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REF: General-MSR 91

Originally posted on the XLFORUM by GA_Ironhead ¹⁾

Notes

- On NSK bearings: “V” = rubber seal on one side; “V V” = rubber seal on both sides; “Z” = steel shield on one side; “ZZ” = steel.
 - Shield on both sides; “DU” = heavy contact seal one side; “DDU” = heavy contact seal both sides.
 - “Heavy Contact” = higher drag. Normally the “V V” seal is sufficient (I have never seen “DW” on an NSK bearing).
- Ball bearing mfgs.
 - All use their own numbering system although many of them are similar to each other.
 - Fafnir: “P” = rubber seal, “KD” = steel shield, etc.
 - SKF: “RS” = rubber seal, “Z” = steel shield, etc.
 - No suffix = no seal or shield
- On Torrington inner cam bearings (from XLF member, Vanmor on Oct 8,2013 ²⁾)

Got a box in today. There were eight BH-117 bearings in individual boxes. However, these said KOYO on them and the bearings say BH-117 but are stamped TORR, not TORRINGTON.

I found out that Timken, who was the former owner of Torrington needle bearings, sold the company to KOYO Seiko of Japan several years ago.

At the time of the acquisition, the plants in the USA were just renamed KOYO and still produced the same bearings as always.

My only worry is, did these come from China?

A lot of Japanese companies have followed the lead of other companies in other countries to make stuff in China and box it as made in Japan.

My KOYO bearings say made in USA. So be aware, your next cam bearings may say KOYO on them.
- Seals retain grease & exclude contaminants. Shields do not – they need an auxiliary seal to do that.
- Often ball bearings that are sealed or shielded on both sides are cheaper (because they are more common).
- You can safely pry out the seal/shield on the side where it’s not needed.
- I’ve listed mostly double sealed/shielded bearings in the chart.
- The “C3” designation on some ball bearings is a clearance designation (the clearance, or “fit”, between the balls & the outer race).

C3 bearings are common (probably the most common), and can be used in many applications. C3 or C4 (requires a higher operating temp or higher rotational speed) means the bearing is designed for high rotational speeds and moderately high temperatures. ³⁾

WARNING, an increased internal clearance bearing will not operate optimally at low speeds.

- Tapered roller bearing mfgs all use the same numbering system, although some use a "4T-" prefix.
- AVOID CHINESE, TAIWANESE & EASTERN EUROPEAN BEARINGS LIKE THE PLAGUE. THEY ARE CHEAP BUT IN THE LONG RUN THEY ARE NOT INEXPENSIVE!
- GOOD BALL & ROLLER BEARINGS ARE NOT THAT MUCH MONEY. SPEND THE EXTRA & SAVE A LOT OF HEADACHES IN THE LONG RUN.

XL Bearing Numbers

HD Bearing#	Years Used On	Description	Application	Cross Reference
8860	1954-1977	5/16" Dia Loose Ball Bearings	7/8" Steering Stem Neck brg(28)	
8871	1991-1994 XL1200 1995-Up All		Nippondenso Starter Drive End brg	NSK 6002VV
8876A	1991-2003	Split Plastic Caged Needle Bearings	Trans Mainshaft and Countershaft brg	TORR2 079 (??)
8877	1981-1994 All		Nippondenso Starter Drive End Drive brg	NSK 6002ZZ
8878	1981-1985 XL1000 1986-1994 XL883		Nippondenso Starter Commutator End brg	NSK 608ZZ
8882 8880 (1/95)	1986-1990 All		Nippondenso Starter Commutator End brg	NSK 608VV
8883	1991-1994 XL1200 1995-Up All		Nippondenso Starter brg, Commutator End	NSK 608VV
8885	L1984-Up	Ball bearing	Clutch Pressure Plate brg	Ripan SS NTN 6208
	Note: Alternate upgrade to OEM - Angular Contact Brg FAG 7200B or SKF 7200BEP ⁴⁾			
8888	L1984-1990	Needle Bearing	C/S Low Gear brg	Torrington B110 SCE 11100H
8977	1991-Up	Drawn Cup, Non Thrust Needle Roller Bearing (25mm x 32mm x 26mm)	Countershaft Tranny Case brg	FAG BK2526 INA BK2526
8996 8996A	1991-Present	Deep Groove Ball Bearing Single Row, Open, Steel Cage (45mm x 85mm x 19mm)	Clutch Gear Trapdoor brg	FAG 559197 (CANADA) FAG 6209 C3 SKF 6209 C3
8998	1991-2003	Deep Groove Ball Bearing (20 x 47 x 14mm)	Countershaft Trapdoor brg	FAG 6204 C3 SKF 6204 C3

9007	1958-1981		Generator Drive End brg	FAG 6202-ZR C3 SKF 6202Z
9008	1955-1978 1954-1963		Rear Wheel brg Front Wheel brg	NTN 6203Z C3
9009	1954-1972 1963 - 1978		Front Wheel brg Rear Wheel brg	Fafnir 203KD
9010	1954-1962		Rear Wheel Bearings (Double Row Brake Side)	(1) dbl row, MRC 5203SBKF or (1)-NSK 6203 and (1)-NSK 6203Z
9025A	1954-1990		Four Speed Clutch Trapdoor brg	NTN 6207ZZ Fafnir 207KDD NTN 6207Z
9052	1973-Up 1979-Up	Tapered Roller Bearings	Front Wheel brg Rear Wheel brg	Timken Race LM11910 Timken Bearing LM11949
9057	L1958-1990	Needle Bearings	Inner Cam brgs	Torrington B-117
9062	1967-1980		Starter Motor Gear Housing brg	M8101 INA BCE810
9063	1967-1980	Needle Bearings	Primary Cover Starter Shaft brg	Torrington B1210 INA S1210 IKO BA1210Z
9073	1971-E1984		Clutch Pressure Plate brg Prestolite Starter Motor Drive End brg	Fafnir S8NPP NSK R12VV OEM 31539-66
9088	1958-1981	Needle Bearings	Generator Commutator End brg	INA BCE89
9118	L1984-Up		Mainshaft Tranny Case brg	Torrington BH2012
9151	1991-2003	Bearings (closed end)	Right Case Shifter Drum brg	
18534-29A	1957-Up		Tappet Roller brg	Japan BRV4146 EOIIKOG (??)
24604-00C	2004-2005	Ball Bearing	Crankshaft brg	
24604-00D	2006-2008	Ball Bearing	Crankshaft brg	
24605-07	2009-up	Ball Bearing	Crankshaft brg	
24648-77	1977-1986		Right Crankcase Pinion Shaft brg	Torrington J202816
24729-52	1954-1976		Left Crankcase Shaft brg	Timken Race 0719D Torr Bearing RA52340-1 (??)
24729-74	1977-1990	Tapered Roller Bearings	Left Case Sprocket Shaft brg	Timken Race L44610 Timken Bearing L44649

29563-55	1958-1969 XLCH	Angular Contact Extra Light Brg	Magneto Rotor Shaft End Brg	MRC 7109 (USA)
29916-82	1982-E1984		Hitachi Generator Commutator End brg	NSK 6201VV
29917-82	1982-E1984		Hitachi Generator Drive End brg	NSK (325) 604DU (??)
31539-66	1967-1980		Prestolite Starter Motor Drive End brg	Fafnir S8PP NSK R12VV
31583-73	1974-1976		Hitachi Starter Motor Drive End brg	NSK 6004VV
35030-89	1991-2003	Deep Groove Ball Bearing (25mm x 62mm x 17mm)	Transmission Mainshaft Trapdoor brg	FAG 6305 C3
35051-89	1991-Up	Needle Bearings	Mainshaft Fifth Drive Gear brg	FAG HK2520
35960-54	1954-1990	Needle Bearing (closed end) (17.46 x 22.23 x 19.05mm)	Countershaft brg	Torrington M-11121
35961-52	1954-1990	Needle Bearings (open end)	Countershaft brg	Torrington B-1212
36799-84	Late 1984-1990	Ball Bearings	Clutch Basket brg	NTN 6089Z (??)
37722-52	1954-1970	Needle Bearings	Clutch Basket brg	Torrington B-229
37722-71	1971-E1984	Ball Bearings	Clutch Basket brg	Fafnir 206KDD NSK 6206ZZ
45586-78	1978-1981	Tapered Roller Bearings	15/16" Steering Stem Neck brgs	Timken Race L44610 Timken Bearing L44640
47098-81	1982-Up	Tapered Roller Bearings	Right Side Swingarm brgs	Timken Race LM11710 Timken Bearing LM11749
47521-74	L1974-1981	Tapered Roller Bearings	Swingarm Brgs	Timken Race 11520 Timken Bearing 11590
47550-74	E1974-Earlier	Tapered Roller Bearings	Swingarm Brgs	Timken Race 17520 Timken Bearing 17580
48300-60	1982-Up	Tapered Roller Bearings	1" Steering Stem Neck brgs	Timken Bearing L44643 Timken Race L44610
559322			Buell Transmission 5th Gear brg	SKF 6209 C3 (45 x 85 x 19mm) ⁵⁾

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1)

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/ironhead-sportster-motorcycle-talk-1957-1985/76838-xl-bearing-numbers?t=548657>

2)

<https://www.xlforum.net/forum/sportster-motorcycle-forum/sportster-motorcycle-era-specific-and-model-specific/frame-mount-evo-sportster-talk-1986-2003-models/157766-torrington-bearings-stamped-torr?t=1688503>

3)

<https://www.123bearing.com/bearings-6204-ZZ-C3-SKF#container-tech-schema>

4)

Thanks to Nibelungen of the XLForum for the cross reference

5)

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Last update: **2024/01/18 00:02**

