RING GAGE DIMENSIONAL INSPECTION

TYPE OF INSPECTION PREREPAIR ☐ POST–REPAIR ☐ NEW MANUFACTURE ☐		
GAGE SERIAL NO.		
GAGE STOCK NO.		
GAGE DRAWING NO.		REV.
SIGNATURE & TITLE OF QUALIFIED INSPECTOR	DATE	ACTIVITY
APPROVED BY	DATE	ACTIVITY

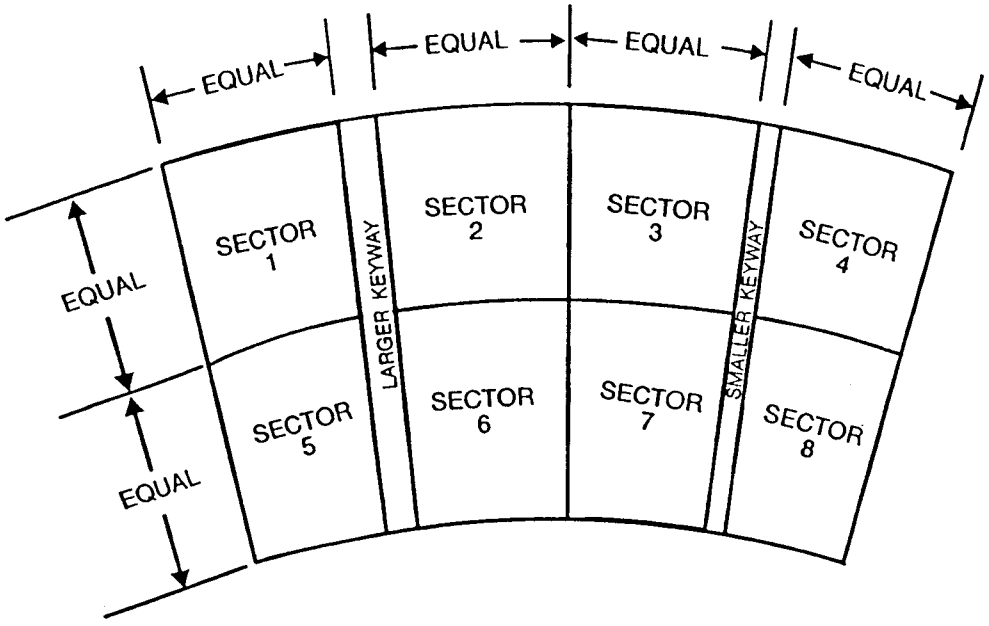
INSTRUCTIONS:

1. Gages shall be inspected and measured in accordance with the applicable gage drawing. Refer to NAVSEA S9243–A5–MMD–010 for additional information.
2. Fill in all forms and identify by circling all out of tolerance measurements.

DISTRIBUTION: One copy to NAVSEA.

RING GAGE DIMENSIONAL INSPECTION

PROPELLER RING GAGE CONTACT IMPRESSION



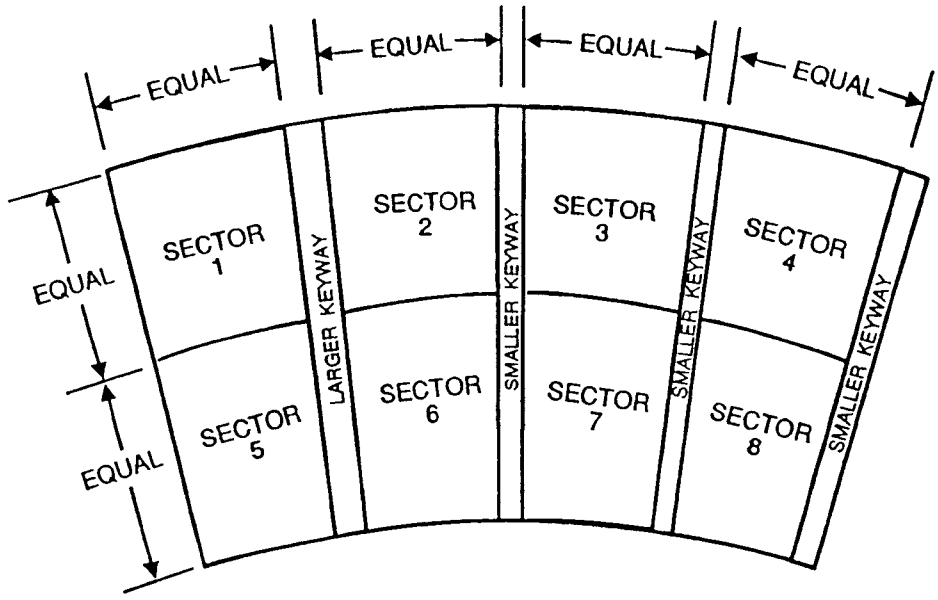
SECTOR	PERCENT OF AREA WITH UNIFORMLY DISTRIBUTED CONTACT WITHOUT KEYS INSTALLED
1	%
2	%
3	%
4	%
5	%
6	%
7	%
8	%
SECTOR AVERAGE	%

Gage certification requires uniformly distributed contact over 90% of the entire contact area.

RING GAGE SERIAL NO. _____

RING GAGE DIMENSIONAL INSPECTION

INBOARD COUPLING RING GAGE CONTACT IMPRESSION



SECTOR	PERCENT OF AREA WITH UNIFORMLY DISTRIBUTED CONTACT WITHOUT KEYS INSTALLED
1	%
2	%
3	%
4	%
5	%
6	%
7	%
8	%
SECTOR AVERAGE	%

Gage certification requires uniformly distributed contact over 90% of the entire contact area.

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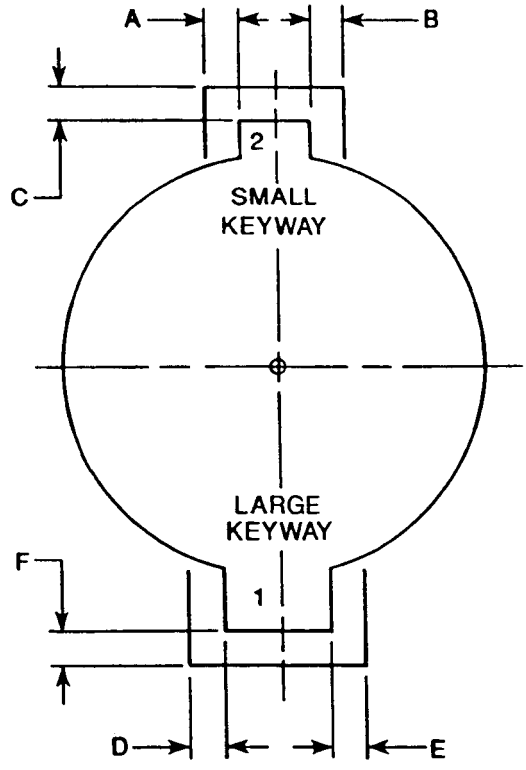
RING GAGE DIMENSIONAL INSPECTION

PROPELLER RING GAGE KEYWAY CLEARANCE

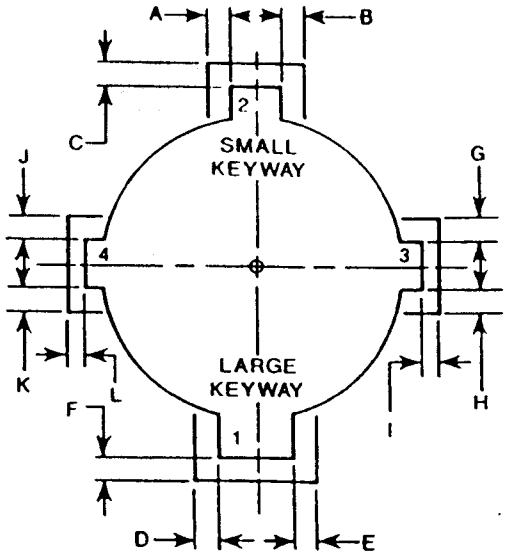


LOCATION	FORWARD END	FORWARD WINDOW	AFT WINDOW	AFT END	TOLERANCE
A					
B					
A + B					
C					
D					
E					
D + E					
F					

RING GAGE SERIAL NO. _____

RING GAGE DIMENSIONAL INSPECTION

INBOARD COUPLING RING GAGE KEYWAY CLEARANCE

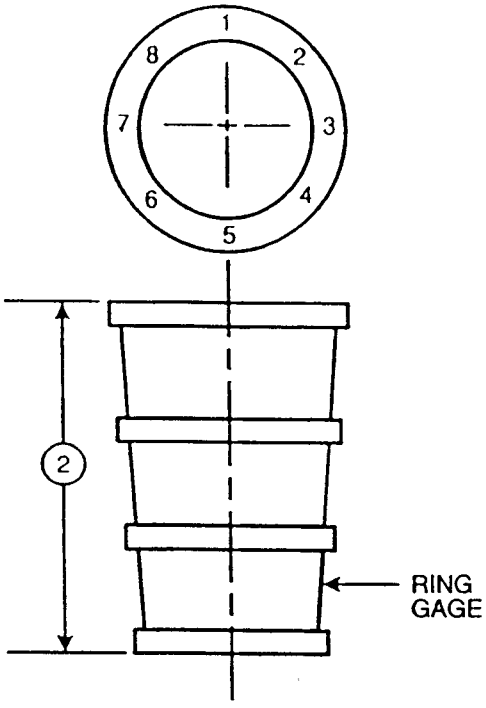


LOCATION	FORWARD END	FORWARD WINDOW	AFT WINDOW	AFT END	TOLERANCE
A					
B					
A + B					
C					
D					
E					
D + E					
F					
G					
H					
G + H					
I					
J					
K					
J + K					
L					

RING GAGE SERIAL NO. _____

RING GAGE DIMENSIONAL INSPECTION

RING GAGE LENGTH

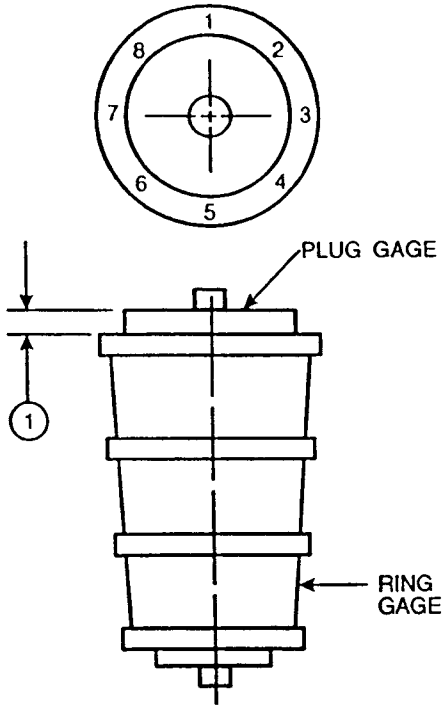


		ACTUAL	DESIGN	DEVIATION (AVERAGE ACTUAL – DESIGN)	TOLERANCE
RING GAGE LENGTH, (2) (8 EQUALLY SPACED PLACES)	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	AVERAGE				

RING GAGE SERIAL NO. _____

RING GAGE DIMENSIONAL INSPECTION

RING GAGE DEPTH OF INSERTION



		WITH KEYS				WITHOUT KEYS			
		ACTUAL	DESIGN	DEVIATION (ACTUAL – DESIGN)	TOLERANCE	ACTUAL	DESIGN	DEVIATION (ACTUAL – DESIGN)	TOLERANCE
DISTANCE, (1), PLUG GAGE LARGE END FACE EXTENDS ABOVE OR BELOW RING GAGE LARGE END FACE (8 PLACES). RECORD AS MINUS (–) IF PLUG GAGE FACE IS BELOW RING GAGE FACE.	1								
	2								
	3								
	4								
	5								
	6								
	7								
	8								
	AVG								

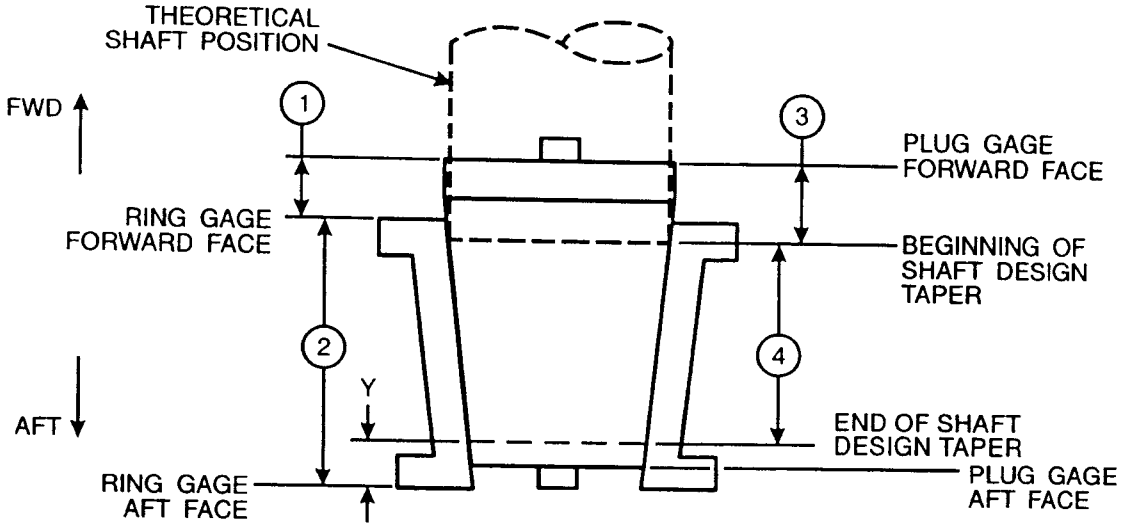
Notes:

1. Large end will be forward end on propeller gages and aft end on inboard coupling gages.

RING GAGE SERIAL NO. _____

RING GAGE DIMENSIONAL INSPECTION

PROPELLER RING GAGE IDENTIFICATION PLATE DATA



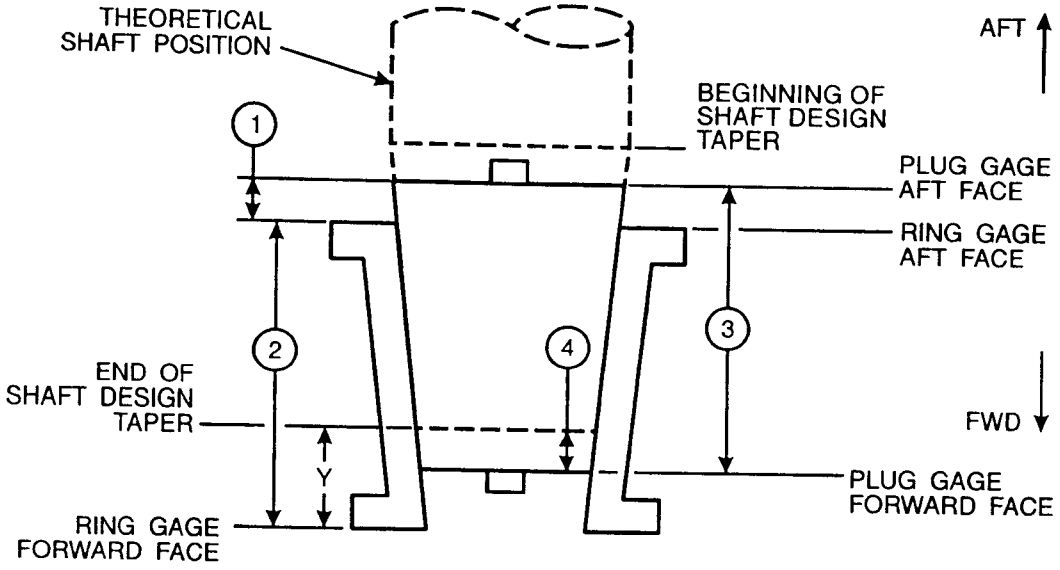
Distance plug gage forward face is forward or aft of ring gage forward face.	①	
Length of ring gage.	②	
Distance plug gage forward face is forward or aft of the start of shaft design taper, from plug gage identification plate data.	③	
Shaft design taper length, from applicable shaft detail drawing.	④	
Distance ring gage aft face is forward or aft of end of shaft design taper.	$Y^1 = ① + ② - ③ - ④$	
	$Y^2 = ① + ② + ③ - ④$	
	$Y^3 = ① - ② + ③ + ④$	
	$Y^4 = ① - ② - ③ + ④$	

Notes:
1. If the plug gage forward face is forward of the start of the shaft design taper and forward of the ring gage forward face.
2. If the plug gage forward face is aft of the start of the shaft design taper and forward of the ring gage forward face.
3. If the plug gage forward face is forward of the start of the shaft design taper and aft of the ring gage forward face.
4. If the plug gage forward face is aft of the start of the shaft design taper and aft of the ring gage forward face.

RING GAGE SERIAL NO. _____

RING GAGE DIMENSIONAL INSPECTION

INBOARD COUPLING RING GAGE IDENTIFICATION PLATE DATA



Distance plug gage aft face is forward or aft of ring gage aft face.	①	
Length of ring gage.	②	
Length of plug gage.	③	
Distance from end of shaft design taper to plug gage forward face, from plug gage identification plate data.	④	
Distance ring gage forward face is forward or aft of end of shaft design taper.	$Y^1 = ① + ② - ③ + ④$	
	$Y^2 = ① - ② + ③ - ④$	
	$Y^3 = ① - ② + ③ + ④$	
	$Y^4 = -① - ② + ③ + ④$	

Notes:

1. If the plug gage forward face is forward of the shaft design taper forward end and the plug gage aft face is aft of the ring gage aft face.
2. If the plug gage forward face is forward of the shaft design taper forward end and the plug gage aft face is forward of the ring gage aft face.
3. If the plug gage forward face is aft of the shaft design taper forward end and the plug gage aft face is forward of the ring gage aft face.
4. If the plug gage forward face is aft of the shaft design taper forward end and the plug gage aft face is aft of the ring gage aft face.

RING GAGE SERIAL NO. _____