

# Replacing timing belt

ENGINE

5 AUTOMOTIVE SPECIAL TOOLS

ENGINE

## ●FREE POSITIONING WRENCH



## ●HANDY BAR



## ●FLAT TYPE EXTRA-LONG OPEN END WRENCH



Removing belts

1

## CRANK PULLEY HOLDER

No. AE701	▼kg 3.9	📦 1
Crank pulley holder (body)		1
Pin		2
Set bolt for the pin (hex hole attached)	M8 Length 25: 2	
Set bolt (hex hole attached)	M6 Length: 35·40·50·60·70·80·90: 2 of each M8 Length: 40·45·60·75·85·100: 2 of each	
Washers	M6: 2 M8: 4	

### A new crank pulley holding tool that can deal with various shapes

#### Usage

- Mainly for crank pulley removal operations (timing belt replacement, oil seal replacement, engine O/H operations) in automobiles (FR vehicles) with vertically placed engines. Can be used together with a crank pulley double-strength wrench to loosen the crank pulley lock bolt.

\* The crank pulley puller manual type (AE702), or the hydraulic type (CPU13) is essential when removing the crank pulley.

#### Application

- Mainly used in vehicles with vertically placed engines. Especially in Toyota JZ type/1G type, Nissan RB type/VG type/VQ type. (Excluding diesel types)
- Exclusive to the V-ribbed belt • Pulley outer diameter: φ90~180
- Where a service tap is included: fits with M6, M8

#### Characteristics

#### Easy to attach

- Simply attach the rotation claw onto the groove of the crank pulley and use the grip to tighten. (The center sliding position can be lined up when fitting the crank pulley.)

#### Thin Design! (Thickness 45mm)

- It is not necessary to remove the radiator condenser when carrying out work. (Excluding some vehicles)

#### Replacement parts

Product name	No.	Contents	📦
Pin set	AE701-1	Pins: 2 M8 set bolts for pins (hex hole included): length 25: 2 bolts Washer M8: 2	1
Set bolt set	-2	Set bolt (hex hole included) M6: Length: 35·40·50·60·70·80·90: 2 M8: Length: 40·45·60·75·85·100: 2 Washer M6: 2 M8: 2	1

## CRANK PULLEY HOLD PLATE

No. CPH1	▼kg 2	📦 1
Crank Pulley Hold Plate		1
Set Bolt	M6: Length: 30·40·50·60·70·80·90: 2 M8: Length: 40·45·60·75·85·100: 2	
Washer	M6: 2, M8: 2	
ADAPTER	M10: 2	

#### Purpose

- Use to hold and take out pulley: plate as fixed with service tap of crank pulley; spinner handle (1/2"sq.) is set in.
- Applicable to crank pulley with service tap.
- Prevents pulley from rotating together and enables fastening/loosening of center lock bolt.
- Usable with AE-10.

\* For removing a crank pulley, AE702 OR CPU 13 is required.

Spare parts (set bolts and washers) are No. CPH128 (Crank Pulley Hold Plate Spare Set). For the details, refer to page 213 (Crank Pulley Tool No. CPHU2).

## CRANK PULLEY LOCK BOLT WRENCH

No.	Handle Opening	Square Drive	L	W	H	▼kg	📦
AE-10	125~1,160	12.7	862	70	60	4.3	1
• Accessories							
Square Drive	S37mm	L80mm	Each 1 pcs.				
Set Bolt	M8x1.25(Length30mm)		2 pcs.				

#### Supply Square Drive Short Long

No.	L
AE-10-1	37(Short)
AE-10-2	80(Long)

#### Purpose

- Removing Crank Pulley Lock Bolt for changing Timing Belt, Crank Short, Oil Seal, etc.)

#### Application

- Crank Pulley installed car with service tap except diesel engine over 3,000cc, Toyota3F, 1FZ Type Engine, Nissan VH Type. Engine, RB26DETT Type Engine.
- Can be used on vehicles with crank pulleys that do not have service taps when used with the AE701.

#### Special Feature

- Newly developed multiplying mechanism (Double Reverse) enables to loosen lock bolts without using impact wrenches.
- Can be used without removing radiators and condensers for shorter work time.

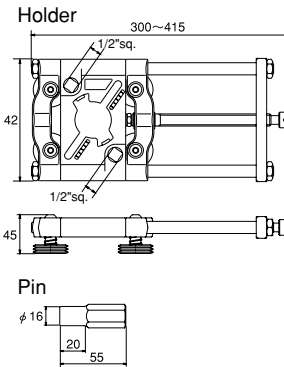
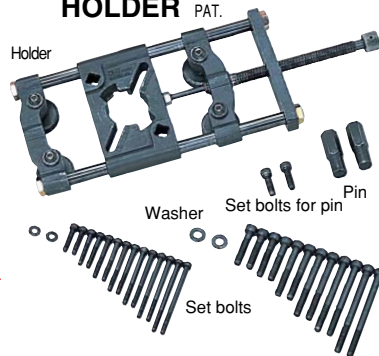
\* CPH1 or AE701 is necessary for this operation.

\* Cannot be used with AE11.

\* Replacement parts are available. Check with your dealer for details.

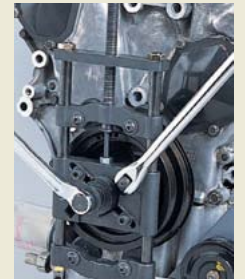
**CAUTION** • THIS TOOL IS EXCLUSIVELY FOR LOOSENING BOLTS.

## ●CRANK PULLEY HOLDER

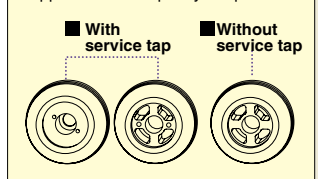


Removing crank pulley

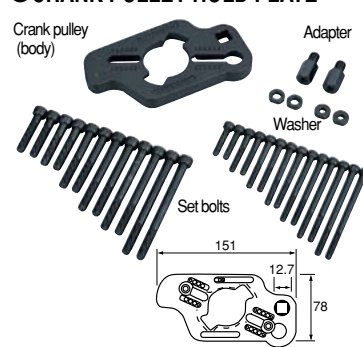
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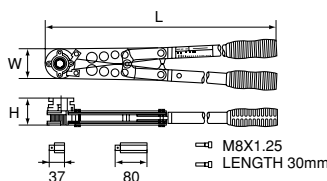
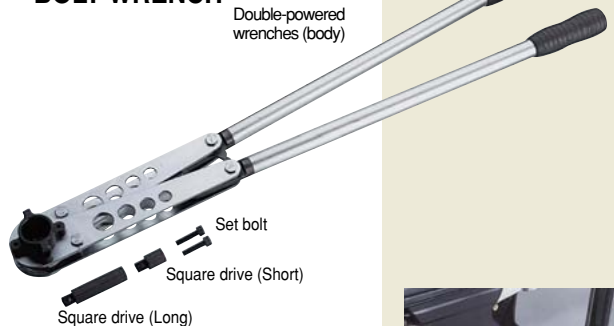
#### ●Applicable crank pulley shape



## ●CRANK PULLEY HOLD PLATE



## ●CRANK PULLEY LOCK BOLT WRENCH



\*Please check the merchandise inventory for a product that is marked by before placing an order.

## 2 Removing the crank pulley lock bolt



Use situation (AE703)



Use situation (AE703A)

### ● CRANK PULLEY HOLD WRENCH FOR HONDA



(AE703)

\* 24mm wrench or 1/2"sq spinner handle is necessary for this operation.



(AE703A)

\* 1/2"sq spinner handle is necessary for this operation.

### CRANK PULLEY HOLD WRENCH

No.	▼g	📦
AE703	450	1
AE703A	400	1

#### Usage

- Crank pulley turn prevention tool for Hondas

\* Crank pulley removal is not possible.

Use the AE701( or the CPH1) and the AE702 (or the CPU13) or carry out crank pulley removal.

#### Application

AE703

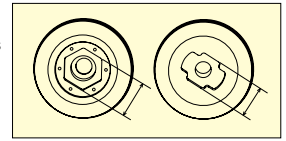
- The crank pulley shown in the right hand diagram is a 50mm 2-faced flat type used in Honda cars.

\* Cannot be used on some NSX models.

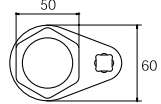
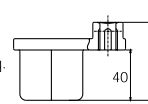
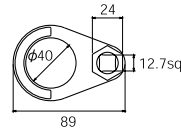
AE703A

- For Honda Life since 2003 (modelJB5-JB8)

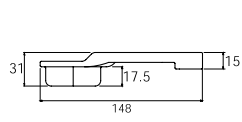
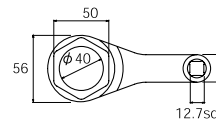
\* Cannot be used on some of the old model of Honda Lifes (working space: less than 30mm)



AE703



AE703A



## 3 Crank pulley removal

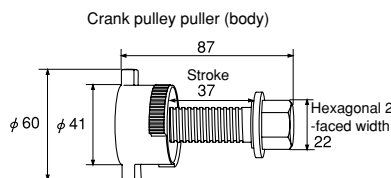


Example of AE701 + AE702 Use



Example of CPH1 + AE702 Use

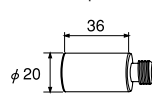
### ● CRANK PULLEY PULLER (MANUAL TYPE)



Adapter A



Adapter B



### CRANK PULLEY PULLER

No. AE702	▼g 500	📦 1
Crank pulley puller (body)		1
Adapter A		1
Adapter B		1

#### Manual type crank pulley removal tool

##### Usage

- Crank pulley removal.

\* The crank pulley holder (AE701) or the crank pulley hold plate (CPH1) is essential when removing the crank pulley.

\* The clawed crank pulley puller (AE11) cannot be used in a combination.

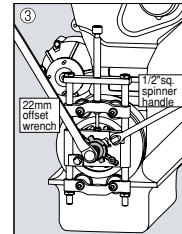
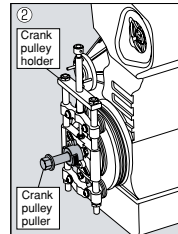
##### Characteristics

- Ideal for work in tight places due to its light weight and compactness.
- Stroke adjustment is possible due to 2 types of adapters.

##### Operating example

When a crank pulley holder (AE701) is utilized

- ① Set the crank pulley holder (AE701 or CPH1) to the crank pulley and remove the lock bolt.



- ② Select the adapter A/B combination and then fit it to the crank pulley holder.

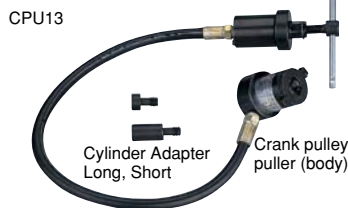
Select the adapter A/B combination according to the required crank pulley removal stroke.

- ③ Use the spinner handle to lock. Using a 22mm offset wrench or a drive tool turn the screw of the crank pulley puller and remove the crank pulley.

#### Replacement parts

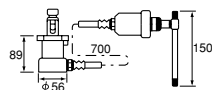
Product name	No.	Contents	📦
Adapter A	AE702-1	Adapter A 1	1
Adapter B	-2	Adapter B 1	1

### ● CRANK PULLEY PULLER (HYDRAULIC TYPE)



CPU13

Cylinder Adapter Long, Short  
Crank pulley puller (body)



### CRANK PULLEY PULLER

No. CPU13	▼kg 1.7	📦 1
Crank Pulley Puller	1 pcs.	
Cylinder Adapter	2 pcs.	

#### Purpose

- Pulling out crank pulley.

#### Features

- Strong power by hydraulic pressure.
- The remote control facilitates use of the tools in the limited space of engine room.

\* For removing the crank pulley AE901 AE11 and CPH1 are required.

\* Replacement parts are available. Check with your dealer for details.

#### Service Parts CRANK PULLEY PULLER SPARE SET

No. CPU12	
Cylinder Adapter Long, Short	Each 1 pcs.



Example of CPH1 + CPU13 Use



An example of AE702 + CPU13

**CRANK PULLEY TOOL SET A**

No. ATE7A	▼kg 6.8	📦 1
<b>AE701</b> Crank pulley holder (body)		1
Pin		2
Set bolt for the pin (hex hole included)	M8: Length 25: 2	
Set bolt (hex hole included)	M6: Length: 35-40-50-60-70-80-90: 2 each M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 4	
<b>AE702</b> Crank pulley puller (body)		1
Adapter A		1
Adapter B		1
Metal case (390x245x75)		

The application is of a broad variety with a low price on the standard type.

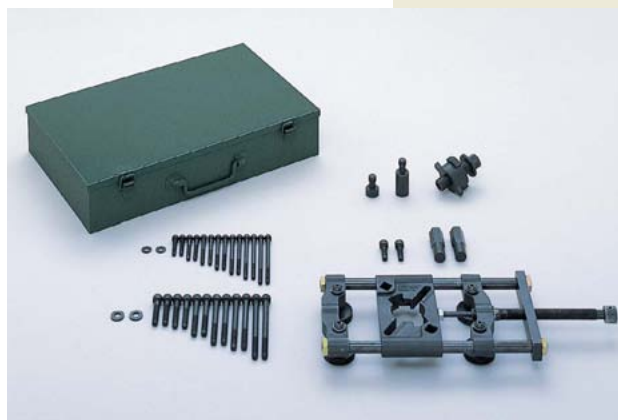
**Usage**

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, manual type

**Application**

- Sets which are available with the either service taps included/excluded.

**●CRANK PULLEY TOOL SET A**



**CRANK PULLEY TOOL SET B**

No. ATE7B	▼kg 8	📦 1
<b>AE701</b> Crank pulley holder (body)		1
Pin		2
Set bolt for the pin (hex hole included)	M8: Length 25: 2	
Set bolt (hex hole included)	M6: Length: 35-40-50-60-70-80-90: 2 each M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 4	
<b>CPU13</b> Crank pulley puller (body)		1
Adapter A		1
Adapter B		1
Metal case (390x245x75)		

A wide variety of easy, correct removal techniques is possible due to hydraulics.

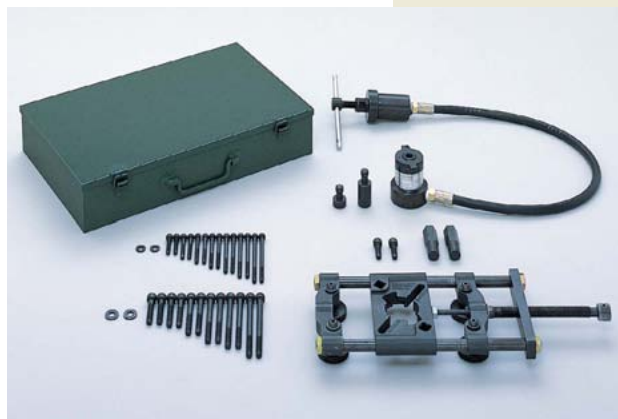
**Usage**

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, hydraulic type

**Application**

- Sets which are available with the either service taps included/excluded.

**●CRANK PULLEY TOOL SET B**



**CRANK PULLEY TOOL SET C**

No. ATE7C	▼kg 1.9	📦 1
<b>CPH1</b> Crank pulley hold plate (body)		1
Set bolt (hex hole included)	M6: Length: 30-40-50-60-70-80-90: 2 each M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 2	
Adapter	M10: 2	
<b>AE702</b> Crank pulley puller (body)		1
Adapter A		1
Adapter B		1

\* Metal case is not included.

Reasonable type at a low price.

**Usage**

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, manual type

**Application**

- Sets applicable for pulleys with fitted service taps.

**●CRANK PULLEY TOOL SET C**



**CRANK PULLEY TOOL**

No. CPHU2	▼kg 6	📦 1
<b>CPU13</b> Crank pulley puller (body)		1
Output cylinder adapter		2
<b>CPH1</b> Crank pulley hold plate (body)		1
Set bolt (hex hole included)	M6: 14 M8: 12	
Washers	M6: 2 M8: 2	
Adapter	M10: 2	
Metal case		

**Usage**

- Crank pulley removal with the service tap fitted

**Characteristics**

- Work time is reduced, as the radiator, condenser does not need to be removed. (Some vehicles may not be included.)
- When outside of the garage, it is not necessary to turn drive tools in the narrow confines of an engine compartment making the job easier.
- Other companies do not stock the outer parts of crank pulleys. However, as the CPHU2 uses service taps, and as the torsion damper rubber does not break down, it can be used freely.
- Torque can be controlled when tightening.

**Application**

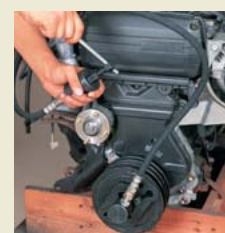
- Service taps are fitted to crank pulleys of vehicles ranging from light weight to normal passenger type and small trucks. (Excluding diesel vehicles that exceed 3000cc)

**●CRANK PULLEY TOOL**



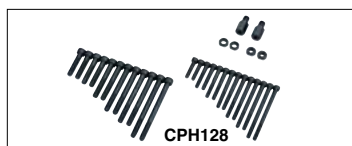
●Removing and fitting crank pulley lock nut

●Crank pulley removal



**Replacement parts: Crank pulley holder spare set**

No. CPH128	
Set bolt (hex hole included)	M6: Length: 30-40-50-60-70-80-90: 2 each M8: Length: 40-45-60-75-85-100: 2 each
Washers	M6: 2 M8: 2
Adapter	M10: 2



\*Please check the merchandise inventory for a product that is marked by before placing an order.

4 Cam pulley lock

5 Timing belt replacement

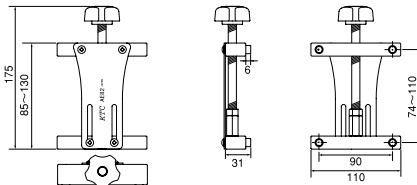
6 Fitting the crank pulley, tightening the lock bolt

7 Checking Torque

●CAM PULLEY LOCK TOOL



Usage



• Make sure that all operators read the Owner's Operator Manual carefully before usage.

CAM PULLEY LOCK TOOL

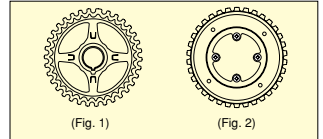
No.	▼g
AE82	860

The cam pulley ensures excellent locking. It supports smooth timing belt removal.

**Usage** • This is a tool that helps hold the 2-cam pulley's position, and helps prevent slippage when removing the timing belt in DOHC gasoline engines.

**Application** • Ranges from domestic light weight to normal passenger type vehicles with DOHC gasoline engines (FF, FR vehicles).

- As the insides of cam pulleys in some Honda and Mitsubishi vehicles are uneven, the pulley can move when tools that are in a fixed position are forced from the outside. (Fig. 1)
- It may not be possible to use this tool on some vehicles with adjustable valve timing as the shape can differ. (Fig. 2)



**Characteristics**

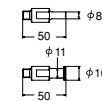
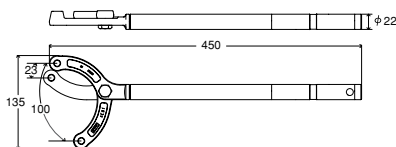
- It is possible to fix the cam pulley in a set position during timing belt replacement before removing the timing belt and up to the end of the operation.
- Install by the use of the knob only.
- Operating space is saved when installing/removing the timing belt as the center bolt is in an offset position.
- Is possible to be used in vehicles where there are obstacles between the 2 cam pulleys.

ENGINE

Disassembling, Inspecting and Installing Engine

1 Checking Torque

●CAM PULLEY HOLD WRENCH



Pin: 2-faced width: 14mm  
Pin: Screw diameter: M8

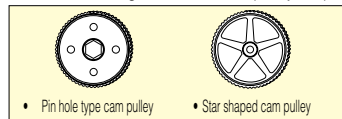
CAM PULLEY HOLD WRENCH

No.	AE81	▼kg	1.1	☞1
Cam pulley hold wrench (body)	1			
Straight pin	2			
Flange fitted pin	2			

**Usage**

- Exclusive cam pulley stopper tool

**Application** Diagram below: Cam pulley shape



**Characteristics**

- The arm is opened/closed by a spring mechanism; this keeps constant tension on the opening action of the tool increasing safety.
- There are 2 types of stopping pins, both of them fit the 2 types of cam pulleys mentioned above.
- The grip part is knurled, is easy to grasp and power is easy to apply.

**Replacement parts**

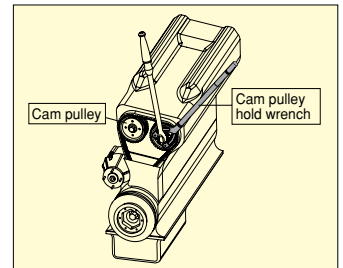
Product name	No.	Contents	☞
Straight pin	AE81-5	Straight pin: 2	1
Flanged pin	-6	Flanged pin: 2	1



• Make sure that all operators read the Owner's Operator Manual carefully before usage.

**Method of use**

- Select the correct pin (straight/flange fitted) depending on the shape of the cam pulley and then attach it to the arm.
- Adjust the cam pulley so that it touches the pin and does not turn, then using a wrench, loosen (or tighten) the holding bolt.

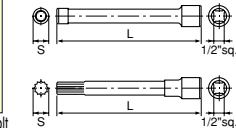
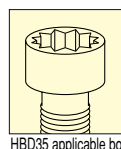
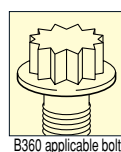
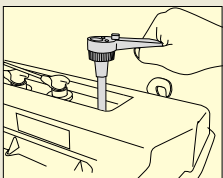


2 Removing Head Cover

●HEXAGONAL WRENCHES

3 Removing Head Bolt

●1/2"sq. CYLINDER HEAD BOLT WRENCH · SET



CYLINDER HEAD BOLT WRENCH-SET

No.	HBD353	▼g	355
HBD35-8, 10			
B360-10			

No.	S	L	▼g	☞
HBD35- 8	8	100	110	5
-10	10	115	115	5
B360 -10	10	130	130	5

**Purpose**

- For fastening/loosening head bolts when removing/installing cylinder heads of engines



• DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.