

# RANGE ROVER SPORT

## OEM TV RETROFIT GUIDE



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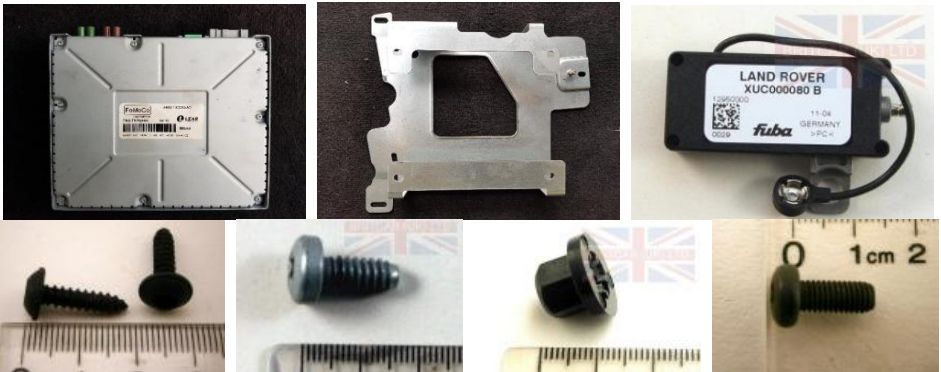
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# Parts List

## Electrical Components & Hardware

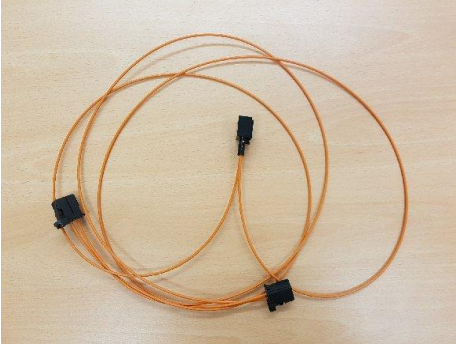
- Hybrid TV Tuner – Build Nr AH42-19C063-AC - Land Rover Part LR010997, superseded by LR024779, superseded by LR057898
- TV Tuner Bracket - LR029167
- M6 x 12mm Torx Bolts for Tuner Bracket (2 required) - XYG500160
- M6 Plastic Nut for Tuner Bracket (1 required) - KTQ100020
- M6 x 14mm Torx Bolts for Mounting Tuner to Bracket (4 required) – Land Rover Part EHV500010
- Isolator Amplifier TV (3 required for 2010 RRS with DAB, otherwise 4 required) – Land Rover Part XUC000080
- M6 x 16mm Torx Bolts for Amplifier (3 Required) – Land Rover Part XUI500010



## Cabling List

- Antenna Cable – Land Rover Discovery Part YMQ502530
- Antenna Cable – Land Rover Discovery Part YMQ502540
- M.O.S.T Fibre Optic Extension Cable – Self Source
- TV Tuner Supply, Earth & Video – Self Source / Assembly
  - TV Tuner Connector Housing – Land Rover Part YPC900520 or Molex 30700-1207
  - Connector Inserts for above (4 required) – TE Connectivity 1393367
  - M6 Ring Connector (1 required) – TE Connectivity 60700-2
  - 0.5mm Cable in Blue, Black & White – Self Source
  - Snap N Lock S-Video Connector (1 required - for vehicles with RSE) – Kycon KMDLAX-4P

- Video Cable (1 required - for vehicles without existing RSE) – Land Rover Discovery Part YMQ502510
- 1.5m FAKRA Video Cable to Touch Screen (1 required - only for vehicles without existing RSE) – VAG Part 00098652A



#### Other Parts

- 4.5mm Split Convolute Conduit Sleeving
- 19mm Wiring Loom Tape

# Trim Removal

## Remove Loadspace Rear Quarter Trim Panel

See TOPIX Workshop Manual section 501-05 (G421016) for full details.

1. If installed, remove the loadspace lamp unit.
  - a. Carefully release the lamp.
  - b. Disconnect the electrical connector.
2. Release the liftgate seal from edge of trim panel.
3. Remove retractable parcel shelf unit.
4. Fold the seat assembly forwards.
5. Release the door aperture weatherstrip from edge of trim panel.
6. Remove the Lower Trim Panel
  - a. Release the 2 window clips using a firm grip on the vent grilles.
  - b. Release the remaining 8 clips (3 on rear edge and 5 on edge within passenger area) using a suitable trim removal tool.
7. Put panel safely to one side to avoid damage.



# Tuner Installation

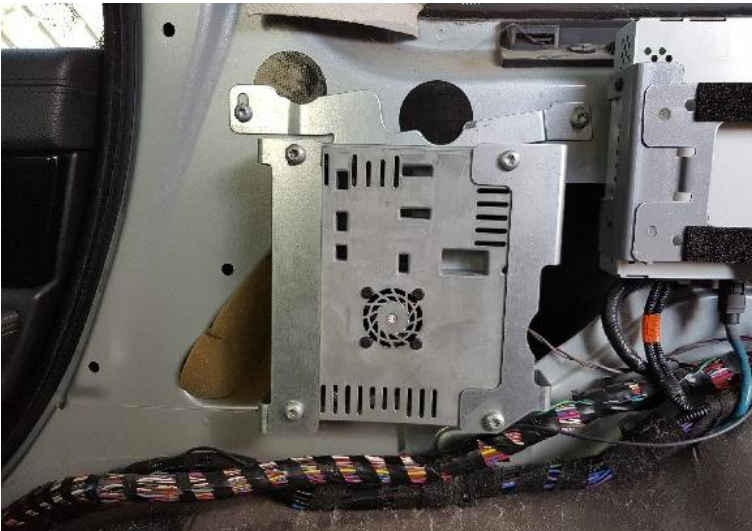
## Install Tuner Bracket

1. Carefully pull plastic Loom clip retainer free from locating stub (stub location can be easily identified by offering up bracket).
2. Fit Bracket (LR029167) to vehicle body.
  - a. Position lower fixing point over stub
  - b. Secure top edge to pre drilled holes in body using the two self tapping M6 x 12mm Torx Bolts (XYG500160)
  - c. Secure bottom edge to stub using the M6 Plastic Nut (KTQ100020)
  - d. Reposition plastic loom retaining clip on new stub located on the bracket assembly.



## Install Hybrid TV Tuner

1. Lower Tuner into the bracket assembly (with connectors located to the left and cooling fan inlet/outlet facing you)
2. Secure Tuner to bracket using the four self tapping M6 x 14mm Torx Bolts (EHV500010).



# Upper Trim Removal

## Remove C-Pillar Upper Trim Panels

See TOPIX Workshop Manual section 501-05 (G421013) for full details.

1. Release the door aperture weatherstrip from edge of trim panel.
2. Release the front edge of the lower trim panel.
3. Release the upper trim access cover.
4. Remove the C-Pillar upper trim panel.
  - a. Remove the Torx screw.
  - b. Release the 2 clips using a suitable trim removal tool.
5. Put panel safely to one side to avoid damage.

*Note. For removal of the C-Pillar upper trim panel from the passenger side of the vehicle the corresponding rear quarter trim panel (as removed from the driver's side to install the Hybrid TV Tuner / Bracket) should be partially released – follow steps 1-5 as described earlier, but only release the upper 2 window clips / clips along the edge of the C-Pillar Upper Trim Panel.*

## Remove D-Pillar Trim Panels

See TOPIX Workshop Manual section 501-05 (G421015) for full details.

1. Release the liftgate seal from edge of trim panel.
2. Release the rear edge of the trim panel.
3. Remove the D-Pillar trim panel.
  - a. Release the 4 clips using a suitable trim removal tool.
4. Lower trim panel and move safely to one side (note safety belt still attached so full removal not possible).

*Note. For removal of the D-Pillar trim panel from the passenger side of the vehicle the corresponding rear quarter trim panel (as removed from the driver's side to install the Hybrid TV Tuner / Bracket) should be partially released – follow steps 1-5 as described earlier, but only release the upper 2 window clips / clips along the edge of the D-Pillar Trim Panel.*





## TV Amplifier Installation (D Pillar)

### Install TV Isolator Amplifiers – D Pillars

1. Fit Isolator Amplifier TV (XUC000080) to vehicle body.
  - a. Position unit so that holes align.
  - b. Secure to body using a single self tapping M6 x 16mm Torx Bolt (XUI500010)
2. Press antennae connector onto adjacent stud on rear quarter window glass.
3. Repeat for other side.





# Headliner Removal

See TOPIX Workshop Manual section 501-05 (G421017) for full details.

1. Ensure both C-pillar Upper trim panels and D-pillar trim panels remain removed as described earlier
2. Remove the 2 rear passenger assist handles.
  - a. Release the 2 screw covers.
  - b. Remove the 2 screws.
  - c. Repeat the above for the other handle.
3. Remove the rear speaker grilles using a suitable trim removal tool.
4. Release the door aperture weatherstrip from the edge of the headliner.
5. Release the liftgate seal from the rear edge of the headliner.
6. Release the edges of the headliner.
7. Carefully lower headliner to allow access for cable installation (providing support to headliner as necessary to avoid damage).

# TV Amplifier Installation (Headliner)

## Install remaining TV Isolator Amplifier(s) and Antenna Cables

1. Fit Isolator Amplifier TV (XUC000080) to vehicle body (Drivers side).
  - a. Position unit in install location (void between headliner and vehicle body, to the front of the rear quarter window glass) so that holes align.
  - b. Secure to body using a single self tapping M6 x 16mm Torx Bolt (XUI500010)
2. Press antennae connector onto adjacent stud on rear quarter window glass.
3. Connect antenna cable (with green TV tuner end connector) to corresponding isolator amplifiers.
  - a. Connect antenna cable to isolator amplifier (XUC000080) located on the passenger's side D-pillar – connector C1602.
  - b. Connect antenna cable to spare outlet on existing FM antenna amplifier located in void between headliner and vehicle body, to the front of the passenger's side rear quarter window glass – connector C1603.
  - c. Route cable through headliner to driver's side (taking care to secure and ensure curtain airbags are not obstructed) and down C-pillar to TV Tuner.
4. Connect antenna cable (with brown TV tuner end connector) to corresponding isolator amplifiers.
  - a. Connect antenna cable to isolator amplifier (XUC000080) located on the driver's side D-pillar – connector C1601.
  - b. Connect antenna cable to isolator amplifier (XUC000080) located in void between headliner and vehicle body, to the front of the driver's side rear quarter window glass – connector C1600.
  - c. Route cable through headliner (taking care to secure and ensure curtain airbags are not obstructed) and down drivers side D-pillar to TV Tuner.

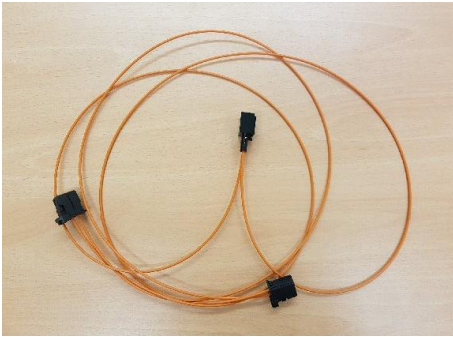
# Power, Control and Video Cable Installation

## Install Power, Control (MOST) and Video Cables

### 1. M.O.S.T. Cable Installation

- a. Cut the 4.5mm split convoluted conduit sleeving to size and fit to MOST extension cable, securing with insulation tape.
- b. Disconnect existing MOST cable from RSE module – connector C2109.
- c. Connect male connector C2109 to corresponding female socket on MOST extension cable.
- d. Connect the remaining two male extension cable connectors the RSE Module and Hybrid TV Tuner.

*Note. Ensure the extended MOST circuit follows the correct ring order (See TOPIX Workshop Manual section 418-00) as ring order will vary based on your vehicles specification and option fitted; for the installation outlined the ring order is Audio head unit (1), Touch screen display (2), Portable audio interface module (3), **Television receiver (4)**, Rear seat entertainment module (5), DAB tuner module (6), Telephone module (7), Power amplifier (8) & Audio head unit (1).*

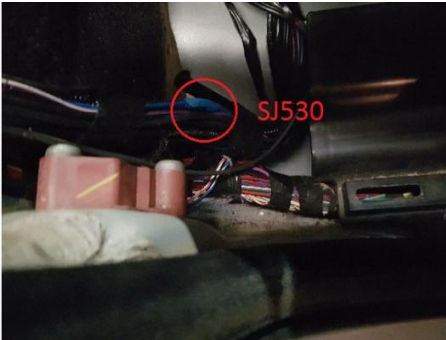


### 2. Power Cable Installation

- a. Makeup Power / Video Cable as per OEM Wiring diagram
  - i. Cut Cable to length (Power - Blue 760mm, GND – Black 1450mm, CVBS Out – White 630mm & CVBS GND – Black 630mm)
  - ii. Strip wire ends and crimp connector inserts onto ends using suitable tool.
  - iii. Insert connector inserts into corresponding location on MOLEX 20 way connector housing (Power – 1, GND – 2, CVBS Out – 4 and CVBS GND – 5)
  - iv. Strip other ends of wire and crimp M6 ring connector to GND.



- c. Isolate Supply source by removing fuse 68P located in passenger compartment fuse box.
- d. Route wires within existing loom assemble and make Power and GRD connections (Power to Solder Joint SJ530 located in drivers site rear passenger compartment, GND – Connector C2646 to ground point by DVD Changer).



- e. Connect the MOLEX connector C2117 to the Hybrid TV Tuner.

### 3. Video Cable Installation

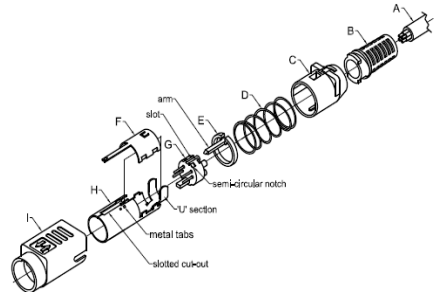
- a. Release the S-Video connector C2957 from the rear seat entertainment module RSE (this will require sliding back the forward lock housing assembly to release the connector).
- b. Remove the forward housing 'I' by splitting (as will not pull off) – new housing required for reassembly.
- c. Partially disassemble the connector by pulling backwards the rear housing 'C & B' & the coil spring 'D'.
- d. Remove the upper body 'F' and pull the plastic guide 'G' backwards.
- e. Release the crimp U section from lower body 'H' and remove the pin block 'G'.
- f. Feed the new wires (CVBS Out – white & CVBS GND – black) through assemblies 'B', 'C', 'D' & 'E'.
- g. Insert heat shrink sleeving over wires a solder new wires to solder caps
  - i. CVBS Out (now TV Comp I/P on C2957) – white to terminal 1.
  - ii. CVBS GND (now TV GND on C2957) - black to terminal 2).
  - iii. Insert the heat shrink sleeving over the terminal and apply heat to seal in place.
- h. Reassemble the connector
  - i. Push Pin Block 'G' forward into the lower body 'H' until it locks into place; ensuring the 4 semi-circular notches line up with the metal tabs inside the lower body 'H'.
  - ii. Crimp U section of lower body onto existing and new cables.
  - iii. Fit plastic Guide 'E' into lower body 'H' by placing plastic arm into the appropriate slot on the top of the metal body.
  - iv. Attach upper body 'F' onto lower body 'H' aligning all tabs and slots.
  - v. Push coil spring 'D' onto the upper body 'F' / lower body 'H'.
  - vi. Push strain relief 'B' / rear housing 'C' assembly onto the upper body 'F' / lower body 'H' assembly
  - vii. Align the assembly with new forward housing 'I' (From Kycon KMDLAX-4P connector), push assembly twisting rear housing 'C' into forward housing 'I' until it locks.
- i. Reconnect completed S-Video connector C2957 to rear seat

entertainment module RSE (this will require sliding back the forward lock housing assembly).

*Note. Wiring Diagram 415-00 shows the CVBS Out & CVBS GND from connector C2117 as also connecting to C2727 (within the centre console area) which in turn connects to the touch screen; these further connections are NOT required as the video source to the touch screen display is managed through the RSE module and existing output terminal 3 & 4 on the S-Video connector C2957.*



- 1 TV tuner composite input
- 2 TV tuner GND (ground) input
- 3 DVD / TV tuner composite output to TSD
- 4 DVD / TV tuner GND (ground) to TSD Output



4. Tidy up wiring and secure to existing loom using loom tape / insulation tape.
5. Replace fuse 68P located in passenger compartment fuse box.





# Car Configuration File Edit

## Recoding CCF (Car Configuration File):

In order to activate the TV menu on the touch screen it is necessary to edit the cars CCF; The CCF settings changed within the infotainment section for this installation are shown in red.

1. TV Tuner – TV tuner (hybrid DVB-T and analogue).
2. Television Receiver Type – Receiver variant 1 fitted.
3. Television Type – Analogue/Digital hybrid.

Base Vehicle Configuration	Heating and Ventilation	Infotainment	Interior & Exterior Lighting
Miscellaneous and Unused	Power Train	Safety/Security and Locking	Vehicle Interior
Warnings and Messages	Washers and Wipers	Wheels/Tyres and Brakes	Undefined
Display As Built Assemblies			

Description	Current Setting	As Built %	
Audio Amplifier Type Fitted	AUD4	43%	Edit
Audio System Country / Region Configuration	Europe	43%	Edit
Audio Visual Audio Input	Fitted	18%	Edit
Audio Visual Filment	Undefined	18%	Edit
Audio Visual Video Input	Fitted	18%	Edit
Audio unit (radio) band/frequency setting	Frequency band and step for Europe	43%	Edit
Bluetooth	Bluetooth enabled	98%	Edit
Bluetooth handsfree telephone system	Bluetooth handsfree telephone system	98%	Edit
Cellular Telephone	Cellular telephone docking station, with bluetooth.	98%	Edit
Digital Audio Broadcasting Receiver (DAB) Filment	Fitted with digital audio broadcasting.	17%	Edit
Digital radio receiver	Without digital radio system	71%	Edit
Front Parking Camera	Without front parking camera	82%	Edit
Front camera	No camera / rear camera only	82%	Edit
Headphone Socket 1 is Fitted	Headphone 1 is fitted.	19%	Edit
Headphone Socket 2 is Fitted	Headphone 2 is fitted.	19%	Edit
Headphone Sockets Filment	Rear headset sockets.	19%	Edit
Headphone sockets - Rear	Headphone sockets, 2 outlets	19%	Edit
In-band on channel (IBOC) receiver fitted.	Not fitted / Disabled	77%	Edit
Intercom Filment	Fitted without intercom.	19%	Edit
Map Configuration option for China / Japan / US and Canada / Western Europe	Enabled	72%	Edit
Map Configuration option for Eastern Europe / Mexico	Disabled	98%	Edit
Map Configuration option for Middle East / Brazil	Disabled	93%	Edit
Map Configuration option for Russia / Australia	Disabled	94%	Edit
Map Configuration option for South Africa / New Zealand	Disabled	98%	Edit
Map Configuration option for Turkey / Argentina	Disabled	99%	Edit
Mode for Navigation Interface (Nav on Move)	Enabled	72%	Edit
Multi Media Module (HLDF) Country	Rest of world	58%	Edit
Navigation region	West Europe, East Europe, Mid East, China, South Africa, Taiwan, Korea	61%	Edit
PAM Scan	Pattern 1 (N/A)	83%	Edit
Park assist camera	Park assist camera	89%	Edit
Parking Camera Filment	Fitted	89%	Edit
Rear Screens Filment	No	18%	Edit
Rear Seat Entertainment DVD Player Filment	DVD player 1 is fitted.	18%	Edit
Rear Seat Entertainment Interface Module Filment	Interface module 1 fitted	18%	Edit
Rear Seat Entertainment Left Hand Display Filment	Fitted	18%	Edit
Rear Seat Entertainment Right Hand Display Filment	Fitted	18%	Edit
SDARS Receiver Type	Not fitted / Disabled	71%	Edit
Second display	Display	73%	Edit
Short Message Service (SMS Read List)	Enabled while driving	72%	Edit
Side camera	No camera / rear camera only	82%	Edit
Side camera	Without side camera	82%	Edit
Sirius Telephone Number	8885397474		Edit
Speech Control Language	0		Edit
TV Tuner	TV tuner (hybrid DVB-T and analogue)	20%	Edit Undo
Television Receiver type	Receiver variant 1 fitted.	20%	Edit Undo
Television Type	Analogue/digital hybrid.	20%	Edit Undo
Traffic Message Channel (TMC) Receiver Filment	With traffic message channel.	54%	Edit
Traffic information	Traffic message channel	54%	Edit
Units	Same as trip computer	97%	Edit
Voice Control	Fitted with voice control (hosted via the multi-media module).	85%	Edit

1. Refit Headliner - See TOPIX Workshop Manual section 501-05 (G421017) for full details.
  - a. Carefully move headliner into required position
  - b. Realign the door aperture weatherstrip with the edge of the headliner.
  - c. Install the 2 rear passenger assist handles.
    - i. Install the screws
    - ii. Install the screw covers.
    - iii. Repeat the above for the other handle.
  - d. Install the rear speaker grilles
  - e. Realign the liftgate seal with the rear edge of the headliner.
2. Refit C-Pillar Upper Trim Panels - See TOPIX Workshop Manual section 501-05 (G421013) for full details.
  - a. Ensure clips are installed to the C-pillar upper trim panel.
  - b. Install the C-pillar upper trim panel.
  - c. Secure the clips.
  - d. Tighten the Torx screw to 6 Nm (4 ib.ft).
  - e. Install the upper trim access cover.
  - f. Install the door aperture weatherstrip with edge of the trim panel.
  - g. Repeat the above for the other C-pillar upper trim panel.
3. Refit D-Pillar Trim Panels - See TOPIX Workshop Manual section 501-05 (G421015) for full details.
  - a. Ensure clips are installed to the D-pillar trim panel.
  - b. Install the D-pillar trim panel.
  - c. Secure the clips.
  - d. Install the liftgate seal with the edge of the trim panel.
  - e. Repeat the above for the other D-pillar trim panel.

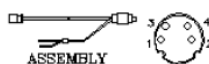
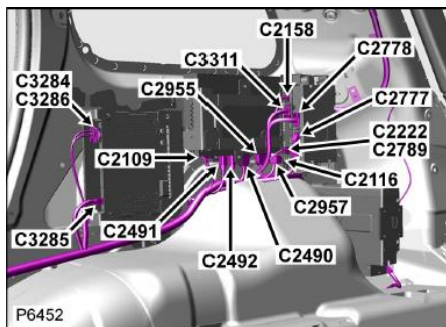
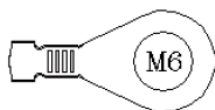
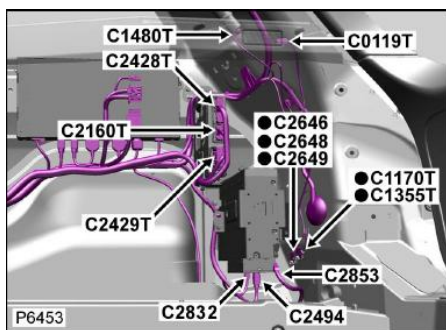
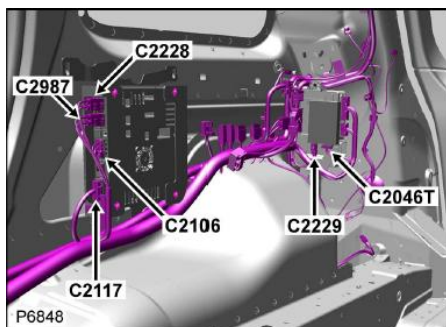
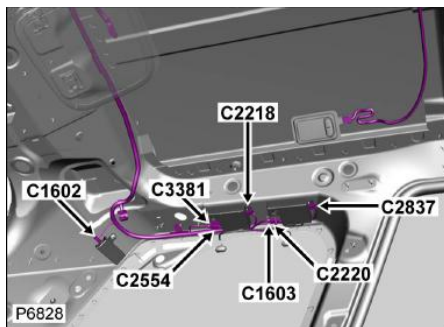
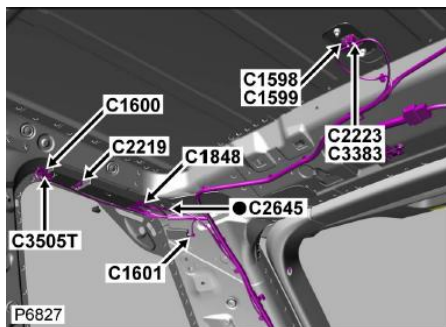
4. Refit Rear Quarter Trim Panels - See TOPIX Workshop Manual section 501-05 (G421016) for full details.
  - a. Ensure clips are installed to the rear quarter trim panel.
  - b. Install the lower quarter trim panel
    - i. Align to the position noted on removal.
    - ii. Secure the clips
  - c. Install the door aperture weatherstrip with the edge of the trim panel.
  - d. Install the liftgate seal with the edge of the trim panel.
  - e. If installed, install the loadspace lamp unit.
    - i. Connect the electrical connector to the load space lamp unit.
    - ii. Push the lamp unit into position
  - f. Repeat the above for the other rear quarter trim panel.
5. Fold the seat assembly rearwards.
6. Refit retractable parcel shelf.

# Completed Installation



RANGE ROVER SPORT

# Connector Locations



**The information contained within this document should not be used for any purpose other than as a general guide. No assurance or warranty as to its correctness or accuracy is given or should be inferred. Anyone attempting any aspect of this installation does so at their own risk.**

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