



IMPORTANT!

Prior to installing and operating the winch, please read this manual thoroughly and carefully. Keep this manual and all other instructions accessible at all time.

Although this manual will help you become familiar with the basic operation of the winch, it is by no means a substitute for proper training by your company in the safe use of winches, barge rigging and other marine equipment. This manual suggests methods of operation, but ultimately, the owners and operators of the equipment are responsible for determining whether a particular method of operation is safe and appropriate for the equipment being operated. Only individuals trained in the proper use of winches, barge rigging and other marine equipment should operate these winches.

The typical operating environment of barge and towboat winches often includes very high forces, and the potential hazards associated with these high forces should not be underestimated. Improper installation or incorrect or unsafe use of the winch could result in injury or death to persons or cause equipment failure or damage.

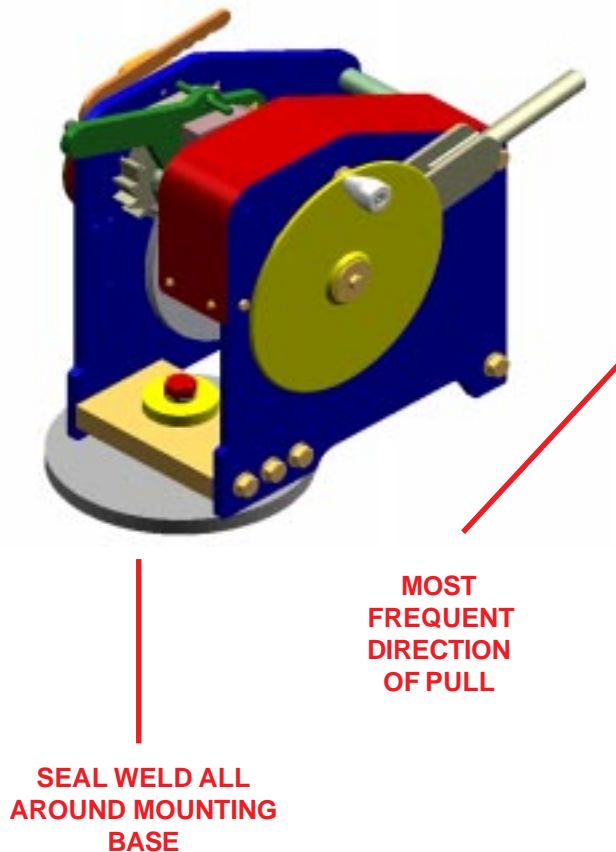
ALWAYS OBSERVE THESE BASIC SAFETY PRECAUTIONS:

- Keep all loose clothing and any foreign objects away while operating the winch.
- **During release of the winch, always stand to the side of the winch opposite the hand wheel.**
- Never operate the winch with bystanders near.
- Operators and bystanders should stay clear of the wire rope while the winch is being operated.
- Under no circumstances should any winch be used to move, raise or lower a person(s) or equipment.
- Do not operate the winch unless you have a firm stance on a non-slippery surface.
- Tension on the wire rope should be reduced by the proper use of the brake and knockout handle.
- Do not stand or jump on the extension pipe. Severe injury could result from such actions.
- Do not apply tension to the winch unless there are at least four complete wraps of rope on the drum.
- Never let go of the ratchet handle under tension. It can snap forward and can cause serious injury. Also, the ratchet extension can fly off the ratchet handle and cause injury, even at a distance.
- If tension on the wire rope is too much to be controlled with reasonable force by the operator, maneuver the barges to relieve tension.
- Always position the ratchet handle in the forward resting position with dog disengaged immediately after winch operation. To leave the handle in any other position is unsafe.
- **Inspect the winch regularly for worn gears, pawls and bearings, cracked welds, loose nuts or bolts or any other damaged or worn parts. If any worn, cracked, loose or damaged parts are found, stop use immediately and remove the winch from service until all appropriate repairs are completely made.**

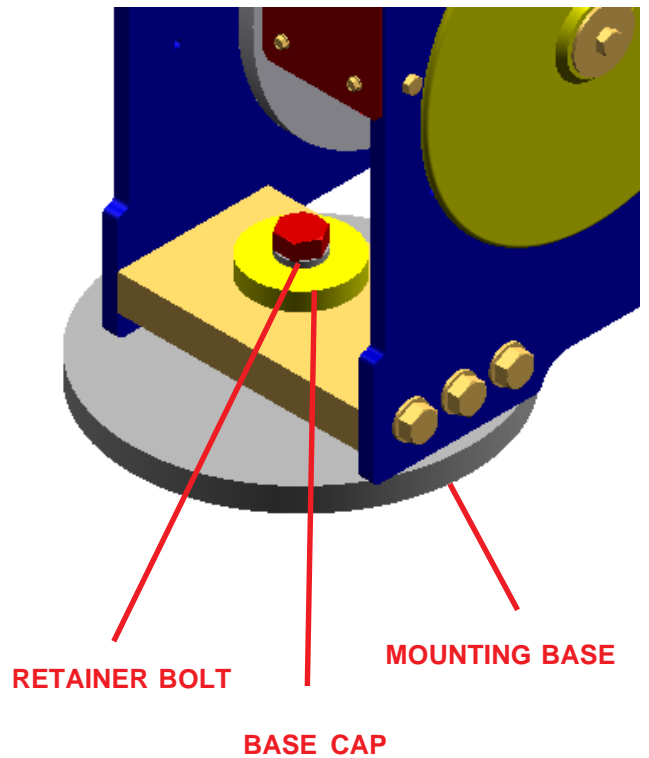
1. INSTALLATION

1.1. All winches must be installed on flat, rigid and non-slippery surfaces. Deck and structure must be strong enough to withstand the weight and holding capacity of the winch, and the forces likely to occur during operation.

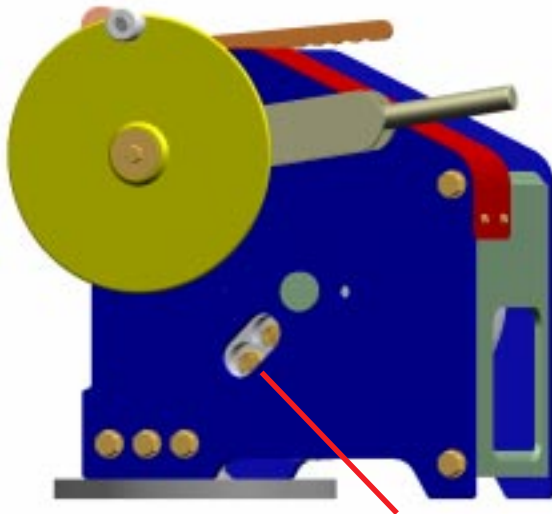
1.2. Place the winch and stud mount assembly in the appropriate area. Make sure the deck in the swivel area is smooth and clear of obstructions. Check that there is enough clearance for proper operation of the ratchet. With extension on the ratchet handle, rotate the handle to the front and rear of the winch to ensure proper clearance. Also, swivel the winch into its possible operating positions and again ensure that there is sufficient room and clearance for operation with the extension on the ratchet handle. After separating the winch from the stud mount assembly, weld the stud mount assembly all around using a seal weld to protect from corrosion. Remember that the weld has to be strong enough to withstand loads equal to or greater than the Brake/Dog Holding Capacity of the winch.



1.3. To attach the winch to the stud mount assembly, place the winch over the stud so that it extends up through the mounting block at the bottom of the winch. Then place the base cap on top of the mounting stud, insert the bolt and tighten.

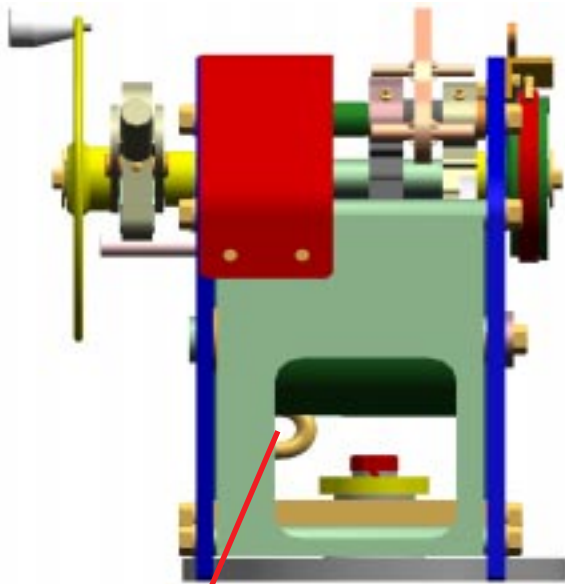


2. ATTACHING THE WIRE ROPE



U-BOLT NUTS

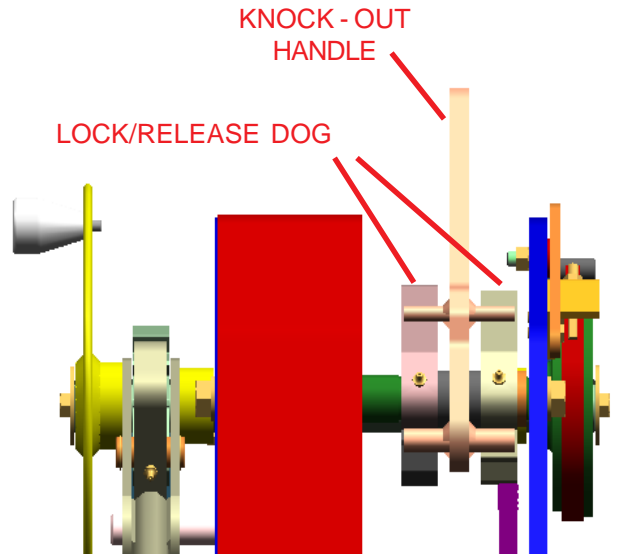
2.1. Rotate the drum until the u-bolt nuts appear in the slot on the side plate. Using a standard socket wrench with extension, loosen the nuts.



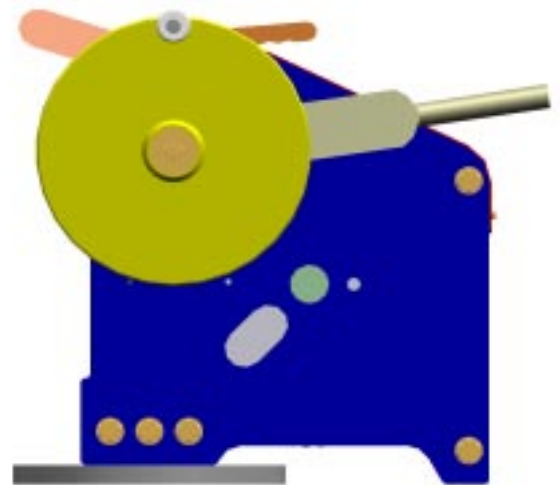
U-BOLT

2.2. If installing a new winch, remove and discard the u-bolt spacer. If replacing worn out wire rope, remove the rope from the u-bolt and dispose of the wire rope properly. Insert the new wire rope from the front of the winch until 3 to 4 inches extend through the U-Bolt. Tighten nuts evenly.

WARNING! PERIODICALLY RETIGHTEN THE NUTS ON THE U-BOLT TO ENSURE CABLE IS BEING GRIPPED PROPERLY.



2.3. Rotate the knock-out handle into the rear rest position, which will engage one of the lock/release dogs into a ratchet wheel. The winch is now ready for spooling wire rope onto the drum.



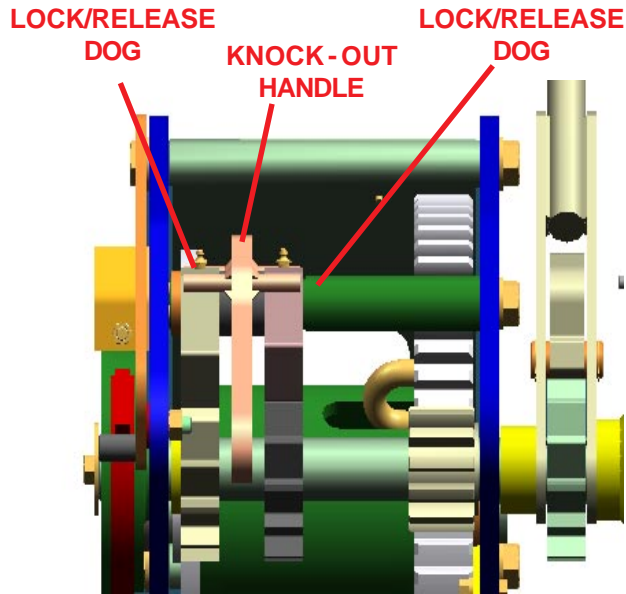
BACK

FRONT

2.4. Turn the handwheel toward the back of the winch to wind the wire rope onto the drum. Maintain enough tension on the rope to be sure the first coil begins snugly against the side of the drum and each successive coil is snug against the previous coil. Check to make sure the rope is reeled in from the bottom of the drum. (If the winch is equipped with a spinner, the spinner may be used to spool the rope more quickly.)

WARNING! FOUR (4) COMPLETE COILS OF THE WIRE ROPE MUST BE ON THE DRUM AT ALL TIMES IN ORDER FOR THE WINCH TO ATTAIN ITS FULL HOLDING CAPACITY. OTHERWISE, THE ROPE CAN PULL FREE OF THE U-BOLT AND THE WINCH AND CAUSE A DANGEROUS SITUATION.

3. APPLYING TENSION TO ROPE



3.1. Position knockout handle toward the back of the winch which will cause one of the two dogs to engage a ratchet wheel and prevent wire rope payout.

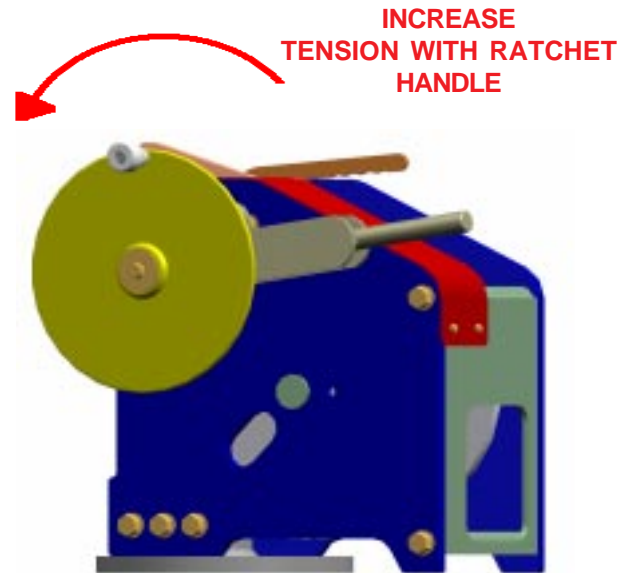
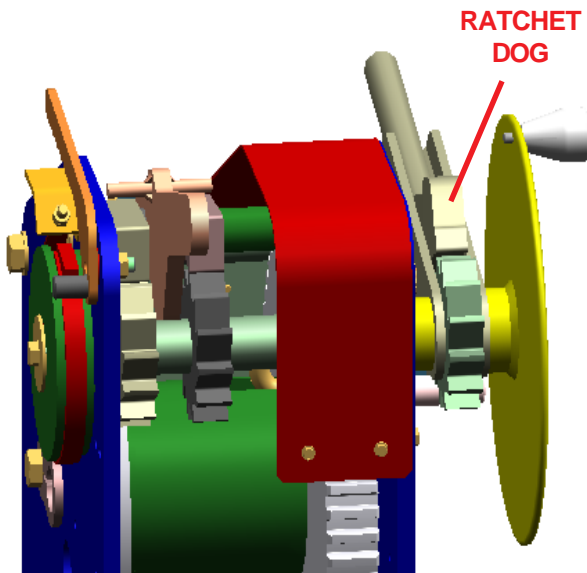
3.2. Turn handwheel toward the back of the winch to wind in and tighten the wire.

3.3. When the handwheel can no longer be turned, additional tension can be added by using an extension pipe on the ratchet handle.

3.4. Slip an extension pipe over the end of the ratchet handle.

3.5. Rotate the extension pipe and ratchet towards the back of the winch into a near horizontal position.

3.6. Check to make sure the ratchet dog is completely engaged in the ratchet wheel.



3.7. Apply downward force to the extension pipe (with palms open) to wind in and tension the wire rope.

3.8. Lift the ratchet up and forward to engage a different tooth on the ratchet handle, ratchet wheel.

3.9. Repeat Steps 3.5 through 3.8 until desired tension is achieved.

WARNING! DO NOT JUMP ON THE EXTENSION PIPE! SEVERE INJURY COULD RESULT!

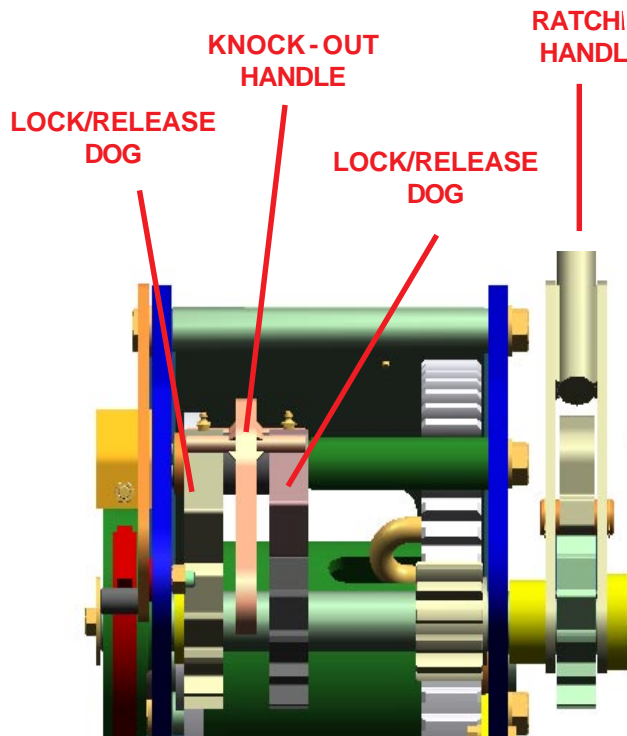
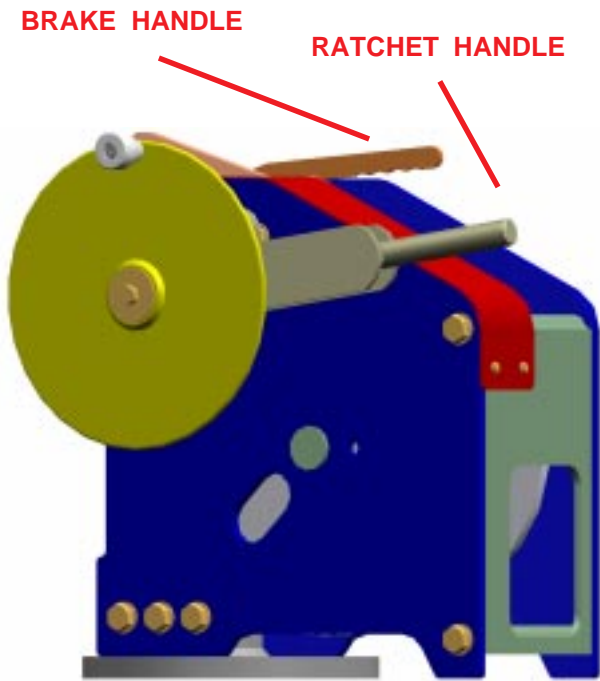
3.10. When desired tension is achieved, rotate the ratchet handle toward the front of the winch and position it near the horizontal position with the ratchet handledog disengaged. the locking dog will continue to hold tension on the wire rope.

WARNING! DO NOT OPERATE THE WINCH UNDER EXTREME TENSION. IF TENSION IS TOO MUCH TO BE CONTROLLED WITH REASONABLE FORCE BY THE OPERATOR, THEN MANEUVER THE BARGES TO RELIEVE TENSION

3.11. Remove the extension pipe and store it in its proper place.

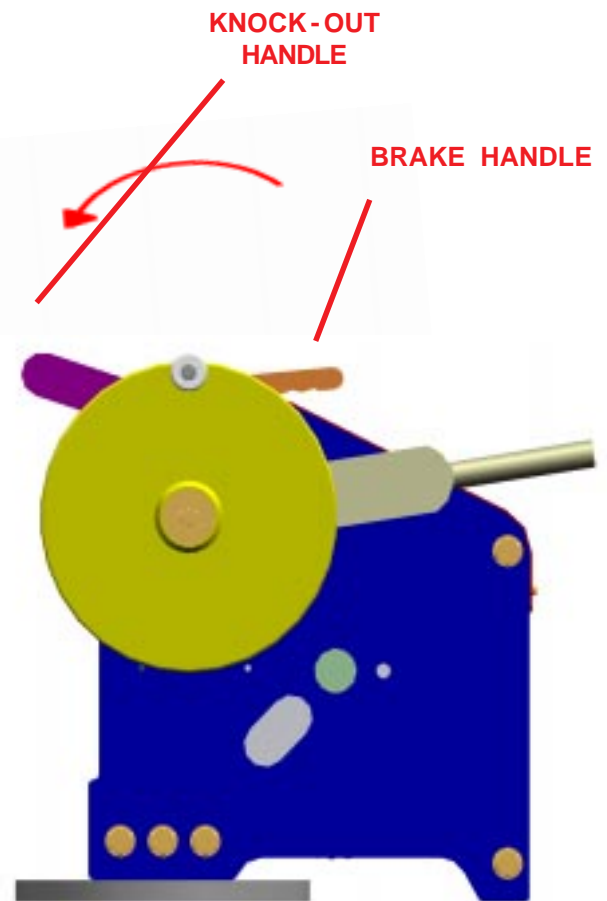
WARNING! NEVER LEAVE THE EXTENSION PIPE ON THE RATCHET HANDLE. NEVER LEAVE THE PULL-UP DOG ENGAGED IN THE RATCHET WHEEL. SEVERE INJURY COULD RESULT!

4. RELEASING THE LOAD



4.1. Make sure the area around the winch is clear of debris or foreign objects.

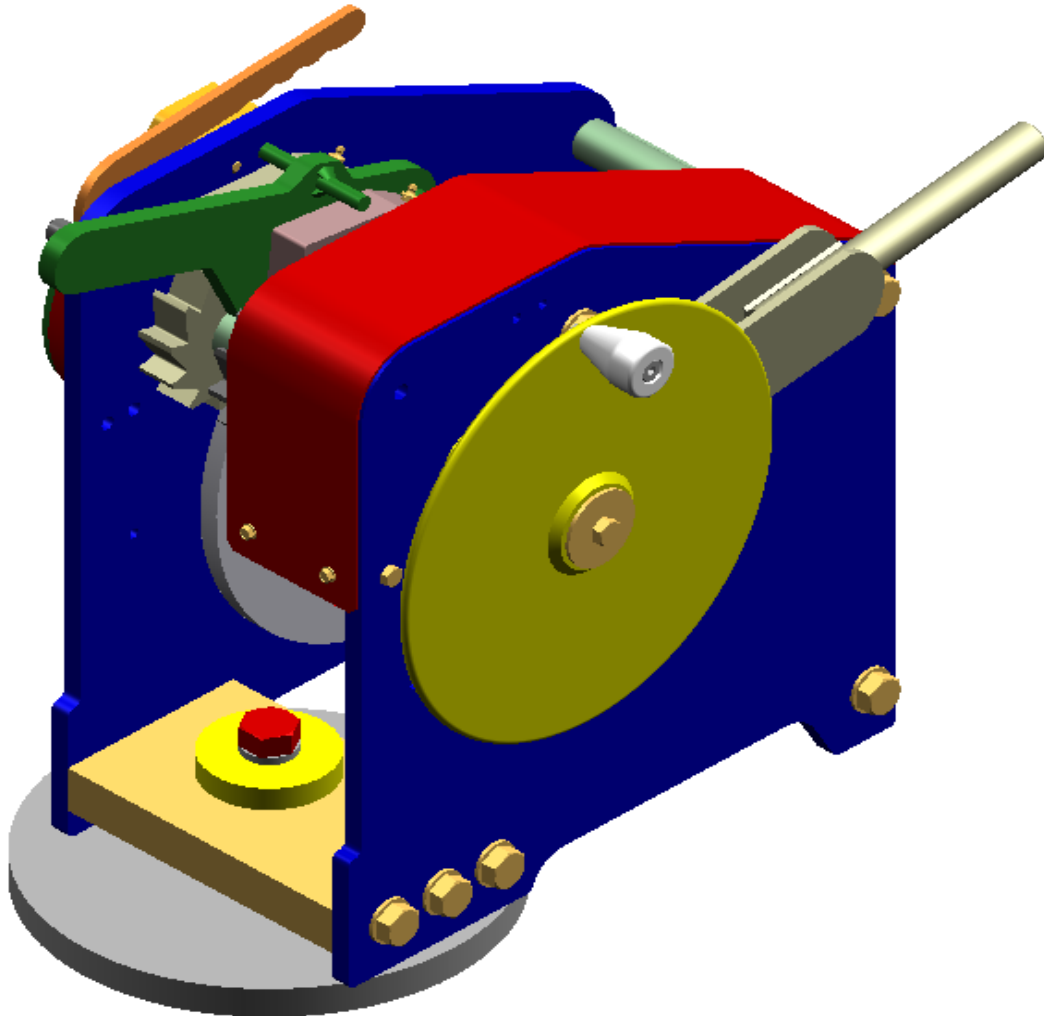
4.2. Make sure the ratchet handle and pull-up dog have been completely disengaged from the ratchet wheel in the ratchet handle. Also make sure the ratchet handle is in the forward resting position. At this time the locking dog is maintaining the tension on the wire rope. While standing to the brake wheel side of the winch, rotate the knockout handle toward the front of the winch. Pull the brake handle up and toward the back of the winch. While maintaining tension on the brake handle, strike the knockout handle with a dead blow handle. This will cause the locking dog to disengage and allow the operator to feather off the load with the use/assistance of the hand brake. Free wheeling of the winch drum and fouling of the wire rope can be minimized with proper use of the brake handle.



5. WINCH MAINTENANCE

5.1. All grease fittings should be lubricated **per operators's maintenance schedule using** heavy-duty grease such as Keystone Moly 29.

5.3. Inspect the winch carefully and completely on a regular basis for worn gears and dogs, cracked welds, and other damaged or worn parts. If any worn, cracked or damaged parts are found, stop use immediately and remove the winch from service until all appropriate repairs are completely performed.



W. W. PATTERSON COMPANY

3 Riversea Road, Pittsburgh, PA 15233 • Phone (800) 322-2018 • Fax (412) 322-2785

REV.	DESCRIPTION	REVISIONS

ITEM	QTY.	FILE NAME	DES
32	1	A20125_1.pwd	FRONT GUARD WELDMEN
33	1	A20132.par	DRUM SPACER
34	1	A20141.asm	FABRICATED BRAKE HANI
35	1	A20150.pwd	BRAKE BRACKET
36	1	A20154.par	HANDLE
37	1	A20155.par	MOUNTING BLOCK
38	1	A20156.asm	STUD MOUNT ASSEMBLY
39	2	A20204.asm	SIDEPLATE
40	1	A20206_1.asm	PNION SHAFT ASSEMBLY
41	1	A20208.asm	DRUM SHAFT WELDMEN
42	1	A20215.par	RATCHET SPACER
43	1	A20216.par	TOP TEROD
44	1	A20217.par	OUTSIDE DOG SPACER
45	1	A20221.asm	ROPE DRUM COMPLETE
46	2	A20222.par	DOG SPACER

ITEM	QTY.	FILE NAME	DESCRIPTION
1	2	I010.par	3/8 X 1 1/4 HEX HEAD GD 5
2	1	I013.par	1/2 LOCKING JAM NUT
3	2	I015.par	1/2 X 1 HEX HEAD GD 5
4	1	I032.par	3/4 X 1 HEX HEAD GD 5
5	4	I038.par	1/4 X 20 X 5/8 TYPE F
6	1	I050.par	FLAT WASHER 1 1/16 OD X 17/32 D X 3/32 THK.
7	1	I125.par	1/2 JAM NUT ST. INYL-ONI
8	2	I132.par	1/4" STRAIGHT GREASE FITTING
9	5	I133.par	1/8" STRAIGHT GREASE FITTING
10	2	I197.par	2 1/2" X 17/32" X 1/8" TK WASHER
11	3	I490.par	3/8 LOCKING FULL NUT
12	4	A10012.par	HELICAL SPRING LOCK WASHER ANSIB18.211. REGULAR 3/8
13	2	A10014.par	5100-100 SNAP RING
14	12	A10017.par	3/4 X 2 HEX HEAD GD 8
15	1	A10021.par	1/2" DIA. SHOULDER BOLT, 2" SH. LENGTH
16	2	A10025.par	HEX HEAD CAP SCREW ANSIB18.21 3/8X1, GRADE 8
17	1	A20004_1.par	SHROUD
18	1	A20029.pwd	KNOCKOUT HANDLE WELDMEN
19	1	A20036.par	RATCHET STOP
20	2	A20040.par	DOG MACHINED
21	1	A20049.par	RATCHET DOG MACHINED
22	1	A20051.par	RATCHET PIVOT PIN
23	1	A20061.pwd	HANDWHEEL WELDMEN MACHINED
24	1	A20068_3.asm	BRAKE BAND
25	1	A20071.par	GEAR SHROUD MOUNTING BRACKET M40
26	1	A20092_5.par	BRAKE WHEEL - MACHINED
27	1	A20096_1.par	RATCHET WHEEL
28	1	A20099.pwd	RATCHET WELDMEN
29	1	A20101.par	KEY, 3/8" SQ. X 1-1/8" LG.
30	1	A20102.par	KEY, 3/8" SQ. X 1.38" LG.
31	1	A20103.par	KEY, 3/8" SQ. X 1-5/16" LG.

NOTES:

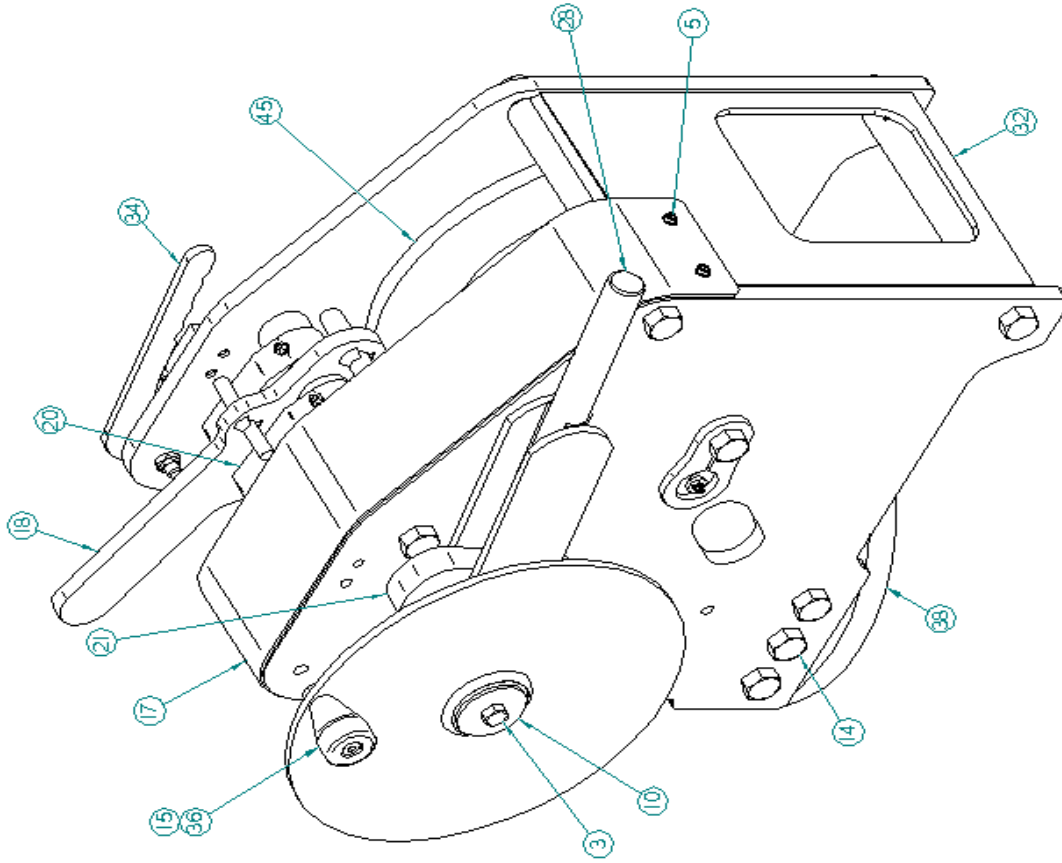
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X=.41 XX=.401 XXX=.4005 ANGULAR =.45"		MODEL NO. WWP40BC
		Material: SEE BOM

REVISIONS

REV.	DESCRIPTION	DATE	CHG.	APPD



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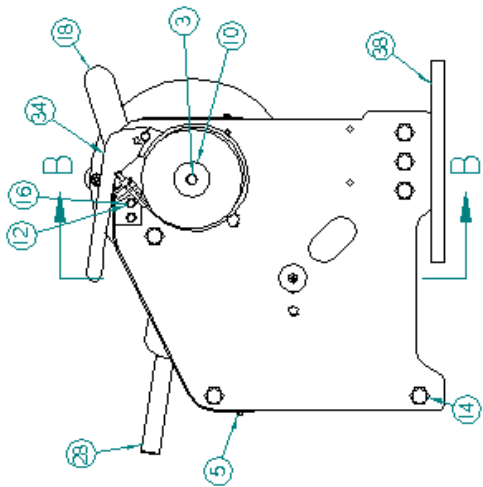
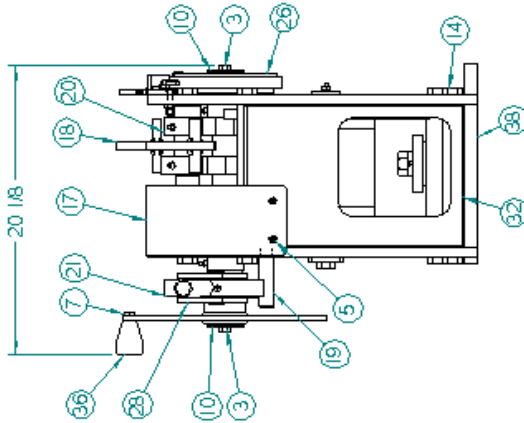
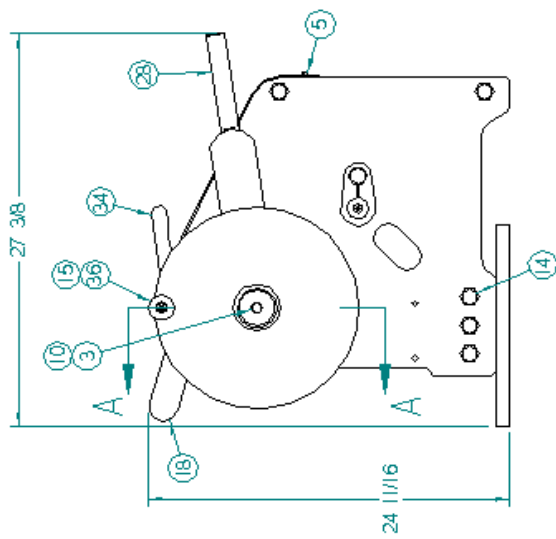
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Since 1838

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		MODEL NO.	WWP40BC	Revision:	-
Material:		SEE BOM		Dwg No.	A20203
				Sheet:	1 of 6

UNLESS OTHERWISE SPECIFIED:
 ALL DIMENSIONS ARE IN INCHES
 AND ALL TOLERANCES ARE AS
 FOLLOWS:
 X = ±.1
 XX = ±.01
 XXX = ±.005
 ANGULAR = ±5°

NOTES:

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REV.	DESCRIPTION	DATE	CHG. APPD.

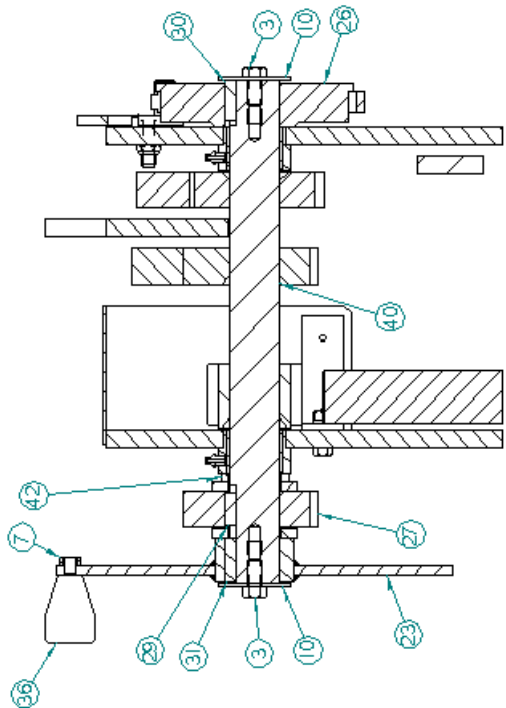


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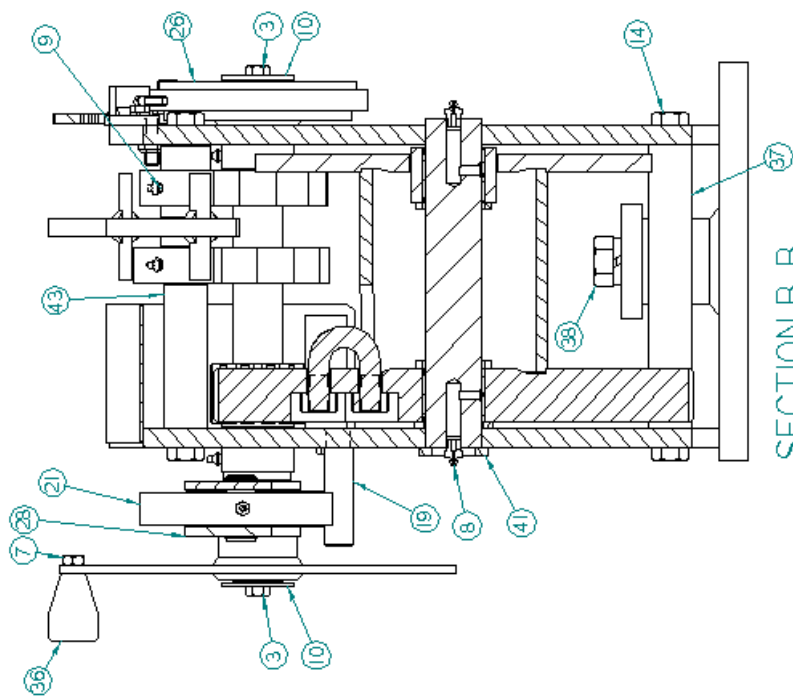
PATTERSON <small>Since 1838</small>		Scale: 1/8"	Part No. A20203	Chk'd By:
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SECTION A-A



SECTION B-B

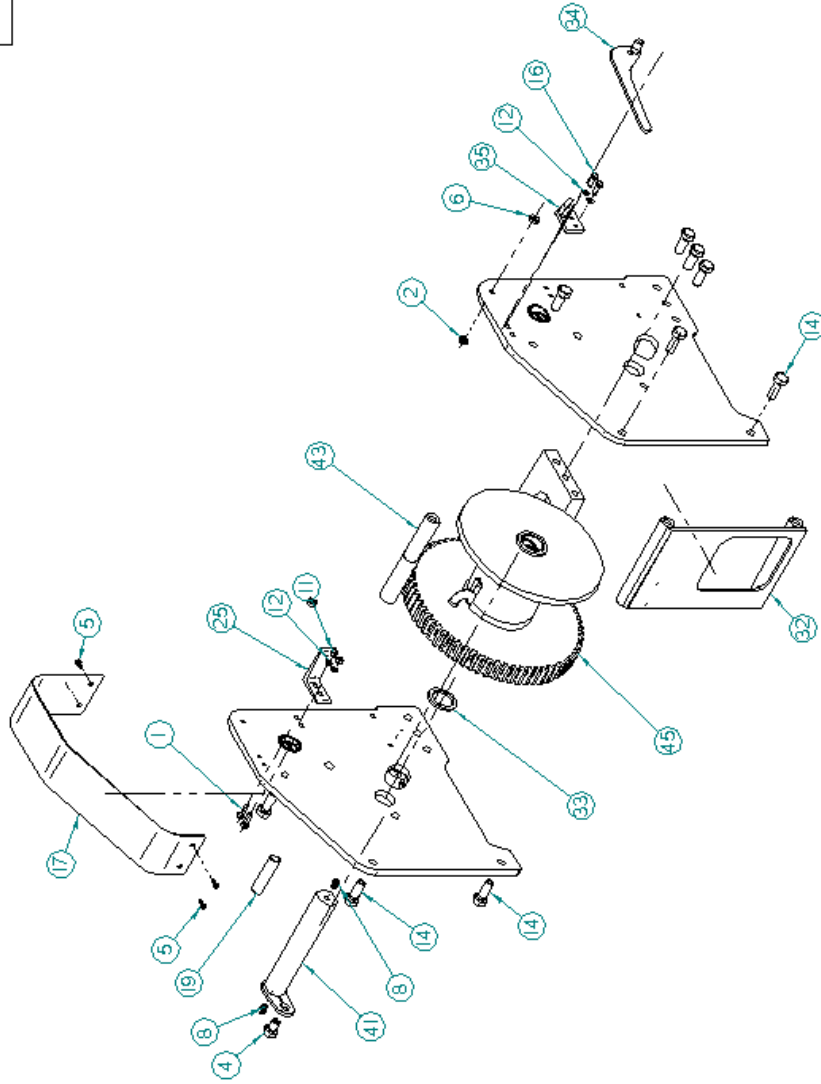
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UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AND ALL TOLERANCES ARE AS FOLLOWS: X .-01 XX .-01 XXX .-005 ANGULAR .-45°	Scale:	1/8	Part No.	A20203	Chkd By:	
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			Material:	SEE BOM	Revision:	-
					Dwg No.	A20203
					Sheet:	3 of 6

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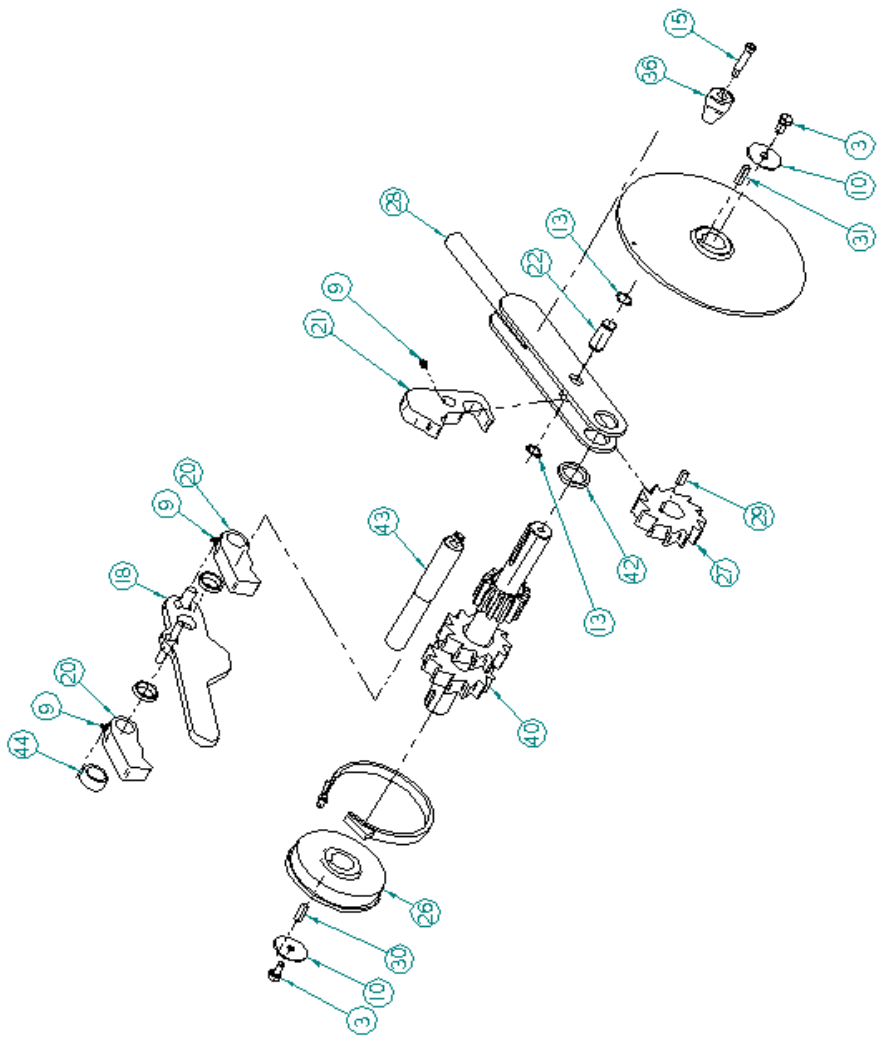
FRAME - EXPLODED VIEW

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 X .-1
 XX .-01
 XXX .-005
 ANGULAR .-5°

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