

# BEARING INSTALLATION AND RETENTION

**TABLE 6 - TREATMENTS TO PREVENT GALVANIC CORROSION OF DISSIMILAR METALS**

| Bearing Material<br>(Bore and O.D. Surface)                           | Housing or Shaft Material |                 |          |                           |             |
|---|---------------------------|-----------------|----------|---------------------------|-------------|
|   | Aluminum Alloys           | Low Alloy Steel | Titanium | Corrosion Resistant Steel | Superalloys |
| Aluminum alloys   | A                         | A,C             | A        | A,C                       | A,C         |
| Bronze and brass  | A,C                       | C               | S        | S                         | S           |
| Bronze and brass, cadmium plated                                      | A                         | C               | X        | S                         | S           |
| 52100 and low alloy steels  | A,C                       | C               | X        | C                         | C           |
| 440C stainless steel  | A,C                       | C               | S        | S                         | S           |
| 440C with wet primer  | A                         | C               | S        | S                         | S           |
| Corrosion resistant steels, 300 series, 17-4PH, 15-5PH, PH13-8Mo, etc | A,C                       | C               | S        | S                         | S           |
| Superalloys   | A,C                       | C               | S        | S                         | S           |

X = Incompatible

A = Anodize aluminum per MIL-A-8625, Type II, or Alodine per MIL-C-5541

C = Cadmium plate per Fed-Spec QQ-P-416, Type I, Class2

S = Satisfactory for use with no surface treatment required.

**TABLE 7 - HOUSING BORE TOLERANCES FOR METAL TO METAL AND PTFE LINED BEARINGS**

| BEARING        |   | HOUSING BORE   |                |                    |                  |                                |                                |
|----------------|---|----------------|----------------|--------------------|------------------|--------------------------------|--------------------------------|
| TYPE           | STYLE                                       | O.D.           |                | Tolerances         |                  | Fit-up                         |                                |
|                |   | inch           | mm             | inch               | mm               | inch                           | mm                             |
| METAL TO METAL | Sphericals                                  | Up to 1.750    | Up to 44.45    | +0.000<br>+0.0005  | +0.000<br>+0.013 | Line to Line to<br>.0010 tight | Line to Line to<br>0.025 tight |
|                |   | 1.750 and over | 44.45 and over | +0.000<br>-0.0008  | +0.000<br>-0.020 | Line to Line to<br>.0013 tight | Line to Line to<br>0.033 tight |
| PTFE LINED     | Sphericals                                  | All            | All            | +0.0005<br>-0.0000 | +0.013<br>-0.000 | Line to Line to<br>.0010 loose | Line to Line to<br>0.025 loose |
|                | Plain and Flanged Journal (Sleeve) Bearings | Up to 1.000    | Up to 25.40    | -0.0007<br>-0.0012 | -0.018<br>-0.030 | .0002 to .0012 tight           | 0.005 to 0.030 tight           |
|                |   | 1.000 and over | 25.40 and over | -0.0010<br>-0.0015 | -0.025<br>-0.038 | .0005 to .0015 tight           | 0.013 to 0.038 tight           |