



JAMA

JAPAN AUTOMOBILE MANUFACTURERS ASSOCIATION, INC.

35 YEARS OF MANUFACTURING AND R&D IN AMERICA



2017-2018

CONTRIBUTIONS REPORT

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35 YEARS OF
MANUFACTURING
AND R&D IN AMERICA

Over the last 35 years, Japan Automobile Manufacturers Association (JAMA) member companies have demonstrated an enduring commitment to innovation, superior craftsmanship, and the development of a highly-trained workforce throughout their American manufacturing and R&D/design operations. In creating this report and reflecting on our members' history in America, we at JAMA USA were struck by the ways in which our member companies have changed the face of U.S. auto manufacturing, while pushing the boundaries of advanced automotive engineering and design. Our members play an increasingly integral role in the U.S. auto industry, as shown by our latest contributions data. Last year our members achieved a number of record-highs, reaching over 90,000 direct U.S. employees and producing nearly 4 million vehicles, a tenfold increase since the mid-1980's (pp. 7-8).

Japanese-brand automakers now operate 24 manufacturing plants and 43 R&D/design centers in 20 U.S. states, reflecting their expanding geographic footprint. With \$45.6 billion in cumulative U.S. manufacturing investment alone (p. 5), the scale and quality of their operations have supported economic growth and development throughout numerous American communities. At the same time, our members' vast U.S. supply chain—combined with their dealership networks, headquarters, sales and distribution systems—means their investments impact every state in the country. In fact, our members also set a new record through their purchases of approximately \$69.9 billion in U.S.-made parts last year (p. 8). This, in turn, supports even more American jobs.

In many ways, the innovative and efficient nature of the American auto industry relies on a diverse and highly-skilled

workforce in manufacturing, R&D, and other roles. For this reason, JAMA members actively engage in advanced workforce training and STEM (science, technology, engineering, and math) education initiatives in collaboration with local institutions (pp. 9-10). Our members are also highly focused on good corporate citizenship, which we see reflected in their charitable giving, volunteering, and other forms of community engagement (pp. 11-12).

In addition to building passenger cars, SUVs, pickup trucks, and commercial vehicles (see full production chart on p. 17) for American consumers, over 412,000 of these vehicles were exported to dozens of countries around the world last year (p. 7). These exports not only support high-quality, high-paying jobs across the U.S.—they also provide a platform to showcase the world-class engineering and design performed at JAMA member facilities in America (page 16). Our members' development of environmentally-friendly vehicles (pp. 13-14) offers further evidence of their technical prowess.

From their initial investments in the early 1980s to the present, the history of Japanese-brand automakers in the U.S. is one of growth, economic and community integration, and the creation of a dynamic American workforce, such that our members support approximately 1.5 million direct, intermediate, and spin-off jobs across the country. We hope the broad focus of this report and the historical photographs we feature here clearly demonstrate the deeply-rooted nature of our members' presence in America.

Manny Manriquez

Manny Manriquez
General Director
JAMA USA

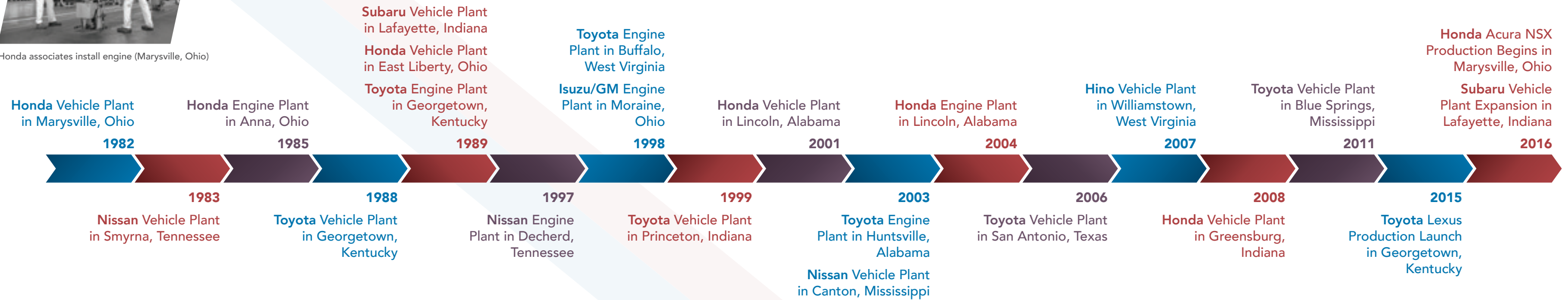


35 YEARS OF MANUFACTURING IN AMERICA



Honda associates install engine (Marysville, Ohio)

JAMA member companies are deeply rooted in the American auto industry. Since the first Japanese-brand automobile manufacturing facility was built in the U.S. in the early 1980s, JAMA members have continuously increased their investment in America, making a positive impact in the communities where they operate, and creating high-quality U.S. jobs.



Honda's first U.S.-made vehicle (Marysville, Ohio)



Subaru employees with first production vehicle (Lafayette, Indiana)



Toyota Motor Manufacturing Kentucky groundbreaking (Georgetown, Kentucky)



First U.S.-made Nissan vehicle (Smyrna, Tennessee)

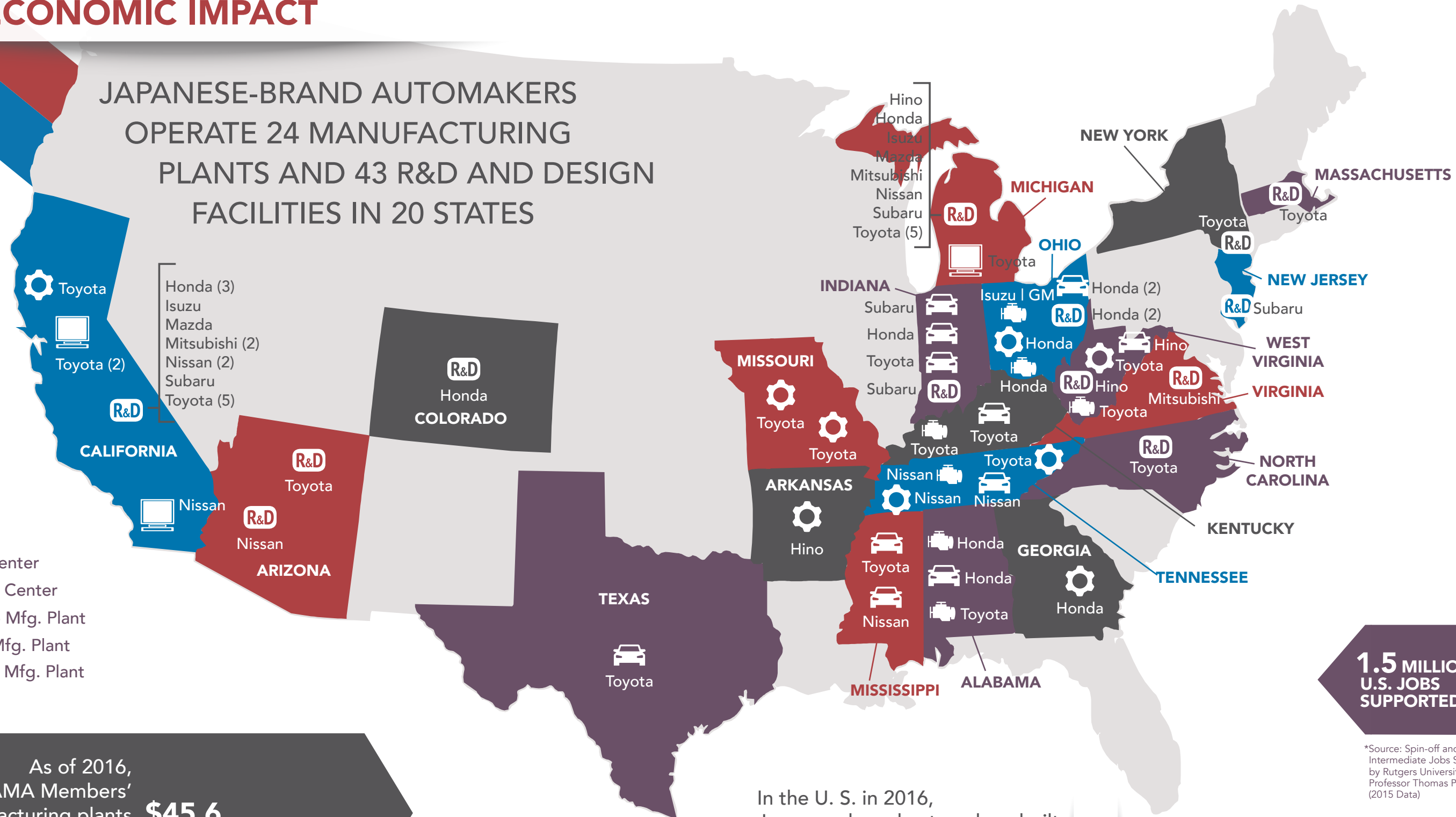


Toyota's first U.S.-made vehicle (Georgetown, Kentucky)

JAMA MEMBERS' U.S. ECONOMIC IMPACT

JAPANESE-BRAND AUTOMAKERS
OPERATE 24 MANUFACTURING
PLANTS AND 43 R&D AND DESIGN
FACILITIES IN 20 STATES

- R&D Center
- Design Center
- Vehicle Mfg. Plant
- Parts Mfg. Plant
- Engine Mfg. Plant



As of 2016,
JAMA Members' manufacturing plants
cumulatively invested **\$45.6 BILLION** in the U.S. Economy

In the U. S. in 2016,
Japanese-brand automakers built

NEARLY 4 MILLION VEHICLES

&

4.7 MILLION ENGINES

1.5 MILLION U.S. JOBS SUPPORTED

*Source: Spin-off and Intermediate Jobs Study by Rutgers University Professor Thomas Prusa (2015 Data)

JAMA MEMBERS' U.S. ECONOMIC IMPACT



412,281

Cars & trucks exported from Japanese-brand auto plants in the U.S. in 2016

2016 U.S. EMPLOYMENT

64,139

MANUFACTURING EMPLOYEES

5,696

R&D/DESIGN CENTER EMPLOYEES

20,206

HQ, SALES & OTHER EMPLOYEES

90,041

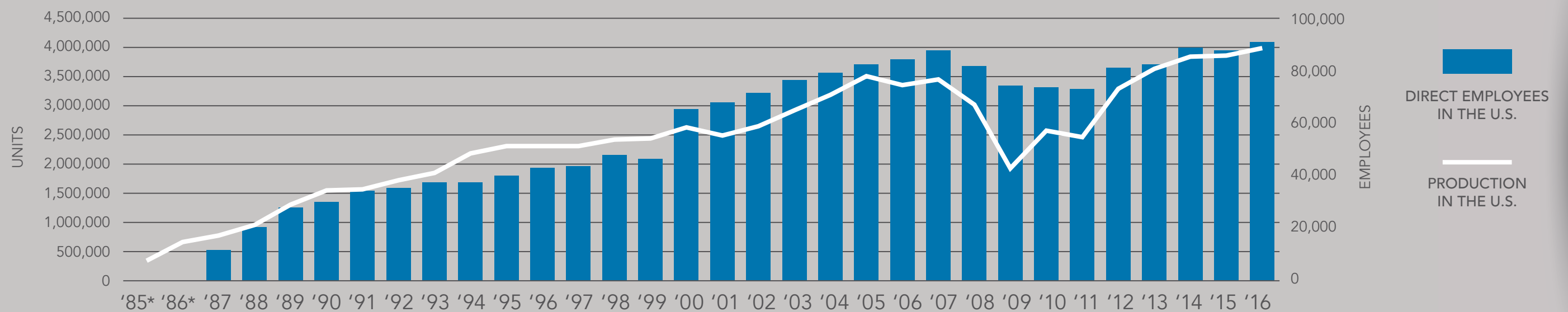
TOTAL DIRECT AMERICAN JOBS

U.S. PARTS PURCHASED

\$ BILLIONS

2010	\$43.13
2011	\$43.24
2012	\$51.28
2013	\$57.09
2014	\$66.00
2015	\$67.90
2016	\$69.9 BILLION

JAMA MEMBERS' PRODUCTION & DIRECT JOBS GROWTH



*No employment data available for these years

WORKFORCE DEVELOPMENT & EDUCATION

JAMA members are committed to supporting the professional growth of their employees and the vitality of the communities in which they operate. Through advanced workforce development programs, they empower their team members to learn and develop new skills. They also partner with local schools, colleges, and universities on STEM (science, technology, engineering, and mathematics) education initiatives to cultivate the workforce of the future.

HONDA

Honda is at the cutting edge of associate training. With the advancement and efficacy of virtual reality, Honda can train associates faster and more efficiently, with less exposure to potential safety hazards. Honda believes in empowering associates to conceive of ideas that create value for their customers, society, and other workers. Honda truly believes that what makes a Honda vehicle so great are the workers who make them.



NISSAN

In March, Tennessee Gov. Bill Haslam and Tennessee Board of Regents Chancellor Flora Tydings joined Nissan officials to formally open the Tennessee College of Applied Technology at Murfreesboro's Smyrna Campus and Nissan Training Center. The state-of-the-art campus offers high-quality programs to prepare Tennessee students and Nissan employees for careers in advanced manufacturing and other fields.



SUBARU

Subaru of Indiana Automotive, Inc. is proud to offer the SIA AIM program. This puts the most promising college students on the fast track to the career of their dreams by providing a highly specialized education in Computer Integrated Manufacturing, along with real-world experience and compensation.

Freshmen studying computer-integrated manufacturing take classes on campus during their first semester and apply for the SIA AIM program. If selected, these students spend the second semester working and taking classes at SIA, including two days of classes at Purdue University's College of Technology Lafayette site, which is located at SIA. Upon successful completion of the program, AIM students qualify for full-time employment with SIA. After six months of employment, these Associates can continue their education at the on-site Purdue campus to earn a Purdue bachelor's degree in engineering technology. SIA will pay for the education.

TOYOTA

Toyota's Technician Training & Education Network (T-TEN) is an automotive technician training program. T-TEN is a partnership between Toyota, community colleges, vocational schools, and Toyota and Lexus dealerships. The program provides state-of-the art, hands-on automotive diagnosis, repair, education and training. T-TEN has been helping to develop and place thousands of factory certified technicians in challenging, rewarding, and well-paid positions in dealerships across the country.



SUPPORTING LOCAL COMMUNITIES

For decades, Japanese-brand automakers and their employees have supported communities across America through charitable giving, volunteer programs, and community engagement initiatives.

HINO

This year Hino employees worked to give to those most in need by donating to a local food bank. Twice a year Hino employees volunteer at the food bank as a way to give back to the local community. They have been doing this for the past five years. Additionally, they continued the annual tradition of donating Christmas gifts to local families in need.



HONDA

In 2017, Honda pledged \$1 million to help improve mobility for all children. The gift establishes the Honda Center for Gait Analysis and Mobility Enhancement, which partners with the Nationwide Children's Hospital in Columbus, Ohio. The center will look to promote innovative ways to manage patients with cerebral palsy, spina bifida, spinal cord injury and neuromuscular disease, congenital anomalies and amputations, and any condition which may limit mobility. The announcement was coupled with a visit from ASIMO, the world's most advanced humanoid robot.



MAZDA

Mazda North American Operations began its Racing Accelerates Creative Education (R.A.C.E.) program as an interactive learning forum designed to motivate and engage the next generation of superstars in science, technology, engineering and math (STEM). As part of the program, Mazda Motorsports conducted more than 50 presentations in 31 elementary, middle, and high schools across the United States and Canada and impacted over 5,000 students across all of those presentations this year.



MITSUBISHI

In 2016, the Mitsubishi Motors USA Foundation announced its support for the American Red Cross of the Heartland. Their support will be instrumental in meeting the needs of the community through the Red Cross Home Fire campaign.



NISSAN

In 2017, Nissan partnered with Mississippi Robotics to host the second annual STEM/Robotics Competition at the Nissan Canton Vehicle Assembly Plant. The full-day event was designed to engage students in grades 3 through 12 in activities that nurture their interest in science, technology, engineering, and math (STEM).



SUBARU

Subaru of Indiana Automotive, Inc. (SIA) strongly believes in community service and this year hosted their third annual color run (pictured) to raise money for the Special Olympics, a nonprofit organization that provides sports training and athletic competition for children and adults with intellectual disabilities. Additionally, this year as part of SIA's 30th anniversary they offered grants to several Indiana non-profits throughout 2017.



TOYOTA

In 2017, Toyota announced that it was donating its Quality and Production Engineering Laboratory on its campus in Erlanger, Kentucky to develop a STEAM-focused (science, technology, engineering, arts and mathematics) education center to serve the Northern Kentucky/Greater Cincinnati region. The facility is envisioned to be a collaborative space for educators, a center for business engagement, a potential national hub for STEAM teacher training, and an early childhood education center.



ENVIRONMENTALLY FRIENDLY VEHICLES

HINO

Designed from the ground up in the U.S., this diesel electric hybrid truck is a huge step forward for commercial vehicles and represents the most viable hybrid engine truck available.



HONDA

In December 2016 Honda began deliveries for the all new Clarity Fuel Cell Sedan. The Clarity Fuel Cell has the highest EPA driving range rating of any zero-emission vehicle in America, including fuel cell and battery electric vehicles, with a 366-mile range and fuel economy rating of 68 combined MPGe (miles per gallon of gasoline-equivalent).



MAZDA

The Mazda CX-9, which incorporates SKYACTIV technologies, features Mazda's new SKYACTIV-G 2.5T engine and super-efficient transmission, and improves its fuel efficiency by 32 percent with no penalty to performance.



More than **80%** of alternative-powered vehicles on U.S. roads are Japanese-brand autos.



MITSUBISHI

Released in the U.S. in 2017, the Outlander PHEV represents 50 years of "electromobility" and decades of four-wheel drive technology. This plug-in hybrid electric vehicle (PHEV) features a highly efficient 2.0-liter gas engine and two high-performance electric motors. Combined with Mitsubishi's superior Super All-Wheel Control (S-AWC) system, the Outlander PHEV is a very eco-friendly and capable vehicle.



NISSAN

The Nissan LEAF continues to be the best-selling 100 percent electric vehicle in the U.S. and the world, with more than 100,000 units sold in the U.S. and more than 238,000 units worldwide (as of fall 2016). The 2017 Nissan LEAF continues to provide best-in-class standard EPA-estimated driving range of 107 miles on a single charge, thanks to a higher capacity and more durable 30-kWh battery.



TOYOTA

Toyota remains at the forefront of alternative-powered, next-generation vehicles with the Mirai. The Mirai hydrogen fuel cell electric vehicle combines hydrogen and oxygen to make electricity onboard, while emitting nothing but water vapor. It is a zero-emission vehicle with an EPA-estimated driving range of 312 miles, and refuels in around five minutes.

R&D, DESIGN, AND TEST CENTERS

Japanese-brand automakers conduct R&D and design for the U.S. market right here in America. Their U.S.-based centers always strive to deliver the most innovative automotive technology and skillfully-designed vehicles for consumers in America and throughout the world.



COMPANY	R&D, DESIGN, AND TEST CENTERS	CURRENT FUNCTIONS
Hino Motors Manufacturing U.S.A., Inc.	Farmington Hills, MI; Williamstown, WV	1,2,3,5,6,7,8
Honda R&D Americas, Inc.	Torrance, Los Angeles & Mountain View, CA; Raymond & Columbus, OH; Detroit, MI; Denver, CO	1,2,3,4,5,6,7,8
Isuzu Technical Center of America, Inc.	Plymouth, MI; Garden Grove, CA	1,2,3,5,6,7,8
Mazda North American Operations, Inc.	Irvine, CA; Wixom, MI	1,2,3,4,5,6,7,8
Mitsubishi Motors R&D of America, Inc.	Ann Arbor, MI; Cypress & San Francisco, CA; Arlington, VA	2,3,8
Nissan Technical Center North America	Farmington Hills, MI; West Sacramento & Sunnyvale, CA; Stanfield, AZ	1,2,3,5,6,7,8
Nissan Design America	San Diego, CA	4
Subaru Research and Development, Inc.	Cypress, CA; Lafayette, IN; Ann Arbor, MI; Cherry Hill, NJ	1,2,3,4,6,8
Toyota Motor North America Research & Development (formerly Toyota Technical Center)	Ann Arbor, Livonia, Plymouth, & Saline, MI; Gardena, Sacramento & Silicon Valley, CA	1,2,3,5,6,7
Toyota Arizona Proving Ground	Wittmann, AZ	
Calty Design Research, Inc. (Toyota)	Newport Beach & San Francisco (Toyota Innovation Hub), CA; Ann Arbor, MI	4,6
Toyota InfoTechnology Center	Mountain View, CA; New York, NY	3,7,8
Toyota Research Institute	Ann Arbor, MI; Cambridge, MA; Palo Alto, CA	8
TRD, U.S.A., Inc.	Salisbury, NC	2,3,8

KEY TO CURRENT FUNCTIONS

1. Technical support for procurement of parts for local production
2. Evaluation of parts
3. Evaluation of vehicles
4. Styling & general design
5. Parts design
6. Vehicle design
7. Prototype production
8. Technical support & marketing research

JAMA MEMBERS' PRODUCTION, EMPLOYMENT, & INVESTMENT IN THE U.S.

COMPANY			LOCATION	PRODUCTS	UNITS PRODUCED IN 2016	PRODUCTION CAPACITY	EMPLOYEES	TOTAL INVESTMENT (\$ MILLION)
HINO	Hino Motors Manufacturing U.S.A., Inc.	Ontario, CA	Vehicle components for Toyota vehicles	216,609	0	0	0	
		Marion, AR	Differential, Rear Axle & Suspension Related Parts for Toyota vehicles	358,454	628,772	800	342	
		Williamstown, WV	Class 6-7 Commercial Vehicles	8,072	12,000	288	68	
HONDA	Honda of America Manufacturing, Inc.	Marysville, East Liberty & Anna, OH	Accord Coupe, Accord Sedan, CR-V, Acura NSX, Acura TLX, Acura ILX, Acura RDX	671,656	680,000 -Marysville 440,000 -East Liberty 240,000	9,300	6,270 -Marysville 4,700 -East Liberty 1,500 -PMC 70	
			Engines	1,105,485	1,180,000		2,400	
		Russels Point, OH	Automatic Transmissions	1,010,600	1,000,000			
			Gear Sets	728,877	970,000	1,100	800	
			4WD Differential Gear	185,234	160,000			
ISUZU	Honda Manufacturing of Alabama, LLC		4WD Transfer Cases	185,247	200,000			
		Lincoln, AL	Odyssey, Ridgeline, Pilot, Acura MDX	369,576	340,000	4,500	2,400	
		Tallapoosa, GA	Engines	369,635	340,000			
			Automatic Transmissions	263,111	375,000	500	375	
		Greensburg, IN	Civic Sedan	248,820	250,000	2,400	1,000	
NISSAN	DMAX, Ltd.	Moraine, OH (Joint Venture: GM)	Diesel Engines	127,743	200,000	625	637	
		Smyrna, TN	Altima, Leaf, Maxima, Pathfinder, Rogue, Infiniti QX60	645,514	640,000	8,400	6,400	
			Lithium-Ion Batteries	N/A	N/A			
		Decherd, TN	Engines	997,325	1,500,000	1,600	1,200	
		Decherd, TN	Engines	99,228		300	325	
SUBARU	Nissan Canton Vehicle Assembly Plant	Canton, MS	Altima, Frontier, Murano, NV Passenger, NV Cargo, Titan	361,807	450,000	6,400	3,300	
		Lafayette, IN	Legacy, Outback, Impreza & Toyota Camry	332,813	354,000	5,526	1,988	
TOYOTA	TABC Inc. (TABC)	Long Beach, CA	Sub-Assemblies	596,380	4,600,000	300	331	
			Stamping Parts	4,566,782	24,000,000			
			Steering Columns	0	210,000			
			Front Arms	459,298	1,000,000			
	Toyota Motor Manufacturing Kentucky, Inc. (TMMK)	Georgetown, KY	Camry, Camry Hybrid, Avalon, Avalon Hybrid, Venza & Lexus ES350	500,766	550,000	8,200	7,000	
			Engines					
	Bodine Aluminum, Inc. (BODINE)	St. Louis & Troy, MO Jackson, TN	Engine Brackets	573,608	660,000	1,300	695	
			Cylinder Heads	2,740,638	2,790,000			
			Cylinder Blocks	1,918,825	2,080,000			
			Transmission Case & Housing	1,041,110	1,620,000			
	Toyota Motor Manufacturing West Virginia, Inc. (TMMWV)	Buffalo, WV	Engines	662,885	639,000	1,600	1,300	
			Transmissions	732,164	740,000			
	Toyota Motor Manufacturing Indiana, Inc. (TMMI)	Princeton, IN	Sienna, Highlander, Highlander HV, & Sequoia	401,859	395,000	5,100	4,300	
	Toyota Motor Manufacturing Alabama, Inc. (TMMAL)	Huntsville, AL	Engines	702,017	700,000	1,400	864	
	Toyota Motor Manufacturing Texas, Inc. (TMMTX)	San Antonio, TX	Tundra, Tacoma	261,651	200,000	3,000	2,600	
	Toyota Motor Manufacturing Mississippi, Inc. (TMMMS)	Blue Springs, MS	Corolla	182,025	160,000	1,500	997	



JAMA WORLDWIDE



JAMA

Japan Automobile Manufacturers Association, Inc.

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