

5.8 bearing damage and countermeasure

When it is run, and no direct observation the bearing. But we are able to check the bearings exceptional pass to noise, vibration, temperature, lubrication and so on condition. To meet below table with bearings damage example.

project	phenomenon	reason	measure
Peel off	Surface Peel off, appear sags and crests	Overload, bad mounting, no precision of shaft and shaft box, clearance small, Invade eyewinker, rustiness, abnormal high temperature to cause hardness decline.	Restudy using condition and choose bearing, consider clearance, check machining precision, mounting method and lubricant , check shaft and shaft box precision
burn	The bearing calorific change color and no run	Clearance change small (include deformation), bad lubricant, overload (Excessive preloading), roller deflexion	Set clearance, check lubricant and using condition, prevent positional difference, change mounting method
crack defect	Crack and nick	Excessive Attack load, interference fit too large, peel off crack, bad mounting precision (Round the corner too), Friction crack bad using (Foreign body)	Check using condition, set clearance, change mounting and using method, prevent friction crack
Retainer rupture	Rivet loose and rupture	Moment load too large, high-speed run and speed often change, bad lubricant, into eyewinker, vibration large, bad mounting(Tilt state to mounting), abnormal high temperature (Resin cage)	Check using and lubricant condition, consider choose retainer, research shaft and shaft box rigidity
scratching	roughness of surface	bad lubricant and into eyewinker	Lubricant method and using condition
jammed	Jammed is rib and roll surface scratching	Bearing deflexion cause roll deflexion, axial direction load too large cause rib surface no oil , large roughness surface and rolling element glide	Enactment seemly prepressing, Intensify seal function, right using bearing
rusty	Surface, part or all of the rust, Rust was rolling dentate	Bad keep and package, Lack of rust inhibitor,into water and acidic solution , Hand bearing directly	Intensify seal function, regularly check lubricant, attention the bearing using
ablation	Wear particles with the surface of the red	Lack of interference, Bearing rock angle little,bad lubricant and no lubricant, Instability Load, Transportation Vibration	Check interference and lubricant, inner ring and outer ring separate pack, no separate bearing for prestress, rechoose lubricant and bearing

project	phenomenon	reason	measure
peel	Running surface was concave-shaped stripe	Overload, bad mounting, no precision of shaft and shaft box, clearance small, Invade eyewinker, rustiness, abnormal high temperature to cause hardness decline.	Restudy using condition and choose bearing, consider clearance, check machining precision, mounting method and lubricant , check shaft and shaft box precision
fray	Surface fray, cause change size, have abrasiondamage	Bad lubricant, roller deflexion, eyewinker into lubricant	Check lubricant and method, Intensify seal function, prevent positional difference
electrolytic corrosion	Crateriform scallops of roll surface, change undulatory	Roll surface through electrical	Make electrical by-pass valve, insulate method prevent through electrical
creep deformation	Inner surface and outer surface skid, cause mirror face , change color and lock	Not enough interference and sleeve tightening, abnormal high temperature and too large load	Restudy using condition and interference, check shaft and shaft box precision
Impress impact	Into eyewinker and attack with mounting surface scratching	Eyewinker into, bad mounting cause attack, mounting with slant	Change mounting and using method, prevent into eyewinker, when it is metal cause ,and need to checking other parts