

# TECHNICAL INSIGHT

A PUBLICATION OF NSK EUROPE

## Retainer Plate Equipped with Ball Bearing

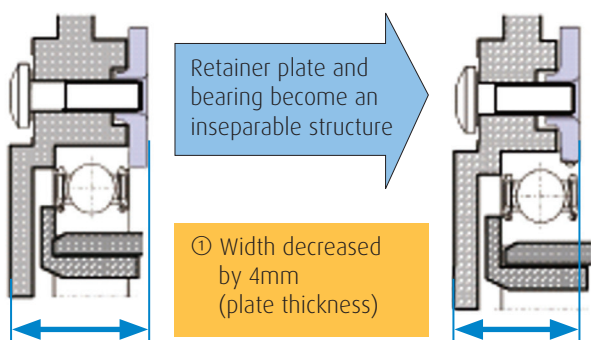
### Development focus or purpose of development

Integrated Retainer Plate and Bearing ⇒ Reduction of the transmission overall length

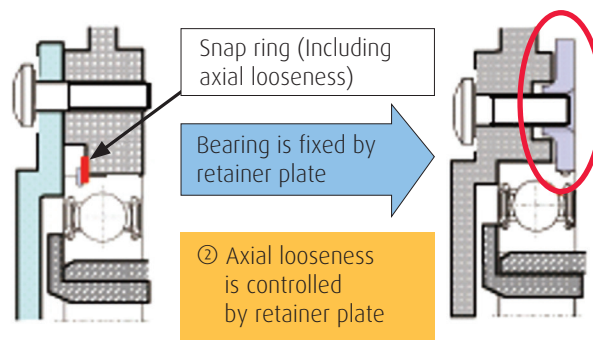
### Features or Background

#### Demands

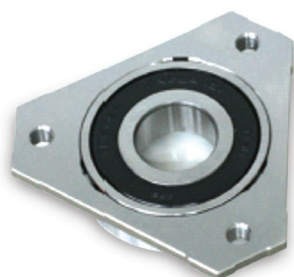
① Reduction of transmission overall length



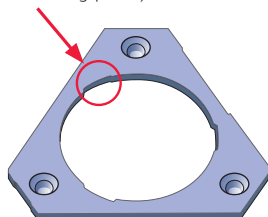
② Reduction of transmission vibration



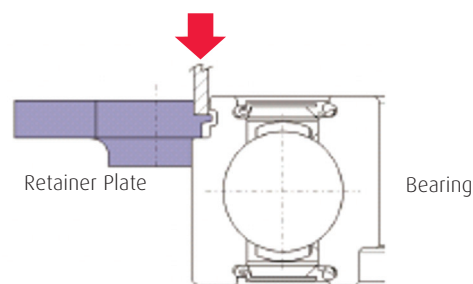
#### Features



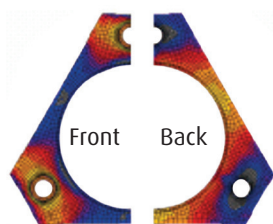
Retainer Plate Notch area  
(Protrusion forming place)



Retainer Plate



Protrusion forming by pressing plate using punch die (3 places)



Optimisation of plate and outer ring shape by elasto-plastic analysis and strength test of bearing with retainer plate



Optimisation of outer ring step and protrusion forming condition by forming analysis and forming test