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Foreign Repair Stations: The Critical Need for their Existence and the Global Nature of the Aviation **Maintenance Industry**

Testimony of Marshall S. Filler Managing Director & General Counsel, Aeronautical Repair Station Association (ARSA) Before the Senate Subcommittee on Aviation Operations, Safety and Security

June 20, 2007

Chairman Rockefeller, Ranking Member Lott, and members of the Subcommittee, thank you for inviting me to testify this afternoon about the role of foreign repair stations, and the safety of aviation maintenance.

My name is Marshall Filler and I am the Managing Director & General Counsel of the Aeronautical Repair Station Association (ARSA). ARSA is a 670 member strong international trade association with a distinguished 22-year record of educating and representing certificated aviation maintenance facilities before the U.S. Congress, the Federal Aviation Administration (FAA), the European Aviation Safety Agency (EASA), and other national aviation authorities (NAA).

ARSA's primary members are companies holding repair station certificates issued by the FAA under part 145 of the Federal Aviation Regulations (FARs). These certificates are our industry's "license to do business." They authorize repair stations to perform maintenance and alterations on civil aviation articles, including aircraft, engines, and propellers, and on components installed on these products. These repair stations perform maintenance for airlines and general aviation owners and operators.

In recent years, the profile of the contract maintenance industry has increased dramatically. With over 4,000 repair stations in the United States employing almost 200.000 people (Appendix A), this sector of the aviation industry continues to grow. We welcome the opportunity to discuss the important role our members play in the aviation industry here and abroad and to correct any misconceptions about the safety of maintenance performed by foreign repair stations.

Foreign repair stations are an essential part of aviation.

Foreign repair stations are a necessary part of the international aviation system. Any effort to restrict the use or number of such facilities would likely lead to retaliatory trade actions by other countries. Ultimately, U.S. aerospace manufacturers, air carriers and the flying public would be harmed.

The Chicago Convention of 1944 and International Civil Aviation Organization (ICAO) standards require that the State of Registry (i.e., the country in which an aircraft is

registered) oversee the maintenance performed on that aircraft and related components, regardless of where the work is performed. Consequently, a U.S. registered aircraft requiring maintenance while outside of the U.S. *must* have that work performed by an FAA-certificated maintenance provider. Indeed, a foreign applicant for a repair station certificate must also demonstrate to the FAA that its services are needed to perform work on articles subject to FAA jurisdiction.

Similarly, when an aircraft of foreign registry requires maintenance while in the U.S., only a repair station certificated or validated by the relevant NAA may perform the work. For example, only an EASA-certificated repair station may perform maintenance on an aircraft of French registry within the U.S.

This legal regime has proven beneficial to American repair stations. Currently, there are 698 FAA-certificated repair stations outside the U.S. (see Appendix B). At the same time, there are close to 1,200 EASA-certificated repair stations in the U.S., and numerous other NAA-certificated repair stations inside our borders.² Our aviation maintenance industry is highly-regarded worldwide.

Foreign repair stations must follow strict standards and procedures.

Bilateral agreements are negotiated between two regulatory authorities to facilitate the airworthiness certification of new and used products imported and exported from the affected countries. The agreements are not a "one size fits all" proposition; they must be tailored to the specific oversight systems and capabilities of the respective authorities.

Such agreements are only concluded after a lengthy evaluation process that assures that the two regulatory oversight systems are technically equivalent. In most cases, they are based on reciprocity. Bilateral agreements also eliminate redundant technical determinations that are not necessary in the interests of safety. Consequently, they allow the two authorities to more efficiently allocate their limited oversight resources. The FAA currently has about 30 bilateral agreements covering design, production and airworthiness approvals, primarily for new products.

It is interesting to note that many more bilateral agreements apply to the airworthiness certification of mostly new products than to articles that have been maintained or altered. In relatively few cases, however, Maintenance Implementation Procedures (MIPs) have also been negotiated. Currently, there are MIPs in place with France, Germany and Ireland (soon to be expanded to other members of the European Union) and Canada. The MIPs set forth mutually acceptable procedures that apply whenever maintenance or alterations are performed on equipment under the jurisdiction of either authority. They also provide a means by which the authorities can cooperate in conducting surveillance and sharing the results of those findings.

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¹ See, ICAO Annex 8, Airworthiness, § 4.2.1(b).

² Data obtained on European Safety Agency (EASA) Web site, for "Foreign EASA Part-145 Valid Approvals for Organisations Located in the United States" June 1, 2007.

Except for Canada, facilities located in MIP countries receive an FAA repair station certificate. They are required to follow the rules of their home country and the designated FAA special conditions. The special conditions are areas where the two authorities' regulations are different and therefore must be followed when work is performed on articles subject to the other's jurisdiction.

A list of countries in which FAA foreign repair stations are located, whether these countries meet ICAO standards, and the status of bilateral agreements with the U.S. is found in Appendix C.

FAA-certificated repair facilities located abroad are not a threat to the U.S. economy or to aviation safety.

FAA-certified repair stations located oversees must meet the same or equivalent safety standards as domestic facilities. Unlike their domestic counterparts, however, foreign repair stations must renew their certificate with the FAA annually or, at the discretion of the FAA, biannually, following a safety inspection. This ensures that the FAA evaluates the housing, facilities, equipment, personnel, and data of each repair station located outside the U.S. at least once every two years.

In 2005 ARSA conducted a member survey, (See Appendix D) which revealed that the average FAA-certificated foreign repair station is audited more than 74 times each year by government regulators, customers, other third-parties, and the repair station's own quality assurance personnel, suggesting a high-level of combined oversight.

Recent attempts at restricting the use of foreign repair stations, and specifically removing the FAA Administrator's ability to issue new certificates, would be highly detrimental. Many companies factor into their business plan the ability to open a new foreign repair station, and much time and effort goes into the application and certification process.

Indeed, many U.S. companies have repair stations internationally. The FAA's list of foreign repair stations reveal that there are approximately 80 foreign repair facilities owned by U.S. aerospace companies, including Nordam, Pratt & Whitney, Hamilton Sundstrand and Honeywell.³ Additionally, international companies have repair stations located within our borders, such as Lufthansa Technik, Dassault, and BAE systems.

The aviation maintenance industry is a global enterprise; thus, action taken domestically affects companies worldwide. A restriction on the use of foreign repair stations only punishes American companies, making them less profitable and competitive.

Although the location of work may differ, quality does not.

To operate in the civil aviation maintenance industry, certificated repair stations must demonstrate to the FAA, or other NAAs if applicable, that they possess the housing, facilities, equipment, trained personnel, technical data, and quality systems necessary

³ Based on FAA Listing of Foreign Repair stations from Air Agency Data, June 10, 2007.

to perform maintenance in an airworthy manner. Based upon satisfactory showings in these areas, a repair station is rated to perform certain types of maintenance.

However, not all repair stations look alike and their capabilities vary significantly. Some provide line maintenance – the routine, day-to-day work necessary to keep an airline's fleet operating safely. Some perform substantial maintenance, which includes more comprehensive inspection and repairs on airframes and overhauls of aircraft engines. Others offer specialized services for their customers such as welding, heat treating, and coating on a variety of aircraft parts. However, the vast majority of repair stations perform maintenance on components. Component maintenance usually occurs off the aircraft, typically away from an airport in industrial parks and similar facilities.

Regardless of the location of the repair facility, the regulatory requirements are the same. Each item goes through a series of checks required by FAA regulation, before being placed on an aircraft.

Despite limited FAA resources, the industry ensures safety.

Aviation safety does not begin and end with the FAA or any other regulatory body. Government inspectors will never be able to oversee each technician at every facility all the time. The industry has the ultimate obligation to ensure that the civil aviation system is safe. All evidence suggests that it is fulfilling that responsibility despite the FAA's limited oversight resources.

In reports published in 2003 and 2005, the Office of the Inspector General of the Department of Transportation (DOT IG) expressed concerns about the FAA's oversight of the contract maintenance industry stating that the agency's oversight is currently insufficient for the amount of work independent repair stations perform for airlines. The FAA has responded to these findings by introducing a risk-based inspection program that identifies those repair stations doing the most work for airlines and monitoring their operations more closely. ARSA has continuously supported efforts to better utilize FAA resources to ensure the continued quality of contract maintenance here and abroad, and to demonstrate to policymakers and the public that our aviation system remains safe.

We also note that despite the IG's observations, repair stations are subject to a tremendous amount of oversight by regulators, their customers, and other entities as shown in the 2005 ARSA member survey referenced above (Appendix D). A more recent membership survey conducted in March 2007 is summarized in Appendix E. The findings from this survey reaffirmed past survey results, including:

 42 percent of members surveyed reported 11 or more external audits during 2006 by regulators, customers, and third-party accreditation bodies.

⁴ See, Department of Transportation Office of Inspector General, Rep. No. AV-2003-047, Review of Air Carriers' Use of Aircraft Repair Stations, at 1 (July 8, 2003); Department of Transportation Office of Inspector General, Rep. No. AV-2005-062, Safety Oversight of an Air Carrier Industry in Transition, at 1 (June 3, 2005).

 FAA resource issues are having an impact. A quarter of survey respondents reported losing customers or foregoing business opportunities because of inadequate FAA staffing.

Thus, safety is not just the FAA's responsibility, but that of every aviation maintenance employee performing work on behalf of a certificated repair station, air carrier or other aviation business. It is the FAA's role to ensure that repair stations have the procedures in place to ensure the quality of the work performed and to ensure that procedures are followed. Indeed, FAA regulations treat repair stations as extensions of an air carrier's maintenance organization. This means that the maintenance provider, regardless of their location, must perform the work in accordance with the carrier's maintenance program and the applicable portions of its manual. It also requires the airlines to provide a level of oversight to make certain these standards are met.

This holds true whether the work is being performed at an FAA certificated facility in Florida or France.

Security is a prime concern of all repair facilities.

Security at contract maintenance facilities has drawn much attention. Domestically, many repair stations located on an airport are required to have their personnel undergo criminal background checks under TSA regulations *if* they require unescorted access to the designated airport security identification display area (SIDA). Therefore, a repair station employee that performs line maintenance for an air carrier would have the same 10-year criminal background check requirement as an airline mechanic. Many repair stations voluntarily implement additional security procedures since the quality and safety of their work directly affects their business.

However, many U.S. repair stations are located miles away from airports and perform specialized work on component parts that have been removed from the airplane and sent to them for repair. These facilities are usually small-businesses; thus, imposing undue security burdens on them would in effect put an entire sector of specialized workers out of business. Our members understand the need for safety and security, since their livelihood depends upon it, and we ask that Congress recognize the difference in repair facilities, remembering that our industry shares their same goal: maintaining a high level of safety and security.

Internationally, each country must implement the types of security procedures to be followed just as they must do in the safety area. These are based on ICAO standards contained in Annex 17 and thus are very similar to TSA regulations. They include, but are not limited to:

- A national civil aviation security program with continuous threat monitoring and mandatory quality control procedures;
- Airport security programs for each airport serving international carriers;
- Air operator security programs;

- Background checks for persons implementing security control measures and persons with unescorted access to restricted security areas; and
- Periodic ICAO security audits

The professionals at the TSA, ICAO and other countries' security oversight organizations have concluded that resources should be focused where the threat is greatest. Therefore, FAA foreign repair stations working on components and located miles away from an airport are not required to implement background checks for their employees. However, if they perform line maintenance at an international airport or otherwise require access to the ramp area, foreign repair station employees would be subject to similar security requirements to their FAA counterparts, including background checks.

Neither domestic nor international security requirements are based on whether a person works for an airline or a repair station; they are dependent on the degree of access the individual has to the restricted security areas of an airport. Further, mandating additional security requirements where none are truly needed will reallocate limited oversight resources from areas where the threat is greater. This could have the unintended consequence of reducing the level of security for the traveling public.

Drug and Alcohol testing.

FAA certificated repair stations in the U.S. are required to conduct drug and alcohol testing for employees performing "safety-sensitive functions" for U.S. air carriers. This means that an employee performing a maintenance task is tested for drug and alcohol use. Additionally, subcontractors used by the repair station are also required to undergo testing. It is important to note that FAA testing requirements do not apply outside the U.S. Therefore, employees of domestic airlines working outside the U.S. must remove their employees from the drug and alcohol pool when they leave the country. Once again, this has nothing to do with whether the individual works for an airline or a repair station; it is based on where the work is performed.

While some have suggested that the U.S. mandate drug and alcohol testing for all aviation maintenance workers if they work on articles subject to FAA jurisdiction, several practical and legal issues arise based on the fact that many of the affected individuals are citizens of another State. Indeed, the FAA proposed drug and alcohol testing outside the U.S. in 1994 but withdrew it in 2000 preferring to develop a multilateral solution through ICAO. Currently, drug and alcohol testing is an ICAO recommended practice; the FAA continues to support making it a standard and thus mandatory for all ICAO members. In addition, a related ICAO standard prohibits individuals from performing safety-critical functions while under the influence of any psychoactive substance.

8 ICAO Annex 1, § 1.2.7.1.

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⁵ 14 CFR part 121, Appendix I, section XII (Drug Testing) and Appendix J, section VIII (Alcohol Testing).

⁶ FAA Docket No. 27066; Notice 92-18, effective January 13, 2000.

⁷ ICAO Annex 1, Personnel Licensing, § 1.2.7.3 and ICAO Document 9654-AN/945, Manual on Prevention of Problematic Use of Substances in the Aviation Workplace (1995).

Conclusion.

Foreign repair stations are an essential part of the aviation community. Without them, maintenance could not be performed on aircraft overseas, and the ability of Americans to travel abroad would cease. The standards and procedures followed by foreign repair stations are essentially the same as those followed by domestic repair stations, if they are FAA certificated and working on U.S. registered aircraft.

The use of foreign repair stations does not threaten the viability of domestic companies, or aviation safety. In fact, with many American businesses having facilities located worldwide, changes to the use of foreign repair stations will adversely affect domestic companies and encourage foreign countries to retaliate with similar measures. ARSA believes that the Congress should allow the international regulatory processes to work through the body established for that purpose, ICAO.

Congress can help maintain the safety and vitality of this industry by providing the FAA with adequate resources to oversee the repair station industry, encouraging continued oversight by airline customers and other civil aviation authorities, and most importantly by ensuring that legislation and regulations are truly based on safety.

FAA Repair Stations by State (Including Territories)

State Repair Stations Employees AK 53 475 AL 56 6,545 AR 43 3,115 AZ 156 6,469 CA 683 30,811 CO 73 1,219 CT 102 7,730 DC 1 7 DE 6 823 FL 512 16,356 GA 114 9,840 GU 1 6 HI 13 113 IA 38 2,985 ID 31 399 IL 93 3,346 IN 72 3,506 KS 107 7,109 KY 37 581 LA 40 2,251 MA 57 1,893 MD 30 1,100 ME 11 857 MI 144 4,469 <th></th> <th>Number of</th> <th colspan="3">Number of</th>		Number of	Number of		
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	Grand	4,216	197,183		

Based on FAA Air Agency Data Dated: June 10, 2007

FAA Repair Stations on Foreign Soil by Country

	Number of	Number of
Country	Repair Stations	Employees
AE	4	4,224
AR	8	1,727
AS	13	6,868
AU	1	1,150
BA	1	5
BE	12	4,618
BR	15	6,160
CH	30	15,171
CI CO	4	754 1,471
cs	3	480
DA	2	859
DR	2	43
EC	2	131
EG	1	3,500
EI	12	3,429
ES	1	1,200
ET	1	2,230
EZ	2	1,213
FI	1	1,800
FJ	1	26
FR	101	25,972
GM	53	30,457
GR	2	914
GT	2	70
HK	7	5,650
HU	2	806
ID	2	2,832
IN	2	806
IS	13	5,567
JA	20 20	6,659
JO	20	17,332 944
KE	1	5
KS	9	5,629
KZ	1	33
LU	1	329
MO	2	995
MT	1	42
MX	20	4,279
MY	8	4,107
NL	20	7,034
NO	4	1,052
NZ	4	3,377
PE	4	670
PM	1	192
PO	2	3,174
QA PO	1	41
RO RP	2	864 3 249
RS	1	3,249 2,350
SA	5	2,350 6,423
SF	4	3,690
SN	48	15,475
SP	6	4,360
SW	8	2,481
SZ	8	4,524
TD	1	153
TH	6	5,650
TU	2	3,006
TW	6	4,844
UK	161	23,998
UP	1	91
VE	4	304
WI	1	100
ΥI	1	-
Grand	698	267,589

Appendix C

FAA Repair Stations on Foreign Soil by Country Code Listing (based on FAA data)

Country Code	Name	Total Repair Stations	Number of Employees	Category 1 = Meets ICAO standards 2 = Does not meet ICAO standards	Bi-Lateral Agreement with the U.S.?
AE	United Arab	4	4,224	1	
	Emirates				1
AR	Argentina	8	1,727	1	Yes
AS	Australia	13	6,868	1	Yes
AU	Austria	1	1,150	1	Yes
BA	Bahrain	1	5	Not Listed	
BE	Belgium	12	4,618	1	Yes
BR	Brazil	15	6,160	1	Yes
CH	China	30	15,171	1	Yes
CI	Chile	4	754	1	
CO	Columbia	4	1,471	1	
CS	Costa Rica	3	480	1	
DA	Denmark	2	859	1	Yes
DR	Dominican Republic	2	43	2	
EC	Ecuador	2	131	1	
EG	Egypt	1	3,500	1	
EI	Ireland	12	3,429	1	
ES	El Salvador	1	1,200	1	
ET	Ethiopia	1	2,230	1	
EZ	Czech Republic	2	1,213	1	Yes
FI	Finland	1	1,800	1	Yes
FJ	Fiji	1	26	1	
FR	France	101	25,972	1	Yes
GM	Germany	53	30,457	1	Yes
GR	Greece	2	914	1	
GT	Guatemala	2	70	2	
HK	Hong Kong	7	5,650	1	
HU	Hungary	2	806	1	
ID	Indonesia	2	2,832	1	Yes
IN	India	2	806	1	
IS	Israel	13	5,567	1	Yes
IT	Italy	20	6,659	1	Yes
JA	Japan	20	17,332	1	Yes
JO	Jordan	2	944	1	
KE	Kenya	1	5	Not Listed	
KS	Korea	9	5,629	Not Listed	

Country Code	Name	Total Repair Stations	Number of Employees	Category 1 = Meets ICAO standards 2 = Does not meet ICAO standards	Bi-Lateral Agreement with the U.S.?
KZ	Kazakhstan	1	33	Not Listed	
LU	Luxembourg	1	329	1	
MO	Morocco	2	995	1	
MT	Malta	1	42	1	
MX	Mexico	20	4,279	1	
MY	Malaysia	8	4,107	1	Yes
NL	Netherlands	20	7,034	1	Yes
NO	Norway	4	1,052	1	Yes
NZ	New Zealand	4	3,377	1	Yes
PE	Peru	4	670	1	
PM	Panama	1	192	1	
PO	Portugal	2	3,174	1	
QA	Qatar	1	41	1	
RO	Romania	2	864	1	Yes
RP	Philippines	8	3,249	1	
RS	Russia	1	2,350	1	Yes
SA	Saudi Arabia	5	6,423	1	
SF	South Africa	4	3,690	1	Yes
SN	Singapore	48	15,475	1	Yes
SP	Spain	6	4,360	1	Yes
SW	Sweden	8	2,481	1	Yes
SZ	Switzerland	8	4,524	1	Yes
TD	Trinidad & Tobago	1	153	1	
TH	Thailand	6	5,650	1	
TU	Turkey	2	3,006	1	
TW	Taiwan	6	4,844	1	
UK	United Kingdom	161	23,998	1	Yes
UP	Ukraine	1	91	2	
VE	Venezuela	4	304	1	
WI	Western Sahara	1	100	Not Listed	
ΥI	Yugoslavia	1	-	Not Listed	
TOTAL	65	698	267,589	60	27

Appendix D ARSA Repair Station Audit Surveillance Survey Results

Domestic Repair Station Annual Audits

	Responses	Internal	Regulatory	Customer	3rd Party	Total
Total	183	3,301	663	1,361	235	5,560
Average		18.0	3.6	7.4	1.3	30.4

Foreign Repair Station Annual Audits

	Responses	Internal	Regulatory	Customer	3rd Party	Total
Total	27	1,439	219	311	48	2,017
Average		53.3	8.1	11.5	1.8	74.7

Total Repair Station Annual Audits

	Responses	Internal	Authority	Customer	3rd Party	Total
Grand Total	210	4,740	882	1,672	283	7,577
Average		22.6	4.2	8.0	1.3	36.1

Appendix E

Analysis of the Aeronautical Repair Station Association's 2007 Member Survey

Executive Summary

In March 2007, the Aeronautical Repair Station Association (ARSA) conducted a major survey of its members. The purposes of the 2007 survey were to:

- Develop a better understanding of the markets served by ARSA members;
- Determine what factors most affect member costs of doing business;
- Identify legislative and regulatory issues of common concern to the membership;
- Determine what members perceive as the most important parts of the ARSA value proposition; and
- Identify additional activities the association could undertake to enhance value to members.

This survey's major findings were as follows:

- ARSA's membership is dominated by privately-owned small businesses. Nearly 70 percent of the survey respondents have annual revenues below \$10.5 million (Question 2); more than 67 percent have fifty or fewer employees (Question 3); and more than 81 percent are privately-owned by a single individual, single family, or group of partners (Question 12).
- The overwhelming majority of ARSA members (98.5 percent) hold Federal Aviation Administration (FAA) repair station certificates; however, more than twothirds (68.42 percent) are also European Aviation Safety Administration (EASA) approval holders (Question 7).
- Commercial air carriers are overwhelmingly the most important customer market for ARSA members, with general (business aircraft) the second most important. The military and general (light aircraft) markets are a distant third and fourth (Question 9).
- Labor unions have low penetration in the repair station industry. Fewer than twelve percent of survey respondents report that their facilities are unionized (Question 13).
- The survey results suggest that the repair station industry is thriving economically. More than two-thirds (71.43 percent) of survey respondents said they plan to add positions and/or hire new workers in the coming year. Not a

single survey respondent reported plans to eliminate positions. Additionally, 83 percent of survey respondents are optimistic about business prospects for the coming year, only nine percent are ambivalent, and fewer than eight percent are pessimistic (Questions 15 and 18).

- There is a considerable level of oversight of repair stations, with 42 percent reporting 11 or more external audits last year by regulators, customers, and thirdparty accreditation bodies (Question 19).
- FAA resource problems are having some impact on the efficiency of the contract maintenance industry. A quarter (24.81 percent) of the survey respondents report losing customers or foregoing business opportunities because of regulatory delays resulting from inadequate FAA staffing (Question 20.)
- Obtaining maintenance manuals from manufacturers remains a major challenge for repair stations. Consistent with earlier ARSA surveys, more than 70 percent of survey respondents report having had some difficultly obtaining maintenance manuals from OEMs. More than a third (37.59 percent) of respondents report that maintenance manual availability is a consistent source of frustration, and that their ability to serve customers is undermined by manufacturers refusing to provide manuals and/or charging exorbitant prices (Questions 21 and 22.)
- Rising health insurance costs have had a significant impact on ARSA members and their employees, with approximately three-quarters (74.44 percent) of members reporting that they have had to reduce benefits or ask workers to shoulder more of the costs of health insurance in recent years (Question 25.)
- Close to 80 percent of survey respondents have had trouble finding skilled technical workers. More survey respondents cited the shortage of technical workers as the single greatest challenge facing that aviation maintenance industry than any other (Questions 26 and 30).
- ARSA members regard ARSA's advocacy activities on behalf of the industry before U.S. regulators and Congress as the most important parts of the ARSA value proposition. ARSA's regulatory compliance publications, the hotline, and maintenance industry networking opportunities are also highly regarded (Question 33.)
- Survey respondents cite their desire to support ARSA's advocacy activities and access to regulatory compliance assistance as the top reasons for joining ARSA (Question 34.)
- A majority of survey respondents say that their company employees have not yet participated in ARSA's Annual Repair Symposium, suggesting significant opportunities to grow member participation in ARSA's flagship event. Survey respondents are ambivalent about restructuring the Symposium to take place entirely on weekdays and about adding a trade show component to the meeting (Question 40, 42 and 43.)

Survey Methodology

ARSA's 2007 Member Survey was conducted between Feb. 26 and March 6 using SDI Weblink's online survey system. The ARSA key contact for each repair station member and corporate member was invited to participate in the survey through three e-mails sent over the course of the week requesting input. Although the survey was anonymous, the survey system was configured to prevent duplicate responses from the same individual. Ultimately, 133 ARSA member companies participated in the survey out of a population of approximately 520 regular and 15 corporate members. The survey margin of error is 7.3 percent.