On Target



VOLUME 2 - 2017

2017 F-150 and F-250 Front Apron-Tube Repair: Similarities & Differences



Ford Senior Damageability Engineer Gerry Bonanni discusses kev aspects of the repair on both new trucks

In completely redesigning the aluminum-allov Ford F-150 and now the

F-Series Super Duty. Ford had several benchmarks it wanted to achieve, not only regarding the assembly of both trucks—making them the toughest, smartest and most capable pickups the automaker ever created—but also in terms of the repairability of both vehicles.

"When we were developing the overall repair plan for the F-150 and for the Super Duty, we had our own mandates as well," said Gerry Bonanni, senior damageability engineer for Ford Motor Company. "One of the most important was to keep collision repairers in mind. Both the F-150 and the Super Duty feature upstream designs to enhance and improve overall repairability, and one of the specific areas addressed involves the front apron tube (front rail) on both vehicles."

The previous front apron-tube repair on the F-150 and Super Duty (before both vehicles switched to an aluminum-alloy body) was a complex, invasive operation, but above all else, it was time-

consuming. In the older design, the front apron tube was more of an internal piece, requiring the repairer to tear down the vehicle's A-pillar and remove the entire instrument panel.

Said Bonanni. "This was a real beast of a repair. one that I personally received a lot of feedback on and was asked if there was anything that could be done about it."

Cascading that information to the design team, the engineers—as part of the vehicle's upstream design—completely overhauled that section on both vehicles and simultaneously upgraded the associated repair procedure.

"The apron tube on both vehicles has been pulled further out from its original location inside the vehicle and is now much easier to access," said Bonanni. "Repairers no longer have to remove the A-pillar or even touch the instrument panel. This new, modular design not only makes the overall apron-tube repair easier and more straightforward, it now saves an incredible amount of time—up to seven or eight hours."

"Since both vehicles share similar architecture, the repairs on each are similar in many respects." Bonanni added. "For example, the front apron on each truck must be replaced at factory seams only. Sectioning is not permitted and there is no approved procedure. With that said, there are





some specific differences repairers need to take into consideration."

While the apron tubes for both trucks attach to the cowl in similar ways, the Super Duty incorporates a dual-tube design on both sides of the vehicle. This is to accommodate the larger. wider diesel engines, cooling packs and powertrain.

Another very specific difference is that the apron tubes are made of different materials: On the F-150, it's a hydroformed aluminum component, whereas on the Super Duty, it's hydroformed HSLA-350 steel. To prevent the steel and aluminum from interacting with each other, the steel apron tube on the Super Duty—along with

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Ford Collision Parts Truckload Program Celebrates 20 Years, Continues Growth

Ford Customer Service Division's (FCSD) Collision Parts Truckload Program—which began modestly in 1997 with only one part category and 40 fascias—is celebrating its landmark 20th anniversary this year while continuing to expand, adding 80 new parts, which pushes the total to more than 650 parts spread across over a dozen part categories.

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FCSD COLLISION TRUCKLOAD

PROGRAM



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Paint Shop Productivity - A Holistic Approach to Prep

Courtesy of Shawn Ryan (3M AAD Technical Service)

Paint shop productivity is a topic that always seems to come up, so there is clearly a demand for continually updating our best practices, but we have yet to organize them into a system that works.

A Holistic Approach to Productivity

The most productive paint teams understand that simply ramming a job through prep and paint does not increase throughput. But how can we improve prep work without taking a bite out of the bottom line? A step-by-step, holistic approach allows you to easily examine the impact one step in the process has on the next.

Wash First!

Not every shop has the capacity to thoroughly prewash every job. That said, everyone can pre-wash with a waterborne cleaner before they start the sanding process. Following the pre-wash with a solvent wax and a grease remover can eliminate any contaminants that were not removed with the waterborne cleaner. This includes the jambs and adjacent panels. Remember, there are two kinds of contaminants: natural and man-made. Using both a waterborne and solvent cleaner removes all of the contaminants, and greatly reduces the chance that any contaminants will be forced into the paint surface during the sanding process.

Verify Color Match

For paint departments that check color prior to entering the paint booth, this is a keystone best practice. Verify the color on the clean panels adjacent to the panels that will be painted. Many times vehicles have been painted before, so the color on one side of the vehicle may not match the side you are painting.

Scuff Before Sanding

Scuff the outer perimeter and recesses first. The straight-line or "rake" marks created from scuffing can add hassles if they're not removed prior to entering the booth, especially on blend panels. By scuffing first and then following with a DA sander, you'll remove straight-line scratches and leave a uniformly de-glossed surface. When sanding the panel, always use an interface pad and quality abrasives such as 3M finishing film or flexible abrasives. These provide a softer finish than traditional paper-backed abrasives, reducing those curlicues that metallics can fall into on blend panels.

Blow Away the Debris

After the panel is fully sanded and uniformly de-glossed, blow off the entire vehicle using clean compressed dry air. Pay special attention to recesses, door jambs, wheel-well areas and cowls.

Wash Again!

Here is why it's very important to wash before you mask: It is impossible to wash panels with masking material on them as thoroughly as you can wash panels without it. Again, using both the solvent and waterborne cleaner, thoroughly wash the panel and adjacent areas, paying special attention to the jamb areas. If you are painting parts that don't require masking separately from the vehicle, wash these as well before loading them into the booth.





Close the Jambs

For jobs that require masking, close the jambs and mask the perimeter. Depending on your shop's practices and work volume, this may be done outside of the booth. Start by closing the jambs that will not be required for getting the vehicle into the booth. Masking foams, such as 3M™ Soft Edge Foam Masking Tape Plus, are a simple and effective way to seal the jamb. The masking foams also work

great for closing fuel doors, door handles and trim molding openings.

Minimize Materials – Maximize Time

By skipping the masking paper step, you can get cleaner jobs and reduced costs. Instead, using wide masking tape, back-mask the perimeter of the repair for plastic sheeting.

Wash Again!

After the vehicle is positioned in the booth and the plastic sheeting has been secured, wash the vehicle one last time. Using a waterborne wax and grease remover, or even just hot tap water on a clean towel, removes any minor dust and fingerprints from the surface. It also reduces any static on the surface, especially on plastic parts. Since the panel has been cleaned twice prior, this last step does not require much effort. To finish, tack the entire panel, paying attention to the corners and recesses.

One of the keys to paint shop throughput is to make sure the current step in the process does not create extra work for the following step. The basics of this approach—taking just a few extra moments to properly de-gloss and clean the panel—provide a solid foundation for adhesion and color uniformity, and reduce the amount of debris in the paint.

Done at each step, this approach minimizes the time required to cut and buff prior to delivery. Incorporated into your everyday paint shop operation, it can make your entire paint shop operation more productive and more profitable.

For more information on surface preparation and other beneficial procedures, contact your local 3M representative or visit **www.3MCollision.com**.

Truckload Program Marks Two Decades

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"20 years is a rare milestone for an OE parts program," said George Gilbert, Truckload Program manager for FCSD. "This anniversary is a testament to the enduring mission of the program, which has always been to provide repairers and insurers—and subsequently Ford vehicle owners—the genuine OE replacement parts they want and expect, at competitive prices."

61 new parts were added during the program's usual timeframe in early April, while 19 supplemental parts were added in June.

The additions include: 20 headlamps, 10 steel bumpers, nine grilles, eight brackets, six bumper bars, five bumper extensions, five fascias, four mirrors, four tail lamps, three isolators, two fog lamps, two GOR/GOPs, one radiator support and one step pad.

By offering Ford and Lincoln wholesaling dealers—the exclusive distributors of genuine Ford replacement collision parts—competitive

prices on bulk purchases of high-volume collision parts, the Truckload Program has allowed them to compete more effectively against non-OEM copy parts and other parts specified by insurance customers. FCSD continually evaluates and updates the parts on the program to keep the most in-demand parts competitively priced. This is a win-win-win situation for insurance companies, body shops and consumers.

The program currently covers 13 replacement part types, including bumper fascias, steel bumpers, bumper bars, exterior lighting, mirrors, brackets, wheels, header panels, grilles/GORs/GOPs, isolators/impact pads/shafts, bumper extensions, step bumpers and valances.

For more information on FCSD's Collision Parts Truckload Program, or for a list of the 650+ parts currently available, contact your local Ford or Lincoln collision parts wholesaling dealer or the Ford Collision Parts Hotline at: cphelp@fordcrashparts.com.

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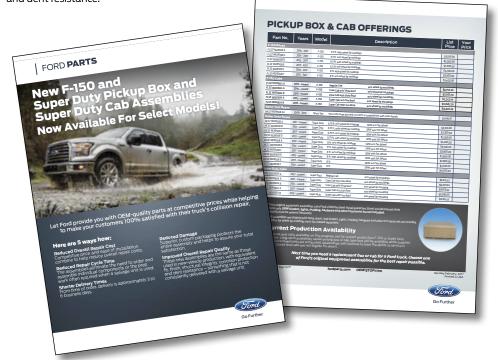
Aluminum Pickup Box and Cab Assemblies Now Available

Ford Customer Service Division has refreshed its pickup box and cab offerings to include assemblies for the aluminum-alloy F-150 and new aluminum-alloy Super Duty*.

By providing original OEM replacement pickup boxes and cabs at the new discount prices, repairers can pass along the competitive pricing to their customers, while providing top-quality repairs that offer equivalent fit, finish and structural integrity of the original part. These parts also carry Ford's lifetime sheet metal guarantee, which includes corrosion protection and dent resistance.

"The pickup box and cab assemblies eliminate the need to order and assemble individual components and the prep work often required when a salvage unit is used," said George Gilbert, collision merchandising manager for FCSD. "The competitive prices and ease of installation combine to help reduce overall repair costs."

These boxes and cabs are available while supplies last and are for current production vehicles only. For more information, contact your local Ford or Lincoln dealer, or the Ford Crash Parts hotline at cphelp@fordcrashparts.com.



F-150 and F-250 Tube Repair Differences

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the rivets, fasteners and adhesives—are all isolated by a special powder coating. That coating also appears on all genuine Ford replacement parts, guaranteeing a robust repair.

The installation techniques are also different. On the F-150, installation involves only rivets; no welding of any kind is permitted. However, on the Super Duty, MIG and Plug welds are allowed as the repairer sees fit. In addition, the apron tube on the Super Duty may be separated at weld-joints to meet repair needs.

This information is intended as a general guideline and is not all-inclusive. "Repairers are strongly advised to research the repair," concluded Bonanni. "That is probably the single strongest piece of advice I can give."

More information can be found in each vehicle's entry in the official *Ford Workshop Manual*, Section 501-27: Front End Sheet Metal Repairs – Fender Apron Panel Reinforcement, which can be accessed through *Motorcraftservice.com*.

Both apron-tube repairs are also detailed in specific instruction sheets. For the F-150, see instruction sheet # SKFL34-16E060-AA. For Super Duty, see instruction sheet # SKHC3B-16E060-AC. Instruction sheets come packaged with the replacement parts, and can also be found on *OEMIStop.com* and *I-CAR.com*.

For additional questions, contact the Ford Collision Parts Hotline at **cphelp@fordcrashparts.com**, or Gerry Bonanni at (313) 317-9000.

INSIDE THE INDUSTRY

Mississippi Consumer's Guide

The state of Mississippi has released a new **Consumer Guide to Insurance and Auto Body Repair.** It reminds consumers they have the right to use the collision shop of their choice and that the cheapest estimate doesn't always include all the procedures and parts needed to properly repair a vehicle. It also urges consumers to make sure a shop's technicians are properly trained to repair their particular vehicle, model year and type of repair, and offers suggestions on how to inspect a vehicle after a repair, among other helpful hints on navigating the repair process.

PPG Ends Bid to Buy AkzoNobel

PPG has announced it has withdrawn its final offer to purchase AkzoNobel and that it will no longer pursue the acquisition. PPG had publicly attempted to merge the two automotive coatings

giants since March of this year, with its most recent offer totaling \$28.8 billion. In deciding to remain independent, AkzoNobel says it intends to spin off its Specialty Chemicals business into a new company.

P/C Insurers Report Underwriting Loss

U.S. property/casualty insurance companies reported a collective underwriting loss of \$4.7 billion in 2016, following a gain of \$8.9 billion the year before. That's according to the Property Casualty Insurers Association of America (PCI), which says insurers still reported overall net income after taxes of \$42.6 billion, though that was down 25 percent from 2015. PCI blames a 42 percent jump in catastrophe losses and slower net written premium growth for the turnaround.

ASA Elects New Board Chair

Roy Schnepper, owner of Butler's Collision in Roseville, Mich., has been sworn in as the Automotive Service Association's new chairman of the board. He joins Ed Cushman (Spokane, Wash.) and Fred Hules II (Peoria, Ariz.) as new board members, while Collision Division Director Scott Benavidez (Albuquerque, N.M.) has been re-elected to a two-year term and Bill Moss (Warrenton, Va.) reappointed to a one-year term as secretary/ treasurer. ASA's annual meeting was held in Denver in late April.

State Farm Requires Welding Certification

State Farm has announced it will now require the Inter-Industry Conference on Auto Collision Repair (I-CAR) Welding Training & Certification for collision repair shops to remain on its Select Service Program. For those shops with 10 or fewer technicians, at least one will be required to complete I-CAR's two steel welding courses by the end of this year, and the aluminum course by March 31, 2018; for shops with 11 or more technicians, at least two will be required to take the training and maintain their certification.

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2017 Super Duty® Crew Cab: B-Pillar Outer Panel Repair (Part 2)

As part of our ongoing effort to help repairers make the proper repair the first time, we're presenting repairs straight from the official Ford Workshop Manual.

This time we look at the installation of the B-pillar outer panel for the 2017 Super Duty. (For the removal process, please see **On Target – 2017, Vol. 1.)**.

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
 - Sand all repair surfaces using 80-grit sandpaper to remove old adhesive and clean the B-pillar reinforcement mating surfaces.

NOTICE:

- Do not install SPR fasteners directly into old SPR fastener locations. New SPR fasteners must be installed adjacent to the original location matching original quantity.
- Solid rivets or blind rivet fasteners may be used in place of SPR fasteners after enlarging existing holes to 6.5mm.
- Specific technical details, including but not limited to fastener and adhesive information, are included in the Instruction Sheet for each service part, found in the service part packaging. Instruction Sheets can also be found on the Professional Technician Society (PTS) website, located under the Service Tips tab for this vehicle.
- 2. Using the air body saw and the spherical cutter, cut the service panel to fit the repair.

 In butt-weld areas, create a backer plate from an unused portion of the old body panel or service replacement panel, and install on the vehicle at each sectioning joint (refer to Section 501-25: Body Repairs – General Information, General Procedures).

NOTE: The use of a backer plate when creating butt-weld joints will produce a stronger and more uniform repair.

- Apply adhesive to the body side, using the metal-bonding adhesives TA-1, 3M™ 08115, Fusor® 108B. (Figure 1)
- 5. Install the service panel and clamp in position. *(Figure 2)*
- Complete joining of service panel to backer plate and weld the sectioning seams using a MIG welder set up for aluminum (refer to Section 501-25: Body Repairs).
- 7. Using the SPR remover/installer and blind rivet gun, install the fasteners. (*Figure 3*)
- 8. Using the 6.5 mm drill bit, drill the 6.5 mm holes for the blind rivet installation. Using the blind rivet gun, install the blind rivet fasteners.
- Finish by using typical aluminum metal finishing techniques and a fiber-based body filler (refer to Special Repair Considerations for Aluminum Repairs found in Section 501-25)
- 10. Refinish using a Ford-approved paint system.
- 11. Re-install the side-curtain airbag.
- 12. Re-install the front- and rear-door weather stripping, scuff plates, front-door striker and rear-door hinges.
- 13. Re-install and align the rear door.

These illustrations are not all-inclusive. Detailed repair information on this and other Ford vehicles can be found in the Ford Workshop Manual at Motorcraftservice.com.

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

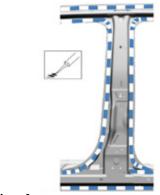


Figure 1



Figure 2

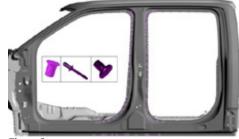


Figure 3

Ford's National Body Shop Program Expands North

The Ford National Body Shop Network is now up-and-running in Canada. Ford Motor Company of Canada says the new program, officially launched in December, is open to both dealership and independent collision repair providers, as is the case in the U.S., and that it will be administered by Certified Collision Care, the Canadian division of Assured Performance Network, which manages the U.S. program.

The program requirements are based upon the essential tools, equipment, training and facilities necessary to repair all Ford and Lincoln vehicles back to manufacturer specifications (including

the new high-strength, military-grade, aluminum-alloy body panels on the F-150 and Super Duty), helping to ensure that vehicle fit, finish, durability, functionality, value and safety are preserved.

Certified shops will receive special Ford Certified signage as part of the integrated Certified Collision Care program and be listed on the consumer-facing online shop locators and smart apps.

For more information, visit **www.certifiedcollisioncare.ca**.



Ford Details Next-Gen ADAS

Already an industry leader when it comes to offering advanced driver-assistance systems (ADAS), Ford Motor Company's commitment to new and improved technologies continues.

With work being conducted in both Dearborn, Mich., and at Ford of Europe's Research and Innovation Center in Germany, some of the newest advancements include:

Pedestrian Detection – Developed by Ford of Europe, this new feature is aimed at drivers concerned about night blindness and fears of hitting something – or someone. Pedestrian Detection utilizes bumper-mounted radar and a windshield-mounted camera to distinguish "pedestrian shapes," with the camera providing 30 snapshots every second. The live-feed video and view angle enables the system to pick out pedestrians, even in low-light conditions and when illuminated only by the vehicle's headlights.

If the system detects a pedestrian collision is imminent, it will first provide an audible and visual warning. If the driver does not react, the system will automatically apply the brakes.

Pedestrian Detection is currently available on the 2017 Ford Fusion as well as the 2017 Lincoln Continental, MKX and MKZ. It will also be available on the 2018 Ford F-150 and the 2018 Ford Mustang.

Evasive Steering Assist – Designed to operate at city and highway speeds, this developing technology uses radar and camera information to detect slower-moving or stationary vehicles ahead and provides steering support to enable drivers to avoid the vehicle if a collision is imminent. The system is activated if there is insufficient space to avoid a collision by braking and the driver decides to take evasive action.

Wrong-Way Alert – This new technology uses a windshield-mounted camera and information from the vehicle's navigation system to give drivers visual and audible warnings should they begin driving in the wrong direction, against traffic.

"Driver-assist technologies help us all be better drivers because they enhance our ability to see and sense the road around us," said Scott Lindstrom, manager, driver-assist and active safety at Ford. "Ford's investment in research and development is paying off by accelerating innovation to expand our portfolio of driver-assist technologies that deliver functionality and performance that customers will value."

Still under active development, Evasive Steering Assist and Wrong-Way Alert are expected to be available on Ford vehicles within the next two years.





DeBeer Refinish Unveils New Toner Technology for OEM Candy Reds

DeBeer® Refinish, a Valspar Automotive brand, has introduced its new patent-pending Metallic Bright Red toner technology, and used a customized 1966 Ford Fairlane to do so. Unveiled at last November's SEMA show in Ford Ruby Red Metallic, the company says the new toner is the first step in a simple, three-part process for refinishing tricky OEM red candy colors.

Paul Goedhart, global director of color technology, Valspar Automotive, says the difference and impact are clearly visible from the first coat—the OEM basecoat formula featuring Metallic Bright Red. "By design, color match is almost spot-on from the first coat of basecoat color. We've eliminated a step by combining the first two layers in the candy repair," he says, referring to

what would traditionally include a grey undercoat followed by a red basecoat.

The second step is a translucent layer—a lightly-tinted intermediate coat for depth and vibrancy—followed by the third and final layer: a 100 percent translucent clearcoat for brilliance and lasting protection.

The Metallic Bright Red toner is available for both solvent and waterborne mixing colors including: 9184 Metallic Bright Red for DeBeer WaterBase 900+ Series and 5184 Metallic Bright Red for BeroBase 500 Series (solvent).

For more information, visit **de-beer.com** or contact them at **refinishinfo@valspar.com** or (800) 321-0672.



Library of 2017 Ford F-Series Super Duty® Videos Available

As Ford continues its rollout of the 2017 F-series Super Duty, it's also been adding new videos to its official <u>Super Duty YouTube Channel</u>, now up to nearly 50.

The brief videos cover almost every aspect of the Super Duty, from the six-part *We Own Work* series—which introduced the truck to heavy-duty truck customers—to videos offering a walk around

the truck, discussing its new aluminum-alloy body.

Others explore how weight savings are reinvested to improve towing and hauling capabilities in the Super Duty, which also features an innovative, new driver-assist technology developed specially for heavy-duty truck customers. In addition to those on Super Duty, Ford also has a library of other YouTube videos—also found on **collision.ford.com**— that focus on **collision repair**, and why it's important for consumers who want to keep their Ford a Ford to **speak up** when it comes to the types of parts used to repair their vehicles.

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.



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

Additional copies of **On Target** are available on the home page on *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**.

On Target

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

Editor George Gilbert

Contributors

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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.

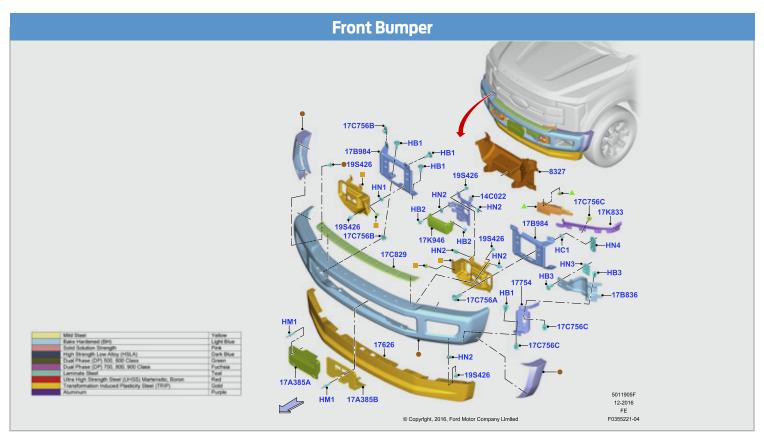
If the vehicle is damaged in this area provide us with the Vehicle ID# located on the driver's-side front corner of the dashboard.

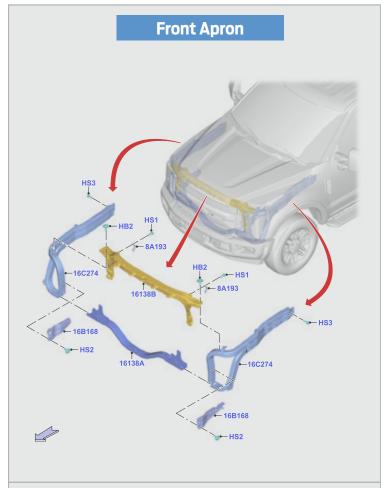
VEHICLE ID#	(Need all 17 Digits)					
TRIM CODE	YEAR DAN		DAMAGE AI	AGE AREA (Circle)		
MLDG. CODE		MAKE		FRONT	REAR	
BODY CODE		PHONE:	()	LEFT SIDE	RIGHT SIDE	
CONTACT:		SHOP:		UNDERBODY	LEFT / RIGHT	

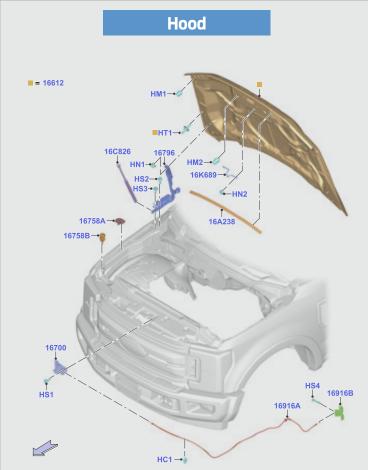
2017 FORD **SUPER DUTY**®

Date Ordered:		PARTS ORDER	Date Needed:
QUANTITY	PART NUMBER / PART DESCRIPTION		

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







Rear Floor Pan <111140</p> <1111086</p> <1000L06</p> <1000L

