

Wesco Aircraft Holdings, Inc
Form 424B4
August 09, 2013

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Filed pursuant to Rule 424(b)(4)
Registration No. 333-188518

PROSPECTUS SUPPLEMENT
(To Prospectus dated May 16, 2013)

6,000,000 Shares

Wesco Aircraft Holdings, Inc.

6,000,000 Shares of Common Stock

This prospectus supplement relates to the shares of common stock of Wesco Aircraft Holdings, Inc. being sold by affiliates of The Carlyle Group, which we refer to as Carlyle or the selling stockholder. We will not receive any proceeds from the sale of our common stock by the selling stockholder.

You should carefully read this prospectus supplement and the accompanying prospectus, together with the documents we incorporate by reference, before you invest in our common stock.

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling stockholder will pay or assume brokerage commissions and similar charges incurred for the sale of shares of our common stock.

Investing in our securities involves risks. See the "Risk Factors" on page S-4 of this prospectus supplement and page 5 of the accompanying prospectus concerning factors you should consider before investing in our securities.

Our common stock is listed on the New York Stock Exchange, or the NYSE, under the symbol "WAIR." On August 6, 2013, the last reported sale price of our common stock on the NYSE was \$19.76 per share.

	Per Share	Total
Public offering price	\$ 18.87	\$ 113,220,000
Underwriting discount	\$ 0.25	\$ 1,500,000
Proceeds, before expenses, to the selling stockholder(1)	\$ 18.62	\$ 111,720,000

(1) See "Underwriting."

The underwriter may also purchase up to an additional 900,000 shares from the selling stockholder, at the public offering price, less the underwriting discount, within 30 days from the date of this prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus supplement. Any representation to the contrary is a criminal offense.

Delivery of the shares of common stock is expected on or about August 13, 2013.

Barclays

The date of this prospectus supplement is August 7, 2013.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document has two parts, a prospectus supplement and an accompanying prospectus dated May 16, 2013. This prospectus supplement and the accompanying prospectus are part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, utilizing a shelf registration process. Under this shelf registration process, the selling stockholders named in a prospectus supplement may, from time to time, offer and sell our common stock in one or more offerings or resales.

The accompanying prospectus provides you with a general description of our common stock, which the selling stockholder may offer pursuant to this prospectus supplement. This prospectus supplement, which describes certain matters relating to us and the specific terms of this offering of shares of our common stock, adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference herein. Any statement that we make in the accompanying prospectus will be modified or superseded by any inconsistent statement made by us in this prospectus supplement.

The rules of the SEC allow us to incorporate by reference information into this prospectus supplement. This information incorporated by reference is considered to be a part of this prospectus supplement, and information that we file later with the SEC, to the extent incorporated by reference, will automatically update and supersede this information. See "Incorporation by Reference." You should read both this prospectus supplement and the accompanying prospectus together with additional information described under the heading "Where You Can Find More Information" before investing in our common stock.

We are responsible for the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any related free-writing prospectus we prepare or authorize. Neither we, the underwriter, nor the selling stockholder have authorized anyone to give you any other information, and we take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

You should not assume that the information contained in this prospectus supplement and the accompanying prospectus or any free writing prospectus prepared by us is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus supplement and the accompanying prospectus is delivered or securities are sold on a later date. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless otherwise specified, the term "Wesco Aircraft" means Wesco Aircraft Holdings, Inc., our top-level holding company, and the terms "Wesco," "the Company," "we," "us," and "our" mean Wesco Aircraft and its subsidiaries, including Wesco Aircraft Hardware Corp., our primary domestic operating company, and Wesco Aircraft Europe, Ltd., our primary foreign operating company. When we refer to "you," we mean the holders of the applicable series of securities. References to "fiscal year" mean the year ending or ended September 30. For example, "fiscal year 2012" or "fiscal 2012" means the period from October 1, 2011 to September 30, 2012.

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PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights important features of this offering and the information included or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary does not contain all of the information that you should consider before investing in our common stock. You should read carefully the entire prospectus supplement, the accompanying prospectus and the documents incorporated by reference, especially the risks of investing in our common stock discussed under "Risk Factors."

Company Overview

We are one of the world's largest distributors and providers of comprehensive supply chain management services to the global aerospace industry on an annual sales basis. Our services range from traditional distribution to the management of supplier relationships, quality assurance, kitting, just-in-time, or JIT, delivery and point-of-use inventory management. We supply approximately 525,000 different stock-keeping units, including hardware, bearings, tools, electronic components and machined parts. We serve our customers under three types of arrangements: JIT contracts, which govern comprehensive outsourced supply chain management services; long-term agreements, or LTAs, which set prices for specific parts; and ad hoc sales. JIT contracts and LTAs, which together comprised approximately 62% of our fiscal 2012 net sales, are multi-year arrangements that provide us with significant visibility into our future sales.

Founded in 1953 by the father of our current chief executive officer, Wesco has grown to serve over 7,400 customers in the commercial, military and general aviation sectors, including the leading original equipment manufacturers and their subcontractors, through which we support nearly all major Western aircraft programs. We have grown our net sales at a 14.8% compounded annual growth rate over the past 20 years to \$776.2 million in fiscal 2012. We have more than 1,200 employees and operate across 42 locations in 12 countries.

Wesco Aircraft was incorporated in Delaware on July 21, 2006, as a holding company for Wesco Aircraft Hardware Corp., our wholly owned, primary domestic operating subsidiary, Wesco Aircraft Europe, Ltd., our primary foreign operating subsidiary, and certain other foreign operating subsidiaries, in connection with the acquisition of 100% of the outstanding stock of Wesco Aircraft Hardware Corp., Wesco Aircraft Israel and the European entities of Flintbrook Ltd., Wesco Aircraft France and Wesco Aircraft Germany by Wesco Aircraft. Wesco Aircraft Hardware Corp., our primary domestic operating company, was incorporated in California on October 11, 1971 and Wesco Aircraft Europe, Ltd., our primary foreign operating company, was incorporated in the United Kingdom on October 19, 1984.

Our principal executive offices are located at 27727 Avenue Scott, Valencia, CA 91355 and our telephone number is (661) 775-7200.

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The Offering

Common stock offered by the selling stockholder	6,000,000 shares
Common stock to be outstanding after this offering	94,179,891 shares(1)
Controlled company status	As a result of this offering, we will no longer qualify as a "controlled company" as defined in the rules of the NYSE.
Option to purchase additional shares	The selling stockholder has granted the underwriter a 30-day option to purchase up to an additional 900,000 shares of our common stock at the public offering price.
Selling stockholder	The selling stockholder in this offering is an affiliate of Carlyle. See "Selling Stockholder."
Use of proceeds	We will not receive any proceeds from the sale of any shares of our common stock offered by the selling stockholder.
Risk factors	See "Risk Factors" on page S-4 of this prospectus supplement and other information included in or incorporated by reference in this prospectus supplement and the accompanying prospectus, including the section entitled "Risk Factors" in our annual report on Form 10-K for the year ended September 30, 2012, as supplemented by our quarterly reports on Form 10-Q for the quarterly periods ended December 31, 2012, March 31, 2013 and June 30, 2013, for a discussion of factors you should carefully consider before deciding to invest in our common stock.
NYSE symbol	"WAIR"

(1) Based on the number of shares outstanding as of August 6, 2013, which includes 6,000,000 shares to be sold by the selling stockholder (or 6,900,000 shares if the underwriter fully exercises its option to purchase additional shares), and excludes 4,847,116 shares of common stock issuable upon the exercise of options outstanding at a weighted average exercise price of \$6.22 per share and 4,612,980 additional shares of common stock reserved for issuance under our 2011 Equity Incentive Award Plan, or the 2011 Plan.

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RISK FACTORS

Investment in our common stock involves risks. You should carefully consider the risks and uncertainties described in this prospectus supplement, the prospectus and the documents incorporated by reference herein or therein, including risk factors described in our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K we file after the date of this prospectus supplement, as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended, or the Exchange Act. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

Risks Relating to this Offering and Our Common Stock

Upon the sale of the shares by the selling stockholder in this offering, we will no longer be a controlled company, and we may have difficulties complying with NYSE rules relating to the composition of our board of directors.

Our common stock is listed on the NYSE. As a controlled company under NYSE rules, we have not been subject to a number of corporate governance rules relating to composition of our board of directors and certain committees. Upon the sale of the shares by the selling stockholder in this offering, we will no longer be a controlled company and, in accordance with NYSE rules, will have to phase into compliance with certain requirements from which we are now exempt, including:

the requirement that a majority of the board of directors consist of independent directors;

the requirement that we have a nominating and corporate governance committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities;

the requirement that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and

the requirement for an annual performance evaluation of the nominating and corporate governance and compensation committees.

We intend to comply with these NYSE rules after ceasing to be a controlled company. We may not be able to attract and retain the number of independent directors needed to comply with NYSE rules during the phase-in period for compliance.

This offering will result in a substantial amount of previously unregistered shares of our common stock being registered, which may depress the market price of our common stock.

Of the 94,179,891 shares of our common stock issued and outstanding as of August 6, 2013, approximately 38.5% were held by Carlyle. The remainder of our shares of issued and outstanding common stock are freely tradable on the NYSE without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, unless such shares constitute "restricted securities" within the meaning of Rule 144 under the Securities Act or are purchased by our "affiliates" as that term is defined in Rule 144 under the Securities Act. The shares of common stock being sold in this offering were not freely tradable on the NYSE prior to the completion of this offering and the sale by the selling stockholder of the shares of common stock in this offering will increase the number of shares of our common stock eligible to be traded on the NYSE, which could depress the market price of our common stock.

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Sales of substantial amounts of our common stock, or the possibility of such sales, may adversely affect the price of our common stock.

Sales of substantial amounts of our common stock in the public market after this offering, or the perception that such sales will occur, could adversely affect the market price of our common stock and make it difficult for us to raise funds through securities offerings in the future. As of August 6, 2013, there were 94,179,891 shares of our common stock issued and outstanding, of which all of the 40,050,000 shares sold in registered offerings prior to this offering and the 6,000,000 shares to be sold in this offering (or 6,900,000 shares if the underwriter fully exercises its option to purchase additional shares) will be freely transferable without restriction or further registration under the Securities Act, unless acquired by our "affiliates" as that term is defined in Rule 144 under the Securities Act.

In addition, all shares of common stock acquired upon the exercise of stock options awarded under our Amended and Restated Equity Incentive Plan, or the Prior Plan, and the 2011 Plan and other equity-based awards granted under the 2011 Plan will also be freely tradable under the Securities Act unless acquired by our affiliates. A maximum of 5,850,000 shares of common stock are reserved for issuance under the 2011 Plan and a maximum of 7,270,352 shares of common stock are reserved for issuance upon the exercise of stock options under the Prior Plan, some of which, in each case, have been issued as of the date of this prospectus supplement. The remaining shares of common stock outstanding, including certain shares issued pursuant to restricted stock awards and restricted stock unit awards granted under the Prior Plan, were issued as "restricted securities" within the meaning of Rule 144 under the Securities Act, but are and have generally been eligible for resale subject to applicable volume, manner of sale, holding period and other limitations of Rule 144 or pursuant to an exemption from registration under Rule 701 under the Securities Act.

We, Carlyle, our directors and our executive officers have agreed to a "lock-up," meaning that, subject to certain exceptions, neither we nor they will sell any shares without the prior consent of the underwriter before October 7, 2013. Following the expiration of this 60-day lock-up period, all of these shares of our common stock will be eligible for future sale, subject to the applicable volume, manner of sale, holding period and other limitations of Rule 144. In addition, Carlyle and certain trusts affiliated with Randy Snyder have the right under certain circumstances to require that we register their remaining shares for resale. As of the date of this prospectus supplement, these registration rights apply to the approximately 30,230,184 shares of our outstanding common stock owned by Carlyle that are not being sold in this offering (or approximately 29,330,184 shares if the underwriter fully exercises its option to purchase additional shares) and 10,519,173 shares of our outstanding common stock owned by trusts affiliated with Randy Snyder. See the section entitled "Description of Capital Stock Amended and Restated Stockholders Agreement" in the accompanying prospectus for a description of the shares of common stock that may be sold into the public market in the future.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus supplement and any accompanying prospectus include and incorporate forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act. The words "believe," "expect," "anticipate," "intend," "estimate" and other expressions that are predictions of or indicate future events and trends and that do not relate to historical matters identify forward-looking statements. You should not place undue reliance on these forward-looking statements. Although forward-looking statements reflect management's good faith beliefs, reliance should not be placed on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which may cause the actual results, performance or achievements to differ materially from anticipated future results, performance or achievements expressed or implied by such forward-looking statements. Forward-looking statements speak only as of the date the statements are made. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, changed circumstances or otherwise. These forward-looking statements are subject to numerous risks and uncertainties, including, but not limited to:

general economic and industry conditions;

changes in military spending;

risks unique to suppliers of equipment and services to the U.S. government;

risks associated with our long-term, fixed-price agreements that have no guarantee of future sales volumes;

risks associated with the loss of significant customers, a material reduction in purchase orders by significant customers or the delay, scaling back or elimination of significant programs on which we rely;

our ability to effectively manage our inventory;

our suppliers' ability to provide us with the products we sell in a timely manner, in adequate quantities and/or at a reasonable cost;

our ability to maintain an effective information technology system;

our ability to retain key personnel;

risks associated with our international operations;

fluctuations in our financial results from period-to-period;

our ability to effectively compete in our industry;

risks related to our indebtedness; and

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other risks and uncertainties.

Important factors that could cause actual results to differ materially from our expectations are disclosed under "Risk Factors" in this prospectus supplement and any accompanying prospectus. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by the cautionary statements as well as other cautionary statements that are made from time to time in our public communications. You should evaluate all forward-looking statements made in this prospectus supplement and any accompanying prospectus in the context of these risks and uncertainties.

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USE OF PROCEEDS

All shares of our common stock offered by this prospectus supplement will be sold by the selling stockholder. We will not receive any proceeds from the sale of these shares.

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The following table presents information concerning the beneficial ownership of the shares of our common stock by the selling stockholder assuming 94,179,891 shares of common stock were issued and outstanding as of August 6, 2013, which includes 6,000,000 shares to be sold by the selling stockholder in connection with this offering (or approximately 6,900,000 shares if the underwriter fully exercises its option to purchase additional shares).

The information in the table below with respect to the selling stockholder has been obtained from the selling stockholder. When we refer to the "selling stockholder" in this prospectus supplement, we mean the selling stockholder listed in the table below as offering shares, as well as its pledgees, donees, assignees, transferees and successors and others who may hold any of such selling stockholder's interest. The selling stockholder may be deemed to be an underwriter within the meaning of the Securities Act.

Name of Selling Stockholder	Shares Beneficially Owned Prior to this Offering		Shares to be Sold in this Offering		Shares Beneficially Owned After this Offering			
			Excluding Exercise of Option	Including Exercise of Option	Excluding Exercise of Option		Including Exercise of Option	
	Number	Percent	Option	Option	Number	Percent	Number	Percent
Carlyle Partners IV, L.P.(1)	36,230,184	38.5%	6,000,000	6,900,000	30,230,184	32.1%	29,330,184	31.1%

(1)

This information is based on a Schedule 13G/A filed with the SEC on February 14, 2013, as supplemented by additional information provided by the selling stockholder in connection with the public offering of 17,250,000 shares of common stock by the selling stockholder on May 29, 2013. Falcon Aerospace Holdings, LLC is the record holder of 36,230,184 shares of common stock. Carlyle Group Management L.L.C. is the general partner of The Carlyle Group L.P., which is a publicly traded entity listed on NASDAQ. The Carlyle Group L.P. is the managing member of Carlyle Holdings II GP L.L.C., which is the general partner of Carlyle Holdings II L.P., which is the general partner of TC Group Cayman Investment Holdings, L.P., which is the general partner of TC Group Cayman Investment Holdings Sub L.P., which is the managing member of TC Group IV, L.L.C., which is the general partner of TC Group IV, L.P., which is the general partner of Carlyle Partners IV, L.P., which is the managing member of Falcon Aerospace Holdings, LLC. Accordingly, each of these entities may be deemed to share beneficial ownership of the common stock owned of record by Falcon Aerospace Holdings, LLC. The principal address of each of the foregoing entities is c/o The Carlyle Group, 1001 Pennsylvania Avenue, N.W., Suite 220 South, Washington, D.C. 20004-2505.

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MATERIAL U.S. FEDERAL TAX CONSIDERATIONS FOR NON-U.S. HOLDERS

The following discussion is a summary of the material U.S. federal income tax consequences to non-U.S. holders (as defined below) of the purchase, ownership and disposition of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or foreign tax laws are not discussed. This discussion is based on the Internal Revenue Code of 1986, as amended, or the Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or IRS, in effect as of the date of this offering. These authorities may change or be subject to differing interpretations. Any such change may be applied retroactively in a manner that could adversely affect a non-U.S. holder of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position regarding the tax consequences of the purchase, ownership and disposition of our common stock.

This discussion is limited to non-U.S. holders that hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a non-U.S. holder's particular circumstances, including the impact of the unearned income Medicare contribution tax. In addition, it does not address consequences relevant to non-U.S. holders subject to particular rules, including, without limitation:

U.S. expatriates and certain former citizens or long-term residents of the United States;

persons subject to the alternative minimum tax;

persons holding our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;

banks, insurance companies, and other financial institutions;

real estate investment trusts or regulated investment companies;

brokers, dealers or traders in securities;

"controlled foreign corporations," "passive foreign investment companies," and corporations that accumulate earnings to avoid U.S. federal income tax;

tax-exempt organizations or governmental organizations;

persons deemed to sell our common stock under the constructive sale provisions of the Code;

persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; and

tax-qualified retirement plans.

If a partnership (or other entity treated as a partnership for U.S. federal income tax purposes) holds our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships holding our common stock and the partners in such partnerships should consult their tax advisors

regarding the U.S. federal income tax consequences to them.

INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP AND DISPOSITION OF OUR COMMON STOCK ARISING UNDER THE U.S. FEDERAL ESTATE OR

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GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Definition of a Non-U.S. Holder

For purposes of this discussion, a "non-U.S. holder" is any beneficial owner of our common stock that is neither a "U.S. person" nor a partnership for U.S. federal income tax purposes. A U.S. person is any of the following:

an individual who is a citizen or resident of the United States;

a corporation (or other entity taxable as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof, or the District of Columbia;

an estate, the income of which is subject to U.S. federal income tax regardless of its source; or

a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more United States persons (within the meaning of Section 7701(a)(30) of the Code), or (2) has made a valid election under applicable Treasury Regulations to be treated as a United States person.

Distributions

Cash or other property distributions on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a non-U.S. holder's adjusted tax basis in its common stock, but not below zero. Any excess will be treated as capital gain and will be treated as described below in the section relating to the sale or disposition of our common stock.

Subject to the discussion below on backup withholding and foreign accounts, dividends paid to a non-U.S. holder of our common stock that are not effectively connected with the non-U.S. holder's conduct of a trade or business within the United States will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or a lower rate specified by an applicable income tax treaty).

Non-U.S. holders will be entitled to a reduction in or an exemption from withholding on dividends as a result of either (a) an applicable income tax treaty or (b) the non-U.S. holder holding our common stock in connection with the conduct of a trade or business within the United States and dividends being paid in connection with that trade or business. To claim such a reduction in or exemption from withholding, the non-U.S. holder must provide the applicable withholding agent with a properly executed (a) IRS Form W-8BEN claiming an exemption from or reduction of the withholding tax under the benefit of an income tax treaty between the United States and the country in which the non-U.S. holder resides or is established, or (b) IRS Form W-8ECI stating that the dividends are not subject to withholding tax because they are effectively connected with the conduct by the non-U.S. holder of a trade or business within the United States, as may be applicable. These certifications must be provided to the applicable withholding agent prior to the payment of dividends and must be updated periodically. Non-U.S. holders that do not timely provide the applicable withholding agent with the required certification, but that qualify for a reduced rate under an applicable income tax treaty, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

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Subject to the discussion below on backup withholding and foreign accounts, if dividends paid to a non-U.S. holder are effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such dividends are attributable), then, although exempt from U.S. federal withholding tax (provided the non-U.S. holder provides appropriate certification, as described above), the non-U.S. holder will be subject to U.S. federal income tax on such dividends on a net income basis at the regular graduated U.S. federal income tax rates. In addition, a non-U.S. holder that is a corporation may be subject to a branch profits tax at a rate of 30% (or a lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits for the taxable year that are attributable to such dividends, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

Sale or Other Taxable Disposition

Subject to the discussions below on backup withholding and foreign accounts, a non-U.S. holder will not be subject to U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock unless:

the gain is effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such gain is attributable);

the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or

our common stock constitutes a U.S. real property interest, or USRPI by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above will generally be subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates. A non-U.S. holder that is a foreign corporation also may be subject to a branch profits tax at a rate of 30% (or a lower rate specified by an applicable income tax treaty) of a portion of its effectively connected earnings and profits for the taxable year, as adjusted for certain items.

A non-U.S. holder described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or a lower rate specified by an applicable income tax treaty) on any gain derived from the disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder (even though the individual is not considered a resident of the United States) provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we are not currently and do not anticipate becoming a USRPHC. Because the determination of whether we are a USRPHC depends on the fair market value of our USRPIs relative to the fair market value of our other business assets and our non-U.S. real property interests, however, there can be no assurance we are not a USRPHC or will not become one in the future. Even if we are or were to become a USRPHC, gain arising from the sale or other taxable disposition by a non-U.S. holder of our common stock will not be subject to U.S. federal income tax if such class of stock is "regularly traded," as defined by applicable Treasury Regulations, on an established securities market, and such non-U.S. holder owns, actually or constructively, 5% or less of such class of our stock throughout the shorter of the five-year period ending on the date of the sale or other disposition or the non-U.S. holder's holding period for such stock.

Non-U.S. holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

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Information Reporting and Backup Withholding

A non-U.S. holder will not be subject to backup withholding with respect to payments of dividends on our common stock we make to the non-U.S. holder, provided the applicable withholding agent does not have actual knowledge or reason to know such holder is a United States person and the holder certifies its non-U.S. status, such as by providing a valid IRS Form W-8BEN or W-8ECI, or other applicable certification. However, information returns will be filed with the IRS in connection with any dividends on our common stock paid to the non-U.S. holder, regardless of whether any tax was actually withheld. Copies of these information returns may also be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which the non-U.S. holder resides or is established.

Information reporting and backup withholding may apply to the proceeds of a sale of our common stock within the United States, and information reporting may (although backup withholding generally will not) apply to the proceeds of a sale of our common stock outside the United States conducted through certain U.S.-related financial intermediaries, in each case, unless the beneficial owner certifies under penalty of perjury that it is a non-U.S. holder on IRS Form W-8BEN or other applicable form (and the payor does not have actual knowledge or reason to know that the beneficial owner is a United States person) or such owner otherwise establishes an exemption.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under the Code provisions commonly known as the Foreign Account Tax Compliance Act ("FATCA") on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends on, or gross proceeds from the sale or other disposition of, our common stock paid to a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and recently-issued IRS guidance, withholding under FATCA generally will apply to payments of dividends on our common stock made on or after July 1, 2014 and to payments of gross proceeds from the sale or other disposition of such stock on or after January 1, 2017.

Prospective investors should consult their tax advisors regarding the potential application of withholding under FATCA to their investment in our common stock.

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UNDERWRITING

The Company, the selling stockholder and Barclays Capital Inc. have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, the underwriter has agreed to purchase 6,000,000 shares from the selling stockholder at a price of \$18.62 per share.

The underwriter is committed to take and pay for all of the shares being offered, if any are taken.

Commissions and Expenses

The following table summarizes the underwriting discounts and commissions the selling stockholder will pay to the underwriter. The underwriting fee is the difference between the initial price to the public and the amount the underwriter pays to the selling stockholder for the shares.

Per share	\$	0.25
Total	\$	1,500,000

The underwriter proposes to offer the shares of common stock directly to the public at the public offering price on the cover of this prospectus supplement and to selected dealers at such offering price less a selling concession not in excess of \$0.15 per share. After the offering, the underwriter may change the offering price and other selling terms. Sales of shares made outside of the United States may be made by affiliates of the underwriter.

The expenses of the offering that are payable by us are estimated to be approximately \$300,000 (excluding underwriting discounts and commissions and any transfer taxes incurred by the selling stockholder in disposing of the shares), including approximately \$2,000 in connection with the qualification of the offering with the Financial Industry Regulatory Authority by counsel to the underwriter. We have agreed to pay expenses incurred by the selling stockholder in connection with the offering, other than the underwriting discounts and commission and any transfer taxes incurred by the selling stockholder in disposing of the shares.

Option to Purchase Additional Shares

The selling stockholder has granted the underwriter an option exercisable for 30 days after the date of this prospectus supplement to purchase, from time to time, in whole or in part, up to an aggregate of 900,000 shares at the public offering price less underwriting discounts and commissions.

Lock-Up Agreements

We and all of our directors and executive officers and the selling stockholder have agreed that, subject to certain exceptions, without the prior written consent of Barclays Capital Inc., we and they will not, (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock beneficially owned (including, without limitation, shares of common stock that may be deemed to be beneficially owned by us or them in accordance with the rules and regulations of the SEC and shares of common stock that may be issued upon exercise of any securities convertible into or exercisable or exchangeable for common stock) or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise during the period ending 60 days after the date of this prospectus supplement. In addition, we have agreed not to file any registration statement with the SEC relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock during the 60-day restricted period.

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The restrictions described in the previous paragraph do not apply to:

the sale of shares to the underwriter in connection with the offering;

the issuance by us of shares of common stock upon the exercise of an option or a warrant or the conversion or exchange of a convertible or exchangeable of a security outstanding on the date of this prospectus supplement and disclosed in this prospectus supplement;

the grant of options or the issuance of shares of common stock by us or our subsidiaries pursuant to employee stock incentive or other benefit plans in effect on the date of this prospectus supplement and disclosed in this prospectus supplement;

the issuance by us of common stock in connection with the acquisition of the securities, business, property or other assets of another person or entity, or pursuant to any employee benefit plans assumed by the us in connection with any such acquisition, provided that such issuance shall not exceed 5% of our outstanding shares of common stock, on a fully-diluted basis, immediately prior to the consummation of this offering, provided that each transferee shall sign and deliver a lock-up agreement;

transactions by a security holder relating to shares of common stock or other securities acquired in open market transactions after the completion of this offering, provided that no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with subsequent sales of common stock or other securities acquired in such open market transactions;

the transfer of shares of common stock pursuant to a trading plan pursuant to Rule 10b5-1 under the Exchange Act that was in effect on the date of this offering;

the establishment by a security holder of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that such plan does not provide for the transfer of common stock during the lock-up period and no public announcement or filing under the Exchange Act regarding the establishment of such plan shall be required of or voluntarily made by or on behalf of such security holder or us;

the transfer or distribution by a security holder of shares of common stock or any securities convertible into common stock, (1) by bona fide gift, will or intestacy, (2) to general or limited partners, members or stockholders of the security holder and partnerships or limited liability companies for the benefit of the immediate family of the security holder and the partners and members of which are only the security holder and the immediate family of the security holder and (3) to any trust for the direct or indirect benefit of the security holder or the immediate family of the security holder, provided that in case of each of (1), (2), and (3), each transferee, donee, trustee or distributee shall sign and deliver a lock-up agreement and no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of common stock (other than a Form 5 required and filed within 45 days of September 30, 2013), shall be required or shall be voluntarily made during the lock-up period;

dispositions of shares of our common stock to us to satisfy tax withholding obligations in connection with the exercise of options to purchase our common stock or in connection with our rights to cause a security holder to sell shares of common stock in effect on the date of the lock-up agreement;

broker-assisted sales of shares of common stock to satisfy tax withholding obligations in connection with the exercise of options to purchase common stock or to cover the exercise price of such options to purchase common stock, provided that no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of common stock

(other

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than a Form 5 required and filed within 45 days of September 30, 2013), shall be required or shall be voluntarily made as a result of such sale during the lock-up period; and

the transfer of shares of common stock by our directors and executive officers subject to the reporting requirements of Section 16 of the Exchange Act in an amount not to exceed, in the aggregate, 100,000 shares of common stock (which amount does not include transfers of shares of common stock pursuant to Rule 10b5-1 trading plans that are in effect on the date of this offering).

Barclays Capital Inc., in its sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time with or without notice. When determining whether or not to release common stock and other securities from lock-up agreements, Barclays Capital Inc. will consider, among other factors, the holder's reasons for requesting the release, the number of shares of common stock and other securities for which the release is being requested and market conditions at the time.

Indemnification

We and the selling stockholder have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriter may be required to make for these liabilities.

Stabilization, Short Positions and Penalty Bids

The underwriter may engage in stabilizing transactions, short sales and purchases to cover positions created by short sales, and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, in accordance with Regulation M under the Securities Exchange Act of 1934:

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.

A short position involves a sale by the underwriter of shares in excess of the number of shares the underwriter is obligated to purchase in the offering, which creates the syndicate short position. This short position may be either a covered short position or a naked short position. In a covered short position, the number of shares involved in the sales made by the underwriter in excess of the number of shares it is obligated to purchase is not greater than the number of shares that it may purchase by exercising its option to purchase additional shares. In a naked short position, the number of shares involved is greater than the number of shares in their option to purchase additional shares. The underwriter may close out any short position by either exercising its option to purchase additional shares and/or purchasing shares in the open market. In determining the source of shares to close out the short position, the underwriter will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which it may purchase shares through its option to purchase additional shares. A naked short position is more likely to be created if the underwriter is concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.

Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the underwriter to reclaim a selling concession from a syndicate member when the common stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

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These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of the common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the New York Stock Exchange or otherwise and, if commenced, may be discontinued at any time.

Neither we nor the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor the underwriter make any representation that the underwriter will engage in these stabilizing transactions or that any transaction, once commenced, will not be discontinued without notice.

Electronic Distribution

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by the underwriter or by its affiliates. In those cases, prospective investors may view offering terms online and prospective investors may be allowed to place orders online. The underwriter may agree with us to allocate a specific number of shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriter on the same basis as other allocations.

Other than the prospectus in electronic format, the information on the underwriter's web site and any information contained in any other web site maintained by the underwriter is not part of the prospectus or the Registration Statement of which this prospectus supplement forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter and should not be relied upon by investors.

New York Stock Exchange Listing

Our common stock is traded on the New York Stock Exchange under the symbol "WAIR."

Relationships

The underwriter and/or its affiliates have engaged, and may in the future engage, in commercial and investment banking transactions with us in the ordinary course of their business, including as our arrangers, lenders and agents under the old senior secured credit facilities and the new senior secured credit facilities for which they have received, and expect to receive, customary compensation and expense reimbursement. For example, affiliates of Barclays Capital Inc. are acting as arrangers, lenders and agents under the new senior secured credit facilities and acted as lenders and agents under the old senior secured credit facilities.

Relationship with Solebury Capital LLC

The selling stockholder has retained Solebury Capital LLC, or Solebury, a Financial Industry Regulatory Authority member, to provide certain financial consulting services (which do not include underwriting services) in connection with this offering. The selling stockholder has agreed to pay Solebury, only upon successful completion of this offering, a fee of \$125,000. Solebury's services include advice with respect to selection of underwriters for this offering, deal structuring, fee and economics recommendations, distribution strategy recommendations and preparation of presentation materials. Solebury is not acting as an underwriter and has no contact with any public or institutional investor on behalf of the selling stockholder, the Company or the underwriters. In addition, Solebury will not underwrite or purchase any of our common stock in this offering or otherwise participate in any such undertaking.

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Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area that has implemented the Prospectus Directive (each, referred to as a "Relevant Member State") an offer to the public of any shares of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- (a) to any legal entity that is a qualified investor as defined in the Prospectus Directive;
- (b) to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the underwriter for any such offer; or
- (c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or the underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Notice to Prospective Investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

Notice to Prospective Investors in Switzerland

The shares of common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or

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marketing material relating to the shares of common stock or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the issuer or the shares of common stock has been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of the shares of common stock will not be supervised by, the Swiss Financial Market Supervisory Authority, and the offer of shares of common stock has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares of common stock.

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus supplement relates to an exempt offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or DFSA. This prospectus supplement is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with exempt offers. The DFSA has not approved this prospectus supplement nor taken steps to verify the information set forth herein and has no responsibility for the prospectus supplement. The securities to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the securities offered should conduct their own due diligence on the securities. If you do not understand the contents of this prospectus supplement you should consult an authorized financial advisor.

Notice to Prospective Investors in Hong Kong

The shares of common stock may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong), or (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap. 32, Laws of Hong Kong) and no advertisement, invitation or document relating to the shares of common stock may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Notice to Prospective Investors in Japan

The shares of common stock offered in this prospectus supplement have not been and will not be registered under the Securities and Exchange Law of Japan. The underwriter has agreed that it will not offer or sell any shares of common stock, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to other for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except (i) pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Securities and Exchange Law of Japan and (ii) in compliance with any other applicable requirements of Japanese law.

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Notice to Prospective Investors in Singapore

This prospectus supplement has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of common stock may not be circulated or distributed, nor may the shares of common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to compliance with conditions set forth in the SFA.

Where the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock pursuant to an offer made under Section 275 of the SFA except

to an institutional investor (for corporations, under Section 274 of the SFA) or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than S\$200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions specified in Section 275 of the SFA;

where no consideration is or will be given for the transfer; or

where the transfer is by operation of law.

Notice to Prospective Investors in Australia

This prospectus supplement is not a formal disclosure document and has not been, nor will be, lodged with the Australian Securities and Investments Commission. It does not purport to contain all information that an investor or their professional advisers would expect to find in a prospectus or other disclosure document (as defined in the Corporations Act 2001 (Australia)) for the purposes of Part 6D.2 of the Corporations Act 2001 (Australia) or in a product disclosure statement for the purposes of Part 7.9 of the Corporations Act 2001 (Australia), in either case, in relation to the securities.

The securities are not being offered in Australia to "retail clients" as defined in sections 761G and 761GA of the Corporations Act 2001 (Australia). This offering is being made in Australia solely to "wholesale clients" for the purposes of section 761G of the Corporations Act 2001 (Australia) and, as such, no prospectus, product disclosure statement or other disclosure document in relation to the securities has been, or will be, prepared.

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This prospectus supplement does not constitute an offer in Australia other than to wholesale clients. By submitting an application for our securities, you represent and warrant to us that you are a wholesale client for the purposes of section 761G of the Corporations Act 2001 (Australia). If any recipient of this prospectus supplement is not a wholesale client, no offer of, or invitation to apply for, our securities shall be deemed to be made to such recipient and no applications for our securities will be accepted from such recipient. Any offer to a recipient in Australia, and any agreement arising from acceptance of such offer, is personal and may only be accepted by the recipient. In addition, by applying for our securities you undertake to us that, for a period of 12 months from the date of issue of the securities, you will not transfer any interest in the securities to any person in Australia other than to a wholesale client.

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LEGAL MATTERS

The validity of the common stock being offered by this prospectus supplement will be passed upon for us by Latham & Watkins LLP, Washington, District of Columbia. Certain legal matters relating to this offering will be passed upon for the underwriter by Davis Polk & Wardwell LLP, New York, New York.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended September 30, 2012 have been so incorporated in reliance on the report (which contains an explanatory paragraph on the effectiveness of internal control over financial reporting due to the exclusion of certain elements of the internal control over financial reporting of Interfast, Inc., a business the registrant acquired during the year ended September 30, 2012) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

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WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

We file reports, proxy statements and other information with the SEC. Information filed with the SEC by us can be inspected and copied at the Public Reference Room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of this information by mail from the Public Reference Room of the SEC at prescribed rates. Further information on the operation of the SEC's Public Reference Room in Washington, D.C. can be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains a web site that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is <http://www.sec.gov>.

These periodic and current reports and all amendments to those reports are also available free of charge on the investor relations page of our website at www.wescoair.com. We have included our website throughout this filing as textual references only. The information on our web site, however, is not, and should not be deemed to be, a part of this prospectus supplement.

This prospectus supplement and the accompanying prospectus are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Forms of the documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement. Statements in this prospectus supplement or the accompanying prospectus about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement at the SEC's Public Reference Room in Washington, D.C. or through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to "incorporate by reference" information into this prospectus supplement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus supplement, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement modifies or replaces that statement.

We incorporate by reference our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, between the date of this prospectus supplement and the termination of this offering. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the future, that are not deemed "filed" with the SEC, including our Compensation Committee report, the Report of the Audit Committee and performance graph or any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

This prospectus supplement and the accompanying prospectus incorporate by reference the documents set forth below that have previously been filed with the SEC:

Our Annual Report on Form 10-K for the year ended September 30, 2012, filed with the SEC on November 30, 2012.

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Our Quarterly Reports on Form 10-Q for the quarters ended December 31, 2012, filed with the SEC on February 8, 2013, March 31, 2013, filed with the SEC on May 9, 2013, and June 30, 2013, filed with the SEC on August 6, 2013.

Our Definitive Proxy Statement on Schedule 14A, filed with the SEC on December 13, 2012.

Our Current Reports on Form 8-K filed with the SEC on November 21, 2012, December 7, 2012 (excluding Item 7.01 and related exhibits), January 28, 2013, March 26, 2013, May 9, 2013 and May 29, 2013.

The description of our common stock contained in the our Registration Statement on Form 8-A, dated July 25, 2011, filed with the SEC on July 25, 2011 and any amendment or report filed with the SEC for the purpose of updating such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus supplement and deemed to be part of this prospectus supplement from the date of the filing of such reports and documents.

You may obtain any of the documents incorporated by reference in this prospectus supplement on the SEC's website at www.sec.gov or request a copy of any or all of the documents referred to above which have been incorporated by reference (other than exhibits, unless they are specifically incorporated by reference in the documents) at no cost to the requester by writing or telephoning us at the following address:

Wesco Aircraft Holdings, Inc.
27727 Avenue Scott
Valencia, CA 91355
Attention: Mark Davidson, Investor Relations
Telephone: (661) 802-5090

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus supplement or the accompanying prospectus.

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PROSPECTUS

WESCO AIRCRAFT HOLDINGS, INC.

25,000,000 SHARES OF COMMON STOCK

This prospectus relates to the resale from time to time of up to 25,000,000 shares of common stock of Wesco Aircraft Holdings, Inc. by affiliates of The Carlyle Group, which we refer to as Carlyle or the selling stockholder.

This prospectus describes the general manner in which the shares of our common stock may be offered and sold by the selling stockholder. The specific manner in which shares of common stock may be offered and sold will be described in a supplement to this prospectus. Additional information about the selling stockholder, including the relationship between the selling stockholder and us, will also be included in the applicable prospectus supplement.

We have agreed to bear all of the expenses incurred in connection with the registration of these shares. The selling stockholder will pay or assume brokerage commissions and similar charges incurred for the sale of shares of our common stock.

The selling stockholder, or its pledgees, donees, transferees or other successors-in-interest, may offer the shares from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices.

Selling stockholders that are affiliates of Wesco Aircraft Holdings, Inc. may be deemed to be "underwriters" within the meaning of the Securities Act of 1933, as amended, or the Securities Act, and, as a result, may be deemed to be offering securities, indirectly, on our behalf. We will not receive any proceeds from the sale of the shares by the selling stockholder.

You should carefully read this prospectus and any accompanying prospectus supplement, together with the documents we incorporate by reference, before you invest in our common stock.

INVESTING IN OUR SECURITIES INVOLVES RISKS. SEE THE "RISK FACTORS" ON PAGE 5 OF THIS PROSPECTUS AND ANY SIMILAR SECTION CONTAINED IN THE APPLICABLE PROSPECTUS SUPPLEMENT CONCERNING FACTORS YOU SHOULD CONSIDER BEFORE INVESTING IN OUR SECURITIES.

Our common stock is listed on the New York Stock Exchange under the symbol "WAIR." On May 9, 2013, the last reported sale price of our common stock on the New York Stock Exchange was \$16.87 per share.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is May 16, 2013.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission, or the SEC using a "shelf" registration process. By using a shelf registration statement, the selling stockholder may, from time to time, sell up to 25,000,000 shares of common stock in one or more offerings. Each time that the selling stockholder sells securities, we will provide a prospectus supplement to this prospectus that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement, you should rely on the prospectus supplement. Before purchasing any securities, you should carefully read both this prospectus and the applicable prospectus supplement, together with the additional information described under the heading "Where You Can Find More Information; Incorporation by Reference."

We are responsible for the information contained or incorporated by reference in this prospectus, any accompanying prospectus supplement and in any related free-writing prospectus we prepare or authorize. Neither we nor the selling stockholder have authorized anyone to give you any other information, and we take no responsibility for any other information that others may give you. We and the selling stockholder will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus and the applicable prospectus supplement to this prospectus is accurate as of the date on its respective cover, and that any information incorporated by reference is accurate only as of the date of the document incorporated by reference, unless we indicate otherwise. Our business, financial condition, results of operations and prospects may have changed since those dates.

Unless otherwise specified, the term "Wesco Aircraft" means Wesco Aircraft Holdings, Inc., our top-level holding company, and the terms "Wesco," "the Company," "we," "us," and "our" mean Wesco Aircraft and its subsidiaries, including Wesco Aircraft Hardware Corp., our primary domestic operating company, and Wesco Aircraft Europe, Ltd., our primary foreign operating company. References to "fiscal year" mean the year ending or ended September 30. For example, "fiscal year 2012" or "fiscal 2012" means the period from October 1, 2011 to September 30, 2012.

CERTAIN TRADEMARKS

This prospectus includes trademarks, such as Wesco Aircraft® and the Wesco logo, which are protected under applicable intellectual property laws and are our property and/or the property of our subsidiaries. This prospectus also contains trademarks, service marks, copyrights and trade names of other companies, which are the property of their respective owners. Solely for convenience, our trademarks and tradenames referred to in this prospectus may appear without the ® or symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable licensor to these trademarks and tradenames.

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WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

We file reports, proxy statements and other information with the SEC. Information filed with the SEC by us can be inspected and copied at the Public Reference Room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of this information by mail from the Public Reference Room of the SEC at prescribed rates. Further information on the operation of the SEC's Public Reference Room in Washington, D.C. can be obtained by calling the SEC at 1-800-SEC-0330. The SEC also maintains a web site that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is <http://www.sec.gov>.

These periodic and current reports and all amendments to those reports are also available free of charge on the investor relations page of our website at www.wescoair.com. We have included our website throughout this filing as textual references only. The information on our web site, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Forms of the documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement at the SEC's Public Reference Room in Washington, D.C. or through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus modifies or replaces that statement.

We incorporate by reference our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, which we refer to as the "Exchange Act" in this prospectus, between the date of this prospectus and the termination of the offering of the securities described in this prospectus. We are not, however, incorporating by reference any documents or portions thereof, whether specifically listed below or filed in the future, that are not deemed "filed" with the SEC, including our Compensation Committee Report, Audit Committee Report and performance graph or any information furnished pursuant to Items 2.02 or 7.01 of Form 8-K or related exhibits furnished pursuant to Item 9.01 of Form 8-K.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC:

Our Annual Report on Form 10-K for the year ended September 30, 2012, filed with the SEC on November 30, 2012.

Our Quarterly Reports on Form 10-Q for the quarters ended December 31, 2012, filed with the SEC on February 8, 2013, and March 31, 2013, filed with the SEC on May 9, 2013.

Our Definitive Proxy Statement on Schedule 14A, filed with the SEC on December 13, 2012.

Our Current Reports on Form 8-K filed with the SEC on November 21, 2012, December 7, 2012 (excluding Item 7.01 and related exhibits), January 28, 2013, March 26, 2013 and May 9, 2013.

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The description of our common stock contained in our Registration Statement on Form 8-A, dated July 25, 2011, filed with the SEC on July 25, 2011 and any amendment or report filed with the SEC for the purpose of updating such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of the offering of the securities described in this prospectus, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a free copy of any of the documents incorporated by reference in this prospectus by writing or telephoning us at the following address:

Wesco Aircraft Holdings, Inc.
27727 Avenue Scott
Valencia, CA 91355
Attention: Mark Davidson, Investor Relations
Telephone: (661) 802-5090

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus and any accompanying prospectus supplement.

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THE COMPANY

We are one of the world's largest distributors and providers of comprehensive supply chain management services to the global aerospace industry on an annual sales basis. Our services range from traditional distribution to the management of supplier relationships, quality assurance, kitting, just-in-time, or JIT, delivery and point-of-use inventory management. We supply approximately 500,000 different stock-keeping units, including hardware, bearings, tools, electronic components and machined parts. We serve our customers under three types of arrangements: JIT contracts, which govern comprehensive outsourced supply chain management services; long-term agreements, or LTAs, which set prices for specific parts; and ad hoc sales. JIT contracts and LTAs, which together comprised approximately 62% of our fiscal 2012 net sales, are multi-year arrangements that provide us with significant visibility into our future sales.

Founded in 1953 by the father of our current chief executive officer, Wesco has grown to serve over 7,400 customers in the commercial, military and general aviation sectors, including the leading original equipment manufacturers and their subcontractors, through which we support nearly all major Western aircraft programs. We have grown our net sales at a 14.8% compounded annual growth rate over the past 20 years to \$776.2 million in fiscal 2012. We have more than 1,200 employees and operate across 41 locations in 12 countries.

Wesco Aircraft was incorporated in Delaware on July 21, 2006, as a holding company for Wesco Aircraft Hardware Corp., our wholly owned, primary domestic operating subsidiary, Wesco Aircraft Europe, Ltd., our primary foreign operating subsidiary, and certain other foreign operating subsidiaries, in connection with the acquisition of 100% of the outstanding stock of Wesco Aircraft Hardware Corp., Wesco Aircraft Israel and the European entities of Flintbrook Ltd., Wesco Aircraft France and Wesco Aircraft Germany by Wesco Aircraft, which we refer to as the Carlyle Acquisition. Wesco Aircraft Hardware Corp., our primary domestic operating company, was incorporated in California on October 11, 1971 and Wesco Aircraft Europe, Ltd., our primary foreign operating company, was incorporated in the United Kingdom on October 19, 1984

Our principal executive offices are located at 27727 Avenue Scott, Valencia, CA 91355 and our telephone number is (661) 775-7200.

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RISK FACTORS

Investment in our securities involves risks. You should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K we file after the date of this prospectus, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, as well as the risk factors and other information contained in the applicable prospectus supplement before acquiring any of such securities. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and any accompanying prospectus supplement include and incorporate forward-looking statements within the meaning of Section 27A of the Securities Act, and Section 21E of the Exchange Act. The words "believe," "expect," "anticipate," "intend," "estimate" and other expressions that are predictions of or indicate future events and trends and that do not relate to historical matters identify forward-looking statements. You should not place undue reliance on these forward-looking statements. Although forward-looking statements reflect management's good faith beliefs, reliance should not be placed on forward-looking statements because they involve known and unknown risks, uncertainties and other factors, which may cause the actual results, performance or achievements to differ materially from anticipated future results, performance or achievements expressed or implied by such forward-looking statements. Forward-looking statements speak only as of the date the statements are made. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events, changed circumstances or otherwise. These forward-looking statements are subject to numerous risks and uncertainties, including, but not limited to:

general economic and industry conditions;

changes in military spending;

risks unique to suppliers of equipment and services to the U.S. government;

risks associated with our long-term, fixed-price agreements that have no guarantee of future sales volumes;

risks associated with the loss of significant customers, a material reduction in purchase orders by significant customers or the delay, scaling back or elimination of significant programs on which we rely;

our ability to effectively manage our inventory;

our suppliers' ability to provide us with the products we sell in a timely manner, in adequate quantities and/or at a reasonable cost;

our ability to maintain an effective information technology system;

our ability to retain key personnel;

risks associated with our international operations;

fluctuations in our financial results from period-to-period;

Carlyle's ability to control the majority of the voting power of our outstanding common stock;

our ability to effectively compete in our industry;

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risks related to our indebtedness; and

other risks and uncertainties.

Important factors that could cause actual results to differ materially from our expectations are disclosed under "Risk Factors" in this prospectus and any accompanying prospectus supplement. All written and oral forward-looking statements attributable to us, or persons acting on our behalf, are expressly qualified in their entirety by the cautionary statements as well as other cautionary statements that are made from time to time in our public communications. You should evaluate all forward-looking statements made in this prospectus or any prospectus supplement in the context of these risks and uncertainties.

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USE OF PROCEEDS

We will not receive any proceeds from the sale of common stock by the selling stockholder.

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DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is not complete and may not contain all the information you should consider before investing in our capital stock. This description is summarized from, and qualified in its entirety by reference to, our certificate of incorporation, which has been publicly filed with the SEC. See "Where You Can Find More Information; Incorporation by Reference."

General

Our authorized capital stock consists of the following: (i) 950,000,000 shares of common stock, par value \$0.001 per share, and (ii) 50,000,000 shares of preferred stock, par value \$0.001 per share. The rights and privileges of holders of our common stock are subject to any series of preferred stock that we may issue in the future.

Common Stock

Holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, including the election of directors. There will be no cumulative voting in the election of directors, which means that holders of a majority of the outstanding shares of common stock will be able to elect all of the directors, and holders of less than a majority of such shares will be unable to elect any director. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of common stock will be entitled to receive ratably such dividends, if any, as may be declared from time to time by our board of directors out of funds legally available for dividend payments. Our senior secured credit facilities impose restrictions on our ability to declare dividends on our common stock. The holders of common stock have no preferences or rights of conversion, exchange, pre-emption or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. In the event of any liquidation, dissolution or winding-up of our affairs, holders of common stock will be entitled to share ratably in our assets that are remaining after payment or provision for payment of all of our debts and obligations and after liquidation payments to holders of outstanding shares of preferred stock, if any.

Preferred Stock

The preferred stock, if issued, would have priority over the common stock with respect to dividends and other distributions, including the distribution of our assets upon liquidation. Unless required by law or by any stock exchange on which our common stock may be listed, our board of directors will have the authority without further stockholder authorization to issue from time to time shares of preferred stock in one or more series and to determine the designations, rights, preferences, privileges, limitations or restrictions of each series. Although we have no present plans to issue any shares of preferred stock, the issuance of shares of preferred stock, or the issuance of rights to purchase such shares, could decrease the amount of earnings and assets available for distribution to the holders of common stock, could adversely affect the rights and powers, including voting rights, of the common stock, and could have the effect of delaying, deterring or preventing a change in control of us or an unsolicited acquisition proposal.

Amended and Restated Stockholders Agreement

Pursuant to the amended and restated stockholders agreement, affiliates of Carlyle that own Wesco shares, which we refer to as the Carlyle Stockholders, have the right to nominate six of the members of the board of directors, certain other stockholders who are party to the amended and restated stockholders agreement, which we refer to as the Wesco Stockholders, have the right to nominate one of the members of the board of directors and the board of directors or a committee of the board has the right to nominate the remaining directors. The number of board members that the Carlyle Stockholders are entitled to nominate will be reduced (i) to four directors if the Carlyle Stockholders hold less than 40% of our common stock, (ii) to three directors if the Carlyle Stockholders hold less than 25% of our common stock, (iii) to two directors if the Carlyle Stockholders hold less than 15% of our common stock and (iv) to one director if the Carlyle Stockholders hold less than 10% of our common stock. The

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Carlyle Stockholders' rights under the board nomination provisions of the amended and restated stockholders agreement will terminate at such time as they hold less than 5% of our common stock. The Wesco Stockholders' rights under the board nominations provisions of the amended and restated stockholders agreement will also terminate at such time as they hold less than 5% of our common stock. In addition, for so long as Randy Snyder remains involved with our business, Mr. Snyder must be the Wesco Stockholders' nominee. However, at such time as Mr. Snyder is no longer involved with our business, the Wesco Stockholders may nominate another director, provided that such nominee is deemed qualified to serve on the board of a public company.

The amended and restated stockholders agreement contains restrictions on the transfer of our equity securities by the stockholders, as well as drag-along rights. In the event that we register any of our common stock following our initial public offering, these stockholders have the right to require us to use our best efforts to include the securities held by them, subject to certain limitations, including as determined by the underwriters, and certain stockholders have the right to cause us to effect registrations of shares on their behalf. The amended and restated stockholders agreement also requires us to indemnify the stockholders in connection with any such registration of our securities.

The amended and restated stockholders agreement will terminate upon the later of (i) a Company Sale (as defined in the amended and restated stockholders agreement) and (ii) the date on which neither Carlyle nor the Wesco Stockholders holds 5% or more of the then-outstanding shares of the Company's common stock.

Limitations on Directors' Liability

Our amended and restated certificate of incorporation and amended and restated bylaws contain provisions indemnifying our directors and officers to the fullest extent permitted by law. We have entered into indemnification agreements with each of our directors that may, in some cases, be broader than the specific indemnification provisions contained under Delaware law.

In addition, as permitted by Delaware law, our amended and restated certificate of incorporation provides that no director will be liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director. The effect of this provision is to restrict our rights and the rights of our stockholders in derivative suits to recover monetary damages against a director for breach of fiduciary duty as a director, except that a director will be personally liable for:

any breach of his or her duty of loyalty to us or our stockholders;

acts or omissions not in good faith that involve intentional misconduct or a knowing violation of law;

the payment of dividends or the redemption or purchase of stock in violation of Delaware law; or

any transaction from which the director derived an improper personal benefit.

This provision does not affect a director's liability under the federal securities laws.

To the extent that our directors, officers and controlling persons are indemnified under the provisions contained in our amended and restated certificate of incorporation, Delaware law or contractual arrangements against liabilities arising under the Securities Act, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Provisions of Our Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws that May Have an Anti-Takeover Effect

Certain provisions that are contained in our amended and restated certificate of incorporation and amended and restated bylaws that are summarized below may be deemed to have an anti-takeover effect and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, including attempts that might result in a premium being paid over the market price for the shares held by stockholders.

Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

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establish a classified board of directors, with three classes of directors;

authorize the issuance of blank check preferred stock that our board of directors could issue to increase the number of outstanding shares and to discourage a takeover attempt;

limit the ability of stockholders to remove directors if a "group," as defined under Section 13(d)(3) of the Exchange Act, ceases to own more than 50% of our common stock;

prohibit our stockholders from calling a special meeting of stockholders;

prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders, if a "group" ceases to own more than 50% of our common stock;

provide that the board of directors is expressly authorized to adopt, alter or repeal our bylaws; and

establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings.

The foregoing provisions of our amended and restated certificate of incorporation and amended and restated bylaws could discourage potential acquisition proposals and could delay or prevent a change in control. These provisions are intended to enhance the likelihood of continuity and stability in the composition of the board of directors and in the policies formulated by our board of directors and to discourage certain types of transactions that may involve an actual or threatened change of control. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they also may inhibit fluctuations in the market price of our common stock that could result from actual or rumored takeover attempts. Such provisions also may have the effect of preventing changes in our management.

Delaware Takeover Statute

Subject to certain exceptions, Section 203 prohibits a Delaware corporation from engaging in any "business combination" with any "interested stockholder" for a period of three years following the date that such stockholder became an interested stockholder, unless: (i) prior to such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (ii) on consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned (a) by persons who are directors and also officers and (b) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or (iii) on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66²/₃% of the outstanding voting stock that is not owned by the interested stockholder.

In our amended and restated certificate of incorporation, we have elected not to be governed by Section 203 of the Delaware General Corporation Law as permitted under and pursuant to subsection (b)(3) of Section 203.

Listing

Our common stock is listed on the New York Stock Exchange under the symbol "WAIR."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

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SELLING STOCKHOLDER

This prospectus relates to the resale by affiliates of The Carlyle Group of up to 25,000,000 shares of our common stock that were issued and outstanding prior to the original date of filing of the registration statement of which this prospectus forms a part. The selling stockholder originally acquired the shares of our common stock included in this prospectus in connection with the Carlyle Acquisition.

Information about the selling stockholder, including the number of shares held by the selling stockholder before and after the offering, the percentage of our common stock held by the selling stockholder before and after the offering and the number of shares of our common stock offered by the selling stockholder, will be set forth in an applicable prospectus supplement, documents incorporated by reference or in a free writing prospectus we file with the SEC. The applicable prospectus supplement will also disclose whether the selling stockholder has had a material relationship with us during the three years prior to the date of the prospectus supplement.

The selling stockholder may not sell any shares of our common stock pursuant to this prospectus until we have identified such selling stockholder and the shares being offered for resale by such selling stockholder in a subsequent prospectus supplement. However, the selling stockholder may sell or transfer all or a portion of their shares of our common stock pursuant to any available exemption from the registration requirements of the Securities Act.

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PLAN OF DISTRIBUTION

The selling stockholder may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods or through underwriters or dealers, through agents and/or directly to one or more purchasers. The securities may be distributed from time to time in one or more transactions:

at a fixed price or prices, which may be changed;

at market prices prevailing at the time of sale;

at prices related to such prevailing market prices; or

at negotiated prices.

Each time that the selling stockholder sells securities covered by this prospectus, the selling stockholder will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms and conditions of the offering of such securities, including (i) the name or names of any underwriters, dealers or agents and the amounts of securities underwritten or purchased by each of them; (ii) if a fixed price offering, the public offering price of the securities and the proceeds to the selling stockholder; (iii) any options under which underwriters may purchase additional securities from the selling stockholder; (iv) any underwriting discounts or commissions or agency fees and other items constituting underwriters' or agents' compensation; (v) terms and conditions of the offering and (vi) any discounts, commissions or concessions allowed or reallocated or paid to dealers.

Offers to purchase the securities being offered by this prospectus may be solicited directly. Agents may also be designated to solicit offers to purchase the securities from time to time. Any agent involved in the offer or sale of our securities will be identified in a prospectus supplement.

If a dealer is utilized in the sale of the securities being offered by this prospectus, the securities will be sold to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

If an underwriter is utilized in the sale of the securities being offered by this prospectus, an underwriting agreement will be executed with the underwriter at the time of sale and the name of any underwriter will be provided in the prospectus supplement that the underwriter will use to make resales of the securities to the public. In connection with the sale of the securities, the selling stockholder, or the purchasers of securities for whom the underwriter may act as agent, may compensate the underwriter in the form of underwriting discounts or commissions. The underwriter may sell the securities to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for which they may act as agent. Unless otherwise indicated in a prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase securities as a principal, and may then resell the securities at varying prices to be determined by the dealer.

Any compensation paid to underwriters, dealers or agents in connection with the offering of the securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers will be provided in the applicable prospectus supplement. Underwriters, dealers and agents participating in the distribution of the securities may be deemed to be underwriters within the meaning of the Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We and the selling stockholder may each enter into agreements to indemnify underwriters, dealers and agents against civil liabilities, including liabilities under the Securities Act, or to contribute to payments they may be required to make in respect thereof and to reimburse those persons for certain expenses.

Our common stock is listed New York Stock Exchange. To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than were sold to them. In these circumstances, these persons would

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cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

If indicated in the applicable prospectus supplement, underwriters or other persons acting as agents may be authorized to solicit offers by institutions or other suitable purchasers to purchase the securities at the public offering price set forth in the prospectus supplement, pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the prospectus supplement. These purchasers may include, among others, commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions. Delayed delivery contracts will be subject to the condition that the purchase of the securities covered by the delayed delivery contracts will not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the purchaser is subject. The underwriters and agents will not have any responsibility with respect to the validity or performance of these contracts.

The specific terms of any lock-up provisions in respect of any given offering will be described in the applicable prospectus supplement.

In compliance with the guidelines of the Financial Industry Regulatory Authority, Inc., or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate proceeds of the offering.

The underwriters, dealers and agents may engage in transactions with us, or perform services for us, in the ordinary course of business for which they receive compensation.

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LEGAL MATTERS

The validity of the securities offered by this prospectus will be passed upon for us by Latham & Watkins LLP.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended September 30, 2012 have been so incorporated in reliance on the report (which contains an explanatory paragraph on the effectiveness of internal control over financial reporting due to the exclusion of certain elements of the internal control over financial reporting of Interfast, Inc., a business the registrant acquired during the year ended September 30, 2012) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

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6,000,000 Shares

Wesco Aircraft Holdings, Inc.

Common Stock

Prospectus Supplement

August 7, 2013

Barclays
