

**ALERT SERVICE BULLETIN**  
**Bell Helicopter** **TEXTRON**

A Subsidiary of Textron Inc.

NO. 407-06-73

DATE OCT 12, 2006

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DATE
REV

**MODEL AFFECTED:** 407

**SUBJECT:** ENGINE, TURBINE ASSEMBLY – POWER  
TURBINE OUTER SHAFT

**HELICOPTERS AFFECTED:** All 407 helicopters

**COMPLIANCE:** See vendor bulletin.

**DESCRIPTION:**

The purpose of this bulletin is to achieve complete distribution of the attached vendor bulletin to the current affected model distribution list on record by Bell Helicopter.

**APPROVAL:**

See vendor bulletin approval.

# ALERT COMMERCIAL ENGINE BULLETIN



## ENGINE, TURBINE ASSEMBLY - POWER TURBINE OUTER SHAFT

### 1. PLANNING INFORMATION

#### A. Effectivity

##### (1) Engines

All Rolls-Royce Model 250-C20, -C28, -C30, -C20R, -C40B, -C47, -B17 and -B17F Series engines listed below are affected by this Commercial Engine Bulletin (CEB).

Model 250 Series II engines

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23037413	UF18164	AE 406250	23037413	UF19203	CAE 295851
23037413	UF18114	AE 406254	23037413	UF17918	CAE 295852
23037413	UF18320	AE 410944	23037413	UF19084	CAE 295853
23037413	UF16985	CAE 270947	23037413	UF19103	CAE 295854
23037413	UF17027	CAE 270948	23037413	UF20035	CAE 295860
23037413	UF17023	CAE 270949	23037413	UF19150	CAE 295862
23037413	UF17037	CAE 270950	23037413	UF19152	CAE 295863
23037413	UF17059	CAE 270951	23037413	UF19120	CAE 295864
23037413	UF17902	CAE 270952	23037413	UF20038	CAE 295865
23037413	UF18171	CAE 270953	23037413	UF20009	CAE 295866
23037413	UF18166	CAE 270954	23037413	UF24392	CAE 295869
23037413	UF18161	CAE 270955	23037413	UF17035	CAE 837056
23037413	UF19193	CAE 270956	23037413	UF19178	CAE 837057
23037413	UF19182	CAE 270958	23037413	UF19132	CAE 837058
23037413	UF19171	CAE 270963	23037413	UF24408	CAE 837059
23037413	UF19177	CAE 270964	23037413	UF24383	CAE 837060
23037413	UF20040	CAE 270966	23037413	UF16966	CAE 845147
23037413	UF17045	CAE 272852	23037413	UF17900	CAE 845153
23037413	UF18159	CAE 272853	23037413	UF18174	CAE 845160
23037413	UF26189	CAE 272857	23037413	UF17881	CAE 845166
23037413	UF17054	CAE 295847	23037413	UF19217	CAE 845167
23037413	UF17028	CAE 295848	23037413	UF19179	CAE 845174
23037413	UF17009	CAE 295849	23037413	UF19121	CAE 845175
23037413	UF18169	CAE 295850	23037413	UF24415	CAE 845177

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250-C20 Series	CEB A-1398	250-C40B	CEB A-72-5052
250-C28 Series	CEB A-72-2208	250-C47 Series	CEB A-72-6060
250-C30 Series	CEB A-72-3278	250-B17 Series	CEB TP A-1341
250-C20R Series	CEB A-72-4093	250-B17F Series	CEB TP A-72-2089

## Rolls-Royce

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23037413	UF24441	CAE 845178	23037413	UF16965	SPARE
23037413	UF24407	CAE 880787	23037413	UF16967	SPARE
23037413	UF24427	CAE 880788	23037413	UF16968	SPARE
23037413	UF18168	CAE 881079	23037413	UF16969	SPARE
23037413	UF18162	CAE 881080	23037413	UF16970	SPARE
23037413	UF19164	CAE 881083	23037413	UF16971	SPARE
23037413	UF19147	CAE 881085	23037413	UF16972	SPARE
23037413	UF24409	CAE 881086	23037413	UF16973	SPARE
23037413	UF24430	CAE 881087	23037413	UF16974	SPARE
23037413	UF24410	CAE 881088	23037413	UF16975	SPARE
23037413	UF24438	CAE 881091	23037413	UF16976	SPARE
23037413	UF17887	CAE 881325	23037413	UF16977	SPARE
23037413	UF18151	CAE 881326	23037413	UF16978	SPARE
23037413	UF17885	CAE 881327	23037413	UF16979	SPARE
23037413	UF19075	CAE 881328	23037413	UF16980	SPARE
23037413	UF19114	CAE 881331	23037413	UF16981	SPARE
23037413	UF11477	SPARE	23037413	UF16984	SPARE
23037413	UF11481	SPARE	23037413	UF16986	SPARE
23037413	UF11487	SPARE	23037413	UF16987	SPARE
23037413	UF11560	SPARE	23037413	UF16989	SPARE
23037413	UF16945	SPARE	23037413	UF16990	SPARE
23037413	UF16946	SPARE	23037413	UF16992	SPARE
23037413	UF16948	SPARE	23037413	UF16993	SPARE
23037413	UF16949	SPARE	23037413	UF16995	SPARE
23037413	UF16951	SPARE	23037413	UF16996	SPARE
23037413	UF16952	SPARE	23037413	UF16997	SPARE
23037413	UF16953	SPARE	23037413	UF16998	SPARE
23037413	UF16955	SPARE	23037413	UF16999	SPARE
23037413	UF16956	SPARE	23037413	UF17000	SPARE
23037413	UF16957	SPARE	23037413	UF17001	SPARE
23037413	UF16958	SPARE	23037413	UF17002	SPARE
23037413	UF16959	SPARE	23037413	UF17005	SPARE
23037413	UF16960	SPARE	23037413	UF17006	SPARE
23037413	UF16963	SPARE	23037413	UF17007	SPARE

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250-C20 Series	CEB A-1398	250-C40B	CEB A-72-5052
250-C28 Series	CEB A-72-2208	250-C47 Series	CEB A-72-6060
250-C30 Series	CEB A-72-3278	250-B17 Series	CEB TP A-1341
250-C20R Series	CEB A-72-4093	250-B17F Series	CEB TP A-72-2089

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PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23037413	UF17008	SPARE	23037413	UF17895	SPARE
23037413	UF17011	SPARE	23037413	UF17897	SPARE
23037413	UF17013	SPARE	23037413	UF17898	SPARE
23037413	UF17014	SPARE	23037413	UF17899	SPARE
23037413	UF17015	SPARE	23037413	UF17901	SPARE
23037413	UF17017	SPARE	23037413	UF17903	SPARE
23037413	UF17018	SPARE	23037413	UF17904	SPARE
23037413	UF17025	SPARE	23037413	UF17907	SPARE
23037413	UF17026	SPARE	23037413	UF17908	SPARE
23037413	UF17029	SPARE	23037413	UF17909	SPARE
23037413	UF17032	SPARE	23037413	UF17911	SPARE
23037413	UF17034	SPARE	23037413	UF17912	SPARE
23037413	UF17036	SPARE	23037413	UF17913	SPARE
23037413	UF17038	SPARE	23037413	UF17914	SPARE
23037413	UF17039	SPARE	23037413	UF17915	SPARE
23037413	UF17040	SPARE	23037413	UF17916	SPARE
23037413	UF17041	SPARE	23037413	UF18099	SPARE
23037413	UF17042	SPARE	23037413	UF18106	SPARE
23037413	UF17043	SPARE	23037413	UF18107	SPARE
23037413	UF17044	SPARE	23037413	UF18108	SPARE
23037413	UF17048	SPARE	23037413	UF18109	SPARE
23037413	UF17050	SPARE	23037413	UF18110	SPARE
23037413	UF17052	SPARE	23037413	UF18111	SPARE
23037413	UF17056	SPARE	23037413	UF18112	SPARE
23037413	UF17058	SPARE	23037413	UF18113	SPARE
23037413	UF17061	SPARE	23037413	UF18116	SPARE
23037413	UF17062	SPARE	23037413	UF18117	SPARE
23037413	UF17880	SPARE	23037413	UF18118	SPARE
23037413	UF17883	SPARE	23037413	UF18119	SPARE
23037413	UF17884	SPARE	23037413	UF18120	SPARE
23037413	UF17886	SPARE	23037413	UF18122	SPARE
23037413	UF17888	SPARE	23037413	UF18123	SPARE
23037413	UF17889	SPARE	23037413	UF18126	SPARE
23037413	UF17891	SPARE	23037413	UF18127	SPARE
23037413	UF17894	SPARE	23037413	UF18129	SPARE

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250-C20 Series CEB A-1398 250-C40B CEB A-72-5052  
250-C28 Series CEB A-72-2208 250-C47 Series CEB A-72-6060  
250-C30 Series CEB A-72-3278 250-B17 Series CEB TP A-1341  
250-C20R Series CEB A-72-4093 250-B17F Series CEB TP A-72-2089

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PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23037413	UF18131	SPARE	23037413	UF19112	SPARE
23037413	UF18133	SPARE	23037413	UF19113	SPARE
23037413	UF18134	SPARE	23037413	UF19116	SPARE
23037413	UF18146	SPARE	23037413	UF19117	SPARE
23037413	UF18148	SPARE	23037413	UF19123	SPARE
23037413	UF18149	SPARE	23037413	UF19124	SPARE
23037413	UF18154	SPARE	23037413	UF19126	SPARE
23037413	UF18160	SPARE	23037413	UF19129	SPARE
23037413	UF18163	SPARE	23037413	UF19130	SPARE
23037413	UF18165	SPARE	23037413	UF19133	SPARE
23037413	UF18167	SPARE	23037413	UF19136	SPARE
23037413	UF18170	SPARE	23037413	UF19137	SPARE
23037413	UF18175	SPARE	23037413	UF19142	SPARE
23037413	UF18176	SPARE	23037413	UF19143	SPARE
23037413	UF18178	SPARE	23037413	UF19144	SPARE
23037413	UF19064	SPARE	23037413	UF19151	SPARE
23037413	UF19066	SPARE	23037413	UF19153	SPARE
23037413	UF19067	SPARE	23037413	UF19155	SPARE
23037413	UF19069	SPARE	23037413	UF19156	SPARE
23037413	UF19071	SPARE	23037413	UF19157	SPARE
23037413	UF19072	SPARE	23037413	UF19158	SPARE
23037413	UF19073	SPARE	23037413	UF19159	SPARE
23037413	UF19076	SPARE	23037413	UF19160	SPARE
23037413	UF19078	SPARE	23037413	UF19162	SPARE
23037413	UF19085	SPARE	23037413	UF19163	SPARE
23037413	UF19087	SPARE	23037413	UF19166	SPARE
23037413	UF19089	SPARE	23037413	UF19167	SPARE
23037413	UF19090	SPARE	23037413	UF19168	SPARE
23037413	UF19091	SPARE	23037413	UF19169	SPARE
23037413	UF19092	SPARE	23037413	UF19170	SPARE
23037413	UF19093	SPARE	23037413	UF19172	SPARE
23037413	UF19094	SPARE	23037413	UF19174	SPARE
23037413	UF19109	SPARE	23037413	UF19183	SPARE
23037413	UF19110	SPARE	23037413	UF19184	SPARE
23037413	UF19111	SPARE	23037413	UF19185	SPARE

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23037413	UF19188	SPARE	23037413	UF20027	SPARE
23037413	UF19189	SPARE	23037413	UF20028	SPARE
23037413	UF19195	SPARE	23037413	UF20029	SPARE
23037413	UF19197	SPARE	23037413	UF20031	SPARE
23037413	UF19198	SPARE	23037413	UF20032	SPARE
23037413	UF19199	SPARE	23037413	UF20034	SPARE
23037413	UF19200	SPARE	23037413	UF20037	SPARE
23037413	UF19201	SPARE	23037413	UF20041	SPARE
23037413	UF19202	SPARE	23037413	UF20042	SPARE
23037413	UF19204	SPARE	23037413	UF20044	SPARE
23037413	UF19205	SPARE	23037413	UF20045	SPARE
23037413	UF19207	SPARE	23037413	UF20047	SPARE
23037413	UF19210	SPARE	23037413	UF20048	SPARE
23037413	UF19218	SPARE	23037413	UF20049	SPARE
23037413	UF19219	SPARE	23037413	UF20051	SPARE
23037413	UF19220	SPARE	23037413	UF20053	SPARE
23037413	UF19221	SPARE	23037413	UF20054	SPARE
23037413	UF19487	SPARE	23037413	UF24337	SPARE
23037413	UF20006	SPARE	23037413	UF24342	SPARE
23037413	UF20007	SPARE	23037413	UF24344	SPARE
23037413	UF20008	SPARE	23037413	UF24350	SPARE
23037413	UF20010	SPARE	23037413	UF24358	SPARE
23037413	UF20011	SPARE	23037413	UF24374	SPARE
23037413	UF20012	SPARE	23037413	UF24393	SPARE
23037413	UF20013	SPARE	23037413	UF24402	SPARE
23037413	UF20014	SPARE	23037413	UF24406	SPARE
23037413	UF20015	SPARE	23037413	UF24412	SPARE
23037413	UF20016	SPARE	23037413	UF24413	SPARE
23037413	UF20019	SPARE	23037413	UF24416	SPARE
23037413	UF20020	SPARE	23037413	UF24417	SPARE
23037413	UF20021	SPARE	23037413	UF24421	SPARE
23037413	UF20023	SPARE	23037413	UF24425	SPARE
23037413	UF20024	SPARE	23037413	UF24428	SPARE
23037413	UF20025	SPARE	23037413	UF24439	SPARE
23037413	UF20026	SPARE	23037413	UF24451	SPARE

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250-C20 Series CEB A-1398 250-C40B CEB A-72-5052  
250-C28 Series CEB A-72-2208 250-C47 Series CEB A-72-6060  
250-C30 Series CEB A-72-3278 250-B17 Series CEB TP A-1341  
250-C20R Series CEB A-72-4093 250-B17F Series CEB TP A-72-2089

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PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23037413	UF24457	SPARE	23037413	UF26236	SPARE
23037413	UF24461	SPARE	23037413	UF26238	SPARE
23037413	UF24471	SPARE	23037413	UF26240	SPARE
23037413	UF24481	SPARE	23037413	UF26241	SPARE
23037413	UF26132	SPARE	23037413	UF26243	SPARE
23037413	UF26140	SPARE	23037413	UF26244	SPARE
23037413	UF26144	SPARE	23037413	UF26245	SPARE
23037413	UF26149	SPARE	23037413	UF26247	SPARE
23037413	UF26155	SPARE	23037413	UF26248	SPARE
23037413	UF26158	SPARE	23037413	UF26251	SPARE
23037413	UF26160	SPARE	23037413	UF26252	SPARE
23037413	UF26161	SPARE	23037413	UF26255	SPARE
23037413	UF26162	SPARE	23037413	UF26257	SPARE
23037413	UF26166	SPARE	23037413	UF26259	SPARE
23037413	UF26172	SPARE	23037413	UF26261	SPARE
23037413	UF26174	SPARE	23037413	UF26262	SPARE
23037413	UF26177	SPARE	23037413	UF26264	SPARE
23037413	UF26178	SPARE	23037413	UF26268	SPARE
23037413	UF26180	SPARE	23037413	UF26269	SPARE
23037413	UF26181	SPARE	23037413	UF26270	SPARE
23037413	UF26183	SPARE	23037413	UF26271	SPARE
23037413	UF26184	SPARE	23037413	UF26274	SPARE
23037413	UF26185	SPARE	23037413	UF26276	SPARE
23037413	UF26193	SPARE	23037413	UF26280	SPARE
23037413	UF26194	SPARE	23037413	UF26286	SPARE
23037413	UF26198	SPARE	23037413	UF26287	SPARE
23037413	UF26206	SPARE	23037413	UF26288	SPARE
23037413	UF26214	SPARE	23037413	UF26290	SPARE
23037413	UF26218	SPARE	23037413	UF26295	SPARE
23037413	UF26219	SPARE	23037413	UF26299	SPARE
23037413	UF26220	SPARE	23037413	UF26305	SPARE
23037413	UF26227	SPARE	23037413	UF26320	SPARE
23037413	UF26229	SPARE	23037413	UF26321	SPARE
23037413	UF26230	SPARE	23037413	UF26323	SPARE
23037413	UF26231	SPARE	23037413	UF26325	SPARE

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250-C20 Series CEB A-1398 250-C40B CEB A-72-5052  
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### COMMERCIAL ENGINE BULLETIN

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23037413	UF26327	SPARE	23037413	UF26401	SPARE
23037413	UF26328	SPARE	23037413	UF26402	SPARE
23037413	UF26329	SPARE	23037413	UF26403	SPARE
23037413	UF26337	SPARE	23037413	UF26404	SPARE
23037413	UF26338	SPARE	23037413	UF26405	SPARE
23037413	UF26339	SPARE	23037413	UF26407	SPARE
23037413	UF26340	SPARE	23037413	UF26410	SPARE
23037413	UF26342	SPARE	23037413	UF26413	SPARE
23037413	UF26343	SPARE	23037413	UF26415	SPARE
23037413	UF26344	SPARE	23037413	UF26416	SPARE
23037413	UF26349	SPARE	23037413	UF26417	SPARE
23037413	UF26352	SPARE	23037413	UF26420	SPARE
23037413	UF26354	SPARE	23037413	UF26425	SPARE
23037413	UF26355	SPARE	23037413	UF26426	SPARE
23037413	UF26357	SPARE	23037413	UF26430	SPARE
23037413	UF26361	SPARE	23037413	UF26436	SPARE
23037413	UF26365	SPARE	23037413	UF26437	SPARE
23037413	UF26371	SPARE	23037413	UF26438	SPARE
23037413	UF26372	SPARE	23037413	UF26439	SPARE
23037413	UF26373	SPARE	23037413	UF26440	SPARE
23037413	UF26378	SPARE	23037413	UF26443	SPARE
23037413	UF26381	SPARE	23037413	UF26444	SPARE
23037413	UF26382	SPARE	23037413	UF26445	SPARE
23037413	UF26384	SPARE	23037413	UF26454	SPARE
23037413	UF26385	SPARE	23037413	UF26456	SPARE
23037413	UF26386	SPARE	23037413	UF26462	SPARE
23037413	UF26388	SPARE	23037413	UF26463	SPARE
23037413	UF26389	SPARE	23037413	UF26466	SPARE
23037413	UF26390	SPARE	23037413	UF26471	SPARE
23037413	UF26392	SPARE	23037413	UF26472	SPARE
23037413	UF26393	SPARE	23037413	UF26473	SPARE
23037413	UF26394	SPARE	23037413	UF26474	SPARE
23037413	UF26397	SPARE	23037413	UF26475	SPARE
23037413	UF26398	SPARE	23037413	UF26476	SPARE
23037413	UF26399	SPARE	23037413	UF26477	SPARE

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250-C20 Series CEB A-1398 250-C40B CEB A-72-5052  
250-C28 Series CEB A-72-2208 250-C47 Series CEB A-72-6060  
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PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23037413	UF26478	SPARE	23037413	UF26646	SPARE
23037413	UF26482	SPARE	23037413	UF26653	SPARE
23037413	UF26483	SPARE	23037413	UF26654	SPARE
23037413	UF26484	SPARE	23037413	UF26658	SPARE
23037413	UF26486	SPARE	23037413	UF26672	SPARE
23037413	UF26488	SPARE	23037413	UF26673	SPARE
23037413	UF26490	SPARE	23037413	UF26674	SPARE
23037413	UF26500	SPARE	23037413	UF26675	SPARE
23037413	UF26504	SPARE	23037413	UF26676	SPARE
23037413	UF26506	SPARE	23037413	UF26677	SPARE
23037413	UF26512	SPARE	23037413	UF26678	SPARE
23037413	UF26514	SPARE	23037413	UF26681	SPARE
23037413	UF26516	SPARE	23037413	UF26682	SPARE
23037413	UF26521	SPARE	23037413	UF26683	SPARE
23037413	UF26525	SPARE	23037413	UF26684	SPARE
23037413	UF26527	SPARE	23037413	UF26685	SPARE
23037413	UF26528	SPARE	23037413	UF26686	SPARE
23037413	UF26531	SPARE	23037413	UF26687	SPARE
23037413	UF26532	SPARE	23037413	UF26688	SPARE
23037413	UF26536	SPARE	23037413	UF26690	SPARE
23037413	UF26539	SPARE	23037413	UF26692	SPARE
23037413	UF26540	SPARE	23037413	UF26693	SPARE
23037413	UF26541	SPARE	23037413	UF26694	SPARE
23037413	UF26549	SPARE	23037413	UF26696	SPARE
23037413	UF26555	SPARE	23037413	UF26697	SPARE
23037413	UF26572	SPARE	23037413	UF26700	SPARE
23037413	UF26597	SPARE	23037413	UF26702	SPARE
23037413	UF26607	SPARE	23037413	UF26705	SPARE
23037413	UF26608	SPARE	23037413	UF26707	SPARE
23037413	UF26632	SPARE			
23037413	UF26634	SPARE			
23037413	UF26635	SPARE			
23037413	UF26636	SPARE			
23037413	UF26640	SPARE			
23037413	UF26645	SPARE			

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250-C20 Series CEB A-1398 250-C40B CEB A-72-5052  
250-C28 Series CEB A-72-2208 250-C47 Series CEB A-72-6060  
250-C30 Series CEB A-72-3278 250-B17 Series CEB TP A-1341  
250-C20R Series CEB A-72-4093 250-B17F Series CEB TP A-72-2089

# ALERT

Rolls-Royce

EXPORT CONTROLLED

## COMMERCIAL ENGINE BULLETIN

Model 250 Series III engines

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23051646	UF10121	SPARE	23051646	UF16515	SPARE
23051646	UF10131	SPARE	23051646	UF16518	SPARE
23051646	UF10132	SPARE	23051646	UF16519	SPARE
23051646	UF10141	SPARE	23051646	UF16520	SPARE
23051646	UF10149	SPARE	23051646	UF16521	SPARE
23051646	UF10161	SPARE	23051646	UF16525	SPARE
23051646	UF10170	SPARE	23051646	UF16526	SPARE
23051646	UF10182	SPARE	23051646	UF16528	SPARE
23051646	UF10183	SPARE	23051646	UF16529	SPARE
23051646	UF10184	SPARE	23051646	UF16530	SPARE
23051646	UF10188	SPARE	23051646	UF16536	SPARE
23051646	UF10190	SPARE	23051646	UF16537	SPARE
23051646	UF16504	SPARE	23051646	UF16538	SPARE
23051646	UF16505	SPARE	23051646	UF16540	SPARE
23051646	UF16506	SPARE	23051646	UF16541	SPARE
23051646	UF16510	SPARE	23051646	UF16543	SPARE
23051646	UF16511	SPARE	23051646	UF16544	SPARE
23051646	UF16512	SPARE	23051646	UF16545	SPARE
23051646	UF16513	SPARE	23051646	UF16547	SPARE
23051646	UF16514	SPARE	23051646	UF16555	SPARE

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250-C20 Series CEB A-1398 250-C40B CEB A-72-5052  
250-C28 Series CEB A-72-2208 250-C47 Series CEB A-72-6060  
250-C30 Series CEB A-72-3278 250-B17 Series CEB TP A-1341  
250-C20R Series CEB A-72-4093 250-B17F Series CEB TP A-72-2089

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### COMMERCIAL ENGINE BULLETIN

Model 250 Series IV engines

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23038136	UF18718	AE 410908	23038136	UF19284	AE 413012
23038136	UF18323	AE 410947	23038136	UF19375	AE 413015
23038136	UF18304	AE 410949	23038136	UF19242	AE 413016
23038136	UF18308	AE 410955	23038136	UF19256	AE 413017
23038136	UF18680	AE 410956	23038136	UF19756	AE 413018
23038136	UF18720	AE 410957	23038136	UF19272	AE 413019
23038136	UF18331	AE 410958	23038136	UF16863	CAE 844238
23038136	UF18321	AE 410960	23038136	UF17447	CAE 844239
23038136	UF18714	AE 410964	23038136	UF18713	CAE 844240
23038136	UF18710	AE 410965	23038136	UF16902	CAE 844241
23038136	UF19280	AE 410970	23038136	UF15400	CAE 844242
23038136	UF18279	AE 410977	23038136	UF16868	CAE 844243
23038136	UF19240	AE 410978	23038136	UF18696	CAE 844244
23038136	UF19712	AE 410983	23038136	UF18280	CAE 844246
23038136	UF19961	AE 410985	23038136	UF18329	CAE 844247
23038136	UF19716	AE 410986	23038136	UF18272	CAE 844249
23038136	UF19506	AE 410987	23038136	UF18672	CAE 844250
23038136	UF19963	AE 410988	23038136	UF18314	CAE 844252
23038136	UF19277	AE 410991	23038136	UF18334	CAE 844253
23038136	UF19273	AE 410992	23038136	UF19379	CAE 844254
23038136	UF19499	AE 410994	23038136	UF19753	CAE 844258
23038136	UF19729	AE 410996	23038136	UF19970	CAE 844259
23038136	UF19514	AE 410997	23038136	UF19266	CAE 844260
23038136	UF19731	AE 410998	23038136	UF19493	CAE 844262
23038136	UF19269	AE 410999	23038136	UF25635	CAE 844264
23038136	UF19747	AE 413001	23038136	UF26025	CAE 847572
23038136	UF19484	AE 413002	23038136	UF16880	CAE 847690
23038136	UF19354	AE 413003	23038136	UF17460	CAE 847691
23038136	UF19725	AE 413004	23038136	UF17445	CAE 847692
23038136	UF19528	AE 413005	23038136	UF17464	CAE 847693
23038136	UF19736	AE 413007	23038136	UF16908	CAE 847694
23038136	UF19509	AE 413008	23038136	UF18694	CAE 847698
23038136	UF19281	AE 413010	23038136	UF18697	CAE 847699
23038136	UF19967	AE 413011	23038136	UF17461	CAE 847700

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250-C20R Series CEB A-72-4093 250-B17F Series CEB TP A-72-2089

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### COMMERCIAL ENGINE BULLETIN

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23038136	UF18285	CAE 847701	23038136	UF19999	CAE 847760
23038136	UF16901	CAE 847702	23038136	UF25654	CAE 847768
23038136	UF18282	CAE 847703	23038136	UF25643	CAE 847775
23038136	UF18290	CAE 847704	23038136	UF25986	CAE 847777
23038136	UF18283	CAE 847706	23038136	UF26038	CAE 847779
23038136	UF18291	CAE 847707	23038136	UF25853	CAE 847780
23038136	UF18269	CAE 847710	23038136	UF25926	CAE 847781
23038136	UF18289	CAE 847712	23038136	UF25837	CAE 847783
23038136	UF18301	CAE 847715	23038136	UF25844	CAE 847784
23038136	UF18303	CAE 847717	23038136	UF25893	CAE 847785
23038136	UF18341	CAE 847720	23038136	UF26006	CAE 847786
23038136	UF18311	CAE 847723	23038136	UF18278	CAE 895997
23038136	UF18691	CAE 847725	23038136	UF16841	CAE 895998
23038136	UF18360	CAE 847726	23038136	UF16874	CAE 896000
23038136	UF18313	CAE 847728	23038136	UF16870	CAE 896001
23038136	UF18353	CAE 847729	23038136	UF18277	CAE 896003
23038136	UF18721	CAE 847730	23038136	UF16883	CAE 896008
23038136	UF18356	CAE 847732	23038136	UF18348	CAE 896010
23038136	UF18358	CAE 847733	23038136	UF18310	CAE 896011
23038136	UF18689	CAE 847734	23038136	UF18346	CAE 896013
23038136	UF19376	CAE 847735	23038136	UF19494	CAE 896020
23038136	UF18709	CAE 847737	23038136	UF19483	CAE 896021
23038136	UF18342	CAE 847738	23038136	UF25845	CAE 896029
23038136	UF18686	CAE 847739	23038136	UF26036	CAE 896030
23038136	UF18701	CAE 847740	23038136	UF25864	CAE 896031
23038136	UF18363	CAE 847741	23038136	UF25953	CAE 896032
23038136	UF19504	CAE 847746	23038136	UF25966	CAE 896033
23038136	UF19513	CAE 847749	23038136	UF25936	CAE 896034
23038136	UF19496	CAE 847750	23038136	UF15341	SPARE
23038136	UF19754	CAE 847751	23038136	UF15364	SPARE
23038136	UF19492	CAE 847752	23038136	UF16329	SPARE
23038136	UF19374	CAE 847753	23038136	UF16828	SPARE
23038136	UF19508	CAE 847754	23038136	UF16831	SPARE
23038136	UF19507	CAE 847755	23038136	UF16832	SPARE
23038136	UF19990	CAE 847757	23038136	UF16837	SPARE

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250-C28 Series    CEB A-72-2208    250-C47 Series    CEB A-72-6060  
250-C30 Series    CEB A-72-3278    250-B17 Series    CEB TP A-1341  
250-C20R Series    CEB A-72-4093    250-B17F Series    CEB TP A-72-2089

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### COMMERCIAL ENGINE BULLETIN

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23038136	UF16842	SPARE	23038136	UF16916	SPARE
23038136	UF16848	SPARE	23038136	UF16929	SPARE
23038136	UF16851	SPARE	23038136	UF16941	SPARE
23038136	UF16852	SPARE	23038136	UF16944	SPARE
23038136	UF16853	SPARE	23038136	UF17444	SPARE
23038136	UF16854	SPARE	23038136	UF17446	SPARE
23038136	UF16857	SPARE	23038136	UF17448	SPARE
23038136	UF16861	SPARE	23038136	UF17449	SPARE
23038136	UF16862	SPARE	23038136	UF17450	SPARE
23038136	UF16867	SPARE	23038136	UF17451	SPARE
23038136	UF16869	SPARE	23038136	UF17452	SPARE
23038136	UF16872	SPARE	23038136	UF17454	SPARE
23038136	UF16873	SPARE	23038136	UF17456	SPARE
23038136	UF16875	SPARE	23038136	UF17457	SPARE
23038136	UF16877	SPARE	23038136	UF17462	SPARE
23038136	UF16878	SPARE	23038136	UF17463	SPARE
23038136	UF16881	SPARE	23038136	UF17465	SPARE
23038136	UF16884	SPARE	23038136	UF17468	SPARE
23038136	UF16885	SPARE	23038136	UF17472	SPARE
23038136	UF16889	SPARE	23038136	UF17472P	SPARE
23038136	UF16891	SPARE	23038136	UF17476	SPARE
23038136	UF16892	SPARE	23038136	UF17479	SPARE
23038136	UF16893	SPARE	23038136	UF17487	SPARE
23038136	UF16896	SPARE	23038136	UF17488	SPARE
23038136	UF16897	SPARE	23038136	UF17493	SPARE
23038136	UF16898	SPARE	23038136	UF18276	SPARE
23038136	UF16900	SPARE	23038136	UF18316	SPARE
23038136	UF16903	SPARE	23038136	UF18318	SPARE
23038136	UF16904	SPARE	23038136	UF18319	SPARE
23038136	UF16906	SPARE	23038136	UF18327	SPARE
23038136	UF16910	SPARE	23038136	UF18344	SPARE
23038136	UF16911	SPARE	23038136	UF18347	SPARE
23038136	UF16912	SPARE	23038136	UF18362	SPARE
23038136	UF16914	SPARE	23038136	UF18367	SPARE
23038136	UF16915	SPARE	23038136	UF18374	SPARE

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250-C28 Series CEB A-72-2208 250-C47 Series CEB A-72-6060  
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250-C20R Series CEB A-72-4093 250-B17F Series CEB TP A-72-2089

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### COMMERCIAL ENGINE BULLETIN

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23038136	UF18675	SPARE	23038136	UF19358	SPARE
23038136	UF18682	SPARE	23038136	UF19359	SPARE
23038136	UF18683	SPARE	23038136	UF19360	SPARE
23038136	UF18685	SPARE	23038136	UF19362	SPARE
23038136	UF18690	SPARE	23038136	UF19365	SPARE
23038136	UF18693	SPARE	23038136	UF19368	SPARE
23038136	UF18695	SPARE	23038136	UF19370	SPARE
23038136	UF18698	SPARE	23038136	UF19362	SPARE
23038136	UF18699	SPARE	23038136	UF19377	SPARE
23038136	UF18702	SPARE	23038136	UF19380	SPARE
23038136	UF18703	SPARE	23038136	UF19381	SPARE
23038136	UF18704	SPARE	23038136	UF19382	SPARE
23038136	UF18708	SPARE	23038136	UF19385	SPARE
23038136	UF18711	SPARE	23038136	UF19470	SPARE
23038136	UF18716	SPARE	23038136	UF19477	SPARE
23038136	UF19238	SPARE	23038136	UF19479	SPARE
23038136	UF19248	SPARE	23038136	UF19481	SPARE
23038136	UF19249	SPARE	23038136	UF19482	SPARE
23038136	UF19263	SPARE	23038136	UF19485	SPARE
23038136	UF19274	SPARE	23038136	UF19487	SPARE
23038136	UF19275	SPARE	23038136	UF19488	SPARE
23038136	UF19276	SPARE	23038136	UF19490	SPARE
23038136	UF19279	SPARE	23038136	UF19491	SPARE
23038136	UF19285	SPARE	23038136	UF19497	SPARE
23038136	UF19341	SPARE	23038136	UF19515	SPARE
23038136	UF19342	SPARE	23038136	UF19516	SPARE
23038136	UF19343	SPARE	23038136	UF19519	SPARE
23038136	UF19344	SPARE	23038136	UF19521	SPARE
23038136	UF19345	SPARE	23038136	UF19523	SPARE
23038136	UF19350	SPARE	23038136	UF19525	SPARE
23038136	UF19351	SPARE	23038136	UF19527	SPARE
23038136	UF19352	SPARE	23038136	UF19717	SPARE
23038136	UF19353	SPARE	23038136	UF19719	SPARE
23038136	UF19355	SPARE	23038136	UF19724	SPARE
23038136	UF19356	SPARE	23038136	UF19728	SPARE

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250-C28 Series CEB A-72-2208 250-C47 Series CEB A-72-6060  
250-C30 Series CEB A-72-3278 250-B17 Series CEB TP A-1341  
250-C20R Series CEB A-72-4093 250-B17F Series CEB TP A-72-2089

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### COMMERCIAL ENGINE BULLETIN

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23038136	UF19730	SPARE	23038136	UF25638	SPARE
23038136	UF19732	SPARE	23038136	UF25640	SPARE
23038136	UF19733	SPARE	23038136	UF25641	SPARE
23038136	UF19735	SPARE	23038136	UF25642	SPARE
23038136	UF19737	SPARE	23038136	UF25644	SPARE
23038136	UF19738	SPARE	23038136	UF25645	SPARE
23038136	UF19742	SPARE	23038136	UF25646	SPARE
23038136	UF19743	SPARE	23038136	UF25650	SPARE
23038136	UF19745	SPARE	23038136	UF25651	SPARE
23038136	UF19746	SPARE	23038136	UF25656	SPARE
23038136	UF19748	SPARE	23038136	UF25657	SPARE
23038136	UF19749	SPARE	23038136	UF25659	SPARE
23038136	UF19750	SPARE	23038136	UF25660	SPARE
23038136	UF19751	SPARE	23038136	UF25662	SPARE
23038136	UF19755	SPARE	23038136	UF25666	SPARE
23038136	UF19757	SPARE	23038136	UF25667	SPARE
23038136	UF19762	SPARE	23038136	UF25669	SPARE
23038136	UF19763	SPARE	23038136	UF25670	SPARE
23038136	UF19765	SPARE	23038136	UF25671	SPARE
23038136	UF19934	SPARE	23038136	UF25673	SPARE
23038136	UF19956	SPARE	23038136	UF25678	SPARE
23038136	UF19960	SPARE	23038136	UF25685	SPARE
23038136	UF19965	SPARE	23038136	UF25686	SPARE
23038136	UF19966	SPARE	23038136	UF25742	SPARE
23038136	UF19969	SPARE	23038136	UF25743	SPARE
23038136	UF19973	SPARE	23038136	UF25744	SPARE
23038136	UF19977	SPARE	23038136	UF25745	SPARE
23038136	UF19981	SPARE	23038136	UF25746	SPARE
23038136	UF19987	SPARE	23038136	UF25750	SPARE
23038136	UF19992	SPARE	23038136	UF25752	SPARE
23038136	UF19995	SPARE	23038136	UF25753	SPARE
23038136	UF19997	SPARE	23038136	UF25755	SPARE
23038136	UF19998	SPARE	23038136	UF25759	SPARE
23038136	UF25632	SPARE	23038136	UF25760	SPARE
23038136	UF25634	SPARE	23038136	UF25762	SPARE

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250-C28 Series CEB A-72-2208 250-C47 Series CEB A-72-6060  
250-C30 Series CEB A-72-3278 250-B17 Series CEB TP A-1341  
250-C20R Series CEB A-72-4093 250-B17F Series CEB TP A-72-2089

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### COMMERCIAL ENGINE BULLETIN

PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE	PART NUMBER	SERIAL NUMBER	ENGINE OR SPARE
23038136	UF25763	SPARE	23038136	UF25958	SPARE
23038136	UF25767	SPARE	23038136	UF25962	SPARE
23038136	UF25770	SPARE	23038136	UF25964	SPARE
23038136	UF25771	SPARE	23038136	UF25975	SPARE
23038136	UF25832	SPARE	23038136	UF25996	SPARE
23038136	UF25843	SPARE	23038136	UF26002	SPARE
23038136	UF25848	SPARE	23038136	UF26003	SPARE
23038136	UF25860	SPARE	23038136	UF26010	SPARE
23038136	UF25884	SPARE	23038136	UF26013	SPARE
23038136	UF25892	SPARE	23038136	UF26020	SPARE
23038136	UF25894	SPARE	23038136	UF26023	SPARE
23038136	UF25895	SPARE	23038136	UF26024	SPARE
23038136	UF25913	SPARE	23038136	UF26027	SPARE
23038136	UF25923	SPARE	23038136	UF26028	SPARE
23038136	UF25927	SPARE	23038136	UF26030	SPARE
23038136	UF25938	SPARE	23038136	UF26042	SPARE
23038136	UF25940	SPARE	23038136	UF26048	SPARE
23038136	UF25954	SPARE	23038136	UF26052	SPARE
23038136	UF25957	SPARE	23038136	UF26056	SPARE

(2) Spares - Not affected

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250-C20 Series	CEB A-1398	250-C40B	CEB A-72-5052
250-C28 Series	CEB A-72-2208	250-C47 Series	CEB A-72-6060
250-C30 Series	CEB A-72-3278	250-B17 Series	CEB TP A-1341
250-C20R Series	CEB A-72-4093	250-B17F Series	CEB TP A-72-2089

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#### B. Reason

Some power turbine outer shafts may have a manufacturing error on the face of the curvics contact face and non-contact face. This anomaly could lead to looseness of the nut and cause fretting of the power turbine outer shaft resulting in reduced capability of the shaft. The purpose of this CEB is to notify operators and provide a list of engine serial numbers and spares with suspect shafts. This CEB also provides instructions to monitor the condition of these engines and engines that have had parts sold as spares installed.

This CEB also provides a vibration test procedure for the power turbine outer shaft. This procedure will establish and monitor the health of the power turbine outer shaft/fourth-stage turbine wheel interface. The timing of the required vibration checks in this CEB match the 100/150 hour intervals (100 hour or 150 hour interval depending on the Regular Scheduled Maintenance Table you are operating to) in each Operations and Maintenance Manual (OMM) and in the following Commercial Service Letters (CSL's):

250-C18 Series	CSL 138
250-C20 Series	CSL 1130
250-C28 Series	CSL 2079
250-C30 Series	CSL 3082
250-C20R Series	CSL 4011
250-B15G	CSL TP 73
250-B17 Series	CSL TP 1092
250-B17F Series	CSL TP 2007

The vibration check is required at 100/150 hour inspection (depending on which Regular Scheduled Maintenance Table you are operating to) and then at regular scheduled 100/150 hour intervals. By performing regular vibration checks and establishing a trend, this issue as well as other engine health problems can be identified.

Any noted change in vibration levels, unknown high oil consumption and/or excessive smoking from the turbine is also reason to suspect the power turbine outer shaft. Do a check of the applicable Operations and Maintenance Manual (OMM) Troubleshooting section before determining that it may be the power turbine outer shaft.

#### C. Description

All power turbine outer shafts listed in the table above in paragraph 1.A.(1), are considered suspect.

**NOTE:** If your engine or turbine has been to a maintenance facility and had work performed that may have had the power turbine outer shaft changed since October 2004, please contact the facility with a request for the part number and serial number of the power turbine outer shaft that was installed.

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250-C28 Series	CEB A-72-2208	250-C47 Series	CEB A-72-6060
250-C30 Series	CEB A-72-3278	250-B17 Series	CEB TP A-1341
250-C20R Series	CEB A-72-4093	250-B17F Series	CEB TP A-72-2089

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D. Approval

Technical aspects are FAA approved.

E. Compliance

Part 1 - Compliance Code 2: To be complied with the next 100/150 hour flight hours and at 100/150 flight hour intervals there after until Part 2 has been complied with.

Part 2 - Compliance Code 4: To be complied with the next time the turbine module is removed and the power turbine rotor is disassembled for any reason. Or no later than:

- Series II - 1750 Operating Hours / 3000 cycles
- Series III - 1500 Operating Hours / 3000 cycles
- Series IV - 1750/2000 Operating Hours / 3500 cycles

F. Interchangeability - Not affected

G. Material Availability

PART NUMBER	QTY/ENGINE	NAME	SERIES
23037413	1	SHAFT, POWER TURBINE OUTER	II
23051546	1	SHAFT, POWER TURBINE OUTER	III
23038136	1	SHAFT, POWER TURBINE OUTER	IV

H. Tooling

- (1) Honeywell Chadwick-Helmuth Vibration Monitor
  - Model 192
  - Model 192A
  - Model 8500C
  - Model 8500C+ and subsequent Analyzer/Plotter with Model 7570 High temperature Velometer Kits
  - Model Vibrex 2000+

James Cox  
 4601 North Arden Drive  
 El Monte, California 91731  
 Tel: (626) 575-6161 ext 370  
 Fax: (626) 350-9697  
 Email: James.CoxJr@honeywell.com

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250-C28 Series	CEB A-72-2208	250-C47 Series	CEB A-72-6060
250-C30 Series	CEB A-72-3278	250-B17 Series	CEB TP A-1341
250-C20R Series	CEB A-72-4093	250-B17F Series	CEB TP A-72-2089

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- (2) Helitune Inc. Vibration Monitor Model RT-5JS+ Rotorturner

George R. Grove  
4965 Cox Road  
Glen Allen, VA 23060  
Tel: (804) 290-7870  
Fax: (804) 290-7872  
Mobile: (804) 244-2036

- (3) Smith Products (Smiths Aerospace) Vibration Monitor Model RADS-AT

Bob Byrne  
14200 Roosevelt Blvd  
Dock A  
Clearwater, FL 33762  
Tel: (800) 826-2124 (Toll Free USA)  
Tel: (727) 532-6670  
Fax: (727) 538-7528  
Email: robert.byrne@smiths-aerospace.com

- (4) Dynamic Solutions Systems Vibration Monitor Model Microvibe 2

Rich Welsch  
E4594 483rd Avenue  
Menomonie, Wisconsin 54751  
Tel: (715) 233-9838  
Cell: (626) 893-8008  
Fax: (715) 233-9838  
Email: richwelsch@dssmicro.com

- (5) SKF Vibration Monitor Model Microlog MX, Microlog GX

Gary Gbor  
Suite 102  
1920 Thoreau Drive  
Schaumburg, IL 75248  
Tel: (847) 397-3370  
Mobile: (847) 340-5422  
Fax: (847) 340-5422  
Email: Gary.L.Gbur@skf.com

- (6) Other equivalent equipment that will measure the discrete frequencies as listed in this bulletin.

**NOTE:** For some newer vibration analysis equipment, contact the manufacturer for software files if required.

- I. Weight and Balance - Not affected
- J. Electrical Load Data - Not affected

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K. References

- (1) 10W2 Operation and Maintenance Manual, Turboshaft Models, 250-C20 Series (OMM).
- (2) 10W3 Overhaul Manual, Turboshaft Models 250-C20 Series (O/H).
- (3) 16W2 Operation and Maintenance Manual, Turboshaft Models 250-C28 Series (OMM).
- (4) 16W3 Overhaul Manual, Turboshaft Models 250-C28 Series (O/H).
- (5) 14W2 Operation and Maintenance Manual, Turboshaft Models 250-C30, -C30S, -C30G, -C30G/2, -C30P, -C30M (OMM).
- (6) 14W2RU Operation and Maintenance Manual, Turboshaft Models 250-C30R, -C30R/1, -C30U (OMM).
- (7) 14W3 Overhaul Manual, Turboshaft Models 250-C30 Series (O/H).
- (8) CSP 21006 Operation and Maintenance Manual, Turboshaft Model 250-C30R/3M (OMM).
- (9) CSP 21000 Operation and Maintenance Manual, Turboshaft Model 250-C40B (OMM).
- (10) CSP 21001 Operation and Maintenance Manual, Turboshaft Model 250-C47B (OMM).
- (11) CSP 21004 Operation and Maintenance Manual, Turboshaft Model 250-C47M (OMM).
- (12) CSP 22001 Overhaul Manual, Turboshaft Models 250-C40B, -C47, -C30R/3 Series (O/H).
- (13) CSP 21007 Operation and Maintenance Manual, Turboshaft Models 250-C20R Series (OMM).
- (14) GTP 5232-3 Overhaul Manual, Turboshaft Models 250-C20R Series (O/H).
- (15) 11W2 Operation and Maintenance Manual, Turboprop Models 250-B17 Series (OMM).
- (16) GTP 5243-2 Operation and Maintenance Manual, Turboprop Models 250-B17F Series (OMM).
- (17) GTP 5243-3 Overhaul Manual, Turboshaft Models 250-B17F Series (O/H).

L. Other Publications Affected - Life Limited Part Log Card (GT12017).

Life Limited Part Log Card has been created for this recording purpose. Cards may be ordered from AVIALL free of charge.

M. Prerequisites - None

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#### 2. ACCOMPLISHMENT INSTRUCTIONS

- A. Vibration Test Procedure - To be conducted until such time that para 2.B. is complete or a power turbine outer shaft not subject to this CEB is installed.  
(REF. ENGINE-ADJUSTMENT / TEST, Vibration Test Procedure, OMM)

- (1) Do the baseline vibration check of the turbine accelerometer location. It has been determined that this is the most appropriate location for this required check. Reference the chart below for the discrete frequencies to be tested. For each engine model the discrete frequencies tested are at 100% power turbine speed and performed on a ground check. The aircraft must pull as much power as possible without lifting off (light on skids).

ENGINE MODEL	POWER TURBINE 100% (RPM)	HZ	GAS PRODUCER TURBINE 100% (RPM)	HZ
C40B	30,908	515.13	51,000	849.95
C47B	32,183	536.38	51,000	849.95
C47M	30,650	510.83	51,000	849.95
C30R/3	30,650	510.83	51,000	849.95
C30	30,650	510.83	51,000	849.95
C30P	30,650	510.83	51,000	849.95
C30G	30,650	510.83	51,000	849.95
C30G/2	30,736	512.27	51,000	849.95
C20R	33,290	554.83	50,970	849.94
B17	33,290	554.83	50,970	849.94
C20	33,290	554.83	50,970	849.94
B17F	33,290	554.83	50,970	849.94

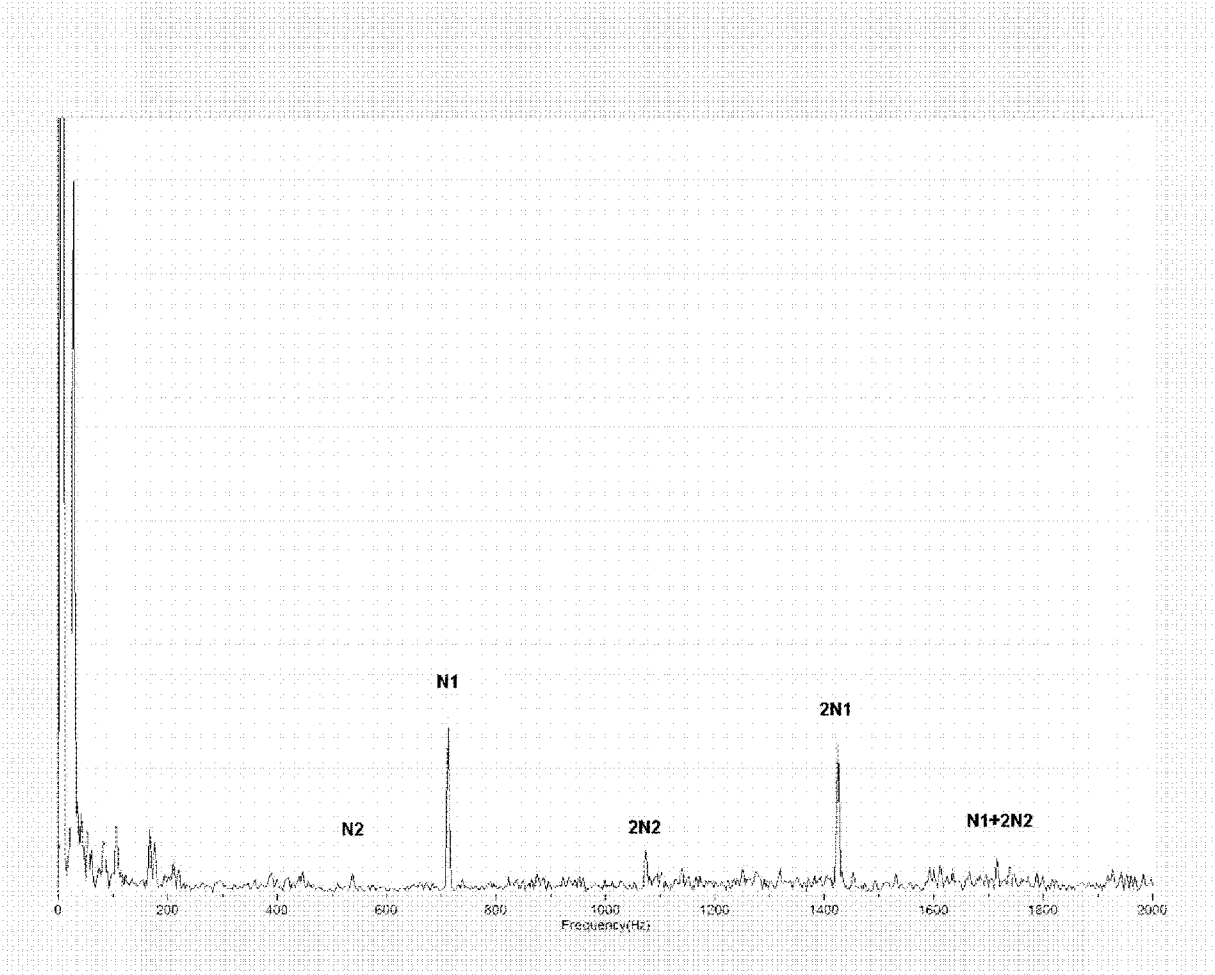
- (2) Figure 1 depicts a vibration card that shows a healthy vibration signature. Figure 2 depicts a vibration card that illustrates an elevated signature at the N2 frequency which this bulletin is written to address.
- (3) Record discrete vibration levels for 1X power turbine speeds and date performed, in the engine log book, for future reference regarding the 100/150 flight hour recurring intervals (depending on which regular scheduled maintenance Table you are using).
- (4) Examine the power turbine outer shaft if any vibration level is greater than 1.0 IPS at the discrete frequency of the power turbine outer shaft (as listed above).  
(REF. 72-50-00, OMM)  
(REF. 72-50-00, O/H)
- (5) Examine the power turbine outer shaft if any change in vibration level is greater than 0.2 IPS at each 100/150 hour inspection (depending on which Regular Scheduled Maintenance Table you are operating to) as compared to the previous vibration check.  
(REF. 72-50-00, OMM)  
(REF. 72-50-00, O/H)

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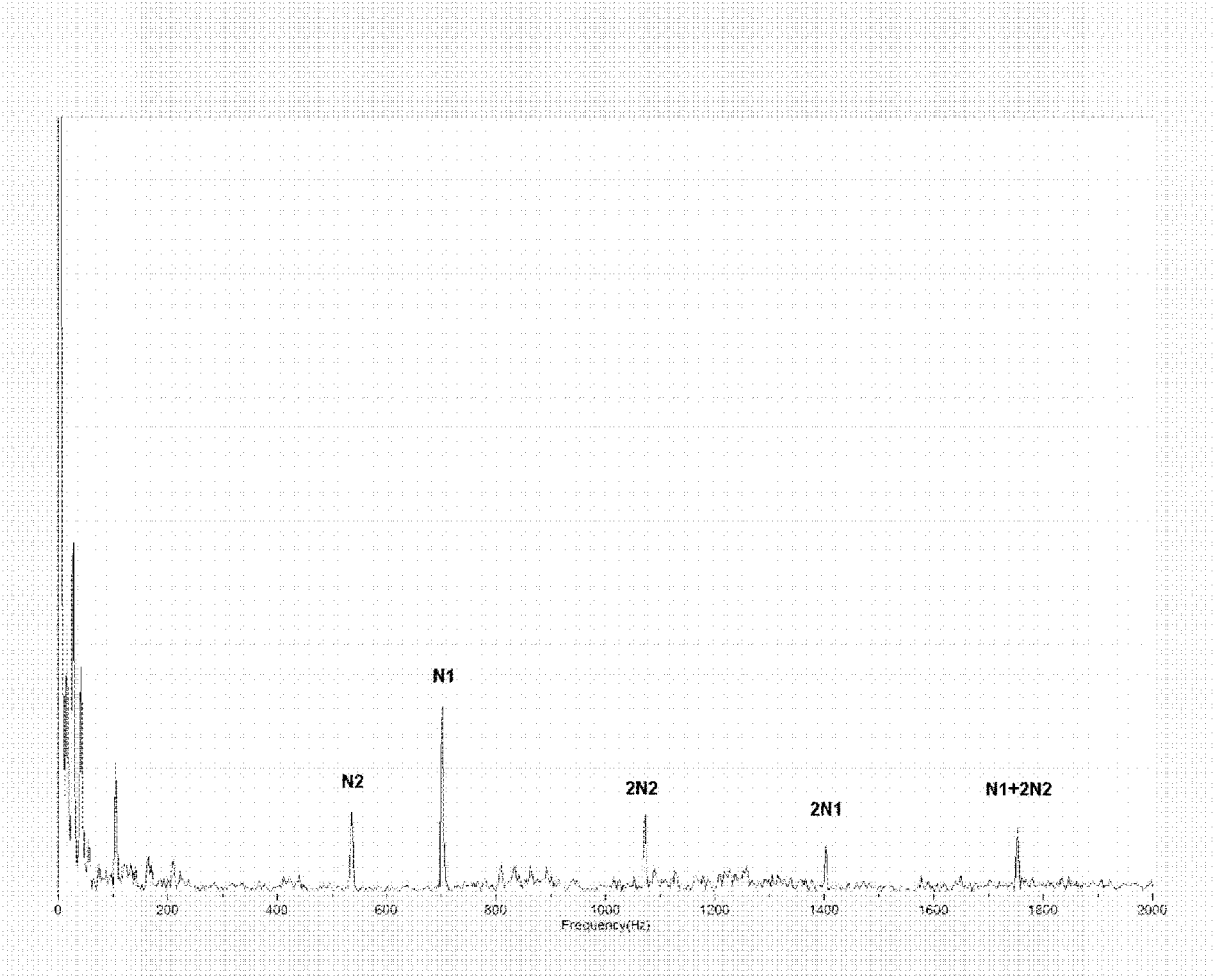
Vibration Card - Healthy N2 Frequency Signature  
FIG. 1

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250-C20 Series	CEB A-1398	250-C40B	CEB A-72-5052
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Vibration Card - Elevated N2 Frequency Signature  
FIG. 2

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- (6) Examine the power turbine outer shaft if the N2 vibration level is greater than the N1 vibration level during the 100/150 hour vibration check.

NOTE: Unknown high oil consumption and/or excessive smoking from the turbine is also reason to suspect the power turbine outer shaft. Do a check of the applicable Operations and Maintenance Manual (OMM) Troubleshooting section before determining that it may be the power turbine outer shaft.

B. Inspect the power turbine outer shaft.

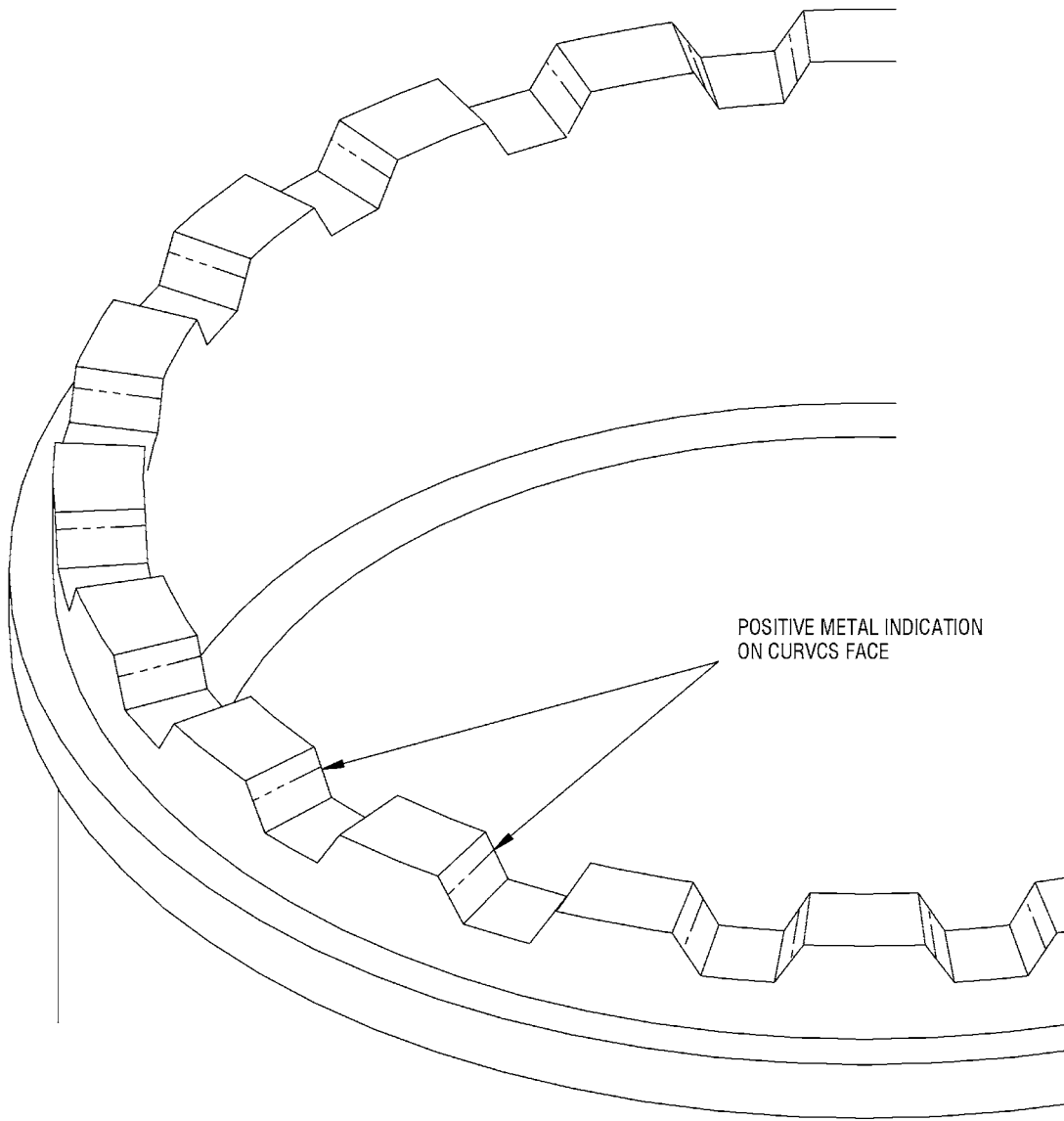
- (1) Remove the turbine assembly.  
(REF. 72-50-00, OMM)
- (2) Send turbine assembly to approved overhaul facility.
- (3) Disassemble the turbine assembly to gain access to the power turbine outer shaft.  
(REF. 72-50-00, O/H)
- (4) Inspect the power turbine outer shaft for positive material indications.  
(REF. FIG. 3)
- (5) Inspect the power turbine outer shaft (REF. 72-50-00, O/H). No signs of fretting in the curvic teeth is allowed.
  - (a) If the power turbine outer shaft is determined to be acceptable, it may be returned to service and no further recurring inspections are required.
  - (b) If the power turbine outer shaft shows positive material indications or fails other inspection criteria, the part must be replaced with a new or known serviceable part. If part is rejected, the fourth-stage turbine wheel curvics area must be inspected (REF. 72-50-00 O/H).
- (6) Contact Rolls-Royce Customer Support (contact information listed at end of this bulletin) to report status of all inspected power turbine outer shafts from the effectivity tables in para 1.A.(1).
  - (a) The following information should be reported:
    - 1 Part Number.
    - 2 Serial Number.
    - 3 Engine Serial Number.
    - 4 Accept or Reject
- (7) Install the power turbine outer shaft.  
(REF. 72-50-00, O/H)
- (8) Install the turbine assembly onto engine.  
(REF. 72-50-00, OMM)

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Power Turbine Outer Shaft Inspection  
FIG. 3

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C. Record events in the Engine Log Book, Life Limited Part Log Card, as applicable.

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250-C30 Series	CEB A-72-3278
250-C40B	CEB A-72-5052
250-C47 Series	CEB A-72-6060
250-B17 Series	CEB TP A-1341
250-B17F Series	CEB TP A-72-2089

### 3. MATERIAL INFORMATION

#### A. Configuration Chart

NEW P/N	QTY/ ENG	NAME	OLD P/N	QTY/ ENG	INSTRUCTIONS/ DISPOSITION
23038136	1	Shaft, Power Turbine Outer	23038136	1	1, 2, 3
23037413	1	Shaft, Power Turbine Outer	23037413	1	1, 2, 3
23051546	1	Shaft, Power Turbine Outer	23051546	1	1, 2, 3

#### INSTRUCTIONS/DISPOSITION NOTES

1. New item.
2. Inspect and return to service.
3. Inspect and reject.

Contact Rolls-Royce Customer Support:  
email: Model250CustSupp@Rolls-Royce.com  
Fax: 1 (317) 230-3381  
Phone (domestic): 1 (888) 255-4766  
Phone (international): 1 (317) 230-2720

CUSTOMER SUPPORT  
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