

Vehicle: 2016 F-150 SuperCab XLT Sport/FX4 (Black Interior)

1. Parts List

The parts used are listed in Table 1.

Table 1 - Part List

Description	Part Number	Price	Vendor	Comments
CONSOLE ASY - OVERHEAD	HL3Z-28519A58-JA	\$175.00 (delivered)	Fairway Ford, OH (Kevin Kriss)	Overhead Console, in "Ebony", matches black Sport interior. With rear window switch, without sensors.
WIRE ASY	HC3Z-14A303-F	\$130.00 (delivered)	Fairway Ford, OH (Kevin Kriss)	Upfitter Relay Box
WIRE ASY	HC3Z-15A404-B	\$18.22 (\$12.50 delivery fee)	Dwayne Lane's North Cascade Ford (Sue Straathof)	Wire harness that plugs into upfitter switches
WIRING PIGTAIL KIT	WPT-1125	\$28.50	Ebay	To connect relay box with upfitter switch harness.
WINDSHIELD PILLAR TRIM CAP	FL3Z-1531459-BC FL3Z-1531459-AC	\$10.75 (delivered)	Fairway Ford, OH (Kevin Kriss)	A-Pillar Bolt Cover Trim Caps. Needed to replace the stock trim caps, which are disposable because one tab always breaks off when removing. Shipping costs more than the parts!!!
AUTOMOTIVE WIRE - 20 GAUGE -HIGH TEMP TXL WIRE - 11 COLORS - 25' EACH COLOR	NA	\$27.99	Ebay	Twice as long as I needed but all I could find at the time. A better source with cheaper prices and more colors is http://www.wireandsupply.com/category_s/322.htm
MEGA/AMG Safety Fuse Block		\$26.59	Amazon http://a.co/hfbXsAV	Holder for 200 amp fuse that provides main power for relay box
200A MEGA/ AMG Fuses		\$10.63	Amazon http://a.co/3XZJu79	200 amp bolt-on fuse

2. Supplies

- [Coroplast 8310SE Automotive Wire Harness Adhesive Electrical Tape](#)
- Solder
- Adhesive lined heat-shrink tubing
- Ring terminals for 20AWG wire
- [3/16" x 3" x 12" Aluminum 6061 stock](#)
- Patience (limited supply)

3. Wiring Harness (HC3Z-15A404-B) Modifications

This wiring harness includes the C9120 connector that plugs into the overhead console. I needed to separate that connector from the wiring harness and create a "pigtail" with it, keeping the wires as long as possible.

Figure 1 - Console Wiring Harness (HC3Z-15A404-B) Packaging



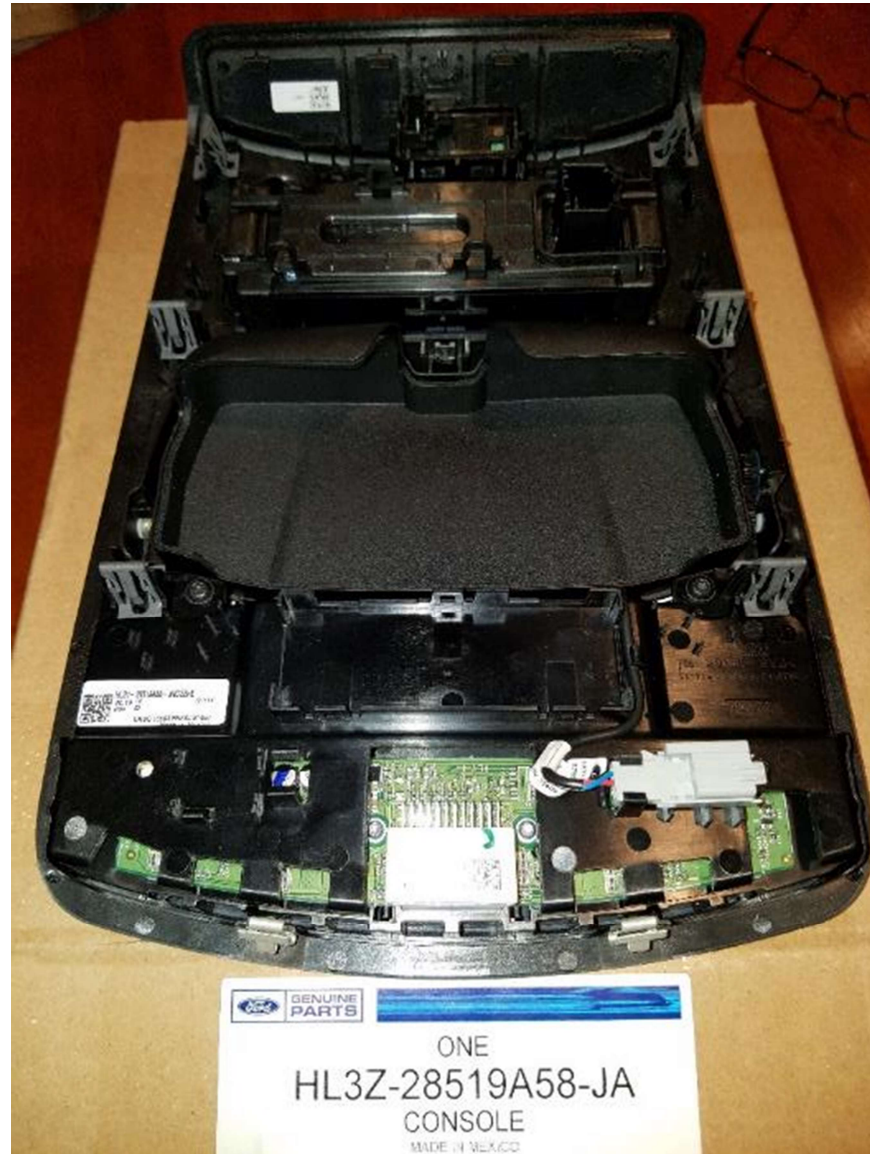
Figure 2 - Console Wiring Harness (HC3Z-15A404-B) Unpacked, and after modification with extra connectors removed and wires extended. Partially taped.



- 3.1 Removed all cloth tape from the entire harness.
- 3.2 Identified the C9120 connector that plugs into the console and cut off the other connectors, maximizing available wire length. This left a pigtail that plugs into the console, with factory wires about five feet long, except for the VT-GY illumination wire on Pin 12 that is about 10" long.
- 3.3 Stripped ¼" off the ends of each wire and plugged the connector into the console connector.
- 3.4 Using a multimeter and wiring diagrams in [Ford SVE Service Bulletin Q-252](#), confirmed and labeled each of the wires.
- 3.5 Soldered an addition 6 feet of colored wire to each of the factory wires. Protected the soldered connections with adhesive lined heat-shrink tubing.
- 3.6 Taped the wires using Coroplast 8310SE Automotive Wire Harness Adhesive Electrical Tape. Separated the black ground wire from bundle so that it was loose in the footwell area.

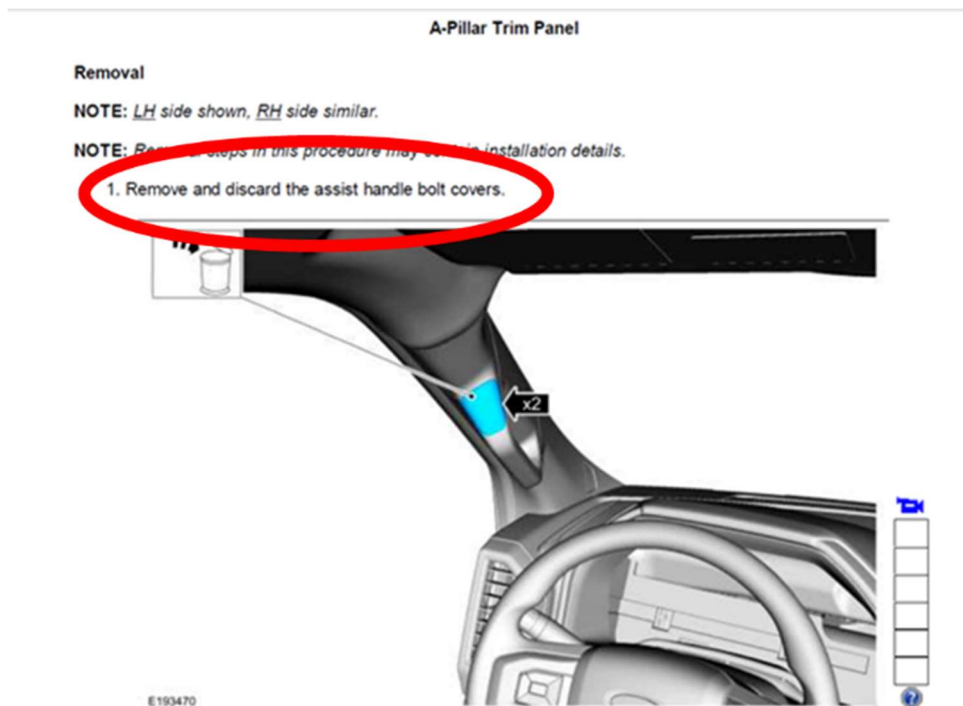
4. Console Assembly (HL3Z-28519A58-JA) Install

Figure 3 - CONSOLE ASY - OVERHEAD (HL3Z-28519A58-JA)



- 4.1 Removed existing console using a plastic trim removal tool. Disconnected existing connectors: SYNC microphone, power sliding rear window switch, and lighting connectors.
- 4.2 Removed A-pillar trim panel. The bolt covers are disposable according to Ford! I tried as carefully as possible to take them off without breaking the locking tabs, but I broke one tab on each cover, so I had to buy replacements: FL3Z-1531459-BC and FL3Z-1531459-AC for my truck.

Figure 4 - A-Pillar Trim Panel Removal Instructions



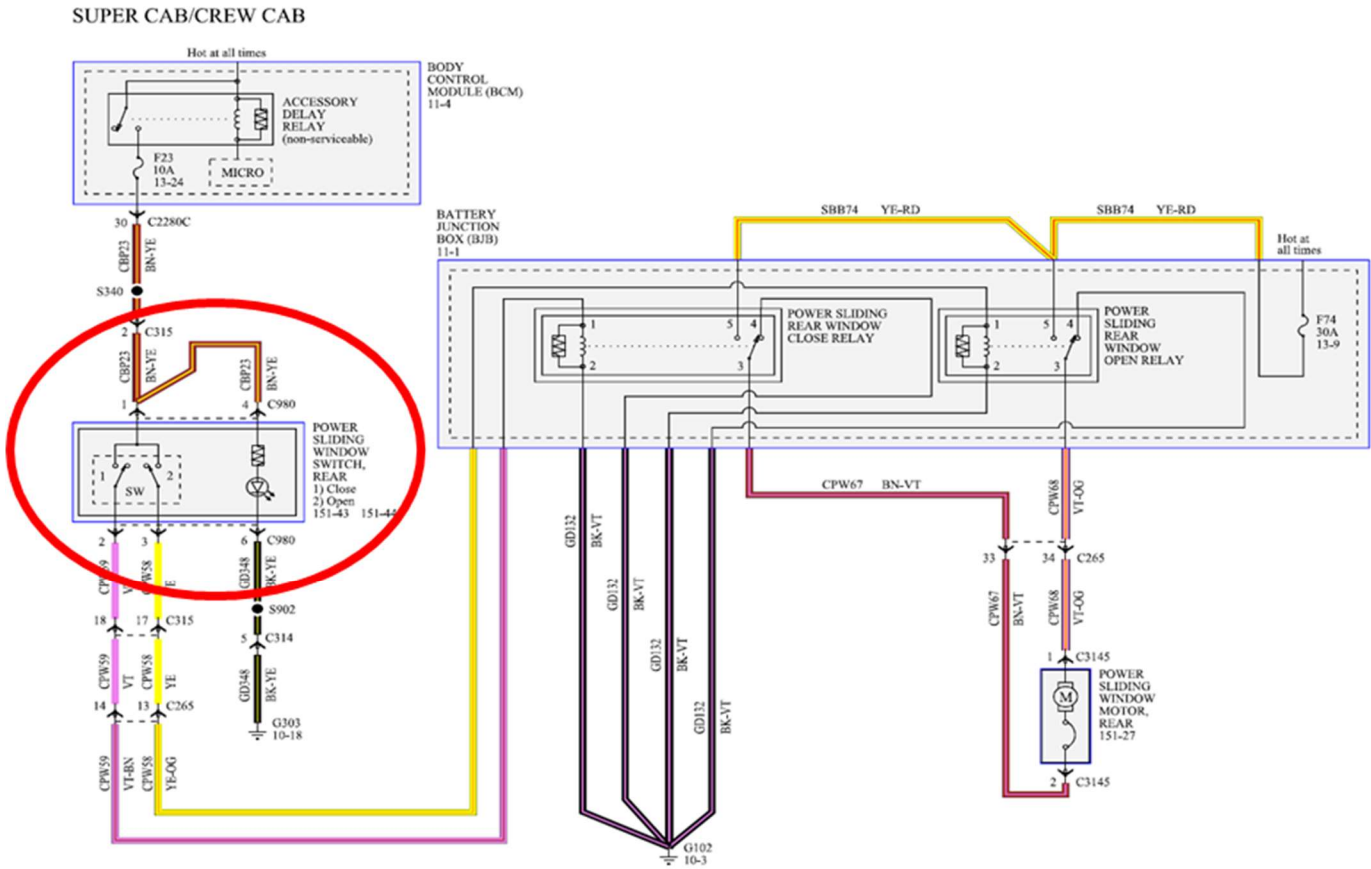
- 4.3 Using fish tape, pulled wires from the console across the roof, down the A-pillar and into the driver foot well.
- 4.4 In the driver's foot well, connected the black ground wire that comes from C9120 Pin 3 (Black) to factory ground point G202 behind dash panel, below steering column.
- 4.5 With the help of a short piece of stiff wire and some pure silicone spray, pushed/pulled wire bundle though the rubber gasket in the firewall and into the engine bay.

Figures 5a & 6b - Wire Bundle under Dash and in Engine Bay



- 4.1 In the console area, connected the C9120 Pin 12 (VT-GY) switch illumination wire to the BN-YE wire on C980 Pin 4 (Power Sliding Window Switch Rear) – see Figure 6, below. This connection provides constant power to the LEDs in the auxiliary switches, but does allow for dimming. This is a deviation from OEM wiring and at some point, I may rewire it like it came from the factory so that the LEDs dim with the rest of the lights.

Figure 6 - Wiring Diagram - Power Sliding Rear Window



- 4.2 Connected the C9120 connector, the power sliding rear window switch connector and the lighting connector to the console.
- 4.3 Snapped the new console into place.

5. Relay Box (HC3Z-14A303-F) and Pigtail Kit (WPT-1125)

Figure 7 - Wire Asy (HC3Z-14A303-F) Upfitter Relay Box and Pigtail Kit WPT-1125



Figure 8 - Pigtail Kit WPT-1125



Figure 9 - Pigtail WPT-1125 Connected to Relay Box Connector



- 5.1 Verified that the WPT-1125 pigtail fits the connector on the HC3Z-14A303-F relay box.
- 5.2 Identified and label the wires on the WPT-1125 pigtail for splicing to wire bundle coming from overhead console.
- 5.3 Soldered/spliced each of the wires coming from the overhead console to the WPT-1125 pigtail.
- 5.4 Removed the 3 unused pins and wires from connector body. If I can find the right sized pins used to create this pigtail, I plan to remove all the green wires from the connector body and repin the connector directly to the wires that come from the console, eliminating all the splices.

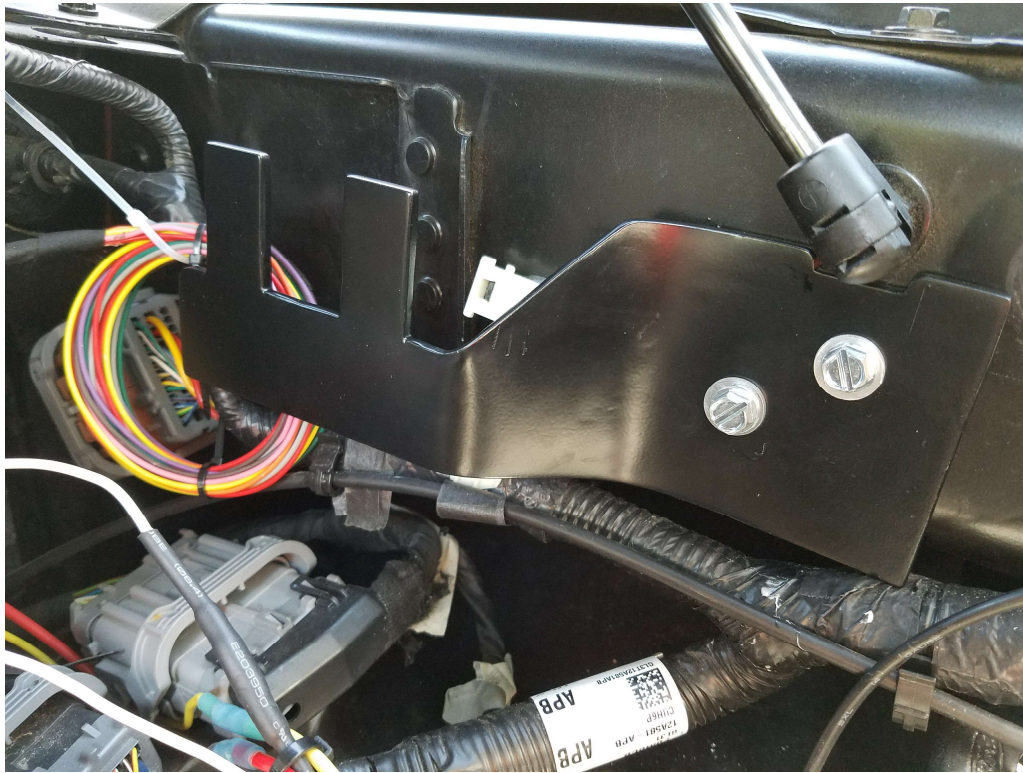
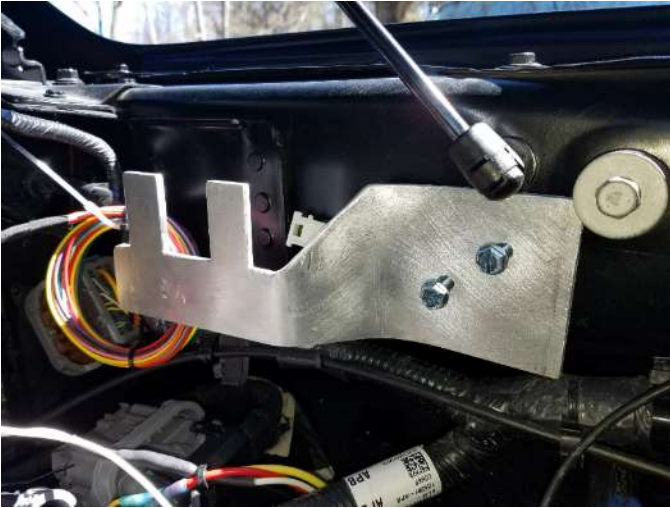
6. Relay Box Mounting

Mounted the relay box in the same spot as "[flsdiver](#)", behind the air box, near where the box is mounted in a Super Duty.

- 6.1 Using a cardboard pattern, created a mounting bracket for the relay box using a piece of 3/16" x 3" Aluminum 6061 stock.



- 6.2 Trimmed bracket to fit the location, and test fit the bracket using ¼"-20 zinc coated steel screws, per the guidance in [Ford SVE Bulletin Q-222](#). Since the entire bracket is aluminum, no aluminum washers are needed.
- 6.3 Painted the bracket using VHT Epoxy Enamel



- 6.4 Attached the relay box to the mount and ensured that the hood closed properly.
- 6.5 Ran the 2AWG main power lead from the relay box to the battery by zip-tying the power lead to the existing wiring harness that runs under the air box, below the cooling fans, and up by the battery.
- 6.6 Attached a waterproof MEGA/AMG Safety Fuse Block to the side of the battery box using ¼" stainless steel bolts.
- 6.7 Shortened the power lead by approximately 2 ½' and used the cut off piece to create a short cable that attached the batter to the Mega fuse.



- 6.8 In order to provide Run/Start power to switches 1-4, connected a wire to fuse 113 using an Add-a-Fuse and a 7.5A fuse. Ran the wire across the engine bay to the Relay Box area and spliced this Run/Start power wire from fuse 113 to the Pin 12 wire in the WPT-1125 pigtail, according to wiring scheme shown in **Error! Reference source not found.** Protected each soldered connection with the adhesive-lined heat shrink tubing that came with the WPT-1125 pigtail.

7. Wiring Scheme

Purpose	Upfitter Switch Harness HC3Z-15A404-B (C9120 Connector)			Intermediate Wire (20AWG) Color	Relay Box HC3Z-14A303-F (C315 Connector)	
	OEM Circuit	Pin	Color		Pin	Color
Ground (Console)	GD233	3	Black	Connect to G202 behind dash panel, below steering column		
Ground (Relay Box)	Connect to G100 Engine compartment, front LH side			1	Black	
Switch 1	CAC05	4	Yellow	Yellow	6	Yellow
Power for Switch 5-6	SB104	5	Green/Red	Red	5	Green/Red
Switch 2	CAC06	6	Green/Brown	Green	9	Green/Brown
Switch 6	CAC14	7	Yellow/Orange	Grey	10	Yellow/Orange
Switch 5	CAC13	8	Blue/Orange	Pink	11	Blue/Orange
Switch 4	CAC08	9	Brown	Brown	4	Brown
Switch 3	CAC07	10	Violet/Green	Violet	3	Violet/Green
Power for Switch 1-4	CBP22	11	Green/Orange	Orange	12	Green/Orange
	Fuse 113 (7.5A)			Orange		
Dimmer	VLN04	12	Violet/Grey	Connect to C930 (Overhead Console) Pin 10		
C9120 Connector				C315 Connector		
