



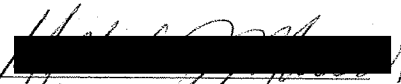
Carson Helicopters, Inc.
Perkasie, PA 18944

FAA Approved
Rotorcraft Flight Manual Supplement No. 5
for Sikorsky S61 N Model Helicopters
modified to the short fuselage configuration

Registration Number _____

Serial Number _____

This supplement must be attached to the FAA Approved S61N Rotorcraft Flight Manual SA4045-82, when conducting Category B out of ground effect operations with STC SR01771NY dated 10/6/03. This Supplement is applicable to S61N model aircraft with a reduction in fuselage length by fifty inches and Carson STC SR1585NY, (Composite Main Rotor Blades). It also increases the Altitude Limitations. The information contained herein supplements or supersedes the basic flight manual and Sikorsky Supplements 15 and 16 only in those areas listed herein. For Limitations, Procedures, and Performance information not contained in this supplement, consult the basic Rotorcraft Flight Manual.


For FAA Approved
Anthony Socias, Acting Manager
New York Aircraft Certification Office


Date: _____

Revision: 001

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 RFMS #5

Log of Revisions

Revision Number	Pages Affected	Description	FAA Approved	Date
	All	Initial Release	Vito A. Pulera, Manager NYACO	10/06/03
001	1,2,3	Include all short fuselage S61N's add -018 Bifilar and higher dash number components	 Anthony Socias Acting Manager NYACO	APR 11 2005

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RFMS No.5

Part 1, Section 1
Operating Limitations

Configuration

The following must be installed on the aircraft:

1. CT58-140-1 Engines or -2 engines
2. S61N helicopters with a reduction in fuselage length by fifty inches (from station 110 to station 160).
3. Main Gear Box (P/N S6135-20600-039 and subsequent).
4. Ribbed pocket tail rotor blades (P/N S6117-30101-043 or -045).
5. Bifilar assembly (P/N S6112-23039-017 or -018).
6. Beam Pitch Control Tail Gear Box (P/N S6135-66705-1).
7. Fixed Main Landing Gear.
8. STC SR1585NY (Composite Main Rotor Blades P/N 163-101-1).

Altitude Limits

Takeoff and Landing, Category B: 12,000 feet density altitude.
Enroute Altitude: 14,000 feet density altitude.

Class B External Load Operations

Altitude: 9,000 feet density altitude

Part 1, Section 4
Performance

When conducting OGE hovering operations, use the data presented in this Performance Section, which supercedes that of the basic flight manual and Sikorsky Supplements No. 15 and 16.

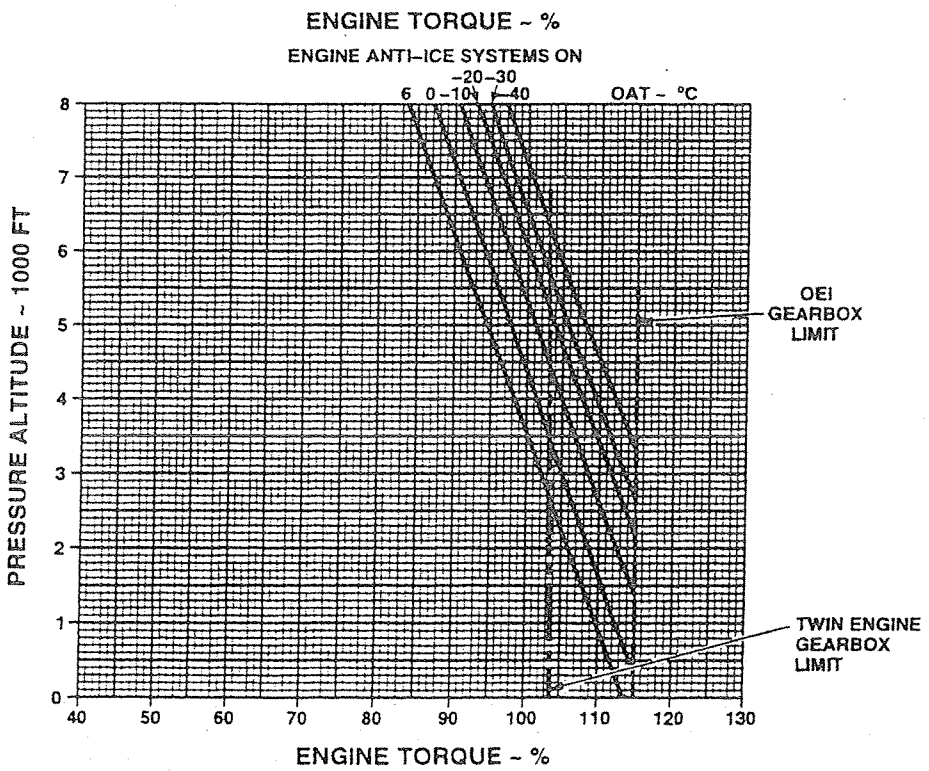
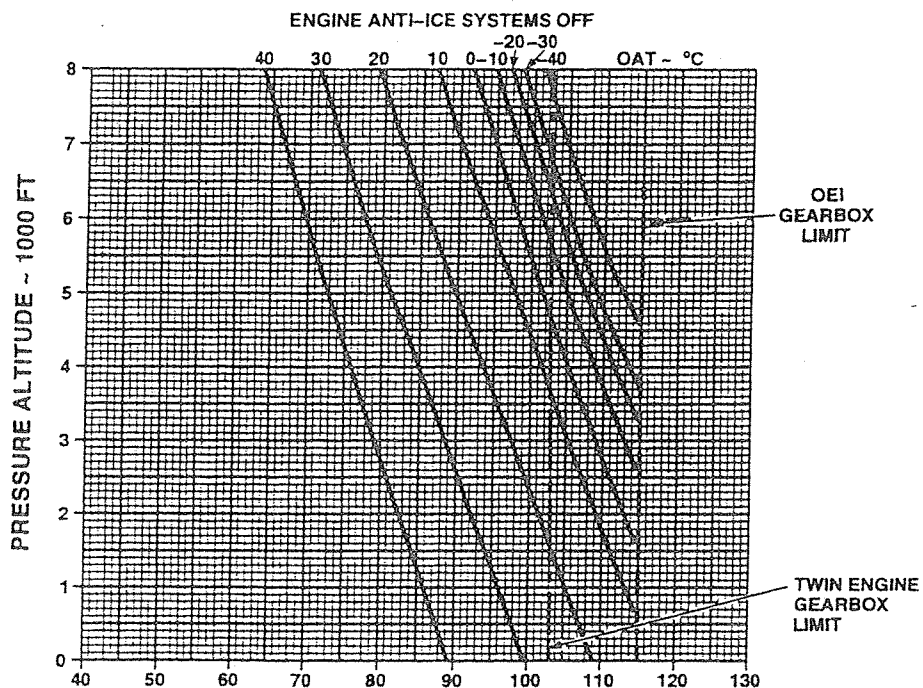
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S61N
POWER AVAILABLE
TAKEOFF POWER (5 MIN TWIN, 30 MIN OEI)
CT58-140-1, -2 ENGINE(S)
100% NR
SPECIFICATION POWER

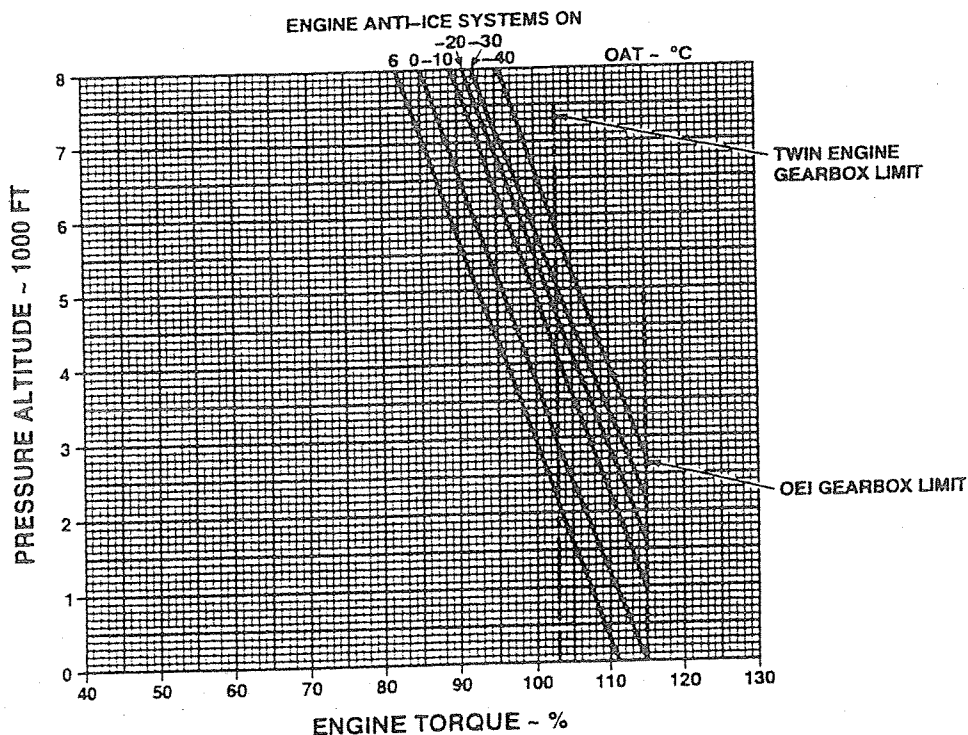
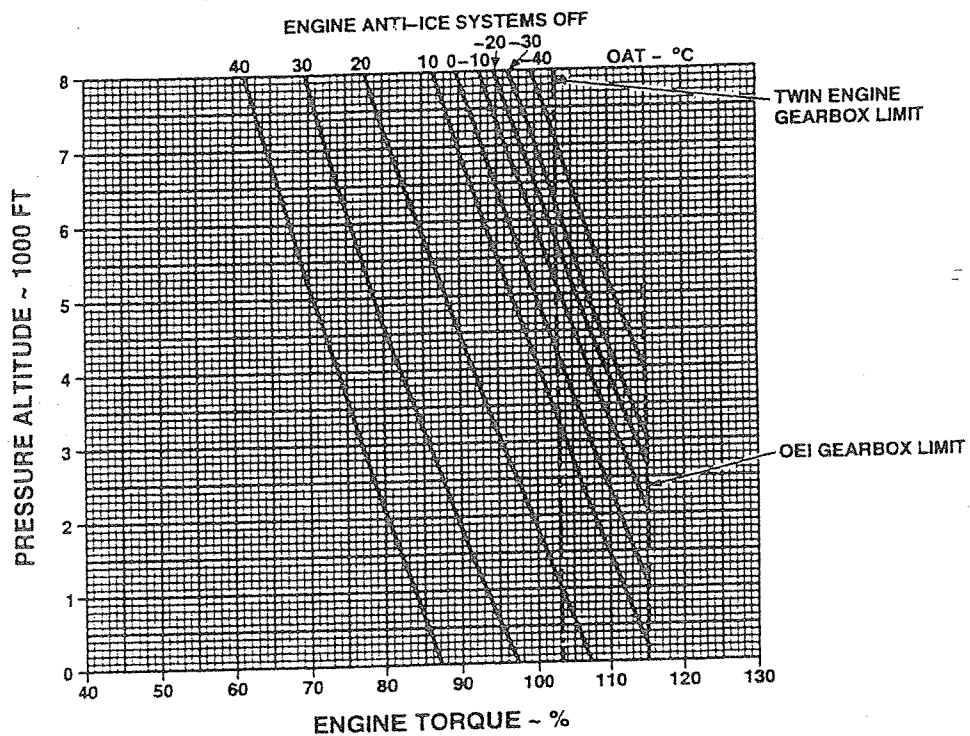


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Takeoff power available at 100%

Figure 1

S61N
POWER AVAILABLE
TAKEOFF POWER (5 MIN TWIN, 30 MIN OEI)
CT58-140-1, -2 ENGINE(S)
103% NR
SPECIFICATION POWER



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Takeoff power available at 103%

Figure 2

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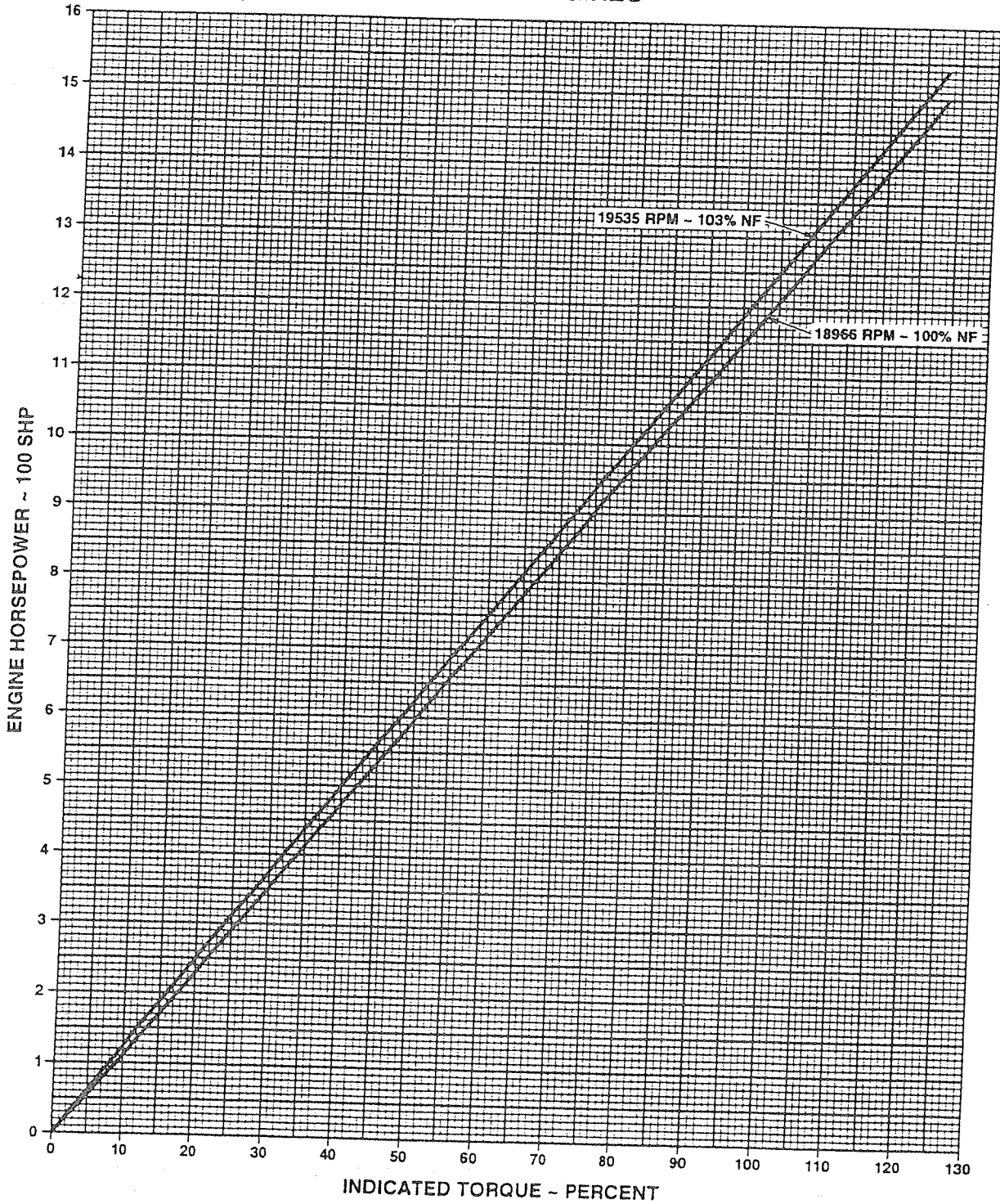
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S61N

INDICATED TORQUE VS ENGINE SHAFT HORSEPOWER

CT58-140 ENGINES



INDICATED TORQUE - PERCENT

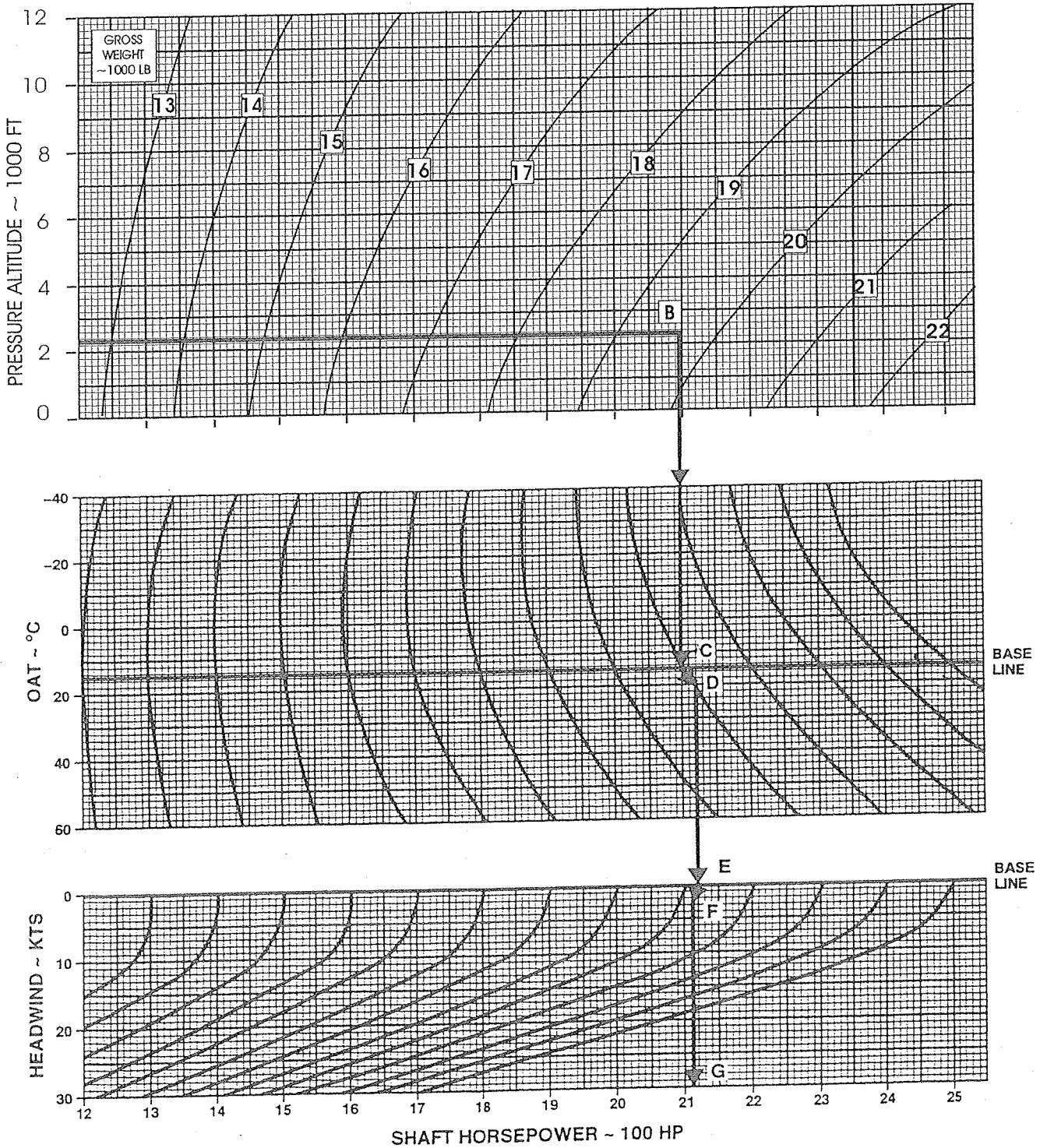
Indicated torque vs engine
shaft horsepower

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NO ICE SHIELD
 SOURCE:
 FLT TEST

S61N
**POWER REQUIRED TO HOVER
 OUT OF GROUND EFFECT**
 COMPOSITE BLADES
 100% Nr

FIXED LANDING GEAR
 10 KVA GENERATOR LOAD
 CT58-140-1



SHAFT HORSEPOWER ~ 100 HP

**Power Required To
 Hover OGE, 100% NR**

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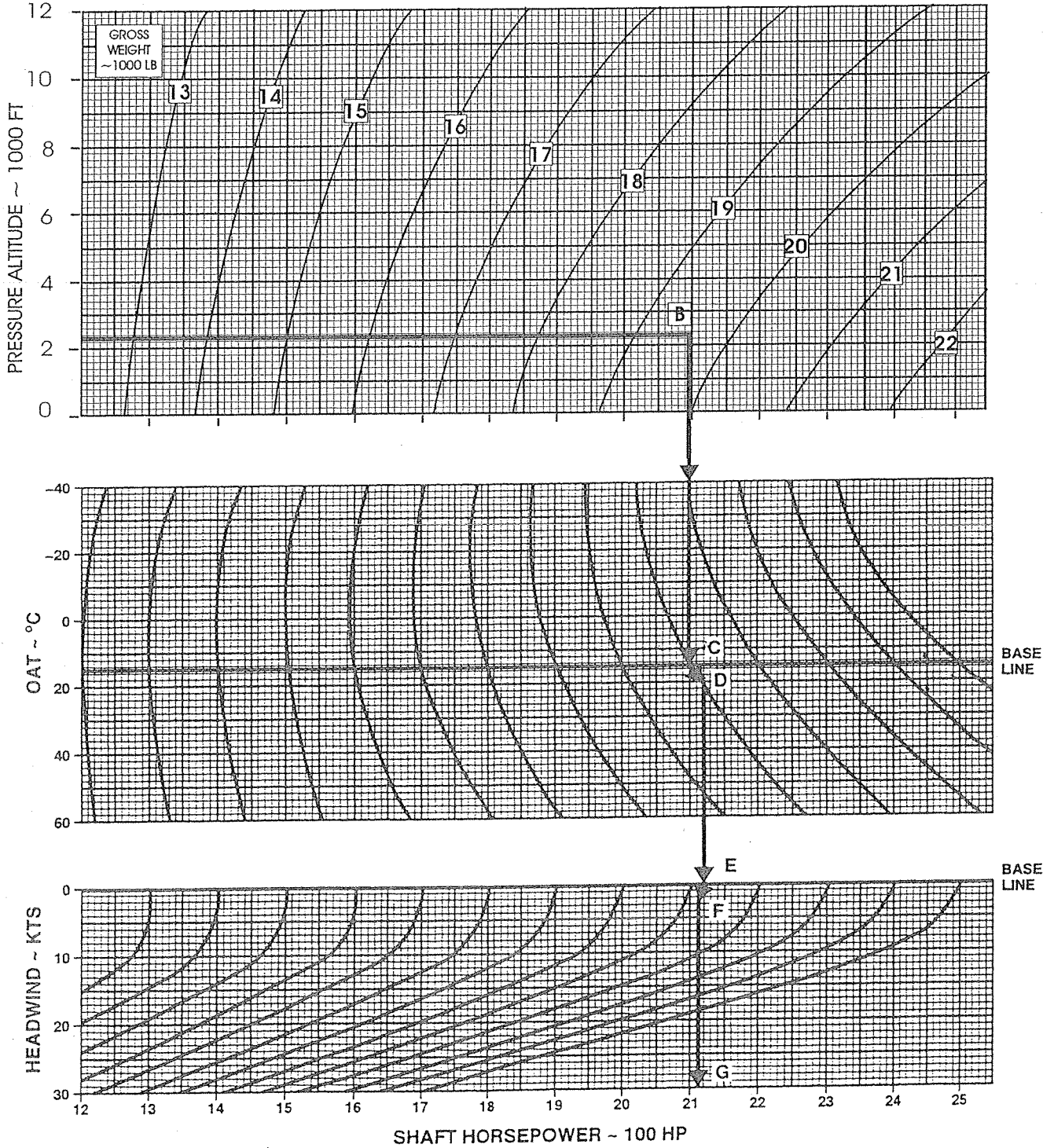
Figure 4

NO ICE SHIELD
 SOURCE:
 FLT TEST

S61N
 POWER REQUIRED TO HOVER
 OUT OF GROUND EFFECT

FIXED LANDING GEAR
 10 KVA GENERATOR LOAD
 CT58-140-1

COMPOSITE BLADES
 103% Nr



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Power Required To
 Hover OGE, 103% NR

Figure 5