



Techni
ENGINEERING SOLUTIONS

MERCEDES NEW VITO

OM 651 DE22LA EURO 6

114 / 116 / 119 BLUETEC

CODE / CODICE: 0500.7912

**COMPRESSOR / COMPRESSEUR / KOMPRESOR
/ COMPRESSORE / COMPRESOR :**

SELTEC TM13 / 15 /

QUE QP13 / 15 /

FITTING INSTRUCTIONS

EINBAUANLEITUNGEN

INSTRUCTIONS POUR LE MONTAGE

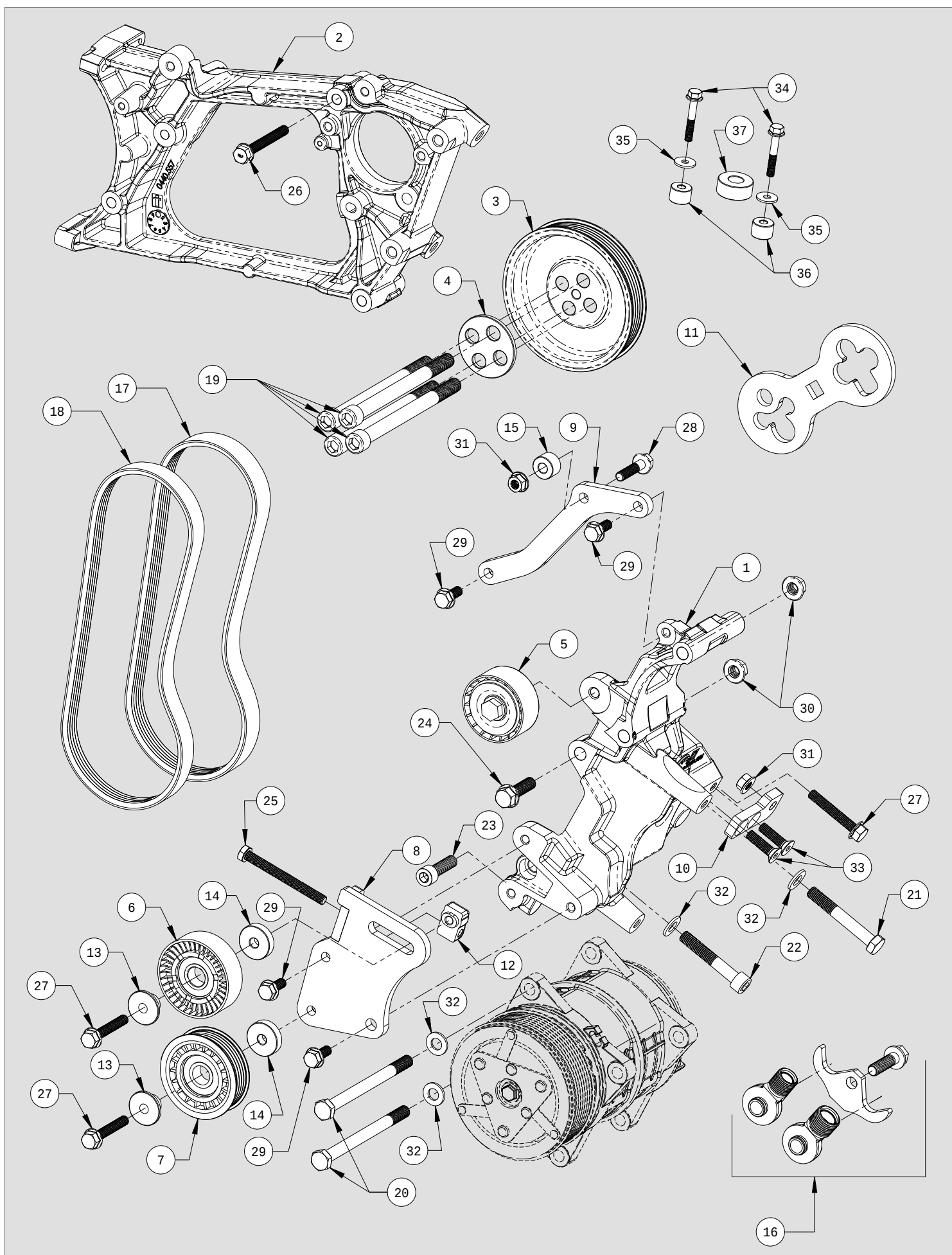
ISTRUZIONI DI MONTAGGIO

INSTRUCCIONES DE MONTAJE

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PARTS VIEW / VUE ÉCLATÉE / TEILEANSICHT / VISTA PARTA / IMÁGENES DE LAS PIEZAS



PARTS LIST / NOMENCLATURE / TEILELISTE / ELENCO DELLE PARTI / LISTA DE PIEZAS

ITEM	CODE / CODICE / KODE / CODIGO	DESCRIPTION / DESCRIZIONE / BESCHREIBUNG / DESCRIPCION	QTY.	COMMENTS
1	0440.5561	Compressor Mount Bracket	1	
2	0440.5571	Auxiliary Mount Bracket	1	
3	1701.5481	Crankshaft Pulley 5PK Dia 124	1	
4	2809.0041	Crank Pulley Washer 55Dia L4	1	
5	1700.0521	Idle Pulley 59.6Dia x 25 - Includes M10 bolt	1	
6	1700.5211	Back Idle Pulley	1	
7	1700.5221	5PK Idle Pulley	1	
8	3020.6531	Belt Tensioner Assembly	1	
9	3020.6541	Support Plate - MB Vito RWD	1	
10	3020.6551	Compressor Support Plate	1	
11	2510.5081	Mercedes OM651 Locking Tool	1	
12	1703.5003	Idle Pulley Adjuster	1	
13	2803.5611	Spacer ID 8.3 OD 16.8 L 14.5	2	
14	2803.6171	Spacer - 30.00 OD x 8.50 ID x 8.00	2	
15	2803.6181	Spacer - 20.00 OD x 8.50 ID x 13.00	1	
16	0425.0621	Manifold - Que/Seltec - Swivel Type D -3/4x7/8	1	
17	0820.7501	Belt - Poly Groove 6PK 2100	1	
18	0820.7831	Belt - Poly Groove 5PK 1140	1	
19	2706.5091	Hex socket head cap screw M12 x 150 : 1.50 - 12.9	4	
20	2705.0531	Hexagon Head Bolt - M10 x 130 : 10.9	2	
21	2705.5201	Hexagon Head Bolt - M10 x 70 ~ 1.5 : 10.9	1	
22	2705.5051	Hex socket head cap screw M10 x 60 : 1.50 - 12.9	1	
23	2705.5261	Hex socket head cap screw M10 x 35 : 1.50 - 10.9	1	
24	2705.0241	Hex flange bolt Durlok - M10 x 35 : 1.50 - 12.9	1	
25	2719.0081	Hex Set Screw - M8 X 80 : 1.25 - 8.8	1	
26	2704.5461	Hex flange bolt - M8 x 65 : 1.25 - 10.9	1	
27	2704.0101	Hex flange bolt - M8 x 50 : 1.25 - 10.9	3	
28	2704.1021	Hex flange bolt - M8 x 35 : 1.25 - 10.9	1	
29	2704.0511	Hex flange bolt - M8 x 20 : 1.25 - 10.9	4	
30	2735.0071	Durlok Hexagon Flange Nut - M10 : 1.50	2	
31	2734.0021	Durlok Hexagon Flange Nut - M8 : 1.25	2	
32	2809.0011	Washer M10 Flat DIN 125 - A 10.5	4	
33	2704.5351	Flat Countersunk Head Cap Screw M8 x 30 : 1.25	2	
34	2702.0501	Hex Flange Bolt M6 X 40 : 1.00	2	
35	2806.0501	M6 Penny Washer	2	
36	2803.6241	Spacer - Nylon 18.00 OD x 6.3 ID x 12.5	2	
37	2803.6251	Spacer - Nylon 25.00 OD x 12.80 ID x 12.5	1	

**COMPATIBLE COMPRESSORS / COMPRESSEURS RECOMMANDÉS / EMPFOHLENE KOMPRESSOREN
RACCOMANDATO COMPRESSORI / RECOMENDADAS COMPRESORES**

SELTEC	TM-13 HS	TM-15 HS	-
Comp No	0381.0202	0381.0002	-
Valeo No.	435-45120	488.45120	-
Mounting	Ear	Ear	-
Rotor	8PV	8PV	-
GL	46.55mm	46.55mm	-
Armature	3E	3E	-
Diameter	123	123	-
Voltage	12	12	-
Orientation	V	V	-
Fitting	3/4 x 7/8	3/4 x 7/8	-
Manifold	Bolt	Bolt	-

QUE	QP-13 HS	QP-15 HS	-
Comp No	0391.0202	0391.0002	-
Que No.	QP13-1302	QP15-1172	-
Mounting	Ear	Ear	-
Rotor	8PV	8PV	-
GL	46.55mm	46.55mm	-
Armature	3E	3E	-
Diameter	123	123	-
Voltage	12	12	-
Orientation	V	V	-
Fitting	3/4 x 7/8	3/4 x 7/8	-
Manifold	Bolt	Bolt	-

SANDEN	-	-	-
Comp No	-	-	-
Sanden No.	-	-	-
Mounting	-	-	-
Rotor	-	-	-
GL	-	-	-
Armature	-	-	-
Diameter	-	-	-
Voltage	-	-	-
Orientation	-	-	-
Fitting	-	-	-

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.

COUPLES DE SERRAGE DES FIXATIONS STANDARDS

Si des chiffres de serrage au couple particuliers ne sont pas indiqués dans cette notice de montage, se référer au tableau suivant qui servira de guide pour le couple de sécurité maximum correspondant à une taille et un grade spécifiques de fixation.

ANZIEHMOMENTE FÜR STANDARDBEFESTIGUNGSMITTEL

Falls in dieser Einbauanleitung keine speziellen Anziehmomente angegeben sind, kann die folgende Tabelle als Richtlinie für das maximale sichere Anziehmoment für eine spezifische Größe oder Qualität von Befestigungsmitteln dienen.

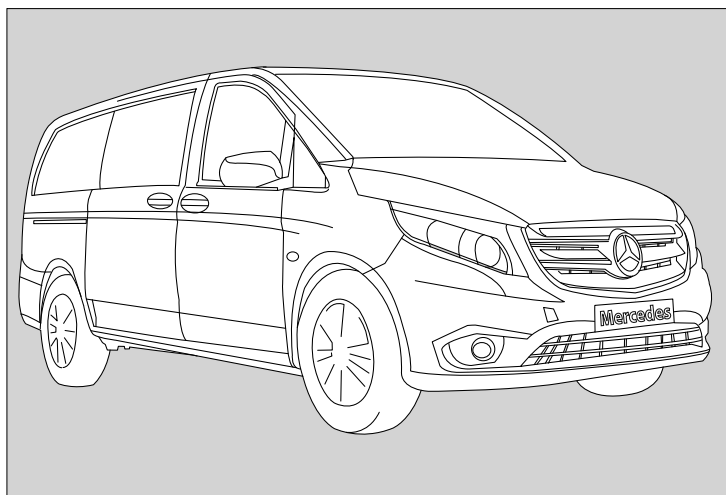
VALORI STANDARD DI SERRAGGIO PER DISPOSITIVI DI FISSAGGIO

In assenza di valori specifici di coppia nel presente manuale di istruzioni, si può utilizzare la seguente tabella come guida per conoscere la coppia massima sicura in base a dimensioni e grado del dispositivo di fissaggio.

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.

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	Mercedes
Make	Vito (W447)
Model	114 / 116 /119 BlueTEC
Engine CC	2143 cc
Engine Details	OM 651 DE22LA Euro 6
Year	10.2014>
Chassis Nos.	N/A
LHD	YES
RHD	YES
PAS	YES
A/C	YES
Voltage	12v

KIT DETAILS

Kit Part Number	0500.7912
Description	Speed Reduction Kit
Compressor RPM	3650 @ Max engine power output
Fitting Time	360 Minutes
Suction Fitting	90°
Discharge Fitting	90°
Belt Type	5PK 1140 / 6PK 2100
Belt Part Number	0820.7831 / 0820.7501
Note	Kit not compatible with 7G Tronic gearbox

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

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.

PRE-INSTALLATION

N.B Prior to commencing work, please examine the instructions with care. The alphabetical symbols on the diagram relate to written instructions, numerical symbols relate to the parts listing.

PRE-INSTALLATION

1. Remove the cover (A) front grill supports (B) air filter assembly (C) and the engine under panel - Fig 1
2. Unclip the front section of the front wheel arch liner (D) remove the access panel (E) remove the 3x screws securing the bumper (F) to the wing - Fig 2
3. Repeat the above operation for the other side of the vehicle.
4. Remove the bumper (F) - Fig 2
5. Remove both headlights (G) - Fig 3
6. Un-bolt the expansion tank (H) and disconnect all wiring from the slam panel (K) - Fig 3
7. Disconnect the bonnet release cable and remove slam panel (K) - Fig 3
8. De-gas the AC system
9. Remove the radiator and intercooler cowls (L) - Fig 4
10. Disconnect all hoses and wiring from the radiator / intercooler assembly (M) - Fig 4
11. Remove the radiator assembly (M) - Fig 4

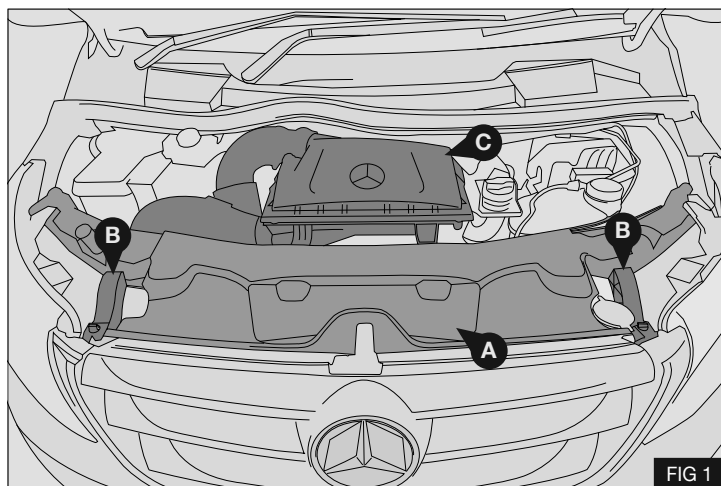


FIG 1

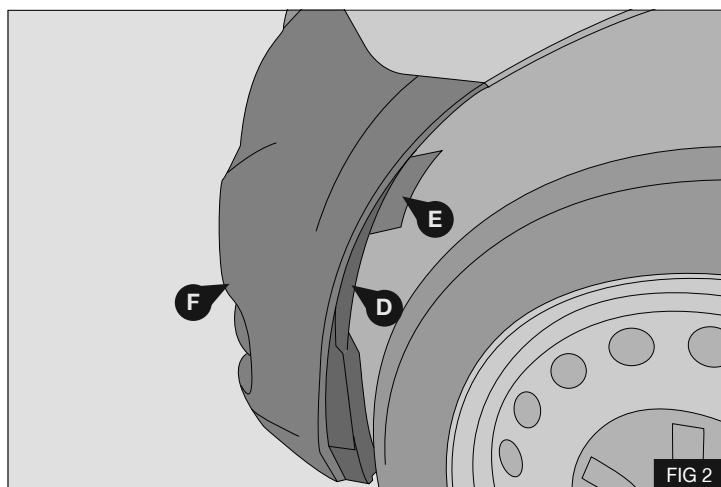


FIG 2

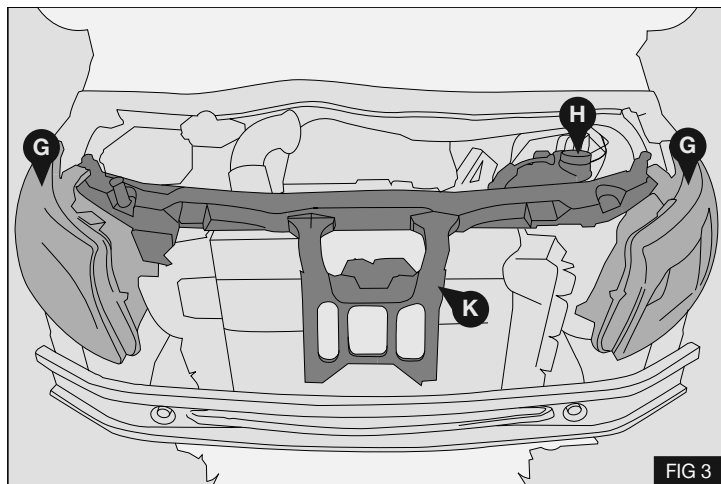


FIG 3

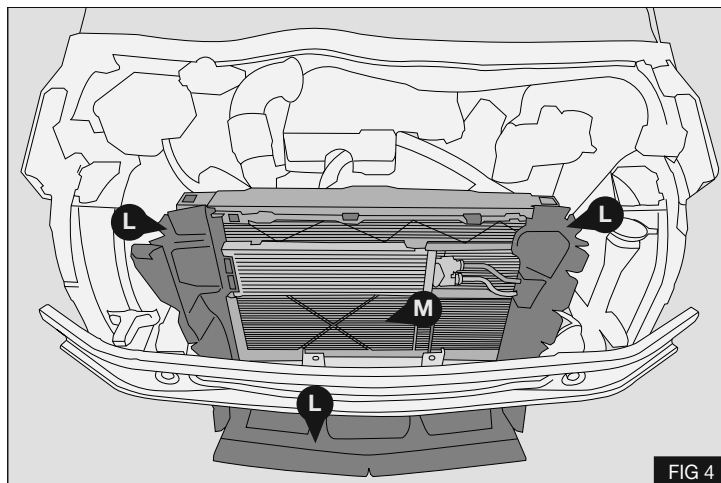
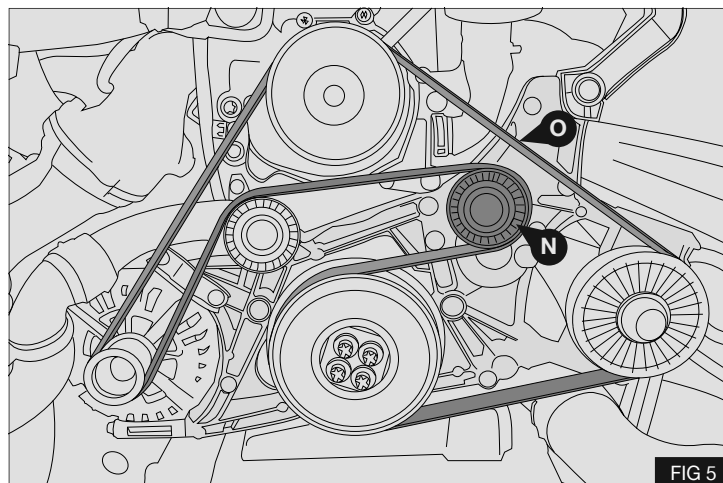
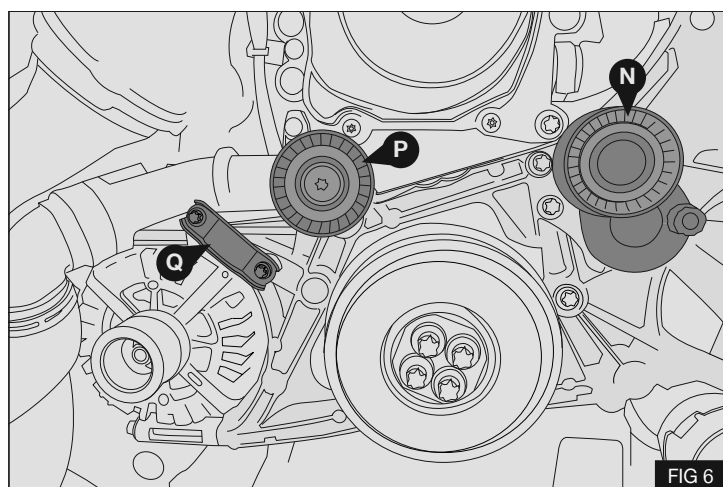


FIG 4

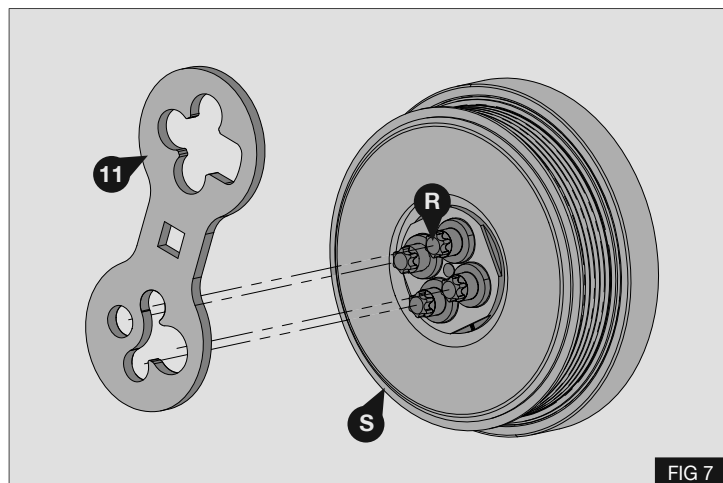
12. Turn the tensioner **N** anti-clockwise, insert a 4mm locking pin to hold the tensioner in the open position - Fig 5
13. Remove and discard the drive belt **O** - Fig 5



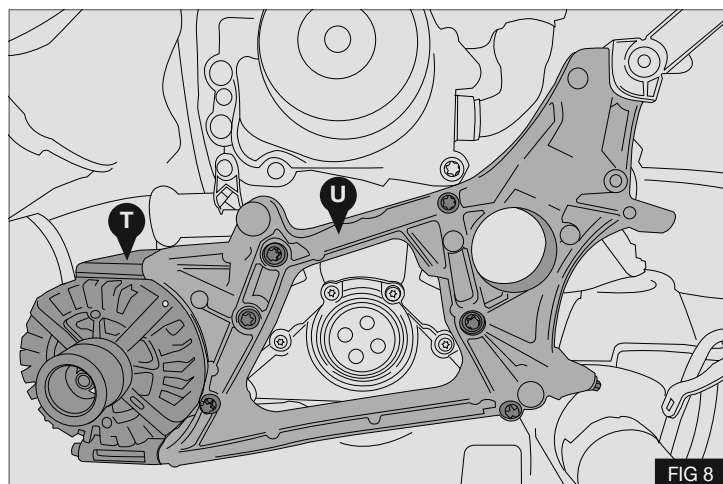
14. Remove and retain the tensioner **N**, Idle pulley **P** and pipe support bracket **Q** - Fig 6



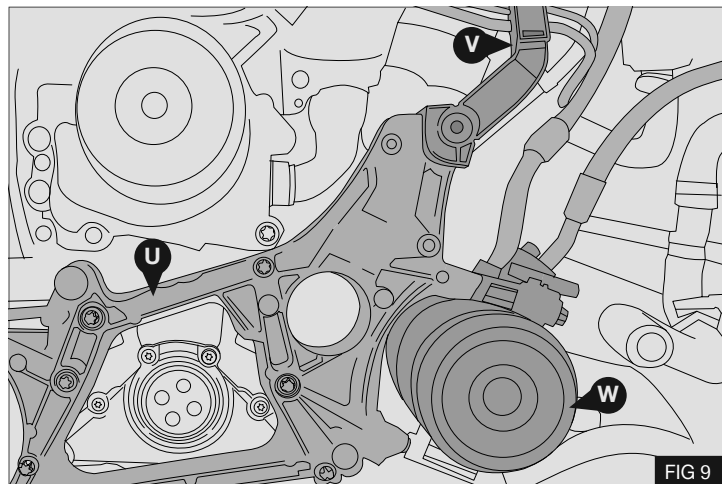
15. Use the supplied locking tool **11** as a counter hold loosen each of the 4x original crankshaft bolts **R** by 90 degrees - Fig 7
16. Once all the bolts have been loosened remove and discard bolts **R**.
17. Carefully remove the crank pulley **S** from the engine - Fig 7



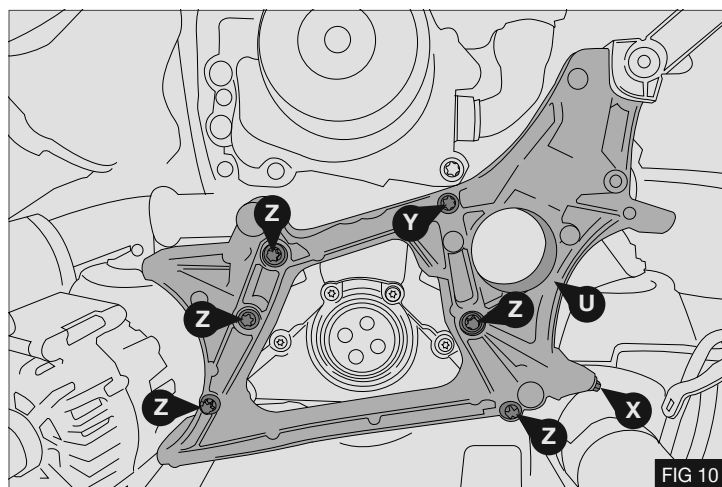
18. Remove the alternator **T** from bracket **U** - Fig 8



19. Remove the hose support bracket (V) from bracket (U) - Fig 9
20. Disconnect the hoses and wiring from the AC compressor (W) - Fig 9
21. Remove the AC compressor (W) - Fig 9

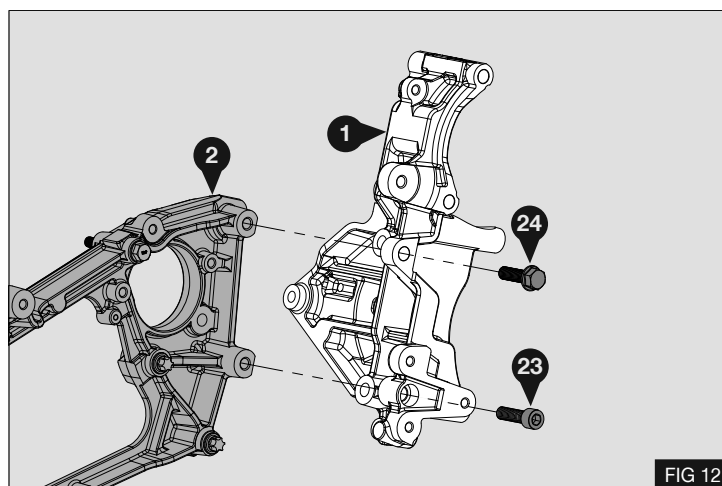
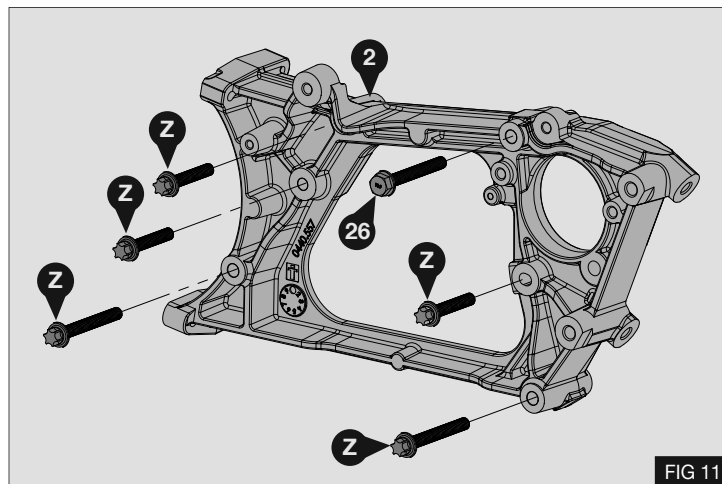


22. Remove and retain the bolt (X) securing the intercooler hose to bracket (U) - Fig 10
23. Remove and discard bolt (Y) - Fig 10
24. Note the position and then remove and retain bolts (Z), remove and discard bracket (U) - Fig 10

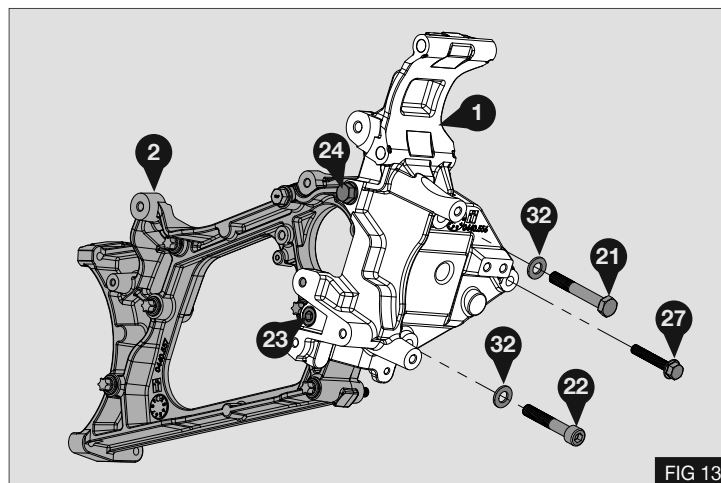


MOUNT BRACKET INSTALLATION

1. Install bracket (2) using original bolts (Z) in their original locations with bolt (26) in the position shown opposite - Fig 11
 2. Torque bolts (Z) to 25Nm / 18 lb-ft
 3. Torque M8x65 bolt (26) to 25Nm / 18 lb-ft
-
4. Secure the supplied bracket (1) to bracket (2) using bolts (23) and (24). Do not tighten these bolts at this stage - Fig 12



5. Secure bracket (1) to bracket (2) using bolts (21) and (22) with washers (32).
Do not tighten these bolts at this stage - Fig 13
6. Secure bracket (1) to the engine mount using M8x50 bolt (27).
Do not tighten this bolt at this stage - Fig 13
7. Hand tighten bolts (21) (22) (23) (24) and (27)
8. Torque bolt (21) to 45Nm / 33 lb-ft
9. Torque bolts (22) (23) (24) to 63Nm / 46 lb-ft
10. Torque bolt (27) to 29Nm / 22 lb-ft



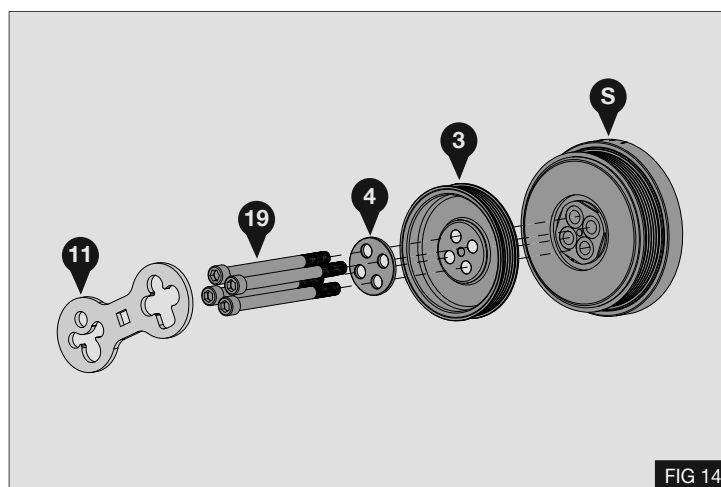
11. Fit the supplied crankshaft pulley (3) onto the existing crank pulley (S) using the supplied bolts (19) with crank washer (4) - Fig 14

Note: Ensure that the crank pulley is fitted the correct way around, see Fig 14

12. Torque the M12x150 bolts (19) using the two stage procedure listed below. Use the correct end of tool (11) as a counter-hold.

Stage 1 – Torque all 4 bolts (19) to 80 Nm / 59 lb.ft

Stage 2 – Turn all 4 bolts (19) an extra 90 degrees

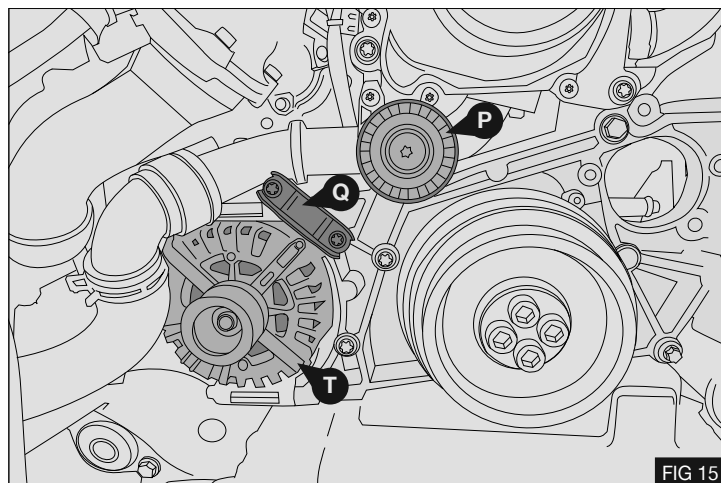


13. Install the alternator (T) using the original bolts.
Torque 4x bolts to 25Nm / 18lb-ft - Fig 15

14. Refit the pipe support bracket (Q) - Fig 15

15. Refit the idle pulley (P).

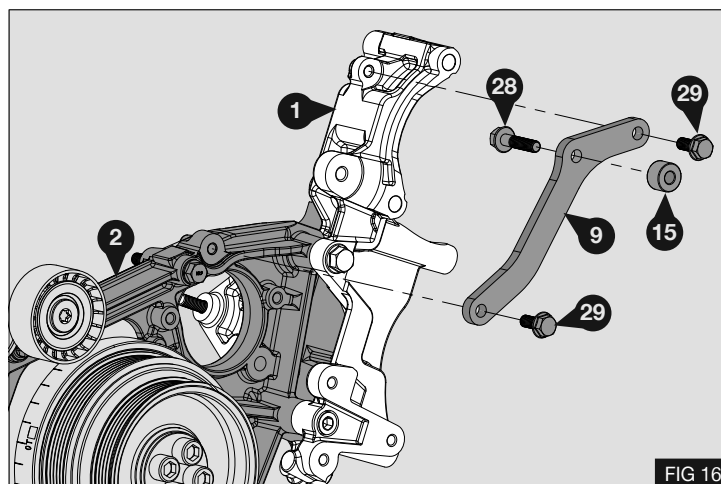
16. Torque bolt to 25Nm / 18lb-ft - Fig 15



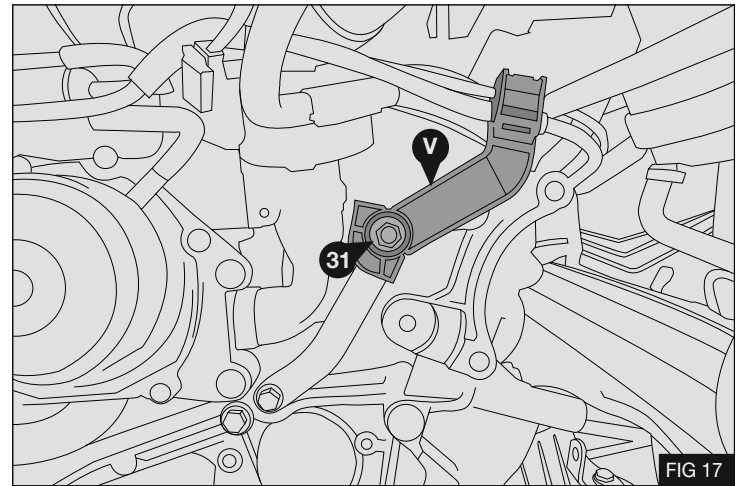
Note: Install bolt (28) through the plate (9) from the rear before securing to brackets (1) and (2)

17. Secure the supplied plate (9) bolt (28) and spacer (15) using 2x M8x20 bolts (29) - Fig 16

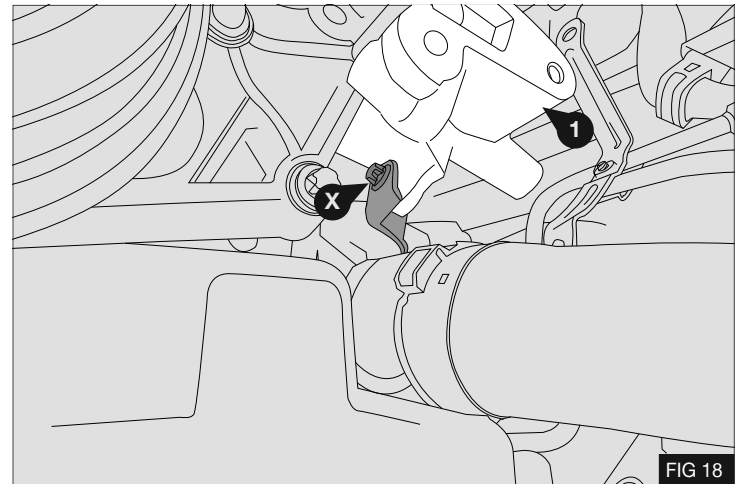
18. Torque bolts (29) to 29Nm / 22 lb-ft



19. Fit hose support bracket (V) onto bolt (28) and spacer (15).
Secure using supplied nut (31) - Fig 17

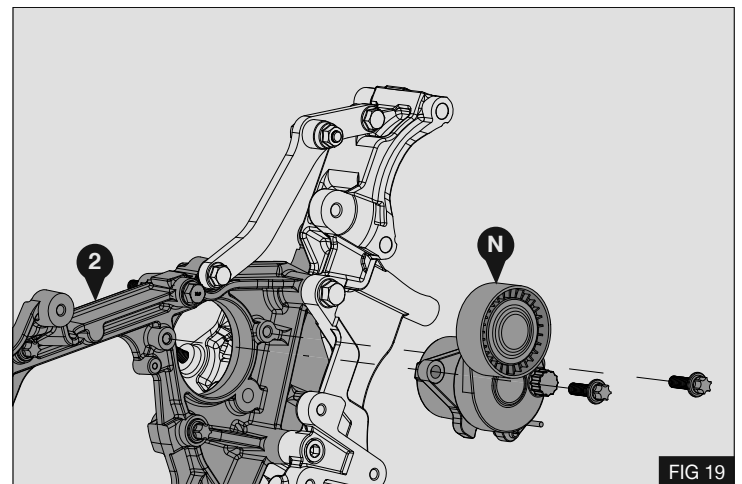


20. Secure the intercooler hose using the previously removed bolt (X).
Secure the hose bracket to the rear of mount bracket (1) and
install bolt (X) from the engine side - Fig 18

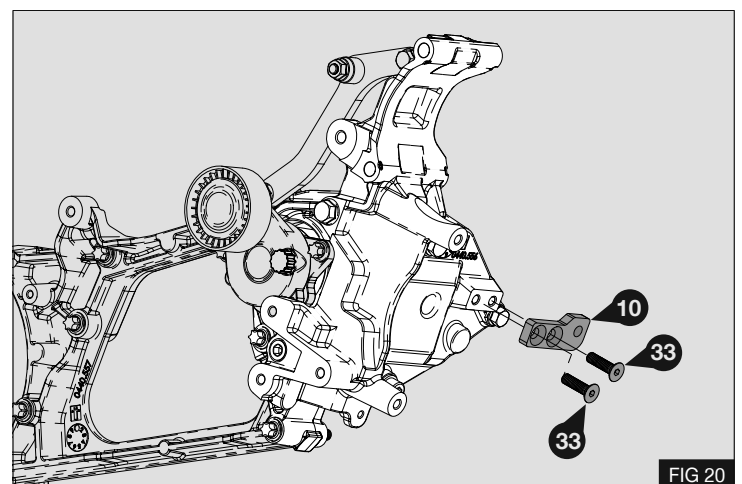


21. Install the OE belt tensioner (N) to bracket (2) using the original
bolts.

22. Torque the tensioner bolts to 25Nm / 18 lb-ft - Fig 19



23. Install the supplied plate (10) to bracket (1) using 2x M8x30
bolts (33). Torque bolts (33) to 25Nm / 18 lb-ft - Fig 20



24. Fit the AC compressor (W) using the original bolts to bracket (1). Use the supplied nut (31) to secure the rear fastener.

25. Torque the 3x bolts to 25Nm / 18 lb-ft - Fig 21

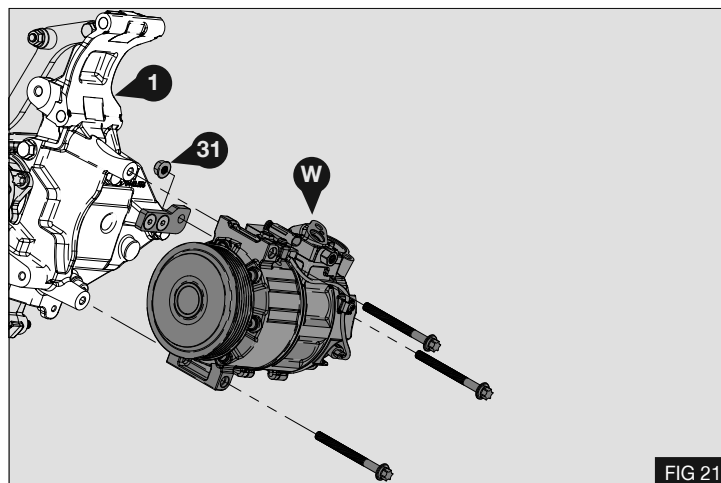


FIG 21

26. Fit the supplied Manifold assembly (16) to the compressor. Do not fully tighten the clamp bolt until after the pipe fittings have been installed - Fig 22

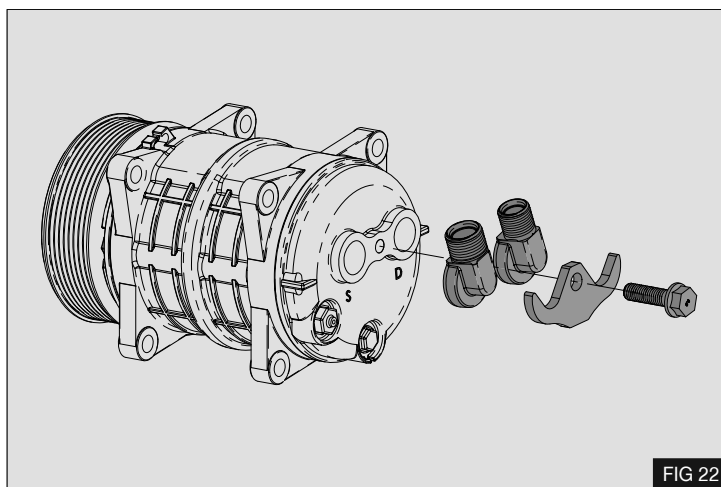


FIG 22

COMPRESSOR INSTALLATION

1. Secure the compressor to the mount bracket (1) using 2x bolts (20) with washers (32) and nuts (30) - Fig 23
2. Torque 2x M10x130 bolts (20) to 58 Nm / 43 lb-ft

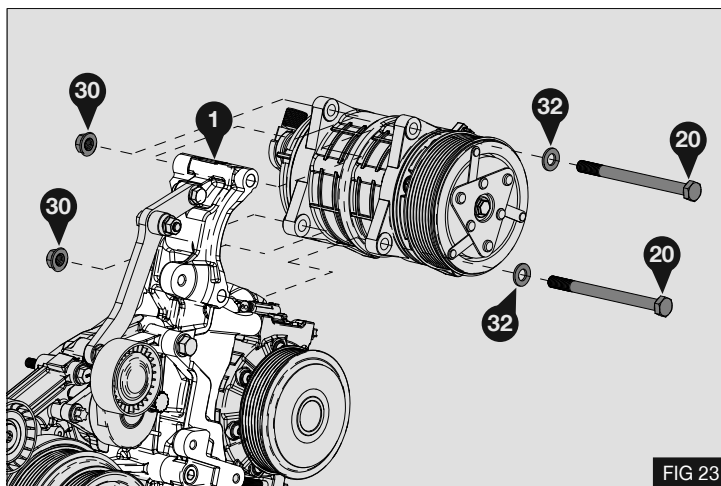


FIG 23

3. Fit the supplied idle pulley (5) to the bracket (1).
4. Torque the M10 bolt to 45 Nm / 32 lb-ft - Fig 24

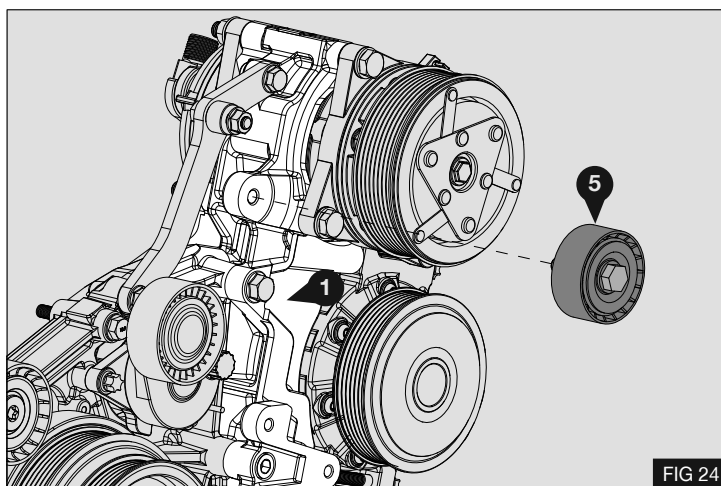
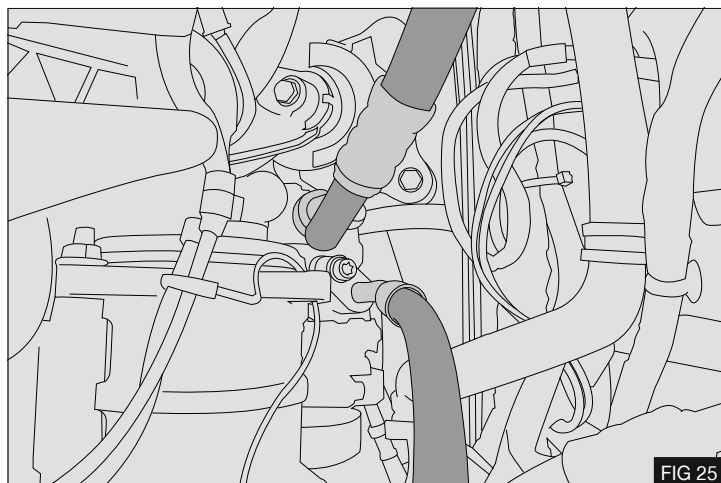


FIG 24

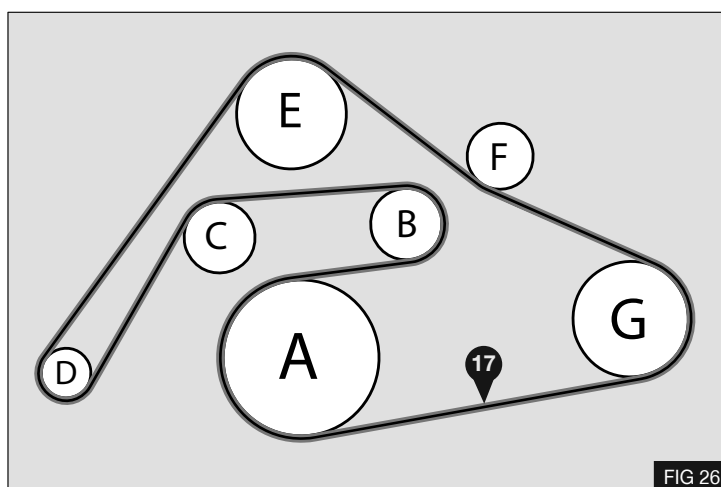
5. Re-fit the AC hoses to the OE AC compressor, check the clearance of the suction hose to the additional compressor and adjust the position slightly if required.



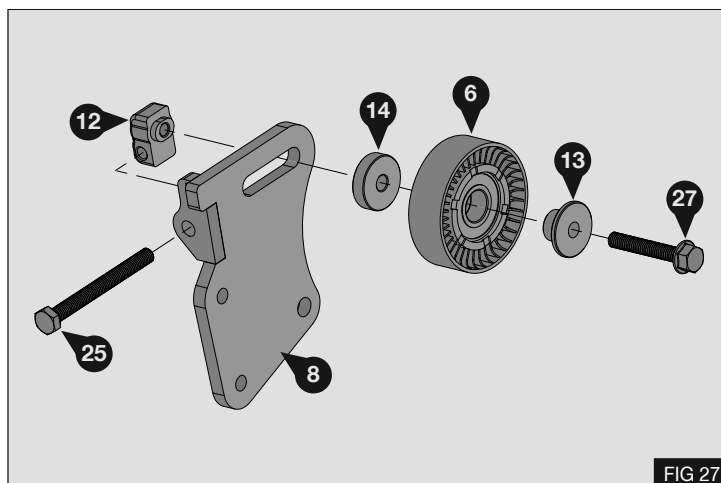
DRIVE BELT INSTALLATION

1. Fit the supplied 6PK drive belt (17) as shown opposite - Fig 26

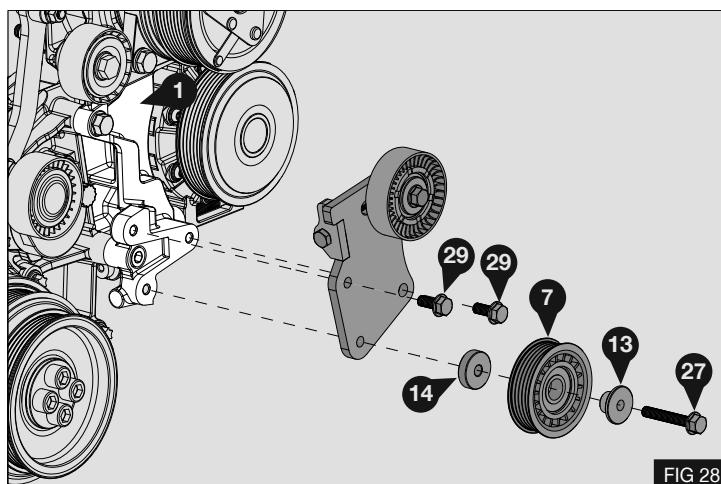
- A - Crank pulley
- B - Tensioner
- C - Idle pulley
- D - Alternator
- E - Water pump
- F - Idle pulley
- G - Compressor



2. Assemble the tensioner as shown opposite using bracket (8) with bolt (27) top hat spacer (13) idle pulley (6) spacer (14) adjuster block (12) and set screw (25) - Fig 27



3. Secure the adjuster assembly to the mount bracket (1) using 2x bolts (29) and bolt (27) with top hat spacer (13) idle pulley (7) spacer (14) as shown opposite - Fig 28
4. Torque bolts (27) and (29) to 29 Nm / 22 lb ft



Place the supplied 5PK drive belt (18) in the position shown on the clutch opposite - Fig 29

Valeo¹ / Que¹ compressors - The belt is installed in the grooves at the rear of the compressor pulley

¹ Model Specific

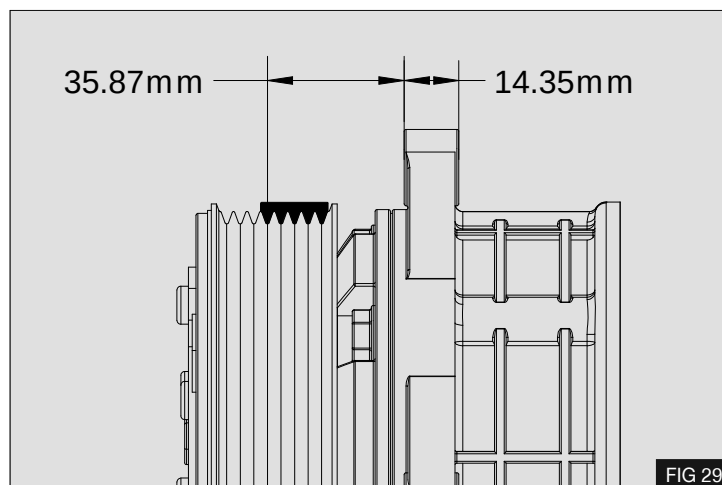


FIG 29

5. Fit the drive belt (18) to the remaining pulleys as shown opposite - Fig 30

A - Crankshaft Pulley
B - Compressor
C - Adjuster Pulley
D - Idle Pulley

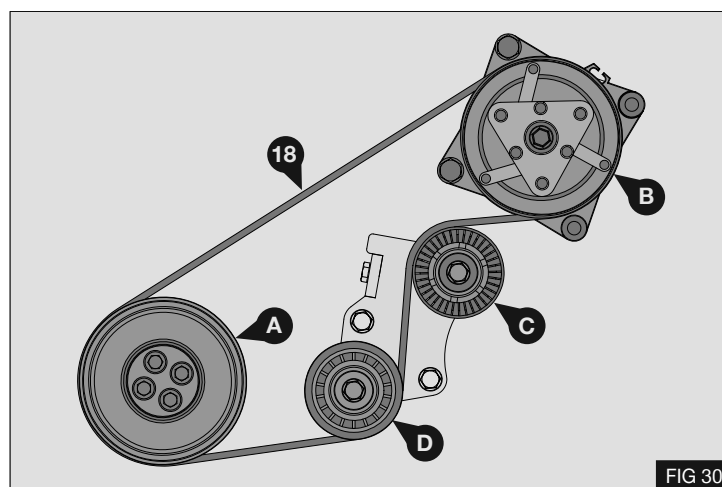


FIG 30

6. Once the belt has been correctly located tension the drive belt (see table) to the new belt value. Torque the bolt (27) securing the adjuster pulley (6) to 29N m / 22 lb ft - Fig 31

Note: A new drive belt must be tensioned to the “new belt level” in order to mesh correctly into the pulley grooves. The belt tension will then fall after a running in period

BELT TENSION TABLE

Belt	Belt Age	Belt Tension Using Belt Tension Gauge
5PK	New Belt	60 - 72 kg
5PK	Used Belt	45 - 50 kg

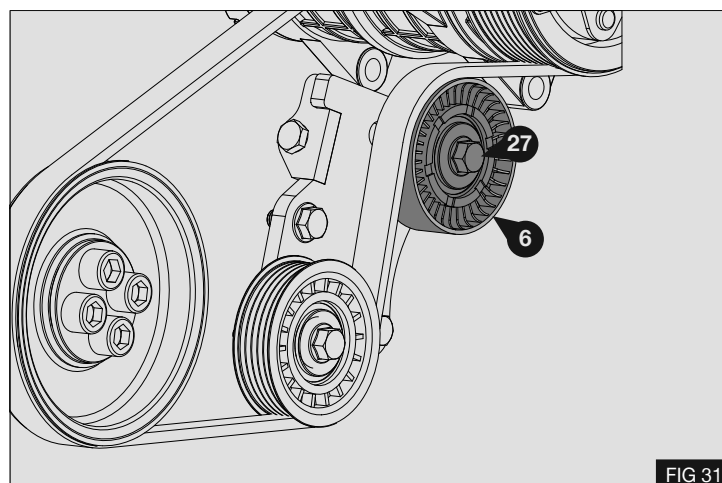


FIG 31

7. Re-fit the radiator and cowl assembly and attach all the hoses and wiring - Fig 32

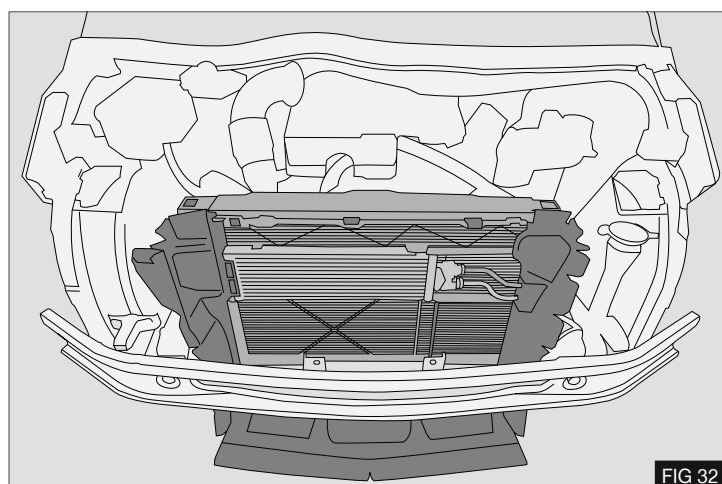
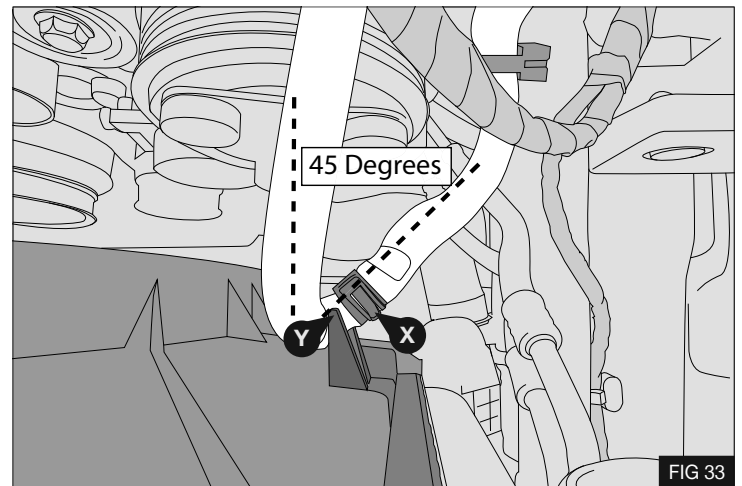


FIG 32

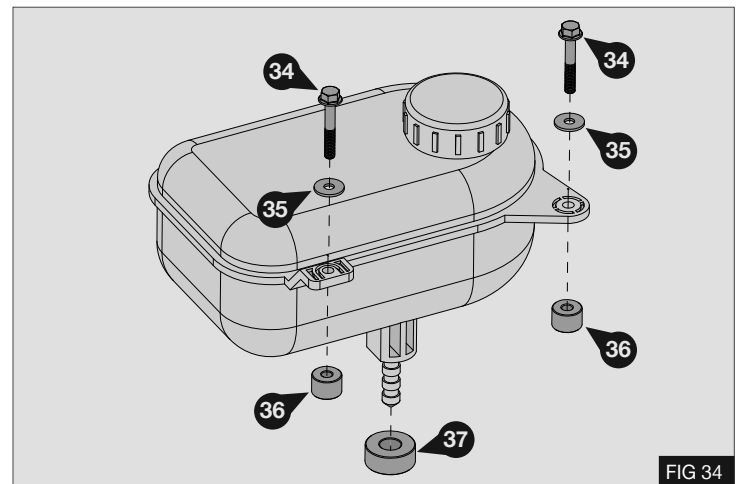
8. Temporarily remove 3x hose clips (X) from tee piece (Y). Rotate the tee piece 45 degrees as shown opposite and re-fit the hose clips (X) - Fig 33
9. Re-assemble the front of the vehicle



10. Insert the supplied spacers (36) and (37) under the coolant tank as shown opposite - Fig 34
11. Use the supplied M6x40 bolts (34) with washers (35) to secure the coolant tank - Fig 34

FINISH

1. Run the engine with the compressor clutch engaged for five minutes, Check all components.
2. Install the supplied belt label in the engine bay.



(EN)

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