



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Mail Stop 3561

February 12, 2010

Via U.S. Mail

Steven Santo
Chief Executive Officer
Avantair, Inc.
4311 General Howard Drive
Clearwater, FL 33762

**Re: Avantair, Inc.
Amendment No. 1 to Form S-1
Filed January 26, 2010
File No. 333-163152**

**Form 10-K for Fiscal Year Ended June 30, 2009
Filed September 28, 2009
File No. 000-51115**

**Form 10-Q for Fiscal Quarter Ended September 30, 2009
Filed November 16, 2009
File No. 000-51115**

**Form 8-K dated November 16, 2009
Filed November 18, 2009
File No. 000-51115**

Dear Mr. Santo:

We have reviewed your responses to the comments in our letter dated December 15, 2009 and have the following additional comments. Please note that all page references below correspond to the marked version of your filing on EDGAR.

Registration Statement

General

1. We note your response to prior comment 1. We are currently reviewing your response and may have further comments upon our review.

Prospectus

Prospectus Summary, page 1

2. We note your response to our prior comment 9 and reissue in part. Please advise us why December 31, 2009 is the most recent practicable date for which you can provide the amount of capital on hand or revise to provide such information as of a more recent date. Also, please disclose the approximated month you will run out of money assuming no change in present trends.

Industry Overview, page 3

3. We note your response to our prior comment 13 and reissue in part. Please provide support for your statement in the last sentence of the first paragraph under this heading that for businesses and high net worth individuals, fractional ownership and flight hour card programs offer a balance between convenience and cost or revise to clarify that such statement is based solely upon your belief. Similarly revise your disclosure on page 27.

Avantair's Business Is Subject To Extensive Government Regulation, page 12

4. We note your response to our prior comment 23; however, please revise to disclose, if true, that many aspects of Avantair's operations are subject to foreign laws and regulations protecting the environment, in addition to federal, state and local laws. Also, refer to the last sentence of this risk factor. Please revise to provide the basis for your belief that your aircraft produce 35.0% less carbon emission than all of your competitors' aircraft or delete.

Avantair May Not Be Able To Obtain Acceptable Customer Contracts, page 12

5. We note your response to our prior comment 16; however, please revise to provide quantitative information regarding the amount of decline in the number of fractional aircraft share sales for the fiscal year ended 2009 as compared to fiscal year ended 2008. Also, if material, please disclose the amount of financing charges the company has paid, and is expected to pay in the future, on floor-plan

arrangements. Please disclose the number of fractional aircraft shares currently available for sale.

6. We note your response to our prior comment 24. Please further revise to discuss how current economic conditions may impact your ability to obtain financing in the future, including a discussion of how tightening credit conditions may affect your ability to obtain credit. Also, please revise the risk factor heading so that it adequately describes the risk of expanding your business during an economic recession.

Use of Proceeds, page 15

7. We note your disclosure on page 3 that each warrant permits the holder to purchase one share of the company's common stock at an exercise price of \$1.05 per share. Please advise us why the maximum proceeds that the company could receive upon the exercise of all 455,888 warrants are \$455,888.00 or revise.

Business, page 26

8. We note your response to our prior comment 33 and your confidential treatment request related to this filing. We will respond to the confidential treatment request separately.
9. We note your response to our prior comment 34; however, please revise your disclosure to provide revenues generated by product category as of the most recently completed fiscal year so investors can understand how your business generates revenues.

Industry Overview, page 27

10. We note your response to our prior comment 36 and reissue in part. Please disclose the amount of deposits relating to future aircraft deliveries for which the company is obligated and that remain outstanding.

How Avantair's Fractional Ownership Program Works, page 28

11. We note your response to our prior comment 38; however, refer to the third to last sentence of the last paragraph under this heading. Please clarify whether an owner must obtain the company's prior written consent in order to assign or transfer rights to individuals who are not wholly owned subsidiaries, parents or successors in interest of the owner. Also, please advise us whether there are any sale restrictions, including price or timing limitations, on the sale by an owner of fractional shares.

Discretionary Annual Bonus, page 39

12. We note your response to our prior comment 41 and reissue in part. Please revise to disclose the performance targets for fiscal year ended 2008 and the targets actually achieved. For example, provide quantitative disclosure regarding the amount or percentage of improvement in the company's balance sheet, level of financing and measure of EBITDA which was necessary for an officer to achieve a bonus and disclose the targets actually reached.

Summary Compensation Table, page 43

13. We note your response to our prior comment 42; however, please disclose all assumptions made in the valuation of stock awards, including the assumptions made in valuing the cost of employee services received in exchange for an award of equity instruments and the assumptions made in determining the grant-date fair value of the award. You may disclose such assumptions in a footnote or by a reference in a footnote to a discussion of those assumptions in a specific part of your financial statements, footnotes to the financial statements or discussion in the Management's Discussion and Analysis.

Selling Stockholders, page 47

14. We note your response to our prior comment 47 and reissue in part. Please revise to indicate the relationship, including directorships, the selling stockholders have had with the company or any of the company's affiliates in the past three years.

Part II – Information Not Required In Prospectus, page II-1

Item 15. Recent Sales of Unregistered Securities, page II-1

15. We note your response to our prior comment 54; however, please revise your disclosure regarding the issuance of warrants to EarlyBirdCapital, Inc. and Mr. Lorne Weil to indicate the section of the Securities Act or the rule of the Commission under which exemption from registration was claimed, along with the facts relied upon to make the exemption available.

Exhibit 5.1

16. Please confirm to us that you will re-file your opinion on the date of effectiveness. Alternatively, delete the words "on the date hereof" throughout your opinion.
17. Please have counsel confirm its understanding that the Delaware General Corporation Law includes all applicable statutory provisions, the rules and

regulations underlying those provisions, as well as applicable judicial and regulatory determinations.

Annual Report on Form 10-K for the fiscal year ended June 30, 2009

Consolidated Financial Statements, page F-1

Notes to Consolidated Financial Statements, page F-10

Note 7 – Commitments and Contingencies, page F-18

Purchase Commitment, page F-19

18. We refer to your response to prior comment 56. Please clarify why you believe accounting for the investment in Share 100 under the cost method is appropriate. Your response should include the ownership percentages of both EAS and the company, the initial investment made and the current carrying value of the investment, as well as the managing member of the LLC. We may have further comment upon receipt of your response.

Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2009

Financial Statements, page 1

Notes to Condensed Consolidated Financial Statements, page 7

Note - 5 Subsequent Events, page 14

19. We note your response to prior comment 61. Please confirm that your next amendment with December 31, 2009 interim financial statements will disclose the fair value assigned to the warrants and the method used to estimate the fair value of the warrants, including the significant assumptions used.
20. Furthermore, we note from your response to prior comment 50 that this transaction is considered a related party transaction. Please revise to disclose how Lorne Weil and/or LW Air are related to the company and clarify your subsequent events footnote to disclose the related party nature of the transaction.

* * * * *

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Steven Santo
Avantair, Inc.
February 12, 2010
Page 7

You may contact Jean Yu at (202) 551-3305 or Heather Clark at (202) 551-3624 if you have questions regarding comments on the financial statements and related matters. Please contact Michelle Lacko at (202) 551-3240 or me at (202) 551-3642 with any other questions.

Regards,

Lauren Nguyen
Attorney-Advisor

cc: Jamie Knox
Douglas Rappaport
Fax: (212) 335-4501