



AUGUST 15, 2016

TECHNICAL BULLETIN

Product: CM entertainment Lodestar electric chain motor
Models: All CM-ET Lodestar Classic models
Manufacturing Start Date: August 15, 2016

Introduced 60 years ago, we engineered the CM Lodestar to be the best electric chain motor in the world. For this reason, we've never stopped reinventing and improving it to not only meet, but exceed customer expectations. As part of our continuous improvement efforts, we've recently made some modifications to the CM Lodestar to address water ingress, grease migration and overall serviceability.

1. WEATHERPROOFING: IP66 RATING

We are excited to announce that the world-class Lodestar motor now holds an IP66 rating. An Ingress Protection (IP) Rating of 66 indicates that the Lodestar offers protection from dust and high-pressure water – making this unit ideal for use in outdoor environments. IP testing was completed by an independent environmental test laboratory.

To achieve this rating, Columbus McKinnon has made a few design enhancements, including a new entry point for the Lodestar's power and pendant cords. With a modest dimension modification to the back frame of the gearbox subassembly and the back frame cover, the cords now enter directly into the back frame. This allows for new water-tight cord grips and a continuous gasket between the back frame and its cover. The minor dimension change does not affect the overall dimension of the Lodestar, so it will continue to fit in standard road cases.

Specific changes to address water migration into the Lodestar motor body include:

Cord Grips

Made of high-performance composite, the new cord grips prevent water from entering the Lodestar motor body where the power and pendant cables enter the body when the unit is in the motor-down position.

To achieve this, the cord grips feature a rubber seal that tightens around the cords to provide 360-degree, water-tight protection. The grips are designed to fit snugly against the back frame of the gearbox assembly to prevent water infiltration.

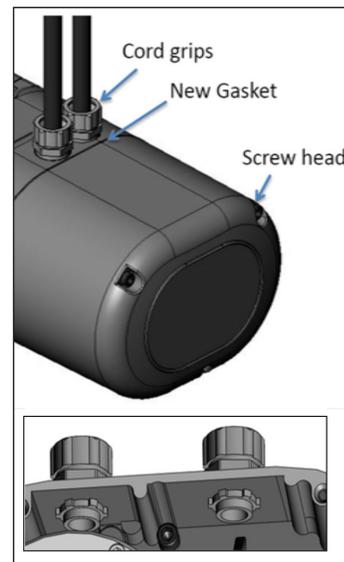
Standard cord grips accommodate cord diameters from 0.35 to 0.63 inches. Larger sizes and solid plugs are also available.

Continuous Gasket

The new continuous gasket between the back frame of the gearbox assembly and the back frame cover creates a tight, waterproof seal between the two components. The new gasket is in addition to the existing continuous gasket between the motor cover and motor housing subassembly.

O-Rings on Lift Wheel Bearing

New O-rings prevent water from entering the Lodestar motor body through the lift wheel opening.





2. GREASE MIGRATION

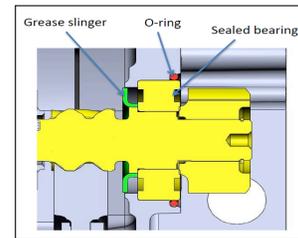
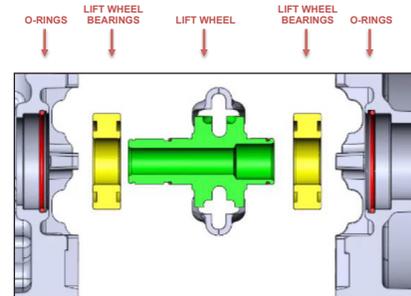
To better prevent grease from migrating within the Lodestar, Columbus McKinnon has made two improvements to the drive shaft.

Contact Sealed Liftwheel Bearing with O-Rings

We now provide better sealing around the drive shaft and bearings to prevent grease leakage and internal grease migration. The O-rings also prevent the grease from leaking out of the hoist.

Grease Slinger

A grease slinger captures grease and directs it back into the gear teeth for lubrication, helping to extend the gear life and reduce noise. It also helps prevent grease migration through bearings, which can cause contamination in the other parts of the unit.



3. SERVICEABILITY AND MAINTENANCE

The ability to quickly and easily service the CM Lodestar, whether in the workshop or out in the field, is important to our end users. To improve the serviceability of this widely used motor, we have made the following modifications:

Standard Socket or Button Head Cap Screws

The hex-style screws allow for a secure grip when loosening or tightening, making it safer for the operator and reducing the risk of scratching the motor body or damaging internal components. This style of screw also prevents stripping or burring of the screw head when applying torque.

Simplified Wiring Schemes

We have reduced the number of Lodestar wiring schemes to make it easier for operators and maintenance professionals to wire up units and order replacement parts. To achieve this, single- and three-phase, low-voltage Lodestar units include new terminal strips that allow service technicians to easily wire up power and control cords and other connections.

Hard-Wired Jumpers on Contactor

Single-phase units now feature hard-wired, plastic-coated jumpers that connect more securely to the contactor. This also helps extend the life of the contactor.

At Columbus McKinnon, the needs of our customers are important to us. We will continue to improve and evolve the CM Lodestar so professional riggers can continue to rely on this legendary motor for the most demanding and challenging applications.

Operator and Maintenance Manuals will be available upon shipment. For additional information on the CM Lodestar or any of our products for the entertainment industry, contact your CMCO Application & Product Specialist or a member of our Channel Services team at 800-888-0985.