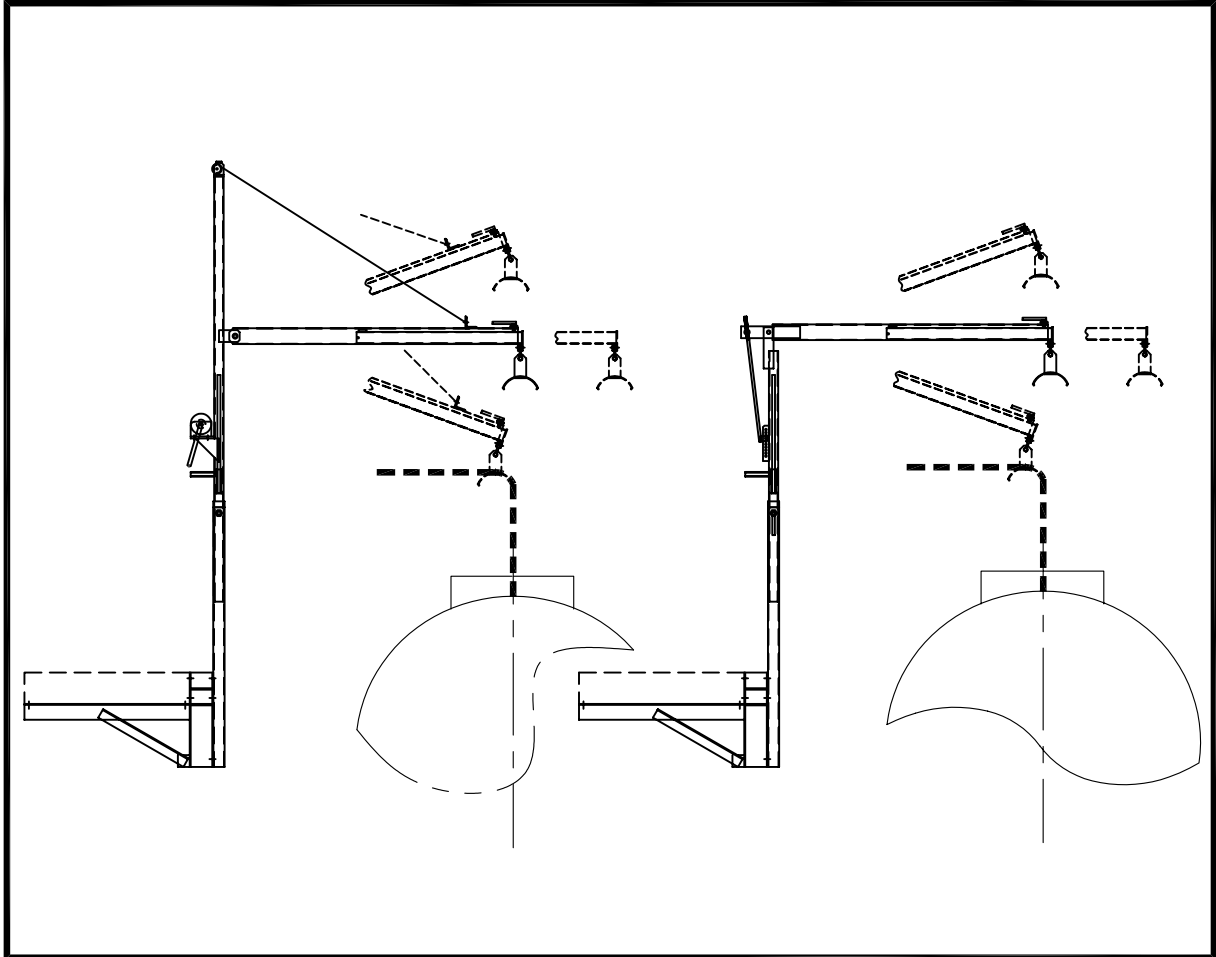


INSTRUCTION MANUAL OPERATION AND MAINTENANCE OF HOSE HANDLER



Proven Solutions in Safe Access and
BEYOND

P.O. BOX 6229
FLORENCE, SC 29502-6229
800-845-2387
FAX: (843) 662-1536
WEB SITE: WWW.CARBIS.NET

TABLE OF CONTENTS

- INTRODUCTION & SAFETY
- PRODUCT DESCRIPTION
- ASSEMBLY
- OPERATION
- MAINTENANCE
- DRAWINGS & SPECIFICATIONS
- ADDENDA

INTRODUCTION & SAFETY

This product has been inspected and meets Carbis' Quality Control Standards. It is important that the information contained in this manual be reviewed before operating the unit, including the following:

- Inspect unit upon delivery for shipping damage or loose bolts. All fastening hardware that has been factory installed has been done so to remain tight; if any fastening hardware, whether factory or field installed, has been loosened, it is imperative that it be tightened before using the product.
- WARNING: This unit can conduct electricity. It is the responsibility of the customer to see that this unit is grounded before any operation is performed, and that all safety codes are followed as required.
- Appropriate Personnel Protective Equipment (PPE) such as gloves, safety glasses, safety shoes, etc., should be worn at all times during operation of this equipment.
- Before activating the unit always insure that all equipment and personnel are clear of moving components.
- Only qualified personnel in good physical condition, trained in the proper operation of this unit should be permitted to use it.
- Check that all warning/caution/notice safety placards/decals are clearly visible, legible, and in good repair.

- ATTENTION: AVOID PROBLEMS WITH STAINLESS STEEL BOLTS. Keep bolts and nuts free of grime and others contaminants that may get into threads. Lubricate stainless steel bolts and nuts prior to tightening. Avoid the use of impact speed wrenches. If one is used, a slower speed will allow heat to dissipate as the connection is tightened.

HOSE HANDLER DESCRIPTION

SEE DRAWINGS HH - 1 & HH-2

The hose handler consists of two types: manually positioned, and hand winch positioned. Each type includes a 150 lb capacity model and a 300 lb capacity model. All four hose handlers are covered in this one manual. The following descriptions are for both types, with the differences noted accordingly.

- An 'L' shaped, gusseted under slung mounting assembly that attaches to the underside and front of the existing platform supports the vertical base pipe of the hose handler.
- The upper pivoting pipe extends inside the base pipe, and includes a sleeve that rests on the top end of the base pipe. A stainless steel pivot lock mounted on the base pipe locks the upper pipe in the desired position.
- The upper pipe supports either the manual adjustment rod or the hand winch, and includes a handle for turning the pipe to the desired position.
- The manually positioned handler incorporates an adjustment rod that is bolted to a slotted plate mounted on the upper pipe on one end, and is pinned to the end of a boom arm on the top end.
- The hand winch positioned handler incorporates the winch mounted to the pivoting pipe; the pivoting pipe extends well above the boom, and includes a pulley mounted on top for the boom support cable.

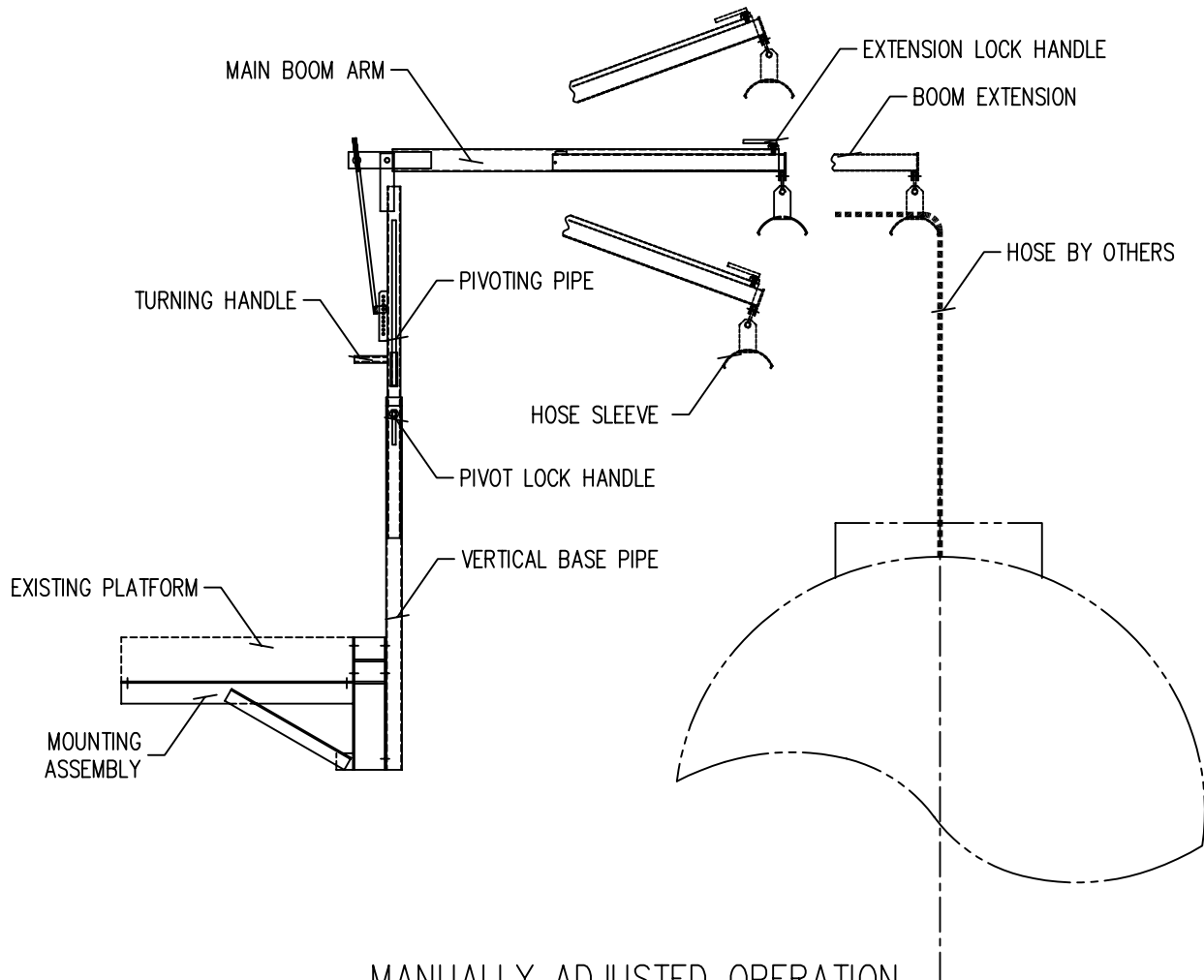
- The hose handler pipe boom arm pivots about a support pin mounted on the upper pipe, and includes a pipe boom extension on the outer end that is locked in place utilizing the same type of stainless steel pivot lock that is mounted on the base pipe. The curved hose sleeve support is shackled to the end of the boom extension on the underside.
- The manual handler boom arm is pinned to the top of the upper pipe, and includes an extension on the back side for the adjustment rod pin.
- The winch operated boom arm is pinned to the front side of the upper pipe. The cable end is attached to an angle mounted towards the front of the boom arm.
- Boom extension for both boom arms is 2'-0".

OPERATION

- **NOTE:** The operation of both types and capacities of hose handlers is covered in this one set of instructions, with the differences noted where needed.
 - The original position of the boom arm for setup can be at the platform or on the vehicle, and is more a function of site conditions/operator convenience.
1. Feed the open end of the hose(s) to be used through the curved hose sleeve mounted on the end of the boom arm extension.
 2. The pivoting function allows for variations in vehicle spotting. To change pivot positions, turn the pivot lock handle counterclockwise to unlock the upper pivoting pipe. Grasp the turning handle and pivot the upper pipe to the desired position. Turn the pivot lock handle clockwise to lock the upper pivoting pipe in position.
 3. The vertical angle adjustment allows for variation in height of vehicles as well as hose length. To change height adjustment:
 - Winch – crank the winch handle in the appropriate direction to raise or lower the boom arm to the desired height.
 - Manual – Loosen the nut at the slotted plate, then raise or lower the boom arm to the desired height then tighten the nut to maintain position.
 4. The boom extension allows for variations in vehicle centerline. To adjust the boom extension, turn the extension lock handle counterclockwise to unlock the boom extension. Extend the boom to the desired position, and then turn the lock handle clockwise to lock the extension in place.
 5. To store the unit, unlock the pivot lock handle and pivot the boom assembly to a convenient location near the platform to clear the vehicle envelope.

MAINTENANCE

1. Visually inspect the unit before each use. Replace any damaged parts. Monthly inspection of the unit is recommended as a minimum. Harsh atmosphere and/or heavy use may dictate more frequent inspections and lubrication.
2. All fastening hardware that has been factory installed has been done so to remain tight; if any fastening hardware, whether factory or field installed, has been loosened, it is imperative that it be tightened before using the equipment.
3. Lubricate the pivot points on the pivoting pipe with light oil such as WD-40.
4. For any assistance, replacement parts, comments, or questions, please call Carbis' Customer Service Department at 1-800-845-2387. Please have your model number and serial number available to expedite your request.



MANUALLY ADJUSTED OPERATION
HH-1000-1

CAPACITY
150 LBS
OR
300 LBS

THE HOSE HANDLER MEETS
OR EXCEEDS OSHA REGULATIONS
AS WE INTERPRET THEM.

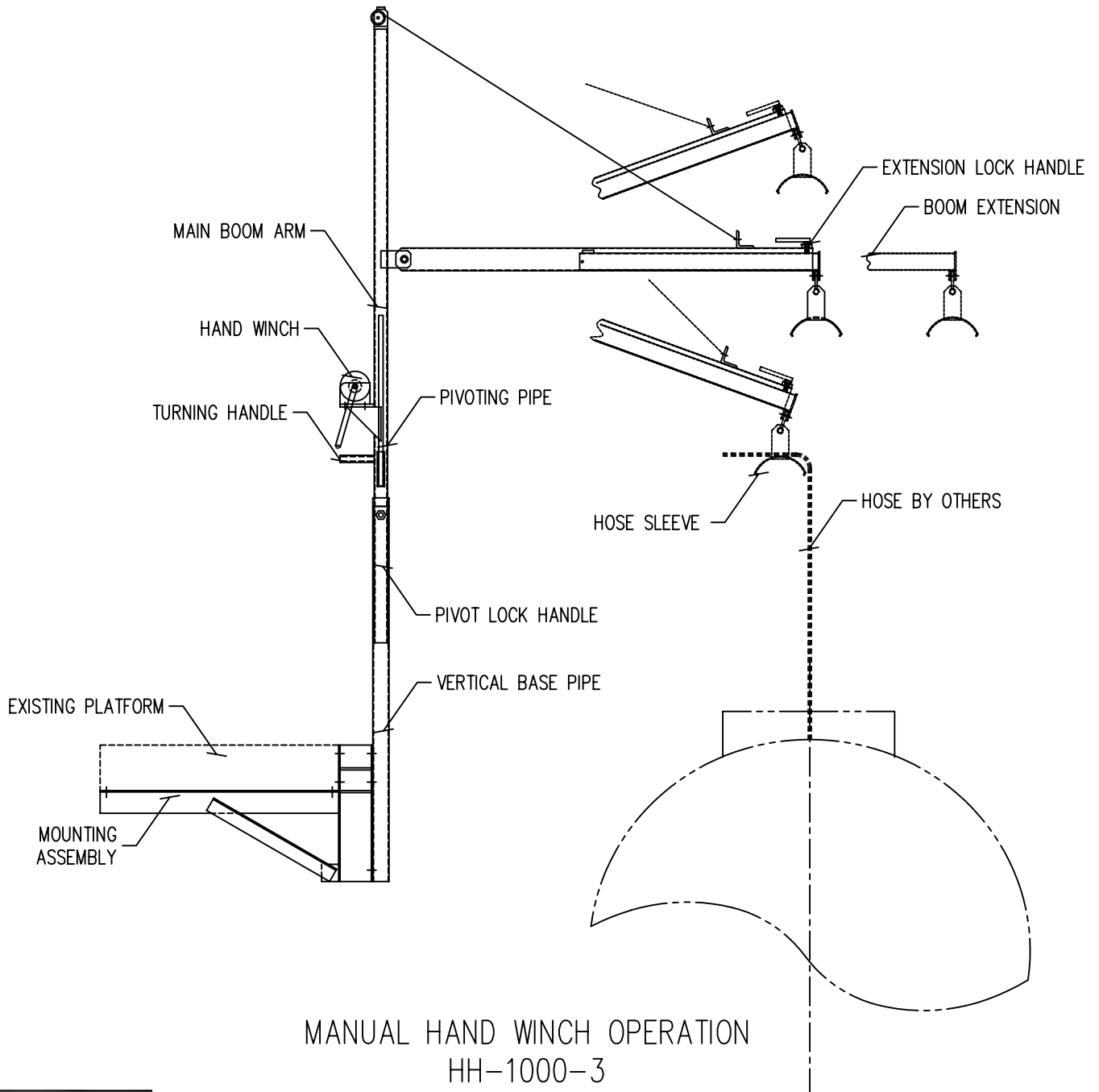
PROPRIETARY DESIGN
THIS DRAWING IS THE PROPERTY OF AND CONTAINS CONFIDENTIAL
AND PROPRIETARY DESIGN INFORMATION BELONGING TO CARBIS, INC.
IT MUST BE RETURNED IMMEDIATELY UPON REQUEST AND MUST NOT
BE COPIED IN WHOLE OR IN PART, NOR THE INFORMATION SHOWN
THEREON DISCLOSED TO THIRD PARTIES OR OTHERWISE USED EXCEPT
AS SPECIFICALLY PERMITTED BY CARBIS, INC.

C:\BUL\Manual\Hose Handler\HH-1.dwg, Jul 02, 2003 - 8:09am

CUSTOMER			
TITLE HOSE HANDLER SPECIFICATIONS			
CUSTOMER PURCHASE ORDER NUMBER			
ALCO ORDER #	SCALE	SHEET	REV.
	N.T.S.	1 of 2	0
DRAWN B.J.L.	CHECK	FINAL CK.	DRAWING NUMBER
DATE 07/01/03	DATE	DATE	HH-1



Proven Solutions in Safe Access and
BEYOND
P.O. BOX 6229
FLORENCE, SC 29502-6229
800-845-2387
FAX: (843) 662-1536
WEB SITE: WWW.CARBIS.NET



MANUAL HAND WINCH OPERATION
HH-1000-3

CAPACITY

150 LBS
OR
300 LBS

THE HOSE HANDLER MEETS
OR EXCEEDS OSHA REGULATIONS
AS WE INTERPRET THEM.

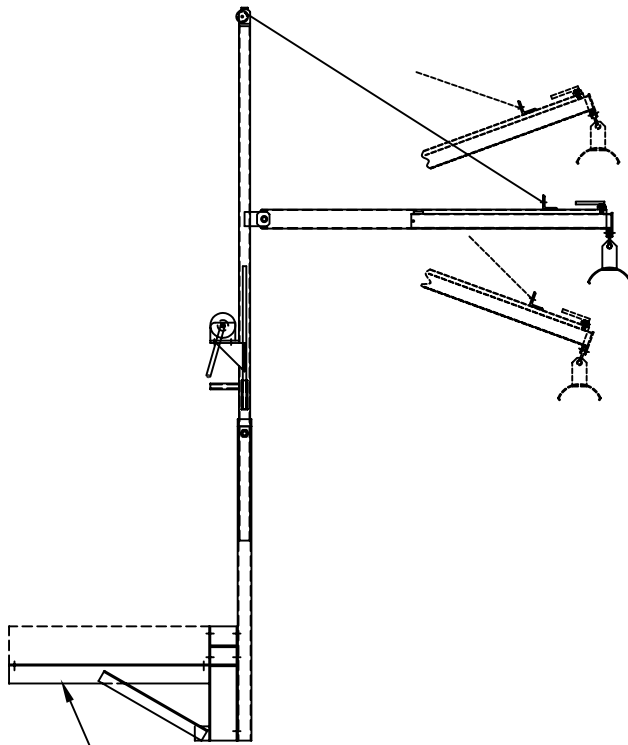
PROPRIETARY DESIGN
THIS DRAWING IS THE PROPERTY OF AND CONTAINS CONFIDENTIAL
AND PROPRIETARY DESIGN INFORMATION BELONGING TO CARBIS, INC.
IT MUST BE RETURNED IMMEDIATELY UPON REQUEST AND MUST NOT
BE COPIED IN WHOLE OR IN PART, NOR THE INFORMATION SHOWN
THEREON DISCLOSED TO THIRD PARTIES OR OTHERWISE USED EXCEPT
AS SPECIFICALLY PERMITTED BY CARBIS, INC.

C:\BUL\Manual\Hose Handler\HH-2.dwg, Jul 02, 2003 - 8:09am

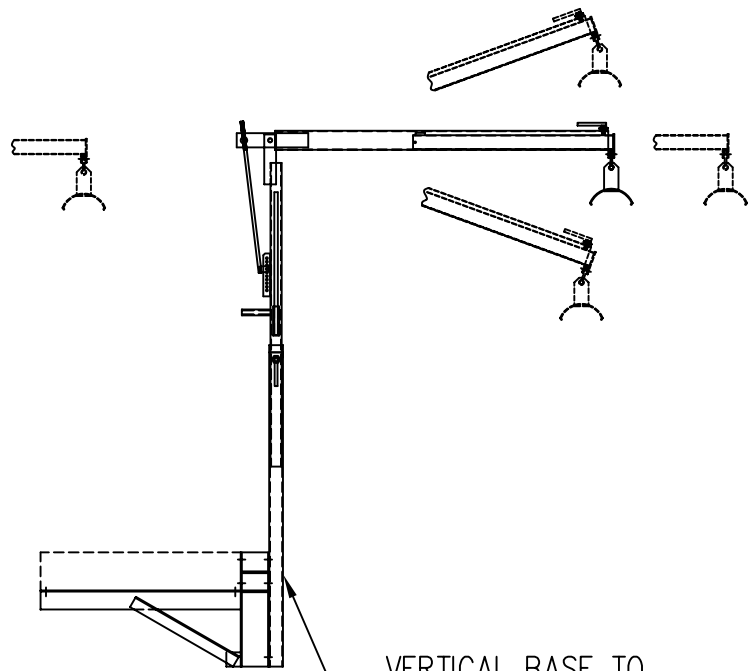
CUSTOMER			
TITLE HOSE HANDLER SPECIFICATIONS			
CUSTOMER PURCHASE ORDER NUMBER			
ALCO ORDER #	SCALE	SHEET	REV.
	N.T.S.	2 of 2	0
DRAWN <u>BUL</u>	CHECK _____	FINAL CK. _____	DRAWING NUMBER
DATE <u>07/01/03</u>	DATE _____	DATE _____	HH-2



Proven Solutions in Safe Access and
BEYOND
P.O. BOX 6229
FLORENCE, SC 29502-6229
800-845-2387
FAX: (843) 662-1536
WEB SITE: WWW.CARBIS.NET



MOUNTING ASSEMBLY
TO BE BOLTED TO
EXISTING PLATFORM



VERTICAL BASE TO
BE BOLTED WITH "U"
BOLTS TO MOUNTING
ASSEMBLY

PROPRIETARY DESIGN
THIS DRAWING IS THE PROPERTY OF AND CONTAINS CONFIDENTIAL
AND PROPRIETARY DESIGN INFORMATION BELONGING TO CARBIS, INC.
IT MUST BE RETURNED IMMEDIATELY UPON REQUEST AND MUST NOT
BE COPIED IN WHOLE OR IN PART, NOR THE INFORMATION SHOWN
THEREON DISCLOSED TO THIRD PARTIES OR OTHERWISE USED EXCEPT
AS SPECIFICALLY PERMITTED BY CARBIS, INC.

C:\BUL\Manual\Hose Handler\ASSEMBLY.dwg, Jul 02, 2003 - 8:11am

CUSTOMER			
TITLE HOSE HANDLER ASSEMBLY			
CUSTOMER PURCHASE ORDER NUMBER			
ALCO ORDER #	SCALE N.T.S.	SHEET 1 of 1	REV. 0
DRAWN BUL DATE 07/01/03	CHECK DATE	FINAL CK. DATE	DRAWING NUMBER ASSEMBLY

CARBIS
INCORPORATED

Proven Solutions in Safe Access and
BEYOND
P.O. BOX 6229
FLORENCE, SC 29502-6229
800-845-2387
FAX: (843) 662-1536
WEB SITE: WWW.CARBIS.NET

TECHNICAL SPECIFICATIONS

FULTON MODEL NUMBER	CAPACITY RATING (C ₁) 1/4" X 1/8" FULCRUM LBS. (65)	FULCRUM LBS. (65)	GEAR RATIO	MAXIMUM MECHANICAL ADVANTAGE (C ₂)	HANDLE LENGTH	HEB SIZE	DRUM STORAGE (C ₃)
R1051/KX1051	1,000 (4.5)	500 (2.2)	4:1:1	29:1	11"	2-1/4"	50" x 7.53" Cable (Max. 6 layers)

- *1 - Capacity Rating - Based on effort line pull on first layer of line on the drum. Capacity is reduced as layers of line build up on the drum.
 *2 - Maximum Mechanical Advantage - Based on first layer of recommended line on the drum. For maximum efficiency use only the amount of line required.
 *3 - Breaking strength of cable must be greater than 2,035 lbs (1.15 kN).

OPERATING INSTRUCTIONS

Turning the handle counter-clockwise actuates the brake. The brake system is designed to hold the load whenever the handle is released.

TO PULL CABLE IN OR RAISE LOAD

- 1) The cable must be securely fastened to the object being lifted and to the winch drum.
- 2) Always be sure that the cable and cable attachments are not damaged and are strong enough for the load. Assume there is adequate safety factor of at least three times the maximum load for all components used.
- 3) Referring to the "Cable In/Cable Out" detail on the winch, turn the handle clockwise to lift. The ratchet MUST make a loud clicking sound.

TO LET CABLE OUT OR LOWER LOAD

- 1) Referring to the "Cable In/Cable Out" detail on the winch, turn the handle counter-clockwise to lower. No clicking will be heard because the brake system is activated.

MAINTENANCE

Do not get oil or grease on the friction disks. This could allow the load to slip or fall.

- 1) Maintain a film of automotive type grease on all gear teeth and to the O.D. of drum bearing, item #17, at all times.
- 2) Keep ratchet pawl pivot, bushings and pinion threads lubricated with automotive engine oil at all times.
- 3) Check brake friction disks for wear. If less than 1/16" thick, cracked, or broken, they must be replaced.
- 4) During each usage, check for proper ratchet operation. When cranking cable in, a loud clicking sound must be heard from the ratchet. If a loud clicking sound is not heard, do not use and replace damaged components immediately. When cranking cable out, there is no clicking and the ratchet pawl must be fully engaged into the ratchet gear teeth.
- 5) Before each usage, inspect fasteners for proper tightness.

LIMITED THREE YEAR WARRANTY

Warranty. Fulton Performance Products, Inc. ("We") warrants to the original consumer purchaser ("You") that the product will be free from defects in material and workmanship for a period of three years under normal use and service, ordinary wear and tear excepted. If the product does not comply with this warranty, we will replace the product without charge to You and within a reasonable time or, at Fulton's option, refund the purchase price. This warranty is not transferable.

Limitations on the Warranty. The warranty does not cover the following: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improperly installed; (d) improper maintenance; (e) a product altered in any manner by anyone other than us.

Obligations of Purchaser. To make a claim, contact us at 50 Industrial Drive, Neenah, WI, (715) 693-1700, identify the product, and follow the instructions that will be provided. Any returned product that is rejected or refunded because the property of Fulton. You will be responsible for shipping costs to us. Please retain your purchase receipt to verify date of purchase. This must be produced to honor warranty claim.

Remedy. Limit. Repair or replacement is the purchaser's sole remedy under this or any other warranty on the product, whether express or implied. We shall not be liable for service or labor charges incurred in removing or re-installing a product or any incidental or consequential damages of any kind. We expressly disclaim any implied warranty of merchantability or fitness for particular purpose other than the three-year warranty period. Some states do not allow the exclusion of incidental or consequential damages or limitation of an implied warranty, so the above exclusion and limitation may not apply to you.

Legal Rights. This warranty gives you specific legal rights, and You also may have other rights which vary from state to state. **ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON ANY PRODUCT SHALL BE LIMITED TO THREE YEARS FROM THE DATE OF RETAIL PURCHASE BY YOU.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty is governed by the laws of the United States of America and is void where prohibited.

FULTON

Performance Products, Inc.

50 Industrial Dr., P.O. Box 8, Neenah, WI 54955-0008
 820.834-9489 715.693-1700 Fax 715.693-1798
 www.fultonperformance.com
 fulton@fultonperformance.com

F1928 (D-7939) 3/02

FULTON

Performance Products

K1051/KX1051 Work Winch Owner's Manual

READ, UNDERSTAND, AND SAVE THESE INSTRUCTIONS

WARNING

- Read, understand and follow all instructions before installing and/or using product. NEVER allow anyone unfamiliar with the operating instructions to use this product.
- Read, understand and follow all instructions provided by the manufacturer of the product(s) that this winch will be installed on.
- Installation, use and maintenance of these Fulton winches must conform to the following instructions on Fulton cannot be held liable for improper installation, use, or maintenance of this product.
- Do not get oil or grease on the friction disks. This could allow the load to slip or fall.
- Obey crank rotation decal and operating instructions. Disregard could cause bodily harm or property damage and/or death.
- DO NOT use this winch as a human hoist. NEVER allow anyone to be positioned on, around or under it load being lifted or moved.
- Never exceed the maximum rated capacities.
- Always inspect the cable and hook before each use to make sure that they are not damaged. If the cable hook breaks, the cable will whip violently and can inflict serious injury and/or property damage.
- Never use worn, kinked, or frayed cable. Replace the cable immediately.
- Always maintain a minimum of three complete wraps of cable on the drum.
- The cable on the winch must be strong enough to support the load to be moved.
- A loud clicking sound from the ratchet must be heard when lifting the load. If a loud clicking sound is not heard do not use and replace ratchet components immediately.
- Never release the crank handle unless the ratchet pawl is fully engaged and the load is supported.
- Never operate with slippery, wet or oily hands and always maintain a firm grip on the winch handle.
- Never leave a weight hanging from the winch while the winch is unattended, as another person may alter to operate the winch, thereby creating an unsafe condition.
- Failure to follow these warnings and instructions will result in property damage, serious bodily injury or death.

MOUNTING INSTRUCTIONS

- 1) Assemble handle onto input shaft end. Tighten the 1/2-13 locknut against handle. Note: Do not remove or adjust the double locknuts on long end of input shaft. They are an important part of the braking system and must be intact. See Fig. 1
- 2) Mount the winch to a structure capable of supporting at least 5 times the load the winch will be pulling.

Note: When bolting the winch down, use three grade 5, 3/8 diameter bolts, flat washers and locknuts (not supplied).

Note: Always use outer most slots at the end opposite the direction of line pull. Use large flat washer if using center slot at opposite end.

CABLE ATTACHMENT TO DRUM

- 1) Feed the cable over the top of drum, through drum side hole, and through cable clamp with one inch extending past clamp.
- 2) With keeper nuts and lock washers outside the drum side, tighten nuts snug until cable is adequately clamped (approx. 20 - 30 lb-in).
- 3) Always be sure the cable is pulling straight off the winch, not at an angle. This will prevent the cable from rubbing against the sides of the drum, which can damage the cable.



FIG. 1

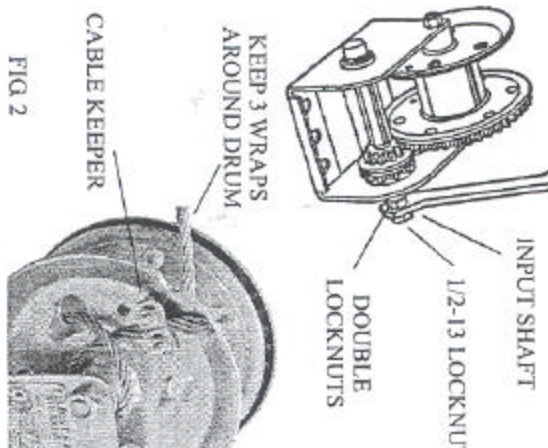
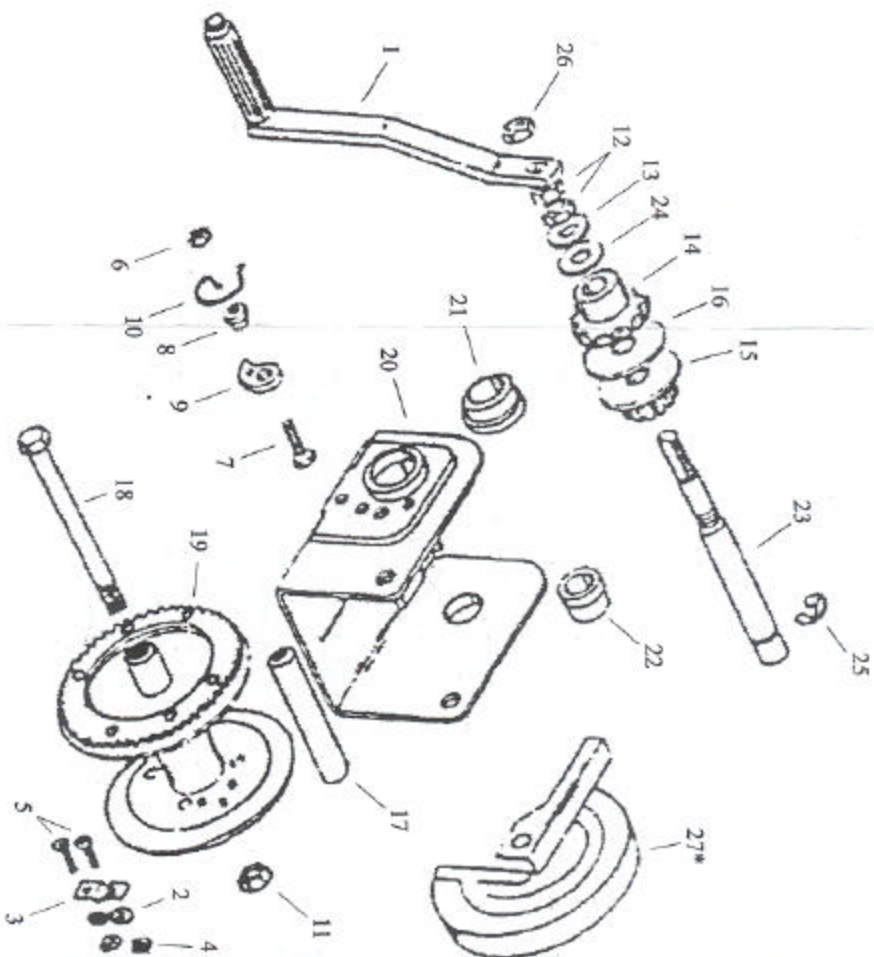


FIG. 2

SERVICE PARTS AND ACCESSORIES

ITEM	DESCRIPTION	QTY.	PART NO.	REPAIR KIT
1	HANDLE ASSY - 11"	1	2461	
2	LOCKWASHER - #10	2	731	5621-01
3	ROPE KEEPER CLAMP	1	5604	CABLE KEEPER KIT
4	NUT - #10-24, HEX	2	806	
5	CARRIAGE BOLT - #10-24 X .69 LG	2	5606	
6	LOCKNUT - 5/16-18	1	36	6731S00
7	CARSCREW - 5/16-18 X 1.00 LG HEX GR 5	1	116	RATCHET KIT
8	SPACER - RATCHET	1	6560	(2 KITS REQUIRED FOR KX1051)
9	RATCHET PAWL	1	6625	
10	SPRING - RATCHET	1	6876	
11	LOCKNUT - 3/8-16	1	907	
12	LOCKNUT - 1/2-13	2	952	
13	DISC - BRAKE	1	2552	
14	ASSY - RATCHET	1	2555	
15	ASSY - PINION GEAR	1	0434003	
16	FRICTION DISC	1	0431003	
17	SPACER - DRUM, 3.81 LG	1	6284	
18	CARSCREW - 3/8-16 X 4.50 LG HEX GR 2	1	6299	
19	WELDMENT - DRUM	1	9186	
20	FRAME - K1051	1	0415301	
21	BUSHING - 1.25 ID X .50 LG	1	4592	
22	BUSHING - .758 ID X .50 LG	1	5790	
23	SHAFT - PINION	1	0469001	
24	WASHER - NYLON	1	178	
25	RETAINING RING - 3/4	1	57	
26	LOCKNUT - 1/2-13, NYLON	1	0927021	
27	COVER - GEAR (* ONLY ON "KX" MODELS)	1	9560	



HOW TO ORDER PARTS

Always replace broken, bent or worn parts before using this product. Use only Fulton Performance Products' parts or parts of equal quality for repair. Replacement parts are available through Fulton Performance Products' Customer Service Department, 715-693-1700. Please specify product model number, name of parts, end part number. A two digit year code is stamped into the frame to aid in model identification.

FULTON

50 Indianhead Dr., P.O. Box 8 Mosinee, WI 54455-0008
 800.624.9466 715.693.1700 Fax 715.693.1759
 www.fultonperformance.com
 fulton@fultonperformance.com