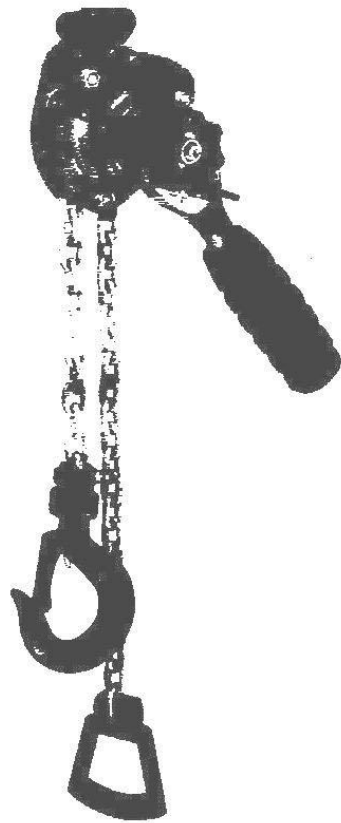


OPERATION – SERVICE – PARTS

“MINI” SERIES

Manually Operated Short Handle
Lever Hoist



MODEL
MA9001

SAFETY PRECAUTIONS

WARNING!

Improper operation of a hoist can create a potentially hazardous situation which, if not avoided, could result in *death* or *serious injury*. To avoid such a potentially hazardous situation, the operator shall:

1. **NOT** operate a malfunctioning or unusually performing hoist.
2. **NOT** operate the hoist until you have thoroughly read and understood this Operating, Maintenance and Parts Manual.
3. **NOT** lift or pull more than rated load for the hoist
4. **NOT** use damaged hoist or hoist that is NOT working properly.
5. **NOT** use a hoist with twisted, kinked, damaged, or worn load chain.
6. **NOT** operate with an lever extension (cheater bar).
7. **NOT** attempt to "free chain" the hoist
8. **NOT** use the hoist to lift, support or transport people.
9. **NOT** lift loads over people and make sure all personnel remain clear of the supported load.
10. **NOT** attempt to lengthen the load chain or repair damaged load chain.
11. **Protect** the hoist's load chain from any damaging contaminates.
12. **NOT** operate hoist when it is restricted from forming a straight line from hook to hook in the direction of loading.
13. **NOT** use load chain as a sling or wrap load chain around load.
14. **NOT** apply the load to the tip of the hook or to the hook latch.
15. **NOT** apply load unless load chain is properly seated in the chain sprocket's.
16. **NOT** apply load if bearing prevents equal loading on all load supporting chains
17. **NOT** operate beyond the limits of the load chain travel.
18. **NOT** leave load supported by the hoist unattended unless specific precautions have been taken.
19. **NOT** operate the hoist unless load attachments are seated properly.
20. **NOT** operate a hoist unless all persons are and remain clear of the supported load.

21. **REPORT** malfunctions or unusual performance of hoist and do not re-use until checked by qualified persons.
22. **BE** familiar with operation controls, procedures, and warnings.

CAUTION!

Improper operation of a hoist can create a potentially hazardous situation which, if not avoided, could result in injury to persons or damage to equipment. To avoid such a potentially hazardous situation the operator shall:

1. **MAINTAIN** a firm footing or be otherwise secured when operation the hoist.
2. **CHECK** brake function by tensioning the hoist prior to each lift.
3. **USE** hook latches.
4. **MAKE** sure the hook latches are closed and not supporting any parts of the load.
5. **MAKE** sure the load is free to move and will clear all obstructions.
6. **AVOID** swinging the load.
7. **KEEP** a firm grip on the lever until operation stroke is completed and the lever is at rest.
8. **INSPECT** the hoist regularly, replace damaged or worn parts, and keep appropriate records of maintenance.
9. **USE** only recommended parts when repairing the unit.
10. **LUBRICATE** load chain per maintenance manual
11. **NOT** operate except with manual power.
12. **NOT** permit more than one operator to pull on lever at the same time. More than one operator is likely to cause hoist overload.
13. **NOT** allow attention to be diverted from proper operation of the hoist.
14. **NOT** adjust or repair the hoist unless qualified to perform such adjustments or repairs.

OPERATION

General

Keep the hoist and chain clean to insure proper operation.

Do not use on loads beyond the operating range of the hoist.

Do not use for lifting people or for lifting loads over people.

Do not leave a load on the hoist unattended.

Read and understand this manual prior to operating hoist.

Do not hold or pull on load chain while operating hoist.

Stay alert, watch what you are doing. **Use common sense.**

Do not operate hoist when under the influence of alcohol, drugs or medication that may cause diminished control.

Because of special requirements this hoist has been modified so it will NOT have a free chain mode. Attempts to regain free chain mode can cause damage to personnel and/or hoist and will void any warranty.

To lift load

Properly attach hoist per tooling manual.

Move the lever trigger to the "UP" position. Operate lever in an up and down motion.

When pulling or lifting move the load only enough to slightly load the unit, then check to be sure that the attachments to the load connections are firmly seated and positively connected.

Insure that the load and the path of load movement is clear and free of obstructions.

NEVER under any circumstance use a lever extension or any form of "cheater bar" to operate hoist.

To lower load

Move the lever trigger to the down "DN" position. Operate the lever in an up and down motion.

After lifting operation is complete inspect the hoist as directed in the inspection section.

MAINTENANCE

Inspection

To maintain continuous and satisfactory operation, a regular periodic inspection procedure must be initiated so that worn, damaged and missing parts can be replaced before the unit becomes unsafe. The frequency of inspection must be determined by user procedures, regulations and requirements.

Under normal usage use the following as a guide to proper inspection.

When the unit is subjected to heavy usage or dusty, gritty, moist or corrosive atmospheric conditions, shorter time periods between inspections must be used. Inspection must be made of all parts for unusual wear, corrosion or damage, in addition to those specifically mentioned in the schedule. Make certain that the unit is complete and contains all parts including end rings.

Any part's that are deemed unserviceable must be replaced with new parts before the unit is returned to service. It is very important that the unserviceable parts be destroyed and disposed of to prevent their possible future use as a repair item. All the proper repair parts and required service can be obtained through Morgan Aero.

Measure and ensure dimensions in Figure 1 have not exceeded the maximum or minimum allowed. Replace any parts that are out of tolerance.

Frequent Inspections

These inspections are by the operator or other designated personnel. Frequent inspections are to be performed prior to each use and are to include the following:

1. Check for free movement of the lever and direction control trigger.
2. Operate hoist with no load and check for visual signs or abnormal noises that could indicate a potential problem.
3. Check brake for evidence of slippage.
4. Check chain for lubrication, worn or damaged links or foreign object contamination.
5. Check attach points for any evidence of cracking, bending or other damage.
6. Check lever and directional trigger for damage and proper operation.

Any deficiencies noted during pre-use inspection must be corrected before using the hoist.

Periodic Inspections

These are visual inspections by an appointed person who records conditions to provide a basis for a continuing evaluation of the hoist. Periodic inspections are to be performed semi-annually or as specified by owner's regulations and procedures and should include the following:

1. All items listed under "Frequent Inspections"
2. Evidence of loose or damaged screw's and fasteners.
3. Evidence of worn, corroded, cracked or distorted upper and lower attach points, frame, end ring, attach block, covers, lever, suspension bolt, gears, bearings, pawls, pawl springs, lever cover, ratchet hub, stripper and ratchet.
4. Evidence of worn, glazed or oil contaminated friction discs.

NOTE: To perform some of the periodic inspections it will be necessary to partially disassemble the hoist. Refer to the Disassembly and Assembly procedure sections.

Any deficiencies noted during the periodic inspection must be corrected before using the hoist.

Load Chain

Chain should feed smoothly into and away from the hoist. If chain binds, jumps or is noisy, first clean and lubricate it. If trouble persists, inspect chain and mating parts for wear, distortion or other damage.

ALWAYS insure the chain is free from knots and kinks.

Clean chain with a non-caustic, non-acid type solvent and make a link by link inspection for nicks, gouges, twisted links, cracks in the weld area, wear and stretching. Chain with any of these defects must be replaced. Re-oil the chain as in '**Chain Lubrication**' section.

When replacing chain, the entire length must be replaced. Never attempt to repair, lengthen or modify the hoist load chain. Load chain is special chain manufactured to precise tolerances for use on specific lever hoists. **NEVER** use any chain that is not supplied by the hoist manufacturer or personal injury or equipment damage could result.

The load chain is specially heat treated, hardened and dimensioned and should never be repaired.

Do not use replaced chain for other purposes such as lifting or pulling. Load chain may break suddenly without visual deformation. For this reason, cut replaced chain into short lengths to prevent it's use after disposal.

Chain Lubrication

A small amount of lubricant will greatly increase the life of load chain. Do not allow the chain to run dry. Keep it clean and lubricate at regular intervals with a good quality chain and bar lubricant. Normally a weekly cleaning and lubrication is satisfactory, but under hot, wet or dirty conditions, it may be necessary to clean the chain at least once a day and lubricate it several times between cleanings.

When lubricating the chain, apply sufficient lubricant to obtain natural run-off and full coverage, especially in the innerlink area.

Lubrication

Lightly lubricate all moving parts.

Be sure to always use the highest quality lubricant available. Use new, not used oil. Never use discarded motor, crankcase or gear lubricant's.

Except for lubricating the load chain frequently, the hoist requires no additional lubrication, unless it has been disassembled for cleaning, inspection and/or repairs. If the unit has been disassembled, remove the old lubricant from the parts and apply new lubricant. When lubricating parts adjacent to the load brake, DO NOT use an excessive amount of lubricant which could seep onto the brake surfaces.

If brake surfaces become contaminated with any lubricant they must be replaced.

If any abnormality is detected during any of the above test have the hoist checked by qualified personnel prior to operation.

Preventative Maintenance

A preventative maintenance program should be established to prolong the useful life of the hoist and maintain its reliability and continued safe use. The program should include frequent and periodic inspections with attention paid to cleaning and lubrication of various components using the recommended lubricants.

Disassembly

Pay careful attention when disassembling and lay parts out in logical order for ease of assembly. When disassembling and assembling refer to the exploded view and parts list. These show proper relationship of the parts, part names and the required quantity of parts.

Assembly

Assemble unit in reverse order of disassembly. Insure all parts are clean and free of damage. Lubricate as required and as noted in Lubrication section of this manual.

Chain Removal & Installation

If the load chain has worn or been damaged to the point it is necessary to have it changed it is recommended the complete unit be returned to the supplier. If the chain needs replacement there are many other parts of the hoist that may need inspection, repair or replacement. A new proof load must be done and current certification issued.

Testing

If a hoist has not been used or tested in the previous 12 months it must be tested prior to use.

To test the hoist, first operate in the unloaded state. Check for satisfactory operation in the up and down mode. For proper operation, light hand pressure on the load bearing chain might be necessary.

As a final test apply 125% of the rated load for the hoist and check for proper operation in the up and down mode.

NOTE:

The free-wheeling feature on this hoist has been disabled and removed. However, the tail chain can be pulled to remove excess chain length from load chain but only if no load is applied.

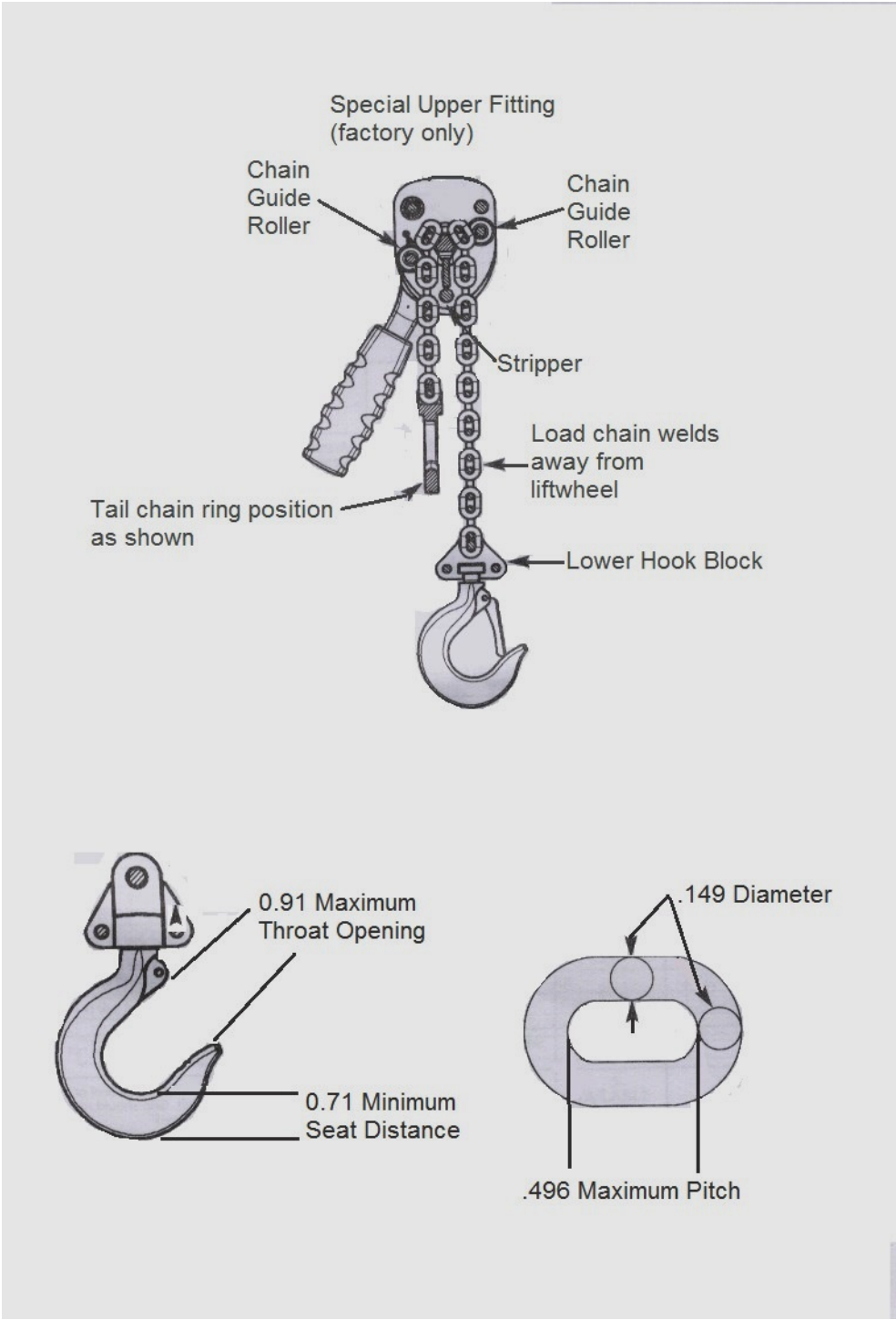
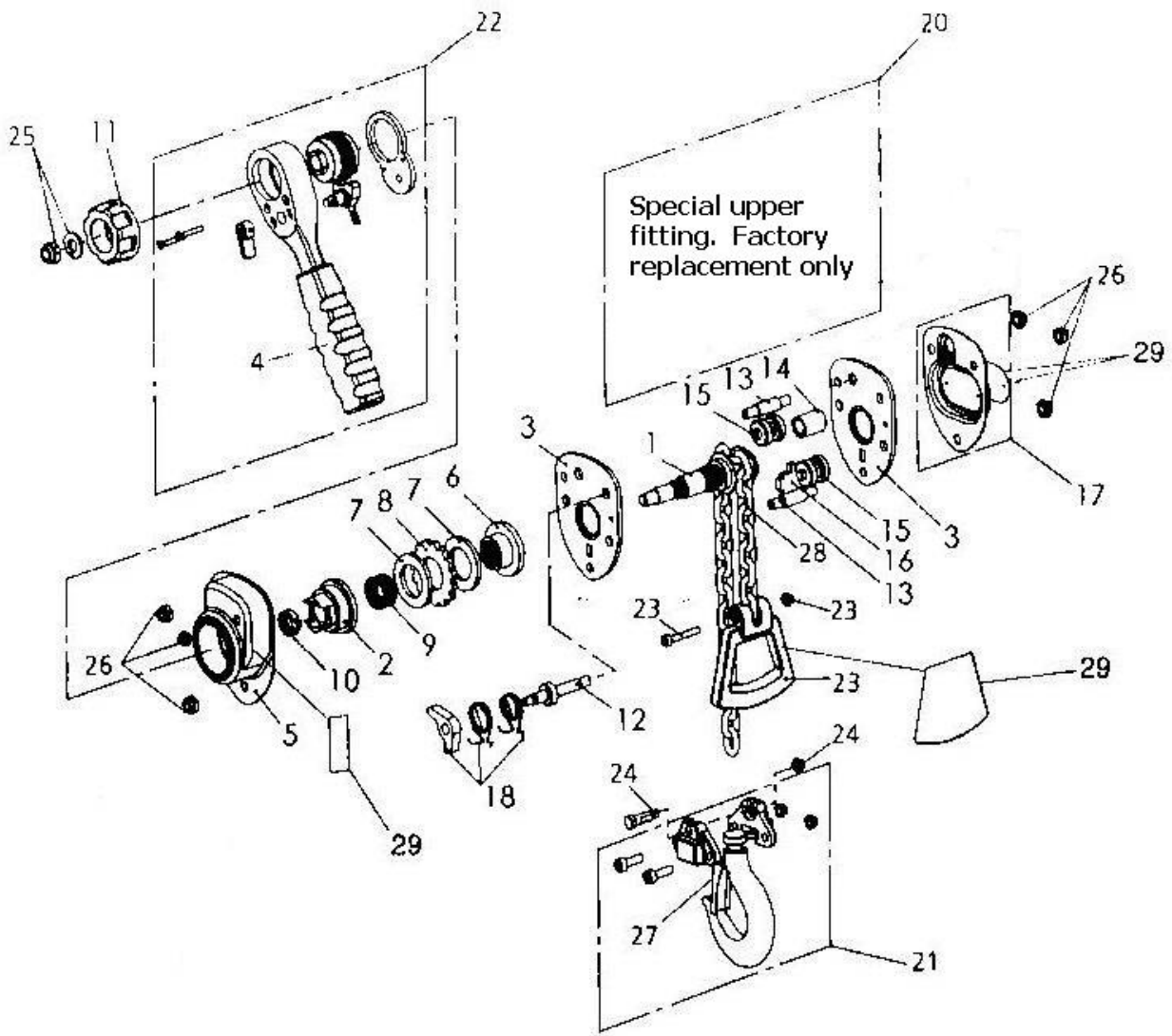


Figure 1



PARTS LIST

Ref.	Qty. Req.	Description	Part Number
1	1	Liftwheel & Shaft	MA9483
2	1	Ratchet Hub	MA9484
3	2	Side Plate Assembly	MA9485
4	1	Lever Grip	MA9486
5	1	Brake Cover	MA9487
6	1	Friction Hub	MA9488
7	2	Brake Disc	MA9489
8	1	Ratchet	MA9490
9	1	Brake Spring	MA9491

10	1	Check Washer	MA9492
11	1	Handwheel	MA9493
12	1	Pawl Stud	MA9494
13	2	Side Plate Studs	MA9495
14	1	Spacer	MA9496
15	2	Chain Guide Roller	MA9497
16	1	Stripper	MA9499
17	1	Cover	MA9499
18	1	Pawl & Springs	MA9503
19	1	Upper Hook Pin	MA9504
20	1	Upper Fitting Factory replacement	NA
21	1	Lower Hook Assembly	MA9506
22	1	Handle Assembly	MA9507
23	1	Loose end Ring	MA9508
24	1	Chain Screw & Nut	MA9509
25	1	Brake Nut & Washer	MA9510
26	1	Cover Nut Kit	MA9511
27	2	Latch Kit	MA9514
28	A/R	Load Chain (order number of feet of lift required)	MA9515

Parts Ordering Information

All repair parts and maintenance can be obtained through:

Morgan Aero
1450 80th. Street SW
Everett, WA USA
425.438.9600

When contacting the supplier about parts please include the following information:

Serial Number
Model Number
Capacity