

## All-New 2017 Ford F-Series Super Duty®: Toughness and Innovation from the Ground Up

The all-new Ford F-Series Super Duty brings a new meaning to *Built Ford Tough*, standing out as the toughest, smartest, most capable Super Duty lineup the automaker has ever made. Not only is the 2017 Super Duty tougher than the previous model, it's also lighter, with its well-documented change to high-strength, military-grade aluminum-alloy body panels for the first time—following the switch of the F-150 two years ago—contributing to an overall weight reduction of up to 350 pounds and improving towing capabilities, payload potential and fuel economy.

Completely redesigned from the ground up, the new Super Duty now comes with a fully-boxed and all-welded frame—versus the open C-channel, mostly-riveted design in the previous model—with 95 percent of it using high-strength steel (HSLA 550), six times the amount in the last Super Duty.

It also now incorporates five high-strength-steel crossmembers that are through-welded, including a front crossmember and a transmission-support crossmember, while four or five additional mid-and-rear bolt-on crossmembers (depending on wheelbase size), as well as bolt-on frame extensions for some models, are also available. These improvements help make the frame up to 24 times stiffer than previous-generation Super Duty models.



The 2017 Super Duty frame comes in several crossmember configurations, depending on wheelbase size.

“The new Super Duty frame was developed using industry-first engineering techniques to create a brand-new foundation for the truck without sacrificing any of the legendary Super Duty toughness,” said Gerry Bonanni, Ford senior damageability engineer.

Similar to the repair plan for the F-150, Ford engineers kept repairers in mind when developing Super Duty repair procedures, creating several frame repair kits to help reduce overall repair time and save some vehicles from being declared total losses. Each frame repair kit is detailed with its

own individual instruction sheet, which comes packaged with each service part.

“Not only have we improved the overall repairability of the Super Duty, we continue to maximize lessons we have learned from previous aluminum-intensive vehicles and high-strength-steel frames,” said Bonanni.

The new Super Duty frame is also E-coated, a process that uses an electrical current and a special epoxy material to create a uniform,

*Continued on page 2*

## I-CAR and Ford National Body Shop Network Work to Ensure Complete Repairs

*Are you confident that your shop has the necessary training to produce complete, safe and quality repairs on every vehicle you service, every time?*

In a world of ever-changing vehicle designs and materials, you need to make a commitment to

training for your business to survive.

To that end, a requirement of the Ford National Body Shop Network is to pursue and achieve I-CAR Gold Class® recognition. Gold Class is the highest role-relevant training achievement

recognized by the collision repair industry.

The I-CAR Professional Development Program™ (PDP) provides collision repair and insurance businesses with a reliable training framework for acquiring Gold Class and maintaining the up-to-date knowledge and skills that contribute to proper repairs, improved business performance and risk reduction.

As the collision repair industry confronts a vehicle “technical tsunami” of new technologies, lightweight vehicle materials, and driver-assist and safety systems, up-to-date collision repair training is more critical now than ever.

The I-CAR Gold Class program prepares businesses to meet the challenges of this ongoing technological change. I-CAR training also includes specific courses on new, advanced vehicle types, such as the aluminum-intensive Ford F-150.

To earn the Gold Class recognition, businesses

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# Feature Vehicle – 2017 Ford F-Series Super Duty®

Better, stronger and more capable, the all-new 2017 Ford F-Series Super Duty transforms what it means to be part of America's best-selling pickup for 40 years in a row. Raising the bar with best-in-class diesel torque, towing and hauling capacity—and class-exclusive advanced driver-assist technologies—Super Duty reinvents the heavy-duty pickup standard for the industry.

Here are some details on the 2017 Super Duty, followed by valuable repair information on how to properly address the B-pillar outer panel.

## Vehicle Highlights:

- All-new, fully boxed, high-strength-steel frame and high-strength, military-grade, aluminum-alloy body provide more capable, best-in-class towing—up to 21,000-pound conventional capacity and up to a maximum 32,500-pound gooseneck capacity\* when properly equipped in F-450 configuration. That's on top of best-in-class payload capacity\* of up to 7,630 pounds for F-350 and 4,200 pounds for F-250.
- Enhanced comfort and productivity features include larger, built-in, weight-distributing hitches, available 360-degree camera with 180-degree, split-view display and 8-inch LCD productivity screen. Other features include adaptive front steering, Trailer Reverse Guidance, improved multi-contour seats with large center console and multiple secure options for storage.
- Second-generation 6.7-liter Power Stroke® turbo diesel V8 delivers 440 horsepower and best-in-

class 925 lb.-ft. of torque; standard flex-fuel 6.2-liter V8 gas engine features best-in-class torque of 430 lb.-ft.; standard 6.8-liter V10 gas engine (for F-450 and F-550 chassis cab only).

## Engines:

- 6.2-liter gasoline V8
- 6.8-liter V10 (chassis cab only)
- 6.7-liter Power Stroke turbo diesel V8

## Transmission:

- Six-speed TorqShift automatic transmission
- New, six-speed TorqShift-G automatic transmission (for gas F-250)

## Trim Levels:

- XL
- XLT
- Lariat
- King Ranch
- Platinum

## Safety Features:

- AdvanceTrac® with Roll Stability Control™
- MyKey® programmable vehicle key
- SOS Post-Crash Alert System
- Available class-exclusive inflatable rear outboard safety belts (Crew Cab only)



## Vehicle Body:

- Aluminum and aluminum alloys
- Extruded aluminum rocker panel reinforcement on Crew Cab
- Steel hood hinges
- Body-side outer panels constructed of aluminum alloy
- Bolted, removable front fenders, hinged doors
- Aluminum-alloy hood
- Bonded and riveted aluminum-alloy body panels
- Mastic pads used on floor pan for sound deadening

\*When properly configured. Class is full-size pickups over 8,500 pounds GVWR based on Ford segmentation.

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## New 2017 Ford F-Series Super Duty Frame



95 percent of the frame is made of high-strength steel, six times more than the previous frame.

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protective shell that bonds with the metal, adding extreme durability and inhibiting rust, thus ensuring corrosion protection for the life of the vehicle, while also preventing the aluminum and steel from reacting with each other.

As with the any other vehicle, Bonanni stresses the importance of researching the repair before coming up with a repair plan, and using the multiple resources that are readily available, including the official repair procedures found

Frame Repair Kits	Instruction Sheet Number
Front frame replacement section	SKHC3C-5E029-AA
Rear frame replacement section	SKHC3C-5F040-AA
Transmission crossmember replacement (all frames)	SKHC3C-7H474-AA
Radius-arm bracket replacement	SKHC3C-3D002-AA
Rear spring front bracket	SKHC3C-5B901-AA
Shock tower replacement	SKHC3C-3D020-AA

on [Motorcraftservice.com](http://Motorcraftservice.com) or through [OEMIStop.com](http://OEMIStop.com).

Additional repair-specific information on the Super Duty is planned for future editions of *On Target*, including a closer look at the front apron tube and the differences and similarities with the apron tube on the F-150.

For repair questions on the Super Duty, or any Ford or Lincoln vehicle, contact Gerry Bonanni at (313) 317-9000 or the Ford Crash Parts Hotline: [cphehelp@fordcrashparts.com](mailto:cphehelp@fordcrashparts.com).



The welded-through crossmembers help make the frame 24 times stiffer than previous models.



# Ford National Body Shop Network and I-Car Gold Class



Continued from page 1

must achieve and maintain a high level of role-relevant training across each of the major collision repair roles. This is measured by achievement and maintenance of Platinum™ recognition—earned through I-CAR training—by designated role representatives at the business.

Here are some of the many benefits of earning Gold Class recognition:

## Improve Business Performance

I-CAR collision repair training is designed to give every collision repair professional the knowledge they need—relevant to their role—to perform safe, complete and quality repairs. PDP training has also been proven to help repair facilities improve several key measures of business performance.

## Gain Confidence in Technical Staff

As a shop owner or manager, it can be risky to assume technicians have the knowledge they need to produce complete and safe repairs, or to think that damage appraisers have the skills they need to file an accurate claim without training.

The PDP reduces business risk with systematic training that progressively builds staff skills—and confidence in the skills and knowledge of your technicians.

## Increase Customer Satisfaction

Technicians perform better with more training. The PDP was designed to give auto physical damage appraisers and the technicians who work at each major stage of the collision repair process the knowledge and skills they need to perform their role properly and efficiently. This means reduced cycle time and increased work quality, which in turn leads to greater customer satisfaction.

## Enhance Network Referral Opportunities

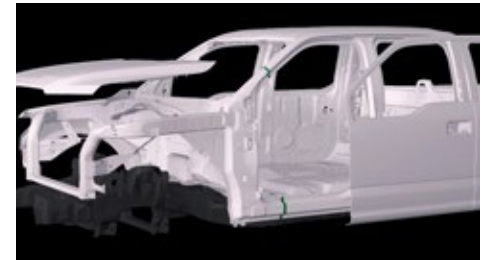
PDP-trained businesses are preferred by the Ford National Body Shop Network and insurers as network members because they understand the impact training has on repair quality, work efficiency and customer satisfaction. In fact,

16 OEMs and a growing number of insurance companies today require I-CAR training of their network participants.

## Improve Human Resource Development

The PDP gives businesses a clear, easy-to-follow knowledge development path for employees involved in collision repair and auto damage appraisal. This enhances their opportunity for career development while also improving employee retention.

For more information on I-CAR's Gold Class recognition or guidelines for proper vehicle repair, visit [i-car.com](http://i-car.com). To begin the Ford National Body Shop certification process for your shop, visit [certifymyshop.com](http://certifymyshop.com) or call (949) 221-0010.



*I-CAR offers robust training classes for new, advanced vehicles including the aluminum-intensive F-150. Each step of the repair is broken down in detailed, fully-animated graphics that help get repairers up to speed on the newest repair procedures the truck offers.*

# Ford Customer Service Division at SEMA 2016



*Senior Ford Damageability Engineer Gerry Bonanni and Ford Collision Marketing Manager Mark Mandl present a seminar that included information on the new aspects of the all-new Super Duty and Ford's National Body Shop Program.*



*Ford Collision Merchandising Manager George Gilbert interacts with attendees in the Ford Customer Service Division display.*



*OEM Collision Repair Roundtable Administrator Chris Caris hosts a special panel on accessing OEM collision repair information, joined by representatives from several automakers, including Ford's Mark Mandl.*

# 2017 Super Duty Crew Cab: B-Pillar Outer Panel Repair (Part 1)

Continued from page 2

Below is an outline covering the first half of the B-pillar outer panel repair for the 2017 Super Duty, detailing the removal process of the B-pillar component. For more in-depth repair information, on this and other Ford vehicles, please consult the *Ford Workshop Manual*, which can be found at [Motorcraftservice.com](http://Motorcraftservice.com).

Tools / Equipment / Materials:

- 6.5 mm Drill Bit
- Spherical Cutter
- Self-Piercing Rivet (SPR) Remover/Installer
- Belt Sander
- Blind Rivet Gun
- Air Body Saw
- MIG/MAG Welding Equipment
- Locking Pliers
- Metal Bonding Adhesives: TA-1, 3M™ 08115, Fusor® 108B

## Removal

**WARNING: Body-side sectioning is prohibited within 50mm of door hinge, door striker and restraints anchoring points.**

**NOTE:** Left-hand side of vehicle shown; right-side similar.



Figure 1

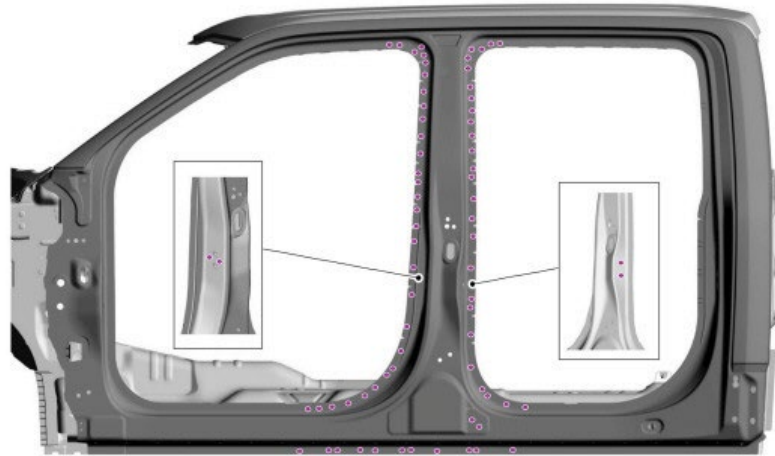


Figure 2

1. De-power the Supplemental Restraint System (refer to Section 501-2B: Supplementary Restraint System, General Procedures).
2. Confirm the vehicle is dimensionally correct (refer to Section 501-26: Vehicle Specific Information and Tolerance Checks, Description and Operation).
3. Remove the rear door (refer to Section 501-03: Body Closures, Removal and Installation).
4. Remove the front door striker and rear door hinges at the body.
5. Remove the front- and rear-door tread plates and door-opening weather strips.
6. Remove the side-curtain airbag (refer to Section 501-2B).
7. Using the air body saw and the spherical cutter, carefully cut the outer panel only. **(See Figure 1)**
8. Using the SPR remover/installer, remove the SPR fasteners. **(See Figure 2)**
9. Break the adhesive bond and remove the B-pillar outer panel.

**NOTE:** Aluminum body panels are highly receptive to heat transfer. With the extensive use of structural adhesives and non-structural sealers in vehicle construction, the potential of heat transfer could impact adhesives and sealers in non-associated panels during the repair process. Many repair areas that utilize structural adhesives may be separated after fastener removal by using a panel chisel along the joint/flange. Heat not exceeding 425°F may be used to loosen a bonded panel, but should only be done **when all panels in the joint** will be replaced and new adhesive applied.

Please note that the illustrations are intended as a general guideline and are not all-inclusive. Be sure to look for the next issue of *On Target*, which will cover the second part of this repair: the installation of the repaired B-pillar outer panel.

For additional repair questions, contact Ford Senior Damageability Engineer Gerry Bonanni at (313) 317-9000 or the Ford Crash Parts Hotline: [cphelp@fordcrashparts.com](mailto:cphelp@fordcrashparts.com)

## INSIDE THE INDUSTRY

### Traffic Deaths Continue to Rise

The National Highway Traffic Safety Administration (NHTSA) says its projections show fatalities on U.S. roads spiked just over 8 percent during the first nine months of 2016, with an estimated 27,875 deaths. The third quarter of the year was the eighth straight with more fatalities than the same quarter the previous year.

### NABC Founder Sulkala to Retire

National Auto Body Council Executive Director Chuck Sulkala has announced he'll retire at the end of the year. Sulkala founded the NABC in 1994 as a way to help improve the image of the collision industry, and has led a number of successful initiatives since, including Recycled Rides, the First

Responder Emergency Extrication (FREE) program, and raising money to help Operation Comfort's Automotivation program to assist wounded veterans returning from Iraq and Afghanistan. A search is underway for Sulkala's replacement.

### Rearview Cameras Reduce Collisions

A new study finds rearview cameras could reduce police-reported backup crashes by 16 percent. The Insurance Institute for Highway Safety research found the backup crash rate fell 40 percent for drivers 70 and older, and 15 percent for drivers younger than 70. Rearview cameras will be required on all new cars and light trucks by May 2018.

### Case Against State Farm Moves Forward

A U.S. Circuit Court of Appeals has denied State Farm's petition to overturn class-action status in the case in which the insurer is accused of secretly

funding the candidacy of Illinois Supreme Court Justice Lloyd Karmeier. Justice Karmeier eventually won that election in 2004, and later proved to be the deciding vote to overturn the \$1.05 billion verdict against the insurer in the landmark *Avery v. State Farm* aftermarket crash parts case. The circuit court ruling means the case can now proceed to trial, pending any further appeals.

### Consumers Not Yet Sold on AV

A new study finds 74 percent of U.S. consumers still doubt the safety of fully autonomous vehicles. The survey, conducted by Deloitte, finds, however, that 68 percent would change their opinion when those vehicles have a proven track record. At the same time, 47 percent of Americans trust traditional vehicle manufacturers to bring AV technology to market, while only 20 percent trust technology companies.



# 2017 Lincoln Continental Added to Anti-Theft Label List

The 2017 Lincoln Continental is the newest addition to the National Highway Traffic Safety Administration's list of vehicles requiring anti-theft identification labels. It joins the Lincoln MKZ, along with 2017 Ford Flex and the upcoming 2017 Lincoln MKT, all of which have been on the list since they were originally introduced.

Automakers are allowed to exempt vehicles from the list for various reasons, however, any individual parts that carry over from the vehicle before it was exempt will continue to require the label. For example, if a part from a 2015 MKC—on the list at the time but now exempt—is utilized in the current model, it will require an anti-theft identification label; if the part is brand new to the 2017 model year, it will be exempt.

The requirement—established in 1987—calls for the vehicle identification number to be attached to, or inscribed on, up to 14 major components of new production vehicles including fenders,



2017 Lincoln Continental

hoods, doors and decklids. Replacement parts will come with an R-DOT and Ford Oval or FoMoCo label, in an effort to aid the tracing and recovery of stolen parts.

The labels also contain built-in security features to deter aftermarket companies from attempting

to copy or (illegally) remove the label and apply it to an aftermarket part.

While anti-theft labels must not be removed from parts at any time and replacements cannot be ordered, they should not be confused with Important Engine Information (IEI) labels or Vehicle Emissions Control Information (VECI) labels, which can be found in the engine compartment of all Ford and Lincoln vehicles.

VECI labels must be replaced after a collision repair, if needed. Replacement VECI, IEI and other labels (such as battery warnings or hose-routing instructions) can be ordered for 1993-or-newer Ford vehicles by faxing form FPS-8604 (located on [FMCDdealer.com](http://FMCDdealer.com)) to (734) 374-8460. Independent repairers should contact their local Ford or Lincoln dealer for assistance, while any other questions or concerns can be directed to the Label Helpline at (734) 374-8353.

# BASF Ford Technology Review Session: A Preview of Innovations to Come

This past November, *On Target* was invited to the BASF Ford Technology Review and Poster Session event, held at the BASF Coatings Research Center in Southfield, Mich.

The all-day event began with a "poster session" that allowed attendees to leisurely walk around a series of diagrams, demonstrations and other technical information presented in an outline form to gain a quick snapshot of BASF's new processes and procedures. BASF experts in those fields were on-hand to interact with guests and answer any questions directly.

After lunch, Ford attendees participated in the technology review portion of the day. BASF engineers, scientists, chemists, metallurgists and other specialists presented several brief, yet in-depth and technologically complex overviews of advancements they are developing in the world of automotive supply including color trends, heat management, enhanced coating protection technologies, light-weighting, sustainability efforts and more.



Dan Waldon, BASF Engineering & Design Management, addresses the crowd of Ford engineers ahead of the technical presentations.

Be on the lookout as *On Target* plans to cover some of those topics in more detail in future issues.

Special thanks to Jeff Wildman, BASF manager OEM & industry relations and to Mary Ann Short, BASF associate manager, market communications for their hospitality. For more information on BASF, they can be contacted at [jeffrey.wildman@basf.com](mailto:jeffrey.wildman@basf.com) or [maryann.short@basf.com](mailto:maryann.short@basf.com).

**Heat Management**

**Composition of Solar Energy**  
Even though we can see the sun as a ball in the sky, over 99% of its energy is invisible. Solar energy spans over three light spectra (Figure 1). Ultraviolet light represents 8%, and can be found in the range of 300-400 nanometers. The visible and near-infrared make up the majority of the spectrum ranging from 400 to 2,500 nanometers.

**Solar Energy Distribution**  
Most of the energy that is absorbed from the sun comes from the near infrared range of the energy distribution. The total solar reflectance can be calculated by the addition of the reflectance in each of these regions. The measurements are represented as a decimal or a percentage.

**Emulating Nature with ECO Efficient "Cool" Pigments**  
Resembling Nature - Heat Management  
An eggplant is able to cool to protect the seeds.

**Why are Cool Coatings Important?**  
Because Cool Coatings can reduce the temperature in a car, the energy in fuel savings can be realized with reduction of air conditioning use.  
Due to this benefit, the US Government is offering Automotive OEMs a CO<sub>2</sub> credit if they use Cool Coatings. This credit could be a large savings for manufacturers. The current regulation is to give the credit to coatings that are >6% reflective.

One of the posters at the "poster session" detailed heat management using "cool" pigments.

## 2017 INDUSTRY EVENTS CALENDAR

Apr. 13	AASP-MN Annual Meeting and Leadership Conference Bloomington, MN <a href="#">AASP-MN</a>	July 24	Collision Repair Education Foundation Annual Golf Outing Chicago, IL <a href="#">CREF</a>	Oct. 19 – 22	ATRA Powertrain Expo Las Vegas, NV <a href="#">Powertrain Expo</a>
Apr. 18 – 19	SCRS Industry Week Pittsburgh, PA <a href="#">SCRS</a>	July 25	Collision Industry Conference General Meeting Chicago, IL <a href="#">CIC</a>	Oct. 31	Collision Industry Conference General Meeting Las Vegas, NV <a href="#">CIC</a>
Apr. 19 – 20	Collision Industry Conference General Meeting Pittsburgh, PA <a href="#">CIC</a>	Jul. 26 – 29	NACE Automechanika Chicago, IL <a href="#">NACE Automechanika</a>	Oct. 31 – Nov. 2	Automotive Aftermarket Products Expo (AAPEX) Las Vegas, NV <a href="#">AAPEX Show</a>
Apr. 24 – 26	Automotive Service Association Annual Meeting Denver, CO <a href="#">ASA</a>	Oct. 4 – 6	Auto Glass Safety Council (AGSC) Auto Glass Week™ Palm Beach, FL <a href="#">AGRSS</a>	Oct. 31 – Nov. 3	Specialty Equipment Market Association (SEMA) Show Las Vegas, NV <a href="#">SEMA Show</a>

# Get it right.



## From the source.

**Ford and Lincoln Dealers are the one-stop source for all of your collision repair needs.**

Not only are they a great source for technical and repair information, their Ford Motor Company Genuine Parts can help your body shop reduce cycle time, improve relationships with insurance companies and satisfy customers. So, call your local Ford or Lincoln Wholesaling Dealership today for all your Genuine Parts needs.



FORD PARTS

## SHARE YOUR THOUGHTS

The purpose of **On Target** is to provide Ford and Lincoln dealership parts departments and independent collision repair shops with the general and technical information needed to deliver efficient, high-quality repairs to Ford, Lincoln and Mercury vehicle owners. In addition, information on parts wholesaling policies and procedures, and collision repair industry activities will also be featured.

**On Target** is scheduled to be published three times a year.

Your comments and article ideas are welcome.

You can e-mail **On Target** at:

[cphelp@fordcrashparts.com](mailto:cphelp@fordcrashparts.com).

Additional copies of **On Target** are available on the home page on [FMCDealer.com](http://FMCDealer.com).

Independent collision repair shops should contact their Ford or Lincoln wholesaling dealer.

**On Target** is also available free of charge by clicking on the Ford page at [OEMIStop.com](http://OEMIStop.com).

## On Target

Produced for Ford and Lincoln wholesaling dealers and their collision repair customers.

### Editor

George Gilbert

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Steven Lubinski Andrea Presnell



FORD PARTS

Dealership Information

# Crash Parts Order Form

Use this form to provide us with the information necessary to make certain we deliver the right parts on time ... the first time!

The information below can be found on the certification label located on the driver's-side door jamb.

If the vehicle is damaged in this area provide us with the Vehicle ID# located on the driver's-side front corner of the dashboard.

<b>VEHICLE ID#</b>	(Need all 17 Digits)				
<b>TRIM CODE</b>		<b>YEAR</b>		<b>DAMAGE AREA (Circle)</b>	
<b>MLDG. CODE</b>		<b>MAKE</b>		FRONT	REAR
<b>BODY CODE</b>		<b>PHONE:</b>	( )	LEFT SIDE	RIGHT SIDE
<b>CONTACT:</b>		<b>SHOP:</b>		UNDERBODY	LEFT / RIGHT

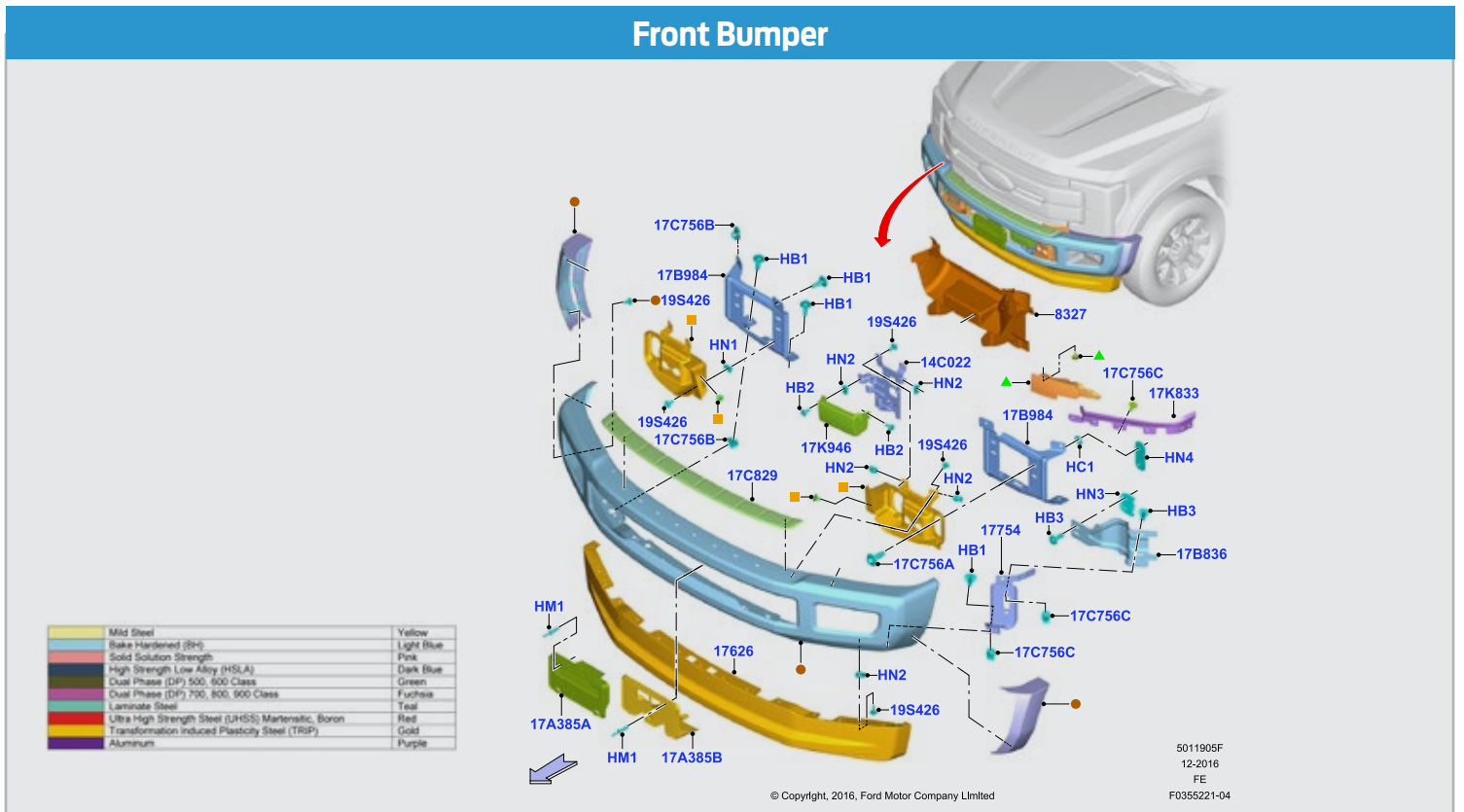
## 2017 FORD SUPER DUTY®

Date Ordered:	<b>PARTS ORDER</b>	Date Needed:
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QUANTITY	PART NUMBER / PART DESCRIPTION

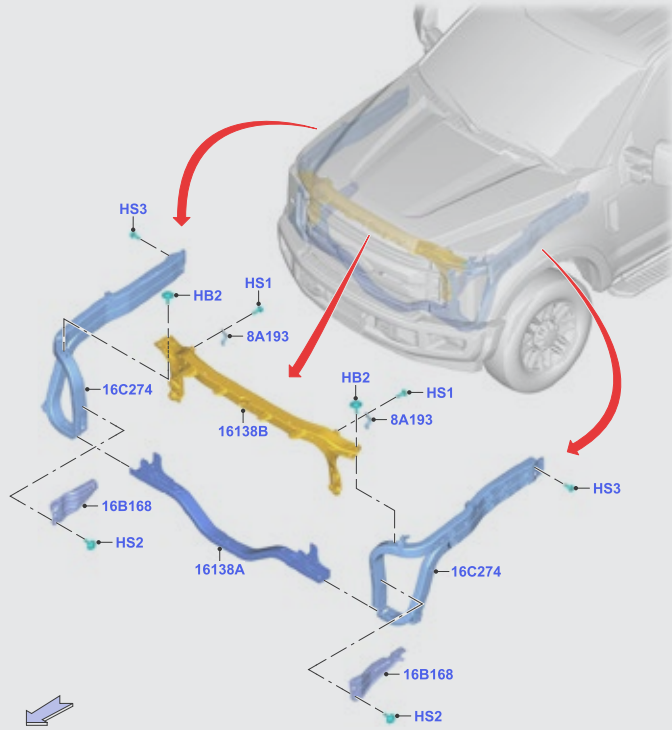
**NOTE: Refer to vehicle diagrams for part identification and numbers.**

### Front Bumper

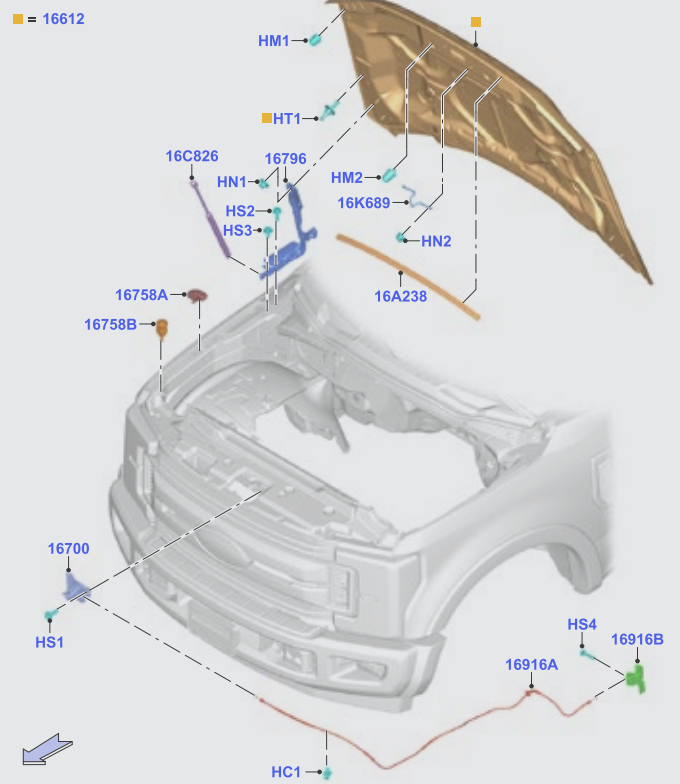




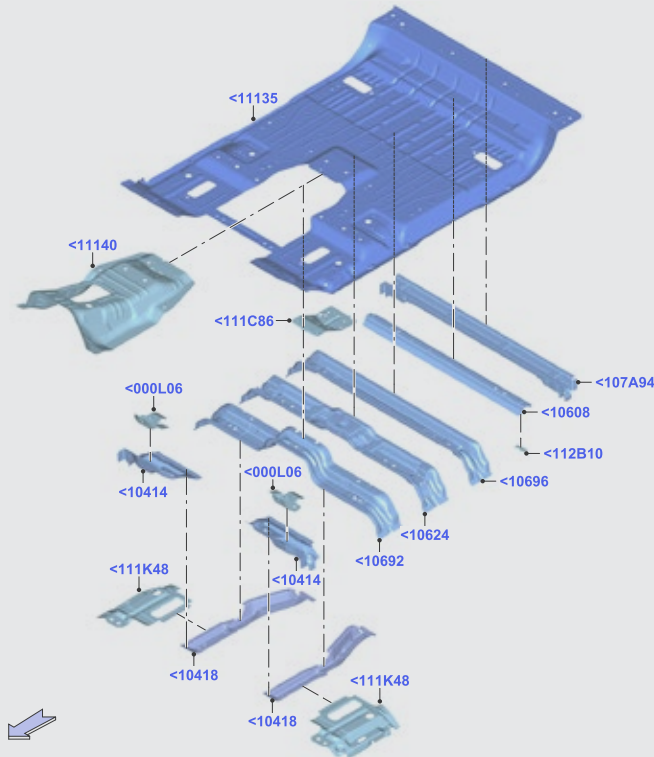
### Front Apron



### Hood



### Rear Floor Pan



### Inner Side Panels

