

INFORMATION NOTICE

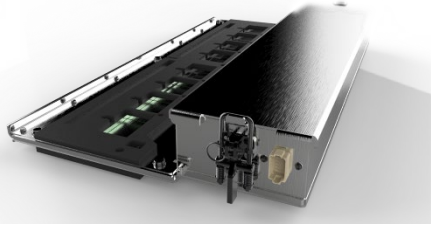
DOCUMENT NUMBER: 600870-000041

SUBJECT: ENGAGE® ZONE CONTROL MOTOR REPLACEMENT

DATE: FEBRUARY 15, 2021

This information notice describes how to replace a failed motor inside the Engage Zone Control unit.

Affected Parts

PART NAME	IAS PART NUMBER	IMAGE	PROBLEM
Engage Zone Control unit	153510-000121	 A photograph of the Engage Zone Control unit, a rectangular metal enclosure with a black top cover and a silver bottom cover. The unit is shown from a three-quarter perspective, highlighting its internal components and the motor assembly at the bottom.	Motor failure

Document References

The content in this information notice and additional maintenance instructions are found in the Engage® Zone Control Maintenance Manual (600840-000047). This document and all other Intelligent Ag support documentation is found at www.intelligentag.com/support.

About

If a motor inside the Engage Zone Control unit fails, follow the instructions in this document to replace it.

Tools Needed

- Pliers (for turning lead screw)
- 1/4" hex drive (for ground wire screw)
- 15 mm socket, ratchet, and extension (for removing motor mounts)
- 5.5 mm socket, ratchet and extension (for removing plates from motor face)
- Torque wrench (for replacing motor mounts)
- Torque screwdriver (for replacing plates from motor face)

Disassembling the Engage® Zone Control Unit

TIP: Refer to the diagram in Appendix A for labelled part names.

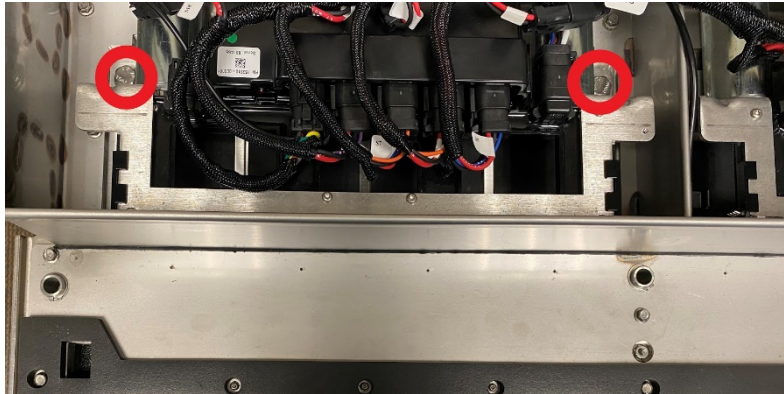
1. Cycle the gates open and closed through the tractor's virtual terminal.
2. Unplug the bin harness that plugs into the Engage® Zone Control unit enclosure.

NOTE: Be careful not to damage the gasket when removing the lid.

3. Clean off any dirt from the enclosure lid. Remove the pin from the latches on the sides of the unit and undo the latches. Then, slide the lid off.
4. Unplug all connections from the motor controller harness.
5. Use a 1/4" hex drive to unscrew the screw holding the ground wire to the motor mount. Then, remove the ground wire.

IMPORTANT: Before removing the motor mounts, make note of the serial number of each motor controller and if it is installed on the left side or right side of the enclosure. The motor controllers must be reinstalled in their original position.

6. Use a 15 mm socket, ratchet, and extension to remove the 2 bolts holding each motor mount to the enclosure. Then, remove the motor mounts.



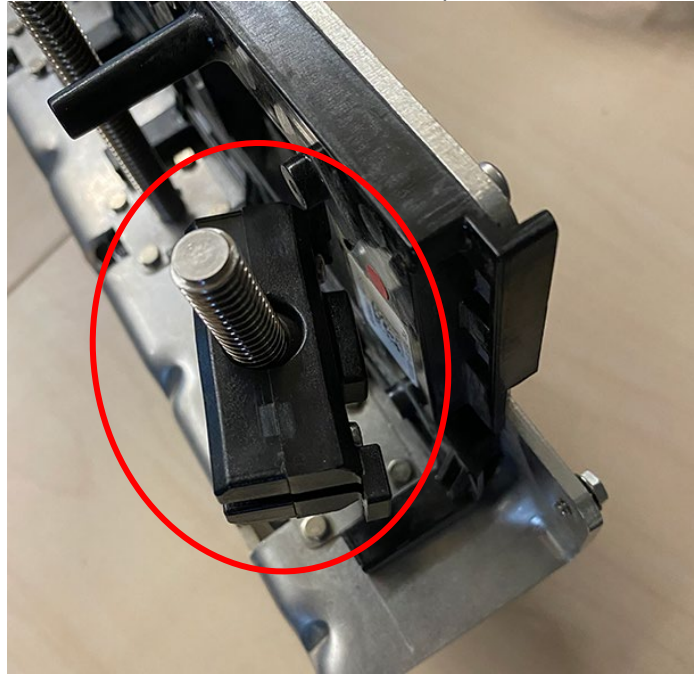
Replacing the Motor

1. Identify the motor that needs to be replaced by referring to the error message on the VT or visually identify the motor that's not moving. Then, disconnect the power connector from the motor controller.



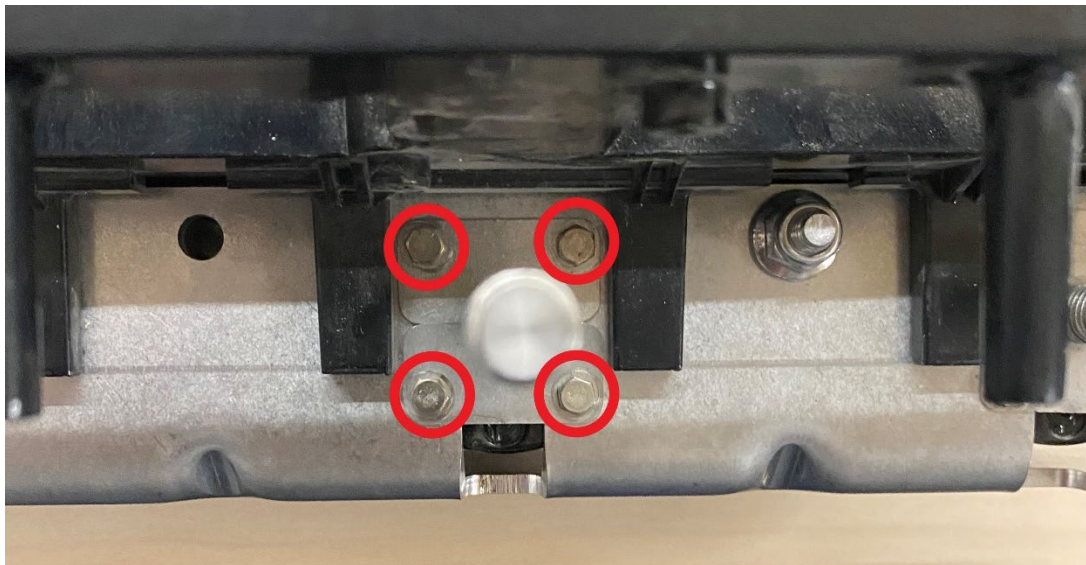
2. Manually turn the lead screw of the motor in order to unscrew the black nut holding clip.

If the motor is seized and will not turn by hand, use a piers to turn the lead screw.

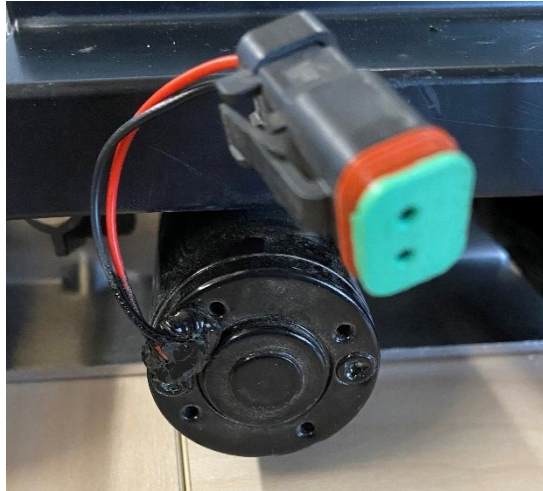


3. Using a 5.5 mm socket, ratchet and extension, remove the four 5.5 mm screws, rubber washer, and the two stainless steel plates from the face of the motor. Then, remove the motor from the motor mount.

If you are submitting a warranty claim, keep the motor in case you are asked to submit it with your claim. Improper maintenance of the system may void motor warranty.



4. Insert the new motor onto the motor mount with the power connector facing up as shown below.



5. Re-install the four 5.5 mm screws. Use a torque screwdriver to torque them to 21 inch/lbs.
6. Re-plug in the power connector to the motor controller.
7. Screw the black nut holding clip onto the lead screw of the motor with the magnet facing up.

Reassembling the Engage® Zone Control Unit

1. Re-position the motor mounts in their original position in the enclosure (left or right side of the enclosure).

Ensure that the nut holding clips rest on top of the short side of the gates (as seen in the diagram in Appendix A) and that the magnet is facing up. You can move the nut holding clips to align with the gates, or pull the gates out to meet the position of the nut holding clips.

TIP: It is easier to align the nut holding clips if you position the motor mount at an angle and align the nut holders individually from one side to the other.

IMPORTANT: Use care when reinstalling the motors so that you do not bend the lead screws.

2. Tighten the 4 bolts holding the two motor mounts in place. Use a torque wrench to torque to 31 ft-lbs.
3. Re-attach the ground wire to the motor mount, making sure that the serrated tooth washer is between the ring terminal and the motor mount.

4. Plug all connections of the motor controller harness back into their respective connections. Refer to the motor controller harness connections diagram at the end of the maintenance manual.

NOTE: Ensure that that harness is routed toward the back of the enclosure.

5. Place the lid back on the enclosure, and latch the lid.
6. Plug the bin harness into the Engage® Zone Control unit enclosure.
7. Cycle the gates open and closed through the tractor's virtual terminal.

Contact

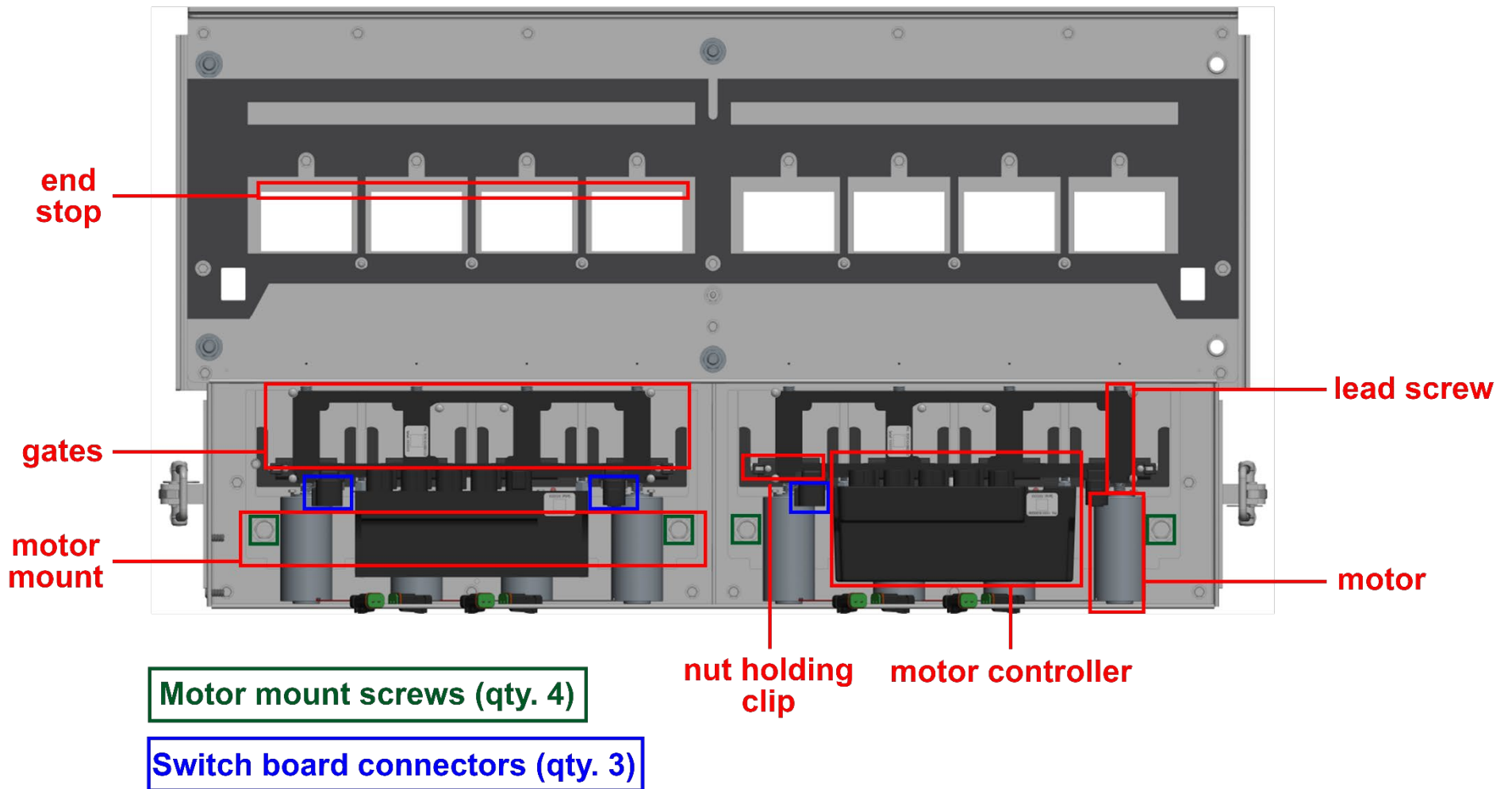
Questions? Contact Intelligent Ag product support:

Canadian Product Support: 1-306-993-1156

United States Product Support: 1-701-436-1219

Or, email us at support@intelligentag.com

Appendix A: Engage® Zone Control Unit Components



Appendix B: Motor Controller Harness Connections

