

# Guidelines when Material Handling Equipment is not used for an extended period

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In the current Covid-19 pandemic Toyota Material Handling will adapt to the evolving health crisis. Toyota Material Handling is following the Corona virus development with utmost care. Our priorities are clear: the health and safety of our employees, as well as our customers and suppliers, come first.

We will do everything we can to uphold our service to our customers and partners. Therefore, we have made these guidelines to make sure that we protect our service technicians' and customers' wellbeing.

Keeping your business running



# Guidelines when Material Handling Equipment is not used for an extended period

The vital sectors, such as food distribution and medical supplies are in full swing. Other sectors are experiencing a downturn, as a result of which material handling equipment is used less or may even come to a standstill. If sites are closed or have limited access for technicians, maintenance, service and (legal) safety inspections may not be possible. We recommend our customers to pay extra attention these days that (legally) required interventions have not lapsed\*. Please contact your regular Toyota contact for advice and support.

## When storing a machine for an extended period of time, we recommend the following\*\*:

### Clean the equipment and park it safely:

- Clean the contact surfaces thoroughly (see separate guideline);
- Before parking the vehicle, fully lift the mast up once to make sure hydraulic components are properly lubricated;
- Trucks should be parked on smooth, level ground with the load handling means, e.g. forks, lowered to the ground and with the means of starting, e.g. key, removed;
- We refer to the operator's manual for information on shutdown and storage. Information in the operator's manual has precedence over this guideline.

### Take care of lead-acid traction batteries:

- Fully charge the battery and complete normal battery maintenance procedures;
- Clean and dry the battery cell tops and connectors;
- Disconnect the battery connector, electrically isolating the battery from the machine unless this is prohibited in the instruction handbook;
- A fluid level check and maintenance charge should be administered at least every third month of storage;
- If the battery is in a battery station it can stay connected to the charger. The charger needs to be programmed for automatic charging;
- Batteries may be kept on the truck or stored separately in a dry area protected from extremely high and low temperature, preferably indoors;
- Where batteries are used in cold or chilled stores, they should not be left in the store for extended idle periods whether on or off the truck. This may require the battery to be removed from the truck;
- The battery may require drying after removal due to condensation;
- If trucks require a permanent battery supply such as for moving part heaters, then consult the truck manufacturer for advice;
- Check correct functioning of any watering systems when topping;
- Before reintroducing into service, check all electrical connection and cables for damage (possible rodent damage to insulation) and arrange repairs where needed;
- Before recommissioning, check the electrolyte level and density and fully charge the battery.

### Take care of Lithium-ion batteries:

- Fully inspect the battery for signs of damage;
- Fully charge the battery;
- Disconnect the battery isolator, electrically isolating the battery from the machine;
- Disconnect the CAN communication connector from the battery, but do NOT disconnect the battery management system (BMS) from the battery;
- Batteries should generally be stored indoors, away from heat sources and direct sunlight, and within the temperature range 0°C to 40°C;
- Storage areas should be dry and well-ventilated (max. 85% humidity);
- Ensure there is sufficient protection against short-circuit and mechanical damage;
- A maintenance charge and inspection should be administered every third month;
- The battery charge should not be permitted to fall below 50% full of charge.

### Take care of LPG-powered machines:

- Remove the gas bottle from the machine and ensure the connector is suitably shielded from damage, contamination or oxidation;
- The (starter) battery should then also be disconnected, and the terminals protected with acid-free grease.

### Take care of diesel-powered machines:

- The fuel tank should be fully filled to prevent build-up of condensation;
- The (starter) battery should then be disconnected from the machine and the terminals protected with acid-free grease.

### Additional precautions to support trouble-free reintroduction:

- Appropriately support the machine's drive unit to remove loading of the drive wheel;
- For machines with solid (non-pneumatic) wheels, support the machine to prevent deformation of the materials and the formation of flat spots. For pneumatic wheels, ensure tyres are inflated to the recommended operating pressure;
- Unpainted surfaces: Lubricate all chains and mechanical parts, apply penetrating oil or suitable protective aerosol spray to all electrical connections;
- If the machine is to be stored in a dusty environment then it should be covered with a cover that does not collect condensation, e.g. a cotton cover, not a plastic sheet.

### Reintroduction to operation:

- The operator's manual will include information on commissioning; perform the same servicing tasks and functional testing as carried out when the truck was first commissioned;
- Make sure that (legally) required interventions have not lapsed.

If you have any questions on how to deal with these guidelines or if you are in need of any support please contact our service desk or your regular contacts at Toyota Material Handling. If it is not possible for our technicians to access your site, they are glad to be of help remotely. Of course support is also available when you take the equipment back into operation.

\*These guidelines are generally formulated for the TMHE network. Local regulations may differ.

\*\*Please ask your technician to support you if needed.

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