

**T-011 Inspection Limits and Repair**

**Engine Application(s):** Allison 250-C20, C20B, C20F, C20J

**Compliance:** Any time the Spur Adapter Gearshaft Assembly is removed. Refer to Table 1 and Figures 1 & 2 as applicable for Inspection and Rework Limits.

**Notes:** Replaces Service Letter T94-014 issued by Superior Turbine on June 13, 1994. Refer to OEM's published data for installation, engine operation, and disassembly.

**Revisions:** N/C Dated: 01/30/97 Original Revision.  
A Dated: 12/01/97 Updated format.  
B Dated: 09/30/98 Updated format and added bearing race replacement instructions.  
C Dated: 02/23/99 Added part A6899239/E6599239, A23031922/E23031922, A23031921/E23031921 and Figure 2; removed scribe check for spline wear from Table 1.  
D Dated: 09/09/09 Updated EXTEX to TIMKEN.  
E Dated: 2/02/16 Updated TIMKEN to EXTEX Engineered Products.

**Spur Adapter Gearshaft and Spur Adapter Gearshaft Assembly  
Inspection and Rework Limits**

Condition	Service Limit	Repair Limit	Corrective Action
<b>Crack Indications, visual and MPI*</b>	Cracks are not acceptable.	No Repair.	Install new or serviceable Gearshaft Assembly.
<b>External Spline Tooth Wear (Both Splines)</b>	Maximum of 0.001 inch wear normal to spline tooth profile.  Minimum over pin diameter (measured in two places): 0.8364 inch over 0.060 inch pins.	No Repair.	Install new or serviceable Gearshaft Assembly if Service Limit is exceeded.
<b>Spline Tooth Damage (metal displacement): chips, gouges, grooves, nicks, spalling, etc.</b>	Spline tooth damage is not acceptable.	No Repair.	Install new or serviceable Gearshaft Assembly if Service Limit is exceeded.
<b>Dimensional Inspection</b>	Check for compliance with Figure 1 & 2 as applicable.	No Repair.	Install new or serviceable Gearshaft Assembly if Service Limit is exceeded.
<b>Localized Galling of Splines</b>	Galling is not acceptable.	Maximum depth: 0.005 inch. Any length.	Remove buildup or sharp edges with Arkansas stone.

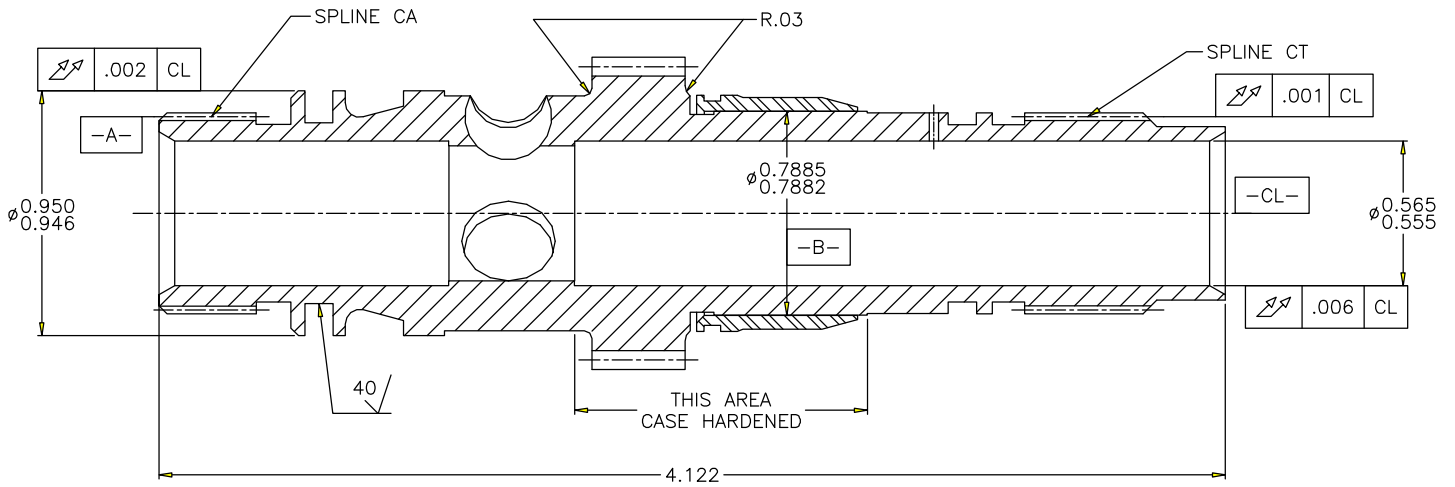
**NOTES:**

\* MPI technique as follows: A) Circular between heads  
AND  
B) Longitudinal in a coil  
  
MPI required only at overhaul.

**TABLE 1**

**T-011 Inspection Limits and Repair**

**A6899239/E6899239 Spur Adapter Gearshaft &  
 A23034784/E23034784 Assembly  
 Dimensional Inspection**

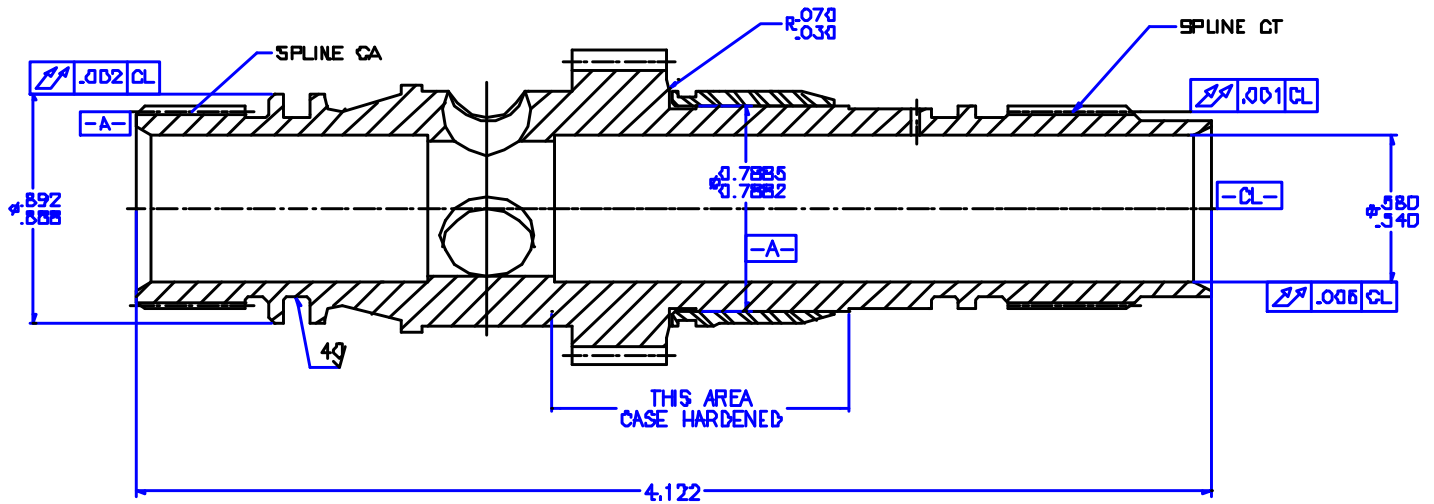


SPLINES CA AND CT HAVE 0.7500" PITCH DIAMETERS.  
 CENTERLINE -CL- IS DEFINED BY PD OF SPLINE CA AND DIAMETER -B-.  
 IF UNACCEPTABLE WEAR IS FOUND ON GEARSHAFT SPLINE CA, THEN  
 REPLACE COUPLING ADAPTER AND SPUR ADAPTER GEARSHAFT AS A SET.  
 DIMENSIONS ARE IN INCHES.  
 FINISHES ARE IN MICROINCHES.

**FIGURE 1**

**T-011 Inspection Limits and Repair**

**A23031921/E23031921 Spur Adapter Gearshaft &  
A23031922/E23031922 Assembly  
Dimensional Inspection**



SPLINES CA AND CT HAVE 0.7500" PITCH DIAMETERS.

CENTERLINE -CL- IS DEFINED BY PD OF SPLINE CA AND DIAMETER -B-.

IF UNACCEPTABLE WEAR IS FOUND ON GEARSHAFT SPLINE CA, THEN  
REPLACE COUPLING ADAPTER AND SPUR ADAPTER GEARSHAFT AS A SET.

DIMENSIONS ARE IN INCHES.

FINISHES ARE IN MICROINCHES.

**FIGURE 2**

**BEARING RACE REPLACEMENT**

1. Extract old race using an appropriate puller.
2. Obtain new or serviceable FAA approved inner race.
3. Heat inner race to 600±50°F. Do not freeze shaft.
4. Install race upon shaft.

**NOTES:** Maximum .005" gap between forward end of race and aft face of spur gear.  
Installed race diameter is 0.8844 - 0.8850" REF.