



INTEGRITY SERVICE AND SUPPORT GUIDE



PROTECT YOUR INVESTMENT WITH CROWN

THE CROWN INTEGRITY APPROACH

Crown's foundation for success is built on integrity. We believe a reputation for integrity is earned by establishing trust and providing superior value. This is achieved by hiring quality people, developing the necessary skills through advanced training, providing the right tools designed to maximize efficiency and deliver a high degree of customer support in the industry — both at the local and manufacturer levels.

Crown is committed to providing superior support and consistent results to achieve the lowest cost of ownership.



PROTECT YOUR INVESTMENT WITH **THE CROWN INTEGRITY APPROACH**

Crown is committed to extending the life of your lift truck fleet and helping you maximize your return on investment.

SERVICE EXPERTISE

Crown's highly skilled, professional service technicians are trained to complete jobs faster and fix trucks right the first time.

- Crown hires and trains to develop highly-skilled and qualified technicians
- Newly hired technicians, regardless of experience level, complete an extensive five-week program that includes 80 hours of Demonstrated Performance® Service Training where they must demonstrate competency before working on customer trucks
- All technicians receive extensive on-going Demonstrated Performance Service Training annually
- Field Service Lead Technicians are veteran technicians that monitor and develop other technicians, conduct Planned Maintenance audits and provide an additional level of customer support
- Field Service Managers audit technician work orders, conduct regular technician performance evaluations and review customer service history to identify cost savings opportunities
- Assured Performance Measurement Tracking helps ensure consistent results

PARTS INVESTMENT

The key to maximizing uptime and minimizing repair costs is using high quality parts and having the right parts in the right quantities at the right time.

- 95% off-shelf parts availability means parts are available when you need them
- Amply stocked service vans allow our technicians to complete the job faster
- Customer parts usage tracked in real time so parts are restocked sooner
- Parts inventories tailored to the technician's service area
- Parts vans to support parts-only customer accounts and manage consignment accounts
- Crown Integrity Parts System® guarantees original equipment parts for Crown lift trucks
- One Source Lift Truck Parts® for miscellaneous parts and original equipment specification parts for other lift truck brands





DATA MANAGEMENT TOOLS

Crown offers numerous data management and maintenance tracking tools that enable customers to make more informed business decisions.

- Crown InfoLink® – wireless fleet and operator management system gives managers real-time operational data
- Crown FleetSTATS® – online fleet maintenance management system allows customers to choose from four flexible packages to meet their specific needs
- Crown Access 1 2 3® Comprehensive System Control – integral truck system that optimizes truck performance and simplifies troubleshooting
- Access to comprehensive reports, detailed analyses and expert recommendations to ensure the lowest cost of operation

The logo for InfoLink features the word "Info" in orange, a stylized orange and grey circular icon with a white arrow, and the word "Link" in grey.The logo for FleetSTATS features a stylized orange and grey grid icon with a white arrow, the word "Fleet" in grey, and the word "STATS" in orange.The logo for Access123 features the word "Access" in grey, "123" in orange, and "Comprehensive System Control" in grey below it.

FACTORY SUPPORT

A dedicated team of professionals work side-by-side with Crown dealers to deliver superior service and support.

- Regional factory-supported training facilities
- Factory call center for service & aftermarket support
- District Service and Parts Managers
- General and Regional Managers
- FleetSTATS support staff
- Service Product Managers
- InfoLink support and installation teams

CROWN RENTAL SYSTEMS

With the industry's most comprehensive line of rental trucks, Crown can deliver the right truck, right now.

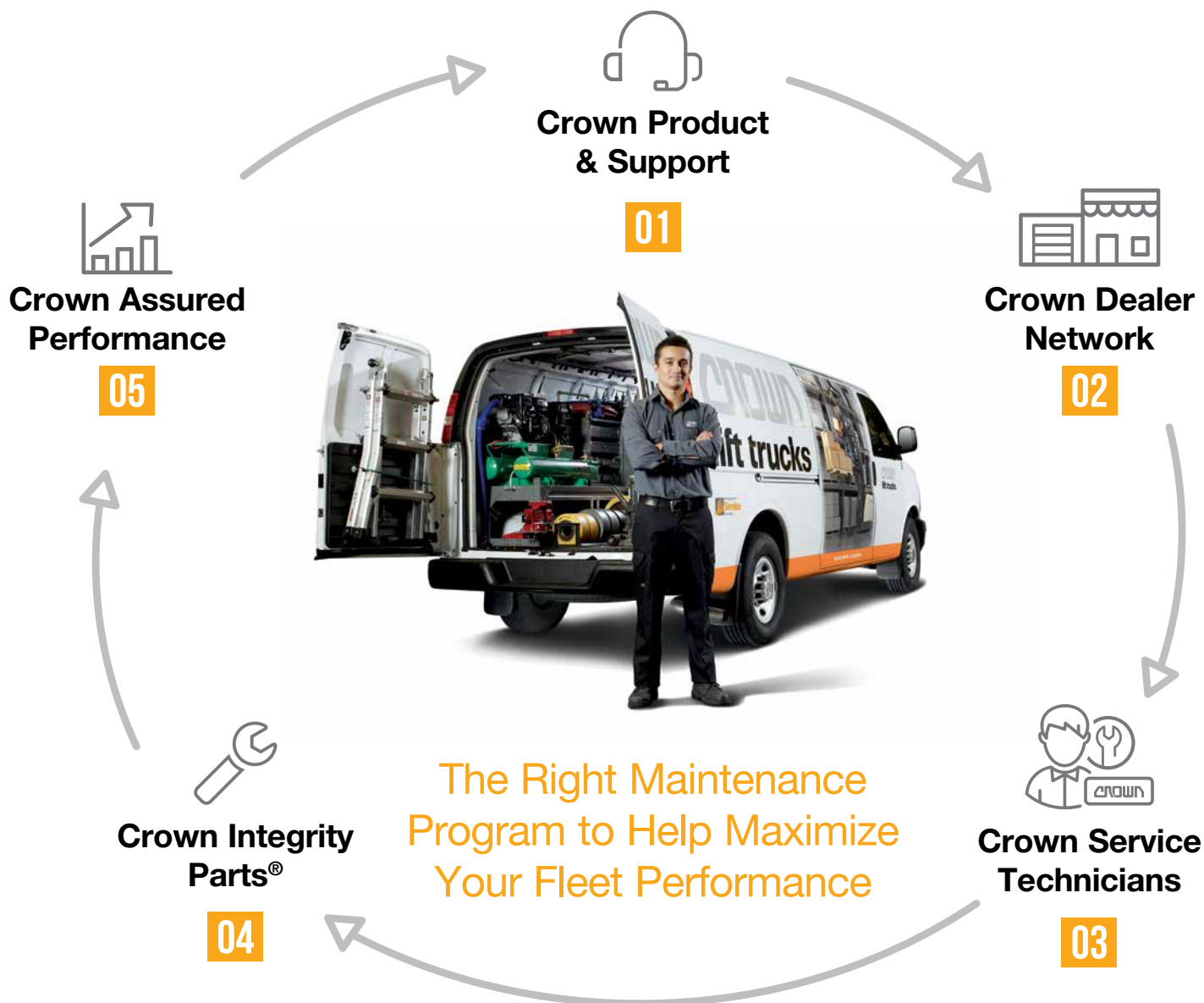
- Newest and widest range of rental trucks
- Extensive local and national fleets ensures quick response
- One call convenience:
1-877-768-5438 (1-877 RNT LIFT)

RAPID RESPONSE

We understand that every minute of downtime costs your company money. Crown has the resources and equipment to ensure fast response and quick repair in the industry.

- Customer Care team to assist with parts and service inquiries and expediting
- Properly equipped service vans
- The parts you need readily available
- Modern, well-equipped shops to handle major repairs and overhauls in a fast, efficient manner

EXPERIENCE MORE UPTIME WITH **THE CROWN INTEGRITY SERVICE SYSTEM**



Maximize Your Fleet Performance

Do you receive prompt service by trained technicians with the right part the first time? If not, look beneath the surface to uncover the secret to reliable performance and substantial cost savings.

Crown offers performance and savings through programs tailored to your business needs.

The Crown Integrity Service System gives you high performance at a low cost of ownership

01 Crown Product & Support

Crown has made substantial investments to provide expert assistance from our customer call center representatives as well as dependable service support, warranty coverage and reliable parts. We continually evaluate our service system to meet your expectations for assured performance at a low cost of ownership.

02 Crown Dealer Network

Crown knows that uptime is your priority. We invest in the latest technology and technician training to:

- Monitor response times
- Track first-call fix ratio
- Stock our service vans with Crown Integrity Parts and One Source Lift Truck Parts®

This investment reduces unnecessary down-time and increases the value of your lift trucks.

03 Crown Service Technicians

Crown technicians bring expertise and dependability to your lift truck maintenance efforts. Technicians are regularly trained on current products and technologies through Crown's Demonstrated Performance® training. Only Crown service technicians have access to the latest updates, repair information and our call center.

04 Crown Integrity Parts

Rely on Crown Integrity Parts to provide reliable performance for your lift trucks. Crown's ongoing testing of look-alike parts consistently finds major flaws including poor fit and obsolete designs that often lead to potential system damage, or issues with performance and safety.

Crown Integrity Parts can last two-to-three times longer than look-alike parts—saving you service costs, and are stocked and properly managed at Crown retailers across the country to help you avoid costly downtime.

05 Crown Assured Performance

We understand that downtime costs your company money so our goal is to achieve the fastest response time in the industry.

Several key business measurements have been established to guide Crown's system of performance including prompt, reliable repairs, up to 98% off-shelf parts availability, reliable customer service with Crown's factory call center, and routine review of equipment condition, part replacement frequency and technician performance.

These measurements help to assure that we live up to our promise to provide a level of support that continually meets or exceeds your expectations.



Crown Integrity Service Benefits	Crown	Other
Prompt Local Dealer Support: Proven performance: responsive and fixed right the first time	Yes	?
+ Parts Availability: Having the right part when you need it	93-98%	?
+ Integrity and One Source Parts: Longer lasting, low frequency of consumption, lower overall cost	Yes	?
+ Factory Support: Experienced call center, and field representation	Yes	No
+ Factory Training: On-going technical training and the latest updates	Yes	No
+ Warranty Support: Only provided by the Crown dealer, continuous product improvement	Yes	No
+ Service Programs: Comprehensive offering of maintenance programs	Yes	?
+ Accountability: Crown management monitors key performance criteria	Yes	No
+ Investment: Facilities, equipment, service vans	Yes	?
= High Performance, Reliability and Uptime at a Low Cost of Ownership		

Crown Integrity Service System, Crown Integrity Parts and One Source Lift Truck Parts are registered trademarks in the United States and other countries.

THE RIGHT MAINTENANCE PROGRAM **TO FIT YOUR NEEDS**



TIME AND MATERIAL

Both planned and unplanned maintenance are performed as needed, so costs fluctuate with maintenance activity.

PLANNED MAINTENANCE

Covers fundamental maintenance to help ensure safe and proper operation, with more predictable costs.

FULL MAINTENANCE

Includes planned and routine maintenance repairs, not including wheels, tires, light bulbs, or damage resulting from misuse or abuse.

COMPLETE MAINTENANCE

Complete Maintenance: Our most comprehensive program, it includes Full Maintenance and abuse repairs up to a prearranged threshold.

MAINTENANCE PROGRAMS

Crown has maintenance programs for **all makes and models of lift trucks – electric or IC**. Whether you have a **new fleet** or an **existing fleet** that needs service and support, Crown is committed to providing consistently high quality maintenance and service regardless of the program you choose.

COVERAGE MATRIX

PROGRAMS ►	TIME & MATERIAL	PLANNED	FULL	COMPLETE
Integrity Service System	✓	✓	✓	✓
Integrity Parts System	✓	✓	✓	✓
One Source Lift Truck Parts®	✓	✓	✓	✓
Truck Planned Maintenance		✓	✓	✓
Unscheduled Maintenance			✓	✓
Wearable Components			✓	✓
Major Components			✓	✓
Side Shift Attachment Repair			✓	✓
Wheels and Tires				✓
Light Bulbs and Fuses				✓
Misuse or Abuse (\$500 or less)				✓
Detailed Service Reports	✓	✓	✓	✓
Customized Billing Cycle Options	✓	✓	✓	✓
Battery Planned Maintenance* (Optional)		✓	✓	✓
Battery Repairs* (Optional)	✓	✓	✓	✓
Charger Planned Maintenance* (Optional)		✓	✓	✓
Charger Repairs* (Optional)	✓	✓	✓	✓

***Note:** Consult your Crown representative for details.



Maintenance Programs

Time and Material

Crown's Time and Material program is ideal for customers that prefer to manage their own repairs. The customer is responsible for ensuring that planned and other needed maintenance is performed. It is recommended that customers purchase maintenance tracking software to monitor maintenance records and operating costs or a maintenance management system such as Crown's FleetSTATS.

A **planned maintenance** program, available from Crown, is recommended for all trucks at regular intervals to help ensure that all lift truck functions and features operate as intended. In addition, planned maintenance helps to minimize downtime and lower the overall cost of repairs.

COVERAGE	
Integrity Service System	✓
Integrity Parts System	✓
One Source Lift Truck Parts®	✓
Truck Planned Maintenance	
Unscheduled Maintenance	
Wearable Components	
Major Components	
Side Shift Attachment Repair	
Wheels and Tires	
Light Bulbs	
Misuse or Abuse (\$500 or less)	
Detailed Service Reports	✓
Customized Billing Cycle Options	✓
Battery Planned Maintenance* (Optional)	
Battery Repairs* (Optional)	✓
Charger Planned Maintenance* (Optional)	
Charger Repairs* (Optional)	✓

***Note:** Consult your Crown representative for details.

CROWN'S SERVICE ADVANTAGE

- Crown's Integrity Service System and exclusive Demonstrated Performance technician training provides value-added service for every customer regardless of the maintenance program selected
- Highly skilled technicians with fully equipped service vans
- Crown's Integrity Parts System and its One Source Lift Truck Parts make sourcing parts simple and fast
- Access to factory support call center and field support

CUSTOMER BENEFITS

- Fast response time.
- All inclusive labor rate – no additional hidden fees, fuel surcharges or supply costs
- Service vans stocked with the right parts to complete repairs
- Crown technicians work efficiently and strive to complete repairs on the first visit so expensive call backs and downtime are minimized
- Crown's Customer Care department helps ensure a consistent level of support and timely response to customer requests
- Work orders and invoices are clear and concise
- Customized service reports are available for all repairs performed by Crown

Planned Maintenance Program

Crown's Planned Maintenance program covers all the essentials and the basic maintenance that should be performed to help ensure that a lift truck's functions and features operate as intended. Planned Maintenance frequency is typically based on average monthly usage, but can be adjusted to meet the requirements of the specific application.

COVERAGE	
Integrity Service System	✓
Integrity Parts System	✓
One Source Lift Truck Parts	✓
Truck Planned Maintenance	✓
Unscheduled Maintenance	
Wearable Components	
Major Components	
Side Shift Attachment Repair	
Wheels and Tires	
Light Bulbs	
Misuse or Abuse (\$500 or less)	
Detailed Service Reports	✓
Customized Billing Cycle Options	✓
Battery Planned Maintenance* (Optional)	✓
Battery Repairs* (Optional)	✓
Charger Planned Maintenance* (Optional)	✓
Charger Repairs* (Optional)	✓

***Note:** Consult your Crown representative for details.

CUSTOMER BENEFITS

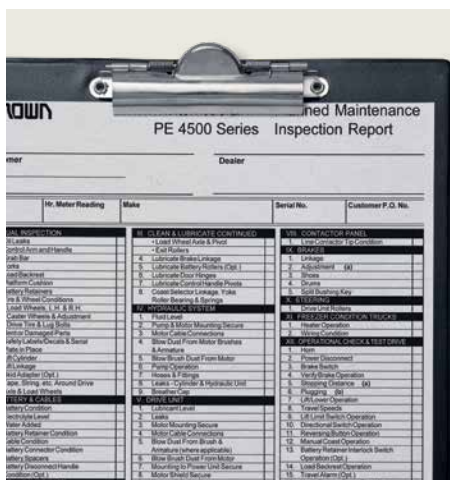
- Regular maintenance reduces overall downtime
- Improves safety
- Helps ensure warranty compliance
- Increases truck trade-in value

WHAT'S COVERED

- Visual, operational and safety inspections
- Removal of body panels to blow off dust and remove debris
- Manufacturers recommended lubrication procedures
- Inspection of all major systems:
 - Hydraulic system
 - Drive unit/transmission
 - Electrical system
 - Brakes
 - Steering system
 - Mast and cylinders

WHAT'S NOT COVERED

- Repairs due to misuse and abuse
- Breakdown repairs
- Wheels, tires, batteries, attachments, light bulbs and other wearable items
- Cost of replacement parts, oils and filters



Crown technicians use truck-specific Planned Maintenance forms because recommended inspections vary for each type of truck.

Technicians will review the results of each truck's Planned Maintenance including recommended repairs. Approved repairs will be billed on a time and material basis.



PE 4500 Series

Full Maintenance Program

Crown's Full Maintenance program covers both planned and routine maintenance for your peace of mind. Full Maintenance helps you control costs and maximize uptime by ensuring the proper operation and repair of both major components and wearable parts. Rates are truck specific.

CUSTOMER BENEFIT

- Consistent monthly cost for routine maintenance and normal operational repairs
- Simplified invoices lead to accounting efficiencies
- Reduced downtime, improved safety
- Warranty compliance and increased truck trade-in value

WHAT'S COVERED

- All items in the planned maintenance program
- All unscheduled maintenance
- Repairs due to normal truck operation¹
- Sideshifter attachment repair
- Free temporary rental truck for repairs lasting more than 48 hours²

¹ Does not apply to repairs resulting from misuse or abuse.

² Rental truck will be the closest match to your current unit.

Subject to availability.

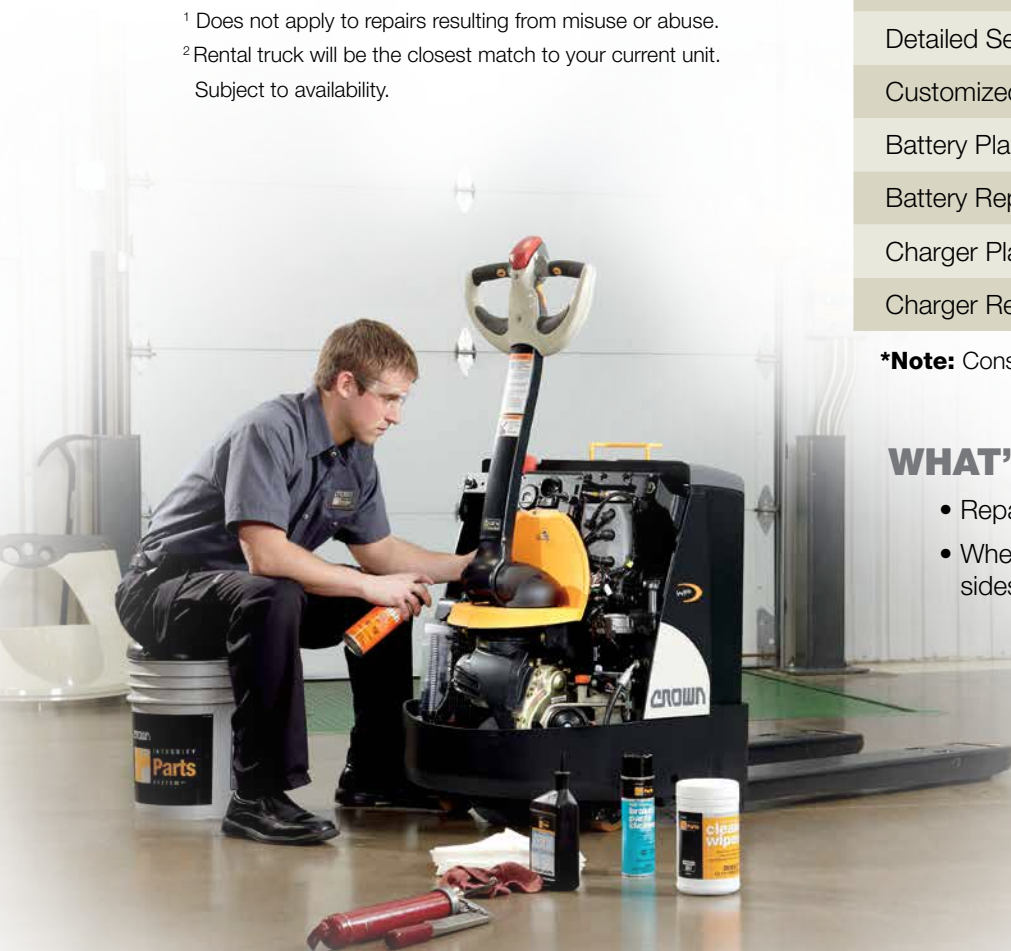
COVERAGE

Integrity Service System	✓
Integrity Parts System	✓
One Source Lift Truck Parts®	✓
Truck Planned Maintenance	✓
Unscheduled Maintenance	✓
Wearable Components	✓
Major Components	✓
Side Shift Attachment Repair	✓
Wheels and Tires	
Light Bulbs	
Misuse or Abuse (\$500 or less)	
Detailed Service Reports	✓
Customized Billing Cycle Options	✓
Battery Planned Maintenance* (Optional)	✓
Battery Repairs* (Optional)	✓
Charger Planned Maintenance* (Optional)	✓
Charger Repairs* (Optional)	✓

***Note:** Consult your Crown representative for details.

WHAT'S NOT COVERED

- Repairs due to misuse or abuse
- Wheels, tires, batteries, attachments (except for sideshifter), light bulbs and other wearable items



Complete Maintenance Program

Crown's Complete Maintenance program helps you budget and control costs associated with both routine maintenance and misuse/abuse.

Monthly rates vary by model, and cover regularly scheduled planned maintenance, breakdown repairs, and abuse repairs up to \$500.**

COVERAGE	
Integrity Service System	✓
Integrity Parts System	✓
One Source Lift Truck Parts	✓
Truck Planned Maintenance	✓
Unscheduled Maintenance	✓
Wearable Components	✓
Major Components	✓
Side Shift Attachment Repair	✓
Wheels and Tires	✓
Light Bulbs	✓
Misuse or Abuse (\$500 or less)	✓
Detailed Service Reports	✓
Customized Billing Cycle Options	✓
Battery Planned Maintenance* (Optional)	✓
Battery Repairs* (Optional)	✓
Charger Planned Maintenance* (Optional)	✓
Charger Repairs* (Optional)	✓

***Note:** Consult your Crown representative for details.



CUSTOMER BENEFITS

- Consistent, comprehensive monthly rate takes the guesswork out of maintenance budgeting
- Simplified invoices lead to accounting efficiencies
- Regular maintenance reduces overall downtime, helps improve safety, increases truck trade-in value and helps comply with manufacturer warranties
- More time to focus on core business operations

WHAT'S COVERED

- All planned and routine maintenance
- Repairs due to normal truck operation¹
- Misuse and abuse repairs costing \$500 or less per incident
- Wheels and tires, unless damage is due to improper housekeeping
- Sideshifter attachment repair
- Light bulbs and fuses
- Free temporary rental truck for repairs lasting more than 48 hours²

¹ Does not apply to repairs resulting from misuse or abuse.

² Rental truck will be the closest match to your current unit. Subject to availability.

WHAT'S NOT COVERED

- Repair/replacement of special attachments (except for sideshifter)
- Misuse or abuse repairs costing more than \$500 per incident

****Note:** Customers are responsible for the entire invoice amount of abuse repairs that exceed \$500 per incident.

Battery and Charger Maintenance

Proper maintenance of your batteries and chargers is crucial to keeping your operation up and running. Crown service technicians are trained to service your forklifts as well as your batteries and chargers, providing a reliable single source for keeping your fleet moving.

PLANNED BATTERY MAINTENANCE*

- Complete Battery Inspection:
 - Visually inspect overall condition, noting operating temperatures and evidence of corrosion or improper filling
 - Check electrolyte level and battery leakage
 - Inspect battery cables, connections and vent caps
 - Record voltage readings and specific gravity for each cell
- Remove minor corrosion
- Thoroughly clean and neutralize battery
- Contain and dispose of all waste according to EPA regulations

PLANNED CHARGER MAINTENANCE*

- Verify DC charge rate
- Validate ammeter and check nameplate rating to ensure battery and charger ratings match
- Visually inspect charging cables, connectors, contact tips and AC lines
- Inspect line contactor and tighten internal connections
- Provide customer written recommendations when further repairs are required

*Complete Maintenance option available upon request. Ask for details



One Source Lift Truck Parts Program

Crown's One Source Lift Truck Parts program provides high quality parts for long life and uptime. By reducing the frequency of parts replacement and unexpected downtime, you'll increase productivity, reduce cost and achieve lower cost of ownership.



**one
source**[®]
LIFT TRUCK PARTS



Hundreds of Thousands of Parts for More Than 50 Material Handling Brands



Computerized Parts Inventory with Over 90% Local Availability



Nationwide Fleet of Service Vehicles Stocked with the Most Commonly Used Parts



On-Site Parts Consignment Program to Place Parts at Your Fingertips



Electronic Parts & Service Resource Tool (PSRT) Provides Online Parts Ordering



Detailed Parts Usage Analysis Helps Determine the Parts You Need Most

Safety First.

Crown's experienced technicians and expert trainers work together to help ensure your equipment and your operators are prepared for safe operation.



FORKLIFT TRAINING PROGRAMS

OSHA Regulation 29 CFR 1910.178 (l)(1)(i) states the employer shall ensure that each powered industrial truck operator is competent to operate a powered industrial truck safely, as demonstrated by the successful completion of the training and evaluation specified in paragraph (l).

Crown's training programs are based on our exclusive, award-winning Demonstrated Performance (DP) training method.

- DP MoveSafe® – truck-specific operator training programs, scheduled upon request and completed at the customer's location
- DP TrainSafe® – training for the trainer, scheduled upon request and completed at the customer's location
- DP LeadSafe® – training for the supervisor, instructor-led classes scheduled upon request or 4-hour computer-based interactive training available

MODIFICATIONS/ADDITIONS TO LIFT TRUCKS

OSHA Regulation 29 CFR 1910.178(a)(4) states that modifications and additions that affect the capacity or safe operation shall not be performed by the customer or user without the manufacturer's prior written approval.

Contact your Crown representative to request a modification of Crown products, if modifications are desired.

OSHA REGULATIONS

OSHA Regulation 29 CFR 1910.178(q)(5) states that all parts of any industrial truck requiring replacement shall be replaced only by parts equivalent as to safety with those used in the original design.



MAINTENANCE AND INSPECTION

OSHA Regulation 29 CFR 1910.178(q)(7) states that “Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examinations shall be made at least daily. Where industrial trucks are used on a round-the-clock basis, they shall be examined by the new operator. Defects when found shall be immediately reported and corrected”. Installing Crown’s InfoLink® system can help ensure compliance with this OSHA regulation by requiring operators to login to a truck and complete an electronic inspection checklist.



NAMEPLATES AND WARNING LABELS

The operator shall see that all labels and markings are in place and are maintained in a legible form. Replacement label part numbers can be located on crown.com.



PRESENCE WARNING DEVICES

Flashing lights are standard on all Crown elevated operator models such as stockpickers and turret trucks and can be ordered as an option on other Crown models. Optional travel alarms can be set to sound when the lift truck is traveling forward, in reverse or both.

Safety considerations and dangers associated with audible travel alarms and lights include:

- Multiple alarms and/or lights can cause confusion
- Workers ignore the alarms after day in and day out exposure
- Operator may transfer the responsibility for “looking out” to the pedestrian
- Annoys operators and pedestrians



BATTERY ROOMS AND BATTERY CHARGING

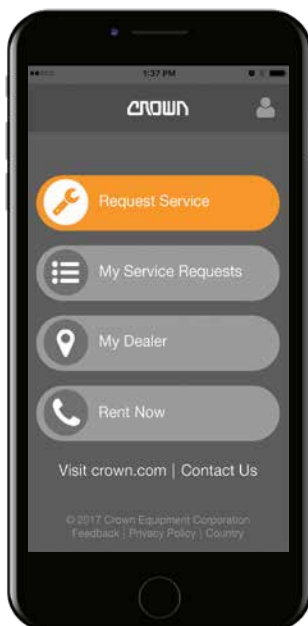
OSHA Regulations 29 CFR 1910.178(g) defines how battery rooms are to be designed, equipped and operated.

To download a free copy of OSHA Regulations go to:

- www.osha.gov for OSHA Regulation (Standards -29 CFR) 1910.178 – Powered Industrial Trucks

Exceptional Support Nationwide

Our responsive, dedicated team of professionals provides the support you need, reducing downtime and increasing your total value. You can count on Crown to deliver the highest quality product, service and support.



FORKLIFT SERVICE **AT YOUR FINGERTIPS**

Request forklift service, discuss your rental needs or contact your dealer — all from the convenience of your smartphone or tablet. The Crown Service Request app provides quick access to Crown service to help you maximize uptime!



DOWNLOAD
THE CROWN SERVICE REQUEST APP TODAY!



Visit crown.com to search Crown's global network of dealers and learn more about Crown products and services.



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crown.com

You can count on Crown to build lift trucks designed for safe operation, but that's only part of the safety equation. Crown encourages safe operating practices through ongoing operator training, safety-focused supervision, maintenance and a safe working environment. Go to crown.com and view our safety section to learn more.

Because Crown is continually improving its products, specifications are subject to change without notice.

Crown, the Crown logo, the color beige, Crown Lift Trucks, the Momentum Mark, Access 1 2 3, Integrity Service System, Integrity Parts System, Crown Integrity Parts, One Source Lift Truck Parts, InfoLink, FleetSTATS, Demonstrated Performance, DP MoveSafe, DP TrainSafe and DP LeadSafe are trademarks of Crown Equipment Corporation in the United States and other countries.

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SF18445 Rev. 01-20
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