

**SUPPLEMENT D54  
TO THE AIRPLANE FLIGHT MANUAL  
DA 62**

**HMoD SURVEY STAR CONFIGURATION**

**Doc. No.** : 7.01.25-E  
: 11.01.05-E  
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## 0.1 RECORD OF REVISIONS

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## **FOREWORD**

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## **1. GENERAL**

### **1.1 INTRODUCTION**

The DA 62 MPP can be equipped with an optional HmoD Survey Star Configuration. To enable this installation of the WX Multi-Purpose Nose (System No.: M30) must be installed.

The supplements of the following modules must be included into the AFM:

| Modules                                | Doc. No.                  |
|----------------------------------------|---------------------------|
| M30 - WX Multi-Purpose Nose            | Supplement STC-62-001-M30 |
| M50 - Survey Camera Hatch              | Supplement STC-62-001-M50 |
| M90 Equipment Wiring Installation Duct | Supplement STC-62-001-M90 |
| Alternative Seating Configuration      | Supplement STC 62-002     |
| M10 - Display Mount Provision          | Supplement M10            |

## **2. OPERATING LIMITATIONS**

### **2.12 FLIGHT CREW**

For flights with the MISSION MASTER switch ON:

Minimum crew : 2 (two persons) consisting of  
: 1 pilot and  
1 mission equipment operator  
seated in the rear cabin

### **WARNING**

The operation of the airplane in aerial work needs special training  
for the pilot and the operator.

### **2.13 KINDS OF OPERATION**

Flights according to VFR, NVFR and IFR with mission master ON are permitted.

### **2.14 Limitation Placards**

All limitation placards are shown below. A list of all placards is included in the Supplemental  
Airplane Maintenance Manual (Doc. No. 7.02.25- DEO 62-054).

|                       |
|-----------------------|
| No Baggage<br>allowed |
|-----------------------|

|                 |                  |             |        |                                       |
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### **3. EMERGENCY PROCEDURES**

#### **WARNING**

The mission system power supply must be switched off in any emergency, abnormal, or icing condition.

### **3.12 SMOKE AND FIRE**

#### **3.12.6 CABIN SMOKE**

1. MISSION MASTER ..... OFF

*Initiate an emergency descent*

2. FLAPS ..... UP
3. LANDING GEAR ..... DOWN
4. POWER lever ..... IDLE
5. FLAPS ..... as required

#### **WARNING**

Max. operating speed with equipment installed:  $v_{MAX} = 162$  KIAS

6. Land on the nearest suitable airfield.

**END OF CHECKLIST**

## **4A. NORMAL OPERATING PROCEDURES**

### **4A.6 CHECKLISTS FOR NORMAL OPERATING PROCEDURES**

#### **4A.6.6 BEFORE TAKE-OFF**

1. Loose equipment securely stowed . . . . . checked
2. Baggage net . . . . . installed and tightened

**END OF CHECKLIST**

#### **4A.6.22 USING MISSION EQUIPMENT**

*Starting mission:*

1. POSITION LIGHTS and STROBE . . . . . ON
2. MISSION MASTER . . . . . ON

### **WARNING**

The mission system power supply must be switched off in any emergency, abnormal, or icing condition.

*After mission:*

1. MISSION MASTER . . . . . OFF

**END OF CHECKLIST**

#### **4A.6.11 APPROACH & LANDING**

1. Loose equipment securely stowed . . . . . checked

**END OF CHECKLIST**

|                  |                         |                                       |
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#### **4B. ABNORMAL OPERATING PROCEDURES**

No change.

#### **5. PERFORMANCE**

No change.

## **6. MASS AND BALANCE**

### **6.4 FLIGHT MASS AND CENTER OF GRAVITY**

#### **6.4.1 MOMENT ARMS**

The lever arms of the HMoD Survey Star Configuration aft of the Datum Plane:

| Item                                 | Mass  |        | Lever Arm |        |
|--------------------------------------|-------|--------|-----------|--------|
|                                      | kg    | lb     | m         | in     |
| Airborne Laser Scanner               | 18.65 | 41,12  | -0.51     | -20.08 |
| Laser Safety Box                     | 0.55  | 1.21   | 2.94      | 115.75 |
| Power Distribution/ Ethernet Box     | 3.50  | 7.72   | 3.98      | 156.69 |
| Control Unit (AP+)                   | 1.10  | 2.43   | -0.04     | -1.57  |
| Internal Measurement Unit (IMU/GNSS) | 2.10  | 4.63   | -0.37     | -14.57 |
| iX-Controller                        | 5.35  | 11.79  | 4.02      | 158.27 |
| Medium Format Camera                 | 1.75  | 3.86   | -0.48     | -18.90 |
| Medium Format Camera                 | 1.75  | 3.86   | -0.59     | -23.23 |
| UltraCam Eagle 4.1 (f90)             | 68.20 | 150.36 | 3.36      | 132.28 |
| Gyro Stabilization Mount GSM 4000    | 25.40 | 56.00  | 3.36      | 132.28 |
| Interface Panel Touch - V4           | 2.40  | 5.29   | 2.72      | 107.09 |
| Interface Panel Touch - V4           | 2.40  | 5.29   | 2.81      | 110.63 |
| 12" LCD Monitor (with Touchscreen)   | 2.85  | 6.28   | 3.04      | 119.68 |
| 8" FMS (Pilot)                       | 0.86  | 1.90   | 1.84      | 72.44  |
| Mission Computer, Fanless            | 5.70  | 12.57  | 2.62      | 103.15 |
| LTE/5G Mobile Router                 | 0.65  | 1.43   | 4.28      | 168.50 |
| Amplified GPS Splitter, 1X4          | 0.30  | 0.66   | -0.28     | -11.02 |

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| Item                             | Mass |      | Lever Arm |        |
|----------------------------------|------|------|-----------|--------|
|                                  | kg   | lb   | m         | in     |
| USB Switch                       | 0.13 | 0.29 | 2.80      | 110.24 |
| AMSS/GPS Antenna (AV39)          | 0.30 | 0.66 | -0.57     | -22.44 |
| AMSS/GPS Antenna (AV39)          | 0.30 | 0.66 | 3.81      | 150.00 |
| Cellular Broadband Blade Antenna | 0.18 | 0.40 | 0.08      | 3.15   |
| Cellular Broadband Blade Antenna | 0.18 | 0.40 | 0.49      | 19.29  |
| Cellular Broadband Blade Antenna | 0.18 | 0.40 | 0.89      | 35.04  |
| Cellular Broadband Blade Antenna | 0.18 | 0.40 | 1.29      | 50.79  |

**NOTE**

The masses shown in the table above are equipment masses without mounting provisions.

**6.5.1 ADDITIONAL EQUIPMENT LIST**

| Airplane Serial No.: |                                 | Registration:    |                                 | Date:    |           |
|----------------------|---------------------------------|------------------|---------------------------------|----------|-----------|
| No.                  | Description                     | Part No.         | Manufacturer                    | S/N      | Installed |
| 1                    | Airborne Laser Scanner          | VQ-780 II-S      | RIEGL Laser Measurement Systems | H2228954 |           |
| 2                    | Laser Safety Box                | HW-VXX-03-017-01 | RIEGL Laser Measurement Systems |          |           |
| 3                    | Power Distribution/Ethernet Box | HW-GP-04-016-02  | RIEGL Laser Measurement Systems | 2229405  |           |

|                                       |                         |                  |
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| Airplane Serial No.: |                                      | Registration:                       |                                 | Date:                |           |
|----------------------|--------------------------------------|-------------------------------------|---------------------------------|----------------------|-----------|
| No.                  | Description                          | Part No.                            | Manufacturer                    | S/N                  | Installed |
| 4                    | Control Unit (AP+)                   | RiSYS-CU-23                         | RIEGL Laser Measurement Systems | S2230087             |           |
| 5                    | Internal Measurement Unit (IMU/GNSS) | IMU 57 (AIMU-M4)                    | Trimble                         | 23555                |           |
| 6                    | iX-Controller                        | iX-CONTROLLER MK6                   | PhaseOne                        | ZC001009             |           |
| 7                    | Medium Format Camera                 | iXM-RS 150F                         | PhaseOne                        | MN030047             |           |
| 8                    | Medium Format Camera                 | iXM-RS 150F                         | PhaseOne                        | MM032009             |           |
| 9                    | UltraCam Eagle 4.1 (f90)             | VB436001                            | VEXCEL                          | 436S12933X<br>419143 |           |
| 10                   | Gyro Stabilization Mount GSM 4000    | 1123                                | SOMAG                           | 90386                |           |
| 11                   | Interface Panel Touch - V4           | VB440001                            | VEXCEL                          | 440I9254X11<br>9008  |           |
| 12                   | Interface Panel Touch - V4           | VB440001                            | VEXCEL                          | 440I72040X3<br>15055 |           |
| 13                   | 12" LCD Monitor (with Touchscreen)   | 1219GNC                             | XENARC                          | G000046              |           |
| 14                   | 8" FMS (Pilot)                       | 892GFC                              | XENARC                          | E000955              |           |
| 15                   | Mission Computer, Fanless            | ABOX-5210G7-i7                      | Sintronics                      | SS24062402<br>55     |           |
| 16                   | LTE/5G Mobile Router                 | MAX-BR1-PRO-5GN-T-PRM               | Peplink                         | 1931-CB22-7<br>A97   |           |
| 17                   | Amplified GPS Splitter, 1X4          | NALDCBS1X4-T/9.0/MC                 | GPS Networking                  | 211297               |           |
| 18                   | USB Switch                           | US3344                              | ATEN                            | Z3M4-112-00<br>87    |           |
| 19                   | AMSS/GPS Antenna (AV39)              | AR1675-180APW-TN<br>CF-000-RG-38-NM | Trimble                         | 8449                 |           |
| 20                   | AMSS/GPS Antenna (AV39)              | AR1675-180APW-TN<br>CF-000-RG-38-NM | Trimble                         | 10005827             |           |

| Airplane Serial No.: |                                  | Registration: |              | Date: |           |
|----------------------|----------------------------------|---------------|--------------|-------|-----------|
| No.                  | Description                      | Part No.      | Manufacturer | S/N   | Installed |
| 21                   | Cellular Broadband Blade Antenna | AV-265        | RAMI         |       |           |
| 22                   | Cellular Broadband Blade Antenna | AV-265        | RAMI         |       |           |
| 23                   | Cellular Broadband Blade Antenna | AV-265        | RAMI         |       |           |
| 24                   | Cellular Broadband Blade Antenna | AV-265        | RAMI         |       |           |

### NOTE

Changes in mass and balance caused by the installation of the HMod Survey Star Configuration must be taken into consideration.

## **7. DESCRIPTION OF THE AIRPLANE AND ITS SYSTEMS**

### **7.1 INTRODUCTION**

The DA 62 MPP can be equipped with an optional mission equipment that allows the aircraft to be used for law enforcement, surveillance, border control and search & rescue. The equipment as part of this DEO consists of an Airborne Laserscanner System (together with two medium format cameras installed in the nose), and a large format mapping camera on the camera hatch in the cabin.

### **7.10 ELECTRICAL SYSTEM**

#### **7.10.3 WARNING, CAUTION AND ADVISORY MESSAGES**

The mission equipment installed for this DEO are connected to the Mission Bus via the in the rear baggage compartment installed Power Panel.

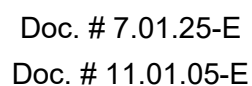
The following table shows the peak power consumption of the parts of the HMod Survey Star Configuration at 28V DC. The maximum continuous power consumption is slightly lower. This table must be used in conjunction with the AMM of the DA 62 Doc. No. 7.02.25-DEO 62-054, Section 24-81.

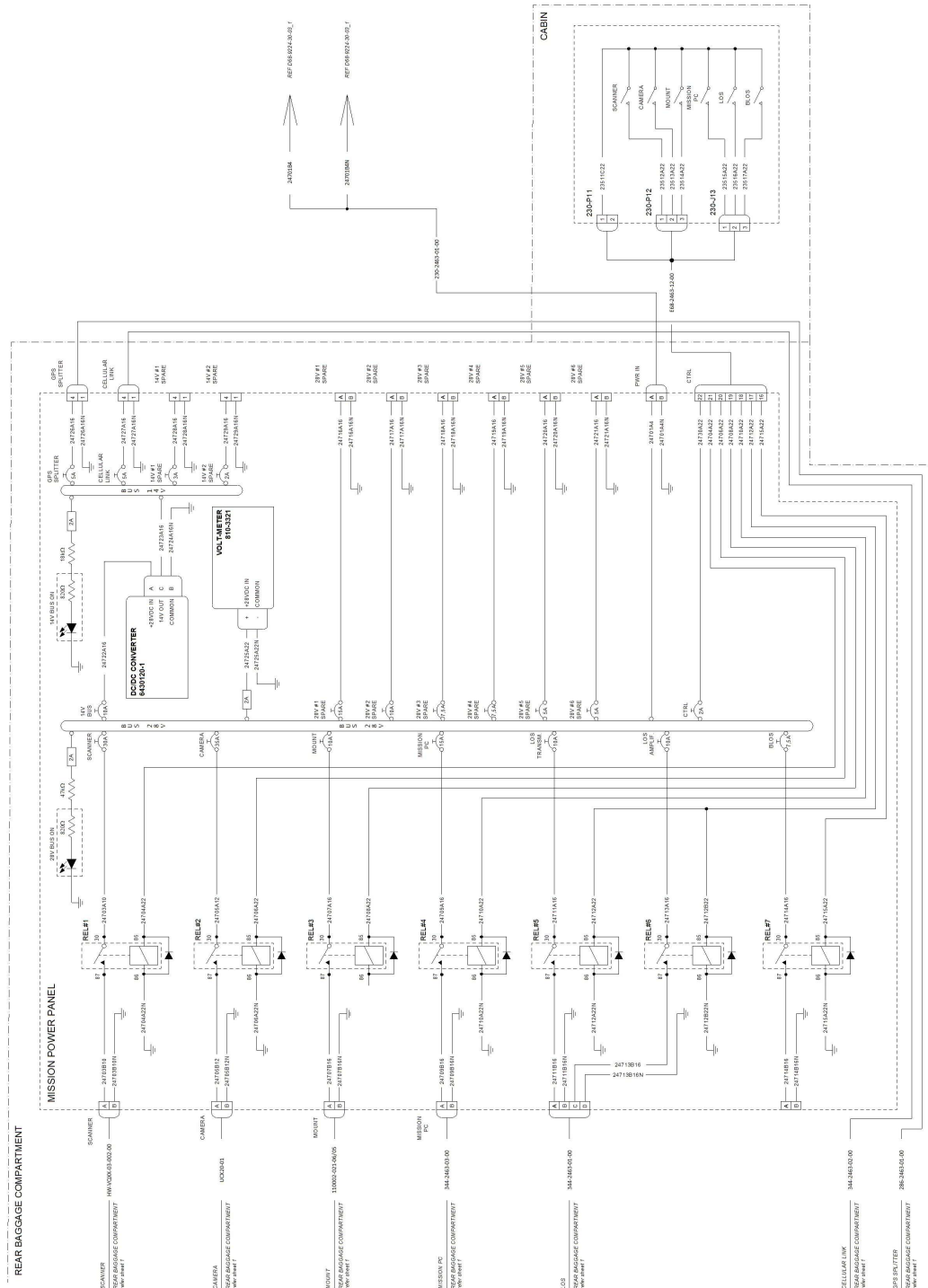
| <b>System</b>                        | <b>Power Consumption [A]</b> |
|--------------------------------------|------------------------------|
| Airborne Laser Scanner               | 17.9A @ 28V                  |
| Control Unit (AP+)                   | 0.8A@28V                     |
| Internal Measurement Unit (IMU/GNSS) | via Control Unit             |
| iX-Controller                        | 4.3A@28V                     |
| Medium Format Camera                 | 0.6A@28V                     |

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| System                             | Power Consumption [A] |
|------------------------------------|-----------------------|
| UltraCam Eagle 4.1 (f90)           | 14.3A@28V             |
| Gyro Stabilization Mount GSM 4000  | 2.5A@28V              |
| Interface Panel Touch - V4         | via UltraCam Eagle    |
| 12" LCD Monitor (with Touchscreen) | 2.1A@14V              |
| 8" FMS (Pilot)                     | via UltraCam Eagle    |
| Mission Computer, Fanless          | 10A@28V               |
| LTE/5G Mobile Router               | 0.7A@28V              |
| Amplified GPS Splitter, 1X4        | 0.96A@14V             |

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**8. AIRPLANE HANDLING, CARE AND MAINTENANCE**

**NOTE**

The HMod Survey Star Configuration consists of a number of high precision parts.

The exposure of the equipped airplane to high humidity, high vibration/ shocks and high temperature variation should be avoided whenever possible.

**NOTE**

For detailed information about the handling, care and maintenance of the HMod Survey Star Configuration refer to the corresponding supplier manuals, latest revision.

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