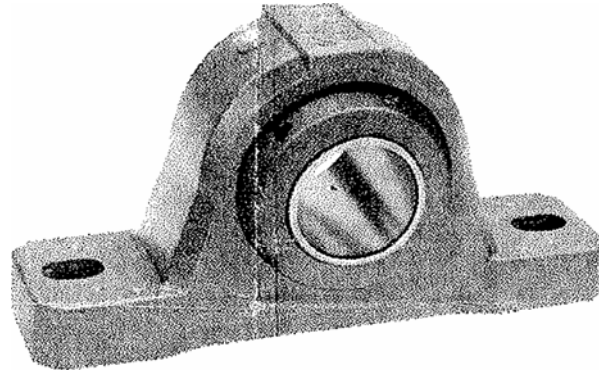


INSTRUCTION MANUAL

FOR DODGE® SN2000 SPHERICAL ROLLER BEARINGS

(Metric and Inch Bore)



INSTALLATION INSTRUCTIONS

WARNING

To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Failure to observe these precautions may result in bodily injury.

DODGE SN2000 Spherical Bearing Pillow Blocks Installation and Maintenance Instructions

General Information

DODGE SN2000 Pillow Blocks offer spherical bearing economy for shaft sizes from 30 to 90 mm and from 1 $\frac{1}{8}$ " to 3 $\frac{1}{2}$ ". Housing are constructed of ductile iron. Easy to install set screw type locking collars are standard features. Both expansion and non-expansion versions are available.

NON-EXPANSION BEARING

1. Clean shaft and bore of bearing. The shaft should be straight, free of burrs and nicks and correct size (see shaft tolerance table, page 2). If used shafting is utilized, then the bearing should be mounted on unworn section of shafting.
2. Lubricate shaft and bearing bore with grease or oil to facilitate assembly. Slip bearing into position. When light press fit is

required, press against the end of the inner ring of bearing. Do not strike or exert pressure on the housing or seals.

3. Bolt bearing to support, using shims where necessary to align bearing so inner ring does not rub on seal carrier. Keep seal carrier concentric with shaft. Use full shims which extend across the entire housing base.
4. Determine final shaft position and tighten set screws in the locking collar(s) of non-expansion bearing to recommended torque while the other bearings remain free. Rotate the shaft slowly under load, if possible, to properly center the rolling elements with respect to the raceways. Then tighten set screws into the locking collar of the remaining bearings to the recommended torque.
- 4a. For normal thrust loads, shock loads or vibration, the shaft should be spot drilled once to receive the point of one set screw to provide additional holding power. Tighten the set screw over the spot drilled area first, then tighten the second set screw. Under heavy thrust load applications it is advisable to use auxiliary thrust carrying devices such as shaft shoulder, snap rings or a thrust collar.
5. Check rotation. If there is any strain, irregular rotational torque or vibration, it could be due to incorrect alignment, bent shaft or bent supports. Installation should be rechecked and correction made where necessary.

WARNING: Because of the possible danger to persons(s) or property from accidents which may result from the improper use of products, it is important that correct procedures be followed. Products must be used in accordance with the engineering information specified in the catalog. Proper installation, maintenance and operation procedures must be observed. The instructions in the instruction manual must be followed. Inspections should be made as necessary to assure safe operation under prevailing conditions. Proper guards and other suitable safety devices or procedures as may be desirable or as may be specified in safety codes should be provided, and are neither provided by Baldor Electric Company nor are the responsibility of Baldor Electric Company. This unit and its associated equipment must be installed, adjusted and maintained by qualified personnel who are familiar with the construction and operation of all equipment in the system and the potential hazards involved. When risk to persons or property may be involved, a failsafe device must be an integral part of the driven equipment beyond the speed reducer output shaft.

BALDOR

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EXPANSION BEARING

Steps (1, 2, 3) Same as Non-Expansion Bearing.

- Position expansion bearing in the housing. For normal expansion conditions, the bearing insert should be positioned in the center of the housing. To center bearing insert in housing, move bearing insert to extreme position and mark shaft. Then using bearing maximum total expansion table, move bearing insert in opposite direction one-half the total expansion to center bearing in the housing. If maximum expansion is required, move bearing insert to the extreme position in the housing to permit full movement in direction of expansion. After expansion bearing has been positioned in the housing, tighten the set screws in the locking collar to the recommended torque.

- Same as Non-Expansion Bearing.

FIELD CONVERSION (RE-OP) OF A NON-EXPANSION BEARING INTO AN EXPANSION BEARING

All SN2000 non-expansion bearings can be re-oped to become an expansion bearing. To modify a non-expansion to an expansion bearing: (1) remove bearing collar. (2) Remove snap ring from collar side of bearing and also remove the non-expansion spacer. (3) Reinstall snap ring. (4) Press, not hammer, on inner ring end opposite the collar and install bearing per Expansion Bearing instruction. Note: Bearing name plate has a non-expansion Part Number. When bearing is modified, bearing should be marked as expansion for future reference.

Bearing Maximum Total Expansion Table

Shaft Size		Total Expansion	
MM	Inch	MM	Inch
30-35	$1\frac{1}{8}-1\frac{1}{2}$	3.18	.125
40-90	$1\frac{5}{8}-3\frac{1}{2}$	6.35	.250

LUBRICATION INSTRUCTIONS

OPERATION IN PRESENCE OF DUST, WATER OR CORROSION VAPORS

This bearing is factory lubricated with a No. 2 consistency lithium-base grease with ISO 100 oil which is suitable for most applications. However, extra protection is necessary if bearing is subjected to excessive moisture, dust or corrosive vapor. In these cases, bearing should contain as much grease as speed will permit (a full bearing with consequent slight leakage through the seal is the best protection against contaminant entry).

In extremely dirty environments, the bearing should be purged daily to flush out contaminants. For added protection, it is advisable to shroud the bearing from falling material.

HIGH SPEED OPERATION

At higher operating speeds, too much grease may cause overheating. In these cases, the amount of lubrication can only be determined by experience. If excess grease causes overheating, remove grease fittings and run for ten minutes. This will allow excess grease to escape. Then wipe off excess grease and replace grease fittings.

In higher speed applications, a small amount of grease at frequent intervals is preferable to a large amount at

infrequent intervals. However, the proper volume and interval of lubrication can best be determined by experience.

AVERAGE OPERATIONS

The following table is a general guide for normal operating conditions. However, some situations may require a change in lubricating periods as dictated by experience. If the bearing is exposed to unusual operating conditions, consult a lubricant manufacturer.

Lubrication Guide

Read preceding paragraphs before establishing lubrication schedule.

Suggested Lubrication Period in Weeks								
Hours run per day	1 to 250 rpm	251 to 500 rpm	501 to 750 rpm	751 to 1000 rpm	1001 to 1500 rpm	1501 to 2000 rpm	2001 to 2500 rpm	2501 to 3000 rpm
8	12	12	10	7	5	4	3	2
16	12	7	5	4	2	2	2	1
24	10	5	3	2	1	1	1	1

OPERATING TEMPERATURES

Abnormal bearing temperatures may indicate insufficient lubrication. If the housing is too hot to touch for more than a few seconds, check the temperature by applying a thermometer at the top of the pillow block with the thermometer tip surrounded by putty.

Because the thermometer reading will be approximately 6°C lower than the actual bearing temperature, add 6°C to the reading and compare to the temperature rating of your grease. If the bearing temperature reading is consistent and operating within the recommended limits of your grease, the bearing is operating satisfactorily.

The recommended maximum operating temperature for a No. 2 lithium base grease is 93°C (200°F).

STORAGE OR SPECIAL SHUT DOWN

If equipment will be idle for some time, before shutting down, add grease to the bearing until grease purges from the seals. This will ensure protection of the bearing, particularly when exposed to severe environmental conditions. After storage or idle period, add fresh grease to the bearing before starting.

Set Screw Torque Table

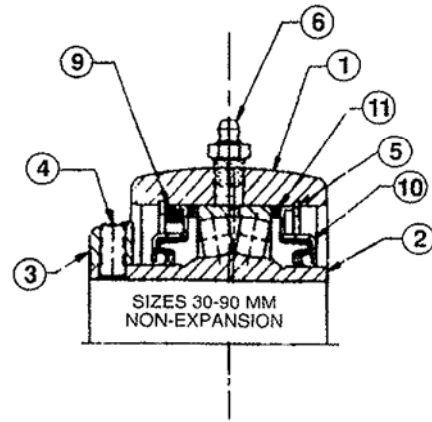
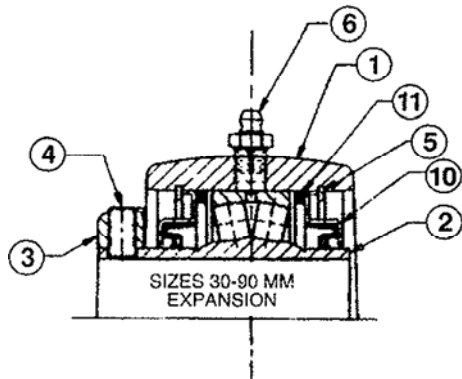
Shaft Size	Socket Set Screw Size	Tightening Torque
30-45 mm	M8	17.8 Newton-meters
50-65 mm	M10	35 Newton-meters
70-90 mm	M12	57 Newton-meters
$1\frac{1}{8}-1\frac{3}{4}$ in.	$\frac{5}{16}$ in.	165 inch-pounds
$1\frac{7}{8}-2\frac{1}{2}$ in.	$\frac{3}{8}$ in.	290 inch-pounds
$2\frac{1}{16}-3\frac{1}{2}$ in.	$\frac{1}{2}$ in.	620 inch-pounds

Recommended Shaft Tolerance Table

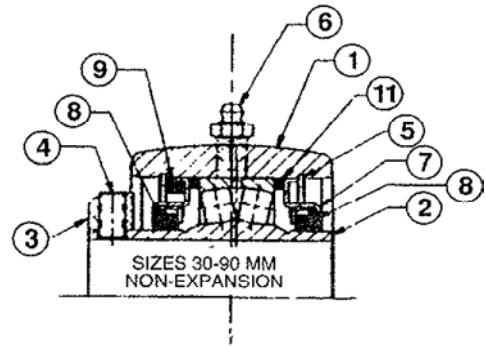
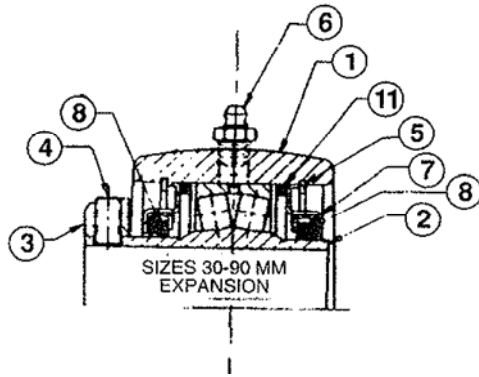
Nominal Shaft Size	For Loads Up To 18% of C and Catalog Speed
30-35 mm	+.000 mm to -.013 mm
40-90 mm	+.000 mm to -.025 mm
$1\frac{1}{8}-1\frac{1}{2}$ in.	+.000 in. to -.0005 in.
$1\frac{5}{8}-3\frac{1}{2}$ in.	+.000 in. to -.0010 in.

SN2000 METRIC BORES (30-90 MM) COMPONENT PART NUMBERS

SN2000-2R



SN2000-2S

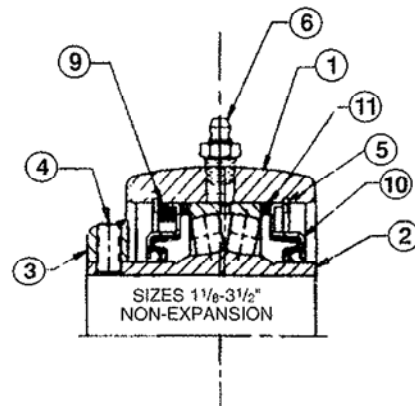
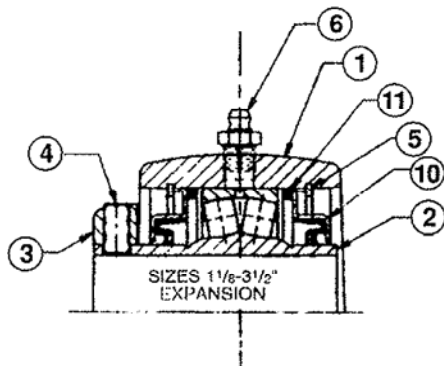


Item	Housing	2	3	4	5	6	7	8	9	10	11
Shaft Size	2B P/B	Bearing	Collar	Set Screw	Snap Ring	Grease Fitting	Seal Carrier	2S-Seal Assy.	Non-Exp. Seal Spacer	2R-Seal Assy.	Bearing Spacer
30	046810	046001	046120	400713	044583	405601	044576	043300	044600	044590	044607
35	046811	046002	046120	400713	044583	405601	044576	043300	044600	044590	044607
40	046812	046003	046121	400713	044584	405601	044577	043301	044601	044591	042862
45	046812	046004	046121	400713	044584	405601	044577	043301	044601	044591	042862
50	046813	046005	046122	400708	044585	405601	044578	043302	044602	044592	042863
55	046814	046006	046123	400709	044586	405601	044579	043303	044603	044593	042864
60	046815	046007	046124	400709	044587	405601	044580	043304	044604	044594	042865
65	046815	046008	046124	400709	044587	405601	044580	043304	044604	044594	042865
70	046816	046009	046125	400710	044588	405601	044581	043305	044605	044595	042866
75	046816	046010	046125	400710	044588	405601	044581	043305	044605	044595	042866
80	046817	046011	046126	400714	044589	405601	044582	043306	044606	044596	042867
85	046818	046012	046126	400710	044589	405601	044582	043306	044606	044596	042867
90	046819	046013	046126	400710	044589	405601	044582	043306	044606	044596	042867
Qty./Per	1	1	1	2	2	1	2*	2	1	2	2

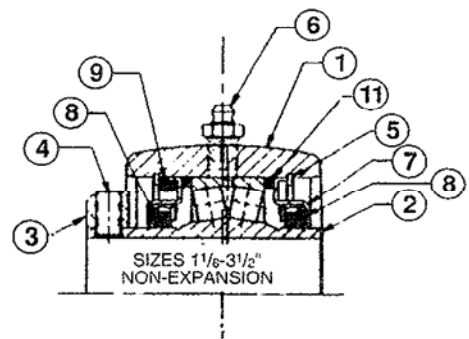
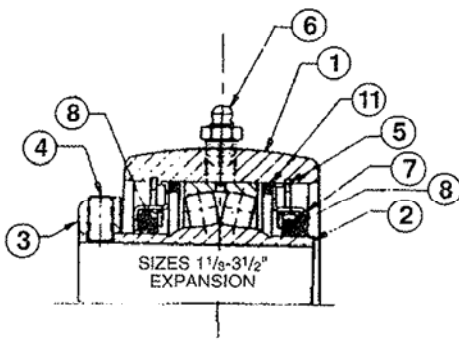
* Seal carrier not required on S2000-2R sizes 30-90 mm. Seal is molded in carrier for assembly.

SN2000 INCH BORES (1¹/₈"-3¹/₂") **COMPONENT PART NUMBERS**

SN2000-2R



SN2000-2S



Item	Housing	2	3	4	5	6	7	8	9	10	11
Shaft Size	2B P/B	Bearing	Collar	Set Screw	Snap Ring	Grease Fitting	Seal Carrier	2S-Seal Assy.	Non-Exp. Seal Spacer	2R-Seal Assy.	Bearing Spacer
1 ¹ / ₈	046810	043110	040050	400058	044583	405601	044576	043300	044600	044590	044607
1 ³ / ₁₆	046810	042832	040050	400058	044583	405601	044576	043300	044600	044590	044607
1 ¹ / ₄	046811	042833	040050	400058	044583	405601	044576	043300	044600	044590	044607
1 ³ / ₈	046811	042834	040050	400058	044583	405601	044576	043300	044600	044590	044607
1 ⁷ / ₁₆	046811	042835	040050	400058	044583	405601	044576	043300	044600	044590	044607
1 ¹ / ₂	046811	042836	040050	400058	044583	405601	044576	043300	044600	044590	044607
1 ⁵ / ₈	046812	042837	040051	400058	044584	405601	044577	043301	044601	044591	042862
1 ¹¹ / ₁₆	046812	042838	040051	400058	044584	405601	044577	043301	044601	044591	042862
1 ³ / ₄	046812	042839	040051	400058	044584	405601	044577	043301	044601	044591	042862
1 ⁷ / ₈	046813	043111	040052	400094	044585	405601	044578	043302	044602	044592	042863
1 ¹⁵ / ₁₆	046813	042840	040052	400094	044585	405601	044578	043302	044602	044592	042863
2	046813	042841	040052	400094	044585	405601	044578	043302	044602	044592	042863
2 ³ / ₁₆	046814	042842	040053	400094	044586	405601	044579	043303	044603	044593	042864
2 ¹ / ₄	046814	042843	040053	400094	044586	405601	044579	043303	044603	044593	042864
2 ³ / ₈	046815	043112	040054	400094	044587	405601	044580	043304	044604	044594	042865
2 ⁷ / ₁₆	046815	042844	040054	400094	044587	405601	044580	043304	044604	044594	042865
2 ¹ / ₂	046815	042845	040054	400094	044587	405601	044580	043304	044604	044594	042865
2 ¹¹ / ₁₆	046816	042846	040055	400150	044588	405601	044581	043305	044605	044595	042866
2 ³ / ₄	046816	042847	040055	400150	044588	405601	044581	043305	044605	044595	042866
2 ¹⁵ / ₁₆	046816	042848	040055	400150	044588	405601	044581	043305	044605	044595	042866
3	046816	042849	040055	400150	044588	405601	044581	043305	044605	044595	042866
3 ³ / ₁₆	046817	042850	040056	400154	044589	405601	044582	043306	044606	044596	042867
3 ¹ / ₄	046817	042851	040056	400154	044589	405601	044582	043306	044606	044596	042867
3 ¹ / ₂	046819	042852	040056	400154	044589	405601	044582	043306	044606	044596	042867
3 ⁵ / ₈	046819	042853	040056	400154	044589	405601	044582	043306	044606	044596	042867
Qty./Per	1	1	1	2	2	1	2*	2	1	2	2

* Seal carrier not required on S2000-2R sizes 1¹/₈-3¹/₂ inch. Seal is molded in carrier for assembly.