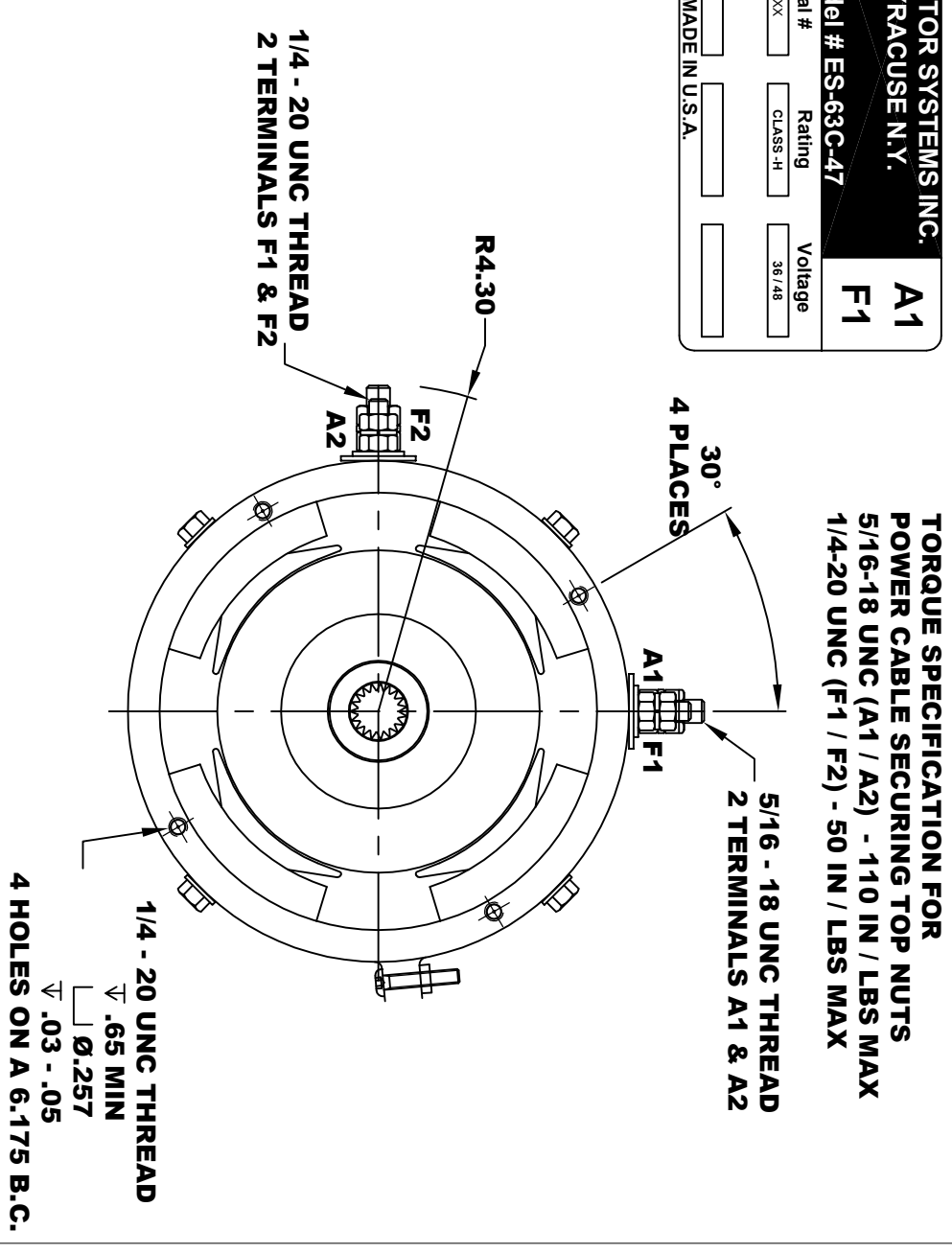
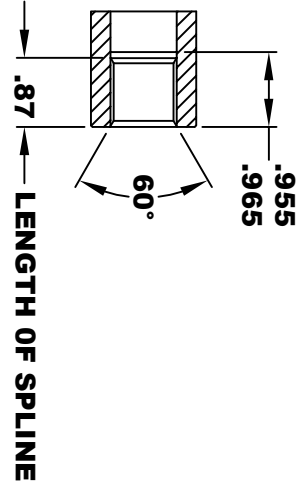


| D&D MOTOR SYSTEMS INC. SYRACUSE N.Y. | | | |
|---|-------------------|---------|---------|
| A2 | Model # ES-63C-47 | | A1 |
| F2 | | | F1 |
| Mfg. Date | Serial # | Rating | Voltage |
| XXXXXX | XXXX | CLASS-H | 36/48 |
| | | | |
| MADE IN U.S.A. | | | |

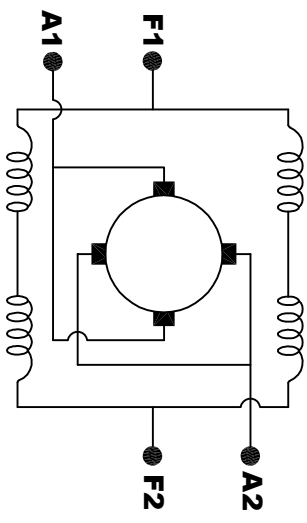


- SPEED SENSOR ELECTRICAL SPECIFICATION:**
- 4.5V TO 24V OPERATING VOLTAGE
 - 20°C TO 85°C OPERATING TEMPERATURE
 - CURRENT SINKING UP TO 25mA
 - AN EXTERNAL OUTPUT PULL UP RESISTOR IS REQUIRED
 - SENSOR IS DESIGNED TO OPERATE WITH 4 N/S POLEPAIRS
 - THE OPERATIONAL DISTANCE BETWEEN THE MAGNET AND THE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

- 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: 60 LBS
CLASS "H" INSULATION
PERFORMANCE SPEC: 47



ELECTRICAL WIRING DIAGRAM

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"

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

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

D & D MOTOR SYSTEMS INC

MOTOR OUTLINE

| SIZE | DRAWN DATE | RELEASE DATE | DWG NO. / PART NO. | REV |
|-------|------------|--------------|--------------------|----------|
| B | 3-7-13 | | ES-63C-47 | R1 |
| SCALE | STF | DRAWN BY | MJG | REV DATE |
| | | | | 6-21-17 |