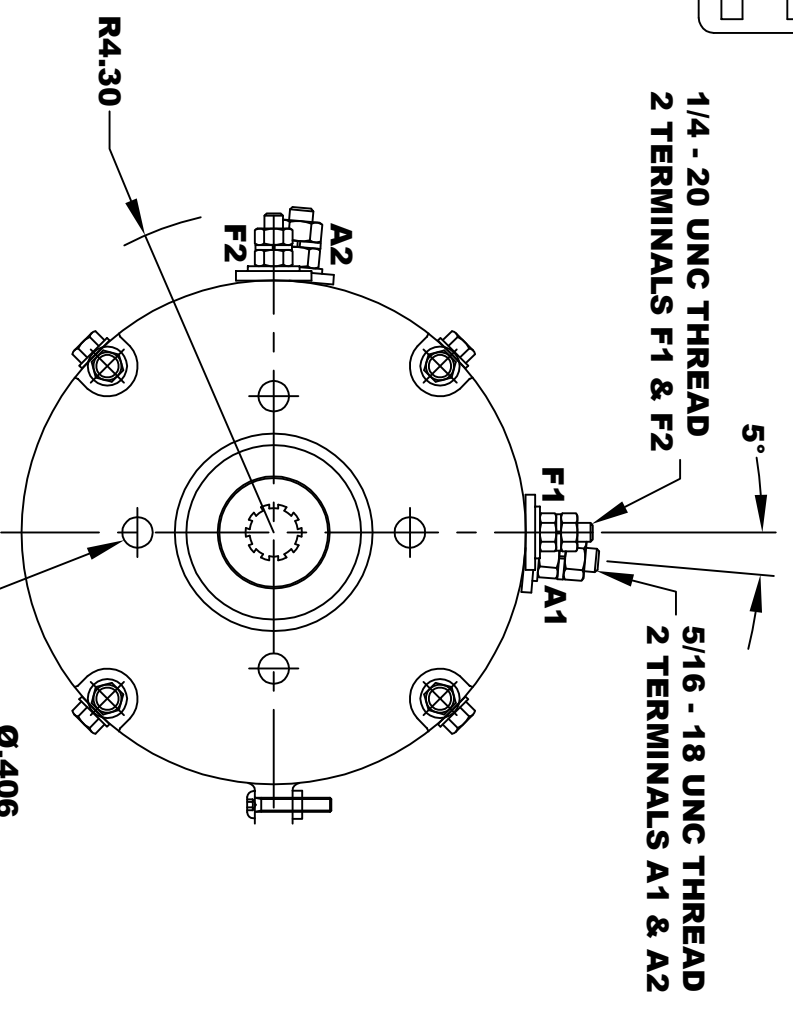
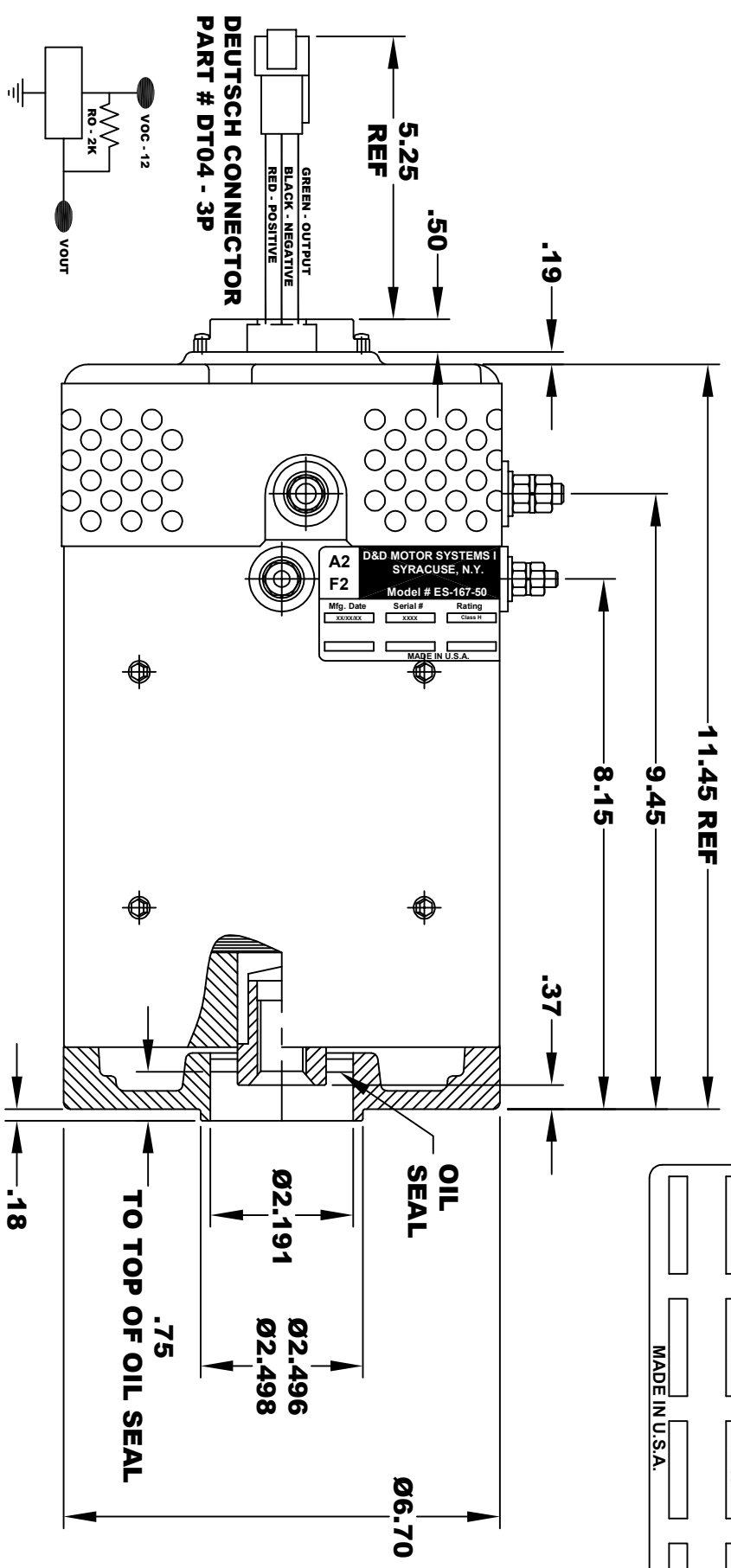
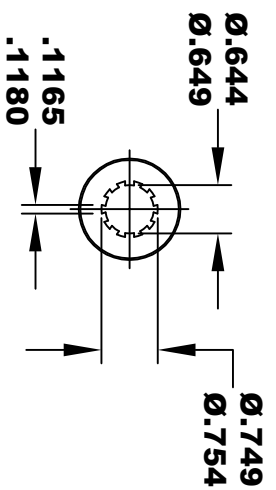


**TORQUE SPECIFICATION FOR  
POWER CABLE SECURING TOP NUTS**  
5/16-18 UNC (A1 / A2) - 110 IN / LBS MAX  
1/4-20 UNC (F1 / F2) - 50 IN / LBS MAX

<b>D&amp;D MOTOR SYSTEMS INC.</b>			
<b>A2</b>	<b>SYRACUSE N.Y.</b>		<b>A1</b>
<b>F2</b>	<b>Model # ES-167-50</b>		<b>F1</b>
Mfg. Date	Serial #	Rating	Voltage
XXXXXX	XXXX	CLASS H	XX
MADE IN U.S.A.			

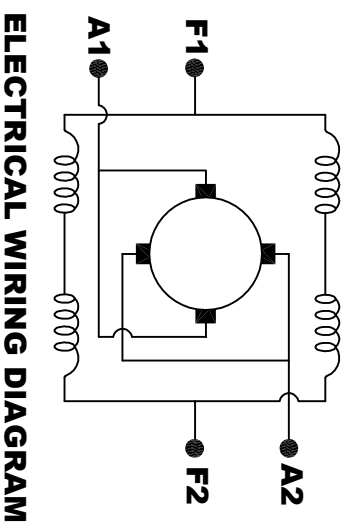


**SPEED SENSOR ELECTRICAL SPECIFICATION:**  
 -4.5V TO 24V OPERATING VOLTAGE  
 -20°C TO 85°C OPERATING TEMPERATURE  
 -CURRENT SINKING UP TO 25mA  
 -AN EXTERNAL OUTPUT PULL UP RESISTOR IS REQUIRED  
 -SENSOR IS DESIGNED TO OPERATE WITH 4 N/S POLEPAIRS  
 -THE OPERATIONAL DISTANCE BETWEEN THE MAGNET  
 AND THE HOUSING, INCLUDING ANY RUNOUT  
 SHOULD NOT EXCEED .030 INCHES



**10 TOOTH  
INTERNAL SPLINE  
HARDNESS OF SPLINE  
TO BE R/C 46 - 53 (.02 DEPTH MIN)**

**MOTOR WEIGHT: 61 LBS  
CLASS "H" INSULATION  
PERFORMANCE SPEC: 50**



**MOTOR WIRING CONNECTIONS:**  
**CW ROTATION DRIVE END**  
 CONNECT A1 & F1 TO ONE BATTERY TERMINAL  
 CONNECT A2 & F2 TO OTHER BATTERY TERMINAL  
**CCW ROTATION DRIVE END**  
 SWITCH F1 & F2 CONNECTIONS

THIS PRINT IS THE PROPERTY OF D&D MOTOR SYSTEMS INC.  
 DO NOT SCALE  
 WORK TO DIMENSIONS  
 TOLERANCES UNLESS OTHERWISE SPECIFIED ARE AS FOLLOWS  
 .XX \_\_\_\_\_ .01  
 .XXX \_\_\_\_\_ .005  
 .XX ROUGH CASTING \_\_\_\_\_ .03  
 HOLES \_\_\_\_\_ .001 / +.006  
 ANGLES \_\_\_\_\_ 0.30"

**D & D MOTOR SYSTEMS INC**

# MOTOR OUTLINE

SIZE	DRAWN DATE	RELEASE DATE	DWG NO. / PART NO.	REV
B	12-4-18		ES-167-50	
SCALE	STF	DRAWN BY	MJG	REV DATE