

## CASE STUDY

# Northrup Grumman

### CLIENT SITUATION

Northrup Grumman sought the needs of Rhoads to remove a rotor assembly and associated parts from a CVN turbine generator located in Building 16 of the Philadelphia Navy Yard.



### RHOADS SOLUTION

First, Rhoads removed dust covers and bearing housings from the turbine and exciter, following proper tracking procedures and bagging and labeling all bolts. After the rotor was removed, it was restored by bolting major components and closing off vacant areas with blanks. Finally, it was placed on a skid crate assembled by Rhoads and shipped to Newport News, Virginia, where it was installed by the customer on the USS George H.W. Bush. The rotor was 22,000 lbs., 11.5 feet long and 4 feet in diameter.

Rhoads worked closely with engineers from Northrop, who provided technical direction including the lifting specs and special tooling necessary for rotor removal. During the lift, engineers from Northrop and the manufacturer were onsite. The rotor was lifted using two cranes and a 20 ton forklift truck with a come-a-long to prevent jumping. Inspections were ongoing throughout the lift.

### RESULT

Originally, the project was estimated to take six weeks. Due to the efficient and continuous work of the project's six millwrights, it was completed in just three weeks and at half the purchase order price. The trust Northrop's engineer and reps had in the Rhoads team aided in the quick turnaround. The Northrop engineer, overseeing the project stated, "The team of Millwrights assigned to remove the generator rotor from Main Turbine Generator #6 did an extremely good and professional job. Today, they perform flawlessly for a whole audience of Newport News Shipyard employees. We're also very impressed with how quickly the guys have been able to get us to the point of removing the generator rotor."

**Contact us today to  
learn how Rhoads  
Industries can help  
with your next project.**

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