

Replacement High-Speed Gear Drives

The Westinghouse Solution

As nuclear power plants reach 50-year operations milestones, it is critical to assess the aging of components, including the condition of high-speed gear drives. Many gear drives have been in operation since original plant construction and when planning operating license extension to 60 or 80 years, it is imperative to assess these gears for replacement or refurbishment.

Westinghouse, in conjunction with Nuttall Gear, offers upgraded high-speed gear drives based on the original design. As the original equipment manufacturer and only supplier with access to design information for these drives, Westinghouse supplies each new like-for-like high-speed gear drive qualified to the specific plant. Westinghouse and partner Nuttall Gear can also reverse engineer, replace and service gear drives from all other prominent gear OEMs including Lufkin, Rexnord and Philadelphia Gear.

Description

Manufacturing of new gearboxes and replacement components is performed at the 250,000 sq. ft. Nuttall Gear facility in Niagara Falls, NY in accordance with the Westinghouse 10CFR50 Appendix B Quality Program.

Westinghouse engineers and technicians oversee the manufacturing process and quality activities, including:

- Review of design and quality requirements with Nuttall Gear personnel
- Inspection of component and quality documentation prior to assembly
- Witness of performance testing
- Final quality release

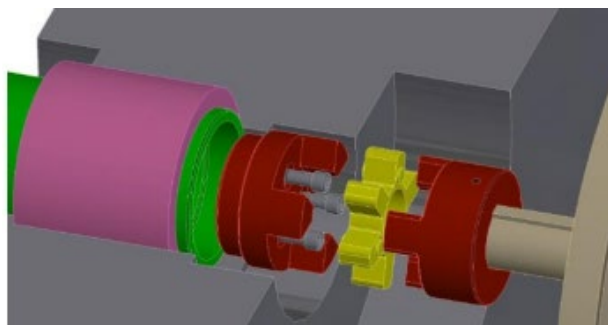


Upgrades

Westinghouse and Nuttall Gear also offer a permanent solution to eliminate wear and loss of lubrication issues caused by the two-pin type lubrication pump coupling.

This upgrade eliminates the two-pin type coupling and replaces it with a more robust custom-designed, three jaw type coupling with a buna-N insert.

Westinghouse and Nuttall Gear also modify existing gear shafts to accept the new style coupling, even if the gear shafts have years of wear from the two-pin type design. This design is proven with decades of safe operation and is currently in use at several nuclear plants.



<https://info.westinghousenuclear.com/westinghouse-parts-business>

Westinghouse Electric Company
1000 Westinghouse Drive
New Stanton, PA 15672
www.westinghousenuclear.com

September 2022
2026 Westinghouse
Electric Company LLC.
All Rights Reserved



Westinghouse Parts Business

Benefits

Westinghouse technology is fundamental to nearly 50% of the world's nuclear reactors. Now, that same trusted expertise is delivering the services and parts to meet the needs of 100% of the **nuclear plants across the globe**.

Experience

Westinghouse maintains the original design and qualification basis documentation for high-speed gear drives ensuring world-class support and service for original Westinghouse-supplied equipment. Expanding on this capability, Westinghouse and Nuttall Gear can also provide reverse engineered form-fit-function replacement gear drives – a solution which mitigates obsolescence and long-term maintenance challenges.

- Replacement and refurbishment of gear drives includes enhancements and upgrades developed over more than 40 years of manufacturing experience.
- Westinghouse engineers and technicians have more than 50 years of experience in providing equipment for safety-related applications in the nuclear industry.
- Westinghouse has furnished more than 200 original Nuttall Gear high-speed gear drives and thousands of replacement parts for the gear drives.



The Westinghouse-Nuttall Gear team of experts can also provide gear drive solutions for equipment originally supplied by others:

- Allen Gear
- Amarillo
- Brad Foote
- Chemineer
- Cleveland Gear
- Chicago Overton
- Cone Drive
- D.O. James
- David Brown
- Delaval
- Falk
- Farrel
- Foote-Jones
- General Electric
- Holroyd
- Flender
- Hansen
- Horsburg & Scott
- Kumera
- Link-Belt
- Lufkin
- Maag
- Marley
- Mixco
- Philadelphia Gear
- Renk
- Renold
- Rexnord
- Sterling
- Sumitomo
- Western
- Westinghouse*
- WestTech
- Wilson Gear
- Winsmith
- Xtek

All photographs are the property of and printed with the permission of Nuttall Gear LLC, a subsidiary of Altra Industrial Motion Corp.

<https://info.westinghousenuclear.com/westinghouse-parts-business>

Westinghouse Electric Company
1000 Westinghouse Drive
New Stanton, PA 15672
www.westinghousenuclear.com

September 2022
2026 Westinghouse
Electric Company LLC.
All Rights Reserved

