



Service Bulletin

Information Only
 Product Update – Non Warranty
 Product Update – Warranty
 ✓ Action Required

MANITOWOC SERVICE BULLETIN W08-010

DATE: 07-25-2008

SUBJECT: Model 16000 #58 boom sections, #59A mast sections and #59 Luffing jib sections

MODEL AFFECTED: 16000

SERIAL NUMBERS OF AFFECTED UNITS:

Crane Serial Numbers:

16001052	16001056	16001060	16001064	16001068
16001053	16001057	16001061	16001065	16001069
16001054	16001058	16001062	16001066	
16001055	16001059	16001063	16001067	

MAX-ER Serial Numbers:

16003702

Luffing Jib Serial Numbers:

16005031
 16005033

PURPOSE:

Manitowoc Crane Care has learned that certain #58 boom sections, #59A mast sections and #59 Luffing jib sections ("sections") on the above-referenced serial number cranes, MAX-ERs and luffing jibs may have chords with non-conforming wall thickness which could impact the structural integrity of cranes incorporating these sections. We are requesting your immediate assistance in shutting down cranes with these sections to measure, identify and replace those sections which were manufactured with non-conforming chord wall thickness.

An Inspection Report has been prepared for each of the above-referenced serial number cranes and attachments which identifies the weldment and manufacturing order (MO) numbers for the sections which may incorporate chords with non-conforming wall thickness. The Inspection Report for each unit is attached to this Service Bulletin.



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If a crane with an affected section cannot be immediately shut down, or if a non-conforming section cannot be immediately replaced, the affected crane must be derated and boom lengths reduced in accordance with this Service Bulletin. The Operations Required section of this bulletin includes the derate percentage and boom length reduction for various crane configurations. If the machines are being operated with #59 Luffing Jib on a #58 HL boom immediately contact the Crane CARE Lattice Team at 1-888-499-7278 for derate instructions. Derating of capacities and reduction of boom length is not a substitute for the shut down of cranes which incorporate affected sections, measurement of chord wall thickness and replacement of sections with nonconforming chords. If any affected sections have been installed on a crane other than the serial number cranes listed above, the crane on which the sections have been installed must also shut be down for measurement of chord wall thickness and derated in accordance with this Service Bulletin.

WARNING: FAILURE TO IMMEDIATELY SHUT DOWN CRANES TO MEASURE AND REPLACE SECTIONS WITH NONCONFORMING CHORD WALL THICKNESS OR OPERATION OF CRANES WITH AFFECTED SECTIONS WITHOUT DERATING CAPACITY MAY RESULT IN SERIOUS INJURY OR DEATH AS WELL AS DAMAGE TO THE CRANE AND OTHER PROPERTY. USE OF SECTIONS WITH NON-CONFORMING CHORDS COULD RESULT IN BOOM, MAST OR LUFFING JIB FAILURE.

OPERATIONS REQUIRED:

A. CRANE SHUTDOWN AND MEASUREMENT

1. Crane Shutdown

Immediately shut down the affected Model 16000 cranes. The #58 boom sections, #59A mast sections and #59 Luffing jib sections identified in Section A2 below must be ultrasonic tested for wall thickness to determine if they meet Manitowoc specifications.

2. Identification of Affected Sections

The weldments identified in the table below may have chords which do not comply with the specified wall thickness. The weldment part numbers appear on the identification tag on each boom, mast or jib section as shown in Figure 1 below. The corresponding section assembly numbers for these weldments are also provided for reference.

#58 Boom

<u>Description</u>	<u>Weldment No.</u>	<u>Assembly No.</u>
INSERT 6 M ASSY #58 (MEDIUM)	A10791 or A17189	A10789 or A20304
INSERT 12M ASSY #58 (MEDIUM)	A11533 or A17211	A11531 or A20305
INSERT TRANSITION ASSY #58 5.0 M	A11350	A11396 or A20303





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(Top Chords Only)

TOP ASSY #58 5.0 M (Top Chords Only)	A11390	A11388 or A20301
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#59 Luffing Jib

<u>Description</u>	<u>Weldment No.</u>	<u>Assembly No.</u>
BUTT ASSY #59 7.00 M	A13755	A13753 or 81000146
TOP ASSY #59 11 M (Bottom Chords Only)	A13419	A13417 or 81000145

#59A Mast

<u>Description</u>	<u>Weldment No.</u>	<u>Assembly No.</u>
BUTT ASSY #59A MAST 6.00M	A13642	A13640
INSERT 6.00M ASSY #59A (HEAVY)	A14527 or A17225	A14525
INSERT 12.00M ASSY #59A (HEAVY)	A14524 or A17224	A14522
TOP ASSY #59A MAST 6.00M	A15936	A13721

If a weldment part number matches one of those listed above, locate the manufacturing order (MO) number on the identification tag for the weldment as shown in Figure 1 and compare it to the MO numbers listed on the attached Inspection Report. If the MO numbers for any of the weldments match the MO numbers listed in the Inspection Report, ultrasonic test the weldment in accordance with Section A3 below. If you need assistance in locating ultrasonic test equipment or ultrasonic testers, please contact the Crane CARE Lattice Team at **1-888-499-7278** for further instructions.

3. Procedure for Testing Chord Wall Thickness

- a. Lower #58 boom, #59 luffing jib or #59A mast so the top is resting on ground or blocking.
- b. Prior to inspection procedure verify that the weldment part number and (MO) on the identification plate located as shown on Figure 1 matches the weldment part number and manufacturing order number (MO) listed on the attached Inspection Report attached to the Bulletin.





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- c. If the weldment part number and manufacturing order number (MO) matches the Inspection Report, ultrasonically test chords pursuant to the 16000 Chord Testing instructions attached to this Bulletin.

4. Immediately Report Measurement Results To Crane Care

When measurements are completed, record the results in the Inspection Report and immediately return the report to the Manitowoc Lattice Crane Warranty Administrator via facsimile at (920) 683-6338 or via PDF e-mail at andy.nourse@manitowoc.com Manitowoc Crane CARE will advise on corrective action based on the ultrasonic test results contained in the Inspection Report. *Cranes incorporating affected sections may only be operated at derated capacity and reduced boom length until receipt of written notification from Manitowoc Crane Care.*

B. DERATING INSTRUCTIONS IF INSERTS CANNOT BE IMMEDIATELY ULTRASONIC TESTED OR AN AFFECTED INSERT CANNOT IMMEDIATELY BE REPLACED

If the sections cannot be immediately ultrasonic tested or if the sections are tested and found to have chords with wall thicknesses that do not meet Manitowoc's specifications and cannot be immediately replaced, the cranes incorporating these sections must be derated and boom lengths reduced as instructed below if the crane is going to remain in operation.

1. Boom Only Configurations

If the crane is being used with the following capacity charts, the capacities must be derated as follows:

#58 HL Main Boom Capacities

- 8659-A
- 8659-AM
- 8659-B
- 8659-BM
- 8660-A
- 8660-AM
- 8661-A
- 8661-AM
- 8676-AM (Euro)
- 8676-AM (Euro)
- 8677-AM (Euro)

Boom Length (feet)	98'-217'	236'-315'
Percent Derate of Chart	10%	30%

#58 HL Boom on 98.4ft Mast – with and without Hanging or Wheeled MAX-ER





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- 8757-A
- 8757-AM
- 8757-B
- 8757-BM
- 8757-C
- 8757-CM
- 8747-A
- 8747-AM
- 8747-B
- 8747-BM
- 8747-C
- 8747-CM
- 8758-AM (Euro)
- 8758-BM (Euro)
- 8758-CM (Euro)
- 8749-AM (Euro)
- 8749-BM (Euro)
- 8749-CM (Euro)

Boom Length (feet)	138'-276'	295'-315'	335'-354'	374'-394'
Percent Derate of Chart	10%	35%	50%	Operation not Permitted

2. Extended Upper Boom Point Configurations

If the crane is being used with the following capacity charts, the capacities must be derated as follows:

#58 HL Boom With 23.0 Foot Extended Upper Boom Point

- 8695-A
- 8695-AM
- 8709-AM (Euro)

Boom Length (feet)	217'-295'
Percent Derate of Chart	15%

#58 HL Boom With 23.0 Foot Extended Upper Boom Point and 98.4' Mast #59A

- 8751-A
- 8751-AM
- 8821-AM (Euro)

Boom Length (feet)	315'
Percent Derate of Chart	15%





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If the machines are being operated with #59 Luffing Jib on a #58 HL boom immediately contact the Crane CARE Lattice Team at **1-888-499-7278** for derate instructions.

DERATING OF CAPACITIES AND REDUCTION OF BOOM LENGTH IS NOT A SUBSTITUTE FOR THE REMOVAL FROM SERVICE AND REPLACEMENT OF AFFECTED SECTIONS. IF A CHORD DOES NOT MEET THE REQUIRED WALL THICKNESS, ALL EFFORTS SHOULD BE MADE TO TAKE THE AFFECTED SECTION OUT OF SERVICE UNTIL IT CAN BE REPLACED.



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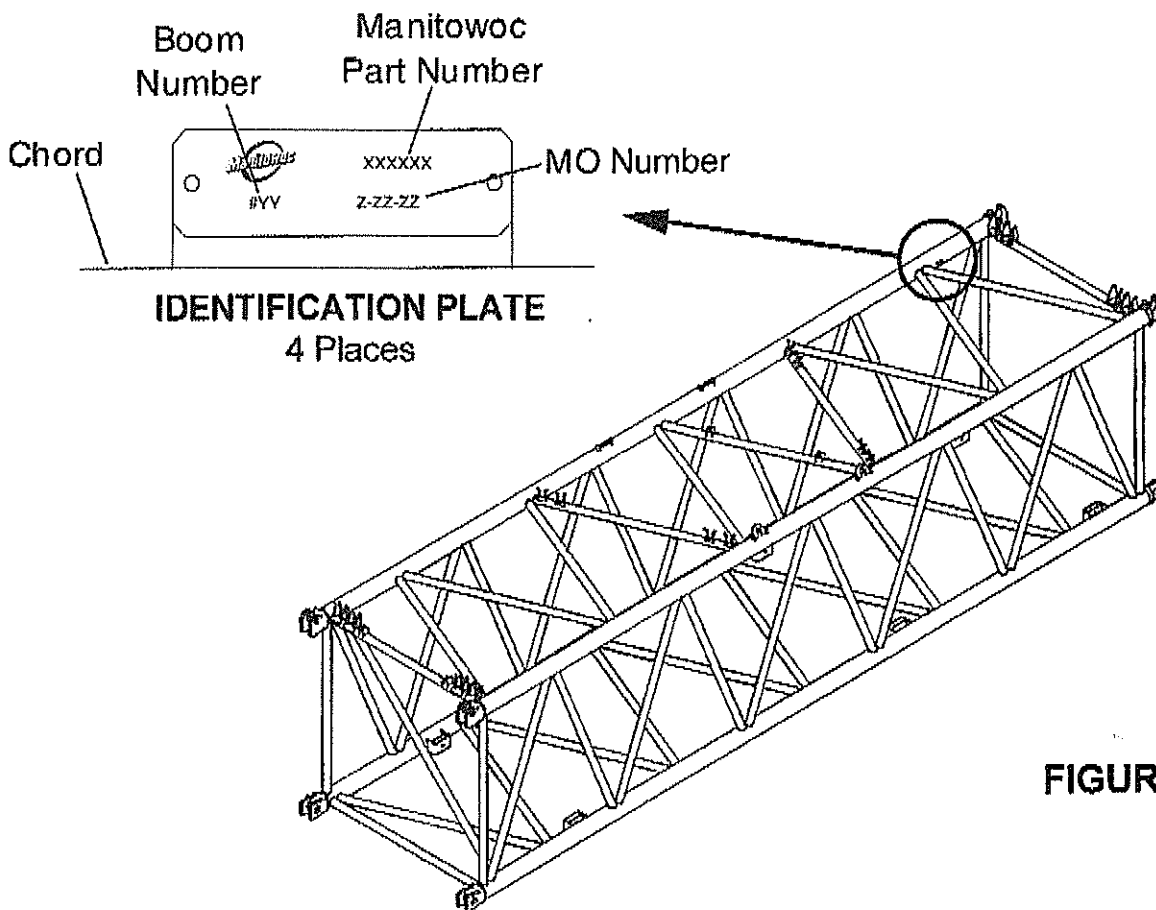


FIGURE 1



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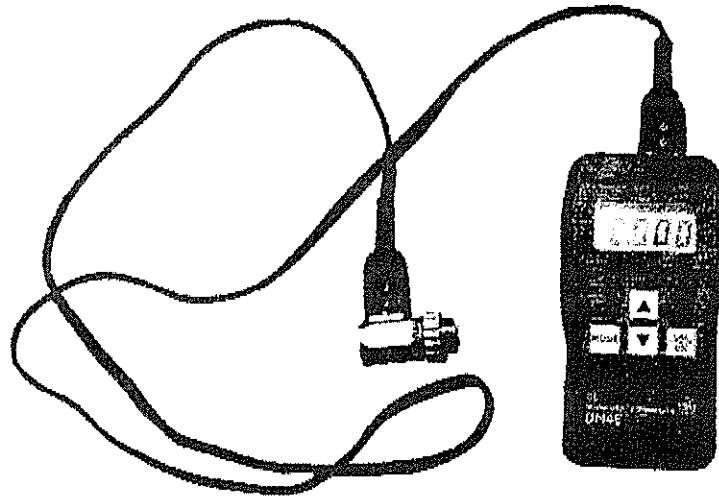
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Testing Chord Dimensions - 16000

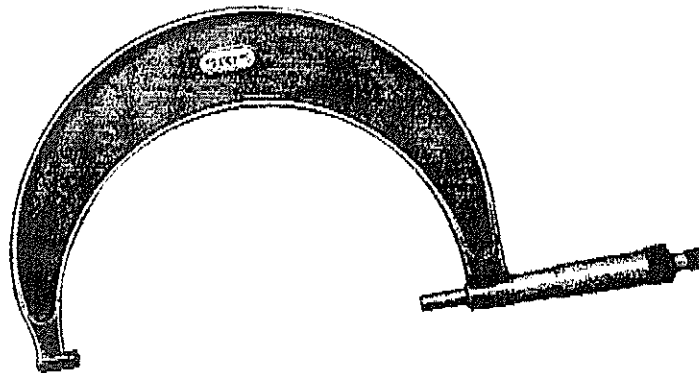
The following steps are the recommended procedure for checking chord dimensions on identified sections.

Items required:

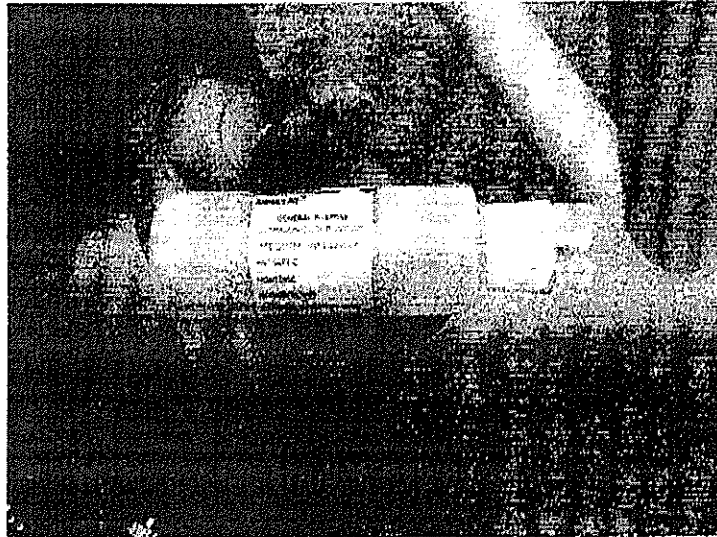
- Ultrasonic test meter kit



- Micrometer of correct diameter



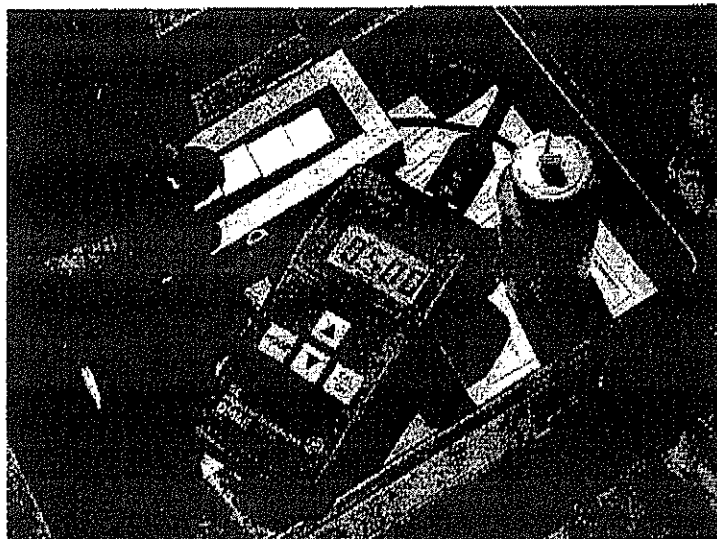
- General Purpose Ultrasonic Coupling Gel



- Data clipboard to record values.
- Calibrate the outside micrometer with gauge block daily.

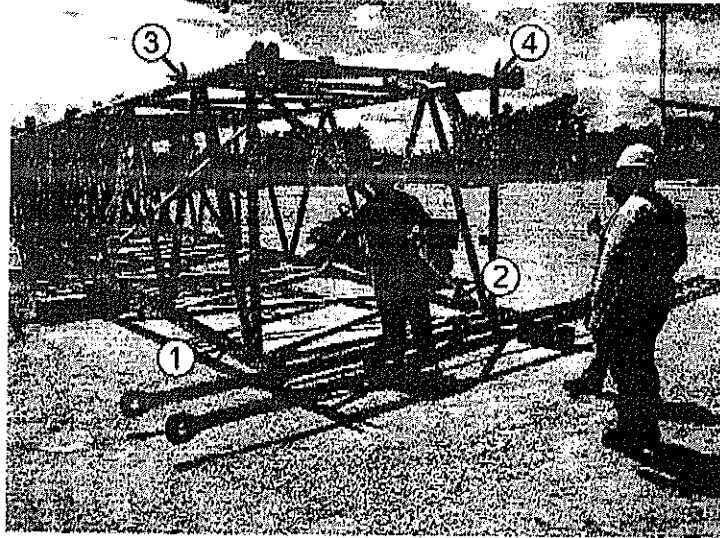
Calibrate the ultrasonic meter before starting each identified section. See ultrasonic meter instructions for calibration.

- Lay down a bead of Purpose Ultrasonic Coupling Gel.
- Test ultrasonic meter with different gauge blocks.
- Calibrate as required.



Measurements are taken from the operator's cab facing the identified section.

1. Start first measurement is taken on the *lower left chord*, in ten percent of section length from connector.



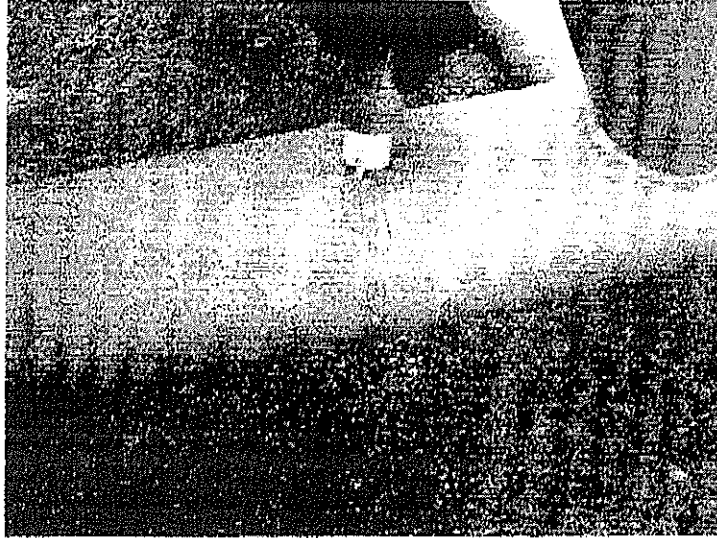
2. The second measurement is taken on the *lower right chord*, in ten percent from connector.
3. The third measurement is taken on the *upper left chord*, in ten percent from connector.
4. The fourth measurement is taken on the *upper right chord*, in ten percent from connector.

Repeat the measurement in the same order on chords at half the section length.

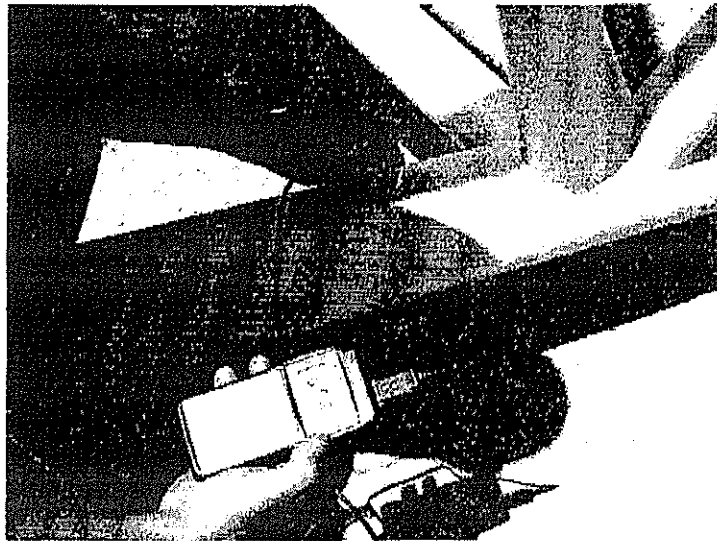
Repeat the measurement in the same order on chords, in ten percent of section length from furthest connector.

A total of 12 different ultrasonic measurements on each identified section.

1. Lay down a bead of Purpose Ultrasonic Coupling Gel around chord.



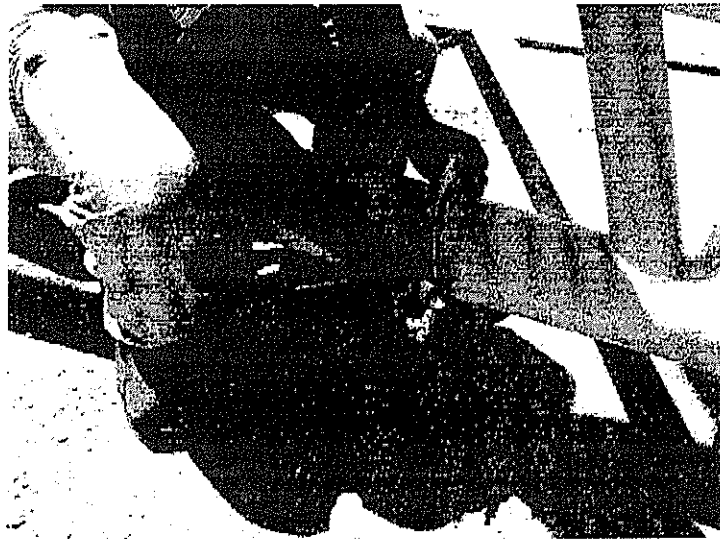
2. Using ultrasonic meter around chord, find the thinnest part of chord.



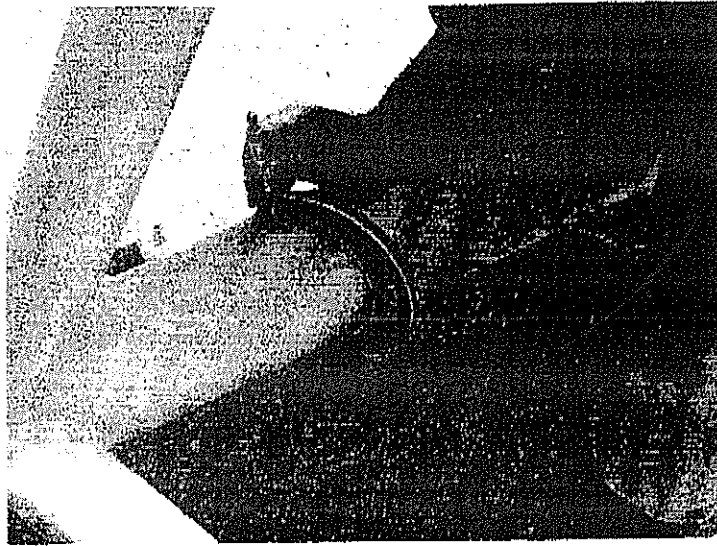
3. When thinnest part of chord is located, mark location on the chord and take first measurement.



4. Take a measurement every 90 degrees from thinnest location for a total of four measurements.
5. Record these measurements on Inspection Report located at the end of the Service Bulletin.
6. With the micrometer off to one side of Purpose Ultrasonic Coupling Gel, measure outside diameter of chord where marked for thinnest wall.



7. Take a measurement 90 degrees from initial measurement for a total of two measurements. Record both outside diameter measurements on Inspection Report located at the end of the Service Bulletin.



8. Repeat test procedure above at the three specified locations located along each chord on the identified sections.