

The Operating and Maintaining Manual

Lj Grip Pullers

Models Lj-1650lbs, Lj-3300lbs, Lj-6600lbs



Model Lj-1650lbs shown

Table of Contents

| | |
|--|----|
| Introduction..... | 2 |
| Specifications | 2 |
| Replacement Parts | 3 |
| Unpacking | 3 |
| Contents of the Shipping Container | 3 |
| Assembly and Set-Up | 3 |
| Pre-Lubrication | 3 |
| Inserting Wire Rope | 3 |
| Operation..... | 4 |
| Maintenance | 5 |
| Lj-1650lbs (3/4 Ton Grip Puller) | 6 |
| Parts List: Lj-1650lbs (3/4 Ton Grip Puller)..... | 7 |
| Lj-3300lbs (1-1/2 Ton Grip Puller) | 8 |
| Parts List: Lj-3300lbs (1-1/2 Ton Grip Puller) | 9 |
| Lj-6600lbs (3 Ton Grip Puller) | 10 |
| Parts List: Lj-6600lbs (3 Ton Grip Puller) | 11 |
| Scope of Application..... | 12 |

1. Read and understand owner's manual before operating grip puller. Familiarize yourself with the content of the warning label on your puller.
2. Do not exceed rated capacity.
3. Supporting structure used with this device must provide adequate support to handle all puller operations plus the weight of the puller and attached equipment. If in doubt, consult a registered structural engineer.
4. Never use handle extensions (cheaters).
5. Do not use with twisted, kinked, frayed or otherwise damaged wire rope.
6. Do not use if grip puller is damaged or malfunctioning.
7. Do not lift people or loads over people. Always keep people clear from load path.
8. When using grip puller to lift vertically, make sure hook is centered under the puller.
9. Do not use as a tow line.
10. Do not use with a hook that is open or twisted, or without safety latch.
11. Never run wire rope over a sharp edge.
12. Never leave a suspended load unattended.
13. Do not swing a suspended load.
14. Always inspect the puller before each use. Replace if any component is damaged or malfunctioning.
15. Always use gloves when handling wire rope. Do not wear loose clothing which can become entangled in moving parts.
16. Do not use this grip puller in an explosive environment.
17. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
18. Do not operate this tool while tired or under the influence of drugs, alcohol or any medication.
19. Failure to comply with the above warnings may result in personal injury and/or property damage.

Introduction

This manual is provided by LJ covering the safe operation and maintenance procedures for a LJ Grip Puller. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. This tool has been designed and constructed to provide consistent, long-term operation if used in accordance with instructions set forth in this manual. If there are any questions or comments, please contact either your local supplier or LJ. LJ can also be reached at our web site: www.nblianjian.com.

Specifications

| | | | |
|-------------------------------|------------------------|---------------------|---------------------|
| Stock Number* | 286575 | 286515 | 286530 |
| Model Number | Lj-1650lbs | Lj-3300lbs | Lj-6600lbs |
| Pulling Capacity (ton) | 3/4 | 1-1/2 | 3 |
| Lifting Capacity (lbs.) | 1,650 | 3,300 | 6,600 |
| Handle Length Min./Max. (in.) | 17-3/4 / 29-1/8 | 31-1/2 / 47-1/4 | 31-1/2 / 47-1/4 |
| Distance Per Stroke (in.) | 2 | 2.17 | 1.10 |
| Dimensions (LxWxH)(in.) | 16-3/4 x 2-1/2 x 9-1/4 | 21-1/2 x 3-7/8 x 11 | 26 x 4-1/2 x 12-3/4 |
| Wire Rope Diameter (in.) | 5/16 | 7/16 | 5/8 |
| Approximate Net Weight (lbs.) | 36 | 48 | 123 |

*NOTE: The above stock numbers do not include the wire rope. To include a wire rope with the grip puller, add a "K" to the end of the stock number.

The above specifications were current at the time this manual was published, but because of our policy of

continuous improvement, LJ reserves the right to change specifications at any time and without prior notice, without incurring obligations.

Replacement Parts

Replacement Parts are listed on pages 7 through 12. To order parts or reach our service department, call 86-574-65323332 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Unpacking

Open shipping container and check for shipping damage. Report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the Grip Puller is assembled and operating properly. Compare the contents of your container with the following parts list to make sure all parts are intact. Missing parts, if any, should be reported to your distributor. Read the instruction manual thoroughly for assembly, maintenance and safety instructions.

Contents of the Shipping Container

- 1 Grip Puller
- 1 Telescopic Handle
- 1 Swivel Hook
- 1 Wire Rope, 5/16" diameter (*sold and packaged separately*)
- 1 Owner's Manual
- 1 Product Registration Card

Assembly and Set-Up

Pre-Lubrication

Before proceeding with assembly, lubricate the puller as follows: Apply oil to the puller mechanisms while continuously operating the *reverse lever* (see Figure 1). This will help spread oil to internal parts. Use special care to oil pawls and links well. A wear-resistant oil is recommended.

Caution: Without proper lubrication, the pawls will fail to engage the wire rope, and the wire rope will not move.

Inserting Wire Rope

1. Attach the eye of the swivel hook to the fastening bolt on the puller. Be sure to install the cotter pin through the fastening bolt. Attach the hook to a suitable anchorage point, as shown in Figure 2.
2. Release the clamp by pushing the clamp lever securely into the notch on the puller body.
3. Insert the end of the wire rope (the end is welded to provide easy entrance) into the rope inlet at the rear of the puller. Feed the wire rope through until it emerges at the other end.

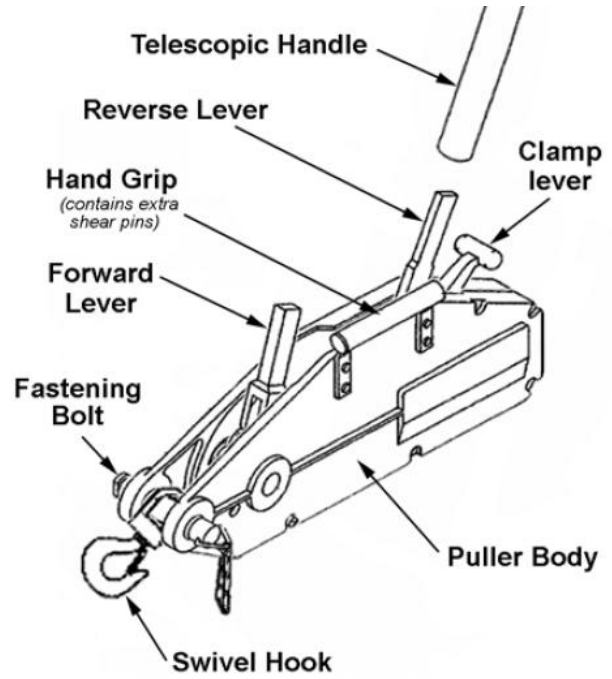


Figure 1

FEATURES OF THE GRIP PULLER (1-1/2 ton model shown)

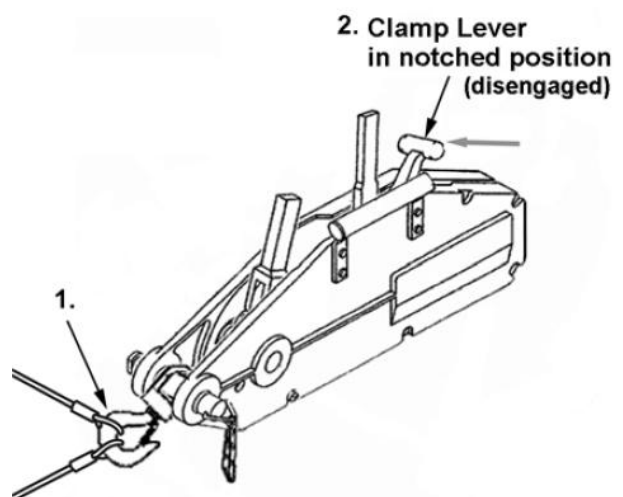


Figure 2

4. Pull the wire rope through by hand to take up the slack and make sure that the exit point is not obstructed.
5. While keeping the wire rope taut, push down on the clamp lever and allow it to spring back to its natural position. This will engage the wire rope within the puller.
6. Mount the telescopic handle to either the forward or reverse lever, according to the action desired. Rotate the handle until it is secure on the lever.
7. The puller is now ready to operate

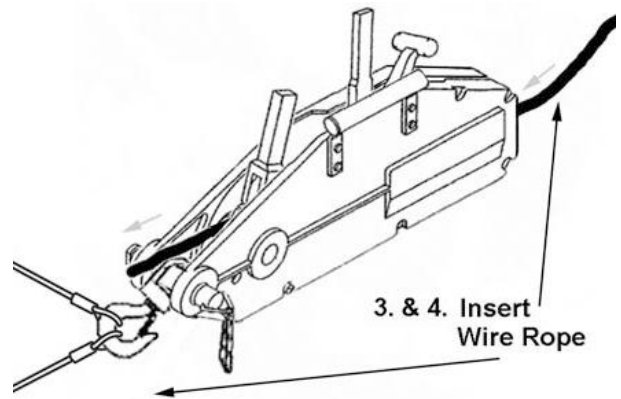


Figure 3

Operation

The grip puller uses standard ASA wire rope and may be used in any position to lift, pull, lower or stretch heavy loads. Before attempting operation of this product, you should become thoroughly familiar with the warnings on page 3.

To operate the grip puller:

1. Place load cable(s) in the middle of the hook and *inside the safety latch*. DO NOT attach any cables outside the safety latch on either the puller hook or the wire rope hook. See Figure 5.
2. Lay out the wire rope correctly without twisting. Twisting the wire rope reduces its strength. See Figure 6.
3. To send the wire rope forward, set the telescopic handle on the *forward lever* and move it back and forth.
4. To send the wire rope backward, set the telescopic handle on the *reverse lever* and move it back and forth.

IMPORTANT: A shear pin (#25 in the parts list) is installed in the forward lever. If the load being handled is too excessive for the puller's capacity, the shear pin is designed to break. If this occurs, **decrease the load or use other equipment of higher pulling capacity**. The broken shear pin is easily replaced using one of the spare shear pins which are found within the hand grip of the 1-1/2 and 3-ton pullers (see Figure 1) and in the telescopic handle of the 3/4-ton puller..

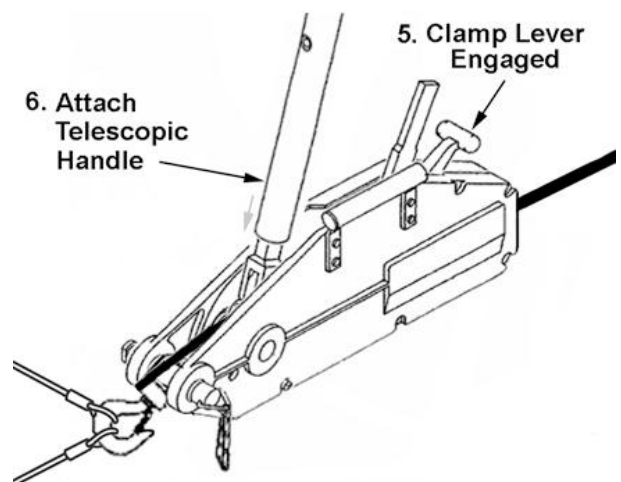


Figure 4

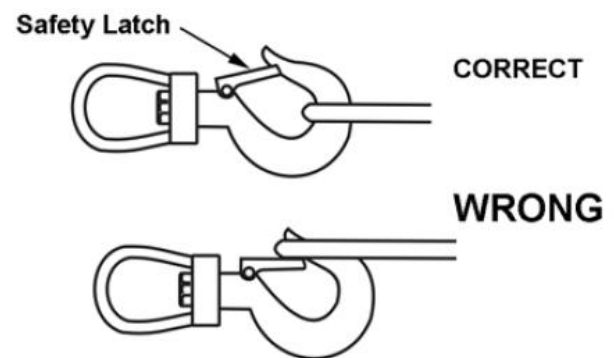


Figure 5

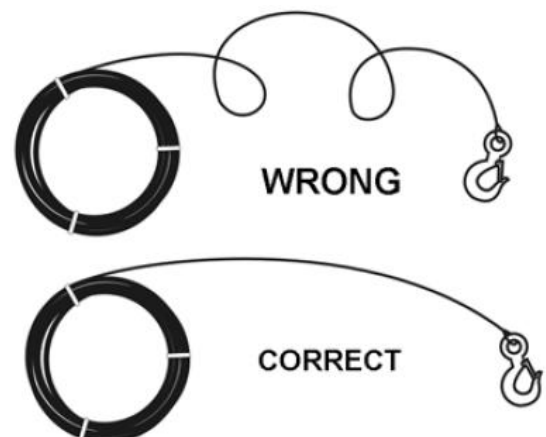


Figure 6

Before storing the grip puller:

5. After use, remove the wire rope from the main body by setting the clamp lever into the notch (disengage clamp), then pulling the wire rope from the inlet side at the rear of the puller.
6. After the wire rope is removed, push the clamp lever out of the notch and let it snap back to its original position. If the clamp lever is kept in the notch for an extended time period, its spring may become stretched.
7. Wipe off any sand or water from the puller body, including internal mechanisms, and the wire rope, then apply oil liberally to both.
8. Store the grip puller away from rain, dew, high humidity areas or around acidic chemicals, which will promote rusting.

Maintenance

Make frequent and careful inspections of the puller. Make sure puller and wire rope are sufficiently oiled, and that they are free of any sand, dirt, dust or other obstruction or abnormality.

Make sure hooks are not deformed and that the puller body has not been warped or damaged. Use care to prevent the wire rope from kinking. If the rope is left shaped like a basket or is kinked many turns at a single point, its strength is greatly diminished and may result in failure.

Replace the wire rope immediately if:

The thickness of the rope becomes less than half of the original value due to abrasion.

The rope exhibits basket-like shapes, kinks, or any abnormal deformation.

The rope is given an exceptionally heavy shock during operation; this can fatigue the rope even if the load is within puller capacity.

The entire rope is napped due to many small cuts.

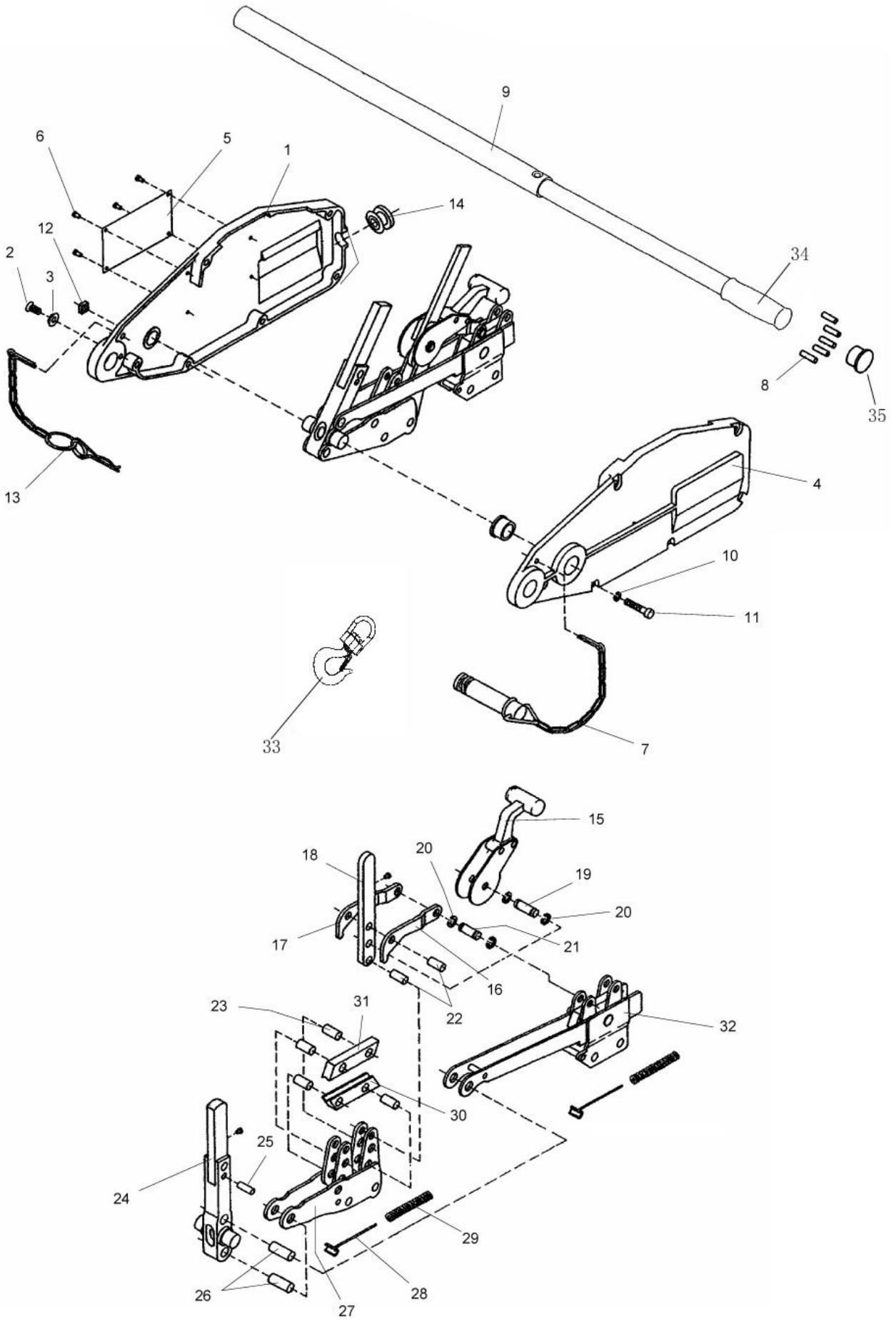
The eye section (thimble) of the wire rope becomes elliptical in shape.

The clamp is deformed.

Troubleshooting

| Trouble | Probable Cause | Remedy |
|--|---|--|
| Wire rope will not move in either direction. | Insufficient lubrication. | Oil the puller and wire rope. |
| | Puller is dirty. | Disassemble and clean out dust, dirt or other foreign matter. Oil the puller after reassembly. |
| | Clamp lever is not in proper position. | Release clamp lever from notch, and allow it to return to engaged position. |
| Wire rope will not advance during normal operation, or advances with great difficulty. | Clamp lever is not in proper position. | Release clamp lever from notch, and allow it to return to engaged position. |
| | Pawls are not lubricated. | Oil the pawl linkages properly; the pawls must engage the wire rope. |
| | Load is beyond puller capacity. | Decrease load. |
| | There is an obstruction within the wire rope's path. | Remove the wire rope; clean and oil the puller and the wire rope. |
| The reverse lever is engaging the wire rope. | Check the position of the reverse lever. Correct as needed. | |
| Clamp lever will not engage the wire rope properly. | Spring on clamp lever has become stretched. | Replace spring. |

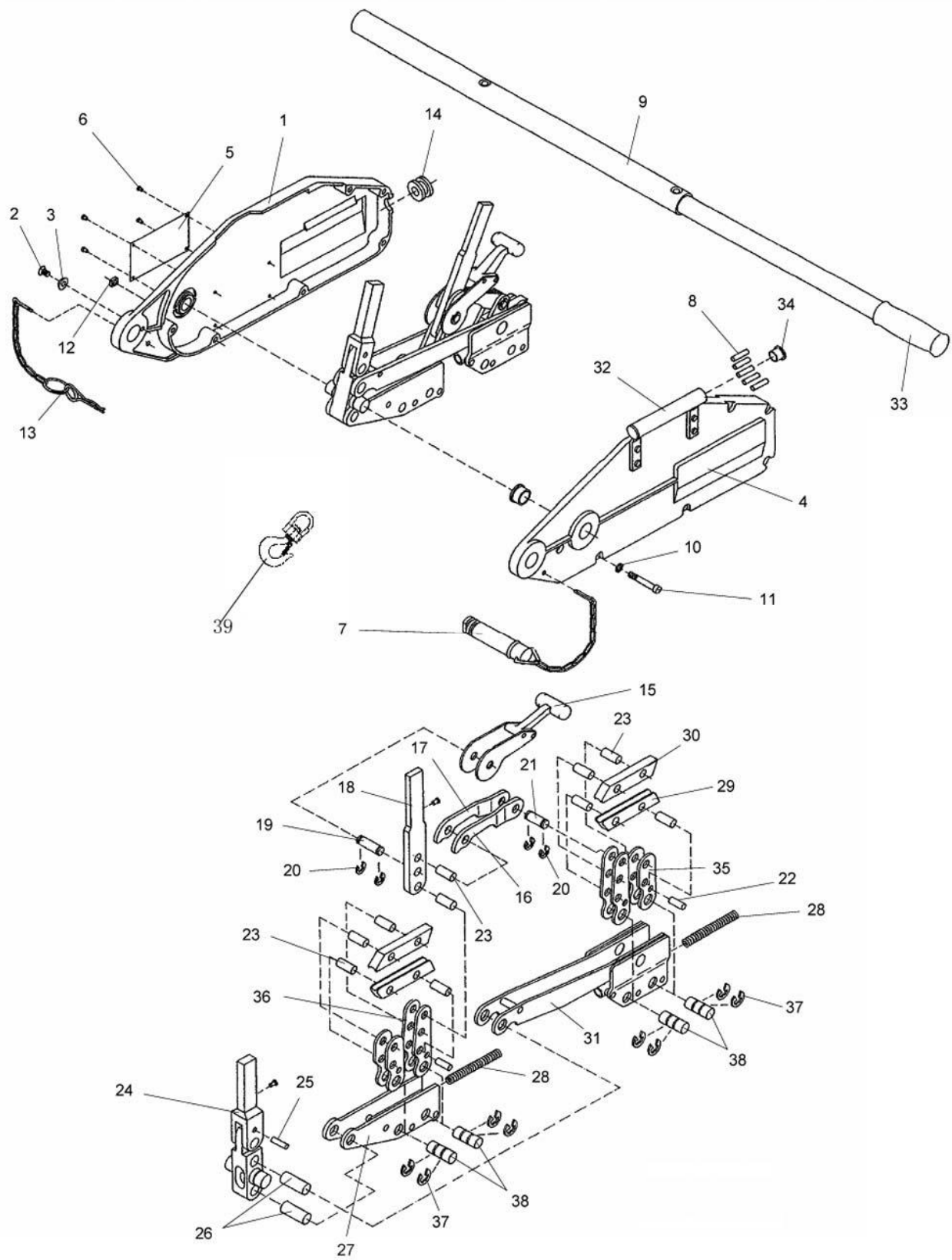
Lj-1650lbs (3/4 Ton Grip Puller)



Parts List: Lj-1650lbs (3/4 Ton Grip Puller)

| Index No. | Part No. | Description | Size | Qty |
|-----------|---------------|------------------------------------|-------|-----|
| 1 | Lj-1650lbs-1 | Case, Right | | 1 |
| 2 | Lj-1650lbs-2 | Flat Head Screw | M5x12 | 1 |
| 3 | Lj-1650lbs-3 | Washer | | 1 |
| 4 | Lj-1650lbs-4 | Case, Left | | 1 |
| 5 | Lj-1650lbs-5 | Name Plate | | 1 |
| 6 | Lj-1650lbs-6 | Rivet | M2x6 | 4 |
| 7 | Lj-1650lbs-7 | Fastening Bolt Assembly | | 1 |
| 8 | Lj-1650lbs-8 | Shear Pin | | 2 |
| 9 | Lj-1650lbs-9 | Telescopic Handle | | 1 |
| 10 | Lj-1650lbs-10 | Lock Washer | M6 | 6 |
| 11 | Lj-1650lbs-11 | Socket Head Cap Screw | M6x40 | 6 |
| 12 | Lj-1650lbs-12 | Square Nut | M6 | 6 |
| 13 | Lj-1650lbs-13 | Cotter Pin Assembly | | 1 |
| 14 | LJ-1650LBS-14 | Wire Rope Guide Sleeve | | 1 |
| 15 | LJ-1650LBS-15 | Release Lever | | 1 |
| 16 | LJ-1650LBS-16 | Push Link, Left | | 1 |
| 17 | LJ-1650LBS-17 | Push Link, Right | | 1 |
| 18 | LJ-1650LBS-18 | Reverse (Backwards Action) Lever | | 1 |
| 19 | LJ-1650LBS-19 | Shaft | | 1 |
| 20 | LJ-1650LBS-20 | Retaining Ring | Ø6 | 4 |
| 21 | LJ-1650LBS-21 | Shaft | | 1 |
| 22 | LJ-1650LBS-22 | Pin | | 2 |
| 23 | LJ-1650LBS-23 | Thrust Pin | | 8 |
| 24 | LJ-1650LBS-24 | Forward Action Lever Assembly | | 1 |
| 25 | LJ-1650LBS-25 | Shear Pin | | 1 |
| 26 | LJ-1650LBS-26 | Axle | | 2 |
| 27 | LJ-1650LBS-27 | Front Slide Assembly | | 1 |
| 28 | LJ-1650LBS-28 | Spring Guide | | 2 |
| 29 | LJ-1650LBS-29 | Spring | | 2 |
| 30 | LJ-1650LBS-30 | Bottom Clamp | | 2 |
| 31 | LJ-1650LBS-31 | Top Clamp | | 2 |
| 32 | LJ-1650LBS-32 | Back Slide Assembly | | 1 |
| 33 | LJ-1650LBS-33 | Swivel Hook | | 1 |
| 34 | LJ-1650LBS-34 | Rubber Handle Grip | | 1 |
| 35 | LJ-1650LBS-35 | Cap | | 1 |
| | LJ-1650LBS-36 | Warning Label (not shown) | | 1 |
| | LJ-1650LBS-37 | 3/4T Wire Rope, 66 Ft. (not shown) | | 1 |

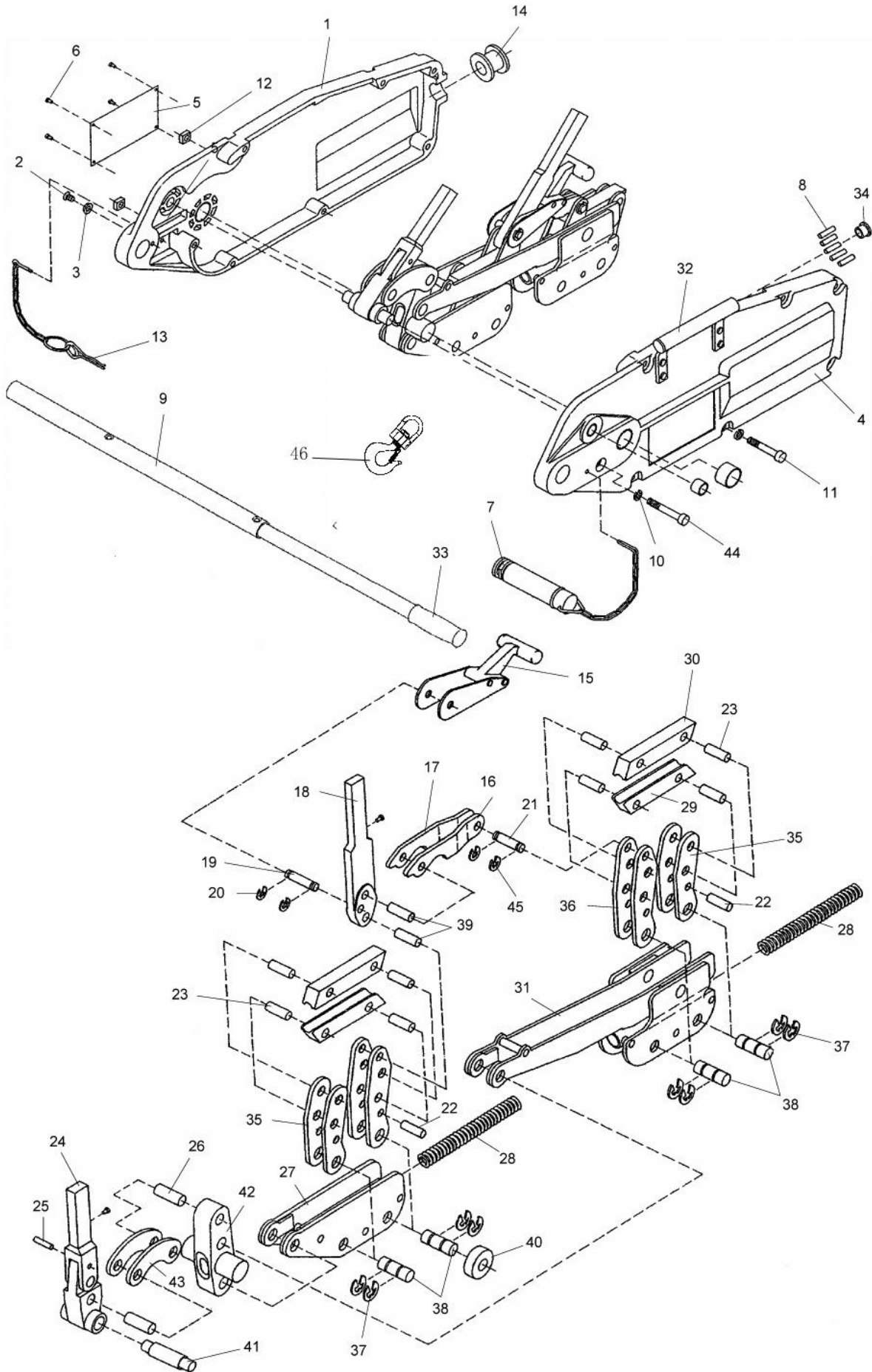
Lj-3300lbs (1-1/2 Ton Grip Puller)



Parts List: Lj-3300lbs (1-1/2 Ton Grip Puller)

| Index No. | Part No. | Description | Size | Qty |
|-----------|---------------|--------------------------------------|-------|-----|
| 1 | Lj-3300lbs-1 | Case, Right | | 1 |
| 2 | Lj-3300lbs-2 | Flat Head Screw | M5x12 | 1 |
| 3 | Lj-3300lbs-3 | Washer | | 1 |
| 4 | Lj-3300lbs-4 | Case, Left | | 1 |
| 5 | Lj-3300lbs-5 | Name Plate | | 1 |
| 6 | Lj-3300lbs-6 | Rivet | M2x6 | 4 |
| 7 | Lj-3300lbs-7 | Fastening Bolt Assembly | | 1 |
| 8 | Lj-3300lbs-8 | Shear Pin | | 5 |
| 9 | Lj-3300lbs-9 | Telescopic Handle | | 1 |
| 10 | Lj-3300lbs-10 | Lock Washer | M6 | 6 |
| 11 | Lj-3300lbs-11 | Socket Head Cap Screw | M6x55 | 6 |
| 12 | Lj-3300lbs-12 | Square Nut | M6 | 6 |
| 13 | Lj-3300lbs-13 | Cotter Pin Assembly | | 1 |
| 14 | Lj-3300lbs-14 | Wire Rope Guide Sleeve | | 1 |
| 15 | Lj-3300lbs-15 | Release Lever | | 1 |
| 16 | Lj-3300lbs-16 | Push Link, Left | | 1 |
| 17 | Lj-3300lbs-17 | Push Link, Right | | 1 |
| 18 | Lj-3300lbs-18 | Reverse (Backwards Action) Lever | | 1 |
| 19 | Lj-3300lbs-19 | Shaft | | 1 |
| 20 | Lj-3300lbs-20 | Retaining Ring | Ø9 | 4 |
| 21 | Lj-3300lbs-21 | Shaft | | 1 |
| 22 | Lj-3300lbs-22 | Pin | | 2 |
| 23 | Lj-3300lbs-23 | Thrust Pin | | 10 |
| 24 | Lj-3300lbs-24 | Forward Action Lever Assembly | | 1 |
| 25 | Lj-3300lbs-25 | Shear Pin | | 1 |
| 26 | Lj-3300lbs-26 | Axle | | 2 |
| 27 | Lj-3300lbs-27 | Front Slide | | 2 |
| 28 | Lj-3300lbs-28 | Spring | | 2 |
| 29 | Lj-3300lbs-29 | Bottom Clamp | | 2 |
| 30 | Lj-3300lbs-30 | Top Clamp | | 2 |
| 31 | Lj-3300lbs-31 | Back Slide Assembly | | 1 |
| 32 | Lj-3300lbs-32 | Hand Grip Assembly | | 1 |
| 33 | Lj-3300lbs-33 | Rubber Handle Grip | | 1 |
| 34 | Lj-3300lbs-34 | Cap | | 2 |
| 35 | Lj-3300lbs-35 | Clamp Plate, Short | | 4 |
| 36 | Lj-3300lbs-36 | Clamp Plate, Long | | 4 |
| 37 | Lj-3300lbs-37 | Retaining Ring | Ø12 | 8 |
| 38 | Lj-3300lbs-38 | Shaft | | 4 |
| 39 | Lj-3300lbs-39 | Swivel Hook | | 1 |
| | Lj-3300lbs-40 | Warning Label (not shown) | | 1 |
| | Lj-3300lbs-41 | 1-1/2T Wire Rope, 66 Ft. (not shown) | | 1 |

Lj-6600lbs (3 Ton Grip Puller)



Parts List: Lj-6600lbs (3 Ton Grip Puller)

| Index No. | Part No. | Description | Size | Qty |
|-----------|---------------|----------------------------------|-------|-----|
| 1 | Lj-6600lbs-1 | Case, Right | | 1 |
| 2 | Lj-6600lbs-2 | Flat Head Screw | M5x8 | 1 |
| 3 | Lj-6600lbs-3 | Washer | | 1 |
| 4 | Lj-6600lbs-4 | Case, Left | | 1 |
| 5 | Lj-6600lbs-5 | Name Plate | | 1 |
| 6 | Lj-6600lbs-6 | Rivet | M2x6 | 4 |
| 7 | Lj-6600lbs-7 | Fastening Bolt Assembly | | 1 |
| 8 | Lj-6600lbs-8 | Shear Pin | | 5 |
| 9 | Lj-6600lbs-9 | Telescopic Handle | | 1 |
| 10 | Lj-6600lbs-10 | Lock Washer | M8 | 6 |
| 11 | Lj-6600lbs-11 | Socket Head Cap Screw | M8x70 | 6 |
| 12 | Lj-6600lbs-12 | Square Nut | M8 | 6 |
| 13 | Lj-6600lbs-13 | Cotter Pin Assembly | | 1 |
| 14 | Lj-6600lbs-14 | Wire Rope Guide Sleeve | | 1 |
| 15 | Lj-6600lbs-15 | Release Lever | | 1 |
| 16 | Lj-6600lbs-16 | Push Link, Left | | 1 |
| 17 | Lj-6600lbs-17 | Push Link, Right | | 1 |
| 18 | Lj-6600lbs-18 | Reverse (Backwards Action) Lever | | 1 |
| 19 | Lj-6600lbs-19 | Shaft | | 1 |
| 20 | Lj-6600lbs-20 | Retaining Ring | Ø8 | 2 |
| 21 | Lj-6600lbs-21 | Shaft | | 1 |
| 22 | Lj-6600lbs-22 | Pin | | 2 |
| 23 | Lj-6600lbs-23 | Thrust Pin | | 8 |
| 24 | Lj-6600lbs-24 | Forward Action Lever Assembly | | 1 |
| 25 | Lj-6600lbs-25 | Shear Pin | | 1 |
| 26 | Lj-6600lbs-26 | Axle | | 2 |
| 27 | Lj-6600lbs-27 | Front Slide | | 2 |
| 28 | Lj-6600lbs-28 | Spring | | 2 |
| 29 | Lj-6600lbs-29 | Bottom Clamp | | 2 |
| 30 | Lj-6600lbs-30 | Top Clamp | | 2 |
| 31 | Lj-6600lbs-31 | Back Slide Assembly | | 1 |
| 32 | Lj-6600lbs-32 | Hand Grip Assembly | | 1 |
| 33 | Lj-6600lbs-33 | Rubber Handle Grip | | 1 |
| 34 | Lj-6600lbs-34 | Cap | | 2 |
| 35 | Lj-6600lbs-35 | Clamp Plate, Short | | 4 |
| 36 | Lj-6600lbs-36 | Clamp Plate, Long | | 4 |
| 37 | Lj-6600lbs-37 | Retaining Ring | Ø12 | 8 |
| 38 | Lj-6600lbs-38 | Shaft | | 4 |
| 39 | Lj-6600lbs-39 | Pin | | 2 |
| 40 | Lj-6600lbs-40 | Roller | | 1 |
| 41 | Lj-6600lbs-41 | Shaft | | 1 |
| 42 | Lj-6600lbs-42 | Center Post | | 1 |
| 43 | Lj-6600lbs-43 | Actuating Link | | 2 |
| 44 | Lj-6600lbs-44 | Socket Head Cap Screw | M8x85 | 1 |
| 45 | Lj-6600lbs-45 | Retaining Ring | Ø9 | 2 |
| 46 | Lj-6600lbs-46 | Swivel Hook | | 1 |
| | Lj-6600lbs-47 | Warning Label (not shown) | | 1 |
| | Lj-6600lbs-48 | 3T Wire Rope, 66 Ft. (not shown) | | 1 |

Scope of application

