Maxon 284080-01

Maxon Liftgate Solenoid OEM # 284080-01 Instruction Manual

Model: 284080-01 | Brand: Maxon

1. Introduction

This manual provides essential information for the proper installation, operation, and maintenance of the Maxon Liftgate Solenoid OEM # 284080-01. Please read this manual thoroughly before installation and operation to ensure safe and efficient use of the product.
The Maxon 284080-01 solenoid is a critical component designed for use in Maxon, GPT, TE, and Waltco liftgate systems. It functions as an electromagnetic switch, controlling the flow of electrical current to activate various liftgate functions.

2. Safety Information

Always observe the following safety precautions to prevent injury or damage to the equipment:

- Disconnect all power to the liftgate system before attempting any installation, maintenance, or repair.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Ensure the work area is well-lit and free of obstructions.
- Do not modify the solenoid or use it for purposes other than its intended application.
- Consult a qualified technician if you are unsure about any installation or troubleshooting steps.
- Verify correct voltage and current ratings before connecting the solenoid.

3. Product Overview

The Maxon Liftgate Solenoid OEM # 284080-01 is a robust electrical component. Below are images illustrating the solenoid from different angles.



Figure 3.1: Front view of the Maxon Liftgate Solenoid, showing the main terminals and mounting bracket.



Figure 3.2: Angled view of the solenoid, highlighting the electrical connections and the label with specifications (e.g., 12V, INT, 88 IN-LBS).



Figure 3.3: Side view of the solenoid, showing its compact design and the integrated mounting bracket.

4. Setup and Installation

Follow these steps for proper installation of the solenoid:

1. **Preparation:** Ensure the liftgate system is powered off and secured. Identify the location for the new solenoid, typically near the liftgate's hydraulic pump or control unit.
2. **Removal of Old Solenoid (if applicable):** Carefully disconnect all electrical wires from the old solenoid, noting their positions for reinstallation. Remove the mounting hardware.

3. **Mounting the New Solenoid:** Position the new Maxon 284080-01 solenoid using its integrated mounting bracket. Secure it firmly with appropriate bolts and nuts. Ensure it is stable and not subject to excessive vibration.
4. **Electrical Connections:** Connect the electrical wires to the corresponding terminals on the new solenoid. Refer to the liftgate's wiring diagram for correct polarity and connection points. Ensure all connections are clean, tight, and free from corrosion. The large terminals are typically for battery and motor connections, while smaller terminals are for control signals.
5. **Verification:** Double-check all connections for security and correctness. Ensure no wires are pinched or exposed.

Note: *Incorrect wiring can lead to system malfunction or damage. If unsure, consult a professional.*

5. Operation

The solenoid operates automatically as part of the liftgate's electrical system. It acts as a relay to switch high current to the liftgate motor when activated by the control circuit.

- When the liftgate control switch (e.g., up/down button) is pressed, a low-current signal is sent to the solenoid's coil.
- This signal energizes the coil, creating a magnetic field that pulls a plunger, closing the internal contacts.
- Closing the contacts allows high current from the battery to flow directly to the liftgate motor, activating its function (e.g., lifting or lowering).
- When the control switch is released, the coil de-energizes, the contacts open, and power to the motor is cut off.

No direct user interaction with the solenoid itself is required during normal operation.

6. Maintenance

Regular maintenance helps ensure the longevity and reliable performance of your Maxon solenoid:

- **Visual Inspection:** Periodically inspect the solenoid for any signs of physical damage, corrosion on terminals, or loose connections.
- **Terminal Cleaning:** If corrosion is present on the terminals, disconnect power and carefully clean them using a wire brush or fine-grit sandpaper. Reapply dielectric grease to prevent future corrosion.
- **Connection Tightness:** Ensure all electrical connections to the solenoid are tight. Loose connections can cause arcing, heat buildup, and premature failure.
- **Environmental Protection:** While designed for outdoor use, protect the solenoid from excessive moisture, dirt, and road debris where possible.

Caution: *Do not attempt to open or repair the sealed solenoid unit. Replace the unit if it is damaged or malfunctioning.*

7. Troubleshooting

If you experience issues with your liftgate system that may be related to the solenoid, consider the following:

Symptom	Possible Cause	Solution
Liftgate does not operate (no click from solenoid)	No power to solenoid coil; Faulty control switch; Open circuit in control wiring.	Check battery voltage; Inspect control switch and wiring for continuity; Check fuses.

Symptom	Possible Cause	Solution
Liftgate does not operate (solenoid clicks but no motor action)	Corroded or pitted main contacts in solenoid; Loose main power connections; Faulty motor.	Clean or replace solenoid; Tighten main power connections; Test liftgate motor independently.
Solenoid gets excessively hot	Overload; Loose connections; Internal short.	Check motor current draw; Tighten connections; Replace solenoid if internal fault is suspected.

If troubleshooting steps do not resolve the issue, it is recommended to consult a certified liftgate technician.

8. Specifications

- **Part Number:** OEM # 284080-01
- **Compatibility:** Maxon, GPT, TE, Waltco Liftgates (specific models may vary)
- **Voltage:** Typically 12V DC (verify specific unit label)
- **Type:** Continuous Duty Solenoid (verify specific unit label)
- **Dimensions:** Approximately 2 x 2 x 2 inches (5.08 x 5.08 x 5.08 cm)
- **Weight:** Approximately 1 Pound (0.45 kg)
- **Manufacturer:** producer (as per product data)
- **Date First Available:** September 20, 2018

9. Warranty and Support

For warranty information, please refer to the original purchase documentation or contact your Maxon product supplier. Warranty terms typically cover manufacturing defects for a specified period from the date of purchase.
For technical support or replacement parts, please contact your authorized Maxon dealer or a qualified liftgate service center. When contacting support, please have your product model number (284080-01) and purchase details readily available.
This product is manufactured by producer.

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