

FORD TRANSIT

3.5L V6 PFDi Gas - Single Alternator 2023MY+

Cargo Van, Passenger Van, Cutaway + Chassis Cab

CODE / CODICE: 0500.0512

**COMPRESSOR / COMPRESSEUR /
KOMPRESSOR / COMPRESSORE / COMPRESOR :**

VALEO TM 13 / 15 / 16

QUE QP 13 / 15 / 16

SANDEN SD 5 / 7

FITTING INSTRUCTIONS

EINBAUANLEITUNGEN

INSTRUCTIONS POUR LE MONTAGE

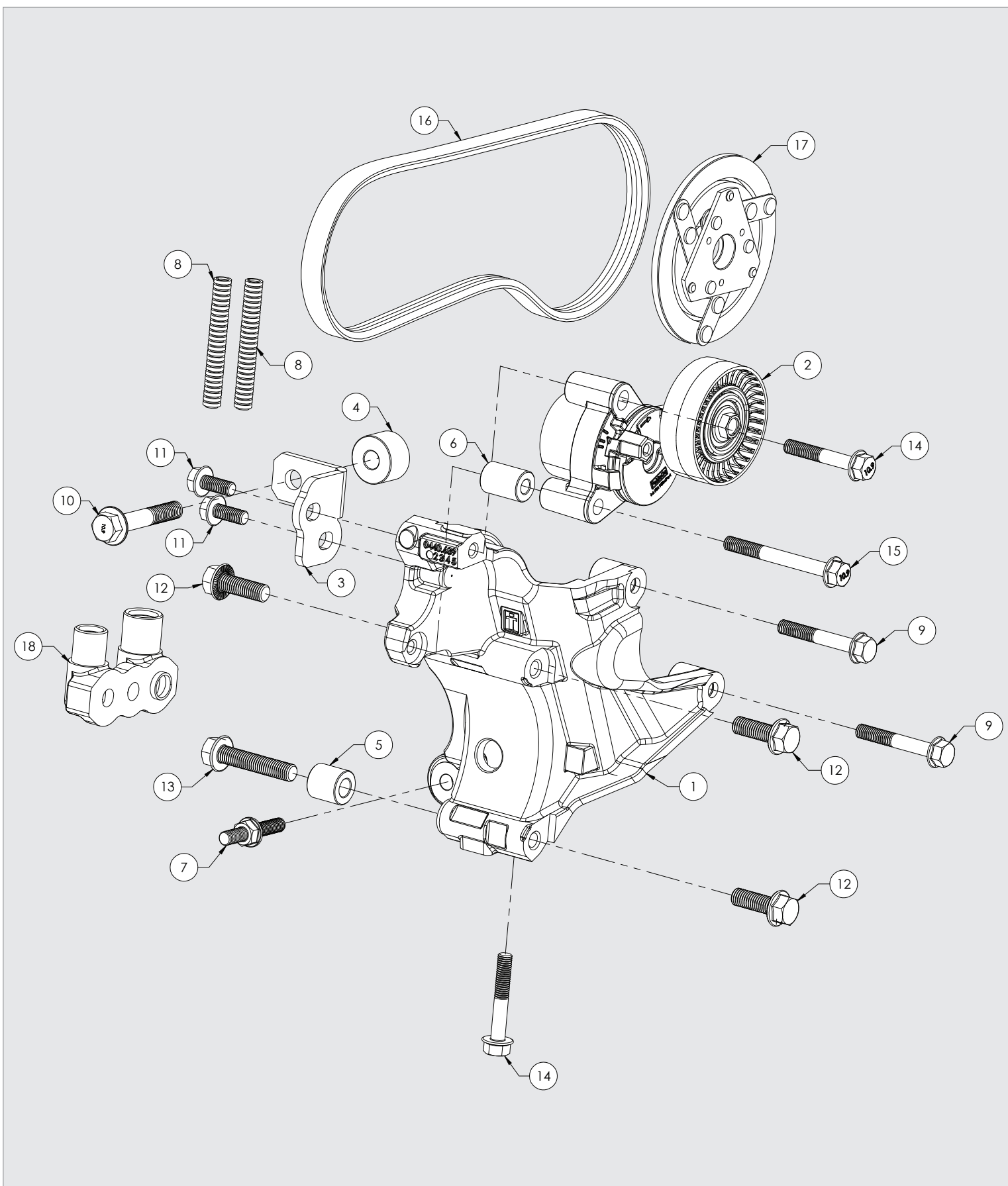
ISTRUZIONI DI MONTAGGIO

INSTRUCCIONES DE MONTAJE

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PARTS VIEW / VISTA EXPLOSIONADA



PARTS LIST / LISTA DE PIEZAS

ITEM	CODE / CODICE / KODE / CODIGO	DESCRIPTION / DESCRIZIONE / BESCHREIBUNG / DESCRIPCION	QTY.	COMMENTS
1	0441.6391	CMB Assy Ford PFDi 2023	1	-
2	1705.5271	Automatic Belt Tensioner - Ford	1	-
3	3021.0871	AMB Component- Eng Mnt Supp- Ford 3.5 2020 MY +	1	-
4	2803.8421	Spacer - 28.0 OD x 10.5 ID x 18.0L	1	-
5	2803.6411	Spacer - 20.0 OD x 10.5 ID x 20L	1	-
6	2803.8681	Spacer -18.0 OD x 8.3 ID x 26.0L	1	-
7	2780.0091	Stud Bolt M8 x 28 x 17 :1.25	1	-
8	1430.0541	Polamide Conduit Split Tube - OD10 x L75 mm	2	-
9	2704.5971	Hexagon Flange Bolt - M8 x 55 : 1.25 - 10.9	2	-
10	2705.5431	Hexagon Flange Bolt M10 x 60 : 1.50 - 10.9	1	-
11	2704.6071	Hexagon Flange Bolt - M8 x 20 : 1.25 - 10.9	2	-
12	2705.0491	Hexagon Flange Bolt Durlok - M10 x 30 : 1.50 - 12.9	3	-
13	2705.0341	Hexagon Flange Bolt Durlok - M10 x 50 : 1.50 - 12.9	1	-
14	2704.6081	Hexagon Flange Bolt - M8 x 50 : 1.25 - 10.9	2	-
15	2704.6091	Hexagon Flange Bolt - M8 x 75 : 1.25-10.9	1	-
16	0820.9101	Belt - Poly Groove 4PK 1384 (K040545)	1	-
17	0421.0011	Clutch Armature SL - Seltec/QUE 13/15/16	1	-
18	0425.0501	Manifold sanden FLX7 Compressor V 3/4 x 7/8	1	-

COMPATIBLE COMPRESSORS / RECOMENDADAS COMPRESORES

VALEO	TM-13 HS	TM-15 HS	TM-16 HS
Comp No	0381.0152	0381.0802	0381.0752
Valeo No.	103-54320	103-55320	103-56320
Mounting	Ear	Ear	Ear
Rotor	8PV	8PV	8PV
GL	34.09	34.09	34.09
Armature	SL	SL	SL
Diameter	119	119	119
Voltage	12	12	12
Orientation	V	V	V
Fitting	3/4 x 7/8	3/4 x 7/8	3/4 x 7/8
Manifold	Bolt	Bolt	Bolt

QUE	QP-13 HS	QP-15 HS	QP-16 HS
Comp No	0391.0152	0391.0802	0391.0752
Que No.	QP13-1150	QP15-1512	QP16-1249
Mounting	Ear	Ear	Ear
Rotor	8PV	8PV	8PV
GL	34.09	34.09	34.09
Armature	SL	SL	SL
Diameter	119	119	119
Voltage	12	12	12
Orientation	V	V	V
Fitting	3/4 x 7/8	3/4 x 7/8	3/4 x 7/8
Manifold	Bolt	Bolt	Bolt

SANDEN	-	-	SD7H15
Comp No	-	-	0370.0061
Sanden No.	-	-	8103
Mounting	-	-	Ear
Rotor	-	-	8PV
GL	-	-	34.09
Armature	-	-	SL
Diameter	-	-	119
Voltage	-	-	12
Orientation	-	-	V
Fitting	-	-	3/4 x 7/8

NOTES

STANDARD FASTENER TORQUE VALUES

In the absence of specific torque values detailed in this fitting instruction manual, the following chart can be used as a guide to the maximum safe torque for specific size and grade of fastener.

VALORES ESTÁNDAR DE LOS PARES DE APRIETE Y FIJACIÓN

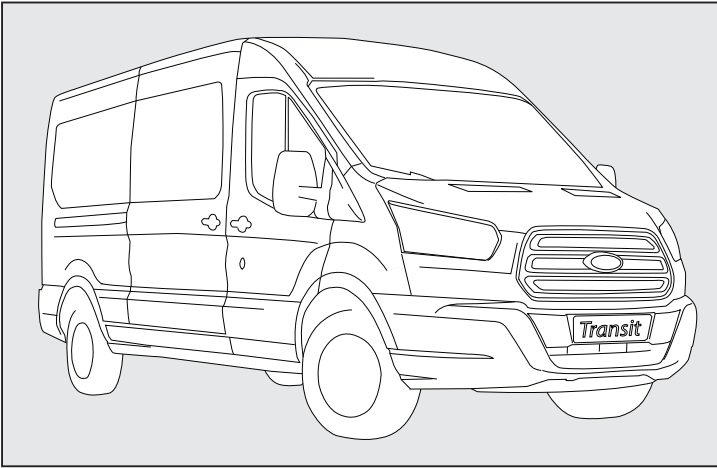
En ausencia de valores para los pares de apriete específicos detallados en este manual de instrucciones de montaje, se puede utilizar la siguiente tabla como guía para consultar el máximo par de torsión seguro para un tamaño concreto y su grado de fijación.

Caution: Measures must be followed accurately to steer clear of the possibility of damage to individuals

Warning: This calls awareness to actions which must be pursued to avoid damage to the components.

NB: This calls awareness to make the job easier or gives useful information.

STRENGTH								
	Max Torque		Max Torque		Max Torque		Max Torque	
Dia / Pitch	lb.ft	Nm	lb.ft	Nm	lb.ft	Nm	lb.ft	Nm
M5 x 0.80	2	3	4.5	6	6.5	9	7.5	10
M6 x 1.00	4	5.5	7.5	10	11	15	13	18
M8 x 1.25	10	13	18	25	26	35	33	45
M10 x 1.25	20	27	39	53	57	78	66	90
M10 x 1.50	18	25	37	50	55	73	63	86
M12 x 1.75	33	45	63	85	97	130	111	150
M14 x 2.00	55	75	103	140	151	205	177	240
M16 x 2.00	85	115	159	215	232	315	273	370



VEHICLE DETAILS

Manufacturer	Ford
Model	Transit
Type	Cargo Van, Passenger Van, Cutaway + Chassis Cab
Engine Details	3.5L V6 PFDi Gas (2023MY+)
Chassis Nos.	N/A
LHD	YES
RHD	YES
PAS	EPAS
A/C	YES
Voltage	12v

KIT DETAILS

Kit Part No.	0500.0512
Description	Standard Kit
Compressor RPM	6000 @ 4500 Engine Speed
Fitting Time	60 Minutes
Suction Fitting	90°
Discharge Fitting	90°
Belt Type	4PK 1384 (K040545)
Belt Part Number	0820.9101
Note:	Not suitable for pre 2023MY

FOREWORD

The purpose of this manual is to facilitate the installation of a direct drive compressor. The information given is merely instructive, should any complications arise contact the Technical department. The manufacturer's warranty does not cover any problems caused by defective installation or alterations made unless authorised. The manufacturer shall not be responsible for any injury, damage or loss caused directly or indirectly as a result of using this manual or the information contained within it.

1 SAFETY MEASURES:

Before fitting the Compressor adapter drive kit, ensure the following for damage:

- a Inner and outer trim and body work
- b Engine idle pace
- c Check all the vehicle functions

Check list:

- a Ensure that the right kit has been selected
- b Before installing, check that all the correct pieces are present; also ensure that there are no missing or broken pieces
- c When fitting, make sure the vehicle is properly protected against damage.

Installation apparatus

- a Calibrated torque wrench
- b Hand service tools
- c Protective covers and shields

2 PRECAUTIONS

- a Detach the battery negative lead.
- b Torque all bolts where stated using a calibrated torque wrench.
- c Take extreme care with moving parts.
- d Remove the vehicle's ignition key and keep it with you.
- e Wear safeguards and make sure that liquid refrigerant never touches your skin

PRE- INSTALLATION

N.B Before proceeding please read the installation precautions. The letters on drawings relate to text, numbers circled relate to the parts list in this manual.

REMOVAL OF PARTS

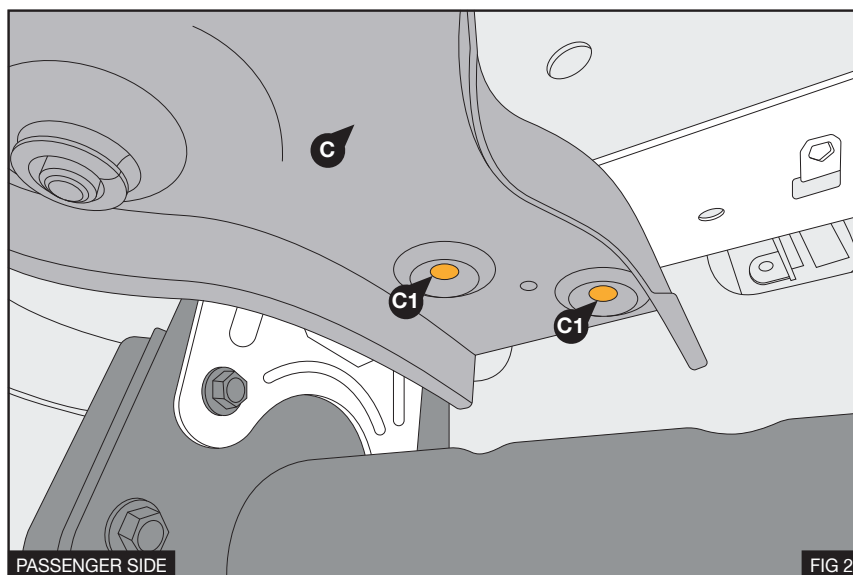
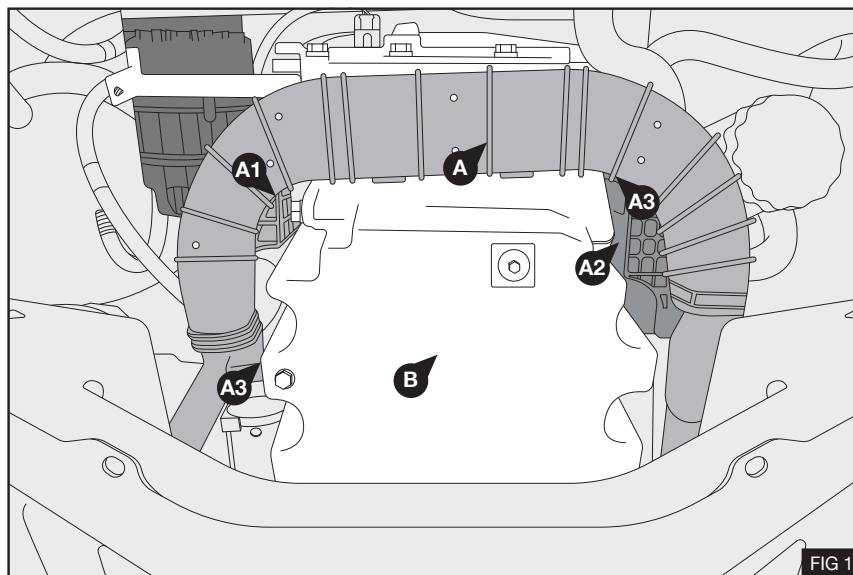
Option: If required for extra working space the plastic guard below the bumper can be removed.in this manual.

1. Remove:

Remove and retain the 2x fasteners (A1), (A2) securing the harness carrier (A) to the oil pan (B). Carefully release the 2x push fit tabs (A3) fixing the harness carrier (A) to the oil pan (B) and to the harness support bracket- not visible - Fig 1

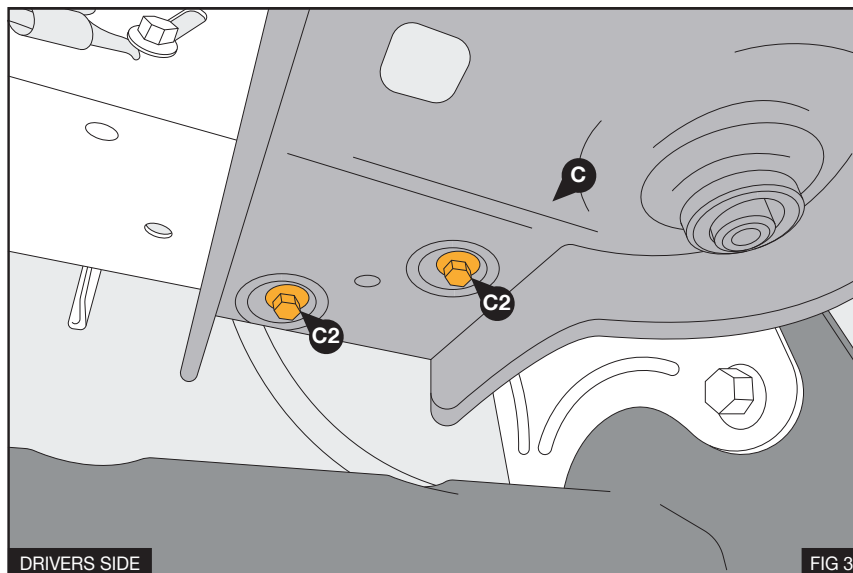
Note: Do not separate the carrier and harness.

2. Remove the 2x bolts (C1) securing the cooling pack lower mount (C) on the passenger side - Fig 2



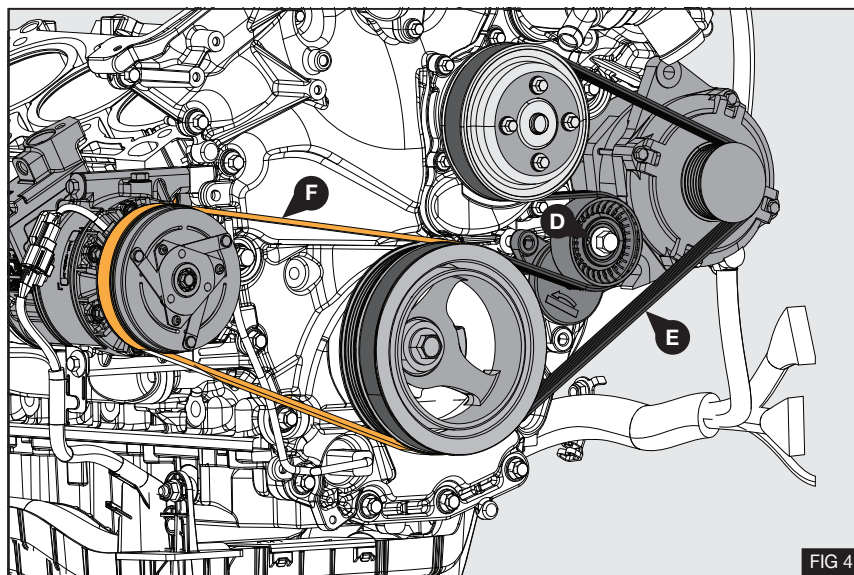
3. Loosen the 2x bolts (C2) securing the cooling pack lower mount (C) on the driver side - Fig 3

Note: Do not fully remove bolts from the driver side. The cross-member (C) should be movable to allow improved access during the compressor and mount bracket installation.



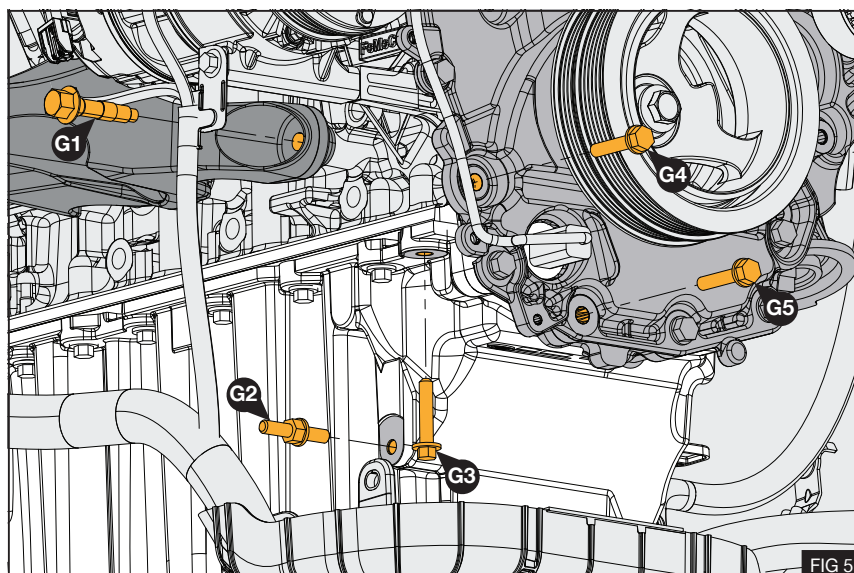
4. Release tension on automatic tensioner ④ - Fig 4
5. Remove and retain drive belt ⑤ - Fig 4
6. Remove and discard the AC compressor stretch belt ⑥ - Fig 4

CAUTION: If the belt ⑥ is being cut to aid removal, take care not to damage any other components.



7. Remove and discard the following fasteners:

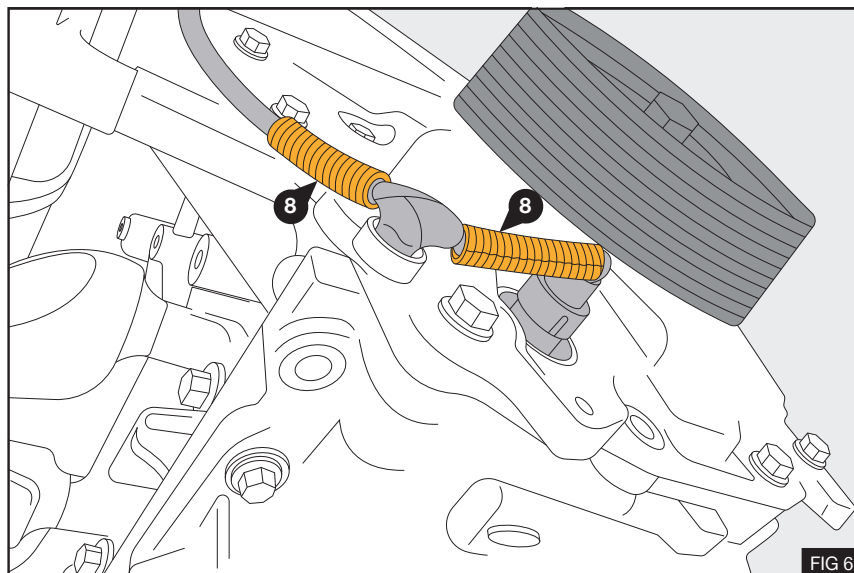
G1 - From Engine mount
 G2 - From Harness carrier
 G3 - From Oil Pan
 G4, G5 - From Engine Front cover



INSTALLATION:

WARNING: DO NOT USE THREADLOCK UNLESS INSTRUCTED TO WITHIN THE MANUAL.

1. Fit the protective sleeves ⑧ either side of the harness support clip at the positions shown - Fig 6



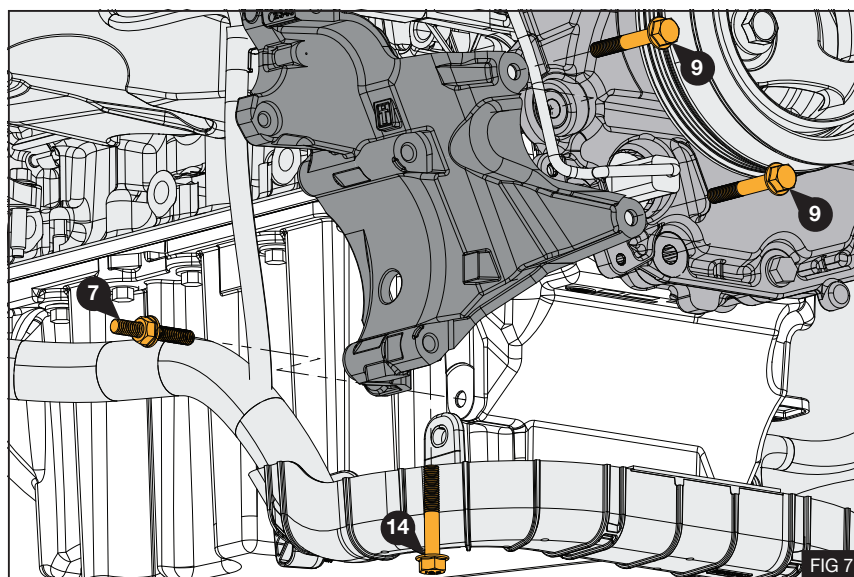
WARNING: DO NOT TIGHTEN FASTENERS UNTIL INSTRUCTED TO.

2. Fit the bracket (1) to the engine using 2x M8x55 bolts (9) - Fig 7
3. Fit the M8x50 bolt (14)
4. Fit the Stud bolt (7)

CAUTION: Check all bracket faces are mated correctly without gaps before final tightening.

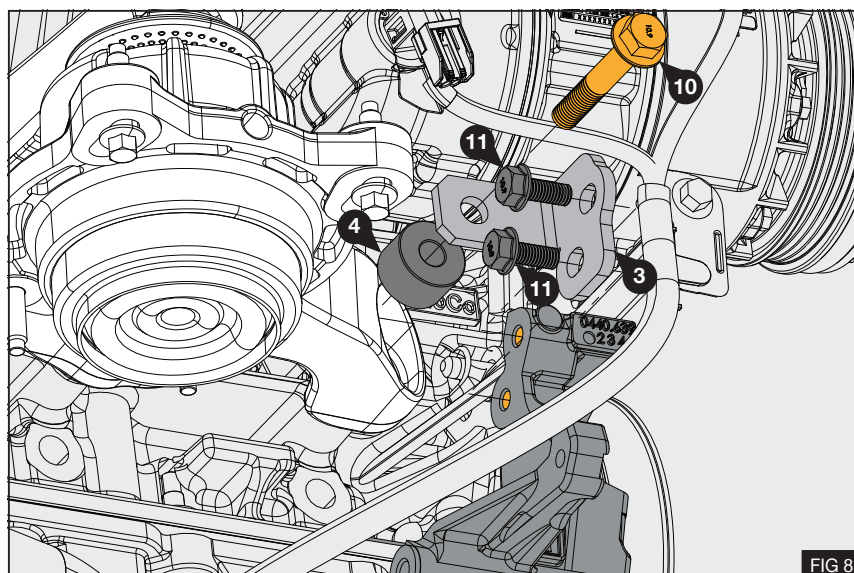
5. Lightly hand tighten then Torque as follows:

1. M8x55 bolts (9) to 21.4 lb.ft / 29 Nm
2. M8x50 bolt (14) to 21.4 lb.ft / 29 Nm
3. M8 Stud bolt (7) to 21.4 lb.ft / 29 Nm



Note: A small amount of thread lock is recommended on fastener (10)

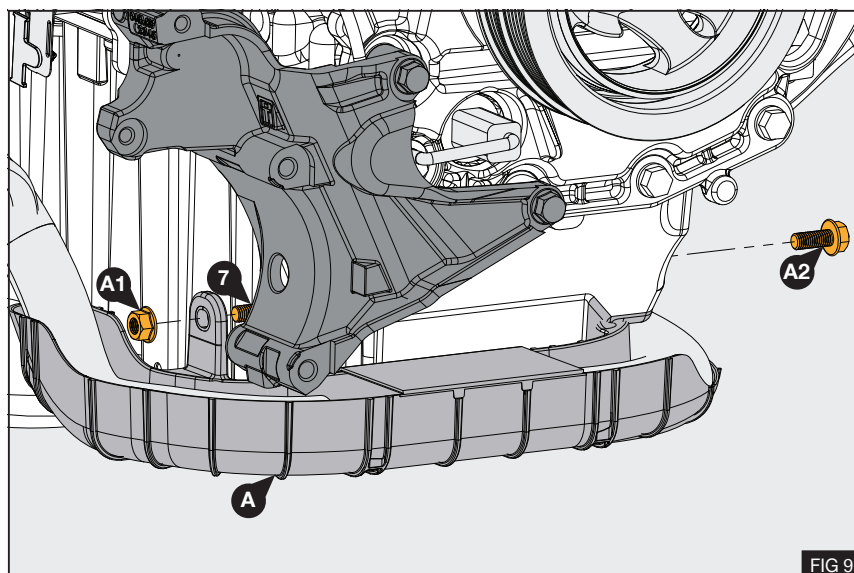
6. Fit the rear support (3) using spacer (4) with M10x60 bolt (10). Secure to the bracket (1) using 2x M8x20 bolts (11) - Fig 8
7. Ensure parts are correctly seated then torque as follows.
 - Bolt (10) to 37 lb.ft / 50 Nm
 - Bolts (11) to 21.4 lb.ft / 29 Nm



8. Carefully fit the harness carrier (A) over the stud bolt (7) - Fig 9
9. Secure carrier using original M8 Nut (A1) and the original M8 bolt (A2) - Fig 9

Note: The carrier (A) needs careful positioning and a small amount of flex to be re-fitted.

- Torque fasteners (A1), (A2) to 18.4 lb.ft / 25 Nm



10. Install the automatic belt tensioner (2) using 1x M8x50 bolt (14) and M8x75 bolt (15) with spacer (6) - Fig 10

• Torque bolts (14), (15) to 21.4 lb.ft / 29 Nm

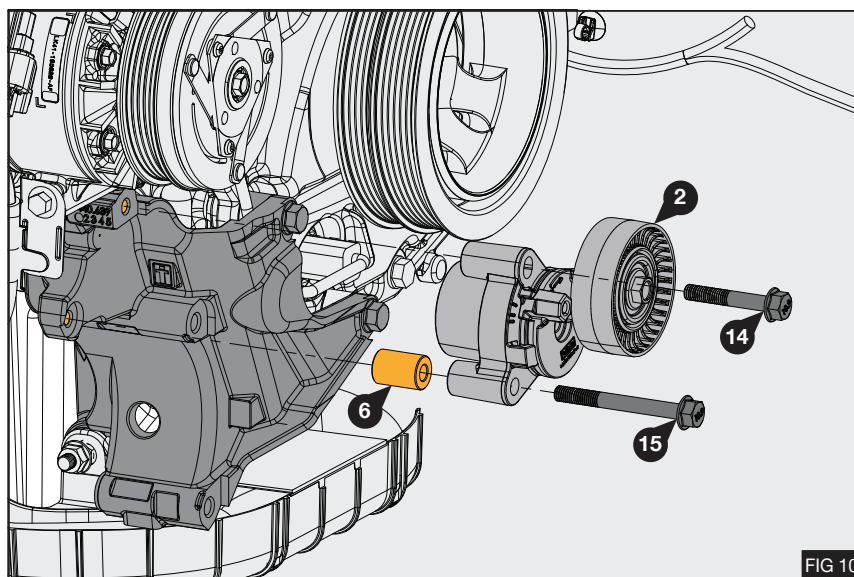


FIG 10

Compressor preparation- Valeo / Que

11. The compressor must have a leaf spring style armature installed. If the compressor is not pre-equipped with this type, fit the supplied armature (17) following guidelines in the compressor service manual - Fig 11

12. Fit the supplied manifold (18) - Fig 11

• Torque bolts (H1) or (H2) to 33 lb.ft / 45 Nm

Note: If the manifold is not supplied with a Cap head bolt (H1) re-use the original hex head compressor bolt (H2).

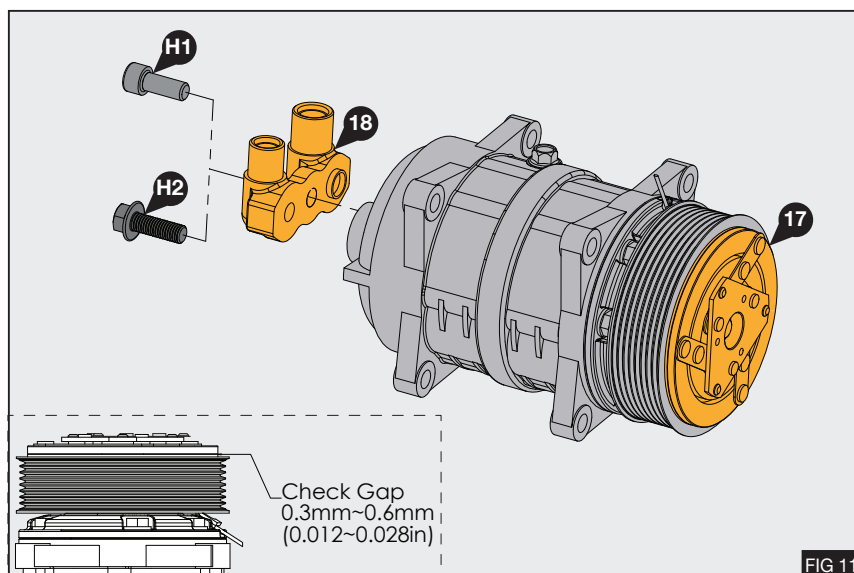


FIG 11

13. Fit the compressor to the mount (1) using 3x M10x30 bolts (12). 1 x M10x50 bolt (13) with spacer (5) - see note - Fig 12

Note: It is important the correct tightening sequence is followed to prevent damage to the compressor.

1. Check the rear bolts (12), (13) are started but not fully tightened against the compressor ears.
2. Tighten the 2 x Front bolts (12) to 37 lb.ft / 50 Nm
3. Tighten rear bolt (12) to 37 lb.ft / 50 Nm
4. Tighten rear bolt (13) to 37 lb.ft / 50 Nm

Caution: This process is required to enable the sliding bushes in the compressor bracket to move independently up to the compressor ears during tightening.compressor.

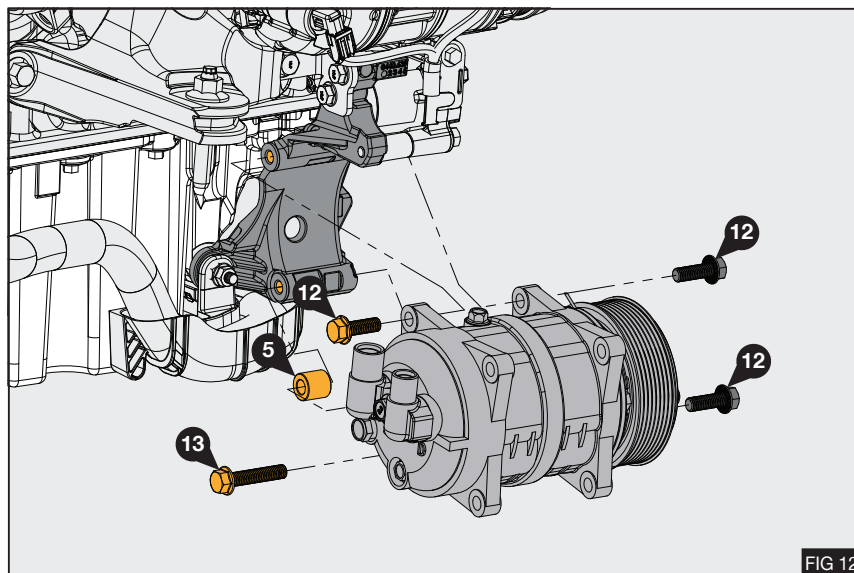


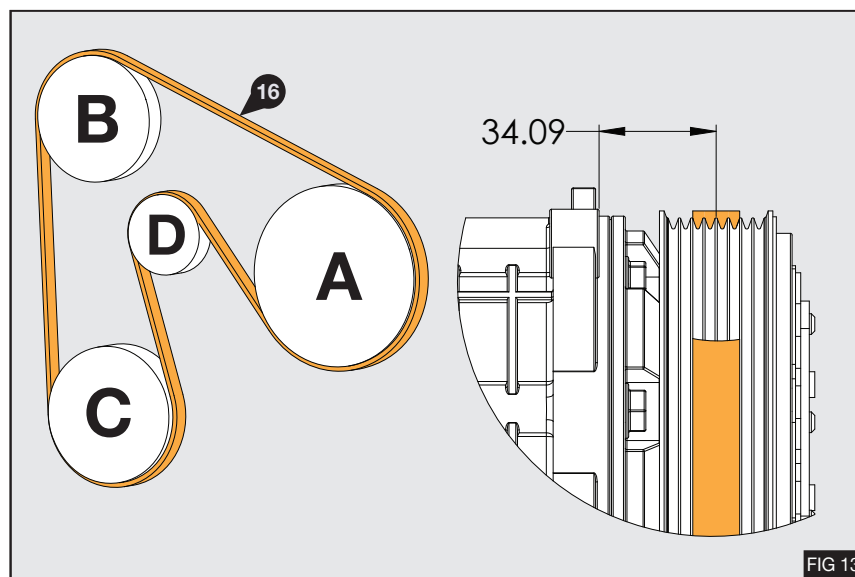
FIG 12

DRIVE BELT INSTALLATION

1. Install the drive belt (16) - Fig 13

Note: Position belt into the correct grooves on the compressor - Fig 13

- A. Crank Pulley
- B. OEM AC Compressor
- C. Additional Compressor
- D. Automatic Tensioner

**FINISH**

1. Re-fit cross member © tighten fasteners (C1), (C2) while tightening ensure the crossmember © is pushed all the way to the front of the vehicle to improve clearance to the compressor armature (28) – See Note.

Note: 5/16" [8mm] is an acceptable minimum clearance between the clutch armature (17) and the cross member ©.

(EN)

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