

# Installation Instructions



Land Rover Defender

2007-2016

2.4 & 2.2 PUMA

# Component List

# Mount & Drive



AK1288/01	PUMA Land Rover Defender Mount and Drive Kit	
Part number	Description	Quantity
PQR500230	Idler	1
7 PK 2958 (2.4ltr)	Belt	1
7 PK 3001 (2.2ltr)	Belt	1
PRF500030	Compressor Cover	1
4101E	Compressor (Filled with oil)	1
BSC8-038	M8 x 110 hex head bolt	2
KYG500390	M8 Compressor Stud	1
W8-010	M8 Spring Washer	4
W8-004	M8 Plain Washer	4
BSC8-026	M8 x 20 Hex Head Setscrew	1

# Evaporator Assembly



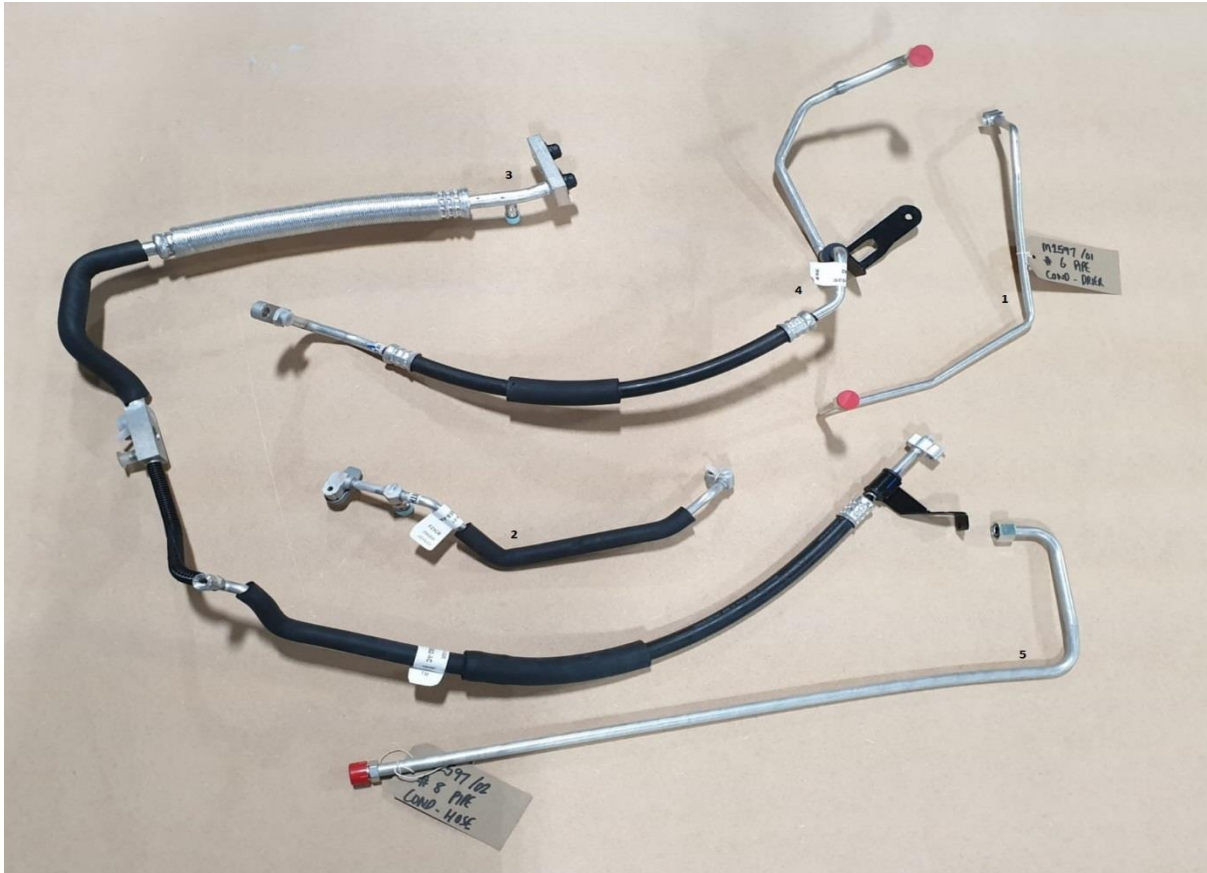
Part number	Description	Quantity
AK1288/02	PUMA Land Rover Defender Evaporator Assembly	
SB1190	Evaporator Assembly/Valve	1
1398-900-01	Electronic thermostat (Plug may vary)	1
M2602	Thermostat Clip	1
JTB500010	A/C Switch	1

# Drier Assembly



Part Number	Description	Quantity
SB1162	PUMA Land Rover Defender Drier Assembly	
1368-077-01DE	Receiver Drier	1
M2449	Drier Bracket	1
N6-007	M6 T Nyloc Nut	1
BSC6-013	M6 x 16 Hex Head Set Screw	1
W6-003	M6 Plain Washer	2
N6-011	M6 Flange Nut	2

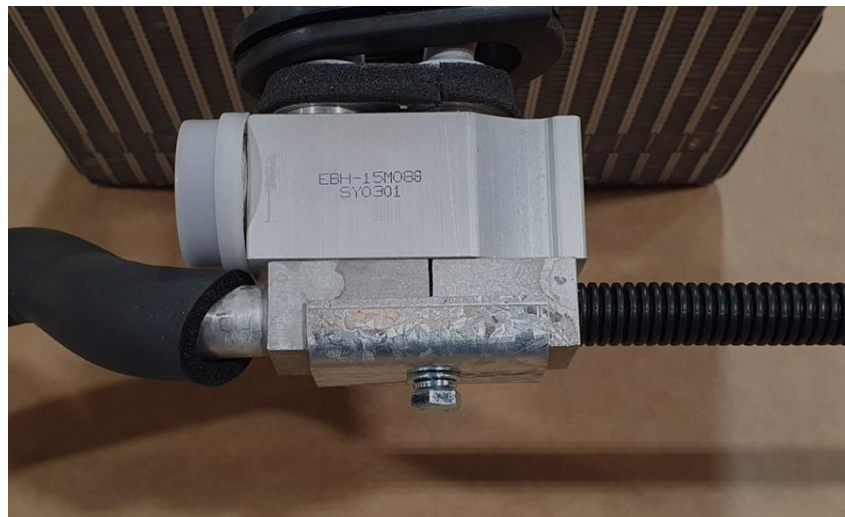
# Hoses and Pipes



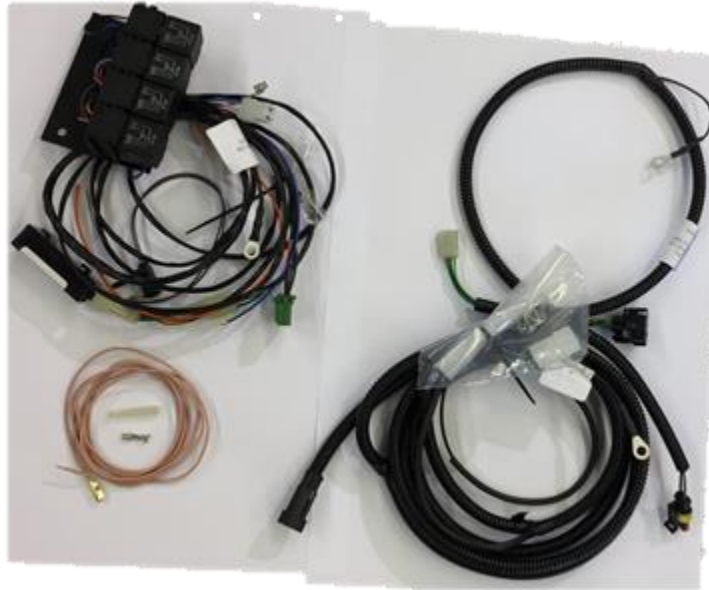
AK1288/04 Part Number	PUMA Land Rover Defender Hoses & Pipes	
	Description	Quantity
1.M2597/01	Condenser – Drier	1
2.1398-606-01E	Drier – Hose	1
3.M3238	Defender PUMA - #6/#10 Combined Hose/Pipe Assembly	1
4.1398-965-02E	Compressor - Pipe	1
5.M2597/02	Pipe – Condenser	1

**\*NOTE\***

Part number M3238 is supplied as a complete assembly and will need to be cut as per the image below for the 2.2 PUMA models. Once cut, the saddle bracket will need to be used for the installation to hold both halves in place on the expansion valve.



# Wiring Loom



PUMA Land Rover Defender Wiring Looms		
Part Number	Description	Quantity
1. M2599	Main Loom	1
2. M2600	Compressor Loom	1
3. M2601	Pressure Switch Loom	1
EXTAK1288	Extension Loom	1



# Condenser Assembly



Part Number	Description	Quantity
SB1187	PUMA Land Rover Defender Condenser Assembly	
1991-455-01	Condenser	1
M2431	Condenser Fame	1
M2432	Condenser mount brackets	2
VA07-AP7/C-31S	Condenser Fan	1
BR-004	4.8 x 12 Blind Rivet	4
N6-007	M6 Nyloc nut	8
W6-006	M6 Repair Washer	4
W6-003	M6 Plain Washer	14
W8-030	Rubber Washer	8
M1157	Pipe Clip	2
N6-011	M6 Serrated Flange nut	2
BSC6-016	M6 x 30 HEX HD	2
BSC6-017	M6 x 35 HEX HD	4
BSC6-019	M6 x 30 HEX HD	2

# Fitting the Kit

# Interior



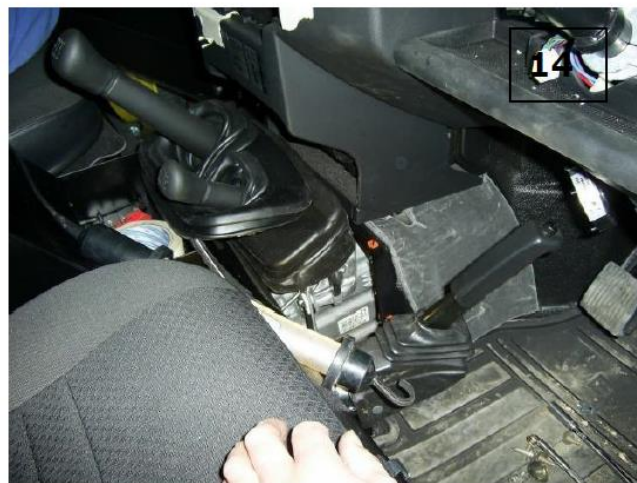
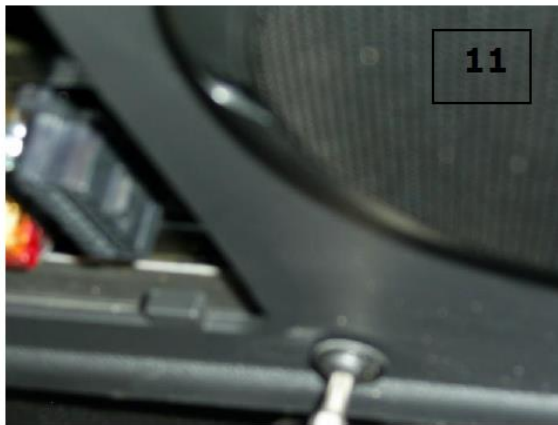
1. Remove the steering wheel cover
2. Remove the steering wheel using the special tool to do so. (Check Spline)
3. Remove the fuse box cover
4. Remove grab handle

5. Remove the two screws from the fascia
6. Remove the controls from the steering column.
7. Remove radio using keys
8. Remove instruments
9. Remove centre console and disconnect plugs.
10. Remove screws for heater controls and leave controls in situ.



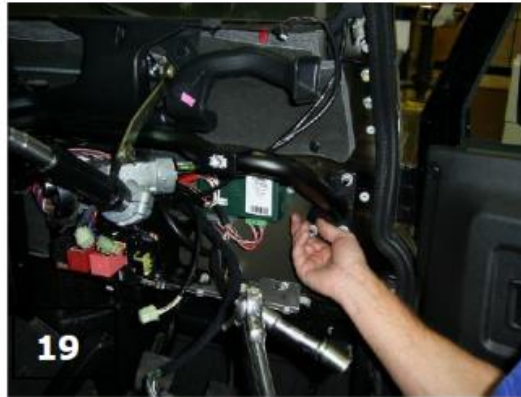
# Interior continued...

11. Remove the dashboard screws at the side and lower part of the dashboard.
12. Remove dashboard screws at the top of the dashboard
13. Remove the speakers from the top of the dashboard and disconnect
14. Remove the parking brake and unbolt
15. Remove carpet n transmission tunnel
16. Remove gear lever cover



# Interior continued...

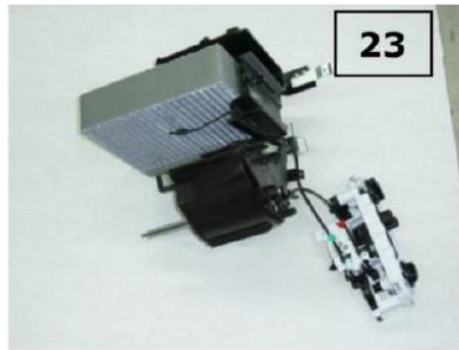
17. Remove Dashboard.
18. Remove duct from blower to heater box
19. Remove dashboard support bar.
20. Remove air ducts
21. Remove heater box



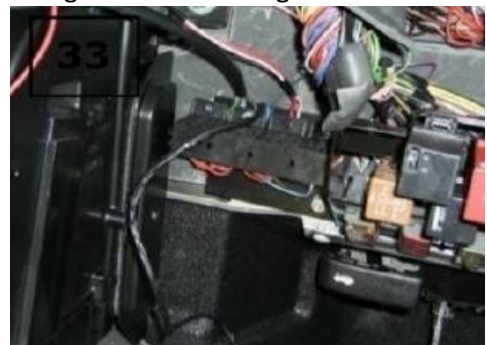


# Interior continued...

22. Split heater box
23. Install evaporator
24. Install thermostat probe as shown.

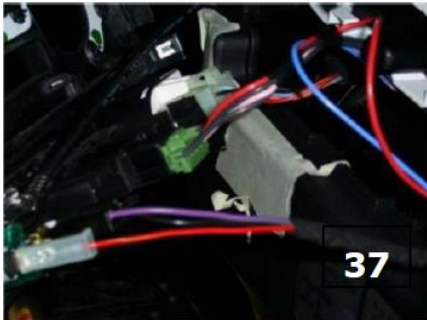


25. Ensure that the drain tube is clear
26. Re-assemble heater box
27. Re-install heater box
28. Remove fuse and relay box – 4 nuts
29. Identify 20a and 10a A/C fuse locations.
30. Install terminals on A/C loom
  - a. Red wire into 20a fuse
  - b. Pink wire into 10a position
31. Fit fuses.
32. Re-fit fuse and relay box
33. Fit A/C loom relays sing bottom fuse, relay box fixing stud and nut.
34. Run A/C loom across the front of the heater box with heater control cable.
35. Solder the blue wire onto the blue wire on the heater control cable.
36. Solder the red and orange wire onto the red and orange wire for dash lights.



# Interior continued...

37. Ensure the green connector is in place for the switch
38. Cut the bulkhead grommet and push through from the engine bay, the compressor loom and the pressure switch loom.
39. Connect AC loom.
40. Connect thermostat



41. Fit A/C switch to centre panel
42. Re-install dash board reversing previous instructions
43. Insert green plug into A/C switch



# Engine Compartment

1. Remove fan cowl and cooling fan.
2. Slacken tensioner to remove original belt and discard
3. Remove grooved idler pulley and discard.
4. Fit back idler to position indicated
5. Fit compressor assembly
6. Slacken tensioner and install new drive belt





# Engine Compartment continued...

7. Remove front grill.
8. Remove a frame and drill out rivets
9. Fix condenser mounting brackets using supplied rivets
10. Fit pipe M2597/02 to condenser before mounting (if not already fitted)
11. Fit condenser assembly



M2597/05 PIPE



# Engine Compartment continued...

12. Remove plastic cover on cylinder head to release loom
13. Undo and move ECU module to allow access to block valve
14. Connect earth from under bonnet looms to earth point near ECU
15. Remove power steering reservoir bracket and fit receiver drier bracket. Mount reservoir to drier bracket, fit receiver drier.



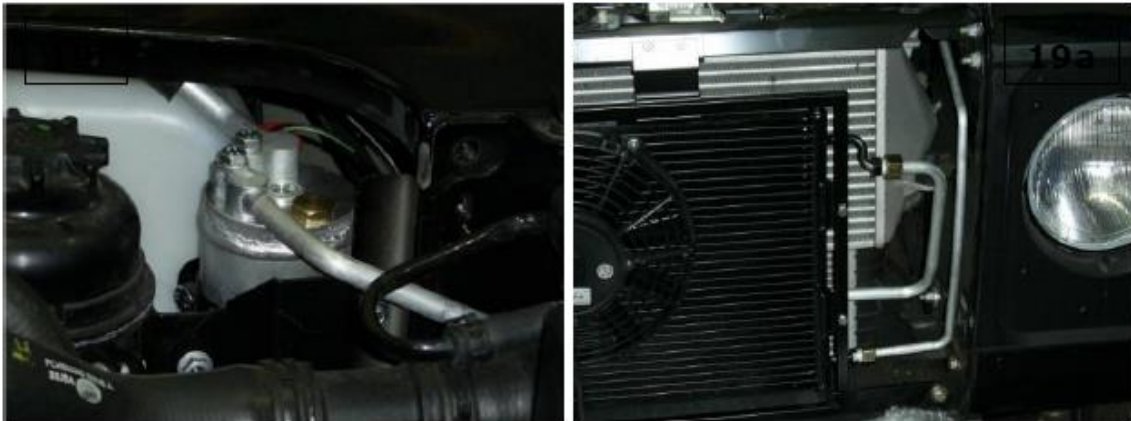
## Engine Compartment continued...

16. Fit pipe assembly to the block valve
17. Fit pipe to receiver drier
18. Connect the pipe assembly to the pipe leading to the receiver drier



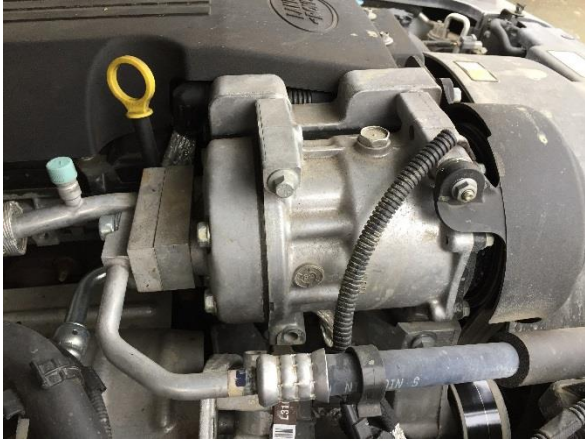
# Engine Compartment continued...

19. Fit pipe from drier to condenser
20. Connect to compressor
21. Gas the system with 650g of R134a Refrigerant

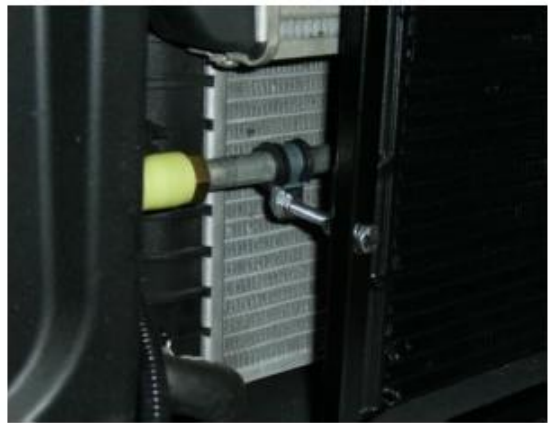




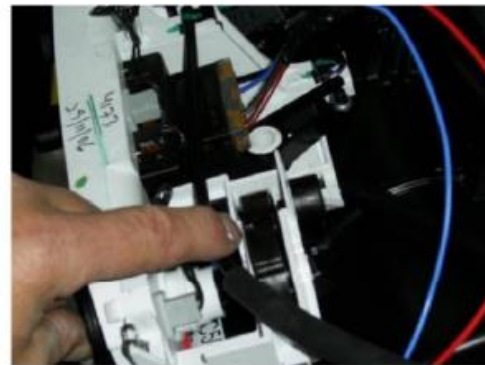
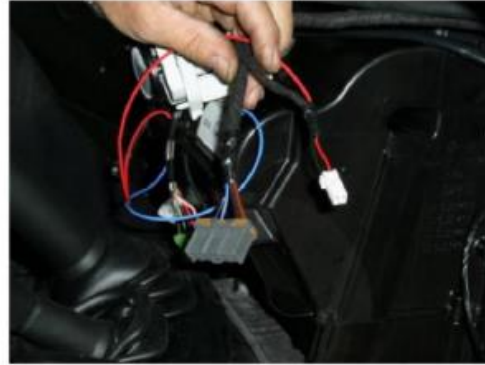
# Additional information



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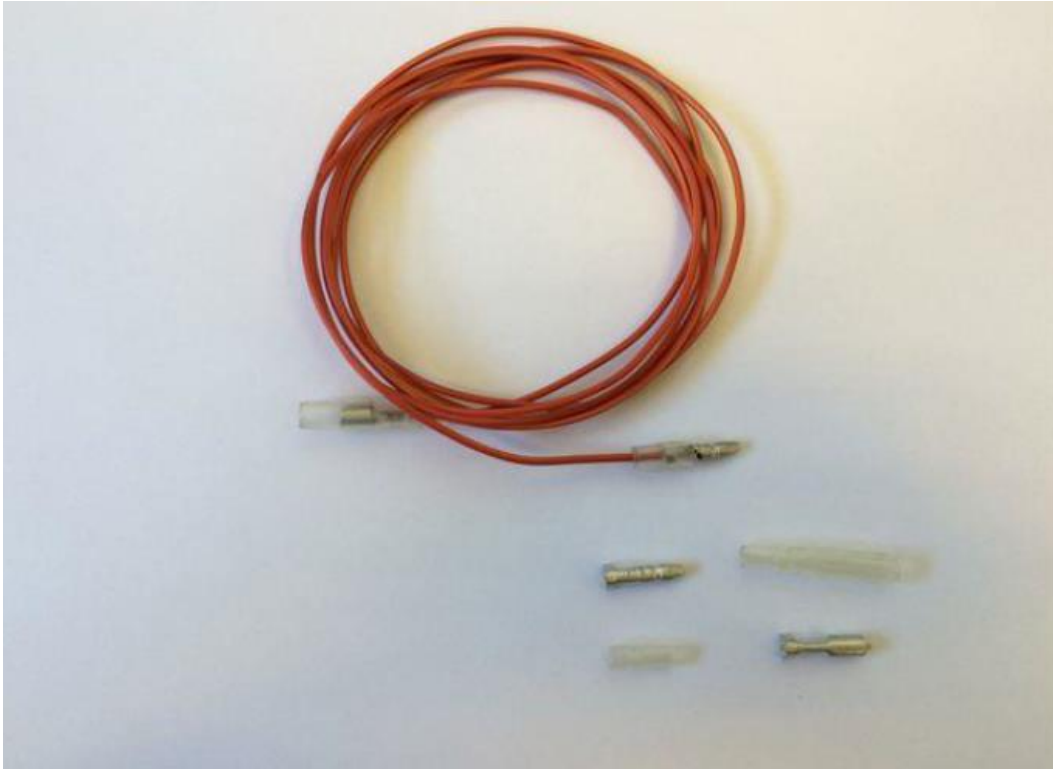
# Additional information







## 2200cc versions only



**For the 2.2ltr models the wiring loom must be extended because the A/C fuse is located underneath the right hand side front seat. The A/C fuse is 20 amps.**