

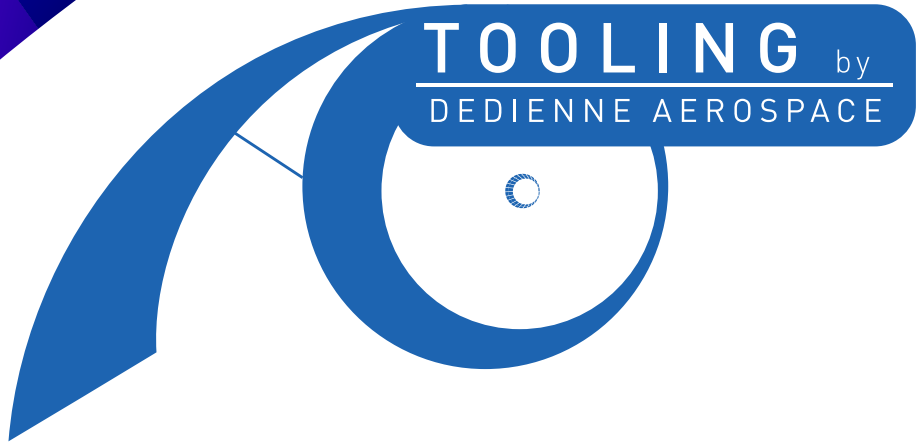
# E190-E2 COLLINS

*NACELLE TOOLING CATALOG*

**NACELLE**

**TOOLING** by

DEDIENNE AEROSPACE





# E190-E2 GSE TOOLS

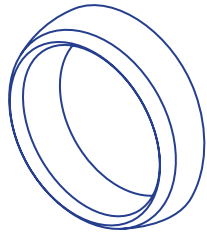
We have the capability to provide you all recommended GSE's based on the Aircraft Maintenance Manual (AMM) for your EIS (Entry-into-Service) program, and all your maintenance operations.

Thanks to our Tooling recommendation team, we can propose you a tailored tooling list for your maintenance workscope.



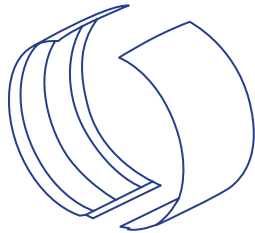
| CATEGORY   | PART NUMBER    | NAME   | MINIMAL QT FOR EIS |
|--|----------------|--|--------------------|
| <br><b>INLET COWL</b>               | 347-1100-1GSE  | Inlet Cowl Sling                               | 1                  |
|  | 347-1100-2GSE  | Inlet Cowl Dolly                               | 1                  |
|  | 347-1100-3GSE  | Inlet Protective Rug                           | 0                  |
|  | 347-1100-4GSE  | Inlet Cowl Cover                               | 2                  |
| <br><b>FAN COWLS</b>                | 347-2000-1GSE  | Fan Cowl Sling                                 | 1                  |
|  | 347-2000-2GSE  | Fan Cowl Dolly                                 | 2                  |
|  | 347-2000-3GSE  | Fan Cowl Vent Plug                             | 0                  |
|  | 347-2000-5GSE  | Fan Cowl Hinge Bolt Thread Protectors          | 1                  |
| <br><b>THRUST REVERSER</b>          | 347-3001-1GSE  | Thrust Reverser Sling - LH/RH                  | 1                  |
|  | 347-3001-2GSE  | Thrust Reverser Towable Dolly- LH/RH           | 2                  |
|  | 347-3001-3GSE  | Thrust Reverser Beam Bolt Thread Protector     | 1                  |
|  | 347-3001-5GSE  | Thrust Reverser Plug                           | 2                  |
|  | 347-3001-7GSE  | Thrust Reverser Door Opening System, Hand Pump | 1                  |
|  | 347-3001-11GSE | Thrust Reverser Unlock Pins - LH/RH            | 1                  |
|  | 347-3001-14GSE | Thrust Reverser PRD Torque Adaptor             | 1                  |
| <br><b>NOZZLE &amp; CENTER BODY</b> | 347-3501-2GSE  | Translating Sleeve Dolly                       | 1                  |
|  | 347-4100-1GSE  | Exhaust Nozzle Cover                           | 2                  |
| <br><b>ENGINE MOUNT</b>             | 347-4100-4GSE  | Exhaust Nozzle Lifting Aid                     | 1                  |
|  | 347-6000-1GSE  | Engine Mount Cart                              | 0                  |
|  | 347-6001-2GSE  | Forward Engine Mount Sling                     | 1                  |
|  | 347-6501-1GSE  | Aft Engine Mount Sling                         | 1                  |

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- > Inlet Cowl Cover.....p.7



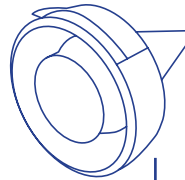
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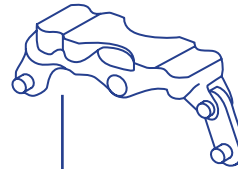
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## INLET COWL SLING

### DESCRIPTION – USE

*The Inlet Cowl Sling is used to lift and move the entire E190-E2 Inlet Assy.*

### CAUTION

*The Inlet Cowl Sling is used to install or remove the Inlet Cowl from the Engine. This tool has a feature that allows the tool operator to rotate the Inlet Cowl and eases the installation on the Engine or placement on the Dolly.*

### TEST

*Dedienne Aerospace has regional facilities to aid in the required annual testing and recertification.*

 **DIMENSIONS**  
2700 x 450 x 450 mm  
[107 x 18 x 18 in]

 **WEIGHT**  
82 kg [181 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*



347-1100-1GSE





# INLET COWL DOLLY

## ⚙️ DESCRIPTION - USE

*This tool is used during the maintenance and transportation of inlet cowl.*

## ⚠️ CAUTION

*This tool has been validated for the maintenance of the E190-E2 Inlet Cowl. If the Inlet Cowl is moved or repaired on another tool and there is damage, the insurance company may not cover the damage.*



↕️ **DIMENSIONS**  
2800 x 1650 x 1700 mm  
[111 x 65 x 67 in]

⚖️ **WEIGHT**  
900 kg [1,984 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-1100-2GSE






## INLET PROTECTIVE RUG

### DESCRIPTION – USE

*Tool is used as a Protective Mat on the Inlet inner surface during Maintenance, Removal or Installation activity on the Inlet.*



 **DIMENSIONS**  
850 x 400 x 200 mm  
[34 x 16 x 8 in]

 **WEIGHT**  
10 kg [23 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-1100-3GSE



# INLET COWL COVER

## DESCRIPTION – USE

The Inlet Cowl Cover is used to protect inlet from foreign objects during parking and mooring.

## CAUTION

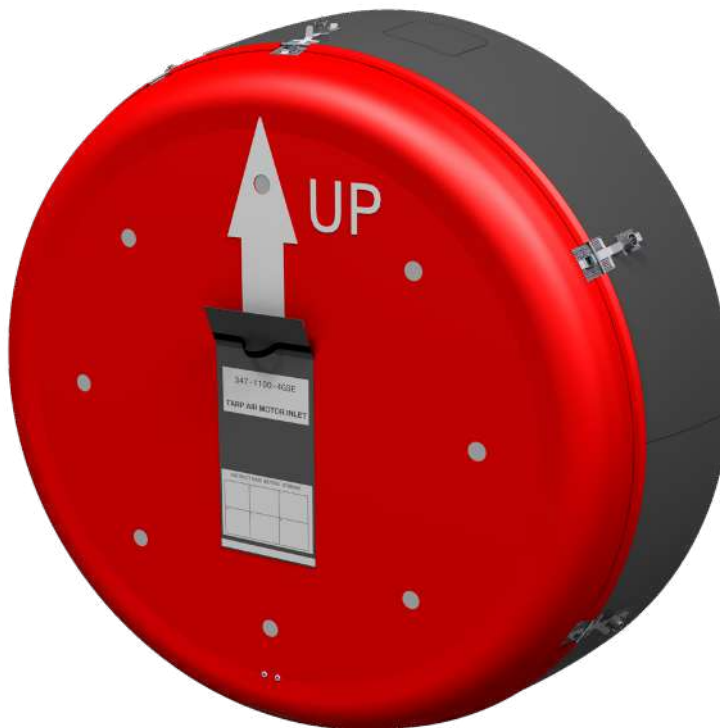
Without the Inlet Cowl Cover, water, dust or wind can go inside the Engine.

- > Water retention: accelerates corrosion.
- > Dust: the Engine could be damaged during the ignition.
- > Wind: allows blade rotation which may cause damage.

The Engine warranty may be void if the Covers are not used properly under the required conditions and there is damage to the Engine.

 **DIMENSIONS**  
500 x 400 x 400 mm  
[20 x 16 x 16 in]

 **WEIGHT**  
3 kg [7 lbs]



347-1100-4GSE



The pictures, measurements, and weights shall be used only as an indication.





# THRUST REVERSER SLING - LH/RH

## ⚙️ DESCRIPTION - USE

The Thrust Reverser Sling is used to pick the Thrust Reverser Engineering Assembly (Both LH/RH) from the ACFT / Shipping container and place the same on the Thrust Reverser Dolly for maintenance purpose. The Manual Hoist connected to the Latch beam location Via the Nylon Strap can be operated to tilt the TR Engineering assembly at various angles during Removal and Installation from ACFT onto the dolly and vise-versa.

## ⚠️ CAUTION

This tool is the only tool validated to lift the E190-E2 Thrust Reverser. If the Thrust Reverser is lifted using another tool, and there is damage, the insurance may not cover the damage.

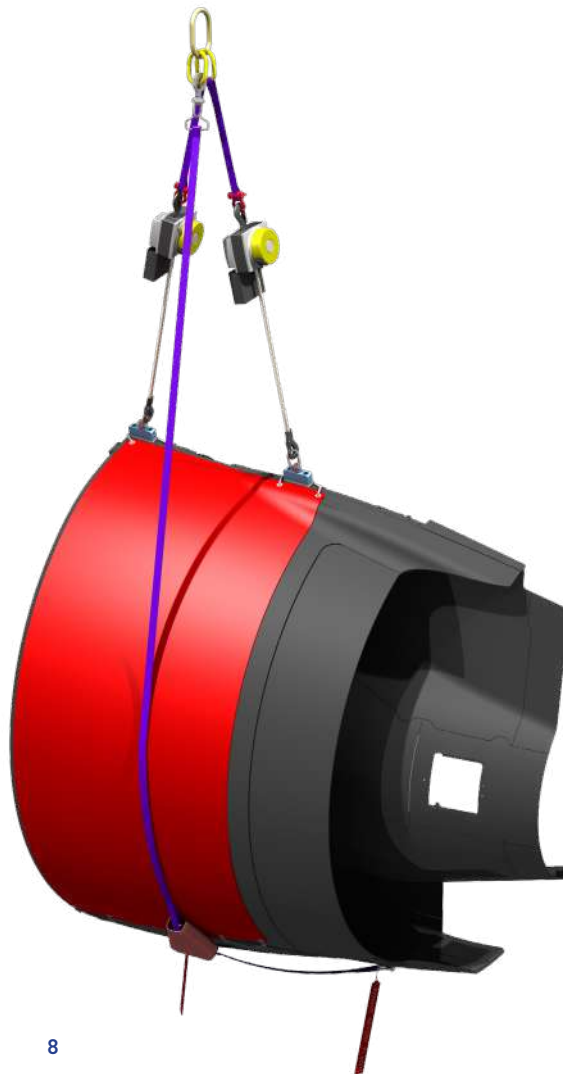
## ✓ TEST

Dedienne Aerospace has regional facilities to aid in the required annual testing and recertification.

✚ **DIMENSIONS**  
1250 x 1400 x 550 mm  
[50 x 56 x 22 in]

⚖️ **WEIGHT**  
150 kg [331 lbs]

The pictures, measurements, and weights shall be used only as an indication.



347-3001-1GSE





# THRUST REVERSER TOWABLE DOLLY - LH/RH

## ⚙️ DESCRIPTION - USE

*This Tool is used to carry a LH or RH Thrust Reverser.*

## ⚠️ CAUTION

*When the Thrust Reverser is removed from the aircraft using the Thrust Reverser Sling, the Thrust Reverser Dolly is needed to store or work on the Thrust Reverser.*



↕️ **DIMENSIONS**  
2600 x 2400 x 1000 mm  
[103 x 95 x 40 in]

⚖️ **WEIGHT**  
750 kg [1,653 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-3001-2GSE

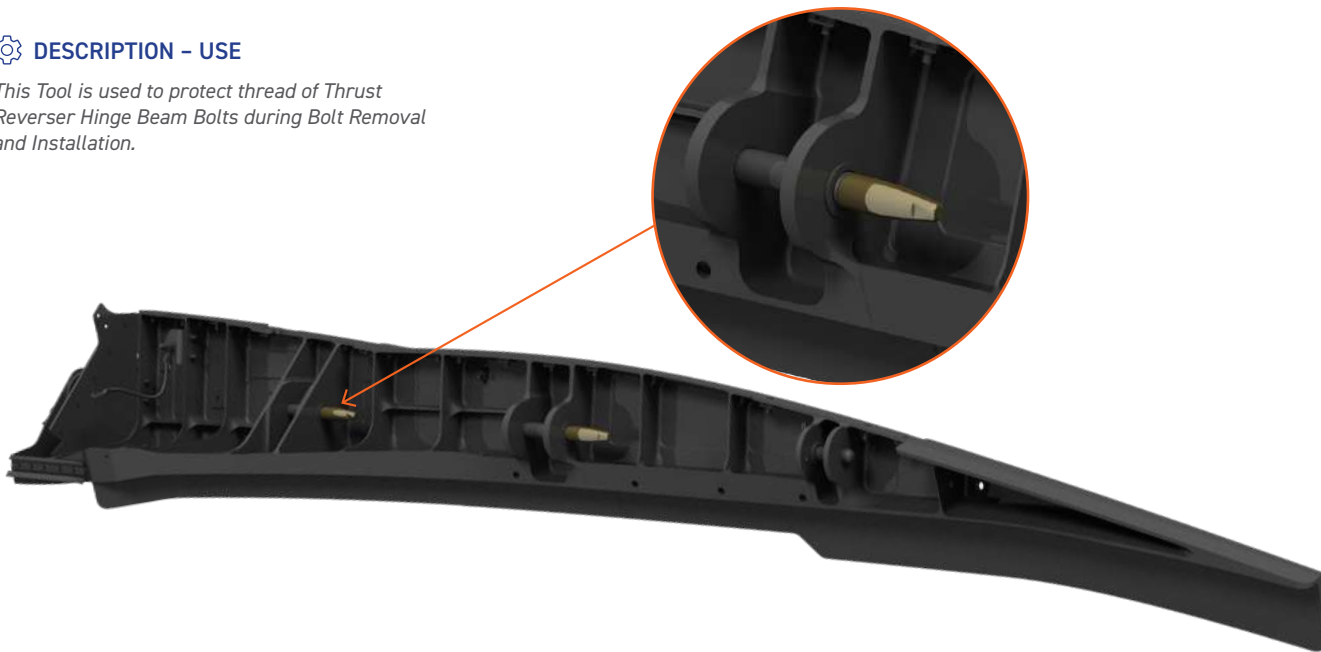




# THRUST REVERSER BEAM BOLT THREAD PROTECTOR

## DESCRIPTION - USE

*This Tool is used to protect thread of Thrust Reverser Hinge Beam Bolts during Bolt Removal and Installation.*



**DIMENSIONS**  
250 x 250 x 150 mm  
[10 x 10 x 6 in]

**WEIGHT**  
1,5 kg [4 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-3001-3GSE





# THRUST REVERSER PLUG

## DESCRIPTION - USE

*This tool is used to cover the bypass duct between the Translating Sleeve and Inner Fixed Structure (LH and RH).*

## CAUTION

*Without the Inlet Cowl Cover, water, dust or wind can go inside the Engine.*

- > *Water retention: accelerates corrosion.*
- > *Dust: the Engine could be damaged during the ignition.*
- > *Wind: allows blade rotation which may cause damage.*

*The Engine warranty may be void if the Covers are not used properly under the required conditions and there is damage to the Engine.*



**DIMENSIONS**  
1400 x 600 x 450 mm  
[56 x 24 x 18 in]

**WEIGHT**  
40 kg [89 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-3001-5GSE





# THRUST REVERSER DOOR OPENING SYSTEM, HAND PUMP

## ⚙️ DESCRIPTION - USE

*This tool is used for manual actuation of Thrust Reverser Door Actuation System.*

## ⚠️ CAUTION

*The Thrust Reverser Hydraulic Opening System or pump has been designed for use on the E190-E2. If another pump is used to open the C-Ducts and there is damage, the insurance may not cover the damage.*

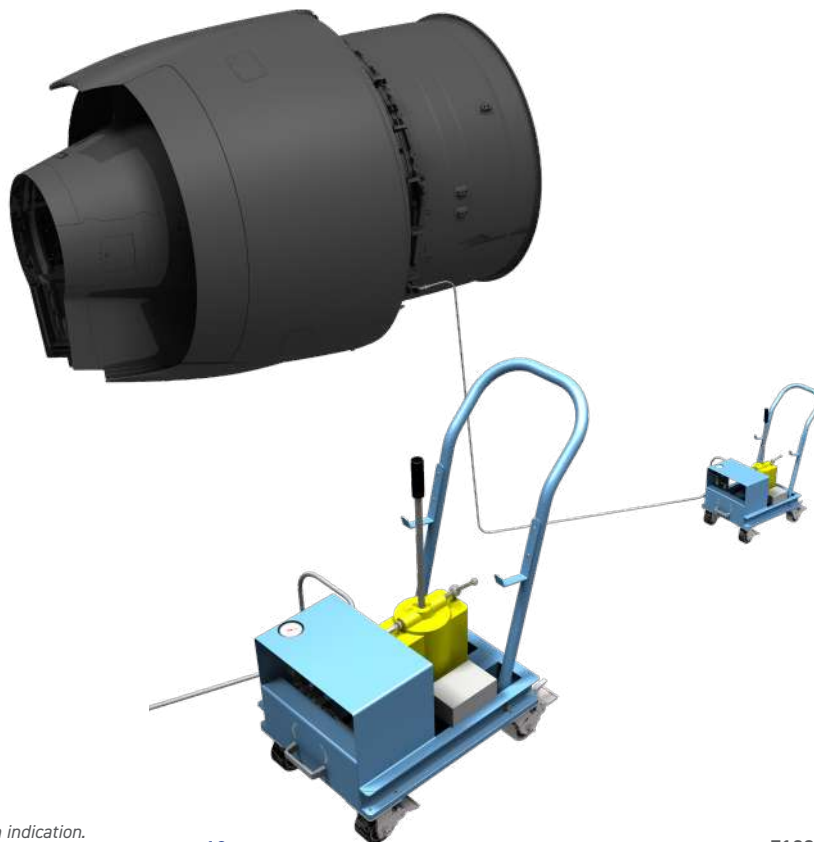
## ✓ TEST

*Dedienne Aerospace has regional facilities to aid in the required annual testing and recertification.*

↕️ **DIMENSIONS**  
1050 x 700 x 1350 mm  
[42 x 28 x 54 in]

⚖️ **WEIGHT**  
160 kg [353 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*



347-3001-7GSE





# THRUST REVERSER UNLOCK PINS LH/RH

## DESCRIPTION - USE

These Pins are used to unlock TRAS Actuators and Track Lock for both LH & RH Nacelles during maintenance.



**DIMENSIONS**  
500 x 300 x 300 mm  
[20 x 12 x 12 in]

**WEIGHT**  
3 kg [7 lbs]

The pictures, measurements, and weights shall be used only as an indication.



347-3001-11GSE

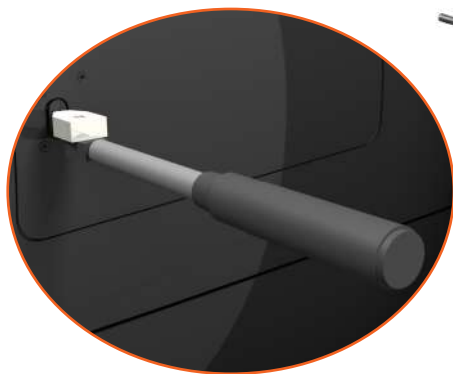




# THRUST REVERSER PRD TORQUE ADAPTOR

## ⚙️ DESCRIPTION - USE

*This Tool is used for check pressure relief door latch pressure.*



⚖️ **DIMENSIONS**  
400 x 300 x 200 mm  
[16 x 12 x 8 in]

⚖️ **WEIGHT**  
2 kg [5 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-3001-14GSE





# TRANSLATING SLEEVE DOLLY

## ⚙️ DESCRIPTION - USE

*This Tool is used during the maintenance and transportation of transleeve assembly.*

## ⚠️ CAUTION

*When the Translating Sleeve is removed from the aircraft using the Thrust Reverser Sling, the Translating Sleeve Dolly is needed to store or work on the Translating Sleeve.*



↕️ **DIMENSIONS**  
2700 x 1950 x 1300 mm  
[107 x 77 x 52 in]

⚖️ **WEIGHT**  
440 kg [970 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-3501-2GSE







# FAN COWL DOOR SLING

## ⚙️ DESCRIPTION – USE

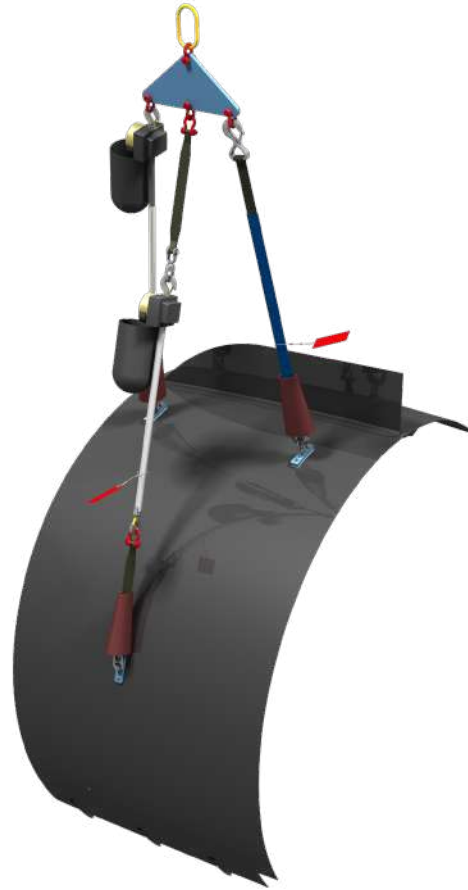
The Fan Cowl Door Sling is used for E190-E2 series Fan Cowl Removal & Installation only.

## ⚠️ CAUTION

This Sling is a lifting tool and it is the only tool validated to lift the E190-E2 Fan Cowl. If the Fan Cowl is lifted with another tool, and there is damage, the insurance may not cover the damage.

↕️ **DIMENSIONS**  
800 x 450 x 350 mm  
[32 x 18 x 14 in]

⚖️ **WEIGHT**  
70 kg [155 lbs]



347-2000-1GSE



The pictures, measurements, and weights shall be used only as an indication.



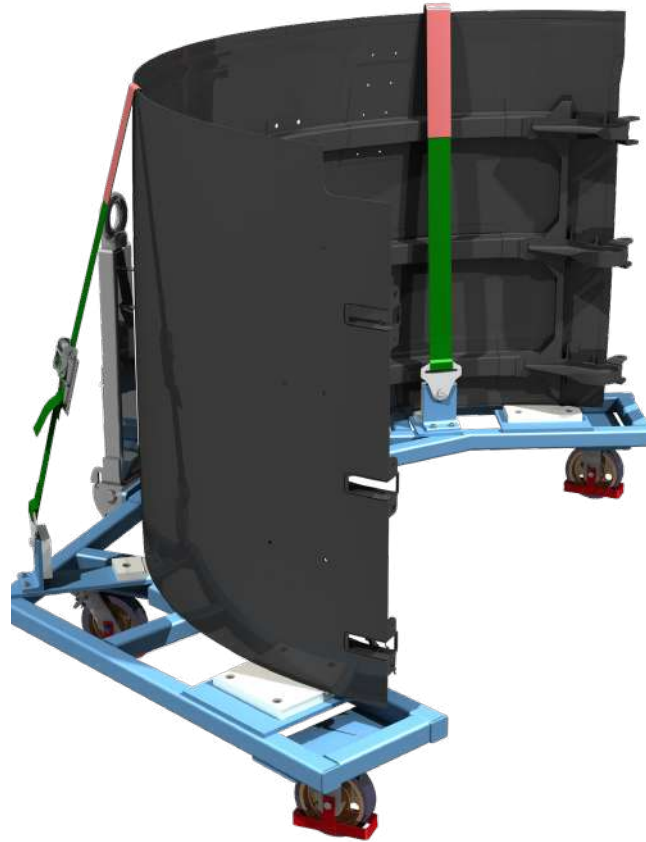
# FAN COWL DOLLY

## DESCRIPTION – USE

The Fan Cowl Dolly is used to move the Fan Cowl in the hangar or shop and for Fan Cowl Storage. The Fan Cowl can be maintained or stored on the Fan Cowl Dolly.

## CAUTION

After using the Fan Cowl Sling 347-2000-1GSE to remove a Fan Cowl from the Engine, the Fan Cowl Dolly is needed to move, store or do maintenance on the Fan Cowl.



**DIMENSIONS**  
3100 x 1700 x 1300 mm  
[123 x 67 x 52 in]

**WEIGHT**  
350 kg [772 lbs]

The pictures, measurements, and weights shall be used only as an indication.

347-2000-2GSE





# FAN COWL VENT DOOR PLUG

## DESCRIPTION - USE

The Fan Cowl Vent Door Plug is used to prevent foreign objects from entering into the Fan Cowl when the aircraft is in parking or mooring.



**DIMENSIONS**  
550 x 450 x 250 mm  
[22 x 18 x 10 in]

**WEIGHT**  
5 kg [12 lbs]

The pictures, measurements, and weights shall be used only as an indication.



# FAN COWL HINGE BOLT THREAD PROTECTORS

## ⚙️ DESCRIPTION - USE

*This tool is used to protect the Hinge Bolt Threads of the Fan Cowl Hinge pins during Removal & Installation.*



⚡ **DIMENSIONS**  
300 x 300 x 150 mm  
[12 x 12 x 6 in]

⚖️ **WEIGHT**  
2 kg [5 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-2000-5GSE





# EXHAUST NOZZLE AND CENTERBODY COVER

## ⚙️ DESCRIPTION – USE

*This tool is used to cover exhaust exit area and cover the AFT Centerbody.*

## ⚠️ CAUTION

*Without the Inlet Cowl Cover, water, dust or wind can go inside the Engine.*

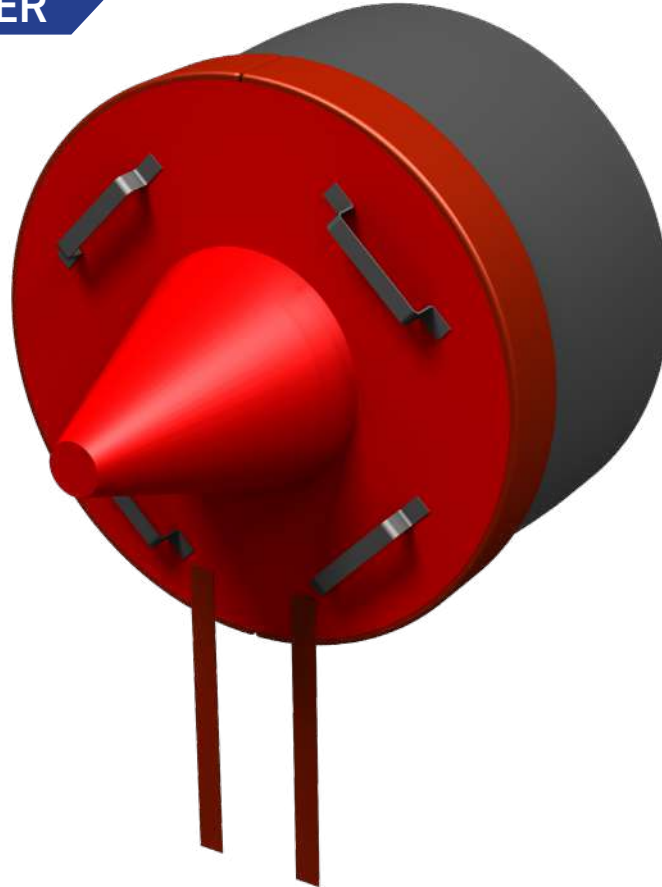
- > *Water retention: accelerates corrosion.*
- > *Dust: the Engine could be damaged during the ignition.*
- > *Wind: allows blade rotation which may cause damage.*

*The Engine warranty may be void if the Covers are not used properly under the required conditions and there is damage to the Engine.*

↕️ **DIMENSIONS**  
1200 x 500 x 400 mm  
[48 x 20 x 16 in]

⚖️ **WEIGHT**  
40 kg [89 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*



347-4100-1GSE





# EXHAUST NOZZLE LIFTING AID

## ⚙️ DESCRIPTION – USE

*This tool is used to Remove or Install Exhaust Nozzle Assembly.*

## ⚠️ CAUTION

*This Aid is a lifting tool and it is the only tool validated to lift the E190-E2 Nozzle. If the Nozzle is lifted with another tool, and there is damage, the insurance may not cover that damage.*

## ✅ TEST

*Dedienne Aerospace has regional facilities to aid in the required annual testing and recertification.*

↕️ **DIMENSIONS**  
1600 x 1200 x 1300 mm  
[63 x 48 x 52 in]

⚖️ **WEIGHT**  
200 kg [441 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*



347-4100-4GSE

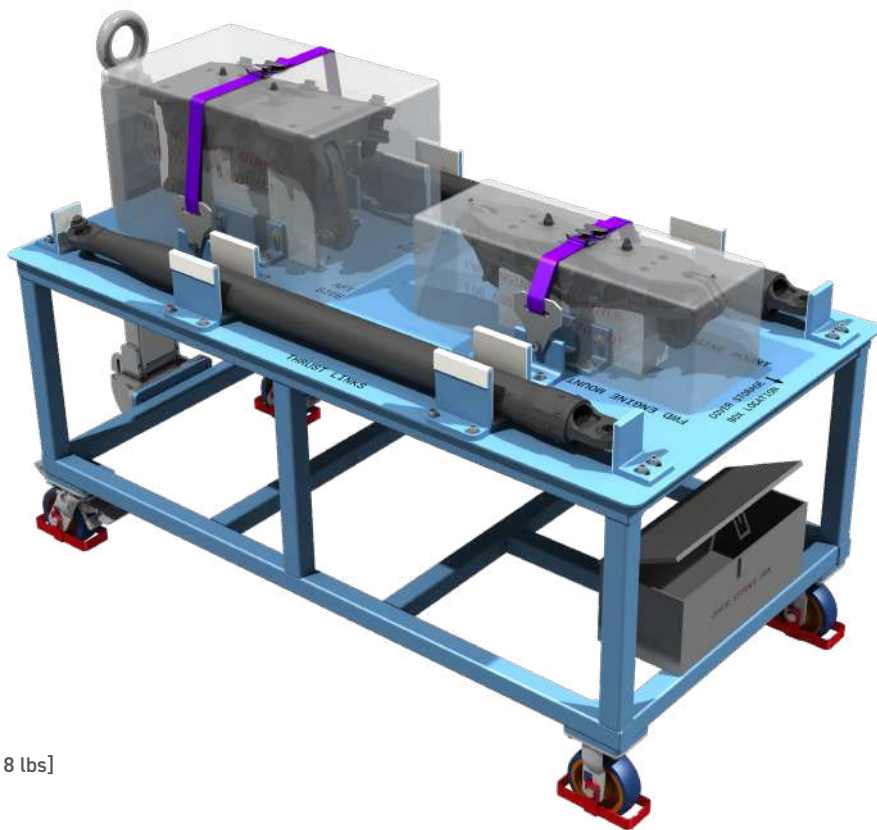




# ENGINE MOUNT CART

## DESCRIPTION - USE

*This Tool is used for Engine Mount Assembly Transportation & Maintenance.*



**DIMENSIONS**  
2000 x 1100 x 1300 mm  
[79 x 44 x 52 in]

**WEIGHT**  
280 kg [618 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*

347-6000-1GSE



# FWD ENGINE MOUNT SLING

## ⚙️ DESCRIPTION – USE

*This Tool is used to lift and move the FWD Engine Mount Assy.*

## ⚠️ CAUTION

*This FWD Engine Mount Sling is a lifting tool and it is the only tool validated to lift the E190-E2 FWD Engine Mount. If the Engine Mount is lifted with another tool, and there is damage, the insurance may not cover the damage.*

## ✅ TEST

*Dedienne Aerospace has regional facilities to aid in the required annual testing and recertification.*

↔️ **DIMENSIONS**  
550 x 450 x 250 mm  
[22 x 18 x 10 in]

⚖️ **WEIGHT**  
9,8 kg [22 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*



347-6001-2GSE







# AFT ENGINE MOUNT SLING

## ⚙️ DESCRIPTION – USE

*This Tool is used to lift and move the AFT Engine Mount Assy.*

## ⚠️ CAUTION

*This AFT Engine Mount Sling is a lifting tool and it is the only tool validated to lift the E190-E2 AFT Engine Mount. If the Engine Mount is lifted with another tool, and there is damage, the insurance may not cover the damage.*

## ✅ TEST

*Dedienne Aerospace has regional facilities to aid in the required annual testing and recertification.*

↕️ **DIMENSIONS**  
600 x 250 x 400 mm  
[24 x 10 x 16 in]

⚖️ **WEIGHT**  
14 kg [31 lbs]

*The pictures, measurements, and weights shall be used only as an indication.*



347-6501-1GSE



## SALES & TECHNICAL SUPPORT

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