

## ATV Bearing with Pac Seal

### The Challenge:

A major ATV manufacturer approached Koyo with a sealing issue on their wheel bearings. They were using a bearing with a seal and two lips and experiencing a significant amount of water and contamination intrusion into the bearing causing poor performance.



Current Supplier  
INBOARD GREASE - Water intrusion, grease discoloration and heavy corrosion



INBOARD RACEWAYS & BALLS - Heavy corrosion

**Koyo**

INBOARD GREASE - Good condition



INBOARD RACEWAYS - Good condition

### Analysis:

After analyzing the potential causes of the issue Koyo engineers recommended using a Koyo brand bearing with a pac seal to help prevent water and other contamination from coming into contact with the bearing.

Internal testing revealed the Koyo brand bearing with pac seal exhibited smooth rotation and excellent performance while the current supplier bearing exhibited rough rotation and endplay.

#### Test Results

Bearing		Current Supplier	Koyo
Test Status		Stopped due to high vibration 136.5 cycles (272.9 hours)	Suspended 136.5 cycles (272.9 hours)
Visual Appearance		Water Intrusion	No Water Intrusion
Seal Condition		Seal Lip Wear	Good
Water Content of Grease %	Inboard	14.3	0.0
	Outboard	10.4	0.1

### Koyo's Solution:

Through head-to-head internal testing it was determined the Koyo bearing with pac seal was the better solution for preventing water and contamination from impacting the bearing performance.

### Result:

Koyo's recommended solution was implemented and the customer feedback has been excellent.



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