

### **Topic: North American Footprint Expansion**

#### **SLIDE 1:**

Senior Manager of DIAM CC Julie Kerr to welcome media and introduce new DIAM CEO and President Hikaru "Howard" Sugi.

Thank you Julie.

#### **SLIDE 2:**

- Today, DENSO is going to announce its expansion plans for the North American market.
- First, I'd like to talk a bit about DENSO's global footprint and activities before we focus on what we're doing here in the North American region.

#### **SLIDE 3:**

- Having responsibility for engineering R&D in Japan, and now, having responsibility for the North American region as well, it is clear that R&D **outside** of Japan has become increasingly important for DENSO's survival as a global company.
- Last fiscal year, DENSO's global consolidated sales were US\$37.7 billion -- 9.3 percent of those sales were dedicated to R&D expenses.
- That might sound like a lot of money, but R&D is important for DENSO's long-term growth.

#### **SLIDE 4:**

- Researching and developing new ideas and new technologies is critical to any company's success, which is why DENSO invests a healthy percentage of its annual consolidated sales in R&D.
- DENSO's global product focus is on fuel efficiency, electrification, safety, and connecting technology to people, cars and society.
- For DENSO, it's important to have a presence in the regions in which our customers operate.

#### **SLIDE 5:**

- Not only do we want to be close to our customers, but we want to develop unique products **IN** the region and **FOR** the region.
- We want to develop products in the market that best suits the market requirements. And we want to develop the technology in the market where the technology is most advanced.
- For example, the US market is the leader for communications technology, so we want to focus our communications and HMI technology development in North America.

#### **SLIDE 6:**

- We are enhancing our development system in seven regions around the world.
- We're establishing R&D centers in emerging regions such as China.
- And, we recently announced we are building new Tech Centers in India and Brazil.

**SLIDE 7**

- In the last few years, DENSO has emphasized strengthening and expanding our product development here in North America.
- This is different than what DENSO has traditionally done in the past.
- It's important for us to have a regional manufacturing footprint in North America.

**SLIDE 8:**

- So, today we are announcing that **DENSO will build an additional plant in Silao, Mexico.**
- The plant will manufacture **heating, ventilation and air conditioning (HVAC) units.**
- DENSO will consider producing additional products at this site in the future.
- DENSO's investment in the new facility will total **US\$57 million**, and we expect to employ more than 400 people by 2015. Construction starts in October 2013.

**SLIDE 9:**

- The new facility will help DENSO expand its business in Mexico and meet the growing needs of its North American customers who are ramping up their operations in the region.
- DENSO has several thermal plants in the U.S –three right here in Michigan and one in Arkansas. We also have one in Canada.
- Mexico is the right decision for us because it completes our thermal manufacturing footprint in North America. We have to be close to our customers.
- It also rounds out our Mexico manufacturing footprint with production of powertrain and body components and now thermal products.

**SLIDE 10:**

**Now I will hand it over to Doug Patton who is our Senior Vice President of Engineering for DENSO International, Inc.**

## **Doug Patton – North American Product and Development**

### **SLIDE 11:**

- Sugi-san talked about how we're expanding our manufacturing footprint (logistics-driven)
- But what's driving what we're doing from a product standpoint in N.A.? Fuel economy requirements. You've all heard 54.5 mpg.

### **SLIDE 12 - Manufacturing new products in N.A.**

- One of the first steps toward 54.5 mpg is the micro-hybrid. What's a micro-hybrid? It's basically stop/start technology. You've heard me talk about this technology before last year's show.
- Stop/start technology shuts the engine off when the vehicle is at a stop or when the brake is decompressed.
- Earlier today you heard automakers announce their plans for new cars and trucks with stop/start technology. So we'll start seeing more of it in the market later this year.
- We've developed this technology for the last 20 years. And now we're going to make our stop/start starting motors in Tenn.

### **SLIDE 13:**

- The next step to reaching 54.5 mpg is more electrification.
- DIAM is doing more hybrid product and development at its N.A. HQ in Southfield, Mich.

### **SLIDE 14**

- DIAM's electromagnetic compatibility chamber give DENSO in N.A. a competitive advantage over its competitors

### **SLIDE 15: Expanding U.S. manufacturing product portfolio**

- We plan to manufacture **full hybrid components** at one of our existing **U.S. manufacturing plants in 2014-2015 timeframe**. Like Sugi-san said we want to make products in the region and for the region.

### **SLIDE 16: DIAM R&D: Battery Management**

- Supporting more development here means we have to add more resources - more people and capabilities.
- One of the places where we're adding resources is in the battery development area where we just received a DOE grant.
- Last year DOE gave us a grant to thermal management is to the lithium ion battery.
- We're doing this by looking at how to keep the battery at the optimal temperature - Meaning taking away heat or adding heat at the most appropriate time
- And, we're also looking at ways to apply thermal management technologies that will enable a reduction in battery size.
- In Southfield we will focus on R&D of liquid-cooled batteries - how do we make an automotive compressor have a longer life, like a refrigerator compressor. How do we do these things while trying to reduce the size and cost of the lithium ion battery.

### **SLIDE 16**

- With this focus in mind, we are building a battery thermal management lab withing our existing tech center in Southfield.

### **SLIDE 17: DIAM R&D: HMI**

- Another area we are adding capabilities is in the area of Human Machine Interface (HMI).

### **SLIDE 18:**

- N.A. is the leader in HMI activity - which is driven by consumer electronics - So we want to develop technologies here and push them out globally.
- As Sugi-san said, this is something we haven't done before but we're strengthening that here in the US and globally.
- HMI development involves how you connect with the outside world – You do that through your cell phone and other kind of vehicle connections – V2X, etc.
- It doesn't matter what you're connecting to – but we want to help manage the connection to provide you with the info you want and expect in a safe way.

### **SLIDE 19**

- Every OE is going to have a signature in how to do that. But DENSO is developing a measurement tool that will quantitatively measure driver distraction.
- We're working with two US Universities
- With HMI we're always talking about how to use new technologies. But you have to know what the new technologies are. So we've **established an office in Silicon Valley** to help us understand what new technologies are being developed.
- So we'll use that activity in Silicon Valley to bring things back here to apply to our HMI and other areas like fuel efficiency or use in Japan in other areas.

### **SLIDE 20: Close**

- From a North American perspective, our message here is that is we're moving research and development up stream allowing us to cast our line in sooner to better understand what's influencing the NA market.
- Mid-stream at DIAM, we're expanding our technical center capabilities so we can better support our customers in the N.A market.
- And if you look down-stream we're expanding our manufacturing capabilities in areas where our customers need us, like in Mexico.
- By expanding DENSO's overall North American manufacturing and R&D footprint will allow us to cast a larger net over the entire pond.
- From a global standpoint, this allows us to stronger.
- We will use our technical expertise and know-how to continue to create products for the region and in the region that help contribute to fuel efficiency, safety, and comfort and convenience.