

		Secondary Inspection Dimensional Comparison	
Customer:		Part Number: 231156	Date: 1/26/23
Description:	Secondary inspection of mounted ball bearing 231156 and product comparison to Timken (TAK 2) as exact interchange.		
Housing Dimensional Inspection		Measured (all dimensions shown are in Inches unless otherwise noted)	
	Specification	ETK	Timken
Part Designation		231156	TAK 2
Overall Length	8.75	8.928	8.904
Bolt Spacing	6.94 (+/- .04)	6.950	6.989
Overall Width	2.37	2.387	2.380
Bolt Slot Length	1.16	1.143	1.168
Bolt Slot Width	0.72	0.722	0.752
Foot Height	0.75	0.776	0.771
Height to Bearing Insert Center	2.4375 (+/- .0079)	2.4327	2.4433
Overall Height	4.97	4.964	4.989
Spherical Inner Diameter	3.9370 (+.0009 / -.0005)	3.9368	3.9370
Width of Spherical ID in Housing	0.94 min	1.149	1.094
Spherical ID Location	Centered in Housing	Pass	Pass
Grease Groove Location	Back	Pass	Pass
Zerk	1/8-27 NPT Zinc Plated (Packaged Separately)	1/8-27 NPT Zinc Plated Separate	1/8-27 NPT Zinc Plated Separate
Zerk Location	45° Off Centerline Right - Plugged	Pass	Pass
Markings	-	E T K on Each Housing Foot Front	TIMKEN - On Top of Housing M96850 100MM R64 4 C20 - Underneath housing
Visual Inspection / Cosmetic		Pass - Acceptable**	Pass - Acceptable
Bearing Dimensional Inspection		ETK	Timken
Part Designation		231156	G1200KPPB4
Bore	2.0000 (+.0009/ -.0000)	2.0007	2.0006
Outer Diameter	3.9370 (+.0000 / -.0006)	3.9364	3.9365
Overall Length (w/ Collar)	2.81	2.807	2.808
Length Thru Bore	2.19 (+.00 / -.01)	2.180	2.184
Outer Race Width	0.94 (+.00 / -.01)	0.944	0.942
Inner Ring OD	-	2.713	2.746
Grease Port Location	0.28 Back from Race Centerline	Pass	Pass
Grease Port	0.06 @ 180°	Pass	Pass
Collar OD	3.00	2.989	2.980
Collar Thickness	0.81	0.814	0.812
Collar Finish	Black Oxide	Black Oxide	Black Oxide
Collar Setscrew	(x1) 3/8" - 24 UNF	(x1) 3/8" - 24 UNF	(x1) 7/16" - 14 UNC
Setscrew Finish	Black Oxide Coated w/ Thread-Lock Patch	Pass	Pass
Seal Type	SECD-N5 +NBR Triple Lip Seal (x2)	(x2) L3 seals	(x2) L3 seals
Markings	-	231156 on Collar Face	FAFNIR S1200K A1 on Collar Face FAFNIR G1200KPPB4 12K LOT# on Outer Ring Face
Visual Inspection / Cosmetic	-	Pass - Acceptable	Pass - Acceptable
Geometric Dimensioning and Tolerancing			
Sphericity of Bearing OD	-	0.0011	0.0001
Sphericity of Housing ID	-	0.0020	0.0015
Cylindricity of Bearing Bore	-	0.0001	0.0006
Bearing / Housing Fit	J7 ISO 286	Pass - Acceptable	Pass - Acceptable

Secondary Inspection Dimensional Comparison

Customer:		Part Number: 231115	Date: 1/26/23
Description:	Secondary inspection of ETK stand alone ball bearing insert 231115 and interchangeability with Timken TAK 2 and 231156 mounted bearing housings.		
Bearing Dimensional Inspection		ETK	Timken
Part Designation		231115	G1200KPPB4
Bore	2.0000 (+.0009 / -.0000)	2.0008	2.0006
Outer Diameter	3.9370 (+.0000 / -.0006)	3.9366	3.9365
Overall Length (w/ Collar)	2.81	2.804	2.808
Length Thru Bore	2.19 (+.00 / -.01)	2.180	2.184
Outer Race Width	0.94 (+.00 / -.01)	0.936	0.942
Inner Ring OD	-	2.712	2.746
Grease Port Location	0.28 Back from Race Centerline	Pass	Pass
Grease Port	0.06 @ 180°	Pass	Pass
Collar OD	3.00	2.992	2.980
Collar Thickness	0.81	0.816	0.812
Collar Finish	Black Oxide	Black Oxide	Black Oxide
Collar Setscrew	(x1) 3/8" - 24 UNF	(x1) 3/8" - 24 UNF	(x1) 7/16" - 14 UNC
Setscrew Finish	Black Oxide Coated w/ Thread-Lock Patch	Pass	Pass
Seal Type	SECD-N5 +NBR Triple Lip Seal (x2)	(x2) L3 seals	(x2) L3 seals
Markings	-	231115 on Collar Face	FAFNIR S1200K A1 on Collar Face FAFNIR G1200KPPB4 12K LOT# on Outer Ring Face
Visual Inspection / Cosmetic		Pass - Acceptable	Pass - Acceptable
Geometric Dimensioning and Tolerancing			
Sphericity of Bearing OD	-	0.0015	0.0001
Cylindricity of Bearing Bore	-	0.0002	0.0006
Bearing / Housing Fit	J7 ISO 286	Pass - Acceptable	Pass - Acceptable
Interchange Inspection			
Proper fitment with Timken TAK 2 Housing		Pass	Pass
Proper fitment with 231156 Housing		Pass	Pass
Inspection Notes:			
<p>** 231156 housing meets dimensional and cosmetic requirements, but housing surfaces are slightly angular and housing foot surface has a raised portion. This can be addressed at the factory adding rounding and smoothness, if required, for future production.</p>			

Secondary Inspection

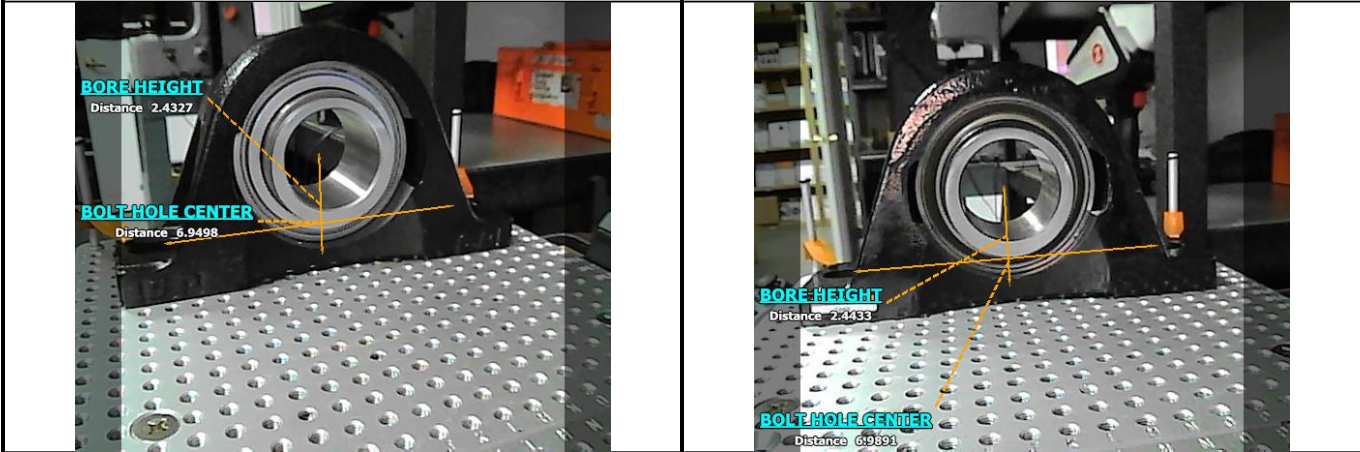
Supplementary Images

Customer:	Part Number:	231156 2311115	Date: 1/26/23
Description:			

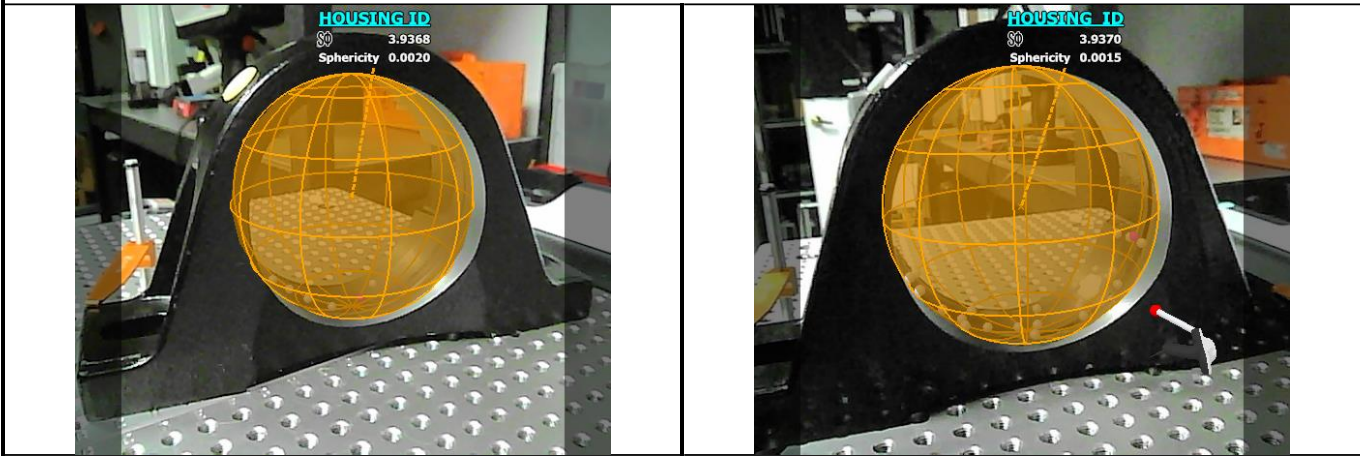
Reference Images

ETK	Timken
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Housing / Bearing Insert Fit



Housing ID



Bearing Insert from Housing

