



TROLLTUNE CORPORATION

CONGRATULATIONS !

You've made the decision to greatly increase the utility and value of your Cessna 182P/Q airplane.

By incorporating our Federal Aviation Administration (FAA) STC SA03608AT or European Aviation Safety Agency (EASA) STC 10026913 you'll enjoy a 150 to 160 pound increase in useful load and you do not have to modify or make installations to the airplane in any way. There are no labor, parts, or installation costs to worry about. You'll also enjoy the widest CG envelope ever available for any Cessna 182 (unless limited by other STCs you've installed).

This introductory document will provide some background, explain the benefits of the "major alteration" you will be making to your airplane, and guide you through the steps you'll need to take. You'll need to print (1) the appropriate STC certificate and (2) Instructions for Continued Airworthiness (ICA) attached to the end of this document - printing the rest of the document is optional.

We will share with you a few frequently asked questions (FAQ's). A more complete FAQ listing may be found at our web site. Should anything remain unanswered after your review, support and answers are always available via E-mail at:

stc@trolltune.com

or at our web site here: www.182stc.com

BACKGROUND TO THE STCs

When Cessna first certified the Cessna 182 series airplanes back in 1956, the maximum design gross weight (both landing and takeoff) was 2550 pounds. The standard useful load was then just over 1000 pounds. As the years passed, gross design weights were incrementally increased as changes were introduced to the basic 182 design. When production of the 182S model was finally restarted in 1996, the Maximum Gross Takeoff Weight (MGTOW) had grown to 3100 pounds, or a whopping 550 pounds above that of the first 182. And yet, the standard useful load had increased by less than 200 pounds, to only 1200 pounds. What happened?

The airplanes had gained weight. More and more systems, modern avionics and instruments, all took their toll and increased the basic empty weights. What was considered a luxurious upgrade, or was simply not available in 1956, over time became necessary and standard basic equipment. This trend continues today. Higher empty weights rob your airplane of payload and performance, compromising utility, range, endurance and consequent safety. (Of course, it may be argued that some of this modern equipment does actually contribute to safety).

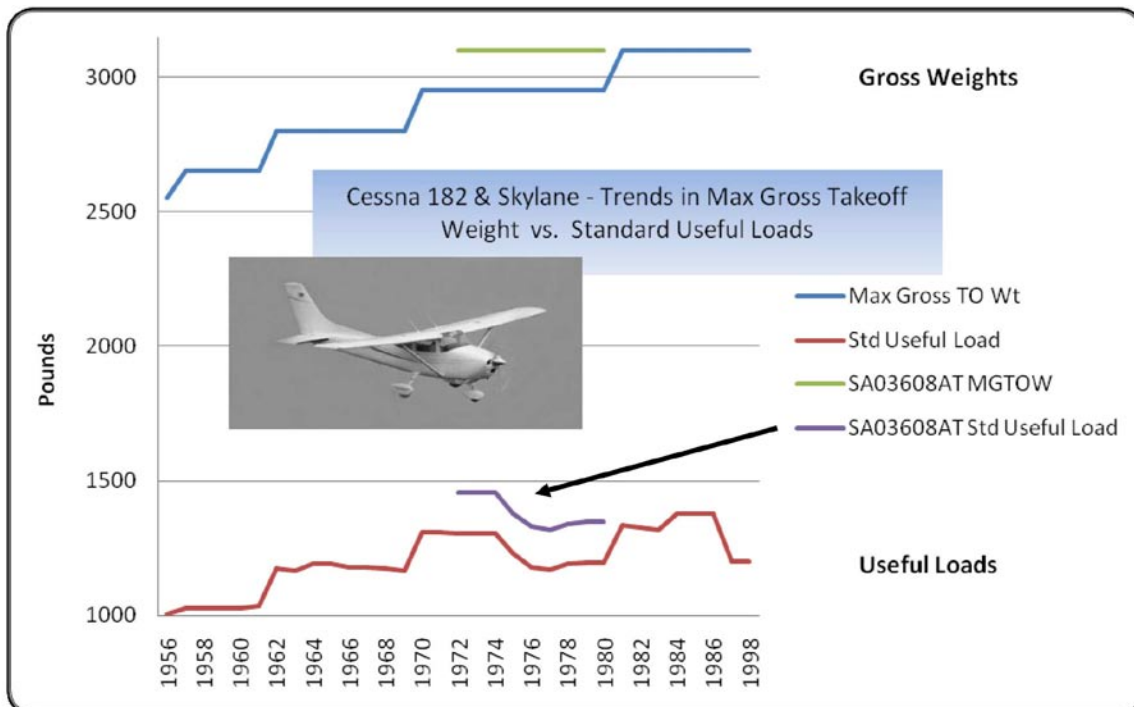
All of the early Cessna 182's were certified to Part 3 of the Civil Air Regulations (CAR 3) incorporating amendments 3-1 through 3-12. For single engine airplanes, those regulations prohibited a design landing weight less than the MGTOW. Only some time after Cessna's type certificate was awarded did the CAA amend the regulations (3-14), recognizing that "...this requirement has restricted unduly the

utility of small airplanes. Accordingly, CAR § 3.242 is being amended to permit [the] design landing weight of all small airplanes to be as low as 95 percent of the maximum weight.”

How did this affect Cessna? They were now able to certify the 182N in 1970 with a MGTOW of 2950 pounds, while keeping the landing weight at 2800 pounds. In 1981, Cessna did it again for the tubular gear 182R models; MGTOW was 3100 pounds, while landing weight remained at 2950 pounds. These numbers, providing the greatest loading flexibility, have been retained in all later fixed-gear 182’s, including the “restart” 182S, 182T, and T182T models.

But along the way, something was missed. Cessna did not bother to retrofit the 182R MGTOW increase to the structurally identical 182P and 182Q models... after all, those airplanes had already been sold. There was no technical reason for this omission, and certification for these models has now been granted via our FAA STC SA03608AT and EASA STC 10026913. These STCs are the culmination of an extensive, multi-year certification effort; FAA/EASA demanded very thorough and validated engineering compliance reports in areas of performance, structures, aerodynamic loads, maintenance, flight testing and acoustics. The old saw suggesting that no project may be approved until the paperwork equals the weight of the airplane was very nearly proven.

The chart below illustrates why our STCs are an important contributor to increasing the usefulness, utility, value, and safety of the Cessna 182P and 182Q airplanes. Note that the line depicted for our STCs suggests that the highest ever 182 useful loads available are for the 1972-1975 182P models. However, take this all with a grain of salt; the empty weight reference is the Cessna “standard” for those years, and your airplane may be heavier today. All we can promise is an increase in useful load of 150 to 160 pounds for every 182P and 182Q ever built.



ELEMENTS OF THE STCs

Depending on how you choose to use them, incorporating these STCs will:

- Offer greater utility and flexibility in flight planning
- Accommodate additional passenger or baggage loads
- Enable increased fuel loads
- Allow the carriage of more jettisonable cargo or skydivers
- Eliminate fuel stops on longer cross country flights
- Increase range, endurance and flight efficiency
- Provide a greater safety cushion in case of unexpected bad weather
- Allow greater loiter times for weight intensive special mission work

The STC certificate itself, either FAA SA03608AT or EASA 10026913, is only a part of what you will need. All of the following documents are required and are included with the STC:

1. Supplemental Airplane Flight Manual (1972 – 1976 182P and 1977 – 1978 182Q only)

Depending upon your airplane's serial number, this will be one of six separate FAA/EASA approved supplements. Each details performance changes at the increased weight. Why so many? Baseline airplane performance, different fuel capacities, etc. occurred in these years. You will receive the correct supplement for your specific airplane.

2. Airplane Flight Manual Supplement (1979 – 1980 182Q only)

These airplanes have an official, FAA approved Pilot's Operating Handbook and Airplane Flight Manual (POH/AFM), serialized to your specific airplane. Unlike the earlier Owner's Manuals or Pilot Operating Handbooks, the POH/AFM is required equipment. Our AFMS covers both years when incorporating either STC.

3. Instructions for Continued Airworthiness (ICA)

This FAA/EASA approved document gives your maintenance provider clear instructions on what to do in the event of an overweight landing. It also makes clear that there are no additional airplane limitations as a consequence of incorporating this STC.

4. Permission Letter

This letter is our authorization for you to use the STC. It is required, not only by FAA and EASA regulations, but in the USA by Congressional edict via Public Law. It bears a unique STC Control Number is valid only for your specific airplane and serial number.

STEP BY STEP

Here are some guidelines to the STC "installation":

1. Print the required STC certificate and ICA (at the end of this document), the permission letter, and flight manual supplement (sent separately) for your records. Refer to the STC certificate continuation sheets to make sure you have received the correct flight manual supplement for your serial number.
2. Make sure that the aircraft registration information on the permission letter and flight manual supplement is consistent with that which is shown on your airplane's certificate of registration, in some cases FAA Form 8050-3.
3. In the United States, have your maintenance provider prepare two copies of FAA Form 337 detailing incorporation of STC SA03608AT. A sample Form 337 is attached below. After signatures in Block 7 are completed, approving your airplane for "return to service", keep one with the aircraft records and forward the second to:

Federal Aviation Administration
Aircraft Registration Branch, AFS-750
PO Box 25504
Oklahoma City, OK 73125

5. Outside of the United States, follow the procedures as outlined by your local CAA (CASA in Australia, TCCA in Canada, etc.). In Europe, for example, this may require a Certificate of Release to Service (CRS) form signed by an EASA Part 66 qualified Aircraft Maintenance Engineer (AME) or other "authorized person".
6. Have your maintenance provider make an entry in your airframe logbook indicating the STC has been incorporated. Be sure to also have your latest Weight & Balance document(s) updated to show your newfound increase in useful load (160 pounds for all 182P and 1977 182Q models, 150 pounds for 1978 to 1980 182Qs). You should be prepared to pay at least a nominal fee for this service, as the "installer" has now researched your airplane's paperwork in order to assure compatibility of any existing mods, repairs, or previous STCs. You and your installer should pay particular attention to Center of Gravity (CG) limitations that may have been imposed by some earlier STCs - these must still be respected.
7. Please review your flight manual supplement carefully and compare it with your present Owner's Manual, POH or AFM. It contains important information about performance changes when operating your airplane at higher weights. You should pay particular attention to the change in center of gravity and moment envelopes and airspeeds for emergency operations. Note that if you also have flight manual supplement(s) from (an)other STC(s) describing performance changes different from your airplane's original OM/POH or AFM, that supplement's flight data may be at variance from the Trolltune data. If you have any doubts, questions or concerns please ask. Our STCs have been successfully sold, installed, and judged compatible with a very long list of previous mods and STCs.
8. Place copies of the STC, the permission letter, Instructions for Continued Airworthiness, and the completed FAA Form 337 or equivalent CRS with the airplane's permanent maintenance records. Your flight manual supplement should be kept with your original OM/POH or AFM and any other supplements you may have.

Frequently Asked Questions (FAQ's):

Cessna 182P / Cessna 182Q MGTOW Increase

FAA STC SA03608AT / EASA STC 10026913

(For a more complete listing, see our web site at www.182stc.com)

Q: What advantage is there to incorporating this STC?

A: The STC allows you to legally take off with an additional 150 pounds of useful load (3100 pounds MGTOW). If you elect to use this capability by adding about an extra 25 gallons of fuel, you'll enjoy greater range, greater endurance, and greater safety. You might also avoid an otherwise unnecessary fuel stop and the related costs in both time and money.

Q: What changes are made to my airplane?

A: Absolutely none. There are no parts required, no installations to be made, no labor costs to consider. Your IA/A&P, AME or other maintenance provider may nominally charge you for completing and signing the appropriate "return to service" form.

Q: I'm confused. Is this a gross weight increase, a ramp weight increase, a useful load increase, or a payload increase?

A: Yes, this is a little confusing. Actually, the STC allows all four.

Since it does not increase the empty weight of your airplane (OK, less a few ounces for the required STC paperwork!), your max gross takeoff weight is increased by 150 pounds. If your airplane is a 1978 - 1980 182Q model, this represents an increase in useful load of 150 pounds as well. Your original ramp weight was 2960 before we increased it to 3110.

Should yours be a 1972 - 1976 182P or a 1977 182Q, your ramp weight was less... it has now gone from 2950 to 3110; your useful load has therefore increased by 160 pounds.

Payload is another matter entirely. Fuel is not considered payload, but is a portion of your useful load. So, for example, if you elect to use only 60 pounds of the 150 pound MGTOW increase for fuel (about 10 gallons), your payload increase is 90 pounds. If no portion of the increase is used for fuel, both your useful load and payload have increased by 150 - 160 pounds.

Q: You always refer to "takeoff weight" in pounds. Why not "takeoff mass" in kilograms?

A: A large segment of the aviation industry in the USA discusses takeoff and landing numbers in terms of "weight" in pounds. In other parts of the world, the "correct" numbers are reflected as "mass" in kilograms. Even though convention accepts that one kilogram is equal to 2.2 pounds, the conversion is neither precise nor accurate. "Weight" varies with changes in gravitational acceleration which changes with altitude, while mass remains constant. Thus, you may see certain flight manuals expressing 3100 pounds Maximum Gross Takeoff Weight (MGTOW) as 1409 kg Maximum Takeoff Mass (MTOM). For all practical purposes, light aircraft may treat differences in weight and mass as insignificant - although, all other things being equal (and disregarding fuel burn), a Boeing 747ER at FL 350 will weigh almost 2700 pounds less than its maximum takeoff weight at sea level, while its MTOM remains the same.

Q: What new limitations are involved?

A: Whenever you operate above 2950 pounds, your new FAA approved Supplemental Airplane Flight Manual (for all 182P and 1977 - 1978 182Q) or Airplane Flight Manual Supplement (for 1979 - 1980 182Q) will show some small restrictions to the CG envelope. These must be adhered with to prevent excessive stick (yoke) force requirements under worst case loadings with full flaps and full power (e.g., a max weight go-around). For weights at 2950 pounds and below, no new limitations are involved.

Q: Exactly what is the new CG restriction?

A: It's the same as the later 1981 to 1986 182R and the "restart" 182S, 182T and T182T airplanes that came from the Cessna factory with a 3100 pound MGTOW. At max gross, the rear limit is reduced by 2.5 inches, forward by 1.4 inches. However (and unlike the 182R and the newer "restart" airplanes), the aft CG restriction does not apply at 2950 pounds and below. Thus, using this STC, 182P and 182Q owners enjoy the best of both worlds and have the widest CG range of any fixed gear Cessna 182.

Q: What am I paying for?

A: You are paying for a legal "major alteration" to your airframe. It adds an additional 150 - pounds to your maximum takeoff weight (from 2950 to 3100 pounds). Costs for the paperwork are related to the major investments that were required for a multi-year FAA and EASA certification program.

Q: Is there a change to maximum ramp weight?

A: Yes, the new max ramp weight is 3110 pounds. For the 1972 through 1977 182P and 182Q models, this is an increase of 160 pounds of useful load. For the 1978 through 1980 182Q models it is an increase of 150 pounds. The theory is that ground idle, taxi, and run-up will consume at least 1.7 gallons of fuel, such that the airplane will weigh no more than 3100 pounds at takeoff.

Q: Does the maximum landing weight change?

A: No, it remains at 2950 pounds.

Q: So, that means 2950 pounds is the Maximum Zero Fuel Weight, right?

A: No, there is no Zero Fuel Weight restriction. This means you can put minimal fuel in the tanks and still load skydivers or other jettisonable cargo as long as weight is reduced to 2950 pounds or less before landing.

Q: What if I need to land right away, or at weights above 2950 pounds?

A: Just do it. In any emergency situation, you should land in an overweight condition and as smoothly as possible on as smooth a surface as can be found. Instructions for Continued Airworthiness, supplied with the STC, will guide you to any necessary inspections required.

Q: Will damage occur from an overweight landing?

A: It is possible, but it is also very unlikely. Cessna builds a rugged airplane with large design margins. The tubular main landing gear and box structure on all Cessna 182P and 182Q airplanes are identical to that of the later Cessna 182R airplanes which were certified for the same design weight limits as under this STC. We are not aware of any serious overweight landing issues with the Cessna 182R, nor has Cessna ever addressed this eventuality in its maintenance or service documents. One 182R fleet operator did report that maintenance to restore main wheel alignment was sometimes necessary, but attributed this to full fuel, four filled seats, student training touch and go's with no attention to maximum landing weight.

Q: What's the difference between a "Supplemental Airplane Flight Manual" and an "Airplane Flight Manual Supplement"?

A: Cessna 182 airplanes built from 1972 through 1978 were provided with either a Cessna Owner's Manual or Pilot's Operating Handbook. These were not, nor were they required to be, FAA approved. STC changes affecting these handbooks are documented in what is called a "Supplemental Airplane Flight Manual."

Beginning with the 1979 and later model year 182 airplanes, an FAA Approved Pilots Operating Handbook and Airplane Flight Manual (POH/AFM) was required and serialized to each airplane. STC changes affecting these manuals are documented in what is called an "Airplane Flight Manual Supplement" or AFMS.

Cessna 182P and 182Q airplanes were built in seven different performance / fuel capacity groups, and this required that we produce seven different, and FAA/EASA approved, flight manual supplements. You'll get the correct one for your airplane based on its serial number.

Q: What if I sell my airplane? Does the STC go with it?

A: Yes. The permission to use the STC is attached to your airplane by serial number, not only to you as owner / operator. The STC adds value to your airplane and follows the airplane after sale. We ask that you advise the buyer / new owner to E-mail us a copy of the new FAA Certificate of Aircraft Registration, Form 8050-3 (or other CAA registration form), to: 8050@trolltune.com. We will then update our database, and be able to inform of any changes to ICA, or possible airworthiness concerns to the current owner / operator.

Q: My A&P/IA or AME says that a previous STC installed in my airplane precludes incorporating your STC. What now?

A: This would be a very unusual situation. However, your investment is safe. 100% of your purchase price will be refunded, given that you return all documents along with a written explanation of why the STC could not be incorporated, within 60 days of purchase.

Q: We operate a small fleet of Cessna 182P/182Q airplanes. Are quantity discounts available?

A: Yes. If 2 or more airplanes are registered to the same operator or organization a discount will apply as long as the purchase is made for all airplanes at the same time. Contact us at stc@trolltune.com, describe your situation, and we'll be happy to provide you a quote.

Q: When I compare my Cessna's serial number with your list, it suggests mine is a 1972 model. But when I check the FAA Registration database or the "N-number" search at the FAA web site, it says the aircraft year is 1971. Which is correct?

A: Our database is correct. First of all, there is no such thing as a 1971 Cessna 182P – that would be a Cessna 182N model. This discrepancy is common and affects a small percentage of all the 182P and 182Q airplanes built late in the previous or early in any given year. It happens because the FAA Aircraft Registration Branch uses the date on the manufacturer's Application for Airworthiness (FAA Form 8130-6) as the model year. For certification (and therefore conformity to the Type Certificate, systems improvements, etc.), the serial numbers eligibility list found on the airplanes' Type Certificate Data sheet (TCDS 3A13 in the case of the 182 series) defines the actual model year.

As production continued throughout the year, the airworthiness applications began to reflect the current correct year and the discrepancy disappeared. The TCDS eligibility grouping of model years by serial number, regardless of any actual manufacturing date, should always be used for certifications, comparisons, and reference in any airplane buying or selling activities.

Q: Which airplanes are eligible for this STC?

A: 1972 model year Cessna 182P, serial nos. 18260826 through 18261425
1973 model year Cessna 182P, serial nos. 18261426 through 18262465
1974 model year Cessna 182P, serial nos. 18262466 through 18263475
1975 model year Cessna 182P, serial nos. 18263476 through 18264295 (except 18263479, plus 675)
1976 model year Cessna 182P, serial nos. 18264296 through 18265175
1977 model year Cessna 182Q, serial nos. 18265176 through 18265965
1978 model year Cessna 182Q, serial nos. 18265966 through 18266590 (plus 18263479)
1979 model year Cessna 182Q, serial nos. 18266591 through 18267300
1980 model year Cessna 182Q, serial nos. 18267301 through 18267715 (except 18267302)

Q: How can I contact you?

A: Most efficiently by E-mail at stc@trolltune.com, or simply use the "REQUEST INFO" link on our website at www.182stc.com. You may address questions or comments to Mr. Tom Storli. Our official corporate address is:

Trolltune Corporation
2710 Thomes Avenue
Cheyenne, Wyoming 82001 USA

However, that physical address is not used for normal correspondence. Our office in Norway is currently serving as liaison to the European Aviation Safety Agency (EASA) where our FAA STC has recently been validated and issued as EASA STC 10026913. Our office address there is:

Trolltune Corporation
c/o Tom Storli
Fyksesundvegen 843
5612 Steinsto, NORWAY

Our USA correspondence and payment address is:

Trolltune Corporation
c/o Tom Storli
29362 Via Milagro
Valencia, CA 91354

We may be reached via telephone at (307) 529-0793 for USA based customers or +47 97 01 4848 for non-USA customers if more convenient (the Wyoming number is a Voice over Internet Protocol [VoIP] connection to our office in Norway from the United States, so only local charges apply - both numbers are at GMT +1). Should you leave a message at either number, your call will be returned promptly.

Alternatively, you may also contact our USA based distributor, Aircraft Spruce & Specialty Co. at 1-877-477-7823.

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United States of America
Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate

Number SA03608AT

This certificate issued to Trolltune Corporation
2710 Thomes Avenue
Cheyenne, WY 82001

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 3 of the Civil Air Regulations:

Original Product -- Type Certificate Number 3A13
Make: Cessna
Model: 182P and 182Q (For Specific Applicable Models See Page 2)

Description of Type Design Change: Increased Maximum Gross Takeoff Weight (MGTO) in accordance with Trolltune Corporation Master Data List (MDL), Document Number ED5000-SW, Revision 6, dated August 20, 2008 or later FAA approved revision. This STC allows a 150 lb. increase to the MGTO, from 2950 to 3100 lbs. There is no change to the maximum landing weight of 2950 lbs.

Limitations and Conditions:

Airplane Flight Manual Supplements (AFMS), dated August 22, 2008 or later FAA approved revision for the applicable Cessna models 182P and 182Q, is a required part of this STC. See Continuation Sheet (page 2) for specific AFMS, model number and serial number applicability. Instructions for Continued Airworthiness (ICA), Trolltune Corporation Document No. ED5004-SW, Revision 1/R, dated April 17, 2008, or later FAA approved revision, is also a required part of this STC, and must be incorporated into the operator's maintenance program.

This approval should not be extended to other aircraft of this model on which other previously approved modifications are incorporated, unless it is determined by the installer that the interrelationship between this change and any other previously approved modifications will produce no adverse effect upon the airworthiness of that airplane. 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.

(Continued on page 2 of 2)

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: February 17, 2006

Date of issuance: August 25, 2008

Date reissued:

Date amended:

By direction of the Administrator



(Signature)
Melvin D. Taylor, Manager
Atlanta 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.

United States of America
Department of Transportation -- Federal Aviation Administration

Supplemental Type Certificate
(Continuation Sheet)

Number SA03608AT

Date of Issuance: August 25, 2008

Applicable Models:

- 1972 model year Cessna 182P, serial nos. 18260826 through 18261425
- 1973 model year Cessna 182P, serial nos. 18261426 through 18262465
- 1974 model year Cessna 182P, serial nos. 18262466 through 18263475
- 1975 model year Cessna 182P, serial nos. 18263476 through 18264295 (except 18263479, plus s/n 675)
- 1976 model year Cessna 182P, serial nos. 18264296 through 18265175
- 1977 model year Cessna 182Q, serial nos. 18265176 through 18265965
- 1978 model year Cessna 182Q, serial nos. 18265966 through 18266590 (plus 18263479)
- 1979 model year Cessna 182Q, serial nos. 18266591 through 18267300
- 1980 model year Cessna 182Q, serial nos. 18267301 through 18267715 (except 18267302)

Applicable Airplane Flight Manual Supplements (AFMS):

- 1972 model year Cessna 182P, serial nos. 18260826 thru 18261425, Trolltune Corp. Document No. SFM7499-SW-R
- 1973 model year Cessna 182P, serial nos. 18261426 thru 18262250, Trolltune Corp. Document No. SFM7500-SW-R
- 1973-1974 model year Cessna 182P, serial nos. 18262251 thru 18263475, Trolltune Corp. Document No. SFM7501-SW-R
- 1975 model year Cessna 182P, serial nos. 18263476 thru 18264295 (except 18263479, plus s/n 675, Trolltune Corp. Document No. SFM7502-SW-R
- 1976 model year Cessna 182P, serial nos. 18264296 thru 18265175, Trolltune Corp. Document No. SFM7503-SW-R
- 1977-1978 model year Cessna 182Q, serial nos. 18265176 thru 18266590 (plus 18263479), Trolltune Corp Document No. SFM7504-SW-R
- 1979-1980 model year Cessna 182Q, serial nos. 18266591 thru 18267715 (except 18267302), Trolltune Document No. AFMS7001-SW-R

Certification Basis:

1. The type certification basis for the Cessna aircraft models identified on page 1 of this certificate is shown on TCDS 3A13 for parts **not changed** or **not affected** by this change.
2. The type certification basis for the parts **changed** or **affected** by the change since the reference date of application, February 17, 2006, is shown on TCDS 3A13.
 - Additionally, the applicant has complied with CAR part 3 as follows: § 3.80 amendment 3-4, § 3.84(a) amendment 3-4, § 3.85(a) amendment 3-4, § 3.109 amendment 3-7, § 3.112(c) amendment 3-4, § 3.120 amendment 3-7, § 3.121 amendment 3-7, § 3.122 amendment 3-7, § 3.124(a) amendment 3-4, § 3.171 amendment 3-7, § 3.174 amendment 3-7, § 3.242 amendment 3-14, § 3.361 amendment 3-7, and § 3.362 amendment 3-7.
 - Additionally, the applicant has complied with 14 CFR Part 36 as follows: § 36.9 amendment 36-19, § 36.501 amendment 36-19, § 36.1501 amendment 36-15, and § 36.1581 amendment 36-25.



SUPPLEMENTAL TYPE CERTIFICATE

10026913

Project reference: 0060004552-001

Reference: P-EASA.IM.A.S.03179

This Supplemental Type Certificate is issued by EASA, acting in accordance with Regulation (EC) No. 216/2008 on behalf of the European Community, its Member States and of the European third countries that participate in the activities of EASA under Article 66 of that Regulation and in accordance with Commission Regulation (EC) No. 1702/2003 to

**TROLLTUNE CORPORATION
2710 Thomas Avenue
CHEYENNE WY 82001
USA**

and certifies that the change in the type design for the product listed below with the limitations and conditions specified meets the applicable Type Certification Basis and environmental protection requirements when operated within the conditions and limitations specified below:

Original Product TC Number: FAA TC 3A13
TC Holder: CESSNA AIRCRAFT COMPANY
Model: 182P AND 182Q (SEE ATTACHMENT)
Original STC Number: FAA STC SA03608AT

EASA Certification Basis:

CAR 3 as defined on FAA STC and CS-36.

Description of Design Change:

Increased Maximum Gross Takeoff Weight (MGTOW). This STC allows a 150 lb Increase in MGTOW from 2950 to 3100 lbs. There is no change to the maximum landing weight of 2950 lbs.

Associated Technical Documentation:

In accordance with Trolltune Corporation Master Data List (MDL), Document Number ED5000-SW, Revision 6, dated August 20, 2008 or later approved revisions.

Operation in accordance with Trolltune Corporation Airplane Flight Manual Supplements (AFMS), dated August 22, 2008 or later approved revisions for the applicable Cessna Models 182P and 182Q, is required as part of this STC See list attached for specific AFMS, model number and Serial Number applicability.

Instructions for Continued Airworthiness (ICA) In accordance with Trolltune Corporation Document Number ED5004-SW, Revision I/R, dated April 17, 2008 or later approved revisions

EASA Noise approval records (182P) C9329, C9330, C9331, C9332, C9333 and C9334 refer.

EASA Noise approval record (182Q) C9335 refers.

Limitations:

None.



Conditions:

1. Prior to installation of this modification the installer must determine that the interrelationship between this modification and any other previously installed modification will introduce no adverse effect upon the airworthiness of the product.
2. The installation of this modification by third persons is subject to written permission of the approval holder and holding and disposal of the approved appropriate documentation.

This Certificate shall remain valid unless otherwise surrendered or revoked.

For the European Aviation Safety Agency,

Date of issue: 21.08.2009

**Roger HARDY
Certification Manager
General Aviation**



European Aviation Safety Agency

Attachment 1 to P-EASA.IM.A.S.03179

Applicable Models:

- 1972 model year Cessna 182P, serial nos. 18260826 through 18261425
- 1973 model year Cessna 182P, serial nos. 18261426 through 18262465
- 1974 model year Cessna 182P, serial nos. 18262466 through 18263475
- 1975 model year Cessna 182P, serial nos. 18263476 through 18264295 (except 18263479, plus s/n 675)
- 1976 model year Cessna 182P, serial nos. 18264296 through 18265175
- 1977 model year Cessna 182Q, serial nos. 18265176 through 18265965
- 1978 model year Cessna 182Q, serial nos. 18265966 through 18266590 (plus 18263479)
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- 1975 model year Cessna 182P, serial nos. 18263476 thru 18264295 (except 18263479, plus s/n 675, Trolltune Corp. Document No. SFM7502-SW-R
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- 1977-1978 model year Cessna 182Q, serial nos. 18265176 thru 18266590 (plus 18263479), Trolltune Corp Document No. SFM7504-SW-R
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Certification Basis:

1. The type certification basis for the Cessna aircraft models identified on page 1 of this certificate is shown on TCDS 3A13 for parts **not changed** or **not affected** by this change.
2. The type certification basis for the parts **changed** or **affected** by the change since the reference date of application, February 17, 2006, is shown on TCDS 3A13.
 - Additionally, the applicant has complied with CAR part 3 as follows: § 3.80 amendment 3-4, § 3.84(a) amendment 3-4, § 3.85(a) amendment 3-4, § 3.109 amendment 3-7, § 3.112(c) amendment 3-4, § 3.120 amendment 3-7, § 3.121 amendment 3-7, § 3.122 amendment 3-7, § 3.124(a) amendment 3-4, § 3.171 amendment 3-7, § 3.174 amendment 3-7, § 3.242 amendment 3-14, § 3.361 amendment 3-7, and § 3.362 amendment 3-7.
 - Additionally, the applicant has complied with 14 CFR Part 36 as follows: § 36.9 amendment 36-19, § 36.501 amendment 36-19, § 36.1501 amendment 36-15, and § 36.1581 amendment 36-25.

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Instructions for Continued Airworthiness

In Accordance With

Supplemental Type Certificate No: SA03608AT

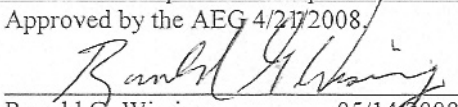
Cessna 182P and Cessna 182Q
Maximum Gross Takeoff Weight Increase

TROLLTUNE CORPORATION	
Instructions for Continued Airworthiness	Document No. ED5004-SW
1972 – 1980 Cessna 182P - Q	
Revision: I/R	Date: 17 April 2008
Approved by:	Date:

Approval – Trolltune Corporation ICA
Document No. ED5004-SW-A2006-051-1,

Rev: I/R - Dated 04/17/2008 "ICA Approval"

Structural ICA Maintenance & Airworthiness limits have been reviewed and are approved herein by the Atlanta ACO for Project Number SP9458AT-A. FAR Part 23 Operational requirements were approved by the AEG 4/21/2008.


Ronald G. Wissing 05/14/2008
Atlanta ACO – Aerospace Engineer
ACE-117A Airframe Branch

REVISION HISTORY
AND LIST OF AFFECTED PAGES

NOTE: Any revisions to this document will be made immediately available at www.trolltune.com/ICA. All STC owners / operators of record will be notified that a revision is available via their currently on-file E-mail address. Paper copies will be furnished to the owner / operator or their designated FAA authorized repair station, A&P, or AI upon request. It is the responsibility of the person(s) performing inspections and / or maintenance to ensure that this document is current prior to performing any work. Any issued revisions will be simultaneously sent to FAA for review, comment and approval.

Page	Rev	Effective Date	Description of Change
All	I/R	17 April 2008	Initial release

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1. INTRODUCTORY INFORMATION

These Instructions for Continued Airworthiness (ICA) have been developed to meet the regulatory requirements of 14 CFR Part 23, Appendix G, and those found in 14 CFR Part 21, § 21.50. This document addresses and defines continuous airworthiness maintenance requirements for certain Cessna 182P and 182Q model airplanes when Trolltune Corporation Supplemental Type Certificate (STC) SA03608AT has been incorporated.

This STC allows a 150 pound increase to the existing Maximum Gross Takeoff Weight (MGTOW), from 2950 to 3100 pounds. There is no change to the Maximum Landing Weight (MLW) of 2950 pounds.

There are no parts added, nor are any modifications made, to the airplanes. New flight manual supplements are provided with the STC describing performance changes at the increased weights. With the exception of the inspection requirements detailed in Section 3 below (which apply ONLY in the case of a hard landing or an overweight emergency landing), there is no change to the existing Cessna maintenance documents.

Trolltune's STC may be incorporated in these specific Cessna airplanes:

- 1972 model year Cessna 182P, serial nos. 18260826 through 18261425
- 1973 model year Cessna 182P, serial nos. 18261426 through 18261528
- 1973 model year Cessna 182P, serial nos. 18261529 through 18262465
- 1974 model year Cessna 182P, serial nos. 18262466 through 18263475
- 1975 model year Cessna 182P, serial nos. 18263476 through 18264295 (except 18263479, plus 675)
- 1976 model year Cessna 182P, serial nos. 18264296 through 18265175
- 1977 model year Cessna 182Q, serial nos. 18265176 through 18265965
- 1978 model year Cessna 182Q, serial nos. 18265966 through 18266590 (plus 18263479)
- 1979 model year Cessna 182Q, serial nos. 18266591 through 18267300
- 1980 model year Cessna 182Q, serial nos. 18267301 through 18267715 (except 18267302)

2. AIRWORTHINESS LIMITATIONS

The Airworthiness Limitations section is FAA approved and specifies maintenance required under Secs. 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved.

NOTE: There are no additional airworthiness limitations as a result of this alteration.

2.1 MANDATORY REPLACEMENT TIMES

None (does not apply).

2.2 STRUCTURAL INSPECTION INTERVAL

After any overweight landing.

2.3 STRUCTURAL INSPECTION PROCEDURE

See Section 3 below.

3. INSPECTION PROCEDURES

Any hard landing, and in particular, any emergency overweight landing (above 2950 lbs.) may result in main landing gear and / or wheel misalignment. If an overweight landing has occurred, proceed as follows prior to further flight:

- A. Perform a main wheel alignment inspection in accordance with the following Cessna documents:
 - 1. For Cessna 182P airplanes, Service Manual D2006-3-13, paragraph 5-19 and Figure 5-5.
 - 2. For Cessna 182Q airplanes, Service Manual D2068-3-13, paragraph 5-29 and Figure 5-5.
- B. If toe-in and camber are found acceptable, return the aircraft to service.
- C. If toe-in and camber are found not acceptable, realign the wheels per the Cessna procedure.
- D. If acceptable wheel alignment cannot be achieved by use of shims as described in the Service Manual, this may indicate that the main gear spring-strut has been deformed or the attaching bulkhead is out of alignment. Repair or replace components per the Service Manual as required.
- E. If main landing gear repairs were required, the following inspections found in Cessna Publication D5133-13, "Model 100 Series, Continued Airworthiness Program Manual" are suggested:
 - 1. Fuselage Strut Area Inspection 53-10-01, page 3-37 (or latest revision).
 - 2. Wing Strut and End Fitting Inspection 57-10-02, page 3-81 (or latest revision).
 - 3. Wing Fuselage Attach Fittings Inspection 57-10-03, page 3-83 (or latest revision).
 - 4. Record the date of overweight landing occurrence, inspections performed, and any repairs made in the airframe maintenance logbook.

----- NOTHING FOLLOWS -----



US Department
of Transportation
Federal Aviation
Administration

MAJOR REPAIR AND ALTERATION (Airframe, Powerplant, Propeller, or Appliance)

Form Approved
OMB No. 2120-0020
11/30/2007

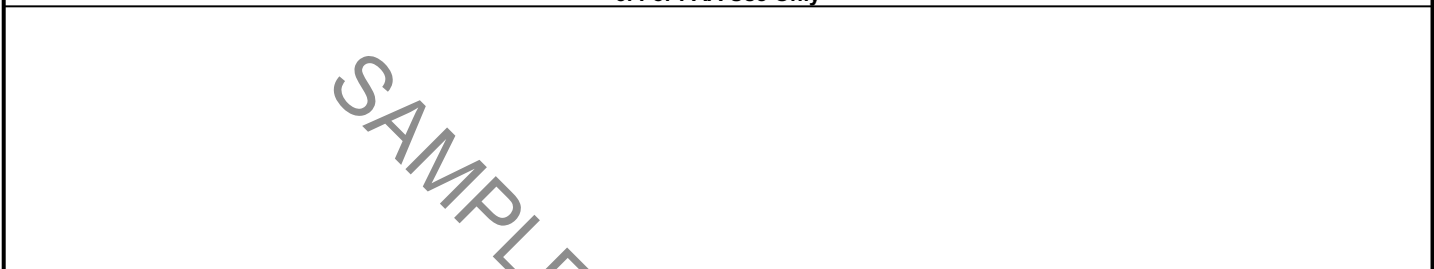
Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark	Serial No.	
	Make	Model	Series
2. Owner	Name (As shown on registration certificate)	Address (As shown on registration certificate)	
		Address _____ City _____ State _____ Zip _____ Country _____	

3. For FAA Use Only



4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
<input type="checkbox"/>	<input type="checkbox"/>	AIRFRAME	_____	(As described in Item 1 above)	_____
<input type="checkbox"/>	<input type="checkbox"/>	POWERPLANT			
<input type="checkbox"/>	<input type="checkbox"/>	PROPELLER			
<input type="checkbox"/>	<input type="checkbox"/>	APPLIANCE	Type _____		
			Manufacturer _____		

6. Conformity Statement

A. Agency's Name and Address		B. Kind of Agency	
Name _____	Address _____ City _____ State _____ Zip _____ Country _____	<input type="checkbox"/> U. S. Certificated Mechanic	<input type="checkbox"/> Manufacturer
		<input type="checkbox"/> Foreign Certificated Mechanic	
		<input type="checkbox"/> Certificated Repair Station	
		<input type="checkbox"/> Certificated Maintenance Organization	

D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel per 14 CFR Part 43 App. B <input type="checkbox"/>	Signature/Date of Authorized Individual
--	---

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is Approved Rejected

BY	FAA Fit. Standards Inspector	Manufacturer	Maintenance Organization	Persons Approved by Canadian Department of Transport
	FAA Designee	Repair Station	Inspection Authorization	Other (Specify)

Certificate or Designation No.	Signature/Date of Authorized Individual
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NOTICE

Weight and balance or operating limitation changes shall be entered in the appropriate aircraft record. An alteration must be compatible with all previous alterations to assure continued conformity with the applicable airworthiness requirements.

8. Description of Work Accomplished

(If more space is required, attach additional sheets. Identify with aircraft nationality and registration mark and date work completed.)

Nationality and Registration Mark

Date

SAMPLE -- not FAA approved

Additional Sheets Are Attached