

185

Property & Supplies Officer

[Redacted]

STAT

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Washington DC 20024

Attn:

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Mailbox Address

7-8 December 1971

Focus Test No. 1

Preacceptance

Zoom 70  
 1x objective } mono  
 0.5x objective }

0.5x objective =  $15 + 12.03 = 27.03$  cm  
 1x " " =  $15 + 3.70 = 18.70$  cm  
 8.33 cm

w/o objective = 0  
 1x objective = 0.049 in

Focus Test No. 2

3x zoom = 0  
 2x " = +0.002 in  
 1.5x " = +0.002 in  
 1x " = 0  
 0.7x " = +0.008 in

- 2 -

Focus Test No. 3

3x zoom	-	0 difference
2x "	-	-0.021 in. "
1.5x "	-	-0.047 m "
1x "	-	-0.131 in. "
0.7x "	-	greater than 0.20 m

1x objective

Focus Test No. 4

focus position	-	0
lowest position	-	0. doesn't reach focus position
neg. X	-	0
highest position	-	no limit to travel of eyepiece

diopter limits cannot be substituted

Focus Test No. 5

Test is for two adjustable eyepieces,  
instrument has only one adjustable  
eyepiece.

● Focus Test No. 6

No image rotation available

Require holder for diameter tubes copse.

### Resolution Test No. 1

Rt.	7-3	oag & tan	161 l/mm	} hi-contrast -target
Lt.	7-3	" "	" "	
1x objective, 30x total mag				
Rt.	7-2	(144 l/mm)	Lt 7-3 (161 l/mm)	low contrast

### Resolution Test No. 2

No interchangeable parts available to increase mag.

### Resolution Test No. 3

Right position in field (position R in fig. 2, pg III-2-6, of manual):

tan	4-6	29 l/mm
oag	5-4	45 l/mm

left eyepiece

Left position (L):

tan	4-5	25 l/mm
oag	5-3	40 l/mm

left eyepiece

Resolution Test No. 4

No notable dioptric errors

Distortion Test No. 1

No stereo

Distortion Test No. 2

Distortion indicated - both in eyepieces and preceding optics

Astigmatism Test No. 1

Left eyepiece, center of field —  
no astigmatism

0.8 field, left, 2nd crosshair  
from center of target —

dipter telescope will not  
cover required field of view  
to use the 2nd crosshair where  
astigmatism is indicated

+

Difference in focus between  
center of field of view and  
vertical crosshair showing  
astigmatism - +0.003 in

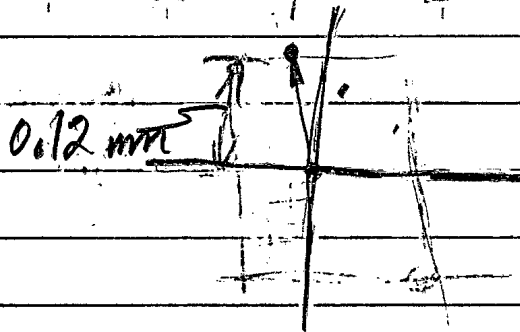
do, for horizontal crosshair -  
-0.001 in

Alignment Test No. 1

Image decentration less than  
0.5 mm in <sup>left</sup> eyepiece image  
plane

Alignment Test No. 2

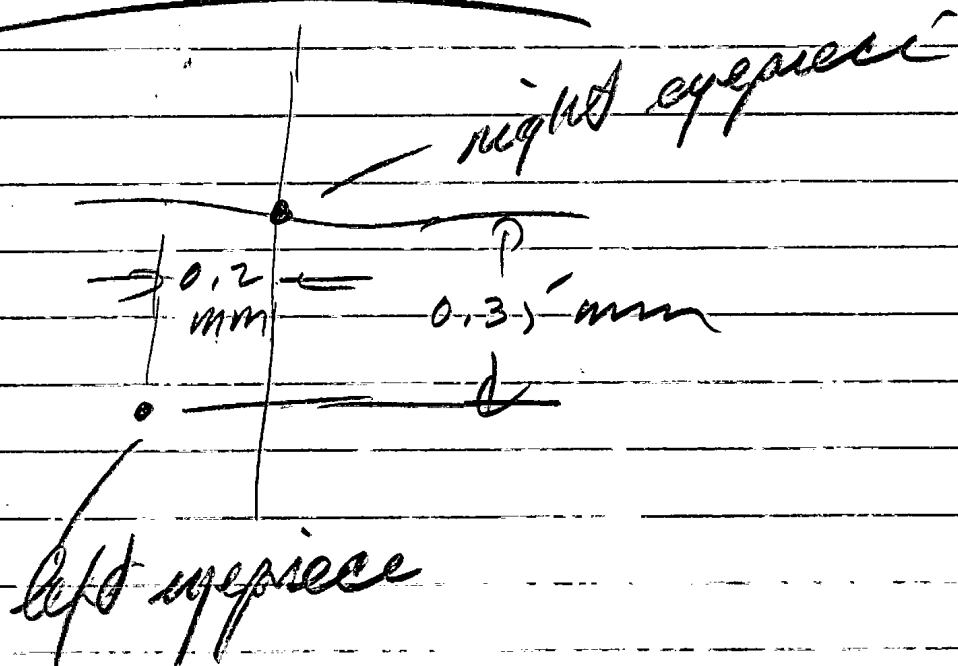
Eyepiece reticle should have continuous  
crosshairs throughout length of scale



left eyepiece

least count of scale  
is 0.1 mm - second  
decimal is an estimate

Alignment Test No. 3



Alignment Test No. 4

No vignetting

Parallax Test No. 1

No pointer to least

Mag. Test No. 1

2 mm target reads 6 mm in eyepiece reticle -  $\therefore \frac{6}{2} = 3\times$  magnification



2 mm target reads 1.4 mm  
 in eyepiece reticle -  $\frac{1.4}{2} = 0.7x$

### NA Test No. 1

Cannot be tested - no holding  
 fixture

### FOV Test No. 1

@ 3x, fov = 6.9 mm

### Illumination Test No. 1

light scale reading - 14  
 Brightness - 1600 fc

### Spectral filter Test No. 1

Green filter	-	7-3	161 l/mm
Red filter	-	7-2	144
Blue filter	-	6-1	64

# Polarisation Test No. 1

polarisation in x-direction  
of table - 7-3 161 l/mm  
polarisation in y-direction  
of table - 7-3

right optical beam

# Interpupillary Dist. Test No. 1

5 cm min.  
7.7 cm max.

# Eye Relief Test No. 1

22 mm	right } left }	30x
21 mm		
22 mm	right } left }	7x
22 mm		

Marking Test. Test No. 1

Similar to previous test - not performed

OTC Test No. 1

did not perform - no showboards

Orthogonality Test No. 1

Mann Comparator

Orthogonality is 90° within  
precision of measurement

Vibration Test No. 1

Less than 0.001 in.

Tension Test No. 1

No film to test

Surface Temp Test No. 11

90° F surface temp. of  
viewing