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REPORT NO. PR-206ER-900M

INSTALLATION INSTRUCTIONS

FOR

ENGINE RELIGHT INSTALLATION

BELL 206 SERIES HELICOPTERS

REVISIONS

<u>REV.</u>	<u>DATE</u>	<u>DESCRIPTION</u>	<u>BY</u>
N/C	10/06/00	Original	MR
A	02/11/02	Added 206ER-100-2 Configuration	GP

REFERENCES

1. Paravion Drawing 206ER-100 System Configuration.
2. Paravion Drawing 206ER-300 Electrical Installation.
3. Paravion Drawing 206ER-350 Electrical Installation.

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1.0 INTRODUCTION

This document provides a step-by-step procedure for installation of the 206ER Engine Relight System Installation on the Bell 206 Series Helicopter. The instructions contained herein are intended to supplement the information contained on the installation drawings.

2.0 206ER-100-1 INSTALLATION INSTRUCTIONS

- 2.1 Reference drawings 206ER-300 Electrical Installation.
- 2.2 Gain access to the instrument console, the overhead breakers and the necessary areas that allow wiring to be run from the instrument console to the hat bin.
- 2.3 Determine if a caution light is available in the instrument panel. If there is use the 206ER-300-2 installation, if not then use the 206ER-300-1 installation.
- 2.4 Find a position on the instrument panel for the ARM/OFF/TEST switch and caution light (if applicable) per the drawing.
- 2.5 If the 206ER-300-2 installation is used, then trim the indicated placard to the desired length per the drawing.
- 2.6 Drill indicated hole(s) for switch and/or light. Deburr holes(s).
- 2.7 Locate a convenient position for the Engine Relight Sensor inside of the instrument console. The final position of this sensor can vary within the instrument console, because the instrumentation in each helicopter can vary greatly.
- 2.8 Install the Engine Relight Sensor by match drilling the existing sensor holes and secure it to the console using the indicated hardware.
- 2.9 Wire the system as indicated using the 22 gauge wire provided. Use the 206ER-300-2 wiring diagram if a caution light is available in the instrument panel.
 - 2.9.1 Install the indicated circuit breaker in an available position in the overhead breaker panel. Run a wire from the breaker to the ARM/OFF/TEST switch.
 - 2.9.2 Splice into the Power Turbine Tach Generator wire and route it to the Engine Relight Sensor per the drawing. This should be accessible within the instrument panel.
 - 2.9.3 Install terminal and diode and route the wire from the Field/Ignition Relay to the Engine Relight Sensor per drawing.
 - 2.9.4 Route wire from pin D of the Engine Out RPM Sensor to the Engine Relight Sensor per the drawing.

- 2.9.5 Install terminal and route a ground wire to the ARM/OFF/TEST switch per the drawing.
- 2.9.6 Install terminals and route the indicated wires from the ARM/OFF/TEST switch to the Engine Relight Sensor per the drawing.
- 2.9.7 Install the diode to the ARM/OFF/TEST switch, then complete all of the wiring connections for both the Engine Relight Sensor and the ARM/OFF/TEST switch per the drawing.
- 2.9.8 Run wire(s) to the caution light.
- 2.10 Install Placards, Switch and Light (if necessary).
- 2.11 Complete the Annual/100 Hour System checklist and the Inspection and Maintenance Section in Instructions for Continued Airworthiness (PR-206ER-120M), for component and system operational check.
- 2.12 The total weight of the 206ER-100-1 Engine Relight System is 0.8 lbs. Therefore, the affects on the weight and balance are negligible.

3.0 206ER-100-2 INSTALLATION INSTRUCTIONS

- 3.1 Reference drawings 206ER-350 Electrical Installation.
- 3.2 Install the Engine Relight Control Box on the center console by removing the four existing screws and securing the box to the console with the indicated hardware.
- 3.3 Connect the wiring harness to the Engine Relight Control Box, Auxiliary Power, Engine RPM Sensor and, Rotor/N2 Tach Indicator. Refer to the labels on the wiring harness, and to the installation drawings (206ER-350) for proper connections.
- 3.4 Route the wiring harness through the cabin and hat bin to the Field/Igniter Relay.
- 3.5 Connect the wiring harness terminal to the Field/Igniter Relay as indicated on the installation drawings.
- 3.6 Complete the Annual/100 Hour System checklist and the Inspection and Maintenance Section in Instructions for Continued Airworthiness (PR-206ER-120M), for component and system operational check.
- 3.7 See Table II for weight and balance information.

TABLE I
WEIGHT AND BALANCE DATA
206ER-100-1

Weight and Balance Data; 206ER-100-1 Engine Relight					
ITEM		Longitudinal		Lateral	
	Weight	F.S.	Moment	B.L.	Moment
	(lb)	(in)	(in-lbs)	(in)	(in-lbs)
Sensor, relays, switches, and wires	0.80	**	**	0.0	0.0
Total	0.80	**	**	0.0	0.0

**undetermined, variable

TABLE II
WEIGHT AND BALANCE DATA
206ER-100-2

Weight and Balance Data; 206ER-100-2 Engine Relight					
ITEM		Longitudinal		Lateral	
	Weight	F.S.	Moment	B.L.	Moment
	(lb)	(in)	(in-lbs)	(in)	(in-lbs)
206ER-3500-1 Control Box	2.03	40.5	82.2	0.0	0.0
206ER-3600-1 Wiring Harness	0.75	86.0	64.5	0.0	0.0
Total	2.78	52.8	146.7	0.0	0.0