CONTROLMASTER®

SMART AUTOMATION & CONTROL TECHNOLOGY **BY RCT**

REDUCE MACHINE DOWNTIME AND REPAIR COSTS

SERVICING

product experience

field experience

industry regulations

RCT
PRODUCT
SERVICING
___
POLICY

RCT
PRODUCT
SERVICING
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PROCEDURE

SERVICE REPORTS

prestart check

250 hour/ fortnightly functional check

500 hour/ monthly machine/ remote check

500 hour/ monthly Teleremote system service

1500 hour/ 3 monthly machine/ remote service

3000-5000 hour/ 6-12 monthly Transmitter/ Receiver service
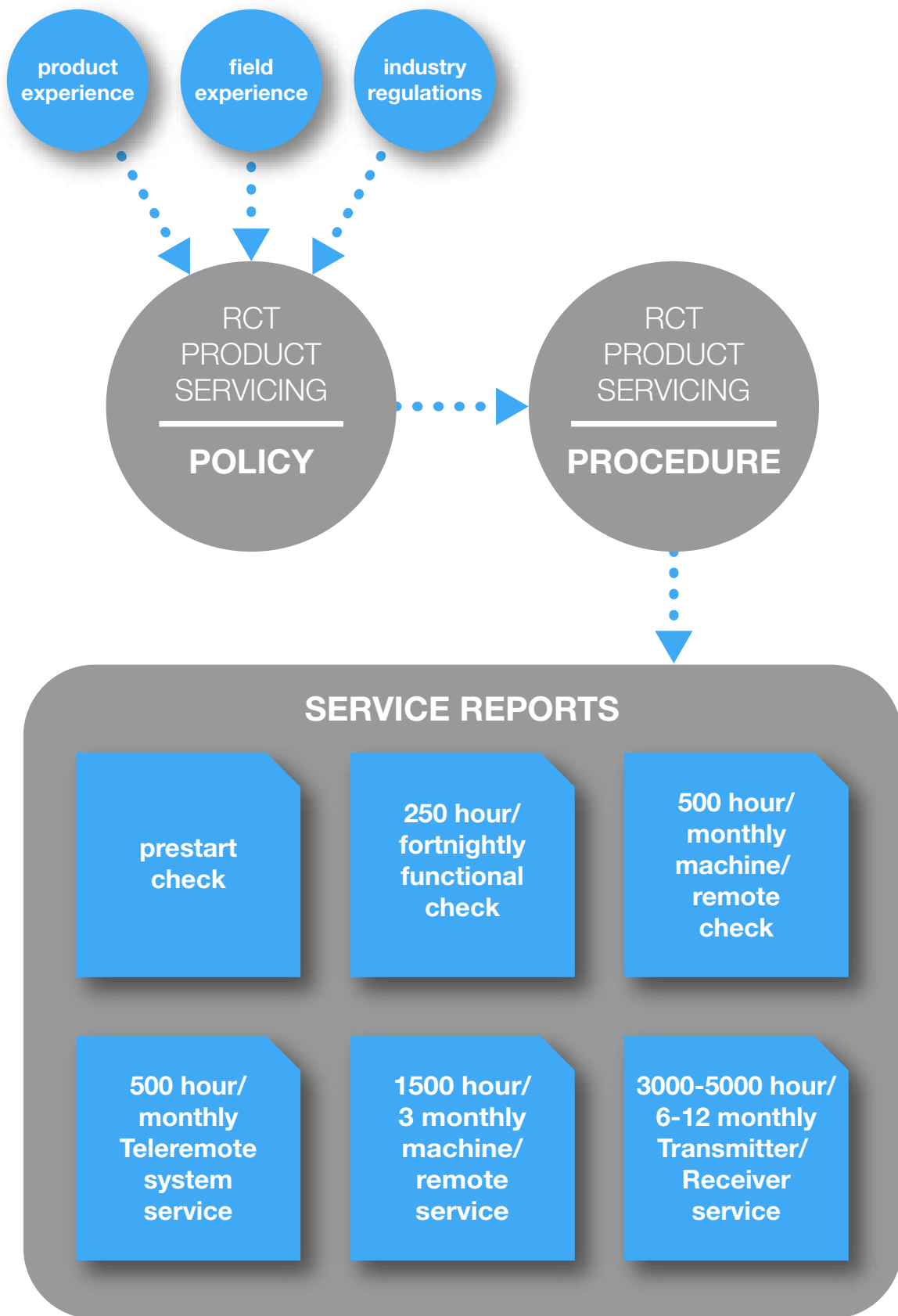
ON-SITE REMOTE MACHINE SERVICING

RCT offers ControlMaster® on-site Remote, Teleremote and Automation control machine systems auditing and servicing.

RCT's ControlMaster® OEM Support packages provide operational checks and preventative maintenance servicing to reduce the risk of equipment malfunction during vital production periods.

Regular preventative maintenance is essential to keep your ControlMaster® solutions operating in a safe and reliable manner. RCT has a dedicated team of qualified customer service personnel, trained to provide maintenance services for Remote Control and Automation Solutions fitted to machines. OEM support should only be carried out by RCT - the OEM.

As the OEM, RCT delivers a structured service program of operational checks and preventative maintenance. The recommended service schedule shown below outlines the frequency of services and the preferred service provider. RCT recommends that remote machine services are performed every three months or at 1500 machine hours and only serviced by RCT. Following the recommended servicing will ensure compliance with section 3.6 of AS/NZS 4240.2:2009.

All operational and maintenance personnel must be fully aware of, and complete, all other requirements set out in AS/NZS 4240.2:2009 for full compliance (refer to your relevant State Mining Act & Regulations for any other necessary compliance).

RCT schedule a team to perform regular maintenance service of Remote Control and Automated machines and equipment at scheduled intervals to ensure equipment remains in safe operating condition, adhering to RCT OEM recommendations and AS/NZS 4240.2:2009 Standards for remote control of mining equipment.

An important part of the RCT ControlMaster® OEM Support, is to provide comprehensive service documentation to allow you to keep detailed records of servicing and to provide traceability for maintenance planning and repair diagnostics. RCT recognises this as a crucial tool in the event that proof of servicing and maintenance is required.

RCT offers a range of OEM Support packages that are customised to suit all operational requirements.

Examples of Machine Service Reports
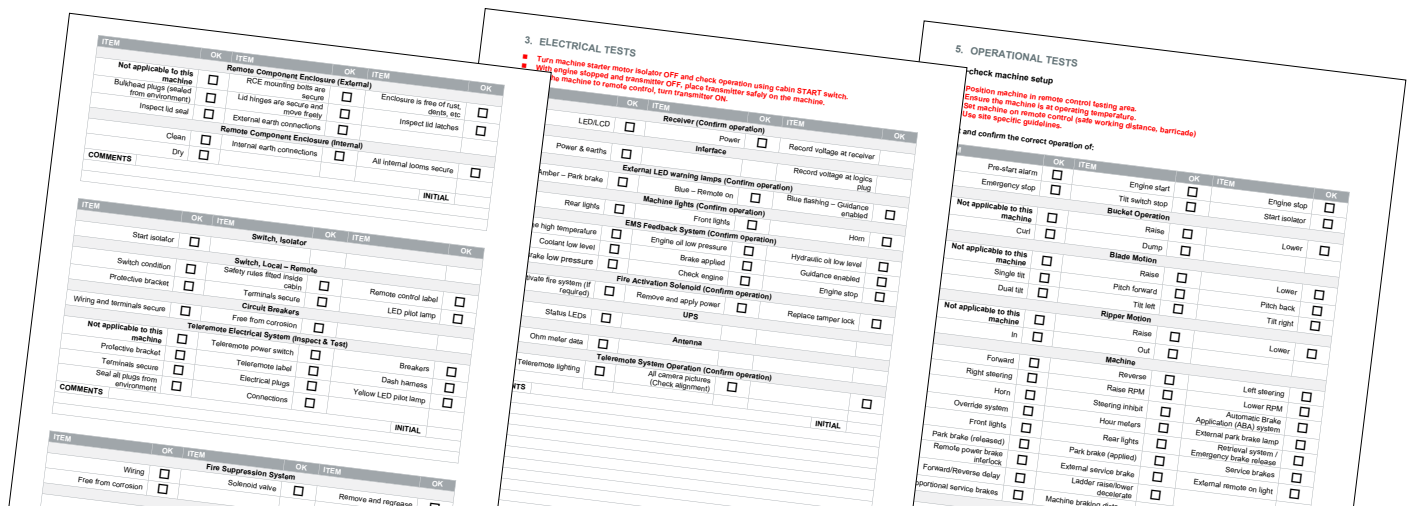
OPERATION	FREQUENCY	PERFORMED BY	RCT PROVIDE
Machine Remote Prestart	Prior to operating the machine on remote control	Client Operator (1)	Check Sheet Template
Remote Function Test	Every 2 weeks or 250 machine hours	Client Maintenance Technician (1)	Check Sheet Template
Remote Machine/Teleremote Service	Every month or 500 machine hours	Client Maintenance Technician (1&2)	Service Report Template
Teleremote Control Station Service	Every month or 500 machine hours	Client Maintenance Technician (1,2 & 3)	Service Report Template
OEM Remote Machine/Teleremote Service	Every 3 months or 1500 machine hours	Authorised and Trained RCT Service Technician	Combined Service Report
OEM Transmitter/Receiver Service	Every 6-12 months or 3000-5000 machine hours	Authorised and Trained RCT Service Technician	Combined Service Report

REMOTE CONTROL COMPONENTS

Malfunctioning equipment could jeopardise the safety of your machine

As with the machine servicing, RCT recommends the regular servicing of ControlMaster® transmitters and receivers.

Our ControlMaster® Service Program for transmitters and receivers is designed to provide operational checks and preventative maintenance servicing to reduce the risk of equipment malfunction during vital production periods and to ensure units are operating in a safe and reliable manner.

RCT has a dedicated team of qualified customer service personnel trained to service and repair transmitter and receiver units. RCT's customer service personnel receive up to date training to ensure changes in new technology is fully understood. Services and repairs can only be effectively carried out by RCT - the OEM.

RCT recommends that the transmitters and receivers should be serviced every 3000-5000 hours or six to twelve monthly. This service is performed at RCT service centres. Remote hire sets are available to ensure the machine can still be operated and to minimise machine downtime.

Examples of Transmitter and Receiver Service

BENEFITS

- Complies with remote operation Standard AS/NZS 4240.2:2009.

- Complies with OEM recommended service schedules.

- Preventative maintenance will reduce machine downtime and repair costs.

- Assists site maintenance teams to gain product knowledge through regular visits and contact with RCT customer service technicians.

- Assists in ensuring your remote systems operate in a safe and reliable manner.

- Ensures all machine remote control components are in good working order will help reduce incorrect fault diagnosis of remote transmitter and receiver units.

- Documentation on completion of service supplied to client for site records.

REMOTE OEM WORKSHOP SERVICING

HIRE UNITS

RCT has a large range of product support hardware available for hire. Ideal for short-term projects and for covering service/repair periods of existing products. All remote hardware is available from ATX/ARX, through to remote sets, Teletransmitters and Automation controllers.

SERVICE EXCHANGE

When available, RCT has service exchange units.

Customers that are local to an RCT branch can send ControlMaster® hardware to the nearest branch where they will be inspected and reported upon. If the servicing value exceeds 75% of the new product, the customer can opt to purchase a service exchange unit, if available, at a competitive price; with a warranty in place.

Customers that are in a remote location can report a critical fault to an RCT branch. If the initial diagnosis is determined that it will require repairs and servicing that exceeds 75% of the purchase of a new unit, the customer can opt to purchase a service exchange unit, if available, at a competitive price; with a warranty in place. The faulty unit will remain on-site, and during the next RCT service visit, it will be inspected and reported upon. If the servicing/repair value exceeds 75% of the new product, the unit will be decommissioned. If the repair cost is lower than 75%, the customer can opt to proceed with the service/repair or agree to decommission.

RCT can provide express servicing when required to accommodate time constraints.

Please contact your nearest RCT branch for terms and conditions.
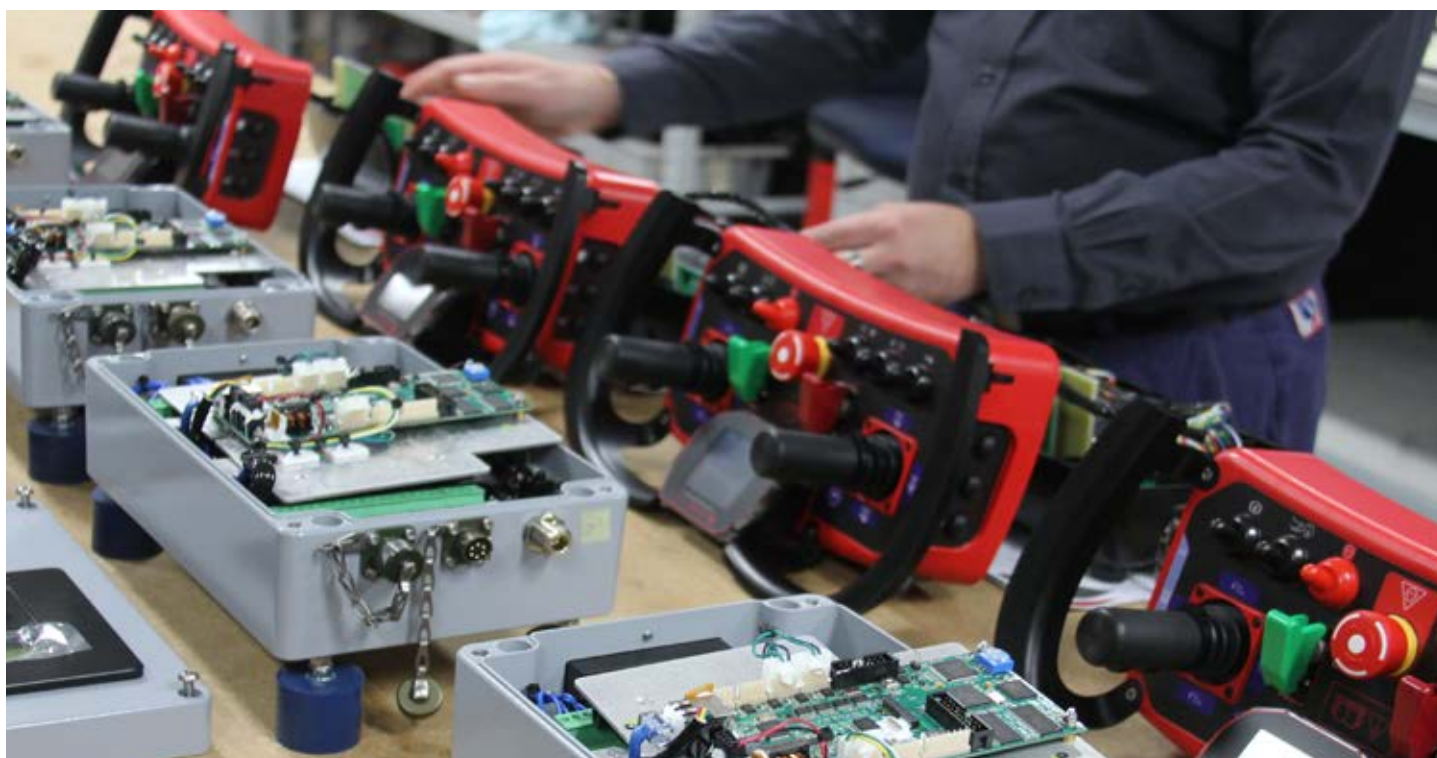
AFTER-SALES OEM SUPPORT PACKAGES

RCT's After-sales OEM Support package delivers clients peace of mind around the performance of their Automation and Control solutions. The package can be purchased up front (12-month agreement) or as an ongoing charge based on the current or an agreed frequency of site visits.

It combines the existing on-site visits with the Automation software maintenance which include servicing of the machine's remote control equipment, auditing of spare parts, checking serviceability of operator stations, work area communications and barriers. RCT will also carry out system checks and machine calibrations as required.

Software updates of operator stations and machine(s) are inclusive of our servicing package to ensure the latest version is available to maintain optimal machine performance.

The below details the tasks carried out each visit, per machine. These tasks can differ from client to client and will depend on what support is required at the time:

- On-site tasks can include:
    - Machine system servicing and optimisation
    - Work area maintenance and system checks and auditing
    - Barrier system checks, tests and auditing
    - Operator station tests, updates, minor repairs and servicing
    - Parts consolidating and auditing
    - System spares testing and checks
    - Operator and maintenance refresher training
    - Required updates to software and downloading of Automation LOGS as required
    - Post-visit reporting on all machine and equipment servicing and machine Automation LOGS

- Servicing parts;
    Time is allocated to replace faulty components (due to excessive wear and tear). Please note this will only cover minor ancillary items.

RCT's After-sales OEM Support is available to all RCT ControlMaster® users and structured to suit clients' on-site support requirements.

These include:

- Ongoing quoted regular scheduled site visits at an agreed frequency

- Up front annual agreement for scheduled site visits at an agreed frequency

- Full-time RCT specialised technician or technicians based on-site at an agreed roster

SOFTWARE SUPPORT

Software Support is now a critical component of the After-sales OEM Support to guarantee software on-site remains compatible with RCT's solutions release cycle.

The incremental enhancements will be made based on the ongoing support of the RCT Automation software licence and ensures Automation features consistently deliver an efficient and reliable operation, guaranteeing clients receive the best overall benefit from their investment.

RCT's software and quality assurance teams are constantly innovating and improving our products as a result of continued improvement plans and direct market feedback.

Software Support ensures:

- Customers are benefiting from current software version improvements, features and fixes that are market directed as they become available

- Updates/improvements and system checks occur when carrying out a machine service on-site.

- Updates can also be made available outside normal service scheduling and can be implemented on-site

- Improvements with fault diagnosis by remote identification of faulty items within a system which enables faster repair/replacement process

- Updates/improvements to devices when they are returned to the branch for their scheduled service interval, including any device service requirements

- Seamless iteration of new improvements and features with minimal business disruption

- Ongoing phone support across all RCT Automation systems

- Simple upgrades of purchased licence features

- Regular reports of all latest version releases note listing all improvements, fixes and upgrades that have been implemented

- The flexibility to move the software across current compatible Automation Centres

- Renewing your RCT Software Support is the most cost-effective way to ensure that the RCT solutions are at optimum performance

Examples of Software Support features:

- Enables an operator to log in with a pin and customise their dash to their requirements

- Operational improvements to machine enrolment and Automation Centre

- Live statistics displayed (includes bucket counts, tram times, dig and dump times, etc.)

- User interface improvements around more machine and Automation information

- Diagnostics improvements will be around machine(s) and on-site infrastructure

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