

## **SUPPLEMENTAL AIRPLANE MAINTENANCE MANUAL**

**DA 42 NG**

### **INSTALLATION INSTRUCTIONS FOR SYSTEM M15**

#### **On Top Exhaust System**

This Supplemental AMM is approved in conjunction with the Optional Design Change Advisory OÄM 42-173 and is valid in conjunction with the basic Airplane Maintenance Manual (AMM).

The limitations and information contained herein either supplement or, in the case of conflict, override those in the AMM.

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This document must be carried in the Airplane Maintenance Manual (AMM) at all times. It describes the maintenance procedures.

The technical information contained in this document has been approved under the authority of DOA No. EASA.21J.052.

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## CHAPTER 03 – GENERAL DESCRIPTION

### 1. Description

The DA 42 M-NG can be equipped with an optional On Top Exhaust. The On Top Exhaust System is mounted on top of the cowling with a mounting plate, anti-vibration mounts and heat shield assy.

Note: All measures must be carried out by a certified airplane maintenance station or a certified airplane mechanic.

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## **CHAPTER 05 –TIME LIMITS AND MAINTENANCE CHECKS**

### **Section 05-10**

#### **Time Limits**

#### **Maintenance Practices**

#### **Maintenance Checklist DA 42 NG**

#### **4.Component Time Limits**

Note: Those component time limits which are Airworthiness Limitations are also listed in Chapter 04.

##### **A. Maintenance Requirements**

The following table lists airplane components and systems which require overhaul or specific checks.

Where an interval is given in both flight time and calendar time, the limit which is reached first must be applied.

For possible maintenance requirements of engine, propeller, components and vendor equipment refer to the applicable Maintenance data as listed in Section 05-00.

ATA Ch.	Component	Maintenance Requirement	Interval	
			hrs.	calendar time
78	On-top exhaust system	<p>If OÄM 42-173/a through OÄM 42-173/j is installed (PN D65-7806-10-00):</p> <p>Examine the exhaust pipe, the exhaust muffler and the attachments. Look specially for cracks and heat damage.</p> <p>Refer to Section 78-00</p>	10 ± 1 hrs	1 yrs ± 30 days
		<p>If OÄM 42-173/k through OÄM 42-173/u is installed (PN D65-7806-10-00_4 or PN D65-7806-10-00_05)</p> <p>Examine the exhaust pipe, the exhaust muffler and the attachments. Look specially for cracks and heat damage.</p> <p>Refer to Section 78-00.</p>	100 ±10 hrs	1 yrs ± 30 days
		<p>If OÄM 42-173/v or later is installed (PN D65-7806-10-00_06):</p> <p>Examine the exhaust pipe, the exhaust muffler and the attachments. Look specially for cracks and heat damage.</p> <p>Refer to Section 78-00.</p>	50 ± 5 hrs	1 yrs ± 30 days



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## CHAPTER 78 – EXHAUST

### 1. General

If OÄM-42-173 is installed, the DA 42 M-NG is equipped with the On Top Exhaust System. The system consists of an exhaust pipe and an exhaust muffler which is mounted on top of the engine.

### 2. Description

Figure 1 shows the installation of the on top exhaust system, installed with OÄM 42-173/a through OÄM 42-173/j. Figure 2 shows the installation of the on top exhaust system, installed with OÄM 42-173/k through OÄM 42-173/p. Figure 3 shows the installation of the on top exhaust system, installed with OÄM 42-173/q through OÄM 42-173/u. Figure 4 shows the installation of the on top exhaust system, installed with OÄM 42-173/v through OÄM 42-173/y. Figure 5 shows the installation of the on top exhaust system, installed with OÄM 42-173/z or later.

The exhaust system consists of an exhaust pipe which is mounted to the turbo charger exhaust and the engine and a muffler which is mounted to the engine nacelle via a bracket and four elastomeric shock mounts.

A heat shield is attached to the muffler mounting bracket to provide glare protection for the pilot.

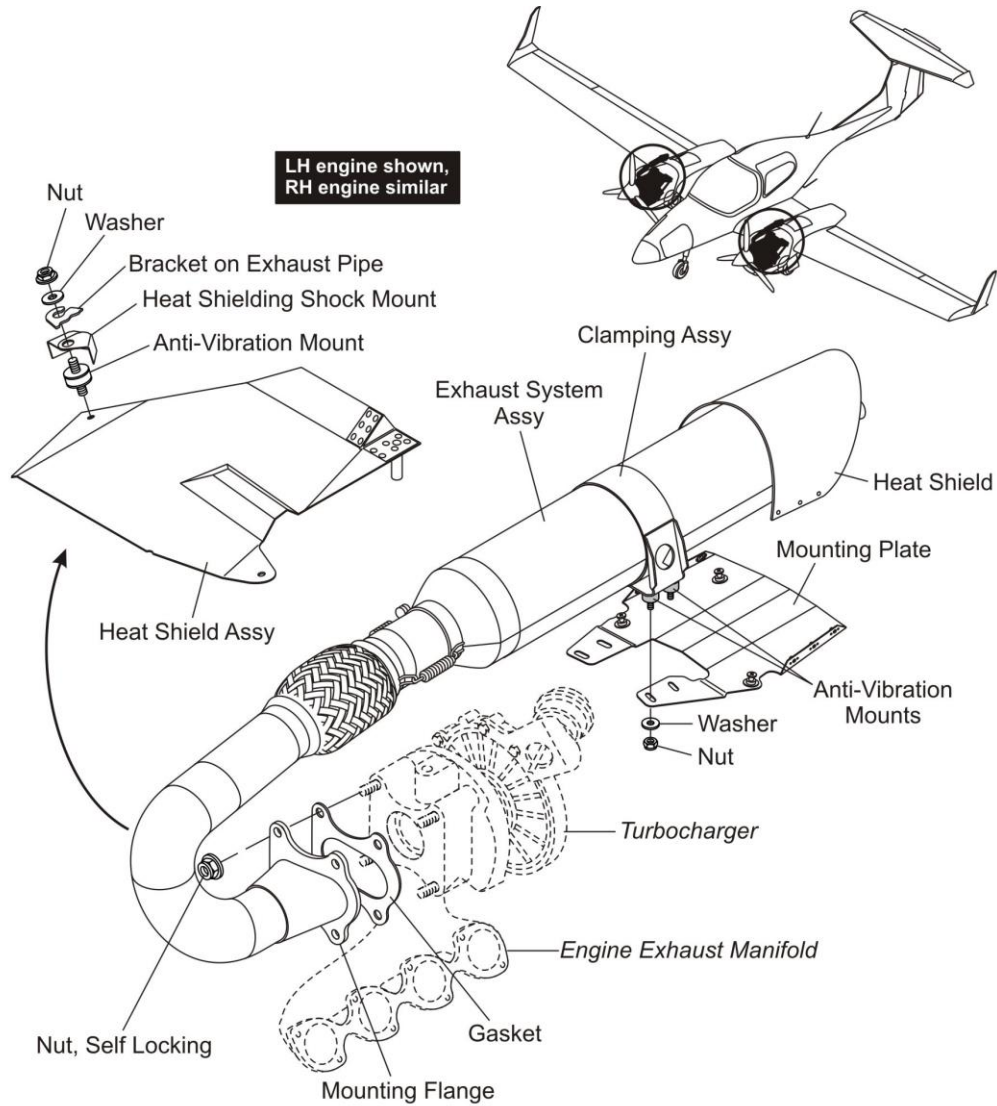


Figure 1: On Top Exhaust System Installation (OÄM 42-173/a through OÄM 42-173/j), Exhaust Tube Part Number: D65-7806-10-00

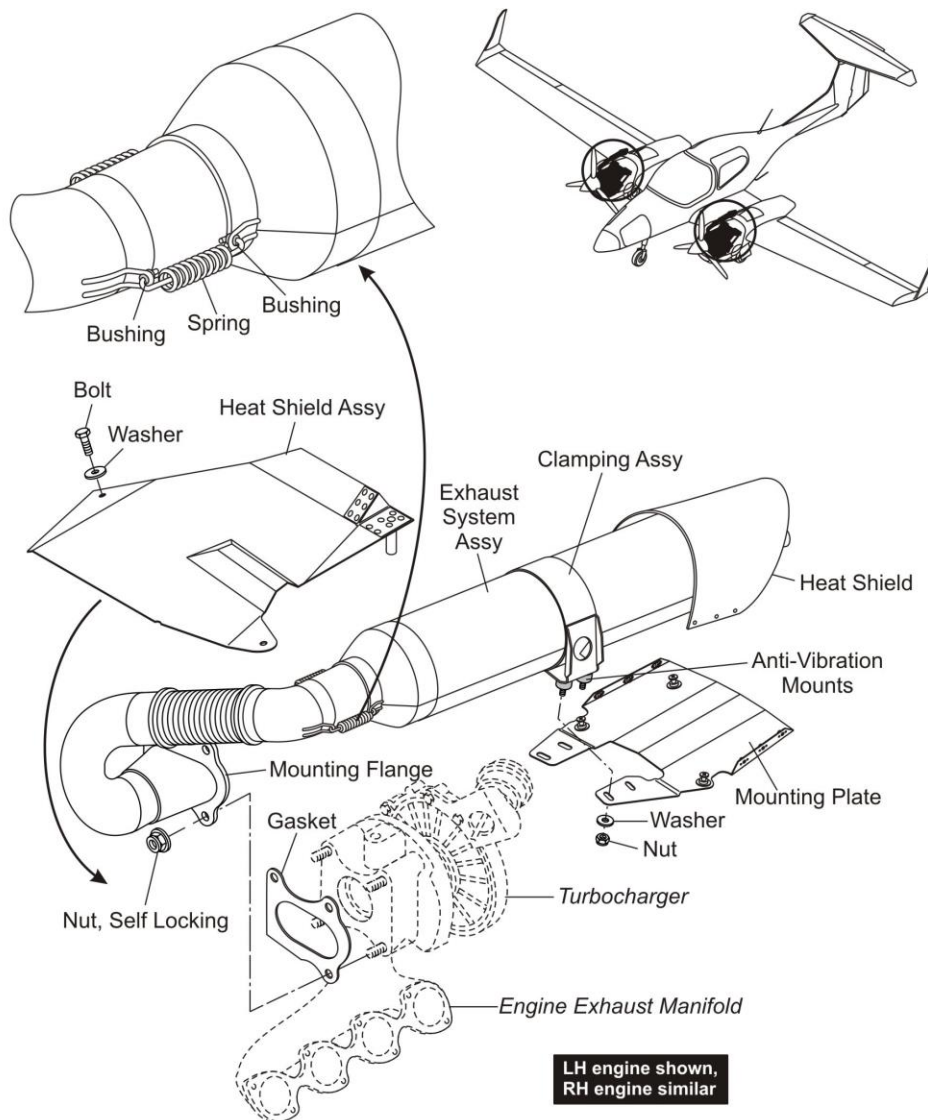


Figure 2: On Top Exhaust System Installation (OÄM 42-173/k through OÄM 42-173/p), Exhaust Tube Part Number: D65-7806-10-00\_4

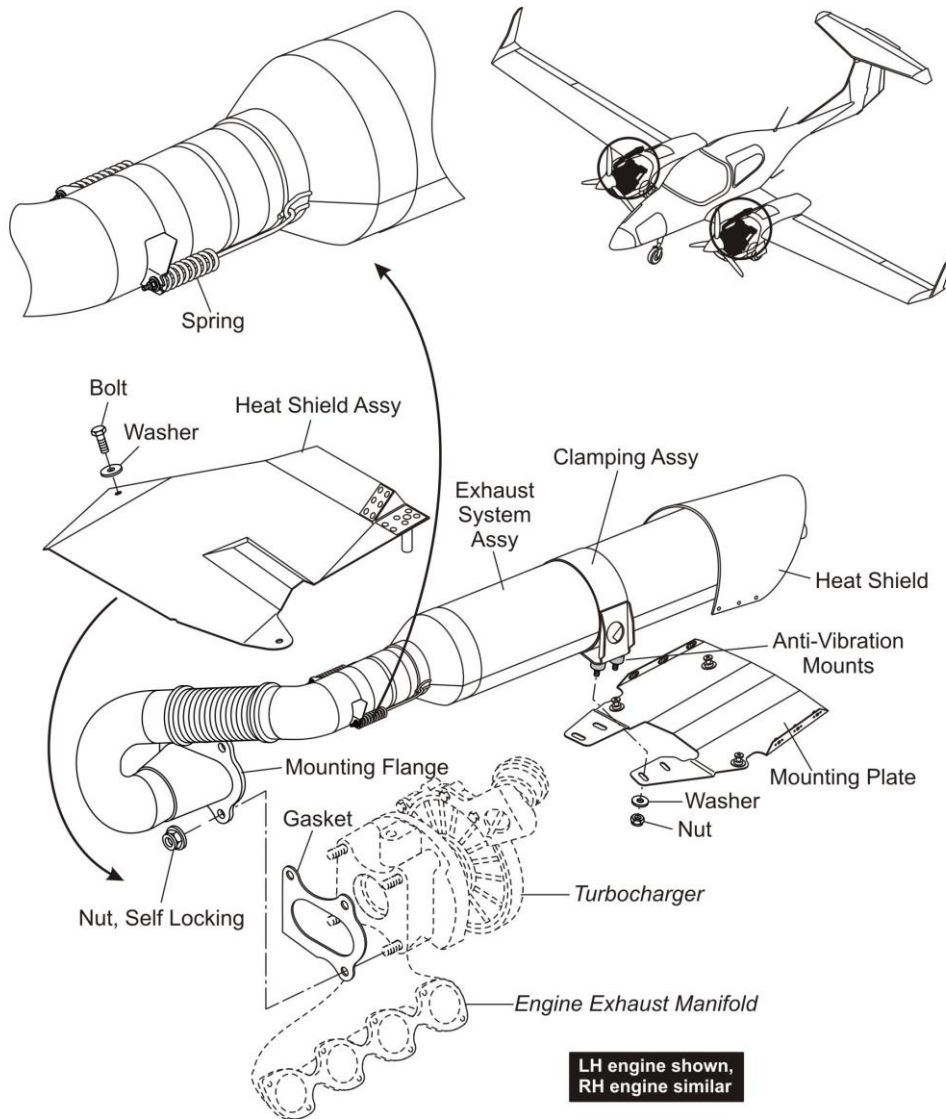


Figure 3: On Top Exhaust System Installation (OÄM 42-173/q through OÄM 42-173/u), Exhaust Tube Part Number: D65-7806-10-00\_05

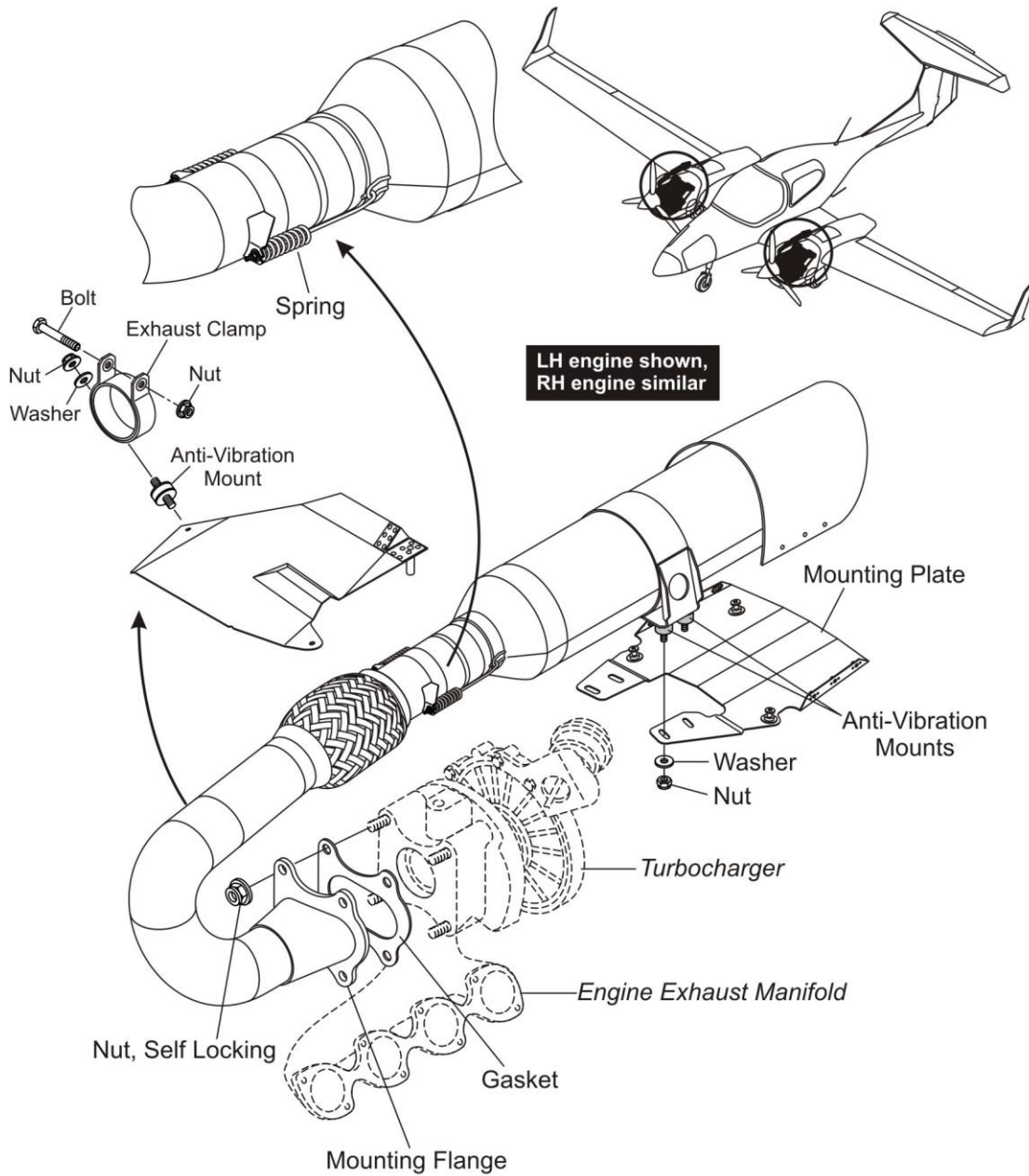


Figure 4: On Top Exhaust System Installation (OÄM 42-173/v through OÄM 42-173/y), Exhaust Tube Part Number: D65-7806-10-00\_06

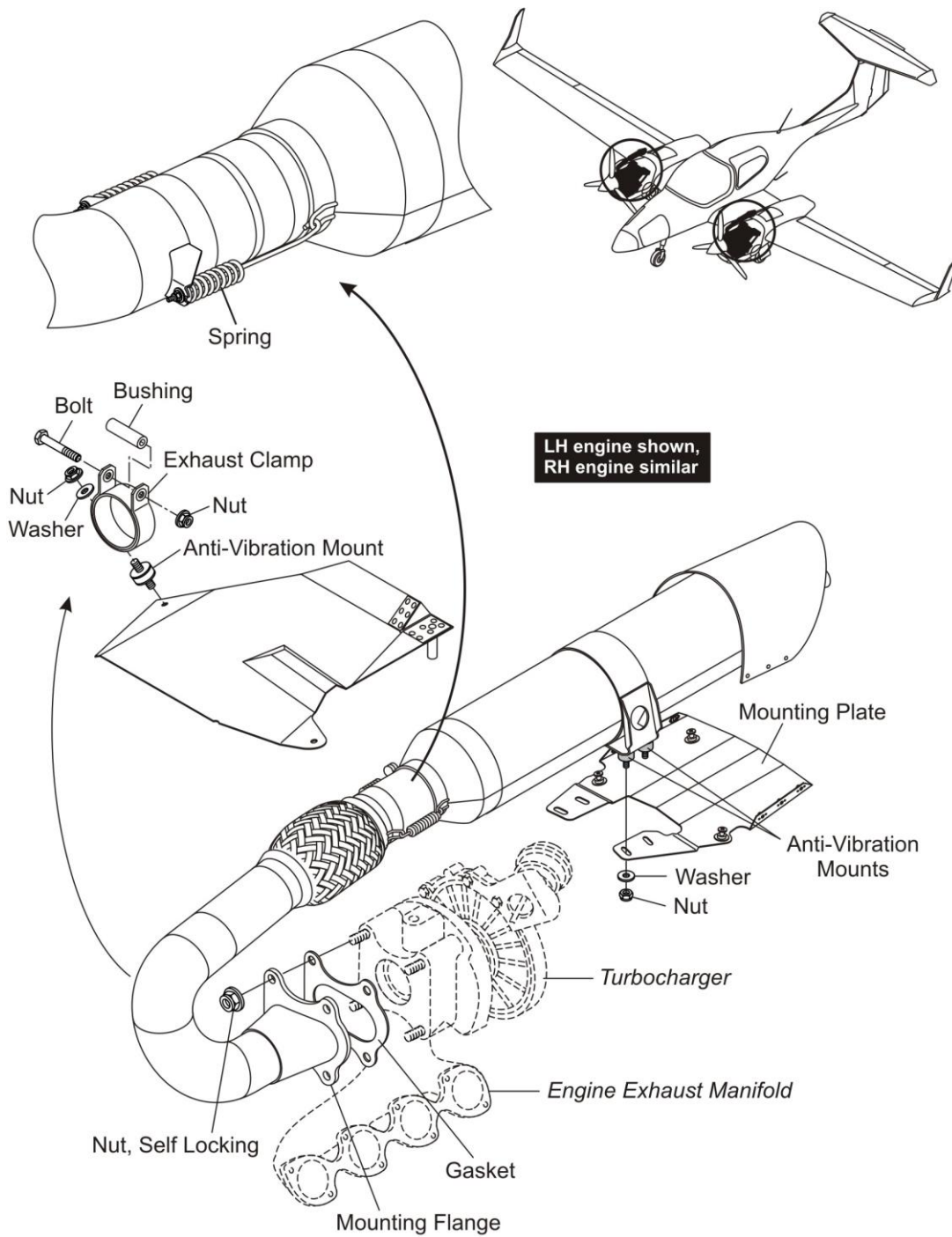


Figure 5: On Top Exhaust System Installation (OÄM 42-173/z or later), Exhaust Tube Part Number: D65-7806-10-00\_06, Bushing installed

## Maintenance Practices

### 1. General

These Maintenance Practices tell you how to remove and install On Top Exhaust System. Refer to Section 81-00 for data about the turbo-chargers.

### 2. Remove/Install the On Top Exhaust System

**WARNING: MAKE SURE THE EXHAUST SYSTEM IS COOL BEFORE YOU TOUCH IT. THE EXHAUST SYSTEM CAN BE VERY HOT, THIS CAN CAUSE INJURY TO PERSONS.**

#### A. Remove the On Top Exhaust System

	Detail Steps/Work Items	Key Items/References
	<p><b>WARNING: DO NOT STAND WITHIN THE DANGER AREA OF THE PROPELLER. IF THE ENGINE STARTS, THE PROPELLER CAN CAUSE DEATH OR INJURY TO PERSONS.</b></p> <p><b>WARNING: YOU MUST MAKE SURE THAT THE ENGINE IS SAFE BEFORE YOU DO WORK ON THE ENGINE CONTROLS. IF THE PROPELLER TURNS IT CAN CAUSE INJURY TO PERSONS.</b></p>	
(1)	Make sure that the related engine is safe: - Set the ELECT. MASTER switch to OFF. - Set the ENGINE MASTER switch to OFF. - Set the power lever to 0%.	
(2)	Disconnect the airplane main battery.	Refer to Section 24-34.
(3)	Remove the engine cowlings.	Refer to Section 71-10.







**B. Install the On Top Exhaust System**

	Detail Steps/Work Items	Key Items/References
	<p><b>WARNING: DO NOT STAND WITHIN THE DANGER AREA OF THE PROPELLER. IF THE ENGINE STARTS, THE PROPELLER CAN CAUSE DEATH OR INJURY TO PERSONS.</b></p> <p><b>WARNING: YOU MUST MAKE SURE THAT THE ENGINE IS SAFE BEFORE YOU DO WORK ON THE ENGINE CONTROLS. IF THE PROPELLER TURNS IT CAN CAUSE INJURY TO PERSONS.</b></p>	
(1)	<p>Install the exhaust system:</p> <ul style="list-style-type: none"> <li>- Move the exhaust pipe system into position.</li> <li>- Move the exhaust pipe flange over the studs on the turbo charger outlet.</li> <li>- Install the four special nuts that attach the exhaust pipe to the turbo charger outlet.</li> <li>- Install the nut which attaches the exhaust pipe to injector cover (if OÄM 42-173/a through OÄM 42-173/j is installed).</li> <li>- Install the bolt and nut which attach the exhaust clamp on the exhaust pipe and the nut which attach the clamp to the injector cover (if OÄM 42-173/v through OÄM 42-173/y is installed).</li> <li>- Install the bolt and nut which attach the exhaust clamp with the bushing on the exhaust pipe and the nut which attach the clamp to the injector cover (if OÄM 42-173/z or later is installed).</li> <li>- Install the 3 cam locks which attach the exhaust muffler mounting plate to the engine nacelle.</li> </ul>	<p>Refer to Figure 1 or Figure 2.</p> <p>Use new nuts.</p> <p>Refer to Figure 4.</p> <p>Refer to Figure 5.</p>
(2)	Install the engine cowlings.	Refer to Section 71-10
(3)	Do an engine ground run-up and then check the exhaust pipe for leaks.	Specially around the gasket at the turbo charger outlet.

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