



Techni
ENGINEERING SOLUTIONS

RENAULT / OPEL / NISSAN

NUOVO MASTER 2.3 DCI / MOVANO 2.3 DCI

NV400 2.3 DCI / INTERSTAR 2.3DCI (+/- AC) FWD

CODE / CODICE: 0500.7132

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

SELTEC: TM13 / TM15 / TM16

QUE: QP13 / QP15 / QP16

SANDEN: SD5H14 / SD7H15

DELPHI SP15

FITTING INSTRUCTIONS

EINBAUANLEITUNGEN

INSTRUCTIONS POUR LE MONTAGE

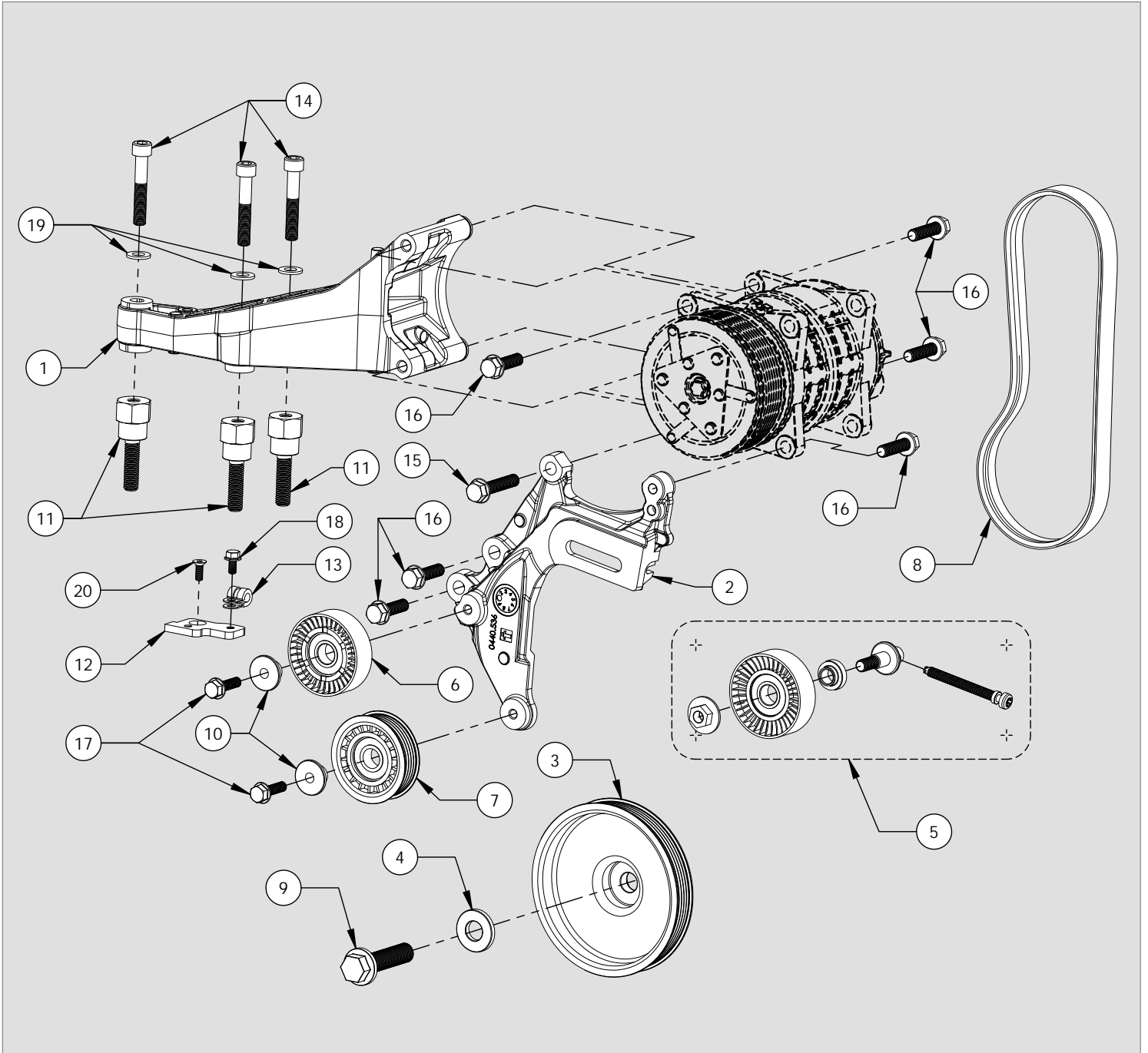
ISTRUZIONI DI MONTAGGIO

INSTRUCCIONES DE MONTAJE

Contents

ENGLISH	4
Parts View.....	4
Parts List	5
Compressor Configurations	6
Standard Fastener Torque Values	6
Kit Details	7
Vehicle Details	7
Forward	7
Pre Installation.....	8
Installation	10
Mount Bracket Installation	11
Drive Belt Installation	12
Post Installation.....	13

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	0441.5351	Mount Bracket	1	
2	0440.5361	Adjuster Bracket	1	
3	1701.5251	Crank Pulley 143mm	1	
4	2803.5661	Crank Washer	1	
5	1705.5022	Belt Tensioner Assembly	1	
6	1700.5211	Back Idle Pulley	1	
7	1700.5221	5PK Idle Pulley	1	
8	0820.7011	Belt - Poly Groove 5PK 1500	1	
9	2711.0031	Hex Flange Screw M16x64: 1.5 - 12.9	1	
10	2803.5611	Spacer Id 8.3 Od 16.8 L 14.5	2	
11	2803.5711	Threaded Pillar M12	3	
12	3020.5971	Hose Support Bracket	1	
13	2771.0541	P-Clip 10Mm	1	
14	2705.5051	Hex Socket Head Cap Screw M10 X 60 : 1.50 - 12.9	3	
15	2705.0341	Hex Flange Bolt Durlok - M10 X 50 : 1.50 - 12.9	1	
16	2705.0241	Hex Flange Bolt Durlok - M10 X 35 : 1.50 - 12.9	6	
17	2704.0091	Hex Flange Bolt Durlok - M8 X 30 : 1.25 - 12.9	2	
18	2702.0141	Hex Flange Bolt Durlok - M6 X 12 : 1.00 - 12.9	1	
19	2809.0011	Washer M10 Flat Din 125 - A 10.5	3	
20	2702.5001	Flat Countersunk Head Cap Screw M6 X 16 : 1.00	1	

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

SELTEC	TM-13 HS	TM15-HS	TM16-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	QP13-HD	QP15-HD	QP16-HD
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

SANDEN	-	SD5H14	SD7H15
Comp No.	-	0370.0051	0370.0061
Sanden No.	-	6629	8103
Mounting	-	EAR	EAR
Rotor	-	7PV	8PV
GL	-	46.55mm	46.55mm
Armature	-	SL	SL
Diameter	-	119	119
Voltage	-	12	12
Orientation	-	V	V
Fitting	-	3/4 x 7/8	3/4 x 7/8

DELPHI	-	SP15	-
Comp No	-	0310.0021	-
Delphi No.	-	015203/1	-
Mounting	-	EAR	-
Rotor	-	8PV	-
GL	-	50.1mm	-
Armature	-	SL	-
Diameter	-	122.4	-
Voltage	-	12	-
Orientation	-	V	-
Fitting	-	1-14 UNF-2A	-

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.

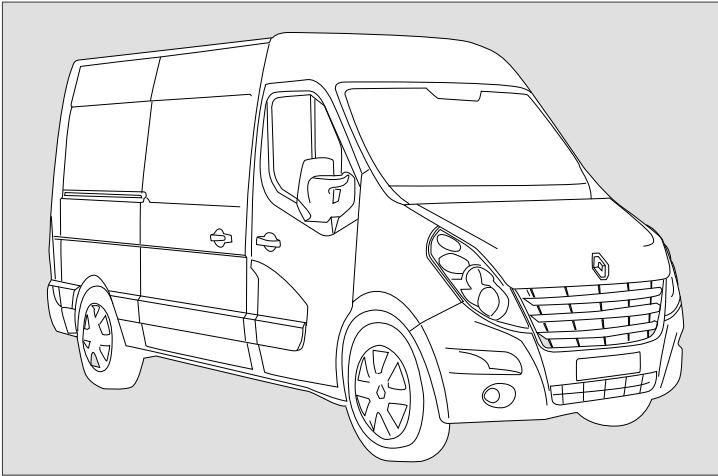
VALORI STANDARD DI SERRAGGIO PER DISPOSITIVI DI FISSAGGIO

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	Vauxhall / Opel, Renault , Nissan
Make	Movano, Master, NV400
Model	FWD 2.3 CDTI / dCi
Engine CC	2299
Engine Details	Euro 5 M9T 100/125/150
Year	2010>
Chassis Nos.	N/A
LHD	YES
RHD	YES
PAS	YES
A/C	YES
Voltage	12v

KIT DETAILS

Kit Part Number	0500.7132
Description	Standard Kit
Compressor RPM	4200 @ Max engine power output
Fitting Time	60 Minutes
Suction Fitting	90°
Discharge Fitting	90°
Belt Type	5PK 1500
Belt Part Number	0820.7011

Note: Fits vehicles with or without PTO.

Not compatible with Tecshift / Quickshift / Automatic
Robotised Gearbox or Stop Start options / Twin Turbo

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.

INSTALLATION

1. Remove and retain the engine under panel and fasteners.
2. Turn the Automatic belt tensioner (A) fully clockwise. Insert a 3mm locking pin to hold in the fully open position. Remove and retain the original drive belt (B) - Fig 1
3. Remove and retain the M6 bolt (C) and flywheel protection plate (D) located at the rear of the engine behind the driveshaft - Fig 2
4. Lock the engine flywheel (E) using a large flat screwdriver - Fig 3
5. Remove the crank bolt (F). Discard crank bolt (F) and pulley spacer (G) - Fig 4

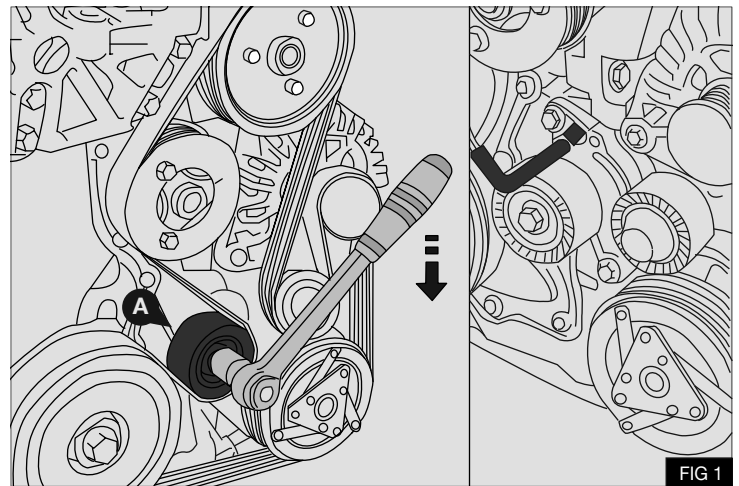


FIG 1

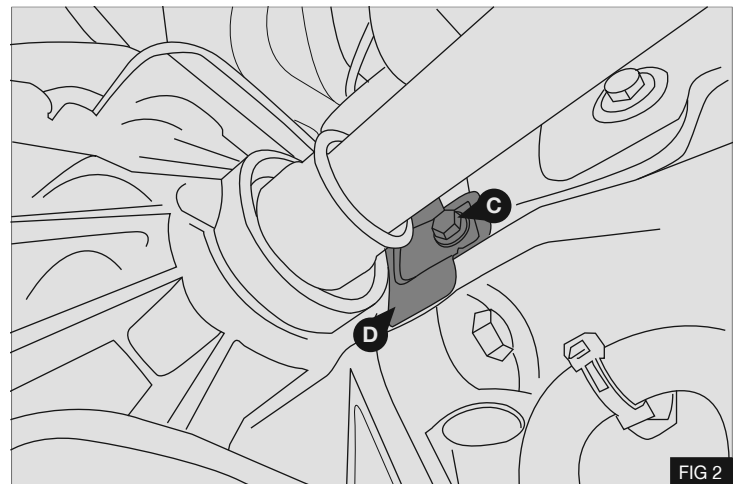


FIG 2

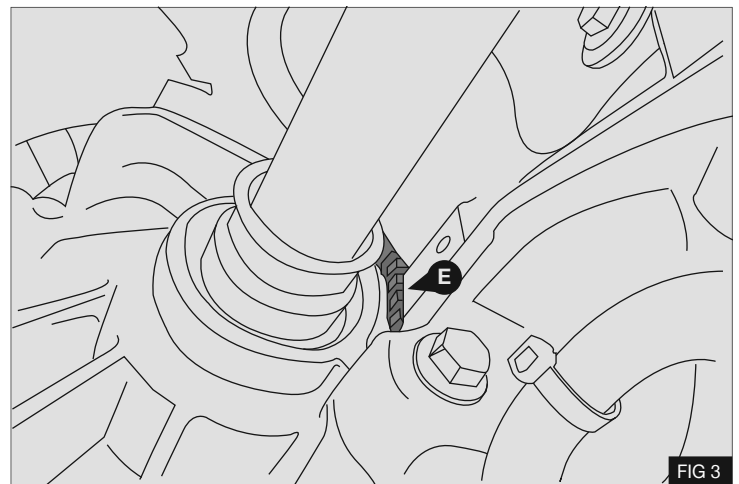


FIG 3

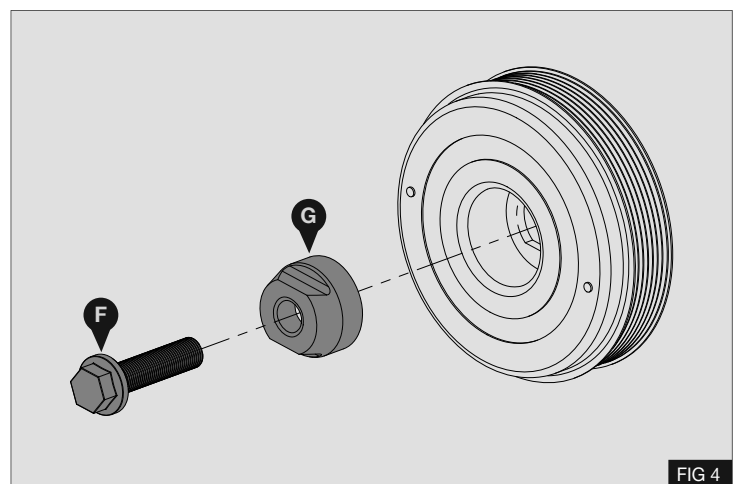
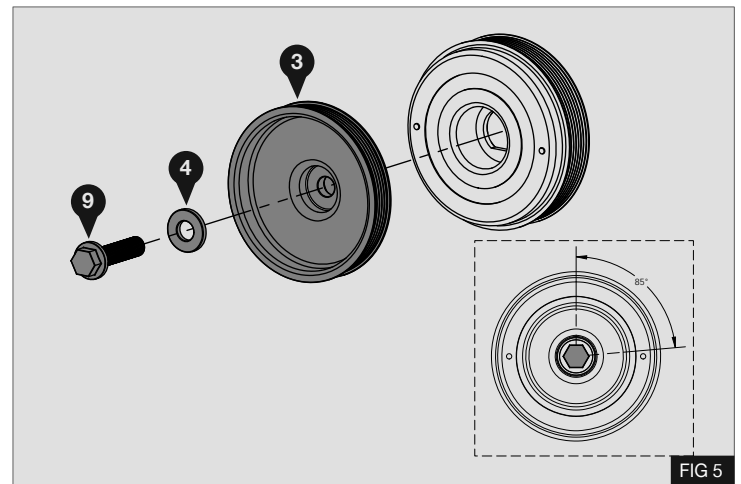


FIG 4

6. Fit the supplied pulley (3) with crank washer (4) and supplied bolt (9). Torque bolt (9) to 50Nm plus an angular tightening of 85 +/- 6 degrees - Fig 5

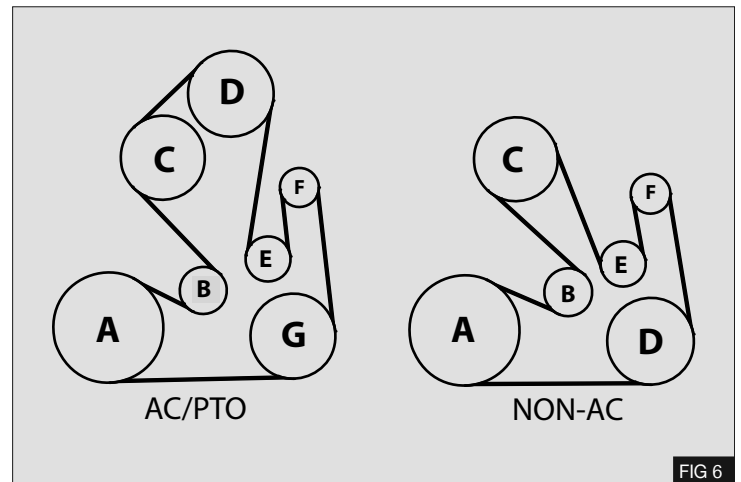
Note: It is recommended that the bolt head and pulley are marked in order to determine that the correct angle of 85 degrees has been achieved.



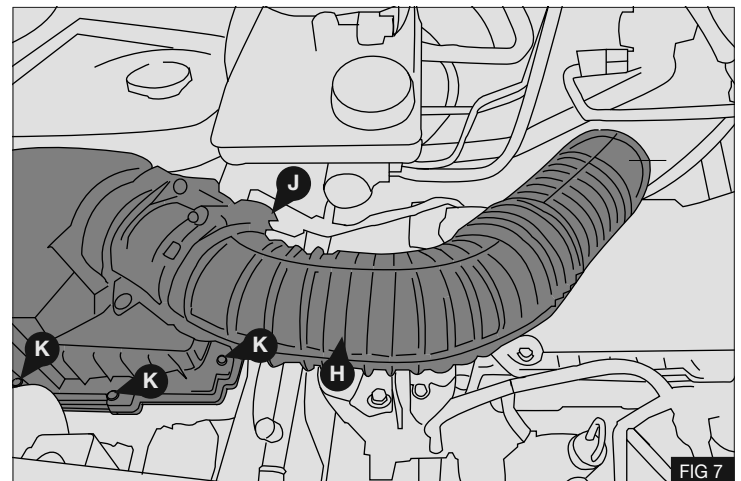
7. Replace the flywheel protection plate (D).

8. Refit the original drive belt (B) - Fig 6

A - Crank Pulley
 B - Tensioner Pulley
 C - Water Pump
 D - PAS Pulley
 E - Idle Pulley
 F - Alternator
 G - AC compressor / Foolish Pulley

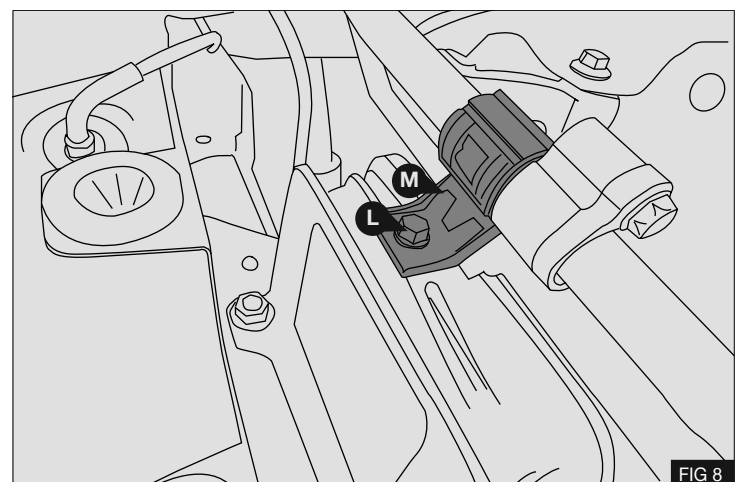


9. Remove the air intake hose (H), disconnect the wiring (J) to the air filter. Loosen the 3x screws (K) and remove the top half of the air filter. Remove the remaining lower section of the air filter - Fig 7

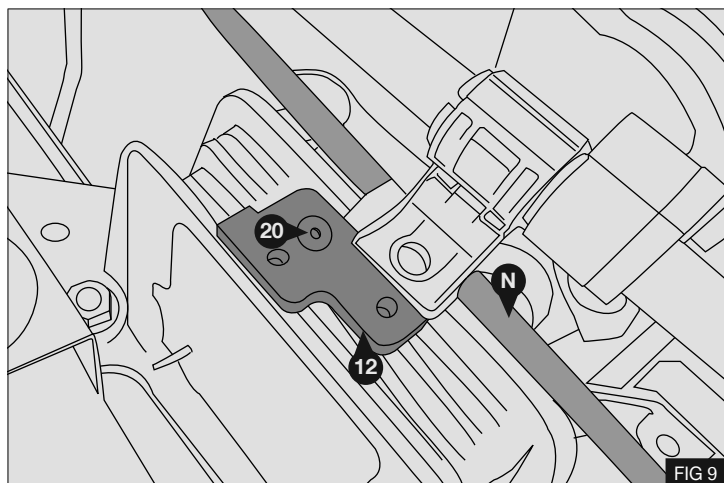


VEHICLES WITH FACTORY AC ONLY

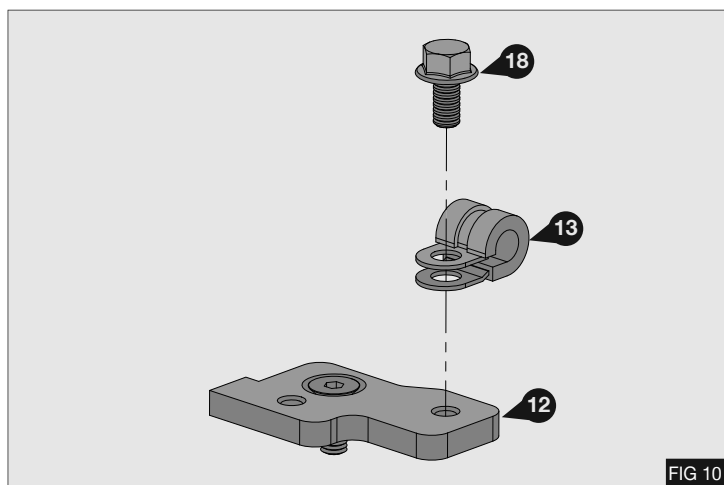
1. Remove the bolt (L) securing the AC pipe bracket (M) to the engine mount - Fig 8



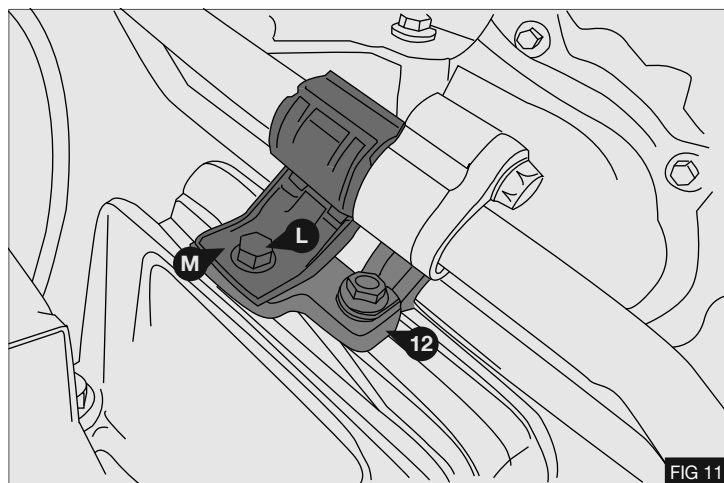
2. Install the supplied hose support bracket (12) to the engine mount bracket using countersunk bolt (20) - Fig 9



3. Fit the supplied pipe clip (13) to the AC hose (N) and secure to the support bracket (12) using bolt (18) - Fig 10

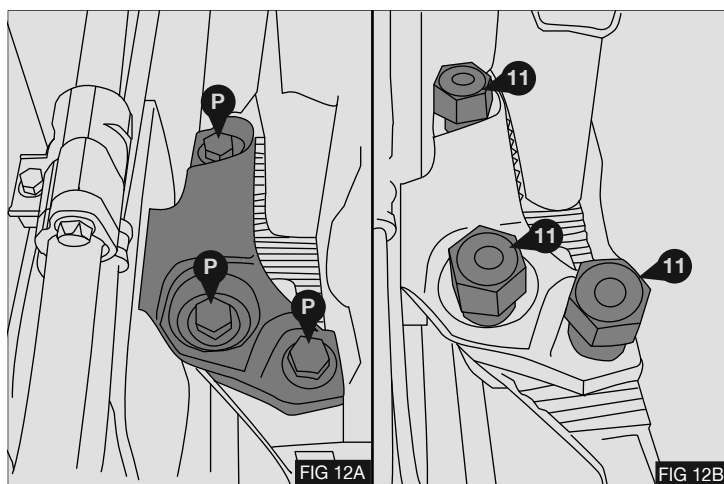


4. Secure the original AC pipe bracket (M) to the support bracket (12) using original bolt (L) - Fig 11



ALL VEHICLES

1. Remove and replace the engine mount bolts (P) **one at a time** and replace with threaded pillars (11). Torque the 3x threaded pillars (11) to 65Nm / 48Lb. ft. - Fig 12a / b



- Assemble the tensioner assembly as shown opposite using bracket (2) and tensioner assembly (5) - Fig 13

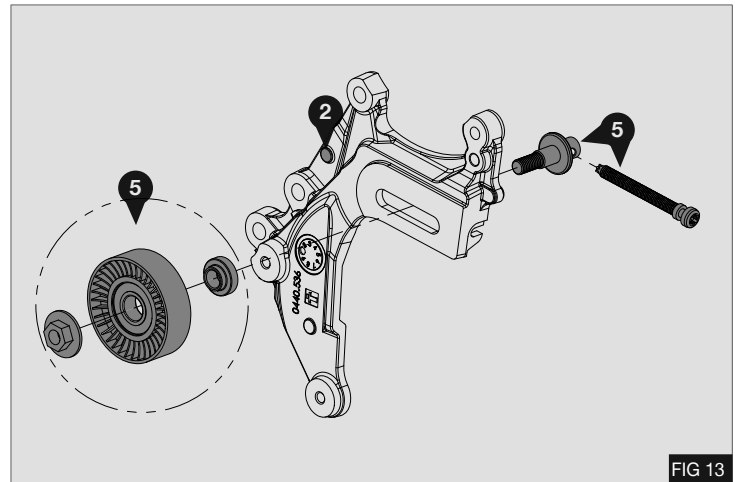


FIG 13

MOUNT BRACKET INSTALLATION

IMPORTANT: The following installation and tightening sequence must be carefully followed to ensure correct belt and bracket alignment.

NB: Please refrain from using “Loctite” unless otherwise notified

- Install the mount bracket (1) to the threaded pillars (11) using bolts (14) with washers (19). Tighten the 3x bolts hand tight so that they only allow side to side movement of the bracket (1) - Fig 14
- Install the adjuster bracket (2) to the side of the engine using 2x M10x35 bolts (16). Tighten the 2x bolts hand tight so that they only allow **up and down** movement of the bracket - Fig 15
- Secure the compressor to bracket (1) using 3x bolts (16). Torque 3x M10x35 bolts (16) to 58Nm / 43lb. ft. in the following sequence : Fig 16

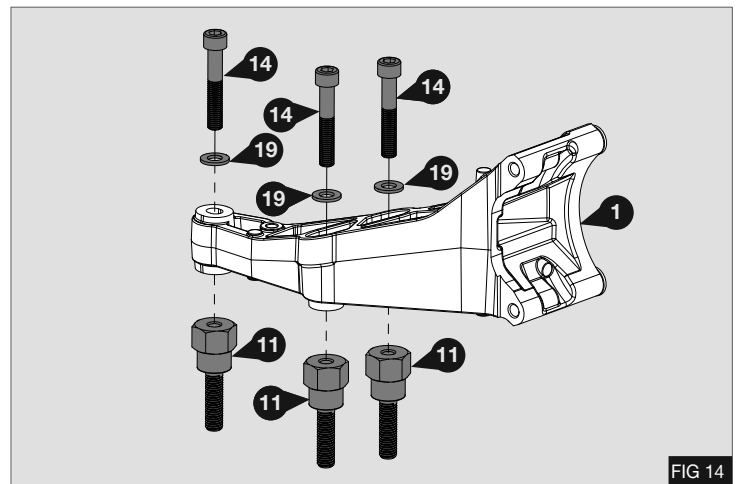


FIG 14

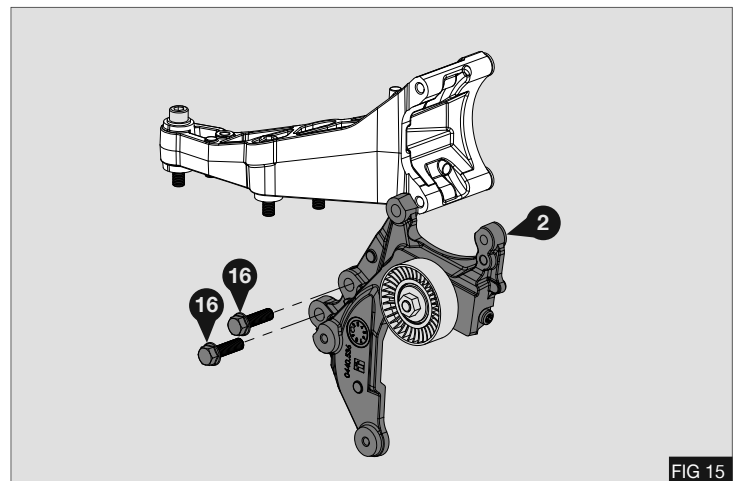


FIG 15

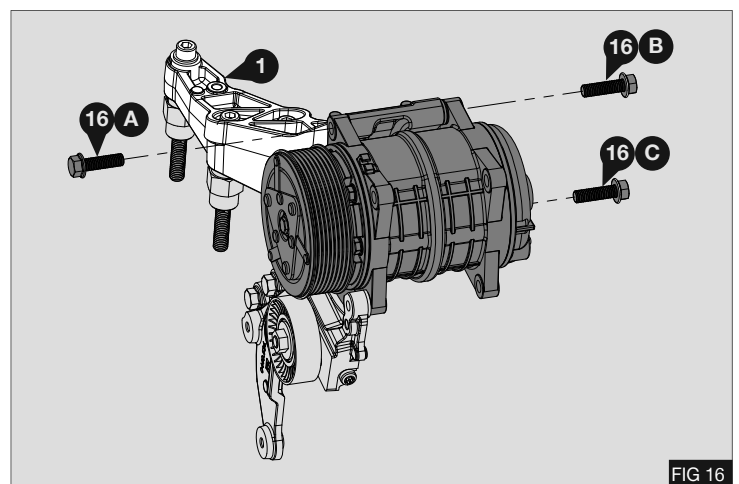


FIG 16

Bolt tightening sequence :

- 1 - (16 A)
- 2 - (16 B)
- 3 - (16 C)

4. Insert M10x50 bolt (15) and M10x35 bolt (16) through the lower front compressor ears as shown opposite. Torque bolts (15) and (16) to 58Nm / 43lb. ft. – Fig 17
5. Torque bolts (16a) securing the adjuster bracket to 58Nm / 43lb. ft. - Fig 17

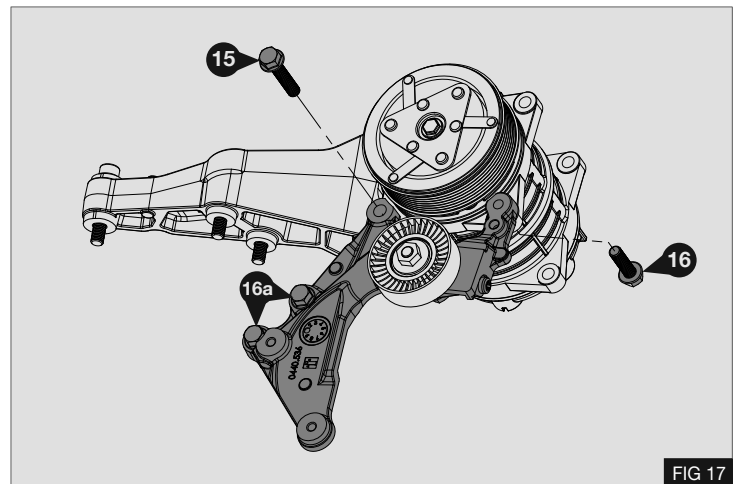


FIG 17

6. Torque bolts (14) to 58Nm / 43lb. ft. - Fig 18
7. Install idle pulleys (6) and (7) to bracket (2) using bolts (17) with spacers (10) as shown opposite. Torque bolts (17) to 29Nm / 22lb. ft. - Fig 18

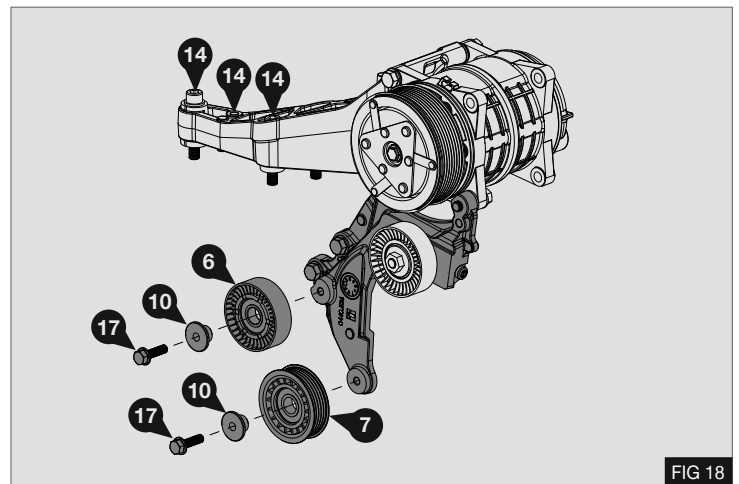


FIG 18

Note: In order to install idle pulley (6) it may be necessary to temporarily move the engine over to the right slightly. To facilitate this insert a wedge between the engine mount and the mount bracket. You may also find it simpler to install the idle pulley from below.

DRIVE BELT

1. Install the supplied drive belt (8) as shown opposite - Fig 19

- A – Crankshaft Pulley
- B – Idle Pulley
- C – Compressor
- D – Adjuster Pulley
- E – Grooved Idle pulley

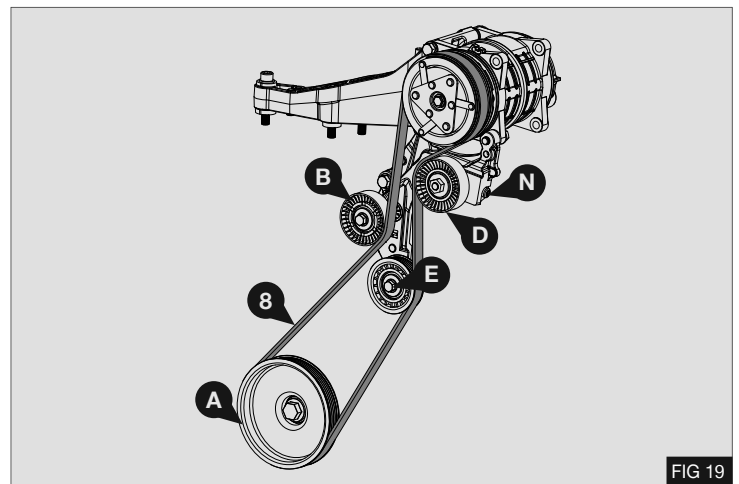


FIG 19

2. Place the belt in the correct groove of the compressor - Fig 20
3. Valeo / QUE / Sanden⁽¹⁾ compressors – Belt is installed in the grooves at the front of the compressor pulley - Fig 20

⁽¹⁾Model Specific

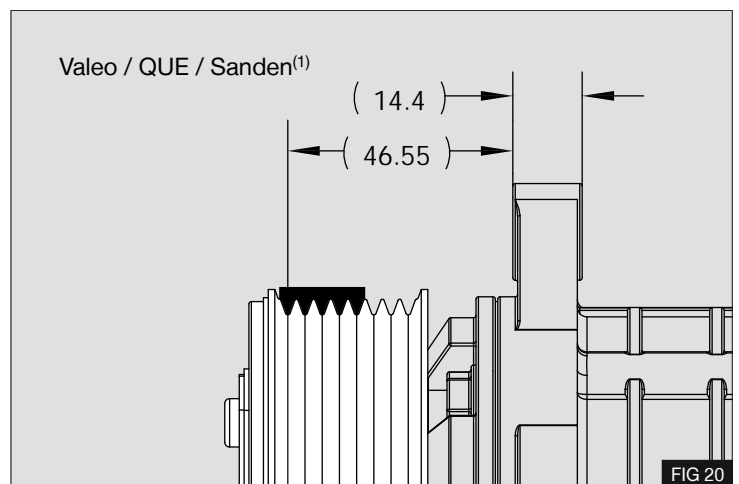
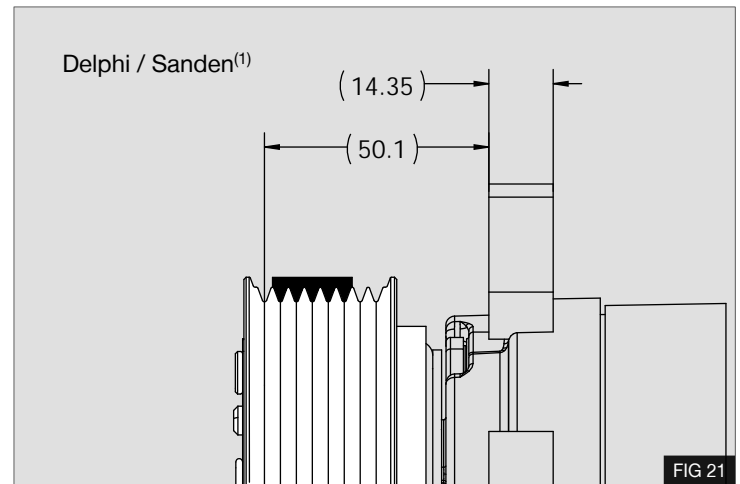


FIG 20

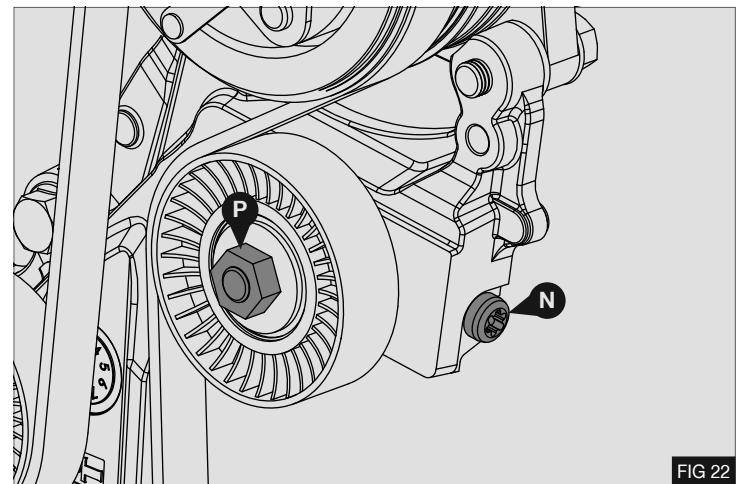
4. Delphi / Sanden⁽¹⁾ compressors - Belt is installed with 1 spare grooves at the front of the compressor pulley - Fig 21

⁽¹⁾Model Specific



5. Tension the drive belt (8) using a T-40 Torx on the adjuster bolt (N) When the correct tension (new belt level) has been achieved (see table). Torque tensioner lock nut (P) to 25Nm / 18lb. ft. using a calibrated torque wrench - Fig 22

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 the Belt Tension Gauge
5 PK	New Belt	60 - 72 kg
5 PK	Used Belt / Re-Tension	45 - 50 kg

FINISH

1. Refit the air filter assembly, wiring loom and intake hose that were previously removed.
2. Run the engine with compressor engaged for five minutes. Check all components.
3. Check the belt tension when the belt is hot. It is important that the belt is allowed to cool before re-tensioning. **Always re-tension new belts if the tension is less than the used belt amount.** Install the supplied belt label in the engine bay.

(EN)

Techni focuses on constant upgrading of its products. The Manufacturer reserves the right to modify the models and components described in the present publication at any time for technical or commercial reasons and without prior notice. For further information, contact Techni technical services.

(DE)

Techni ist stets bestrebt die eigenen Produkte zu verbessern. Die Herstellerfirma behält sich das Recht vor, aus technischen oder Verkaufsgründen, zu jeder Zeit und ohne vorherige Ankündigung, Abänderungen an den Modellen und den in dieser Veröffentlichung beschriebenen Einbauteile vorzunehmen. Für weitere Informationen bitten wir Sie, sich an unseren Techni Kundendienst zu wenden.

(FR)

Techni vise à une amélioration constante des ces produits. La maison se réserve le droit d'apporter, à tout moment et sans préavis, des modifications aux modèles et aux composants décrits dans cette publication pour des raisons d'ordre technique ou commerciale. Pour d'ultérieures informations s'adresser au service d'assistance Techni.

(IT)

Techni mira ad un costante miglioramento dei propri prodotti. La Casa si riserva il diritto di apportare in qualunque momento e senza preavviso modifiche ai modelli e ai componenti descritti in questa pubblicazione per ragioni di natura tecnica o commerciale. Per ulteriori informazioni rivolgersi al servizio assistenza Techni.

(ES)

Techni aspira a un constante mejoramiento de su producción. La Fábrica se reserva el derecho de aportar en cualquier momento y sin preaviso modificaciones a los modelos y los componentes descritos en esta publicación por razones técnicas o comerciales. Para ulteriores informaciones dirigirse al servicio asistencia Techni.

VENDITA E SERVIZIO
VENTE ET SERVICE

SALES AND SERVICE
VERKAUF UND SERVICE



Sundorne Trade Park, Henley Way,
Shrewsbury, United Kingdom, SY1 4NS
Telephone (+44) (0) 1743 443176
Fax (+44) (0) 1743 443113
Email: sales@techni.co.uk