

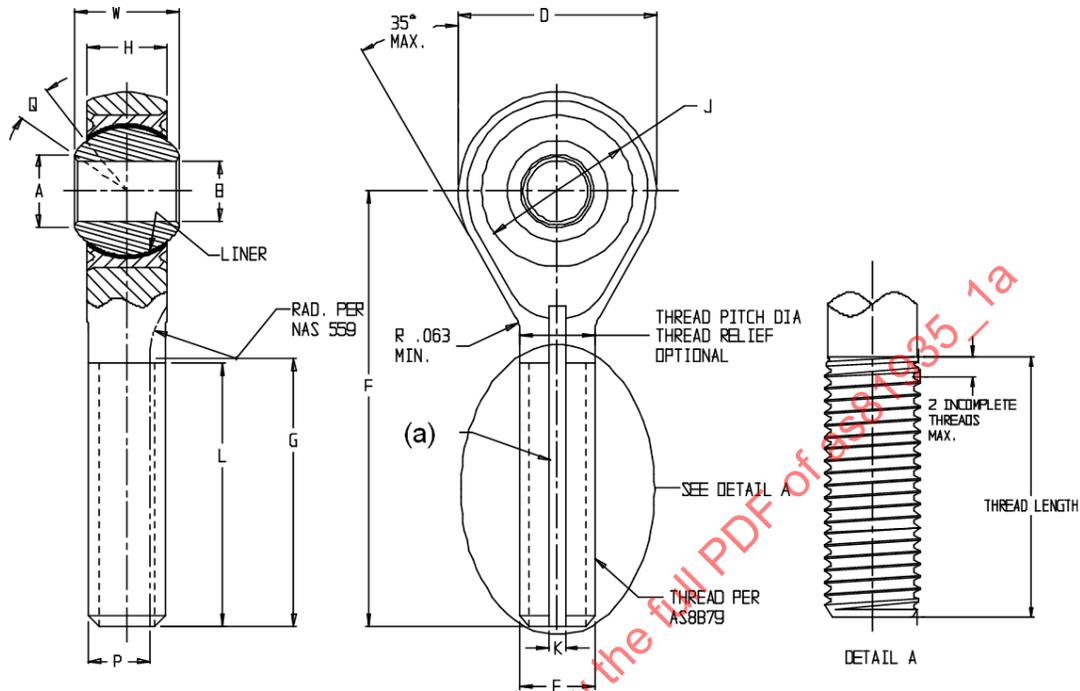
REV.  
A

SAE AS81935/1

FEDERAL SUPPLY CLASS  
3120

RATIONALE

AS81935/1 IS BEING REVISED TO FOR GENERAL FORMATTING, ADDED PH13-8MO BALL OPTION AND TYPE "A" LINER OPTION TO PART NUMBER SUFFIX.



(a) KEYWAY SHALL BE ORIENTED ALONG THE CENTERLINE OF THE THREADED SHANK. THE PLANE OF THE BOTTOM OF THE KEYWAY SHALL BE PARALLEL TO THE PLANE MADE BY THE FACE OF THE ROD END HOOP.

FIGURE 1 - ROD END ASSEMBLY

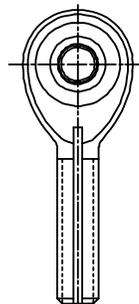
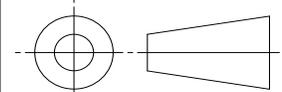


FIGURE 2 - OPTIONAL ELLIPTICAL HEAD DESIGN

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THIRD ANGLE PROJECTION



CUSTODIAN: ACBG - PLAIN BEARING

PROCUREMENT SPECIFICATION: AS81935

**SAE Aerospace**  
An SAE International Group

**AEROSPACE STANDARD**

(R) BEARING, PLAIN, ROD END, SELF-ALIGNING, SELF-LUBRICATING, WIDE, EXTERNALLY THREADED, -65 TO +325 °F

**SAE AS81935/1**  
SHEET 1 OF 3

**REV. A**

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REVISED 2011-06

ISSUED 1998-03

TABLE 1 - DIMENSIONS

| DASH NUMBER | B                        | D                     | L                         | E                                | F                                  | W                               | H                      |
|-------------|--------------------------|-----------------------|---------------------------|----------------------------------|------------------------------------|---------------------------------|------------------------|
|             | BORE<br>+.0000<br>-.0005 | SPH.<br>DIA.<br>±.010 | THREAD<br>LENGTH<br>±.031 | THREAD<br>SIZE<br>UNJF-3A<br>(c) | CTRLINE<br>BALL TO<br>END<br>±.010 | BALL<br>WIDTH<br>+.000<br>-.002 | BODY<br>WIDTH<br>±.005 |
| -03         | .1900                    | .806                  | .968                      | .3125-24                         | 1.562                              | .437                            | .337                   |
| -04         | .2500                    | .806                  | .968                      | .3125-24                         | 1.562                              | .437                            | .337                   |
| -05         | .3125                    | .900                  | 1.187                     | .3125-24                         | 1.875                              | .437                            | .327                   |
| -06         | .3750                    | 1.025                 | 1.187                     | .3750-24                         | 1.938                              | .500                            | .416                   |
| -07         | .4375                    | 1.150                 | 1.281                     | .4375-20                         | 2.125                              | .562                            | .452                   |
| -08         | .5000                    | 1.337                 | 1.468                     | .5000-20                         | 2.438                              | .625                            | .515                   |
| -10         | .6250                    | 1.525                 | 1.562                     | .6250-18                         | 2.625                              | .750                            | .577                   |
| -12         | .7500                    | 1.775                 | 1.687                     | .7500-16                         | 2.875                              | .875                            | .640                   |
| -14         | .8750                    | 2.025                 | 2.000                     | .8750-14                         | 3.375                              | .875                            | .765                   |
| -16         | 1.0000                   | 2.775                 | 2.343                     | 1.2500-12                        | 4.125                              | 1.375                           | 1.015                  |

| DASH NUMBER | A    | J                      | Q°  | G                                | K          |       | P |
|-------------|------|------------------------|-----|----------------------------------|------------|-------|---|
|             | MIN  | MAX<br>HOUSING<br>I.D. | MIN | KEYWAY<br>FLAT<br>+.000<br>-.020 | KEYWAY (b) |       |   |
| -03         | .30  | .6250                  | 15  | .980                             | .062       | .268  |   |
| -04         | .30  | .6250                  | 15  | .980                             | .062       | .268  |   |
| -05         | .36  | .6875                  | 14  | 1.270                            | .062       | .268  |   |
| -06         | .47  | .8125                  | 8   | 1.235                            | .093       | .319  |   |
| -07         | .54  | .9062                  | 10  | 1.402                            | .093       | .383  |   |
| -08         | .61  | 1.0000                 | 9   | 1.589                            | .093       | .445  |   |
| -10         | .75  | 1.1875                 | 12  | 1.683                            | .125       | .541  |   |
| -12         | .85  | 1.3750                 | 13  | 1.808                            | .125       | .663  |   |
| -14         | 1.00 | 1.6250                 | 6   | 2.121                            | .156       | .777  |   |
| -16         | 1.27 | 2.1250                 | 12  | 2.464                            | .187       | 1.136 |   |

(b) KEYWAY, WHEN SPECIFIED, IS COMPATIBLE WITH LOCKING DEVICES: AS81935/3 FOR SIZES -03 THROUGH -08, AND NAS 513 FOR SIZES -10 THROUGH -16. KEYWAY TOLERANCES NOT SPECIFIED SHALL BE IN ACCORDANCE WITH AS81935/3 OR NAS 513 AS APPLICABLE.

(c) THREADS SHALL BE FORMED BY A SINGLE ROLLING OPERATION AFTER FINAL HEAT TREAT AS SPECIFIED IN THE THREAD SECTION OF AS81935.

TABLE 2 - LOAD VALUES

| DASH NUMBER | ULTIMATE<br>STATIC<br>RADIAL<br>LOAD<br>(LBS) | FATIGUE<br>LOAD<br>(LBS) | AXIAL<br>PROOF<br>LOAD<br>(LBS) | WEIGHT<br>REF.<br>(LBS) | NO LOAD<br>ROTATIONAL<br>BREAKAWAY<br>TORQUE<br>(IN-LBS) |     |
|-------------|---|--------------------------|---------------------------------|-------------------------|--|-----|
|             |   |                          |                                 |                         | MIN  | MAX |
| -03         | 2360  | 1470(d)                  | 1000                            | .072                    | .5   | 6   |
| -04         | 4860  | 2380                     | 1000                            | .072                    | .5   | 6   |
| -05         | 7180  | 2770(e)                  | 1100                            | .087                    | 1  | 15  |
| -06         | 8550  | 3570                     | 1660                            | .136                    | 1  | 15  |
| -07         | 12 000  | 4800                     | 1850                            | .183                    | 1  | 15  |
| -08         | 19 500  | 7680(e)                  | 2040                            | .278                    | 1  | 15  |
| -10         | 21 900  | 9180                     | 2430                            | .424                    | 1  | 15  |
| -12         | 29 300  | 11 600                   | 2810                            | .639                    | 1  | 15  |
| -14         | 34 500  | 13 100                   | 3320                            | .963                    | 1  | 24  |
| -16         | 80 300  | 30 400                   | 4340                            | 2.546                   | 1  | 24  |

(d) BASED ON BOLT BENDING FATIGUE STRENGTH 180 000 PSI

(e) SHANK LIMITATION

|  |   |                                      |                         |
|--|---|--------------------------------------|-------------------------|
| <br>An SAE International Group | <b>AEROSPACE STANDARD</b>   | <b>SAE AS81935/1</b><br>SHEET 2 OF 3 | <b>REV.</b><br><b>A</b> |
|  | (R) BEARING, PLAIN, ROD END, SELF-ALIGNING,<br>SELF-LUBRICATING, WIDE, EXTERNALLY THREADED,<br>-65 TO +325 °F |                                      |                         |