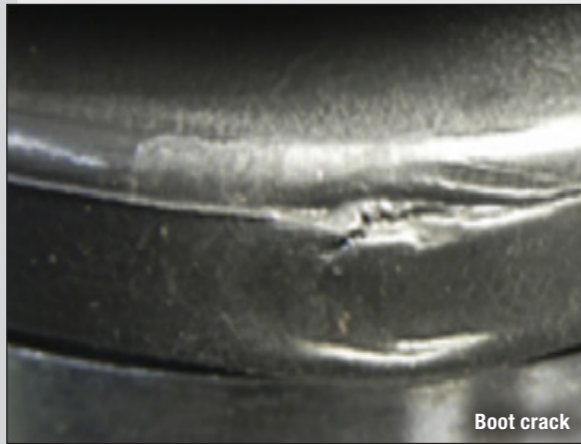# SNR®
Brand of **NTN corporation**

POSSIBLE CV JOINT DEGRADATION
CVJ

CV joints fail for many reasons. NTN has analyzed them and gives you technical advice to resolve them. NTN provides you with complete CV joint kits to make your work easier.
Our kits include everything you need for a correct repair (replacement parts, hardware, collar and grease).
We recommend that you always use these specific SNR components for an optimal repair.

◼ BOOT FAILURE

Boot cut

Boot crack

Boot deformation

Buckling = inversion of the shape of the boot or boot deformation

Damage of the clamping collar

DRIVING IMPRESSIONS
• Noise - rubbing of convolutions
• Grease leakage to the ground

PRODUCT FAILURE
• Degradation of the boot
• Tearing/cutting of the boot
• Abrasion of the boot
• Inversion of the shape of the boot
• Damage of the clamping collar
• Collar rotation

CAUSES
• Exterior attacks on the boot
• Internal attack if the product degrades - rupture of one of the components inside (race, balls, loss of material due to friction)
• Friction / abrasion with large steering input
• Extreme conditions of use / outside of manufacturer's specifications (extreme deviation, speed or temperatures)
• Damage to the collar of the boot / improper tightening of the collar
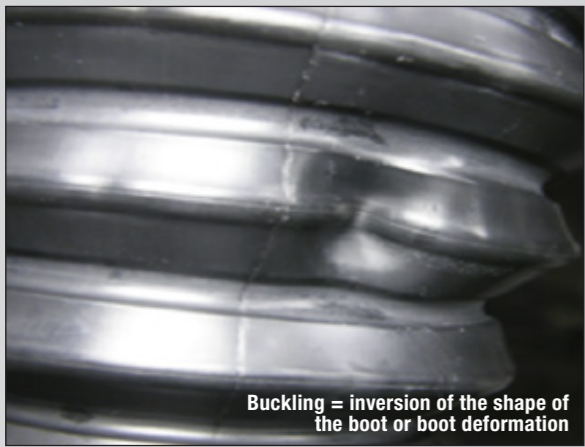
PRODUCT IMPACT
• Loss of primary functions of the boot
▷ Maintain grease inside the joint for its proper operation
▷ Protect the joint from the exterior environment
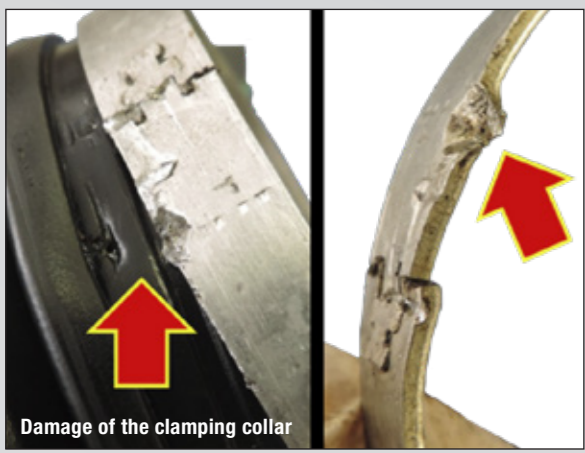
RECOMMENDATIONS
• Replacement of the boot in case of external or internal degradation and filling with grease
• Replacement of the collar and filling with grease
• Check the tightening torque specifications

◼ DURABILITY FAILURE
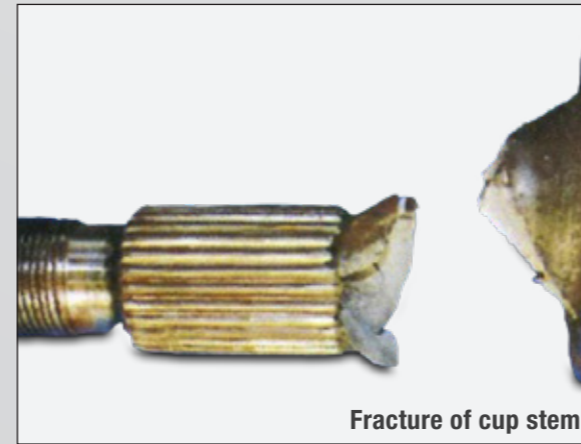
Fracture of cup stem

Cup fracture

Cup spalling

Loss of material

DRIVING IMPRESSIONS
• Noise
• Steering wheel vibrations
• Floor and/or dashboard vibration

PRODUCT FAILURE
• Degradation of cup and cup stem
• Degradation of driveshaft

CAUSES
• Transmission of very high and/or very frequent torque
▷ This fatigues and degrades the material faster
• Corrosion
• Poor interfacing with the hub
• Too high tension on the joint stem

PRODUCT IMPACT
• Degradation of contact surfaces resulting in noise and vibrations
• Degradation of hardened surfaces – spalling, seizing, loss of material
• Fracture of cup stem
• Fracture of part of the cup
• Fracture of part of the shaft

RECOMMENDATIONS
• If the shaft is damaged, replace the complete driveshaft along with the safety nut (available in our DK kits)
• If one of the joints is damaged, replace the complete joint (cup, boot, collar, grease, circlip...) and fill the joint with grease

◼ STATIC/FATIGUE FAILURE

Fracture of cup stem

Spline damage

Fracture of the spline

Cup fracture

Cup fracture

DRIVING IMPRESSIONS
The driver will be unaware of component fatigue, but it will eventually result in a fracture:
• Loss of primary function - loss of mobility
• Immobilization of the vehicle without early indications (no warning signs)

DÉFAILLANCE PRODUIT
• Fracture of one of the components (cup/connecting spline/tulip)

CAUSES
• Utilization of the product outside of the manufacturer's specifications
• Incidental maneuver (example: impact start or running over kerb)

PRODUCT IMPACT
• Fracture of cup stem
• Fracture of a connecting spline
• Fracture of part of the cup
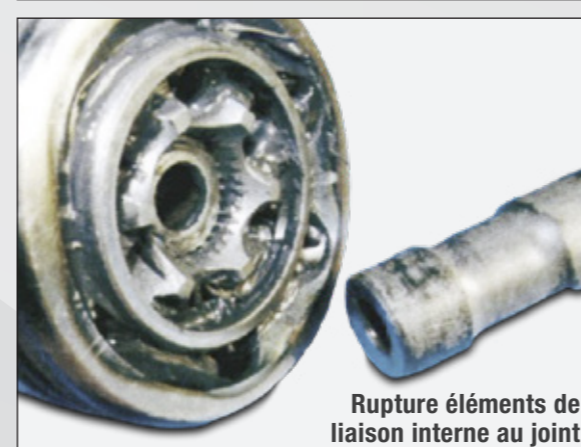Result: No longer transmits torque from the gearbox to the wheels

RECOMMENDATIONS
• If the shaft or cup is severely damaged, replace the complete driveshaft along with the safety nut (available in our DK kits)
• If the cup is slightly damaged, replace the complete joint (cup/tulip, boot, collar, grease, circlip...) and fill the joint with grease

◼ INTERNAL COMPONENT FAILURE

Rupture cage

Rupture éléments de liaison interne au joint

Rupture cage

Dommages sur billes

DRIVING IMPRESSIONS
• Noise
• Steering wheel vibrations
• Floor and/or dashboard vibration

PRODUCT FAILURE
• Degradation of component inside the joints - cup and/or tulip
▷ Cup: Race, cage, balls, circlip, connecting splines
▷ Tulip: Spider, spring, circlip, roller

CAUSES
• Transmission of very high and/or very frequent torques
• Shocks or jolts coming from outside

PRODUCT IMPACT
• Impact of internal components on the operation of the joint
▷ Loss of internal material
▷ Internal degradation of boot or cup/tulip
▷ Loss of function of the joint
▷ Internal friction

RECOMMENDATIONS
• Obligatory replacement of the complete CV joint

Find our **CV JOINT** removal and installation tutorials on ▶ YouTube :

Wheel side joint:
Removal and installation on the driveshaft

Driveshaft:
Removal and installation on the vehicle

Removal of the differential side boot
and installation on the driveshaft

Removal of the wheel side boot
and installation on the driveshaft

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Thanks to our **TechScaN'R app,** find all our technical data that you may need about our products. Download the app to your smartphone!

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