



भारत सरकार - रेल मंत्रालय
अनुसंधान अभिकल्प और मानक संगठन
लखनऊ - 226 011
EPBX (0522) 2451200
Fax : 0522 - 2452581

Government of India-Ministry of Railways
Research Designs & Standards Organisation
Lucknow - 226 011
DID (0522) 2450115
DID (0522) 2465310



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प्रमुख विद्युत अभियंता,

1. मध्य रेलवे, मुम्बईसीएसटी-400 001
2. पूर्व मध्य रेलवे, हाजीपुर-844 101
3. पूर्वतटीय रेलवे, चन्द्रषेखरपुर, भुवनेश्वर-751 023
4. पूर्वरेलवे, फेयर्ली प्लेस, कोलकाता-700001
5. उत्तर मध्य रेलवे, ब्लॉक ए-2, सुबेदार गंज इलाहाबाद- 211 033
6. उत्तर रेलवे, बड़ौदा हाऊस, नई दिल्ली-110 001
7. उत्तर पश्चिम रेलवे जयपुर- 302006
8. उत्तर पूर्व रेलवे गोरखपुर- 273001
9. उत्तर पूर्व फ्रेन्टीयर रेलवे मालीगाँव गुवाहाटी-781011
10. दक्षिण मध्य रेलवे, रेलनिलायम, सिकंदराबाद-500 071
11. दक्षिण पूर्व मध्य रेलवे, बिलासपुर-495004
12. दक्षिण पूर्व रेलवे, गार्डेनरीच, कोलकाता-700 043
13. दक्षिण रेलवे, पार्क टाउन, चेन्नई-600003
14. दक्षिणपश्चिमरेलवे हुबली-580020
15. पश्चिम मध्य रेलवे, जबलपुर-482 001
16. पश्चिम रेलवे, चर्चगेट, मुम्बई- 400 020
17. चित्तरंजन रेल इंजन कारखाना, चित्तरंजन- 713 331
18. डीजल रेल इंजन कारखाना, वाराणसी-221004

Principal Chief Electrical Engineers,

1. Central Railway, Mumbai, CST-400 001.
2. East Central Railway, Hazipur-844 101.
3. East Coast Railway, Chandrashekharpur, Bhubaneswar-751 023.
4. Eastern Railway, Fairlie Place, Calcutta-700 001.
5. North Central Railway, Block-A, Subedarganj, Allahabad- 211 033.
6. Northern Railway, Baroda House, New Delhi- 110 001.
7. North Western Railway, Jaipur- 302 006
8. North Eastern Railway, Gorakhpur-273001
9. North East Frontier Railway, Maligaon, Guwahati-781011
10. South Central Railway, Rail Nilayam, Secunderabad-500 071.
11. South East Central Railway, Bilaspur-495 004.
12. South Eastern Railway, Garden Reach, Kolkata-700 043.
13. Southern Railway, Park Town, Chennai-600 003.
14. South Western Railway, Hubli- 580020
15. West Central Railway, Jabalpur-482 001.
16. Western Railway, Churchgate, Mumbai-400 020
17. Chittaranjan Locomotive Works, Chittaranjan- 713 331
18. Diesel Locomotive Works, Varanasi-221 004.

Technical Circular No. RDSO/2012/EL/TC/0117, Rev. '1' dated 28.09.2018

Sub: Technical Circular on Year of manufacturing codification on traction motor & MSU Bearings used in Electric Locomotive/EMUs/MEMUs.

(Signature)

1. Purpose:

The year of manufacturing codes for traction motor & MSU bearings up to year 2015 were given in Technical Circular No. RDSO/2012/EL/TC/0117, Rev. '0' dated 16.10.2012 & its amendment No. 1. To provide year codes after 2015, above Technical Circular is being revised as Technical Circular No. RDSO/2012/EL/TC/0117, Rev. '1'.

2. Scope of Application:

This technical circular is being issued to inform the manufacturing date & year of bearings to plan for replacements based on its life. Bearing manufactures normally etch out code for date/ month & year of manufacturing, instead of giving date/month of manufacturing. De-coding details, used by different bearing manufacturers for manufacturing date/month/year have been given as **Annexure-1 to V** for traction motor and MSU bearings of electric Locomotives/EMUs/MEMUs

3. Procedure:

3.1. **New Bearings:-** While fitment of new bearings by motor manufacturer/POH Shop/Shed, the following information should be recorded on the basis of decoding the codes etched out on face of bearing (face of outer ring and inner ring, in case of NDE bearing of 6FRA6068 & 6FXA7059, codes etch out on face of inner ring only):

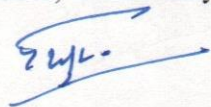
- Make of bearing
- Manufacturer's code indicating date/month/year of manufacturing.
- Country of origin
- Designation of bearings

3.2. **Opening for overhauling:** While opening a bearing for overhauling of the traction motor or MSU, Sheds/POH shops should maintain clear record of the bearing taken out containing the following information:

- Make of bearing
- TM position and No.
- Date of failure
- Date of commissioning of bearing
- Country of origin
- Designation of bearings
- Manufacturer's code indicating date/month/year of manufacturing

4. Failure/Pre-mature replacement of bearings:

4.1. While overhauling of TM/MSU , when a bearing found unserviceable, its life may be judged based on the following:



- Date of commissioning of bearing
 - Manufacturer's code indicating date/month/year of manufacturing
- 4.2. All failure of bearings indicating premature replacement during overhauling should be reported to the respective firm immediately asking them to depute their representative for joint investigation
- 4.3. The failed bearing should be preserved till completion of joint investigation is to be carried out.
- 4.4. Copy of investigation report jointly signed by firm representative and Railway should be sent to RDSO

The failed bearing should be scrapped after marking weld cut on bearing.

5. Application:

All Bearings used on Traction Motor & MSU of Electric Locomotives/EMUs/MEMUs

6. Agency of Implementation:-

All traction motor manufacturers / All POH shops / All Electric Loco Sheds

7. Periodicity of Implementation:

During assembly and overhauling of TM/ MSU.

744-
28.2.18

(P. K. Saraswat)
for Director General/Electrical

Copy to: As per standard mailing list

1. M/s SKF use following marking scheme on TM & MSU bearings for indigenous as well as imported:

a) Cylindrical Roller Bearing:

- i. SKF—Bearing Designation—Manufacturing location-XX-MX-Y
Or
- ii. SKF—Bearing Designation—Manufacturing location-XX-XXX-Y

b) Tapper roller bearings

- i. SKF—Bearing Designation—Manufacturing location-HX-MX-Y
Or
- ii. SKF—Bearing Designation—Manufacturing location-HX-XXX-Y

Where,

XX = Channel identification (optional), Example: 01, 02, 03.....etc.

MX = Indicates month of year, example: M1 for January, M2 for February...M12 for December

Y= Indicates year code of manufacturing given in **table-1** (eg: O-2017, P-2018 etc.)

XXX = Indicates day code, number of day in the year on which bearing is manufactured
i.e. Day 1 - 001, Day 2 - 002, Day 3 - 003, Day 365 - 365 (refer table-2 & 2A)

HX = Indicates Hour of Ring Measurement, Example: 0 to 0:59 =code 00, 01.00 to 01:59 =code01, ---- 23 to 23:59 =code 23.

- Channel identification (XX) and Hour of Ring Measurement (HX) is optional, irrespective of marking method.
- HX indicates Hour of Ring Measurement and is used for Taper roller Bearings only
- Either Month or Day code will be used
- **SKF:** denotes manufacturer of bearing.
- **Bearing designation:** Indicates details of bearings
- **Country code:** Manufacturing country of bearing.
- **Plant Code:** Code of plant which had manufactured the bearing.

Table:-1: Year code (Y) for bearings manufactured by M/s SKF

Symbol	Year	Symbol	Year
A	2004	N	2016
B	2005	O	2017
C	2006	P	2018
D	2007	R	2019
E	2008	S	2020

F	2009	T	2021
G	2010	U	2022
H	2011	V	-
J	2012	W	2023
K	2013	X	2024
L	2014	Y	2025
M	2015	Z	2026

Table:-2: Example of day code for **leap year (XXX)**

Days/month	Code	Days/month	Code
1 st January	001	1 st July	183
31 st January	031	31 st July	213
1 st February	032	1 st August	214
29 th February	060	31 st August	244
1 st March	061	1 st September	245
31 st March	091	30 th September	274
1 st April	092	1 st October	275
30 th April	121	31 st October	305
1 st May	122	1 st November	306
31 st May	152	30 th November	335
1 st June	153	1 st December	336
30 th June	182	31 st December	366

Table:-2A: Example of day code for **non leap year (XXX)**

Days/month	Code	Days/month	Code
1 st January	001	1 st July	182
31 st January	031	31 st July	212
1 st February	32	1 st August	213
28 th February	59	31 st August	243
1 st March	60	1 st September	244
31 st March	90	30 th September	273
1 st April	91	1 st October	274
30 th April	120	31 st October	304
1 st May	121	1 st November	305
31 st May	151	30 th November	334
1 st June	152	1 st December	335
30 th June	181	31 st December	365

Table:-3: Country code

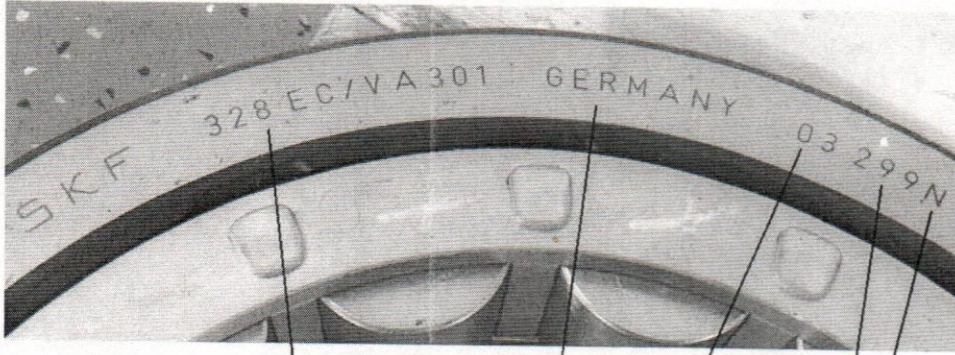
Country	Code
GERMANY	DE
AUSTRIA	AT
INDIA	IN

Table:-4: Plant code applicable for Indian bearing only.

Plant code	Code
Ahmedabad plant	A

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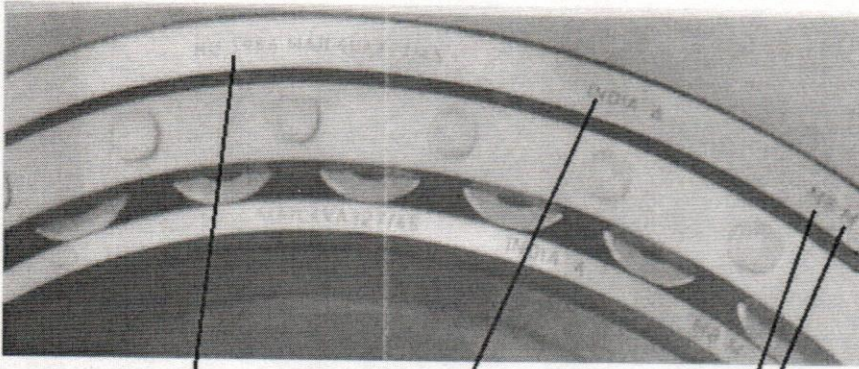
Example 1



SKF -- Bearing Designation -- Manufacturing Location --(XX)-- MX--Y or XXX--Y
Optional

Here,
299 indicate 26th
October.
N indicates year 2016
Thus, 299N=26th
October'2016

Example 2



SKF -- Bearing Designation -- Manufacturing Location --(XX)-- MX--Y or XXX--Y
Optional

Here,
M8 indicates Month
of August.
N indicates year 2016.
Thus, M8 N =
August'2016

SKF

1. M/s Schaeffler use following marking scheme on TM & MSU bearings for indigenous as well as imported:

FAG—Bearing Designation—Manufacturing location—Plant code—date /Month/year
code

Where,

- **FAG:** denote manufacturer of bearing.
- **Bearing description:** Indicates details of bearings
- **Country code:** manufacturing country of bearing.
- **Plant code:** Code of plant which had manufactured the bearing.
- **Date code:** As per table-2
- **Year code:** Code for year of manufacturing given in **table-1** (eg:M-2016, N-2017).

Table-1: Year code for bearings manufactured by M/s Schaeffler

Symbol	Year	Symbol	Year
A	2006 & 2026	N	2017
B	2007	O	--
C	--	P	--
D	2008	Q	--
E	2009	R	2018
F	2010	S	--
G	2011	T	2019
H	2012	U	2020
I	--	V	2021
J	2013	W	2022
K	2014	X	2023
L	2015	Y	2024
M	2016	Z	2025

Table-2: Code used for day, month & year

SN	Date indication	Date format	Abbreviated style	Un Coded
1.	Year	Y	N	2017
2.	Month and year	MM-YYYY or MM/YYYY	03-2017 or 03/2017	March 2017
3.	Year and canonical day	YCCC	N081	22nd March 2017
4.	Canonical day and Year Code and Plant Code	CCCY & Plant Code	065 K. D	065 K. D
5.	Year, month and day	YMMDD	N0322	22 nd March 2017
6.	Year, canonical day and time of day (Precise to seconds)	YCCC-HHMMSS	N081-163456	22nd March 2017, 16:34:56
7.	Year, month, day and time of day (precise to seconds)	YMMDD-HHMMSS	N0322-163456	22nd March 2017, 16:34:56

8.	Year, canonical day and time of day (precise to hours)	D-HH (YCCC-HH)	N081-17	22nd March 2017, 17:XX ¹
9.	Year, month, day and time of day (precise to hours)	D-HH (YMMDD-HH)	N0322-17	22nd March 2017, 17:XX ¹
Note:- ¹ time between 17:00 and 17:59				

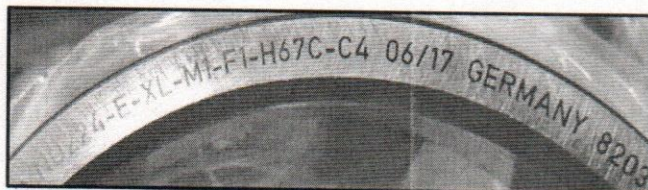
NOTE:-

As per M/s Schaeffler, Production plant can adopt any of above scheme mentioned in **table-2** (Indicating day, month & year).

Table:-3: Plant code

SN	Plant code	Production Place (Country of Origin)
1.	K or 0295	Schaeffler India Limited, Maneja Vadodara
2.	8210	Schaeffler India Limited, Savli Vadodara
3.	D or 8203	Wuppertal, Germany
4.	LM or 8203	Litim F & A Wuppertal, Germany
5.	BR or 0097	Romania
6.	H, Q or 0019, 0246	Italy
7.	B or 0200 or 3000	Schweinfurt, Germany

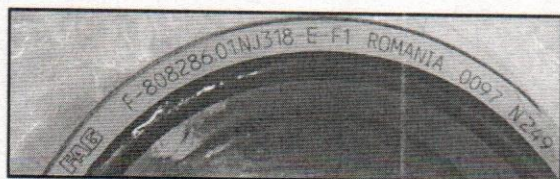
Examples:



Here,
06/17 indicates June '2017'



Here,
R indicates year 2018 & 116 indicates day of year i.e. 26th April.
Thus, R116=26th April 2018.



Here,
N indicates year 2017 & 249 indicates day of year i.e. 5th September.
Thus N249=5th September 2017



Here,
05/16 indicates May '2016'

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1. M/s NSK. Japan use following month & year code on bearings:**Table:-1:** Year code for bearing manufactured by M/s NSK, Japan

Symbol	Year	Symbol	Year
A	1998 & 2017	O	--
B	--	P	2008
C	1999 & 2018	Q	--
D	2000 & 2019	R	2009
E	2001 & 2020	S	--
F	2002 & 2021	T	2010
G	2003 & 2022	U	2011
H	2004 & 2023	V	2012
I	--	W	2013
J	2005 & 2024	X	2014
K	--	Y	2015
L	2006 & 2025	Z	2016
M	2007 & 2026		
N	--		

Table:-2: Month code for bearing manufactured by M/s NSK, Japan

Month	Symbol
January	A
February	B
March	C
April	D
May	E
June	F
July	G
August	H
September	J
October	K
November	L
December	M



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1. M/s NEI, Jaipur uses following month & year code on bearings:

M/s NEI, Jaipur use 'MM-YY' coding for Month & year code on Traction motor & MSU bearings:

- i. MM-denotes month of manufacturing
- ii. YY- denotes year of manufacturing



Here,
09-18 indicates
September'18

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