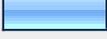
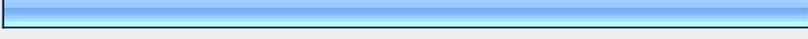
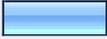
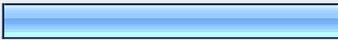
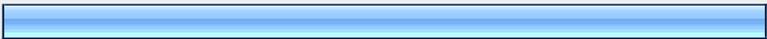
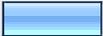
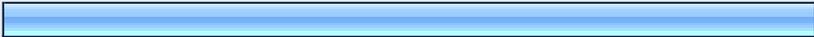


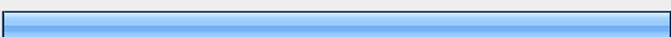
Certified Technician - Air Conditioning

1. What technician certifications type(s) do you hold (check all that apply)?			Response Percent	Response Count
Not US EPA certified			0.0%	0
Type I			16.7%	3
Type II			16.7%	3
Type III			11.1%	2
Universal			88.9%	16
NATE (North American Technician Excellence)			11.1%	2
Other (please specify)			0.0%	0
			answered question	18
			skipped question	1

2. What is your primary business activity (check all that apply)?			Response Percent	Response Count
Residential/Light Commercial Refrigeration			36.8%	7
Commercial/Industrial Refrigeration			26.3%	5
Commercial/Industrial Air Conditioning			84.2%	16
			Other (please specify)	0
			answered question	19
			skipped question	0

3. Do you install and service automatic leak detection systems that measure changes in a R/AC system's refrigerant level?			Response Percent	Response Count
Yes			10.5%	2
No (go to question #3)			89.5%	17
			<i>answered question</i>	19
			<i>skipped question</i>	0

4. What is the average equipment and installation costs for an automatic leak detection system that measures changes in a R/AC system's refrigerant level?						
	\$Under \$2,500	\$2,500-\$5,000	\$5,001-\$10,000	Over \$10,000	Response Count	
Air Conditioning - Initial Installation	50.0% (1)	0.0% (0)	50.0% (1)	0.0% (0)	2	
Air Conditioning - Retrofit Installation	0.0% (0)	100.0% (1)	0.0% (0)	0.0% (0)	1	
					<i>answered question</i>	2
					<i>skipped question</i>	17

5. Do you install and service automatic leak detection systems that measures the refrigerant level in the air in a room?			Response Percent	Response Count
Yes			26.3%	5
No (If no, select done on the bottom of this page to go to next page)			73.7%	14
			<i>answered question</i>	19
			<i>skipped question</i>	0

6. What is the average equipment and installation cost for an automatic leak detection system that measures the refrigerant level in the air in a room, including all sensors?

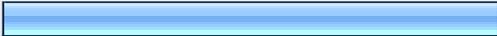
	\$Under \$2,500	\$2,500 to \$5,000	\$5,001 to \$10,000	Over \$10,000	Response Count
Air Conditioning - Initial Installation	33.3% (1)	0.0% (0)	66.7% (2)	0.0% (0)	3
Air Conditioning - Retrofit Installation	0.0% (0)	50.0% (1)	50.0% (1)	0.0% (0)	2
	<i>answered question</i>				4
	<i>skipped question</i>				15

7. What is the average number of sensors that are used in an automatic leak detection system that measures the refrigerant level in the air in a room?

	1	2-3	4-5	6-10	Greater than 10	Response Count
Centrifugal Chiller	0.0% (0)	75.0% (3)	25.0% (1)	0.0% (0)	0.0% (0)	4
Packaged Chiller	0.0% (0)	100.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	3
	<i>answered question</i>					5
	<i>skipped question</i>					14

8. What is the average equipment and installation cost for each additional sensor for an automatic leak detection system that measures the refrigerant level in the air in a room?

	\$Under \$100	\$101 to \$250	\$251 to \$500	Over \$500	Response Count
Centrifugal Chiller	0.0% (0)	0.0% (0)	100.0% (2)	0.0% (0)	2
Packaged Chiller	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	2
	<i>answered question</i>				3
	<i>skipped question</i>				16

9. Do you currently provide commercial air-conditioning system leak inspection or repair services?			Response Percent	Response Count
Yes			54.5%	6
No (If no, select done on the bottom of this page to go to next page)			45.5%	5
			answered question	11
			skipped question	8

10. When you conduct a preventative maintenance leak inspection for the listed types of commercial air-conditioning systems, what process do you use to detect a leak (check all that apply)?					
	Review Refrigerant Use	Visual Inspection	Hand Held Refrigerant Leak Detector	Bubble Test	Response Count
Centrifugal Chiller	50.0% (1)	100.0% (2)	100.0% (2)	50.0% (1)	2
Packaged Chiller	50.0% (2)	100.0% (4)	100.0% (4)	75.0% (3)	4
Unitary Air-conditioning System	50.0% (3)	100.0% (6)	100.0% (6)	83.3% (5)	6
Split Air-conditioning System	50.0% (3)	100.0% (6)	100.0% (6)	83.3% (5)	6
Other (please specify)					0
answered question					6
skipped question					13

11. What do you charge for a preventative maintenance leak inspection for the listed types of commercial air-conditioning systems?

	Under \$150	\$151 to \$250	\$251 to \$350	Greater than \$350	Response Count
Centrifugal Chiller	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (2)	2
Packaged Chiller	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (2)	2
Unitary Air-conditioning System	25.0% (1)	50.0% (2)	25.0% (1)	0.0% (0)	4
Split Air-conditioning System	0.0% (0)	75.0% (3)	25.0% (1)	0.0% (0)	4
Other (please specify)					1
answered question					4
skipped question					15

12. What is the average certified technician labor hours required for leak repairs for the listed types of commercial air-conditioning systems?

	1 to 2	3 to 5	6 to 10	11 to 20	Greater than 20	Response Count
Centrifugal Chiller	0.0% (0)	0.0% (0)	0.0% (0)	50.0% (1)	50.0% (1)	2
Packaged Chiller	33.3% (1)	0.0% (0)	33.3% (1)	0.0% (0)	33.3% (1)	3
Unitary Air-conditioning System	60.0% (3)	0.0% (0)	40.0% (2)	0.0% (0)	0.0% (0)	5
Split Air-conditioning System	20.0% (1)	40.0% (2)	40.0% (2)	0.0% (0)	0.0% (0)	5
Other (please specify)						0
answered question						5
skipped question						14

13. What is the average additional refrigerant charge (in pounds) required for leak repairs for the listed types of commercial air-conditioning systems?

	1 to 10	11 to 50	51 to 100	101 to 200	Greater than 200	Response Count
Centrifugal Chiller	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (2)	0.0% (0)	2
Packaged Chiller	0.0% (0)	33.3% (1)	33.3% (1)	33.3% (1)	0.0% (0)	3
Unitary Air-conditioning System	80.0% (4)	20.0% (1)	0.0% (0)	0.0% (0)	0.0% (0)	5
Split Air-conditioning System	80.0% (4)	0.0% (0)	20.0% (1)	0.0% (0)	0.0% (0)	5
Other (please specify)						0
answered question						5
skipped question						14

14. Of the time you and your technicians spend repairing leaks in commercial air-conditioning systems, what percentage of time is spent repairing leaks on each of the listed system types? (As an example of frequency of all repairs, Centrifugal Chillers may be 60% of all repairs and Split Air conditioning System 40% to total 100% of all repairs.)

	Less than 20%	21% - 40%	41% to 60%	61% to 80%	Greater than 80%	Response Count
Centrifugal Chiller	100.0% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	2
Packaged Chiller	66.7% (2)	33.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3
Unitary Air-conditioning System	40.0% (2)	40.0% (2)	20.0% (1)	0.0% (0)	0.0% (0)	5
Split Air-conditioning System	20.0% (1)	60.0% (3)	20.0% (1)	0.0% (0)	0.0% (0)	5
Other (please specify)						0
answered question						5
skipped question						14

15. What types of commercial air-conditioning systems are found in each of the listed refrigerant charge size categories (check all that apply)?

	Refrigerant Charge Less than 50 lbs	Refrigerant Charge Between 50 and 200 lbs	Refrigerant Charge Between 200 and 2,000 lbs	Refrigerant Charge Greater than 2,000 lbs	Response Count
Centrifugal Chiller	0.0% (0)	0.0% (0)	100.0% (2)	50.0% (1)	2
Packaged Chiller	0.0% (0)	100.0% (4)	25.0% (1)	25.0% (1)	4
Unitary Air-conditioning System	66.7% (4)	33.3% (2)	0.0% (0)	0.0% (0)	6
Split Air-conditioning System	66.7% (4)	33.3% (2)	0.0% (0)	0.0% (0)	6
Other (please specify)					1
answered question					6
skipped question					13

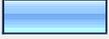
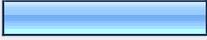
16. What commercial air-conditioning system components are most often serviced for leak repairs for the listed types of commercial air-conditioning systems?

	Compressors	Coils	Evaporators	Joints	Valves	Response Count
Centrifugal Chiller	0.0% (0)	0.0% (0)	0.0% (0)	100.0% (2)	0.0% (0)	2
Packaged Chiller	0.0% (0)	25.0% (1)	0.0% (0)	25.0% (1)	50.0% (2)	4
Unitary Air-conditioning System	0.0% (0)	33.3% (2)	0.0% (0)	33.3% (2)	33.3% (2)	6
Split Air-conditioning System	0.0% (0)	16.7% (1)	16.7% (1)	16.7% (1)	50.0% (3)	6
Other (please specify)						1
answered question						6
skipped question						13

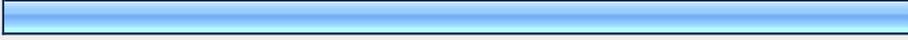
17. How long does a commercial air-conditioning system refrigerant leak repair last before a component is likely to require additional repair?

	Compressors	Coils	Evaporators	Joints	Valves	Response Count
Less than 6 Months	0.0% (0)	50.0% (1)	0.0% (0)	0.0% (0)	50.0% (1)	2
6 to 12 Months	0.0% (0)	0.0% (0)	66.7% (2)	0.0% (0)	33.3% (1)	3
1 to 2 Years	0.0% (0)	33.3% (1)	0.0% (0)	66.7% (2)	0.0% (0)	3
2 to 4 Years	0.0% (0)	66.7% (2)	0.0% (0)	0.0% (0)	33.3% (1)	3
Greater than 4 Years	20.0% (1)	0.0% (0)	60.0% (3)	20.0% (1)	0.0% (0)	5
Other (please specify)						0
answered question						6
skipped question						13

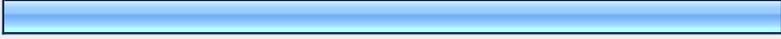
18. How do you manage empty non-refillable refrigerant cylinders (check all that apply)?

		Response Percent	Response Count
Provide to Refrigerant Distributor		11.1%	1
Provide to Refrigerant Reclaimer		11.1%	1
Provide to Metals Recycler for Recycling		66.7%	6
Dispose in Refuse		22.2%	2
Other (please specify)		0.0%	0
answered question			9
skipped question			10

19. Optional Information

		Response Percent	Response Count
Company Name:		0.0%	0
Contact:		100.0%	1
E-mail:		100.0%	1
Phone Number:		0.0%	0
		<i>answered question</i>	1
		<i>skipped question</i>	18

20. Would you like to be included in the Refrigerant Management Program mail list to obtain future notices regarding this program?

		Response Percent	Response Count
Yes		14.3%	1
No		85.7%	6
		Comments:	0
		<i>answered question</i>	7
		<i>skipped question</i>	12