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Fitting Instructions for Defender RHD TD5 Automotive Air Conditioning Kit

Part Nr. RNAC500R

Fits: Defender RHD TD5

READ ALL INSTRUCTIONS COMPLETELY BEFORE BEGINNING!



Introduction

Update your Defender with the latest R134A Air Conditioning system. Our exclusive Air Conditioning Kit for Defenders incorporates many improved components and features, including better ventilation and blower capacity for a faster, colder air. Superior Range Rover-style vent covers and swiveling louvered vents for footwells deliver cold air where you need it the most.

Stronger switch gear and redesigned sleeker one-piece fascia hold up to the elements. Includes; Lower dash fascia unit, blowers, compressor, lines, hoses, fittings, pulley, tensioner belt, evaporator, condenser and fan unit, receiver-drier, all hardware and fitting instructions.



Fitting Instructions for Defender RHD TD5 Automotive Air Conditioning Kit

Suggested Tools

For the install, you could probably do it with your teeth and a rock, but we suggest the following tools:

- Marker, pencil or pen
- Ruler in millimeters, inches
- Electric drill
- Center punch
- Hammer
- 3, 5.5 and 7mm drill bits
- Phillips screw driver
- Flathead screw driver
- Hole saw, High-speed air saw or similar for 30mm, 51mm holes
- A/C Oil or Lubricant
- Various sized wrenches and sockets for M6, M8, M10 and other bolts
- Soldering iron, solder & flux
- Heat shrink tubing
- Hylomar or similar gasket sealant
- Wire cutter and or wire stripper
- A/C system charging equipment
- Utility Pocket Knife (if fitting Dynamat)



Marker,
Pencil or
Pen



Ruler in
Millimeters,
Inches



Center
Punch



Hammer



Metal Drill Bits
3, 5.5 and 7mm



Drill



Metal Bit Hole Saws
25mm, 51mm



Utility Pocket Knife

Drill Bit Conversion	
Millimeters	Drill Size or #
2.4892mm#40
3.9688mm5/32"
5.5563mm7/32"
6.9088mm5/16"
21.8281mm55/64"
30.1625mm1-3/16"
51mm2.007"



Gasket Sealer



Wire Stripper



Heat Shrink



A/C Oil or Similar
Lubricant



Wire Cutter



Screwdrivers



Various Tools



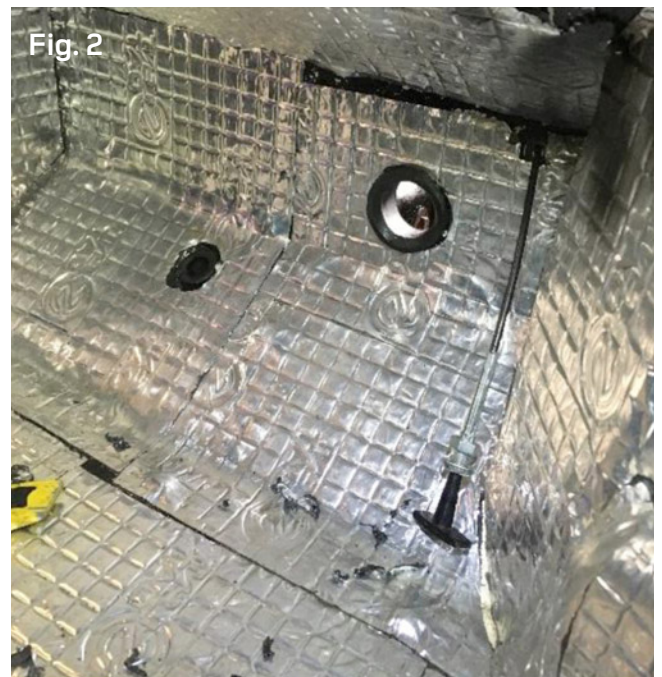
Soldering Iron, Solder & Flux

ENSURE BATTERY IS DISCONNECTED BEFORE INSTALLATION !**Vehicle Preparations, p3, Steps 1–4**

- Step 1.** Disconnect the battery.
- Step 2.** Remove the front grill and grill surroundings and store somewhere safe.
- Step 3.** Remove radiator 'A' frame assembly
- Step 4.** Remove bonnet 'slam panel' screws from both wings.

INTERIOR, p3–4, Steps 1–18

- Step 1.** Remove speakers from vehicle fascia, retain all parts.
- Step 2.** Remove fuse box cover.
- Step 3.** Locate the brown seven way connector in the area of the fuse carrier brackets and remove the blank connector from the unit. Later instructions follow if your vehicle does not have this connector.
- Step 4.** Drill out the two outer speaker mounting holes to 7mm diameter.
- Step 5.** Fit the two 90° degree brackets and weld nut assemblies to the drilled out speaker holes with the fixings provided.
- Step 6.** Remove the bulkhead grommet and drain tube grommet from the vehicle firewall and transmission tunnel.
- Step 7.** Drill hole for the new firewall gromet and fit.

**Fig. 1****Fig. 2**

Above: Passenger footwell, showing Silent Coat (or Dynamat) style insulation with holes drilled and grommet fitted.

Fitting Instructions for Defender RHD TD5 Automotive Air Conditioning Kit**INTERIOR CONTINUED...**

Step 8. Locate the oval firewall grommet on the either the right hand or left hand side of the fuse box and cut to allow the white connector on the under bonnet wiring harness to pass through. (Later vehicle do not have oval bulk head grommets is it therefore necessary to cut a 25mm hole in the firewall behind the fuse board and fit the grommet supplied on the loom. Before drilling this hole remember to check that there is nothing behind the firewall in the engine bay that could be damaged. (Fig. 3)

Step 9. Lift the under dash unit into position on the vehicle, pushing the round A/C pipe manifold block into the firewall grommet fitted earlier (lubricate if necessary).

Step 10. The 90 degree brackets fitted earlier will fit inside the fascia moulding.

Step 11. Centralise the fascia and using the centre fixing hole as a location drill a 5.5mm hole into the vehicle dash board. Fix the fascia to the dashboard using the long self-tapping screw provided with the kit.

Step 12. Drill 3mm holes either side of the mounting into the 90 degree brackets and fix with the self-tappers provided in the kit.

Step 13. Re-fit the speakers to the A/C fascia.

Step 14. Connect the 3 way electrical harness (2 x Brown 7-way connectors and 1 x white 4-way connector) to the fuse box connector block and the fascia connector block.

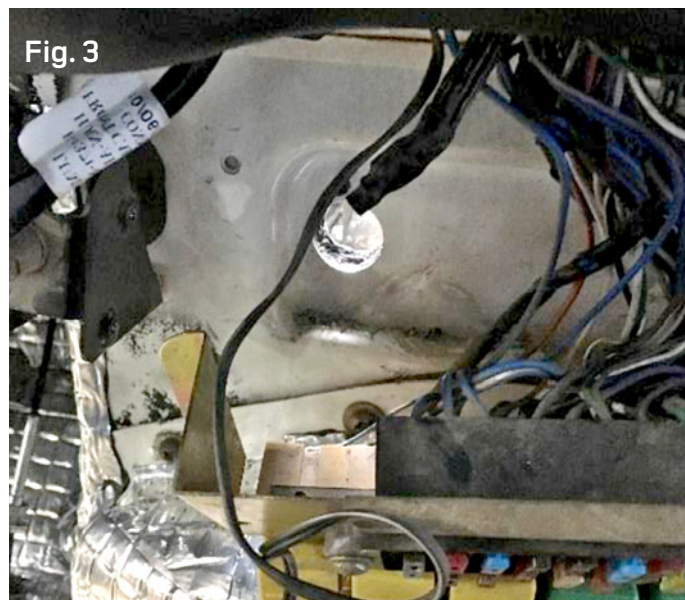
Step 15. FOR VEHICLES not equipped with 7-way brown connector, wire as follows;

- Connect an ignition feed onto white and green wire
- Connect a 30A main feed onto brown wire
- Connect an earth onto blue and black wire

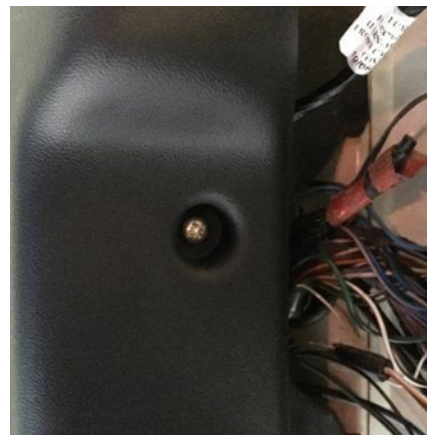
Step 16. From the engine side push the white 4-way connector from the main harness through the oval grommet previously cut. Connect to the reciprocal on the three way harness.

Step 17. Re-fit the fuse box.

Step 18. Fit the drain tube to the evaporator and through the drain tube grommet.



Above: Looking at the interior center bulkhead with fuse panel removed.



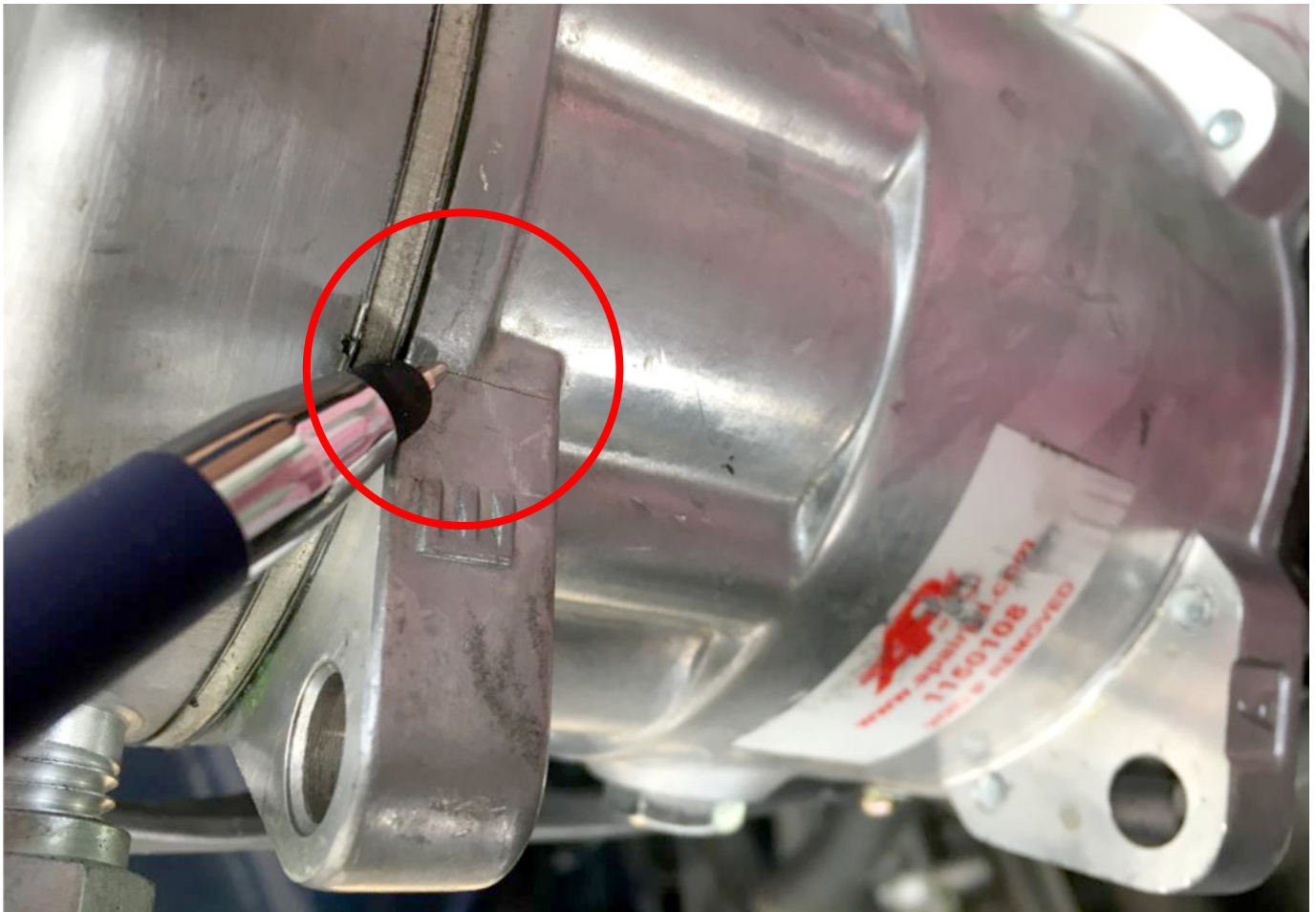
ENGINE BAY**COMPRESSOR & ENGINE DRESS, p5, Steps 1–7**

Step 1. Remove plastic engine cover and plastic cover above the radiator.

Step 2. Remove and discard the drive belt and top idler pulley.

Step 3. Fix mounting brackets to fixing points on the engine using the bolts provided.

Step 4. Fit compressor to the mounting brackets and fit new drive belt.



CAUTION: Check the compressor fitment before overtightening as this can cause damage to the lugs. (See picture above) if there is a gap, it needs to be shimmed. Any damage to the compressor is not covered by the warranty.

Step 5. Fit the receiver drier to the right side chassis rail (when viewed from the front of the vehicle).

Step 6. Holes are available for both receiver/drier installations as the positions are as fitted by Land Rover.

Step 7. Fit pipes and hoses ensuring a smooth run of hose, connect condenser on installation.

ENGINE BAY

CONDENSOR FAN ASSEMBLY, p6, Steps 1-4

Step 1. Fit condenser and frame to the lower A Frame fixing points, do not tighten at this point.

Step 2. Carefully drill out the four rivets from the bonnet/hood latch/anti-tamper cover.

Step 3. Using rivets supplied refit cover and fix top condenser brackets to slam panel.

Step 4. Ensure secure fitment to A Frame fixing points.



ENGINE BAY**UNDER BONNET ELECTRICAL LOOM, p7, Steps 1–5**

Step 1. Lay the harness over the engine and plug in to the condenser fan and compressor. The plug on the compressor locates onto the tabs on the compressor guard.

Step 2. Ensure that the wiring harness is clear of any heat/damage sources and tie wrap in position.

Step 3. Re-fit removed components from vehicle.

Step 4. Charge the A/C system with 600gm +/- 25gm of R134a refrigerant gas.

Step 5. Run the system to ensure that the condenser fan cuts in at the appropriate pressure and is running in the right direction (blowing on the condenser).

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COMPONENT LIST



Hoses and Pipes

QTY	Part Nr.	Description
1	M2465/03	DEFENDER TD5 #6 PIPE EVAP : DRIER
1	M2465/04	DEFENDER TD5 #6 PIPE COND-DRIER
1	M2440/04	DEFENDER TD5 #8 HOSE COND : COMP
1	M2440/06	DEFENDER TD5 #10 HOSE EVAP-COMP



Drier Assembly

QTY	Part Nr.	Description
1	M2442	Defender LHD Drier Bracket
1	LR1059	2.5" Drier
2	BSC10-107	M10 x 90 HEW.HD.BOLT-BZP
2	W10-005	M10 Plain Washer
2	W10-011	M10 Spring Washer
3	N6-007	M6 Nyloc Nut
6	W6-003	M6 Plain Washer
2	BSC6-014	M6 x 20 Hex HD Setscrew
2	BSC6-015	M6 x 25 Hex HD Setscrew
2	W6-014	M6 Shake Proof Washer
1	M1195	Pipe Clip Size 10
2	M1157	Pipe Clip Size 12
1	M1429	Pipe Clip Size 16
10	C-001	Cable Tie 200 x 3.6 Black
4	U383-606	Flanged Hex HD Self tappers



Wiring Looms

QTY	Part Nr.	Description
1	RDMP62B	Main Loom
1	RDMP63A	Evap Loom



Evaporator Assembly

QTY	Part Nr.	Description
1	1369-408-02	Evaporator Assembly
1	1369-958-01DE	Drain Tube
1	1369-956-01DE	Drain Tube Grommet
1	1369-955-01DE	Firewall Grommet
1	W6-006	M6 Mudguard washer
2	1369-954-01DE	Defender Fixing Brackets
4	ST-008	4.2 x 19 Self tappers (black)
1	ST-016	#10 x 2.5 Self Tapper
2	1369-953-01DE	Weld nut fixing brackets
4	BSC5-137	M5 x 20 Hex HD
4	W5-008	M5 Spring Washer



Mount & Drive

QTY	Part Nr.	Description
1	M1097/01	Compressor Bracket-Top
1	M1097/02	Compressor Bracket-Bottom
1	M1128	Spacer
2	BSC10-068	M10 x 130 Skt HD
2	N10-009	M10 Nyloc Nut
4	W10-005	M10 Plain Washer
4	BSC8-042	M8 X 30 Skt HD
4	W8-020	M8 Spring Washer
1	8028	Compressor
1	7PK1800	Belt



Condenser Assembly

QTY	Part Nr.	Description
1	M2431	Condenser mounting frame
1	1991-455-01	Condenser
2	M2432	Top Condenser Mounting Bracket
1	VA07-AP7/C-31S	Condenser Fan
8	BSC6-016	M6 x 35 Hex HD
8	W6-030	M8 Rubber Washer 30mm O/D
8	N6-007	M6 Nyloc nut
12	W6-003	M6 Plain washer
4	W6-006	M6 x 20 O/D washer
4	BR-004	4.8 x 12 Rivets
1	BSC8-025	M8 x 16 Hex HD
1	N8-008	M8 Nyloc nut
1	W8-004	M8 Plain washer