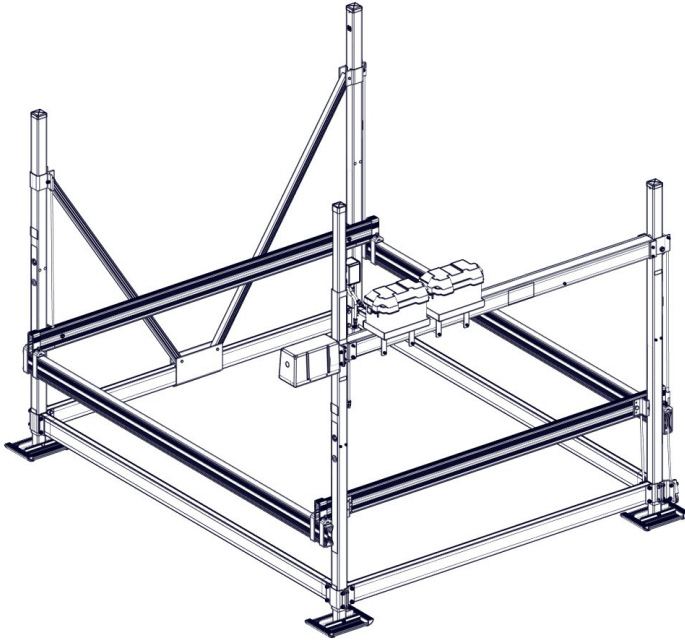


# FLOE VSD DC STAR BRAKE REPLACEMENT

## INSTRUCTIONS

KIT P/N 511-00012-00



### TOOLS REQUIRED

- (2) 9/16" WRENCHES
- 5/64" ALLEN WRENCH
- 3/16" FLAT TIP SCREWDRIVER
- 5/16" FLAT TIP SCREWDRIVER
- #2 PHILLIPS SCREWDRIVER
- NEEDLE NOSE PLIERS
- 5/32" HEX BIT/ALLEN WRENCH  
(VSD3800/5000 LIFTS)
- 1/4" HEX BIT/ALLEN WRENCH  
(VSD6000-10000 LIFTS)
- TORQUE WRENCH

\* LIFT & DRIVE KIT NOT INCLUDED

### **VERY IMPORTANT!!!**

**LIFT MUST BE LOWERED ENTIRELY  
BEFORE REMOVING THE DRIVE UNIT.  
FAILURE TO ADHERE MAY RESULT IN  
SEVERE INJURY OR DEATH.**

## BILL OF MATERIALS/EXPLODED VIEW

P/N 511-00012-00	BRAKE, DC VSD MOTOR STAR		
NO.	PART NUMBER	DESCRIPTION	QTY
1	001-22150-00	WIPE, ALCOHOL	1
2	006-04000-00	ANTI-SEIZE	1
3	007-03929-00	SPACER, STAR BRAKE INSTALLATION GAUGE	1
4	007-03987-00	BRAKE, ELECTRIC 24V DC 2021 (INCLUDES SCREWS, LOCK WASHERS, AND NUT)	1
5	007-11321-02	DECAL, WARNING – VSD POWER UNIT	1



### VERY IMPORTANT!!!

**THE INCLUDED DECAL MUST BE INSTALLED ONTO THE DRIVE UNIT COVER OVER THE OLD DECAL. THE NEW DECAL HAS UPDATED INSTRUCTIONS ON HOW TO MANUALLY LOWER THE LIFT.**

## STEP 1

**LOWER THE LIFT UNTIL THE CRADLE HAS REACHED THE LOWER LIMIT SWITCH AND THE WEIGHT OF THE BOAT IS NO LONGER ON THE LIFT. THERE MUST BE NO LOAD ON THE CRADLE/LIFT, AS THE DRIVE UNIT WILL BE REMOVED FROM THE LIFT. IDEALLY, THE BOAT WILL BE REMOVED FROM THE LIFT AND TIED TO THE DOCK. IF THE LIFT IS NOT COMPLETELY LOWERED, THE DRIVE UNIT WILL SPIN EXTREMELY FAST UNTIL THE CRADLE REACHES THE FRAME BEAMS.**

REMOVE (2) SCREWS FROM THE BOTTOM OF THE MOTOR COVER (FIGURE 1.1). PULL THE COVER DOWN AND DISCONNECT THE MOTOR & BRAKE WIRES (FIGURE 1.2). REMOVE THE FASTENERS SECURING THE DRIVE UNIT TO THE BALL SCREW CLAMP (FIGURE 1.3).



FIGURE 1.1

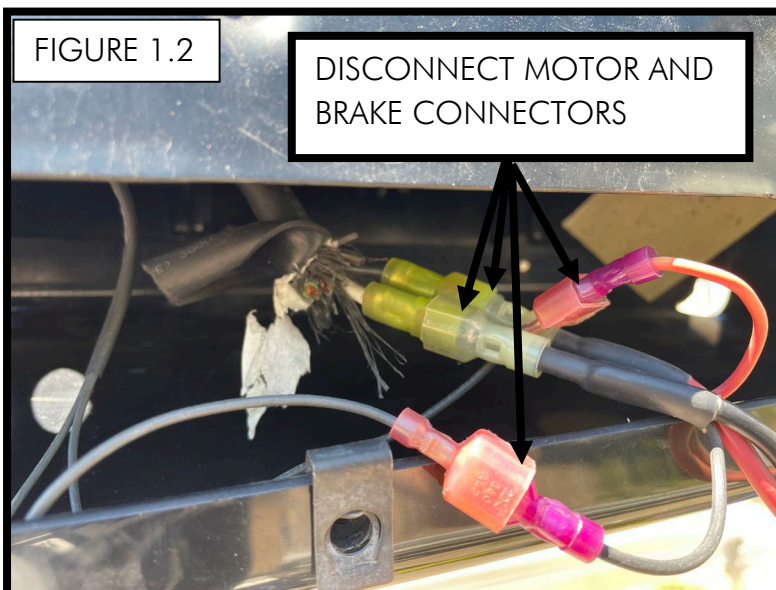
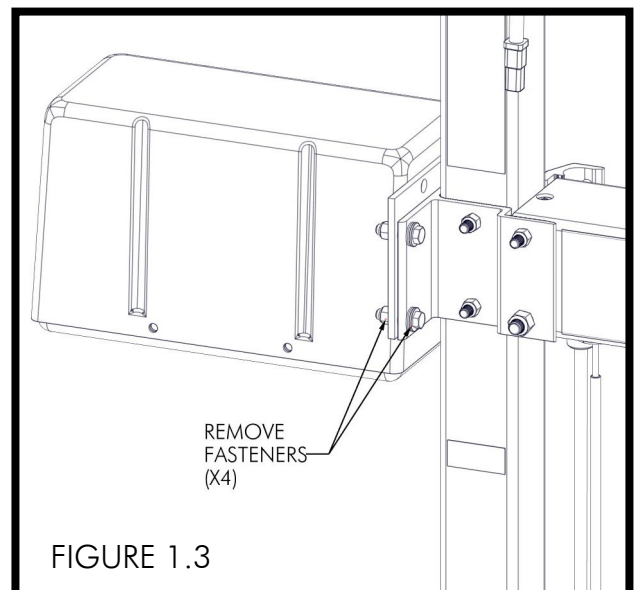


FIGURE 1.2

DISCONNECT MOTOR AND  
BRAKE CONNECTORS

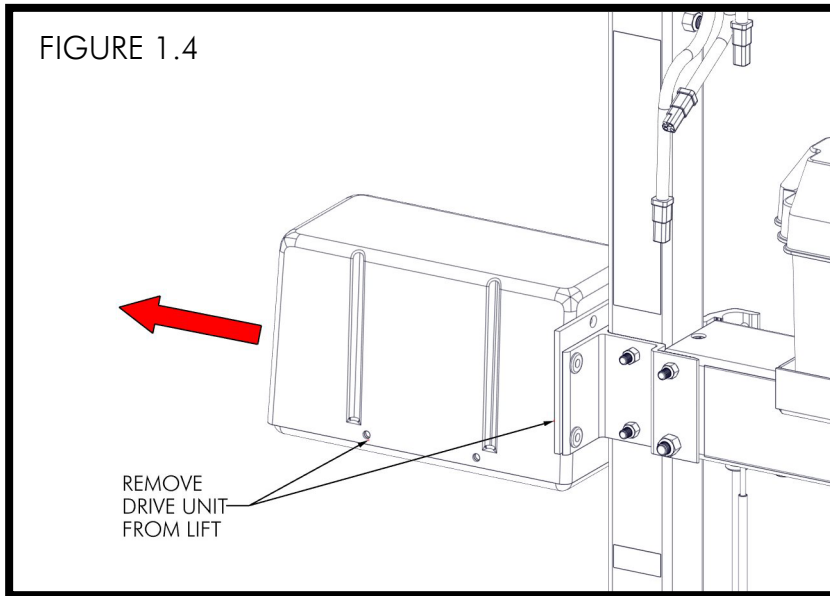


REMOVE  
FASTENERS  
(X4)

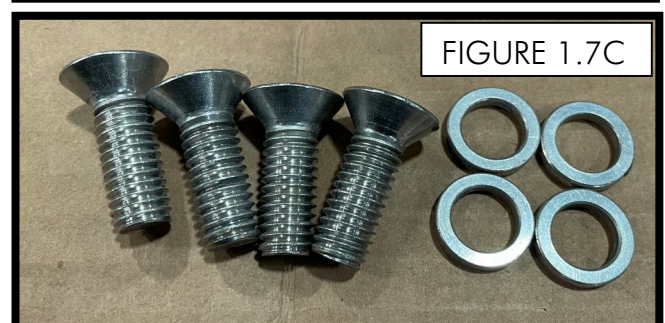
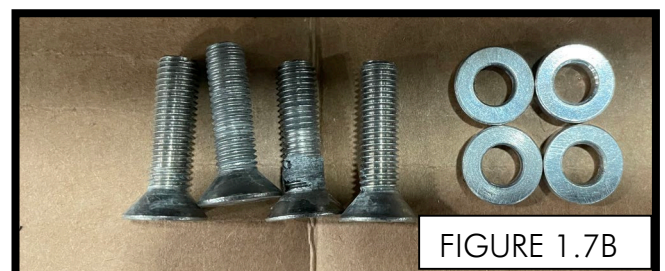
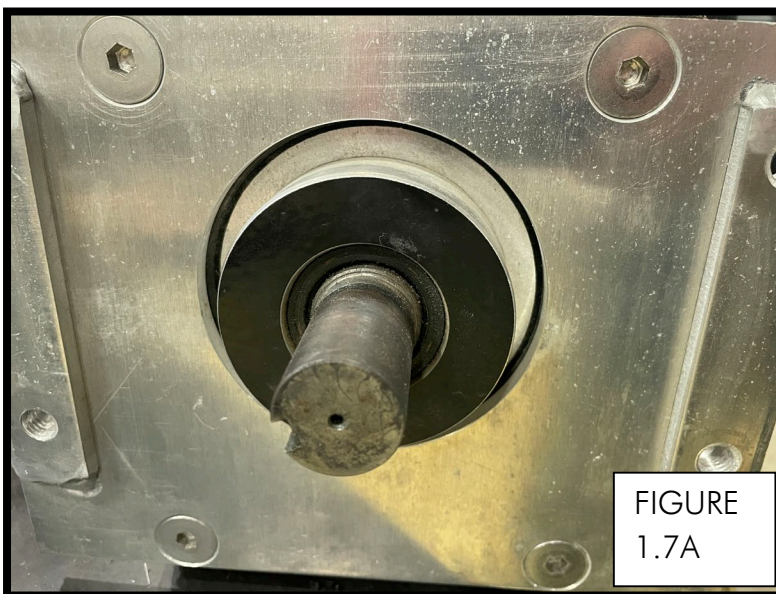
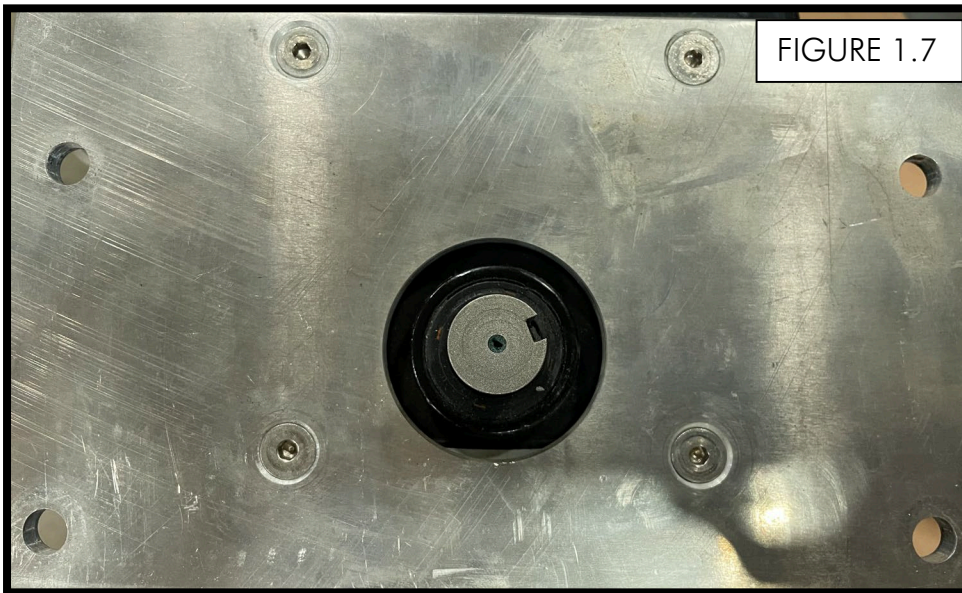
FIGURE 1.3



PULL THE MOTOR OUT OF THE END OF THE BALL SCREW (FIGURE 1.4). REMOVE THE REMAINING (2) SCREWS FROM THE COVER (FIGURE 1.5). REMOVE THE COVER AND THE FOAM INSERTS (FIGURE 1.6).

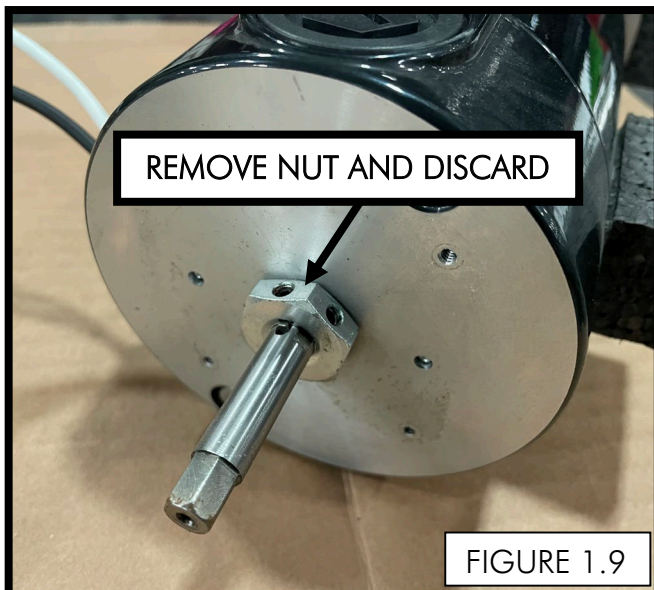
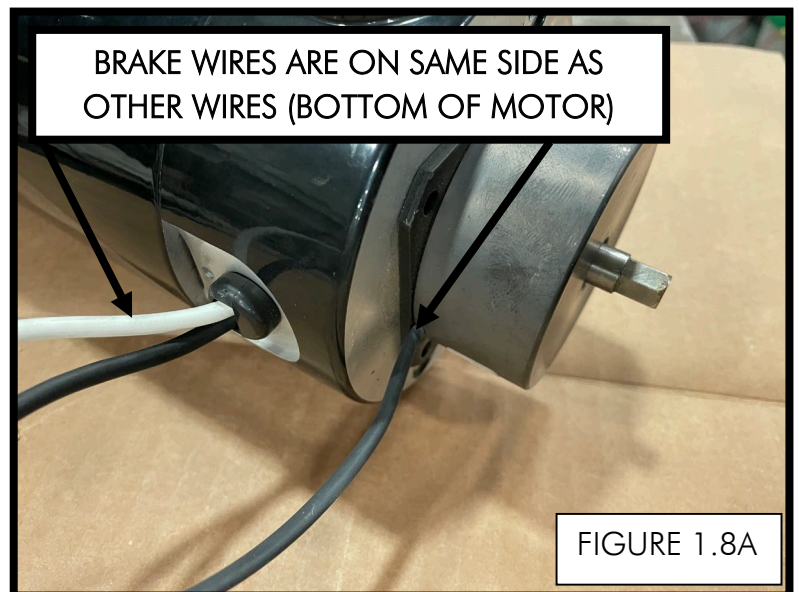


REMOVE THE (4) FASTENERS SECURING THE MOUNT FROM THE COVER. FOR VSD3800/5000 LIFTS, USE A 5/32" HEX BIT/ALLEN WRENCH TO REMOVE THE BOLTS (FIGURE 1.7). FOR VSD6000-10,000 LIFTS, USE A 1/4" HEX BIT/ALLEN WRENCH TO REMOVE THE BOLTS (FIGURE 1.7A). **NOTE: THERE ARE (4) SPACERS UNDERNEATH THE PLATE THAT NEED TO BE RETAINED FOR REASSEMBLY (FIGURE 1.7B & 1.7C).**

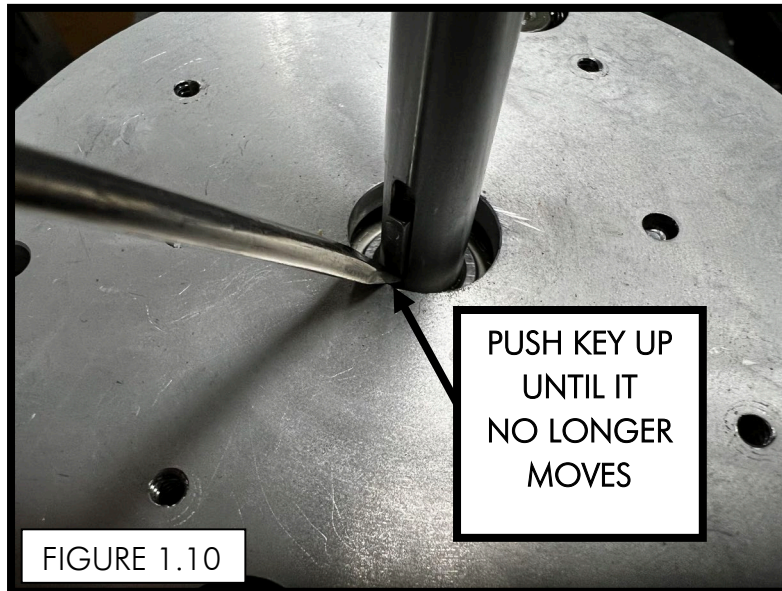




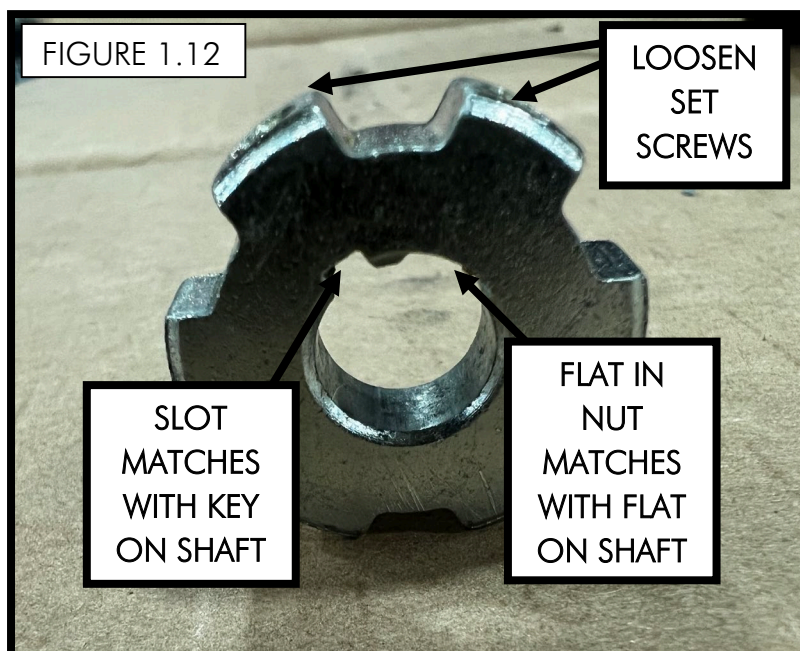
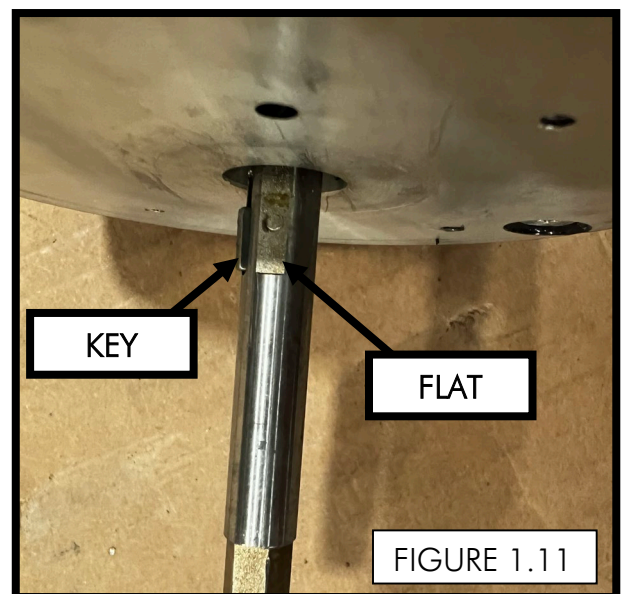
ONCE THE MOTOR IS REMOVED FROM THE COVER, REMOVE THE (4) SCREWS AND (4) WASHERS SECURING THE BRAKE TO THE MOTOR. THEY WILL NOT BE RE-USED (FIGURE 1.8). NOTE THE ORIENTATION OF THE WIRES BEFORE REMOVING THE BRAKE (FIGURE 1.8A). REMOVE THE NUT SHOWN AND DISCARD (FIGURE 1.9).



ONCE THE OLD NUT IS REMOVED, SLIDE THE KEY IN THE SHAFT UP WITH A FLAT TIP SCREWDRIVER (3/16" BLADE). SLIDE KEY UNTIL IT NO LONGER MOVES. **BE CAREFUL TO NOT LET THE KEY FALL OUT OF THE SHAFT** (FIGURE 1.10). NOTE THAT THERE IS A MACHINED FLAT IN THE SHAFT THAT MATCHES WITH THE NEW NUT AND A KEYWAY IN THE NUT THAT MATCHES WITH THE KEY ON THE SHAFT. LOOSEN THE SET SCREWS IN THE NUT, BUT **DO NOT REMOVE** (FIGURES 1.11 & 1.12).

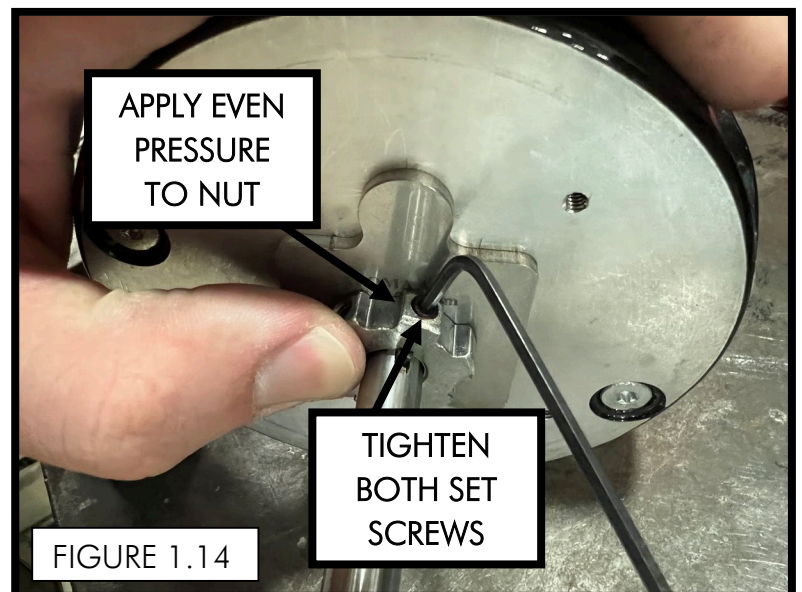
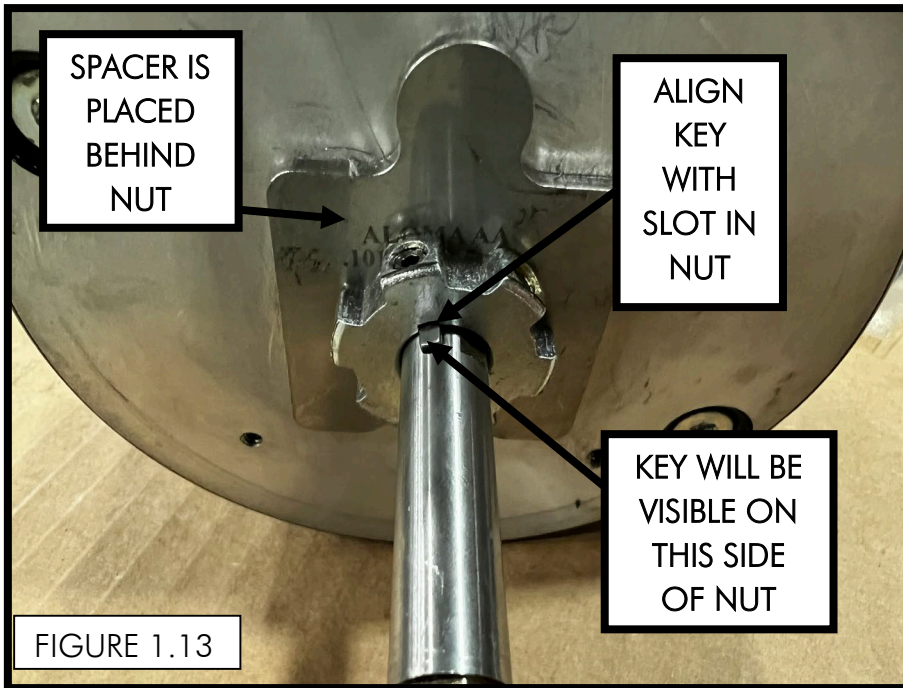


REPLACEMENT KEY P/N:  
007-03970-00





ALIGN THE KEYWAY IN THE NUT ONTO THE KEY ON THE MOTOR SHAFT AND ALIGN THE FLAT ON THE NUT WITH THE FLAT ON THE SHAFT. PLACE THE INCLUDED SPACER BETWEEN THE NUT AND THE MOTOR HOUSING (FIGURE 1.13). WHILE **EVENLY** HOLDING (BY HAND OR WITH A TUBE THAT FITS OVER THE SHAFT AND ONTO THE NUT) THE NUT AGAINST THE SPACER, TIGHTEN THE SET SCREWS UNTIL SNUG (APPROXIMATELY 10 IN-LB). ONCE TIGHTENED, REMOVE THE SPACER. THE SPACER WILL HAVE SOME RESISTANCE WHEN REMOVED WHEN THE NUT IS PROPERLY INSTALLED (FIGURE 1.14).



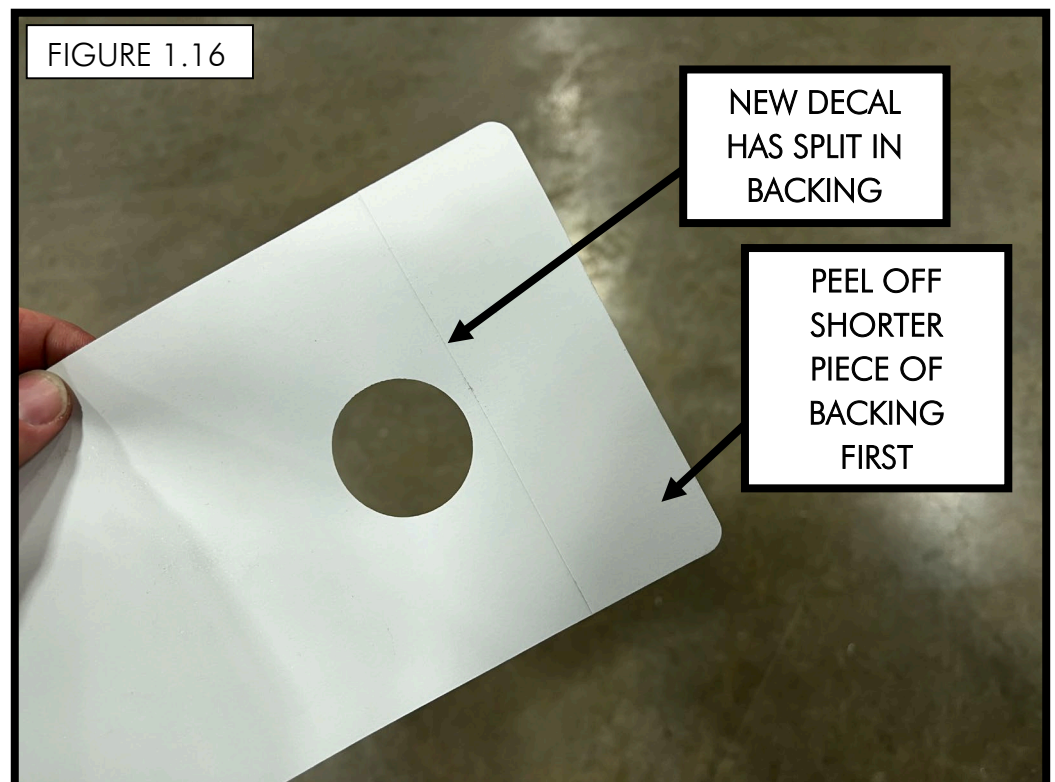


A NEW DECAL IS SUPPLIED WITH THIS KIT TO BE PLACED OVER THE CURRENT ONE ON THE DRIVE UNIT COVER. IT HAS NEW "HOW TO MANUALLY LOWER THE LIFT WITH A CORDLESS DRILL:" INSTRUCTIONS THAT ARE RELATED TO THE NEW BRAKE BEING INSTALLED ONTO THE MOTOR.

**IMPORTANT:**

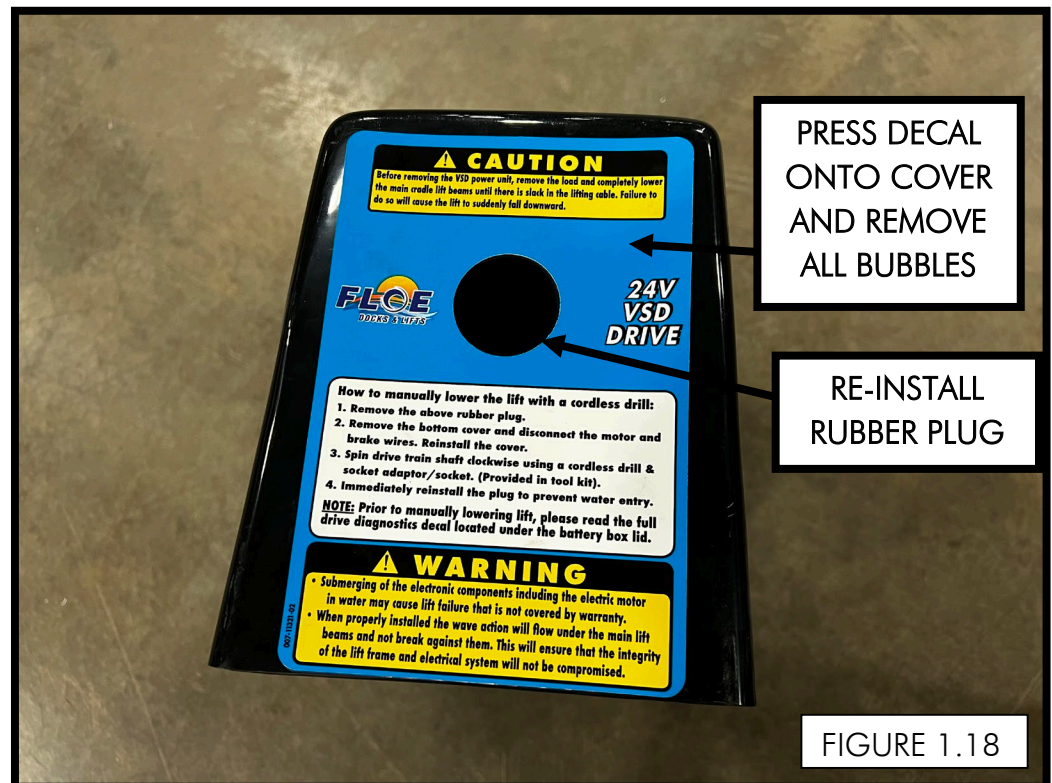
**THE INCLUDED DECAL MUST BE INSTALLED ONTO THE DRIVE UNIT COVER ALONG WITH THIS NEW BRAKE. STEP 2 OF THE MANUALLY LOWERING INSTRUCTIONS ON THE OLD DECAL CONTAINS INSTRUCTIONS TO APPLY 12 VOLTS TO THE BRAKE. APPLYING 12 VOLTS TO THE NEW BRAKE'S WIRES WILL RELEASE THE BRAKE AND CAUSE THE LIFT TO FALL DOWNWARD.**

WITH THE RUBBER PLUG REMOVED FROM THE COVER, CLEAN THE CURRENT DECAL WITH THE INCLUDED ALCOHOL WIPE AND ALLOW TO COMPLETELY DRY (FIGURE 1.15). THE NEW DECAL HAS A SPLIT IN THE BACKING TO AID IN APPLICATION (FIGURE 1.16).



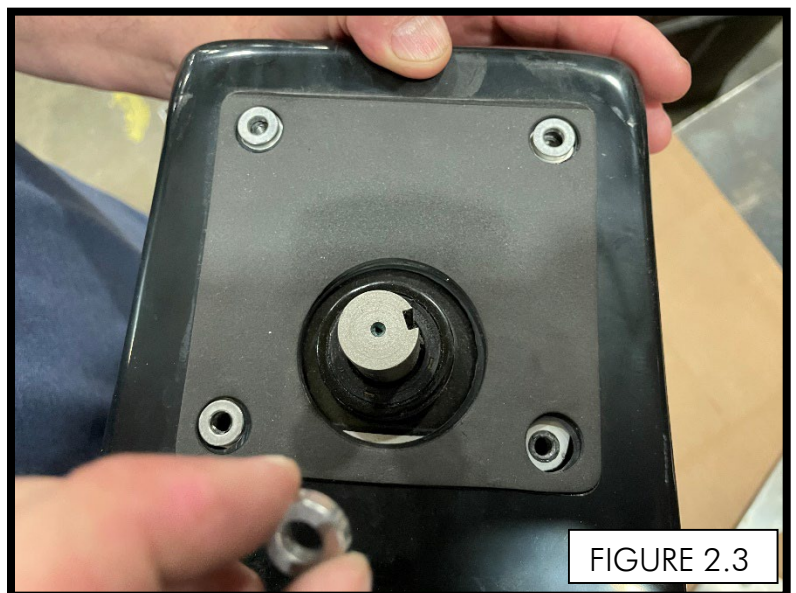
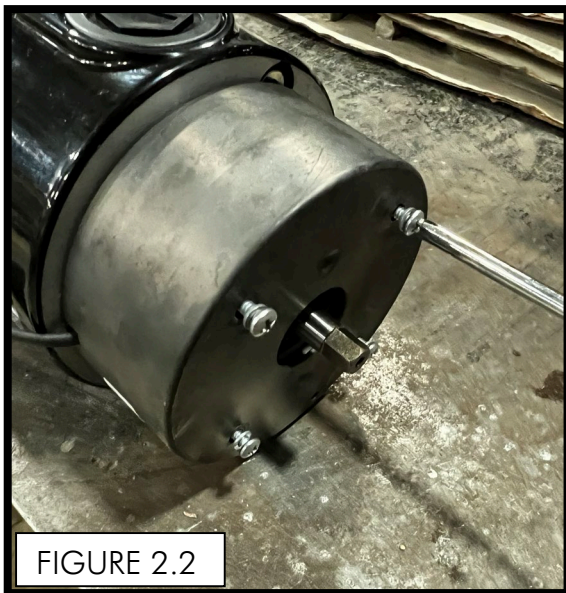


INSTALL THE NEW SUPPLIED DECAL OVER THE OLD DECAL, STARTING AT THE TOP AND WORKING DOWN WHILE PRESSING TO REMOVE BUBBLES (FIGURES 1.17 & 1.18). RE-INSTALL THE RUBBER PLUG.



## STEP 2

PLACE THE BRAKE ONTO THE END OF THE MOTOR WHILE ALIGNING THE BRAKE ONTO THE STAR NUT AND ALIGNING THE MOUNTING HOLES (FIGURE 2.1). ATTACH USING THE INCLUDED SCREWS AND WASHERS (FIGURE 2.2). PLACE THE COVER BACK ONTO THE MOTOR WHILE ALIGNING THE MOUNTING HOLES ON THE MOTOR AND COVER. REPLACE THE PREVIOUSLY REMOVED SPACERS AS SHOWN (FIGURE 2.3).





REPLACE THE MOTOR PLATE AND THE PREVIOUSLY REMOVED BOLTS (FIGURE 2.4). TORQUE TO 10 FT-LB (FIGURE 2.5). REPLACE THE FOAM INSERTS (FIGURE 2.6) AND REPLACE THE COVER (FIGURE 2.7).

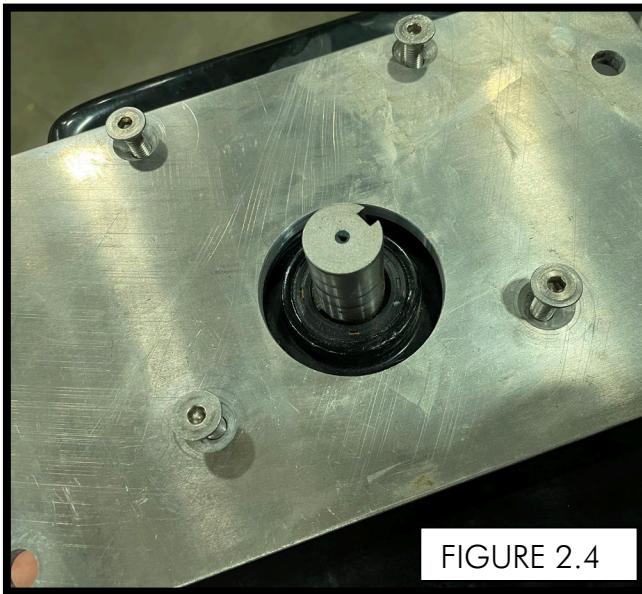


FIGURE 2.4

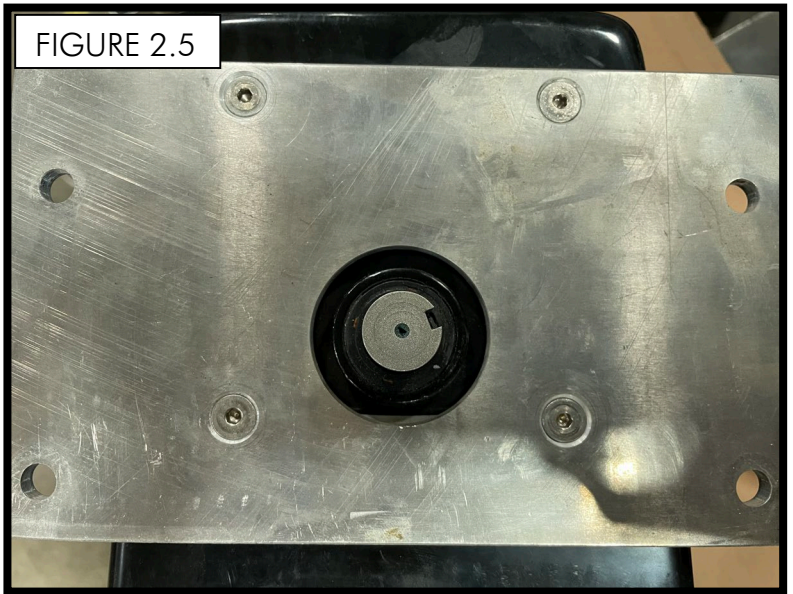


FIGURE 2.5

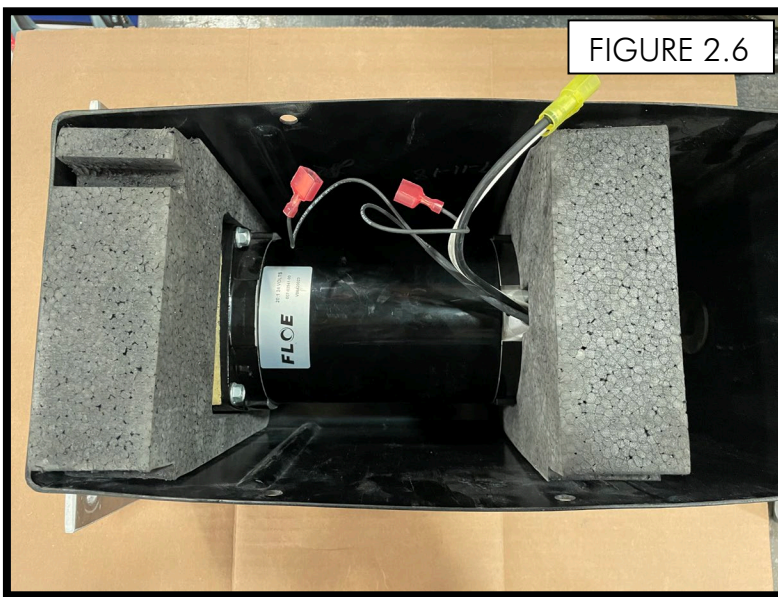
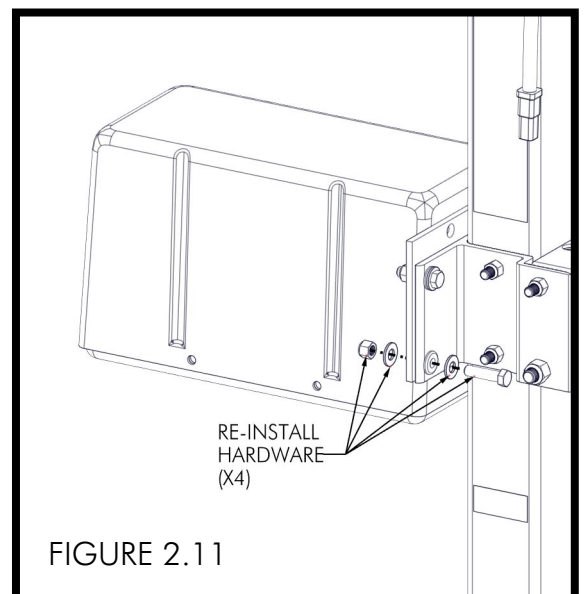
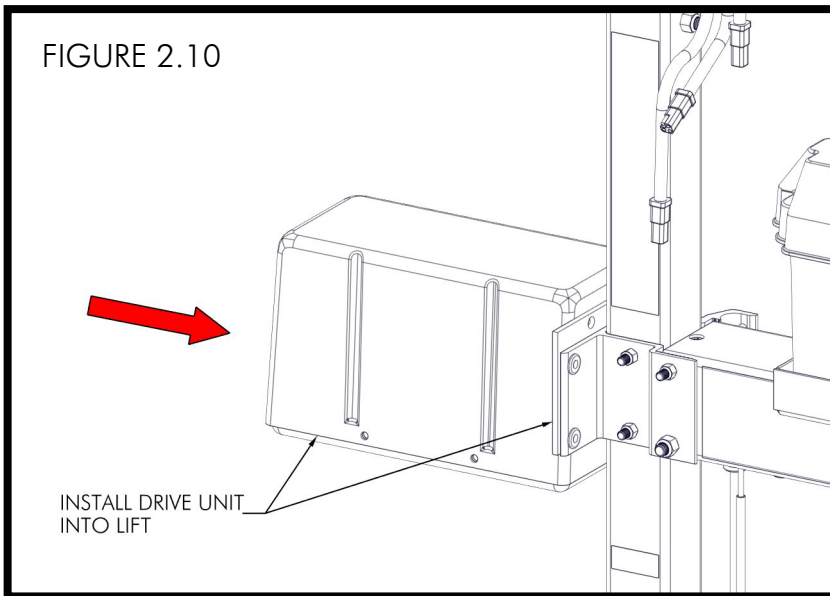
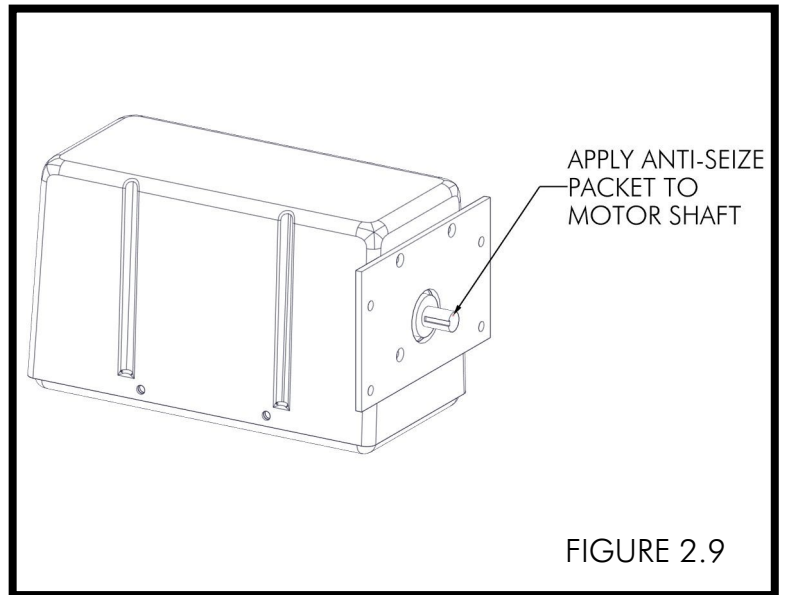


FIGURE 2.6



FIGURE 2.7

INSERT (2) SCREWS TO SECURE THE BOTTOM OF THE COVER (FIGURE 2.8). APPLY THE ENTIRE CONTENTS OF THE ANTI-SEIZE PACKET TO THE MOTOR SHAFT (FIGURE 2.9). INSTALL THE MOTOR ONTO THE END OF THE BALL SCREW (FIGURE 2.10). RE-INSTALL THE PREVIOUSLY REMOVED FASTENERS TO SECURE THE MOTOR TO THE BALL SCREW CLAMP (FIGURE 2.11).





TIGHTEN FASTENERS UNTIL THERE IS A 1/8" GAP BETWEEN THE MOTOR PLATE AND BALL SCREW CLAMP (FIGURE 2.12). RE-ATTACH THE MOTOR CONNECTORS AND BRAKE CONNECTORS TO THE ASC AND ROUTE THE WIRES UNDER THE COVER (FIGURE 2.13). INSTALL THE REMAINING (2) SCREWS TO THE BOTTOM OF THE MOTOR COVER (FIGURE 2.14).

