

T-037 Inspection Limits and Repair

Engine Application(s):	Allison 250-C20, C20B, C20F, C20J, C20C, C20S, C20W, C20R, C20R/1, C20R/2, C20R/4		
Compliance:	Any time the Turbine Splined Adapter is removed for overhaul. Refer to Table 1 and Figure 1 for Inspection and Rework Limits.		
Notes:	Refer to OEM's published data for installation, engine operation, and disassembly. Parts inspected, reworked and returned to service in accordance with these instructions may be classified as serviceable, repaired or overhauled at the discretion of the certifying party.		
Revisions:	N/C	Dated: 8/7/97 Original Revision.	
	A	Dated: 6/21/99 Updated format; added P/N EH6898784; added alternate hardness check for parts with serial no. prefix of "CI3-"; removed scribe check as rejection criteria for spline wear from Table 1; added allowance for ID spline chipping not uncommon at installation.	
	B	Dated: 7/12/01 Clarified post inspection status and added silver plate inspection and rework criteria.	
	C	Dated: 9/20/02 Added Silver Plating Specification to ***** note.	
	D	Dated: 9/04/09 Updated EXTEX to TIMKEN.	
	E	Dated: 2/03/16 Updated Timken to EXTEX Engineered Products.	

**A6898784/E6898784/EH6898784
Turbine Splined Adapter
Inspection and Rework Limits**

Condition	Service Limit	Repair Limit	Corrective Action
Cracks, (MPI*)	Cracks are not acceptable.	No Repair.	Install new or serviceable Splined Adapter.
External Spline Tooth Wear	Maximum of 0.001 inch wear normal to spline tooth profile. ** See Note Below. Minimum over pin diameter (measured in two places): 0.8367 inch over 0.060 inch pins. *** See Note Below.	No Repair.	Install new or serviceable Splined Adapter if Service Limit is exceeded.
Spline Tooth Damage (metal displacement): chips, gouges, grooves, nicks, spalling, corrosion, pitting, etc.	Spline tooth damage is not acceptable. ***** See Note Below.	No Repair.	Install new or serviceable Coupling Adapter if Service Limit is exceeded.
Internal Spline Tooth Wear	No spline wear allowed. ** See Note Below. Maximum between pin diameter (measured in two places): 0.4523 inch between 0.054 inch pins. (minimum of 8 teeth between pins.) *** See Note Below.	No Repair.	Install new or serviceable Splined Adapter if Service Limit is exceeded.

Table 1 continued on page 2

T-037 Inspection Limits and Repair

Condition	Service Limit	Repair Limit	Corrective Action
Dimensional Inspection (Pilot Diameter "A" and Pitch Diameter Run Out)	Check for compliance with Figure 1.	No Repair.	Install new or serviceable Splined adapter if Service Limit is exceeded.
Hardness check (over-temperature inspection)****	Hardness check must be made on the top flat of a spine which has been case hardened. Strip silver from selected area and check hardness. Min. hardness of 15N-92. See Figure 1.	No Repair.	Replace, if hardness is below limit minimum. Replate*****, if hardness is above limit minimum.
Wear on surface A	See Figure 1.	No Repair.	Re-qualify by grinding or lapping surface A.

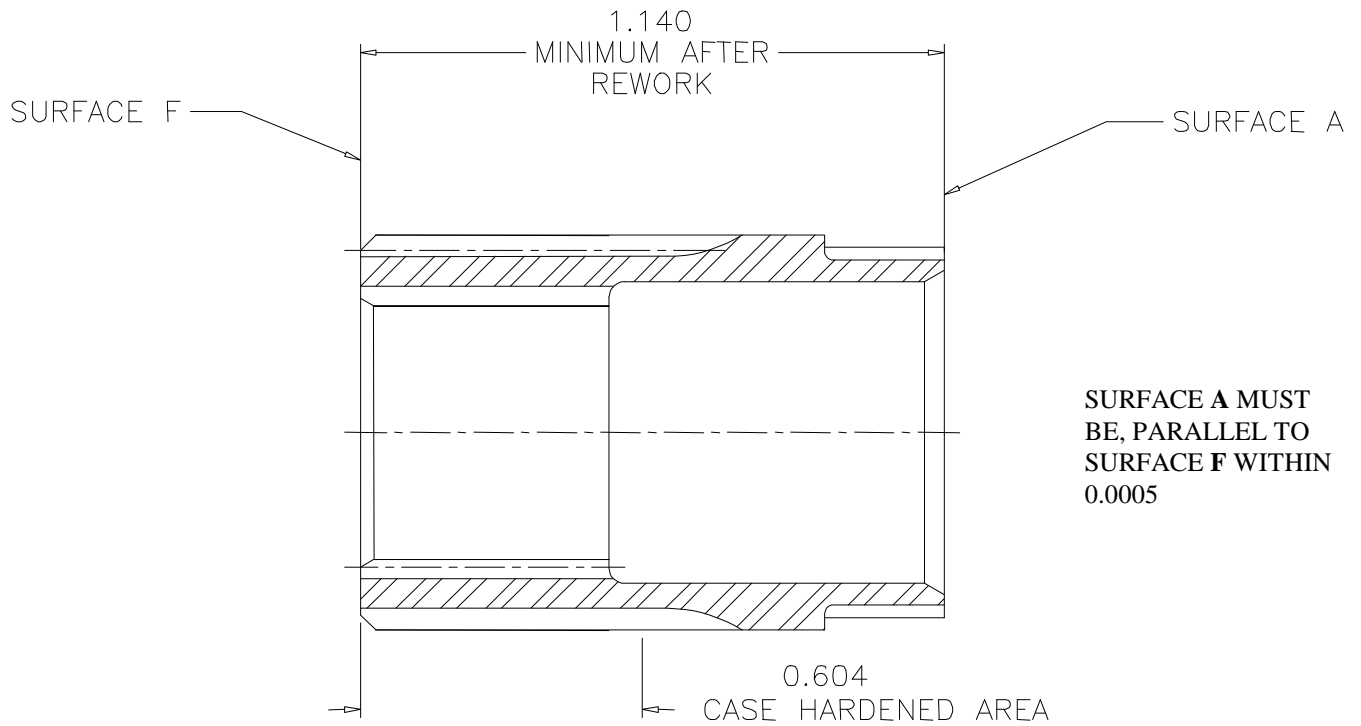
NOTES:

- * MPI technique as follows: A) Circular between heads
 AND
 B) Longitudinal in a coil
- ** A scribe can be used to aid in detecting a wear step. A wear step over 0.001 inch can usually be felt distinctly using a scribe with a 0.020 inch radius, which would be over the service limit.
- *** Check spline wear by BOTH pin and scribe methods. Spline wear check by scribe is for reference only. Spline wear exceeding 0.001 inch by over pin or between pin method is not acceptable.
- **** Adapters with a serial number prefix of "CI3-" are exempt from this check. As an alternate, check core hardness on the OD, Rc 30 or equivalent minimum.
- ***** Chips on tips of ID splines typically experienced during installation are acceptable provided no more than two teeth are chipped, chips are less than .030" dia. and the chipped area does not affect the working face of the spline tooth.
- ***** Re-plate in accordance with applicable OEM overhaul, repair or rework instructions or Silver plate per AMS 2412 .0001-.0003 thick. DO NOT plate end faces.

TABLE 1

T-037 Inspection Limits and Repair

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Second Stage Turbine Splined Adapter Inspection**



DIMENSIONS ARE IN INCHES

FIGURE 1