

SERVICE INFORMATION NO. SI D4-150

NOTE: SI's are used only:
1) To distribute information from DAI to our customers.
2) To distribute applicable information/documents from our suppliers to our customers with additional information.
Typically there is no revision service for SI's. Each new information or change of that will be sent along with a new SI.

I. TECHNICAL DETAILS

1.1 Airplanes affected:

All DA 40 D aircraft

1.2 Subject:

EASA Emergency Airworthiness Directive No. 2011-0152-E
TM TAE 125-0021, Rev 1 - Replacement Clutch
TM TAE 125-1011 P1, Rev 1 - Replacement Clutch
ATA-Code: 72-10

1.3 Reason:

EASA has issued Emergency Airworthiness Directive No. 2011-0152-E which supersedes EASA Emergency Airworthiness Directive No. 2011-0111-E and prescribes replacement of certain part numbers and serial numbers of clutch assemblies in reference to TM TAE 125-0021, Rev 1 and TM TAE 125-1011 P1, Rev 1.

TAE has identified a batch of spring discs in clutch assemblies which received a non-conforming heat treatment process. This might result in an un-airworthy condition of the engine.

TAE has now widened the range of affected clutch serial numbers. Depending on the operation time of the clutch it may be necessary to replace the clutch assembly immediately. Then only a ferry flight to the maintenance station is permitted.

1.4 Information:

For detailed technical information refer to EASA Emergency Airworthiness Directive No. 2011-0152-E, TM TAE 125-0021, Rev 1 and TM TAE 125-1011 P1, Rev 1 which are applicable without any further additions or restrictions.




Diamond Aircraft Industries GmbH
N.A. Otto-Straße 5
A-2700 Wiener Neustadt
Austria

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II. OTHERS

EASA Emergency Airworthiness Directive No. 2011-0152-E, TM TAE 125-0021, Rev 1 and TM TAE 125-1011 P1, Rev 1 are attached to this Service Information.

In case of doubt contact Thielert Aircraft Engines GmbH or Diamond Aircraft Industries GmbH.

EASA	EMERGENCY AIRWORTHINESS DIRECTIVE	
	<p>AD No.: 2011-0152-E</p> <p>Date: 18 August 2011</p> <p>Note: This Emergency Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EC) No 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation</p>	
<p>This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].</p>		
<p>Type Approval Holder's Name : Thielert Aircraft Engines GmbH</p>	<p>Type/Model designation(s) : TAE 125 engines</p>	
<p>TCDS Number:</p>	<p>EASA.E.055</p>	
<p>Foreign AD:</p>	<p>Not applicable</p>	
<p>Supersedure:</p>	<p>This AD supersedes EASA Emergency AD 2010-0111-E dated 10 June 2010, including its Correction dated 11 June 2010.</p>	
ATA 72	Engine – Clutch Assembly – Identification / Replacement	
<p>Manufacturer(s):</p>	<p>Thielert Aircraft Engines (TAE)</p>	
<p>Applicability:</p>	<p>TAE 125-01 (commercial designation Centurion 1.7), all serial numbers, if a clutch assembly with Part Number (P/N) 02-7210-11001R13 is installed, and TAE 125-02-99 (commercial designation Centurion 2.0), all serial numbers, if a clutch assembly with P/N 05-7211-K006001 or P/N 05-7211-K006002 is installed.</p> <p>These engines are known to be installed on, but not limited to, the following aeroplane types, mostly through application of a Supplemental Type certificate (STC):</p> <ul style="list-style-type: none"> - Cessna 172 and (Reims-built) F172 series (STC EASA.A.S.01527), - Piper PA-28 series (STC EASA.A.S.01632), - CEAPR (APEX, Robin) DR 400 series (STC EASA.A.S.01380), and - Diamond DA 40 and DA 42 series. 	
<p>Reason:</p>	<p>In-flight engine shutdown incidents have been reported on aeroplanes equipped with TAE 125 engines. Preliminary investigations showed that it was mainly the result of nonconforming disc springs (improper heat treatment) used in a certain production batch of the clutch.</p> <p>This condition, if not corrected, could result in further cases of engine in-flight shutdown and consequent loss of control of the aeroplane.</p> <p>To address this unsafe condition, EASA issued Emergency AD 2010-0111-E to require identification of the affected P/N clutch assemblies on TAE 125-01 and TAE 125-02-99 engines and replacement with new clutch assemblies.</p> <p>Since that AD was issued, TAE have identified further affected clutch</p>	

	<p>assemblies. The two Service Bulletins (SB/TM) have been revised accordingly, adding the serial numbers of those units to the lists.</p> <p>For the reasons described above, this AD retains the requirements of EASA AD 2010-0111-E, which is superseded, and makes reference to the revised TAE SB/TM publications for identification and replacement of the affected clutch assemblies.</p>																
Effective Date:	22 August 2011																
Required Action(s) and Compliance Time(s):	<p>Required as indicated, unless accomplished previously:</p> <p>(1) Before next flight after the effective date of this AD, identify the serial number (s/n) of each P/N 02-7210-11001R13, P/N 05-7211-K006001 and P/N 05-7211-K006002 clutch assembly installed on the aeroplane. If the s/n of a clutch matches one of those listed in TAE SB TM TAE 125-0021 Revision 1 (for TAE 125-01 engines) or in TAE SB TM TAE 125-1011 P1 Revision 1 (for TAE 125-02-99 engines), as applicable to engine model, within the compliance time specified in Table 1 or Table 2 of this AD, as applicable, replace the clutch assembly with a serviceable part.</p> <p style="text-align: center;">Table 1 – Single engine aeroplanes</p> <table border="1" data-bbox="555 857 1457 1171"> <thead> <tr> <th>Time accumulated by the clutch</th> <th>Compliance time</th> </tr> </thead> <tbody> <tr> <td>100 flight hours (FH) or more</td> <td>Before next flight after the effective date of this AD (see note below)</td> </tr> <tr> <td>Less than 100 FH</td> <td>Upon accumulating 100 FH or within the next 10 FH after the effective date of this AD, whichever occurs later</td> </tr> </tbody> </table> <p style="text-align: center;">Table 2 – Twin engine aeroplanes</p> <table border="1" data-bbox="555 1279 1457 1785"> <thead> <tr> <th>Installation and time accumulated by the clutch</th> <th>Compliance time</th> </tr> </thead> <tbody> <tr> <td>Only a single clutch affected, irrespective of time accumulated</td> <td>Upon accumulating 100 FH or within the next 50 FH after the effective date of this AD, whichever occurs later</td> </tr> <tr> <td colspan="2" style="text-align: center;">Both clutches affected, identify time accumulated for each clutch:</td> </tr> <tr> <td>Clutch with 100 FH or more</td> <td>Before next flight after the effective date of this AD (see note below)</td> </tr> <tr> <td>Clutch with less than 100 FH</td> <td>Upon accumulating 100 FH or within the next 10 FH after the effective date of this AD, whichever occurs later</td> </tr> </tbody> </table> <p>Note: A single ferry flight (maximum of 2 FH, under VFR conditions only) is allowed to a maintenance facility to accomplish the required clutch assembly replacement.</p> <p>(2) An engine that is already compliant with EASA AD 2011-0111-E is considered to be compliant with the requirements of paragraph (1) this AD, provided it can be positively determined that no clutch assembly, having a P/N and s/n listed in TAE SB TM TAE 125-0021 Revision 1 (for TAE 125-01</p>	Time accumulated by the clutch	Compliance time	100 flight hours (FH) or more	Before next flight after the effective date of this AD (see note below)	Less than 100 FH	Upon accumulating 100 FH or within the next 10 FH after the effective date of this AD, whichever occurs later	Installation and time accumulated by the clutch	Compliance time	Only a single clutch affected, irrespective of time accumulated	Upon accumulating 100 FH or within the next 50 FH after the effective date of this AD, whichever occurs later	Both clutches affected, identify time accumulated for each clutch:		Clutch with 100 FH or more	Before next flight after the effective date of this AD (see note below)	Clutch with less than 100 FH	Upon accumulating 100 FH or within the next 10 FH after the effective date of this AD, whichever occurs later
Time accumulated by the clutch	Compliance time																
100 flight hours (FH) or more	Before next flight after the effective date of this AD (see note below)																
Less than 100 FH	Upon accumulating 100 FH or within the next 10 FH after the effective date of this AD, whichever occurs later																
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Both clutches affected, identify time accumulated for each clutch:																	
Clutch with 100 FH or more	Before next flight after the effective date of this AD (see note below)																
Clutch with less than 100 FH	Upon accumulating 100 FH or within the next 10 FH after the effective date of this AD, whichever occurs later																

	<p>engines) or in TAE SB TM TAE 125-1011 P1 Revision 1 (for TAE 125-02-99 engines), both dated 17 August 2011, is installed on that engine.</p> <p>(3) From the effective date of this AD, do not install on any aeroplane a TAE 125 engine with a P/N 02-7210-11001R13, P/N 05-7211-K006001 or P/N 05-7211-K006002 clutch assembly installed, and do not install on any TAE 125 engine a P/N 02-7210-11001R13, P/N 05-7211-K006001 or P/N 05-7211-K006002 clutch assembly, unless it has been verified that the s/n of the clutch assembly (to be) installed on the engine is not listed in TAE SB TM TAE125-0021 Rev.1 or TAE SB TM TAE 125-1011 P1 Rev.1, as applicable to engine model.</p>
Ref. Publications:	<p>TAE SB TM TAE 125-0021 Rev.1 dated 17 August 2011.</p> <p>TAE SB TM TAE 125-1011 P1 Rev.1 dated 17 August 2011.</p> <p>The use of later approved revisions of these documents is acceptable for compliance with the requirements of this AD.</p>
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD. 2. The safety assessment has requested not to implement the full consultation process and an immediate publication and notification. 3. Enquiries regarding this AD should be referred to the Safety Information Section, Executive Directorate, EASA. E-mail: ADs@easa.europa.eu. 4. For any question concerning the technical content of the requirements in this AD, please contact Thielert Aircraft Engines, Platanenstraße 14, D-09350 Lichtenstein, Federal Republic Germany Telephone +49-37204-696-0, Fax +49-37204-696- 2912, E-mail info@centurion-engines.com.

Technische Mitteilung / Service Bulletin

Technische Mitteilung Nr. / Datum: TM TAE 125-0021, Rev. 1 / 17.08.2011
Service Bulletin No. / Date TM TAE 125-0021, Rev. 1 / August 17, 2011

Betrifft: Austausch Kupplung
Subject: Replacement clutch

Betroffenes Luftfahrtgerät: TAE 125-01
Type affected: TAE 125-01

Betroffene Geräte-Nr.: Kupplung P/N 02-7210-11001R13 mit den folgenden Seriennummern:

00055	10343	10711	10931	11151
00159	10352	10722	10944	11153
00361	10354	10736	10963	11160
00385	10357	10754	10972	11194
00406	10363	10758	10979	11257
00414	10382	10764	10983	
00437	10393	10767	10995	
00438	10407	10768	10998	
10008	10409	10769	11002	
10010	10416	10777	11004	
10013	10448	10778	11018	
10082	10466	10802	11019	
10083	10473	10807	11023	
10098	10487	10809	11027	
10111	10490	10812	11030	
10126	10492	10826	11035	
10135	10517	10833	11051	
10137	10540	10834	11063	
10141	10554	10838	11064	
10176	10568	10853	11071	
10185	10576	10862	11086	
10199	10600	10864	11098	
10226	10602	10876	11104	
10235	10611	10881	11107	
10270	10648	10894	11112	
10294	10686	10897	11116	
10314	10687	10906	11119	
10324	10694	10911	11129	
10335	10700	10924	11148	
10341	10705	10925	11150	

Checked

C. Rudolph, CVE

Approved

D. Hartung, Office of Airworthiness

Technische Mitteilung / Service Bulletin

Technische Mitteilung Nr. / Datum: TM TAE 125-0021, Rev. 1 / 17.08.2011
Service Bulletin No. / Date TM TAE 125-0021, Rev. 1 / August 17, 2011

Models affected:

Clutch P/N 02-7210-11001R13 with the following serial numbers:

00055	10343	10711	10931	11151
00159	10352	10722	10944	11153
00361	10354	10736	10963	11160
00385	10357	10754	10972	11194
00406	10363	10758	10979	11257
00414	10382	10764	10983	
00437	10393	10767	10995	
00438	10407	10768	10998	
10008	10409	10769	11002	
10010	10416	10777	11004	
10013	10448	10778	11018	
10082	10466	10802	11019	
10083	10473	10807	11023	
10098	10487	10809	11027	
10111	10490	10812	11030	
10126	10492	10826	11035	
10135	10517	10833	11051	
10137	10540	10834	11063	
10141	10554	10838	11064	
10176	10568	10853	11071	
10185	10576	10862	11086	
10199	10600	10864	11098	
10226	10602	10876	11104	
10235	10611	10881	11107	
10270	10648	10894	11112	
10294	10686	10897	11116	
10314	10687	10906	11119	
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Technische Mitteilung / Service Bulletin

Technische Mitteilung Nr. / Datum: TM TAE 125-0021, Rev. 1 / 17.08.2011
Service Bulletin No. / Date TM TAE 125-0021, Rev. 1 / August 17, 2011

Einstufung: Kategorie 1 – Sicherheit
Compliance: Category 1 – safety

Dringlichkeit:

Einmotorige Installationen:

TSI Kupplung über 100 Std.:
Weiterer Betrieb ist nur für den Überflugsflug zum nächsten Wartungsbetrieb zur Durchführung der in dieser Technischen Mitteilung genannten Maßnahmen gestattet. Dieser Flug ist limitiert auf VFR und darf eine Flugdauer von 2 Stunden nicht überschreiten.

TSI Kupplung unter 100 Std.:
Maßnahmen sind innerhalb der nächsten 10 Flugstunden oder mit der nächsten Wartung durchzuführen, maßgebend ist das ersteintreffende Ereignis.

Zweimotorige Installationen:

Wenn eine Kupplung der Installation betroffen ist:
Maßnahmen sind innerhalb der nächsten 50 Flugstunden oder mit der nächsten Wartung durchzuführen, maßgebend ist das ersteintreffende Ereignis.

Wenn beide Kupplungen der Installation betroffen sind:
Siehe einmotorige Installationen.

Accomplishment:

Single engine installations:

TSI clutch above 100 hrs:
Further operation is allowed only as Ferry Flight to the next Maintenance Station to accomplish the requirements of this Service Bulletin. The maximum flight duration shall be 2 hours and limited to VFR conditions.

TSI Clutch less than 100 hrs:
Measures have to accomplish within the next 10 flight hours or with the next maintenance, whichever occurs first.

Twin engine installations:

If one clutch of the installation is affected: Measures have to accomplish within the next 50 flight hours or with the next maintenance, whichever occurs first.

*If both clutches of the installation are affected:
Refer to single engine installations.*

Grund:

Ermittlung einer Charge von Tellerfedern, welche einen unzureichenden Wärmebehandlungsprozess erhalten hat. Dies kann zu einem nicht flugtauglichen Zustand des Motors führen.

Reason:

*Identification of a batch of Belleville washer / disk springs which received a non-conforming heat treatment process.
This might result in an unairworthy condition of the engine.*

Technische Mitteilung / Service Bulletin

Technische Mitteilung Nr. / Datum: TM TAE 125-0021, Rev. 1 / 17.08.2011
Service Bulletin No. / Date TM TAE 125-0021, Rev. 1 / August 17, 2011

Maßnahmen:**Austausch der Kupplung:**

1. Die Kupplung und den Zwischenflansch gemäß dem aktuellen Reparaturhandbuch RM-02-01, Kapitel 05.1 austauschen.

Measures:**Replacement of the clutch:**

1. Replace the clutch. Refer to chapter 05.1 of the current Repair Manual RM-02-01.

Hinweise:**Arbeitsaufwand:**

Gemäß der aktuellen labor allowance list.

Gutschreibung:

Auf Grundlage der aktuellen veröffentlichten Laufzeit des betroffenen Bauteils (gemäß OM-02-01, Kapitel 5 und 6) werden die Bauteilkosten und der Arbeitsaufwand für die nicht genutzte Laufzeit gutgeschrieben.

Remarks:**Labor Effort:**

In accordance with the current labor allowance list

Credit:

Based on the current published service time of the affected part(s) (refer to OM-02-01, Chapter 5 and 6) the remaining useful service time will be credited for part(s) and labor effort.

Teile/:**Parts:**

Teile Nummer / Part Number	Beschreibung / Description	Menge / Quantity
05-7211-K009406	ZSB Kupplung / Assembly Clutch	1
05-7212-K020804	Zwischenflansch / Intermediate Flange	1
NM-0000-0030801	Sechskantschraube M10x40-10.9 Hexagon Head Screw M10x40-10.9	2
NM-0000-0140401	Sicherungsscheibe Lock Washer	2
NM-0000-0030601	Zylinderschraube M8x30-8.8 Cylinder Head Screw M8x30-8.8	1
NM-0000-0004801	Unterlegscheibe Washer	1
VR00173-01-0103	Sperrhalter Schwungscheibe Flywheel Locking Tool	1

Zulassung:

Die technischen Informationen, die in diesem Dokument enthalten sind, wurden im Rahmen der Befugnisse der EASA- Genehmigung als Entwicklungsbetrieb Nr. EASA.21J.010 genehmigt.

Approval:

The technical information contained in this document have been approved under the authority of EASA Design Organisation Approval no. EASA.21J.010.

Technische Mitteilung / Service Bulletin**PRIORITY 1 – Safety**

Technische Mitteilung TM TAE 125-1011 P1, Rev. 1 / 17.08.2011
Nr. / Datum:

Service Bulletin No. / TM TAE 125-1011 P1, Rev. 1 / August 17, 2011
Date:

Betrifft: Austausch Kupplung

Subject: Clutch Replacement

Betroffenes TAE 125-02-99 (CENTURION 2.0), TAE 125-02-114 (CENTURION 2.0S) |
Luftfahrtgerät:

Type affected: TAE 125-02-99 (CENTURION 2.0), TAE 125-02-114 (CENTURION 2.0S) |

Checked

C. Rudolph, CVE



Approved

D. Hartung, Office of Airworthiness

**Ersetzt Technische Mitteilung Nr. / Datum:**

TM TAE 125-1011 P1, Initial Issue / 09.06.2010

Replaces Service Bulletin No. / Date:

TM TAE 125-1011 P1, Initial Issue / June 09, 2010

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Betroffene Geräte-Nr.:Kupplung P/N 05-7211-K006001 oder P/N 05-7211-K006002 mit den
folgenden Seriennummern:

20006	20351	20520	20963	21386	21707	22229
20011	20352	20522	20981	21390	21715	22230
20012	20356	20524	20982	21405	21717	22231
20040	20362	20527	20985	21409	21770	22236
20053	20364	20535	20988	21411	21773	22238
20054	20365	20537	20997	21418	21776	22240
20066	20370	20540	21013	21419	21777	22241
20090	20372	20543	21014	21421	21778	22243
20093	20373	20544	21021	21424	21779	22244
20101	20374	20553	21028	21425	21784	22246
20105	20383	20571	21040	21427	21786	22247
20136	20385	20592	21050	21443	21791	22251
20138	20388	20596	21053	21445	21792	22252
20145	20409	20600	21076	21457	21794	22253
20159	20410	20601	21119	21466	21826	22254
20161	20412	20604	21130	21469	21842	22255
20169	20419	20614	21134	21471	21854	22262
20174	20425	20624	21153	21478	22011	22266
20176	20427	20628	21154	21482	22139	22267
20188	20443	20629	21156	21488	22140	22268
20192	20449	20630	21164	21495	22154	22269
20199	20451	20632	21167	21500	22157	22271
20221	20456	20638	21169	21503	22160	22278
20231	20457	20652	21197	21505	22164	22279
20232	20458	20655	21218	21511	22167	22280
20240	20459	20667	21274	21512	22175	22281
20241	20462	20678	21297	21523	22176	22283
20265	20468	20682	21299	21543	22180	22288
20271	20470	20695	21301	21554	22183	
20284	20472	20703	21315	21562	22188	
20285	20474	20752	21320	21566	22189	
20297	20476	20760	21340	21579	22192	
20309	20478	20763	21349	21581	22193	
20322	20484	20765	21366	21585	22198	
20327	20487	20920	21369	21594	22199	
20341	20488	20933	21371	21636	22201	
20342	20491	20944	21373	21656	22224	
20343	20505	20950	21375	21669	22225	
20346	20507	20953	21376	21676	22226	
20348	20513	20959	21379	21680	22228	

Ersetzt Technische Mitteilung Nr. / Datum:

TM TAE 125-1011 P1, Initial Issue / 09.06.2010

Replaces Service Bulletin No. / Date:

TM TAE 125-1011 P1, Initial Issue / June 09, 2010

Models affected:*Clutch P/N 05-7211-K006001 or P/N 05-7211-K006002 with the following serial numbers:*

20006	20351	20520	20963	21386	21707	22229
20011	20352	20522	20981	21390	21715	22230
20012	20356	20524	20982	21405	21717	22231
20040	20362	20527	20985	21409	21770	22236
20053	20364	20535	20988	21411	21773	22238
20054	20365	20537	20997	21418	21776	22240
20066	20370	20540	21013	21419	21777	22241
20090	20372	20543	21014	21421	21778	22243
20093	20373	20544	21021	21424	21779	22244
20101	20374	20553	21028	21425	21784	22246
20105	20383	20571	21040	21427	21786	22247
20136	20385	20592	21050	21443	21791	22251
20138	20388	20596	21053	21445	21792	22252
20145	20409	20600	21076	21457	21794	22253
20159	20410	20601	21119	21466	21826	22254
20161	20412	20604	21130	21469	21842	22255
20169	20419	20614	21134	21471	21854	22262
20174	20425	20624	21153	21478	22011	22266
20176	20427	20628	21154	21482	22139	22267
20188	20443	20629	21156	21488	22140	22268
20192	20449	20630	21164	21495	22154	22269
20199	20451	20632	21167	21500	22157	22271
20221	20456	20638	21169	21503	22160	22278
20231	20457	20652	21197	21505	22164	22279
20232	20458	20655	21218	21511	22167	22280
20240	20459	20667	21274	21512	22175	22281
20241	20462	20678	21297	21523	22176	22283
20265	20468	20682	21299	21543	22180	22288
20271	20470	20695	21301	21554	22183	
20284	20472	20703	21315	21562	22188	
20285	20474	20752	21320	21566	22189	
20297	20476	20760	21340	21579	22192	
20309	20478	20763	21349	21581	22193	
20322	20484	20765	21366	21585	22198	
20327	20487	20920	21369	21594	22199	
20341	20488	20933	21371	21636	22201	
20342	20491	20944	21373	21656	22224	
20343	20505	20950	21375	21669	22225	
20346	20507	20953	21376	21676	22226	
20348	20513	20959	21379	21680	22228	

Ersetzt Technische Mitteilung Nr. / Datum:

TM TAE 125-1011 P1, Initial Issue / 09.06.2010

Replaces Service Bulletin No. / Date:

TM TAE 125-1011 P1, Initial Issue / June 09, 2010

Einstufung: Kategorie P1 – Sicherheit

Classification: Category P1 – Safety

Ausführung bis:

Einmotorige Installationen:

TSI Kupplung über 100 Std.:

Weiterer Betrieb ist nur für den Überführungsflug zum nächsten Wartungsbetrieb zur Durchführung der in dieser Technischen Mitteilung genannten Maßnahmen gestattet. Dieser Flug ist limitiert auf VFR und darf eine Flugdauer von 2 Stunden nicht überschreiten.

TSI Kupplung unter 100 Std.:

Maßnahmen sind innerhalb der nächsten 10 Flugstunden oder mit der nächsten Wartung durchzuführen, maßgebend ist das ersteintreffende Ereignis.

Zweimotorige Installationen:

Wenn eine Kupplung der Installation betroffen ist:

Maßnahmen sind innerhalb der nächsten 50 Flugstunden oder mit der nächsten Wartung durchzuführen, maßgebend ist das ersteintreffende Ereignis.

Wenn beide Kupplungen der Installation betroffen sind:

Siehe einmotorige Installationen.

Time of Compliance:

Single engine installations:

TSI clutch above 100 hrs:

Further operation is allowed only as Ferry Flight to the next Maintenance Station to accomplish the requirements of this Service Bulletin. The maximum flight duration shall be 2 hours and limited to VFR conditions.

TSI Clutch less than 100 hrs:

Measures have to accomplish within the next 10 flight hours or with the next maintenance, whichever occurs first.

Twin engine installations:

If one clutch of the installation is affected:

Measures have to accomplish within the next 50 flight hours or with the next maintenance, whichever occurs first.

If both clutches of the installation are affected:

Refer to single engine installations.

Grund:

Ermittlung einer Charge von Tellerfedern, welche einen unzureichenden Wärmebehandlungsprozess erhalten hat.

Dies kann zu einem nicht flugtauglichen Zustand des Motors führen.

Reason:

Identification of a batch of belleville washer / disk springs which received a non-conforming heat treatment process.

This might result in an unairworthy condition of the engine.

Maßnahmen:

1. Das Getriebe gemäß dem aktuellen Reparaturhandbuch RM-02-02, Kapitel 72-10.01 oder 72-10.15 demontieren.
2. Den Zwischenflansch gemäß dem aktuellen Reparaturhandbuch RM-02-02, Kapitel 72-10.08 austauschen.

◆ Hinweis: Der Austausch des Zwischenflansches ist nicht notwendig, wenn bereits der Zwischenflansch mit der Teilenummer 05-7212-K037901, 05-7212-K038001, 05-7212-K020804 oder 05-7212-K020903 installiert ist.

3. Die Kupplung gemäß dem aktuellen Reparaturhandbuch RM-02-02, Kapitel 72-10.12 austauschen.
4. Das Getriebe mit dem hinteren Getriebedeckel nach oben zeigend auf der Werkbank ablegen. Freigang der Propellerwelle sicherstellen.

Wenn der hintere Getriebedeckel die Teilenummer 05-7212-K000904 und den im Bild 1 sichtbaren Absatz aufweist muss der hintere Getriebedeckel nach den folgenden Schritten bearbeitet werden. Ansonsten mit Arbeitsschritt 19 fortfahren:

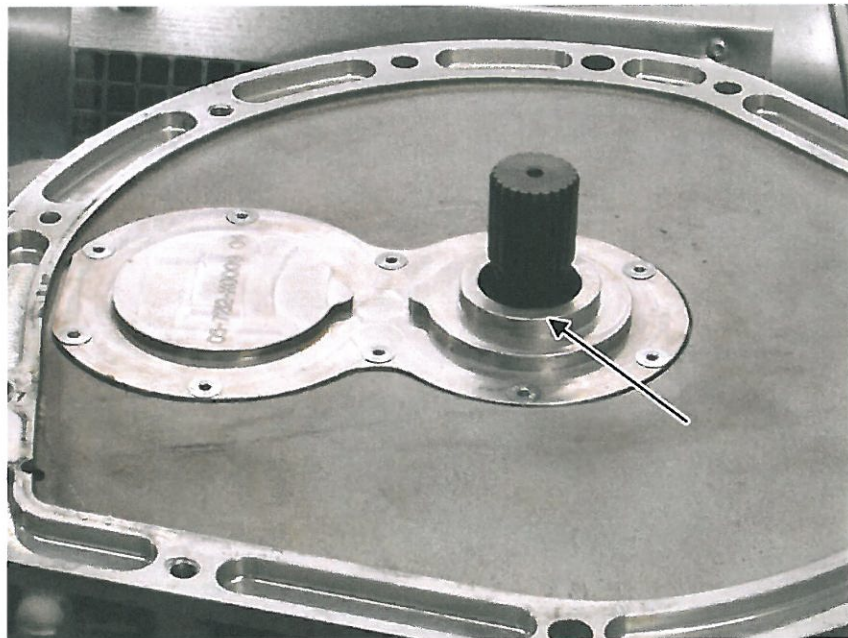


Bild 1 Absatz am Getriebedeckel

5. Das Spezialwerkzeug VR00388 über die Getriebeeingangswelle führen. Siehe Bild 2.

◆ Hinweis: Die beiden Innensechskantschrauben müssen lose sein. Siehe Bild 4.

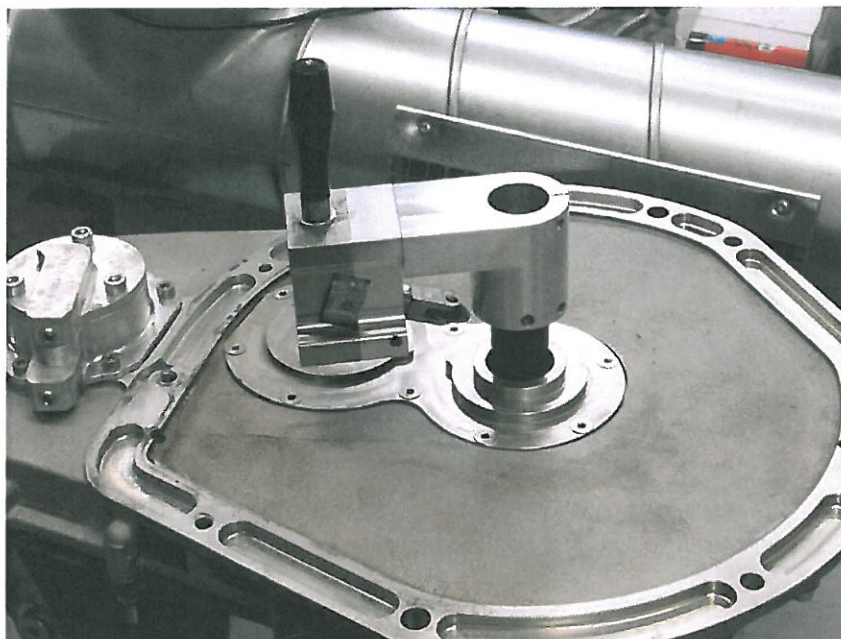


Bild 2 Spezialwerkzeug ansetzen

6. Das Spezialwerkzeug aufschieben und mit einer Fühlerlehre einen Abstand von 0.5mm zwischen Spezialwerkzeug und dem hinteren Getriebedeckel einrichten. Siehe Bild 3.

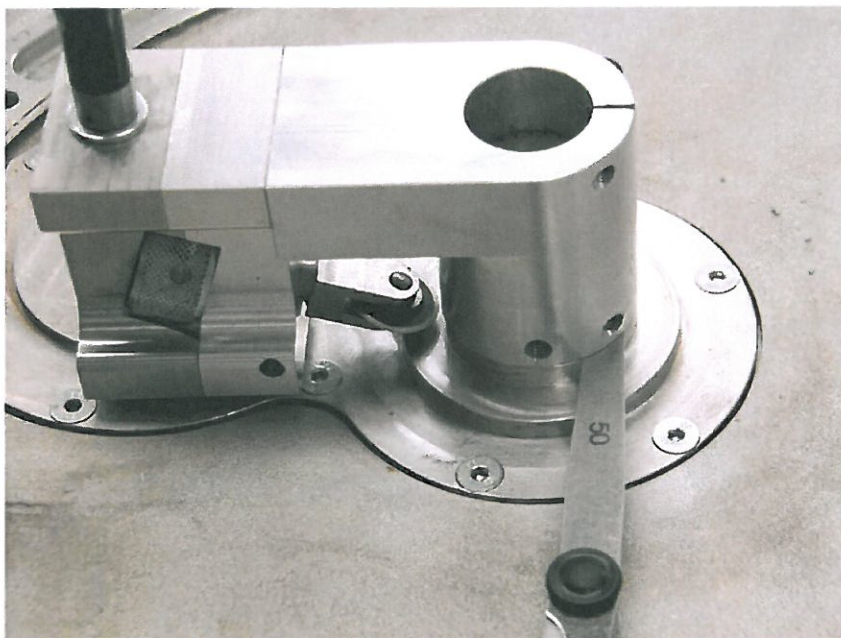


Bild 3 Abstand mit Fühlerlehre einstellen

7. Die zwei Innensechskantschrauben am Spezialwerkzeug mit dem vorgeschriebenen Drehmoment anziehen. Siehe Bild 4.

Anzugsmoment:

7 Nm

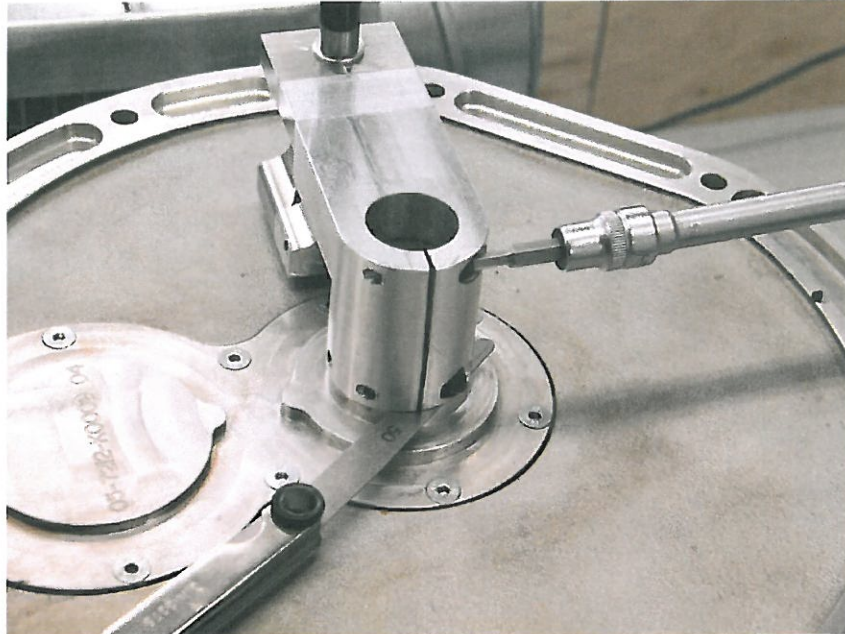


Bild 4 Feststellschrauben am Spezialwerkzeug

8. Fühlerlehre entnehmen.
 9. Das Einstellrad soweit drehen bis das Schneidwerkzeug am Bund des Getriebedeckels anliegt.
 10. Den Zylinderstift in die Bohrung des Einstellrades stecken. Siehe Bild 5.
 11. Das Einstellrad soweit drehen bis der Zylinderstift am Gehäuse des Werkzeuges anstößt.
- **ACHTUNG:** Das Einstellrad nicht weiter als 45° drehen, ansonsten kann das Schneidwerkzeug beschädigt werden!
- ◆ **Hinweis:** Den Zylinderstift zum Drehen des Einstellrades verwenden. Siehe Bild 5.

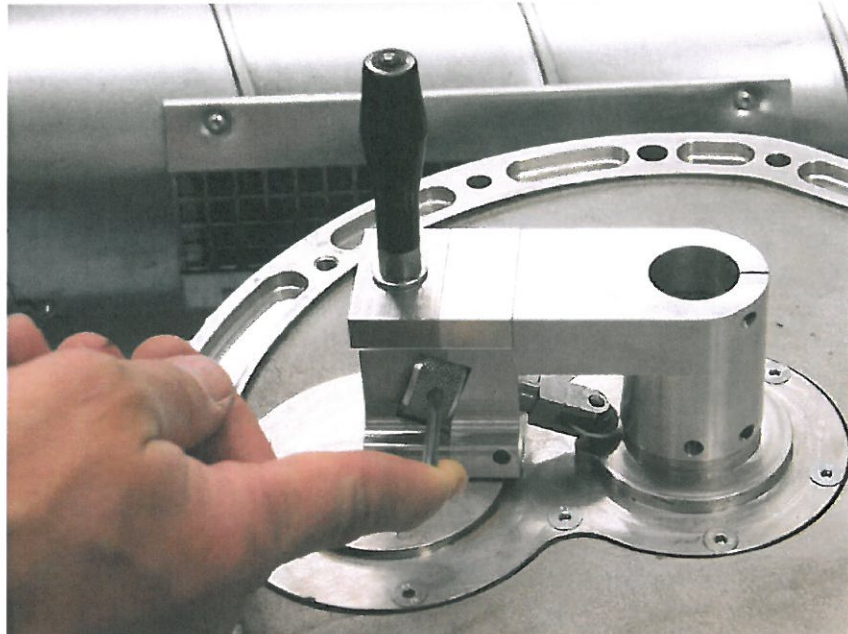


Bild 5 Das Schneidwerkzeug am Einstellrad zustellen

12. Das Werkzeug am Griff mehrere Umdrehungen mit der Getriebeeingangswelle drehen. Siehe Bild 6.



Bild 6 Spezialwerkzeug durch drehen

13. Anschließend analog zu Arbeitsschritt 12 das Schneidwerkzeug weiter zustellen und das Spezialwerkzeug am Griff drehen. Die Arbeitsschritte 12 und 13 solange wiederholen, bis sich der Bund vom Getriebedeckel löst. Siehe Bild 7.

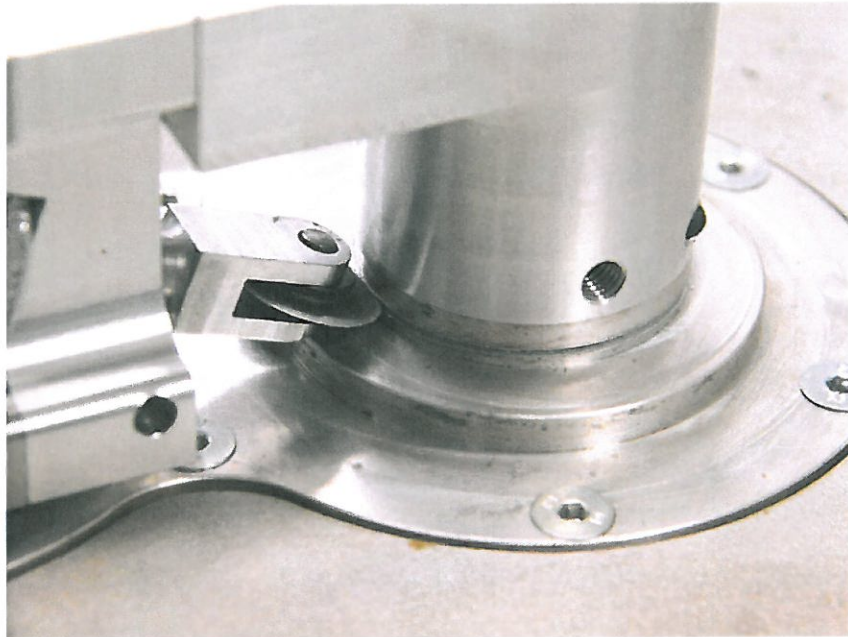


Bild 7 Bund ist abgetrennt

14. Das Einstellrad zurück drehen bis das Schneidwerkzeug ausreichend Freigang zur Entnahme des Spezialwerkzeuges hat.
15. Die zwei Zylinderschrauben vom Spezialwerkzeug lösen.
16. Das Spezialwerkzeug abnehmen.
17. Den Bund vom Getriebedeckel abnehmen. Siehe Bild 8.

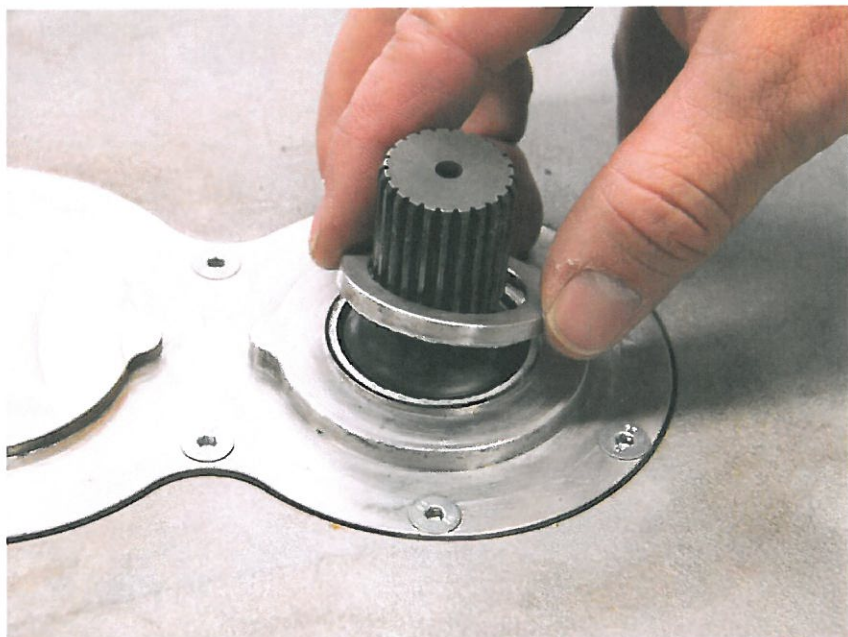


Bild 8 Den Bund abnehmen

18. Die Getrieberückseite mit dem Staubsauger reinigen.

19. Das Getriebe gemäß dem aktuellen Reparaturhandbuch RM-02-02, Kapitel 72-10.01 oder 72-10.15 montieren.

Correction:

1. Remove the gearbox. Refer to Chapter 72-10.01 or 72-10.15 of the current Repair Manual RM-02-02.
2. Exchange the intermediate flange. Refer to Chapter 72-10.08 of the current Repair Manual RM-02-02.

◆ Note: The replacement of the intermediate flange is not necessary, if intermediate flange P/N 05-7212-K037901, P/N 05-7212-K038001, P/N 05-7212-K020804 or P/N 05-7212-K020903 is already installed.

3. Exchange the clutch. Refer to Chapter 72-10.12 of the current Repair Manual RM-02-02.
4. Put the gearbox on the workbench with the rear gearbox cover facing upwards. Make sure that the propeller shaft has clearance to the workbench.

If the rear gearbox cover has the part number 05-7212-K000904 and the shoulder shown in Fig. 1, you must rework the rear gearbox cover in accordance to work steps which follow. Otherwise, proceed to step 19.

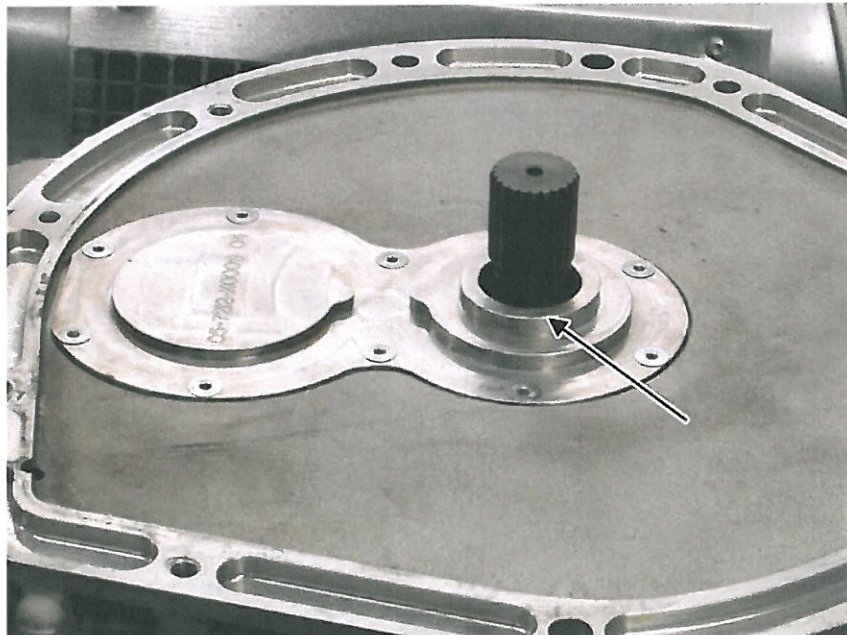


Fig. 1 Shoulder on the rear gearbox cover

5. Put the special tool VR00388 to the input shaft of the gearbox. See Fig. 2.

◆ Note: Make sure that the two cylinder head screws at the special tool are loose. See Fig. 4.

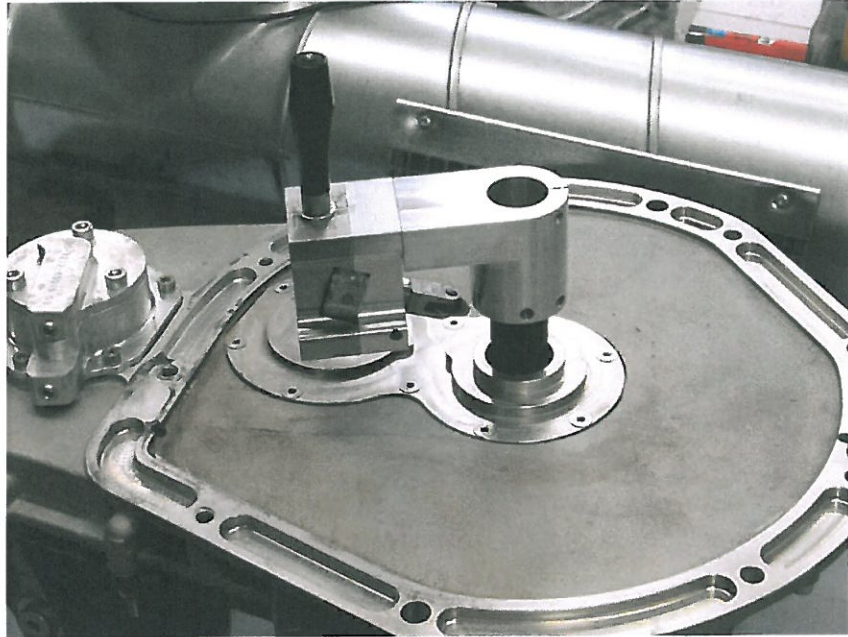


Fig. 2 Install special tool

6. Move the special tool downwards to the rear gearbox cover until there is a clearance of 0.5mm between the special tool and the rear gearbox cover. Use a feeler gauge to ensure the clearance of 0.5mm. See Fig. 3.

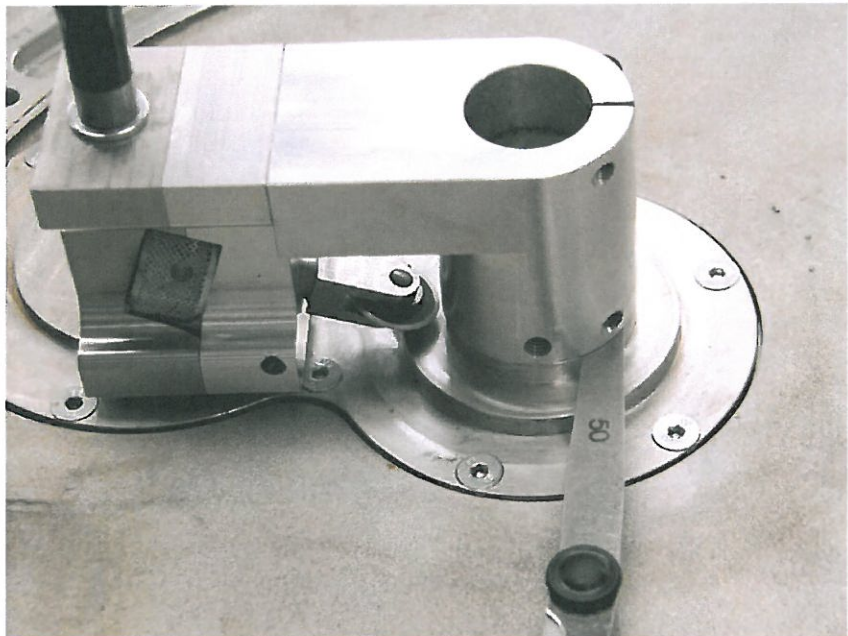


Fig. 3 Adjust clearance with feeler gauge

7. Tighten the two cylinder head screws to the specified tightening torque. See Fig. 4.

Tightening Torque:

20 Nm

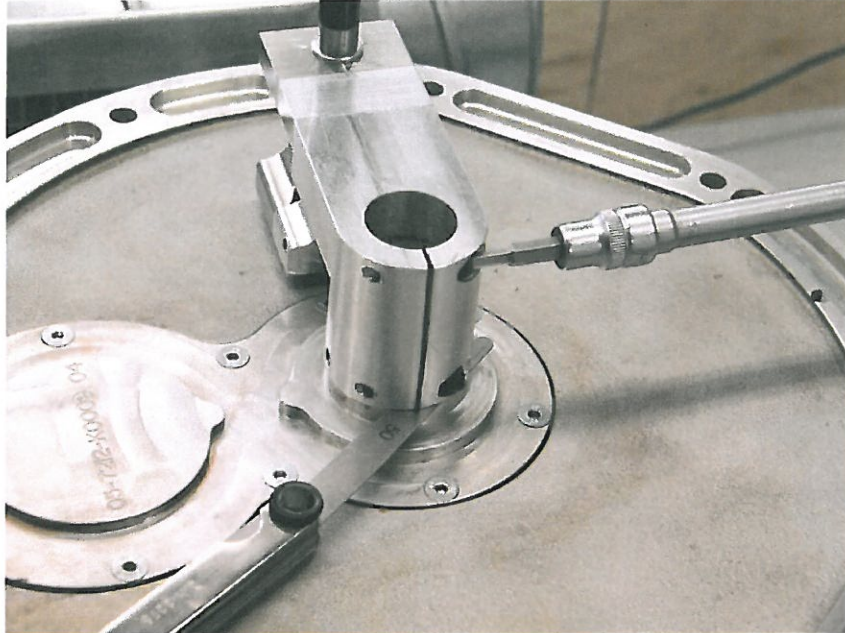


Fig. 4 Screws for the attachment of the special tool

8. Remove the feeler gauge.
9. Turn the adjustment wheel until the cutting tool touches the shoulder of the rear gearbox cover.
10. Put the cylinder pin in the drill hole of the adjustment wheel. See Fig. 5.
11. Turn the adjustment wheel until the cylinder pin touches the housing of the tool. See Fig. 5.

■ **CAUTION:** Do not turn the adjustment wheel more than 45°. It can cause damage to the cutting tool!

◆ **Note:** Use the cylinder pin to turn the adjustment wheel. See Fig. 5.

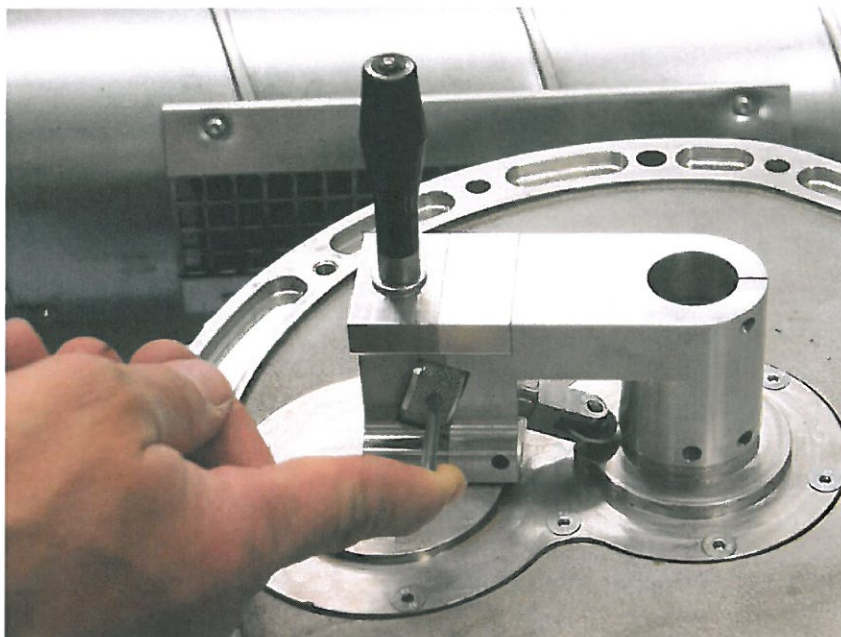


Fig. 5 Turn the adjustment wheel to feed the cutting tool

12. Turn the special tool together with the gearbox input shaft a few revolutions. Use the handle bar. See Fig. 6.

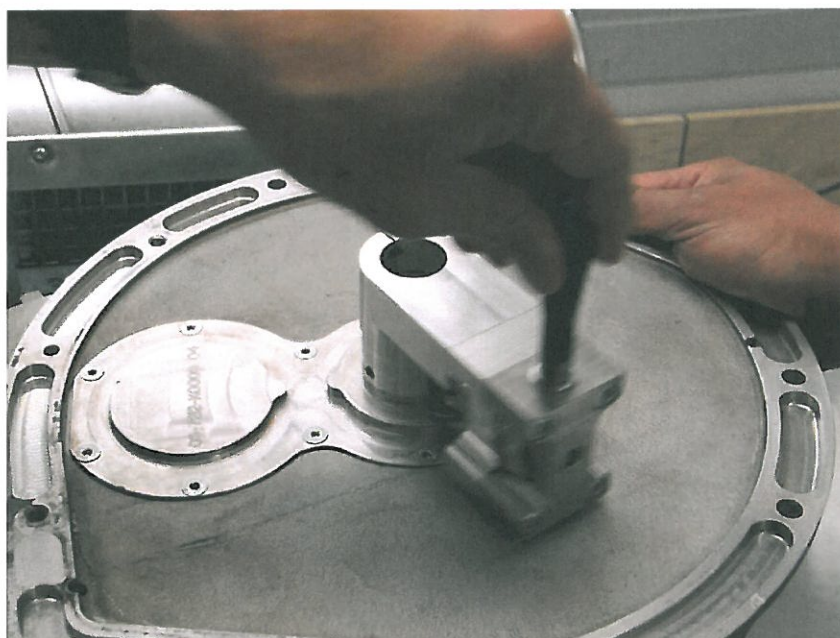


Fig. 6 Turn the special tool

13. Feed the cutting tool. Refer to work step 12. Then turn the special tool. Refer to work step 13. Repeat work step 12 and 13 until the shoulder of the rear gearbox cover gets loose. See Fig. 7.

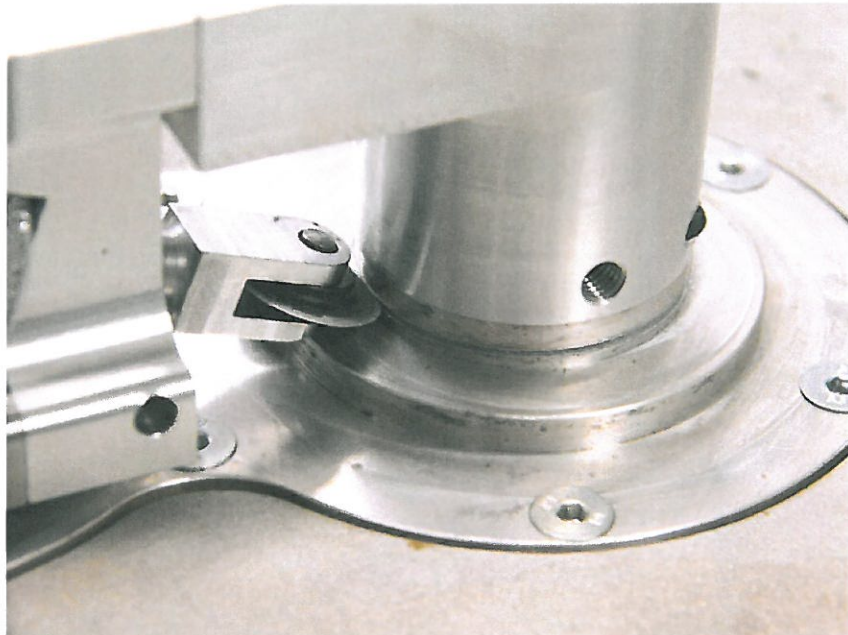


Fig. 7 Shoulder is cut through

14. Turn the adjustment wheel backwards until the cutting tool has enough clearance to the shoulder to remove the special tool.
15. Loosen the cylinder head screws of the special tool.
16. Remove the special tool.
17. Remove the shoulder of the rear gearbox cover. See Fig. 8.

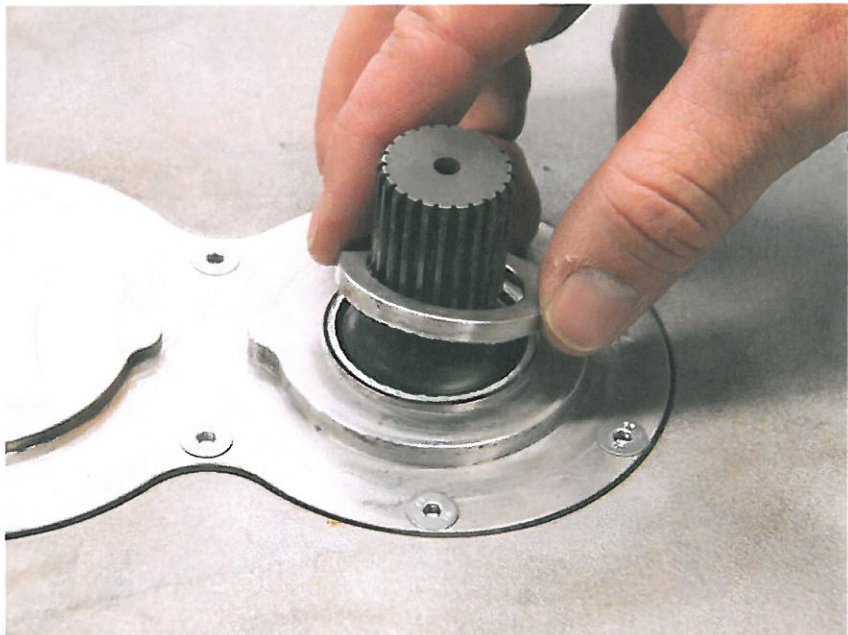


Fig. 8 Remove the shoulder

18. Clean the rear gearbox side with a vacuum cleaner.
19. Install the gearbox to the engine. Refer to Chapter 72-10.01 or 72-10.15 of the current Repair Manual RM-02-02.

Bemerkungen:

Arbeitsaufwand:

Gemäß der aktuellen labor allowance list.

Gutschreibung:

Auf Grundlage der aktuellen veröffentlichten Laufzeit des betroffenen Bauteils (gemäß OM-02-02, Kapitel 5 und 6) werden die Bauteilkosten und der Arbeitsaufwand für die nicht genutzte Laufzeit gutgeschrieben.

Remarks:

Labor Effort:

In accordance with the current labor allowance list

Credit:

Based on the current published service time of the affected part(s) (refer to OM-02-02, Chapter 5 and 6) the remaining useful service time will be credited for part(s) and labor effort.

Teile:

Parts:

Teile Nummer / Part Number	Beschreibung / Description	Menge / Quantity
05-7212-K037901 05-7212-K038001	Zwischenflansch Cessna, DAI Intermediate Flange Cessna, DAI Zwischenflansch Apex, Piper Intermediate Flange Apex, Piper	1
05-7212-K004402	Passhülse Fitting Sleeve	2
NM-0000-0216501	Gewindebolzen M8x32 Distance Bolt M8x32	1
NM-0000-0140401	Sicherungsscheibe NORD-LOCK NL10 SP SS Lock Washer NORD-LOCK NL10 SP SS	2
NM-0000-0059801	Zylinderschraube M8x20-8.8 Cylinder Head Screw M8x20-8.8	1
05-7211-K009406	ZSB Kupplung Clutch Assembly	1
VR00349-00-0101	Schlagdorn für Passhülsen Mandrel for Fitting Sleeves	1
VR00173-01-0103	Schwungradgegenhalter Flywheel Locking Tool	1
VR00356-01-0002	Zentrierdorn Kupplung Clutch Centering Tool	1
VR00388-00-1201	Werkzeug zur Getriedeckelbearbeitung Tool For Reworking The Gearbox Cover	1
	Loctite 243 (blau, mittel-fest) Loctite 243 (blue, medium-strength)	As req'd

- ◆ Hinweis: Der Austausch des Zwischenflansches ist nicht notwendig, wenn bereits der Zwischenflansch mit der Teilenummer 05-7212-K037901, 05-7212-K038001, 05-7212-K020804 oder 05-7212-K020903 installiert ist.

Ersetzt Technische Mitteilung Nr. / Datum:

TM TAE 125-1011 P1, Initial Issue / 09.06.2010

Replaces Service Bulletin No. / Date:

TM TAE 125-1011 P1, Initial Issue / June 09, 2010

- ◆ Note: *The replacement of the intermediate flange is not necessary, if intermediate flange P/N 05-7212-K037901, P/N 05-7212-K038001, P/N 05-7212-K020804 or P/N 05-7212-K020903 is already installed.*

Zulassung:

Die technischen Informationen, die in diesem Dokument enthalten sind, wurden im Rahmen der Befugnisse der EASA- Genehmigung als Entwicklungsbetrieb Nr. EASA.21J.010 genehmigt.

Approval:

The technical information contained in this document has been approved under the authority of EASA design Organisation Approval No. EASA.21J.010.