mt-propeller
ENTWICKLUNG GMBH
EASA DE.21G.0008
EASA.21J.020

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	Service Letter SL 52-1 R1	DO - No. EASA.21J.020

Installation of P-447 Accumulator in Combination with MT-Propellers.

Affected Aircraft: Grob G115E
Affected Propeller: MTV-12-B-C/C183-17e installed per EASA STC.10043263

Required Material:

Quantity	Name	Part-No.
1	Accumulator	P-447
1	Accumulator Bracket Assembly	P-1336
1	Hose	AE6208G0094-250
4	Clamp	RSGU1.16/12W1
2	Clamp	MS35842-14
1	Straight Fitting	AN816-6-2

Expendable Material:

- Oil resistant rubber blanket or tape to prevent the accumulator chaffing on the bracket and the supporting clip

Reason:

On some Grob G115E airplanes propeller speed surges were observed due to engine oil pressure fluctuations during some aerobatic maneuvers.
In normal operation the propeller governor is supplied with engine oil from the engine oil system. During aerobatics short engine oil pressure dropouts may occur. This results in insufficient oil supply to the propeller governor. The propeller MTV-12-B-C/C183-17e is controlled with oil pressure to decrease pitch. In case of oil pressure loss the propeller pitch moves towards high pitch. In this case the amount of the RPM-drop depends on the length of the oil supply dropouts.

The installation of the accumulator causes an oil supply from the accumulator to the propeller governor during short engine oil pressure dropouts, the propeller pitch remains controllable.

Checked / Approved by MPL	*Issued by:*
Josef Eberl Date: July 30. 2015	Josefine Hoell *Date*: July 30, 2015

This technical Information has been approved according the procedures established for the EASA-certified Design Organization
No.: EASA.21J.020

This Service Letter SL 52-1 R1 overwrites SL 52-1B of June 17, 2014!

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Required Action:

The Accumulator Bracket Assy consists of a bracket, rear plate (with anchor nut) and all required screws, washers and nuts. Additionally required are two clamps (MS35842-14) to mount the accumulator to the bracket and four clamps (RSGU1.16/12W1) will be used to mount the accumulator together with the assy to the inner right hand side of the engine mounting frame.

The hose AE6208G0094-250 is required to connect the accumulator with the governor.

Remove the oil/air separator in accordance with Grob 115E AMM CH 79-20 to aid access. On the ´Classic´ aircraft position the oil pressure sensor in a forward position to give clearance for the accumulator bracket.

Place the four clamps in the appropriate position on the engine frame.

Use four Bolts (C-300-5), washers & three nuts to install the accumulator bracket to the plate, together with four clamps. Use the Bolt (C-300-3), washer & nut and fit to the bracket as indicated in the photograph.

Mount the accumulator to the forward side of the bracket by using the two clamps (MS35842-14).

Put a rubber blanket or tape between the accumulator housing and the steel clamps and between the accumulator and the bracket to protect the accumulator against abrasion.

Make sure that the 90° elbow fitting is on the upper side and facing direction to the governor.

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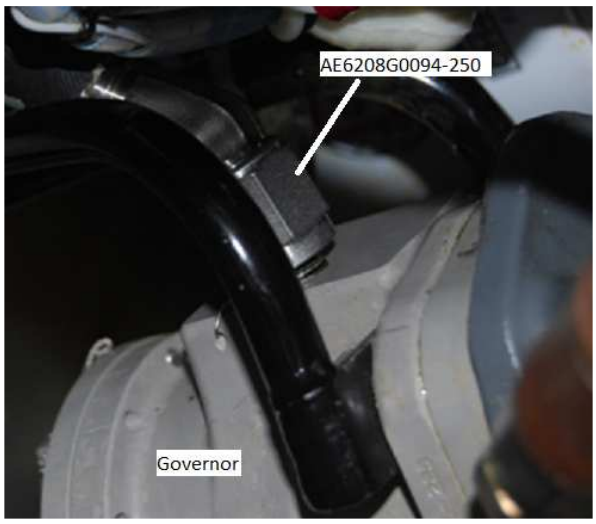
Fit an AN816-6-2 straight fitting into the governor accumulator port. If necessary to prevent damage to the governor plug, remove the governor and replace the original plug P/No C-164 with an AN816-6-2 straight fitting. Use a suitable anti-seize compound on the threads. Refit the governor if removed.

Install the hose between the fitting of the accumulator and the appropriate connection on the rear side of the governor.

Refit the oil/air separator in accordance with Grob 115E AMM CH 79-20.

Charge the accumulator with air or nitrogen to 125 psi.



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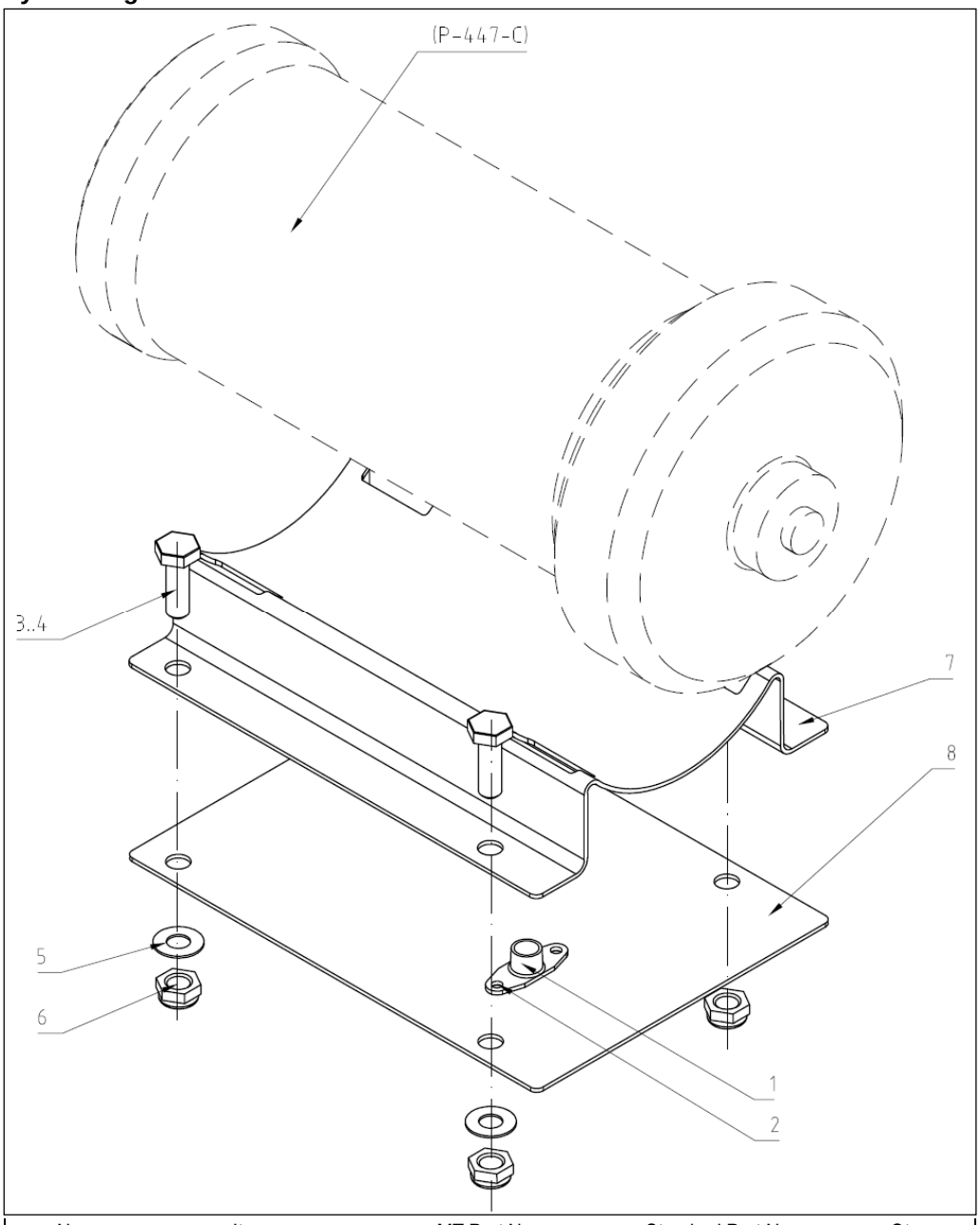
Assembly drawing:



No	Item	MT Part No	Standard Part No	Qty
1	Anchor Nut	C-345	K-1000-3	1
2	Rivet	C-346	MS20426AD3-4	2
3	Bolt	C-300-3	AN3H-3A	1
4	Bolt	C-300-5	AN3H-5A	4
5	Washer	C-341-10	AN960-10L	9
6	Nut	C-324-1032	MS21044N3	4
7	Accum. Bracket	A-1921-1		1
8	Accum. Plate	A-1921-3		1

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Completion:

Perform ground run and check for oil leaks.

Amend AFM Section 6, Page 6-6, Fig. 6.2 Weight and Balance Record to add the new mass/moment change and re-calculate the ´Running empty Mass´ column.

Item	**Mass**	**Arm**
Accumulator, bracket, attaching parts and hose	1,446 kg	-0,9 m

The accumulator pressure should be checked on a regular basis dependent on operator experience.

Removal of Accumulator:

At the owners discretion, for example on replacement of the engine, the accumulator and attaching parts can be removed and aerobatic performance reassessed for reconsideration for the requirement to have an accumulator installed.

The process for this is a simply working back through the installation procedure in reverse order. This will put the aircraft back to the original configuration pre installation of SL 52-1 R1.

Once the accumulator has been removed the following should be undertaken:

- Ensure Plug P/No C-164 is securely installed in the governor P/No P880-37 and wire locked.
- Perform ground run and check for oil leaks.
- Amend AFM Section 6, Page 6-6, Fig 6.2 Weight and Balance Record to remove the SL 52-1 R1 mass/moment change and recalculate the ‘Running empty Mass’ column using the figures above.