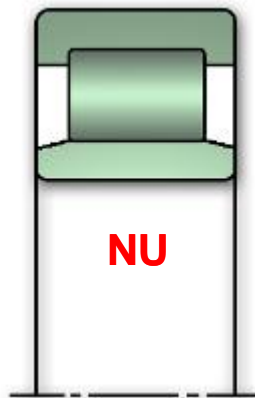


# Traction Roller Bearings

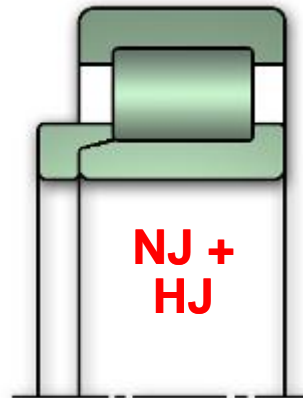


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Schaeffler numbers in the 500000 range are just sequential numbers corresponding to a special bearing print number. The number has no specific breakdown code. The numbers are being updated from the old FAG nomenclature to new Schaeffler nomenclature and may be referenced by either number depending on the date of the reference material but the physical bearings are identical. New and old nomenclatures is shown below.



**NU**



**NJ +  
HJ**



Schaeffler # Z-558540.04.ZL  
(Old FAG # 558540D)  
is an **NU** design

Schaeffler # Z-558320.03.ZL  
(Old FAG # 558320C)  
is an **NJ+HJ** design

Both are 2 pc.  
Machined Brass Cage  
hot rivet "**M**" type designs

# Traction Roller Bearings



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- **Cylindrical traction motor bearings manufactured with special tolerances.**
- **X-Life surface quality honed raceway finishes**
- **Special radial clearances**
- **NJ/HJ type have increase axial clearance**
- **Heat Stabilized : S1 = 200°C (392°F)**
- **Machined bronze cage for high speed and stress due to centrifugal and shock**
- **Special inspection for railway applications (F1)**

# Traction Roller Bearings – F1 Spec



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## Special inspection for railway applications

**In addition to standard quality inspections and batch sampling nital etch inspection for grind burns**

- **All rings 100 % magnetic particle inspected for cracks (MPI)**
- **All rollers 100 % eddy current tested for defects (ED)**
- **All component and assemblies 100 % visual inspection**
- **All bearings tower packaged to separate inner and outer rings to eliminate shipping damage such as false brinelling**

# Traction Roller Bearings – Fits



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- **Traction motors typically have interference fits both on the shaft and housing, countering the high torque of the motors and limiting the ring creep to reduce fretting damage**
- **The actual fit will vary by manufacturer and the motor design**
- **Special tolerances on ID and OD for the traction motor bearings have a direct influence on the actual fit**
- **PE bearings use interference shaft fits, typically around reference ISO class r7**
- **CE bearings use interference shaft fits, typically around reference ISO class N6**
- **PE and CE bearing housing fits vary from transition to tight fits.**

Traction Motor Bearings

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