

# Speedi

Wings & Wheels

[www.speedi.tv](http://www.speedi.tv)

October / November 2015

Issue No: 22



51 Page Reno Special

Best viewed  
as Full Size  
Single Page

147 Pages Full of Action

News

Events

Features

Show Reports

Reviews



RENO AIR RACES II



CALIFORNIA CAPITAL AIR SHOW

FREE!  
Online  
Magazine

THIS MONTH:

California Capital Air Show

Reno - National Championship Air Races

and Much More



## Morning Aurora From the Space Station

NASA astronaut Scott Kelly captured this photograph from the International Space Station on Oct. 7, 2015. Sharing with his social media followers, Kelly wrote,

NASA image

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Editorial Team: North America Editor – Steve Wood   West Coast Contributor - Jim (Flybum) Pratt   Canada - Jim Swan   Cruisin' & Hot Rod's - Gary Rosier   UK Team - The Gremlins at Kew



## Editorial



Welcome to the October / November 2015 issue of *Speedi Wings & Wheels*.

Take a look at our 'Content's page to find out more about what's in this issue. The magazine is published bi-monthly during the last week of February, April, June, August, October and December.

In this issue there's a 51 page feature on the National Championship Air Races from Reno, NV - Plus much more . . .

Take a look at the next page - the magazine index - for more details

Blue Sky's and Safe Flying.

*The Speedi Team*

*Speedi Wings & Wheels is a wide screen format magazine  
Best viewed in full screen single page HD mode*

### Beluga XL design freeze\_1

Airbus has marked the end of the concept phase at aircraft level for its Beluga XL, the company's new-generation oversized transport aircraft based on the A330.

Airbus image



# 7 Reno Air Races - 51 Page Special

## Speedi Wings & Wheels

CONTENTS



**7 Reno Air Races I:** The 2015 National Championship Air Races at Reno, NV was the attraction for two of our West Coast correspondents - Jim (Flybum) Pratt takes the first view . . .

**37 Reno Air Races II:** The second take on the 2015 National Championship Air Races at Reno, NV by Mark Pomerville . . .

**67 California Capital Air Show I:** A visit to the annual California Capital Air Show by our West Coast correspondent, Jim (Flybum) Pratt . . .

**83 California Capital Air Show II:** The second part of our visit to the annual California Capital Air Show features photos from Tim Sowell . . .

### Regular Features:

**5 AvNews:** Snippets of aviation related news

**58 Speedi's Blog:** Steve Wood looks at 'what's hot and what's not' in the world of aviation

**59 News from the Barn:** News of the events & 'happenings' at Spruce Creek Fly-in.

**95 Nose Art & Numbers:** Readers fun machines

**96 AutoNews:** Top titbits of Auto News

**99 Gone Cruisin':** Hot Rods & Cruisers and more . . .

**137 SpeediCity:** Fun and action from Daytona Beach

**37 Reno Air Races II**



Cover Photo: Jim (Flybum) Pratt

**67 California Capital I**



Photo: Gary Rosier

**83 California Capital II**



Photo: Gary Rosier



## Boeing Completes Major Upgrade to Air Force F-22 Simulators

Twenty F-22 training simulators receive new high-resolution imagery system

Boeing photo right: An instructor at Tyndall Air Force Base in Florida looks down

over a simulated coastline from the cockpit of an F-22 Raptor simulator equipped with Boeing's Constant Resolution Visual System (CRVS).



ST. LOUIS, Oct. 2, 2015

Boeing has completed its upgrade of all U.S. Air Force F-22 Raptor Mission Training Centers with its high-fidelity Constant Resolution Visual System (CRVS). The system trains pilots in a more realistic visual environment than current simulators and allows them to experience extreme maneuvers that typically are only practiced in a simulator.

The final CRVS installations were recently done by Boeing and the Air Force at Tyndall Air Force Base in Florida. Simulators at Hawaii's Hickam Air Force Base, Alaska's

Elmendorf Air Force Base and Virginia's Langley Air Force Base, also have the system.

"The final installation of the Boeing Constant Resolution Visual System improves the realism of ground-based training and increases mission readiness for pilots," said Lt. Col. Matthew Zamiska, 325th

Training Support Squadron commander. "This is paramount for Tyndall's mission of training and projecting unrivaled combat airpower."

Boeing's patented CRVS display is the centerpiece of the training suite and provides high-resolution imagery for pilots with nearly 20/20 acuity in an immersive, 360-degree visual environment. By using off-the-shelf projectors, the system takes advantage of the rapidly emerging commercial technology.

"With innovative thinking, backed by a roadmap for advancing the technology in years ahead, the

CRVS is anticipating the future needs of customers," said Tim Noonan, Boeing's vice president of Training Systems and Government Services. "We're providing the customer with a tool that makes them mission ready and also gives them an edge in the sky because of the way pilots can train in this system."

CRVS, first delivered in 2010, is found in a variety of other aircraft simulators, including the F-15 Eagle, AH-64 Apache, M-346 Master, BAE Hawk and F-16 Fighting Falcon.

"Boeing's

CRVS is unique in that, unlike any other visual system, it provides the warfighter with constant target visibility throughout the entire field of vision," said Scott Whitaker, Boeing's display team manager. "The CRVS is a great benefit to the customer top-down, because it provides highly effective training at a low cost."

A member of the F-22 Raptor team with Lockheed Martin and Pratt & Whitney, Boeing develops, integrates and delivers F-22 aircrew and maintenance training systems to the Air Force, along with logistics and sustainment services.

## Boeing, U.S. Air Force KC-46A Tanker Completes Successful First Flight

Flight paves the way to aerial refueling and Milestone C testing

Boeing photo right: The Boeing-built KC-46A Pegasus tanker takes off on its first flight, from Paine Field, Everett, Wash. to Boeing Field, Seattle. The

KC-46A is a multirole tanker Boeing is building for the U.S. Air Force that can refuel all allied and coalition military aircraft compatible with international aerial refueling procedures and can carry passengers, cargo and patients.

EVERETT, WA  
Sept 25, 2015

The Boeing and U.S. Air Force team successfully completed the first flight of a KC-46A tanker aircraft today, taking off from Paine Field at 1:24 p.m. (PST) and landing four hours later at Boeing Field in Seattle.

This was the first flight of a KC-46A tanker-configured aircraft, following ongoing flights of the program's first test aircraft, a 767-2C. During the flight, Boeing test pilots performed operational checks on engines, flight controls and environmental systems and took the tanker to a maximum altitude of 35,000 feet prior to landing.

"This first tanker flight is a key milestone for the program and we'll

now begin free air stability tests and flight controls of the boom and wing aerial refueling pods (WARPs) before conducting aerial refueling tests where the KC-46 will make contact with other military aircraft down the road," said Col. Christopher Coombs, U.S. Air Force KC-46 System program manager.



"Today's flight reinforces that we are moving in the right direction and are on track to begin planned Milestone C testing later this year," said Tim Peters, Boeing KC-46 tanker vice president and program manager. "This is an aerospace industry first and the culmination of a lot of hard work by the team, including Boeing, our suppliers and the U.S. Air Force."

The Boeing team now will conduct a post-flight inspection and calibrate instrumentation prior to the next series of flights, during which the tanker boom and WARPs systems will be deployed. Before the end of the year, the KC-46 will begin conducting aerial refueling flights

with a number of U.S. Air Force aircraft. Those flights, along with the mission systems demonstrations and a recently completed ground cargo handling test, will support the planned Milestone C decision in 2016.

As part of a contract awarded in 2011 to design and develop the U.S. Air Force's next-generation tanker

aircraft, Boeing is building four test aircraft – two are currently configured as 767-2Cs and two KC-46A tankers. The KC-46s will fly as fully equipped tankers through the FAA and military certification process, while the 767-2Cs enter flight test prior to receiving their upgrade to the KC-46A configuration

and the addition of their aerial refueling systems.

The program's first test aircraft (EMD-1), a 767-2C, has completed more than 150 flight test hours to date since making its first flight in December 2014.

The KC-46A is a multirole tanker Boeing is building for the U.S. Air Force that can refuel all allied and coalition military aircraft compatible with international aerial refueling procedures and can carry passengers, cargo and patients. Overall, Boeing plans to build 179 KC-46 aircraft for the U.S. Air Force.



## China Aviation Supplies Holding Company orders 30 A330 Family and 100 A320 Family aircraft

29 October 2015:

**A great endorsement for the world's leading versatile wide-body A330 (Airbus photo right) and the best-selling single aisle A320 Family aircraft.**

China Aviation Supplies Holding Company (CAS) has signed a General Terms Agreement (GTA) with Airbus for the acquisition of 30 A330 Family aircraft and 100 A320 Family aircraft. The 30 A330s are the firm up of the

commitment signed in June 2015. The GTA was signed in Beijing by Li Hai, President and CEO of CAS, and Fabrice Brégier, President and CEO of Airbus, in the presence of Chinese Premier Li Keqiang and visiting German Chancellor Angela Merkel.

"We are grateful to CAS, one of our longest standing customers, for its continued confidence in Airbus and in the versatile A330 Family as well as the best-selling A320 Family," said Fabrice Brégier, President and CEO of Airbus. "With these 30 A330 options now firmed up, CAS' total number of orders for the popular Airbus widebody is this year 75 aircraft. This strong demand

in China for the A330 has been the key driver behind our decision to set up an A330 Completion and Delivery Centre in Tianjin, China next to the A320 Family final assembly line and delivery centre in Tianjin, which has assembled and delivered more than 240 Airbus single aisle aircraft. This will enable



Angela Merkel and Chinese Premier Li Keqiang. A framework agreement was signed in July 2015 in Toulouse.

According to the Airbus global market forecast, China is leading the world in passenger growth. China's domestic air traffic will become the world's largest within the next 10

years, and traffic volumes will quadruple in the next 20 years. In the next 20 years, Airbus forecasts a demand in China for some 5,400 new passenger and freighter aircraft including 1,700 widebody aircraft like the A330, A350 and A380.

At present, the in-service Airbus fleet with Chinese operators comprises

over 1,200 aircraft (over 1,000 A320 Family aircraft, over 160 A330 Family aircraft and five A380s as well as Airbus freighters and corporate jets).

The A330 is one of the most popular widebody aircraft ever and has to date won over 1,500 orders, with over 1,200 flying with more than 100 operators worldwide. Airbus is investing hundreds of millions of Euros per year in the A330 Family to maintain the aircraft at the leading edge of innovations. The A330 Family is part of the world's most modern and comprehensive widebody product line, which also includes the larger A350 XWB and double deck A380.

us to be even closer to our customers and to take our long-standing mutual beneficial partnership with China to a new height."

The first agreements on setting up an A330 C&DC in Tianjin, China were signed by Airbus and Chinese partners in March 2014 and witnessed by French President Francois Hollande and visiting Chinese President Xi Jinping. This was followed in October 2014, when Airbus, the Tianjin Free Trade Zone (TJFTZ) and the Aviation Industry Corporation of China (AVIC) signed a Letter of Intent (LoI) in Berlin, Germany, in the presence of the German Chancellor

## Finnair becomes first European A350 XWB operator

7 October 2015

**Offering a new generation flying experience for passengers**

**Finnair has taken delivery in Toulouse of the first of 19 A350 XWBs on order (Airbus photo right), thus becoming the first European operator and the third worldwide of the all-new airliner. The aircraft is configured in a premium three-class layout, with 297 seats, comprising 46 Business Class, 43 Economy Comfort and 208 Economy.**

Finnair will commence commercial services with the A350 XWB later this week, with a European tour starting at Amsterdam and Oslo on October 9th. Furthermore, on the 21st of November 2015, non-stop long-haul A350 XWB flights will start from Helsinki to Shanghai. The aircraft will join the airline's all-Airbus fleet of 45 aircraft in operation, today comprising 30 A320 Family aircraft and 15 A330/A340s.

"Finnair has enjoyed a long and prosperous working relationship with Airbus and the A350 takes our cooperation to another level. This aircraft is the future of flying and

will give our passengers a completely new and enhanced travel experience," says Finnair CEO, Pekka Vauramo.

"At Airbus, we're proud and delighted to see Finnair, one of the world's longest-standing and most respected airlines, become the first European carrier to fly the A350



The world's latest generation airliner, the A350 XWB, is the newest member of Airbus' modern, comfortable & efficient wide-body product family. Offering customers a game-changing reduction in fuel-burn, the long-range A350 XWB features the most modern aerodynamic design, carbon fibre fuselage and wings, plus new fuel-

efficient Rolls-Royce Trent XWB engines. Together, these cutting-edge technologies translate into unrivalled levels of operational efficiency, with a 25 per cent reduction in fuel burn and emissions, and significantly lower maintenance costs. For passengers, it brings new levels of in-flight comfort, with an extra-wide

cabin offering more personal space in all classes, including 18 inch wide seats as standard in economy class.

To date, Airbus has recorded a total of 783 firm orders for the A350 XWB from 41 customers worldwide, already making it one of the most successful widebody aircraft ever.

Follow the delivery ceremony on <http://www.a350xwb.com/delivery/finnair/> and [www.youtube.com/user/airbus](http://www.youtube.com/user/airbus)

XWB," said Fabrice Brégier, Airbus President and CEO. "The A350 XWB's unrivalled fuel efficiency and passenger comfort make it the perfect aircraft to spearhead Finnair's Asian expansion."

Eric Schulz, President - Civil Large Engines, Rolls-Royce, said: "We are very proud to be with Finnair and Airbus today to mark another chapter in the A350 XWB story. The Trent XWB exemplifies how we take the best in technology to deliver new standards of excellence. Today marks the start of a new era in our relationship with Finnair and we look forward to working with them for many years to come."





Photos for this feature:

Pages 7 through 36 - Jim (Flybum) Pratt

Pages 37 through 57 - Mark Pomaville





























































































































































































# SPEEDI'S BLOG

**W**ELCOME TO SPEEDI'S Blog.

Drones (or UAV's) are the must have thing of the moment. Previously an aviation enthusiast without a pilots license could only enjoy the skies with either fixed wing or rotary aircraft. Now drones can be bought by anyone for not a lot of money. Unlike traditional radio controlled aircraft the new drones are gyro stabilized and many have video cameras fitted. A wealth of new laws are being hastily introduced by aviation authorities around the world. That's OK for law biding flyers, but will not stop those, and there are many, who will 'put a finger up' to the law.



But drones can be put to good use. An example is in agriculture. Drones

can easily map fields so that the farmer can more efficiently spread fertilizer, as just one example.

It's all about robotics and the way computerization has become miniaturized. Robots are now viable in everyday life. Car manufacturers are rapidly developing robotics to assist the driver in controlling their vehicle. There are driverless vehicles being extensively tested in real world conditions, and it's only a matter of time when such vehicles will be made available to the public.



Mercedes recently revealed a self-driving concept vehicle created for "young, urban trendsetters" that showcases how future

car designs could be transformed into "hip living spaces".



Yamaha has revealed its new humanoid motorcycle-riding robot at the Tokyo Motor Show. Its goal? To beat MotoGP world champion Valentino Rossi.

Here's a link to a video showing the progress made so far - click [here](#)



How a robot will be able to match the way Valentino throws his bike around with such ease is hard to imagine. But robots can be programmed to do

'almost' anything . . .

Robotic pilots, or pilot-less aircraft are now a well established reality in military roles. The



U.S. Navy has been testing the use of 3D printers on its ships to produce custom drones outfitted for specialized missions.

The project, being carried out by researchers at the Naval Postgraduate School, is investigating whether modern communications and fabrication technology can be combined to give sailors a new tool for whatever mission they are deployed on.

In addition, the US Navy is to deploy Robot Ships to track Chinese and Russian subs. Work on the U.S. Navy's new anti-submarine drone is progressing and that's

bad news for Chinese and Russian diesel-electric subs.

NASA is advancing an airliner flight deck of the future that features one seat in the cockpit for a captain and one on the ground, occupied by an operator filling the role of either "super dispatcher" or first officer. The research, while rife with political and public ramifications that could far outweigh the technical challenges, is far less science fiction than it was three years ago.

The MQ-8C Fire Scout is the US Navy's next generation unmanned helicopter. The Northrop Grumman MQ-8C Fire Scout's airframe is based on the commercial Bell 407. Last December, after more than a year of land-based testing at Point Mugu, California, the



MQ-8C Fire Scout grew its sea legs, making 22 takeoffs and 22 precision landings while being controlled from the ship's ground control station. Here's a link to a video showing operations on the USS Jason Dunham - click [here](#).



There's even a Shipboard Autonomous Firefighting Robot (SAFFiR), which was tested aboard the USS Shadwell, a decommissioned Navy vessel . . .





**N**EW FROM THE Barn is a regular feature about the happenings at the largest (and greatest) fly-in community in the world - Spruce Creek Fly-in. Situated on the Space Coast of Florida, just 7 miles south of the famous Speed City of Daytona Beach, Spruce Creek is a very special place. Our North America editor, Steve Wood, has lived there for since 2001, so he should know. We hope you enjoy this regular feature about a very special aviation community.

Spruce Creek Airport Information - Courtesy of the Spruce Creek POA Website - [www.scpoa.com](http://www.scpoa.com)

The Spruce Creek Airport is the heart of the Spruce Creek Fly-In Community. The Airport is a private airport owned and operated by the Spruce Creek Property Owners Association (SCPOA). The Spruce Creek Airport Authority Committee through the SCPOA Board of Directors has the authority and the responsibility to oversee the operation of the Spruce Creek Airport. The SCPOA employs a full time, 24-7 security staff. The Airport runways, taxiways and aircraft parking areas are regularly patrolled and are under continuous video surveillance by the Security staff 24 hour a day.

All flying activities at the Spruce Creek Airport are regulated by the FAA and by the recommended procedures published in the Aeronautical Information Manual (AIM). In addition, a limited number of local rules and procedures have been established to promote a safe and enjoyable airport. All resident, tenants and invitees are encouraged to cooperate and abide by these procedures.

**SPRUCE CREEK AIRCRAFT ARRIVAL & DEPARTURE PACKAGE** - The airport management provides information to assist all pilots operating in and out of the Spruce Creek Air, viewed or printed with Adobe Reader. [Download PDF](#)

**AIRPORT SAFETY VIDEO** – The airport management recommends that all Spruce Creek Fly-In residents and airport users view this very good airport safety video. Click [Here](#) Airport Info Quick List.

TEL ..... 386/760-5884 or Airport Manager cell see below.

FAX ..... 386/761-7808 AFTER 1700 .....386/756-6125 (Security)

VORTAC OMN .....112.6 MHz 165°R/13.9 DME

VORTAC ORL ..... 112.2 MHz 020°R/35.6 DME

FSS St. Petersburg .....122.2 MHz

APCH CNTRL Daytona Beach ...125.35 MHz (South) 125.8 MHz (North)

INSTR APCH (Rwy 05) .....GPS (Private, Residence Only)

CTAF..... 122.975 MHz (pilot actuated lights 3-5-7 clicks)

AWOS..... 121.725 MHz

FUEL ..... 100LL & JET A (self serve and truck delivery)

FUEL ..... 386 257-7791 (on field) or 129.7 MHz (forward request to Spruce Creek)

Airport Manager: John Sponza, Cell 386 872-1430

Airport Assistant Manager: Buddy Dicey, Cell 386 872-1431

Airport Assistant Manager: John Steidinger, Cell 386 872-1431

Airport Assistant Manager: Dave Baldwin, Cell 386 872-1431

Airport Committee Chairman: Kathy Royer, Cell 386 451-8929





IN OUR 'News from the Barn' section we will be featuring news and photos from Spruce Creek Fly-in, the world's greatest aviation community. With over 1600 homes, and not all of them are hangar homes, and home to over 3000 people, there are over 650 airplanes based at Spruce Creek. But it's not all about aviation at Spruce Creek - there's golf, tennis, motorcycling and much more, as well as a Country Club and the Downwind restaurant right alongside Beech Boulevard - a major taxiway in the center of the airport. EAA Chapter 288 (Daytona Beech) meets at Keith Phillip's hanger on the other major taxiway - Cessna Boulevard. Then there's the Gaggle Flight, which is quite something in its own right. Every Saturday morning (and sometimes on Wednesday too) members of the Gaggle Flight

meet at The Big Tree which sits right in the middle of the airport. Upwards of 30 aircraft depart in flights of 3 or 4 (and sometimes more) flying out to breakfast. The arrivals back are usually spectacular, with overhead breaks the norm. Our North America editor, Steve Wood, is part of Goofy Flight - named after his GlaStar which has the special registration N-600FY. Steve even has 'goofy' smoke on his airplane which can 'puff' or be continuous at whim. Everyone has great fun at Spruce Creek Fly-in which perhaps explains why there's a sign inside the main entrance which reads "Caution - Children And Adults At Play".



This issue of *News from the Barn* features a recent invitation to the Spruce Creek Gaggle Flight to visit Embry Riddle Aeronautical University in Daytona Beach as part of its 50th year anniversary events.

All photos by Gary Rosier

Photo this page shows Lakes Flight of 8 in the break overhead Daytona International Speedway







Lakes Flight landing 25R at KDAB





The ERAU fleet of Cessna C172s





Campus parking





Lakes Flight at breakfast





Red Flight taxi out - closely followed by a Delta MD88







Daytona Airport and the Speedway





# CALIFORNIA CAPITAL AIRSHOW



Photos for this feature:

Pages 67 through 82 - Jim (Flybum) Pratt

Pages 83 through 94 - Tim Sowell



**California Capital Airshow  
October 2-4, 2015  
Sacramento, CA**

It is hard to believe that another year has passed since Tim Sowell and I attended this airshow last. As usual, one could not help noticing the efficiency and organization at this event as we were directed to parking, had a security check, and were inside the show in just minutes. Of course the next thing we were reminded of is just how big this airshow really is. After entering the gate it is a long walk to air show center. We dumped our chairs at the flight line and then started looking for targets to photograph.

One of the first eye-catchers were the UPS planes. I am talking about the big boys, the 767s, the ones that move the freight from China to here and vice-versa. We visited the cockpit of the 767 which looked a bit antiquated but interesting. On the way to the 767 we got our first glimpses of a B-17 and a

B-25. In the area next to the 767 there was an Air Force C5A that was open to the public. What a behemoth. There was also a DC-7 (military version) which brought back memories of a 10 hour flight to Hawaii when I was in the Navy years ago. That old bird had no insulation and we were all deaf when we arrived. Parked nearby was also a B-52 Stratofortress (BUF to you veterans). It is amazing that there are pilots flying that plane today whose grandfathers were the first to fly it.

Sprinkled in between the big boys were some kit planes, biplanes, sea planes, an L-29, a P-51D, an F-16, a Vietnamese Lady sitting on a motorcycle with sidecar that had a machine gun and an RPG mounted to it (say what?) Check the picture. Of course the police and sheriff had their helicopters there on display which is a big attraction for the kids.

Opening ceremonies included the usual parachute jump as aerobatic performers circled the jumper carrying the American flag.

This was followed by the B-17, B-25 and P-51s attacking the airfield and dropping their bombs and laying down a wall of fire that was enough to give you a sun burn. They made several passes raising hell on every pass.

Next, an F-18 Hornet from NAS Lemoore flew a routine to demonstrate the tactics of Navy fighters and also their techniques for landing on a carrier. It brings back memories of my days on the flight deck of the USS Ranger, recovering the planes from a mission. The F-18 made an awesome high speed pass at just below Mach 1.0. Next was a High-Alpha maneuver that is amazing as the aircraft passes the crowd pitched up with a forward speed of about 80 knots with its

nose hanging in the air. I wonder what the F-35 has that might beat it. Maybe more stealth, better avionics, higher costs?

The Canadian Snowbirds put on a graceful performance. They start their routine with a formation of nine CT-114 Tutor jets slowly approaching the crowd. They then split into different groups to keep the action going. Their theme this year commemorated the WWII Battle of Britain at which 103 Canadians flew against the attacking German Air Force over England. The CT-114s are 1950s vintage jets which serve the team well as they are highly reliable and the right aircraft for the relaxing performance that they give.

Jack Link's Sasquatch Jet Bi-Plane performed was next. If you want to see an "unnatural act" being performed, watch this biplane as the jet engine kicks in and it climbs

skyward like a scalded ape. I am not sure why the acceleration doesn't tear the wings off the airplane, but so far that has not happened. You listen for a radial engine but hear the roar of a jet. Wow!

Matt Younkin, who performs at Oshkosh every year, flew next in his Beech 18 twin-engine plane. His red and black transport does aerobatics like it was meant for that. I can imagine that he is making it look a lot easier to do the maneuvers than it is. The twin radials sound cool as he flies by.

World Aerobatic Champion Rob Holland performed in his MX5-RH monoplane. He came straight to the airshow from the 2015 World Aerobatic Championships. He is a 3-time Gold Medal winner.

Lt. Col. John Klatt, sponsored by the California Air National Guard, performed in his MX-5, redefining the laws

of physics with a unique blend of precision, power and performance.

The final act of the day, and the big reason why over 100,000 people attended this event over the 3 days, was the U.S. Air Force Thunderbirds! Led by Lt. Col. Christopher Hammond of Abilene, Tx, the team wowed the crowd as usual and everyone stayed for the whole show to watch. The team flew 67 airshows at 35 locations this year. Flying the F-16 Fighting Falcon, their precision performance is awesome and keeps the crowd on the edge of their seats for the entire time.

My only regret is that there was a night time airshow on Friday evening that we were unable to attend. The folks did a wonderful job of putting this airshow on. The traffic flow out of the show was very efficient and there was very little waiting to leave. Great job Sacramento! Thanks Karen Strong!





























































Continental  
Journey















































# NOSE ART & NUMBERS



In this regular Nose Art & Number feature we showcase our readers Nose Art and Special Registration Numbers. Just send in your pics, along with a bio (around 150 words) about your nose art or special registration to [noseart@speedi.tv](mailto:noseart@speedi.tv) - and don't forget, spread the word.





## Exceptional Traction for Greater Performance: the Porsche 911 Carrera 4 and 911 Targa 4 Models with New Turbocharged Engines and Enhanced All-Wheel Drive Systems

More efficient and powerful all-wheel drive 911 models will reach U.S. dealers in April 2016

October 6, 2015

Atlanta, Georgia. With the new 2017 911 Carrera 4 and 911

Targa 4 models, the traction advantage courtesy of an enhanced all-wheel drive system is paired with innovative turbocharged engines that are more powerful and consume less fuel than their predecessors. The standard adaptive PASM chassis (Porsche Active Suspension Management) with its ten-millimeter reduced ride height provides an even greater bridge between agile handling and sophisticated ride comfort. Rear-axle steering is available as an option for the Carrera 4S models and enhances the car's agility even further. The standard Porsche Communication (PCM) connectivity and infotainment system with a multi-touch display offers simplified usability.

The all-wheel drive models feature the numerous optical refinements of the new 911 Carrera models,

including headlights with four-point daytime running lights, door handles without recess covers, a redesigned rear decklid with vertical louvers,



and new rear lights with characteristic four-point brake lights. Additionally, the Carrera 4 and Targa 4 variants are distinguished by a light strip between the rear lights which is now particularly distinctive thanks to its three-dimensional design. When illuminated, it reinforces the impression of depth. The light strip also underlines the wider body of the all-wheel drive 911, with the rear width increased by 44 millimeters over the two-wheel drive models.

The refined look of the new 911 range also underlines the sophisticated elegance of the Targa. With its individual design, the new 911 Targa continues to stand out from the Coupé and Cabriolet. It combines the classic Targa design with an advanced roof in spectacular fashion. Like the legendary original Targa, it has the characteristic Targa bar in place of B pillars, a retractable

roof section over the front seats, and a wrap-around rear window without C pillars. The roof segment can be opened and closed at the push of a button, with the soft top being stowed behind the rear seats as it opens.

Faster acceleration, reduced fuel consumption

More than four decades of experience with turbocharged Porsche engines used in motor racing and on production sports cars went into the development of the new flat six engines.

The result: a new three-liter, flat six twin-turbo engine that sets new standards in performance, driving pleasure, and efficiency, while offering a 20 hp increase compared to the previous engine generation. Thanks to twin-turbo technology, the three-liter, six cylinder engines in the 911 Carrera 4 and 911 Targa 4 develop 370 hp and 331 lb.-ft. of torque. Using turbochargers with modified compressor wheels, a model-specific exhaust system, and different tune for the engine management system, the 4S models deliver 420 hp and 368 lb.-ft. of torque. Both engines offer significantly greater torque than their predecessors, which is available across a broad power band from 1700 to 5000 rpm.

The new 2017 Porsche 911 Carrera 4 and 911 Targa 4 range will be available in the U.S. beginning in April 2016.

## OPEN DRIVING EXCITEMENT: INTRODUCING THE NEW MINI CONVERTIBLE

\* Newest member of MINI lineup goes on sale in U.S. in March 2016

\* First open top MINI powered by BMW Group engine technology and architecture

Woodcliff Lake, NJ, October 22, 2015.

MINI USA introduced today the newest addition to its iconic product line, the new MINI Convertible. As the first open top MINI powered by BMW Group engines and architecture, the new MINI Convertible is a premium four-seater soft-top convertible that is both practical and customizable for unlimited open-air motoring fun.

Like all other MINI models in the product portfolio, the new MINI Convertible is made for individualization, setting the new standard in the premium convertible market. It offers a choice of 11 exterior color options, including the new Caribbean Aqua, which harkens back to the classic MINI color palette, ideal for the fun-loving enthusiast, and Melting Silver, recently introduced on the new MINI Clubman, a cool and modern finish perfect for the open air thrill seeker.

The customization carries over to the interior with a number of

premium seating options available, including a new Malt Brown leather with diamond-stitching reminiscent of classic English Chesterfield sofas. Convertible enthusiasts looking for even more style can opt



for the new MINI Yours soft-top featuring an embroidered Union Jack with herringbone patterned detailing.

"The new MINI Convertible has a great balance of playful personalization and sophistication. It's open-top driving without compromise," said David Duncan, vice president MINI of the Americas. "The bespoke levels of customization set it apart from other convertibles on the market, while the front wheel drive BMW architecture and engines make it fun-to-drive and practical in any driving conditions."

Powered by BMW Group-developed three- and four-cylinder MINI TwinPower Turbo Technology engines, the new MINI Convertible will come standard with an efficient six-speed manual transmission. With the three-cylinder Cooper version and four-cylinder Cooper S, the new MINI

Convertible presents customers a choice of two powerful, highly efficient TwinPower Turbo engines developed by the BMW Group and built in Europe. In keeping with MINI tradition for authentic, driver-involving motoring, both the Cooper Convertible and Cooper S Convertible come standard with a 6-speed manual transmission. Alternatively, the new MINI Convertible can be equipped with a smooth, quick-shifting 6-speed Steptronic automatic transmission.

This premium four-seater convertible has an emphasis on practicality, with an easy-load and load-through function that makes the cargo space both accessible and functional. The rigid frame and invisible roll bar enhance both the safety of the vehicle and also provide improved acoustics, allowing for more long-distance comfort and sporty driving dynamics. Drivers will also appreciate the unique multi-way top settings, including a sunroof option which enables the soft-top to open midway for just the right amount of sun and air.

The new MINI Convertible is equipped with an "Always Open Timer," providing convertible enthusiasts with the ability to calculate the number of hours they've driven with the top down.



## Global Unveiling of Jaguar Land Rover Bond Cars

\* Jaguar and Land Rover stunt vehicles Jaguar C-X75, Range Rover Sport SVR and Land Rover Defender make international debut in Frankfurt, Germany  
\* SPECTRE cast members Naomie Harris and David Bautista attend star-studded event ahead of reveal at motor show

15 September 2015

Jaguar Land Rover celebrated its vehicles appearing in the new Bond adventure, SPECTRE. Cars, including the Jaguar C-X75, Range Rover Sport SVR and the iconic Land Rover Defender, stole the show as they were unveiled in public for the first time at the palatial Thurn und Taxis in Frankfurt.

Naomie Harris (Moneypenny) and David Bautista (Hinx) were guests of honour at the glamorous event showcasing special stunt vehicles used in the latest instalment of the James Bond series. Guests were entertained by British singer and musician John Newman, who performed a number of top ten hits from his album.

SPECTRE, the 24th James Bond film, from Albert R. Broccoli's EON Productions, Metro-Goldwyn-Mayer Studios and Sony Pictures Entertainment, sees the Jaguar C-X75 drive through the moonlit streets of Rome in one of the movie's most iconic high speed chase scenes. Driven by Hinx,

played by David Bautista, the C-X75 supercar, named the most advanced Jaguar ever created, was provided by Jaguar Land Rover Special Vehicle Operations (SVO) in collaboration with development partner Williams Advanced Engineering headquarters in Oxfordshire, England.

SVO was created in June 2014



to focus on meeting the increasing expectations of today's most discerning and enthusiastic Jaguar and Land Rover customers. Working on the development of high performance versions of existing models, luxury bespoke commissions and limited run collector editions, it represents the very pinnacle of the two iconic brands.

Specially modified Land Rover Defenders and the fastest, most powerful Land Rover ever, the Range Rover Sport SVR also star in major action sequences shot in Austria. The highly capable Defenders were constructed by the JLR Special Operations division with huge 37-inch diameter off-road tyres and enhanced body protection to tackle the challenging terrain of

the snow-covered mountain roads used for filming.

Actor David Bautista said, "To have the opportunity to be a part of an iconic chase scene in a Bond movie and to drive the C-X75 supercar was like a dream come true for me. It truly is a beautiful beast of a car that will go down in movie history."

Naomie Harris, who will reprise the role of Moneypenny in SPECTRE said: "I made my Bond debut in the Defender, and I have so many fond memories shooting that sequence in Turkey. It's such a special franchise to be a part of, and I'm thrilled to be here in Frankfurt with the Jaguar Land Rover team".

Managing Director of Jaguar Land Rover Special Operations, John Edwards, said: "For Jaguar Land Rover to once again be a part of the iconic vehicle line ups in one of the most celebrated film franchises in the world represents a proud moment for us. It's an incredible opportunity to showcase production and concept cars alike and we look forward to continuing this relationship well into the future."

Fans around the world will be treated to a host of exclusive behind the scenes SPECTRE content on Jaguar and Land Rover's social channels and brand new websites, including special access to unseen footage and interviews with the design, SVO and stunt teams as well as a stunning 360 dynamic walk-around of the Jaguar C-X75.

SPECTRE is released worldwide from October.



## All-New Range Rover Evoque Convertible Breezes Through Ultimate All-Terrain Testing

\* Bold new Range Rover Evoque Convertible is the world's first luxury compact SUV convertible

\* Exclusive film captures final stage of testing at Land Rover's challenging all-terrain proving ground

\* Full suite of advanced on- and off-road technologies showcased

\* The Convertible for all Seasons will be revealed in November and on sale Spring 2016

(WHITLEY, U.K.) - October 4, 2015

The All-New Range Rover Evoque Convertible will be the most capable convertible in the world when it debuts in November after completing Land Rover's punishing development and testing program with flying colors.

Hot on the heels of last week's London takeover, where six full-scale wireframe sculptures showcased Evoque Convertible's elegant design at a series of iconic locations, Land Rover has released a film showcasing its all-terrain credentials.

The footage, released today, shows the world's first luxury compact SUV convertible completing the final phase of testing at Land Rover's legendary Eastnor Castle estate, in Herefordshire, UK. The film demonstrates how Land Rover's engineers have rigorously tested the four-wheel drive Convertible to ensure it delivers customary all-terrain capability.

Mike Cross, Land Rover Chief Engineer, Vehicle Integrity, said, "Land Rover prides itself on being a class leader when it comes to all-terrain capability and the Evoque Convertible is no different. Thanks to a combination of innovative engineering and the application of advanced technologies, Evoque Convertible will deliver a dynamic

and assured SUV experience that has been tested around the world. We call it 'The Convertible for all Seasons'."

Land Rover confirmed plans to launch a highly desirable convertible derivative of its multi award-winning Range Rover Evoque at the Geneva Motor Show in March 2015. The bold addition to the range has just completed its extensive development program and continues Land Rover's tradition for creating and leading new market segments.

Travelling the globe, Evoque Convertible has proved its capability and durability in a series of demanding tests before undergoing final sign-off at the famous Eastnor Castle Estate, where all Range Rovers have been put through their paces for the last 45 years.

Launching in November and making its public debut at the Los Angeles International Auto Show, Evoque Convertible will be on sale in key markets from Spring 2016.



## BENTAYGA MAKES POWER ON ICE DEBUT

\* Bentley's extraordinary ice-driving event returns for 2016

\* Bentleyga to demonstrate prowess on frozen lakes of Finland

\* Former World Rally Champion, Juha Kankkunen, leads tuition team

(Crewe, 29 October 2015)

The most powerful, most luxurious, most exclusive and fastest SUV in the world, the Bentley Bentayga, makes its ice-driving debut in 2016 at Bentley's flagship customer event, Power on Ice.

Power on Ice is an unforgettable four-day experience that provides the opportunity to push a full range of Bentley cars to their limits. Running throughout February next year, guests will be among the first to explore the Bentayga's extraordinary capabilities in one of the most beautiful and challenging environments in the world.

Two days of exhilarating ice driving training are provided by the vastly experienced Bentley Ice Driving Team. Leading the tuition will be four-time World Rally Champion and two-time ice-speed record holder, Juha Kankkunen – who personally designs each of the ten ice tracks.

A range of Bentley models, including the brand's performance



flagship, the Continental GT3-R, will take on the challenging off-piste tracks. Thanks to their all-wheel-drive systems – and Bentley's new Drive Dynamics Mode with optional Responsive Off-Road Setting in the case of Bentayga – each of the models can constantly adjust the distribution of power between front and rear wheels depending on available traction, ensuring optimal grip is delivered.



The home of the event will be the unique Chalet Ruka Peak. Relaxing evening meals featuring

contemporary Finnish cuisine and a traditional smoke sauna will afford guests time to unwind after an adrenaline-fuelled day. Night time husky-sled safaris to an historic reindeer farm complete the immersion into Finnish culture and ensure a truly unique experience.

Guests can select from a range of accommodation, with prices starting from €11,900 per person. More information can be found at [events.bentleymotors.com](http://events.bentleymotors.com), or by contacting the Bentley Driving Team on +44 (0)1675 445 945

View the video of the event at: <http://5d85f571f5427d3a1fe4-946480a501581fbc4b2efb17af092f06.r18.cf3.rackcdn.com/data/videos/transcoded/391/1.mp4>

## 3D Printing Helps Ford Develop All-New Ford GT – and Means You Can Build a Supercar in Your Own Home

**COLOGNE, Germany, Oct. 14, 2015** – Here's a reason to add a 3D printer to your Christmas list. The technology can now be used at home to print models of some of Ford's most desired cars, including the all-new Ford GT, Ford Mustang, and Focus RS. Appropriately, these are three cars for which 3D printing played a key role in the development of the full-sized vehicle.

Ford uses 3D printing to significantly reduce development time through the use of prototype parts that enable designers and engineers to quickly test and refine a range of different approaches. Traditional prototyping methods require special tools and can be time-consuming. Ford can print a 3D-part in just a few hours, for as little as €1,000, opening the door to experimentation, and more radical, innovative design.

For the Ford GT, designers used laser 3D printing techniques to create the F1-style steering wheel with integrated driver controls, and the transmission paddle-shift controls. Engineers also printed key lightweight structural components for the upward-swinging doors.

For customers with their own 3D printer [The Ford 3D Store](http://TheFord3DStore.com) offers the first automaker- authorised one-stop online store for 3D-printable vehicle files. As well as enabling customers to print their own Ford GT, templates for a further 1,000 models

also include the Focus ST, Fiesta ST and the U.S. spec F-150 Raptor.

"3D computer printing technology has totally changed the way we design and develop new vehicles. We can be more creative in trying to find potential solutions, and for the customer this means that our cars are better able to incorporate the latest thinking in design and technology," said Sandro Piroddi, supervisor, Rapid Technology, Ford of Europe.

Ford actually bought the third 3D printing machine ever produced in 1988, and globally has since produced its 500,000th 3D printed part, an engine cover for the [all-new Ford Mustang](http://www.ford.com). Today's printers are



quicker, more cost efficient, and incredibly accurate. Prototypes are used for everything from engine parts, to wheels, to intricate detailing.

The first step in bringing a design to life is a sketch produced by the Ford Design team. Clay modellers then make a scale- and later full-size model of the vehicle to assess proportions and develop the design. In parallel, digital sculptors will create a model using computer-aided design (CAD). The two models are developed together, leveraging the strengths of both disciplines. While

some parts are worked in clay, more complex or detailed items are mostly developed digitally and often 3D printed – this is where the Rapid Prototype team, based at Ford's European headquarters in Cologne, Germany, comes into play.

Depending on the requirement – Ford Design or engineering – the Rapid Prototype team evaluates the design, and will use one of a number of techniques to create the piece they are working on, including 3D printing. The latter requires CAD software that "slices" parts into paper- thin layers to create a 3D printed prototype.

This will act as a template for the 3D printing machine. How robust the prototype part will need to be will determine whether it is constructed from materials that may include plastic, sand, or metal. Layer by layer, the materials are fused together into the desired shape using a laser. After printing, any excess material is dissolved away and the part is finished as required, such as by sanding or painting. The completed part can then be delivered to the appropriate design studio or test facility for immediate use.

### All-new Ford GT

The precision smoothness of the finishing process was a key to 3D-printed parts being used in the development of the all-new Ford GT supercar. The [Ford GT race car](http://www.ford.com), competing next year at Le Mans as part of the FIA World Endurance Championship, also benefitted from the technology, employed in the development of the intake manifold on the EcoBoost race engine.



# GONE CRUISIN'

**Gary's Hot Rods & Cruisers**



In this issue, Gary Rosier visits the Daytona Flea Market for two Cruisin' events.

First up is a VW meet . . .



















































































The second event was a  
classic cruisin' meet . . .







































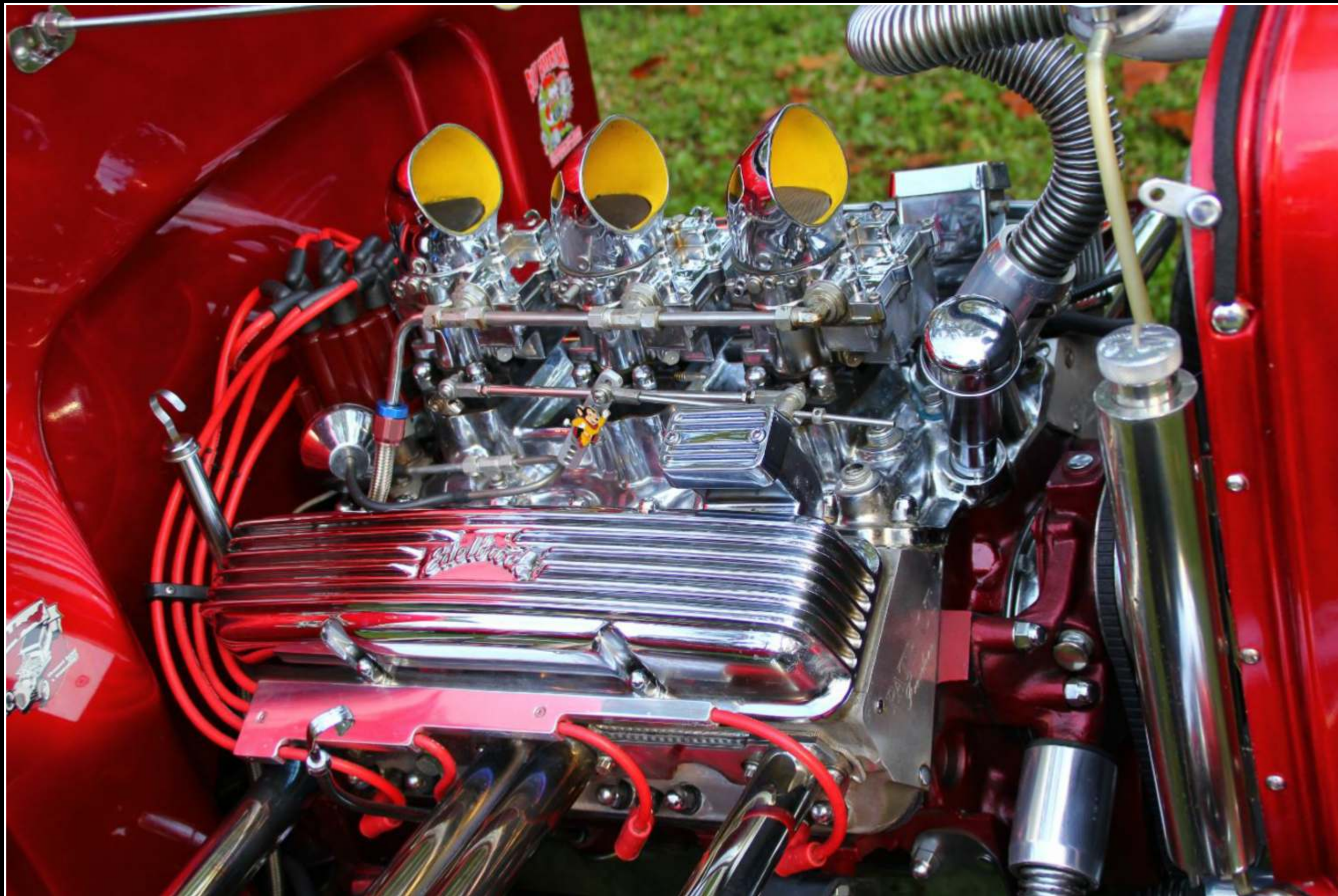






































































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