

Attach C1

WORKSHEET

UNIT# _____

JOB NO. _____

DATE _____

TESTED BY _____

CLASS REQUIREMENT	RESULTS ACC/REJ
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<u>MAJOR: AQL 0.65% Defective</u>	<u>PART I PERFORMANCE</u>
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101. Vibration - 30 + 5 cps amplitude 1/16 inch for 2 minutes + 15 seconds with magnetic needle in locked position	_____
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102. Cleanliness of Telescope - There shall be no more than 3 particles of dirt larger than the reticle linewidth	_____
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103. Cleanliness of Magnifier - There shall be no more than 3 particles of dirt larger than the reticle linewidth	_____
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104. Azimuth Setting - With the axes of the two azimuth worms parallel to each other and on the same side of the vertical axis, the index line set to coincide with zero graduation line on the azimuth scale the azimuth micrometer shall read zero.	_____
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105. Elevation setting - With the telescope level, indicated by the tubular level vial, zero graduations on both the telescope elevation scale & micrometer knob scale shall be coincidence with their respective index lines within 1/4 line width.	_____
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Leveling - With the line of sight of the telescope describing a horizontal plane within 0.1 mil, rotate 360 degrees by upper azimuth knob, the following requirements shall be met:	_____
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106. Tubular Level Vial Bubbles shall: be centered within 0.15 mil shall agree with each other within 0.15 mil.	_____ _____
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107. Eccentricity of Circular Level Vial Bubble shall not exceed 1/2 the width forming the red circle	_____
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108. The eyepiece focus for the telescope shall be fixed between -0.75 and -1.0 diopter	_____
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109. Orienting Mechanism - Line of sight shall not deviate from the horizontal by more than 0.3 mil when rotated 360 degrees by means of the lower azimuth knob.	_____
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3.2.3.3.2

111. Parallelism of Reticle and Image - The vertical reticle line shall be parallel to a plumb line within 0.6 mil when measured adjacent to the "80" graduation, with the reticle line being coincident with plumb line at the other "80" graduation	_____
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112. Plumb Travel - The line of sight shall not deviate from the plumb line more than 0.40 mil when the telescope is actuated through 430 mils depression to 830 mils at any azimuth setting.	_____
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An additional plumb travel error of .6 mils is permitted for the M2A2 in elevation range from 830 to 1100 mils.

113. Elevation Limits: The limits permitted by the stop rings shall: Allow at least 1100 mils movement of the telescope above the horizontal.	_____
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 Allow at least 430 mils movement of the telescope below the horizontal.

 Shall prevent the telescope from striking the compass box.

114. Backlash of the Elevating mechanism shall not exceed 0.7 mil. (See Table B)	_____
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115. Elevation Error, excluding backlash: (See Table B)
 Shall not exceed 0.60 mils between -430 to +830 mils. _____
 Shall not exceed 1.0 mils between +830 to 1100 mils. _____

Backlash shall not exceed the following tolerances:

116. Elevating mechanism 0.70 mil _____

117. Upper azimuth mechanism 0.40 mil _____

118. Orienting mechanism 0.70 mil _____

119. Lift - In reversing the azimuth motion, shall not exceed 0.4 mil. (See Table A) _____

120. Side Play - In reversing the elevation motion, shall not exceed 0.30 mil. _____

121. Total Horizontal Error not to exceed 1.5 mil
 Plumb travel error (112) _____
 Azimuth circle error (114) _____
 Side play error (113) _____
Total horizontal error _____

122. Compass - Magnetic Needle Balance
 Shall maintain the south end in a vertical plane within the two short reticle lines. _____
 The needle shall function 3 degrees out of level. _____

123. Half Period - With the is deflected a minimum of 8°, the average half period shall be 2.5 seconds for a minimum of six successive half periods _____

124. Magnifier Assembly Parallax - Shall not exceed 1.0 mil _____

125. Magnetic Needle Magnifier - Shall focus sharply within 0 to -0.5 diopter. _____

126. Open Sight - Shall be parallel to the line of sight within 20 mils. _____

127. Parallax in Telescope:
 Shall be nominally 0 at 50 yds. _____
 Shall not exceed 0.30mil over a range of 30 to 150 yards _____

128. Magnetic Needle, Clamp, & Release Mechanism
 With the clamping mechanism in the vertical position, it shall hold the magnetic needle firmly against the compass box cover. _____

When rotated clockwise to the horizontal position the lever must detent and allow the needle to swing free. _____

With the lever rotated counter-clockwise and held in its furthest position, it shall free the needle while under finger pressure. _____

When released, the spring action should return the lever to the vertical position, causing the needle to be held firmly against the compass box cover. _____

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129. Illumination - The reticle markings shall appear clearly defined when observed in a darkened area. _____

Sealing - (60° to 90° F)

There shall be no leakage in excess of 1.0 psig when subjected to an internal pressure of 5.0 ± 0.1 psig for a for a period of 2 minutes using dry nitrogen having a dew at least as low as -25° F in the following locations:

307. Telescope _____

308. Compass compartment _____

309. Complete instrument _____

TABLE A: AZIMUTH READING

SETTING	AZIMUTH ERROR	LIFT ERROR
0		
800		-----
1600		
2400		-----
3200		
4000		-----
4800		
5600		-----

TABLE B: ELEVATION READING

SETTING	ELEVATION ERROR	BACKLASH
-400		
-200		
0		
200		
400		
600		
800		
1000		

LIMITED WARRANTY

Seiler Instrument and Manufacturing Co., Inc. (MANUFACTURER) warrants that the equipment (EQUIPMENT) will be free from defects in materials and workmanship, and will perform, under ordinary usage, in accordance with all specifications referenced in the applicable purchase order for a period of one year from the date of sale.

The limited warranty provided above does not cover damages or malfunctions caused by: (a) failure to follow MANUFACTURER'S installation, operation or maintenance instructions or industry custom or other improper installation, operation or maintenance; (b) modification or alteration of the EQUIPMENT not authorized in writing by MANUFACTURER; or (c) abuse, misuse, negligent acts or willful conduct. Claims under this warranty are to be brought to the attention of MANUFACTURER by written notice as soon as reasonably possible and in all events must be received by MANUFACTURER within the warranty period.

PURCHASER'S exclusive and sole remedy with respect to EQUIPMENT which does not conform to this limited express warranty shall be the repair or replacement of the defective EQUIPMENT at the original point of delivery. In the event MANUFACTURER is unable within a reasonable period of time to provide such repair or replacement then it shall refund the purchase price for the specific defective EQUIPMENT. Any transportation charges involved in the return or replacement of the EQUIPMENT shall be for the MANUFACTURER'S account. MANUFACTURER'S OBLIGATION TO REPAIR, REPLACE OR REFUND AS SET FORTH ABOVE SHALL BE PURCHASER'S EXCLUSIVE REMEDY IN CONNECTION WITH ALL EQUIPMENT FURNISHED HEREUNDER.

MANUFACTURER SHALL HAVE NO LIABILITY TO PURCHASER, PURCHASER'S CUSTOMERS OR THIRD PARTIES FOR ANY INDIRECT, PUNITIVE OR EXEMPLARY, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS, LOST SAVINGS OR LOSS OF GOODWILL, ARISING OUT OF THIS AGREEMENT OR ITS PERFORMANCE OR BREACH, ANY EQUIPMENT OR ITS DELIVERY, INSTALLATION, USE, REPAIR, REPLACEMENT OR MAINTENANCE, OR THE PERFORMANCE OR BREACH OF ANY WARRANTY, WHETHER ARISING OUT OF CONTRACT, TORT OR OTHERWISE. IN ANY EVENT THE TOTAL LIABILITY OF MANUFACTURER TO PURCHASER FOR ALL CLAIMS OF WHATEVER NATURE SHALL NOT EXCEED THE PURCHASE PRICE FOR THE EQUIPMENT PROVIDED. THESE LIMITATIONS SHALL SURVIVE FAILURE OF AN EXCLUSIVE REMEDY.