole patterns on the crankshaft face of the engine. On most engines, the head of the engine will be up or pointed inward towards the mounting frame for best fit. On some engines, however, it must be reversed so that when folded out in a vertical plane the cylinder or cylinders will be pointing downward. There are even some situations where the engine may be mounted crossways on the plate.

### WARNING

**Remove the spark plug wire from the engine before attempting any service. AN ENGINE COULD START merely by turning the crankshaft.**

Some engines have protrusions around the crankshaft face that prevent them from lying flat. In this case, use washers or spacer tubes to space the engine up far enough to provide clearance.

Most engines require either 5/16 x 1 or 1/4" bolts or M8 x 1 or 1/4" metric bolts. There are a few that use only a single 1/2" bolt. Some use 3/8" NC capscrews also. Due to the wide variety of combinations, it is simplest for the operator to provide bolts that fit his particular engines. It is also a good idea to put at least one washer under the head of each bolt due to the oversize holes and slots.

After finding the best mating hole patterns, if this size or type engine is to be serviced frequently, it may be well to mark this specific hole patterns used with a paint mark or other means. Now tighten the engine down securely to the motor mount plate so it cannot slip or move.

Next it is usually preferable to rotate the engine mount plate in the diagonal or the vertical plane. Then rotate about the pivot access as different areas of the engine need to be accessed.

With the various combinations of positions provided, it is usually possible to get the engine in any desired position for best access. When mounted on the *Lit'L HEFTEE* or the *HEFTEE* fork the main lift may be raised or lowered also to give the most convenient access.

To rotate the pivot arm assembly merely lift up on the lock lug and rotate until it drops into the desired position slot.

**NOTE:** It is not necessary to lubricate the pivot assembly, it will rotate rather hard with a heavy load but this is an advantage in holding it in position as one rotates. Lubricant may be used if desired.

When attaching a load, it is desirable to keep the load approximately centered.

### CAUTION

**Be careful of fuel, oil or acid spillage when rotating and hold securely.**

**Do not allow fire close to an engine.**

**Keep safety lock in place, secure and operating properly**

**Lower load (keeping feet away from the lift area) before leaving.**

# ASSEMBLY & OPERATING INSTRUCTIONS

## CAUTION

Check to make sure that all parts are installed and positioned the same as shown on the parts drawing. Do not exceed 150# load and don't lift it all on one (1) arm.

Do not allow anyone on or under lift when operating.

Use *HEFTEE* Service Brackets only on a level firm floor.

## CAUTION

Read the operator's manual. Any lifted load poses a potential hazard and if used carelessly or improperly can cause falling loads and serious injury.

Review the "before operation" check list to make sure that everything is in proper condition, bolts are tight, etc. See page 2. Read and understand all items in safety section.

## WARNING

Keep all safety locks in place and in good condition. Wear safety shoes and eye protection.

**NOTE:** Position so that on heavy machines the weight will be centered as well as practical.

The machine may now be raised to the desired working height and tilted as required.

## DANGER

When rotating be careful of spilling gasoline, oil, battery acid, etc. Do not smoke or allow fire near machine.

If oil and/or gas is to be drained from the machine by rotating or tipping, be very careful in placing the container to avoid spillage. Rotating a heavy machine should only be attempted with two (2) persons to provide control. Be certain it is secure before attempting any tipping.

As can be seen by the great extent to which safety has been considered on this machine, we sincerely hope that no one will ever be injured or hurt. We cannot guarantee that, as anything can cause harm if used improperly, even a rock. Any raised heavy object is a potential hazard if it should fall with someone underneath.

**PLEASE USE WITH CAUTION AND RESTRAINT.**

## CAUTION

Before leaving *HEFTEE* Service Brackets always lower any load to discourage unauthorized use by the careless, the unqualified, or children.

# SERVICE INSTRUCTIONS

The *HEFTEE Service Bracket* has been designed to minimize service as much as possible. Refer to parts drawings and safety pages before working on *HEFTEE Service Bracket*.

## **INSPECTION**

Periodically check your *HEFTEE Service Bracket* **carefully** for bent parts, loose bolts and any sign of cracks. Replace if found. **DO NOT USE** if any problems are found. Your safety depends on it.

The pivot tube may be greased with a heavy grease, such as wheel bearing grease, to make rotation easier and smoother. However, this is optional.



## **CAUTION**

Keep the safety lock in place and in good condition.

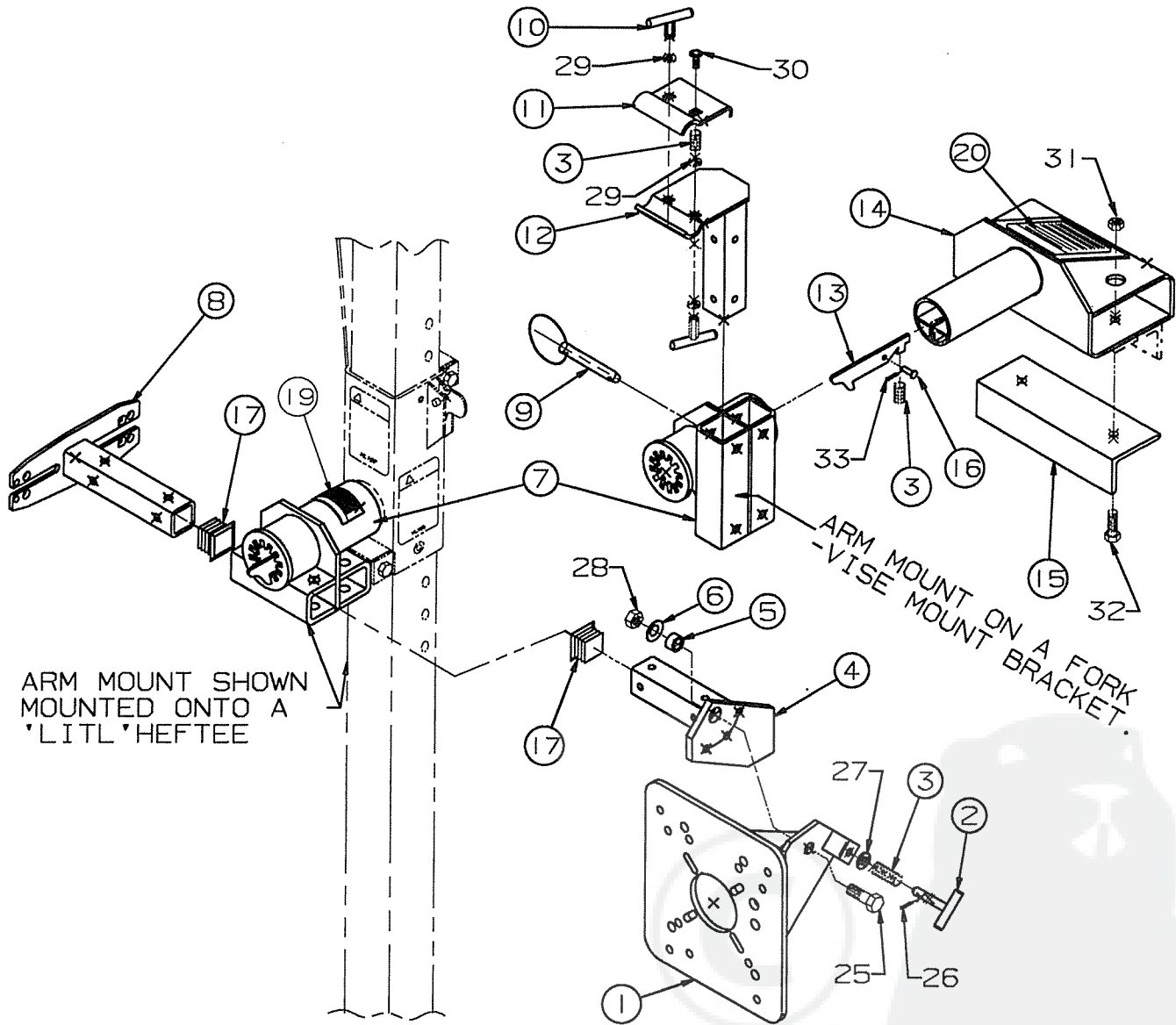
## **SAFETY LOCKS**

Check the safety lock pivot pin, spring and mount to be sure they are in good condition and snap securely into locked position. Repair or replace as needed.

Replace any decals immediately if damaged. Clean area for decal with soap and water. Remove any dirt, grease or remnants of old decal. Reapply pressure sensitive decal in same location.



# PARTS LIST FOR HEFTEE® SERVICE BRACKETS



REF. NO.	PART#	REQ.	DESCRIPTION
.....	HL200	1	KIT of 3 SERVICE BRACKETS
1	HL190	1	MOTOR MOUNT PLATE ASSEMBLY
2	HL187	1	MOUNT PLATE LOCK PIN ASSEMBLY
3	HL155	3	COMPRESSION SPRING
4	HL184	1	MOTOR MOUNT SUPPORT ASSEMBLY
5	HL191	1	1/2 X 3/4 OD X 7/16 LONG SLEEVE
6	MF510	1	1/2" BELLEVILLE WASHER
7	HL150	1	ARM & BRACKET MOUNT PIVOT ASSY
8	HL181	1	SAW BAR MOUNT ASSEMBLY
9	HL113	2	1/4 X 2" BALL SPRING PIN WITH RING
10	HL196	2	CLAMP TEE NUT - 5/16 NC
11	HL193	1	TRIMMER CLAMP PLATE (LOOSE)
12	HL194	1	TRIMMER CLAMP & MOUNT ASSEMBLY
13	HL139	1	SWIVEL LOCK LATCH
14	HL109	1	FORK, BENCH OR VISE MOUNT ASSY
15	HL204	1	VISE MOUNT ANGLE - 2 X 3 X 6"
16	MF658	1	1/4 X 3/4 DRILLED PIN

17	HF265	3	PLASTIC END CAP
19	HL169	1	PATENT DECAL
20	HL105	1	SAFETY DECAL

## HARDWARE

REF. NO.	PART#	REQ.	DESCRIPTION
25	O/L*	1	1/2 X 1-1/2 NC HHCS G-5
26	O/L*	1	3/32 X 1 COTTER PIN
27	O/L*	1	3/8 SAE FLAT WASHER
28	O/L*	1	1/2" NC HEX LOCK NUT
29	O/L*	2	5/16" STANDARD FLAT WASHER
30	O/L*	2	5/16 NC X 1-1/2" CARRIAGE BOLT G-5
31	O/L*	2	3/8 NC HEX LOCK NUT
32	O/L*	2	3/8 X 1" HEX CAPSCREW G-5
33	O/L*	1	1/16 X 3/4" COTTER PIN