

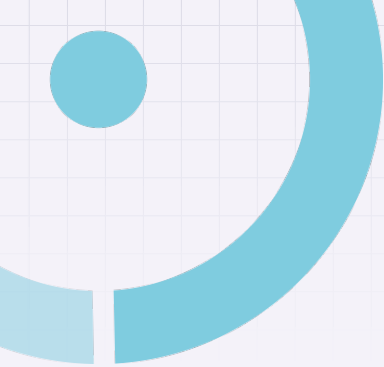
TREINAMENTO

MESTRE   
AUTOMOTIVO 



# MOTORES THP: TECNOLOGIA E DIAGNÓSTICO COM OSCILOSCÓPIO

The logo for SIMPLO, featuring the word "SIMPLO" in a bold, white, sans-serif font. A white, curved line arches over the letters "I", "M", and "P", creating a stylized wave or swoosh effect.



01



MOTOR THP  
(TURBO HIGH PRESSURE)



TREINAMENTO

MESTRE  AUTOMOTIVO 

# APRESENTAÇÃO

**Símbolo do downsizing,  
o THP (Turbo High Pressure)  
da PSA Peugeot Citroën,  
foi desenvolvido em parceria com a  
BMW**





# Identificação

O motor de quatro cilindros 1.6 (1.598 cm<sup>3</sup>) 16 válvulas turbo e injeção direta de combustível.

## Nome Técnico

EP6CDT (156 cv) Sistema de injeção Bosch MED 17.4

EP6CDTM (165 cv) Sistema de injeção Bosch MED 17.4.2

EP6FDTM (173 cv com etanol) Sistema de injeção Bosch MED 17.4.4



## O que muda?

A diferença entre as versões a gasolina é apenas o software que comanda a injeção, desenvolvido pela Bosch. Com a atualização, o sistema muda de nome: de MED 17.4 (156 cv) para MED 17.4.2 (165 cv), assim como o número regulamentar inscrito no chassi do veículo nos 6º, 7º e 8º caracteres, podendo ser 5FV (156 cv) ou 5FM (165 cv).

O motor flex com sistema MED 17.4.4 (173 cv) tem número regulamentar 5GV e recebe modificações na injeção para comportar o uso do etanol.

**Obs:** A PSA Peugeot Citroën conta os cilindros a partir do volante. Portanto, o 1º cilindro está ao lado do volante e o 4º, ao lado da sincronização.

# Particularidades

- **Tecnologia de acionamento pilotado para diversos componentes**
  - ✓ **Válvula termostática**
  - ✓ **Alternador**
  - ✓ **Ar Condicionado**
  - ✓ **Bomba d'água Elétrica e Mecânica**
  - ✓ **Bomba de óleo**
  - ✓ **Turbina**
  - ✓ **Bomba de alta pressão de Combustível**

**Com o objetivo de reduzir atrito no motor, resultando em economia de combustível e emissões de poluentes extremamente reduzidas.**

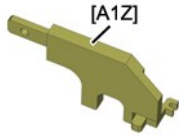
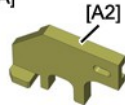
# FERRAMENTAS DE SINCRONISMO

[0197-BZ]



**POSIÇÃO DO VIRABREQUIM**

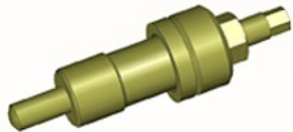
[0197-A]



**POSIÇÃO DOS COMANDOS DE VALVULAS**



[0197-M]



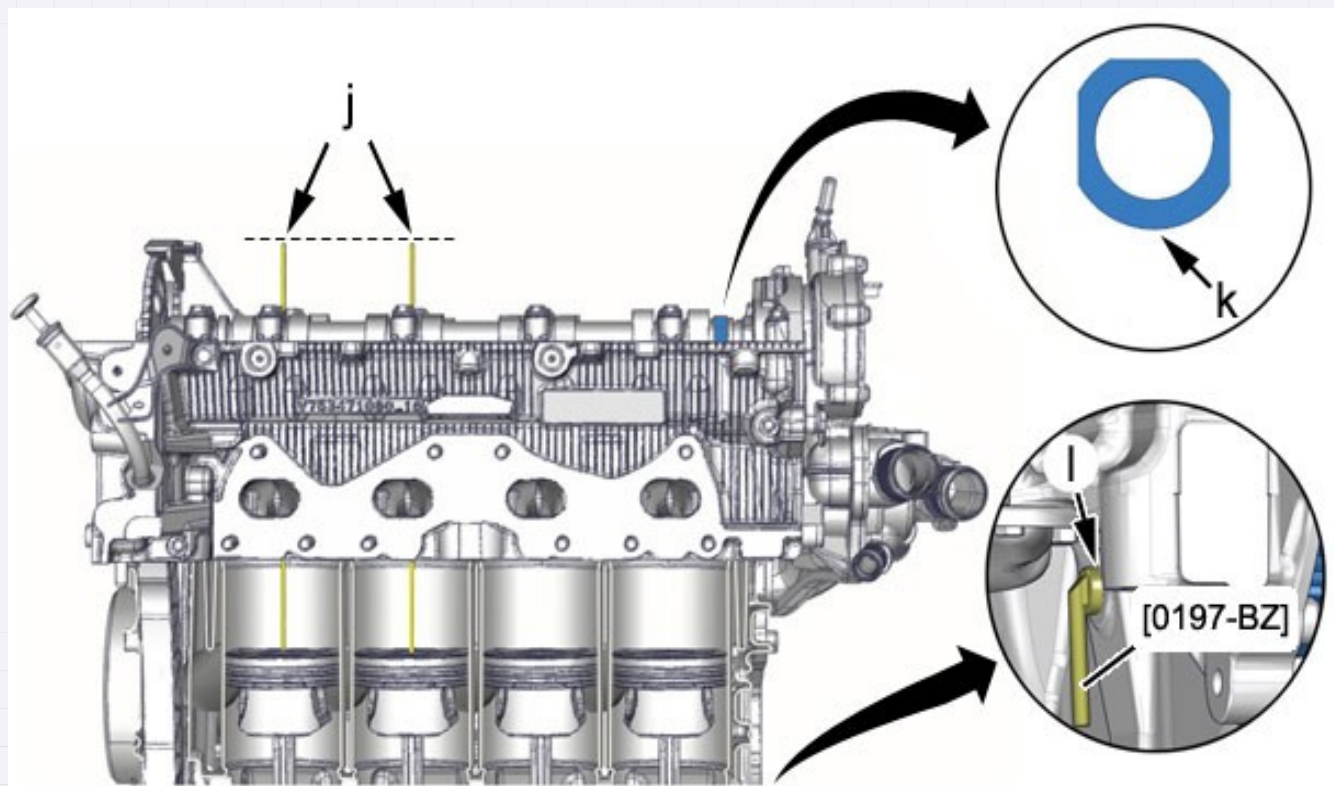
**FALSO TENSOR**

[1376-A]



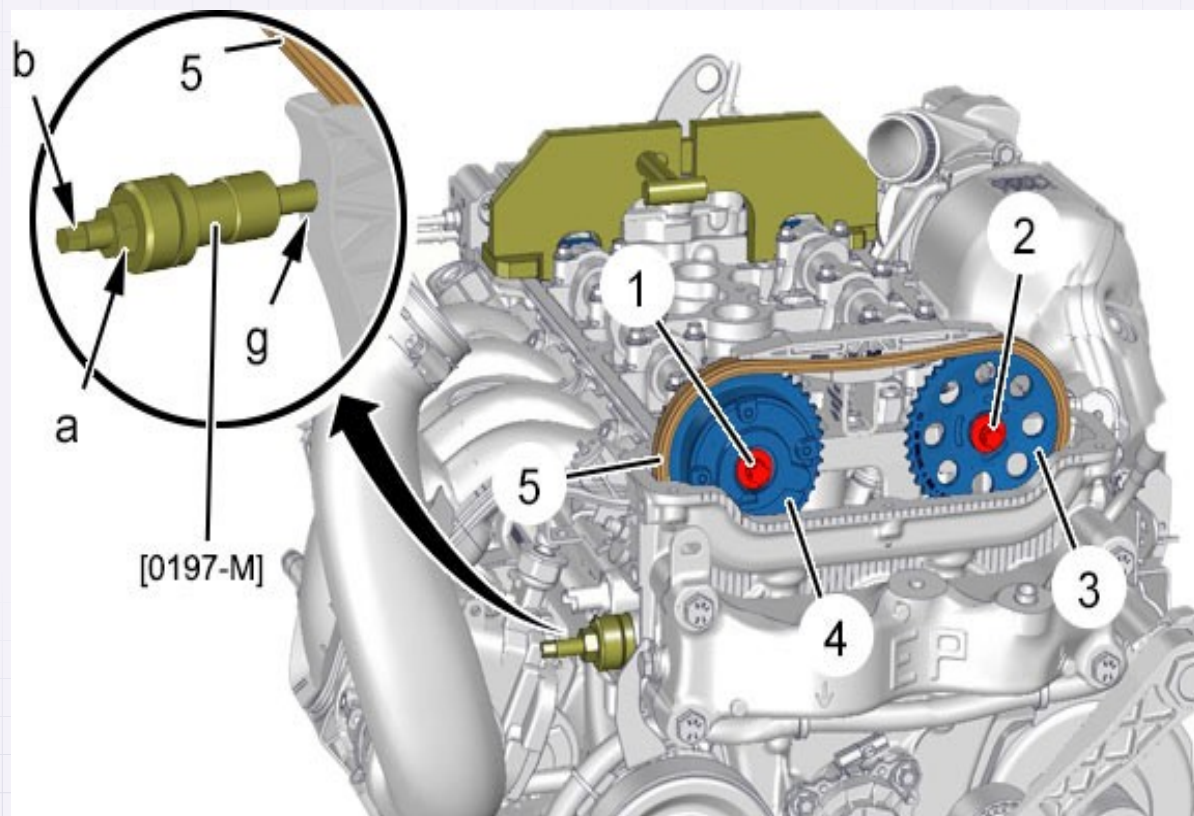
**INCLINOMETRO**

# Posicionamentos

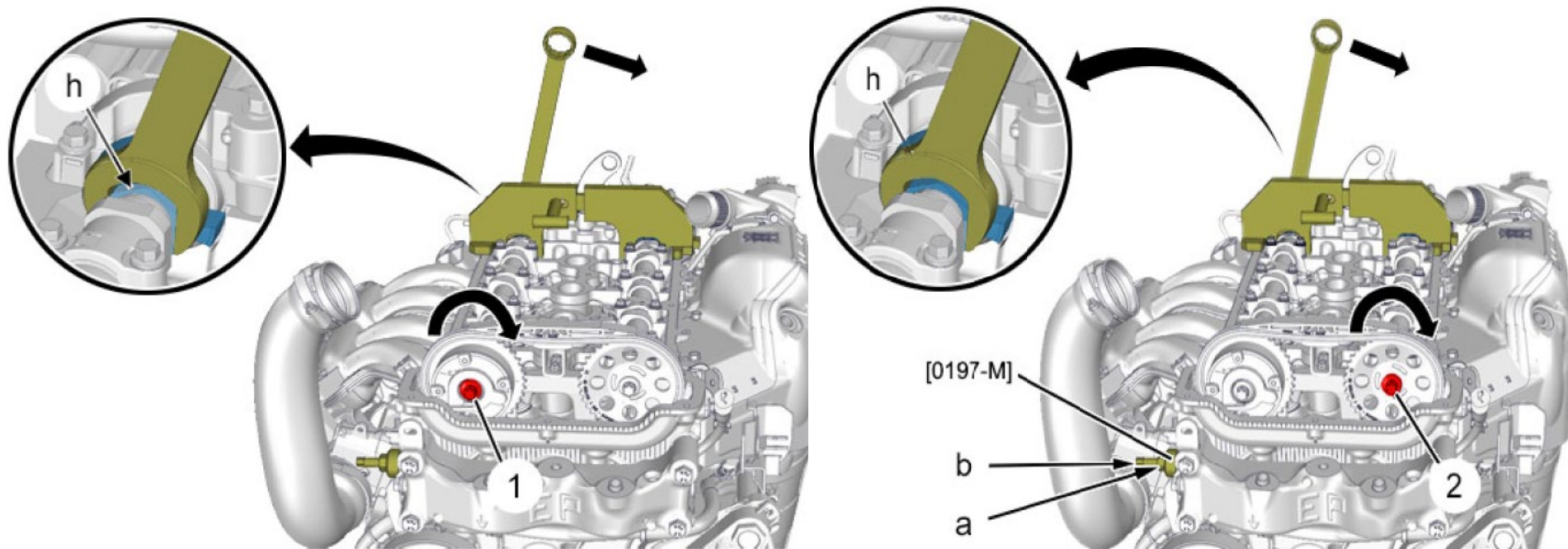




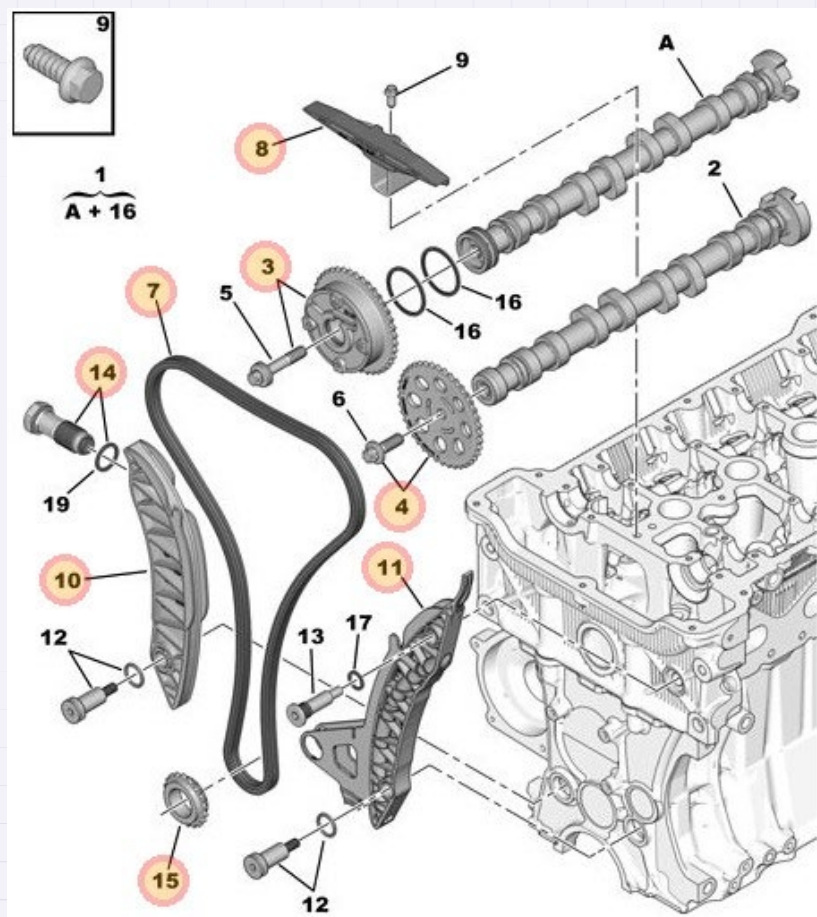
# Posicionamentos



# Procedimientos



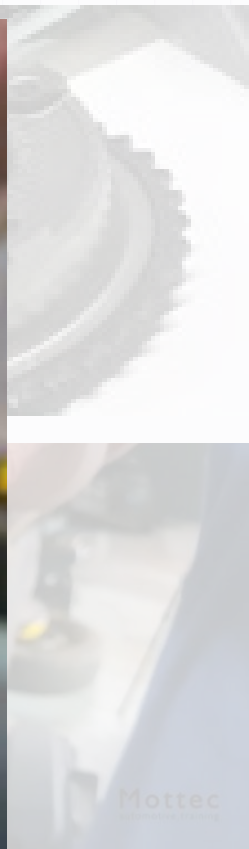
# Substituir



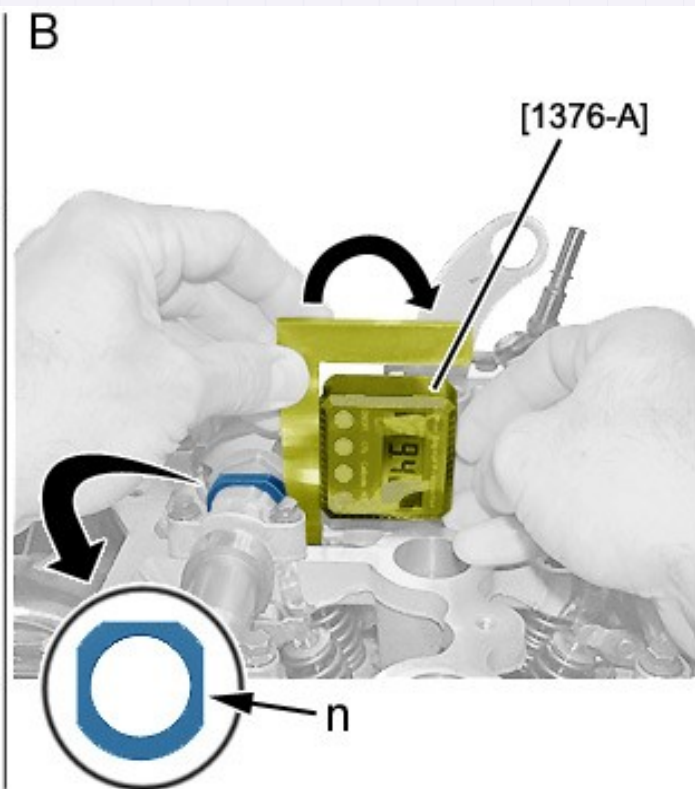
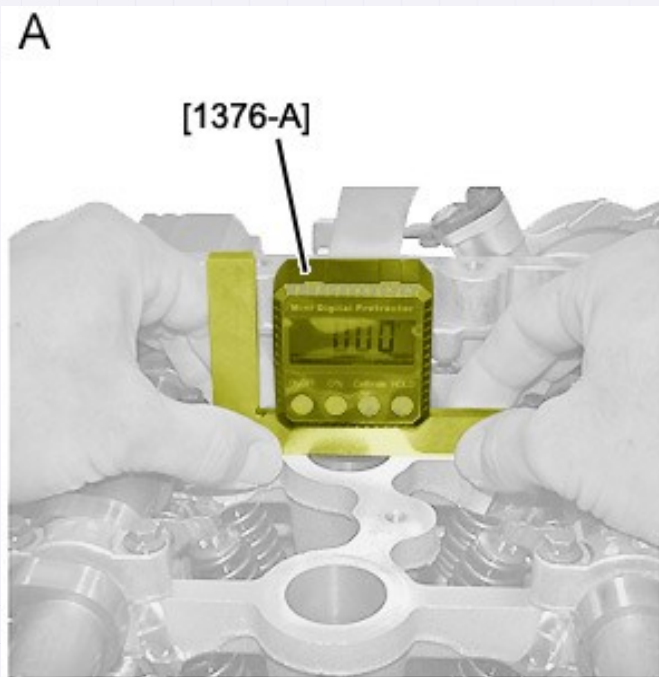
## Kit Distribuição Atualizado



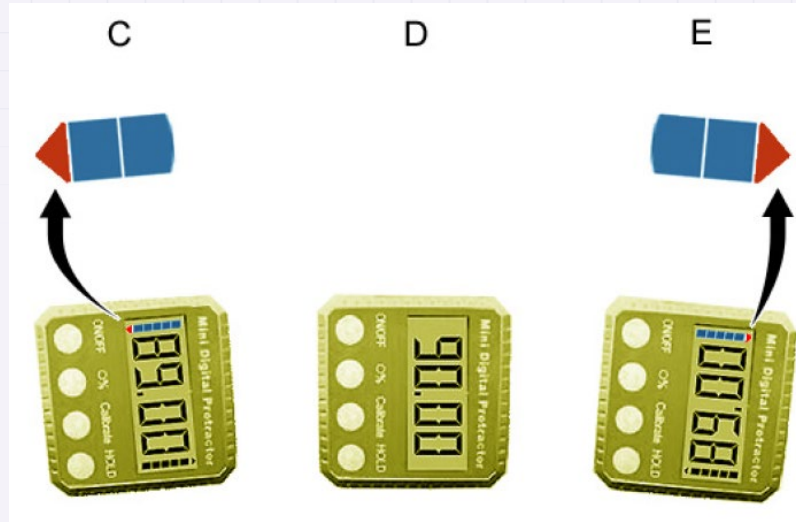
## Kit Distribuição Atualizado



# Procedimientos



# Atenção



**ATENÇÃO : O mostrador do inclinômetro não indica o valor superior a 90°.**

"C" (Ângulo de avanço) : O valor lido no inclinômetro é igual ao ângulo real .

"D" (Ângulo perpendicular) : O valor lido no inclinômetro é igual ao ângulo real .

"E" (Ângulo incoerente) : O valor lido no inclinômetro não é igual ao ângulo real .

Em caso de exceder o ponto médio "D" :

O inclinômetro mostra o valor para baixo

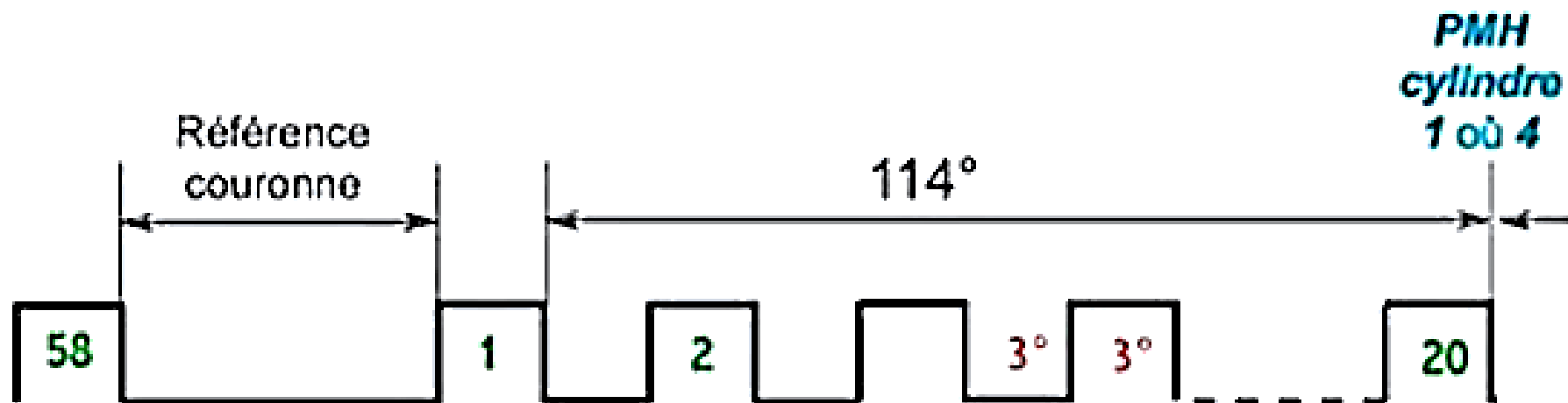
O sentido de leitura do valor está invertido

A direção das flechas está invertida

Ângulo "E" real =  $180^\circ$  - Valor "E" lido.

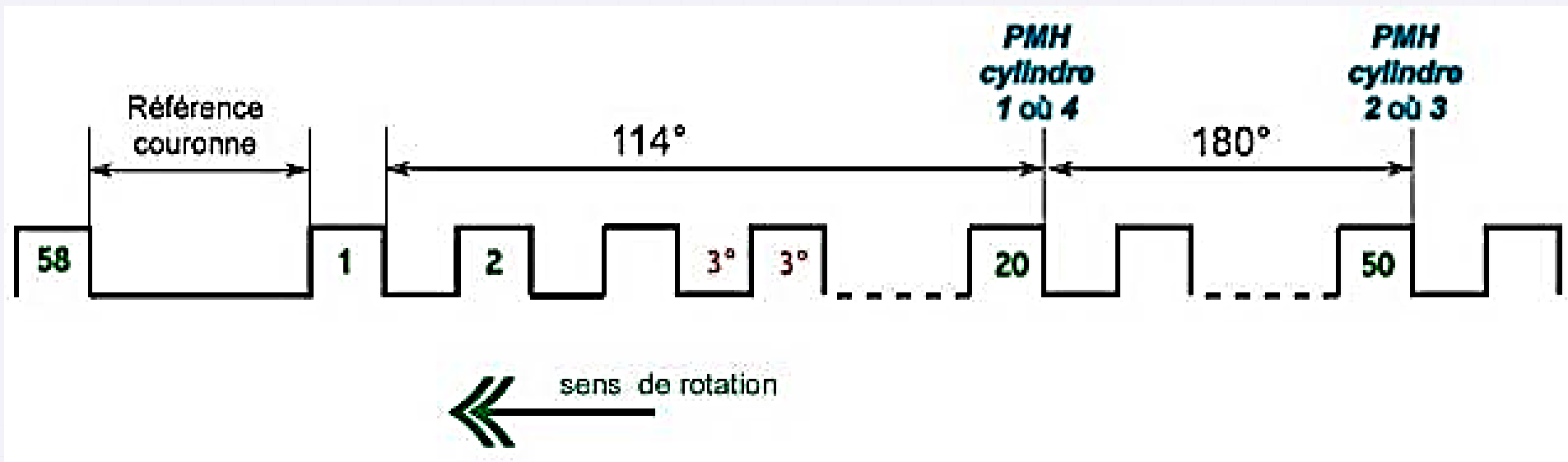
Exemplo : Ângulo "E" real =  $180^\circ$  -  $89^\circ$  =  $91^\circ$ .

## Referência

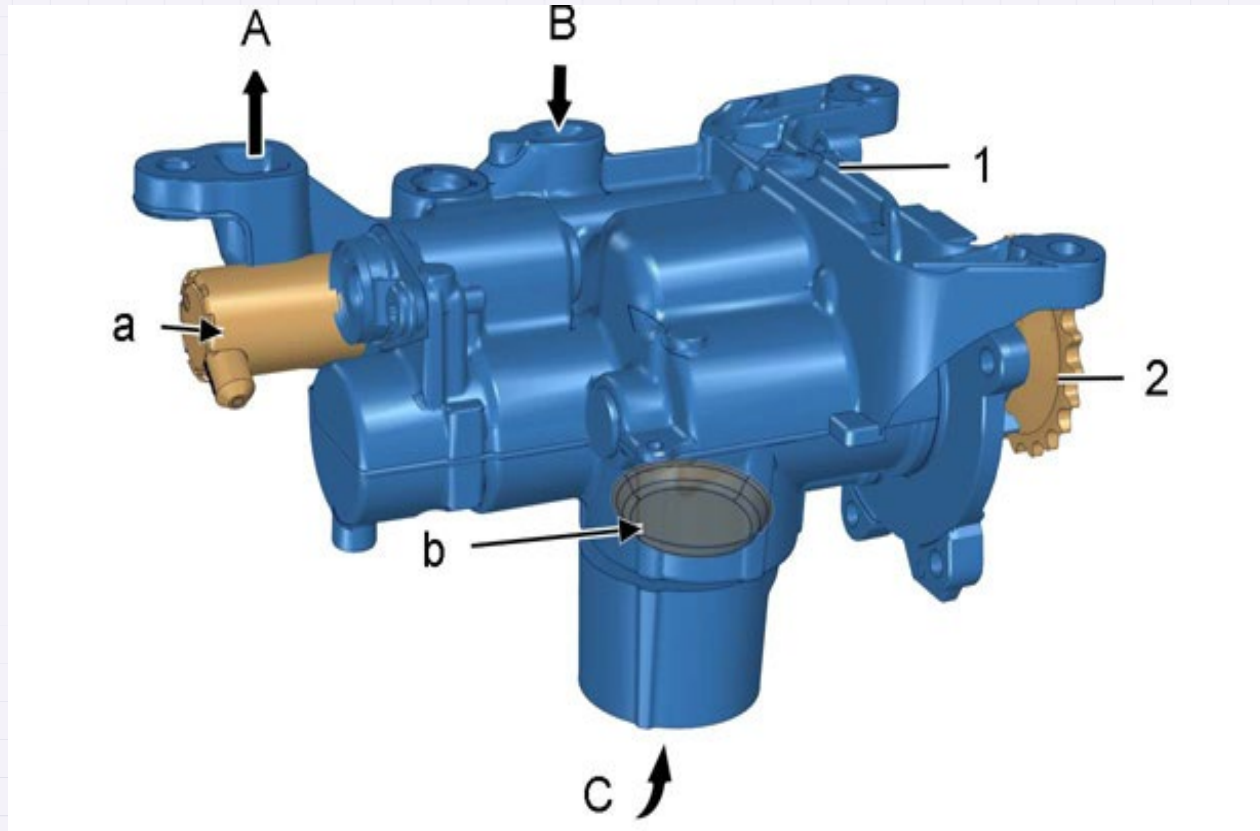




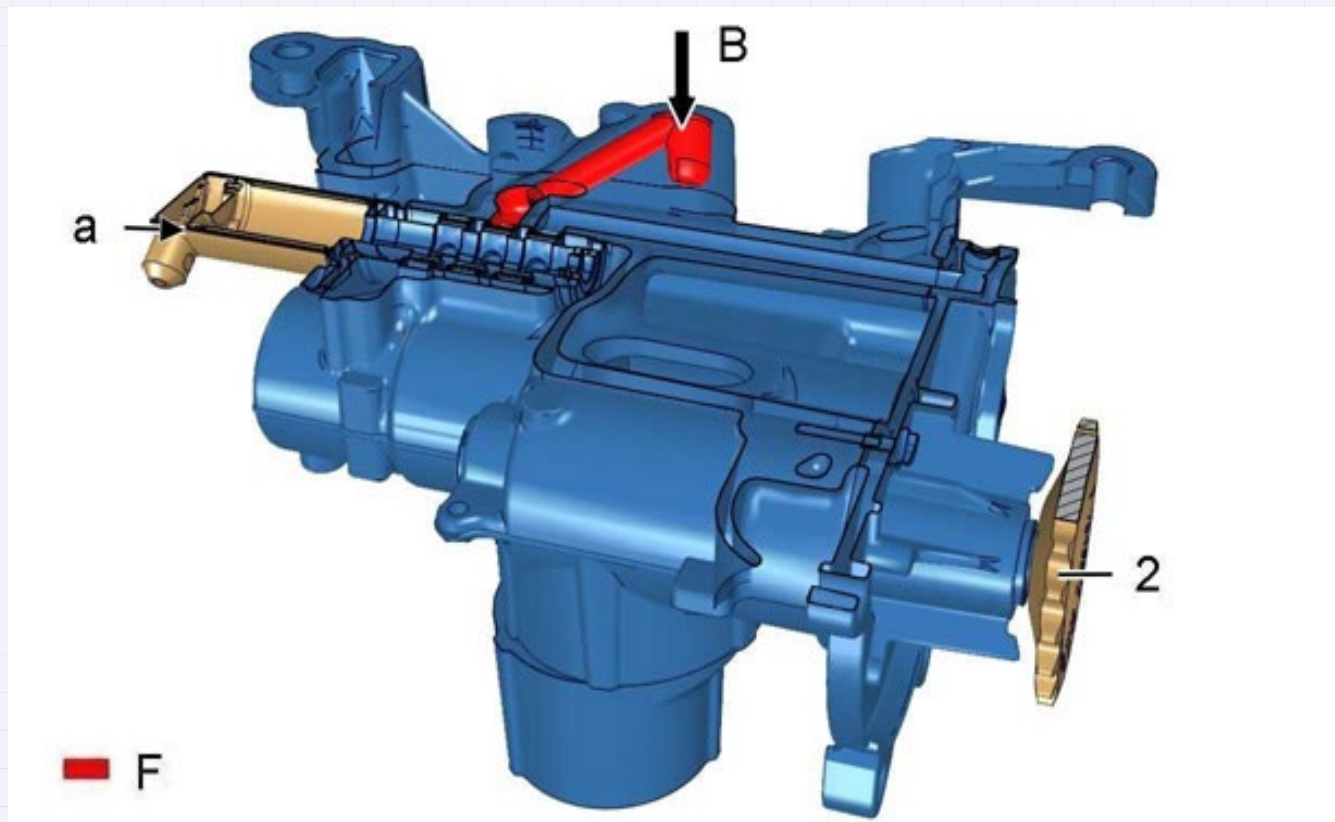
## Referência



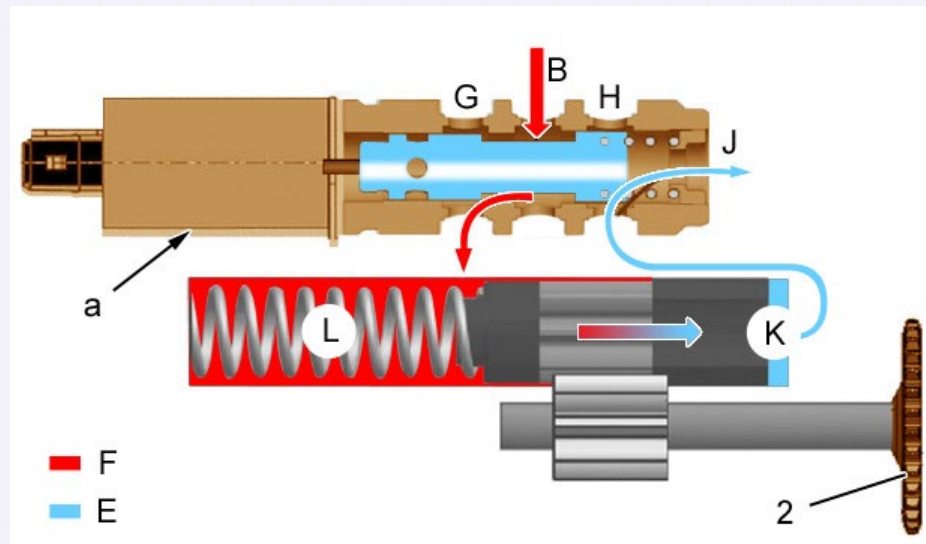
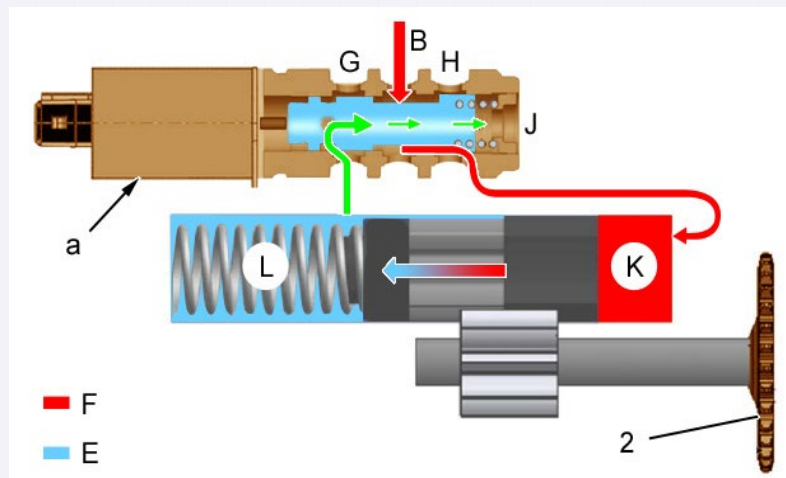
# Bomba de Óleo Pilotada



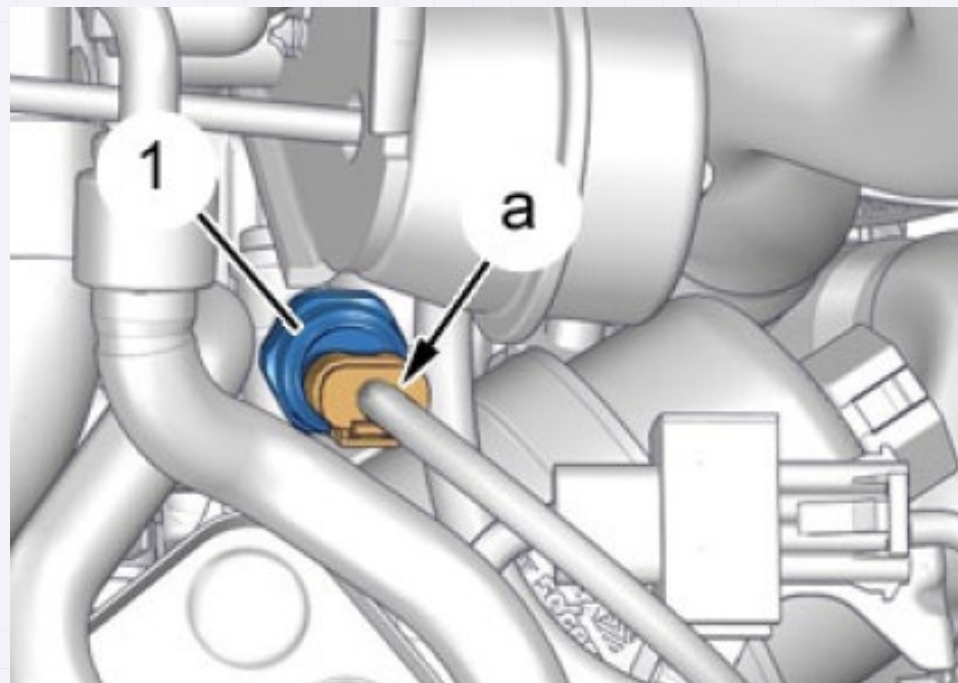
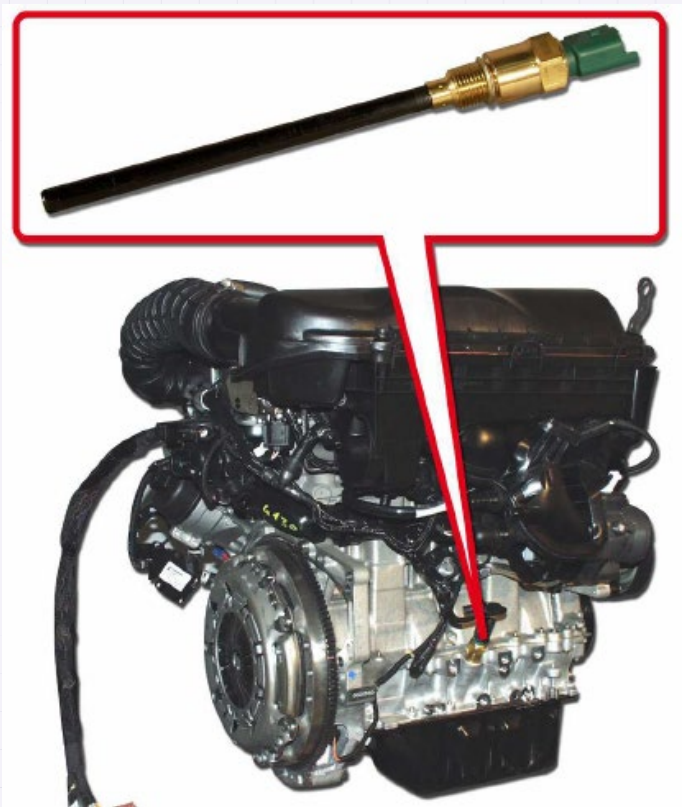
# Válvula Reguladora



# Funcionamento



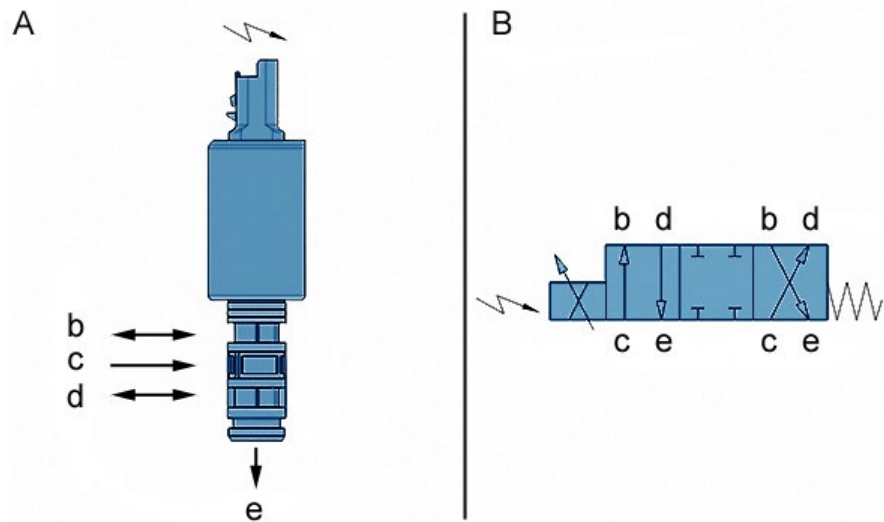
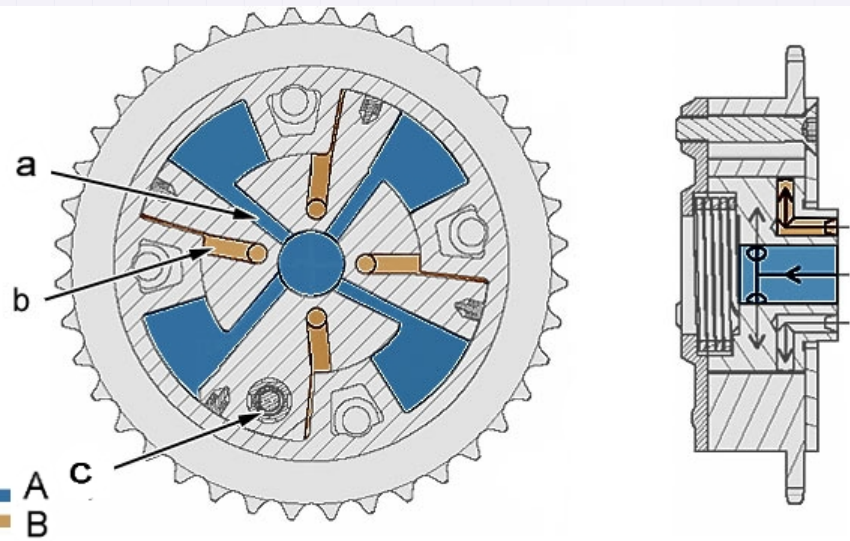
# Sensores



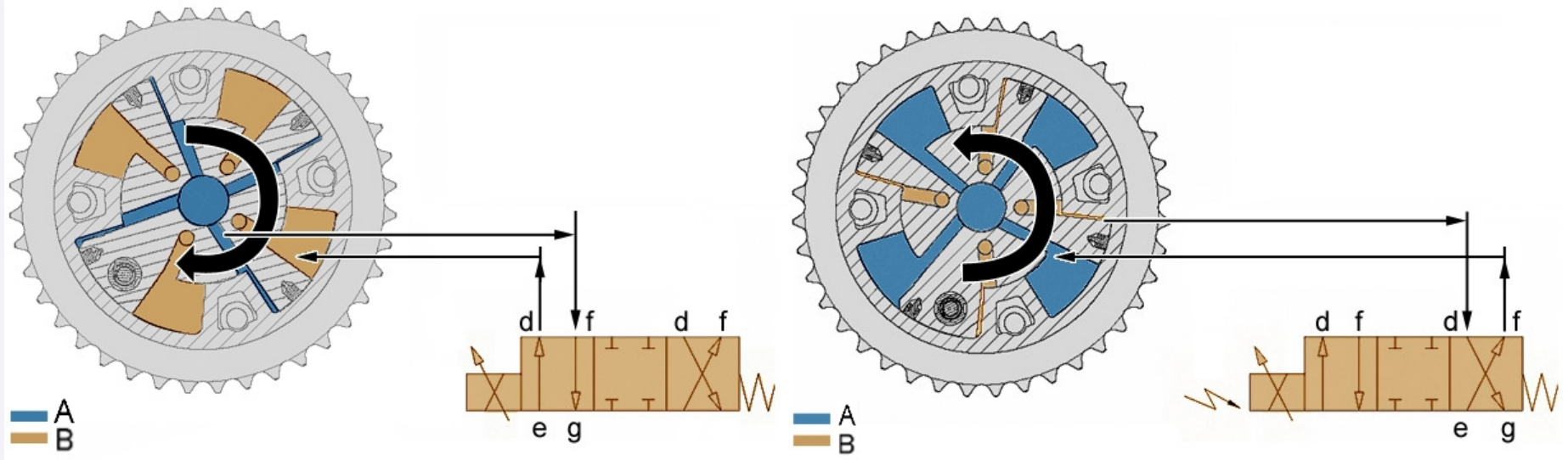
## Válvulas de Retenção



# Comando Variável

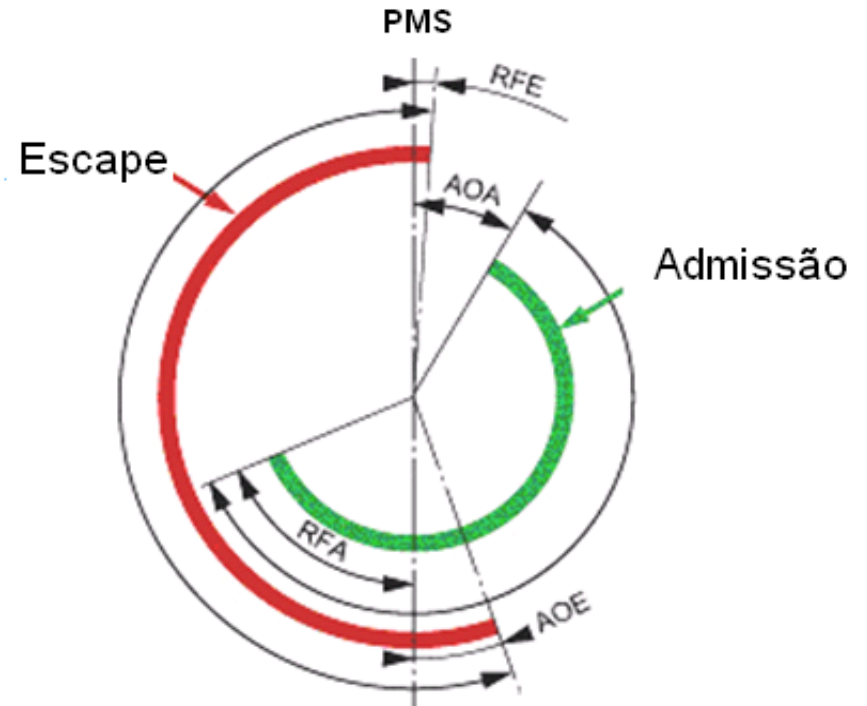
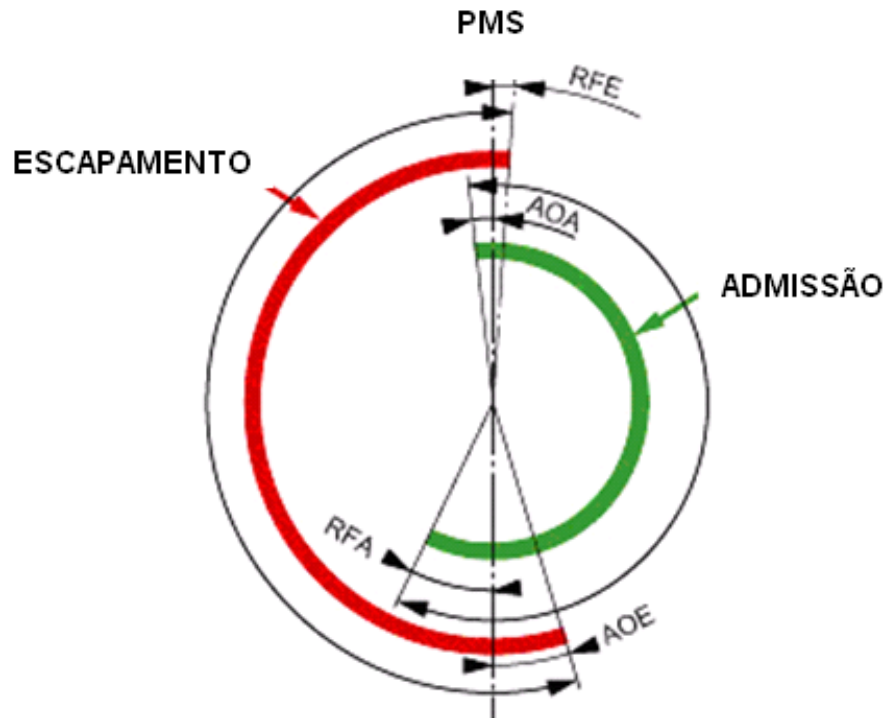


# Funcionamento





# Diagrama de Válvulas



# Atualizações



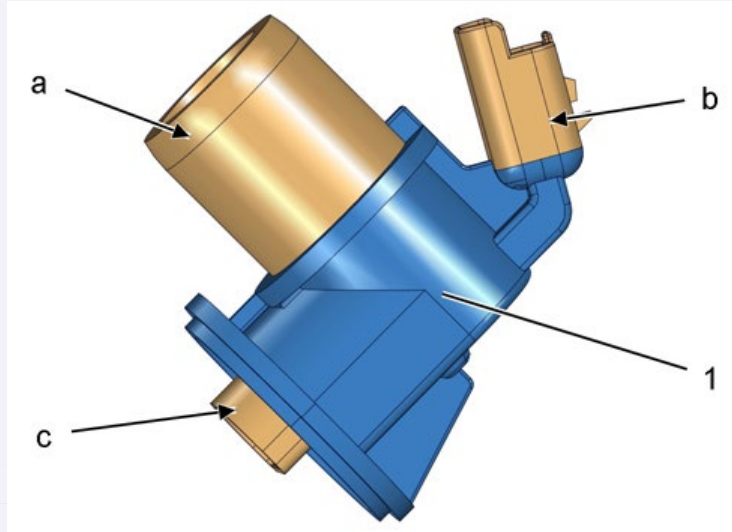
**Modelo Antigo**



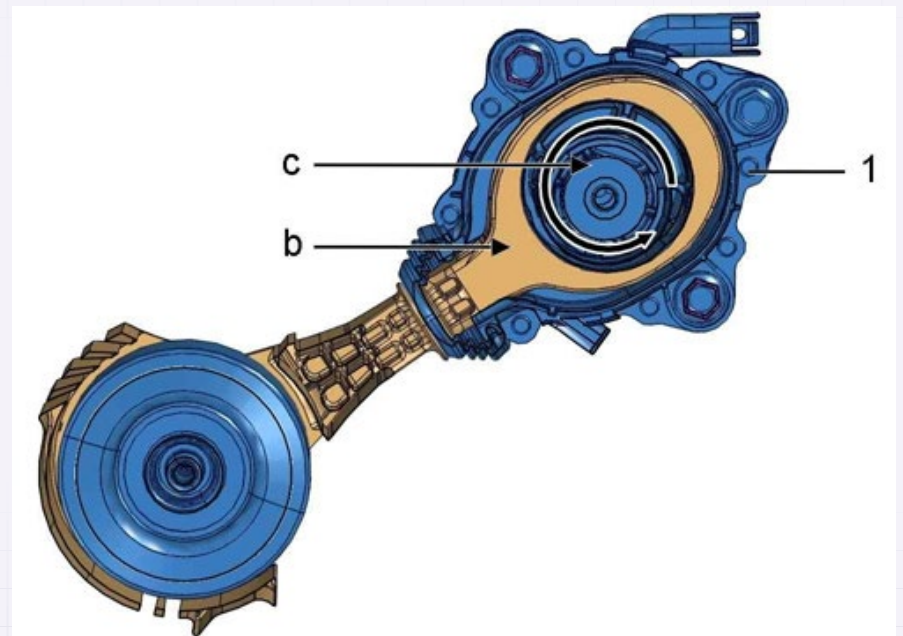
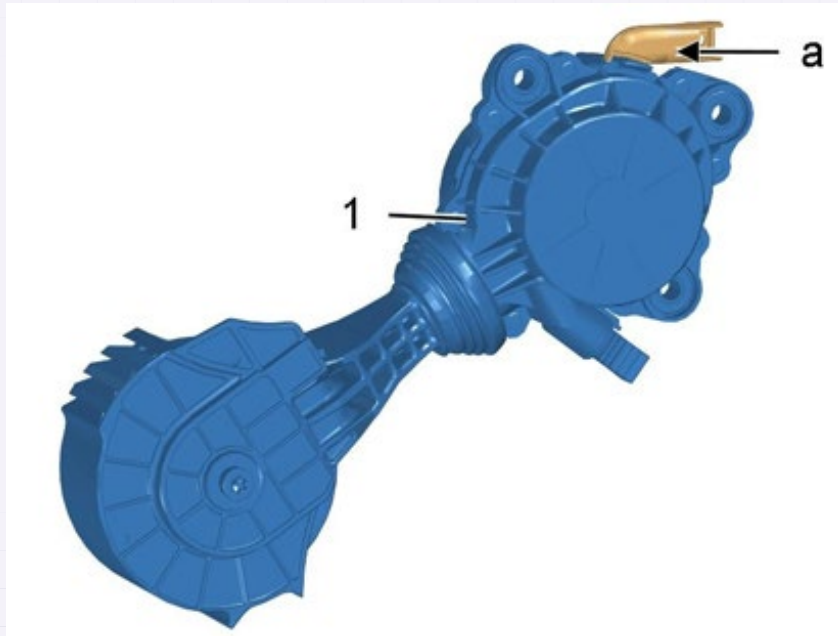
**Modelo Novo**



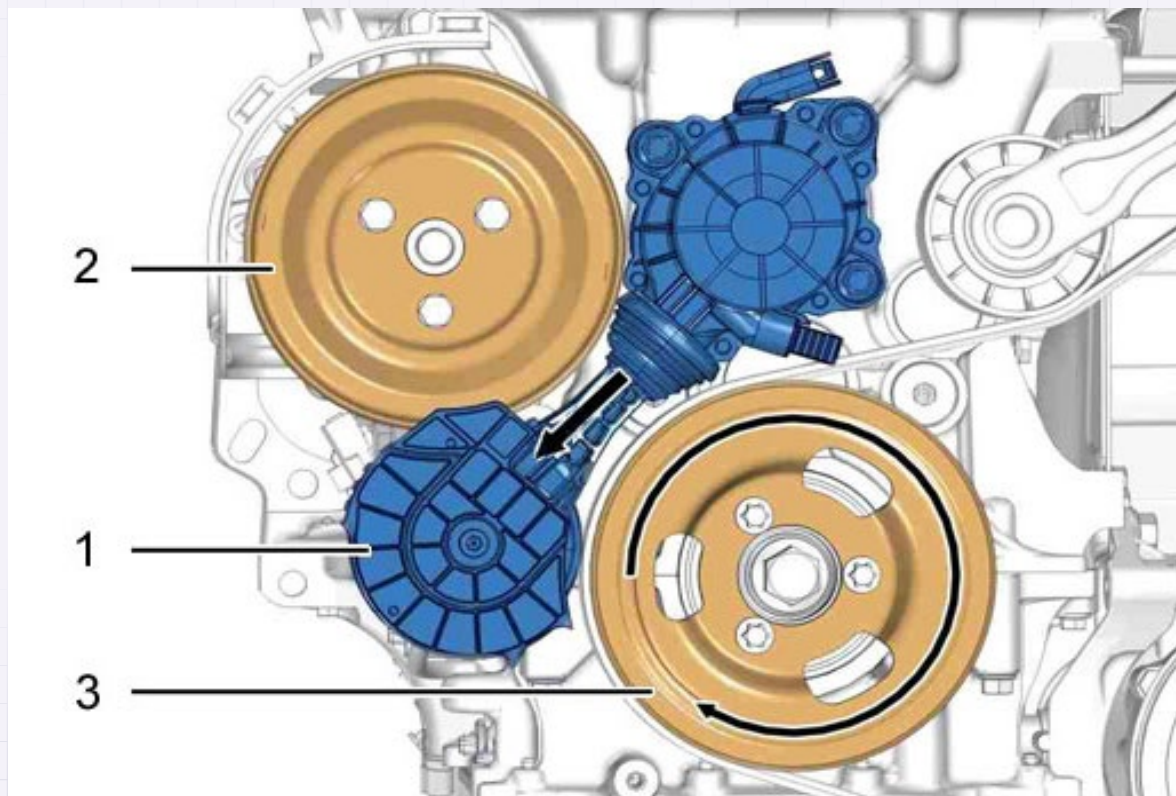
## Aquecedor dos Vapores de Óleo (Blow By)



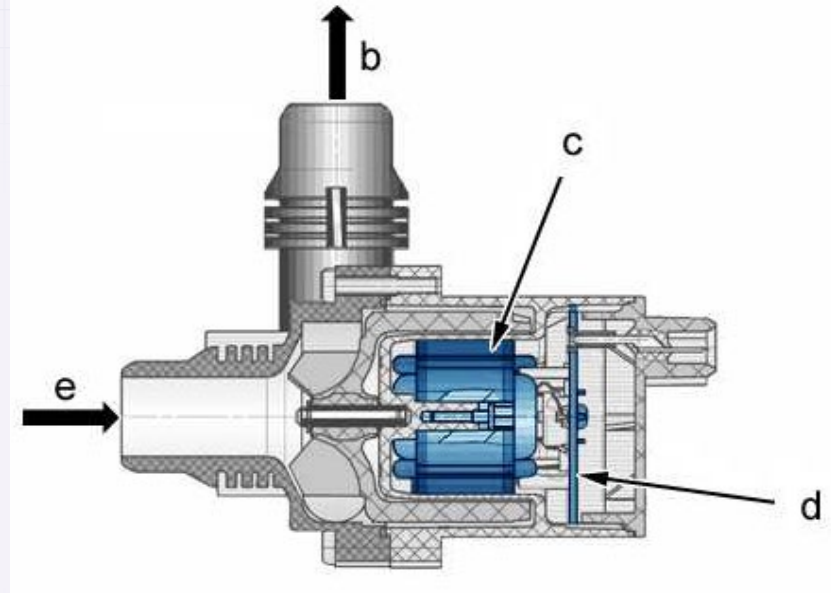
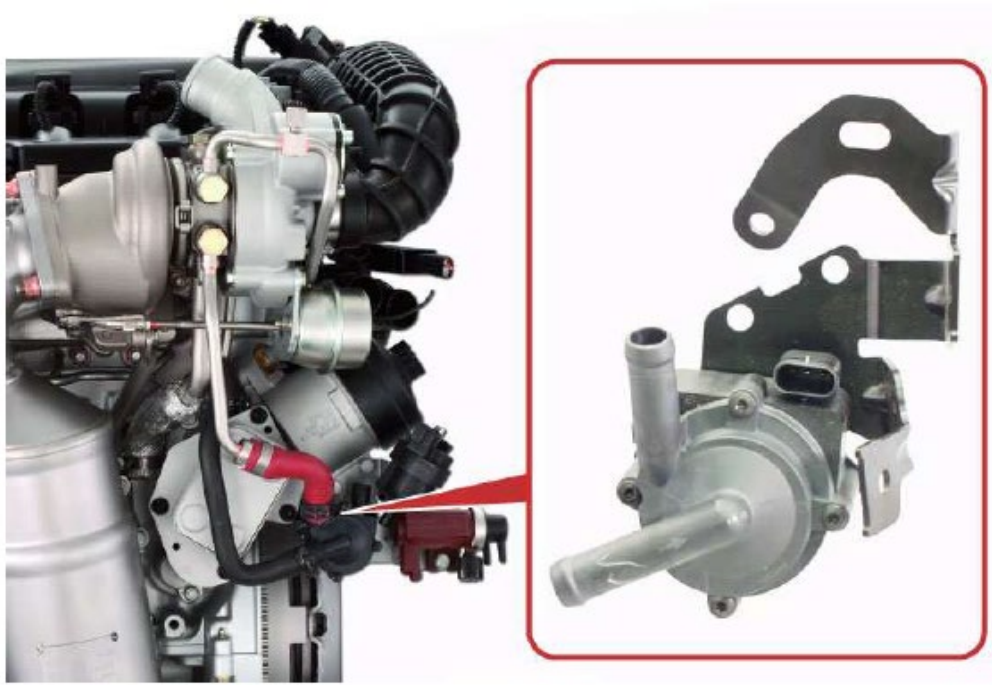
# Acionador da Bomba de Água



# Funcionamento



# Bomba de Agua Elétrica



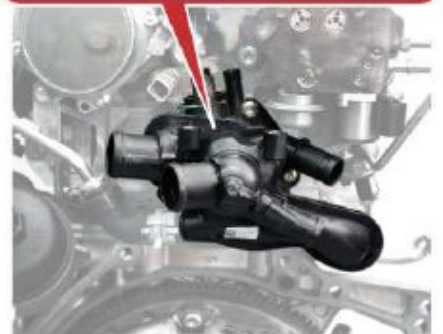
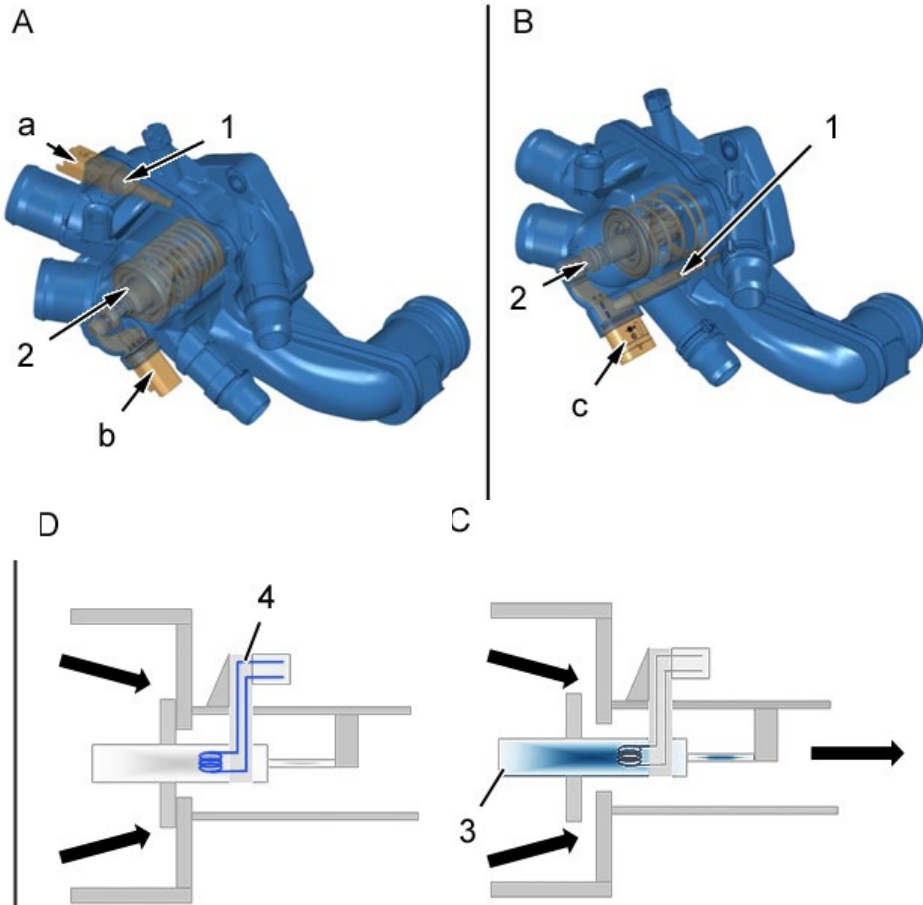
"b" Saída de água.

"c" Motor elétrico.

"d" Circuito elétrico.

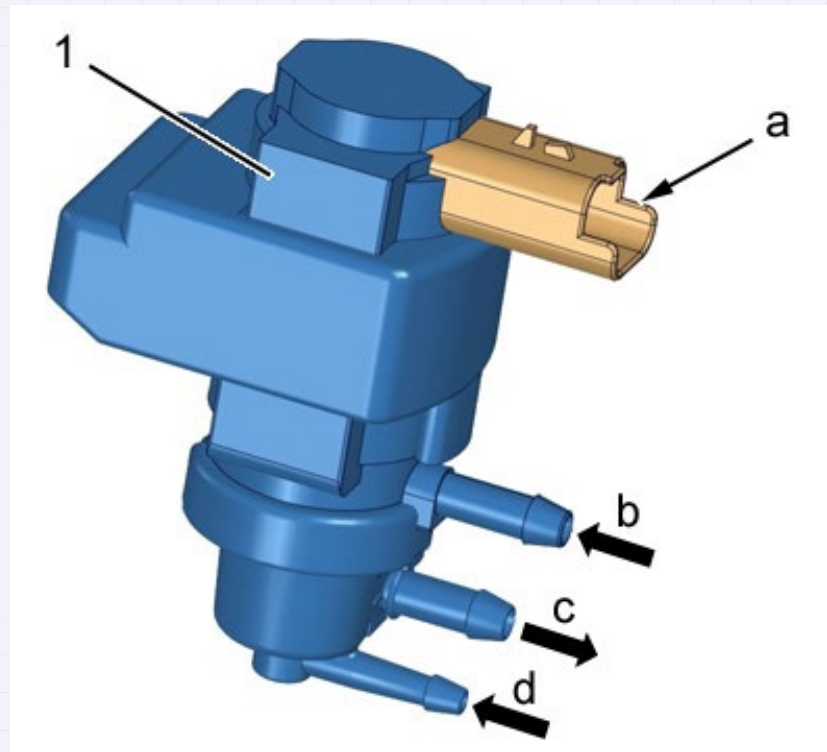
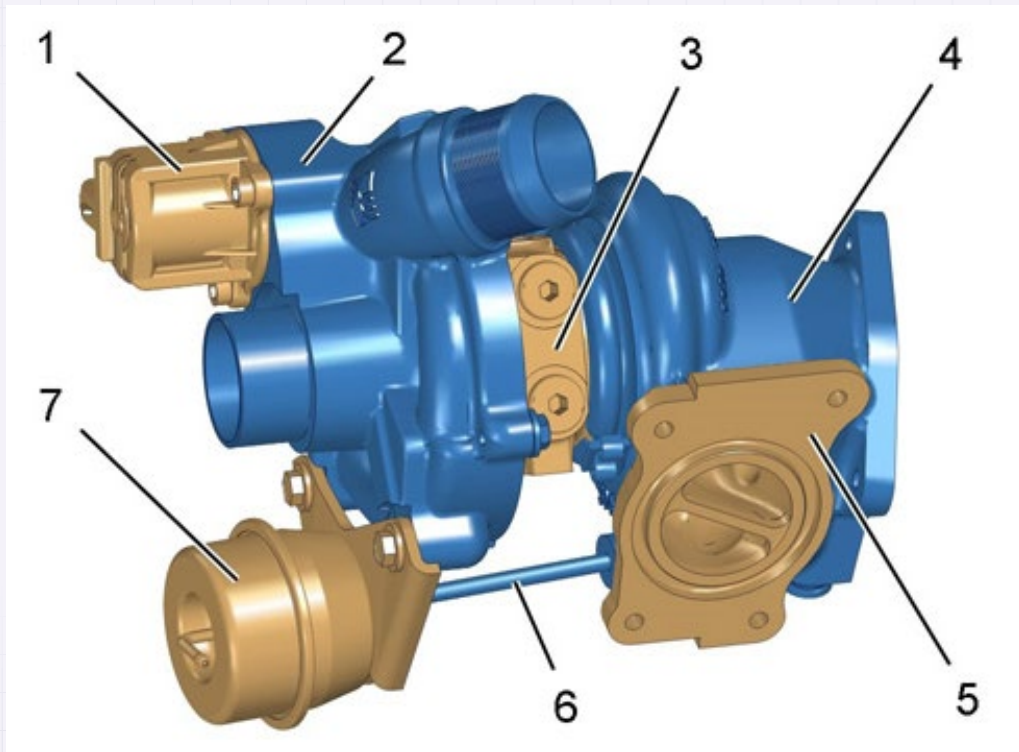
"e" Entrada de água.

# Termostato Pilotado



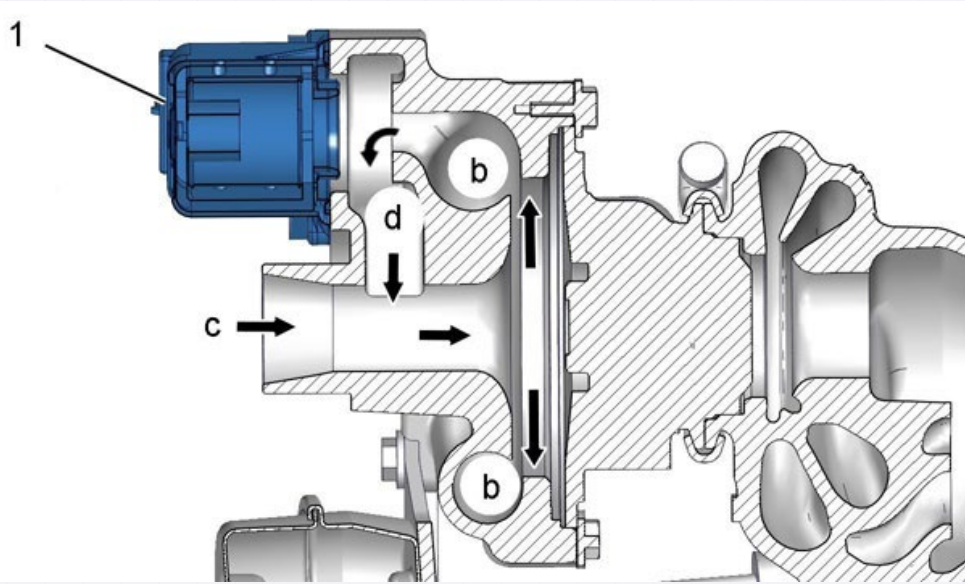


# Turbo Compressor



Válvula reguladora de Pressão

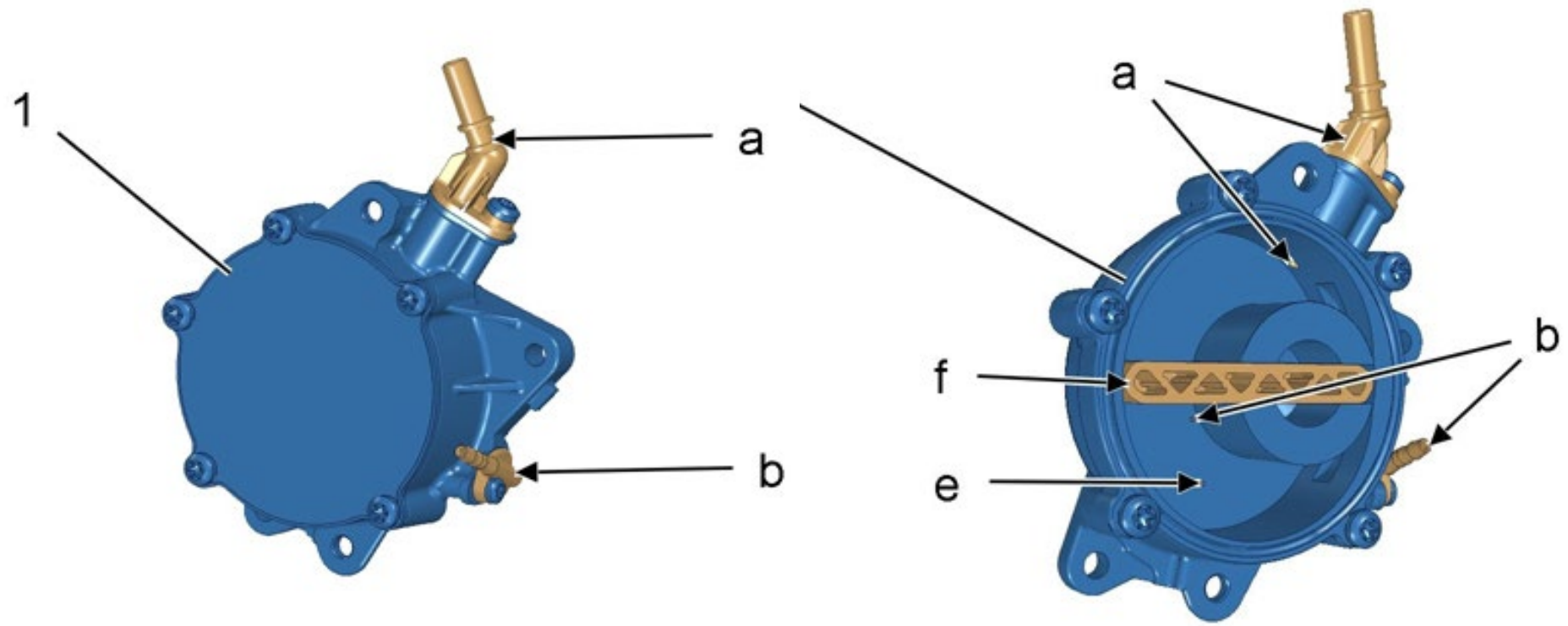
# Válvula de Alívio



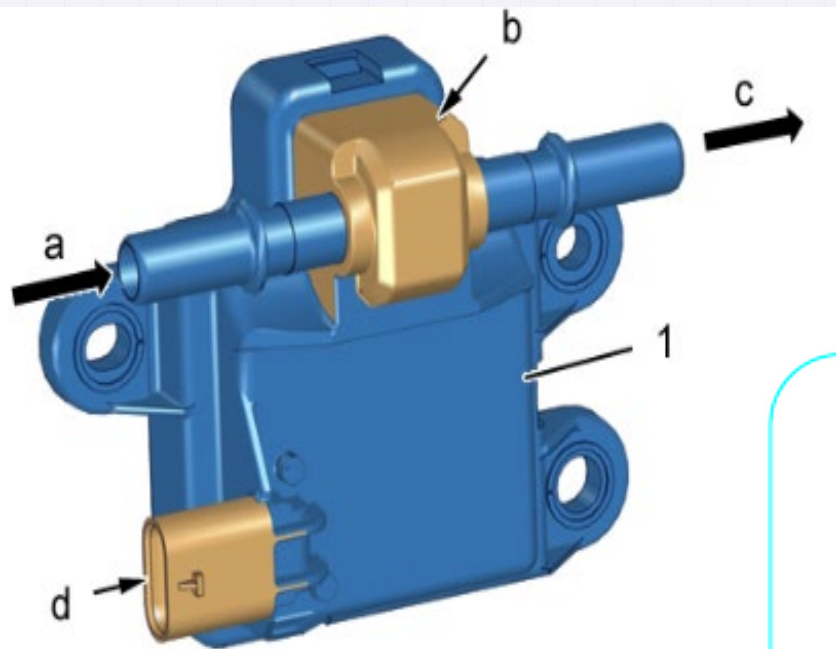
Válvula de Alívio de Pressão (Dump Valve)



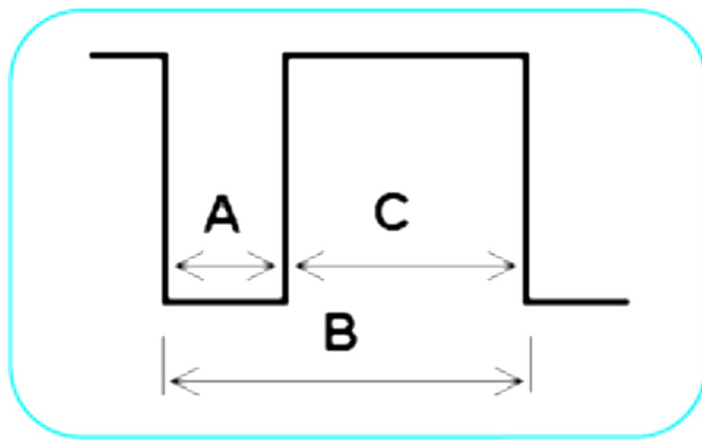
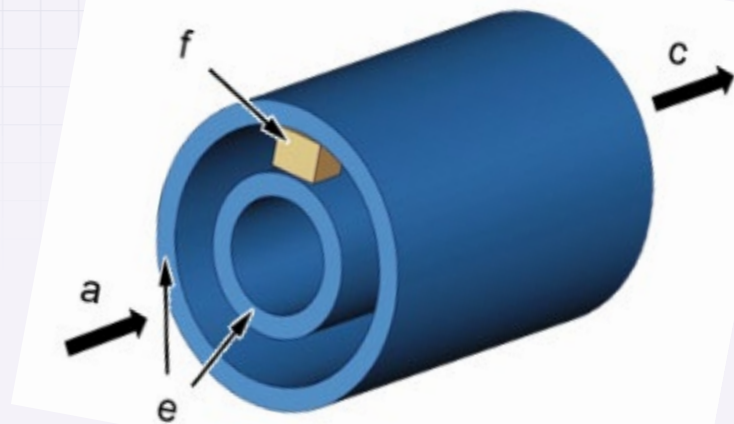
# Bomba de Vácuo



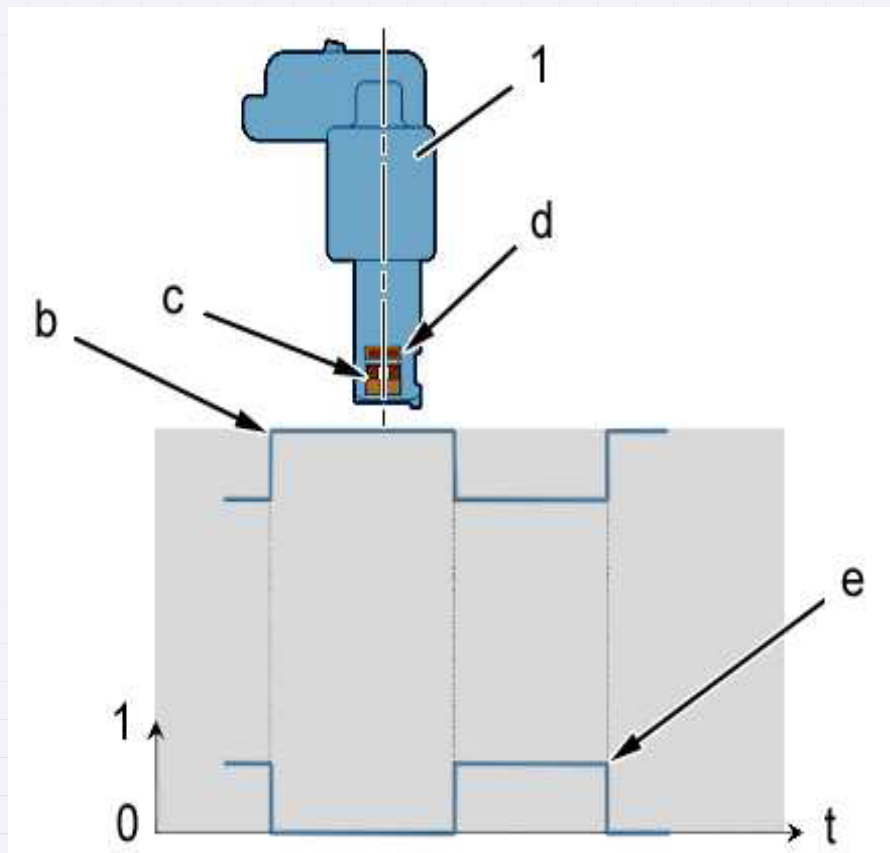
# Sensor de Taxa de Etanol



**A** TIME ON DO CICLO (TEMPERATURA)  
**B** PERIODO TOTAL DO CICLO  
**C** TIME OFF DO CICLO



# SENSOR DE FASE





02



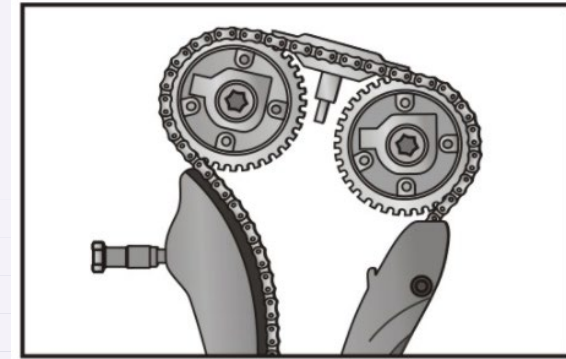
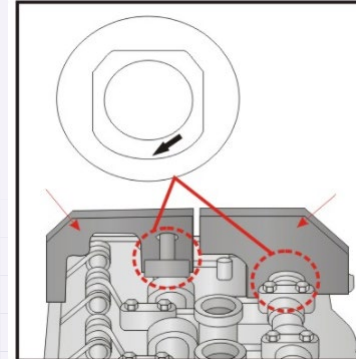
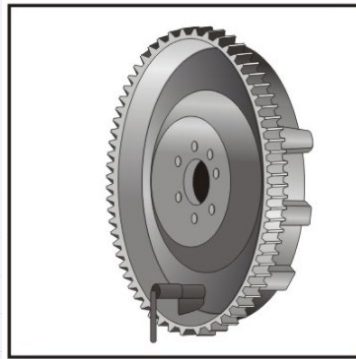
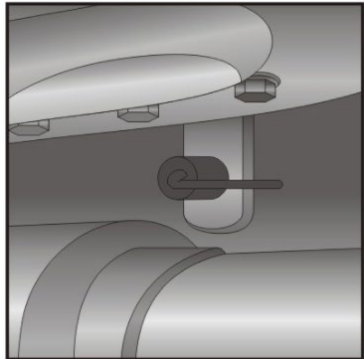
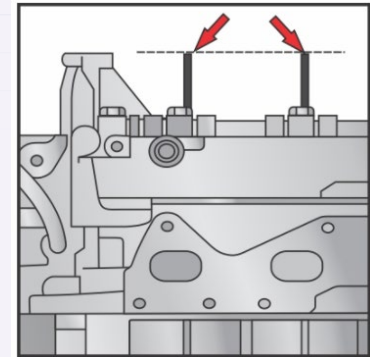
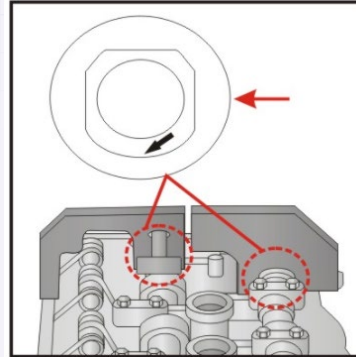
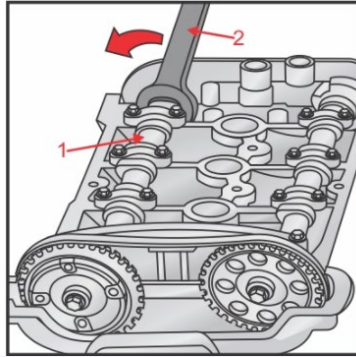
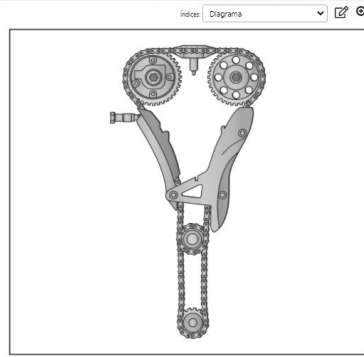
## UTILIZAÇÃO DO OSCILOSCÓPIO NOS MOTORES THP

**SIMPLO**

TREINAMENTO

**MESTRE**  **AUTOMOTIVO** 

# VERIFICAÇÃO DO SINCRONISMO SEM OSCILOSCÓPIO



# MANUAL OSCI FACILITANDO A VIDA DO REPARADOR

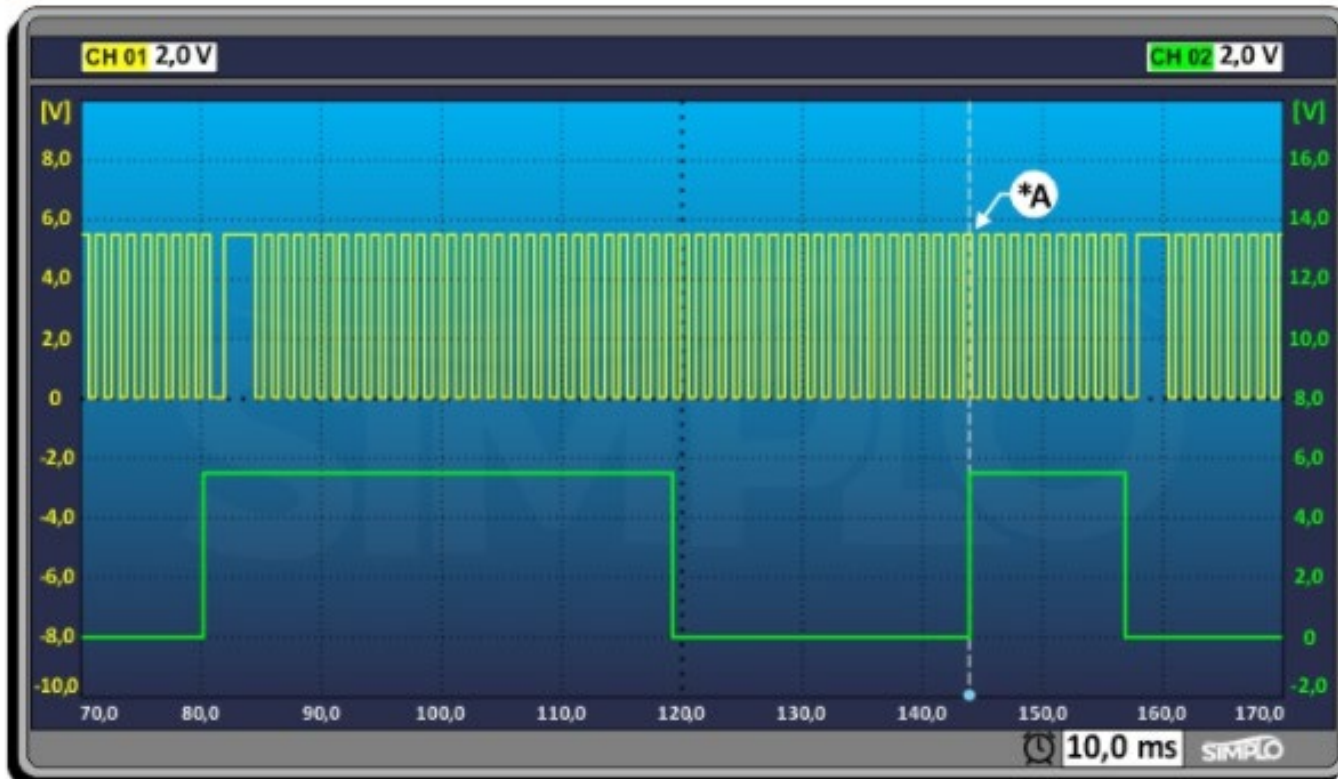
The screenshot displays the OSCI manual interface with three main navigation tabs: **Montadoras** (Manufacturers), **Modelos** (Models), and **Índice** (Index). A sidebar menu on the left lists various vehicle systems, with **OSCI** highlighted in red. The **Montadoras** tab shows a list of manufacturers including FIAT, FORD, HONDA, HYUNDAI, IVECO, JEEP, KIA, LAND ROVER, MAZDA, MERCEDES-BENZ, MITSUBISHI, NISSAN, PEUGEOT, RENAULT, SUZUKI, and TOYOTA. The **Modelos** tab shows a search for the year 2008, with results for 2008 1.6 16V THP Flex 173cv, 2008 1.6 16V VTI Flex 122cv, 2007 1.4 8v Flex 82cv, and 2007 1.6 16V Flex 113cv. The **Índice** tab shows search results for "Conectores do ECM do Motor", "Sincronismo do Motor - Ondas de Funcionamento dos Sensores CKP e CMP", and "Sincronismo do Motor - Ondas de Funcionamento do Sensor de CKP e Pressão no Cilindro".

Montadoras	Modelos	Índice
FIAT	2008	Conectores do ECM do Motor
FORD	2008 1.6 16V THP Flex 173cv de 2015 a 2019 - MED 17.4.4 - EP6FDTM	Sincronismo do Motor - Ondas de Funcionamento dos Sensores CKP e CMP
HONDA	2008 1.6 16V VTI Flex 122cv de 2015 a 2019 - ME 7.4.9R - EC5	Sincronismo do Motor - Ondas de Funcionamento do Sensor de CKP e Pressão no Cilindro
HYUNDAI	2007 1.4 8v Flex 82cv Multiplexado de 2008 a 2015 - ME 7.4.9 - TU3JP MERC - KFWFF	
IVECO	2007 1.6 16V Flex 113cv de 2008 a 2013 - ME 7.4.9 - TU5JP4K - N6A	
JEEP		
KIA		
LAND ROVER		
MAZDA		
MERCEDES-BENZ		
MITSUBISHI		
NISSAN		
PEUGEOT		
RENAULT		
SUZUKI		
TOYOTA		



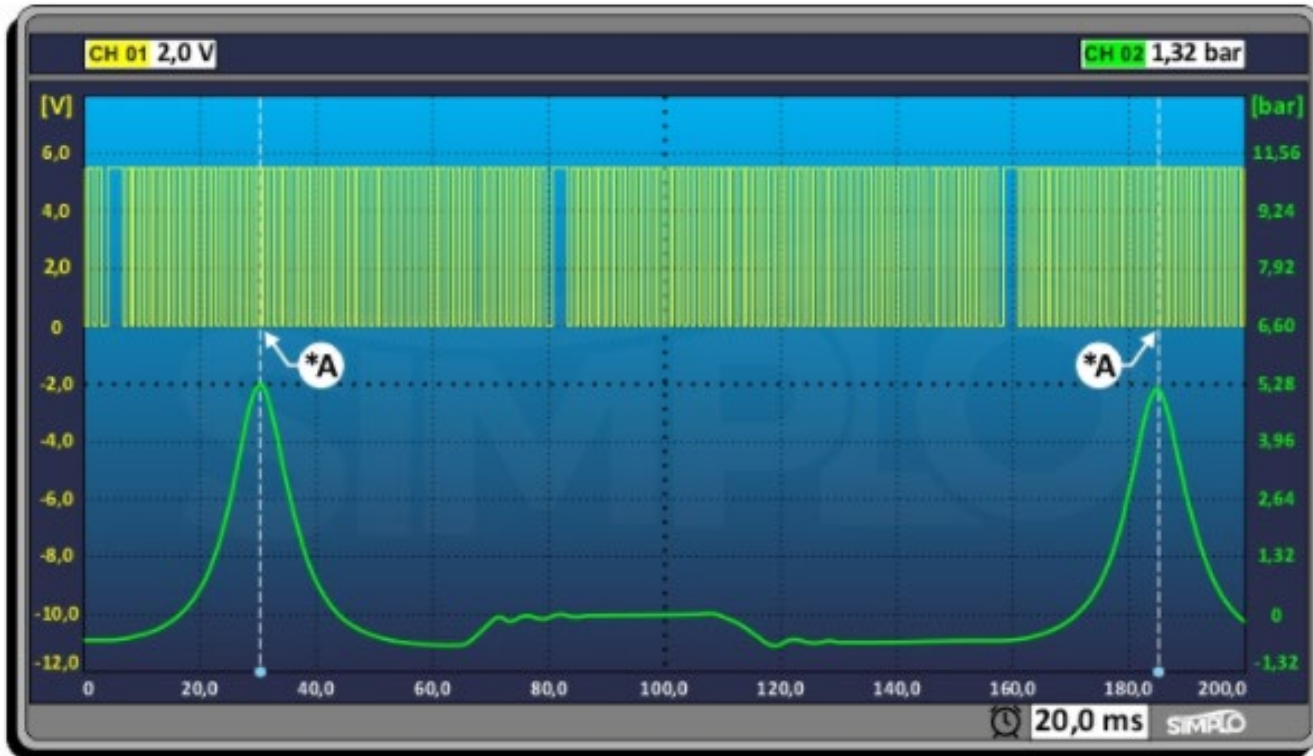
# SINCRONISMO VIRTUAL (CKP E CMP)

Sincronismo do Motor - Ondas de Funcionamento dos Sensores CKP e CMP

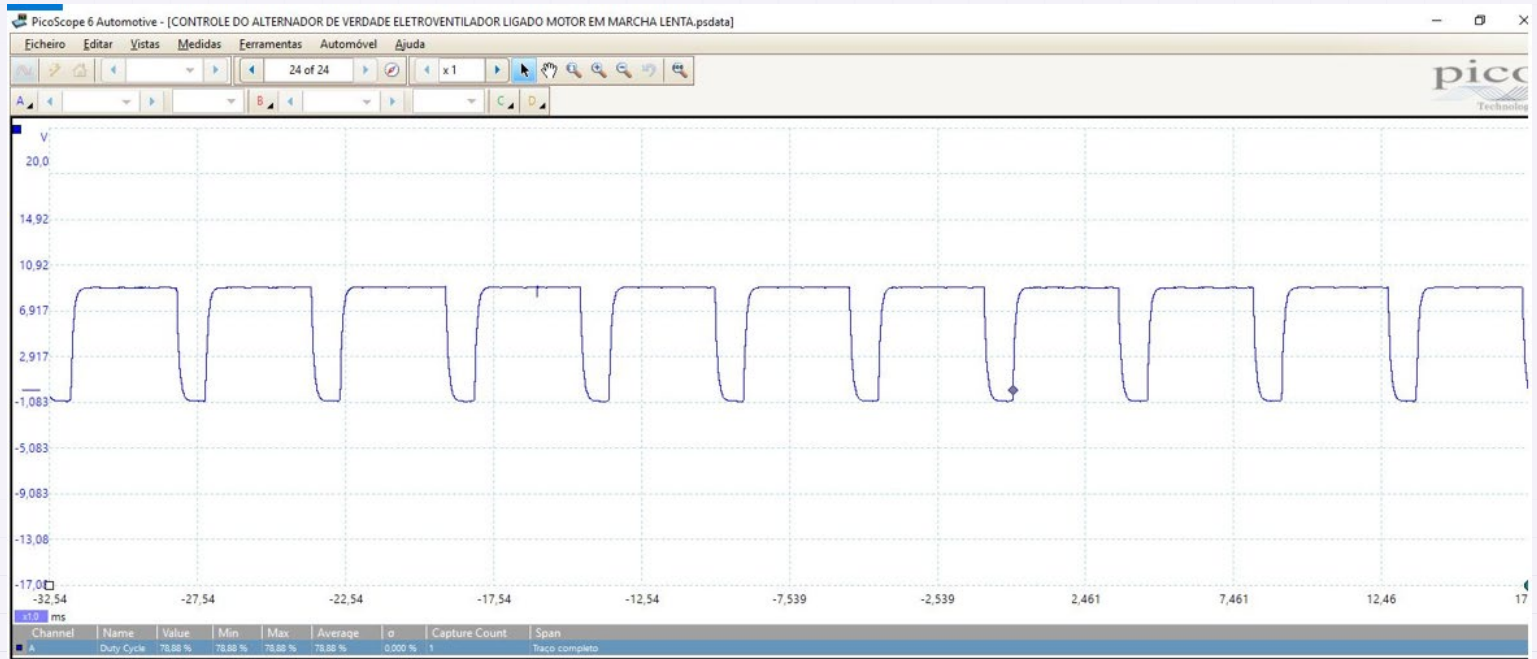


# SINCRONISMO REAL (CKP E PRESSÃO DO CILINDRO)

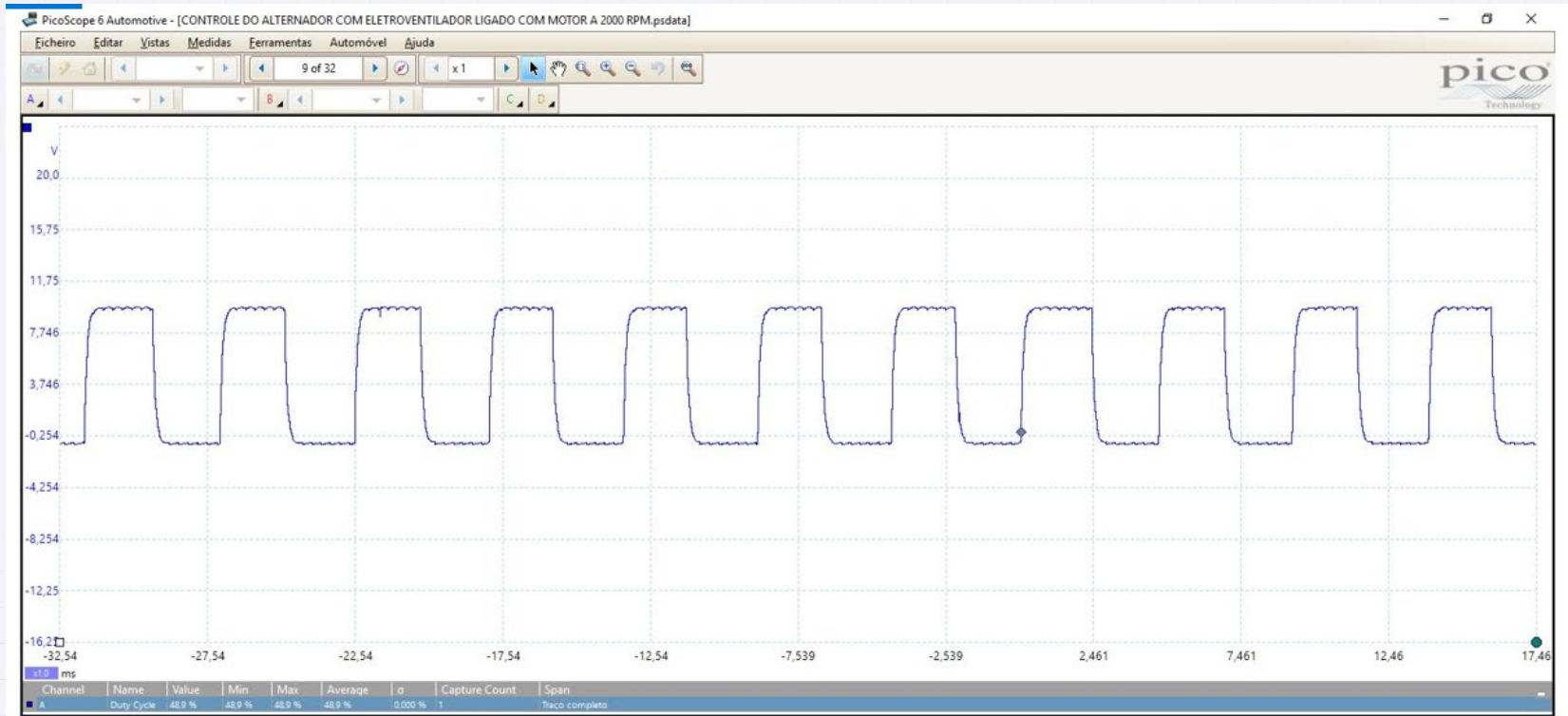
Sincronismo do Motor - Ondas de Funcionamento do Sensor de CKP e Pressão no Cilindro



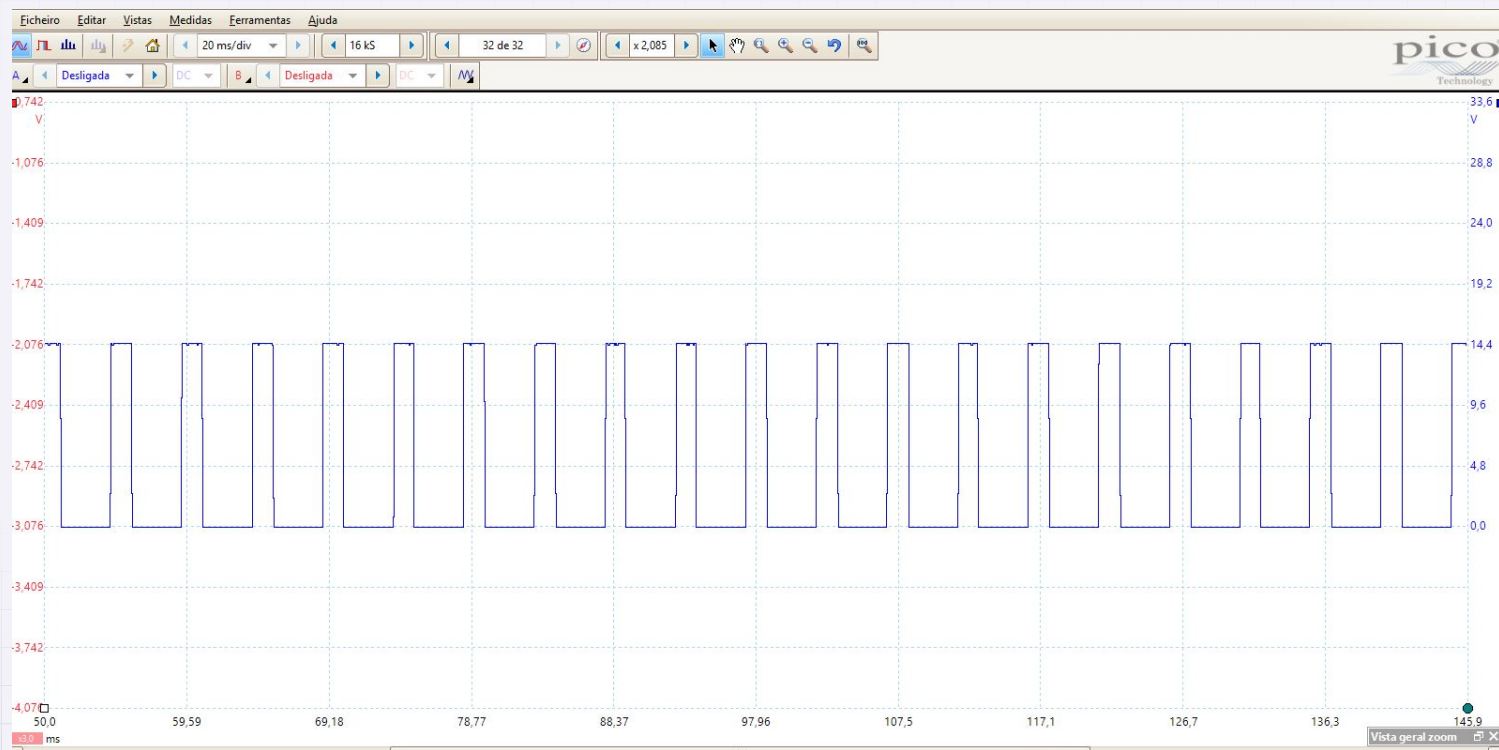
# CONTROLE DO ALTERNADOR (MOTOR EM MARCHA LENTA)



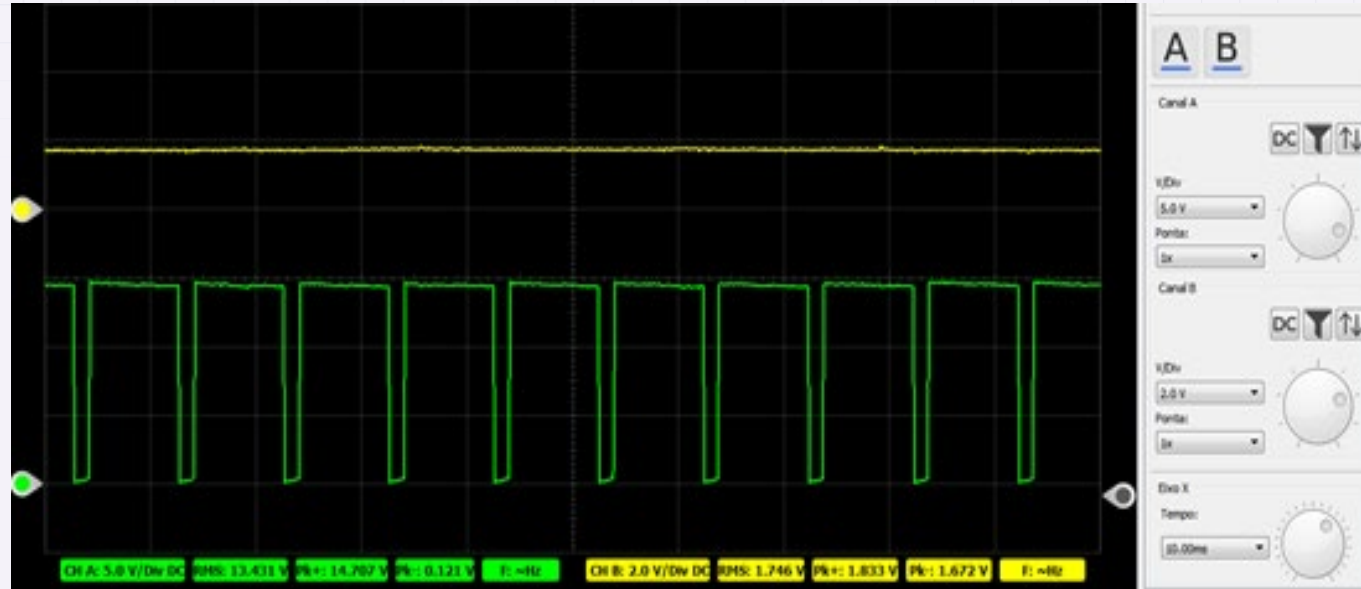
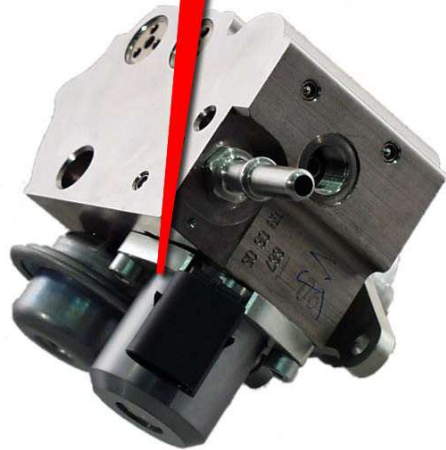
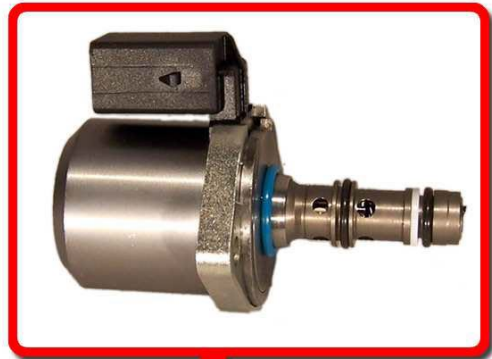
# CONTROLE DO ALTERNADOR (MOTOR A 2000 RPM)



# CONTROLE DA VÁLVULA TERMOSTÁTICA ELETRÔNICA (ETANOL)



# Válvula Reguladora de Pressão



Sensor de Pressão do Rail X Válvula Reguladora

T R E I N A M E N T O

M E S T R E



A U T O M O T I V O



Agradecemos sua participação!

**SIMPLO**