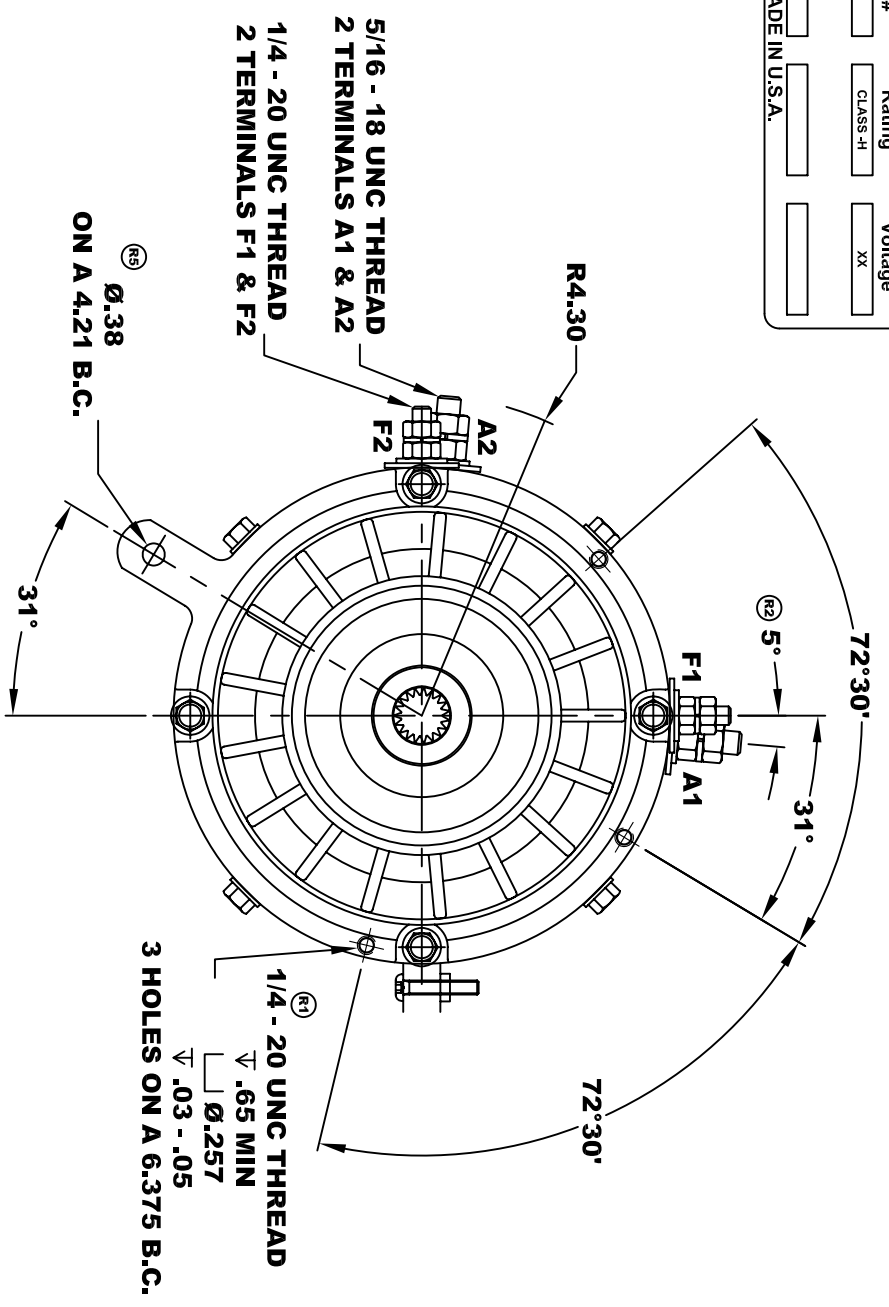


D&D MOTOR SYSTEMS INC.			
SYRACUSE N.Y.			
Model # ES-61-5			
A2	F2	A1	F1
Mfg. Date	Serial #	Rating	Voltage
XXXX/XX	XXXX	CLASS -H	XX
MADE IN U.S.A.			

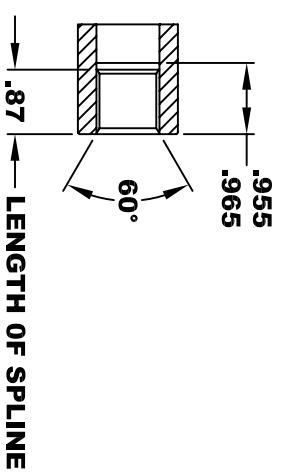
TORQUE SPECIFICATION FOR POWER CABLE SECURING TOP NUTS
 5/16-18 UNC (A1 / A2) - 110 IN / LBS MAX
 1/4-20 UNC (F1 / F2) - 50 IN / LBS MAX



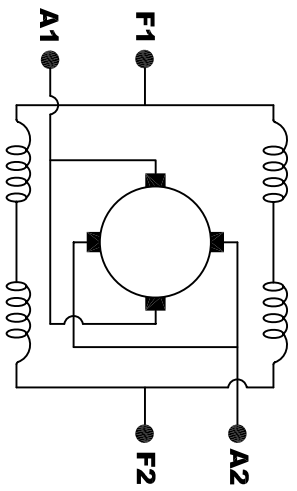
ELECTRICAL SPECIFICATION:
 -4.5V TO 24V OPERATING VOLTAGE
 -20°C TO 85°C OPERATING TEMPERATURE
 -CURRENT SINKING UP TO 25mA
 -AN EXTERNAL OUTPUT PULL UP RESISTOR IS REQUIRED
 -SENSOR IS DESIGNED TO OPERATE WITH 4 N/S POLEPAIRS
 AND THE HOUSING, INCLUDING ANY RUNOUT
 SHOULD NOT EXCEED .030 INCHES

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: 50 LBS
CLASS "H" INSULATION
PERFORMANCE SPEC: 5



ELECTRICAL WIRING DIAGRAM

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	2-19-03		ES-61-5 (R3)	R6
SCALE	STF	DRAWN BY	MJG	REV DATE
				5-10-13