

Crane & Hoist Maintenance

A Professional Service by the Rossendale Group

SERVICE DETAILS - The Maintenance Contract Agreement

HOIST MOTION: The load hook will be travelled through its full extent, to ensure that the operation is smooth and without excessive noise.

CROSS TRAVEL MOTION: The hoist unit/s or trolley/s will be travelled along the entire length of the crane bridge to ensure that the operation is smooth and no excessive noise is present. Visual observations will be made as the cross-crane cable carrying trolleys travel along the C rail or catenary system. The cables will be observed to ensure they are of sufficient length and the parking area for the trolleys is adequate.

MAIN TRAVEL MOTION: The crane bridge will be travelled in both directions to ensure that the operation is smooth and no excessive noise is present. Visual observations will be made as the mains collectors travel along the mains conductor system to ensure smoothness of passage. Observations will be made to ensure the crane does not make contact with the building structure or services.

THE OPERATION OF ALL LIMIT SWITCHES AND ANTI COLLISION SYSTEMS WILL BE CHECKED DURING THE OPERATIONAL CHECKS FOR ALL MOTIONS.

LOAD HOOK ASSEMBLY: The load hook will be inspected for wear, damage and free rotation of the crosshead arrangement. The sheaves will be inspected for wear, damage, and free rotation of the crosshead arrangement. The sheave covers will be inspected for wear, damage and security of fixings within the load hook assembly. Capacity markings and plates will be inspected to ensure they are correct, visible, and free from damage.

LOAD ROPE: The load rope will be inspected for wear and damage along its entire length, with particular attention being paid to the lubrication of the strands.

ROPE REPLACEMENT CRITERIA: The load rope should be replaced if any of these faults are found -

- Over a any length of 10 diameters, 5% of the total individual wires are broken; or
- A strand is broken; or
- Local groups of wires are broken; or
- There is deterioration at the termination; or
- There is deterioration of the inner core; or
- Wear, i.e. rope diameter is less than 85% of the nominal diameter; or
- There is internal corrosion; or
- There is wire slackness.

ISOLATION OF THE EQUIPMENT: The equipment will be positioned in the appropriate working area and the mains supply will be isolated either at the equipment or the appropriate isolator. If possible the fuses will be removed and an Isolock fitted to the handle of the isolator. A "Man Working on the Equipment" sign will be displayed on the isolator and the control station. Our Service Engineer will gain access to the equipment via suitable access equipment and carry out the maintenance work.

GENERAL: All assemblies will be inspected for wear and damage. All bolts will be checked to ensure they tight. Particular attention will be paid to the MOTORS, COUPLINGS, DRIVES, AND CRANE STRUCTURE.

MOTORS: The motors will be inspected for external damage, and where possible each motor will be opened to inspect the accessible internal components for wear and damage.

HOIST/TROLLEY: The side plates and frame will be inspected for cracks, deformation or serious damage. The crossbolts will be inspected to ensure they are not bent or worn. The suspension links will be inspected to ensure they are free from cracks, deformation, or serious damage, and the bolt holes are not elongated. The wheels will be inspected to ensure they are free running, free from cracks, deformation or serious damage, and that the correct type of wheel is fitted. The gauge of the unit will be checked to ensure that the side plates and the frame are set correctly, and within manufacturers guidelines.

GEARBOXES: All gearboxes will be inspected for wear, deformation, cracks and oil leaks. The oil levels will be checked to ensure they are correct and the quality of the lubricant is acceptable.

BRAKES: The brake covers will be removed and the brake mechanisms will be inspected for wear, defatation, cracks, and serious damage. The air gap will be measured with suitable instruments to ensure it complies with manufacturers guidelines.

ROPE BAND AND GUIDE: The rope guide (if fitted) will be inspected for wear, deformation, cracks and correct positioning by the joining plates, bolts and nuts. The tension of the spring/s will be checked to ensure it is correct and free from defects.

ROPE CLAMPS: The clamps will be inspected for correct fitting, wear, and secure holding of the rope.

ROPE DRUM: The drum will be inspected for misalignment, wear, deformation and cracks.

ROPE WEDGE ANCHORAGE: This will be inspected for wear, defatation, cracks, and correct fit.

ROPE SHEAVES: The sheaves will be checked for wear, deformation, cracks and free rotation.

CABLES: All cables will be inspected for external defects. i.e. frayed, damaged, signs of over heating, perished insulation, etc.

PUSH BUTTON CONTROL STATION: The control station will be inspected for the following -

- It is supported by a support line/s and not the electrical cable;
- The pendant case is not cracked or damaged, and is secure;
- The pushbuttons/switches/lights are free from wear, deformation, cracks and operate correctly;
- The legends are correct and visible;
- The electrical connections within the station are tight;
- The electrical cable is held securely by the tensioning grip.

CONTACTORS, OVERLOADS, FUSES, TRANSFORMERS, ISOLATORS: Where possible the electrical contactors will be opened to inspect the condition of the fixed and moving contacts, laminations and coil. The condition of the electrical wiring and connections will be checked for tightness and conformity. The items will be inspected for wear, deformation, cracks, and secure positioning. Particular attention will be paid to the settings of overloads, timers, etc, along with ensuring the correct type of fuses are fitted to the fuse carriers.

LIMIT SWITCHES, ANTI-COLLISION SYSTEMS: All limit switches and anti-collision systems will be inspected for wear, deformation, cracks and for secure in positioning with the appropriate fixings. The terminations will be checked for tightness and conformity.

Crane & Hoist Maintenance

A Professional Service by the Rossendale Group

DRUM CONTROLLERS: The drum controllers (if fitted) will be inspected for wear, deformation, cracks and for correct setting and lubrication of the contact tips and moving segments. The terminations will be checked for signs of overheating, tightness, and conformity.

RESISTANCE BANKS: The resistance banks will be inspected for wear, deformation, cracks and signs of overheating etc. The terminations will be checked for tightness and conformity.

END CARRIAGE UNITS: The end carriage and crane bridge connection points will be inspected for wear, deformation, and cracks. The main travel wheels will be inspected to ensure they are free running, and have no wear, deformation, cracks or serious damage. Attention will be paid to the wear plates, axles and gearing.

BRIDGE RAIL/S & BEAM/S: The bridge rail or beam will be inspected for wear, deformation, cracks, and secure positioning by the joining plates, bolts, and nuts.

CAPACITY MARKINGS/SIGNS: Will be inspected for conformity and secure positioning.

GENERAL STRUCTURE: Will be inspected for wear, deformation, cracks and security of fixings.

LUBRICATION: The lubrication system will be inspected for defects and conformity. All points will be charged with lubricant.

COMMISSIONING: The mains conductor system electrical supply will be reinstated to the equipment and the operational check procedure will be repeated once again. On the satisfactory completion of this procedure the equipment will be released to your appointed personnel, and all permits etc will be cancelled.

REPORTING PROCEDURES: A detailed service report for each piece of equipment will be submitted for your approval by our Service Engineer, who will also welcome the opportunity to discuss in detail the contents of the report/s and subsequent recommendations with your representative. This will enable the client to be fully aware of the condition of the equipment before the Service Engineer leaves site.

QUOTATIONS: Following the service visit, written quotations will be submitted for your approval. These quotations will be for any further work that has been identified during the service visit.

STATEMENT OF SERVICE AND CARE

The Rossendale Group aims to provide crane and hoist users with the highest quality maintenance and breakdown service available. We are committed to -

- Safe working.
- Regulatory compliance, in particular with the new LOLER Regs.
- The safety of your equipment and personnel.
- Immediate breakdown service.
- Keeping maintenance visit appointments.
- Thorough workmanship.

Prior to arriving on site the client is contacted by telephone to arrange a convenient time and date to carry out the maintenance visit. Our Service Engineer will arrive on site at the prearranged time and date. On arrival he will contact the designated personnel.

On the completion of the on-site safety procedures our Service Engineer will locate the equipment covered by the contract agreement. Attention is paid to all aspects of maintenance of the equipment

particularly adjustments relating to the safety of operation. Attention is paid to the correct adjustments of the brakes, the condition of the hoist load rope and of associated equipment. All limit switches are carefully inspected, with special attention being paid to the hoist limit switch. Detailed records are kept of your equipment and all service and repair work carried out. Periodic contract reviews will target cost savings and equipment reliability.

CONTRACT REVIEW

After a 6 or 12 month period the ROSSENDALE GROUP will carry out a CONTRACT REVIEW of the servicing. This will identify in detail any problem areas with your equipment, e.g. continual pendant control station damage, and offer solutions to overcome the problem. The essence of the review is to save the customer money and ensure reliable long term operation of the equipment.

MAINTENANCE CONTRACT FILE

When you sign a maintenance agreement with the ROSSENDALE GROUP, you will receive free of charge a maintenance binder to enable you to build up a history of the maintenance of the equipment. This will enable you comply fully with the latest regulations with regard to lifting equipment, including the LOLER Regulations.

EQUIPMENT RECORD CARDS

During the first service visit our engineer will complete a record card for each item of equipment. This card will identify the make and type of all the components that make up the item of equipment. In the event of a breakdown, the ROSSENDALE GROUP will be aware of the full details of your equipment and our engineer would be able to attend the breakdown with necessary replacement parts. Costly delays are avoided; your equipment is down for less time: The record cards WILL SAVE YOU BOTH TIME AND MONEY.

SAFETY ON SITE

All site work carried out by the Rossendale Group is governed by our Safety Procedures, Ref W.I.203. These procedures require an appointed safety representative on all sites and cover all aspects of site safety including -

- Personnel health & safety and use of PPE.
- Customer site regulation observation and training compliance.
- Site safety notices and work area barriers.
- Safe use of scaffolding, access equipment, lifting equipment and machinery.
- Control of hot work, compressed air, noise and chemical substances.
- Proper waste disposal and site cleanliness.

All engineers have the "Client Contractor National Safety Group Passport"