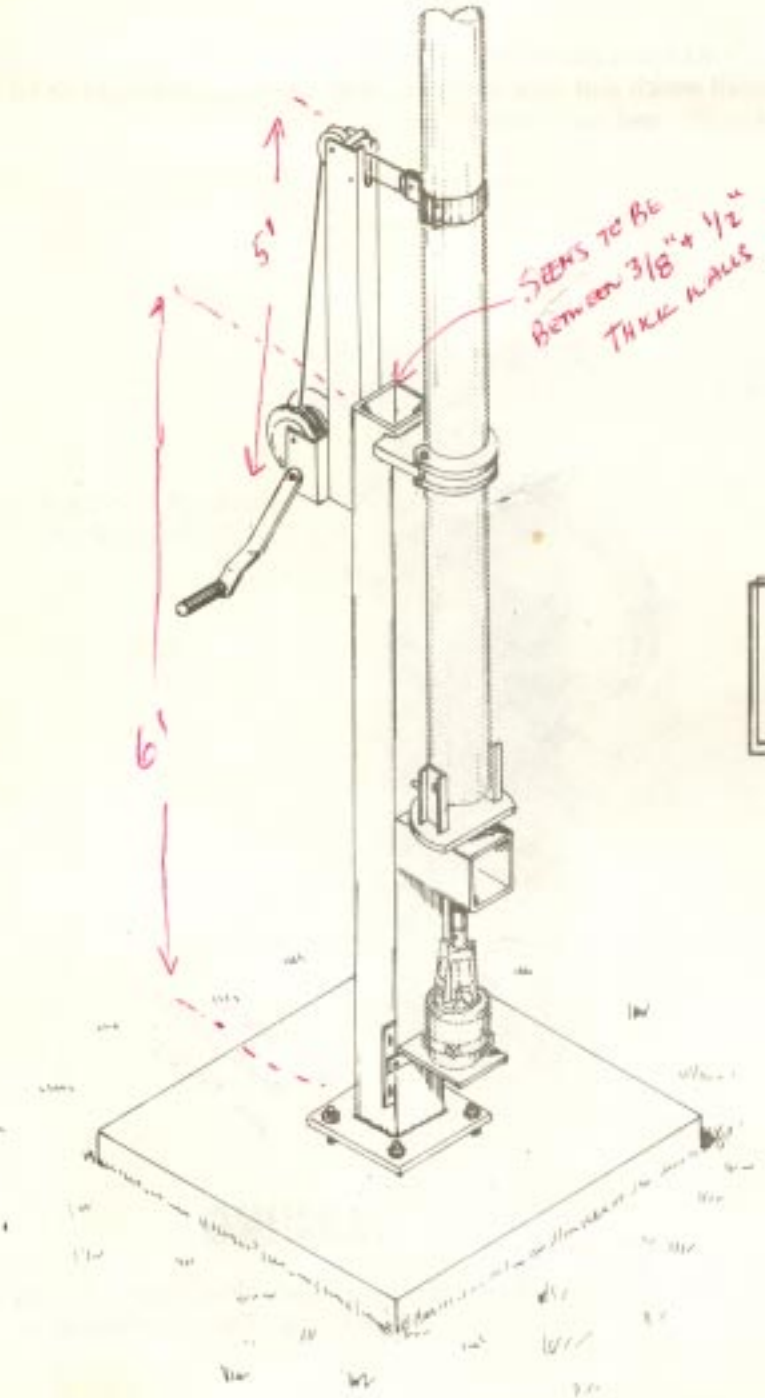
INSTALLATION INSTRUCTIONS

"WARNING"
IF YOU DO NOT READ THESE INSTRUCTIONS FIRST ALL WILL GO WRONG!



RB-61B

Rotor Base Raising Fixture for MT-61B Tower

"WARNING"

INSTALLATION OF THIS PRODUCT NEAR POWER LINES IS DANGEROUS. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS.

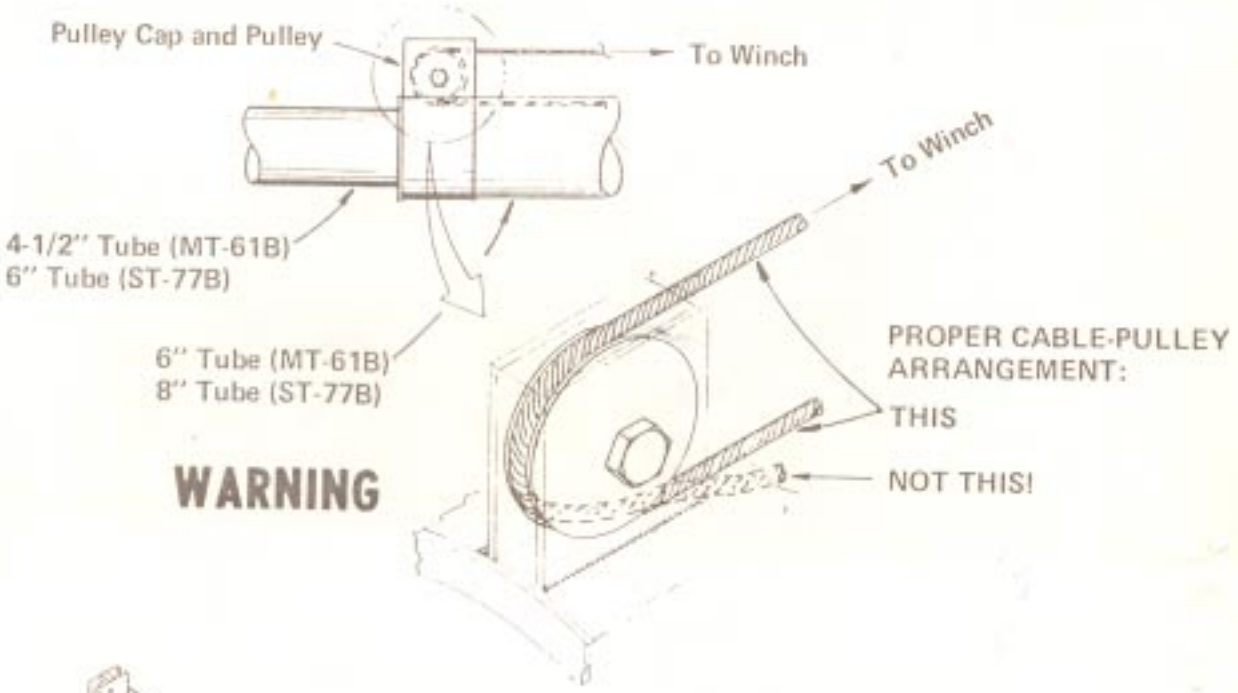
WSI WILSON SYSTEMS, INC.
4286 S. Polaris Ave., Las Vegas, Nevada 89103
(702) 739-7401 — Toll-Free Order Number 800-634-6898

08-01-80 Rev.

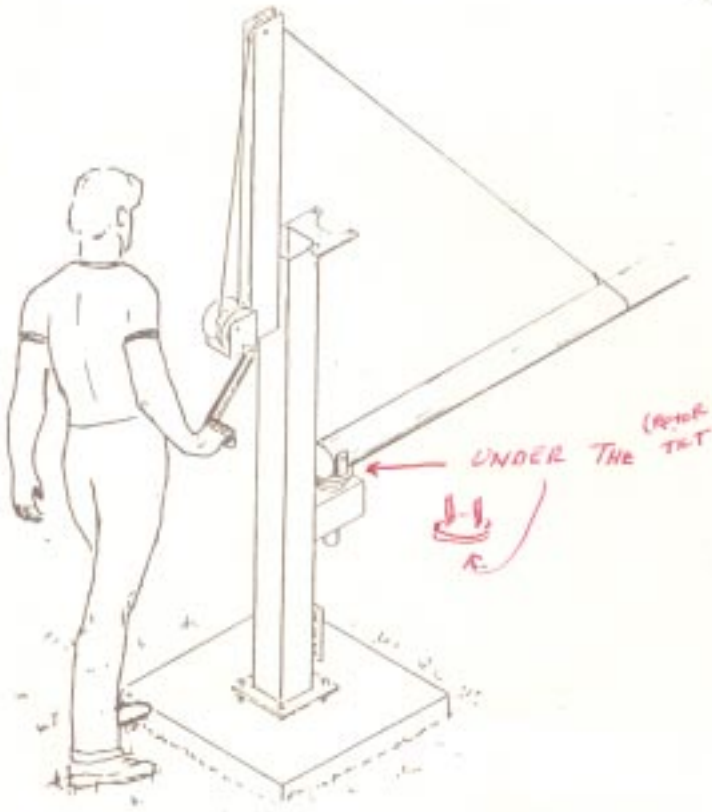
SAFETY BULLETIN

The following general safety precautions should be strictly adhered to to prevent possible harm to yourself and/or damage to the tower and its components.

1. Prior to raising your tower and its antenna make absolutely certain that the winch cable is around the pulley *first*, as shown below. Next, install winch and take up cable slack. Check pulley again to be sure the cable is properly engaged with the pulley and no "roll-off" occurs.

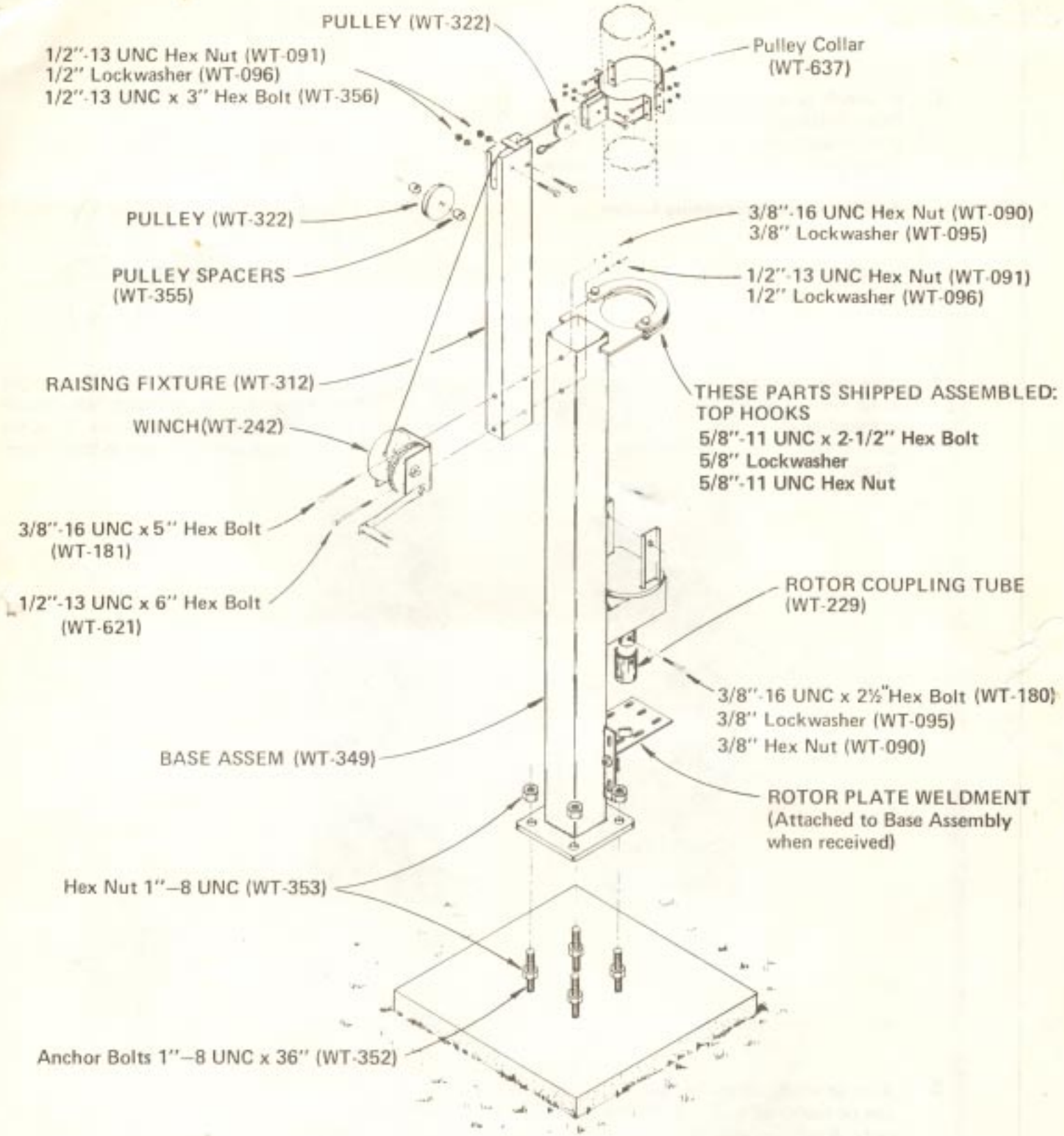


WARNING



WARNING

2. Keep all personnel clear when raising tower to horizontal. Take no chances — keep clear!

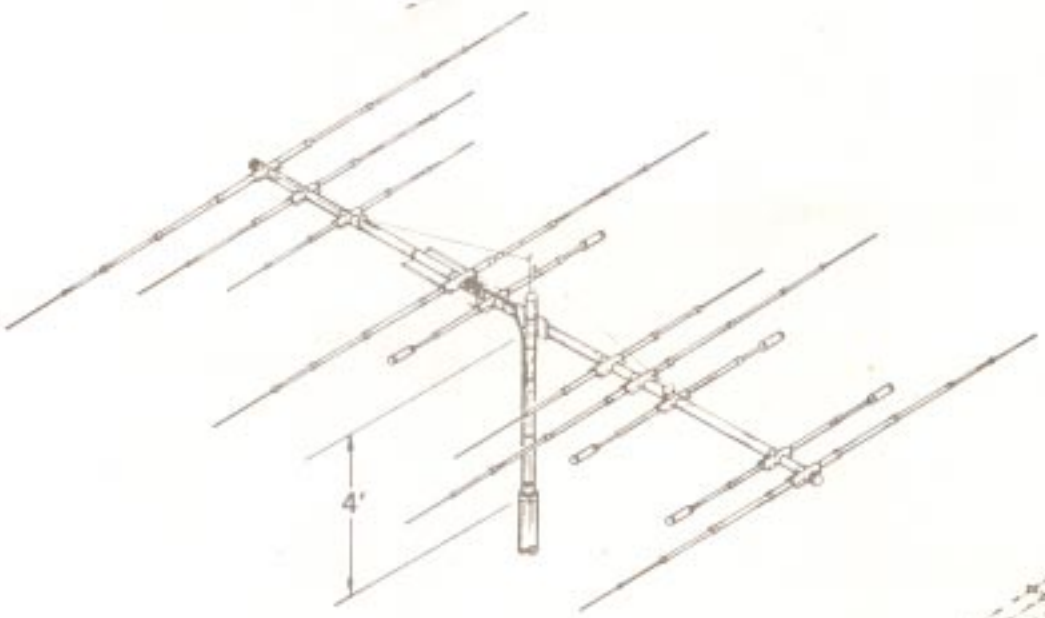


PARTS IDENTIFICATION ILLUSTRATION

This illustration is intended to aid in identifying the various parts of the RB–61B Raising Fixture listed on the adjacent page. Complete assembly details are shown in subsequent pages.

3. If winch is excessively hard to turn — Stop! This is an indication that something is drastically wrong. Lower your tower and make a full investigation of the cable and pulley alignment as described in Step 1 above, before proceeding further.

4. The wind load specifications given in the tower instructions are for 50 mph winds only. Since most areas receive winds in excess of 50 mph on occassions, we recommend that you keep your tower cranked down at least 15 ft. below maximum height when not in use or during windy seasons. Also, we do not recommend going above 4 ft. on the 2" O.D. tubing with a large antenna such as the Wilson SY40.



5. Also, in windy areas the wind load capability of Wilson towers can be increased to 20 sq. ft. at 80 mph by guying the top section only. A rotating guy collar and guy kits are available for all towers.

Your Rotating Base Raising Fixture is designed to handle your Wilson 61-ft. Freestanding Tower without the aid of any other above-ground supports. In order to do this, however, it must be securely anchored in the ground in a manner sufficiently strong to withstand the worst probable weather conditions. Since soil is a highly variable and unpredictable substance, there is no reliable way to foretell its load-bearing capacity without making extensive tests at the actual site. For this reason, the customer must assume responsibility for providing construction suitable to the site selected, and for complying with all applicable laws and building codes. We strongly recommend you obtain the advice of a local engineer or contractor before starting any work.

In a 50 mph wind a 12 square-foot antenna will be subjected to a force of 100 lbs., which will act to push your tower over. Your anchor must be able to withstand this, or any greater force that may reasonably be expected to develop. If you have "normal" soil as defined by E.I.A. Standard RS-222-C, a reinforced concrete base 3 ft. square by 5½ ft. deep... with the anchor bolts cast in the concrete...will often be adequate. "Normal" soil per RS-222-C is "cohesive type soil with an allowable not vertical bearing capacity of 4000 lbs. per square foot and an allowable net horizontal pressure of 400 pounds per square foot per lineal foot of depth to a maximum of 4000 pounds per square foot. Rock, non-cohesive soils, or saturated or submerged soils are not to be considered as normal." If your soil is not "normal", you may need a differently constructed base.

To construct a base in "normal" soil, dig a hole 3 ft. square by 5½ ft. deep, and secure a 2x4 wood form at the top. Use at least four pieces of No. 6 re-bar for vertical reinforcement, arranged in a square pattern 3 – 4 inches from the sides of the hole. Tie togther with No. 4 or larger horizontals, spaces about twenty one inches apart, (Figure 2). The hole will require 2 cu. yds. of concrete.

Pressemble the four anchor bolts to a wooden template with a nut on each side...allow about 1/2 inch of the bolts to proturde above the upper nuts. Center the template on the form and temporarily nail into place. Pour the concrete into the hole carefully so as not to overly distrub the reinforcing framework. Take extra care when you reach the bottoms of the achor bolts. The bolts can be kept in line by pouring a little concrete at a time and straightening as the hole fills up. Allow the concrete to set-up to the point that it is still workable. Then remove the top nuts and the template, Make certain that the anchor bolts are not disturbed. Tap around the entire form with a hammer – this allows the concrete to settle against the sides of the form and will give a smooth appearance when the form is removed. Using a concrete trowel crown the top of the concrete slightly to allow good water run-off. It is a good idea to leave the form in place for a 7 day period since the edges of the concrete will be especially prone to damage during this period of time. Allow the concrete to cure for at least 7 days. At this point the form may be removed by tapping lightly with a hammer to break the form loose. The fixture can now be installed.

Thread a nut 2 inches down on each of the four anchor bolts. Set your fixture on the bolts so that it rests on these four nuts, and secure with four additional nuts on top. Level the fixture by adjusting these nuts up or down as required. (A carpenter's level is a must for making sure the fixture is straight and true.) Tighten securely after leveling, (Figure 3).

ASSEMBLEY INSTRUCTIONS:

After you have installed and leveled your rotating base, you are ready to assemble the raising fixture. Begin by installing the pulley in the tip end of the fixture tube, as shown in Figure 4 using the hard ware shown.

Next assemble the winch and fixture to the base, using the hardware illustrated. Tighten securely. Install the winch handle per the winch manufacturer's instructions. Then thread the plain end of the cable assembly over the pulley, and attach to the winch as shown.

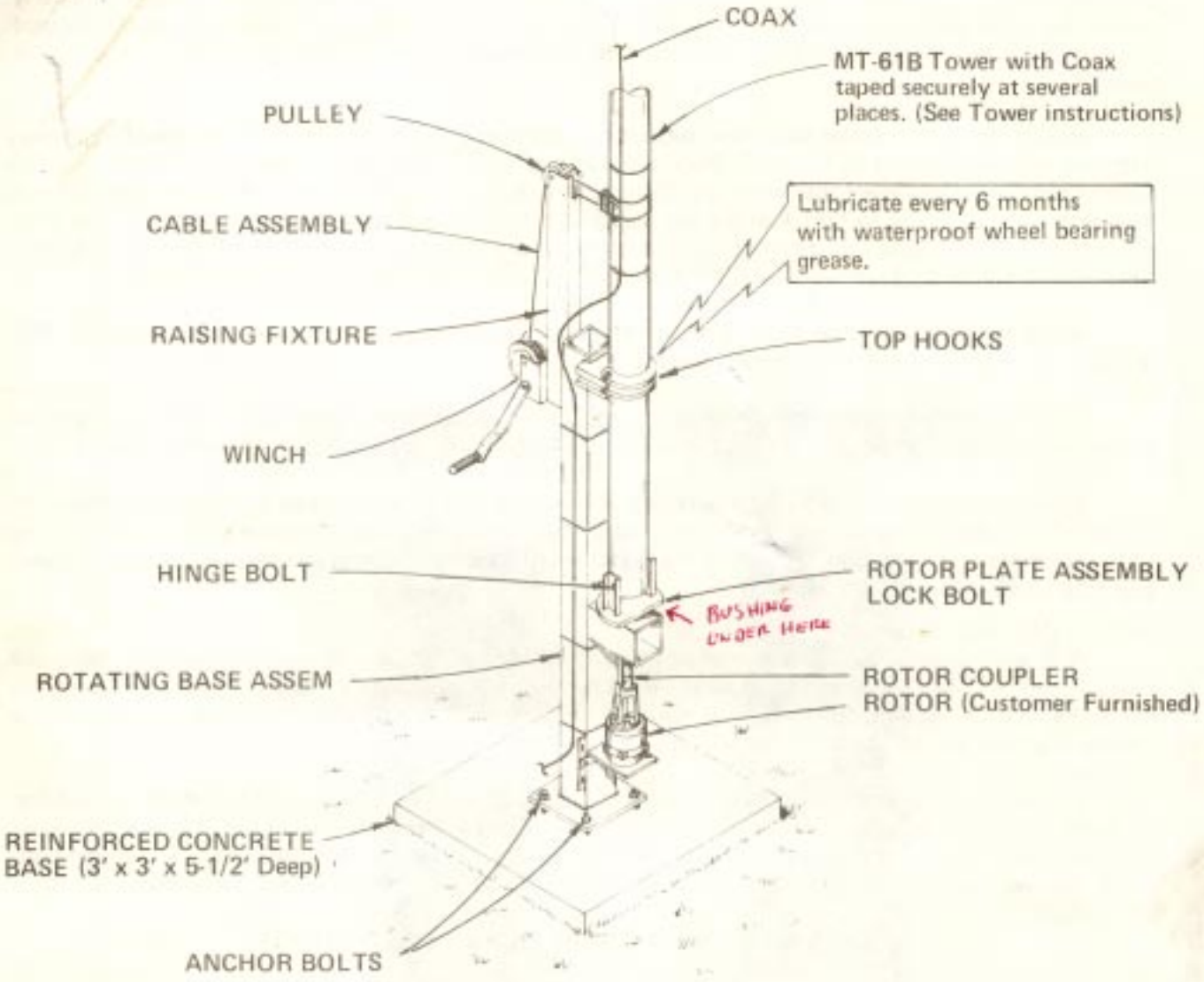
TOWER INSTALLATION:

Set your tower in an approximately horizontal position, with the base end between the ears on the rotor shaft assembly, and secure with the hinge bolt (supplied with the tower) as shown in Figure 5. DO NOT OVERTIGHTEN the hinge bolt – a 1/4 turn beyond full compression of the lockwasher is sufficient. Complete your tower assembly per the tower instructions.

PARTS LIST

RB-61B

PART NUMBER	QUANTITY	DESCRIPTION	CHECK LIST
WT-349	1	Rotating Base Assembly, with Rotor Plate Weldment Attached	
WT-312	1	Raising Fixture Weldment	
WT-350	1	Raising Fixture & Accessory Parts Kit (Packaged in tube)	
WT-639	1	Hardware Box	
TUBE CONTAINS:			
WT-242	1	Winch	
—	1	Winch Handle (See winch instructions)	
WT-638	1	Raising Fixture Cable Assembly (29' long)	
WT-229	1	Rotor Coupling Tube (2" O.D. x 8-1/2")	
WT-352	4	Anchor Bolt, 1"-8 UNC x 36" long	
WT-353	8	Hex Nut, 1"-8 UNC	
HARDWARE BOX CONTAINS:			
WT-637	1	Pulley Collar	
—	1	Winch Instructions	
—	1	RB-61B Instructions	
WT-354	1	Hardware Bag	
HARDWARE BAG CONTAINS:			
WT-322	2	Pulley, 3-1/2" O.D. x 1/2" Center	
WT-355	2	Spacer, Pulley	
WT-356	2	Hex HD Bolt, 1/2"-13 UNC x 3" long	
WT-621	1	Hex HD Bolt, 1/2"-13 UNC x 5" long	
WT-181	1	Hex HD Bolt, 3/8"-16 UNC x 5" long	
WT-180	1	Hex HD Bolt, 3/8"-16 UNC x 2-1/2" long	
WT-608	4	Hex HD Bolt, 3/8"-16 UNC x 1-1/2" long	
WT-641	1	Hex HD Bolt, 3/8"-16 UNC x 1-3/4" long	
WT-632	1	Hex HD Bolt, 1/2"-13 UNC x 2-1/2" long	
WT-091	4	Hex Nut, 1/2"-13 UNC	
WT-090	7	Hex Nut, 3/8"-16 UNC	
WT-096	4	Lockwasher, Split Ring, 1/2"	
WT-095	7	Lockwasher, Split Ring, 3/8"	
—	1	Winch Hardware Bag (See winch instructions)	



BASIC INSTALLATION PROCEDURE:

This figure illustrates what your Rotor Base Raising Fixture with the MT-61B Tower attached will look like when completed. All major components are identified while installation and assembly details are shown in the following pages. Your basic order should be:

1. Dig the 3' x 3' x 5-1/2' deep hole for the reinforced concrete base. Assemble the re-bar framework and anchor bolt template per Figure 2. Pour concrete and let cure 7 days before proceeding further.
2. When concrete is cured, attach and level Rotating Base Assem (Figure 3) and attach Raising Fixture, Winch, Cable Assem and Pulley as shown in Figure 4.
3. Attach your MT-61B Tower and antenna and raise into position as shown in Figure 5.
4. Install Rotor per Figure 6.
5. Finally, tape the Coax to the Base Assembly at several places as illustrated above. Be sure to leave a sufficiently large loop in it as shown to allow 360° tower rotation without binding.

FIGURE 1

DRAWN ETJ
APPROVED _____

RB -61B

MID CAFF

Place a temporary support under your tower about halfway out from the base, or further, and of sufficient height to lift the tower to 15-degrees above the horizontal – or more, if additional clearance is needed for your antenna. Install your antenna per the antenna manufacturer's instructions, and extend the mast tube as desired – but no further than the windload area of the antenna permits – and lock in position.

Mount the pulley collar weldment securely to the tower approximately 82" from the hinge point with the hardware shown in Figure 5. Place a portion of the thimble end of the cable between the ears which hold the pulley, insert the pulley and fasten it in place with the 1/2" bolt, lockwasher and hex nut. Be sure the pulley is free to turn. Pull the cable around the pulley and install the 3/8" hex bolt. Insert the thimble end of the cable into the slot in the raising fixture and secure it with the 1/2" bolt as shown. Crank the winch to take up cable slack only.

Remove one of the top hook bolts, and loosen the other; pivot the hooks approximately 180-degrees, well out of the way to receive the tower.

CAUTION: Before raising your tower, make a final check to confirm that everything is tight and secure, and correctly installed. Have everyone stand clear and well out of danger – take no chances.

When ready, slowly raise your tower into the vertical position. You may have to guide it into the center of the bearing hooks, but take care to keep your hands well clear. Replace all bolts. Be sure the tower turns freely before fully tightening the bolts. Then detach the raising fixture cable from the tower, and take up all slack with the winch.

ROTOR INSTALLATION:

With the tower winch at its normal position at shoulder height, it will not be possible to rotate the tower a full 360-degrees. Should full rotation be needed, you will have to locate this winch above the raising fixture. Or, as a compromise, you may remove the raising fixture after the tower is secured in the vertical position, and locate the tower winch above the bearing hooks.

Your rotor mounts to the adjustable plate at the base, and couples to the rotor shaft through the 2" diameter rotor coupler, as shown in the illustration. The plate adjusts up and down to accommodate different rotor sizes. If the standard hole pattern in the plate does not match the mounting holes in your rotor, you will have to drill additional holes as needed. Be sure to keep the rotor centered on the rotor shaft assembly.

MAINTAINING YOUR TOWER AND RAISING FIXTURE

Like anything that is subjected to constant weathering, your tower and raising fixture must be inspected regularly for signs of wear and corrosion, and repaired promptly whenever damage occurs. The frequency of inspection needed depends on both the severity of the weather and the severity of the application. With light antenna loads and calm dry weather, a thorough inspection every six months is usually adequate. But with heavy antenna loads and strong winds coupled with rain or snow, an inspection every month, or even more frequently, will be required. And, of course, a thorough inspection immediately after every major storm is always necessary. In addition, tower tube guides and raising fixture top hooks and rotor plate shaft bearing should be well lubricated with conventional automotive wheel bearing grease (or equivalent) at least twice a year.

In addition to an inspection program to detect damage, you should also have a program of routine maintenance to prevent damage. The settling of building foundations, changes in mean air temperature, normal creep of metals under stress, and numerous other diverse factors can all have an effect, and may need to be compensated for. Bolts and nuts can loosen from vibration, and may have to be retightened to original specifications, and rotating parts always need periodic cleaning and lubrication.

Prompt repair of damage is the key to extending the useful life of your equipment. Corrosion usually starts very gradually in small areas, and becomes serious only if neglected. When you discover corrosion . . . especially rusted steel . . . clean it off immediately, and cover with paint. There are numerous products on the market that give excellent results when the manufacturer's instructions are followed carefully. Parts that have suffered physical damage, by whatever means, should be repaired as soon as possible; or if beyond economical repair, should be replaced. Replacement parts for all Wilson products are available through the factory.

After concrete base has cured install fixture on anchor bolts and level by adjusting lower Hex Nuts until fixture is plumb in both directions using your carpenter's level as indicated. Attach remaining Hex Nuts and tighten securely.

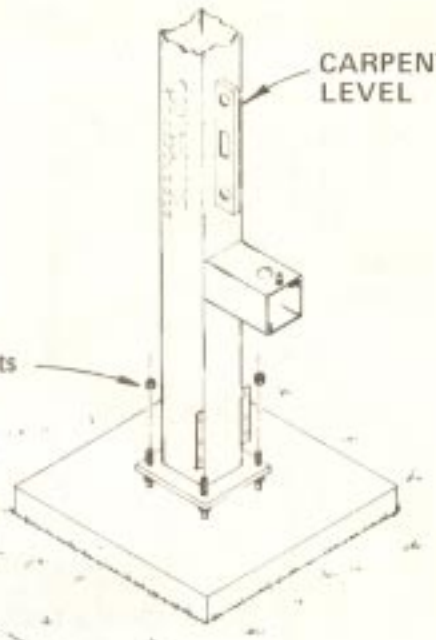
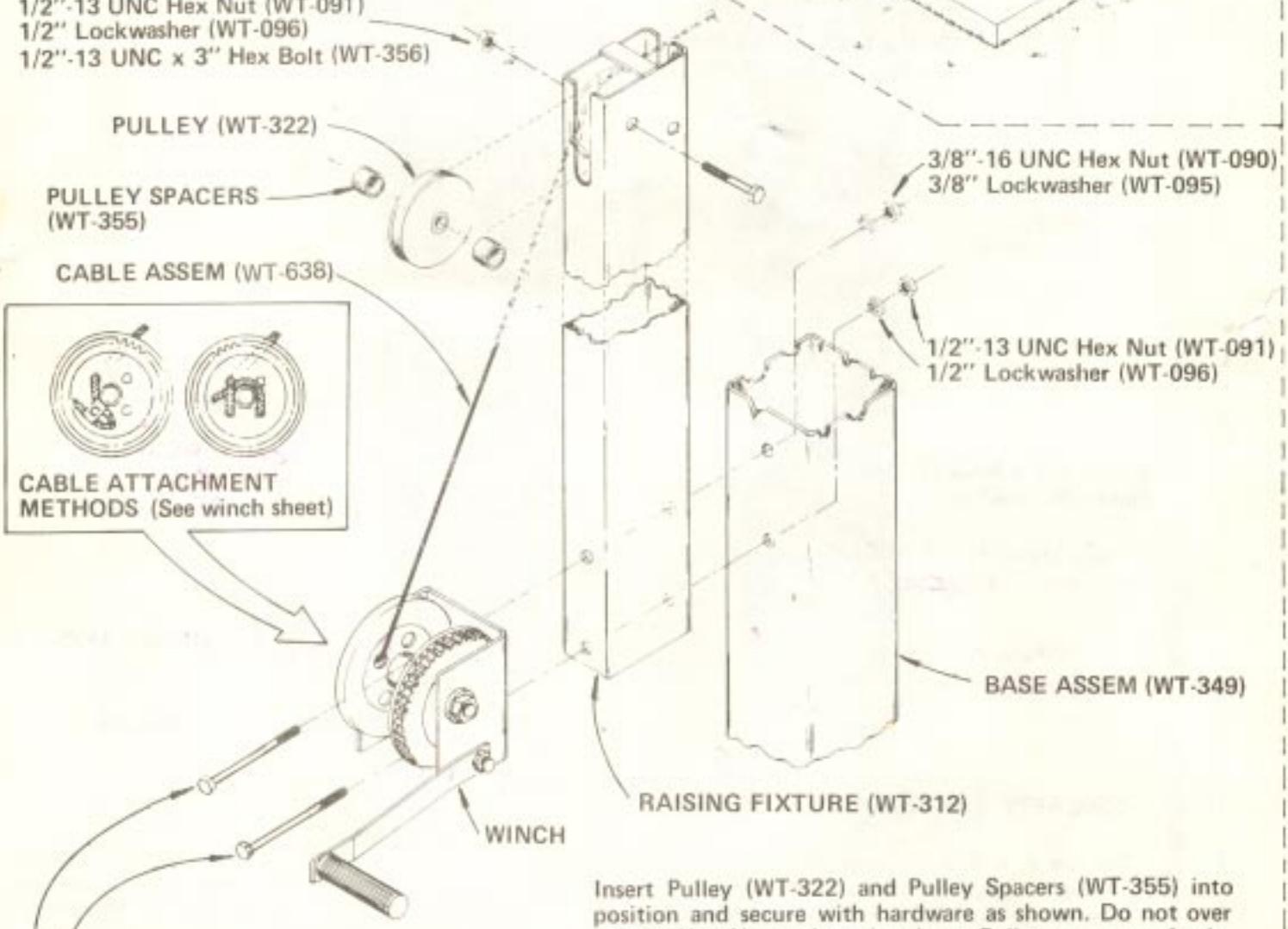


FIGURE 3



Insert Pulley (WT-322) and Pulley Spacers (WT-355) into position and secure with hardware as shown. Do not over tighten Hex Nut and crush tube as Pulley must turn freely. Attach winch and Raising Fixture (WT-312) to Base Assem (WT-349) with hardware shown. Thread free end of cable over Pulley and attach to Winch in one of the methods shown (or Winch Manufacturer's method).

FIGURE 4

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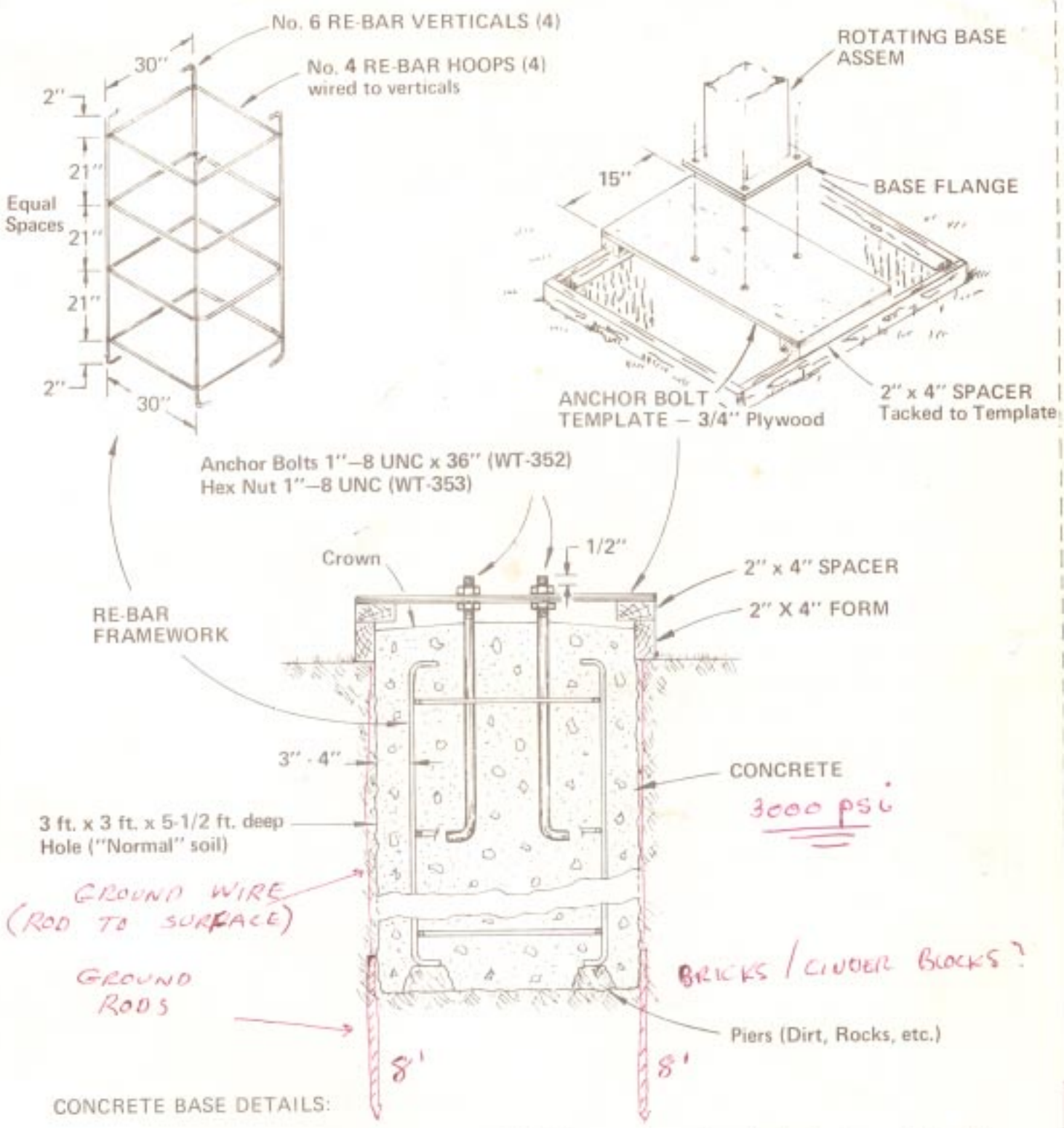

CONCRETE BASE DETAILS:

Dig the 3' x 3' x 5½ deep hole, place and level 2" 4" form, place re-bar piers in bottom of hole (3"-4" high). Assemble re-bar framework as shown above and put in place 3" - 4" sides of hole. Transfer base flange hole pattern to plywood template and attach anchor bolts as shown leaving 1/2" thread exposure for leveling purposes. After concrete has set slightly, crown top surface to insure good water run-off. Remove template gently. Spray exposed anchor bolts and nuts with Rustoleum or any similar rust preventing substance. Allow concrete to cure at least 7 days before installing fixture. Remove form.

FIGURE 2

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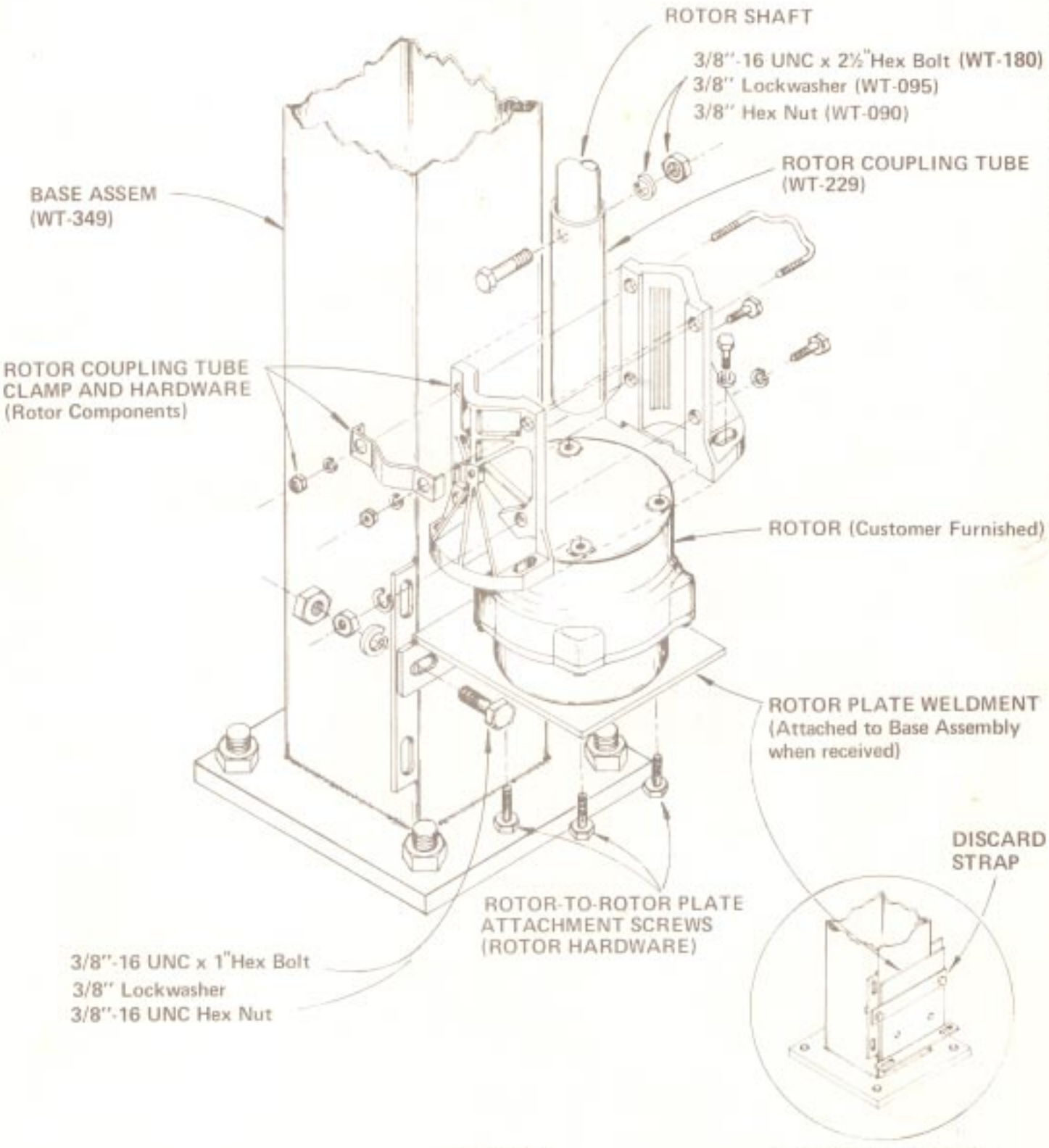

FIGURE 6

DRAWN EFW
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RB -61B

3/8"-16 UNC x 1-1/2" Hex Bolt (WT-608)
3/8" Lockwasher (WT-095)
3/8"-16 UNC Hex Nut (WT-090)
3/8"-16 UNC x 1-3/4" Hex Bolt (WT-641)

1/2"-13 UNC x 2-1/2" Hex Bolt (WT-632)
1/2" Lockwasher (WT-096)
1/2"-13 UNC Hex Nut (WT-091)

PULLEY COLLAR (WT-637)

PULLEY (WT-322)

Note:
When replacing top hooks be sure to place hook marked "T" on top and hook marked "B" on bottom

Insert cable thimble into slot and secure with 1/2" Hex Bolt, Lockwasher and Hex Nut.

1/2"-13 UNC Hex Nut (WT-091)
1/2" Lockwasher (WT-096)
1/2"-13 UNC x 3" Hex Bolt (WT-356)

TOWER OPERATING POSITION

MT-61B TOWER

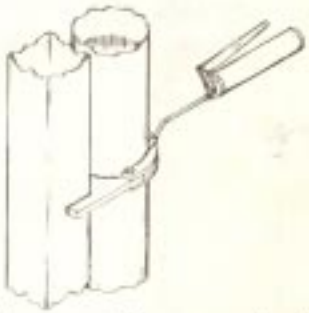
TEMPORARY TOWER SUPPORT

5/8"-11 UNC x 2-1/2" Hex Bolt
5/8" Lockwasher
5/8"-11 UNC Hex Nut
(Shipped With Raising Fixture Weldment)

TOP HOOKS

EACH 1/2" THICK

82" To lower edge of collar

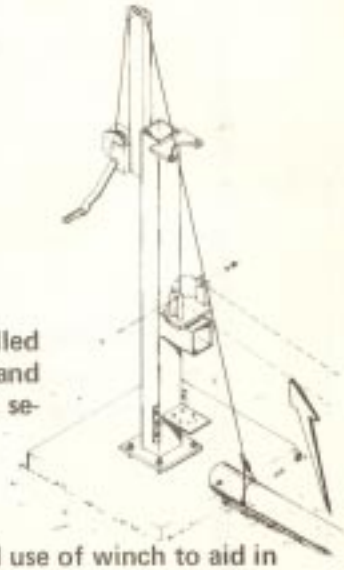


Lubricate guides, top hooks and rotor plate shaft every 6 months with waterproof wheel bearing grease!

Lockbolt

5/8"–11 UNC x 7-1/2" Hex Bolt, Lockwasher and Hex Nut supplied with MT-61B tower.

NOTE: Make certain Lockbolt is installed prior to raising tower to vertical position and when laying over. Remove after tower is securely in place to allow rotation.



WARNING! Leave raising fixture cable attached to your tower until all hardware which holds the tower in place has been securely tightened.

Suggested use of winch to aid in positioning tower on rotor plate assembly. Use half hitch in cable as illustrated above.

FIGURE 5

DRAWN EJS
APPROVED

RB-61B

90 DAY LIMITED WARRANTY

TOWERS

WILSON SYSTEMS, INCORPORATED ("WILSON") warrants that your new TOWER has been manufactured free of defects in design, material and workmanship. If this product fails to give satisfactory service due to defects covered by warranty, including any warranty implied by law such as WARRANTIES OF MERCHANTABILITY OR FITNESS, for a period of NINETY DAYS FROM THE DATE OF PURCHASE, "WILSON" will, at its option, replace or repair the unit, or any defective part free of charge.

To obtain warranty service, contact WILSON SYSTEMS, INC., or should this be inconvenient, pack it securely, and send it with proof of purchase date and a letter explaining the problem, shipping cost prepaid, to CUSTOMER SERVICE DEPT., WILSON SYSTEMS, INC., 4286 SO. POLARIS, LAS VEGAS, NEVADA 89103.

IMPORTANT

Please note: A written "Return Goods Authorization" must first be obtained from "WILSON" prior to shipping anything to the plant, with a copy of the authorization included inside the carton. Warranty service covers only repair or replacement of the TOWER only. "WILSON" is not responsible for costs of removal or reinstallation, or shipping to the place of repair. The warranty period is not extended due to repair or replacement.

"WILSON" reserves the right to make reasonable charges for service if there is evidence of damage due to alteration, misuse or installation not according to the enclosed instructions.

NOTE

After installation, and within 30 days of purchase, a photograph of the installation must be submitted with the warranty card for proper registration of your tower. WARRANTY IS NULL AND VOID IF PHOTOGRAPH AND CARD NOT RETURNED WITHIN SPECIFIED TIME PERIOD.

"WILSON" IS NOT RESPONSIBLE FOR DAMAGE TO OTHER EQUIPMENT OR PROPERTY OR FOR ANY OTHER CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY KIND, WHETHER BASED ON CONTRACT, NEGLIGENCE OR STRICT LIABILITY. MAXIMUM LIABILITY SHALL NOT, IN ANY CASE, EXCEED THE PURCHASE PRICE OF THE UNIT.

(Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusion may not apply to you.)

(This warranty gives you specific legal rights. You may also have other rights which may vary from state to state.)

WILSON SYSTEMS, INC.
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