

J.P. INSTRUMENTS
FAA APPROVED MODEL LIST (AML) NUMBER SA00678SE
FOR
INSTALLATION OF THE SLIM LINE® EGT 100 SERIES
PRIMARY INSTRUMENTS (CHT, TIT, OIL as applicable)

United States of America
 Department of Transportation—Federal Aviation Administration
Supplemental Type Certificate

Number SA00678SE

This certificate, issued to:

J. P. Instruments
 9621 Bay Meadows Drive
 Huntington Beach, CA 92646

certifies that the change in the type design for the following product with the limitations and conditions therefor as specified herein meets the airworthiness requirements of Part 21 of the Federal Aviation Regulations.

Original Product—Type Certificate Number: *See attached FAA Approved Model List (AML)

Make: No. SA00678SE for a list of the approved airplane
Model: models and applicable airworthiness regulations.

Description of the Type Design Change: Installation of J. P. Instruments Slimline EGT-100 series primary instruments in accordance with J. P. Instruments Installation Instructions 102S, Revision A, dated February 19, 1999, or later FAA approved revision. The instrument may be installed to monitor one of the following: cylinder head temperature, turbine inlet temperature, or oil temperature.

Limitations and Conditions: Approval of this change in type design extends to the airplane models listed on the AML only. This approval should not be extended to other aircraft of these models on which other previously approved modifications are incorporated unless it is determined that the relationship between this change and any of those other previously approved modifications, including changes in type design, will introduce no adverse effect upon the airworthiness of that aircraft. A copy of this Certificate and AML must be maintained as part of the permanent records for the modified aircraft.

If the holder agrees to permit another person to use this certificate to alter the product, the holder shall give the other person written evidence of that permission.

This certificate and the supporting data which is the basis for approval shall remain in effect until surrendered, suspended, revoked, or a termination date is otherwise established by the Administrator of the Federal Aviation Administration.

Date of application: May 26, 1998

Date received:

Date of issuance: March 5, 1999

Date amended:



By direction of the Administrator

 (Signature)
 Acting Manager, Seattle Aircraft
 Certification Office
 (Title)

Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both.
This certificate may be transferred in accordance with FAR 21.47.

FAA Form 8110-2(10-88)

| ITEM | AIRCRAFT MAKE | AIRCRAFT MODEL | TYPE CERTIFICATE NUMBER | CERTIFICATION BASIS FOR ALTERATION | AML REVISION DATE |
|------|---------------------------------|---|-------------------------|------------------------------------|-------------------|
| 42. | Robinson Helicopter Co. | R44 | H11NM | FAR27 | |
| 43. | PITTS (AVIAT) White Inter. Ltd. | S-2S, S-2B | A8SO | FAR 23 | |
| 44. | Thompson | Navion, A,B,C,D,E,F,G with IO-520 Series eng. | A-782 | CAR 3 | |
| 45. | Thompson | Navion, B, F, G, H | A-782 | CAR 3 | |
| 46. | Siai-Marchetti | F.260, B,C,D,F | A10EU | FAR 23 CAR 10 | |
| 47. | S.O.C.A.T.A. Aerospaziale | TB10, TB20, TB21,200 | A51EU | FAR 21.29 | |

February 19, 1999 Rev NC

Approved:
 A. S. Pasion
 Manager, Special Certification Branch
 Seattle Aircraft Certification Office

Date: March 5, 1999

Subject: Permission to use STC.

To Whom It May Concern:

J.P. Instruments holder of STC SA00678SE grants to the purchaser of the SlimLine (PN EGT-100) permission to use the STC.

Signed

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|------|---|---|-------------------------|------------------------------------|-------------------|
| 1. | American General Aircraft Holdings, Grumman | AA-5, AA-5A, AA-5B | A16EA | FAR 23 | |
| 2. | Beech | C35 | A-777 | CAR 3 | |
| 3. | Beech | 35-A33, A36TC, B36TC | 3A15 | CAR 3 | |
| 4. | Beech Twin | 58P,58PA,58TC,58TCA | A23CE | FAR 23 | |
| 5. | Bellanca Inc. | 17-31ATC | 1A3 | CAR 3 | |
| 6. | Cessna | 170, 170A, B | A-799 | CAR 3 | |
| 7. | Cessna | 172, 172A, B, C, D, E, F, G, H, 172 I, K, L, M, N, P, Q | 3A12 | CAR 3 | |
| 8. | Cessna | 172RG | 3A17 | CAR 3 | |
| 9. | Cessna | 177,177A, 177B | A13CE | FAR 23 | |
| 10. | Cessna | 177RG | A20CE | FAR 23 | |
| 11. | Cessna | 180, 180A, B, C, D, E, F, G, H, J, K | 5A6 | CAR 3 | |
| 12. | Cessna | 182,182A,B,C,D,E,F,G,H,J,K, L, M, N, P, Q, R | 3A13 | CAR 3 | |
| 13. | Cessna | R182, T182, TR182 | 3A13 | CAR 3 | |
| 14. | Cessna | 185,185A,B,C,D,E,A185E,A185F | 3A24 | CAR 3 | |
| 15. | Cessna | 206, P206, P206A, B, C, D, E, TP206A, B, C, D, E, U206, U206A, B, C, D, E, F, G, TU206A, B, C, D, E, F, G | A4CE | CAR 3 | |
| 16. | Cessna | 207, 207A, T207, T207A | A16CE | FAR 23 | |
| 17. | Cessna | 210, 210A, B, C, D, E, F 210-5, 210-5A, T210F, 210G, T210G, 210H, T210H, 210J, T210J, T210K, 210K, 210L, T210L, 210M, T210M, 210N, P210N, T210N, 210R, P210R, T210R | 3A21 | FAR 23 | |
| 18. | Cessna twin | 310, C, D, E, F, G, H, E310H, 310I, J, K, L, N, P, Q, R 310J-1, E310J, T310P, Q, R, T310Q, 310R, T310R | 3A10 | CAR 3 | |
| 19. | Cessna twin | 336 | A2CE | CAR 3 | |
| 20. | Cessna twin | 337, 337A, B, C, D, E, F, G, H, T337B, C, D, E, F, G, H, M337B, P337H, T337H-SP | A6CE | CAR 3 | |
| 21. | Cessna twin | 401, 401A, B, 402, 402A, B, C, 414, 414A, | A7CE | CAR 3 | |
| 22. | EXTRA | EA-300,S, L, EA-300/200 | A67EU | FAR 21.29 FAR 23 | |

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| ITEM | AIRCRAFT MAKE | AIRCRAFT MODEL | TYPE CERTIFICATE NUMBER | CERTIFICATION BASIS FOR ALTERATION | AML REVISION DATE |
|------|-------------------------|---|-------------------------|------------------------------------|-------------------|
| 23. | GENERAL AVIA | F22B, F22C, F22R | A75EU | FAR 23 | |
| 24. | Jobmaster Company | DGA-15P (Army UC-70; Navy GH-1, GH-2,GH-3, NH-1 | A-717 | CAR 4a | |
| 25. | Maule | M-5-180C M-5-200 MX-7-180, A, B MXT-7-180, A, B, MXT-7-160 MX-7-160 | 3A23 | CAR 3 | |
| 26. | Maule | M-5-235C | 3A23 | CAR 3 | |
| 27. | Mooney | M20E, F, J, K | 2A3 | CAR 3 | |
| 28. | Mooney | M20K (with Rocket Conversion TSIOS20NB) | 2A3 | CAR 3 | |
| 29. | North American | AT-6 (SNJ-2),-6A,B,C,D,E,F, (SNJ-3,4,5,6,7) | A-2-575 | CAR 3 | |
| 30. | Piper | PA-18S "105" PA-18 "125" (Army L-21A) PA-18S "125", PA-18AS "125", PA-18 "135" (Army L-21B), PA-18A "135", PA-18S "135", PA-18AS "135", PA-18 "150", PA-18A "150", PA-18S "150", PA-18AS "150", | 1A2 | CAR 3 | |
| 31. | Piper | PA-20, -20S, 20-"115", 20S-"115", PA-20-"135", -20S-"135" | 1A4 | CAR 3 | |
| 32. | Piper | PA-22, -22-108, -22-135, -22S-135, PA-22S-150, -22-160, -22S-160 | 1A6 | CAR 3 | |
| 33. | Piper | PA 23, 23-160, PA-E23-250, PA-23-250 | 1A10 | CAR 3 | |
| 34. | Piper | PA-24,-250, -260, | 1A15 | CAR 3 | |
| 35. | Piper | PA-28-140,-150,-151,-160,-161, PA-28-180,-28S-160, PA-28R-180 | 2A13 | CAR 3 | |
| 36. | Piper | PA-28-181, PA-28R-200, | 2A13 | CAR 3 | |
| 37. | Piper | PA-28-235; -28-236 | 2A13 | CAR 3 | |
| 38. | Piper | PA-30, PA-39, PA-40 | A1EA | CAR 3 | |
| 39. | Piper | PA -31-350, PA-31-325 | A20SO | CAR 3 FAR23 | |
| 40. | Piper | PA-60-600, -60-601, 60-601P PA-60-602P, 60-700P | A17WE | FAR 23 | |
| 41. | Robinson Helicopter Co. | R22, R22 ALPHA, R22 BETA R22 MARINER | H10WE | FAR27 | |

| MAKE | AIRCRAFT MODE | T.C.D.S | P/N 400000 - XX - [() - ()] * |
|--------------------------------------|--|---------|---|
| Grumman | AA-1, -1A, -1B | A11EA | 4-G300R2600 |
| Grumman | AA-1C | A11EA | 4-G300R2700 |
| Gulfstream | AA-5, AA-5A, AA-5B | A16EA | 4-G300R2700 |
| Commander Aircraft | 112,112B | A12SO | 4-G300R2700 |
| Commander Aircraft | 112TC, 112TCA | A12SO | 4-G300R2570 |
| Commander Aircraft | 114,114A, B | A12SO | 6-G300R2700 |
| Gulfstream (Twin Commander Aircraft) | 500 | 6A1 | 6-G300R2575 |
| | 500-A | | 6-G300R2620 |
| | 500-B, U, S | | 6-G300R2620 |
| | 520, 560,560A, -E | | 6-G300Y3000R3400 |
| Gulfstream (Twin Commander Aircraft) | 560F | 2A4 | 6-G300Y3000R3400 |
| | 680,E, 720 | | 6-G300Y3200R3400 |
| | 680-F, 680FL, 680-FL(P) | | 6-G300Y3200R3400 |
| | 685 | | 6-G300R3400 |
| Hughes Helicopter (Schweizer) | 269A, (HO-360-B1A, 2900RL) | 4H12 | 4-G300R2900 |
| | 269A (O-360-C2D, 2700-2900) | | 4-G300Y2700R2900 |
| | 269A-1,(H1O-360-B1A ,2900RL) | | 4-G300R2900 |
| | 269B, 269C,(H1O-360-D1A,3200RL) | | 4-G300R3200 |
| Maule | Bee Dee M-4, M-4,-4C,-4S,-4T | 3A23 | 4-G300R2700 |
| Maule | M-4-210,C,S,T, M-4-220C,S,T, M-4-180C,S,T | 3A23 | 6-G300R2800 |
| Maule | M-5-180C, (Lyc 0-360-C1F,2000-2250, 2700RL) M-5-200.) MX-7-180, A, B, MXT-7-180, A, B, MXT-7-160, MX-7-160 | 3A23 | 4-G300R2000G2250R2700 4-G300R2700 4-G300R2700 |

| MAKE | AIRCRAFT MODE | T.C.D.S | P/N 400000 - XX - [() - ()] * |
|--------|---|---------|--|
| Cessna | 140A | 5A2 | 4-G300R2470 |
| Cessna | 150,A,B,C,D,E,F,G,H,J,K A150K, 150L, A150L, 150M A150M | 3A19 | 4-G300R2750 |
| Cessna | 152, A152 | 3A19 | 4-G300R2550 |
| Cessna | 170,170A,170B | A-799 | 6-G300R2700 |
| Cessna | 172 172A,B,C,D,E,F,G,H | 3A12 | 6-G300R2700 |
| Cessna | 172, I, K, L, M,N,P, Q | 3A12 | 4-G300R2700 |
| Cessna | 172RG | 3A17 | 4-G300R2700 |
| Cessna | R172E, F, G, H, J, (IO-360-D,-H, 2800RL) K, (IO-360K, 2600RL) | 3A17 | 6-G300R2800 6-G300R2600 |
| Cessna | P172D,175,175A,B,C | 3A17 | 6-G300R3200 |
| Cessna | 177, 177A, 177B | A13CE | 4-G300R2700 |
| Cessna | 177RG | A20CE | 4-G300R2700 |
| Cessna | 180, (0-470-A,-J,-K, A&K 2600RL, 180 (0-470-J 2550RL) 180A,B,C,D,E,F,G,H,J 180K | 5A6 | 6-G300R2600 6-G300R2550 6-G300R2600 6-G300R2400 |
| Cessna | 182,182A,B,C,D,E,F,G,H,J,K,L,M,N,P 182,Q,R, R182, T182, TR182 | 3A13 | 6-G300R2600 6-G300R2400 |
| Cessna | 185,185A,B,C,D,E | 3A24 | 6-G300R2620 |
| Cessna | A185E,A185F | 3A24 | 6-G30Y2700R2850 |
| Cessna | 188,188A,188B A188,A188A, A188B T188C | A9CE | 6-G300R2600 6-G300Y2700R2850 6-G300R2700 |
| Cessna | 190, 195,195B 195A | A-790 | 7-G300R2200 7-G300Y2000R2200 |

* See Part Number Designation on Sheet 13

* See Part Number Designation on Sheet 13

| MAKE | AIRCRAFT MODE | T.C.D.S | P/N 400000 - XX - [() - ()] * |
|----------------|--|---------|---|
| Cessna | 206,P206,P206A,B, C,D,E TP206A,B,C,D,E | A4CE | 6-G300R2700 6-G300R2700 |
| Cessna | U206,U206A U206B,C,D,E,F,G TU206A,B,C,D,E,F,G | A4CE | 6-G300R2700 6-G300Y2700R2850 6-G300R2700 |
| Cessna | 207,207A | A16CE | 6-G300R2700 |
| Cessna | T207,T207A | A16CE | 6-G300Y2600R2700 |
| Cessna | 210,210A | 3A21 | 6-G300YR2620 |
| Cessna | 210B,C | 3A21 | 6-G300R2620 |
| Cessna | 210D,E,F | 3A21 | 6-G300R2700 |
| Cessna | 210-5,210-5A T210F,T210G,T210H 210G,,210H, 210J | 3A21 | 6-G300R2620 6-G30R2700 6-G30R2700 |
| Cessna | T210J, T210K,T210L 210K, 210L, 210M,210N,210R T210M,T210N, P210N P210R, T210R | 3A21 | 6-G300R2700 6-G300Y2700R2850 6-G300Y2600R2700 6-G30R2700 |
| Cessna | 305A,C,D,F | 5A5 | 6-G300Y2300R2600 |
| Cessna Twin | 310,310A,B | 3A10 | 6-G300R2600 |
| Cessna Twin | 310C,D,E,F,G,H,J, 310J-1, E310H, 310I, E310J 310K,L,N,P,Q | 3A10 | 6-G300R2620 |
| Cessna Twin | 310R, T310Q,T310P,T310R | 3A10 | 6-G300R2700 |
| Cessna Twin | 320,A,B,C, 320-1 320D,E,F,335, 340,340A | 3A25 | 6-G300R2600 6-G300R2700 |
| Cessna Twin | 321 | 3A11 | 6-G300R2600 |
| Cessna Twin | 336 | A2CE | 6-G300R2800 |

* See Part Number Designation on Sheet 13

| MAKE | AIRCRAFT MODE | T.C.D.S | P/N 400000 - XX - [() - ()] * |
|--|---|---------|--|
| Cessna Twin | 337, 337A,B,C,D,E,F,G,H T337B,C,D,E,F,G,H, M337B (MIL), P337H T337H-SP, (TSIO-360-JB 2600-2800RL) | A6CE | 6-G300R2800 6-G300R2800 6-G300Y2600R2800 |
| Cessna Twin | 401, 401A,B, 402,402A,B,C | A7CE | 6-G300R2700 |
| Cessna Twin | 404, 406 (GTSIO-520M, 3350RL, 2235PROP @ .667:1) | A25CE | 6-G300R3350 |
| Cessna Twin | 411,411A, (GTSIO-520C, 3200RL 2400Prop @.750:1) | A7CE | 6-G300R3200 |
| Cessna Twin | 414,414A | A7CE | 6-G300R2700 |
| Cessna Twin | 421,421A 421B, (GTSIO-520H, 3400RL 2275PROP @.667:1) | A7CE | 6-G300R3400 |
| Cessna Twin | 421C, (GTSIO-520H, 3350RL 2235PROP @.667:1) | A7CE | 6-G300R3350 |
| Consolidated Aeronautical | C-1, C-2, LAKE LA-4, LA-4A, LA-4P | 1A13 | 4-G300R2700 |
| Consolidated Aeronautical | LA-4-200 | 1A13 | 4-G300R2000G2350R2700 |
| Consolidated Aeronautical | LA-4-250 | 1A13 | 6-G300R2570 |
| De Havilland | DHC-2 Mk. I, DHC-2 Mk. II, DHC-2MK. III | A-806 | 9-G300Y2200R2300 |
| Enstrom Helicopter | F-28 F-28A,-28C, -28F, 280, 280C 280F, 280FX | H1CE | 4-G300R2700 4-G300R2900 4-G300R3050 |
| GENERAL AVIA Costruzioni Aeronautiche | F22B, F22R F22C | A75EU | 4-G300R2700 4-G300R2000G2250R2700 |
| GENERAL AVIA Costruzioni Aeronautiche Twin | F20 (IO-520F, 2700-2850RL) twin | A38EU | 6-G300Y2700R2850 |

* See Part Number Designation on Sheet 13