**Incorrect or out of phase engine timing can result in damage to the valves. The Tool Connection cannot be held responsible for any damage caused by using these tools in anyway.**

## Safety Precautions – Please read

- Disconnect the battery earth leads (check radio code is available)
- Remove spark or glow plugs to make the engine turn easier
- Do not use cleaning fluids on belts, sprockets or rollers
- Always make a note of the route of the auxiliary drive belt before removal
- Turn the engine in the normal direction (clockwise unless stated otherwise)
- Do not turn the camshaft, crankshaft or diesel injection pump once the timing chain has been removed (unless specifically stated)
- Do not use the timing chain to lock the engine when slackening or tightening crankshaft pulley bolts
- Do not turn the crankshaft or camshaft when the timing belt/chain has been removed
- Mark the direction of the chain before removing
- It is always recommended to turn the engine slowly, by hand and to re-check the camshaft and crankshaft timing positions.
- Crankshafts and Camshafts may only be turned with the chain drive mechanism fully installed.
- Do not turn crankshaft via camshaft or other gears
- Check the diesel injection pump timing after replacing the chain
- Observe all tightening torques
- Always refer to the vehicle manufacturer's service manual or a suitable proprietary instruction book
- Incorrect or out of phase engine timing can result in damage to the valves
- It is always recommended to turn the engine slowly, by hand, and to re-check the camshaft and crankshaft timing positions

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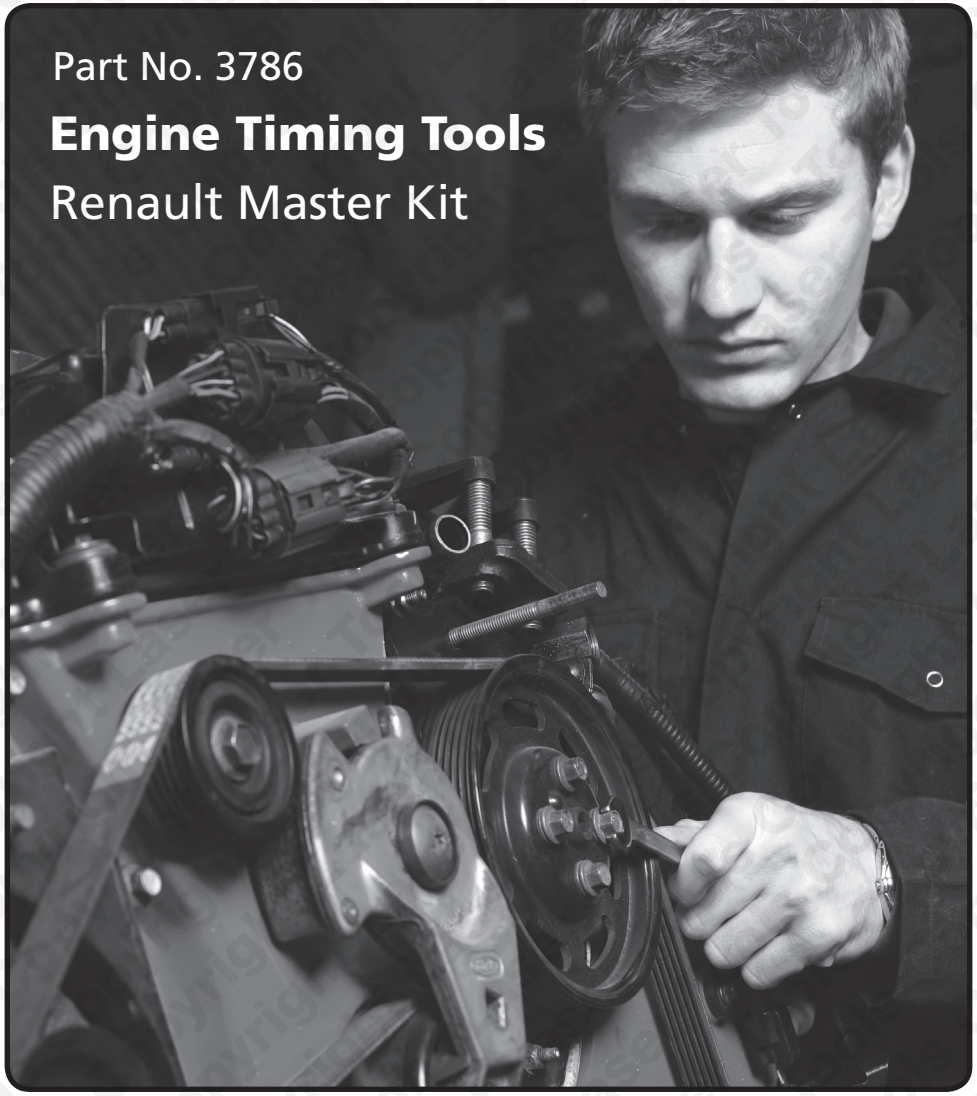
LASER®

Part No. 3786

# Engine Timing Tools

## Renault Master Kit



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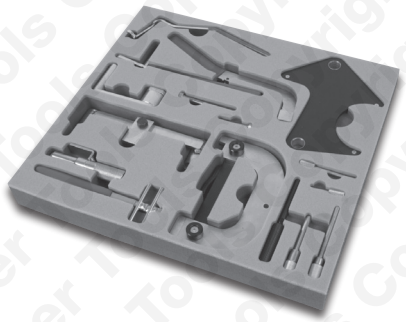
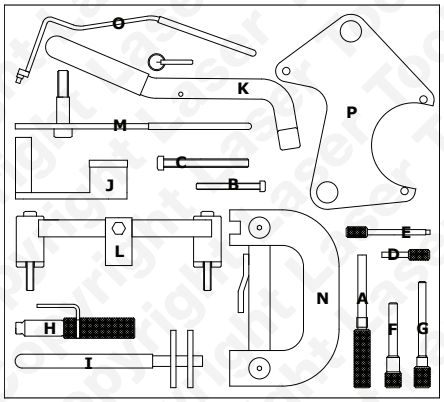
# Plan Layout





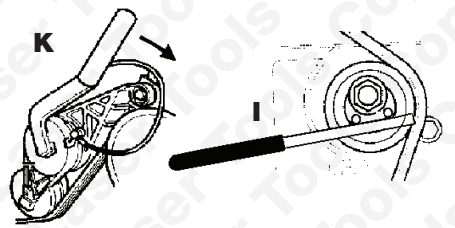

| Ref | Code | Oem Code | Description |
|---|---|---|---|
| A | C037 | MOT1489 | Crankshaft Timing Pin |
| B | C067 | | Locking Screw M6 x 30mm |
| C | C068 | | Locking Screw M8 x 70mm |
| D | C097 | MOT910 | Flywheel Locking Pin |
| E | C098 | MOT910 | Injection Pump Setting Pin |
| F | C099 | MOT861/863 | Flywheel Locking Pin |
| G | C100 | MOT1318 | Flywheel Locking Pin |
| H | C110 | MOT1340 | Flywheel Locking Pin |
| I | C111 | MOT1135-01 | Tension Wrench |
| J | C112 | MOT1386 | Tensioner Adjuster |
| K | C114 | MOT1348 | Tensioner Adjuster |
| L | C116 | MOT1337 | Camshaft Locking Tool |
| M | C117 | MOT1496 | Tensioner Adjuster |
| N | C120 | MOT1312 | Camshaft Locking Tool |
| O | C124 | MOT1384 | Tensioner Adjuster |
| P | C126 | MOT1490-01 | Camshaft Sprocket Alignment Tool |

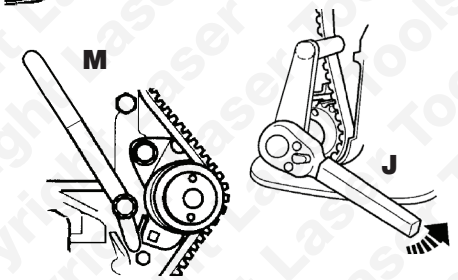


# Instruction (DE)

## Spannwerkzeug

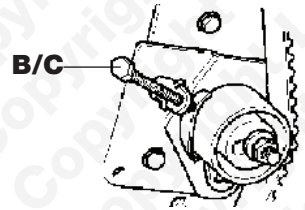
Es gibt fünf Arten, die in diesem Satz eingeschlossen werden, der der korrekten Spannung ermöglicht, zum Timing-Gürtel angewandt zu werden.



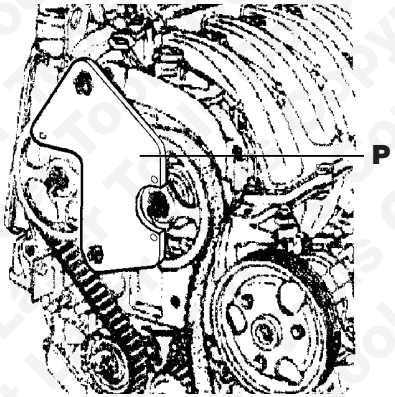

## Spannwerkzeug

Es gibt zwei Arten, die in diesem Satz eingeschlossen werden, der der korrekten Spannung ermöglicht, zum zahnriemen angewandt zu werden.




## Verschiedene Werkzeuge

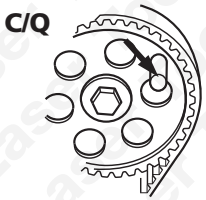
Das Nockenwelle Rolle Ausrichtung Werkzeug (P) wird benutzt, um die Nockenwelle-Rollen zu blockieren. Dies verhindert die Anforderung, um eine der zwei Rollen wenigstens zu lockern und das Auseinandernehmen des Gelenkes. Die originalen Befestigungsschrauben werden benutzt, um dieses Werkzeug zu behalten.

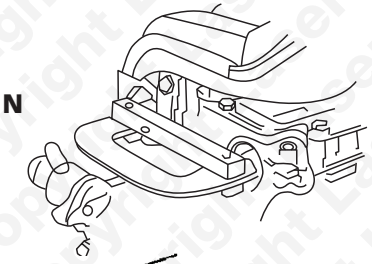


# Instruction (DE)

## Nockenwellen und Einspritzpumpen

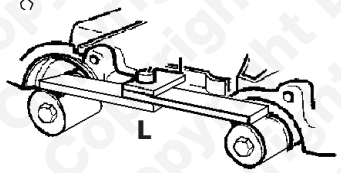
Fixierdorn.Diese werden generell benutzt, um die korrekte riemsen abzuschließen durch werdend durch den Nockenwelle-Zahn in ein zusammenpassendes Loch in den Zylinderkopf hineingesteckt.

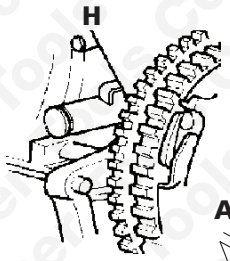



## Nockenwellen-Werkzeug

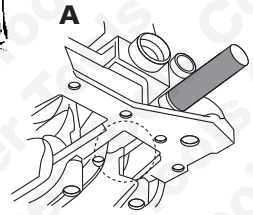
Diese werden generell benutzt, um die korrekte riemen abzuschließen durch werdend am Ende in einen Lage-Schlitz von der Nockenwelle hineingesteckt und das Angleichen der Nockenwelle in Verbindung zum Zylinderkopf und einander.

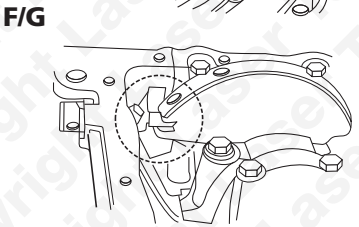



## Kurbelwellen-Fixierdorn

Es gibt vier andere Stücke, die in diesem eingeschlossen werden, das gesetzt wird. Wie mit der Nockenwelle-Timing-Nadel werden sie durch den Motorblock hineingesteckt und gebraucht, die Kurbelwelle aufzustellen, um die korrekte riemen des ersten Zylinders zu erreichen. Es ist wichtig, daß diese Stücke benutzt werden, um die riemens zu setzen, aber wird nicht benutzt werden, um das Schwungrad abzuschließen.






# Applications

The application list for this product has been compiled cross referencing the OEM Tool Code with the Component Code.

In most cases the tools are specific to this type of engine and are necessary for Cam belt or chain maintenance.

If the engine has been identified as an interference engine valve to piston damage will occur if the engine is run with a broken Cam belt.

A compression check of all cylinders should be performed before removing the cylinder head.

Always consult a suitable work shop manual before attempting to change the Cam belt or Chain.

**Autodata**

Our applications data is supplied by Autodata and we are able to supply this data to you in a PDF format.

If this is a specific kit for a group of engine codes the application list has been supplied showing the main vehicles this kit is designed for and does not list every model each pin fits.

If this is a master kit then all vehicles are included.

The data is the copyright of Tool Connection and should not be reproduced.

If the application data is extensive we have included a CD with the application list in .pdf format.

**Languages**

We have also included where possible translations for the instructions in the following languages:

- French
- Spanish
- German
- Portuguese
- Italian
- Dutch

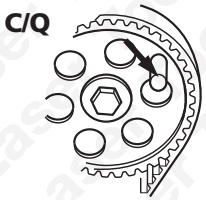
The use of these engine timing tools is purely down to the user's discretion and Tool Connection cannot be held responsible for any damage caused what so ever.

ALWAYS USE A REPUTABLE WORKSHOP MANUAL

# Instruction (GB)

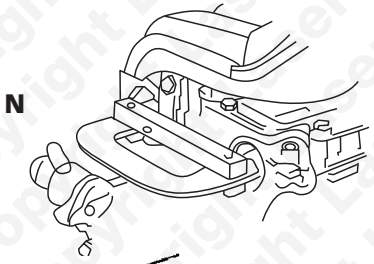
## Camshaft and Injection Pump Pulley Timing Pin

These are generally used to lock the correct timing position by being inserted through the camshaft sprocket into a matching hole in the cylinder head.



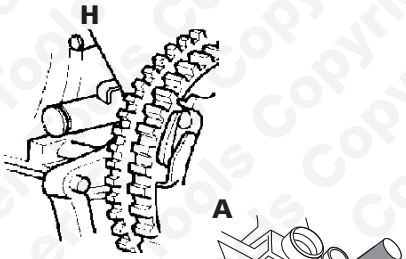

## Camshaft Alignment Setting Tools

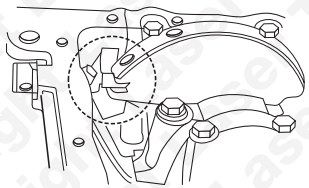
These are generally used to lock the correct timing position by being inserted into a location slot in the end of the camshaft and aligning the camshaft in relation to the cylinder head and each other.




## Crankshaft Timing Pins

There are four different pieces included in this set. As with the camshaft timing pin, they are inserted through the engine block and used to position the crankshaft to achieve the correct timing position of the first cylinder. It is important that these pieces are used to set the timing position, but are not to be used to lock the flywheel.



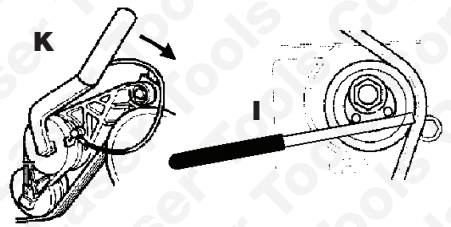






# Instruction (ES)

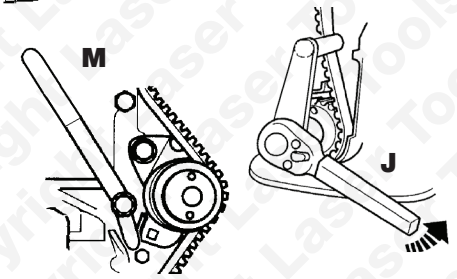
## Herramientas de tensado

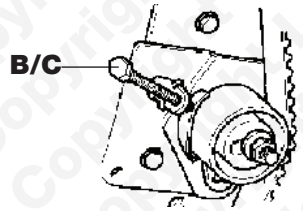
Hay cinco tipos incluidos en este juego que permite aplicar la tensión correcta a la correa de distribución.




## Tornillos de tensado

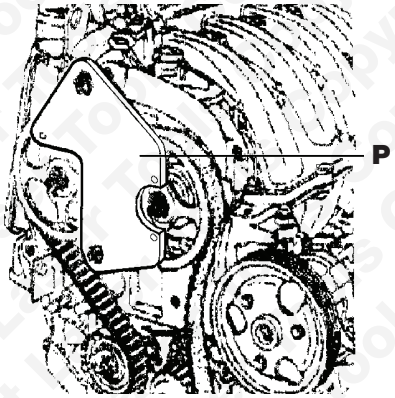
Hay dos tipos incluidos en este juego que permite aplicar la tensión correcta a la correa de distribución.



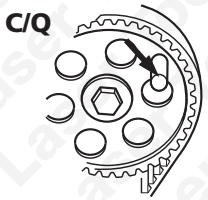

## Las Herramientas misceláneas

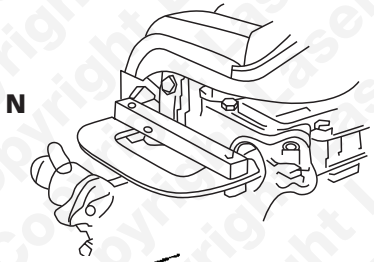
La Árbol de levas Polea Alineación Herramienta (P) se usa para bloquear las poleas del árbol de levas. Esto previene el requisito para soltar una de las dos poleas por lo menos y desmantelando la juntura. Los tornillos arreglando originales se usan para retener esta herramienta.



### Pige de calage et blocage d'arbre à cames et de pompe à injection

Ceux-ci sont utilisés pour fermer à clé la place du réglage correcte en étant inséré à travers la dent de l'arbre à cames dans un trou assorti dans la tête du cylindre généralement.

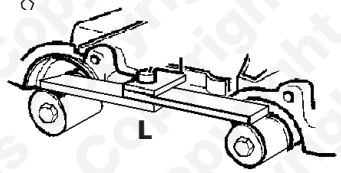


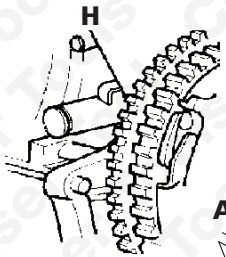



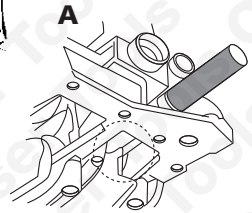

### Outils de calage et blocage de l'arbre à cames:

Permet le contrôle et le calage de la distribution. Caler le moteur au PMH (avec l'outil A ou H), déposer les bouchons à l'arrière des arbres à cames.

Insérer l'outil (sans forcer) dans les rainures des arbres à cames. Si l'outil ne s'engage pas, refaire le calage ou la tension de la distribution.

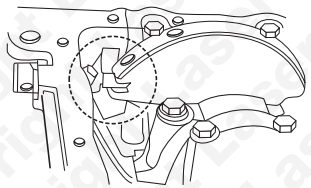



### Piges de calage des volants moteurs:

Permet le calage du vilebrequin au PMH. Outil de calage moteur de PMH, à ne pas utiliser comme outil de blocage moteur.

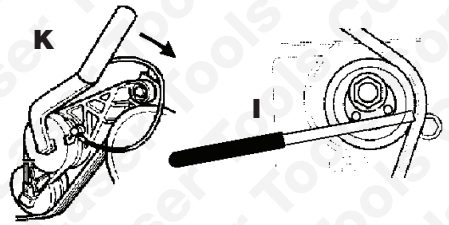






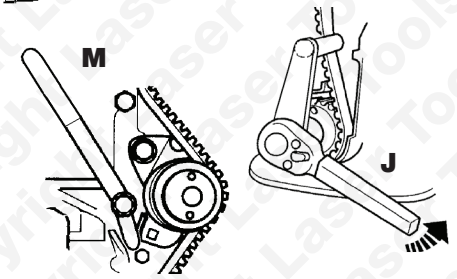

### Outils de tension

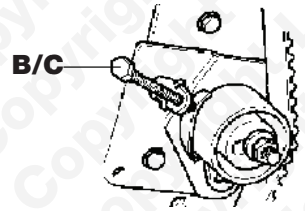
Ce coffret contient 5 outils pour l'application de la tension correcte sur la courroie de distribution.




### Boulon de tendeur

Ce coffret contient 2 vis pour l'application de la tension sur la courroie de distribution

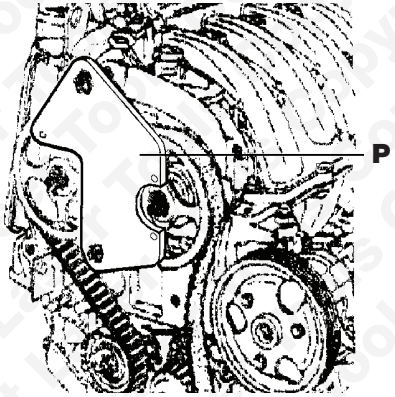



### Outil de blocage des poulies d'arbres à cames

Positionner verticalement le logo RENAULT gravé sur les branches des poulies.

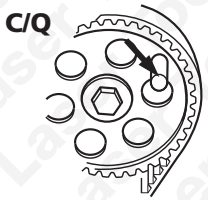
Monter l'outil de blocage sur les poulies et utiliser les fixations du carter de distribution pour le fixer.



# Instruction (ES)

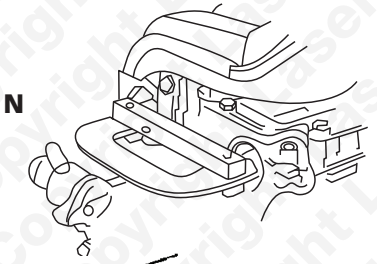
### Chaveta de reglaje de la bomba de inyección

Éstos generalmente se usan para cerrar con llave la posición de la oportunidad correcta insertándose a través del engranaje de árbol de levas en un agujero emparejando en la culata.



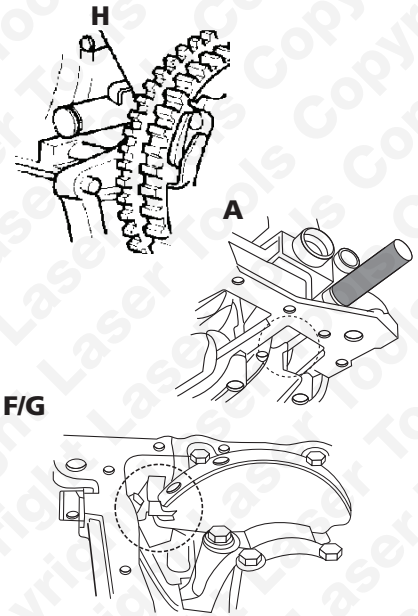

### Herramientas de reglaje del àrbol de levas

Éstos generalmente se usan para cerrar con llave la posición de la oportunidad correcta insertándose en una hendedura de la situación en el extremo del árbol de levas y encuadrando el árbol de levas respecto a la culata y nosotros.




### Chavetas de reglaje del cigüeñal

Hay cuatro pedazos diferentes incluidos en esto puesto. Como con el árbol de levas que cronometra el alfiler, ellos se insertan a través del bloque motor y posicionaban el cigüeñal para lograr la posición de la oportunidad correcta del primer cilindro. Es importante que estos pedazos se usan para poner la posición de la oportunidad, pero no será usado para cerrar con llave el volante.

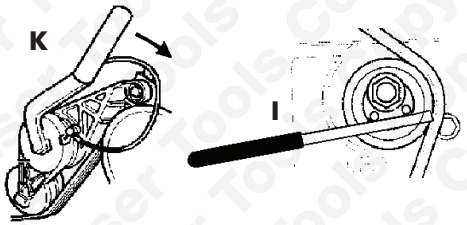


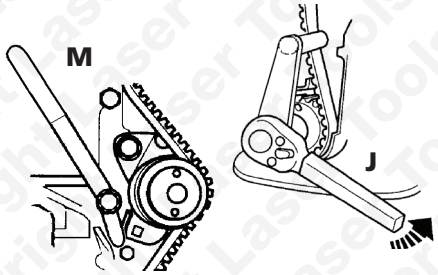



# Instruction (GB)

### Tensioning Tools

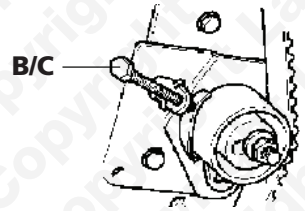
There are five types included in this set, which enable the correct tension to be applied to the timing belt.




### Tensioning Adjustment Screws

There are two types included in this set, which enable the correct tension to be applied to the timing belt.




### Miscellaneous Tools

The Camshaft Pulley Alignment Tool **(P)** is used to lock the camshaft pulleys.
This removes the need to loosen a pulley and split the joint. The original fixing screws are used to retain this tool.