

Peugeot 407

Peugeot 407 Diesel Owners Workshop Manual

Models Covered: 2004 to 2011 (53 to 11 reg)

This manual provides step-by-step maintenance and repair procedures for Peugeot 407 Hatchback and Estate models, including Volcane Turbo Diesel and special/limited editions with 1.8 litre (1769cc) and 1.9 litre (1905cc) diesel engines.

1. INTRODUCTION

This manual is designed to assist owners in performing routine maintenance and more extensive repairs on their Peugeot 407 Diesel vehicles. It provides detailed instructions and illustrations to guide you through various procedures, ensuring proper vehicle upkeep and repair.

PEUGEOT 407 Diesel



2004 to 2011 (53 to 11 reg)

Owners Workshop Manual

step-by-step maintenance and repair



The best selling car manuals in the world

Figure 1.1: Front cover of the Peugeot 407 Diesel Owners Workshop Manual, displaying the vehicle model and manual title.

SEE HAYNES, SEE HOW

Written from hands-on experience gained from the complete strip-down and rebuild of several Peugeot 407 vehicles in our Project Workshop, this manual can help you understand, care for and repair your Peugeot. We do it ourselves to help you do-it-yourself, and whatever your mechanical ability, the practical step-by-step explanations, linked to over 900 photos, will help you get the job done right. Regular servicing and maintenance of your Peugeot can help maintain its resale value, save you money, and make it safer to drive.

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Inside this Manual

Maintenance Simple weekly checks to keep you on the road

Servicing Complete, fully illustrated step-by-step guide

Fault finding Pinpoint specific problems easily

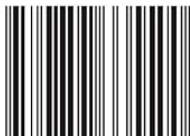
The MoT Step-by-step test checks

Fuel saving Expert advice on maximising mpg

Electrics Easy-to-read wiring diagrams

Haynes tips Valuable short cuts make many tasks easier

ISBN 978 0 85733 550 0



9 780857 335500

Models covered by this Manual

Peugeot 407 Saloon & Estate (SW) with 1.6 litre (1560cc) & 2.0 litre (1997cc) turbo-diesel engines

Also covers most features of Coupe

Does NOT cover 2.2, 2.7 or 3.0 litre diesel engines, petrol models or 'Bioflex' models

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Figure 1.2: An internal page from the manual, illustrating the comprehensive nature of the content with images and text describing various repair processes.

2. SAFETY INFORMATION

Always prioritize safety when working on your vehicle. Ensure the vehicle is securely supported on jack stands before working underneath. Disconnect the battery's negative terminal before performing any electrical work. Wear appropriate personal protective equipment, such as gloves and eye protection. Refer to the vehicle's specific safety warnings and guidelines before commencing any task.

3. WEEKLY CHECKS

Performing regular weekly checks helps maintain your vehicle's performance and identify potential issues early. Key checks include:

- Underbonnet check points
- Engine oil level
- Coolant level
- Brake and clutch fluid level
- Tyre condition and pressure
- Power steering fluid level
- Screen washer fluid level
- Battery condition
- Bulbs and fuses operation
- Wiper blades condition

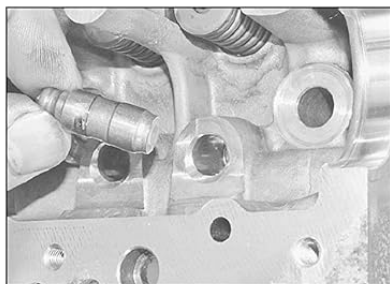
4. ROUTINE MAINTENANCE AND SERVICING

Regular maintenance is crucial for the longevity and reliability of your Peugeot 407. This section covers routine servicing specifications and maintenance schedules.

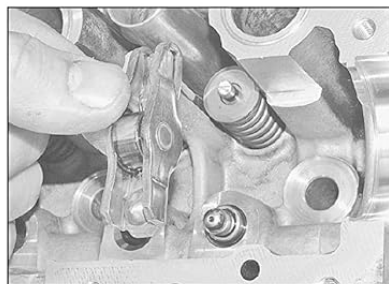
4.1. Lubricants and Fluids

Refer to the specifications for correct lubricant and fluid types and capacities.

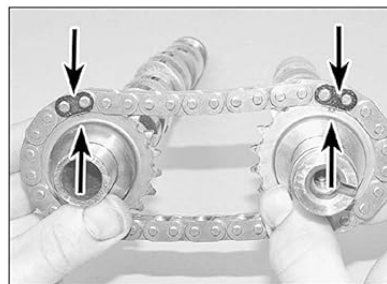
4.2. Capacities



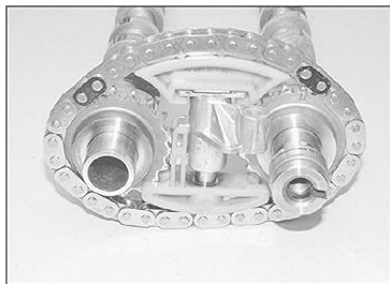
9.21 Refit the hydraulic tappets . . .



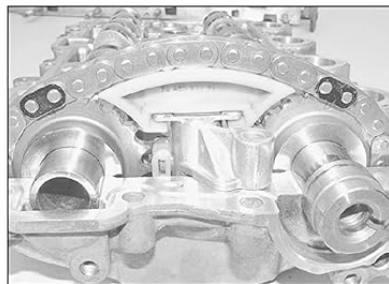
9.22 . . . and rocker arms to their original locations



9.23 Align the marks on the sprockets with the centre of the black-coloured chain links (arrowed). There must be 12 link pins between the sprocket marks



9.24a Assemble the chain tensioner between the upper and lower runs of the chain . . .



9.24b . . . and lower the camshafts, chain and tensioner into position

original bores in the cylinder head unless they have been renewed (see illustration).

22 Lubricate the rocker arms and place them over their respective tappets and valve stems (see illustration).

23 Engage the timing chain around the camshaft sprockets, aligning the black-coloured links with the marked teeth on the camshaft sprockets (see illustration). If the black colouring has been lost, there must be 12 chain link pins between the marks on the sprockets.

24 Fit the chain tensioner between the upper

and lower runs of the chain, then lubricate the bearing surfaces with clean engine oil, and fit the camshafts into position on the underside of the camshaft cover/bearing ladder. Refit the bearing caps to their original positions and tighten the retaining bolts to the specified torque (see illustrations). Tighten the tensioner retaining bolts to the specified torque.

25 Apply a thin bead of sealant to the mating surface of the camshaft cover/bearing ladder as shown. Peugeot recommend the use of Autojoint Noir (see illustration). Do not allow

the sealant to obstruct the oil channels for the hydraulic chain tensioner.

26 Check that the black-coloured links on the chain are still aligned with the marks on the camshaft sprockets, then refit the camshaft cover/bearing ladder, and gradually and evenly tighten the retaining bolts until the cover/ladder is in contact with the cylinder head, then tighten the bolts to the specified torque in sequence (see illustration). **Note:** Ensure the cover/ladder is correctly located by checking the bores of the vacuum pump and camshaft oil seal at each end of the cover/ladder.

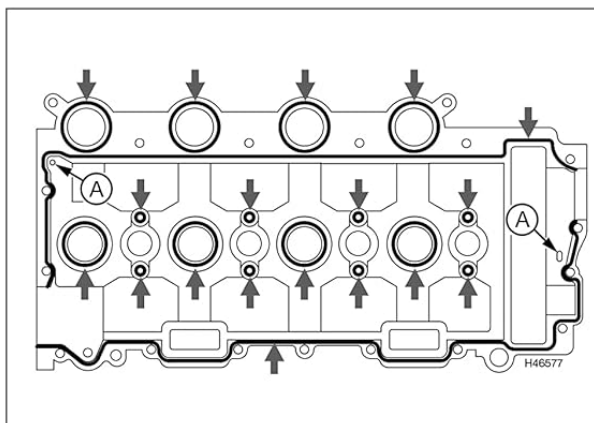
27 Fit a new camshaft oil seal as described in Section 14.

28 Refit the camshaft sprocket, and tighten the retaining bolt finger-tight.

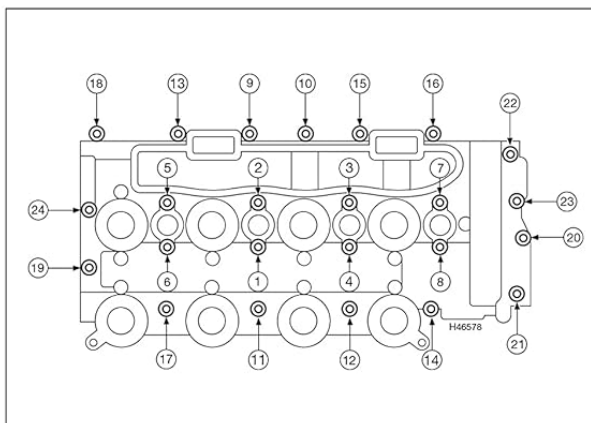
29 Using a spanner on the camshaft sprocket bolt, rotate the camshafts approximately 40 complete revolutions clockwise. Check the black-coloured links on the chain still align with the marks on the camshaft sprockets.

30 If the marks still align, refit the camshaft sprocket as described in Section 8.

31 Refit and adjust the camshaft position sensor as described in Chapter 4A.



9.25 Apply sealant to the camshaft cover/bearing ladder as indicated by the heavy black lines. Ensure sealant does not enter the tensioner oil holes - marked A



9.26 Camshaft cover/bearing ladder bolt tightening sequence

Figure 4.1: A page detailing various specifications, including fluid capacities and torque wrench settings for different components.

Fluid Capacities (Approximate)

System	Capacity
Engine oil (1.6 litre engine)	3.75 litres
Engine oil (2.0 litre engine)	5.25 litres
Cooling system (1.6 litre engine)	7.2 litres

System	Capacity
Manual transmission (BE4/R)	1.9 litres
Automatic transmission (AL4)	6.0 litres (total, including torque converter)
Fuel tank	66 litres

4.3. Torque Wrench Settings

Selected Torque Settings

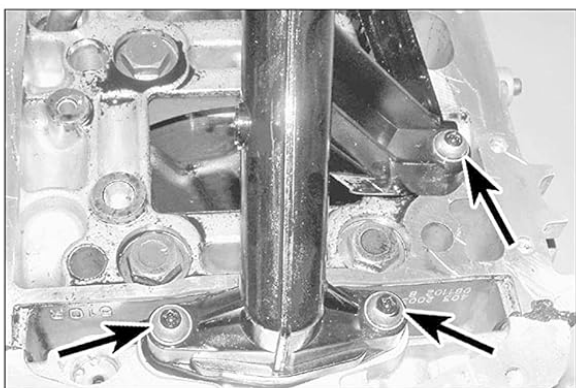
Component	Nm	lb ft
Automatic transmission drain plug (AL4)	33	24
Manual transmission drain plug (BE4/R)	22	16
Oil filter cap	25	18
Wheel bolts	90	66

5. REPAIRS AND OVERHAUL

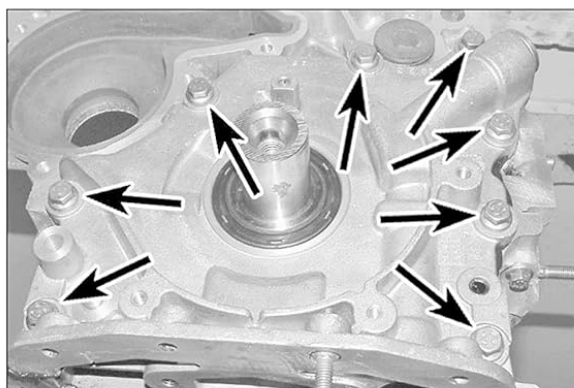
This section provides detailed procedures for repairing and overhauling various vehicle systems, including the engine, transmission, brakes, and body equipment.

5.1. Engine In-Car Repair Procedures (1.6 litre engine example)

This subsection details procedures that can be performed without removing the engine from the vehicle.



12.4 Oil pick-up tube Allen screws (arrowed)



12.5 Oil pump retaining bolts (arrowed)

12 Oil pump – removal, inspection and refitting



Removal

- 1 Remove the sump as described in Section 11.
- 2 Remove the crankshaft sprocket as described in Section 8. Recover the locating key from the crankshaft.
- 3 Disconnect the wiring plug, undo the bolts and remove the crankshaft position sensor, located on the right-hand end of the cylinder block.
- 4 Undo the three Allen screws and remove

the oil pump pick-up tube from the pump/block (see illustration). Discard the oil seal; a new one must be fitted.

- 5 Undo the 8 bolts, and remove the oil pump (see illustration).

Inspection

- 6 Undo and remove the Torx bolts securing the cover to the oil pump (see illustration). Examine the pump rotors and body for signs of wear and damage. If worn, the complete pump must be renewed.

- 7 Remove the circlip, and extract the cap, valve piston and spring, noting which way around they are fitted (see illustrations). The condition of the relief valve spring can only be

measured by comparing it with a new one; if there is any doubt about its condition, it should also be renewed.

- 8 Refit the relief valve piston and spring, and then secure them in place with the circlip.

- 9 Refit the cover to the oil pump, and tighten the Torx bolts securely.

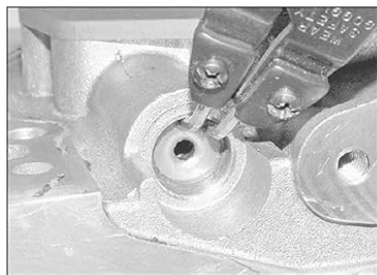
Refitting

- 10 Remove all traces of sealant, and thoroughly clean the mating surfaces of the oil pump and cylinder block.

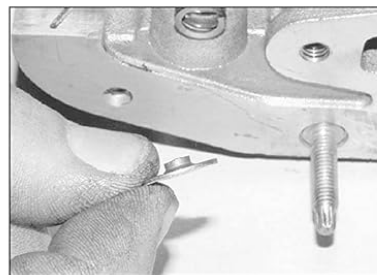
- 11 Apply a 4 mm wide bead of silicone sealant to the mating face of the cylinder block (see illustration). Ensure that no sealant enters any of the holes in the block.



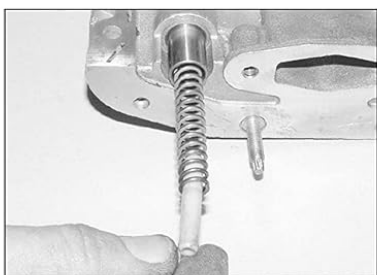
12.6 Undo the Torx bolts and remove the pump cover



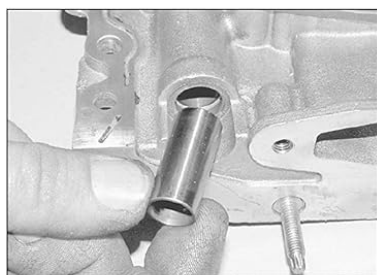
12.7a Remove the circlip . . .



12.7b . . . cap . . .



12.7c . . . spring . . .



12.7d . . . and piston



12.11 Apply a bead of sealant to the cylinder block mating surface

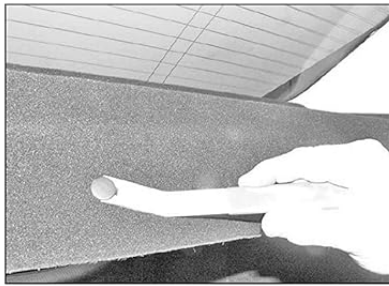
Figure 5.1: Illustrations showing the refitting of hydraulic tappets and rocker arms, and aligning timing chain marks during engine repair.

1. **Refit hydraulic tappets:** Ensure correct placement.
2. **Refit rocker arms:** Position them correctly on their original locations.
3. **Align timing chain marks:** Align the black-coloured links with the marks on the camshaft sprockets. There must be 12 chain link pins between the sprockets.
4. **Assemble chain tensioner:** Position the chain tensioner between the upper and lower runs of the chain.
5. **Apply sealant to camshaft cover/bearing ladder:** Ensure sealant does not enter the tensioner oil holes.

5.2. Oil Pump Removal, Inspection, and Refitting

Detailed steps for servicing the oil pump.

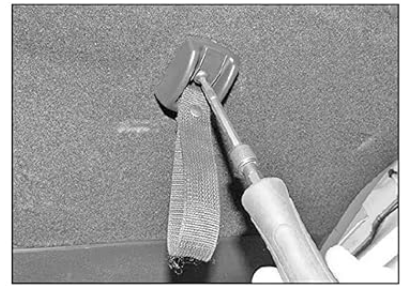
11•28 Bodywork and fittings



25.47 Unclip the securing clips from along the rear parcel shelf



25.48 Withdraw the belt through the parcel shelf



25.50 Undo the retaining screw from the grab handle

the rear seat belt lower anchorage bolt (see illustration 24.9). Note the fitted position of the spacers and washers on the seat belt anchorage bolt for refitting.

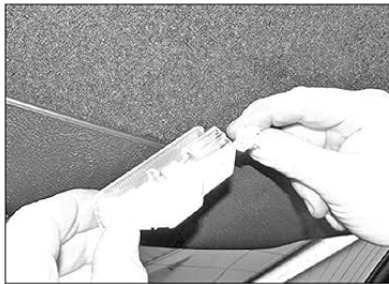
47 Tilt the seat back forwards and then release

the securing clips along the front edge of the parcel shelf trim panel (see illustration).

48 Lift the shelf trim panel upwards to release it from below the rear screen, and then remove the trim panel from the rear of the passenger

compartment. As the parcel shelf trim is being withdrawn, unclip the plastic guide and withdraw the seat belt through the front of the shelf trim panel (see illustration).

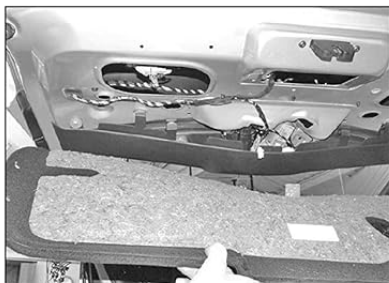
49 Refitting is a reversal of removal.



25.51 Unclip the courtesy light and disconnect the wiring plug



25.52 Release the securing clips . . .



25.53 . . . and remove the trim panel from the tailgate



25.56 Peel back the glass hatch aperture seal

Tailgate trim

Lower carpet trim panel

50 Undo the retaining screw and remove the pull strap from the tailgate (see illustration).

51 Unclip the luggage compartment light from the trim panel, and disconnect the wiring connector (see illustration).

52 Release the plastic securing clips from the sides and the lower edge of the trim panel (see illustration).

53 Carefully pull the panel away from the tailgate, releasing it from the upper plastic trim panel as it is removed (see illustration).

54 Refitting is a reversal of removal.

Upper plastic trim panel

55 Remove the lower carpet trim panel as described previously in this Section.

56 Close the tailgate and open the upper glass hatch. Pull away the rubber weatherstrip from the tailgate aperture adjacent to the trim panel (see illustration).

57 Release the plastic securing clip from the top of the plastic trim panel (see illustration).

58 Pull the trim panel away from the tailgate to release the securing clips (see illustrations). As the trim is removed, take care not to damage the rear wiper motor drive. **Note:** The outer rivets/washers are just locating pegs for the trim panel to slide behind.

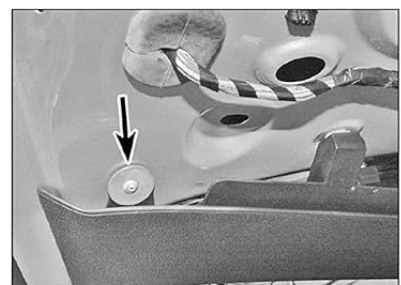
59 Refitting is a reversal of removal.



25.57 Unclip the trim upper securing clip



25.58a Release the plastic trim from the tailgate . . .



25.58b . . . pulling it upwards from behind the locating pegs/washers (arrowed)

Figure 5.2: Images illustrating the removal of oil pick-up tube Allen screws, oil pump retaining bolts, and components of the oil pump assembly.

Removal

1. Remove the pump as described in Section 11.
2. Remove the crankshaft sprocket as described in Section 8. Recover the locating key from the crankshaft.

3. Disconnect the wiring plug, undo the bolts and remove the crankshaft position sensor, located on the right-hand end of the cylinder block.
4. Undo the three Allen screws and remove the oil pump pick-up tube from the pump/block.
5. Undo the 8 bolts, and remove the oil pump.

Inspection

1. Undo and remove the Torx bolts securing the cover to the oil pump.
2. Examine the pump rotors and body for signs of wear and damage. If worn, the complete pump must be renewed.
3. Remove the circlip, and extract the cap, valve, piston and spring, noting which way around they are fitted.
4. The condition of the relief valve spring can only be measured by comparing it with a new one; if there is any doubt about its condition, it should also be renewed.

Refitting

1. Remove all traces of sealant, and thoroughly clean the mating surfaces of the oil pump and cylinder block.
2. Apply a 4 mm wide bead of silicone sealant to the mating face of the cylinder block.
3. Ensure that no sealant enters any of the holes in the block.

5.3. Bodywork and Fittings

Instructions for working with various body components.

Colour codes

BA	White	OR	Orange
BE	Blue	RG	Red
BG	Beige	RS	Pink
GR	Grey	VE	Green
JN	Yellow	VI	Mauve
MR	Brown	VJ	Green/ Yellow
NR	Black		

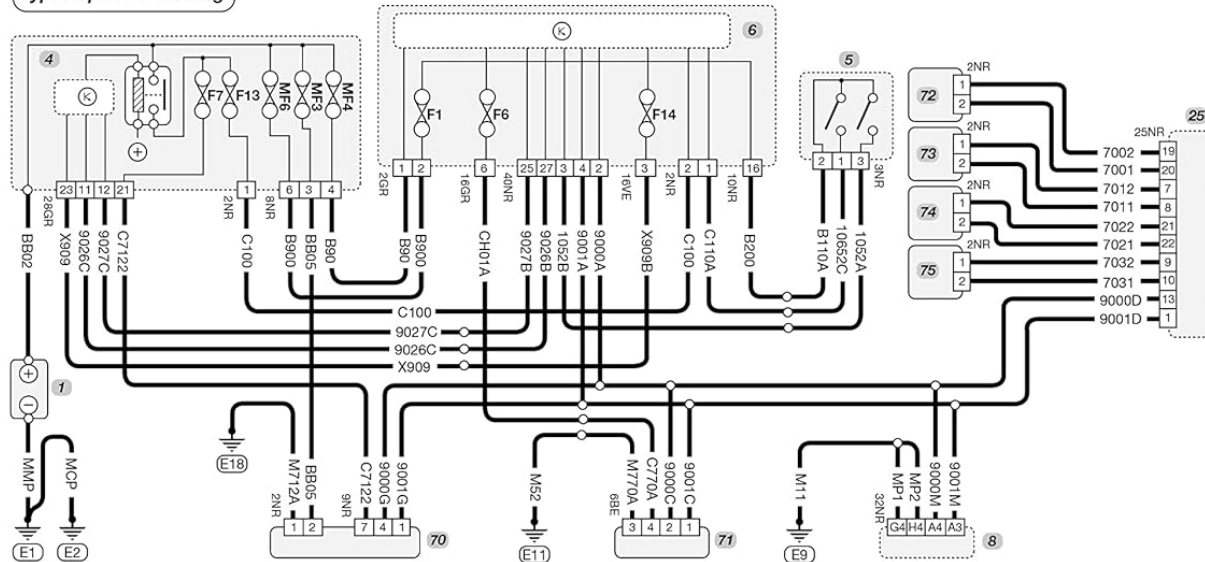
Key to items

1	Battery	70	Power steering pump	77	LH front pad wear sensor
4	Engine fusebox	71	Steering angle sensor	78	RH front pad wear sensor
5	Ignition switch	72	LH front wheel sensor	79	Low brake fluid switch
6	Built-in systems interface	73	RH front wheel sensor	80	Yaw sensor
8	Engine management control unit	74	LH rear wheel sensor		
21	Stop light switch	75	RH rear wheel sensor		
25	ESP control unit	76	Diagnostic connector		

Diagram 9

H47395

Typical power steering



Typical ABS/ESP

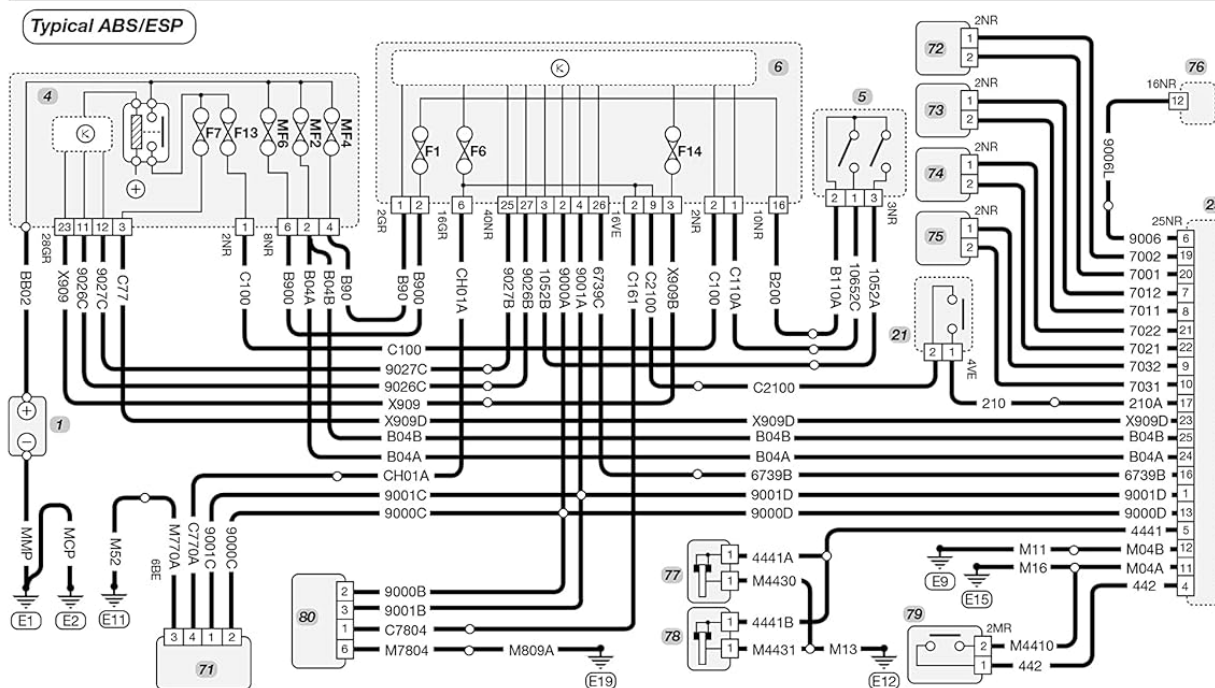


Figure 5.3: Visual guide for unclipping securing clips, withdrawing the belt through the parcel shelf, and removing the tailgate trim.

Rear Parcel Shelf Removal

1. Unclip the securing clips from along the rear parcel shelf.
2. Withdraw the belt through the front of the parcel shelf trim panel.
3. Undo the retaining screw from the grab handle.

Tailgate Trim Removal

1. Undo the retaining screw and remove the pull strap from the tailgate.

2. Unclip the luggage compartment light from the trim panel and disconnect the wiring connector.
3. Release the plastic securing clips from the sides and the rear edge of the trim panel.

6. WIRING DIAGRAMS

This section contains detailed wiring diagrams to assist in diagnosing and repairing electrical systems. Each diagram includes a key to identify components and wire colors.

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	2.0 litre engine in-car repair procedures Page 2B•1
Roadside repairs	Engine removal and overhaul procedures Page 2C•1
Introduction Page 0•6	Cooling, heating and ventilation systems Page 3•1
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Figure 6.1: An example of a wiring diagram, showing connections for typical power steering and ABS/ESP systems with color codes and component keys.

Key to Items:

- BA: Blue
- RG: Red/Green
- OR: Orange
- GR: Grey
- VE: Green
- JN: Yellow/Brown
- MR: Brown/Red
- VJ: Green/Yellow
- NR: Black

Note: Full wiring diagrams and keys are provided within the manual for comprehensive electrical system troubleshooting.

7. SPECIFICATIONS

This section provides general specifications for the Peugeot 407 Diesel models covered by this manual.

- **Publisher:** J H Haynes & Co Ltd
- **Language:** English
- **ISBN-10:** 0857339826
- **ISBN-13:** 978-0857339829
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- **Dimensions:** 8.27 x 0.79 x 10.63 inches

8. TROUBLESHOOTING

The manual includes sections dedicated to fault finding and diagnosis. These sections provide systematic approaches to identify the root cause of common vehicle problems, from engine issues to electrical faults. Refer to the specific chapters for detailed troubleshooting guides.

9. WARRANTY AND SUPPORT

This instruction manual is a third-party publication and does not come with a direct product warranty from the publisher. For vehicle-specific warranty information, please consult your Peugeot dealer or the official Peugeot owner's manual that came with your vehicle. For support regarding the content of this manual, please refer to the publisher's contact information typically found within the manual itself or on their official website.