

Operating, Maintenance & Parts Manual

Cable Hoist

Model Numbers

105SB

115SB

115DB

505NB

202WNB

434WNB

430CDPB

404WNB

404WNB/MC

Follow all instructions and warnings for inspecting, maintaining and operating this hoist.

The use of any hoist presents some risk of personal injury or property damage. That risk is greatly increased if proper instructions and warnings are not followed. Before using this hoist, each operator should become thoroughly familiar with all warnings, instructions, and recommendations in this manual. Retain this manual for future reference and use.

Forward this manual to the hoist operator.

Failure to operate the equipment as directed in the manual may cause injury.

Before using the hoist, fill in the information below:

Model No. _____

Serial No. _____

Purchase Date _____



Cable Hoist

LITTLE MULE®

SAFETY PRECAUTIONS

Each Little Mule Cable Hoist is built in accordance with the specifications contained herein and at the time of manufacture complies with our interpretation of applicable sections of American Society of Mechanical Engineers Code (ASME) B30.21. Copies of this Standard can be obtained from ASME Order Department, 22 Law Drive, Box 2300, Fairfield, NJ 07007-2300, U.S.A.

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 thoroughly reading and understanding the manufacturer's Operating and Maintenance Instructions or Manuals.
3. **NOT** operate a hoist which has been modified without the manufacturer's approval or certification to be in conformity with applicable OSHA regulations.
4. **NOT** lift or pull more than rated capacity of the hoist.
5. **NOT** use damaged hoist or hoist that is NOT working properly.
6. **NOT** use hoist with damaged or excessively worn cable.
7. **NOT** operate with any handle extension (cheater bar).
8. **NOT** attempt to "free-wheel" the hoist while a load is applied.
9. **NOT** use the hoist to lift, support, or transport people.
10. **NOT** lift loads over people.
11. Protect the hoist's cable from weld splatter or other damaging contaminants.
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 hoist cable as a sling or wrap around load.
14. **NOT** apply the load to the tip of the hook or to the hook latch.
15. **NOT** apply load unless two wraps of cable are properly seated on the drum.
16. **NOT** leave load supported by the hoist unattended unless specific precautions have been taken.
17. **NOT** remove or obscure the warnings on the hoist.
18. **NOT** operate a hoist which has NOT been securely attached to a suitable support.
19. **NOT** operate a hoist unless load slings or other approved attachments are properly sized and seated in the hook saddle.
20. **NOT** lift loads that are NOT balanced and that the holding action is NOT secure, taking up slack carefully.
21. **NOT** operate a hoist unless all persons are and remain clear of the supported load.
22. Report malfunctions or unusual performances of a hoist, after it has been taken out of service.
23. **NOT** operate a hoist on which the safety placards or decals are missing or illegible.
24. Be familiar with operating controls, procedures, and warnings.

CAUTION

Improper operation of a hoist can create a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. To avoid such a potentially hazardous situation, THE OPERATOR SHALL:

1. Maintain a firm footing or be otherwise secured when operating the hoist.
2. Use hook latches. Latches are to retain slings, chains, etc. under slack conditions only.
3. Make sure the hook latches are closed and not supporting any parts of the load.
4. Make sure the load is free to move and will clear all obstructions.
5. Avoid swinging the load or hook.
6. Avoid handle "fly-back" by keeping a firm grip on the handle until operating stroke is completed and the handle is at rest.
7. Inspect the hoist regularly, replace damaged or worn parts, and keep appropriate records of maintenance.
8. Use the hoist manufacturer's recommended parts when repairing the unit.
9. **NOT** use the hoist load limiting or warning device to measure load.
10. **NOT** operate except with manual power.
11. **NOT** permit more than one operator to pull on handle at the same time. More than one operator is likely to cause hoist overload.
12. **NOT** allow your attention to be diverted from operating the hoist.
13. **NOT** allow the hoist to be subjected to sharp contact with other hoists, structures, or objects through misuse.
14. **NOT** adjust or repair the hoist unless qualified to perform such adjustments or repairs.

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HOIST SPECIFICATIONS

All cable hoist models are designed for lifting and pulling loads up to rated capacities listed on the hoist nameplate. Features include a winding wheel for taking up slack or free stripping of the cable and a handle designed to bend before any mechanical part of the hoist is subjected to damaging overload. The handle may be inserted into the U-Frame socket from either direction to facilitate use in confined areas or to allow the operator to pull against the load under unusual conditions. A double, interlocking pawl system provides positive load control at all times. Refer to Table 1 for model specifications.

OPERATION

LIFTING OR PULLING

Place the reversing lever in the up position, engaging the loading pawl against the ratchet teeth. Work the handle as required to achieve desired lift or tension. The handle may be inserted into either end of the U-frame socket enabling user to work in restricted areas. Never use a “cheater” bar or handle other than those approved by the manufacturer.

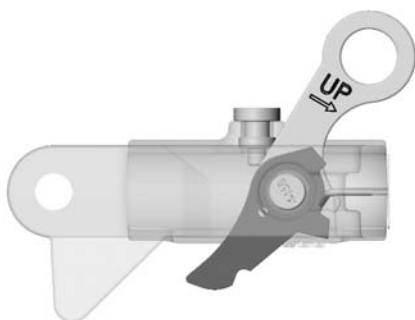


Figure 1

CAUTION

Rig hoist properly so that the hoist is free to align with the direction of pull. Avoid side loading. Hoist frame should not bear against anything and should be free to align with hooks.

LOWERING

Place the reversing lever in the down position and operate the handle to its extreme down position until the load is removed from the holding pawl. As the handle is slowly released, the



Figure 2

load will be lowered by one notch. To continue lowering repeat this operation. The lowering of heavy loads is easier if quick (sharp) downward handle motion is used.

FREE-WHEELING

Before attempting to free-wheel make certain the hoist is not loaded. To release the cable for free-wheeling, the reversing lever must first be in the down position. Press the free-wheel lever. The cable may now be stripped from the drum to facilitate more rapid positioning while attaching to the object to be pulled or lifted. The hoist will not free-wheel if it has a minimum of 40 pounds of load/tension. Similarly, excess slack may be quickly and easily rewound on the drum using the winding wheel.

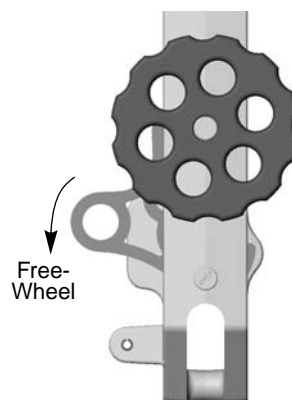


Figure 3

MAINTENANCE

Maintenance of the hoist is normally limited to cleaning and lubrication. The hoist should always be lubricated following each cleaning operation to replace any lubricants that were washed away.

CLEANING

Occasional cleaning of the cable hoist will increase operating efficiency and decrease wear on friction parts. Clean with an approved solvent or kerosene, applying liberally with a brush or cloth. Lubricate the cable hoist after cleaning.

LUBRICATION

Lubricate the following areas weekly with a light grease:

- a. ratchet teeth of drum.
- b. contact points between U-frame and free-wheel lever.
- c. contact points between pawl and pin (H5230-31).

Lubricate the following areas weekly with SAE 20-30 gear oil:

- a. rotating points of shafts, with the exception of the drum shaft.
- b. hook shanks

Only small amounts of lubricants need to be applied. DO NOT saturate areas with grease/oil. DO NOT allow lubricants to contact cable.

FREQUENT INSPECTIONS

In addition to performing all the frequent inspections listed under FREQUENT INSPECTION on Figure 4, visual observations should be conducted during regular service for any damage. Any deficiencies shall be carefully examined and determination made as to whether they constitute a hazard as follows:

- a. Check all functional operating mechanisms for maladjustment interfering with proper operation.
- b. Check all hooks and latches for deformation, chemical damage, cracks and wear.
- c. Check all hook latches for proper attachment and operation.
- d. Check levers for bends, cracks or other damage.
- e. Check for damage to the support for the hoist.
- f. Check cable at the start of each shift for abrasive wear and damaged strands.

Wire Rope Inspection

Frequent inspections shall be performed by an appointed person. This inspection shall cover the entire length of the cable. If any of the following damage is discovered, the cable should be removed from service. Special care should be taken when inspecting sections for rapid deterioration, such as the following:

- a. Check for distortion of the cable such as kinking, crushing, unstranding, birdcaging, main strand displacement or core protrusion.
- b. Check for general corrosion, broken or cut strands.

PERIODIC INSPECTIONS

In addition to performing all the periodic inspections listed under PERIODIC INSPECTION on Figure 4, the following should be conducted:

- a. A designated person shall determine whether conditions found during inspection constitute a hazard and whether disassembly is required.
- b. Check fasteners for evidence of loosening.
- c. Check cable, suspension frame, levers, yokes, shafts, pins, rollers and locking and clamping devices for evidence of wear, corrosion, cracks and distortion.

Wire Rope Inspection

Periodic inspections shall be performed by an appointed person. This inspection shall cover the entire length of the cable. Special care should be taken when inspecting sections for rapid deterioration, such as the following:

- a. Sections in contact with saddles, equalizer sheaves, or other sheaves where cable travel is limited.
- b. Sections at or near terminal ends where broken strands may be evident.
- c. Sections subject to reverse bends.
- d. Sections that are normally hidden during visual inspection, such as sections passing over sheaves.

Table 1 - Specifications

Model No.	Single Line			Double Line			Cable Dia. (In)	Handle Length (in)	Ship Weight (lbs)
	Capacity (lbs)	Lift (ft)	Hook to Hook (Min.) (in)	Capacity (lbs)	Lift (ft)	Hook to Hook (Min.) (in)			
105SB	1000	40	20	N/A	N/A	N/A	3/16	16	12½
115SB	1000	23	20	N/A	N/A	N/A	3/16	16	11½
115DB	1000	23	20	2000	11½	27	3/16	16	14
505NB	1500	17	20	N/A	N/A	N/A	1/4	20	12½
202WNB	1500	17	20	3000	8½	27	1/4	20	14½
434WNB	1500	22	20	3000	11	27	1/4	20	15
430CDPB	1500	22	20	3000	11	30	1/4	20	15½
404WNB	2000	17	20	4000	8½	27	9/32	24	16½
404WNB/MC	2000	17	20	4000	8½	27	9/32	24	16½

INSPECTION AND MAINTENANCE CHECK LIST
LEVER OPERATED CABLE HOIST

Type of Hoist _____ Capacity (Tons) _____
 Location _____ Date Placed in Service _____
 Manufacturer _____ Manufacturer's Serial No. _____

Item	Normal Service		Heavy Service		Severe Service		Remarks
	Visual Monthly	Record Yearly	Visual Weekly	Record 6 Months	Visual Daily	Record Monthly	
FREQUENT INSPECTION							
All functional mechanisms for proper operation	*		*		*		
Hooks and latches for deformation, chemical damage, cracks & wear (See ASME B30.10)	*		*		*		
Hook latch operation	*		*		*		
Cable/Wire Rope (See Wire Rope Inspection)	*		*		*		
Levers for bends, cracks, etc.	*		*		*		
Hoist support for damage	*		*		*		
PERIODIC INSPECTION							
Evidence of loose pins, bolts, nuts or rivets		**		***		***	
Evidence of worn, corroded, cracked or distorted parts such as suspension frame, levers, cable attachments, yokes, shafts, pins and rollers		**		***		***	
Evidence of damage to hook retaining nuts and pins		**		***		***	
Evidence of worn pawls, cams or ratchet; corroded, stretched or broken springs		**		***		***	
Warning label		**		***		***	
End connections of wire rope		**		***		***	

*Visual inspection by operator or other designated personnel.
 **Visual inspection by designated person of conditions.
 ***Visual inspection by designated person of conditions unless conditions indicate that disassembly should be done to permit detailed inspection.

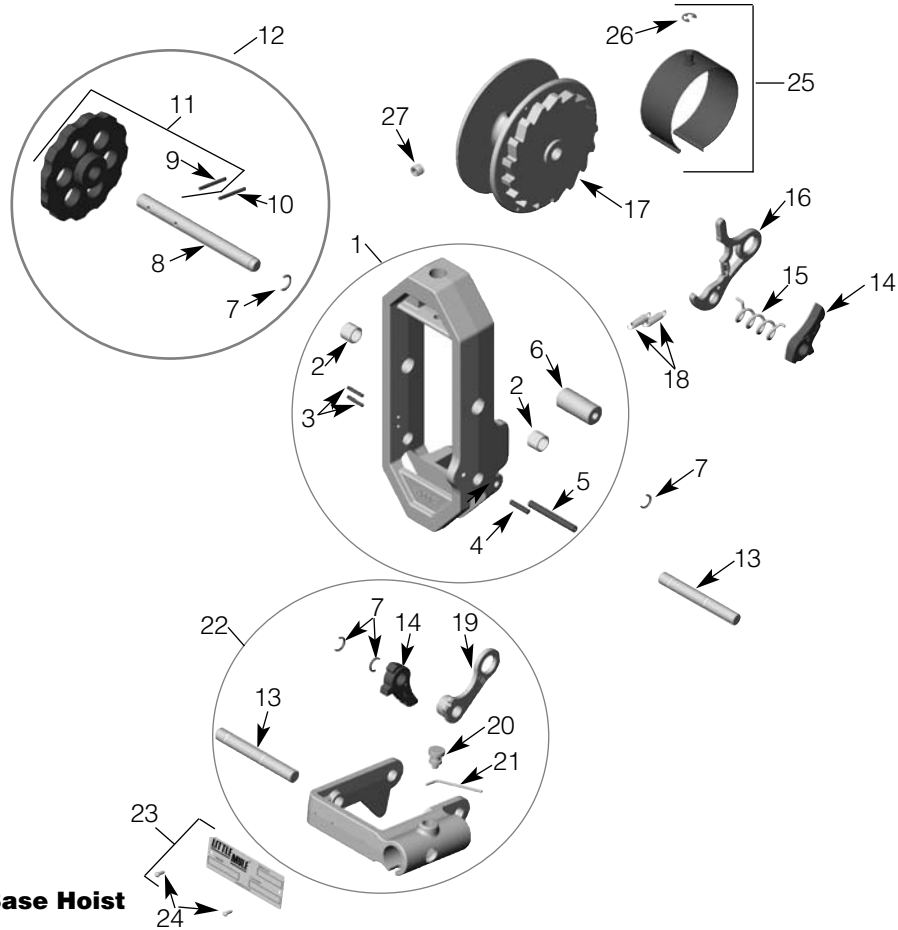
NORMAL SERVICE - Weekly usage
 HEAVY SERVICE - Daily usage
 SEVERE SERVICE - Daily usage and/or in severe weather conditions (rain, snow, ice, etc.)

NOTE: All hoists are load tested at 125% of the rated capacity at the manufacturer. If load sustaining parts are altered, replaced or repaired, the hoist must be **load tested at rated capacity**. This inspection and maintenance check list is in accordance with our interpretation of the requirements of the Safety Standard for Manually Lever Operated Hoists ASME B30.21. It is, however, the ultimate responsibility of the employer/user to interpret and adhere to the applicable requirements of this safety standard.

Figure 4 — Recommended Inspection and Maintenance Check List



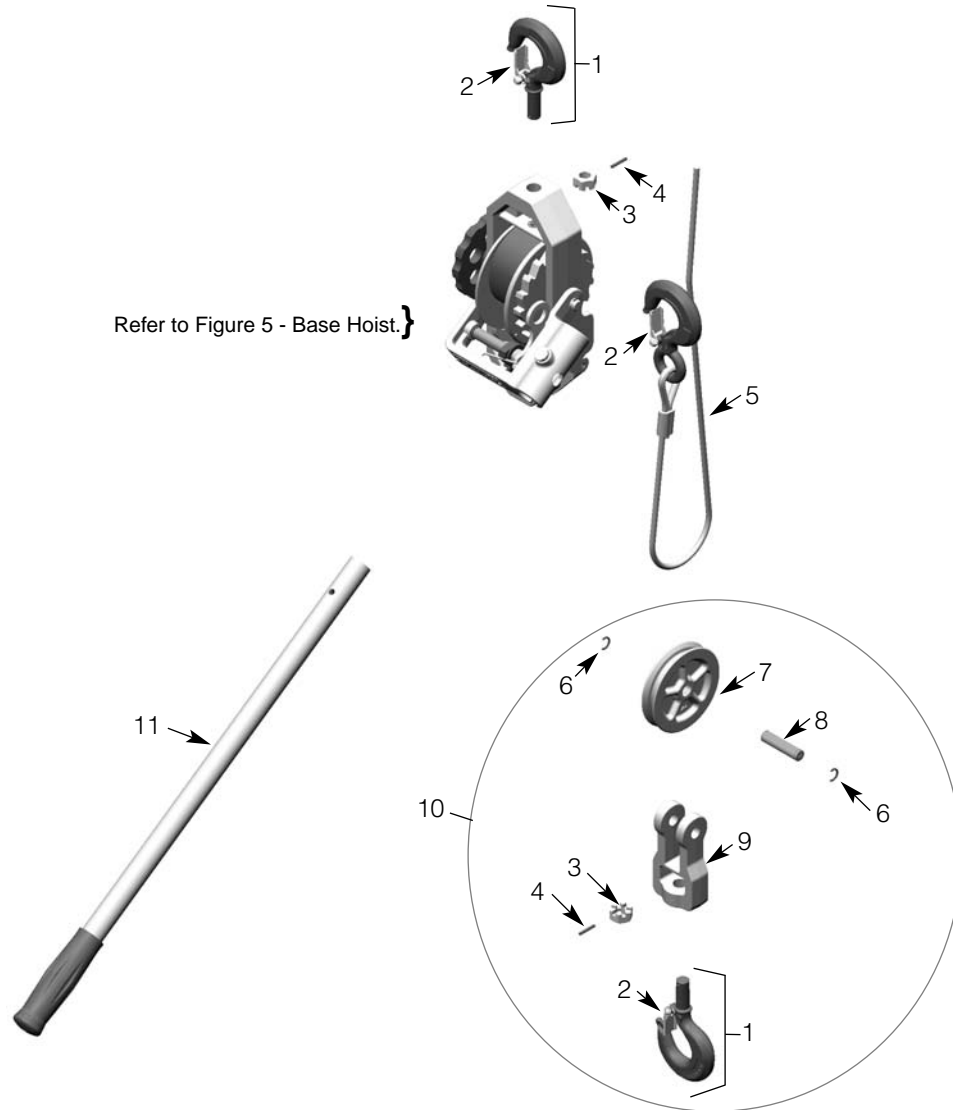
Figure 5 - Base Hoist



Parts List for Base Hoist

Ref No.	Description	Part No.	Qty	Ref No.	Description	Part No.	Qty
1	Main Frame Assembly	LG3411B	1	15	Pawl Spring	23L2	1
2	Bushing	LM12	2	16	Free-Wheel Lever	279B-1	1
3	Pin, 1/8 X .88, Type G	H5230-30	2	17	Cable Drum	3475B	1
4	Pin, 3/16 X 1.00, Type B	H5230-31	1	18	Return Spring	23L1	2
5	Pin, 1/4 X 2.50	H5242	1	19	Reversing Lever	47B	1
6	Cable Roller	3427	1	20	Handle Lock	51	1
7	Retaining Ring	H5596	4	21	Reversing Spring	42	1
8	Drum Shaft	472B	1	22	U-Frame Assembly	446B	1
9	Pin, 1/8 X 1.25	73-1	1	23	Name Plate Kit	676L1K	1
10	Pin, 1/8 X 1.00	H5251	1	24	Drive Screw	H2861P	2
11	Winding Wheel Assembly	32	1	25	Cable Shield w/E Ring	418B	1
12	Drum Shaft Assembly	LG107B	1	26	E-Ring	H5595	1
13	Pawl Shaft	445B	2	27	Set Screw	78B	1
14	Pawl	241B	2				

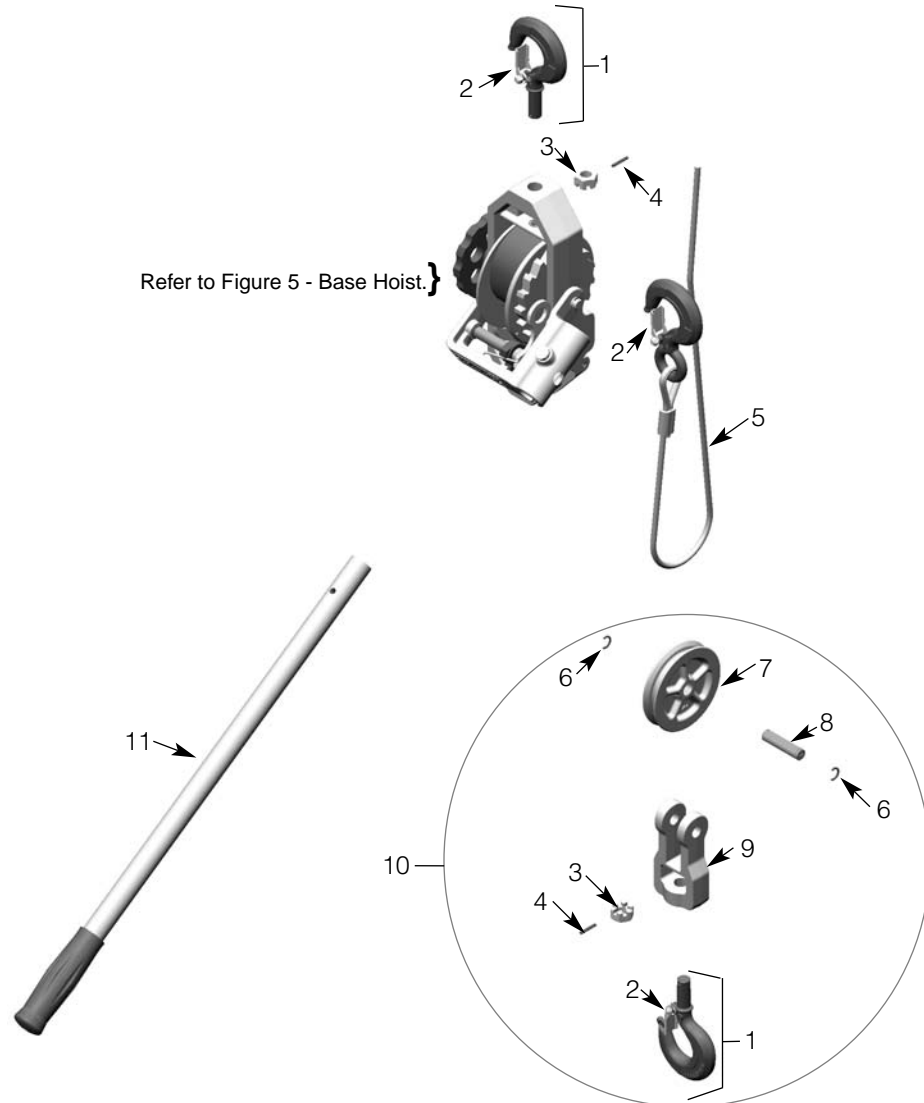
Figure 6 - Models 105SB, 115SB & 115DB



Parts List for Models 105SB, 115SB & 115DB

Ref. No.	Description	Model 105SB	Qty	Model 115SB	Qty	Model 115DB	Qty
1	Hook & Latch Assembly	3M003C01S	1	3M003C01S	1	3M003C01S	2
2	Latch Kit	10A	2	10A	2	10A	3
3	Nut	LM16	1	LM16	1	LM16	2
4	Pin, 1/8 X .88	H5250	1	H5250	1	H5250	2
5	Cable and Hook Assembly	L19-11	1	L19-12	1	L19-12	1
6	Retaining Ring	-----	-----	-----	-----	H5596	2
7	Pulley and Bushing Assembly	-----	-----	-----	-----	L28-2G	1
8	Sheave Shaft	-----	-----	-----	-----	96B	1
9	Yoke	-----	-----	-----	-----	L30-3	1
10	Sheave Block Assembly	-----	-----	-----	-----	LM99B	1
11	Handle	150B	1	150B	1	150B	1

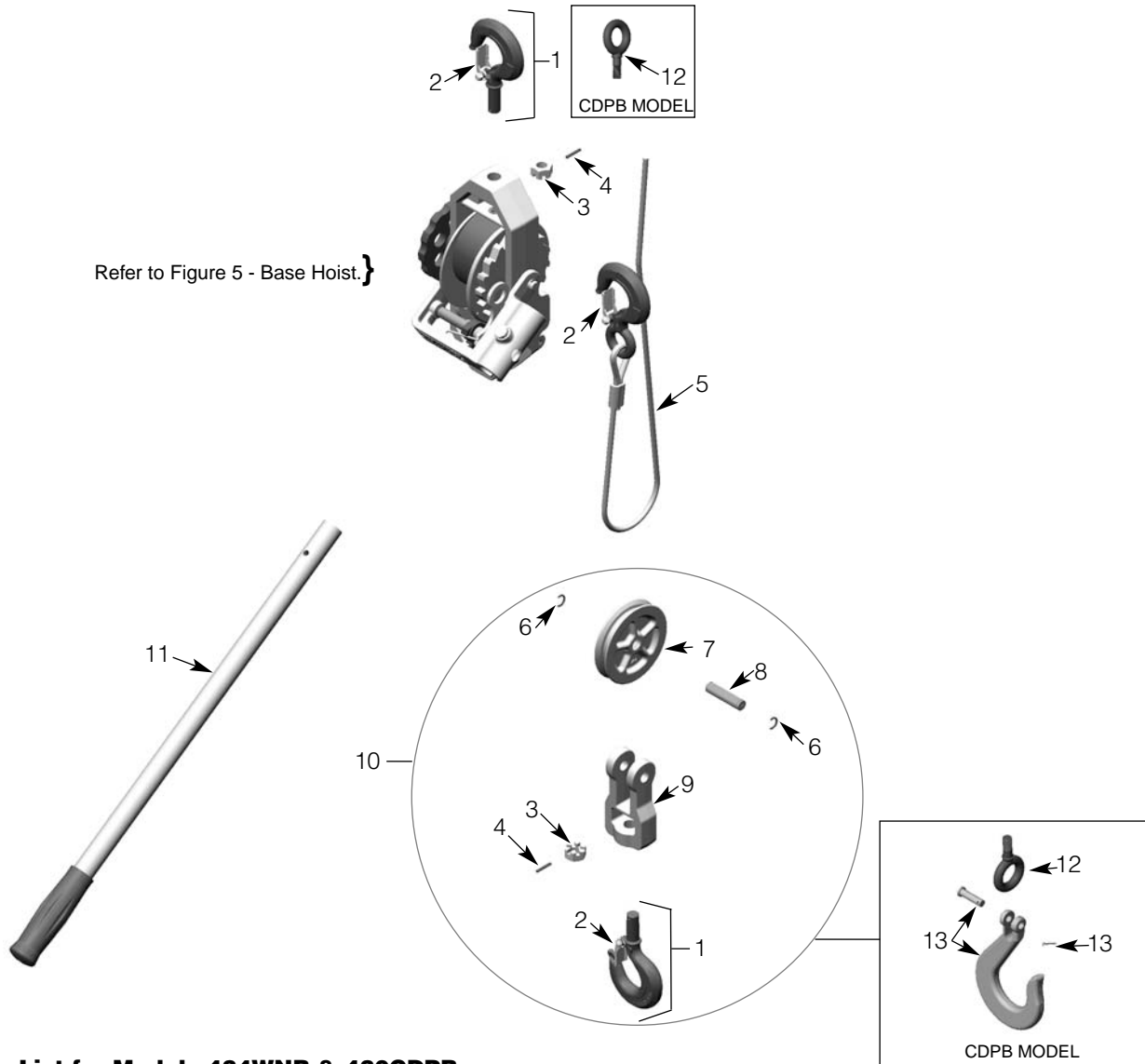
Figure 7 - Models 505NB & 202WNB



Parts List for Models 505NB & 202WNB

Ref. No.	Description	Model 505NB	QTY	Model 202WNB	Qty
1	Hook & Latch Assembly	3M003C01S	1	3M003C01S	2
2	Latch Kit	10A	2	10A	3
3	Nut	LM16	1	LM16	2
4	Pin, 1/8 X .88	H5250	1	H5250	2
5	Cable and Hook Assembly	L19-13	1	L19-13	1
6	Retaining Ring	-----	-----	H5596	2
7	Pulley and Bushing Assembly	-----	-----	L28-2G	1
8	Sheave Shaft	-----	-----	96B	1
9	Yoke	-----	-----	L30-3	1
10	Sheave Block Assembly	-----	-----	LM99B	1
11	Handle	250B	1	250B	1

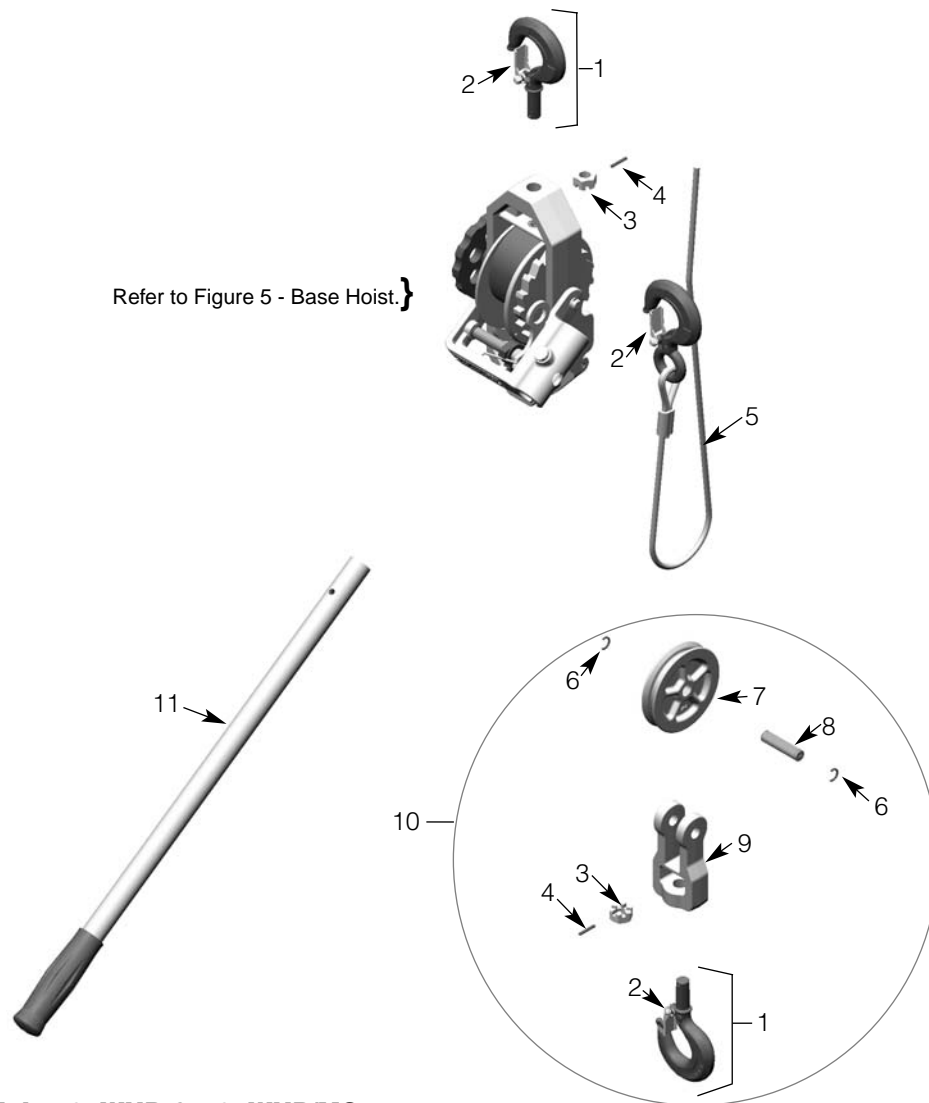
Figure 8 - Models 434WNB & 430CDPB



Parts List for Models 434WNB & 430CDPB

Ref. No.	Description	Model 434WNB	Model 430CDPB	Qty
1	Hook & Latch Assembly	3M003C01S	-----	2
2	Latch Kit	10A	-----	3
3	Nut	LM16	LM16	2
4	Pin, 1/8 X .88	H5250	H5250	2
5	Cable and Hook Assembly	L19-5	L19-6	1
6	Retaining Ring	H5596	H5596	2
7	Pulley and Bushing Assembly	L28-2G	L28-2G	1
8	Sheave Shaft	96B	96B	1
9	Yoke	L30-3	L30-3	1
10	Sheave Block Assembly	LM99B	499CDPB	1
11	Handle	250B	250B	1
12	Eye Bolt	-----	25	2
13	Hook, Clevis	-----	474C	1

Figure 9 - Models 404WNB & 404WNB/MC



Parts List for Models 404WNB & 404WNB/MC

Ref. No.	Description	Model 404WNB	Model 404WNB/MC	Qty
1	Hook & Latch Assembly	3M004C09S	3M004C09S	2
2	Latch Kit	10A	10A	3
3	Nut	H3986P	H3986P	2
4	Pin, 1/8 X .88	H5250	H5250	2
5	Cable and Hook Assembly	L19-14	L19-14SS	1
6	Retaining Ring	H5596	H5596	2
7	Pulley and Bushing Assembly	L28-2G	L28-2G	1
8	Sheave Shaft	96B	96B	1
9	Yoke	L30-3	L30-3	1
10	Sheave Block Assembly	L914-1B	L914-1B	1
11	Handle	450B	450B	1

NOTES



WARRANTY

Every hoist is thoroughly inspected and performance tested prior to shipment from the factory. If any properly installed, maintained and operated hoist as outlined in the applicable accompanying Little Mule manual develops a performance problem due to defective materials or workmanship as verified by Coffing Hoists/Little Mule, repair or replacement of the hoist will be made to the original purchaser without charge and the hoist will be returned, transportation prepaid. This warranty does not apply where deterioration is caused by normal wear, abuse, improper or

inadequate maintenance, eccentric or side loading, overloading, chemical or abrasive actions, excessive heat, unauthorized modifications or repairs, or use of non-Coffing/Little Mule repair parts.

EXCEPT AS STATED HEREIN, COFFING HOISTS/LITTLE MULE MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

WARNING

Overloading and Improper Use Can Result In Injury

To Avoid Injury:

- Do not exceed working load limit, load rating, or capacity.
- Do not use to lift people or loads over people.
- Read and follow all instructions.



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