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# INGERSOLL RAND TECHNICAL INFORMATION BULLETIN

Bulletin #:	LT-001
Date:	08/12/2005
Product:	LIGHT SOURCE LT-6K
Subject:	Play reduction mast

MODELS	SERIAL NUMBER

Required tools for modification: Modification kit 22799191 2 x Spanner 13 mm 2 x Spanner 30mm boring-machine Drill Ø 5mm and 8mm grinding-machine Rivet tong Hammer Tape measure and sliding rule



# Adding Decals:

1. With Mast in transport position, apply Arrow Decals to side of Tube 1 and round collar of Pivot Support.



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2. Raise Mast to full extension. Apply STOP decal to outside of Tube 2, using locating holes.



# Inspection:

3. Check hardware securing each Pivot Latch. Shoulder Screw, Washers, and Nut should be assembled as shown in sketch; be sure no pieces are missing.







# Adding Shims under Slides

#### Preparation

4. Remove Lamp Bar and Junction Box Support.



 Remove Horizontal Pin at Cradle.
 Use winch to raise Mast out of Cradle. Reinsert Horizontal Pin and secure with Lynch Pin.
 Using winch, lower Mast until securely supported on Horizontal Pin.



# Disassembly

6. Remove upper keeper Pin, remove middle Pin holding cable thimble end.



Remove (12) Rivets by drilling at top of Tube 3; remove (6) black Slides.





<u>In all steps</u>, preserve all Slides for re-use during **Reassembly**. <u>For each tube</u>, after removing rivets clean inside each tube to **remove any debris**.

Slide Tube 4 out of Mast. Keep cable with tube and avoid damage.

7. Remove (8) Rivets by drilling at bottom of Tube 4; remove (4) black Slides.



8. Remove lower Pin holding cable thimble end.



Remove (12) Rivets by drilling at top of Tube 2; remove (6) black Slides. Slide Tube 3 out of Mast. Keep cable with tube and avoid damage.

9. Remove (8) Rivets by drilling at bottom of Tube 3; remove (4) black Slides.



10. Remove (12) Rivets by drilling at top of Tube 1; remove (6) white Slides.



11. Release Telescope Latch, allowing Tube 2 to extend.



 Slide Tube 2 to end of Mast. Use winch to spool in cable slack.
 Securely support both ends of Tube 2, while keeping bottom end near Mast. Avoid pinching cable. Remove top Pulley from Tube 1, if needed.



Remove (12) Rivets by drilling at bottom of Tube 2; remove (6) white Slides.





# **Check Reinforcing Angles**

 Measure height of Reinforcing Angles above outside surface of Tube 2. If height is 5mm or less = OK

If height is greater than 5mm, grind all surfaces of Angles until they are 5mm or less above outside surface of Tube 2.











Before



After



14. Measure protrusion of Foot Plate beyond outside surface of Tube 2.
If protrusion is 5mm or less = OK
If protrusion is greater than 5mm, grind end of Foot Plate until it is only 5mm beyond outside surface of Tube 2.



Apply zinc spray or metallic spray paint to raw metal surfaces after grinding is complete.

# **Check Magnets**

15. Inspect (2) Magnets on outside surface of Tube 2.

If Magnets are broken, replace them and secure with Rivets 95962734. If desired, apply Silicone Glue behind Magnet and/or around edges. If Magnets are OK, Silicone Glue may be applied around edges if desired.



# Reassembly

 Install (6) white Slides to outside bottom of Tube 2, with spacer Shim 22794770 between Slide and Tube wall. Secure with (12) new Rivets 36884419.



17. Slide Tube 2 into Mast. Use winch to release cable as needed. Verify that Tube 2 slides freely in and out of Mast. Reinstall top Pulley to Tube 1, if removed in St

Reinstall top Pulley to Tube 1, if removed in Step 12.

- 18. Allow Telescope Latches to engage Tube 2 when it is fully inserted into Mast.
- 19. Install (6) white Slides to inside at top of Tube 1, with spacer Shim 22794770 between Slide and Tube wall. Secure with (12) new Rivets 35120492.
- 20. Install (4) black Slides to outside bottom of Tube 3, with spacer Shim 22794770 between Slide and Tube wall. Secure with (8) new Rivets 36884419.
- Slide Tube 3 into Mast. Avoid pinching cable. Install (6) black Slides to inside top of Tube 2, with spacer Shim 22794770 between Slide and Tube wall. Secure with (12) new Rivets 35120492.

Secure Cable to top of Tube 1, using Pin. Verify that Tube 3 slides freely in and out of Mast.

Also check that the guide still enters the fork on tube 2 freely.

If not, grind some material from the guide on Tube 3







- 22. Install (4) black Slides to outside bottom of Tube 4, with spacer Shim 22794770 between Slide and Tube wall. Secure with (8) new Rivets 36884419.
- 23. Slide Tube 4 into Mast. Avoid pinching cable. Install (6) black Slides to inside top of Tube 3, with spacer Shim 22794770 between Slide and Tube wall. Secure with (12) new Rivets 35120492.

Some material may need to be removed from the edge of (2) of the Slides to assure a good fit.



Secure Cable to top of Tube 2, using Pin. Verify that Tube 4 slides freely in and out of Mast.

24. Install Washer 95935037 under Cotter Pin at each Pulley on the Mast and the Pivot Support.(7) Pulleys total.

During reassembly of cable Pins and pulley Pins, use new Cotter Pin 95928867. (10) Pins total.





- 25. Operate winch to raise Mast out of Cradle. Remove horizontal pin. Operate winch to lower Mast into Cradle.
- 26. Re-Install Lamp Bar and Junction Box Support.
- 27. Raise and lower Mast 3X to check proper operation.



# Troubleshooting

28. If winch motor circuit breaker trips:

- Verify battery is fully charged
- Check battery terminals, winch motor connections, and circuit breaker connections to be sure they are secure and free of corrosion.

# Adding Caps

29. Insert Cap 22773949 in Roof Panel above Radiator. Insert Cap 22773956 in Roof Panel above Engine.



