Techni
ENGINEERING SOLUTIONS

EN

MERCEDES BENZ Sprinter (907)

2.0 I4 Gas (M274 DE20 LA) 2019 MY>

CODE / CODICE: 0500.9092

COMPRESSOR / COMPRESSEUR / KOMPRESSOR / COMPRESSORE / COMPRESOR :

VALEO TM 13 / 15 / 16
QUE QP 13 / 15 / 16

FITTING INSTRUCTIONS

EINBAUANLEITUNGEN
INSTRUCTIONS POUR LE MONTAGE
INSTRUZIONI DI MONTAGGIO
INSTRUCCIONES DE MONTAJE

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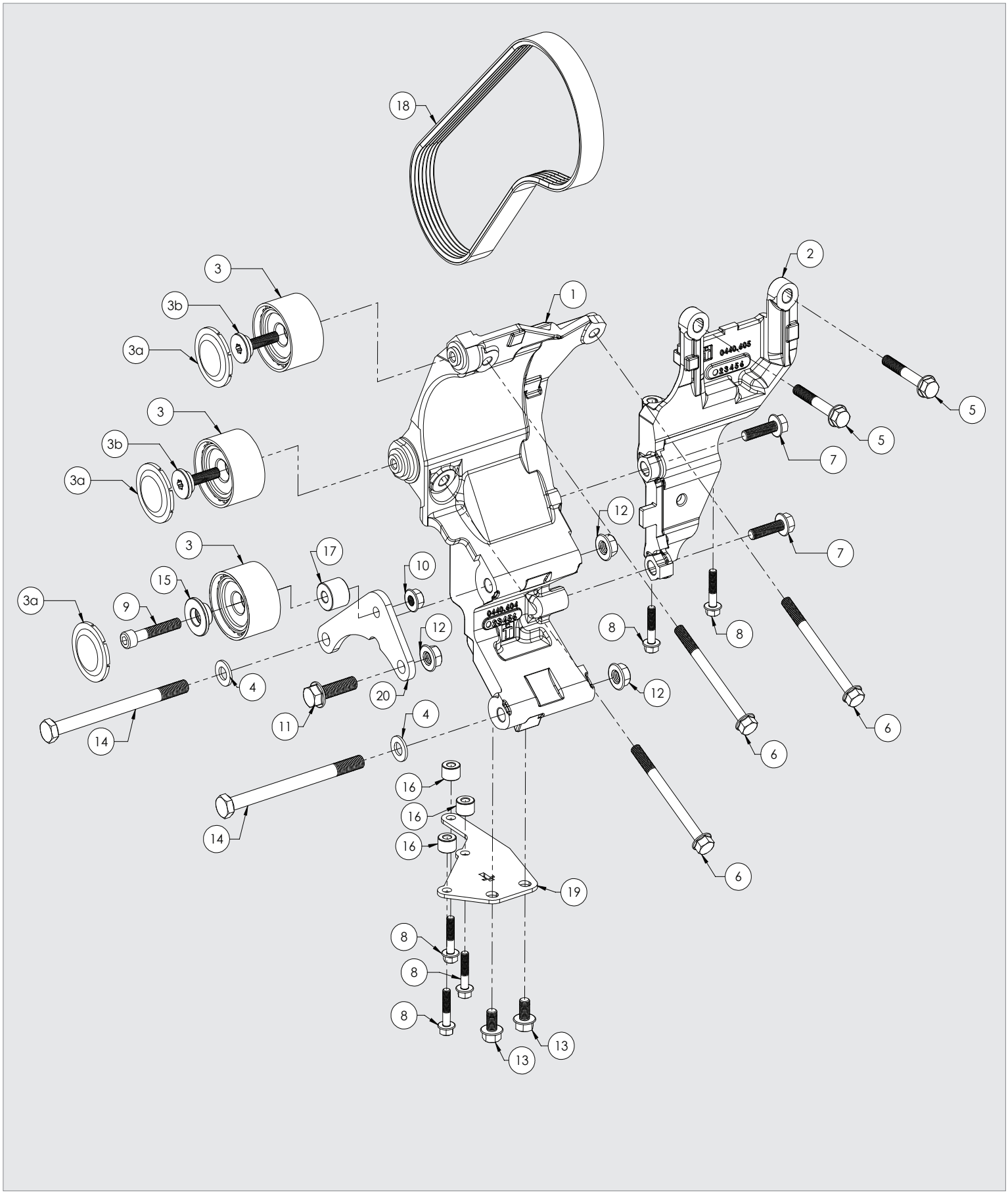
PARTS VIEW / VISTA EXPLOSIONADA



PARTS LIST / LISTA DE PIEZAS

ITEM	CODE / CODICE / KODE / CODIGO	DESCRIPTION / DESCRIZIONE / BESCHREIBUNG / DESRIPCION	QTY.	COMMENTS
1	0440.6041	CMB- MB Sprinter M274 2.0 Bracket A	1	-
2	0440.6051	CMB- MB Sprinter M274 2.0 Bracket B	1	-
3	1700.5161	Idle Pulley inc Bolt and Cap 54mm	3	-
4	2809.0011	Washer M10 Flat DIN 125 - A 10.5	2	-
5	2704.5971	Hexagon flange bolt - M8 x 55 : 1.25 - 10.9	2	-
6	2704.5361	Hexagon flange bolt - M8 x 100 : 1.25 - 8.8	3	-
7	2704.0091	Hexagon flange bolt Durlok - M8 x 30 : 1.25 - 12.9	2	-
8	2702.0511	Hexagon Flange Bolt M6x30 : 1.00	5	-
9	2704.5341	Hexagon socket head cap screw M8 x 45 : 1.25 - 12.9	1	-
10	2734.0021	Hexagon flange nut Durlok - M8 : 1.25	1	-
11	2705.0241	Hexagon flange bolt Durlok - M10 x 35 : 1.50 - 12.9	1	-
12	2735.0071	Durlok Hexagon Flange Nut - M10 : 1.50	3	-
13	2704.1521	Hexagon flange bolt Durlok - M8 x 16 : 1.25 - 12.9	2	-
14	2705.0531	Hexagon Head Bolt - M10 x 130 : 1.5 - 10.9	2	-
15	2803.7451	C-Bored - Spacer ID 8.3 OD 16.8 L 11.0	1	-
16	2803.7461	Spacer 14.5 OD 6.5 ID 10.5 L	3	-
17	2803.7441	Spacer 22 OD x 8.5 ID x 15 L	1	-
18	0820.8601	Belt - Poly Groove 6PK 2213	1	-
19	3020.8691	Oil Pan Support Plate	1	-
20	3020.8682	Pulley Mount Plate	1	-

COMPATIBLE COMPRESSORS / RECOMENDADAS COMPRESORES

VALEO	TM-13 HS	TM-15 HS	TM-16 HS
Comp No	0381.0202	0381.0002	0381.0312
Valeo No.	488-45120	488-55120	488-46134
Mounting	Ear	Ear	Ear
Rotor	8PV	8PV	8PV
GL	46.55mm	46.55mm	46.55mm
Armature	3E	3E	3E
Diameter	123	123	123
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	0391.0202	0391.0002	0391.0312
Que No.	QP13-1302	QP15-1171	QP16-1581
Mounting	Ear	Ear	Ear
Rotor	8PV	8PV	8PV
GL	46.55mm	46.55mm	46.55mm
Armature	3E	3E	3E
Diameter	123	123	123
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

NOTES

STANDARD FASTENER TORQUE VALUES

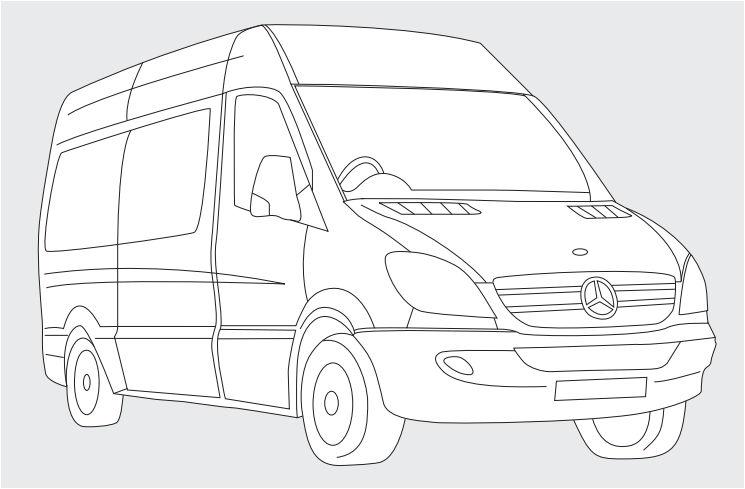
In the absence of specific torque values detailed in this fitting instruction manual, the following chart can be used as a guide to the maximum safe torque for specific size and grade of fastener.

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	4.8		8.8		10.9		12.9	
	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	Mercedes
Model	Sprinter (907)
Type	1500 / 2500
Engine Details	2.0 I4 GAS (M274 DE20 LA)
Year	2019MY>
Chassis Nos.	N/A
LHD	YES
RHD	YES
PAS	YES
A/C	YES
Voltage	12v

KIT DETAILS

Kit Part No.	0500.9092
Description	Standard Kit
Compressor RPM	6000 @ 4750 Engine Speed
Fitting Time	90 Minutes
Suction Fitting	90°
Discharge Fitting	90°
Drive Belt	6PK 2213
Belt Part Number	0820.8601

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

Note: 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

Note: It is unnecessary to de-gas the AC system or remove the vehicle front to install this kit

1. Disconnect the battery(s)
2. Release tension on the original drive belt Ⓐ, lock the tensioner Ⓑ using a suitable Ø4mm Pin - Fig 1
3. Remove and discard the drive belt Ⓐ - Fig 1

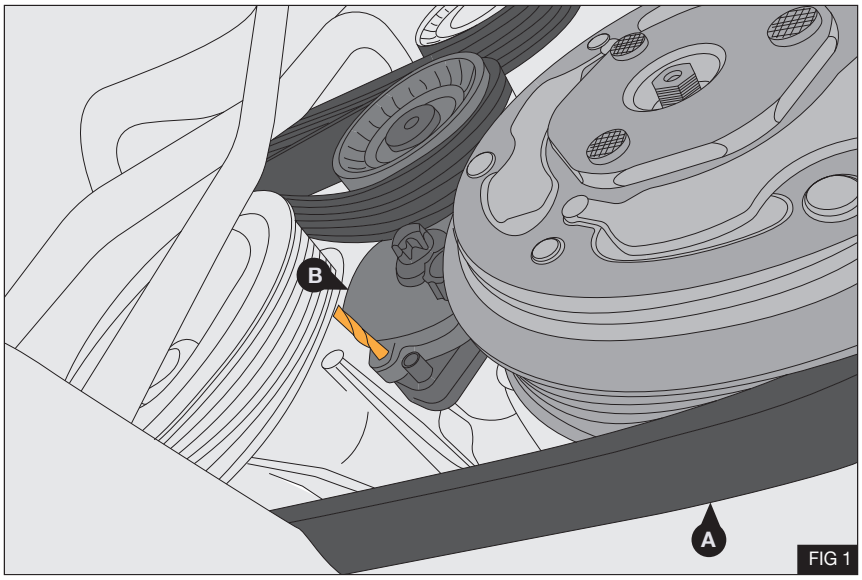


FIG 1

4. Remove charge duct Ⓒ - ease out the retaining springs into the removal position where they should clip into the plastic housings - Fig 2
5. Remove 3 x bolts Ⓓ from the AC compressor Ⓔ – do not disconnect harness or pipes. Secure the compressor to one side with tie wraps to prevent stress on the pipes or electrical harness. Discard bolts Ⓓ - Fig 2

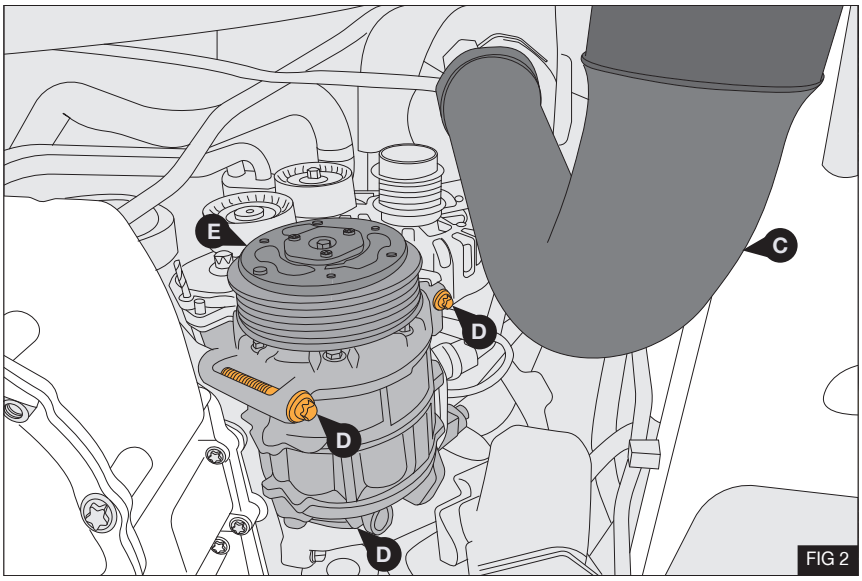


FIG 2

Remove and discard the following fasteners:

- 2x M8x 50 bolts Ⓕ securing the lower section of the engine mounting - Fig 3
- 2x M6 x 25 bolts Ⓖ securing the oil pan upper - Fig 3
- 3x M6 x 16 bolts Ⓗ securing the oil pan lower - Fig 3

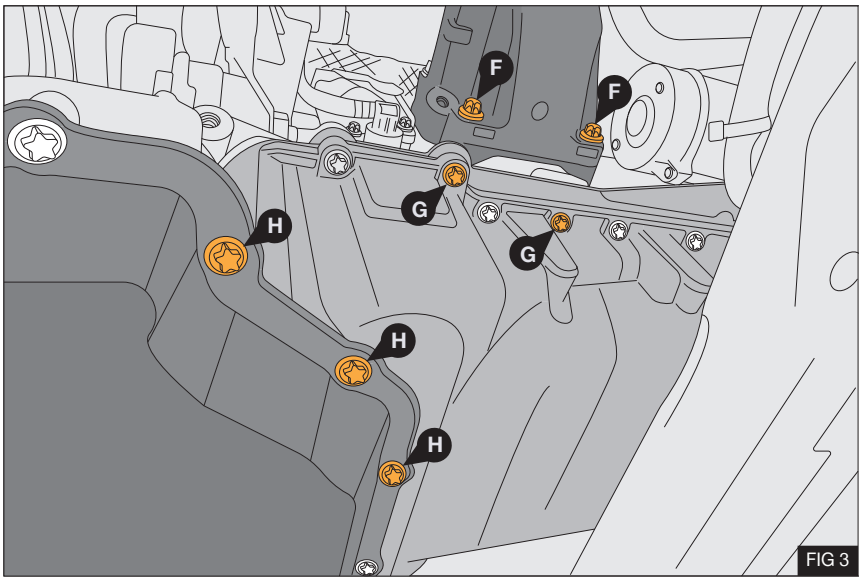


FIG 3

INSTALLATION

Note: Do not use Threadlock during the installation of this kit.

Note: The idle pulley (3) securing bolt is designed to fit into the pulley from one direction only. The metal bearing shield on the rear of the bearing should face the mount bracket

1. Fit the pulleys (3) to the bracket (1) using the centering bolts (3b) - Fig 4
   - Torque bolts (3b) to 18 lb-ft / 25 Nm
2. Fit pulley caps (3a)

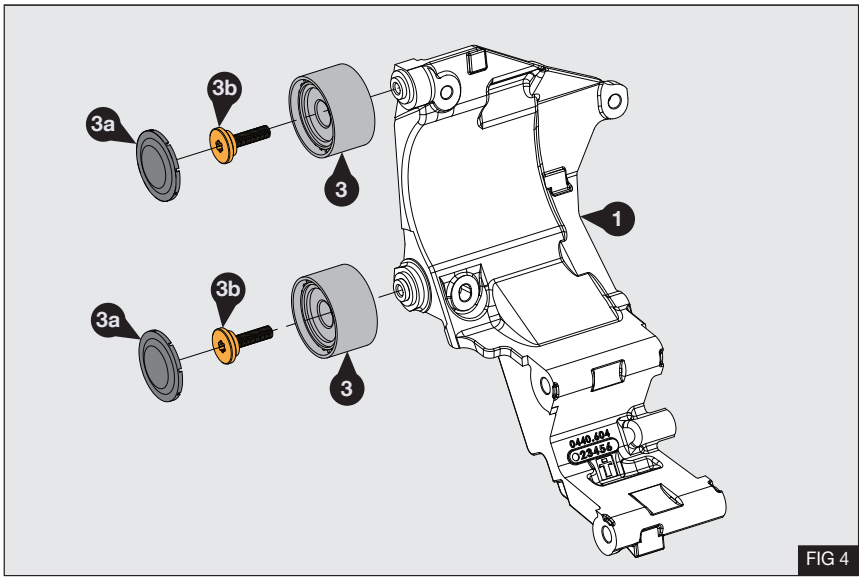


FIG 4

3. Install both the bracket (1) and compressor (E) to the engine using 3x M8 x 100 bolts (6). Note the rear compressor bolt must be installed with the compressor as it cannot be inserted once the compressor is located. - Fig 5
4. Tighten bolts evenly (6) then torque to 18 lb-ft / 25 Nm

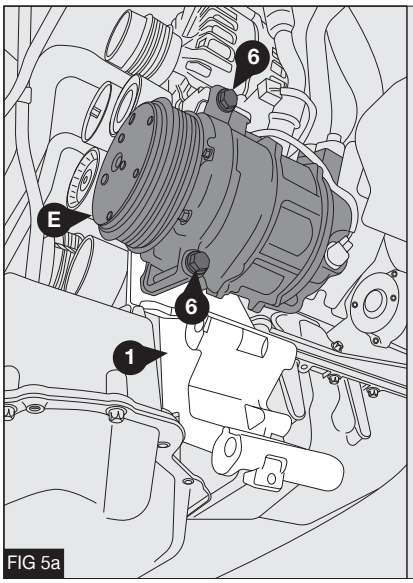


FIG 5a

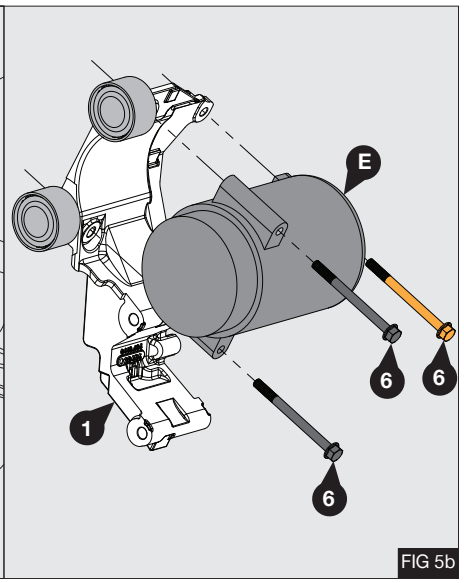


FIG 5b

5. Fit the rear bracket (2) to the engine using 2x M8 x 55 bolts (5) and 2x M6 x 30 bolts (8). Use 2x M8 x 30 bolts (7) to secure it to Bracket (1) - Fig 6
6. Hand tighten and snug the bracket to the mating faces before fully tightening the bolts
   - Torque bolts (8) to 7.5 lb-ft / 10 Nm
   - Torque bolts (5) and (7) to 18 lb-ft / 25 Nm

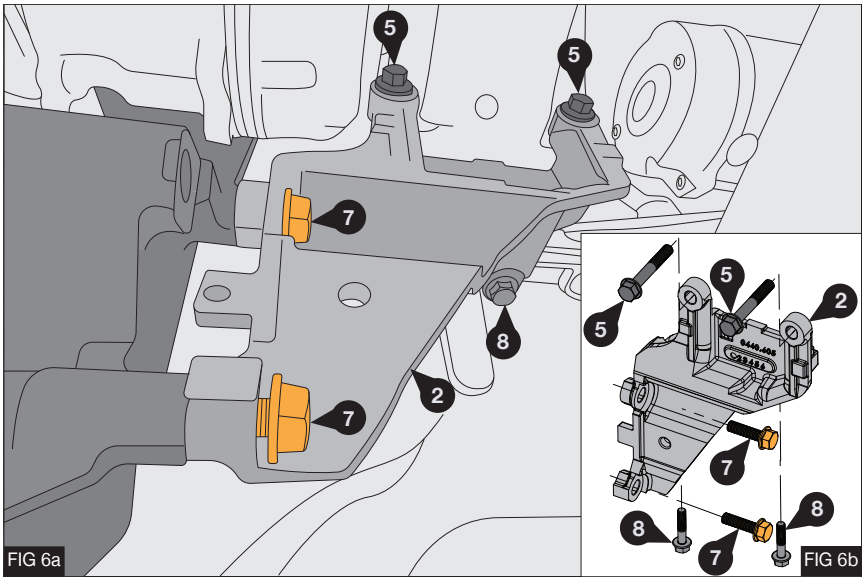


FIG 6a FIG 6b

7. Fit the lower support plate (19) with spacers (16), 3x M6 x 30 bolts (8) and 2x M8 x 16 bolts (13) - Fig 7

8. Hand tighten all bolts then torque as follows

   - Torque bolts (8) to 7.5 lb-ft / 10 Nm
   - Torque bolts (13) to 18 lb-ft / 25 Nm

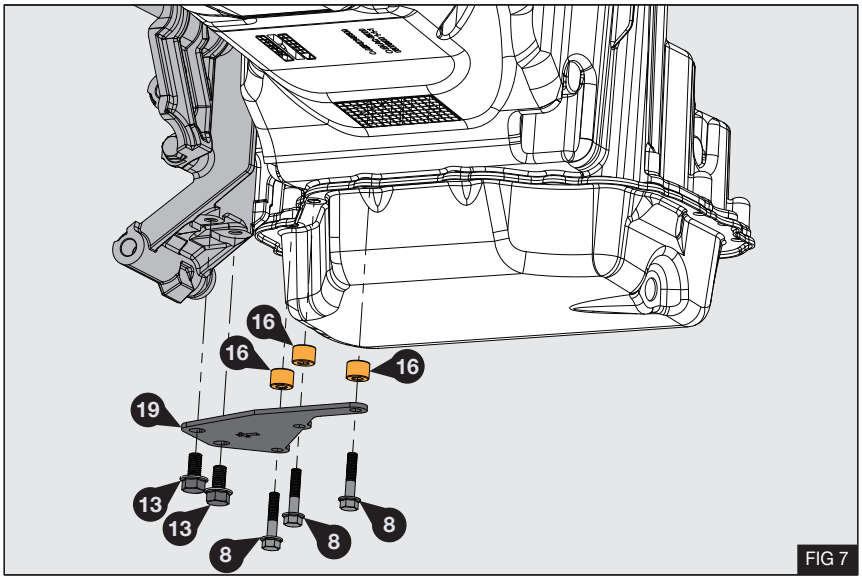


FIG 7

9. Fit the pulley (3) to the plate (20) using spacer (17) and M8x45 bolt (9) with reducing spacer (15) and M8 nut (10) - Fig 8

   - Torque bolt (9) to 18 lb-ft / 25 Nm

10. Fit pulley cap (3a)

11. Loosely install the assembled plate to the additional compressor with M10 x 35 bolt (11) and nut (12)

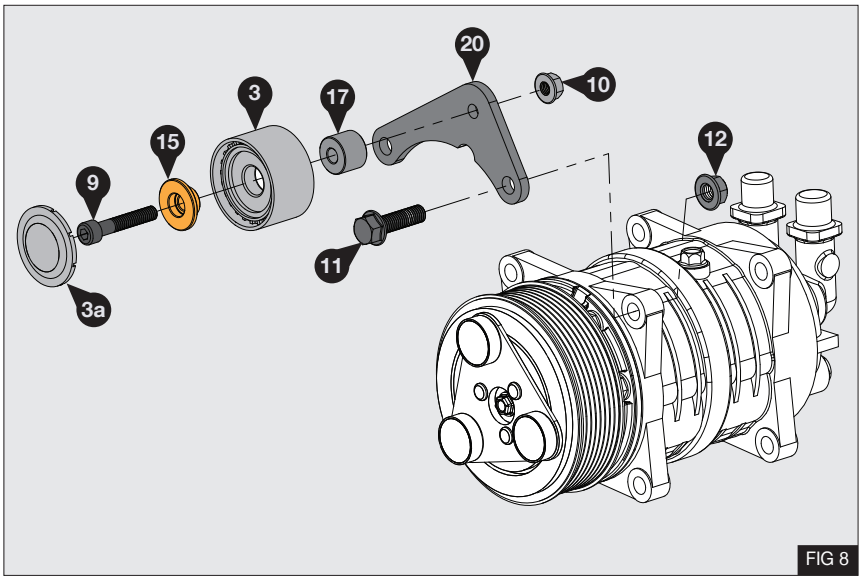


FIG 8

12. Fit the compressor to the bracket using 2x M10 x 130 bolts (14) with washers (4) and nuts (12) - Fig 9

   - Torque bolts (14) and (11) to 37 lb.ft / 50 Nm

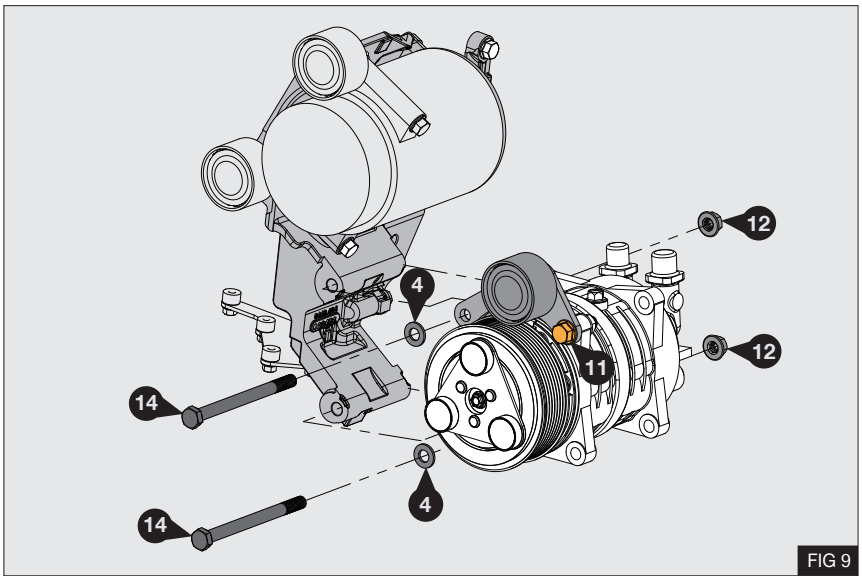


FIG 9

DRIVE BELT INSTALLATION

1. Fit drive belt (18) to rear grooves shown on compressor drawing - Fig 10

   A. Crank Pulley
   B. Tensioner
   C. Water Pump
   D. Alternator
   E. Idler
   F. AC Compressor
   G. Idler
   H. Aux Compressor
   I. Idler
   J. Idler

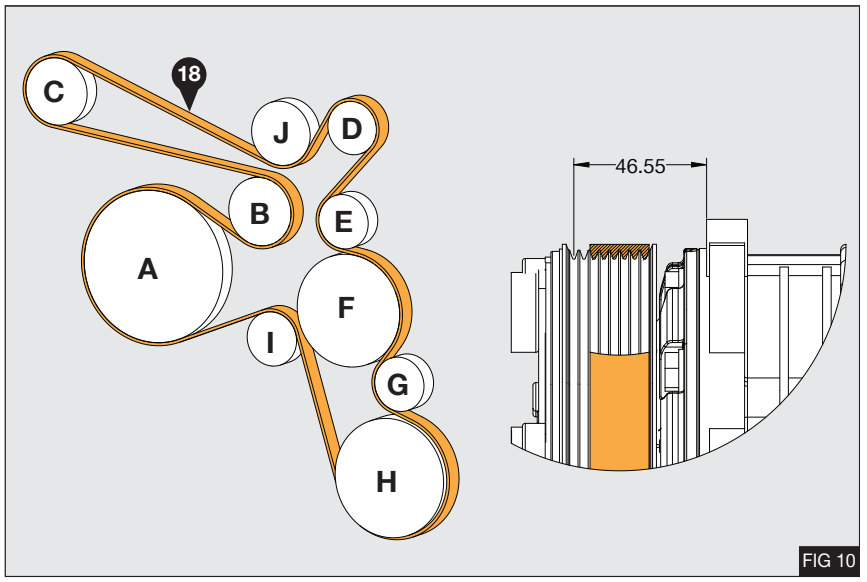


FIG 10

2. Re- fit turbo duct Ⓒ ref Fig 2

POST INSTALLATION

1. Before starting the engine check all the installed parts and ensure that the belt is installed correctly. Run the unit at least for ten minutes, then check the whole mounting assembly and previously removed parts.

2. Install the supplied labels in the engine bay

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