



OPERATION AND MAINTENANCE MANUAL

SERIAL NUMBER:

ASSEMBLY DRAWING: D-1400 Rev B

ASSEMBLY DATE:

CONTENTS:

SET UP AND OPERATION INSTRUCTIONS

MAINTENANCE INSTRUCTIONS

ASSEMBLY DRAWING

THE WILL-BURT COMPANY

169 SOUTH MAIN STREET, ORRVILLE, OHIO 44667-0900 TELEPHONE 330-682-7015, FAX 330-684-1190 email: mastlite@willburt.com, www.willburt.com

ISO 9001 CERTIFIED QUALITY SYSTEM

SET UP AND OPERATION

WARNING - Death or serious personal injury can result from improper use of this equipment. Pending OSHA regulations require that operators be properly trained in the hazards associated with the use of this equipment.

Set Up

- Select an area free of power lines or other overhead obstructions. The mast should be located no closer than a horizontal distance equal to the extended height of the mast away from any power lines. The ground should be level and firm.
- 2. Position the ground plate approximately 2 feet in front of or behind a non-drive wheel, preferably on the driver's side of the vehicle. The mast should not be inserted in the ground plate.
- 3. Carefully ease the vehicle onto the ground plate. If possible, observe from the driver's side window that the vertical tube does not contact the vehicle as the tire rolls onto the ground plate. Stop the vehicle when the tire is centered on the plate.
- 4. Stop the engine. Place the transmission in park and engage the parking brake.
- 5. The mast can now be lowered into the vertical tube on the ground plate assembly.
 Rotate the mast so that the slot in the bottom of the mast drops over the key in the bottom of the vertical tube.

- 6. Be sure to allow adequate clearance between the mast and the vehicle to allow for wind deflection.
- 7. Secure the top adapter stub to the mast using the quick release pin. NOTE: Twenty (20) pounds is the maximum top load capacity.

Raising The Mast

- 1. Make sure all collars are in the locked position. This is with the knobs tightened.
- 2. Start by loosening the knob on the top collar only. Push the top mast section up until it stops and lock the collar by tightening the knob.
- Follow the same procedure for each mast section going from the smallest to the largest.

Rotating The Mast

 Securely grip the mast section just above the bottom collar. Loosen knob on the collar. Turn the mast section to aim the top load. Tighten the knob.

Lowering The Mast

1. Securely grip the mast section just above the bottom collar. Loosen the knob on the collar and carefully lower that section. Take care not to pinch your fingers between

the collars as the section is lowered. After that section has fully retracted lock the collar.

- 2. Follow the same procedure for each mast section going from the largest to the smallest. Stand clear of the top load so it does not hit you as it is lowered.
- 3. Remove the top load from the mast.
- 4. Remove the mast from the ground plate assembly.
- 5. Carefully drive the vehicle off of the ground plate.

MAINTENANCE

Hurry up telescoping masts should be cleaned on a regular basis to insure smooth operation and to prolong useful life. This maintenance should be performed whenever the mast sections are noticeably dirty or become difficult to push up.

Cleaning

Set up the mast as described in the set up and operation instructions. It will be much easier if two people can perform this procedure. With one person pushing a mast section up, the other person can wipe it clean using a non-abrasive cleaner or solvent such as lacquer thinner. Do not allow the cleaning fluid or solvent to run down inside the collar. Repeat this procedure for all of the mast sections. Take care not to pinch your fingers between the collars as each mast section is lowered.

Mast Overhaul

- Place the mast horizontally on a pair of saw horses or similar supports. Secure the
 mast base section to the saw horses so that the mast does not roll off. To disassemble
 the mast, start with the top section and work toward the base section. Refer to the
 cover drawing, d-1400 for part identification.
- 2. To remove the top section, remove the three 10-32 flat head screws from the top collar. Slide it off the end of the top section.

- 3. Slide the top section out. NOTE: The nylon stop panel / bearing will come out with the mast section. This is a 1/32" thick sheet of nylon.
- 4. To remove the next mast section, remove the three 10-32 flat head screws from the next collar. Repeat this procedure for each subsequent mast section.
- 5. Remove the old seal from the bottom of each mast section. Clean each mast section with solvent such as lacquer thinner. Do not use anything that might scratch the surface of the mast sections. Clean each section inside and outside. Clean and inspect the dampening seals. Worn or cut seals should be replaced.
- 6. Inspect each collar to make sure the liner material on the inside is secure. If any mast sections have been sliding down after being locked in the extended position, it may be due to a worn lining. If the lining is to be replaced, remove all old lining and any adhesive from the inside of the collar.
- 7. Cement the new lining in place using a suitable epoxy adhesive. Follow the manufacturers instructions.
- 8. Lubricate the seals with factory approved grease. With the lip edge of the seal toward the bottom end of the mast section, stretch it onto the butt plate and into the seal groove. For the first 4 or 5 inches in from the top end of the mast section apply a thin

coat of grease tot he inside surface of all mast sections. Do not lubricate the inside of the top section.

- 9. When reassembling the mast, start with the base section and work toward the top section.
- 10. Secure the base section of the mast horizontally on the saw horses. Hold the next mast section so that the top end of the section is at a lower elevation than the seal end. With the seal end resting on the inside of the base tube, slowly raise the lower end of the mast section to horizontal while carefully pressing the lip of the seal into the receiving section. Use your thumbs and forefingers and press on both sides of the seal simultaneously in an upward motion. Work this way until your fingers meet at the top. To make sure that the seal is in correctly, slide the mast section back and forth within the receiving section. If the mast section has difficulty in its travel, pull out the section, re-lubricate the seal and begin again. Once the seal is correctly inserted, slide the collar to the top of the mast section. Wrap the nylon stop panel around the mast section and slide it in.
- 11. Line up the holes in the collar with the holes in the sleeve flange on the top of the receiving mast section. Replace the three 10-32 flat head screws.
- 12. NOTE: The screws used to attach the collar to the sleeve flange have a plastic pellet.

 The pellet will help keep the screws from turning once tightened or adjusted. After

the screws have been removed twice, it is advisable to obtain new screws of this type or use a thread-locking liquid comparable to loctite P/N 49550 color clear.

13. Follow the same procedure for each mast section going from the largest to the smallest.

MAST INSTALLATION – EXTERNAL MOUNTING

WARNING: Proper installation is critical to safe operation and must be performed by qualified technicians.

- When selecting the location for the mast on the vehicle, check the strength and
 rigidity of the body where the mast is to be attached. Also check for internal wiring
 and obstructions in the body.
- 2. Make sure the vehicle is on a flat, level area.
- 3. Securely attach the external shelf bracket to the vehicle making sure it is level.
- 4. Slide the support bracket over the bottom of the mast and insert the base of the mast into the shelf bracket. Rotate the mast so that the slot in the bottom of the mast drops over the key in the bottom of the shelf bracket.
- 5. Slide the support bracket up the mast to the collar on the base mast section. The vertical height of the support bracket should be a maximum of 56" from the horizontal surface of the shelf bracket to the top of the support bracket. The minimum should be 50".

- 6. Secure the support bracket to the wall structure. Spacers may be added between the support bracket and the wall as needed to keep correct alignment between the support bracket and the shelf bracket. Make sure the mast is plumb.
- 7. Periodically inspect all fasteners and welds to make sure the mast is securely attached.

Raising The Mast

- WARNING: <u>Select an area free of power lines or other overhead obstructions</u>.
 The mast should be located no closer than a horizontal distance equal to the extended height of the mast away from any power lines. The mast should be plumb.
- 2. Make sure all collars are in the locked position. This is with the thumb levers in the inward position toward the mast tubes.
- 3. Start by pulling outward on the thumb lever on the top collar only. Push the top mast section up until it stops and lock the collar by pushing in on the thumb lever.
- 4. Follow the same procedure for each mast section going from the smallest to the largest.

Rotating The Mast

 Securely grip the mast section just above the bottom collar. Pull out on the thumb lever on the collar. Turn the mast section to aim the top load. Push the thumb lever in to lock the collar.

Lowering The Mast

- Securely grip the mast section just above the bottom collar. Pull out on the thumb
 lever on the collar and carefully lower that section. Take care not to pinch your
 fingers between the collars as the section is lowered. After that section has fully
 retracted, push the thumb lever in to lock the collar.
- 2. Follow the same procedure for each mast section going from the largest to the smallest. Stand clear of the top load so it does not hit you as it is lowered.
- 3. Remove the top load from the mast.