![BRANDMOTION - seamless vehicle personalization]

INSTALLATION INSTRUCTIONS

Rear Vision System – Tailgate Emblem Camera Aftermarket Display
2009-Current Ford F-150 and 2010-Current Super Duty
(Kit part number 1008-6509)

Kit Contents:

Tailgate Emblem Mount with Camera
Chassis Harness with RCA **(Note: In some cases a RCA extension may be required to connect to your aftermarket display.)**
1 bag containing: Ford Emblem
1 bag containing
    2 Tailgate emblem retainers
    2 Mounting Screws
1 bag containing:
    25 Wire Ties
    Z-Tech (in a white bottle)
1 bag containing:
    3 Templates (along with these instructions)

Tools Required:

T30 Torx Driver
7mm, 8mm, and 10mm Sockets
Flat Head Screwdriver
Plastic Trim Removal tool
Drill Bit and small Flat File (if needed)
1 inch and 1¾ inch Center Hole Saws
Soldering Iron
Small brush
Round file (if needed)
Deburring Tool

NOTE: We strive to provide accurate and up-to-date installation instructions. The latest full color instructions, as well as an installation video by viewing the relevant portions of the full mirror kit (part number 1008-9520) can be accessed at www.brandmotion.com

PRE-INSTALLATION VEHICLE CHECKLIST

Before beginning, determine how the vehicle is equipped and check appropriate boxes:

Determine whether the vehicle has an opening in the center of pickup bed close to opposite of the opening in the bottom of the tailgate.

☐ Yes, skip Section 2.

☐ No, tailgate must be removed to drill an opening for the camera harness (refer to Section 2).

Determine whether the vehicle has the required three mounting holes behind the existing tailgate emblem. Refer to Steps 1 & 2 to remove inner tailgate panel, and use supplied 1008-9100-04 template to confirm whether the required holes are present in the panel.

☐ No, use supplied 1008-9100-04 template to position the holes to drill and/or cut the tailgate. If you do not wish to cut the tailgate, Brandmotion offers tailgate handle camera kits (1008-6501, black handle, and 1008-6502, chrome handle) that do not require cutting.

☐ Yes, proceed to Section 3.

☐ Check kit contents are complete against the list on previous page.

TABLE OF CONTENTS

Section 1: Camera Mount Preparation

1. Lower tailgate and remove upper sheet metal cover by removing the eight screws with a T-30 Torx bit (Figure 1).

Figure 1

2. From the inside of the tailgate, verify whether two square mounting holes and a central opening approximately 1-3/4" inch in diameter are present behind the factory emblem. If not, it will be necessary to drill and square two holes for camera mount retainers and a cut an opening for the camera and harness (Steps 5-7).
3. Raise the tailgate. Taking care not to damage the body panel, insert plastic trim removal tool into the base of existing emblem to pry it off (Figure 2).

Figure 2

4. Remove any adhesive remaining on the tailgate.

5. If camera mounting holes and harness opening were present in the existing tailgate, proceed to Step 8. If not, align the supplied 1008-9100-04 template to the two existing emblem locating holes.
6. Mark and center punch the location for the two retaining clip holes and the camera and harness access opening (Figure 3).

Figure 3

7. Drill the two retaining clip holes with a 3/8 inch drill bit. Use a small flat file to square the drilled holes for the retaining clips (recommended method). Alternate method: Drill the two holes with a 1/8 inch drill bit and use sheet metal screws (not supplied in kit) to mount the camera harness. Apply Z-tech to drilled holes.
8. Insert supplied retaining clips (Figure 4).

Figure 4

Section 1: Camera Mount Preparation continued

9. Drill a pilot hole for the camera mount. Using a 1¾ inch hole saw, cut the camera harness opening. Trial fit camera mount and file opening as necessary (Figure 5).

Figure 5

10. Apply Z-tech to camera harness opening.

Section 2: Cut Pickup Bed Opening

Follow Steps 12 through 16 only if the vehicle does not have an opening in the bed above the license plate per Figure 6

Figure 6

12. Prepare a clean, flat work surface for tailgate. Remove tailgate retaining straps. With an assistant, remove the tailgate by lifting away from lower tension pins, and set tailgate aside.

13. Measure 21 inches from the left edge and 1¼ inches from the top and make a temporary mark on the pickup bed (Figure 7).
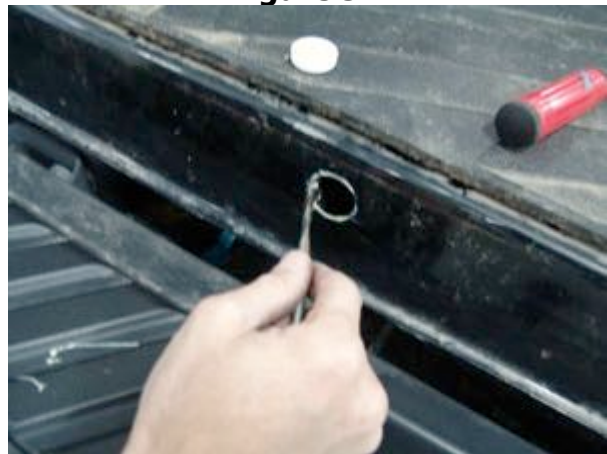
Figure 7

14. Center punch the mark and drill a pilot hole. Next, cut a 1 inch opening with a hole saw (Figure 8).

Figure 8

15. Clean the rough edges of the opening with a deburring tool. Apply supplied Z-tech with a small brush (Figure 9).
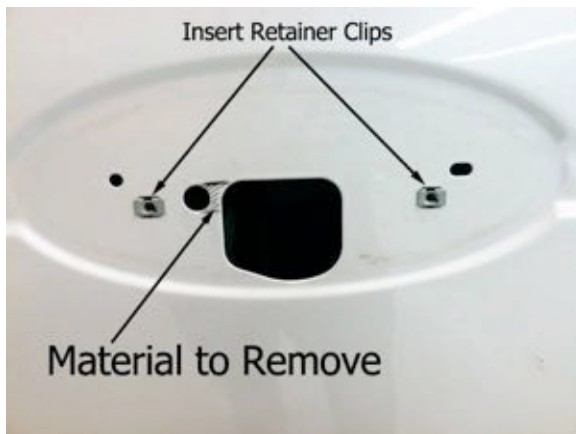
Figure 9

16. With the aid of an assistant, reinstall tailgate on tension pins and reattach straps.

Section 3: Camera Installation

17. Mounting Camera

17a. Remove material between camera opening and round hole for harness clearance (apply supplied Z-tech to any exposed bare metal with a small brush). Insert the two retainer clips (Figure 10).

Figure 10

17b. Route the camera harness through tailgate opening (Figure 1O.5).

Figure 10.5

18. Run camera harness through opening in the base of the tailgate and seat grommet in pickup bed (Figure 11).

Figure 11

19. Using the two supplied 7mm screws, attach camera mount to tailgate. Press the supplied emblem into the camera mount.

INSTALLATION INSTRUCTIONS

Section 4: Chassis Harness Installation

20. Remove the driver side sill plate with a trim tool (Figure 12).

Figure 12

21. Loosen driver side A-pillar molding with hands and then remove the driver side lower kick panel (Figure 13).

Figure 13

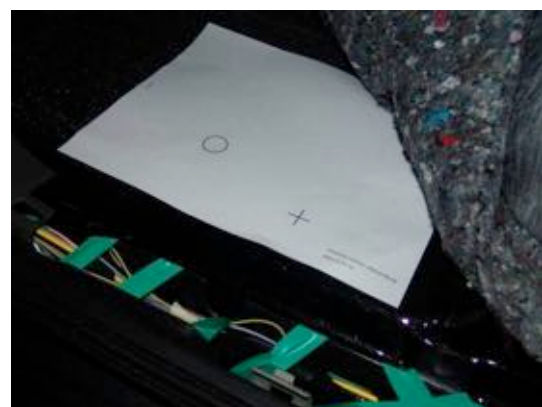**22.** Pull back carpet in front of driver's seat. (Figure 14).

Figure 14

23. Secure Super Duty template number 1008-9100-01 (Figure 15) or secure F150 template number 1008-9100-02 over opening in front of driver's seat (Figure 16).

Figure 15

Figure 16

INSTALLATION INSTRUCTIONS

Section 4: Chassis Harness Installation continued

24. Center punch and drill a pilot hole then drill a 1 inch hole with a hole saw.
25. Clean the hole with a deburring tool (Figure 17).

Figure 17

26. Apply supplied Z-tech with a small brush (Figure 18).

Figure 18

27. Route the supplied chassis harness through the drilled opening and seat the grommet from the inside of vehicle (Figure 19).

Figure 19

INSTALLATION INSTRUCTIONS

Section 4: Chassis Harness Installation continued

28. Route the exterior portion of the supplied chassis harness along existing vehicle chassis harness and over fuel tank. Using supplied tie wraps, secure the harness to existing wiring at 2 inch intervals (Figures 20 and 21).

Figure 20

Figure 21
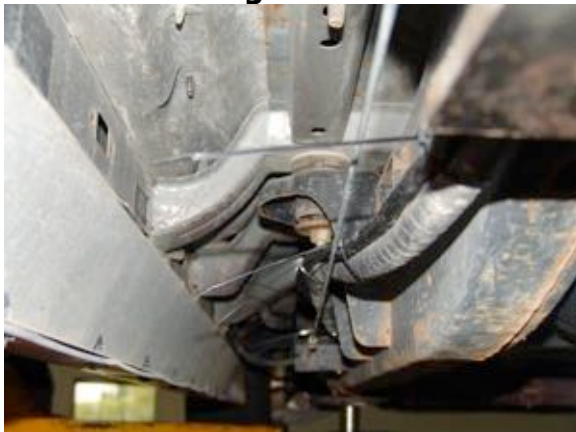
29. Loop any excess from the harness as shown and secure with tie wraps (Figure 22).

Figure 22

30. Plug the chassis harness into the camera harness installed earlier under the pickup bed (Figure 23).

Figure 23

INSTALLATION INSTRUCTIONS

Section 5: Ignition, Reverse and Ground Locations

31. If needed, install aftermarket display or navigation display per instructions.

32. Remove the passenger side door sill plate with a trim tool and remove passenger side kick panel with hands, just disengaging the two clips from the sheet metal (Figure 24).

Figure 24

33. Route the supplied chassis harness green, red, and black wires along the vehicle cross dash harness as shown. Secure using wire ties wherever possible at 2 inch intervals.

34. Splice the green reverse wire from the supplied chassis harness to the wire listed in Diagram A on page 11 depending on your vehicle model. Solder and cover the connection with tape or heat shrink tubing.

35. Attach the black ground wire eyelet from the supplied chassis harness to sheet metal in the passenger side kick panel with a screw using an 8mm socket (Figure 25).

Figure 25

36. Splice the red ignition wire from the supplied chassis harness to the wire listed in Diagram A, Page 11. Solder and cover the connection with tape or heat shrink tubing.

37. Connect the male RCA from the chassis harness to the camera IN on the aftermarket display or navigation display. In some cases a RCA extension may be required.

38. Start the vehicle and shift into reverse. If all of the connections are correct an image will appear on the aftermarket display or navigation display.

39. Reinstall all previously removed interior and exterior parts.

INSTALLATION INSTRUCTIONS

Section 5: Ignition, Reverse and Ground Locations continued

Diagram A

Chassis Harness Ignition & Reverse Locations								Supplied Chassis Harness
Model	**Year(s)**	**Function**	**Connector**	**Dia. Page**	**Location**	**Pin**	**Color**	**Color**
F150	**2012** **(late production)**	Ignition	C2280B	12	Right Kick (BCM)	35	Violet/Green	Red
		Reverse	C2280D	13	Right Kick (BCM)	13	Blue/White	Green
Super Duty	**2012** **(late production)**	Ignition	C2280B	14	Right Kick (BCM)	35	Violet/Green(Gas) Yellow/Orange (Diesel)	Red
		Reverse	C2280D	13	Right Kick (BCM)	13	Blue/White	Green

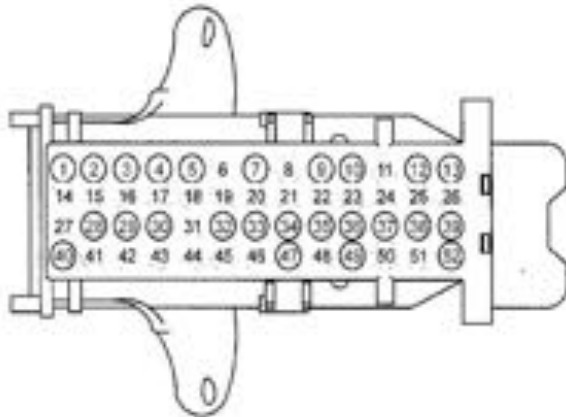**NOTE:** For previous years pinouts, please refer to Section 6B.

Section 5: Ignition, Reverse and Ground Locations continued

Ignition Connector C2280B – 2012 late production F150

Connector: C2280B	Description BODY CONTROL MODULE (BCM)	Color BK²	Harness 14401	Base Part # 14B207	Service Pigtail Not Available

Pin	Circuit	Gauge	Circuit Function	Qualifier
1	SBP09 (RD)	22	FUSE - 9 OR CIRCUIT BREAKER	
2	CBP34 (VT-BN)	22	FUSE - 34 OR CIRCUIT BREAKER	
3	CBP41 (BU)	22	FUSE - 41 OR CIRCUIT BREAKER	SVT Raptor
3	CBP41 (BU)	22	FUSE - 41 OR CIRCUIT BREAKER	
4	CBP31 (BU-OG)	20	FUSE - 31 OR CIRCUIT BREAKER	
5	CBP42 (GN)	26	FUSE - 42 OR CIRCUIT BREAKER	
6	*	*	Not Used	
7	CBP35 (YE-GY)	22	FUSE - 35 OR CIRCUIT BREAKER	
8	*	*	Not Used	
9	CBP36 (BU-BN)	20	FUSE - 36 OR CIRCUIT BREAKER	
10	CBP37 (WH)	22	FUSE - 37 OR CIRCUIT BREAKER	
11	*	*	Not Used	
12	SBP26 (YE-RD)	22	FUSE - 26 OR CIRCUIT BREAKER	
13	CBP38 (GY-BU)	22	FUSE - 38 OR CIRCUIT BREAKER	
14	*	*	Not Used	
15	*	*	Not Used	
16	*	*	Not Used	
17	*	*	Not Used	
18	*	*	Not Used	
19	*	*	Not Used	
20	*	*	Not Used	
21	*	*	Not Used	
22	*	*	Not Used	
23	*	*	Not Used	
24	*	*	Not Used	
25	*	*	Not Used	
26	*	*	Not Used	
27	*	*	Not Used	
28	CDB08 (VT-WH)	22	SWITCH - BRAKE PEDAL POSITION (BPP) NORMAL OPEN	
29	CDC34 (WH-OG)	20	SWITCH - IGNITION # RUN, START	
30	VLF14 (BU-BN)	22	SENSOR - AUTOLAMP DAY/NIGHT	
30	VLF14 (BU)	26	SENSOR - AUTOLAMP DAY/NIGHT	with automatic A/C
31	*	*	Not Used	
32	CLS32 (BN)	26	SWITCH - HAZARD	
33	CRH04 (VT)	26	CTRL MOD. - RELAY HORN	
34	CDC30 (BU-GY)	22	SWITCH - IGNITION # KEY IN	
35	CDC33 (VT-GN)	22	SWITCH - IGNITION # RUN, ACCESSORY	

Pin	Circuit	Gauge	Circuit Function	Qualifier
36	VRT23 (VT-GY)	22	TRANSCEIVER - PASSIVE ANTI THEFT (IMMOBILIZER) # RX DATA (RX_IN)	
37	VRT24 (YE-OG)	22	TRANSCEIVER - PASSIVE ANTI THEFT (IMMOBILIZER) # TX CNTRL	
38	VDB06 (GY-OG)	22	CONNECTOR - DIAGNOSTIC # CAN BUS MEDIUM SPEED HIGH	
39	VDB07 (VT-OG)	22	CONNECTOR - DIAGNOSTIC # CAN BUS MEDIUM SPEED LOW	
40	VLN04 (VT-GY)	22	CTRL MOD. - IP/SWITCH ILLUMINATION	
41	*	*	Not Used	
42	*	*	Not Used	
43	*	*	Not Used	
44	*	*	Not Used	
45	*	*	Not Used	
46	*	*	Not Used	
47	CDC35 (BU-WH)	22	SWITCH - IGNITION # START	
48	*	*	Not Used	
49	CET53 (BU-OG)	20	CTRL MOD. - POWERTRAIN # BRAKE SHIFT INTERLOCK	
50	*	*	Not Used	
51	*	*	Not Used	
52	VDN01 (BU-WH)	20	CTRL MOD. - LIN BUS # SPDJB 1	
52	VDN01 (BU-WH)	22	CTRL MOD. - LIN BUS # SPDJB 1	with inverter module

INSTALLATION INSTRUCTIONS

Section 5: Ignition, Reverse and Ground Locations continued
Reverse Connector C2280D – 2012 late production F150 and Super Duty

Connector: C2280D	Description	Color	Harness	Base Part #	Service Pigtail
	BODY CONTROL MODULE (BCM)	BK	14A005	14B207	Not Available
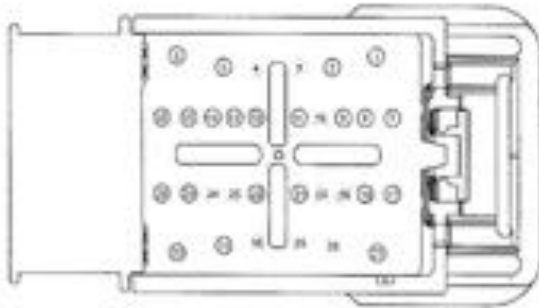
Pin	Circuit	Gauge	Circuit Function	Qualifier
1	SBP03 (BU-RD)	14	FUSE - 3 OR CIRCUIT BREAKER	
2	SBP05 (GY-RD)	16	FUSE - 5 OR CIRCUIT BREAKER	w/memory
3	*	*	Not Used	
4	*	*	Not Used	
5	SBP02 (YE-RD)	18	FUSE - 2 OR CIRCUIT BREAKER	
6	SBP01 (RD)	14	FUSE - 1 OR CIRCUIT BREAKER	
7	CBP33 (WH-BN)	20	FUSE - 33 OR CIRCUIT BREAKER	heated seats
7	CBP33 (WH-BN)	22	FUSE - 33 OR CIRCUIT BREAKER	rear heated seats
8	CBP34 (VT-BN)	22	FUSE - 34 OR CIRCUIT BREAKER	
9	SBP21 (GY-RD)	18	FUSE - 21 OR CIRCUIT BREAKER	ambient lighting
10	*	*	Not Used	
11	SBP07 (WH-RD)	22	FUSE - 7 OR CIRCUIT BREAKER	offline
11	SBP07 (WH-RD)	20	FUSE - 7 OR CIRCUIT BREAKER	online
12	CLS16 (GY-BN)	20	CTRL MOD - STOP/TURN LEFT (INBOARD)	
13	CLS28 (BU-WH)	18	CTRL MOD - RELAY REVERSE LAMP CONTROL (RLC)	
14	CLS52 (BN)	20	CTRL MOD - STOP/TURN RIGHT MIDDLE	
15	CLS19 (VT-OG)	18	CTRL MOD - STOP/TURN RIGHT (INBOARD)	
16	GD139 (BK-YE)	16	GROUND - COWL SIDE/PILLAR A RIGHT # 2ND POINT (SL2T)	
17	CBP32 (GN-VT)	18	FUSE - 32 OR CIRCUIT BREAKER	
18	CBP40 (YE-GN)	18	FUSE - 40 OR CIRCUIT BREAKER	
19	*	*	Not Used	
20	*	*	Not Used	
21	CPL51 (BU-GN)	18	CTRL MOD - DOOR LOCK # DRIVER UNLOCK	
22	CLN09 (YE-GN)	22	RELAY - BATTERY SAVER (E.G. SWITCH OFF INTERIOR LIGHTING)	
23	*	*	Not Used	
24	*	*	Not Used	
25	GD139 (BK-YE)	16	GROUND - COWL SIDE/PILLAR A RIGHT # 2ND POINT (SL2T)	
26	CPL11 (GY-BN)	16	CTRL MOD - DOOR LOCK # ALL LOCK	
27	CBP01 (BU)	12	FUSE - 48 OR CIRCUIT BREAKER	
28	*	*	Not Used	
29	*	*	Not Used	
30	*	*	Not Used	
31	CPL52 (VT-GY)	18	CTRL MOD - DOOR LOCK # PASSENGER DOORS UNLOCK (ALL EXCLUDING DRIVER)	
31	CPL52 (VT-GY)	16	CTRL MOD - DOOR LOCK # PASSENGER DOORS UNLOCK (ALL EXCLUDING DRIVER)	Super Crew
32	SBP19 (BU-RD)	14	FUSE - 19 OR CIRCUIT BREAKER	SONY sound

INSTALLATION INSTRUCTIONS

Section 5: Ignition, Reverse and Ground Locations continued

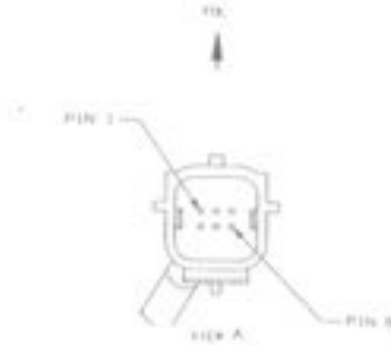**Ignition Connector C2280B – 2012 late production Super Duty**

Connector: C2280B	Description BODY CONTROL MODULE (BCM)	Color BK	Harness 14401	Base Part # 15604	Service Pigtail Not Available
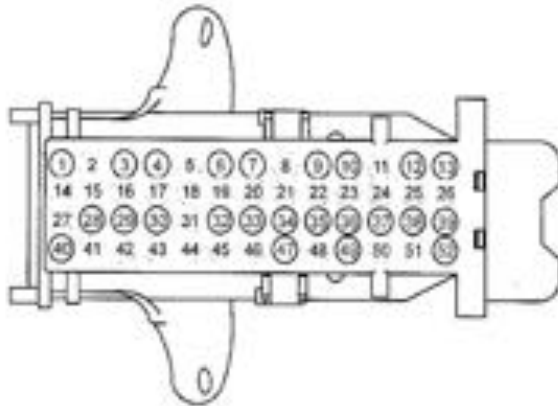
Pin	Circuit	Gauge	Circuit Function	Qualifier
1	SBP09 (RD)	20	FUSE - 9 OR CIRCUIT BREAKER	
2	*	*	Not Used	
3	CBP41 (BU)	22	FUSE - 41 OR CIRCUIT BREAKER	
4	CBP31 (BU-OG)	22	FUSE - 31 OR CIRCUIT BREAKER	
5	*	*	Not Used	
6	CBP44 (VT)	22	FUSE - 44 OR CIRCUIT BREAKER	
7	CBP35 (YE-GY)	22	FUSE - 35 OR CIRCUIT BREAKER	
8	*	*	Not Used	
9	CBP36 (BU-BN)	20	FUSE - 36 OR CIRCUIT BREAKER	
10	CBP37 (WH)	22	FUSE - 37 OR CIRCUIT BREAKER	
11	*	*	Not Used	
12	SBP26 (YE-RD)	22	FUSE - 26 OR CIRCUIT BREAKER	
13	CBP38 (GY-BU)	22	FUSE - 38 OR CIRCUIT BREAKER	with single CD / base audio
14	*	*	Not Used	
15	*	*	Not Used	
16	*	*	Not Used	
17	*	*	Not Used	
18	*	*	Not Used	
19	*	*	Not Used	
20	*	*	Not Used	
21	*	*	Not Used	
22	*	*	Not Used	
23	*	*	Not Used	
24	*	*	Not Used	
25	*	*	Not Used	
26	*	*	Not Used	
27	*	*	Not Used	
28	CDS06 (VT-WH)	22	SWITCH - BRAKE PEDAL POSITION (BPP) NORMAL OPEN	
29	CDC62 (WH-VT)	22	CTRL MOD. - IGNITION ACCESSORY SHUTDOWN # D+	diesel
29	CDC34 (WH-OG)	18	SWITCH - IGNITION # RUN; START	gasoline
30	VLF14 (BU-BN)	22	SENSOR - AUTOLAMP DAY/NIGHT	manual a/c
30	VLF14 (BU-BN)	20	SENSOR - AUTOLAMP DAY/NIGHT	automatic a/c
31	*	*	Not Used	
32	CLS32 (BN-YE)	22	SWITCH - HAZARD	
33	CRH04 (VT-GN)	22	CTRL MOD. - RELAY HORN	
34	CDC30 (BU-GY)	22	SWITCH - IGNITION # KEY IN	
35	CDC63 (YE-OG)	22	CTRL MOD. - IGNITION ACCESSORY SHUTDOWN # RUN	diesel
35	CDC33 (VT-GN)	22	SWITCH - IGNITION # RUN; ACCESSORY	gasoline

Pin	Circuit	Gauge	Circuit Function	Qualifier
36	VRT24 (YE-OG)	22	TRANSCEIVER - PASSIVE ANTI THEFT (IMMOBILIZER) # TX CNTRL	
37	VRT23 (VT-GY)	22	TRANSCEIVER - PASSIVE ANTI THEFT (IMMOBILIZER) # RX DATA (RX_IN)	
38	VDB06 (GY-OG)	22	CONNECTOR - DIAGNOSTIC # CAN BUS MEDIUM SPEED HIGH	
39	VDB07 (VT-OG)	22	CONNECTOR - DIAGNOSTIC # CAN BUS MEDIUM SPEED LOW	
40	VLN04 (VT-GY)	22	CTRL MOD. - IP/SWITCH ILLUMINATION	
41	*	*	Not Used	
42	*	*	Not Used	
43	*	*	Not Used	
44	*	*	Not Used	
44	*	*	Not Used	
45	*	*	Not Used	
46	*	*	Not Used	
47	CDC35 (BU-WH)	22	SWITCH - IGNITION # START	
48	*	*	Not Used	
49	CET53 (BU-OG)	22	CTRL MOD. - POWERTRAIN # BRAKE SHIFT INTERLOCK	
50	*	*	Not Used	
51	*	*	Not Used	
52	VDN01 (BU-WH)	22	CTRL MOD. - LIN BUS # SPDJB 1	

INSTALLATION INSTRUCTIONS

Section 6A: Reference –
Supplied Camera &
Chassis Harness Pinouts

PIN #	FUNCTION	CAMERA HARNESS COLOR	CHASSIS HARNESS COLOR
1	Video (+)	White	White
2	Shield	Blue	Blue
3	Reverse	Green	Green
4	Video (-)	Brown	Brown
5	Ground	Black	Black
6	Ignition	Red	Red

Loose wires provided in the Supplied Chassis Harness	
Function	**Wire color**
Ground (-)	Black
Reverse signal 12V	Green
Ignition 12V	Red

INSTALLATION INSTRUCTIONS

Section 6B: Reference –
## Previous Model Year Ignition and Reverse Locations

Model	Year	Function	Connector	Dia. Page	Location	Pin	Color	Supplied Chassis Harness Color
F150	**2004**	Ignition	C270J	17	Right Kick	2	White / L. Blue	Red
		Reverse	C270E	18	Right Kick	20	Black / Pink	Green
F150	**2005-2008**	Ignition	C270J	17	Right Kick	2	White / L. Blue	Red
		Reverse	C270B	19	Right Kick	12	Green/ Yellow	Green
F150	**2009-2012 (early production)**	Ignition	C2280D	20	Right Kick	16	Blue or Blue/ Red	Red
		Reverse	C215	21	Right Kick	6	Blue	Green
Super Duty	**2008**	Ignition	C264	22	Right Kick SJB	10	Red / Yellow	Red
		Reverse	C264	22	Right Kick SJB	12	Black / Pink	Green
Super Duty	**2009-2012 (early production)**	Ignition	C264	23	Right Kick	2	Blue	Red
		Reverse	C264	23	Right Kick	10	Green/ Blue	Green

INSTALLATION INSTRUCTIONS

Section 6B: Reference –
Previous Model Year Ignition & Reverse Locations continued

Ignition Connector C270J – 2004 – 2008 F-150

Connector: C270J	Description	Color	Harness	Base Part #	Service Pigtail
	CENTRAL JUNCTION BOX (CJB)	BK	14A005	14A067	
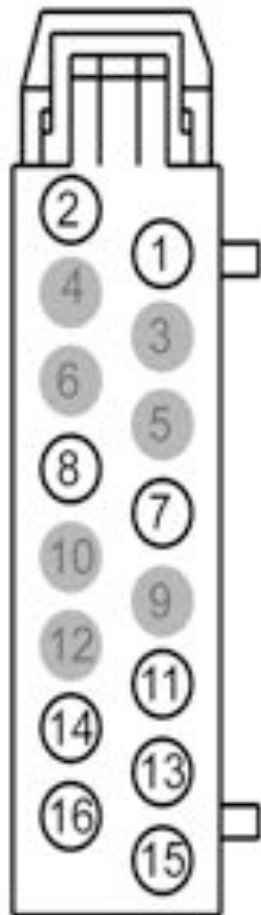
Pin	Circuit	Gauge	Circuit Function	Qualifier
1	59 (DG-VT)	20	Rear window defrost relay output	
2	294 (WH-LB)	20	Voltage supplied in Start and Run (overload protected)	
3	*	*	Not Used	
4	*	*	Not Used	
5	*	*	Not Used	
6	*	*	Not Used	
7	956 (OG-LG)	20	Voltage supplied at all times overload protected	
8	9 (LG-OG)	16	Left rear stop-turn lamps signal feed	
9	*	*	Not Used	
10	*	*	Not Used	
11	720 (RD-YE)	20	Voltage supplied at all times overload protected	
12	*	*	Not Used	
13	937 (RD-WH)	20	Voltage supplied in Start and Run (overload protected)	
14	5 (OG-LB)	16	Right rear stop-turn lamps signal feed	
15	705 (LG-OG)	18	Battery saver relay output	
16	64 (DG)	16	Right rear stop-turn lamps signal feed	

INSTALLATION INSTRUCTIONS

Section 6B: Reference –
Previous Model Year Ignition & Reverse Locations continued

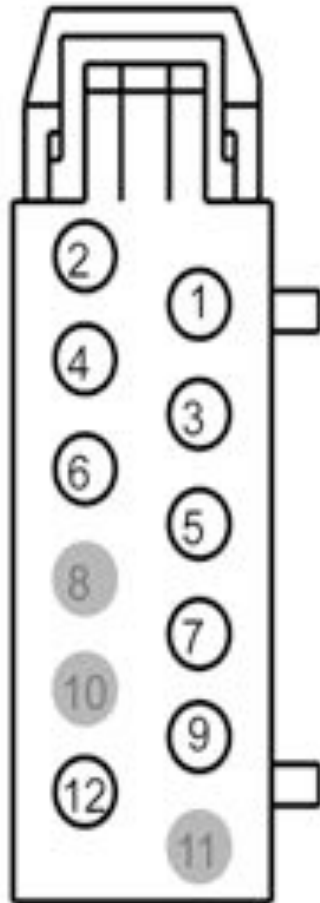### Reverse Connector C270E – 2004 F150

C270e (BK)

14401

Central Junction
Box (CJB)
(14A067)

FEMALE
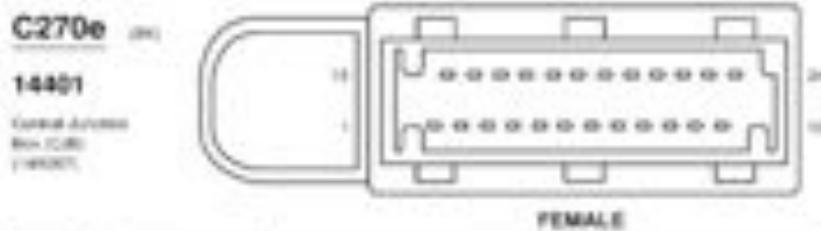
Pin	Circuit	Circuit function
1	1039 (BK/YE)	Voltage supplied in Start and Run (overload protected)
2	14 (BN)	Hot in Park or Head
3	- - -	not used
4	- - -	not used
5	- - -	not used
6	- - -	not used
7	- - -	not used
8	- - -	not used
9	481 (OG)	Front blower motor relay control
10	1005 (VT/OG)	Battery saver relay control
11	- - -	not used
12	1 (DB)	Horn relay control
13	54 (LG/YE)	Accessory delay relay switched power
14	1003 (GY/YE)	Voltage supplied in Start and Run (overload protected)
15	9 (LG/OG)	Left rear stop/turn lamps signal feed
16	729 (RD/WH)	Voltage supplied at all times (overload protected)
17	1266 (RD/YE)	Voltage supplied in Start and Run (overload protected)
18	5 (OG/LB)	Right rear stop/turn lamps signal feed
19	- - -	not used
20	143 (BK/PK)	Trailer tow relay, reversing lamp switched power
21	1332 (LB)	Accessory delay relay control
22	1009 (OG/YE)	Rear window defrost relay control
23	296 (WH/VT)	Voltage supplied in Start and Run (overload protected)
24	1000 (RD/BK)	Voltage supplied in Start (overload protected)

INSTALLATION INSTRUCTIONS

Section 6B: Reference –
Previous Model Year Ignition & Reverse Locations continued

Reverse Connector C270B – 2005-2008 F150

Connector: C270B	Description CENTRAL JUNCTION BOX (CJB)	Color BK	Harness 12A581	Base Part # 14A067	Service Pigtail XF2T-14A464-KA

Pin	Circuit	Gauge	Circuit Function	Qualifier
1	295 (LB-PK)	18	Voltage supplied in Start and Run (overload protected)	
2	1856 (GY-DG)	20	Voltage supplied in Start and Run (overload protected)	Late production
3	533 (TN-RD)	18	Voltage supplied in Start and Run (overload protected)	
4	1683 (DG)	20	Voltage supplied at all times (overload protected)	
5	160 (DB-WH)	18	Headlamps low beam switched power	
6	65 (DG)	20	Voltage in Run or Accessory (overload protected)	
7	883 (PK-LB)	16	Voltage supplied at all times (overload protected)	
8	*	*	Not Used	
9	161 (DG-OG)	18	Headlamps low beam switched power	
10	*	*	Not Used	
11	*	*	Not Used	
12	1043 (DG-YE)	20	Trailer tow relay, reversing lamp control	

INSTALLATION INSTRUCTIONS

Section 6B: Reference –
Previous Model Year Ignition & Reverse Locations continued

Ignition Connector C2280D – 2009-2012 (early production) F150

Connector:	Description	Color	Harness	Base Part #	Service Pigtail
C2280D	SMART JUNCTION BOX (SJB)	BK	14A005	14B207	
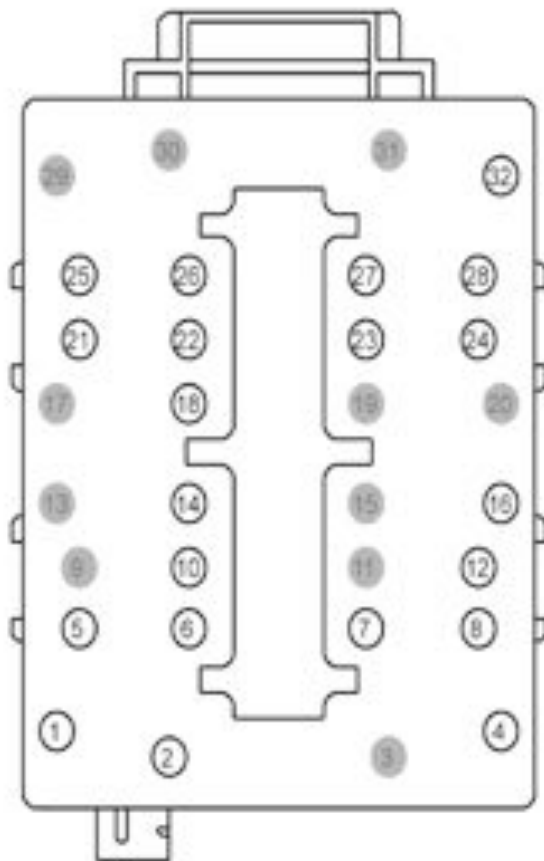
Pin	Circuit	Gauge	Circuit Function	Qualifier
1	SBP01 (RD)	16	FUSE - 1 OR CIRCUIT BREAKER	
2	SBP18 (YE-RD)	16	FUSE - 18 OR CIRCUIT BREAKER	
3	"	"	Not Used	
4	SBP38 (BN-RD)	16	FUSE - 38 OR CIRCUIT BREAKER	
5	CBP32 (GN-VT)	20	FUSE - 32 OR CIRCUIT BREAKER	
6	CPL11 (GY-BN)	16	CTRL MOD. - DOOR LOCK # ALL LOCK	
7	GD139 (BK-YE)	16	GROUND - PILLAR A RIGHT # 2ND STUD	
8	GD139 (BK-YE)	20	GROUND - PILLAR A RIGHT # 2ND STUD	
9	"	"	Not Used	
10	SBP13 (GY-RD)	20	FUSE - 13 OR CIRCUIT BREAKER	
11	"	"	Not Used	
12	GD139 (BK-YE)	20	GROUND - PILLAR A RIGHT # 2ND STUD	
13	"	"	Not Used	
14	CBP46 (WH-BU)	20	FUSE - 46 OR CIRCUIT BREAKER	
15	"	"	Not Used	
16	CBP41 (BU)	18	FUSE - 41 OR CIRCUIT BREAKER	
17	"	"	Not Used	
18	SBP12 (GN-RD)	18	FUSE - 12 OR CIRCUIT BREAKER	All others
18	SBP12 (GN-RD)	20	FUSE - 12 OR CIRCUIT BREAKER	If equipped
19	"	"	Not Used	
20	"	"	Not Used	
21	CLN09 (YE-GN)	18	RELAY - BATTERY SAVER (E.G. SWITCH OFF INTERIOR LIGHTING)	
22	CBP43 (GY)	20	FUSE - 43 OR CIRCUIT BREAKER	
23	CBP35 (YE-BU)	20	FUSE - 35 OR CIRCUIT BREAKER	
24	GD139 (BK-YE)	20	GROUND - PILLAR A RIGHT # 2ND STUD	
25	CLS18 (GY-BN)	16	CTRL MOD. - STOP/TURN LEFT	
26	CLS19 (VT-OG)	16	CTRL MOD. - STOP/TURN RIGHT	
27	CPL52 (VT-GY)	16	CTRL MOD. - DOOR LOCK # PASSENGER DOORS UNLOCK (ALL EXCLUDING DRIVER)	
28	CPL51 (BU-GN)	18	CTRL MOD. - DOOR LOCK # DRIVER UNLOCK	
29	"	"	Not Used	
30	"	"	Not Used	
31	"	"	Not Used	
32	CBP47 (GN-BU)	12	FUSE - 47 OR CIRCUIT BREAKER	

INSTALLATION INSTRUCTIONS

Section 6B: Reference –
Previous Model Year Ignition & Reverse Locations continued

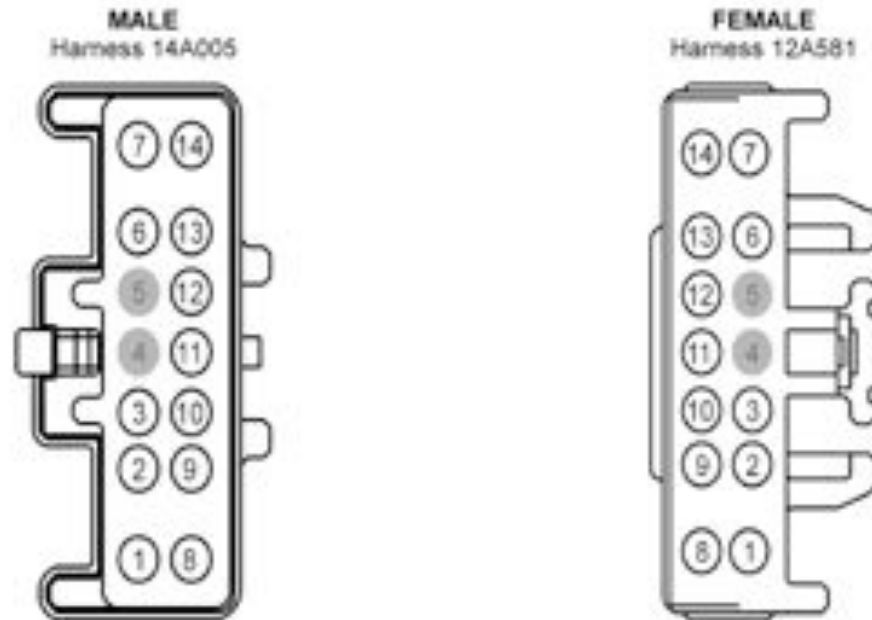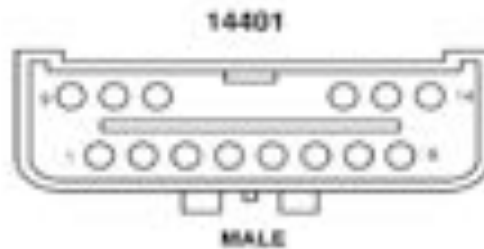**Reverse Connector C215 – 2009-2012 (early production) F150**

Inline C215	Description	Color	Base Part #	Service Pigtail
	Inline	GY		

MALE
Harness 14A005

FEMALE
Harness 12A581

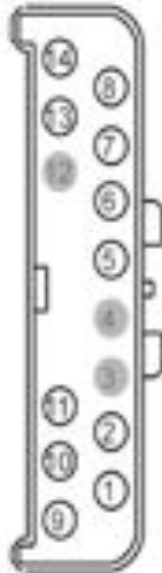| Pin	Circuit	Gauge	Qualifier
1	SBB11 (BU-RD)	12	
2	CLS19 (VT-OG)	16	
3	SBB72 (VT-RD)	16	
4	*	*	
5	*	*	
6	CET47 (BU)	20	
7	SBB14 (BN-RD)	14	
8	SBB69 (GY-RD)	12	14A005
8	SBB69 (GY-RD)	14	12A581
9	CMC25 (WH-VT)	20	12A581
9	CMC25 (WH-VT)	22	14A005
10	VCA23 (BU-WH)	20	
11	VCA24 (GN-OG)	20	
12	CLS25 (YE-VT)	18	14A005
12	CLS25 (YE-VT)	18	12A581 - Early production
12	CLS25 (YE-VT)	20	12A581 - Late production
13	CLS18 (GY-BN)	16	
14	CRD06 (BN-YE)	12	

INSTALLATION INSTRUCTIONS

Section 6B: Reference –
Previous Model Year Ignition & Reverse Locations continued

Ignition and Reverse Connector C264 – 2008 Super Duty
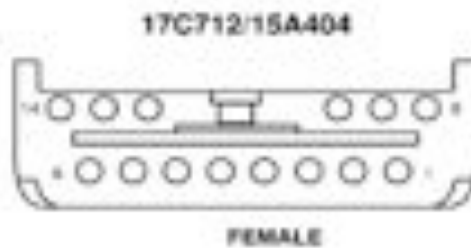
INSTALLATION INSTRUCTIONS

Section 6B: Reference –
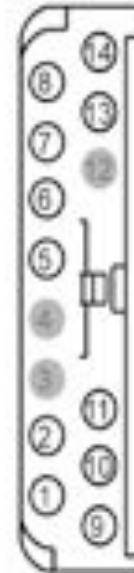## Previous Model Year Ignition & Reverse Locations continued

Ignition and Reverse Connector C264 – 2009-2012 (early production) Super Duty

Inline C264	Description	Color	Base Part #	Service Pigtail
	Inline	BK		

MALE
Harness 14A005

FEMALE
Harness 17K745

Pin	Circuit	Gauge	Qualifier
1	DMP19 (BK)	20	With Video Camera
2	CBP41 (BU)	20	
3	*	*	
4	*	*	
5	VMC30 (BU-GY)	20	
6	VMC31 (GY-BU)	20	
7	VMP19 (WH-GN)	20	With Video Camera
8	RMP19 (BN-VT)	20	With Video Camera
9	RMM13 (BU)	20	MIC
10	CLS10 (GN-BN)	18	MIC
11	VMM13 (YE-GN)	20	
12	*	*	
13	DMM13 (BK)	18	
14	GD133 (BK)	20	

Rear Vision System – Liftgate Emblem Camera for Aftermarket Display
2009-2012 Ford Flex (Kit part number 1008-6509)

Kit Contents:

Liftgate Emblem Mount with Camera
Chassis Harness with RCA **(Note: In some cases a RCA extension may be required to connect to your aftermarket display.)**
1 bag containing: Ford Emblem
1 bag containing:
    2 Liftgate emblem retainers
    2 Mounting Screws
1 bag containing:
    25 Wire Ties (short)
    Z-Tech (in a white bottle)
1 bag containing:
    1 Template (along with these instructions)

Tools Required:

5.5mm, 7mm, 8mm, and 10mm Sockets
Phillips Screwdriver
Plastic Trim Removal tool
Pliers
Razor Knife or scissors
Wire Cutters
Soldering Iron
Small Brush

Addtional Tools:

Drill Bit
1¾ inch Center Hole Saw
Flat Metal File
Round File or Deburring Tool

NOTE: We strive to provide accurate and up-to-date installation instructions. For the latest full color instructions, as well as an installation video (use relevant portions of 1008-9520), please visit www.brandmotion.com

PRE-INSTALLATION VEHICLE CHECKLIST

Before beginning, determine how the vehicle is equipped and check appropriate boxes:

Determine whether the vehicle has the required two mounting holes and a camera harness opening behind the existing liftgate emblem. Refer to Steps 2-4 to remove inner liftgate panel, and use supplied 1008-9100-04 template to confirm whether the required holes are present in the panel.

☐ No, use supplied 1008-9100-04 template to position the holes to drill and/or cut the liftgate.

☐ Yes, proceed to Section 2.

☐ Check kit contents are complete against the list above.

TABLE OF CONTENTS

INSTALLATION INSTRUCTIONS

Section 1: Camera Mount Preparation

1. Remove grommets from the supplied chassis harness and camera harness. Remove tape and, taking care not to cut the supplied wiring, cut grommets off with a razor knife, scissors, or wire cutters (Figure 1). Discard grommets.

Figure 1

2. Raise liftgate. Using a plastic trim removal tool, pry off the two red plastic reflectors in the lower edge of the liftgate to expose four retaining screws (Figure 2).

Figure 2

3. Unfasten the four screws with a Phillips screwdriver and pry up on the edges of the liftgate lower trim panel to release it from the liftgate. Remove liftgate lower trim panel and set aside (Figure 3).

Figure 3

4. Remove upper liftgate trim and set aside.

5. If equipped with power liftgate opener, remove the top end of the power gas strut by prying off the bolt cover with a plastic trim tool to access one 10mm bolt. Use a 10mm socket to remove and push free end of strut aside.

6. From the inside of the liftgate, verify whether two square mounting holes and a central camera pass through opening are present behind the factory emblem. If not, it will be necessary to drill and square two holes for camera mount retainers and a cut an opening for the camera and harness (Steps 10 & 11).

7. Close the liftgate. Taking care not to damage the body panel, insert plastic trim removal tool into the base of existing emblem to pry it off (Figure 4).

Figure 4

Section 1: Camera Mount Preparation continued

8. Remove any adhesive remaining on the liftgate.

9. If two camera mounting holes and a camera harness opening were present in the existing liftgate, proceed to Section 2. If not, align the supplied 1008-9100-04 template to the two existing emblem locating holes and camera harness opening.

10. Mark and center punch the location for the two retaining clip holes (Figure 5).

Figure 5
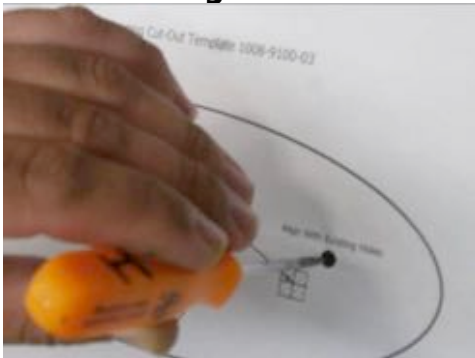
11. Drill the two retaining clip holes with a 3/8 inch drill bit. Use a small flat file to square the drilled holes for the retaining clips (recommended method). Alternate method: Drill the two holes with a 1/8 inch drill bit and use sheet metal screws (not supplied in kit) to secure the camera mount.

12. Apply supplied Z-tech to exposed bare metal with a small brush, and insert supplied retaining clips (Figure 6).

Figure 6

13. Mark, center punch, and drill a pilot hole for the camera mount harness opening (Figure 7). Using a 1¾ inch hole saw, cut the camera harness opening. Trial fit camera mount and file opening as necessary.

Figure 7

14. Clean the rough edges of the opening with a round file or deburring tool.

Section 2: Camera Installation

15. Test fit the camera mount in the factory tailgate opening. If the camera mount does not fit flush, determine where the mount is contacting the edges of the opening and use a flat metal file to enlarge it. Work slowly, checking often for fit.

16. Clean the rough edges of the enlarged opening with a deburring tool or round file.

17. Apply supplied Z-tech to any exposed bare metal with a small brush (Figure 8).

Figure 8

18. Route the camera harness through liftgate opening.

19. Using the two supplied 7mm screws, attach camera mount to liftgate (Figure 9).

Figure 9

20. Route the light gray connector end of the camera harness along the inner liftgate structure toward the driver side of the liftgate opening.

Section 3: Chassis Harness Installation

21. Using a plastic trim removal tool, loosen two access covers in the D-pillar trim panel to expose two 7mm bolts (Figure 10)

Figure 10

22. Remove the two bolts with a 7mm socket, and loosen the driver side upper D-pillar trim panel by peeling back weather stripping slightly and releasing the retaining clips (Figure 11).

Figure 11

23. If necessary, use a razor knife to cut a small slit in the liftgate wiring grommet to assist in the routing of the chassis harness wiring trough the grommet.

24. Run the RCA connector end of the chassis harness through the opening you cut in the grommet and out through the other open end of the grommet. A pair of pliers may be required to pull the connector and harness through the opening (Figure 12).

Figure 12

25. Route the light gray chassis harness camera connector end of the chassis harness toward the light gray connector on the camera harness and connect (Figure 13).

Figure 13

Section 3: Chassis Harness Installation continued

26. Pull down rear edge of headliner slightly to route chassis harness inside and towards the driver side D-pillar.

27. Remove driver side C-pillar trim panel with a trim removal tool (Figure 14).

Figure 14

28. Partially unclip driver side lower quarter panel trim.

29. Route chassis harness forward taking care not to bind the cable when replacing the trim.

30. Remove the driver side rear door sill plate with a trim tool.

31. Loosen driver side rear door weather strip.

32. Remove 5.5mm screw and loosen driver side lower C-pillar trim.

33. Loosen driver side lower B-pillar trim panel with hands.

34. Continue routing chassis harness forward, taking care not to pinch wiring between trim pieces.

35. Remove the driver side front door sill plate with a trim tool.

36. Route remainder of chassis harness towards dash.

INSTALLATION INSTRUCTIONS

Section 4: Ignition, Reverse and Ground Locations

37. If needed, install aftermarket display or navigation display per instructions.

38. Remove driver side kick panel.

39. Splice the green reverse wire from the supplied chassis harness to the wire listed in Connector C925 diagram on page 8. Solder and cover the connection with tape or heat shrink tubing.

40. Attach the black ground wire eyelet from the supplied chassis harness to sheet metal with an existing screw using an 8mm socket (Figure 15).

Figure 15

41. Splice the red ignition wire from the supplied chassis harness to the wire listed in Connector C925 diagram on page 8. Solder and cover the connection with tape or heat shrink tubing.

42. Connect the male RCA from the chassis harness to the camera IN on the aftermarket display or navigation display. In some cases a RCA extension may be required.

43. Coil and secure any excess chassis harness with remaining wire ties (Figure 16)

Figure 16

44. Start the vehicle and shift into reverse. If all of the connections are correct an image will appear on the aftermarket display or navigation display.

45. Reinstall all previously removed interior and exterior parts.

46. Press the supplied emblem into the liftgate camera mount.

INSTALLATION INSTRUCTIONS

Section 4: Ignition, Reverse and Ground Locations continued

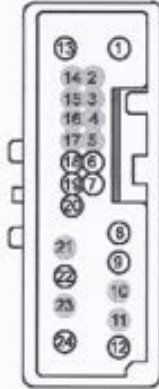**Ignition and Reverse Locations – Connector C925 – 2009-2012 Ford Flex**

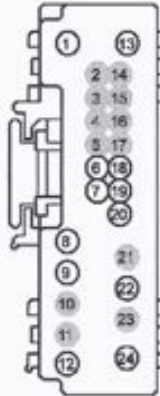| Inline C925	Description	Color	Base Part #	Service Pigtail
	Inline	GY		Not Available

MALE Harness 14A005

FEMALE Harness 14334

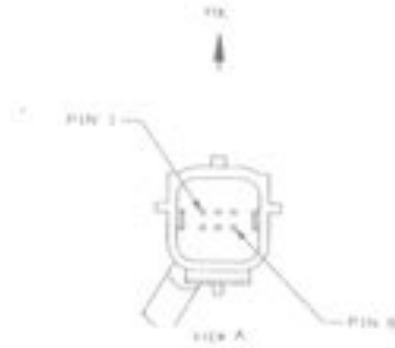| Pin	Circuit	Gauge	Qualifier		Pin	Circuit Function	Supplied Chassis Harness Color
1	SBP19 (BU-RD)	14					
2	"	"					
3	"	"					
4	"	"					
5	"	"					
6	VMC31 (GY-BU)	22					
7	VMM13 (YE-GN)	22					
8	CLS10 (GN-BN)	20	-		8	Relay – Reverse Lamps	Green
9	VLN33 (GY-VT)	20					
10	"	"					
11	"	"					
12	GD133 (BK)	20			12	Ground – A Pillar Left	Black
13	CBP41 (BU)	20			13	Fuse – 41 or Circuit Breaker	Red (12V + Ignition)
14	"	"					
15	"	"					
16	"	"					
17	"	"					
18	VMC30 (BU-GY)	22					
19	RMM13 (BU)	22					
20	DMM13 (NONE)	20					
21	"	"					
22	CLN09 (YE-GN)	18	14A005				
22	CLN09 (YE-GN)	20	14334				
23	"	"					
24	GD133 (BK)	14			24	Ground – Pillar A Left	Black

INSTALLATION INSTRUCTIONS

Section 5: Reference –
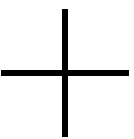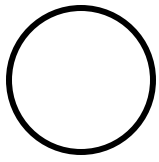## Supplied Camera &
Chassis Harness Pinouts

PIN #	FUNCTION	CAMERA HARNESS COLOR	CHASSIS HARNESS COLOR
1	Video (+)	White	White
2	Shield	Blue	Blue
3	Reverse	Green	Green
4	Video (-)	Brown	Brown
5	Ground	Black	Black
6	Ignition	Red	Red

Loose wires provided in the Supplied Chassis Harness	
Function	**Wire color**
Ground (-)	Black
Reverse signal 12V	Green
Ignition 12V	Red

Front

Front