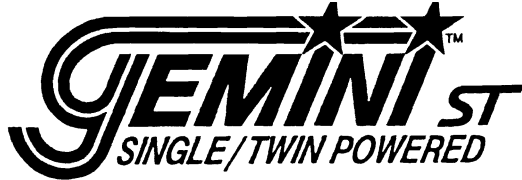
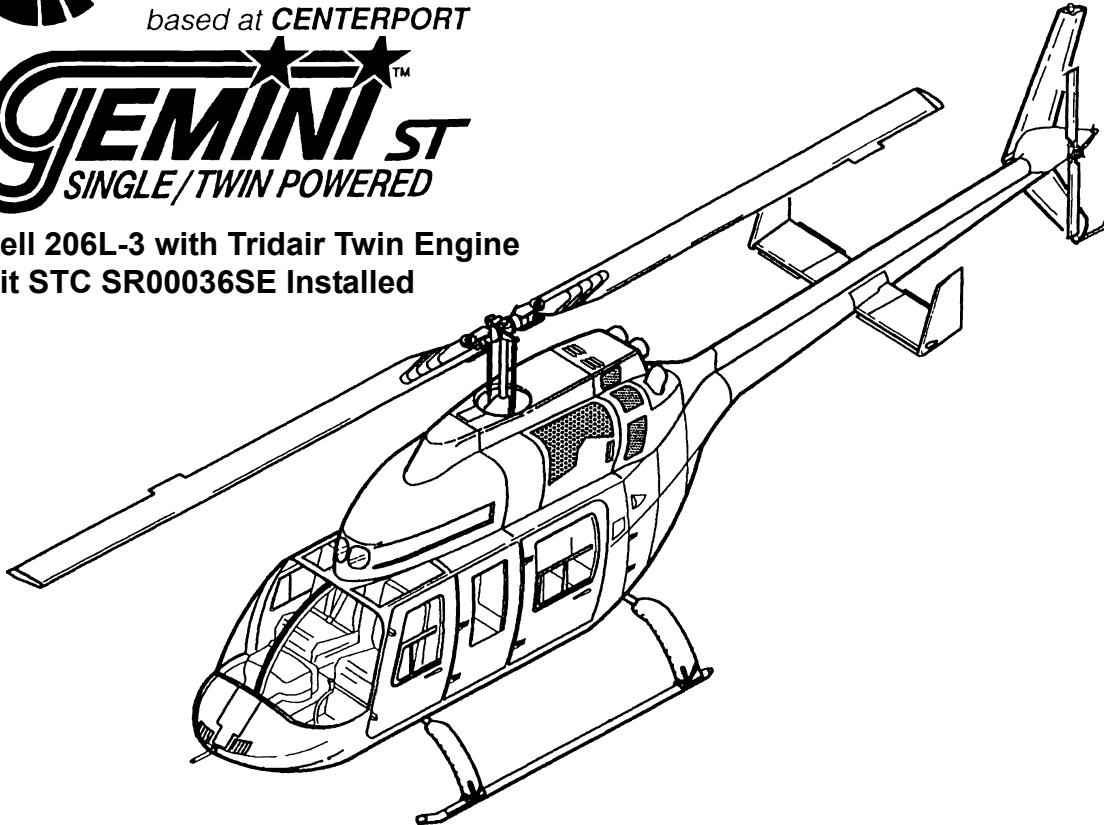


**TRIDAIR
HELICOPTERS, INC.**

based at CENTERPORT



Bell 206L-3 with Tridair Twin Engine
Kit STC SR00036SE Installed



FLIGHT MANUAL SUPPLEMENT TO BELL FLIGHT MANUAL BHT-206L3-FM-1

This supplement must be attached to the Rotorcraft Flight Manual (RFM) when a Tridair Helicopters, Inc. conversion kit is installed. Information contained herein supplements or supersedes the basic RFM only in those areas listed herein. For limitations, procedures and performance information not contained in this supplement, consult the basic RFM.

S.T.C. NO. <u>SR00036SE</u>	REGISTRATION NO. _____
SERIAL NO. _____	
APPROVED BY <u>Collet E. McElroy</u>	DATE <u>JULY 28, 1994</u>
for <u>MANAGER</u>	
SEATTLE AIRCRAFT CERTIFICATION OFFICE FEDERAL AVIATION ADMINISTRATION RENTON, WASHINGTON 98055-4056	

LOG OF REVISIONS

Original028 JUL 94 Revision213 JAN 09
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LOG OF PAGES

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NOTE

Revised text is indicated by a black vertical line. A revised page with only a vertical line next to the page number indicates that text has shifted or that non-technical correction(s) were made on that page. Insert latest revision pages; dispose of superseded pages.

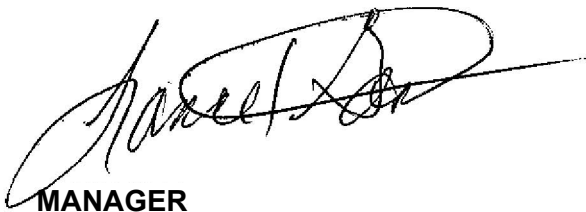
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MANAGER

ROTORCRAFT CERTIFICATION OFFICE
FEDERAL AVIATION ADMINISTRATION
FT. WORTH, TX 76193-0170

<div style="display: flex; justify-content: space-between; align-items: center;"> ○ <h2 style="margin: 0;">AIRSPEED LIMITATIONS INTERNAL LOADING</h2> ○ </div>											
Hp $\frac{FT}{1000}$	0	2	4	6	8	10	12	14	16	18	20
OAT °C	VNE IAS KTS										
ABOVE 4150 LB											
52	125	-	-	-	-	-	-	-	-	-	-
46	128	117	-	-	-	-	-	-	-	-	-
40	130	120	109	-	-	-	-	-	-	-	-
20	130	129	119	108	-	-	-	-	-	-	-
0	130	130	128	118	107	-	-	-	-	-	-
-20	130	130	130	129	118	107	-	-	-	-	-
-40	129	124	120	117	112	108	104	-	-	-	-
-50	118	114	110	106	102	98	95	91	-	-	-
FROM 4050 LB TO 4150 LB											
52	130	-	-	-	-	-	-	-	-	-	-
46	130	125	-	-	-	-	-	-	-	-	-
40	130	127	120	-	-	-	-	-	-	-	-
20	130	130	127	119	111	104	96	89	-	-	-
0	130	130	130	126	119	110	103	95	88	81	78
-20	130	130	130	130	126	118	110	103	95	88	80
-40	129	124	120	117	112	108	104	100	96	92	87
-50	118	114	110	106	102	98	95	91	88	84	82
<div style="display: flex; justify-content: space-between; align-items: center;"> ○ <h2 style="margin: 0;">BELOW 4050 LB</h2> ○ </div>											
52	130	-	-	-	-	-	-	-	-	-	-
46	130	126	-	-	-	-	-	-	-	-	-
40	130	128	122	-	-	-	-	-	-	-	-
20	130	130	127	121	115	108	102	96	-	-	-
0	130	130	130	127	121	114	108	101	95	89	82
-20	130	130	130	130	127	121	114	108	101	95	88
-40	129	124	120	117	112	108	104	100	96	92	89
-50	118	114	110	106	102	98	95	91	88	84	82

Figure 1-3. Placards and Decals (Sheet 1 of 2)

THIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER FLIGHT MANUAL.

Location: On compass trim panel.

SELECTED PASSENGER LOADING

WHEN BOTH CREW SEATS ARE OCCUPIED ONLY ONE (1) MID-PASSENGER IS PERMITTED UNLESS THERE ARE TWO (2) AFT PASSENGERS.

WHEN ONLY ONE (1) CREW SEAT IS OCCUPIED NO MORE THAN ONE (1) AFT PASSENGER IS PERMITTED UNLESS THERE IS ONE (1) MID-PASSENGER.

ABOVE 4150 LB GW ALTERNATE PASSENGER LOADING FROM SIDE TO SIDE.

MINIMUM COCKPIT WEIGHT FOR SINGLE PILOT OPERATIONS IS 200 LBS.

REFER TO RFM WEIGHT AND BALANCE FOR ADDITIONAL LOADING INFORMATION.

Location: On center post trim.

CARGO MUST BE SECURED IN ACCORDANCE WITH FLIGHT MANUAL INSTRUCTION

MAX ALLOWABLE WEIGHT 250 LBS.
MAX ALLOWABLE WEIGHT PER SQ. FT. 86 LBS.

Location: On the inside of the baggage compartment door.

ENGAGE ROTOR BRAKE BETWEEN 38% & 30% ROTOR RPM

Location (if installed): On rotor brake handle.

DEVIATION UP TO 20°E WILL BE PRESENT WITH BOTH LANDING LIGHTS ON

Location: Adjacent to standby compass.

AVOID 75% TO 88% N2 ABOVE 20% TQ

Location: Instrument panel.

206L3_RFMS-TH-1_0001_c1

Figure 1-3. Placards and Decals (Sheet 2 of 2)

1-15. ELECTRICAL

1-16. GENERATOR

Continuous operation 0 to 150 amps
 Maximum 150 amps

1-17. POWER PLANT

Two Rolls-Royce 250-C20R turboshaft engines.

1-18. GAS PRODUCER RPM

Continuous operation 62 to 105%
 Maximum 105%
 Maximum transient 106%
 (Do not exceed
 15 seconds above 105%)
 Idle operation 62 to 64%

1-19. POWER TURBINE RPM



USE OF THROTTLE TO CONTROL RPM IS NOT AUTHORIZED. REFER TO SECTION 3, EMERGENCY PROCEDURES — ENGINE OVERSPEED FOR EXCEPTION.

Steady-state operation 75 to 88% N₂ and engine torque greater than 20% is prohibited. Transient operation through the range is permissible.
 Minimum 99%
 Continuous operation 99 to 101%
 Maximum continuous 101%

Transient overspeed 101 to 104%
 range (5 minutes maximum)

NOTE

Refer to Rolls-Royce Operations and Maintenance Manual No. GTP 5232-2 for operation in the N₂ speed avoidance range and for transient overspeed limits.

1-20. TURBINE OUTLET TEMPERATURE (TOT)

Continuous operation 100 to 752°C
 Maximum continuous 752°C
 5 minute take-off range 752 to 810°C
 Maximum for takeoff 810°C
 Maximum transient 843°C
 (Do not exceed 6 seconds above 810°C)
 Maximum starting or shutdown (Do not exceed 10 seconds above 810°C) 927°C

NOTE

Intentional use of power transient area (810 to 843°C) is prohibited. Each TOT module is equipped with a red warning light that will illuminate when either of the following conditions occur:

Above 810°C for 1 second (power transient), or above 927°C for 1 second (during start sequence).

Momentary peak temperature of 927°C is permitted for no more than 1 second.

SINGLE ENGINE OPERATION — EMERGENCY ONLY:

Maximum continuous 810°C
 Transient (6 seconds) 810 to 899°C

NOTE

Refer to Rolls-Royce Operation and Maintenance Manual for action required if TOT exceeds 810 to 899°C for 6 seconds.

1-21. TRANSMISSION TORQUE LIMITS (TWIN ENGINE OPERATION)



DO NOT EXCEED TORQUE LIMITS. REFER TO ROLLS-ROYCE OPERATION AND MAINTENANCE MANUAL FOR ENGINE TORQUE LIMITS.

NOTE

100% equals 450 SHP.

Continuous operation	0 to 82%
Maximum continuous	82%
5 minute takeoff range	82 to 100%
Maximum for takeoff (Do not exceed 5 seconds above 100%)	100%

TRANSMISSION TORQUE LIMITS WITH ONE ENGINE INOPERATIVE

Continuous operation	0 to 82%
Maximum continuous	82%
5 minute maximum	100%

1-22. FUEL PRESSURE

Minimum	4 PSI
Continuous operation	4 to 25 PSI
Maximum	25 PSI

1-23. ENGINE OIL PRESSURE

Minimum for idle	50 PSI
Conditional operation below 79% gas producer (N ₁) RPM	50 to 130 PSI
Continuous operation below 94% gas producer (N ₁) RPM	90 to 130 PSI
Continuous operation above 94% gas producer (N ₁) RPM	120 to 130 PSI
Maximum	130 PSI

1-24. ENGINE OIL TEMPERATURE

Continuous operation	0 to 107°C
Maximum	107°C

1-25. ANTI-ICE/CONTINUOUS IGNITION

The maximum ambient temperature for use of engine anti-ice is 4.4°C (40°F). Engine anti-icing and continuous ignition shall be on for flight in visible moisture in temperatures below 4.4°C (40°F), and when conducting flight operations in falling and/or blowing snow.

1-26. STARTER

Limit starter energize time to following:

External Power Start	Battery Start
40 seconds ON	60 seconds ON
30 seconds OFF	60 seconds OFF
40 seconds ON	60 seconds ON
30 seconds OFF	60 seconds OFF
40 seconds ON	60 seconds ON
30 minutes OFF	30 minutes OFF

CAUTION

IF THE MAIN ROTOR IS NOT ROTATING BY 25% GAS PRODUCER RPM (N_1), ABORT THE START. A SECOND OR THIRD ATTEMPT MAY BE MADE; IF THE CONDITION STILL EXISTS, REFER TO ROLLS-ROYCE OPERATION AND MAINTENANCE MANUAL.

NOTE

ENG OUT light extinguished at 52 +1% gas producer RPM (N_1).

9. Starter — Release at 58% gas producer RPM (N_1).
10. ENG OIL, XSMN OIL, and COBOX OIL PRESSURE — Check.

NOTE

During cold temperature operations, stabilize at idle until ENG OIL temperature reaches 0°C.

11. IDLE RELEASE switch — Activate.

NOTE

Excessive throttle pressure against idle release stop will prevent plunger release and throttle advancement.

12. Throttle — Open to approximately 70% gas producer RPM (N_1). Hold for 4 seconds to allow idle release solenoid to complete cycle.
13. Throttle — Close to idle position. Check N_1 idle RPM, then open to 70% N_1 .
14. APU — Disconnect (as required).

15. Generator switch — On (as required), check amp meter.

WARNING

AVOID CONTINUOUS OPERATION WHEN BETWEEN 75 AND 88% N_2 AND ENGINE TORQUE GREATER THAN 20%.

NOTE

During initial charge of a low battery, red light may illuminate and volt/amp meter display will flash.

16. Second engine start — Repeat start sequence step 5 to step 12.
17. Throttle — Close to idle position. Check N_1 RPM then open to 70% N_1 .
18. APU — Disconnect prior to activating either generator switch.
19. Generator switch(es) — ON.
20. VDC/amp meter — Check L, R, L + R amperage readings and red LEDs out for flight.
21. Throttles — Idle. Check 62 to 64% gas producer RPM (N_1) after amperage is stabilized.

2-18A. DRY MOTORING RUN

The following procedure is used to reduce residual TOT to recommended levels for engine start.

1. Throttle — Closed position.
2. STARTER button — Press to engage for 15 seconds, then release.

Follow ENGINE STARTING procedure, paragraph 2-18, once 0% N_1 is indicated.

CAUTION

IF THE ENGINE HAS BEEN SHUTDOWN FOR MORE THAN 15 MINUTES, STABILIZE AT IDLE FOR ONE MINUTE BEFORE INCREASING POWER.

2-19 P R E L I M I N A R Y HYDRAULIC SYSTEMS CHECK

NOTE

Uncommanded control movement or motoring with hydraulic system switch off may indicate hydraulic system malfunction.

HYDRAULIC SYSTEM switch - OFF, then ON.

2-20 ENGINE RUNUP

1. Attitude gyro - Pull and hold knob to cage.
2. Directional gyro and attitude switch - ON. Release attitude knob smoothly.
3. Pitot heat - As required.

CAUTION

ALL FUEL PUMP CIRCUIT BREAKERS MUST BE IN, AND BOTH FUEL VALVE SWITCHES MUST BE OPEN DURING FLIGHT.

4. Fuel boost pumps - Check as follows:
 - a. Crossfeed switch - C R O S S F E E D O V E R R I D E Check C R O S S F E E D O V E R R I D E light on. Indication of fuel pressure on gage confirms respective forward fuel transfer pump operation.
 - b. Crossfeed switch - N O R M A L. Check C R O S S F E E D O V E R R I D E light out.
 - c. NO. 1 aft pump circuit breaker - Pull OFF. AFT PRESS light remains off. This confirms NO. 2 aft boost pump operation.
 - d. NO. 2 aft pump circuit breaker - Pull OFF. AFT PRESS light comes on to confirm pressure sensor operation.
 - e. NO. 1 aft pump circuit breaker - Push IN. AFT PRESS light goes out confirming NO. 1 aft boost pump operation.