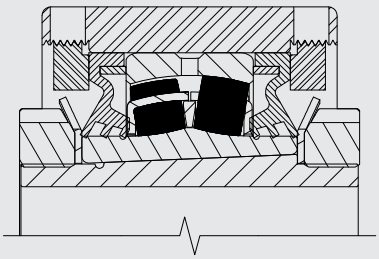
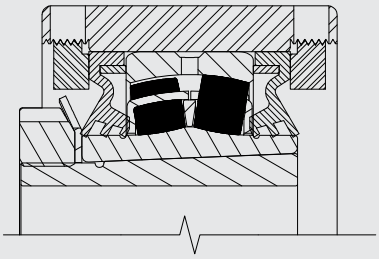
TIMKEN

TIMKEN® SOLID-BLOCK MOUNTED SPHERICAL ROLLER BEARING

TA/TAA DV/DAA SERIES







INSTALLATION

Depending on the locking style selection choose one of the three methods for installing your mounted bearing. Single nut tapered adapter can be installed by either using the axial drive up method or the tang count method. When using double nut tapered adapters use the double nut tapered adapter installation method.

AXIAL DRIVE-UP METHOD

1. Clean all components of any debris and apply a thin oil film to all mating surfaces to ensure proper seating.
2. If using an open-end cover, slide the open-end cover/seal combination into position on the shaft.
3. Slide the adapter sleeve into position on the shaft, then put the mounted bearing into place on the adapter sleeve.
4. Loosely install the mounted bearing mounting bolts. Check the mounted bearing alignment. Verify mounting surfaces are in the same flat plane to help achieve good alignment. If shimming is required to minimize misalignment, use full shims across the entire housing base where possible (fig. 1). Washers should be properly sized to the bolt diameter and should not be an SAE grade, which is smaller.
5. Put the lockwasher on and thread the locknut onto the adapter sleeve leaving approximately 6.350 mm (¼ in.) between the lockwasher and the inner ring of the bearing.
6. Use a large screwdriver or pry bar to lever the sleeve into position until there is no relative movement between the shaft, the adapter sleeve, and the bearing's inner ring.
7. Rotate the locknut until hand-tight.
8. Tighten the locknut while using a dial indicator to measure the axial movement of the tapered adapter sleeve relative to the bearing's inner ring (see table 1).
9. Bend a tang on the lockwasher into a slot on the locknut to prevent the locknut from loosening.
10. Tighten the mounted bearing mounting bolts.

If using covers:

11. Make sure the mating surface of the cover and retaining nuts are clean and dry.
    a. Urethane cover: slightly roughen the mating surface of the cover, place a 3 mm – 6 mm (1⁄8 in. – 1⁄4 in.) bead of polyurethane adhesive sealant on the roughened surface.
    b. Steel cover: place a 3 mm – 6 mm (1⁄8 in. – 1⁄4 in.) bead of silicone adhesive sealant on the mating surface of the cover.
12. Align the cover mounting holes with the mounting holes on the retaining housing nut (make sure that the grease fitting on the cover is accessible when doing so)
13. Apply and tighten the cover mounting hardware.

TANG COUNTING METHOD

1. Clean all components of any debris and apply a thin oil film to all mating surfaces to ensure proper seating.
2. If using an open-end cover, slide the open-end cover/seal combination into position on the shaft.
3. Slide the adapter sleeve into the correct position on the shaft, then put the mounted bearing into place on the adapter sleeve.
4. Loosely install the mounted bearing mounting bolts. Check the mounted bearing alignment. Verify mounting surfaces are in the same flat plane to help achieve good alignment. If shimming is required to minimize misalignment, use full shims across the entire housing base where possible (fig. 1). Washers should be properly sized to the bolt diameter and should not be an SAE grade, which is smaller.
5. Put the lockwasher on and thread the locknut onto the adapter sleeve leaving approximately 6.350 mm (¼ in). between the lockwasher and the inner ring of the bearing.
6. Use a large screwdriver or pry bar to lever the sleeve into position until there is no relative movement between the shaft, the adapter sleeve and the bearing's inner ring.
7. Rotate the locknut until hand-tight.
8. Note which tang is in line with one slot on the locknut.
9. Tighten the locknut until the slot on the locknut passes the number of tangs shown in table 2.
10. Bend a tang on the lockwasher into a slot on the locknut to prevent the locknut from loosening.
11. Tighten the mounted bearing mounting bolts.

TABLE 1. AXIAL MOVEMENT OF TAPERED ADAPTER SLEEVE RELATIVE TO INNER RING

Shaft Dia.	Bearing No.	Minimum Axial Movement	Maximum Axial Movement
mm in.		**mm** in.	**mm** in.
40 1 7⁄16, 1 ½	22209	**0.38** 0.015	**0.46** 0.018
45 1 11⁄16, 1 ¾	22210	**0.38** 0.015	**0.46** 0.018
50 1 15⁄16, 2	22211	**0.46** 0.018	**0.56** 0.022
55 –	22212	**0.46** 0.018	**0.56** 0.022
60 2 3⁄16, 2 ¼	22213	**0.46** 0.018	**0.56** 0.022
65 2 7⁄16, 2 ½	22215	**0.64** 0.025	**0.76** 0.030
70 2 11⁄16, 2 ¾	22216	**0.64** 0.025	**0.76** 0.030
75 2 15⁄16, 3	22217	**0.69** 0.027	**0.97** 0.038
80 3 3⁄16, 3 ¼	22218	**0.69** 0.027	**0.97** 0.038
85 –	22219	**0.69** 0.027	**0.97** 0.038
90 3 7⁄16, 3 ½	22220	**0.69** 0.027	**0.97** 0.038
100 3 15⁄16, 4	22222	**0.76** 0.030	**1.07** 0.042
110 4 3⁄16, 4 ¼	22224	**0.76** 0.030	**1.07** 0.042
115 4 7⁄16, 4 ½	22226	**0.89** 0.035	**1.27** 0.050
125 4 15⁄16, 5	22228	**0.89** 0.035	**1.27** 0.050

TABLE 2. NUMBER OF TANGS TO LOCKING

Shaft Dia.	Bearing No.	Number of Tangs
mm in.		
40 1 7⁄16, 1 ½	22209	3-4
45 1 11⁄16, 1 ¾	22210	3-4
50 1 15⁄16, 2	22211	4-5
55 –	22212	4-5
60 2 3⁄16, 2 ¼	22213	4-5
65 2 7⁄16, 2 ½	22215	5-6
70 2 11⁄16, 2 ¾	22216	5-6
75 2 15⁄16, 3	22217	8-9
80 3 3⁄16, 3 ¼	22218	8-9
85 –	22219	8-9
90 3 7⁄16, 3 ½	22220	8-9
100 3 15⁄16, 4	22222	10-11
110 4 3⁄16, 4 ¼	22224	10-11
115 4 7⁄16, 4 ½	22226	10-11
125 4 15⁄16, 5	22228	10-11

If using covers:

12. Make sure the mating surface of the cover and retaining nuts are clean and dry.
13. Urethane cover: slightly roughen the mating surface of the cover, place a 3 mm – 6 mm (1⁄8 in. – 1⁄4 in.) bead of polyurethane adhesive sealant on the roughened surface.
14. Steel cover: place a 3 mm – 6 mm (1⁄8 in. – 1⁄4 in.) bead of silicone adhesive sealant on the mating surface of the cover.
15. Align the cover mounting holes with the mounting holes on the retaining housing nut (make sure that the grease fitting on the cover is accessible when doing so).
16. Apply and tighten the cover mounting hardware.

TAA/DAA SERIES INSTALLATION PROCEDURE

1. Clean all components of any debris and apply a thin oil film to all mating surfaces to ensure proper seating.

2. If using an open-end cover, slide the open-end cover/seal combination into position on the shaft.

3. Check that the withdrawal nut settings are appropriate for the application shaft size. The axial measurement of the withdrawal nut of the tapered adapter is preset from the factory assuming the shaft is to commercial grade tolerances (see commercial grade tolerance table 3). If the shaft is smaller or larger than the commercial grade tolerances, see table 3. Calculate the amount of rotation to adjust the withdrawal nut from the values in table 3 under the withdrawal nut adjustment column (values listed are based on 1⁄4 turn of the withdrawal nut). For smaller than commercial grade shaft tolerances turn the withdrawal nut counter-clockwise. For larger than commercial grade shaft tolerances turn withdrawal nut clockwise when looking at front face of the nut.

    a. If you feel the adapter has changed from the pre-set value that was provided, use the tang counting method up to size 40, axial drive up method, or reach out to your local timken engineer.

4. Slide the adapter sleeve and withdrawal nut into the correct position on the shaft, then put the mounted bearing into place on the adapter sleeve.

5. Loosely install the mounted bearing mounting bolts. Check the mounted bearing alignment. Verify mounting surfaces are in the same flat plane to help achieve good alignment. If shimming is required to minimize misalignment, use full shims across the entire housing base where possible (Figure 1). Washers should be properly sized to the bolt diameter and should not be an SAE grade, which is smaller.

6. Rotate front locknut by hand until it makes contact with inner ring. Using a wrench, further tighten the front locknut until the inner ring makes contact with the inner face of the withdrawal nut. A hydraulic nut also may be used to do this; however, the front locknut must first be removed, then the bearing tightened with a hydraulic nut. Following this, the front locknut is replaced on to the tapered adapter. In bearing sizes 23132K to 23140K, front locknut should rotate through a certain number of tangs of the lockwasher after making initial contact between the tapers of the adapter and the bore of the bearing, detailed in Table 3.

7. For bearing sizes 23132K to 23140K, secure the front locknut by bending a tang on the lockwasher into the closest notch on the locknut. For bearing sizes 23144K and larger, secure the front locknut by fixing the lockplate into the closest notch on the locknut.

8. Tighten the mounted bearing mounting bolts.

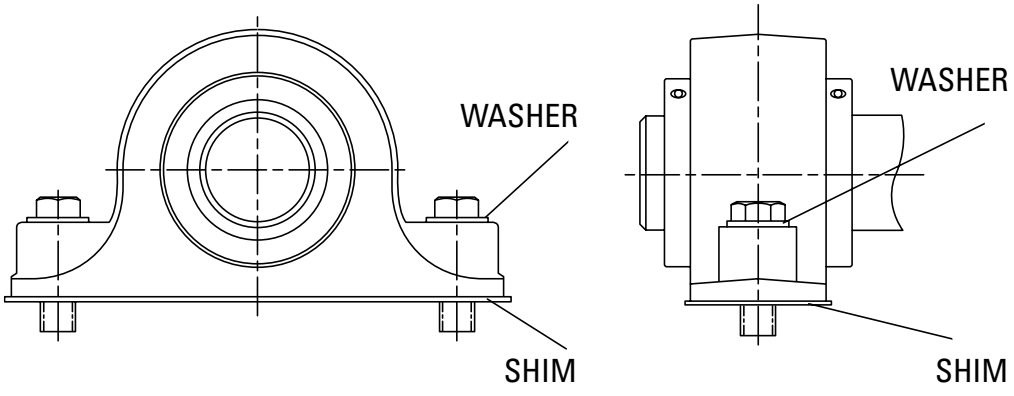


Fig. 1. Use Washers And Full Shims.

CROSS-SECTIONAL VIEW OF BEARINGS

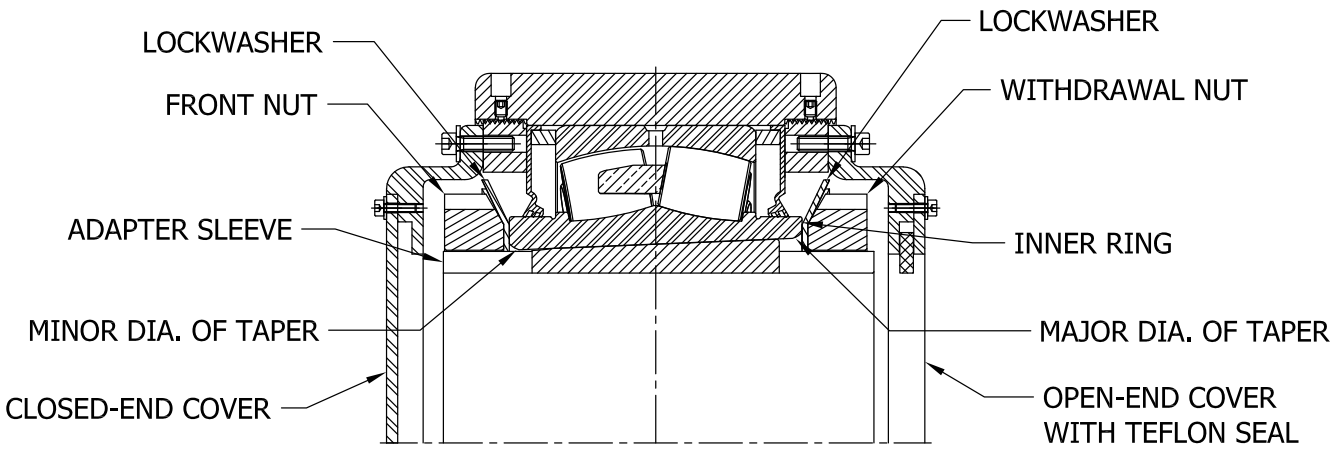


Fig. 2. Cross-sectional view of bearing sizes 23132K to 23140K

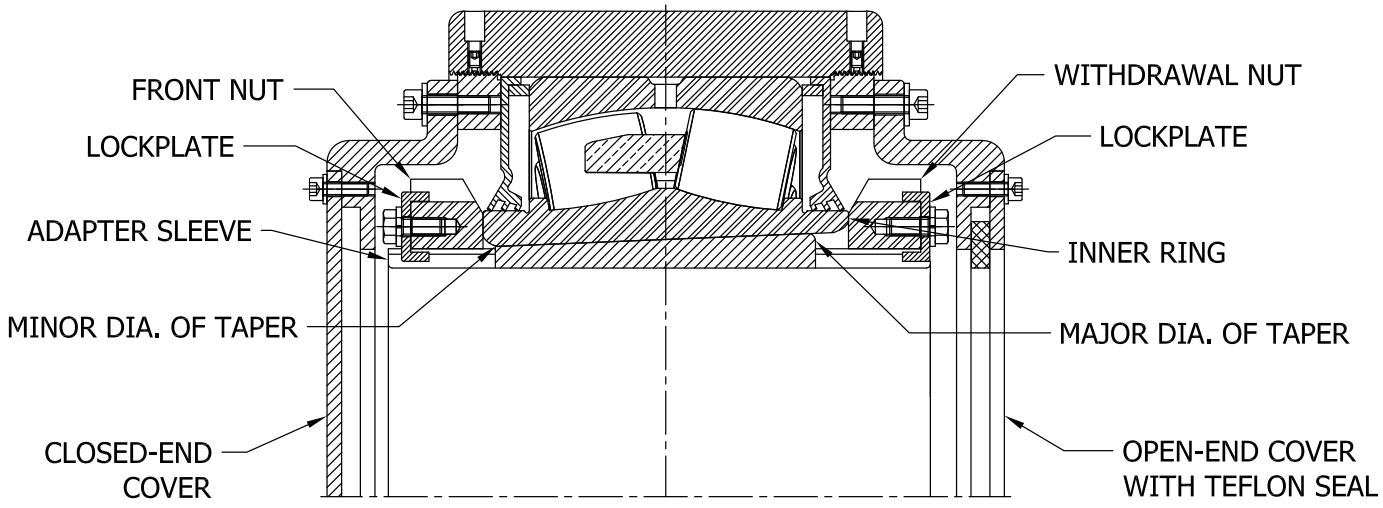


Fig. 3. Cross-sectional view of bearing sizes 23144K and larger

TABLE 3. INSTALLATION DATA

Shaft Diameter	Bearing Part No.	Recommended Shaft Tolerance	Maximum Speed (Urethane Seals)	Adapter Thread Specification	Withdrawal Nut Preset for Shaft Tolerance:[3]	Back-off withdrawal nut 1/4 turn if shaft is undersized by:[2]	Number of Tangs to Lock[1]	Minimum Axial Movement	Maximum Axial Movement
mm in.		**mm** in.	RPM		**mm** in.	**mm** in.		**mm** in	**mm** in
135, 140 5 3/8, 5 7/16, 5 1/2	23132K	**+0.00 / -0.125** +0.000 / -0.005	500	M160 x 3	**-0.05** -0.002	**0.063** 0.0025	7–10	**1.24** 0.049	**1.37** 0.054
150 5 13/16, 5 7/8, 5 15/16, 6	23134K	**+0.00 / -0.125** +0.000 / -0.005	470	M170 x 3	**-0.05** -0.002	**0.063** 0.0025	7–10	**1.24** 0.049	**1.37** 0.054
160 6 5/16, 6 3/8, 6 7/16, 6 1/2	23136K	**+0.00 / -0.125** +0.000 / -0.005	430	M180 x 3	**-0.08** -0.003	**0.063** 0.0025	8–11	**1.24** 0.049	**1.37** 0.054
170 6 13/16, 6 7/8, 6 15/16, 7	23138K	**+0.00 / -0.125** +0.000 / -0.005	400	M190 x 3	**-0.08** -0.003	**0.063** 0.0025	9–12	**1.55** 0.061	**1.70** 0.067
180 7 1/8, 7 3/16, 7 1/4	23140K	**+0.00 / -0.125** +0.000 / -0.005	400	M200 x 3	**-0.08** -0.003	**0.063** 0.0025	9–12	**1.55** 0.061	**1.70** 0.067
200 7 3/16, 7 7/8, 7 15/16, 8	23144K	**+0.00 / -0.125** +0.000 / -0.005	330	Tr220 x 4	**-0.08** -0.003	**0.083** 0.0033	N/A	**1.68** 0.066	**1.83** 0.072
220 8 7/16, 8 1/2, 8 15/16, 9	23148K	**+0.00 / -0.152** +0.000 / -0.006	310	Tr240 x 4	**-0.08** -0.003	**0.083** 0.0033	N/A	**1.96** 0.077	**2.16** 0.085
240 9 7/16, 9 1/2	23152K	**+0.00 / -0.152** +0.000 / -0.006	250	Tr260 x 4	**-0.08** -0.003	**0.083** 0.0033	N/A	**1.96** 0.077	**2.16** 0.085
260 9 15/16, 10, 10 7/16, 10 1/2	23156K	**+0.00 / -0.178** +0.000 / -0.007	240	Tr280 x 4	**-0.089** -0.0035	**0.083** 0.0033	N/A	**1.96** 0.077	**2.16** 0.085
280 10 15/16, 11	23160K	**+0.00 / -0.178** +0.000 / -0.007	210	Tr300 x 4	**-0.089** -0.0035	**0.083** 0.0033	N/A	**2.08** 0.082	**2.31** 0.091
300 11 7/16, 11 1/2, 11 15/16, 12	23164K	**+0.00 / -0.178** +0.000 / -0.007	190	Tr320 x 5	**-0.089** -0.0035	**0.104** 0.0041	N/A	**2.24** 0.088	**2.46** 0.097
320 12 7/16, 12 1/2	23168K	**+0.00 / -0.203** +0.000 / -0.008	180	Tr340 x 5	**-0.10** -0.004	**0.104** 0.0041	N/A	**2.24** 0.088	**2.46** 0.097
340 12 15/16, 13, 13 7/16, 13 1/2	23172K	**+0.00 / -0.203** +0.000 / -0.008	170	Tr360 x 5	**-0.10** -0.004	**0.104** 0.0041	N/A	**2.51** 0.099	**2.77** 0.109
360 13 15/16, 14	23176K	**+0.00 / -0.203** +0.000 / -0.008	160	Tr380 x 5	**-0.10** -0.004	**0.104** 0.0041	N/A	**2.51** 0.099	**2.77** 0.109
380 14 15/16, 15	23180K	**+0.00 / -0.203** +0.000 / -0.008	150	Tr400 x 5	**-0.10** -0.004	**0.104** 0.0041	N/A	**2.51** 0.099	**2.77** 0.109

[1] Mounted bearings with bearing part no. 23132K to 23140K use lockwashers (Figure 2). Mounted bearings with bearing part no. 23144K and larger use lockplates (Figure 3).

[2] Calculation would be: Adjustment turns = (0.25 x (preset shaft size – measured shaft size)) / Withdrawal nut adjustment value from table.

For example, if the shaft is undersized by 0.001 in., you would back off the withdrawal nut by 1/10 of a turn (or 36 degrees), as shown by the following calculation.

If you have a 5 7/16 in. shaft that is undersized by 0.001 in. (0.25 x (5.4375 in. – 5.4365 in.)) / 0.0025 in.) = 0.1 turns = 1/10 of a turn.

Or in degrees, this would be 360 degrees/10 = 36 degrees.

[3] Based on Commercial Shafting.

COVER INSTALLATION

1. Make sure the mating surface of the cover and retaining nuts are clean and dry.
2. Steel cover: place a 3-6 mm (⅛ – ¼ in.) bead of silicone adhesive sealant on the mating surface of the cover.
3. Align the cover mounting holes with the mounting holes on the retaining housing nut (make sure that the grease fitting on the cover is accessible when doing so).
4. Apply and tighten the cover mounting hardware.

TAA/DAA BEARING REMOVAL

1. Remove covers, if applicable, by removing cover hardware and disengaging the cover from the mounted bearing retaining nut.
2. Disengage locknut retainer on lockwasher on both front and withdrawal locknuts.
3. Remove front locknut
4. Tighten withdrawal nut to disengage bearing from adapter sleeve.
5. Slide off bearing, then slide off adapter sleeve.

TAA/DAA BEARING REMOVAL WITH HYDRAULIC SLEEVE

1. Loosen and remove locknut and lockwasher.
2. Unlock lockwasher on withdrawal nut.
3. Hook up hydraulic pump to M6 threaded hole on end of sleeve.
4. Pressurize hydraulic pump/sleeve.
5. Tighten withdrawal nut to dismount sleeve with the assistance of hydraulics between sleeve and bearing bore.

TABLE 4. HYDRAULIC TAPER SLEEVE

Part Number	Bearing Size	Shaft Size (d)	O.D. (D)	Length (L)	Hydraulic Port	Approx. Wt.
		mm	**mm** in.	**mm** in.	**mm**	**kg** lbs.
TL03132X140M-BO	SLK32	**140**	**169.9** 6 11/16	**184.9** 7 9/32	**M6**	–
TL03134X150M-BO	SLK34	**150**	**179.8** 7 5/64	**186.5** 7 11/32	**M6**	–
TL03136X160M-BO	SLK36	**160**	**190.5** 7 1/2	**196.9** 7 3/4	**M6**	–
TL03138X170M-BO	SLK38	**170**	**200.8** 7 29/32	**206.8** 8 9/64	**M6**	–
TL03140X180M-BO	SLK40	**180**	**211.9** 8 11/32	**216.7** 8 17/32	**M6**	–
TL03144X200M-BO	SLK44	**200**	**232.6** 9 5/32	**235.0** 9 1/4	**M6**	–
TL03148X220M-BO	SLK48	**220**	**253.2** 9 31/32	**246.9** 9 23/32	**M6**	–
TL03152X240M-BO	SLK52	**240**	**274.6** 10 13/16	**266.7** 10 1/2	**M6**	–
TL03156X260M-BO	SLK56	**260**	**294.5** 11 19/32	**273.1** 10 3/4	**M6**	–
TL03160X280M-BO	SLK60	**280**	**315.9** 12 7/16	**286.9** 11 19/64	**M6**	–
TL03164X300M-BO	SLK64	**300**	**337.3** 13 9/32	**306.4** 12 1/16	**M6**	–
TL03168X320M-BO	SLK68	**320**	**358.0** 14 3/32	**346.9** 13 21/32	**M6**	–
TL03172X340M-BO	SLK72	**340**	**377.8** 14 7/8	**354.9** 13 31/32	**M6**	–
TL03176X360M-BO	SLK76	**360**	**398.5** 15 11/16	**360.8** 14 13/64	**M6**	–
TL03180X380M-BO	SLK80	**380**	**419.1** 16 1/2	**370.7** 14 19/32	**M6**	–

RELUBRICATION

This information is to aid in the proper lubrication of Timken solid-block mounted spherical roller bearings for the majority of applications.

Mounted bearings have been factory-prelubricated with an NLGI No. 2 lithium-complex, extreme-pressure synthetic grease that combines the benefits of wide operating temperatures and broad compatibility with varied materials. This grease offers excellent thermal stability through temperatures ranging from -40° C to 177° C (-40° F to 350° F). Mounted bearings should be relubricated with this grease or one that is compatible and made for roller bearings. It is vital that the greases used are compatible with the factory installed grease. Please consult with your Timken engineer for the grease specifications if the use of a grease other than the grease mentioned above is needed.

Normal service is considered as operation in a clean, dry environment at temperatures between -34° C to +82° C (-30° F to +180° F). If service is beyond normal conditions due to speed, temperature or exposure to moisture, dirt or corrosive chemicals, periodic relubrication may be necessary. For extreme conditions or conditions in which special chemicals are used, consult with your Timken engineer.

After extended storage or periods when the mounted bearing is not in operation, fresh grease should be added.

It's important to have the right amount of lubrication because it affects the mounted bearing operating temperature as well. An inadequate amount of grease could lead to higher operating temperatures due to inadequate lubrication film thickness.

Excessive grease will lead to higher operating temperatures due to grease churning, which can cause bearing overheating. It is best to observe the bearing and its temperature and adjust the lubrication as needed. If necessary, use the purge valve or seals that purge to reduce the amount of grease.

NOTE

Please check with the manufacturer of your grease delivery system for specific information.

TABLE 5. RELUBRICATION INTERVALS

Shaft Dia.	Bearing Part No.	Initial Weight	Relubrication Weight	Relubrication Interval (Hours of Service based on RPM and Temperature deg. F)											
				100 RPM		250 RPM		500 RPM		1000 RPM		2000 RPM		3000 RPM	
				<160°	>160°	<160°	>160°	<160°	>160°	<160°	>160°	<160°	>160°	<160°	>160°
mm in.		**g** oz.	**g** oz.												
40 1 7/16, 1 1/2	22209	**19.8** 0.7	**5.7** 0.2	2000	1000	1200	600	800	400	320	160	160	80	80	40
45 1 11/16, 1 3/4	22210	**22.7** 0.8	**5.7** 0.7	1600	800	1000	500	640	320	240	120	120	60	60	30
50 1 15/16, 2	22211	**28.4** 1.0	**8.5** 0.3	1200	600	800	400	440	220	160	80	100	50	60	30
55 –	22212	**34.0** 1.2	**8.5** 0.3	1150	580	750	380	400	200	140	70	90	50	50	20
60 2 3/16, 2 1/4	22213	**39.7** 1.4	**11.3** 0.4	1120	560	720	360	360	180	120	60	80	40	40	20
65 2 7/16, 2 1/2	22215	**76.5** 2.7	**19.8** 0.7	1040	520	680	340	340	170	100	50	60	30		
70 2 11/16, 2 3/4	22216	**76.5** 2.7	**19.8** 0.7	1040	520	680	340	340	170	10	50	60	30		
75 2 15/16, 3	22217	**96.4** 3.4	**25.5** 0.9	1000	500	640	320	320	160	100	50	60	30		
80 3 3/16, 3 1/4	22218	**104.9** 3.7	**25.5** 0.9	960	480	600	300	300	150	80	40	40	20		
85 –	22219	**104.9** 3.7	**25.5** 0.9	960	480	600	300	300	150	80	40	40	20		

Contiued on next page

Shaft Dia.	Bearing Part No.	Initial Weight	Relubrication Weight	Relubrication Interval (Hours of Service based on RPM and Temperature deg. F)											
				100 RPM		250 RPM		500 RPM		1000 RPM		2000 RPM		3000 RPM	
				<160°	>160°	<160°	>160°	<160°	>160°	<160°	>160°	<160°	>160°	<160°	>160°
mm in.		**g** oz.	**g** oz.												
90 3 7/16, 3 1/2	22220	**184.3** 6.5	**45.4** 1.6	840	420	520	260	240	120	60	30				
100 3 15/16, 4	22222	**209.8** 7.4	**53.9** 1.9	680	340	440	220	200	100	60	30				
110 4 3/16, 4 1/4	22224	**260.8** 9.2	**68.0** 2.4	640	320	400	200	180	90	50	25				
115 4 7/16, 4 1/2	22226	**340.2** 12.0	**85.0** 3.0	600	300	360	180	160	80	40	20				
125 4 15/16, 5	22228	**396.9** 14.0	**99.2** 3.5	520	260	340	170	140	75						
135, 140 5 3/8, 5 7/16, 5 1/2	23132	**593** 20.9	**116** 4.1	480	240	320	160	120	60						
150 5 13/16, 5 7/8, 5 15/16, 6	23134	**646** 22.8	**122** 4.3	420	200	280	140	110	60						
160 6 5/16, 6 3/8, 6 7/16, 6 1/2	23136	**803** 28.3	**145** 5.1	400	180	240	120								
170 6 13/16, 6 7/8, 6 15/16, 7	23138	**956** 33.7	**167** 5.9	380	160	200	110								
180 7 1/8, 7 3/16, 7 1/4	23140	**1202** 42.4	**190** 6.7	350	150	150	90								
200 7 13/16, 7 7/8, 7 15/16, 8	23144	**1474** 52.0	**221** 7.8	320	140	110	60								
220 8 7/16, 8 1/2, 8 15/16, 9	23148	**1942** 68.5	**255** 9.0	290	130	85	45								
240 9 7/16, 9 1/2	23152	**2415** 85.2	**318** 11.2	260	120	60	30								
260 9 15/16, 10, 10 7/16, 10 1/2	23156	**2745** 96.8	**335** 11.8	230	110										
280 10 15/16, 11	23160	**3202** 113.0	**400** 14.1	200	100										
300 11 7/16, 11 1/2, 11 15/16, 12	23164	**4112** 145.0	**476** 16.8	170	90										
320 12 7/16, 12 1/2	23168	**5093** 179.7	**550** 19.4	140	80										
340 12 15/16, 13, 13 7/16, 13 1/2	23172	**5315** 187.5	**576** 20.3	110	60										
360 13 15/16, 14	23176	**5725** 201.9	**601** 21.2	85	45										
380 14 15/16, 15	23180	**6466** 228.1	**649** 22.9	60	30										

DISCLAIMER

Every reasonable effort has been made to ensure the accuracy of the information in this writing, but no liability is accepted for errors, omissions or for any other reason.

RELUBRICATION

Adequate lubrication is an essential element to mounted bearing bearing life. Use table 5 as a suggested initial point of reference. Relubrication frequency and quantity intervals are best determined through experience for each application based on types of service, which may differ from the suggestions in the table.

When the mounted bearing is not in operation for an extended period of time, grease should be added to prevent corrosion.

Table 5 shows general lubrication suggested starting points only. Please read the entire installation instructions prior to using these tables. Applications should be regularly reviewed and lubrication amounts and intervals modified as needed to ensure the best results.

HOW TO CONVERT A SOLID-BLOCK MOUNTED BEARING FROM FIXED TO EXPANSION (FLOATING)

Flange Cartridge and Flange Block

- Make a reference mark on the housing and retaining nut.
- Loosen the Teflon-tipped set screw that locks the retaining nut in place.
- Loosen the retaining nut by tapping it with a hammer and punch, rotating the retaining nut counterclockwise one complete revolution.
- Tighten the Teflon-tipped set screw.

NOTE

When converting a solid-block mounted bearing from fixed to expansion, it is imperative that the unit that is going to be converted is correctly oriented. Since the insert in a steel mounted bearing flange bearing is held against either a shoulder or snap ring opposite the housing retaining nut, a flange bearing that has been converted to expansion can only float in the direction of the retaining nut. Based on this, the retaining nut must be on the side of the housing opposite the fixed bearing.

DISCLAIMER

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Pillow Block

- Decide the amount and direction of expansion that's needed. If unidirectional expansion is required, follow the directions outlined above for flange bearings on the nut that is on the side you want the expansion.
- If multi-directional expansion is required, follow the directions above for both nuts on flange mounted bearings.

HOW TO CONVERT A SOLID-BLOCK MOUNTED BEARING FROM EXPANSION (FLOATING) TO FIXED

Flange Cartridge and Flange Block

- Loosen the Teflon-tipped set screw that locks the retaining nut in place.
- Tighten the retaining nut by tapping it with a hammer and punch, rotating the retaining nut clockwise until tight. It is not possible to overtighten the retaining nut.
- Tighten the Teflon-tipped set screw.

Pillow Block

- Follow the directions above for flange bearings on both nuts on either side of the housing.

NOTE

When converting a solid-block mounted bearing from expansion to fixed on a mounted bearing, the locking-collar set screws must be released to allow the insert to move both in the housing and on the shaft.

⚠ WARNING

Failure to observe the following warnings could create a risk of death or serious injury.

Proper maintenance and handling practices are critical. Always follow installation instructions and maintain proper lubrication.

Overheated bearings can ignite explosive atmospheres. Special care must be taken to properly select, install, maintain and lubricate mounted bearings that are used in or near atmospheres that may contain explosive levels of combustible gases or accumulations of dust such as grain, coal, or other combustible materials. Consult your equipment designer or supplier for installation and maintenance instructions.

If hammer and bar are used for installation or removal of a part, use a mild steel bar (e.g., 1010 or 1020 grade). Mild steel bars are less likely to cause release of high speed fragments from the hammer or bar or the part being installed or removed.

CAUTION

Failure to follow these cautions may result in property damage.

Do not use damaged mounted bearings.

TIMKEN

The Timken team applies their know-how to improve the reliability and performance of machinery in diverse markets worldwide. The company designs, makes and markets bearings, gear drives, automated lubrication systems, belts, brakes, clutches, chain, couplings, linear motion products and related industrial motion rebuild and repair services.

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