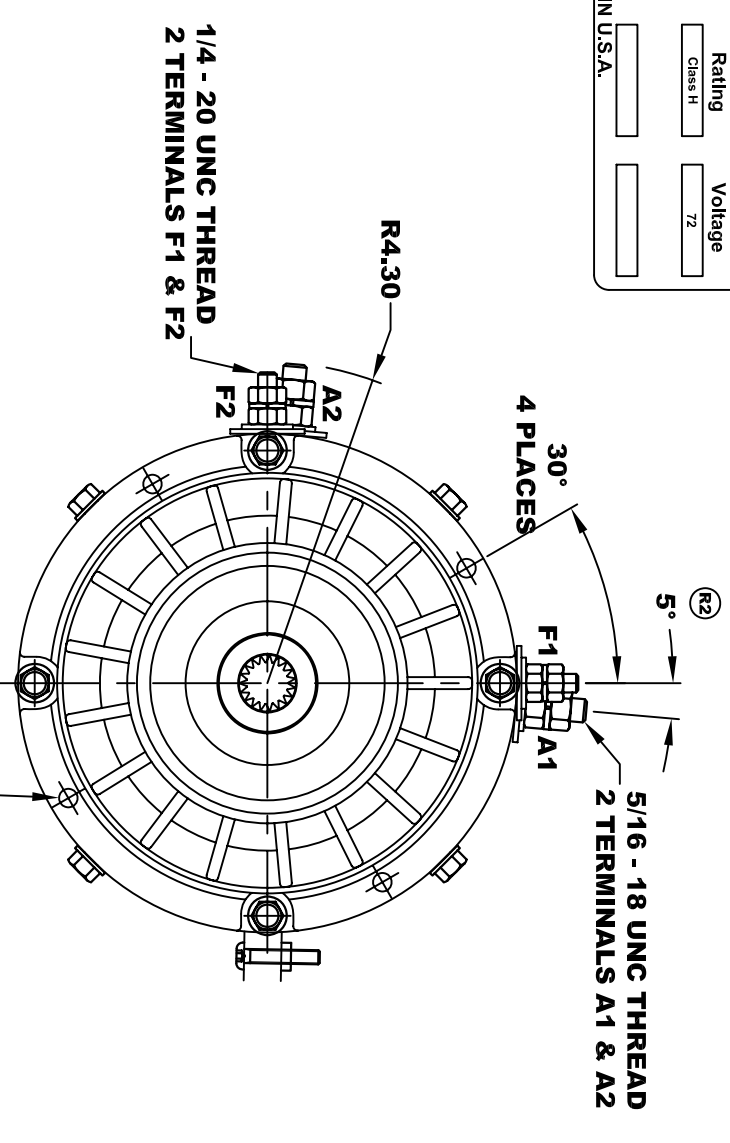
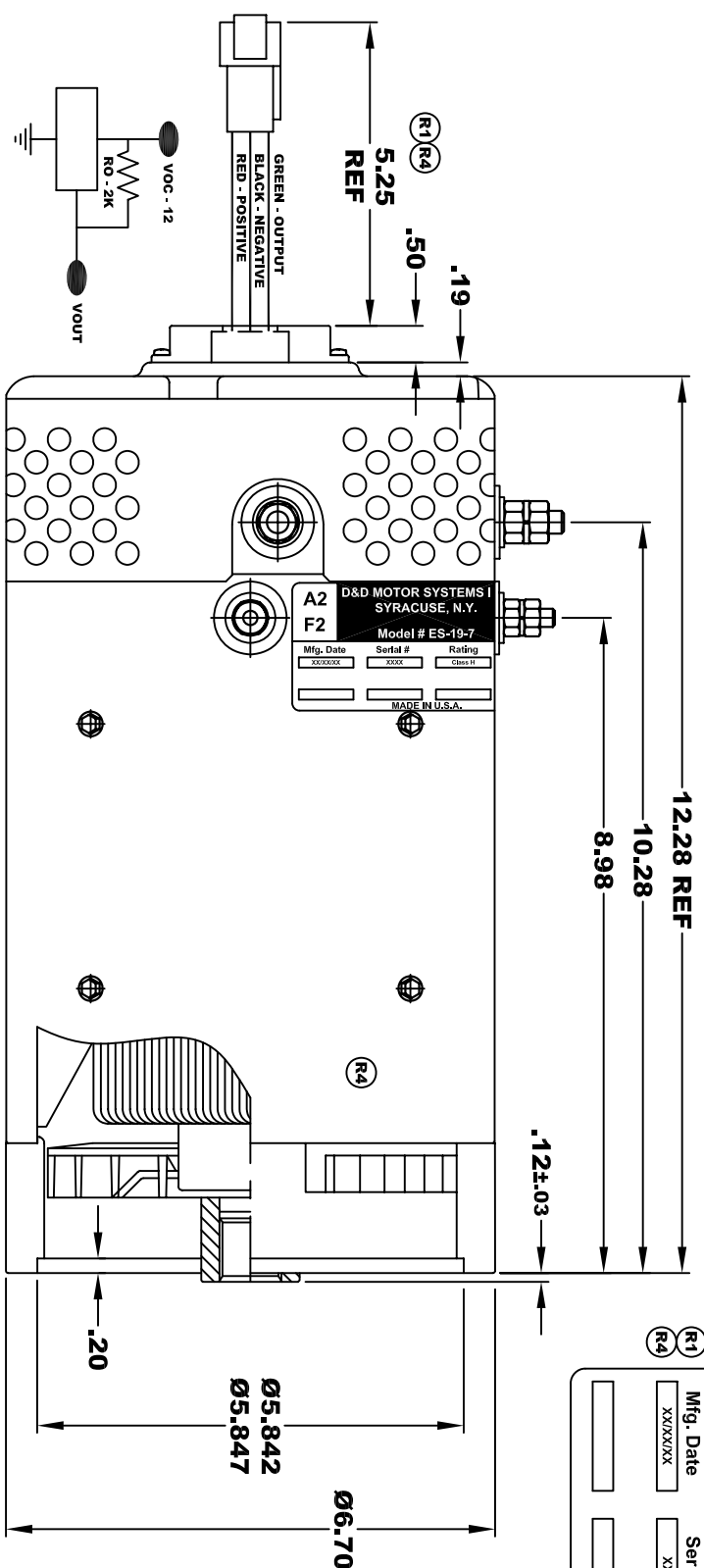


D&D MOTOR SYSTEMS INC.			
SYRACUSE N.Y.			
A2	Model # ES-19-7		A1
F2	Mfg. Date	Serial #	Rating
	XXXXXX	XXXX	Class H
			72
			Voltage
			MADE IN U.S.A.

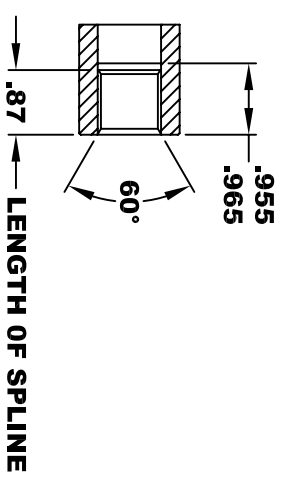
**TORQUE SPECIFICATION FOR
POWER CABLE SECURING TOP NUTS**
 5/16-18 UNC (A1 / A2) - 110 IN / LBS MAX
 1/4-20 UNC (F1 / F2) - 50 IN / LBS MAX



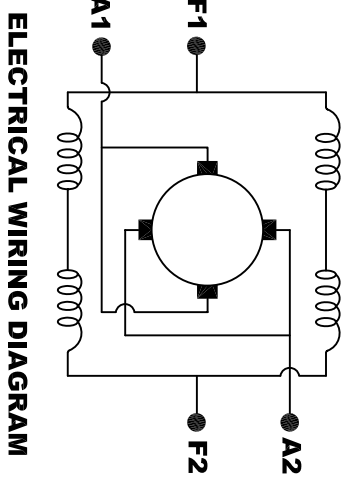
ELECTRICAL SPECIFICATION:
 -4.5V TO 24V OPERATING VOLTAGE
 -20°C TO 85°C OPERATING TEMPERATURE
 -CURRENT SINKING UP TO 25mA
 -AN EXTERNAL OUTPUT PULL UP RESISTOR IS REQUIRED
 -SENSOR IS DESIGNED TO OPERATE WITH 4 N/S POLEPAIRS
 -THE OPERATIONAL DISTANCE BETWEEN THE MAGNET
 AND THE HOUSING, INCLUDING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

**INTERNAL INVOLUTE SPLINE SPECIFICATION
 CLASS 5 FILLET ROOT SIDE FIT (PER A.N.S.I. B92.1)**

NO. OF TEETH	19
SPLINE PITCH	24 / 48
PRESSURE ANGLE	45°
BASE Ø	.5597 REF
PITCH Ø	.7916 REF
MAJOR Ø	.850 - .859
FORM Ø	.835
MINOR Ø	.767 - .772
CIRCULAR SPACE WIDTH	.0764
EFFECTIVE SPACE WIDTH	.0738
MAX. DIMENSION BETWEEN TWO PINS	.6714
PIN Ø	.0800
SPLINE HARDNESS TO BE R/C	26-34



MOTOR WEIGHT: 61 LBS
CLASS "H" INSULATION
PERFORMANCE SPEC: 7



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.
B	10-23-02		ES-19-7 (R3)
SCALE	STF	DRAWN BY	MJG
		REV DATE	4-1-10
		REV	R4