

## General Davit Maintenance

1. Inspect all cables, hydraulic hose and hydraulic fittings often. Replace at the first signs of excessive wear and/or corrosion.
2. Wash the crane with fresh water often. Regular fresh water and soap wash-downs will greatly increase the life of the painted finish, and prevent salt build-up. Turn power off at the breaker prior to a thorough wash-down. Spray fresh water into the sheave-end of the crane. Elevate the boom and spray down the exposed interior surfaces of the boom and mast. Wipe dry with a soft cloth. Spray a light coating of silicone corrosion inhibitor over all of the interior components periodically.
3. Lubricate the radial crane bearing using grease. Pump grease into the bearing until it is observed oozing pas the grease seal. Touch up any visible paint damage or corrosion.
4. Inspect the crane and its components regularly for signs of damage or non-functioning parts. Touch up any paint damager as necessary to preserve the crane's finish.
5. The linear winch system (cylinder, guides and sheaves) should be professionally service every 18 to 24 months. The service and inspection requires partial disassembly of the crane and should be done by a qualified Nautical Structures Field Service Technician. Sheave wear can inhibit the crane's performance and must be serviced at regular intervals. We recommend having an inspection on an annual basis.

### 6. Hydraulic System Maintenance

- a. Service the hydraulic system annually or after every 50 hours of use. Whichever comes first. Servicing should include verifying the condition of the hydraulic fluid. If the fluid appears dirty or discolored (it should be a clear amber color), or is milky with water contamination it should be replaced. If you are not sure of the fluids condition, contact Nautical Southeast to arrange to have a sample of the fluid analyzed.
- b. Timely replacement of the filter canisters are essential to keeping the fluid clean. The canister should be replaced after the first 50 hours of operation and again after the next 100 hours of operation.
- c. Inspect the hydraulic lines and fittings for leaks periodically. Occasionally a hydraulic fitting may need to be retightened if it is weeping oil. Make sure not to over tighten the fittings. The best way to monitor the condition of the hydraulic components is to keep them very clean. If a hydraulic leak is suspected, clean all residual oil from the area. Operate the davit several times and then inspect the area for leakage. Any leaking fittings should be easy to identify.

- d. Always keep hydraulic cylinders fully retracted while not in use. Never use the winch cable of a linear winch crane system (EZ-Crane) to secure the system for storage. Any exposed cylinder rod may quickly corrode, causing damage and leaks in the cylinder rod seals. Always use a boom-tie down cable assembly to secure the davit system to the vessel's deck.

**CAUTION: Do not store the crane by attaching the cable hook to a deck pad-eye. Corrosion of any exposed winch cylinder rod will occur. Attach the crane to the deck using the provided pad-eye located on the underside of the crane's boom with a cable-down assembly, or with a shipyard supplied boom-crutch. The Lay-Down crane should be stowed using a boom-crutch.**

1. Most cranes utilize linear winch technology which dramatically reduces the wear and tear on the lift cable, thus extending its useful life. The cable is still exposed to friction between the individual strands and will fatigue. Without periodic replacement, the cable will eventually fail. We recommend that the cable be replaced on a yearly basis. Inspect your cable for burrs or broken strands, and replace it accordingly. If it has not been replaced within the last three years of regular operation, we strongly advise that this be done. Call us to schedule your service, as it is suggested a factory technician perform this task. You can greatly extend the wear life of your cable by regularly lubricating your cable with an approved cable dressing. This may be purchased from Nautical Southeast, or any cable supply house. It is a light spray lubricant.
2. Inspect all crane rotation attachment bolts. To do this access provision has been provided in the pedestal base or thru underside opening in platter applications. Please note that these bolts should be checked on an annual basis.
3. The slew bearing has grease points on the outer ring mounted to the turret/mast. Access is provided through the small hole in the skirt. Remove cap and insert the grease gun nozzle pumping the bearing liberally, then raise the boom and rotate the crane fully 2-3 complete revolutions, re-grease, repeat revolutions, re-grease, repeat revolutions. Typically 3-4 times will fully lubricate the bearing.
4. Lubricate all hydraulic cylinder cross-tubes. Each visible cylinder has a cross tube and a grease zerk fitting for this purpose. Pump grease into each cross tube, making sure that the grease is spread throughout the pin area. You should notice some grease oozing out the ends of the cross-tubes.
5. Spray an approved electrical terminal lubricant on the remote hand control canon plug pin connectors. CRC Electrical spray is acceptable, WD-40 is not.
6. Open the printed circuit card boxes, inspect the seal on the card box to make sure that is pliable and weather tight. Inspect the connections on the board for tightness, and lightly mist these connections with an approved conductor lubricant.
7. Inspect the fluid level and clarity of your hydraulic oil. For those units over 5 years old, we strongly suggest that the oil be replaced with an approved pre-filtered hydraulic oil which meets our ISO specification of 17/14/12. Insure the unit is refilled with an HW-68 with an ISO rating of 17/14/12.

8. Inspect all hydraulic hoses for chafing or cracking. If wear is found, please call Nautical Southeast for a replacement. The stainless steel hose-ends may discolor with surface corrosion over time. We recommend that a "Scotch-Brite" pad be used to clean off the corrosion. Dressing the hose ends with a silicon spray is effective in preventing corrosion.
9. Inspect all visible hydraulic fittings and hose-ends for leaks and/or weeping. If any leaks are found tighten the fitting. When doing this, be sure to use two wrenches. One to tighten the fitting. Using just one wrench may damage the fitting, *Never* tighten a fitting while there is hydraulic pressure in the hose or fitting. It is recommended that the interior of the crane be thoroughly cleaned periodically. This will make even the small leaks much more apparent.
10. Thoroughly inspect the paint and finish of your crane and repair any nicks or scratched before they become a problem. Take careful note of the finish and condition of the steel hydraulic cylinders and repair as necessary. Stainless steel cylinders are available for those who wish to upgrade.

For your safety, we strongly recommend that the above maintenance procedures be followed, and that this document be filed away with your other crane information and reviewed on an annual basis.

We appreciate your business and hope that your crane equipment had performed dependably and to your satisfaction. We look forward to servicing your future needs.