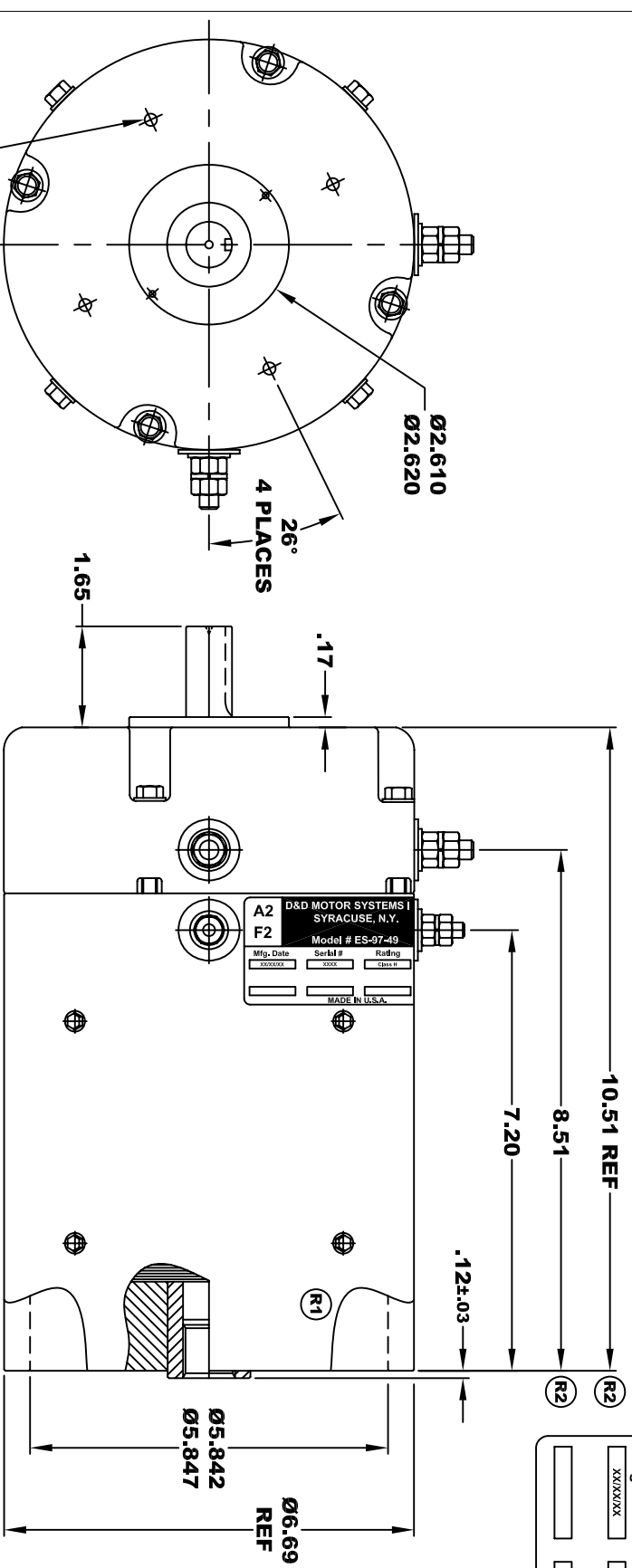
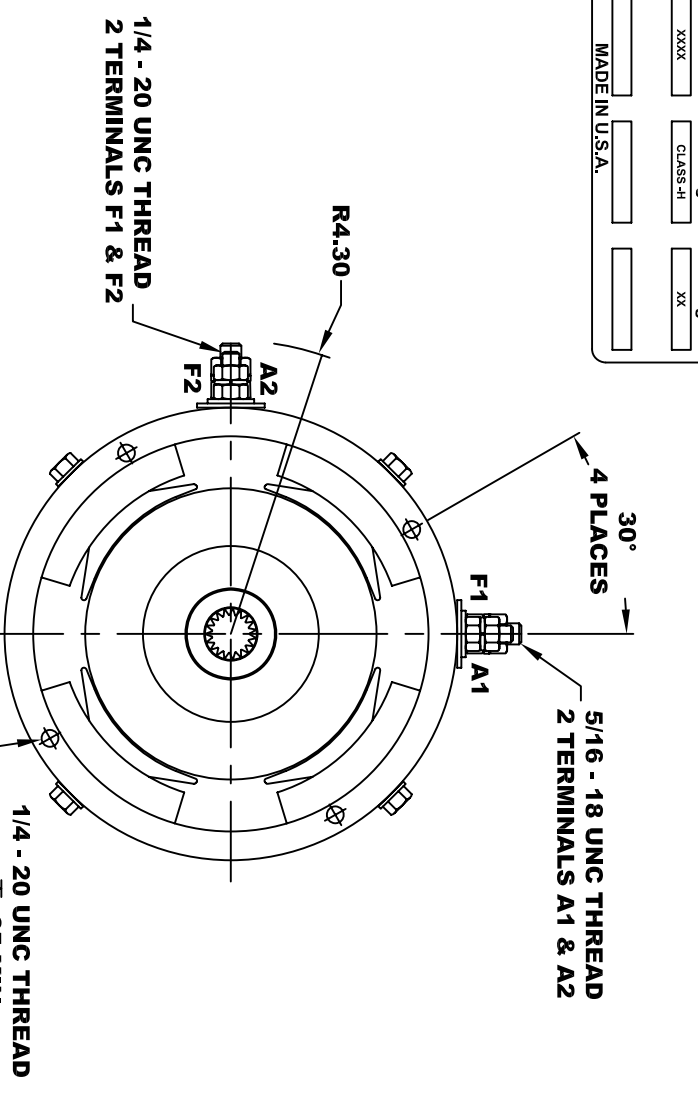


|                                   |                         |                 |                       |
|-----------------------------------|-------------------------|-----------------|-----------------------|
| <b>D&amp;D MOTOR SYSTEMS INC.</b> |                         |                 |                       |
| <b>SYRACUSE N.Y.</b>              |                         |                 |                       |
| <b>A2</b>                         | <b>Model # ES-97-49</b> |                 | <b>A1</b>             |
| <b>F2</b>                         | <b>Mfg. Date</b>        | <b>Serial #</b> | <b>Rating</b>         |
|                                   | XXXXXX                  | XXXX            | CLASS-H               |
|                                   |                         |                 | <b>Voltage</b>        |
|                                   |                         |                 | XX                    |
|                                   |                         |                 | <b>MADE IN U.S.A.</b> |

**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

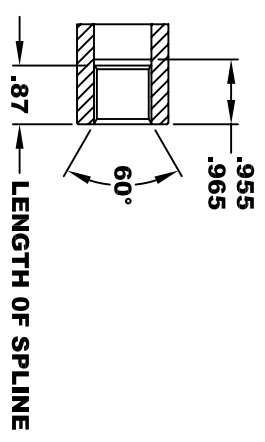
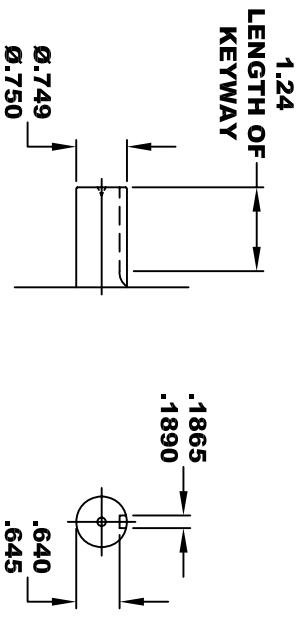


1/4-20 UNC THREAD  
TAPPED THRU  
EQUALLY SPACED  
ON A Ø4.50 B.C.  
4 PLACES

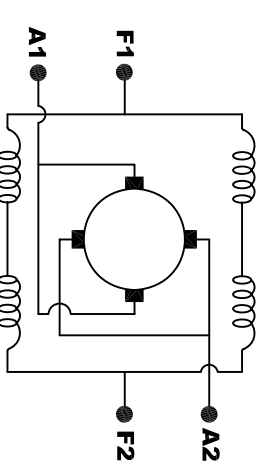


**INTERNAL INVOLUTE SPLINE SPECIFICATION  
CLASS 5 FILLET ROOT SIDE FIT (PER A.N.S.I. B92.1)**

|                                 |             |
|---------------------------------|-------------|
| 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: 58 LBS**  
**CLASS "H" INSULATION**  
**PERFORMANCE SPEC: 49**



**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"

|                                    |            |              |                    |
|------------------------------------|------------|--------------|--------------------|
| <b>D &amp; D MOTOR SYSTEMS INC</b> |            |              |                    |
| <b>MOTOR OUTLINE</b>               |            |              |                    |
| SIZE                               | DRAWN DATE | RELEASE DATE | DWG NO. / PART NO. |
| B                                  | 10-7-05    |              | ES-97-49           |
| SCALE                              | STF        | DRAWN BY     | MJG                |
|                                    |            |              | REV DATE           |
|                                    |            |              | 12-6-13            |