

BILL OF MATERIAL						
ITEM NO.	NO. REQD	SEC-TION	DESCRIPTION	LENGTH FT.	IN.	MATERIAL
						CODE NO. OR Dwg. NO.

ASSEMBLIES USED ON

I. INTRODUCTION

THE INSTRUCTIONS HEREIN APPLY TO A 4600-S4 RINGER-S3 WITH BOOM AND JIB COMBINATIONS AND THE SPECIAL BOOM TRAVEL SUPPORT SHOWN ON DWG. 66013.

II. MACHINE PREPARATION

- A. THE RINGER SHOULD BE IN A WORKING CONFIGURATION WITH THE CRAWLER DRIVE SPROCKET TO THE REAR OF THE MACHINE, THE RING PROPERLY BLOCKED AND FULL RINGER COUNTERWEIGHT ASSEMBLED.
- B. SWING THE UPPERWORKS SO THAT THE BOOM CARRIER IS CENTERED BETWEEN THE FRONT OF THE CRAWLERS AND THE BOOM IS PARALLEL TO THE CRAWLERS.
- C. LOWER BOOM AND JIB AND BLOCK ON GROUND.
- D. ADJUST THE MACHINE REAR HOOK ROLLERS FOR 1/8 IN. CLEARANCE. THE HOOK ROLLERS WILL BE USED AS AN INDICATOR FOR PROPER SUSPENSION PENDANT TENSION LATER.
- E. RAISE BOOM TO 68° BOOM ANGLE.
- F. REDUCE THE AUXILIARY RINGER COUNTERWEIGHT TO VALUE SHOWN IN TABLE ON DWG. 66013. POSITION THE COUNTERWEIGHT BOXES EQUALLY FROM SIDE TO SIDE SO THAT THE WEIGHT IS UNIFORMLY DISTRIBUTED ON THE COUNTERWEIGHT CARRIER.

CAUTION:

DO NOT UNLOAD ALL THE COUNTERWEIGHTS FROM ONE SIDE OF THE CARRIER AND THEN ALL FROM THE OTHER SIDE. REMOVE THE COUNTERWEIGHTS ONE AT A TIME, ALTERNATING FROM SIDE TO SIDE.

III. TENSIONING BOOM TRAVEL SUPPORT PENDANTS

NOTE:

PROPER TENSIONING OF THE PENDANT SUSPENSION REQUIRES EQUIPMENT CAPABLE OF EXERTING 3000 FT.-LBS. OF TORQUE TO THE 2-3/4" NUTS OF THE ADJUSTABLE CONNECTORS (98017 AND 546072).

- A. SLOWLY TIGHTEN THE TAKE-UP SO THAT SUSPENSION PENDANTS (#277139) ARE TENSIONED EQUALLY. WHILE TIGHTENING THE PENDANTS OBSERVE THE POSITION OF THE MACHINE HOOK ROLLERS. THE FRONT HOOK ROLLERS WILL BECOME FREE WHEN APPROXIMATELY 1/3 OF THE REQUIRED TENSION IN THE SUSPENSION PENDANTS HAS BEEN OBTAINED.

CONTINUE TIGHTENING THE SUSPENSION PENDANTS UNTIL THE REAR HOOK ROLLERS START TO MOVE UPWARD, INDICATING THAT THE MACHINE REAR HOUSE ROLLERS HAVE BECOME FREE. AT THIS POINT THE MACHINE UPPER IS BALANCING ON THE FRONT HOUSE ROLLERS. (FINAL TORQUE ON THE TAKE-UP NUTS SHOULD BE BETWEEN 2650 AND 2750 FT.-LBS.). RAISE BOOM TO 75° BOOM ANGLE. MACHINE SHOULD SET BACK DOWN ON THE REAR HOUSE ROLLERS.

- B. JACK MACHINE SLOWLY OFF THE RING BLOCKING AND WATCH THE MACHINE REAR HOOK ROLLERS. IF THE HOOK ROLLERS MOVE UPWARD TOWARD THE ROLLER PATH FLANGE, BACK OFF THE ADJUSTMENT ON THE SUSPENSION PENDANTS SO THAT THE REAR HOOK ROLLERS DO NOT COME IN CONTACT WITH THE ROLLER PATH FLANGE. TRY TO MAINTAIN ENOUGH TENSION IN THE SUSPENSION PENDANTS TO KEEP THE MACHINE UPPER BALANCED ON THE FRONT HOUSE ROLLERS.

- C. WITH BLOCKING REMOVED AND MACHINE CRAWLERS ON GROUND, SLOWLY LOWER BOOM UNTIL THE MACHINE REAR HOOK ROLLERS BEGIN TO MOVE UPWARD TOWARD THE ROLLER PATH FLANGE. THE BOOM ANGLE SHOULD NOT BE LESS THAN 68°.

- D. THE MACHINE IS NOW READY FOR TRAVELING. FOR TRAVEL CONDITIONS SEE SERVICE INSTRUCTION MANUAL AND DWG #6665.

IV. RETURNING MACHINE TO NORMAL OPERATIONS

- A. RAISE THE BOOM TO 75° BOOM ANGLE. RAISE MACHINE AND RING WITH JACKING SYSTEM AND BLOCK RING IN ACCORDANCE WITH PROCEDURES GIVEN IN SERVICE INSTRUCTION MANUAL.
- B. IF REBLOCKING RING DOES NOT RELEASE THE TENSION IN THE SUSPENSION PENDANTS (#277139), THEN SLOWLY RELEASE THE TENSION UNTIL THE PENDANTS ARE SLACK. USE CARE TO RELEASE THE TENSION EQUALLY ON BOTH PENDANTS. MAKE SURE THAT LINK 98023 TO WHICH THE BACKHITCH LUG IS ATTACHED PIVOTS FORWARD TO ITS STOPS AS THE SUSPENSION PENDANT TENSION IS RELEASED.
- C. ADJUST MACHINE BACKHITCH PENDANT CONNECTORS UNTIL THE DIMENSION BETWEEN PIN (#140891) CENTERS ON THE ADJUSTABLE EYEBARS (#146821 & 146822) IS 52-5/8 IN. THIS IS A TENTATIVE ADJUSTMENT THAT MUST BE CHECKED LATER. SEE SERVICE INSTRUCTION MANUAL FOR MORE INFORMATION.
- D. READJUST HOOK ROLLERS FOR PROPER POSITION.

REVISIONS

11-1-82 RAD
A B NOTES
REVISED

DWG. NO.
184509

DATE
6-10-81
PATTERN NO.

DWG. NO.
184509

SCALE	Manitowoc Cranes, Inc.	TENSIONING & TRAVEL
DR. CEL	Manitowoc, Wisconsin	INSTRUCTION FOR
CK. DPD	MODEL 4600 SERIES 4	BOOM TRAVEL SUPPORT
APP MR	RINGER III	66013