

PROPELLER BLADE GAGE DIMENSIONAL INSPECTION

GAGE SET SERIAL NO.

STOCK NO.

MFG. BY (NEW GAGES ONLY)

REFERENCES

(A) PROPELLER DWG. NO.

REV.

(B) PROPELLER BLADE GAGE DATA DWG. NO.

REV.

INSPECTION

SIGNATURE & TITLE OF QUALIFIED INSPECTOR

ACTIVITY

DATE

INSTRUCTIONS

1. Inspect the gages and record measurements as required in pages 2 through 6. (Use additional sheets as necessary.) Design dimensions are specified in Refs. (A) and (B).
2. Deficiencies not reported in the columns provided in pages 2 through 6 must be recorded in the "REMARKS" section on those pages.
3. All gages must have serial numbers. If a set is unserialized, contact NAVSEA,
4. Upon completion of an acceptable inspection, fill out the certification document.

DISTRIBUTION: One copy to NAVSEA. One copy in a waterproof envelope with the inspected gages.

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PRESSURE FACE CYLINDRICAL GAGE MEASUREMENT

RADIUS _____ GAGE SERIAL NO. _____ GAGE DWG. NO. _____ REV. _____

OFFSET STATIONS (REF (A))	BLADE SECTION OFFSET		DEVIATION ¹ (MEAS-DSGN)
	DESIGN (REF (A))	PRESSURE FACE	
LE			
A			
B			
C			
D			
E			
F			
G			
H			
J			
K			
L			
M			
N			
O			
P			
Q			
TE			

REMARKS _____

LOCATION OF POINTS J, K, AND T	POINT	DESIGN (REF B)	MEASURED	DEVIATION ² (MEAS-DSGN)
	J			
	K			
	U			
	T			
V				

INSPECTION ITEM	YES	NO
1. Is there a line, labeled "REF LINE" scribed across the gage?		
2. Are the LE and TE ordinates labeled?		
3. Are the offset stations labeled?		
4. Are there labeled, 0.025 holes at locations J, K, and T?		
5. Are there lines, perpendicular to the reference line, scribed through points J and K?		
6. Are there axial projection lines scribed through J and K?		
7. Is there a line, labeled Q_c , at the 50% offset station?		
8. Are the BCL and BCA axial projection lines labeled?		
9. Is the BCA perpendicular projection line labeled Q_A ?		
10. Are there labeled lines for fillet gage intersection locations? (Usually 0.3R, 0.4R, and 0.5R gages.)		
11. Is the gage correctly identified?		

NOTE: 1. TOLERANCE ON GAGE CONTOUR IS +0.005/-0.000.
 2. TOLERANCE ON LOCATION OF POINTS J, K, AND T IS +0.005/-0.005.

SUCTION FACE CYLINDRICAL GAGE MEASUREMENT

RADIUS _____ GAGE SERIAL NO. _____

GAGE DWG. NO. _____ REV. _____

X	BLADE SECTION OFFSET		
	DESIGN (REF (A))	SUCTION FACE	DEVIATION ¹ (MEAS-DSGN)
OFFSET STATIONS (REF (A))	MEASURED		
LE			
A			
B			
C			
D			
E			
F			
G			
H			
J			
K			
L			
M			
N			
O			
P			
Q			
TE			

LOCATION OF POINTS J AND K ON THE REFERENCE LINE	POINT	DESIGN (REF B)	MEASURED	DEVIATION ² (MEAS-DSGN)
		J		
	K			

INSPECTION ITEM	YES	NO
1. Is there a line, labeled "REF LINE" scribed across the gage?		
2. Are the LE and TE ordinates labeled?		
3. Are the offset stations labeled?		
4. Are there lines, perpendicular to the reference line, scribed through points J and K?		
5. Are there axial projection lines scribed through J and K?		
6. Is there a line, labeled Q_c , at the 50% offset station?		
7. Are there labeled lines for fillet gage intersection locations?		
8. Is the gage correctly identified?		

REMARKS

NOTE: 1. TOLERANCE ON GAGE CONTOUR IS $+0.005/-0.000$.
 2. TOLERANCE ON LOCATION OF POINTS J AND K IS $+0.005/-0.005$.

LEADING AND TRAILING EDGE GAGE MEASUREMENT

RADIUS _____ GAGE SERIAL NO. _____ GAGE DWG. NO. _____ REV. _____

LEADING EDGE GAGE				TRAILING EDGE GAGE			
SUCTION FACE OFFSET DIMENSIONS				SUCTION FACE OFFSET DIMENSIONS			
SFx ¹ (REF B) (OFFSET STATION)	SFy ¹ (REF B) (DESIGN)	MEASURED	DEVIATION ² (MEAS-DSGN)	SFx ¹ (REF B) (OFFSET STATION)	SFy ¹ (REF B) (DESIGN)	MEASURED	DEVIATION ² (MEAS-DSGN)

PRESSURE FACE OFFSET DIMENSIONS				PRESSURE FACE OFFSET DIMENSIONS			
PFx ¹ (REF B) (OFFSET STATION)	PFy ¹ (REF B) (DESIGN)	MEASURED	DEVIATION ² (MEAS-DSGN)	PFx ¹ (REF B) (OFFSET STATION)	PFy ¹ (REF B) (DESIGN)	MEASURED	DEVIATION ² (MEAS-DSGN)

REMARKS

NOTE: 1. DESIGN OFFSETS ARE OBTAINED FROM REF B.
2. TOLERANCE ON GAGE CONTOUR IS +0.005/-0.000.

PAGE _____ OF _____

TIP GAGE MEASUREMENT

GAGE SERIAL NO. _____

GAGE DWG. NO. _____

REV. _____

SUCTION FACE OFFSET DIMENSIONS			
SFX (REF B) (OFFSET STATION)	SFY (REF B) (DESIGN)	MEASURED	DEVIATION ² (MEAS-DSGN)

PRESSURE FACE OFFSET DIMENSIONS			
PFx (REF B) (OFFSET STATION)	PFy (REF B) (DESIGN)	MEASURED	DEVIATION ² (MEAS-DSGN)

REMARKS

INSPECTION ITEM	YES	NO
1. Is there a line, labeled "BCL" scribed across the gage identifying the reference line?		
2. Is there a scribed line perpendicular to the BCL showing the tip line extension?		
3. Are there scribed lines showing tip ordinates or extensions located midway between tip and open end?		
4. Are there scribed lines identifying the "open" measurement point?		
5. Is the total open gap value identified?		
6. Is the gage correctly identified?		

NOTE: 1. DESIGN OFFSETS ARE OBTAINED FROM REFERENCE B.
2. TOLERANCE ON GAGE CONTOUR IS +0.005/-0.000.

FILLET GAGE ASSEMBLY MEASUREMENT

GAGE IDENTIFICATION (POSITION) _____ GAGE SERIAL NO. _____ GAGE DWG. NO. _____ REV. _____

FILLET GAGES				
OFFSET ¹ STATION	SUCTION FACE		PRESSURE FACE	
	DESIGN ¹	MEASURED	DESIGN ¹	MEASURED
	DEVIATION ² (MEAS-DSGN)		DEVIATION ² (MEAS-DSGN)	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
15				
20				
25				
30				
35				
40				
45				
50				

HUB GAGE AND ANGLE BRACKET				
BRACKET ANGLE	SUCTION FACE		PRESSURE FACE	
	DESIGN ¹	MEASURED	DESIGN ¹	MEASURED
	DEVIATION ^{2,3} (MEAS-DSGN)		DEVIATION ^{2,3} (MEAS-DSGN)	
N ¹				

INSPECTION ITEM	YES	NO
1. Are there scribed lines identifying the radial reference line?		
2. Are there lines labeled "0.3R REF LINE"?		
3. Are there ten, scribed and labeled, equally spaced measurement lines? (Nine on fillet gage and one on hub gage)		
4. Are the gages correctly identified?		

REMARKS

NOTES:
 1. Design offsets are obtained from Reference B.
 2. Tolerance on gage contour is +0.000/-0.005.
 3. Bracket angle tolerance is ± 10°.