

AUTOMOTIVE SPECIALTY TOOLS

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Index by work area

KTC develops optimal products that not only save labor and improve efficiency in maintenance work, but also enable safe and comfortable work. We do not only pursue individual performance in tool making. We consider maintenance work as a flow and propose a total system of work.

Engine P.501



Specialized tools required for replacing oil, grease, and belts in engine maintenance. Oil drainer, cup type oil filter wrench, coolant charger, crank pulley tool, etc.

Driveline P.522



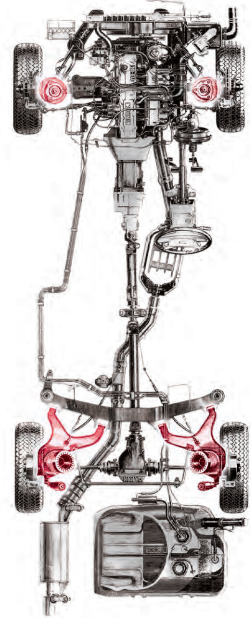
Special tools required for transmission maintenance, etc. Drain plug socket for differential oil change, etc.

Steering P.524



Special tools required mainly for operating device maintenance in the undercarriage. Side slip boards or Multi puller and Tie rod end separators required for hub bearing disassembly, or Target sheets required for aiming, etc.

Suspension P.541



Specialized tools required mainly for accumulator maintenance in the suspension. Strut spring compressors, etc.

Tire and wheel P.544



Specialized tools required for tire maintenance and wheel mounting and dismounting. Tire air gauges, sockets dedicated to various wheel nuts for light to heavy-duty vehicles, torque wrenches dedicated to wheel nuts for regular vehicles, etc.

Braking system P.557



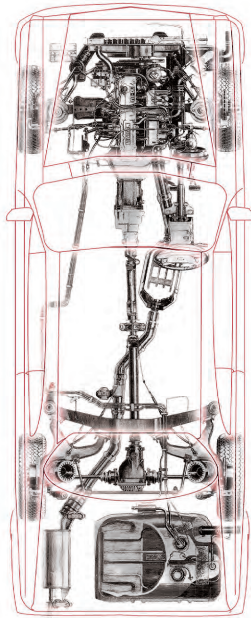
Specialized tools required for servicing disc and drum type brakes. Disc brake piston tools, shoe adjustment tools, and brake bleeders required to bleed brake air.

Electrical P.572



Special tools required for maintenance of plugs and various sensors. Plug wrench, armature bearing puller, headlight adjustment wrench, O₂ sensor socket, etc.

Body P.584



Special tools required for body maintenance. Slide hammers and various attachments. Clip clamp tools, handy removers, free spray stands, etc.

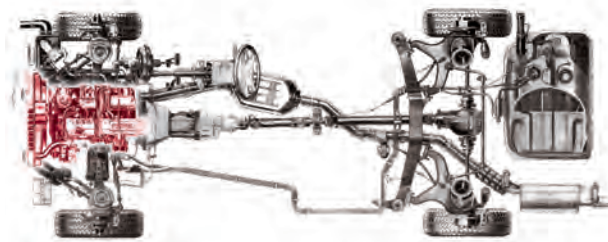
Others P.601

Support tools that are indispensable in automotive maintenance. Chain pliers, service creepers, and covers such as fender covers or seat covers, etc.

• Overhaul can be done only by the qualified person.

ENGINE

- 502 A Engine oil change
- 512 B LLC replacement
- 514 C Serpentine belt replacement
- 516 D Timing belt replacement
- 517 E Engine disassembly,
inspection and assembly
- 520 F Oil pan removal
- 521 G Idle adjustment
- 521 H Exhaust gas purification
system disassembly and
inspection



Major inspection and maintenance of motor include engine oil, filter, and coolant replacement, timing belt and various belt replacements.

A Engine oil change

A1 Undercover detaching

Clip Clamp Pliers
(For removal lock pin type)

P.597



Screwdriver

P.357



T-shaped Wrench

P.349



Socket

P.214



Other Tools

A2 Oil filler cap detaching



How to use.

OPENER OF OIL FILLER CAP

3/8" sq.



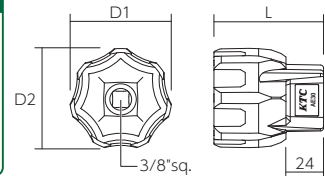
No.	L	D1	D2	Weight(g)	⊠	
AE30	70	63	62	40	1	

- Loosen oil filler caps that are stuck and cannot be turned with bare hands.
- The removed cap can be placed on top of the product. (to prevent loss and forgetting to close the cap)
- Oil filler caps of all manufacturers that use a convex shape. (Not compatible with polygonal caps)
- Lightweight and oil-resistant body made of polypropylene.
- Specially designed to fit the genuine filler caps of Japanese cars, it firmly captures the filler caps without damaging them.
- The body color is a bright color (yellow) that stands out in the engine compartment for improved visibility.

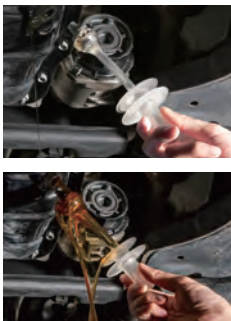
Applicable cap shape

○ TOYOTA ○ NISSAN ✗ Not applicable (e.g.)

Convex shaped caps are compatible with all manufacturers!



A3 Drain plug detaching



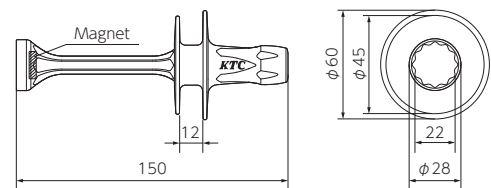
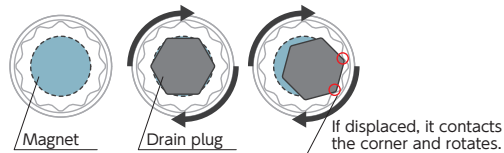
How to use.

DRAIN PLUG CATCHER



No.	Weight(g)	⊠	
AEP-1419	50	1	

- Remove the drain plug.
- Compatible with engine oil drains, differential drains, and mission drains.
- Prevents hand contamination and burns when discharging oil for safe and comfortable operation.
- The magnet and special internal square shape accommodate drain plugs of various sizes and shapes.
- Cleaning and installation can be done with the drain plug attached to the tip.
- Elastomer with excellent oil and heat resistance is used.



Socket

P.214



Box end wrench

P.323

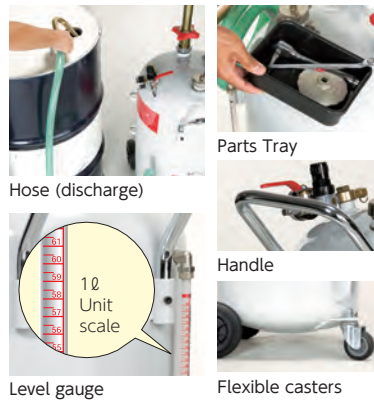


Other Tools

Oil drainer series

KTC's oil drainer makes oil changes easy, clean and efficient.

- Automobile engine oil change operations (removal, transfer, and drainage of waste oil)
- From passenger cars and 2-ton trucks.
- Attention to the waste oil receiver
 - The large-diameter wide hat makes it easy to catch waste oil.
 - The net prevents falling objects into the tank, such as drain plugs.
 - Can be offset from the body/pipe for ease of operation.
- Air-pressurized type for easy waste oil discharge (*Except for GOD24B "Moterukun")
 - No cumbersome handle operation is required for ejection.
 - The discharge hose can be attached when not in use.
- Large tank with level gauge
 - The internal tank capacity can be seen and could estimate how much numbers of cars can be discharged.
 - Large-capacity tanks provide efficiency for large-volume working.
- Portable parts tray
 - Convenient for temporary storage of tools, drain plugs, etc. (W150×D95×H45)
 - Pipe handles are large and easy to move and operate.
 - Large casters for stable movement (2 wheels in front)
 - Easy to get over steps.



A Engine oil change


Oil draining and suction **A4**



discharge from top part



discharge from bottom part

<p>Multifunctional type</p> <p>Can be discharged from top and bottom. Transparent cylinder makes discharging status visible at a glance</p> <p>Transparent cylinder makes waste oil visible</p> <p>Talking with customers and proposals</p> <p>Improvement in the capability of working car's maintenance</p>	<p>Tank capacity 80L</p>  <p>GOD80B ➔ P.503</p>	<p>Standard type</p> <p>Can be discharged from top and bottom. Standard type used for both ways of discharging.</p> <p>Compact size with reduced overall height and width</p> <p>Can be stored on shelves, etc.</p> <p>Saving space</p>	<p>Tank capacity 80L</p>  <p>GOD80E ➔ P.504</p>	<p>Portable type</p> <p>Portable small type. Can be discharged from top only.</p> <p>Small type, used for on-site maintenance service</p> <p>Improve service quality</p> <p>Becoming regular customers</p>	<p>Tank capacity 24L</p>  <p>GOD24B ➔ P.504</p>
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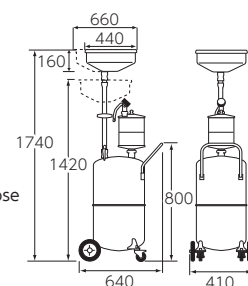
OIL DRAINER (VISIBLE TYPE)



No.	Draining tray capacity(L)	Diameter of the casters		Air coupler (Input)	Hose (discharge)	Discharging type	Weight (kg)
		Front (Fixed)	rear (Flexible)				
GOD80B	12	φ 150	φ 80	Nitto Koki 20PM	φ 19 2m	Air pressurized type	32

- Waste oil tray size: 440 mm (diameter) × 160 mm (height)
- Total capacity of waste oil receiver: 12L
- The quantity of packages is 2.
- Repair parts are available. Please contact our distributors for details.
- Do not use for suctioning oils and fats other than engine oil.**

Tank capacity 80L
Usable capacity 62L

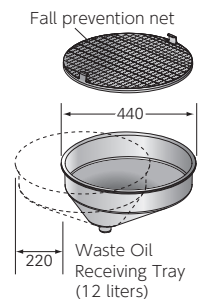


Suction nozzle (for extraction)

Suction nozzle type	Material	Outer diameter
Suction nozzle flexible type	Nylon (with metal shaft core)	φ5×700mm
Suction nozzle flexible type		φ6×700mm
Suction nozzle flexible type		φ8×700mm
Suction nozzle flexible type		φ7×1,000mm
Suction nozzle metal type	Brass	φ5×700mm
Suction nozzle metal type		φ6×700mm

Suction adapter

Suction Adapter A	For Volkswagen cars
Suction Adapter B	For BMW cars



How to use.

- Function mark is indicated under the product name. For the details, please refer to ➔ P.004-005.
- Products marked with ⚠ should be ordered after checking stock.



A Engine oil change

A4 Oil draining and suction



OIL DRAINER

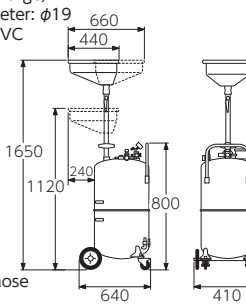


No.	Draining tray capacity(L)	Diameter of the casters		Air coupler (Input)	Hose (discharge)	Discharging type	Weight (kg)
		Front (Fixed)	rear (Flexible)				
GOD80E	12	φ 150	φ 80	Nitto Koki 20PM	φ 19 2m	Air pressurized type	29

- Waste oil tray size: 440 mm (diameter) × 160 mm (height)
- Total capacity of waste oil receiver: 12L

* Repair parts are available. Please contact our distributors for details.
 * Do not use for oils or fats other than engine oil.

Tank capacity 80L
 Usable capacity 62L



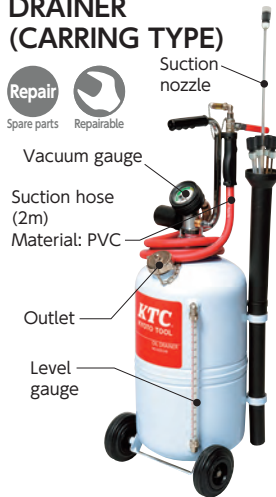
Suction nozzle (for extraction)

Suction nozzle flexible type	Nylon (with metal shaft core)	Outer diameter	φ5×700mm
Suction nozzle flexible type		Outer diameter	φ6×700mm
Suction nozzle flexible type		Outer diameter	φ8×700mm
Suction nozzle flexible type		Outer diameter	φ7×1,000mm
Suction nozzle metal type	Brass	Outer diameter	φ5×700mm
Suction nozzle metal type		Outer diameter	φ6×700mm

Suction adapter

Suction Adapter A	For Volkswagen cars
Suction Adapter B	For BMW cars

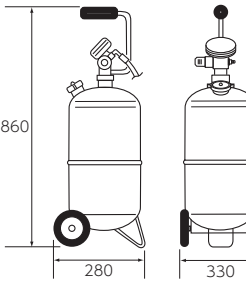
COMPACT OIL DRAINER (CARRING TYPE)



No.	Tank		Diameter of the casters		Air coupler (Input)	Waste oil discharging type	Weight (kg)
	Full capacity (L)	Effective capacity (L)	Fixed				
GOD24B	24	20	φ 125		Nitto Koki 20PM	Manual	13.7

* Repair parts are available. Please contact our distributors for details.
 * Do not use for suctioning oils and fats other than engine oil.

Tank capacity 24L
 Usable capacity 20L



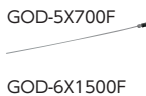
Suction nozzle (for extraction)

Suction nozzle flexible type	Nylon (with metal shaft core)	Outer diameter	φ5×700mm
Suction nozzle flexible type		Outer diameter	φ6×700mm
Suction nozzle flexible type		Outer diameter	φ8×700mm
Suction nozzle flexible type		Outer diameter	φ7×1,000mm
Suction nozzle metal type	Brass	Outer diameter	φ5×700mm
Suction nozzle metal type		Outer diameter	φ6×700mm

Suction adapter

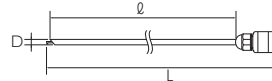
Suction Adapter A	For Volkswagen cars
Suction Adapter B	For BMW cars

FLEXIBLE SUCTION NOZZLE FOR OIL DRAINER



No.	D	L	ℓ	Nozzle Material
GOD-5X700F	5	750	700	Nylon (with metal shaft core)
GOD-6X700F	6	750	700	
GOD-6X1500F	6	1,550	1,500	
GOD-7X1000F	7	1,050	1,000	
GOD-8X700F	8	750	700	

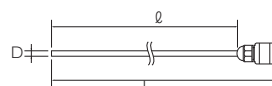
• GOD-6X1500F is a convenient length for van cars, etc.



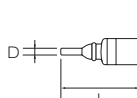
METAL SUCTION NOZZLE FOR OIL DRAINER



No.	D	L	ℓ	Nozzle Material
GOD-5X700M	5	750	700	Brass
GOD-6X700M	6	750	700	



SUCTION ADAPTER FOR OIL DRAINER

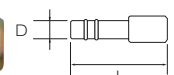


No.	D	L
GOD-ADA	5	57
GOD-ADB	13	52

• The adapter is designed to mount directly on the guide pipe of oil level gauge, without using a nozzle.

GOD-ADA: For Volkswagen cars
 GOD-ADB: For BMW cars

* For classic cars. Cannot be used for current models.



• Overhaul can be done only by the qualified person.

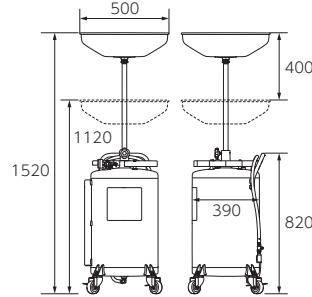
OIL DRAINER



No.	Draining tray capacity (L)	Diameter of the casters		Air coupler (Input)	Hose (discharge)	Discharging type	Weight (kg)	☐
		Front (Flexible)	rear (Flexible)					
GOD80DR GOD80DBK GOD80DS GOD80DBL	17	φ75		Nitto Koki Equivalent to 20PM	φ9.5 1.6m	Air pressurized type	30	1

- Air-pressurized system makes it easy to dispose of waste oil in the tank.
 - The height of the waste oil receiving pan can be adjusted according to the working height.
 - Castors with brakes for smooth movement and stable operation.
 - A level gauge on the side of the main unit helps you to see the amount of wasted oil in the tank at a glance.
 - A check valve is provided in the main pipe to prevent backflow of waste oil.
 - Includes a plastic tray (GOD80D-T) for temporary storage of tools.
 - With use of an anti-splash mat (optional) prevents waste oil from scattering from the receiving pan.
 - When using the connecting hose set (optional), waste oil can be discharged by connecting to a diaphragm pump.
- * Repair parts are available. ☑ Refer to "Repairable List" from P.625.

Tank capacity 80L
Usable capacity 60L



KTC's oil drainer supports two drainage ways

Discharge by air pressurization	Discharge by diaphragm pump connection
With use of air-pressurized system, no need for manual ejection	Can be discharged by centralized piping
	Connection hose set (optional)



GOD80D-H



GOD80D-M



GOD80D-T

Spare parts

No.	Description	Weight(kg)	☐
GOD80D-H	Connecting hose set	2.9	1

Spare parts

No.	Description	Weight(g)	☐
GOD80D-M	Anti-splash mat	350	1

- Can also be used for GOD80B and GOD80E.

Spare parts

No.	Description	Weight(g)	☐
GOD80D-T	Resin tray	350	1

A Engine oil change

Oil draining and suction **A4**



* Diaphragm pump connected image



How to use.



* Image of use



Anti-splash mat to prevent splashing of waste oil from the receiving pan is available as an option, and can be used with other oil drainer series (GOD80B,E) released from KTC.



Resin tray convenient for temporary storage of tools needed during oil change operations.

A Engine oil change

A5 Oil filter replacement



Compatible with aluminum and resin filter paper replacement type oil filter caps used in TOYOTA and other vehicles.

Oil Filter Wrench Series

KTC offers four types of wrenches (cup type, chain type, band type, and adjustable type) to accommodate various types of oil filters. Especially, we have 31 sizes of cup type wrenches, including 26 sizes for passenger cars and 6 sizes for large-diameter cars, which can cover most of the cars in Japan.



Features of KTC cup type oil filter wrench

Overall height is kept low, and a large hanging allowance is applied.

Non-slip design

By die-cast aluminum integral molding*,

Weight is 60% of steel products!

* Except for filter paper replacement type. Also, the large-diameter version uses Iron (steel) for drive angles, by insert manufacturing method.

Choice of tools with use

Includes an drive size and hexagonal angle to select the tool that drives the oil filter wrench, depending on the work environment. (For passenger cars, 3/8"sq. hexagonal 24mm drive size) (For large diameter cars, 1/2"sq. hexagonal 27mm drive size)

OIL FILTER WRENCH FOR TOYOTA PAPER OIL FILTER

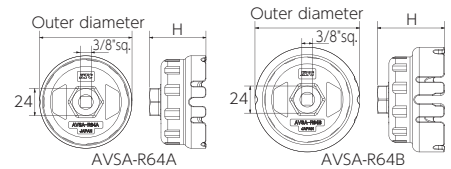


No.	Inside diameter	φ(Outer diameter)	H	Weight(g)	⊠
AVSA-R64A	71	81	50	410	1
AVSA-R64B	81	91	59	540	1

- Installation and removal of filter paper replacement type oil filter cap.
- AVSA-R64A: Prius, VOXY, Vitz, etc.
- AVSA-R64B: Mark X, Crown, Hiace, etc.
- This tool is exclusively for installation and removal of aluminum and resin filter paper replacement type oil filter caps used in TOYOTA and other vehicles.
- The filter cap is driven by the protrusions (ribs) on the filter cap, preventing it from being caught or slipping.
- The material has been changed from aluminum die-cast to steel, making it 1.7 times stronger than the conventional product.



* Not for use with cartridge-type oil filters.
* This product is for manual use. Do not use power tools such as impact wrenches.



CUP TYPE OIL FILTER WRENCH SET [14pcs.]



No.	Weight(kg)
AVSA14	4.6

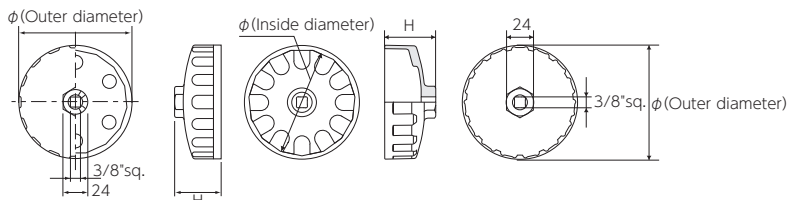
Set contents	
Cup type oil filter wrench	AVSA-063,064,067,073,074,075D,079,080,089,A92,099,101
Oil filter wrench for TOYOTA paper oil filter	AVSA-R64A,R64B
Case (W550×D380×H115)	

CUP TYPE OIL FILTER WRENCH



No.	Inside diameter	φ(Outer diameter)	H	Shape	Weight(g)	⊠
AVSA-063	63	72	35	14 point	80	10
AVSA-064	64	72	35	14 point	80	10
AVSA-067	66.5	74	35	14 point	80	10
AVSA-073	72.5	80	35	14 point	90	10
AVSA-074	74	82	35	14 point	90	10
AVSA-075D	74.7	82	37.5	15 point	120	10
AVSA-079	79	86	40	15 point	100	10
AVSA-080	79.5	86	40	15 point	110	10
AVSA-089	89	96	40	15 point	120	10
AVSA-092	92	99	40	15 point	130	10
AVSA-A92	91.4	99.5	44	Special shape	150	10
AVSA-095	94.5	102	45	15 point	140	10
AVSA-099	99	106	45	15 point	140	10
AVSA-101	100.5	108	45	15 point	150	10

* For application, please refer to P.508 and search on the web.



Oil Filter Wrench
Applicable representative car models
AVSA-075/Mazda Skyactiv Diesel
AVSA-092/Nissan NV350 Caravan (diesel)

• Overhaul can be done only by the qualified person.

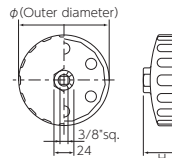
CUP TYPE OIL FILTER WRENCH

3/8" sq.



No.	Nominal size	φ(Outer diameter)	H	Shape	Weight(g)	⊥
AVSA-074	74	82	35	14 point	90	10
AVSA-074C	74C	82.5	50.5	14 point	100	10
AVSA-075	75	81	35	15 point	90	10
AVSA-076	76	82	35	15 point	90	10
AVSA-086	86	95	46.5	16 point	120	10
AVSA-087	87	96	68	16 point	210	10
AVSA-A74	A74	81	35	15 point	90	10
AVSA-A75	A75	82	35	30 point	90	10
AVSA-A93	A93	100	40	36 point	140	10
AVSA-B76	B76	83	35	12 concave	90	10
AVSA-B86	B86	93	40	18 concave	120	10
AVSA-C76	C76	86	35	8 point	90	10
AVSA-C95	C95	103	40	10 point	120	10

* For application, please refer to P.508 and search on the web.



A Engine oil change

Oil filter replacement **A5**

CUP TYPE OIL FILTER WRENCH SET (LARGE DIAMETER) [5pcs.]

1/2" sq.

5 pcs.



No.	Weight(kg)
AVSA5	4

Set contents	
Oil Filter Wrench	AVSA-101B,106B,108B,110B,118B
Metal case (W430×D285×H76)	

CUP TYPE OIL FILTER WRENCH (LARGE DIAMETER)

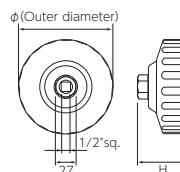
1/2" sq.



No.	Inside diameter	φ(Outer diameter)	H	Shape	Weight(g)	⊥
AVSA-101B	100.5	117	64	15 point	550	10
AVSA-106B	106	124	64	16 point	570	10
AVSA-108B	108	125	66	16 point	610	10
AVSA-110B	110	125	68	17 point	610	10
AVSA-118B	118	135	68	16 point	650	10
AVSA-125B	125.2	142	70	18 point	750	10

- For removal and installation of engine oil filter cartridges for 2- 4 ton class trucks, buses, and other vehicles.
- By insert manufacturing method, iron (steel) in the drive angle and increasing the thickness of the aluminum section help to increase the durability.

* For application, please refer to P.508 and search on the web.



Designed to hang firmly on the filter even in thermal expansion

To accommodate resin oil filter covers that may cause thermal expansion, AVSA-074C and 087 are longer in overall length than the standard type, and are designed to have a larger gap between the oil filter and the cover so that the filter will be firmly attached even during thermal expansion.

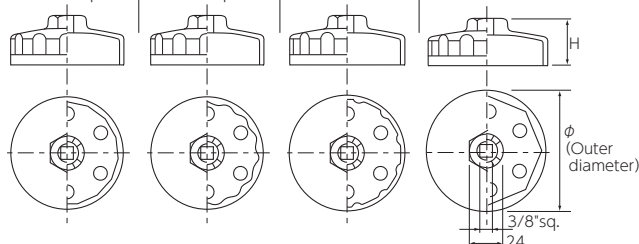


Oil filter of VOLVO cap and replacement filter paper



Shape of cup type oil filter wrench for non-Japanese cars

- | | | | | |
|---------------|--------------|--------------|----------------|--------------|
| 074 14 point | 076 15 point | A74 15 point | B76 12 concave | C76 8 point |
| 074C 14 point | 086 16 point | A75 30 point | B86 18 concave | C95 10 point |
| 075 15 point | 087 16 point | A93 36 point | | |



- Function mark is indicated under the product name. For the details, please refer to P.004-005.
- Products marked with ⚙ should be ordered after checking stock.



Oil Filter Wrench Application Table

カップ型オイルフィルタレンチ (AVSAシリーズ) サポートページ
 当社がお届けする製品も安心してご利用いただくために、KTC独自のサービスシステム、KTC Quality Service Systemによる、安心・信頼のサポートをご提供いたします。

オイルフィルタレンチ適用表【国産車】 トヨタ

検索
 検索または原動機の種類から適切なオイルフィルタレンチの品番を検索できます。オイルフィルタレンチの品番から適切な車種および原動機の種類を検索できます。

車種グループ: ▼ 原動機の種類: ▼ フィルタレンチ品番

例: ABC-001

検索する **リセット**

車種名	原動機の種類	適用フィルタレンチ	適用フィルタレンチ2
トヨタ自動車	1FZ-FE	AVSA-073	AVSA-085
トヨタ自動車	1UR-FE	AVSA-R64B	
トヨタ自動車	2UZ-FE	AVSA-073	
トヨタ自動車	3FZ	AVSA-085	
トヨタ自動車	F33A-FTV	AVSA-064	
トヨタ自動車	V55A-FTV	AVSA-064	
トヨタ自動車	1GD-FTV	AVSA-R64B	
トヨタ自動車	1GR-FE	AVSA-073	AVSA-R64B
トヨタ自動車	1KD-FTV	AVSA-085	
トヨタ自動車	1KZ-TE	AVSA-085	

In KTC cup type oil filter wrench (AVSA series) in support page, you can search oil filter wrenches applies for passenger cars and heavy-duty vehicles.

- KTC cup type oil filter wrench (AVSA) is sized to fit the genuine oil filter.
- If you are using OEM parts, the size may not fit (rattling, binding, etc.).
- Even with the same engine type, the size may differ depending on the year and the time of supply of genuine parts.
- Do not use anything other than an oil filter wrench for filter paper replacement on the filter paper replacement type oil filter cap.
- * Listed only engine models for which are applicable for KTC cup type oil filter wrench (AVSA).

How to find an oil filter wrench

01
 Select a car from the dedicated page



<https://ktc.jp/support/avsa>

Read the special QR code and select "Japanese Cars" or "Other Cars".

* You can also browse the dedicated page from "Oil Filter Wrench Application Chart" on each product page.

02
 Select a Manufacturer

オイルフィルタレンチ適用表【国産車】

トヨタ自動車 | トヨタ | ニッサン

ホンダ | マツダ | スバル

スズキ | ダイハツ | 三菱

日産自動車 | いすゞ | 日野

UDトラックス

オイルフィルタレンチ適用表【輸入車】

アウディ、フェルダスカーブ | メルセデス・ベンツ | 日産

ボルボ | 日産 | 日産

アジエール、シトロエン | キヤブトラック、シボレー、マツダ | クライスラー、日産、日産

Select the car's manufacturer you want to search.

03
 Select the type of car and engine

検索
 検索または原動機の種類から適切なオイルフィルタレンチの品番を検索できます。オイルフィルタレンチの品番から適切な車種および原動機の種類を検索できます。

▼ 車種: ▼ 原動機の種類: ▼ フィルタレンチ品番

例: ABC-001

検索する **リセット**

車種名	原動機の種類	適用フィルタレンチ	適用フィルタレンチ2
トヨタ	1FZ-FE	AVSA-073	
トヨタ	1UR-FE	AVSA-R64B	
トヨタ	2UZ-FE	AVSA-073	
トヨタ	3FZ	AVSA-085	
トヨタ	F33A-FTV	AVSA-064	
トヨタ	V55A-FTV	AVSA-064	
トヨタ	1GD-FTV	AVSA-R64B	
トヨタ	1GR-FE	AVSA-073	AVSA-R64B
トヨタ	1KD-FTV	AVSA-085	
トヨタ	1KZ-TE	AVSA-085	

You can search for the applicable oil filter wrench part number by car model or engine model.

* You can also check the applicable car model and engine model from the part number of the oil filter wrench.

ADJUSTABLE OIL FILTER WRENCH

3/8" sq.

Repair

Spare parts

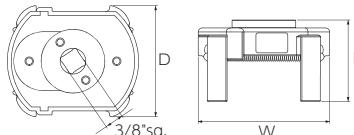
POWERFIT



AVSA-6379-K

No.	Applicable diameter	D	W	H	Weight(g)	⊠
AVSA-6379	φ63~79	56	66	41	300	1

- Removal of cartridge type oil filters for passenger cars.
- Cars equipped with oil filters from 63 to 79 mm diameter. (except filter paper replacement type)
- Special size for Mazda and other vehicles with certain oil filters.
- non-Japanese cars with certain shaped oil filter.
- The adjustable type can be used with oil filters of various shapes.
- * This is for removal only. Do not use for installation of oil filter.
- * Do not use for filter paper replacement type.
- * Repair parts are available. Please contact our distributors for details.



Three-stage jaw catches firmly.



Easy to install with one hand.



Low height when mounted, can be worked in tight spaces.

Spare parts (Drive set for adjustable oil filter wrench)

No.	Drive size	Contents	⊠
AVSA-6379-K	3/8"sq.	Drive×1, Plate, steel spacer, hexagon socket button bolt (M5×L8), hexagon socket button bolt (M4×L5) 2 each	1

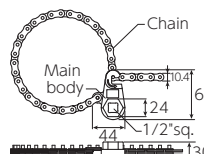
CHAIN TYPE OIL FILTER WRENCH

1/2" sq.



No.	Applicable diameter	Weight(g)	⊠
AE502	φ89~142	600	1

- Removal of cartridge type oil filters for passenger cars and heavy-duty vehicles.
- Compact and lightweight
- Depending on the work environment, 12.7 sq. breaker bar or 24 mm box end wrench can be used with.
- The chain does not easily come off during operation and can be loosened securely.
- * This is for removal only. Do not use for installation of oil filter.
- * Do not use for filter paper replacement type.
- * Repair parts are available. Please contact our distributors for details.

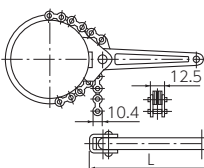


CHAIN TYPE OIL FILTER WRENCH



No.	Applicable diameter	L	Weight(g)	⊠
CW-90140	φ90~125	140	530	10

- Removal of cartridge type oil filters and fuel filters for passenger cars and medium trucks (4t).
- Less filter deformation.
- The unique pivoting head mechanism allows the rotating load to act on the entire chain, preventing concentrated loads that can cause cartridge deformation.
- * The 10.4mm chain thickness may not be used on some car models with narrow gaps.
- * This is for removal only. Do not use for installation of oil filter.
- * Do not use for filter paper replacement type.



BELT TYPE OIL FILTER WRENCH

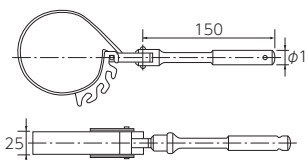


FF-8095

FF-90110

No.	Applicable diameter	Weight(g)	⊠
FF-8095	φ80~95	400	10
FF-90110	φ90~110	410	10

- Adjustable for easy squeezing and non-slip operation.
- The shape of the product allows it to work freely even in tight spaces.
- * This is for removal only. Do not use for installation of oil filter.
- * Do not use for filter paper replacement type.



A Engine oil change

Oil filter replacement **A5**



· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with should be ordered after checking stock.

A Engine oil change

A5 Oil filter replacement



Using image



How to use.

OIL FILTER WRENCH & FILTER OIL CATCHER SET



FILTER OIL CATCHER



AVP-6376



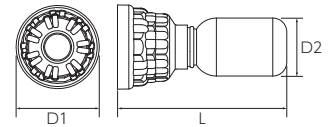
AVP-6376-01

No.	Weight(g)	☐	
ATVP5	400	1	
Set contents			
Filter oil catcher	AVP-6376		
Cup type oil filter wrench	AVSA-063,064,067,076		

- This set contains a filter oil catcher and four types of oil filter wrenches that apply to typical downward-facing oil filters.
- The filter oil catcher has a multi-stage cup shape to accommodate the four main sizes of downward-facing oil filters, and the inner circumference shape, in keeping with the KTC oil filter wrench, firmly captures the oil filter.

No.	L	D1	D2	Weight(g)	☐	
AVP-6376	178	90	62	64	1	

- Used to remove the oil filter after loosening the downward-mounted oil filter.
- This product prevents hands from getting dirty by performing tasks that would normally be performed with bare hands or rubber gloves.
- The use of polypropylene makes it lightweight and oil-resistant.
- Multi-stage cup shape, compatible with 4 main sizes of downward-facing oil filters.
- The inner circumference shape follows KTC's cup-type oil filter wrench and firmly grips the oil filter.
- A special 250mL bottle is used to catch even a large amount of residual oil leaking out.



Using image

* This product is not an oil filter wrench. Use an oil filter wrench for loosening work.

* Heat resistance temperature: Bottle 120°C, Cup 140°C

Spare parts

No.	Description	Volume (mL)	Weight(g)	☐	
AVP-6376-01	Oil catch bottle	250	29	1	

OIL JUG



No.	Capacity (L)	Weight(g)	☐	
AE501	5	430	1	

A6 Drain plug Installation

(1)Packing removal

(2)Drain plug Installation

(3)Tightening torque measurement

Scraper

➔ P.390-394



Drain plug catcher

➔ P.502



Box end wrench

➔ P.323



Digital ratchet

➔ P.410-422



A7 Undercover Installation

Screwdriver

➔ P.354



T-shaped Wrench

➔ P.349



Socket

➔ P.214

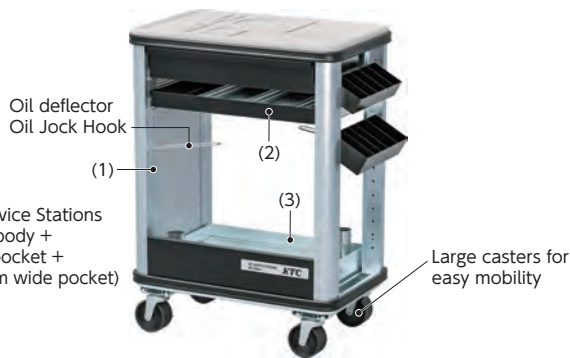


OIL SERVICE STATION

Efficient oil change operation
Service station



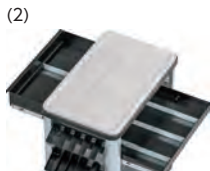
Oil Service Stations
Full set for passenger cars and large vehicles SKR815



Oil Service Stations
(Main body + small pocket + medium wide pocket) SKR81



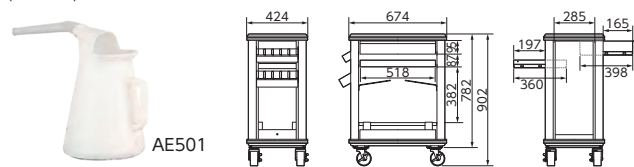
(1) Perforated panel to which magnetic products such as magnetic socket holder (EHB310) can be attached.



(2) Bi-directional movable drawers available in two stalls.



(3) Removable oil pan for oil drainage of waste filter.



Spare parts

No.	Description	Size
AE501	Oil jug (5L capacity)	Capacity 5L
SKR-55P	Pocket for packing	W285×D100×H50
SKR-55S	Small pocket for AVSA	W285×D100×H50
SKR-55M	Inside pocket for AVSA	W285×D120×H60
SKR-55MW	Medium wide pocket for AVSA	W285×D120×H60
SKR-55L	Large pocket for AVSA	W285×D140×H80
SKR-55W	Pocket for rag	W285×D72×H150

A Engine oil change

Full set for passenger cars and large vehicles

No.	Contents of tools	Weight(kg)	☐
SKR815	72	53	1(4 units)
Set contents			
SKR81	Oil service station unit × 1		
SKR814T1	assembled product × 1		
SKR814T2	assembled product × 1		
SKR815T1	assembled product × 1		

Standard set

No.	Contents of tools	Weight(kg)	☐
SKR814	65	47.8	1(3 units)
Set contents			
SKR81	Oil service station unit × 1		
SKR814T1	assembled product × 1		
SKR814T2	assembled product × 1		

Oil Service Stations

No.	Weight(kg)	☐
SKR81	35.6	1(1 unit)
Set contents		
Oil service station unit × 1		
SKR-55S	Small pocket for AVSA	
SKR-55MW	Medium wide pocket for AVSA	

No.	Basic set
Contents	
Oil mug	AE501 × 2 pcs.
Cup type oil filter wrench	AVSA-063, 064, 067, 073, 074, 075D, 079, 080, 089, 092, A92, 099, 101
Oil filter wrench for TOYOTA paper oil filter	AVSA-R64A, R64B
Fender cover	AYC-2A
3/8"sq. socket (6pt.)	B3-08, 10, 12, 14, 17, 19, 22
3/8"sq. short hexagon bit socket	BT3-08S
L-Shaped Standard Hexagonal Bar Wrench	HLD250-8
3/8"sq. ratchet handle	BR3E
3/8"sq. breaker bar	B53E
3/8"sq. extension bar 150mm	BE3-150
3/8"sq. extension bar 270mm	BE3-270
Stainless Scraper	KZ1-22
Box end wrench	M5-1417, 1921, 2224
Clip Clamp Tool Angle Stubby Small	AP209-7A
Clip Clamp Tool Angle Stubby Medium	AP209-9A
Filter oil catcher	AVP-6376
Drain plug catcher	AEP-1419
Oil filler cap opener	AE30

No.	Incoming assembly for non-Japanese vehicles
Contents	
Cup type oil filter wrench	AVSA-A74, 074C, A75, B76, C76, 086, 087
3/8"sq. socket (6pt.)	B3-11, 13, 15
3/8"sq. magnetic socket holder	EHB310
3/8"sq. socket holder	EHB310
1/2"sq. socket holder	EHB405
1/2"sq. socket (6pt.)	B4-27, 32, 36
3/8"sq. socket adapter	BA34
3/8"sq. hexagonal wrench	BT3-10S, 12S
Driver flat head	D1M2-6, 8
Driver cross-shaped	D1P2-2, 3
Small pocket for AVSA	SKR-55S
Medium wide pocket for AVSA	SKR-55MW

No.	Incoming assembly for trucks
Contents	
Large pocket for AVSA	SKR-55L
Cup type oil filter wrench (Large diameter)	AVSA-101B, 106B, 108B, 110B, 118B, 125B

• Function mark is indicated under the product name. For the details, please refer to P.004-005.
• Products marked with ⚙ should be ordered after checking stock.



B LLC replacement

B1 Drain plug Detaching

B2 Hose replacement

(1) Hose clip removal



Applicable Hose clip



Applicable Hose clip



Applicable Hose clip



(2) Pulling out and removing sticking hoses



AE45-1



AE45-2



AE45-3

Box end wrench

P.323



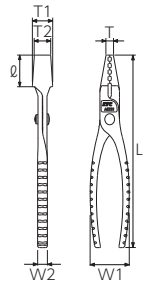
Other Tools

HOSE CLIP PLIERS



No.	L	ℓ	W1	W2	T	T1	T2	Weight(g)
AE931	210	34.5	48	12	9	25	20	310

- Spring-loaded hose clip removal and attachment.
- Plate spring type hose clip for use with hoses with outer diameters of 10 to 47 mm dia.
- The teeth have a grid-like, mountainous edge that prevents the hose clip from slipping and coming off, allowing use even in tight or deep places.
- The teeth are trapezoidal in shape and can be used in any orientation, including vertical, horizontal, and diagonal.
- Corresponds to current vehicle conditions where hose clip tightening pressure is increasing.
- Optimized lever ratio, with a larger tip opening for easier use.

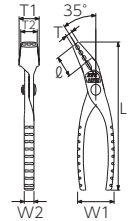


HOSE CLIP PLIERS (SHORT BENT)



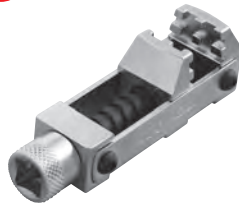
No.	L	ℓ	W1	W2	T	T1	T2	Weight(g)
AE932	163	25	45	12	6	25	20	225

- Spring-loaded hose clip removal and attachment.
- Plate spring type hose clip for use with hose outer diameters of 10 to 36 mm.
- Both the grip and teeth are more compact than the standard type (AE931).
- The 35° angle at the tip allows you to avoid pipes and stays and reach deep into plugged in.



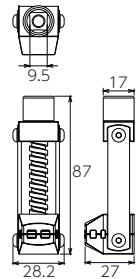
HOSE CLIP TOOL

3/8" sq.



No.	Weight(g)	⊞
AE921	170	1

- Hose clips that secure the cooling system hoses on Suzuki vehicles (Wagon R, etc.). (For car models with the lock position facing sideways or downward)
- For car models that are difficult to work on with plier-type tools.
- Allows work without removing sensors, ducts, hoses, etc. near the hose band.
- Maximum aperture: 40mm
- The screw type allows the hose band to be held loose for secure operation even in tight working spaces.
- Same tip shape as AE931, so the hose clip does not slip and will not come off accidentally.



HOSE PLUCKER SET [3pcs.]

3 pcs.



No.	Weight(g)	⊞
AE45T	300	5

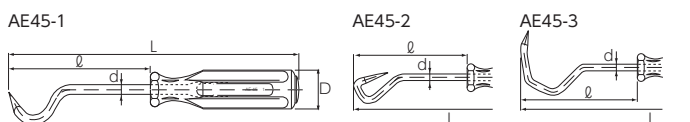
Set contents	
Horse plucker	AE45-1,2,3

HOSE PLUCKER



No.	d	D	ℓ	L	Weight(g)	⊞
AE45-1	6	26	90	185	100	10
AE45-2	6	26	90	185	100	10
AE45-3	6	26	90	185	100	10

- Remove adhesion of hoses used in automobiles.
- Three types of special tip shapes can be used for a wide range of applications, even in areas with limited work space.
- The special angle of the tip is effective on the back side of the hose.



• Overhaul can be done only by the qualified person.

COOLANT CHARGER



No.	Weight(kg)
AE401	4.5
W×D×H	420×300×450mm
Hose length	2.5m
Tank capacity	15L
Tank Material	Polyethylene
Vacuum (attained pressure)	Approx. -0.09 MPa
Air consumption	Approx. 120-190L/min
Applicable air pressure	0.6~0.7MPa
Capable operating temperature	7~50°C
Air coupler	Nitto Koki 20PM equivalent

- For automotive coolant injection.
- For passenger cars and 1.5 ton light trucks. Can be used for both down-flow and side-flow type. (For some non-Japanese vehicles, an optional cone plug L-size adapter is required.)
- Cooling water can be injected quickly without mixing air.
- The tank and main unit can be detached, and a spare tank (sold separately) can be used for different cooling water (e.g., red or green) injection operations.
- No need to adjustment for input air pressure.
- Switching between vacuuming and infusion can be done at the touch of a button.
- * Repair parts are available. Please contact our distributors for details.

Spare tank Assy (tank + cap)



AE401-ST



AE401-CPL

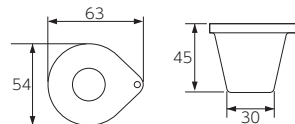
No.	Weight(kg)
AE401-ST	1

- Spare tanks are convenient for use in dosing operations with different color coolants (e.g., red or green).
- Size W420 (bottom length approx. 360)×D220×H370

Cone Plug L Size Adapter

No.	Weight(g)
AE401-CPL	55

- This is an option for non-Japanese vehicles with a large radiator cap inner diameter (34-40mm).
- Volkswagen (all models)
- Audi (all models)
- Volvo (all passenger cars)
- Rover (200-600, FREELANDER)
- Fiat (all models)



PINCH OFF PLIERS



PSA34

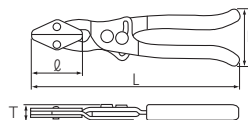
PSA57

No.	L	ℓ	D	T	Aperture value	Weight(g)
PSA34	140	33	48	5	23	75
PSA57	233	57	65	18	50	340

- For automobile hoses are closed.
- Useful for cooling system hose blockage, especially when using with coolant charger (AE401).
- For blockage of brake hose during strut removal, etc.
- For blockage of ATF hose during AT removal.
- For vacuum hose blockage during inspection of auxiliary equipment at reduced speed.
- For fuel hose blockage during fuel filter replacement.
- For fuel hose and oil hose blockage on motorcycles.
- The pliers are equipped with a stepless automatic locking mechanism that locks the pliers just by clamping and gripping the object, enabling speedy operation.
- Simply opening the grip releases the retention.

Applicable hose max. diameter

PSA34	Outer diameter φ19mm
PSA57	Outer diameter φ41mm



· Make sure that the device is securely locked when it is held in place.

Check mirror

☛ P.497



B LLC replacement

LLC injection B3



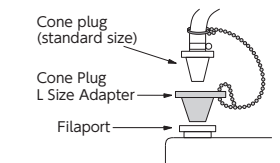
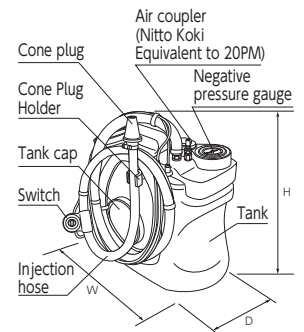
* Wagon is not included.



Detachable body and tank



How to use.



By attaching a cone plug L-size adapter to the radiator filler port, it can be used for non-Japanese vehicles with a large inner diameter.

For hose blockage when using coolant charger



Features

Leakage inspection/confirmation B4

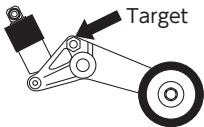
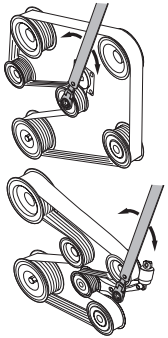
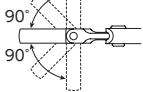
· Function mark is indicated under the product name. For the details, please refer to ☛ P.004-005.
 · Products marked with ⚙ should be ordered after checking stock.



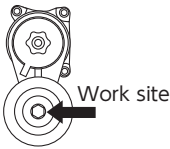
C Serpentine belt replacement

C Belt replacement

Flexible swing angle. Useable for final tightening



Damper-type auto tensioner



Auto tensioner

BELT TENSIONER WRENCH SET [5pcs.]

5 pcs.

72



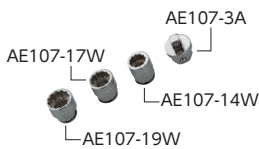
Normal sockets can be used with this drive.

Dedicated Socket

Covers the majority of Japanese car models.



Insert the hexagonal side of the special socket into the box end part.



No.	Weight(kg)	⊠	
ATE175	1	1	
Set contents			
Belt Tensioner Wrench	AE107-500		
Dedicated sockets 14,17,19mm	AE107-14W,17W,19W		
3/8"sq. drive	AE107-3A		

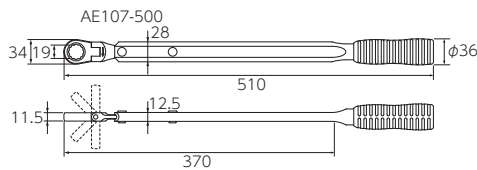
- Special tool to move the tensioner in the loosening direction when replacing the belt in cars with auto tensioner type drive belts (single belt type).
- Effective for small passenger cars, especially van cars (FWD cars).

Wrench

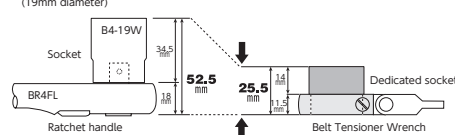
- This is a special low-profile long swing ratchet Box end wrench designed for the working with vehicles with auto-tensioners. The wrench can be swung at a large angle without interfering with pulleys or other obstacles, even in a narrow engine compartment.
- The easy-to-apply, non-slip plastic grips make it easy to work with damper-type auto tensioners, which are often used on FWD vehicles with high loads.

Dedicated socket, 3/8"sq. drive

- Special sockets are available in 14, 17, and 19 mm, which are frequently used.
- Thin, through-through type for bolt relief.
- By attaching the 3/8"sq. drive to the box end part of the belt tensioner wrench, a regular socket can be used.

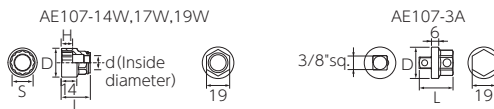


Comparison of overall height of head section (19mm diameter)



Belt Tensioner Wrench

No.	Weight(g)
AE107-500	850



Dedicated Socket • 3/8"sq. drive

No.	Description	S	D	d	H	L	Weight(g)
AE107-14W	Dedicated Socket 14mm	14	22	11	8.5	26	35
AE107-17W	Dedicated Socket 17mm	17	24	13	9	26	40
AE107-19W	Dedicated Socket 19mm	19	26	13	9	26	40
AE107-3A	3/8"sq. drive	—	26	—	—	28	60

BELT WRENCH SET [2pcs.]

2 pcs.

72

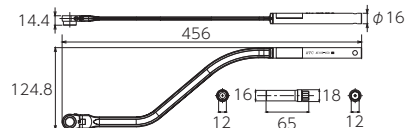


No.	Weight(g)	⊠	
ATE109	410	1	
Set contents			
Belt wrench	Ratchet part: diameter	12mm	AE109-450
Dedicated belt wrench sockets		12mm	AE109-12W

No.	Description	Weight(g)
AE109-450	Belt wrench	345
AE109-12W	Belt wrench socket 12mm	65

- For replacement and adjustment of air conditioning belts for Suzuki (Wagon R [since Sep 08], MR Wagon [since Jan 06]). (Belt wrench only)
- Air conditioner and power steering belt replacement and adjustment for Daihatsu (Move [from product year Dec. 2008] and Tanto [from product year Dec. 2007]). (Belt wrench + special socket)
- Unique shape avoids obstacles for smooth operation.
- The use of a special socket makes it suitable for Daihatsu car engines.
- The ratchet head on the tip allows for comfortable operation.
- Only with license plate removed, reducing the work time.
- No need to remove the bumper when changing belts.

- * Repair parts are available. Please contact our distributors for details.



• Overhaul can be done only by the qualified person.

BELT TENSIONER WRENCH (OFFSET TYPE)

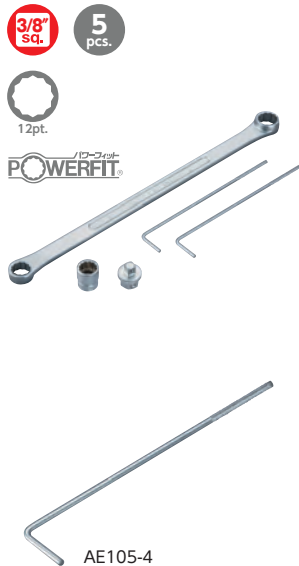


Example of combination with AE107-500

No.	S	D	H	h	B1	B2	L	Weight(g)	☐
AE107-260	19	26	104.7	40	26	28	262.5	375	1

- Toyota's 2.4L (2AZ) powered Vellfire, Alphard [from product year May 2008], Mark X Geo, etc.
- When used with AE107-500 (P.514) the AE107-500 enables reliable work in an optimal working posture, even in areas where working space is limited.
- The offset shape of the main unit allows it to avoid surrounding obstacles.
- The special design of the product allows it to be used in vehicles that can only be accessed from the bottom of the engine compartment.
- * Repair parts are available. Please contact our distributors for details.

WRENCH SET FOR BELT EXCHANGE (SUZUKI DOUBLE TENSIONER) [5pcs.]



No.	Weight(kg)	☐
ATE1055	0.7	1

Set contents

Flat type box end wrench (extra long)	M160-19×21	1
Tensioner hold pin	AE105-4	2
3/8"sq. drive	AE107-3A	1
3/8"sq. socket (12pt.)	B3-17W	1

- A set of tools to turn the crankshaft pulley and auto tensioner during belt replacement operations.
- Suzuki Spacia (MK53S), Wagon R (MH55S), and other models with mild hybrid (R06A engine + WA05A ISG) released after February 2017.
- Ideal for belt replacement work on Suzuki's new mild hybrid engine equipped vehicles.
- The optimal working posture allows for reliable work even in tight workspaces.
- * Suzuki special tool (sold separately) is required to remove and install the water pump drive belt.
- Drive Beltrimuba (09991-07410)
- Drive belt installer No. 2 (09991-07440)
- Drive belt installer No. 3 (09991-07470)
- Above 3 SST are required

Tensioner hold pin

No.	Weight(g)	☐
AE105-4	22	10

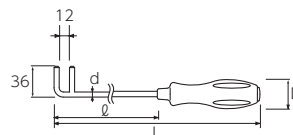


BELT HOOK TOOL



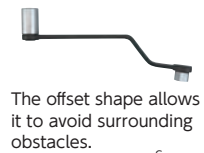
No.	d	D	L	ℓ	Weight(g)	☐
AE108	6	34	660	540	200	1

- It is more convenient when used with the belt tensioner wrench (ATE175) for replacing the auto tensioner type drive belt (1-piece type). (P.514)
- Replacing engine belts, pulling up and guiding wiring and piping.
 - V-belts and V-ribbed belts (7 or more mounts) for passenger cars.
 - Hooks with round shafts facilitate smooth belt replacement and prevent damage to new belts.
 - The wide, difficult-to-replace one-piece (serpentine) long belt can be replaced quickly.
 - The engine compartment is 660 mm long, which is effective for van cars and other vehicles with deep engine compartments.

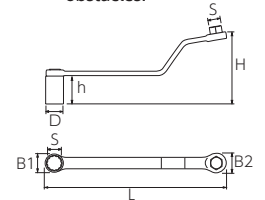


C Serpentine belt replacement

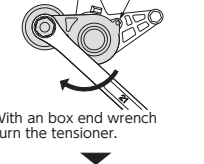
Belt replacement



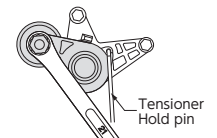
The offset shape allows it to avoid surrounding obstacles.



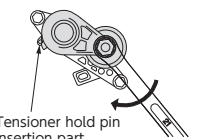
Tensioner hold pin Outlet



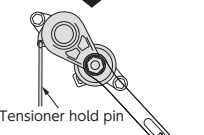
With an box end wrench Turn the tensioner.



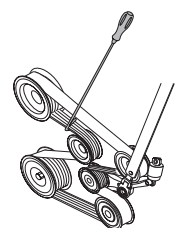
Insert the tensioner hold pin to secure the tensioner.



Tensioner hold pin insertion part Turn the tensioner with a box end wrench



Insert the tensioner hold pin to secure the tensioner.



• Function mark is indicated under the product name. For the details, please refer to P.004-005.
 • Products marked with ⚡ should be ordered after checking stock.



D Timing belt replacement

D1 Various belt removal

Handy bar

P.497



Box end wrench (extra long)

P.329



D2 Crank pulley lock bolt removal



Using image (AE703)



Using image (AE703A)

CRANK PULLEY HOLD WRENCH (HONDA)

1/2" sq.



AE703

* 1/2"sq. breaker bar or a wrench with a width of 24mm is required for the work.



AE703A

* 1/2"sq. breaker bar is required for the work.

No.	Weight(g)	⊠	
AE703	450	1	
AE703A	400	1	

• Crank pulley turning prevention tool for Honda cars.

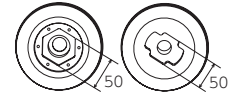
* Crank pulley extraction work is not possible. Use AE701 and AE702 (or CPU13) for crank pulley pull-out work. (Discontinued product)

AE703

• The right figure-shaped crank pulley with a dihedral width of 50 mm used in Honda vehicles.

* Some models (Honda NSX, etc.) are not applicable due to their 45 mm bilateral width.

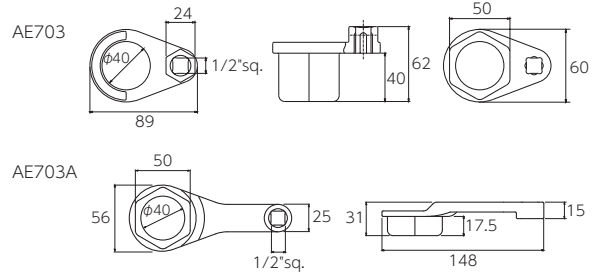
* Certain model (Honda Life, etc.) with a working space of 30 mm or less are not applicable.



AE703A

• For Honda Life (model JB5 to JB8) from product year 2003.

* Certain model (Honda Life, etc.) with a working space of 30 mm or less are not applicable.



D3 Pull out crank pulley

D4 Locking cam pulley



(Figure 1)



(Figure 2)

CAM PULLEY LOCK TOOL



No.	Weight(g)	⊠	
AE82	860	1	

• Special tool to fix the two cam pulleys and prevent misalignment when changing the timing belt on DOHC gasoline engines.

• DOHC gasoline engine vehicles (FF, FR).

• When used on cam pulleys with corrugated inner surfaces used on some Honda and Mitsubishi vehicles, the pulley may move if external force is applied while the tool is installed. (Figure 1)

• For vehicles with variable valve timing function, it may not be possible to install. (Figure 2)

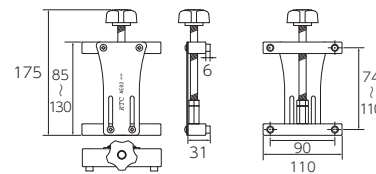
• When replacing the timing belt, the cam pulley can be set before removing the timing belt to hold the position of the cam pulley until the work is completed.

• Easy installation with just a knob operation.

• The center bolt is offset to provide work space when removing and installing the timing belt.

• Can be used for vehicles with an obstruction between two cam pulleys.

* Repair parts are available. Please contact our distributors for details.



D5 Replace timing belt

D6 Mount crank pulley Fastening locking bolt

• Overhaul can be done only by the qualified person.

CAM PULLEY HOLD WRENCH

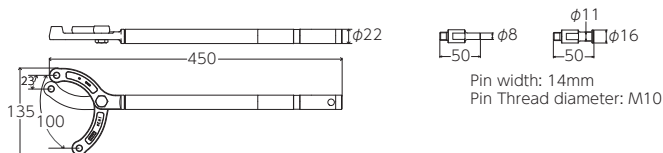
Repair
Spare parts



No.	Weight(kg)	☐
AE81	1.1	1

Set contents	
Cam pulley hold wrench (main unit)	1
Straight pin	2
Flanged pin	2

- Special tool for stopping cam pulley rotation.
 - Cam pulley of the shape shown below
 - Select two types of pins according to the shape of the cam pulley and install them on the arm part.
 - Place the pin on the cam pulley to stop (fix) it from turning and loosen (tighten) the bolt.
 - The arms are spring-loaded and always tensioned in the open direction for good stability.
 - Knurled grip for easy gripping and force application.
- * Repair parts are available. Please contact our distributors for details.



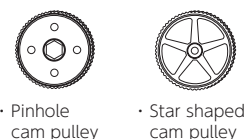
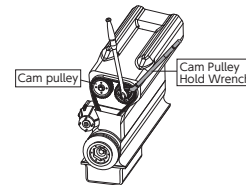
Spare parts

No.	Description	Contents	☐
AE81-5	Straight pin	2 straight pins	1
AE81-6	Flanged pin	2 pins with flange	1



E Engine disassembly, inspection and assembly

Cam pulley removal E1



- Pinhole cam pulley
- Star shaped cam pulley

Hexagonal wrench, etc.

Head cover removal E2

3/8"sq. TRIPLE SQUARE BIT SOCKET SET [4pcs.]

3/8" Sq. 4 pcs.

Repair
Spare parts

POWERFIT



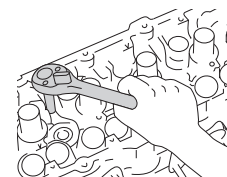
No.	Weight(g)	☐
TBT304TS	320	1

Set contents	
3/8"sq. triple square bit socket	BT3-M5, M6, M8, M10
Socket Holder	EHB305



- Do not use with power tools such as impact wrenches.

Head bolt removal E3



3/8"sq. TRIPLE SQUARE BIT SOCKET

3/8" Sq.

Repair
Spare parts

POWERFIT

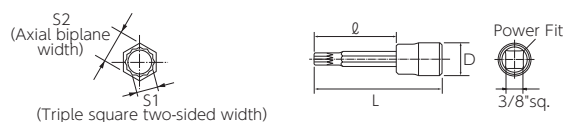


No.	Size	S1	S2	D	L	ℓ	Weight(g)	☐
BT3-M5	M5	3.45	6.3	17	72	43	50	10
BT3-M6	M6	4.34	6.3	17	72	43	51	10
BT3-M8	M8	5.19	8	18.5	72	43	65	10
BT3-M10	M10	6.96	10	18.5	72	42	75	10

- This is a special bit for use with the triple square-hole bolts used on European vehicles. It is widely used for driveshaft flanges and undercarriages of Volkswagen, Audi, etc.
- The tip of the bit can be replaced.



- Do not use with power tools such as impact wrenches.



Triple Square Replacement Bits

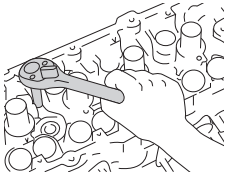
No.	Contents
T-M5	BT3-M5
T-M6	BT3-M6
T-M8	BT3-M8
T-M10	BT3-M10



· Function mark is indicated under the product name. For the details, please refer to P.004-005.
· Products marked with ⚠ should be ordered after checking stock.



E3 Head bolt removal



1/2"sq. CYLINDER HEAD BOLT WRENCH SET [3pcs.]



No.	Weight(g)	⊞	
HBD353	355	1	
Set contents			
1/2"sq. cylinder head bolt wrench	HBD35-8,10		
	B360-10		



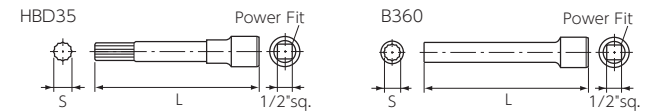
Do not use with power tools such as impact wrenches.

1/2"sq. CYLINDER HEAD BOLT WRENCH

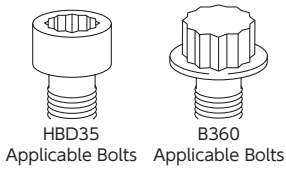


No.	S	L	Weight(g)	⊞	
HBD35-8	8	100	110	5	
HBD35-10	10	100	115	5	
B360-10	10	95	130	5	

This tool is specially designed for tightening and loosening head bolts when removing and installing engine cylinder heads.



Do not use with power tools such as impact wrenches.



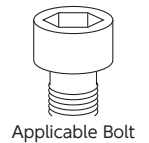
1/2"sq. CYLINDER HEAD BOLT SOCKET WRENCH SET [2pcs.]



No.	Weight(g)	⊞	
HB352	300	5	
Set contents			
1/2"sq. cylinder head bolt socket wrench	HB35-8, 10		



Do not use with power tools such as impact wrenches.

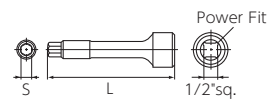


1/2"sq. CYLINDER HEAD BOLT SOCKET WRENCH

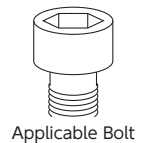


No.	S	L	Weight(g)	⊞	
HB35-8	8	80	140	5	
HB35-8T	8	90	150	5	
HB35-10	10	105	160	5	

This tool is specially designed for tightening and loosening head bolts when removing and installing engine cylinder heads.
The hexagonal bar is made of special spring steel for superior durability.



Do not use with power tools such as impact wrenches.



1/2"sq. CYLINDER HEAD BOLT SOCKET WRENCH SET [2pcs.]

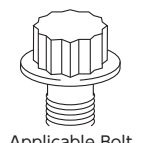


No.	Weight(kg)	⊞	
B3502	1.3	1	
Set contents			
1/2"sq. cylinder head bolt socket wrench	B350-10, 12		

This is a special wrench used for removing and installing engine cylinder head bolts.
Durable by thickness and heat treatment of the socket section.



Do not use with power tools such as impact wrenches.



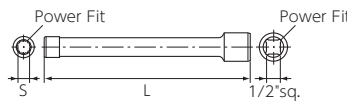
Overhaul can be done only by the qualified person.

1/2"sq. CYLINDER HEAD BOLT SOCKET WRENCH



No.	S	L	Weight(g)	⊞
B350-10	10	190	600	5
B350-12	12	200	700	5

- This is a special wrench used for removing and installing engine cylinder head bolts.
- Durable by thickness and heat treatment of the socket section.

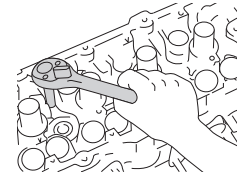


Applicable Bolt



· Do not use with power tools such as impact wrenches.

Head bolt removal E3



3/4"sq. CYLINDER HEAD BOLT & FLY-WHEEL BOLT WRENCH SET FOR IMPACT WRENCH [3pcs.]



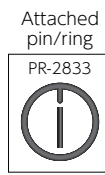
No.	Weight(kg)	⊞
ATBP603	1.6	1

Set contents	
For head bolts	ABP6-14WP
For head bolt and flywheel	ABP6-19WP, 22WP

- This is a special wrench used for removing and installing engine cylinder head bolts and flywheel bolts.



Applicable Bolt



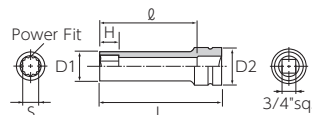
➔ P.283 for details.

3/4"sq. CYLINDER HEAD BOLT & FLY-WHEEL BOLT WRENCH FOR IMPACT WRENCH

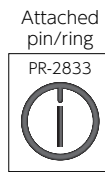


No.	S	D1	D2	H	L	Weight(g)	⊞
ABP6-14WP	14	22.5	38	15	140	400	5
ABP6-17WP	17	26	38	16	90	540	5
ABP6-19WP	19	29	38	16	90	550	5
ABP6-22WP	22	33	38	16	120	650	5

- This is a special wrench used for removing and installing engine cylinder head bolts and flywheel bolts.
- These four sizes can be used for each head bolt and flywheel bolt of Isuzu and Mitsubishi Fuso.



Applicable Bolt



➔ P.283 for details.

ABP6-14WP ABP6-17WP ABP6-19WP ABP6-22WP

Ceramic Scraper

➔ P.391-392



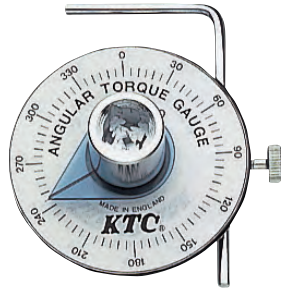
Head Cleaning E4

· Function mark is indicated under the product name. For the details, please refer to ➔ P.004-005.
 · Products marked with ⚠ should be ordered after checking stock.



E5 Head bolt installation and tightening

ANGULAR TORQUE GAUGE



No.	sq.	A	H	D	L	φ	d	Weight(g)	⊖
ATG30-1	1/2"	24.2	55	78.5	97	52	4.8	365	10

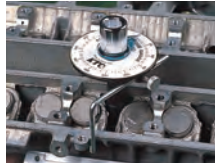
- For measuring the angle for tightening bolts (angle tightening bolts).
- The small scale can be measured in 5° increments, so it can be used for a wide range of engines from various manufacturers. (It can be widely used not only for Japanese cars but also for other cars.)



· When using this product, do not tighten it with a torque wrench. The torque wrench may be damaged by setting torque too exceeded.

Usage rules

1. Tighten the head bolts with a torque wrench to the specified torque in advance.



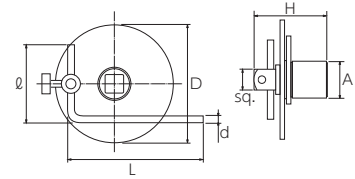
2. Set the angle torque gauge and use the L-shaped stopper to stop it from turning.



3. Set the gauge needle to the zero point.



4. Tighten to the specified angle using a breaker bar, etc.



Torque wrench

➔ P.423-433



Digital ratchet

➔ P.410-422



F Oil pan removal

F1 Seal cutout

OIL PAN SEAL CUTTER

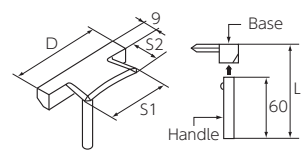


No.	D	L	S1	S2	Weight(g)	⊖
TAG-48	70	68	48	24	180	10

- Used to cut the seal packing when removing the oil pan.
- The cutter is arc-shaped and can be driven into the seal area.
- The side cutter is sharply angled so that the base is pressed against the side of the cutter and can be moved.
- The shape of the cutter, large striking surface, and detachable handle allow safe operation.
- The oil pan can be easily removed in tight spaces by removing the handle.



· Wear protective goggles when working.



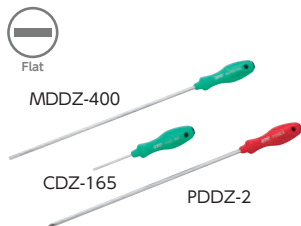
F2 Sticker removal

Ceramic Scraper

➔ P.391-392



CARBURETOR SCREWDRIVER SET [3pcs.]

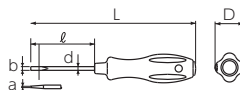


No.	Weight(g)	⊞							
CD3	230	5							
Set contents									
Plastic grip screwdriver (long flat)	MDDZ-400								
Cab Jet screwdriver	CDZ-165								
Plastic grip screwdriver (long cross)	PDDZ-2								
No.	Type	a	b	d	D	L	ℓ	Weight(g)	⊞
MDDZ-400	Flat	0.7	5.5	5.5	27	383	288	90	5
CDZ-165	Flat	0.7	3.5	3.5	27	155	60	40	5
PDDZ-2	Cross No. 2	—	—	6	27	383	288	100	5

* Screwdriver for adjustment.



Do not use on anything that has electricity running through it.



G Idle adjustment

Tightening and loosening of adjustment screw



QUICK CONNECTOR PLIERS



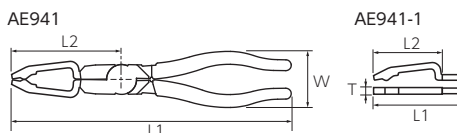
AE941



AE941-1

No.	L1	L2	W	Weight(g)	⊞
AE941	206	80	47	195	1

- Special tool for unlocking and removing urea water piping connectors (quick connectors 7.89mm and 9.49mm) used on medium and large buses and trucks.
- This prevents the connector from being pushed too far when unlocking it, thus preventing damage to the connector while performing the work.



Spare parts

No.	Description	L1	L2	T	Weight(g)	⊞
AE941-1	Quick connector pliers claw A	65	49	4.5	7	1

* Hexagon socket set screws are not included.

H Exhaust gas purification system disassembly and inspection

Connector removal H1



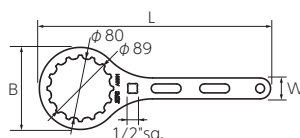
Using image

BOX END PCV FILTER CAP WRENCH



No.	L	B	W	φ(Inside diameter)	Weight(g)	⊞
AE601	290	110	28	89	390	1

- Special tool for removing closed ventilator caps used on Hino Motors vehicles (including OEM vehicles).
- Closed ventilator caps that cannot be turned by hand because they are stuck with oil, etc. can be removed.



cap removal H2



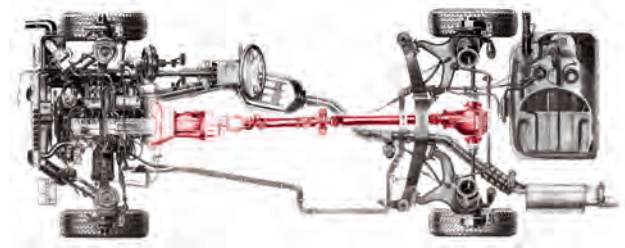
Using image

· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with should be ordered after checking stock.



523 A Clutch disassembly

523 B Transmission and
differential oil change



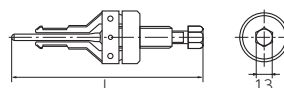
Major inspection and maintenance of the power transmission system includes disassembly and assembly of the clutch, transmission, and differential oil replacement.

PILOT BEARING & BUSH PULLER



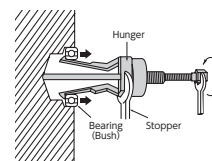
No.	Range of use	L	Weight(g)	☞
PBU-1219	Inner diameter ϕ 12-19	145	215	10

- For pulling out the pilot bearing bushings of the flywheel.
 - Compact, lightweight, easy to use, and easy to handle for improved workability.
 - Well clawed and can be serviced on the car.
 - Applicable to a wide range of car models.
 - * Repair parts are available.
- For details, please contact our distributors.



A Clutch disassembly

Detach the pilot bearing **A**



3/8"sq. DRAIN PLUG SOCKET

3/8" sq.



POWERFIT



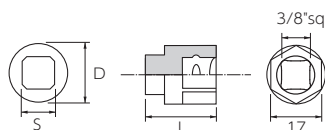
AC302-08



AC302-10

No.	S	D	L	Weight(g)	☞
AC302-08	8.2	20	25	31	10
AC302-10	10.0	20	23	31	10

- AC302-10 is for tightening and loosening of drain (filler) plugs of transmission and differentials used in automobiles.
- AC302-10 is a drain (filler) plug for the transmission and differential of Suzuki vehicles and their OEM models.
- AC302-08 is for tightening and loosening of drain bolts with 8mm square holes used in French cars, etc.
- The 17mm hexagonal drive enables work in tight spaces with obstructions.
- The square convexity of 10.0 mm ensures stable tightening and loosening of the drain plug.
- The drive size is 3/8"sq. which is the majority in automobile maintenance, eliminating the need to change tools and improving work efficiency.



B Transmission and differential oil change

Drain plug removal **B**



Using image

1/2"sq. DRAIN PLUG SOCKET SET [3pcs.]

1/2" sq.

3 pcs.



POWERFIT



No.	Weight(g)	☞
ATC3013	245	1

Set contents

1/2"sq. drain plug socket	AC301-10,13,17
---------------------------	----------------

- For tightening and loosening of drain (filler) plugs for transmissions and differentials used in Nissan and Subaru cars.
- The 1/2" sq. can be used for drain plugs that are tightened with high torque.
- The hexagonal shape of the body allows the use of a 24 mm Box end wrench, etc.
- * AC301-10 is for Nissan car drain plugs with 10.5mm width. Cannot be used with drain plugs of other manufacturers width of 10 mm.

1/2"sq. DRAIN PLUG SOCKET

1/2" sq.



POWERFIT



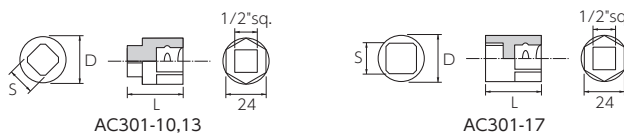
AC301-10

AC301-13

AC301-17

No.	S	D	L	Weight(g)	☞
AC301-10	10.5	26.5	31	70	10
AC301-13	13.1	26.5	31	85	10
AC301-17	17.3	26.5	32	90	10

- For manual transmissions mainly for Nissan FWD vehicles. (AC301-10)
- Mainly for Nissan manual transmissions and rear differentials, Subaru 4WD rear differentials. (AC301-13)
- Mainly for FR manual transmissions of classic Nissan RWD vehicles. (AC301-17)
- * AC301-10 is for Nissan car drain plugs with 10.5mm width. Cannot be used with drain plugs of other manufacturers width of 10 mm.



AC301-10,13

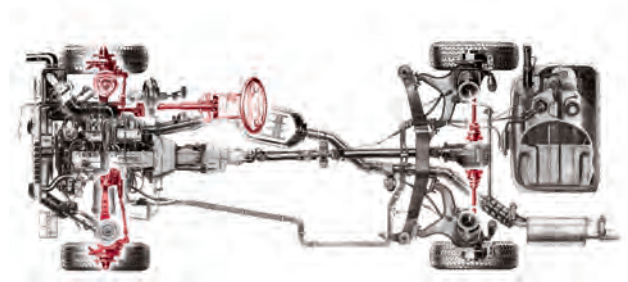
AC301-17

• Function mark is indicated under the product name. For the details, please refer to P.004-005.
 • Products marked with should be ordered after checking stock.



STEERING

- 525 A ADAS adjustment
- 526 B Side Slip Adjustment
- 527 C Axle disassembly and assembly
- 529 D Lower arm disassembly and assembly
- 533 E Drive shaft disassembly and assembly
- 537 F Extracting the horsing nut and hub
- 539 G Bearing grease charge



Major inspection and maintenance of the steering system includes sideslip adjustment, hub bearing replacement, and driveshaft disassembly and assembly.

MAGNET TARGET SHEET SET

No.	contents	Size of each sheet	Weight(kg)	☐
ATT120	12	W1,840×H300	18	1

- Target sheet for the front camera required for the calibration of the collision damage mitigation brake.
- The set includes 12 types of target sheets for 7 major Japanese car makers.
- The surface of the target sheet has a matte finish without gloss. The material is stain-resistant PVC.
- The target pattern used for one unit is printed on a single sheet.
- Some marks must be hidden during sequential recognition.
- Target stand set is sold separately.

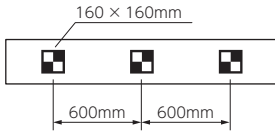


· The person who has the qualification required by laws and regulations shall fully understand the information (maintenance instructions, etc.) provided by the car manufacturer and work on the car.

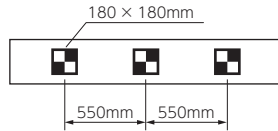
Set contents

TOYOTA

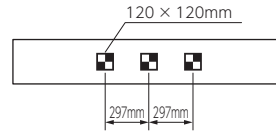
Magnetic target sheet (TOYOTA 1) No.AT120-011



Magnetic target sheet (TOYOTA 2) No.AT120-012

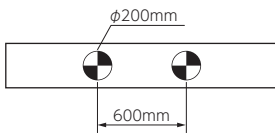


Magnetic target sheet (TOYOTA 3) No.AT120-013

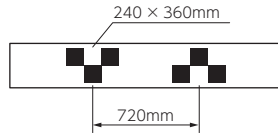


NISSAN

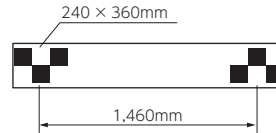
Magnetic target sheet (NISSAN 1) No.AT120-041



Magnetic target sheet (NISSAN 2) No.AT120-042

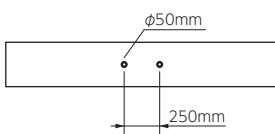


Magnetic target sheet (NISSAN 3) No.AT120-043

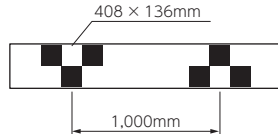


MAZDA

Magnetic target sheet (MAZDA 1) No.AT120-081

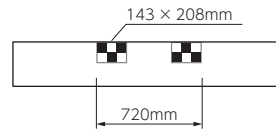


Magnetic target sheet (MAZDA 2) No.AT120-082



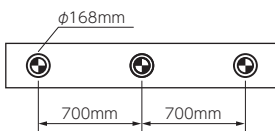
DAIHATSU

Magnetic target sheet (DAIHATSU 1) No.AT120-031



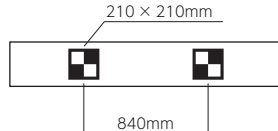
HONDA

Magnetic target sheet (HONDA 1) No.AT120-071



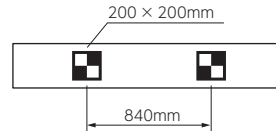
SUZUKI

Magnetic target sheet (SUZUKI 1) No.AT120-091



MITSUBISHI

Magnetic target sheet (MITSUBISHI 1) No.AT120-051



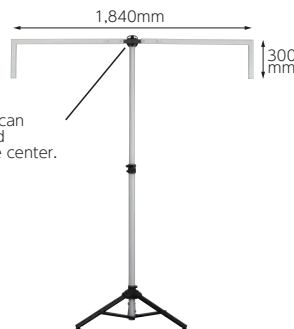
TARGET STAND SET

No.	Weight(kg)	☐
ATT210	9.5	1

- Stand and frame set exclusively for magnetic target sheet set (No.ATT120).
- The target stand set is made of aluminum, lightweight, and can be carried even with the magnetic target sheet attached, making it easy to move to suitable measurement location.
- The target frame can be attached to the target stand with a single bolt.
- Stand height: approx. 1,350 to 2,240 mm.
- Frame length: W1,840mm×H300mm.
- Load capacity: 46kg.



The target frame can be easily adjusted horizontally in the center.



Maximum height 2,240mm to Minimum height 1,350mm



Magnet target sheet attachment image

A ADAS adjustment

ADAS adjustment **A**



By making the entire backside magnetic, it can be attached to a dedicated target stand set (No. ATT210) or a whiteboard without sagging, and its position can be easily adjusted.

B SideSlip Adjustment

B1 Side slip inspection

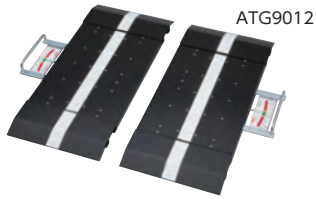


Example of use (ATG92)

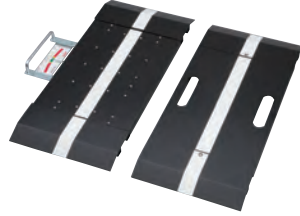


How to use it

SIDE SLIP BOARD SET



ATG9012



ATG92

For quick and easy inspection for sideslip.

No.	Weight(kg)	☐	
ATG9012	43	1(2 units)	

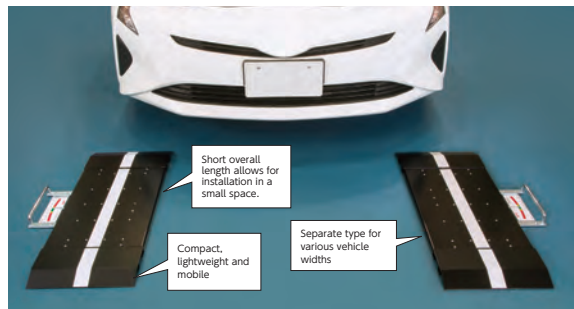
Set contents			
Side slip board	AG901	(2 units)	

• With both meters, both sides can be checked at the same time.

No.	Weight(kg)	☐	
ATG92	31.5	1(2 units)	

Set contents			
Side slip board	AG901		
Step board	AG902		

- This is a simple tester that displays the amount of wheel skid (sideslip) caused by driving by simply passing the front wheels of a vehicle, and checks the balance between toe-in and camber of the front wheels of the vehicle.
- For passenger cars and 2-ton class trucks.
- Vehicles with tires 280 mm or less in width.
- Simple type that requires no installation work. Compact, lightweight, and movable.
- Independent left and right sides allow for compatibility with vehicles of various widths.
- Short overall length allows for installation in a small space.
- Low body height (28mm) with a slope for smooth entry and exit.
- The maximum value displayed remains as is.
- To adjust the zero point, simply return the needle with a finger.
- The display range is as wide as 0 to 20 mm/m for both IN and OUT, and is also compatible with non-Japanese cars.



Example of use (ATG9012)

Side slip board

No.	Weight(kg)	☐	
AG901	21.5	1	

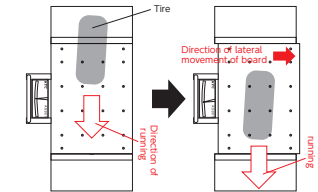
Main body	× 1		
Slope for side slip board	× 2		

Step board

No.	Weight(kg)	☐	
AG902	10	1	

Main body	× 1		
Slope for side slip board × 2	Hexagon socket bolt (M5×10mm) × 2		

Measurement Mechanisms



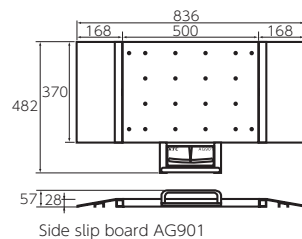
When a tire passes over the board, the amount of sideslip of the tire is detected by the lateral movement of the board, and the value is displayed with a needle.

* This product is not an automobile inspection device.

* Use on a flat surface.

* Repair parts are available. Please contact our distributors for details.

- Always read the "Instruction Manual" carefully before use.
- This product should be used by qualified personnel (auto mechanics or those with equivalent qualifications).
- The use of the product shall be limited to its original purpose of use.
- Do not disassemble or modify.



Side slip board AG901

specifications

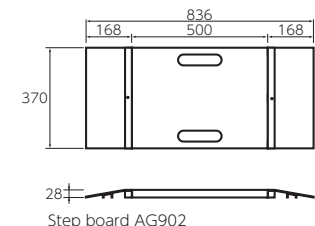
Allowable wheel load*	750kg (Shaft weight 1500kg)
Display range	0 to 20 (mm/m) for both IN and OUT (Min. scale 1mm/m)
Display method	Analog, needle-mounted (1 hand)
Type	Right and left separated

* Weight on one wheel. Figures in parentheses () represent weight on both wheels.

* This product is not an automobile inspection device.



CAUTION

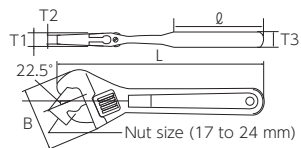


Step board AG902

* AG902 (step board) does not have the side slip indicator function; use with AG901 (side slip board).

• Overhaul can be done only by the qualified person.

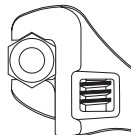
ADJUSTABLE TIE ROD LOCK NUT WRENCH



No.	B	T1	T2	T3	L	l	Weight(g)	☐
AS701	66	15	10	17	220	95	500	5

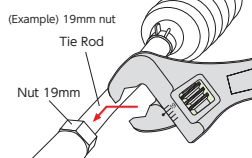
- For tightening and loosening of tie rod end lock nuts for automobiles.
- Sideslip adjustment work for vehicle inspections and tire changes.
- Replacement of rack boots.
- Lock nuts for tie rod ends with hexagonal with width of 17 to 24 mm. (Covers most types of passenger cars)
- The wrench shape holds the corner of the nut firmly, enabling secure tightening and loosening of the nut without slipping.
- Wide grip to prevent hand pain even when force is applied.
- The overall length is optimum so as not to interfere with surroundings when steering wheel is turned on the ground. Can be operated without removing the tire.
- The size scale is displayed so that preset size nut can be used.

Holds nut corners securely



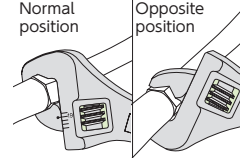
Wrench does not slip and can be used for tightening and loosening nuts securely. The wrench shape holds the corner of the nut.

Fine design for easy setting to the nut



With the nut set to the correct size for the nut, it can be smoothly inserted and removed without interfering with the tie rods.

Angled head



The head is angled and can be used in both forward and reverse directions, so it can be used for different tasks.

B SideSlip Adjustment

Sideslip Adjustment **B2**



Wheel Cap Wrench

➔ P.548



Aluminum wheel center cap wrench

➔ P.548



Impact wrench

➔ P.442-444



Wheel nut socket for impact wrench

➔ P.548-550



Cross rim wrench

➔ P.555



C Axle disassembly and assembly

Wheel removal **C1**

Lock nut chisel

➔ P.533



Hub nut socket

➔ P.533-534



Hub nut removal **C2**

Socket

Disk caliper removal **C3**

Tie Rod End Separator

➔ P.529



Ball Joint Separator

➔ P.529



Box end wrench

➔ P.323



Breaker bar

➔ P.208-267



Tie Rod Separation **C4**

Plastic Hammer

➔ P.386



Axle assembly removal **C5**

SNAP RING PLIERS FOR HUBS

Repair
Spare parts

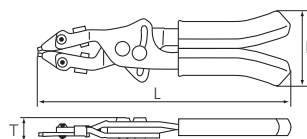


No.	D	T	L	Weight(g)	☐
AS307	58.5	18.2	228	310	5

- Installation and removal of snap rings used in automobile hubs.
- Snap ring pliers tip opening range (min.10 mm to max.36 mm)
- Stepless automatic locking mechanism is adopted. Can be locked at any position.
- Unlocking is as simple as opening the grip.
- The claw can be easily replaced.
- Compatible with snap rings with holes as well as notched type rings (TOYOTA).



Applicable snap ring shape



Spare parts

No.	Description	Contents	Weight(g)
AS3072	Tip claw	1 claw each side, 2 mounting screws	32

Snap ring removal **C6**



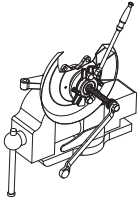
• Function mark is indicated under the product name. For the details, please refer to ➔ P.004-005.
• Products marked with ⚙ should be ordered after checking stock.



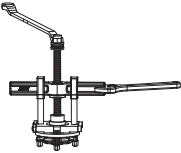
C Axle disassembly and assembly

C7 Axle Assy Disassembly and assembly

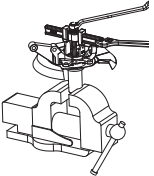
(1) Extracting the hub



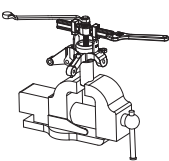
(2) Extracting the bearing inner race



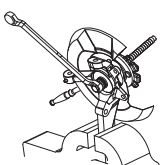
(3) Extraction of wheel bearings



(4) Pressing in wheel bearings



(5) Pressing in the hub



How to use it

MULTI PULLER



Spare parts

Usage

Axle	Disassembly and assembly of hubs and knuckles Disassembly and assembly of bearing races Disassembly and assembly of wheel bearings
Steering	Steering wheel extraction
Differential	Extraction of companion flange
Transmission	Bearing and gear removal
Other	Extraction of various bearings and gears

Adoption · Mainly applicable to axles of FWD passenger cars.
· Applied to steering wheels, differential companion flanges, transmission bearings and gears for passenger cars.

Maximum working load of the product in manual operation	19,600 N (2t)
Number of hub bolts	4 to 5 holes
Wheel bearing diameter	φ64~φ84
Bearing race diameter	φ47~φ63
Hub holder 1	φ68~ 84 mm
Hub Holder 2	φ76~106 mm

Feature · Disassembly and assembly of axles can be done with a single set.
· Compatible with both types with hub bearings on the inner side and outer side.
· Hydraulic presses can be used, reducing labor and time.
· The arms can be detached and attached by a fixed ball.
· The center bolt is bearing-equipped and has light drive torque.
· Applicable to the rear end of FR and 4WD vehicles.
· In addition to axles, a wide range of applications include steering wheels, differential companion flanges, transmission bearings, and gears.
· By inter-changing the set, it can be used for various bearings of not only cars can be used for gear extraction.



No.	Weight(kg)
AS301	17

Set contents		
Center bolt Assy	Hexagonal with width 22 mm overall length 280 mm (M18×2.0)	1
Hunger	270 × 38 × 37 mm	1
Slide arm	60.5 × 30 × 20 mm	2 pcs.
Arm M	φ 16 × 105 mm	2 pcs.
Hub plate	φ 154 × 24 mm (With screw: M18 × 2.0, 1/2"sq.)	1
Hub holder 1 Assy	φ 70 × 34 mm (with wing bolt (M6))	1
Hub Holder 2 Assy	190 × 190 mm (with hexagon socket adjusting bolt (M10))	1
Race shaft	φ 55 × 114 mm (Screw: M18 × 2.0)	1
Plates (4 types)	A(φ79 × 15) B(φ71 × 15) C(φ67 × 15) D(φ60 × 15)	1 each
Press hanger Assy	150 × 50 × 25 mm (with hexagonal bolt (M10) + washer)	1
Press arm	φ 16 × 75 × 35 mm	2 pcs.
Hanger nut	φ45 × 18mm (Screw: M18 × 2.0)	1
Lace holder Assy	90 × 140 mm (with hexagon socket adjusting bolt (M10))	1
Plate bolt	Hexagonal with width 22mm × Total length 34mm (M18 × 2.0)	1
Arm L	φ 16 × 330 mm	2 pcs.
Claw Assy	27 × 25 × 12 mm	2 pcs.
Bolt for M8	M8 Hexagon socket head cap bolt (with nut and washer)×100 mm	2 pcs.
Bolt for M10	M10 Hexagon socket head cap screw (with washer)×100 mm	2 pcs.

Spare parts * The price shown is for "quantity required 1".

Center bolt Assy	No. AS301-1 Required 1 M18×2.0 Screw, Over-all length 280mm, Hexagonal with width 22mm	Hub Holder 2 Assy	No. AS301-7 Required 1 190×190mm, M10 Hexagon socket head cap screw with (Hex nut)	Press hanger Assy	No. AS301-13 Required 1 150×64×31mm, M10 Hexagon bolt with (Washer)	Adjusting bolt for race holder	No. AS301-17-45 Required 2 M10 Hexagon socket head cap screw Over-all length 140mm
Hunger	No. AS301-2 Required 1 270×38×37mm	Adjusting bolt for hub holder 2	No. AS301-7-45 Required 2 M10 Hexagon socket head cap screw Over-all length : 140mm	Press hanger plate	No. AS301-13-2 Required 1 150×31×18mm	Plate bolt	No. AS301-18 Required 1 M18×2.0 Screw, Over-all length 34mm, Hexagonal with width 22mm
Slide arm	No. AS301-3 Required 2 61×30×20mm	Race shaft	No. AS301-8 Required 1 M18×2.0 Screw, φ55×114mm	Hexagon bolts set	No. AS301-13-34 Required 1 M10 Hexagon bolt	Arm L	No. AS301-19 Required 2 φ16×330mm
Arm M	No. AS301-4 Required 2 φ16×105mm	Plate A	No. AS301-9 Required 1 φ79×15mm	Press arm	No. AS301-14 Required 2 16×75×35mm	Claw Assy	No. AS301-20 Required 2 27×25×12mm
Hub plate	No. AS301-5 Required 1 Drive size 12.7sq M18×2.0 Screw, φ154×24mm	Plate B	No. AS301-10 Required 1 φ71×15mm	Hanger nut	No. AS301-15 Required 1 M18×2.0 Screw, φ45×18mm	Bolt set for M8	No. AS301-2125 Required 2 M8 Hexagon socket head cap screw Thread length 80mm
Hub holder 1 Assy	No. AS301-6 Required 1 φ70×34mm, M6 with wing bolt	Plate C	No. AS301-11 Required 1 φ67×15mm	Hexagon bolt for hanger nut	No. AS301-16 Required 2 M5×10mm	Bolt set for M10	No. AS301-2345 Required 2 M10 Hexagon socket head cap screw Thread length 80mm
with wing bolt	No. AS301-6-6 Required 1 M6 with wing bolt 10mm	Plate D	No. AS301-12 Required 1 φ60×15mm	Lace holder Assy	No. AS301-17 Required 1 90×140mm M10 Hexagon socket head cap screw with (Hex nut)		

· Overhaul can be done only by the qualified person.

Wheel Cap Wrench

➔ P.548



Aluminum wheel center cap wrench

➔ P.548



Impact wrench

➔ P.442-444



Wheel nut socket for impact wrench

➔ P.548-550



Cross rim wrench

➔ P.555



D Lower arm disassembly and assembly

Wheel removal D1

(1) Removal of wheel caps

(2) Wheel nut removal

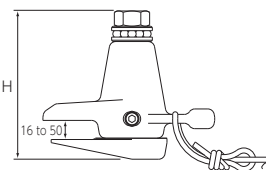
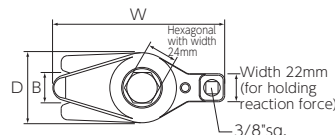
TIE ROD END SEPARATOR (OFFSET TYPE)

3/8" sq.



No.	W	D	B	H	Weight(kg)	⊖
AS201	135	55	24	116	1.6	1

- Separate tie rod ends.
- High durability design.
- Offset shape improves durability.
- Rated output is set to 15 kN (1.5 t), maximum 30 kN (3 t).
- For a wide variety of car models. (Aperture range 16mm to 50mm)
- Applicable to tie rod ends for passenger cars.
- Easy operation and increased efficiency.
- Easy to install and remove only by operating the thrust bolt.
- Easy work with drive tools.
- Square drive angle 3/8"sq. Capable of holding reaction force with drive tool.
- The "anti-drop-off strap" is provided for safety.



* Repair parts are available. Please contact our distributors for details.

Application table

Work site	Car model	Light weight vehicle (KEI car)	Passenger car
		●	●
Suspension	Upper	●	△
	Lower	×	×

Tie Rod Separation D2



BALL JOINT SEPARATOR (OFFSET TYPE)

3/8" sq.

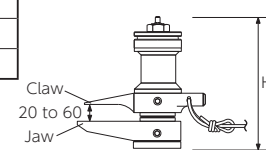
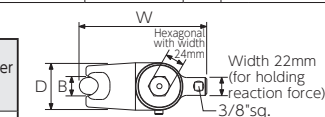


No.	W	D	B	H	Weight(kg)	⊖
AS202A	165	70	24	160~200	3	1

Application table

Work site	Car model	Light weight vehicle (KEI car)	Passenger car
		●	●
Suspension	Upper	●	●
	Lower	●	×

- Ball joint separation.
- Strong design with rated output of 2.5t
- Easy to install and remove only by operating the thrust bolt.
- Easy work with drive tools.
- Square drive angle 3/8"sq. Capable of holding reaction force with drive tool.
- Claw and jaw can be interchangeable according to the work environment.
- The "anti-drop-off strap" is provided for safety.



* Repair parts are available. Please contact our distributors for details.

Spare parts

No.	Name	Weight(kg)	⊖
AS202-A24	Claw	0.7	1
AS202-J	Jaw	0.7	1



AS202-A24



AS202-J



Example of interchangeable claw and jaw

· Function mark is indicated under the product name. For the details, please refer to ➔ P.004-005.
 · Products marked with ⚙️ should be ordered after checking stock.



D Lower arm disassembly and assembly

D3 Ball joint locknut disassembly and assembly

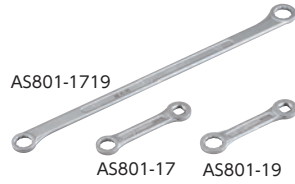


For loosening only



For tightening only

BALL JOINT LOCK NUT WRENCH SET



AS801-1719

AS801-17

AS801-19

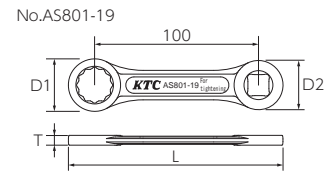
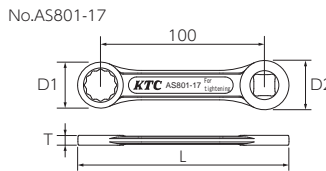
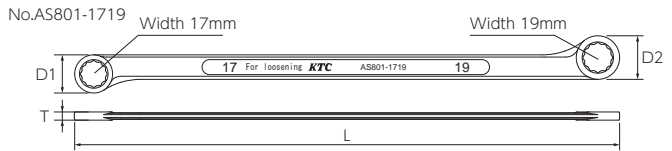
No.	Weight(g)	⊞	
ATS8013	428	10	

Set contents			
Ball joint lock nut wrench for loosening	AS801-1719		
Ball Joint Lock Nut Wrench for tightening	AS801-17, AS801-19		

- Usage · Installation and removal of lock nuts of ball joints.
- Feature · Set includes a long wrench for loosening and two sizes of wrenches for tightening with 1/2"sq. insert angle.
- Both loosening and tightening wrenches are forged and molded to a thickness of 6 mm. Ideal for vehicles with a narrow gap between the locknut and driveshaft.
 - Power-fit shape is adopted on the bore side and the drive size side. More secure loosening and tightening operations are possible.
 - The AS801-1719, designed exclusively for loosening, is a long type with a high force capacity. Both ends are offset by 10° with different runout angles on the back and front sides to secure working space.
 - The AS801-17 and AS801-19, which are for tightening only, have a 1/2"sq. inlet angle to enable tightening torque control using a torque wrench. The effective length is 100 mm, allowing easy torque conversion.

Spare parts

No.	D1	D2	L	T	Drive size	Effective length	Weight(g)	⊞	
AS801-1719	28	32	400	6	—	—	252	1	
AS801-17	28	30	129	6	1/2"	100	86	1	
AS801-19	32	30	131	6	1/2"	100	90	1	



Work can be performed without removing the drive shaft!



General Box end wrench



This product(AS801-1719)

Forged molding realizes a thickness of 6 mm. Even in vehicles with a narrow gap between the ball joint lock nut and driveshaft, the lock nut can be removed and attached.

Tightening torque for ball joint lock nuts can be controlled!



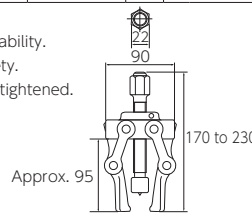
The special wrench for tightening has a 1/2"sq. drive size, which enables torque management using a torque wrench.

· Overhaul can be done only by the qualified person.

PITMAN ARM PULLER



No.	Applicable Vehicles	Weight(kg)	☐	
PAU-3747	Small passenger cars, cargo vehicles, tractors	1.5	1	
Usage • Pitman arm pull-out operation. Feature • The claw is forged and heat-treated for durability. • The "anti-drop-off strap" is provided for safety. • The claw is designed to bite inward as it is tightened. Applicable • Pitman outer diameter $\phi 37$ to $\phi 47$				



D Lower arm disassembly and assembly

Pitman arm separation D4



BALL JOINT BOOT TOOL SET [13pcs.]

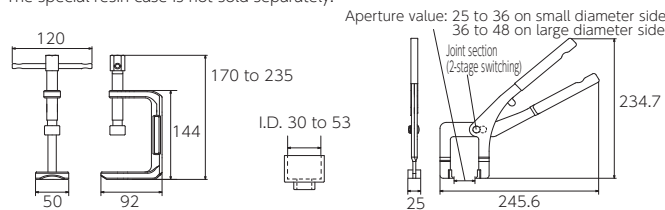
13 pcs.



No.	Weight(kg)	☐	
ATS4113	4.8	1	

Set contents	
Ball Joint Boot Inserter Body	AS411
Ball Joint Boot Inserter Attachment	AS411-30D,30H,32,34,36,38,40,42,44,50,53
Ball Joint Boot Pliers	AS412

- Special resin case
- This tool is specially designed for removal and press fitting of ball joint boots of lower arms and tie-rod ends.
 - In addition to the conventional product (ATS4111), an attachment (AS411-30D, 30H) with an inner diameter of 30 mm, suitable mainly for Daihatsu and Honda small cars, has been added. Enable adaptation to a wide range of boots for small cars.
 - The ball joint boot pliers have a unique tip shape that enables easy and reliable boot removal.
 - The screw clamps ensure safe and reliable press-fitting operations.
 - Applicable boots are press-fit (caulking) type excellent parts.
 - With a special plastic case.
 - * The special resin case is not sold separately.



Boot replacement D5



How to use it

BALL JOINT BOOT INSERTER SET [12pcs.]

12 pcs.



No.	Weight(kg)	☐	
ATS4112	4.2	1	

Set contents	
Ball Joint Boot Inserter Body	AS411
Ball Joint Boot Inserter Attachment	AS411-30D,30H,32,34,36,38,40,42,44,50,53

- Special resin case
- For press fitting ball joint boots of lower arms and tie rod ends. The dedicated attachment (11 sizes) is attached to the main body of the ball joint boot inserter.
 - Applicable boots are press-fit (caulking) type.
 - With a plastic case.
 - Ball joint boot inserter body (AS411) and ball joint boot inserter attachment (AS411-30D, 30H, 32-53) are available as Spare parts.
 - * The special resin case is not sold separately.

Spare parts (ATS4113 / ATS4112)

No.	Description	Inside diameter	Weight (g)
AS411	Ball Joint Boot Inserter Body	-	845
AS411-30D	Ball Joint Boot Inserter Attachment	$\phi 30$	155
AS411-30H		$\phi 30$	155
AS411-32		$\phi 32$	126
AS411-34		$\phi 34$	134
AS411-36		$\phi 36$	142
AS411-38		$\phi 38$	172
AS411-40		$\phi 40$	159
AS411-42		$\phi 42$	216
AS411-44		$\phi 44$	177
AS411-50		$\phi 50$	282
AS411-53		$\phi 53$	270
AS412	Ball Joint Boot Pliers (Included only in ATS4113)	-	600



• Function mark is indicated under the product name. For the details, please refer to P.004-005.
 • Products marked with ⚠ should be ordered after checking stock.



D5 Boot replacement

BALL JOINT BOOT TOOL SET [11pcs.]

11 pcs.



No.	Weight(kg)	⊞	
ATS4111	3.9	1	
Set contents			
Plastic hard case	W385×D205×H140		
Ball Joint Boot Inserter Body	AS411		
Ball Joint Boot Inserter Attachment	AS411-32,34,36,38,40,42,44,50,53		
Ball Joint Boot Pliers	AS412		

- Remove ball joint boots and press-fit boots.
- * Applicable boots are press-fit type of OEM parts.
- Ball joint boot inserter: AS411
- 9 sizes of attachments to fit boots of small to standard passenger cars.
- Can be press-fitted easily and reliably.
- Ball Joint Boot Pliers: AS412
- The boot-specific design allows for easy and reliable boot removal.
- Special claw is used to float the boot press-fit part with a single action.

BALL JOINT BOOT INSERTER SET [10pcs.]

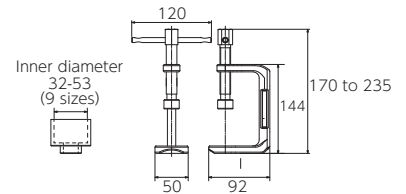
10 pcs.

Repair Spare parts



No.	Weight(kg)	⊞	
ATS4110	3.3	1	
Set contents			
Plastic hard case	W385×D205×H140		
Ball Joint Boot Inserter Body	AS411		
Ball Joint Boot Inserter Attachment	AS411-32,34,36,38,40,42,44,50,53		

- Press-fit ball joint boots.
- * Applicable boots are press-fit type of OEM parts.
- 9 sizes of attachments to fit boots of small to standard passenger cars.
- Can be press-fitted easily and reliably.



AS411-32~53

AS411

Spare parts (ATS4111 / ATS4110)

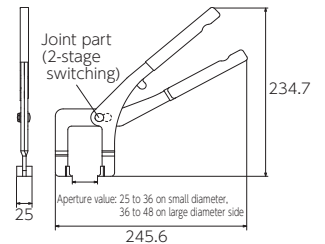
No.	Description	Inside diameter	Weight (g)
AS411	Ball Joint Boot Inserter Body	-	845
AS411-32	Ball Joint Boot Inserter Attachment	φ 32	128
AS411-34		φ 34	136
AS411-36		φ 36	144
AS411-38		φ 38	174
AS411-40		φ 40	161
AS411-42		φ 42	214
AS411-44		φ 44	179
AS411-50		φ 50	287
AS411-53		φ 53	273
AS412	Ball Joint Boot Pliers (Included only in ATS4111)	-	600

BALL JOINT BOOT PLIERS

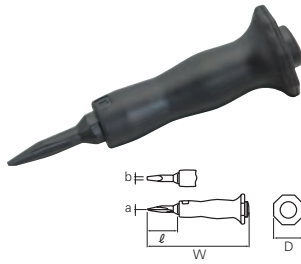


No.	Weight(kg)	⊞	
AS412	0.6	1	

- Remove the ball joint boot.
- The boot-specific design allows for easy and reliable boot removal.
- Special claw is used to float the boot press-fit part with a single action.



LOCK NUT CHISEL



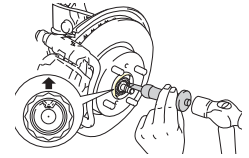
No.	a	b	D	W	ℓ	Weight(g)	☐
AS404	0.4	4.5	50	173	51	350	10

- Remove and install the drive shaft lock nut.
- Most of the crimp-type locknuts used on driveshafts.
- Can be used for tightening and crimping locknuts!
- The boat-shaped tip allows for clean and easy crimping by simply pressing down and striking the tip.
- The grip is made of rubber for easy gripping and has a flange to prevent accidental hitting of the hand.

CAUTION ⚠ Wear protective goggles when working.

E Drive shaft disassembly and assembly

Lock nut removal **E1**



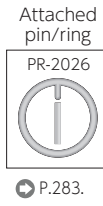
1/2"sq. HUB SOCKET SET FOR IMPACT WRENCH [5pcs.]



No.	Weight(kg)	☐
ATS3085	1.8	1

Set contents	
Hub Bolt Socket	AS308-E24,24W
Hub nut socket	AS308-30W,32W,36W

- Loosening of front (rear) axle hub nuts of double hexagonal shape or E-type TORX shape used on TOYOTA and European vehicles with an impact wrench.
- The bore depth and circumference dimensions are designed to match the hub.
- Semi-deep type that does not interfere with drive shaft threads.



Disassembly and removal of driveshafts and hubs **E2**



1/2"sq. HUB SOCKET SET FOR IMPACT WRENCH [3pcs.]



No.	Weight(kg)	☐
ATS3083	1.1	1

Set contents	
Hub Bolt Socket	AS308-24W,E24
Hub nut socket	AS308-36W



1/2"sq. IMPACT SOCKET SET FOR HUB NUT [2pcs.]



No.	Weight(g)	☐
ATS3082	730	1

Set contents	
Hub nut socket	AS308-30W,32W

- Loosening of double hexagonal front (rear) axle hub nuts used on TOYOTA vehicles with an impact wrench.
- Double hexagonal sockets for impact wrenches to match the shape of hub nuts.
- The bore depth and outer diameter are thin-walled to match the shape of the hub nut.
- Semi-deep type with a total length of 75mm that does not interfere with the drive shaft threads.

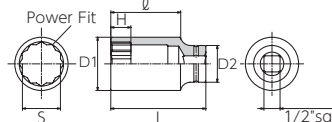
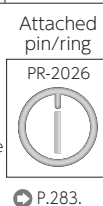


1/2"sq. IMPACT SOCKET FOR HUB NUT



No.	S	D1	D2	H	L	ℓ	Weight(g)	☐
AS308-30W	30	42	29	15	75	55	360	1
AS308-32W	32	44	29	15	75	55	370	1
AS308-36W	36	48	29	28	75	47	500	1

- Loosening of double hexagonal front (rear) axle hub nuts used on TOYOTA vehicles with an impact wrench.
- Double hexagonal sockets for impact wrenches to match the shape of hub nuts.
- The bore depth and outer diameter are thin-walled to match the shape of the hub nut.
- Semi-deep type with a total length of 75mm that does not interfere with the drive shaft threads.



• Function mark is indicated under the product name. For the details, please refer to ➔ P.004-005.
• Products marked with ⚠ should be ordered after checking stock.



E2 Disassembly and removal of driveshafts and hubs

1/2"sq. IMPACT SOCKET FOR HUB BOLT



No.	S	D1	D2	H	L	ℓ	Weight(g)	⊠
AS308-24W	24	34	29	25	80	52	280	1
AS308-E24	E24	29	—	—	80	—	290	1

- Loosening of front (rear) axle hub nuts of double hexagonal shape or E-type TORX shape used on European vehicles with an impact wrench.
- The bore depth and outer diameter are thin-walled to match the shape of the hub nut.
- Semi-deep type with an overall length of 80mm that does not interfere with the drive shaft threads.

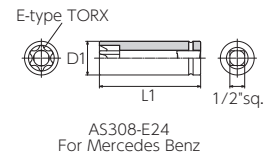
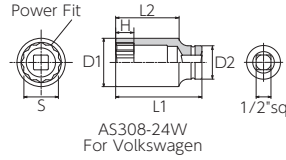
Attached pin/ring



PR-2026

Spare parts

No.	Description	Contents	⊠
PR-2026	Pin and ring set	5 each	1

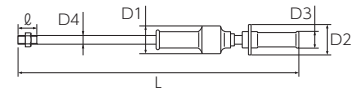


SLIDE HAMMER PULLER



No.	D1	D2	D3	D4	L	Shocker weight	ℓ	Screw Size	Weight (kg)	⊠
AUD3	60	68	30	14	580	1.2kg	52	W9/16-12	2.7	1
AUD4	85	68	30	18	675	3.5kg	60	M18×2.0	5.5	1

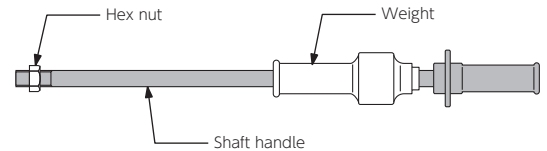
- For disassembly of automobile undercarriages and sheet-metal work.
- For passenger cars and small trucks.
- Safer. Newly designed to prevent hands from being caught.
- Slide hammer puller AUD5 with a shocker weight of 5.3 kg and attachments for sheet metal work P.585-587.



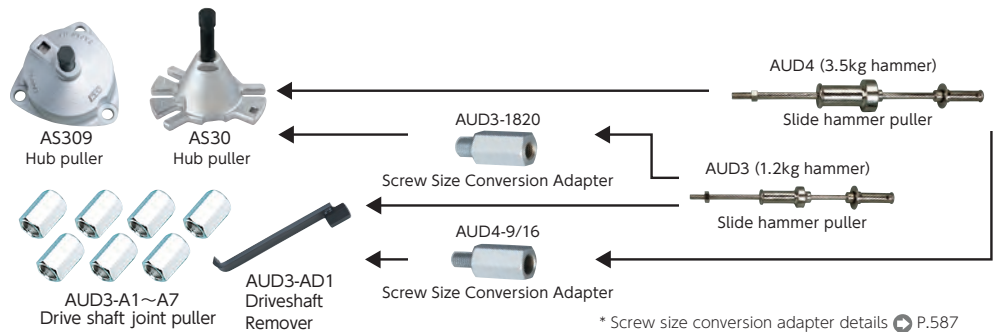
- When using a slide hammer, be careful of the working posture and hand position at all times.
- Wear protective goggles when working.

Spare parts: Exclusive for KTC slide hammer puller

No.	Description	Adoption	⊠
AUD3-1	Shaft handle	For AUD3	1
AUD3-6	Hex nut	For AUD3	1
AUD3-7	Weight	For AUD3	1
AUD4-1	Shaft handle	For AUD4	1
AUD4-6	Hex nut	For AUD4	1
AUD4-7	Weight	For AUD4	1



Combination example



* Screw size conversion adapter details P.587

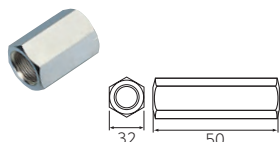
SLIDE HAMMER PULLER ATTACHMENT SET



No.		☐	
ATUD307		1	
Set contents			
Drive shaft joint puller for slide hammer puller	AUD3-A1, A2, A3, A4, A5, A6, A7		

* Please select the size after checking the maintenance manual, etc.

SLIDE HAMMER PULLER ATTACHMENT

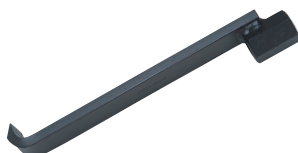


No.	Screw size Working side	Screw size Puller side	☐	
AUD3-A1	M18×1.5	W9/16-12	1	
AUD3-A2	M19×1.5	W9/16-12	1	
AUD3-A3	M20×1.0	W9/16-12	1	
AUD3-A4	M20×1.5	W9/16-12	1	
AUD3-A5	M22×1.0	W9/16-12	1	
AUD3-A6	M22×1.5	W9/16-12	1	
AUD3-A7	M24×1.5	W9/16-12	1	

· Attachment for slide hammer puller (AUD3 ☉ P.534).

* Please select the size after checking the maintenance manual, etc.

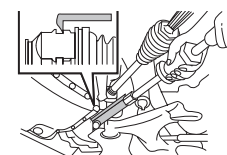
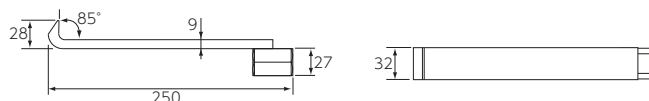
DRIVE SHAFT REMOVER FOR SLIDE HAMMER PULLER



No.	Size	Screw size Puller side	Weight (g)	☐	
AUD3-AD1	250×32×28	W9/16-12	660	1	

· For pulling out drive shafts of FWD vehicles from the transaxle.

· Attachment for slide hammer puller (AUD3 ☉ P.534).



HUB PULLER FOR SLIDE HAMMER PULLER

3/8" sq.

Repair Spare parts



No.	Applicable hubs	Weight(kg)	☐	
AS30	P.C.D100mm~140mm Bolt M14 or less size	1.4	1	

· Axle shaft extraction, brake drum extraction, drive shaft extrusion.

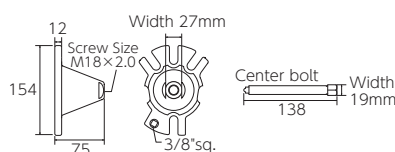
· Single unit that can be used for 4 or 5 holes.

· The 3/8"sq. drive size and 27mm width allow the use of a drive tool, Adjustable wrench, etc. For prevent from turning.

· Can be used in combination with slide hammer puller (AUD4 ☉ P.534).

Spare parts

No.	Description	Weight(g)	☐	
AS30-1	Center bolt (M18×2.0)	240	1	AS30-1



HUB PULLER FOR SLIDE HAMMER PULLER

1/2" sq.

Repair Spare parts



No.	Applicable hubs	Weight(kg)	☐	
AS309	P.C.D140mm M14	2.5	1	

· Axle shaft extraction, brake drum extraction, drive shaft extrusion.

· Automotive 6-hole type hubs.

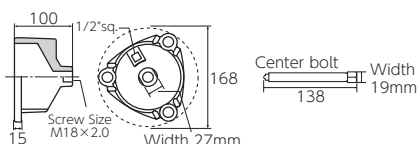
· The deep hole design allows for compatibility with front freewheel hubs on 4WD vehicles.

· The 1/2"sq. drive size and 27mm width allow the use of a drive tool, Adjustable wrench, etc. For prevent turning.

· Can be used in combination with slide hammer puller (AUD4 ☉ P.534).

Spare parts

No.	Description	Weight(g)	☐	
AS30-1	Center bolt (M18×2.0)	240	1	AS30-1



· Function mark is indicated under the product name. For the details, please refer to ☉ P.004-005.

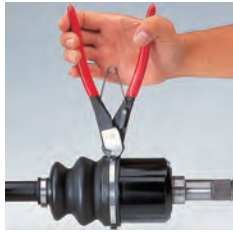
· Products marked with ☉ should be ordered after checking stock.



E Drive shaft disassembly and assembly

E3 Drive shaft disassembly and assembly

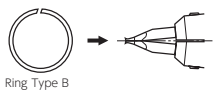
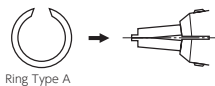
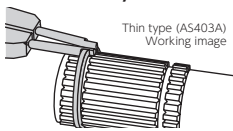
(1) Boot band removal



Applicable boot bands



(2) Import joints Disassembly and assembly



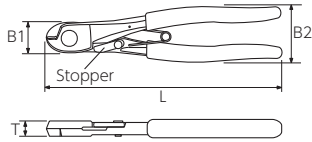
(3) Tightening, cutting, and crimping of boot bands



Applicable boot bands



BOOT BAND CUTTERS



No.	B1	B2	T	L	Weight(g)	⊞
AS402	24	41	11	193	260	10

- Cutting of boot band and boot of drive shaft.
- Stainless steel boot bands for drive shafts of passenger cars.
- Rubber driveshaft boots.
- Cutting with boot band attached.
- In addition, boots can also be cut, speeding up a series of operations. (Figure 1)
- After cutting the band, the boot can be cut without having to change tools. (Figure 2)
- Spring-loaded for easy opening and compact storage with stopper.
- By pressing the stopper while holding the handle, the handle can be secured in a closed position, saving space when storing. (Figure 3)
- * Repair parts are available. Please contact our distributors for details.

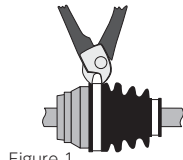


Figure 1.

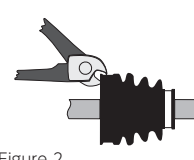


Figure 2.

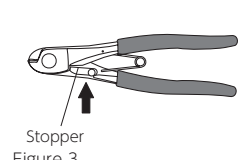
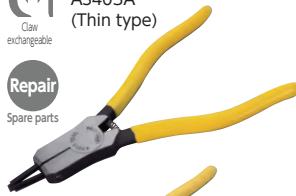


Figure 3.

EXTERNAL SNAP-RING PLIERS



AS403A (Thin type)

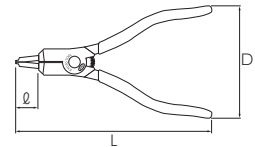


AS403B (Special tip type)
For Honda cars only



No.	D	L	∅	Weight(g)	⊞
AS403A	90	168	21	170	10
AS403B	90	168	21	170	10

- A special tool for removing (installing) snap rings used on drive shafts of automobiles that do not have a hook hole.
- Snap ring without hook holes.
- The claw tip is thin and can be used for rings with narrow openings.
- Exclusively for snap rings for Honda vehicles with narrow openings and notches at an angle.
- Claw can be replaced in case of exhaustion and tear.
- The stepped tip of the snap ring enables stable snap ring removal and attachment, which was difficult to do in the past.
- Possible to work in both vertical and horizontal directions.
- The snap ring can be removed and attached for Honda vehicles, which has been difficult in the past.
- * Spring and claw screws are available as repairable. Please contact our distributors for details.



• Wear protective goggles when working.

Spare parts

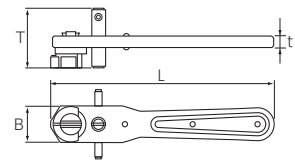
No.	Description	Contents
AS403A4	Tip claw (thin type)	Set of 4 claws for AS403A
AS403B4	Tip claw (tip special type)	Set of 4 claws for AS403B

BOOTS BAND TOOL WITH CUTTER



No.	B	T	t	L	Weight(g)	⊞
AS401	26	43	8	160	180	1

- For tightening and cutting the drive shaft joint boot fixing band.
- OEM boot bands for passenger cars. (Applicable to all sizes)
- Efficient winding by ratchet mechanism.
- Boot bands can be folded and cut in one action.
- * Repair parts are available. Please contact our distributors for details.
- * Not required for genuine boot bands.



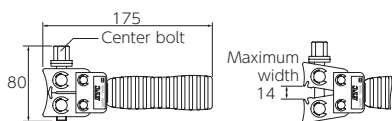
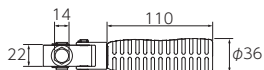
• Wear protective goggles when working.

BOOTS BAND TOOL

Repair
Spare parts



Applicable boot bands



No.	Weight(g)	⊠	
AS405	750	1	

- A special tool used in automobiles to tighten the driveshaft boot band.
- Suitable for passenger cars that use a caulking type boot band. (Can also be used for non-Japanese vehicles.)
- The center bolt is simply screwed in for easy operation.
- Ratchet handles, etc., can be used for quick work with light force. (Hexagonal with width 14mm)
- The center bolt has a flange to prevent the wrench from shifting even when a Box end wrench is used.
- The handle has a non-slip resin grip.
- Crimping area will not be raised.

* Repair parts are available. Please contact our distributors for details.

Spare parts

No.	Description	
AS405-C2	Claw set	



· Read the "Instruction Manual" carefully before use.



E Drive shaft disassembly and assembly

Drive shaft disassembly and assembly

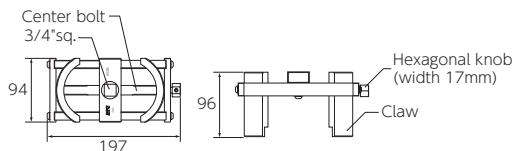
E3

- (3) Tightening, cutting, and crimping of boot bands



HOUSING NUT WRENCH FOR LARGE VEHICLES (FOR HEX. & OCTAGONAL NUTS)

3/4" sq.



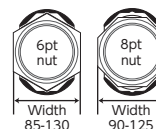
No.	Weight(kg)	⊠	
AS351	4	1	

Hosing nut wrench (for 6pt and 8pt nuts)

Metal case (W245×D140×H110)

- Tightening and loosening of rear hosing nut of heavy-duty vehicles.
- Rear hosing nut used on heavy-duty vehicles (4 ton or more).
6 pt : 85mm to 130mm wide
8 pt : 90mm to 125mm wide
- Special wrench for 6 pt and 8pt nuts with a single wrench Low shape.
- The special shape of the claw holds the face of the nut firmly.
- Simply turn the hexagonal knob with a 17 mm wide Box end wrench or drive tool.

* Repair parts are available. Please contact our distributors for details.



F Extracting the hosing nut and hub

Tightening and loosening of truck undercarriage nuts

F

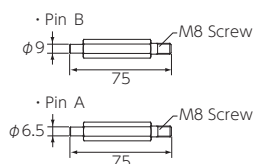
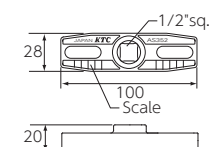


Tightening and loosening of rear hosing nut

HOUSING NUT WRENCH FOR SMALL VEHICLES (FOR CIRCULAR NUTS)

1/2" sq.

Repair
Spare parts



No.	Weight(g)	⊠	
AS352	450	1	

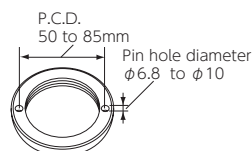
Hosing nut wrench (for round nut) main body 1

Pin A (for pin hole diameter 6.8 to 9) 2

Pin B (for pin hole diameter φ9.1 to 10) 2

Wing nut 2

- Tightening and loosening of rear hosing nut.
- Rear hosing nut used on small cars (2-tons class).
- By sliding the pins to the appropriate pitch, a wide range of car models can be accommodated.
- The scale on the body makes centering easy.



Spare parts

No.	Description	Tip diameter		
AS352-2	Pin A (2 pcs)	φ6.5		
AS352-3	Pin B (2 pcs)	φ9		



Tightening and loosening of rear hosing nut

· Function mark is indicated under the product name. For the details, please refer to P.004-005.
· Products marked with should be ordered after checking stock.



F Extracting the horsing nut and hub

F Tightening and loosening of truck undercarriage nuts

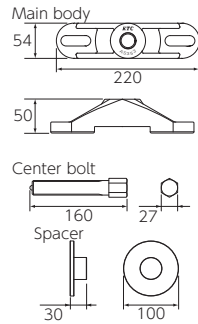


Detaching of the rear wheel hub.



Front wheel hub extraction

REAR HUB PULLER FOR LARGE VEHICLES



No.	Weight(kg)	☐	
AS353	3.5	1	
Rear hub puller for large vehicles Body	1		
Center bolt	1		
Spacer	1		
Metal case (W245×D140×H60)			

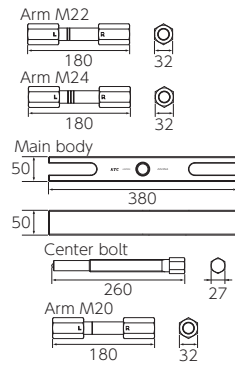
- Rear wheel hub removal for heavy duty vehicles.
- Rear wheel hubs used on heavy-duty vehicles (4 tons or more) that meet the following conditions
- 8, 10 holes (number of axle shaft mounting bolts)
- P.C.D 140mm to 188mm
- Axle shaft mounting bolt size M12 - M16
- The axle shaft mounting bolts are used to prevent damage to aluminum wheels and other components.
- Simply tighten using a Box end wrench or a socket (27 mm in two-face width) + drive tool.

Spare parts

No.	Description
AS353-2	Center bolt
AS353-3	Spacer



FRONT HUB PULLER FOR LARGE VEHICLES



No.	Weight(kg)	☐	
AS354	12	1	
Front hub puller for large vehicles Body	1		
Center bolt	1		
Arm M20	2		
Arm M22	2		
Arm M24	2		
Metal case (W380×D240×H75)			

- Front wheel hub extraction for heavy-duty vehicles.
- Front wheel hubs used on heavy-duty vehicles (4 tons or more) that meet the following conditions
- 6, 8, 10 holes (6, 8 holes: JIS class, 10 holes: ISO class) Wheel
- P.C.D 222.25mm ~335mm
- Hub bolt size M20×1.5, M22×1.5, M24×1.5
- The hub bolt is attached to the hub bolt and pulled out, so there is no damage to the aluminum wheel or other components.
- The L and R markings on the arm itself make it easy to distinguish left and right.
- Hub bolt sizes are M20, M22, and M24. They can be identified by the number of lines. (M20: 1 pcs. M22: 2 pcs. M24: 3 pcs.)

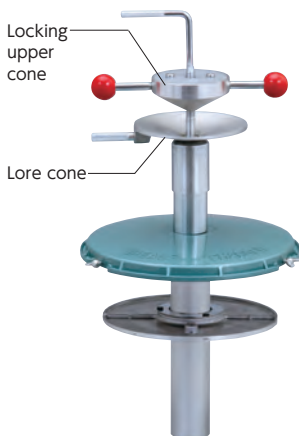
Spare parts

No.	Description
AS354-2	Center bolt (1 pcs.)
AS354-3	Arm M20 (2 pcs.)
AS354-4	Arm M22 (2 pcs.)
AS354-5	Arm M24 (2 pcs.)



• Overhaul can be done only by the qualified person.

GREASE EXCHANGER "HIGHLOAD"

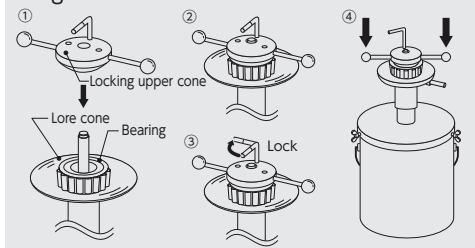


* Compared to our "Grease Charger (GZ18)", it can handle higher viscosity grease.

No.	Applicable cans	Applicable bearings	Weight(kg)	☐	
GZR18	16kg pail	Inner diameter ϕ 15-100	9	1	

- Grease charging of heavy duty bearings in heavy duty vehicles.
 - Grease charge to hub bearings during inspection and maintenance of various types of automobiles.
 - Adoption of a bearing lock mechanism.
The bearing is locked (fixed) by the upper and lower cones, preventing grease from escaping through the gap between the cone and the bearing. Therefore, all force applied to the handle is converted to grease charge (pressure).
The bearing can be locked with a single touch.
 - Wide range of applications.
Applicable to a wide range of bearing sizes for automobiles (from light to heavy duty vehicles) and construction machinery.
 - Easy handling, clean hands, and improved work efficiency.
Grease replacement can be done with a single touch without the need for skill.
Since the grease does not contaminate your hands, you can quickly move on to the next task.
 - Save grease by using it without waste.
Minimal greasing is required, and the grease in the can can be used up to the bottom, saving consumption compared to manual operation.
 - A simple mechanism that minimizes breakdowns.
The simplicity of the mechanism reduces breakdowns and provides superior durability.
- * Repair parts are available. Please contact our distributors for details.

Usage Procedure



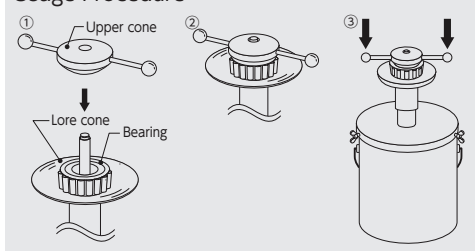
GREASE EXCHANGER



No.	Applicable cans	Applicable bearings	Weight(kg)	☐	
GZ18	16kg pail	Inner diameter ϕ 15-100	8	1	

- Grease charge to hub bearings during inspection and maintenance of various types of automobiles.
 - Reduces working time to about 1/7. (Compared to our experimental results)
 - Can be used in a wide range of applications.
 - Keeping your hand clean makes it better work efficiency.
 - Grease in the pail can be sucked up to the end, so it can be used without wastage.
- * Repair parts are available. Please contact our distributors for details.

Usage Procedure



G Bearing grease charge

Bearing grease injection



AUTOMOTIVE SPECIALTY TOOLS

STEERING



Using image

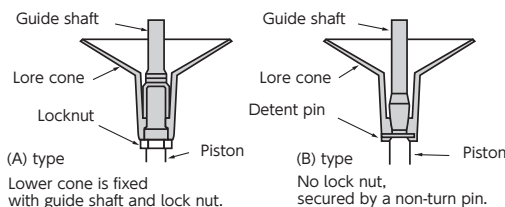
GREASE EXCHANGER "HIGHLOAD" ASSY



No.	Weight(kg)	☐	
GZR182	2.2	1	

- Locking upper cone
- Applicable bearing bore size ϕ 15 to 100
- Lore cone
- Handle
- Non-rotating handles
- Guide shaft

- The grease charger (GZ18) is assembled as a replacement part so that it can be used for a high load. This assembly can be installed only on the (A) type.
- * Repair parts are available. Please contact our distributors for details.



• Function mark is indicated under the product name. For the details, please refer to P.004-005.
• Products marked with should be ordered after checking stock.



G Bearing grease charge

G Bearing grease injection



Nozzle adapter for easy injection without removing bearings



Removed bearings can be greased by setting them in the cone

AIR GREASE FEEDER



* The grease and the pail in the photo are not included in the product.

No.	Weight(kg)
AVG350	80
Pump	Air
Driving Source	Compressed air
Input air pressure	0.4~0.9MPa
Maximum discharge pressure	40.5MPa
Compression ratio	45:1
Pump stroke	65mm
Applicable grease	NLGI No.0~No.3
Applicable grease can	16kg(Recommended can inner diameter 265-285mm)
Air filter	Automatic Discharge
Oiler	Capacity 25ml
Hose length	2.5m
Operating temperature	0°C~40°C
Operating grease temperature	-10°C~40°C
Outer dimension (lower limit of pump)	560×580×1,390

Applicable bearings

Cone side	Inner diameter 15 to 100mm
Hose-side	Nozzle Adapter Inner diameter 45-90mm (Bearing pitch 15 to 21mm Equivalent to 4t-10t front and rear tapered roller bearings)

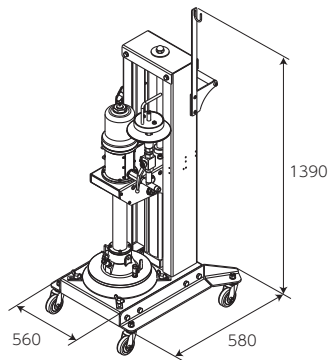
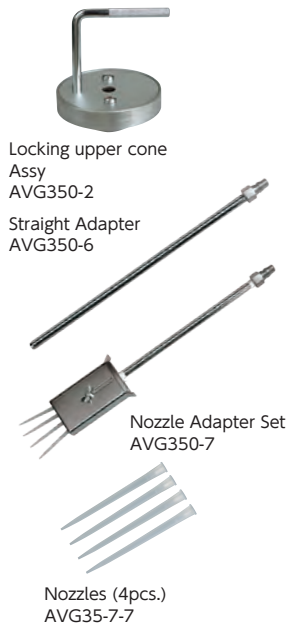
- Grease injection when replacing or replenishing grease in taper roller bearings, etc., of medium to heavy-duty vehicles (4 to 10 tons).
- Can also be used for greasing tapered roller bearings in industrial equipment, transportation equipment, vehicle equipment, etc.
- Two regulators are provided to prevent malfunctions and damage.
- The inner lid is securely pressed down to the bottom of the grease pail, reducing the amount of remaining grease in the pail.
- It is less likely for air shot, and the working time can be shortened.
- Two types of nozzle adapters are included for efficient operation.
- * Hoses, guns, nozzle adapters, and straight adapters are not available for repair.
- * Repair parts are available. Please contact our distributors for details.



- Grease may scatter when operating the ball valve or gun while there is residual pressure even after the air hose is removed.
- Store the unit in a place where it will not freeze.
- Use clean input air. Humid air may cause malfunction.

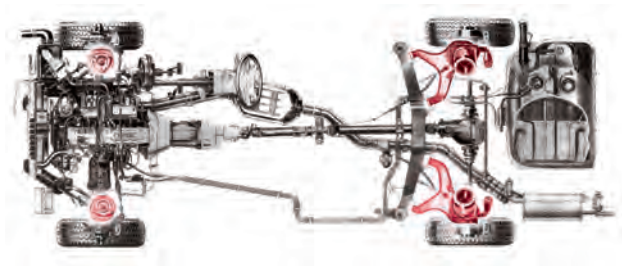
Spare parts

No.	Description	Contents
AVG350-2	Locking upper cone Assy	1
AVG350-6	Straight Adapter	1
AVG350-7	Nozzle Adapter Set	1 (With 4 nozzles)
AVG35-7-7	Nozzles (4pcs.)	4



• Overhaul can be done only by the qualified person.

542 Suspension separation and assembly



The main inspection and maintenance of the buffer system includes the separation and assembly of the suspension.

Suspension separation and assembly

1 Wheel removal

- (1) Removal of wheel caps
- (2) Removal and installation of wheel nuts

Wheel cap wrench

➔ P.548



Aluminum wheel center cap wrench

➔ P.548



Impact wrench

➔ P.442-444



Wheel nut socket for impact wrench

➔ P.548-550



Cross rim wrench

➔ P.555



2 Disconnect brake hose

- (1) Hose blockage
- (2) Pipe disassembly

Pinch-off pliers

➔ P.513



Flare nut wrench

➔ P.565-567



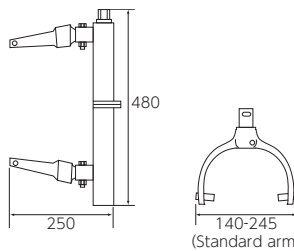
3 Suspension separation and assembly



STRUT SPRING COMPRESSOR



AS10-1



No.	Weight(kg)	☐	
AS10	6	1	

Main body	AS10-1
Standard arm (OD 90-170)	AS10-2

Applicable coil spring

Item	Scope of Application
Wire diameter	18mm or less
Outer Diameter	Standard arm 90 to 170mm Large arm 135 to 220mm
Number of effective windings	More than 2 volumes
Gap between the springs	20mm or more

- This strut spring compressor is a dedicated tool for removing and installing strut type coil springs used in automobile suspensions.
- The drive is designed so that if too much load is applied to the spring compressor during operation, the rupture mechanism in the drive installed in the center screw bolt section will rupture. (Figure 2)
- The center screw bolt is built into the body to protect the threaded part.
- The main body is a vertical pipe type, which is compact, easy to use, and improves work efficiency.
- * Large arm is optional.
- * Repair parts are available for the claw mounting bolts and nuts. Please contact our distributors for details.

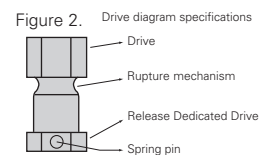
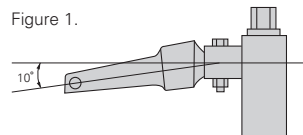
Main body

No.	Dimensions	Weight(kg)	
AS10-1	Total length 480×φ42	3.8	

Arm

No.	Applicable Diameter	Contents	Weight(kg)	☐	
AS10-2	Standard arm outer diameter 90 to 170mm	2	2.2	1	
AS10-3	Large arm outer diameter 135 to 220mm	2	2.5	1	

- The drive is designed so that if too much load is applied to the spring compressor during operation, the rupture mechanism inside the drive, which is installed in the center screw bolt section will rupture.
- Never overtighten the bolts. If the breakage mechanism should break, do not weld, and contact us for repair.
- Never use with an impact wrench.
- This strut spring compressor is designed to fit the strut type of Japanese cars.



- Use the product only after fully understanding how to use it.
- Improper use may result in death or serious injury.
- Spring compressors should be operated by persons who have the qualifications required by law and fully understand the information (maintenance instructions, etc.) provided by the vehicle manufacturer.

• Overhaul can be done only by the qualified person.

ATTACHMENT SET FOR ISUZU APPLICATIONS OF STABILIZER BUSHING PULLER



With dedicated carry case (W585×D330×H315)

No.	Weight(kg)	☐	
ATSP120	33	1	

Set contents

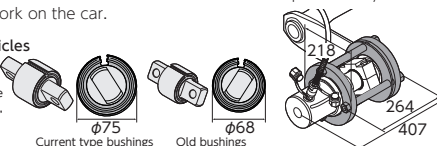
No.	Description	No.	Description
ASP120-1	Attachment base	ASP120-6	Adapter
ASP120-2	Push-out attachment (For current type bushings)	ASP120-7	Ring nut
ASP120-3	Push-out attachment (For old type bushings)	ASP120-8	Press base
ASP120-4	Press Fit Attachment	ASP120-9	Carrying case
ASP120-5	Bush press		

- Specialized for push-pull and press-fit of stabilizer bushings for Isuzu Motors.
- No hydraulic press is required, and stabilizers can be worked either while mounted on the vehicle or while lying down after removal. There is no need to carry heavy stabilizers to the press machine.
- No need to center the bushing when removing and installing it.
- Hydraulic unit set (No.ATSP110) is required for use.
- Includes a special carrying case with casters for convenient transportation and storage.
- The dedicated carry case is not sold separately.



Notes on bushings for Isuzu vehicles

There are two types of stabilizer bushings for Isuzu vehicles: current type* bushings and old type bushings that were used in the past. When replacing the old type bushings, a part of the "Attachment Set for Hino Vehicles" is required. *As of March 2023



ATTACHMENT SET FOR HINO APPLICATIONS OF STABILIZER BUSHING PULLER



With dedicated carry case (W635×D385×H315)

No.	Weight(kg)	☐	
ATSP130	46	1	

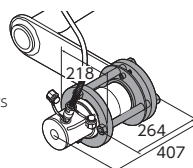
Set contents

No.	Description	No.	Description
ASP130-1	Attachment base	ASP130-6	Push-out attachment (For medium-sized vehicles)
ASP130-2	Push-out attachment (For large vehicles)	ASP130-7	Adapter
ASP130-3	Press Fit Attachment (For large vehicles)	ASP130-8	Press base
ASP130-4	Bush press	ASP130-9	Ring nut
ASP130-5	Press Fit Attachment (For medium-sized vehicles)	ASP130-10	Carrying case

- Specialized in push-pulling and press-fitting of medium to heavy-duty (4- to 10-ton) stabilizer bushings for Hino Motors.
- No hydraulic press is required, and stabilizers can be worked either while mounted on the vehicle or while lying down after removal. There is no need to carry heavy stabilizers to the press machine.
- No need to center the bushing when removing and installing it.
- Hydraulic unit set (No.ATSP110) is required for use.
- Includes a special carrying case with casters for convenient transportation and storage.
- The dedicated carry case is not sold separately.



The person who has the qualification required by laws and regulations shall fully understand the information (maintenance instructions, etc.) provided by the car manufacturer and work on the car.



HYDRANLIC UNIT SET OF STABILIZER BUSHING PULLER



With dedicated carry case (W520×D460×H315)

No.	Hydraulic capacity	Driving Source	Safety device	Weight (kg)	☐	
ATSP110	30t	Compressed air	With relief valve	31	1	

Set contents

No.	Description	No.	Description
ASP110-1	Air pump	ASP110-4	Air regulator
ASP110-2	Hydraulic cylinder body	ASP110-5	Bush Press Attachment
ASP110-3	Hydraulic hose	ASP110-6	Carrying case

- Hydraulic unit set exclusively for Isuzu and Hino stabilizer linker attachment set (No. ATSP120/ATSP130).
- Hydraulic cylinder capacity is 30 tons.
- Includes a special carrying case with casters for convenient transportation and storage.
- The dedicated carry case is not sold separately.



The person who has the qualification required by laws and regulations shall fully understand the information (maintenance instructions, etc.) provided by the car manufacturer and work on the car.

Suspension separation and assembly

Suspension separation and assembly

3

Work procedure for split bushings



(1) Attachment attached



(2) Compression of cracked bushings



(3) Press-fit the split bushings

Example of use for large vehicles



(1) Attachment attached



(2) Bush pushout



(3) Press fitting of bushing



Image of work on a car

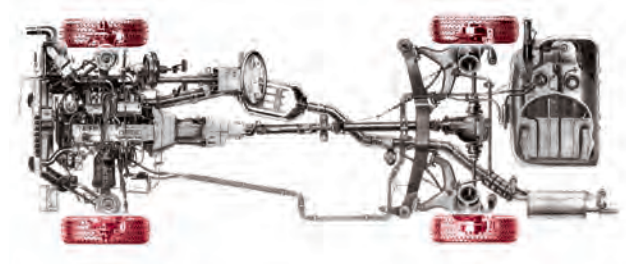


Image of work near a vehicle

· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with should be ordered after checking stock.



545 Removing and installing
wheels



The main inspection and maintenance of driving equipment includes wheel replacement (tightening and loosening of wheel nuts) and tire pressure checks.

TRASAS TIRE SERVICE STATION

1/2" Sq. 15 pcs.



Tire service efficiency & All-in-one items to improve profitability!

Various undercarriage work items that lead to safety, shortening of time, and improvement of work quality are integrated in the tool station.
Improve profitability in tire service.

No.		Weight(kg)	☐	Built-to-order products
SK4161TRA		38	1(4 units)	
Set contents				
SK4161TR-T1	Assembled×1			
SK4161TR-T2A	Assembled×1			
SK4161TR-T3	Assembled×1			
SKR602A	Tool station (2-tier movable tray type)×1			
Contents				
Tire Stone Remover	AH3			
Tire Depth Gauge	GNDA020			
TORQULE 1/2"sq.(40 to 200N·m)	GNA200-04			
1/2"sq. torque wrench pre-set type	GW200-04			
1/2"sq. wheel nut socket	B38Z-17H, 19H, 21H, 22H			
1/2"sq. cordless torque limit impact wrench set for wheel nut	JTAE473A			
1/2"sq wheel guard socket for impact wrench	BP49-17G, 19G, 21G, 22G			
Magnetic mounting arm for 7 to 11 inch iPad and tablet	100-LATAB020			
Slim tap with USB charging function (2P, 5 ports, 2m)	TAP-SLIM5U-2			
Tray (2pcs)				

- For tire changes and inspections.
- The system is designed to perform "removal" and "installation" of wheel nuts necessary for tire replacement in a single operation.
- Tools necessary for measuring the remaining amount of tire grooves and removing stones are also included.
- Tablet stand and power strips were installed in response to the IoT and electrification of maintenance.
- By installing the dedicated "TRASAS Admin (free)" application on your smartphone or tablet, you can record and manage the work performed with the TORQULE and tire depth gauge.
- The special tray allows all tools to be stored and managed in a single place. All tools can be used quickly and prevented from being lost at the same time.



• Do not open more than two drawers at the same time, as the product may tip over.



No.SKR602A
Tool Station
(2-tier movable tray type)×1

MAGNET ARM FOR TABLET



12 powerful magnets allow for strong mounting on whiteboards, TV stands, cabinets, etc. Two joints allow for free adjustment of height and width, up and down, left and right, and angle. 7- to 11-inch tablets are supported. Tablet holder size W195×D27×H132mm (including stopper). Maximum arm length 243mm.

* This is a Sanwa Supply product.
For more information on the product, visit the Sanwa Supply website.
<https://www.sanwa.co.jp/>

PLUG STRIP



The magnet makes it easy to attach to steel desks, shelves, etc. Two USB charging ports are provided, and a 3-pin plug can also be plugged in. Body size W240×D31×H24 mm.

* This is a Sanwa Supply product.
For more information on the product, visit the Sanwa Supply website.
<https://www.sanwa.co.jp/>

Removing and installing wheels

General wheel removal and installation work



Tire Inspection



Measuring tire grooves and filling out inspection records



Tire removal



Tire installation (temporary tightening)



Tire installation



Records Management

• Function mark is indicated under the product name. For the details, please refer to P.004-005.
• Products marked with should be ordered after checking stock.

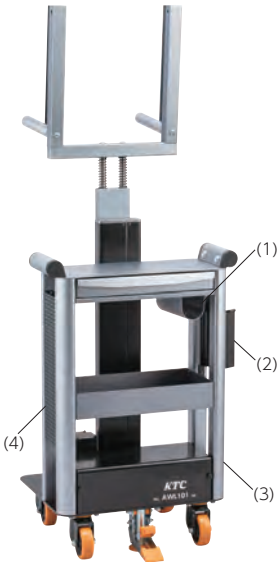


Removing and installing wheels

1 Removing and installing wheels



How to use it



Optional installation image

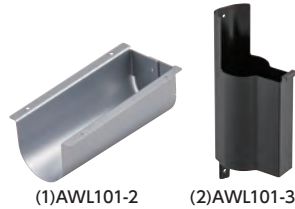
(4) Side punching board



Hook set D P.195 (SKR-54-D / sold separately) can be used together for hanging storage.
* There are 10 hooks in a pack.

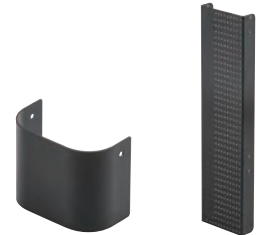


TIRE LIFTER



(1)AWL101-2

(2)AWL101-3

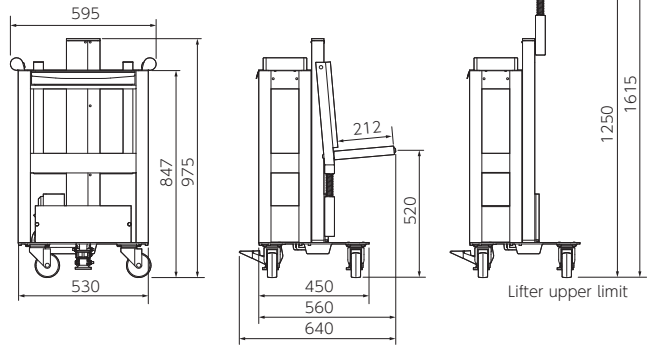


(3)AWL101-4

(4)AWL101-5

No.	Maximum loading capacity (kg)	Applicable tire outer diameter (mm)	Applicable tire width (mm)	Weight (kg)	☐
AWL101	40	550~790	285 or less	61.5 (main unit only)	1

- Electric tire lifter assists in the lifting and lowering of tires.
- The aluminum structure makes the machine lightweight, compact, and has a low center of gravity for stable operation.
- Tire lifting and lowering is operated by a two-hand switch. This prevents the tires from being caught in the work and allows for safe operation.
- The rotary rod and damper in the tire lifter section allow easy fine adjustment of the position of the tire during mounting with light force.
- A safety step-on type brake is adopted.
- Uses rechargeable batteries (sold separately). No air hose is required and the cordless design allows for comfortable mobility even in small work spaces.
- Maximum lifting distance: 730mm, Maximum loading capacity: 40kg, Number of continuous lifting: Approx. 300 turning (the number of turning varies depending on the environment of the machine and the battery).
- Includes a drawer for storing tools necessary for tire changes and other undercarriage work.
- The optional accessories provide the necessary tools for changing tires. It can be stored in a storage.
- * Batteries are not included with this product. (2 required) For more information, please contact our distributors.
- * Repair parts are available. Please contact our distributors for details.



The person who has the qualification required by laws and regulations fully understands the information (maintenance instructions, etc.) provided by the car manufacturer.

Optional

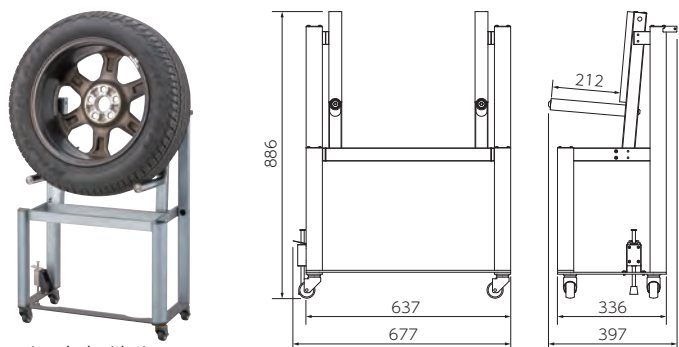
No.	Description	☐
AWL101-2	Cordless Ratchet Holder	1
AWL101-3	Cordless Impact Wrench Holder	1
AWL101-4	Spray can holder	1
AWL101-5	Side punching board	1

TIRE ROTATION WAGON



No.	Maximum loading capacity (kg)	Applicable tire outer diameter (mm)	Applicable tire width (mm)	Weight (kg)	☐
AWR101	40	550~790	285 or less	16	1

- Ideal for moving tires during tire rotation and removal operations.
- Tire rotation work can be performed with the removed tires on the machine. Two units can be used for efficient tire rotation work.
- The Tire Lifter (AWL101) can be used in combination with the Tire Lifter (AWL101) to save labor for undercarriage work.
- The special design allows for smooth transfer of tires.
- The lightweight and compact size is achieved through the use of an aluminum structure.
- The tire lifter is integrated with the tire lifter and equipped with a locking lever that allows movement.
- Equipped with a foot-operated brake that is easy to operate even with safety shoes.
- Rotating rod for easy inspection of removed tires.
- * Repair parts are available. Please contact our distributors for details.



Loaded with tires

• Overhaul can be done only by the qualified person.

Fender cover

P.603



Removing and installing wheels

Fender cover installation

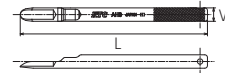
2

TIRE STONE REMOVER



No.	L	W	Weight(g)	⚙
AH3	140	10	70	1

- Remove stones caught in tires with a single action.
- The specially developed rounded tip enables efficient removal of stones without damaging tires.
- Reduces working time to about one-eighth (* our research). No pressure on time for visual inspections.

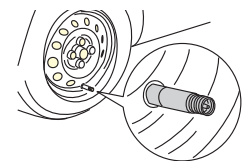


Tire Inspection

3



How to use it

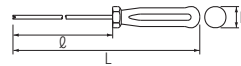


TIRE VALVE WRENCH



No.	D	ℓ	L	Weight(g)	⚙
AH2-4	17	165	235	40	1

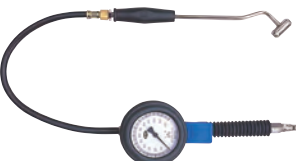
- Used for mounting and dismounting valve cores of tires of passenger cars, trucks, buses, etc. (Excluding motorcycles, construction vehicles, and cars with double tires)
- The long shaft length prevents the tool from hitting the wheel and improves workability. (Shaft length 165mm)
- The grip is narrow in diameter to facilitate fast turning.



TIRE AIR GAUGE



AGT231 (straight connector)



AGT232 (double connector)



AGT23-A1



AGT23-A2



AGT23-A3

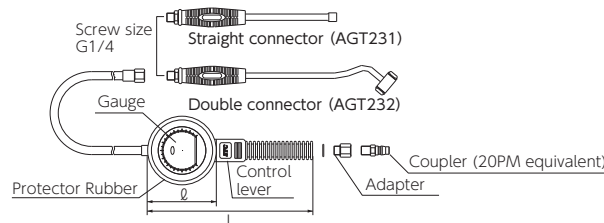
No.	Measuring range	Minimum scale	Thickness	ℓ	L	Weight (g)	⚙
AGT231	0~500kPa(0~5kgf/cm ²)	10kPa	95	100	270	800	1
AGT232	0~1200kPa(0~12kgf/cm ²)	10kPa	95	100	270	800	1

- Used to increase, decrease, and measure air pressure in automobile tires.
- AGT231: Passenger cars, vans, etc.
- AGT232: Motorcycles, passenger cars, trucks, buses, etc.
- The control lever is light and allows smooth fine-tuning.
- Large gauge (φ70mm) is used for easy reading of measured values. Decompression and measurement can be made without connecting an air hose.
- Equipped with a Siebel joint to prevent the hose from twisting.
- * Repair parts are available. Please contact our distributors for details.

Replacement Tip Connector

No.	Description	Over-all length
AGT23-A1	Straight connector	220
AGT23-A2	Double connector	312
AGT23-A3	Clip Connectors	33

- AGT23-A3 is a replacement tip connector with a valve fixing clip.



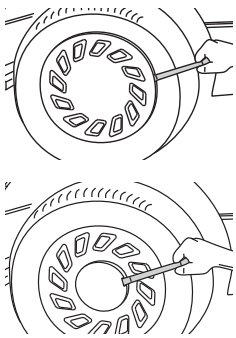
• Function mark is indicated under the product name. For the details, please refer to P.004-005.
 • Products marked with ⚙ should be ordered after checking stock.



Removing and installing wheels

4 Removal and installation of wheels

(1) Removal of wheel caps

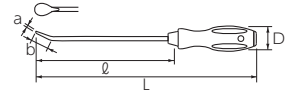


WHEEL CAP WRENCH



No.	a	b	D	ℓ	L	Weight(g)	⊥
AH101	1.3	20	40	215	350	200	5

- Removal of automotive wheel caps.
- Thin type that can be easily inserted between wheel rims and wheel caps to prevent scratching.
- Angled for easy operation.
- Resin grip that fits the hand.

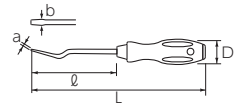


CENTER CAP WRENCH FOR ALUMINUM WHEEL



No.	a	b	D	ℓ	L	Weight(g)	⊥
AH102	0.7	7	34	115	235	90	5

- Removal of automotive aluminum wheel center caps.
- The tip is thin, compact, scratch-resistant, and easy to insert into a notch.
- Two angles for easy working.
- Resin grip that fits the hand.



Impact wrench

➔ P.442-444

Cordless Impact Wrench

➔ P.449-452

(2) Removal and installation of wheel nuts

1/2"sq. ALUMINIUM SOCKET SET [3pcs.] FOR POLISHED NUT



No.	Weight(g)	⊥
ATBP403AL	415	1

Set contents

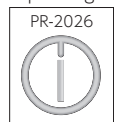
Aluminium socket for polished nut ABP4-17ALP, 19ALP, 21ALP
Metal case (W165×D70×H40)

- Used for tightening and loosening aluminum wheel polished nuts. Thin-walled type with minimal outer diameter and rubber cushion to prevent damage to polished nuts.



- This product is made exclusively for aluminum wheels. Tighten to the torque specified by each manufacturer due to the low load-bearing capacity of the structure.

Attached pin/ring



➔ P.283.

1/2"sq. ALUMINIUM SOCKET FOR POLISHED NUT



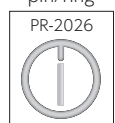
No.	S(6pt.)	D1	D2	H	L	Weight(g)	⊥
ABP4-17ALP	17	26	29	21	49	50	1
ABP4-19ALP	19	28.5	29	24	52	60	1
ABP4-21ALP	21	31	29	27	55	70	1

- Used for tightening and loosening aluminum wheel polished nuts. Thin-walled type with minimal outer diameter and rubber cushion to prevent damage to polished nuts.

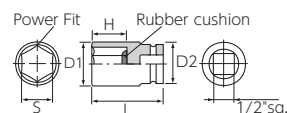


- This product is made exclusively for aluminum wheels. Tighten to the torque specified by each manufacturer due to the low load-bearing capacity of the structure.

Attached pin/ring



➔ P.283.



1/2"sq WHEEL GUARD SOCKET SET FOR IMPACT WRENCH [3pcs.]



No.	Weight(g)	☐
TBP4903G	600	1
Set contents		
1/2"sq wheel guard socket for impact wrench	BP49-17G,19G,21G	

- Special socket wrench used for loosening and tightening automobile wheel nuts.
- The wheel is equipped with a plastic guard to prevent scratching.
- Set of three frequently used sizes: 17mm, 19mm, and 21mm.
- The size is easily identifiable in color.
- Torsion effect by the neck in the center of the socket improves durability.
- The overall length is less likely to interfere with the wheel.
- The bottom of the bore has a rubber cushion that attach gently to the nut.
- * The sockets and guards are consumables. If any abnormality such as wear is observed, replace them with new ones.

CAUTION

- Do not use for other than wheel nuts of passenger cars.
- This product is designed to be thin-walled and may break depending on how it is used.

1/2"sq WHEEL GUARD SOCKET FOR IMPACT WRENCH

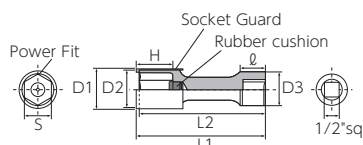


No.	S(6pt.)	D1	D2	D3	H	ℓ	L1	L2	Weight(g)	☐
BP49-17G	17	25.4	24	25	23.2	18	101.2	100	182	5
BP49-19G	19	27.4	26	25	25.2	18	101.2	100	192	5
BP49-21G	21	28.9	27.5	25	27.2	18	101.2	100	193	5
BP49-22G	22	30.9	29.5	25	28.2	18	101.2	100	213	5

- Special socket wrench used for loosening and tightening automobile wheel nuts.
- The wheel is equipped with a plastic guard to prevent scratching.
- The lineup includes four sizes for everything from minicars to SUVs.
- * The sockets and guards are consumables. If any abnormality such as wear is observed, replace them with new ones.

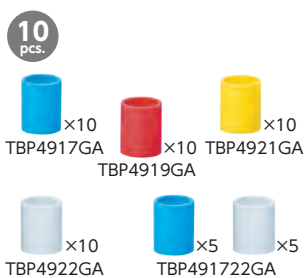
CAUTION

- Do not use for other than wheel nuts of passenger cars.
- This product is designed to be thin-walled and may break depending on how it is used.



* D2 and L2 are the size when the guard is removed.

1/2"sq WHEEL GUARD SOCKET SET FOR IMPACT WRENCH [10pcs.]



No.	Contents	Weight(g)	☐
TBP4917GA	For BP49-17×10 pcs.	20 (2×10 pcs.)	1
TBP4919GA	For BP49-19×10 pcs.	20 (2×10 pcs.)	1
TBP4921GA	For BP49-21×10 pcs.	30 (3×10 pcs.)	1
TBP4922GA	For BP49-22×10 pcs.	30 (3×10 pcs.)	1
TBP491722GA	For BP49-17×5 pcs. For BP49-22×5 pcs.	25 (2×5, 3×5)	1

- Replacement spare part for guard of wheel guard sockets for impact wrench (BP49-17G to 22G) for 1/2"sq. When attached to the tip of the socket, it prevents the wheel from being scratched.
- If you attach it to your 1/2"sq. wheel nut socket (BP49-17 to 22), it becomes a socket with guard.
- The color of the guard is consistent with the color of the socket body for easy identification.
- Increased durability by increasing the thickness of the tip ground surface.
- Effective for low head nuts.

1/2"sq. WHEEL NUT SOCKET SET [3pcs.]



No.	Weight(g)	☐
TBP4903	560	1
Set contents		
Wheel nut socket for impact wrench	BP49-17, 19, 21	

- Special socket wrench for tightening and loosening automobile wheel nuts. Compatible with impact wrench.
- Rubber cushion attach gently to plated and painted nuts.

CAUTION

- Do not use for other than wheel nuts of passenger cars.
- This product is designed to be thin-walled and may break depending on how it is used.

Removing and installing wheels

Removal and installation of wheels 4

(2) Removal and installation of wheel nuts



Without guard There is a guard.

• Function mark is indicated under the product name. For the details, please refer to P.004-005.
• Products marked with ⚠ should be ordered after checking stock.



Removing and installing wheels

4 Removal and installation of wheels

(2) Removal and installation of wheel nuts

1/2"sq. WHEEL NUT SOCKET

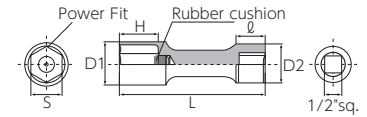


No.	S(6pt.)	D1	D2	H	ℓ	L	Weight(g)	⊖
BP49-17	17	24.0	25	22	18	100	180	5
BP49-19	19	26.0	25	24	18	100	190	5
BP49-21	21	27.5	25	26	18	100	190	5
BP49-22	22	29.5	25	27	18	100	210	5

- Special socket wrench for tightening and loosening automobile wheel nuts. Compatible with impact wrench.
- Rubber cushion attach gently to plated and painted nuts.



- Do not use for other than wheel nuts of passenger cars.
- This product is designed to be thin-walled and may break depending on how it is used.



1/2"sq. WHEEL NUT SOCKET FOR ALUMINIUM

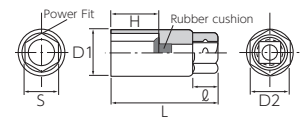


No.	S(6pt.)	D1	D2	H	ℓ	L	Weight(g)	⊖
B35A-17H	17	24	21	22	15	60	140	10
B35A-19H	19	26	21	24	15	60	140	10
B35A-21H	21	27.5	21	27	15	60	140	10

- This socket wrench is specially designed for tightening and loosening aluminum wheel nuts of automobiles.
- Thin-wall type with rubber cushion to prevent damage to nuts.



- The load-bearing capacity is low due to its structure, since it is made exclusively for aluminum wheels.



1/2"sq. WHEEL NUT SOCKET

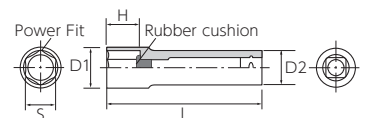


No.	S(6pt.)	D1	D2	H	L	Weight(g)	⊖
B38Z-17H	17	24	22	22	100	200	5
B38Z-19H	19	26	22	24	100	200	5
B38Z-21H	21	27.5	22	26	100	200	5
B38Z-22H	22	29.5	22	27	100	200	5

- This socket wrench is specially designed for tightening and loosening automobile wheel nuts.
- The overall length is 100 mm, and it is specially designed to fit the wheel.
- Ease of use is improved when used in conjunction with a torque wrench.
- Rubber cushion is provided for plated and painted nuts.
- 22H is for Toyota Land Cruiser and Honda Legend (KB1).



- The load-bearing capacity is low due to the structure of the wheel nut, as it is made exclusively for wheel nuts.



1/2"sq. WHEEL NUT SOCKET (SEMI-LONG)

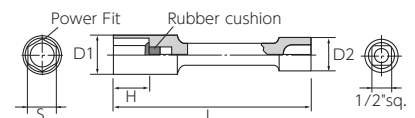


No.	S(6pt.)	D1	D2	H	L	Weight(g)	⊖
B38ZM-21H	21	27.5	22	26	130	300	5

- This socket wrench is specially designed for tightening and loosening automobile wheel nuts.
- The overall length is 130 mm, and it is specially designed to fit the body shape.
- The use of a torque wrench improves ease of use.
- Rubber cushion is provided for plated and painted nuts.



- The load-bearing capacity is low due to the structure of the wheel nut, as it is made exclusively for wheel nuts.



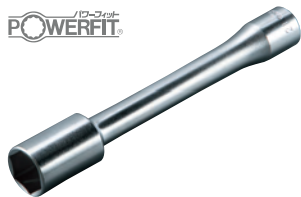
Removal and installation of wheels **4**

(2) Removal and installation of wheel nuts

1/2"sq. WHEEL NUT SOCKET (LONG)



POWERFIT

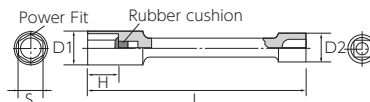


No.	S(6pt.)	D1	D2	H	L	Weight(g)	⊖
B38ZL-17H	17	24	24	22	180	330	5
B38ZL-19H	19	26	24	24	180	340	5
B38ZL-21H	21	27.5	24	26	180	350	5

- This socket wrench is specially designed for tightening and loosening automobile wheel nuts.
- Long size suitable for RV.
- Long size without the need for an extension bar improves workability.
- Rubber cushion attach gently to plated and painted nuts.



· The load-bearing capacity is low due to the structure of the wheel nut, as it is made exclusively for wheel nuts.



3/4"sq. IMPACT COMBINATION SOCKET SET FOR WHEEL NUT [11pcs.]



POWERFIT

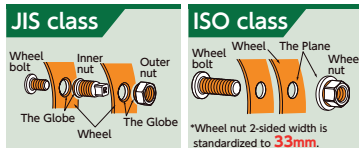


No.	Weight(kg)	⊖
ATBP611TP	6	1

Set contents	
3/4"sq. impact combination socket for wheel nut	ABP6-3517TP,3820TP,4120TP,4121TP
3/4"sq. impact socket (deep and thin)	BP6L-33TP
1/2"sq. impact socket (semi deep and thin)	BP4M-10TP,12TP,14TP,17TP,19TP,22TP
Case (W310×D165×H70)	ABP-M

- The case can be used to collectively manage standard size sockets used for undercarriage work on medium and large vehicles.
- Carefully select the size of wheel nut combination sockets based on the current vehicle and frequency of use.
- Wide range of support for both JIS and ISO.
- The wheel nut combination socket is a labor-saving tool for tightening and loosening the outer nut and inner nut with a single wrench.
- Sockets for 1/2"sq. impact wrenches are also included in consideration of the work flow.
- KTC's unique pin release prevention mechanism "AMBAC System" improves work safety.

Wheel structure of heavy-duty vehicles



3/4"sq. IMPACT COMBINATION SOCKET FOR WHEEL NUT



POWERFIT

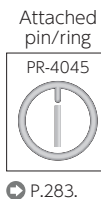
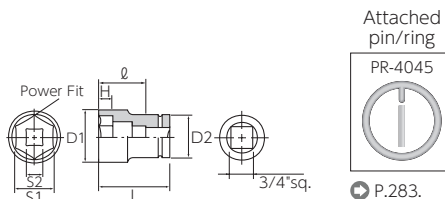


No.	S1 6pt.	S2 Square	D1	D2	H	L	ℓ	Weight (g)	⊖
ABP6-3217TP	32	17	46.5	50	12	76	51	780	2
ABP6-3517TP	35	17	50	50	13	78	53	840	2
ABP6-3820TP	38	20	55	50	14	75	50	850	2
ABP6-4119TP	41	19	58	50	14	80	55	900	2
ABP6-4120TP	41	20	58	50	14	80	55	900	2
ABP6-4121TP	41	21	58	50	14	80	55	900	2

- Labor-saving tool for tightening and loosening outer and inner nuts with a single wrench.
- The thin-wall type is also effective for vehicles with small clearance between the wheel hub and wheel nut.
- We have a full range of sizes to accommodate from medium-sized vehicles (2-ton class) to large vehicles (4-ton or larger class).



· Black rings are paired with black pins, and gray rings are paired with silver pins.



· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with should be ordered after checking stock.



Removing and installing wheels

4 Removal and installation of wheels

(2) Removal and installation of wheel nuts



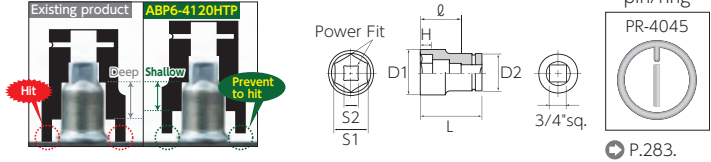
3/4"sq. IMPACT SHORT INNER COMBINATION SOCKET FOR WHEEL NUT



No.	Drive size	S1	S2	D1	D2	H	L	ℓ	Weight (g)	⊞
ABP6-4120HTP	3/4"	41	20	58	50	13	79	54	905	2

- Tightening and loosening of inner and outer nuts of Hino trucks (1 to under 4 tons).
- Exclusive use for genuine parts rear wheel nuts (JIS type, 5/6 holes) for Hino Motors (including OEM supplied vehicles) medium/light trucks (1 to under 4 tons).
- * For JIS wheel nuts other than the above applicable models, please use the conventional products ABP6-3217TP-4121TP (3/4"sq.) or ABP8-3517TP-4121TP (1"sq.).
- Designed exclusively for Hino Motors' genuine parts.
- Prevents scratches on the rear inner wheel during vehicle inspections, tire changes, and wheel rotations.
- Double lines in the center of the body make it easy to distinguish it from conventional products without double lines.
- KTC's unique pin release prevention mechanism "AMBAC System" improves work safety.

Comparison with conventional products



3/4"sq. IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT

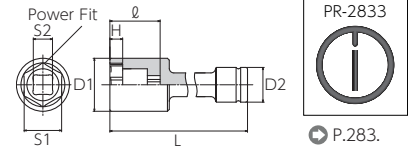


No.	S1	S2	D1	D2	H	ℓ	L	Weight (kg)	⊞
ABP6ZL-4121TP	41	21	58	38	14	55	450	2.6	1

- Labor-saving tool for tightening and loosening outer and inner nuts with a single wrench.
- The thin-wall type is also effective for vehicles with small clearance between the wheel hub and wheel nut.
- The combination socket and extension bar are integrated to eliminate rattling and enable more precise torque control when using a torque wrench.
- The long overall length of 450mm allows for use with wide bodies without interference.



• Black rings are paired with black pins, and gray rings are paired with silver pins.



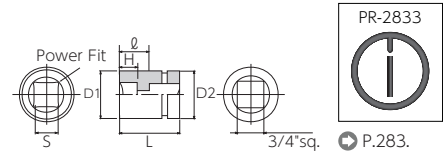
3/4"sq. IMPACT INNER SOCKET



No.	S	D1	D2	H	L	ℓ	Weight(g)	⊞
ABP6-17SQP	17	40	38	18.5	56.5	31.5	370	5
ABP6-19SQP	19	40	38	18.5	56.5	31.5	322	5
ABP6-20SQP	20	40	38	20.5	58.5	33.5	346	5
ABP6-21SQP	21	40	38	22.5	60.5	33.5	350	5



• Black rings are paired with black pins, and gray rings are paired with silver pins.



3/4"sq. IMPACT SOCKET (DEEP THIN / WITH PIN & RING)

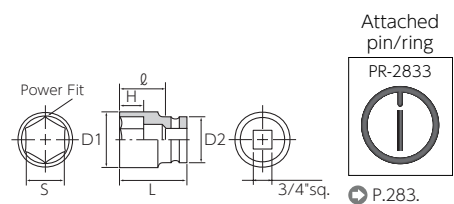


No.	S	D1	D2	H	L	ℓ	Weight(g)	⊞
BP6L-33TP	33	48	38	28	100	75	693	5

- Deep, thin-walled type compatible with the new ISO wheel.



• Black rings are paired with black pins, and gray rings are paired with silver pins.



• Overhaul can be done only by the qualified person.

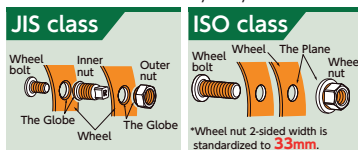
1"sq. IMPACT COMBINATION SOCKET SET FOR WHEEL NUT [11pcs.]



No.	Weight(kg)	⊠	
ATBP811TP	6.2	1	
Set contents			
1"sq. impact combination socket for wheel nut	ABP8-3517TP,3820TP, 4120TP, 4121TP		
1"sq. impact socket (deep and thin)	BP8L-33TP		
1/2"sq. impact socket (semi deep and thin)	BP4M-10TP,12TP,14TP, 17TP,19TP,22TP		
Case (W310×D165×H70)	ABP-M		

- The case can be used to manage all standard size sockets used for undercarriage work on medium and heavy duty vehicles for inspection and maintenance.
- Carefully select the size of wheel nut combination sockets based on the current vehicle and frequency of use.
- Wide range of support for both JIS and ISO.
- The wheel nut combination socket is a labor-saving tool for tightening and loosening the outer nut and inner nut with a single wrench.
- Sockets for 1/2"sq. impact wrenches are also included in consideration of the work flow.
- KTC's unique pin release prevention mechanism "AMBAC System" improves work safety.

Wheel structure of heavy-duty vehicles



1"sq. IMPACT SOCKET FOR WHEEL NUT

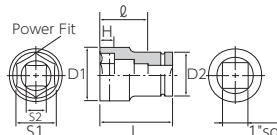


No.	S	D1	D2	H	L	ℓ	Weight(g)	⊠	
ABP8-32TP	32	46.5	50	25	80	50	680	2	
ABP8-35TP	35	50	50	25	80	50	710	2	
ABP8-38TP	38	55	50	30	80	50	800	2	
ABP8-41TP	41	58	50	35	80	50	840	2	

- Thin-walled type for use in vehicles with no clearance between wheel hubs and wheel nuts.
- The outer diameter is 94% smaller than that of our conventional products.
- Tightening and loosening of wheel nuts (outer nuts) for medium-sized vehicles (2 to 4 tons) and large-sized vehicles (4 tons or more) such as buses.



- Black rings are paired with black pins, and gray rings are paired with silver pins.



Attached pin/ring



➔ P.283.

1"sq. IMPACT COMBINATION SOCKET FOR WHEEL NUT

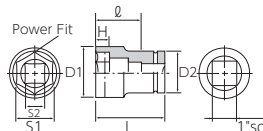


No.	S1 6pt.	S2 Square	D1	D2	H	L	ℓ	Weight (g)	⊠	
ABP8-3517TP	35	17	50	50	13	83	53	830	2	
ABP8-3820TP	38	20	55	50	14	80	50	840	2	
ABP8-4119TP	41	19	58	50	14	85	55	890	2	
ABP8-4120TP	41	20	58	50	14	87	57	900	2	
ABP8-4121TP	41	21	58	50	14	87	57	900	2	

- Labor-saving tool for tightening and loosening outer and inner nuts with a single wrench.
- The thin-wall type is also effective for vehicles with small clearance between the wheel hub and wheel nut.
- We have a full range of sizes to accommodate everything from medium-sized vehicles (2-ton class) to large vehicles (4-ton or larger class).



- Black rings are paired with black pins, and gray rings are paired with silver pins.



Attached pin/ring



➔ P.283.

Removing and installing wheels

Removal and installation of wheels 4

(2) Removal and installation of wheel nuts



· Function mark is indicated under the product name. For the details, please refer to ➔ P.004-005.
 · Products marked with ⚠ should be ordered after checking stock.



Removing and installing wheels

4 Removal and installation of wheels

(2) Removal and installation of wheel nuts



1"sq. IMPACT SHORT INNER COMBINATION SOCKET FOR WHEEL NUT

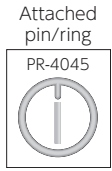
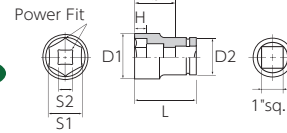
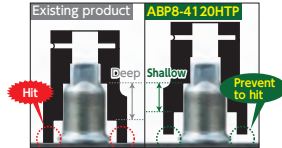
1" sq.



No.	Drive size	S1 6pt.	S2 Square	D1	D2	H	L	ℓ	Weight (g)	⊠
ABP8-4120HTP	1"	41	20	58	50	13	81	51	920	2

- For tightening and loosening inner and outer nuts of Hino trucks (1 to under 4t).
- Exclusive use for genuine parts rear wheel nuts (JIS type, 5/6 holes) for Hino Motors (including OEM supplied vehicles) medium/light trucks (1 to under 4tw).
- * For JIS wheel nuts other than the above applicable models, please use the conventional products ABP6-3217TP-4121TP (3/4"sq.) or ABP8-3517TP-4121TP (1"sq.).
- Designed exclusively for Hino Motors' genuine parts.
- Prevents scratches on the rear inner wheel during maintenance, vehicle inspections, tire changes, and wheel rotations.
- Double lines in the center of the body make it easy to distinguish it from conventional products without double lines.
- KTC's unique pin release prevention mechanism "AMBAC System" improves work safety.

Comparison with conventional products



➔ P.283.

1"sq. IMPACT LONG COMBINATION SOCKET FOR WHEEL NUT

1" sq.

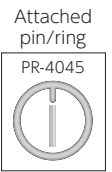
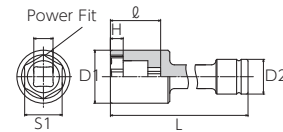


No.	S1 6pt.	S2 Square	D1	D2	H	ℓ	L	Weight (kg)	⊠
ABP8ZL-4121TP	41	21	58	50	14	55	450	2.8	1

- Labor-saving tool for tightening and loosening outer and inner nuts with a single wrench.
- The thin-wall type is also effective for vehicles with small clearance between the wheel hub and wheel nut.
- The combination socket and extension bar are integrated to eliminate rattling and enable more precise torque control when using a torque wrench.
- The long overall length of 450mm allows for use with wide bodies without interference.



- Black rings are paired with black pins, and silver rings are paired with silver pins.



➔ P.283.

1"sq. IMPACT INNER SOCKET

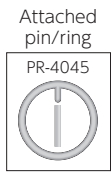
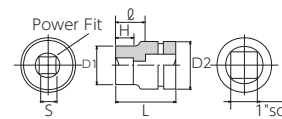
1" sq.



No.	S	D1	D2	H	L	ℓ	Weight(g)	⊠
ABP8-17SQP	17	40	50	18.5	61.5	31.5	600	5
ABP8-19SQP	19	42	50	18.5	61.5	31.5	595	5
ABP8-20SQP	20	43	50	20.5	63.5	33.5	630	5
ABP8-21SQP	21	44	50	20.5	63.5	33.5	680	5



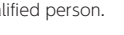
- Black rings are paired with black pins, and silver rings are paired with silver pins.



➔ P.283.

1"sq. IMPACT SOCKET (DEEP THIN / WITH PIN & RING)

1" sq.

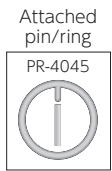
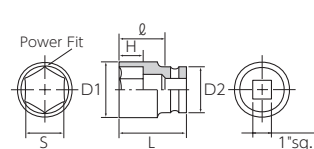


No.	S	D1	D2	H	L	ℓ	Weight(g)	⊠
BP8L-33TP	33	48	49.5	25	100	70	832	2

Deep, thin-walled type compatible with the new ISO wheel.



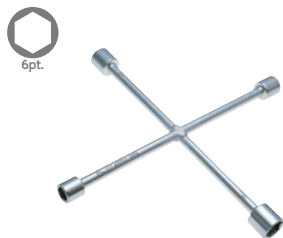
- Some trucks may not be available for use depending on the model of car.
- Black rings are paired with black pins, and silver rings are paired with silver pins.



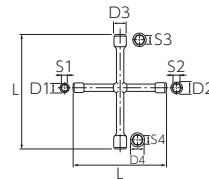
➔ P.283.

• Overhaul can be done only by the qualified person.

CROSS RIM WRENCH



No.	S1×S2×S3×S4(6pt.)	D1×D2×D3×D4	L	Weight(kg)	⊖
XH-14-21	19×21×17×14	28.5×30.5×25×21	400	1.3	10
XH-17-23	19×21×17×23	28.5×30.5×25×33	400	1.5	10
XH-19-26	19×21×23×26	28.5×30.5×33×37	400	1.5	10
XH-19-27	19×22×24×27	28.5×32×34.5×38.5	400	1.6	10



Removing and installing wheels

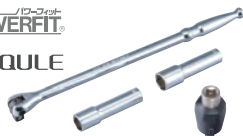
Removal and installation of wheels **4**
 (2) Removal and installation of wheel nuts

1/2"sq. WHEEL NUT SOCKET WRENCH SET (TORQULE) [4pcs.]

1/2" sq. 4 pcs.



POWERFIT TORQULE



No.	Weight(kg)
TB404TQ	3

Set contents	
TORQULE 200N·m	GNA200-04
1/2"sq. breaker bar	BS4E
1/2"sq. wheel nut socket (6pt.)	B38Z-19H, 21H
Metal case (W455×D190×H60mm)	EKB-2

- Includes a metal case and dedicated storage tray for convenient tool management.
- Case P.198
- TORQULE P.032



1/2"sq. WHEEL NUT TORQUE WRENCH SET

1/2" sq.

36

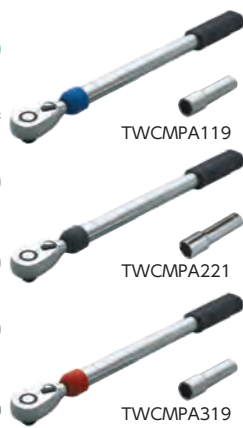


PUSH

Repair Spare parts

Repairable

POWERFIT



With special plastic case

No.	Weight(kg)	⊖
TWCMPA119	1.3	1

Set contents		
1/2"sq. wheel nut torque wrench	85N·m	WCMPA085
1/2"sq. wheel nut socket	19mm	B38Z-19H

- Applies to automobiles (Suzuki, Nissan kei-cars, etc.) with wheel nut specified torque of 85 N·m.
- Includes a special plastic case. (Size: W495×D78×H67)

No.	Weight(kg)	⊖
TWCMPA221	1.3	1

Set contents		
1/2"sq. wheel nut torque wrench	103N·m	WCMPA103
1/2"sq. wheel nut socket	21mm	B38Z-21H

- Applies to automobiles (Toyota, Daihatsu, etc.) with wheel nut specified torque of 103 N·m.
- Includes a special plastic case. (Size: W495×D78×H67)

No.	Weight(kg)	⊖
TWCMPA319	1.3	1

Set contents		
1/2"sq. wheel nut torque wrench	108N·m	WCMPA108
1/2"sq. wheel nut socket	19mm	B38Z-19H

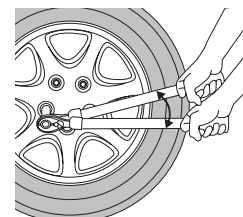
- Applies to automobiles (Honda cars, etc.) with wheel nut specified torque of 108 N·m.
- Includes a special plastic case. (Size: W495×D78×H67)



Check the torque specified by the manufacturer before use.

Details of sockets dedicated to wheel nuts P.550-551

Tightening torque confirmation **5**



Tightening torque confirmation work should be performed within the range of the arrows.

Function mark is indicated under the product name. For the details, please refer to P.004-005.
 Products marked with should be ordered after checking stock.



Removing and installing wheels

5 Tightening torque confirmation

1/2"sq. WHEEL NUT TORQUE WRENCH



With special plastic case

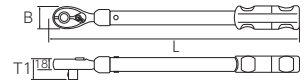


No.	Drive size	Torque (N·m)	L	B	T1	Weight(kg)	⊠
WCMCPA085	1/2"	85	423	40	32	1.1	1
WCMCPA103	1/2"	103	423	40	32	1.1	1
WCMCPA108	1/2"	108	423	40	32	1.1	1

- Single function type torque wrench exclusively for automotive wheel nuts.
- Applicable for right hand rotation only. (Not applicable for reverse threads.)
- WCMCPA085: 85N·m specified torque (Suzuki, Nissan kei-cars)
- WCMCPA103: Specified torque 103N·m (Toyota and Daihatsu models)
- WCMCPA108: Specified torque 108N·m (Nissan and Honda models)
- * Some car models are not applicable. Check the specified torque value specified by the manufacturer before use.
- Highly accurate torque management is possible with dedicated settings for each torque specified by the manufacturer.
- The overall length is set at 420 mm, which is the optimum length to prevent interference between the tire and the hand.
- Includes a special plastic case. (Size: W495×D78×H67)
- * Ratchet head repair kit (BR4E-K) is available. P.251, P.556
- * It is recommended that the repair kit be calibrated and adjusted if used.
- * Repair parts are set. Refer to "Repairable List" from P.625.



• Check the torque specified by the manufacturer before use.



1/2"sq. TORQUE WRENCH FOR WHEEL MOUNTING

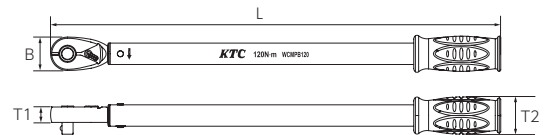


The color of the cover allows easy identification of the set torque. (Yellow:120N·m / Green:140N·m)



No.	Drive size	Torque (N·m)	L	B	T1	T2	Weight (kg)	⊠
WCMCPB120	1/2"	120	517	39	18	43	1.3	1
WCMCPB140	1/2"	140	517	39	18	43	1.3	1

- WCMCPB120: 120 N·m of torque (Subaru, Volkswagen, Audi, etc.)
- WCMCPB140: Specified torque 140 N·m (BMW, Toyota Supra, etc.)
- * Some car models are not applicable. Check the specified torque value specified by the manufacturer before use.
- Torque wrench dedicated to wheel installation with 120 N·m, 140 N·m, which does not require torque setting.
- The color of the cover allows easy identification of the set torque. (Yellow:120N·m, Green:140N·m)
- When the specified tightening torque is reached, a light shock is felt in the hand and a "click" sound is heard to confirm that tightening is complete.
- The union mechanism prevents the socket from being removed from the torque wrench unless the push button is pressed.
- Measurement accuracy is ±3%, meeting ISO standards. Measurement direction is clockwise only.
- * Ratchet head repair kit (BR4E-K) is available. P.251, P.556
- * It is recommended that the repair kit be calibrated and adjusted if used.



A union mechanism is used that prevents the socket from being removed from the torque wrench unless the push button is pressed.

REPAIR KIT FOR 1/2"sq. RATCHET HANDLE



Spare parts

No.	Drive size	Contents	Weight(g)	⊠
BR4E-K	1/2"	1 each of drive gear, claw, steel ball, spring, lever, small screw, lid, and flat head small screw × 2	144	1

- * Repair kit for 1/2"sq. wheel nut torque wrench (WCMCPA085, WCMCPA103, WCMCPA108) and 1/2"sq. torque wrench for wheel mounting (WCMCPB120, WCMCPB140).

QUICK WHEEL GUIDE PINS

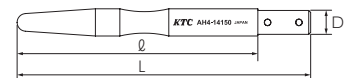


No need to screw in, one-touch detachable without worrying about screw pitch.



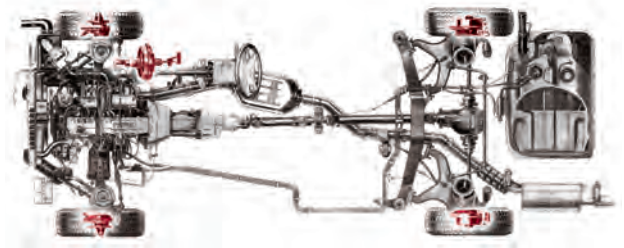
No.	L	ℓ	D	Weight(g)	⊠
AH4-14150	150	123	12.2	145	1

- Special guide pin for wheel bolt vehicles to prevent positioning and wheel dropout when mounting wheels.
- The ball plunger can be attached and detached with a single touch.
- Adapted to wheel bolt size M14.



• Overhaul can be done only by the qualified person.

558 Brake disassembly and assembly



Major maintenance of the braking system includes drum brake shoe replacement and adjustment, disc brake pad replacement, and brake fluid replacement and air bleeding.

Brake disassembly and assembly

Brake disassembly and general assembly work

DRUM BRAKE SERVICE TOOL SET [12pcs.]

12 pcs.



No.	Weight(kg)	☐	
ATBX12A	2.4	1	
Set contents			
Tension spring tool	AB-7, ABX-35	1	each
C Washer Tool	ABX-31		1
Parking shoe lever tool	ABX-32		1
Shoe hold spring tool	ABX-33, 34	1	each
Brake Shoe Adjustment Tool	ABX301, 304	1	each
T-drum remover	ABX9-06, 08	1	each
Hubcap inserter	AS331		1
Lock nut chisel	AS404		1
Foam resin tray			

- This tool set includes the best tools for automotive drum brake maintenance.
- Drum brakes can be safely and comfortably disassembled and serviced.
- Tools are stored in a dedicated foam storage tray and managed in a fixed location to reduce wasteful searching and the risk of loss.
- The tray can be fitted KTC's "Tool Station" series wagon. (SKR703A, SKR602A, SKR502A, SKR402A).



DISK BRAKE SERVICE TOOL SET [6pcs.]

6 pcs.



No.	Weight(kg)	☐	
ATBX6	1.6	1	
Set contents			
Disc brake piston tool	ABX10	1	
Disc parking tool	ABX102, 103, 104	1	each
Handles for disc parking tools	ABX101	1	
Seal pick tool	ABO-100	1	
Tray (W335×D230×H45)			

- A set of special tools used for disassembling, assembling, and adjusting disc brakes used in automobiles.
- Disc brake system used in passenger cars to light trucks (up to 2-ton class).
- The tray can be fitted with the "Tool Station" series (SKR703A, SKR602A, SKR502A, SKR402A).



1 Wheel removal

(1) Removal of wheel caps and wheel nuts

Wheel Cap Wrench

➔ P.548



Aluminum Wheel Center Cap wrench

➔ P.548



Impact wrench

➔ P.442-444



For impact wrench Wheel nut Socket

➔ P.548-550



Cross rim wrench

➔ P.555



(2) Hub cap removal

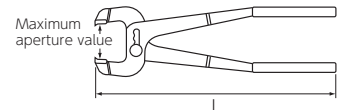


HUB CAP PLIER



No.	Maximum aperture value	L	Weight(g)	☐	
HP-350S	95	350	750	10	

- Hub cap removal.
- Scratch-resistant, one-touch operation.
- The shape allows the cap to float without any difficulty.
- The free size is applicable to a wide range of car models.

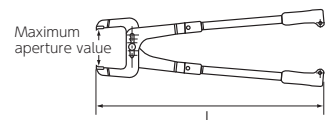


HUB CAP PLIER



No.	Maximum aperture value	L	Weight(kg)	☐	
HP-45130	130	490	1.35	1	

- Hub cap removal.
- The parallel jaws bite into the hubcap, making it easy to remove without damaging the hubcap.
- The blade width can be adjusted in 6 steps, making it applicable for small cars to medium-sized trucks.

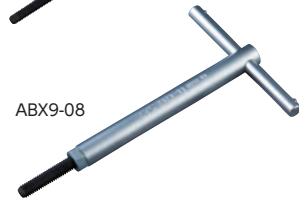


• Overhaul can be done only by the qualified person.

T-SHAPED DRUM REMOVER

Repair
Spare parts

ABX9-06



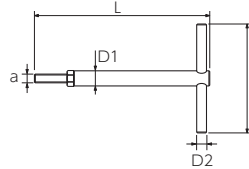
ABX9-08

No.	a	L	ℓ	D1	D2	Weight(g)	⊖
ABX9-06	M6	160	100	14	9	200	1
ABX9-08	M8	160	100	14	9	200	1

- For removal of brake drums, mainly for small cars.
- The sliding handle allows smooth removal of the brake drum even when two handles are used, without touching each other.
- The tip of the screw is set as a spare part. When the screw is worn out, only the tip screw can be replaced.

Spare parts

No.	Description
ABX9-06A	M6 bit
ABX9-08A	M8 bit



SCREWDRIVER FOR BRAKE DRUM SCREW

⊕
Cross

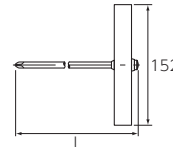


No.	Nominal size	L	Weight(g)	⊖
AB-5	Cross No.3	270	260	1

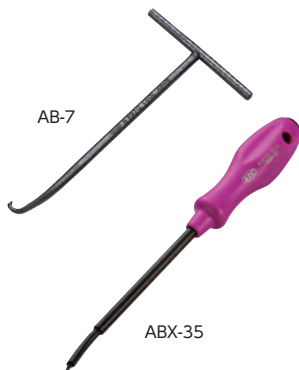
- Removal and installation of brake drum screws, door hinge bolts, etc.
- T-shaped handle with thick, non-slip grip for easy application of force.
- It is also effective for removing and installing door hinge bolts, etc.



· Do not use on anything that has electricity running through it.



TENSION SPRING TOOL

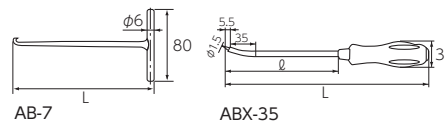


AB-7

ABX-35

No.	L	ℓ	Weight(g)	⊖
AB-7	153	—	90	1
ABX-35	265	145	130	10

- AB-7 Removal of drum brake tension spring. A tip that prevents the spring from coming off and a T-shaped handle that makes it easy to apply force ensure safe operation.
- ABX-35 Drum brake tension spring assembly. Bend shape on the shaft allows the spring to move smoothly. The grips are shaped for easy grip and easy assembly.



SHOE-HOLD SPRING CUP TOOL

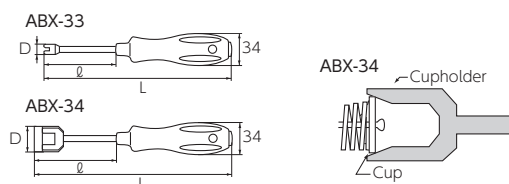


ABX-33

ABX-34

No.	D	L	ℓ	Weight(g)	⊖
ABX-33	10	195	75	100	10
ABX-34	24	205	85	130	10

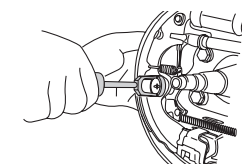
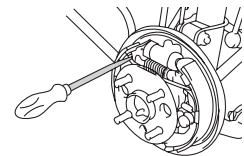
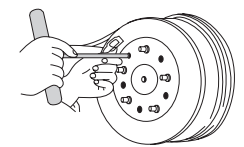
- Removal and installation of shoe hold springs for passenger car drum brakes.
- ABX-33 : Grip is easy to grip for pushing and pin turning.
- ABX-34 : Tapered cup holder holds cups for speedy operation.



Brake disassembly and assembly

Disassembly and assembly of drum brakes **2**

(1) Shoe installation/removal

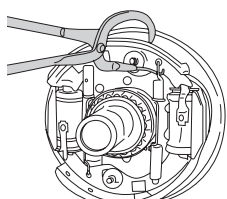
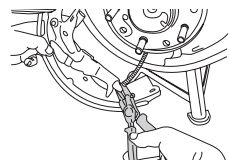


· Function mark is indicated under the product name. For the details, please refer to P.004-005.
· Products marked with should be ordered after checking stock.

Brake disassembly and assembly

2 Disassembly and assembly of drum brakes

(1) Shoe installation/removal

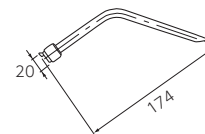


DUO-SERVO TYPE BRAKE SPRING TOOL



No.	Adoption	Weight(g)	☐	
AB-9	Medium size vehicle (2-4t) Hiace class	160	5	

• When used with brake spring pliers (ASP-550), the brake shoe return spring can be removed and reassembled for almost all car models.

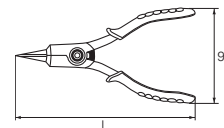


PARKING SHOE LEVER TOOL



No.	L	Weight(g)	☐	
ABX-32	177	170	10	

• Removing and installing parking cables.
• The use of a special claw makes it difficult to release the parking brake cable once it is gripped.
• The parking cable can be attached and detached with a single touch.



BRAKE SPRING PLIERS



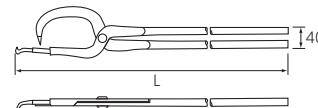
Repair
Spare parts

No.	L	Weight(g)	☐	
ASP-550	550	1,200	1	

• Removal and assembly of tension springs for 4 to 10 ton heavy duty vehicles.

Spare parts

No.	Description	Over-all length	Weight(g)	☐	
ASP-C	Claw (with pin)	101	35	1	



C-WASHER TOOL

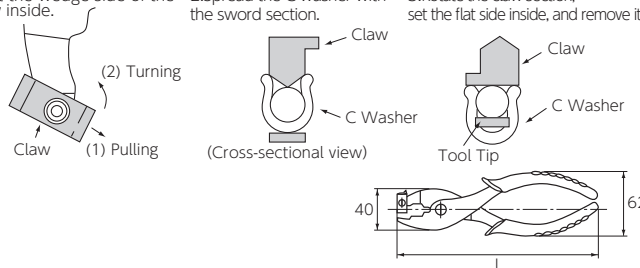


No.	L	Weight(g)	☐	
ABX-31	203	230	10	

• Remove and install C washers.
• Specialized claw improves workability.
• The C-washer is spread on the wedge side of the claw and pushed out on the flat side for speedy operation.

Removal operation

1. Set the wedge side of the claw inside.
2. Spread the C-washer with the sword section.
3. Rotate the claw section, set the flat side inside, and remove it.



BRACKET SANDER SET

Repair
Spare parts



AP5306



AP53010



AP530G

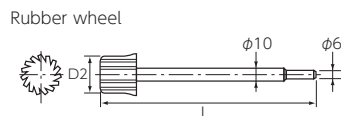
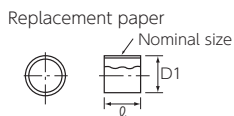
No.	Details						Applicable Vehicles	Weight (g)	☐	
	Paper			Rubber wheel						
	D1	∅	Nominal size	Volume	D2	L				Volume
AP5306	30	25	#60	5	29	177	1	Hino 8t or more	160	5
AP5326	32	30	#60	5	31	177	1	UD8t or more	160	5
AP5356	35	35	#60	5	34	177	1	Fuso, Isuzu 8t or more	160	5

· Cleaning of brake shoe brackets on large vehicles.

Spare parts

No.	Description	Details	Volume	Weight(g)	☐
AP53010	Replacement paper set	#60Paper for ∅30	10	100	5
AP53210	Replacement paper set	#60Paper for ∅32	10	100	5
AP53510	Replacement paper set	#60Paper for ∅35	10	100	5

No.	Description	D2	L	Weight(g)	☐
AP5-30G	Rubber wheel	29	177	110	10
AP5-32G	Rubber wheel	31	177	110	10
AP5-35G	Rubber wheel	34	177	110	10



DISC-BRAKE SPREADER

Repairable

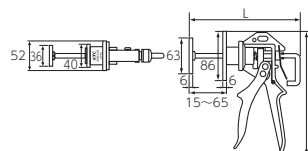


No.	L	H	Weight(g)	☐
ABX105	145~195	214	750	1

- Push back disc brake piston calipers.
- The brake piston can be easily returned by simply squeezing the lever.
- The handle rotates to allow work in a variety of positions.
- The calipers can be easily removed from the calipers with a one-handed operation.
- The parallel movement allows the piston to be pushed straight back without scratching the piston.
- Single piston caliper for small cars to light trucks (2-ton class). (Cannot be used for brake calipers with integrated parking brake)
- * Repair parts are available. Please contact our distributors for details.

Comparison with our conventional product (ABX10)

Compared to the handle type, it takes only 12 seconds* from tool setting to completion of piston return, since the operator only needs to hold the grip. Work time is reduced by 60% compared to conventional products!



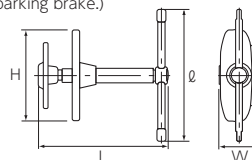
* Piston protrusion: 20mm → 0mm (Working time varies by individual.)

DISC-BRAKE SPREADER (SINGLE PISTON TYPE)



No.	Plate aperture value	∅	L	W	H	Weight(g)	☐
AB-11	12~77	120	122	36	86	345	1

- Push back disc brake piston calipers.
- The plate can be used in different ways, with the plate hitting all surfaces, even if the arm is high or low.
- The center screw rotates smoothly with a ball.
- Applicable to single piston calipers for light cars to light trucks (2-ton class). (Cannot be used for brake calipers with an integrated parking brake.)

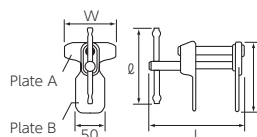


DISC-BRAKE SPREADER



No.	Plate aperture value	∅	L	W	H	Weight(kg)	☐
ABX10	10~75	120	155	86	117	1	1

- Push back disc brake piston calipers.
- Applicable to many car models by using different AB plates.
- Applicable to single-piston calipers, parallel two-piston calipers, and opposed two-piston calipers for small cars to light trucks (2-ton class). (Cannot be used for brake calipers with an integrated parking brake.)



Brake disassembly and assembly

Disassembly and assembly of drum brakes 2

(2) Cleaning of large car brake shoe brackets

Disassembly and assembly of disc pads 3

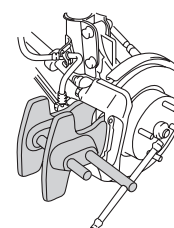
(1) Pad removal



Disc brake piston tool application examples

Type	Single-piston caliper	Parallel 2-piston caliper	Opposed 2-piston caliper	Opposed 4-piston caliper
No.				
ABX105	●			
AB-11	●			
ABX10	●	●	●	
AB-10	●	●	●	
ACB-12	●	●	▲	●

▲: Can be used after the caliper is removed from the vehicle body.



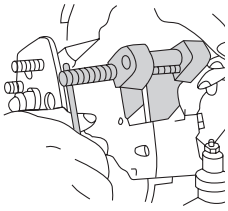
· Function mark is indicated under the product name. For the details, please refer to P.004-005.
· Products marked with ⚙ should be ordered after checking stock.



Brake disassembly and assembly

3 Disassembly and assembly of disc pads

(1) Pad removal

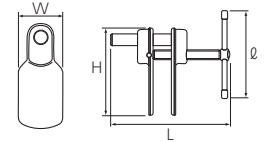


DISC-BRAKE SPREADER



No.	Plate aperture value	φ	L	W	H	Weight(g)	⊠
AB-10	10~65	120	155	50	115	780	1

- Push back disc brake piston calipers.
- The jaw that pushes in the piston moves in parallel with the guide, eliminating lateral movement, so work can be performed by rotating the handle.
- The shape prevents accidental widening of the caliper or mountings when inserting the pawl.
- Applicable to parallel 2-piston calipers and opposed 2-piston calipers for passenger cars to light trucks (2-ton class). (Cannot be used for brake calipers with an integrated parking brake.)

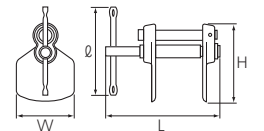


DISC-BRAKE SPREADER (WIDE PLATE)



No.	Plate aperture value	φ	Plate thickness	L	W	H	Weight (kg)	⊠
ACB-12	10~87	150	5	184	90	120	1.4	5

- Push back disc brake piston calipers.
- Applicable to single-piston calipers, parallel 2-piston calipers, opposed 2-piston calipers, and opposed 4-piston calipers for passenger cars to light trucks (2-ton class). (Cannot be used for brake calipers with an integrated parking brake.)
- * Opposed 2-piston brake calipers cannot be used when mounted on the vehicle body because the opening dimension is smaller than the tool. It can be used if the brake caliper is removed from the vehicle body.
- * Repair parts are available. Please contact our distributors for details.



DISC-BRAKE SPREADER SET (WIDE PLATE) [5pcs.]



5 pcs.

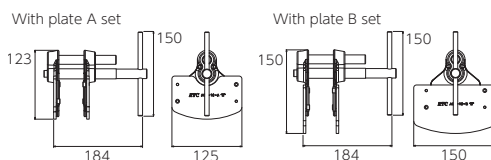
No.	Weight(kg)	⊠
ATCB5	3.0	1

Disc brake piston tool (wide plate)	ACB-12
Plate A Set	ATCB2A
Plate B Set	ATCB2B

- Push back disc brake piston calipers.
- The disc brake piston tool (ACB-12) is used as a base, and the plate can be interchanged according to the size used.
- Applicable to single-piston calipers, parallel 2-piston calipers, opposed 2-piston calipers, and opposed 4-piston calipers for light cars to light trucks (2-ton class). (Cannot be used for brake calipers with an integrated parking brake.)
- Plate A Set: Opposed 4-piston, parallel 2-piston disc caliper
Caliper upper opening 125 mm or more.
- Plate B Set: Opposed 6-piston disc caliper
Caliper upper opening 150 mm or more

Application examples

	Caliper type	Car model	Manufacturer
Plate A 125mm	Parallel 2-piston disc calipers	Light truck	Isuzu: Elf
		Passenger car	Toyota: Celsior, Aristo
			Nissan: Cedric, Gloria, Elgrand, Liberty, Serena
			Mazda: MPV, Bongo
Plate B 150mm	Opposed 4-piston disc caliper	Passenger car	Lexus: LS, GS
			Porsche: 928
			Lexus: IS F



Example of ACB-12/ATCB2A usage

Type	Parallel 2-piston caliper (large)	Opposed 4-piston caliper (large)	Opposed 6-piston caliper
No.			
ACB-12 + ATCB2A	●	●	
ACB-12 + ATCB2B			●

ATCB5 applies to all the above types. (Opposed 2-piston calipers require the caliper to be removed from the vehicle body.)

Disassembly and assembly of disc pads **3**

(1) Pad removal

PLATE FOR DISC-BRAKE SPREADER [2pcs.]

2 pcs.



No.	Weight(g)	⊞	
ATCB2A	670	1	
Set contents			
Dedicated plates (2pcs.)	125×77×11.3		

· Can be attached to your disc brake piston tool (ACB-12).



· Disc brake piston tool (wide plate) for ACB-12 only. Do not use by attaching to other products.

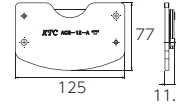


PLATE FOR DISC-BRAKE SPREADER [2pcs.]

2 pcs.

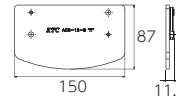


No.	Weight(g)	⊞	
ATCB2B	920	1	
Set contents			
Dedicated plates (2pcs.)	150×87×11.3		

· Can be attached to your disc brake piston tool (ACB-12).



· Disc brake piston tool (wide plate) for ACB-12 only. Do not use by attaching to other products.



DISK PARKING TOOL SET [3pcs.]

3/8" sq.

3 pcs.



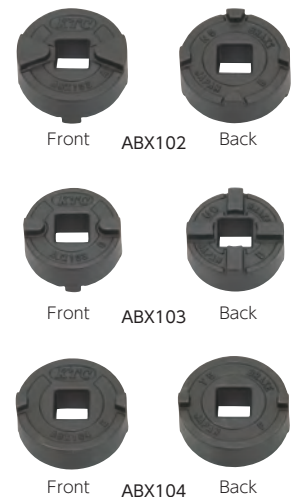
No.	Weight(g)	⊞	
ATBX13	200	10	
Set contents			
Rotor (A, B)(C, D)(E, F)	ABX102, 103, 104		

* The ABX101 (handle) is not included with the ATBX13.



ROTOR

3/8" sq.



Rotor (A, B)

No.	Drive size	L	W1	W2	Weight(g)	⊞	
ABX102	3/8"	34	11	16	70	10	

Rotor (C, D)

No.	Drive size	L	W1	W2	Weight(g)	⊞	
ABX103	3/8"	30	11	16	60	10	

Rotor (E, F)

No.	Drive size	L	W1	W2	Weight(g)	⊞	
ABX104	3/8"	34	11	16	70	10	

- Three types of rotors can be used with six types of brake pistons.
- The small outer diameter allows installation through the caliper cutout.
- The special shape of the piston, which is precision-cast to match the shape, makes it easy to select an applicable rotor and prevents the rotor jaws from coming off.

ABX102
Applicable Manufacturers
A
 Toyota,
 Mitsubishi, Mazda,
 Daihatsu, Nissan
 (manufactured by
 Akebono Brake)
B
 Nissan

ABX103
Applicable Manufacturers
C
 Toyota (made by
 Aisin), Suzuki
D
 Honda (made by
 Nissin), Suzuki

ABX104
Applicable Manufacturers
E
 Volkswagen, Audi
F
 Subaru

· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with should be ordered after checking stock.



Brake disassembly and assembly

3 Disassembly and assembly of disc pads

(1) Pad removal

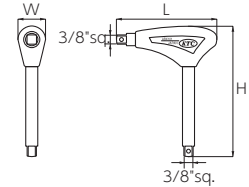
3/8"sq. HANDLE

3/8" sq.



No.	H	W	L	Weight(g)	⊠
ABX101	140	28	110	250	10

- This L-shaped handle is ideal for disc parking tools (ABX102-104) and is easy to push and turn.
- The 3/8"sq. drive size allows for use with sockets, hexagonal bit sockets, etc.



- Insert the square drive completely up to the root.

4 Replacement of inner parts

(1) Sticker removal



(2) Cylinder cleaning

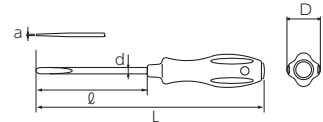


SEAL PICK TOOL



No.	a	D	d	L	∅	Weight(g)	⊠
ABO-100	1	27	5	187	100	55	1

- Disc brake seal removal.
- Winding shape tip to prevent scratching.
- The rounded tip allows removal of seals and boots without damaging them.
- The grip shape is easy to grip and the long shaft length allows for easy removal of seals and boots.

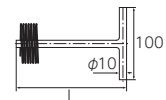


DISC CYLINDER POLISHER



No.	L	Applicable cylinder	Weight(g)	⊠
ACPD-54	150	48~53	180	1
ACPD-64	150	54~60	180	1

- Clean the inside of the disc brake cylinder.
- Rust and impurities in the cylinder and seal grooves can be cleaned.
- This is a polisher with special abrasive and is applicable to $\phi 48$ to $\phi 60$ disc cylinders.
- Material: Nylon wire rod with abrasive (silicon carbide #180)



For cleaning O-ring grooves of brake calipers



To clean sliding pin holes in brake calipers



For cleaning and rust removal from brake rotor surfaces



For cleaning and rust removal around automobile axle hubs

POLISHER BIT FOR IMPACTDRIVER

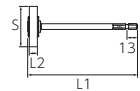
1/4" 6.35



Caliper Polisher

No.	S	L1	L2	Weight(g)	⊠
ACP-50H	$\phi 50$	135	10	140	10

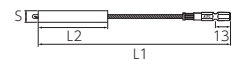
- Material: Steel wire (brass coated)



Slide Pin Polishers

No.	S	L1	L2	Weight(g)	⊠
ACP-08	$\phi 8$	171	60	16	25
ACP-10	$\phi 10$	171	60	16	25
ACP-12	$\phi 12$	171	60	16	25
ACP-14	$\phi 14$	171	60	16	25

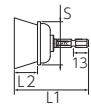
- Material: Wire rod with abrasive (silicon carbide #320)



Rotor Polisher

No.	S	L1	L2	Weight(g)	⊠
ACP-40C	$\phi 34$	64	20	61	10
ACP-50C	$\phi 51$	76	25	148	10

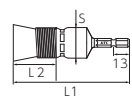
- Material: Steel wire (brass coated)



Hub Polisher

No.	S	L1	L2	Weight(g)	⊠
ACP-15W	$\phi 15$	85	30	40	10
ACP-25W	$\phi 25$	95	35	95	10

- Cleaning of each part of the undercarriage
- The hexagonal shaft enables secure fastening to power tools and allows power tools to be used with maximum force. This helps shortening work time.
- The lineup includes a flexible shaft for areas where excessive cutting is not desired, and an integrated shaft for areas where adhered rust is to be removed firmly.
- Rotor polishers/hub polishers can be used on other parts of the body and in addition to the car.
- Material: Steel wire



- Wear protective goggles when working, as dust and nylon wire may break off and scatter.
- Slide pin polishers and cylinder polishers for large vehicles must be used with right hand rotation.

• Overhaul can be done only by the qualified person.

BRAKE CYLINDER POLISHER SET [6pcs.]

6 pcs.



No.	Weight(g)	⊞
ACP6	400	5
Cylinder Polisher (for aluminum alloy cylinders)	ACP-16A, 24A, 32A	
Cylinder Polisher (for cast cylinders)	ACP-16F, 24F, 32F	

- Clean the inside of the cylinder.
- Two types of polishers, one for aluminum and the other for cast metal, are included in the set.
- The nylon wire brushes contain abrasive material to clean and polish.
- Aluminum catch basin to prevent dripping of brake fluid.
- Flexible shaft for improved workability.
- Applicable to wheel cylinders from light cars to light trucks (2-ton class).

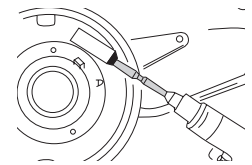


· Wear protective goggles when working, as dust and nylon wire may break off and scatter.

Brake disassembly and assembly

Replacement of inner parts 4

(2) Cylinder cleaning



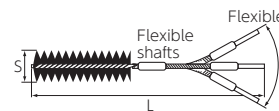
BRAKE CYLINDER POLISHER



No.	S	L	Type	Weight(g)	⊞
ACP-16A	φ 16	172	For aluminum alloy cylinders	30	10
ACP-24A	φ 24	175		35	10
ACP-32A	φ 32	175		40	10
ACP-16F	φ 16	172	For cast cylinders	30	10
ACP-24F	φ 24	175		35	10
ACP-32F	φ 32	175		40	10



· Wear protective goggles when working, as dust and nylon wire may break off and scatter.



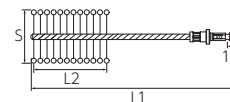
POLISHER BIT FOR IMPACTDRIVER

1/4" 6.35



No.	S	L1	L2	Weight(g)	⊞
ACP-41FH	φ 41	200	70	100	10
ACP-51FH	φ 51	200	70	115	10
ACP-59FH	φ 59	200	70	140	10

- Cleaning of wheel cylinders of heavy-duty vehicles.
- The hexagonal shaft enables secure attachment to power tools and maximum use of power tools. This contributes to shortening work time.
- Material: Silicon carbide #180



FLEX FLARE NUT WRENCH



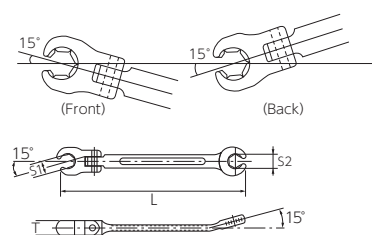
POWERFIT



No.	S1×S2	T	L	Weight(g)	⊞
MZF-10	10×10	10	143	80	5

- Tightening and loosening of hydraulic union nuts (flare nuts) for brake and clutch systems for passenger cars and light trucks (2-ton class).
- The head swivels to provide a wide range of use and is effective in confined areas near the master cylinder.
- The hexagonal bore of the head is angled at 15° to the center, so that the same feed angle as the dodecagonal bore can be obtained by repeated operations on the front and back sides. (Figure 1)

Capable of the same feed as the dodecagon (Figure 1)



(3) Pipe disassembly



· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with should be ordered after checking stock.



Brake disassembly and assembly

4 Replacement of inner parts

(3) Pipe disassembly



BRAKE PIPE TOOL SET [2pcs.]

3/8" sq. 2 pcs.



POWERFIT



No.	Weight(g)	⊠
AB252	105	10

Set contents	
Socket for brake pipe (6pt.)	BZ25-10H
Claw foot glasses for brake pipes (6pt.)	MZ25-10H

- Tightening and loosening of hydraulic union nuts (flare nuts) for brake and clutch systems for passenger cars and light trucks (2-ton class).
- Effective for tight working areas such as flare nuts on master cylinders.
- The hexagonal angle of the clawfoot for brake pipes is angled at 15° to the center, allowing work equivalent to that of a dodecagonal bore (work is possible with a runout angle of 30°) through repeated work on the front and back sides.
- Applies to brake and clutch flare nuts (10 mm) for passenger cars, light four-wheel trucks, and light four-wheel trucks of all Japanese car makers.

SOCKET WRENCH FOR BRAKE PIPE

3/8" sq.

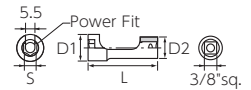


POWERFIT



No.	S	D1	D2	L	Weight(g)	⊠
BZ25-10H	10	20	17	54	60	1

- Ideal for tightening and loosening hydraulic union nuts (flare nuts) for brake and clutch systems on passenger cars and light trucks (2-ton class).
- Various uses are possible in combination with a drive tool with a 3/8"sq. drive size.



CRAW FOOT OFFSET WRENCH FOR BRAKE PIPE

3/8" sq.

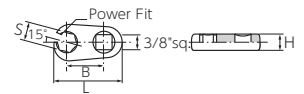


POWERFIT



No.	S	B	H	L	Weight(g)	⊠
MZ25-10H	10	22	10	40	45	1

- Ideal for tightening and loosening hydraulic union nuts (flare nuts) for brake and clutch systems on passenger cars and light trucks (2-ton class).
- Various uses are possible in combination with a drive tool with a 3/8"sq. drive size.

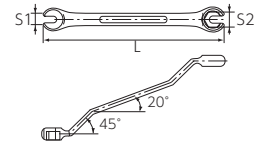


FLARE NUT WRENCH



No.	S1(6pt.)×S2(6pt.)	L	Weight(g)	⊠
MZ1-10X12	10×12	160	80	5

- Tightening and loosening of brake pipes and flare nuts for light, small, and medium-sized automobiles.
- The bore is shaped so that the five points are in contact with each other, allowing the nut to be turned securely.



FLARE NUT WRENCH



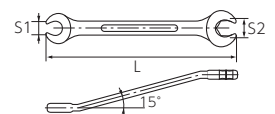
POWERFIT

(MZ10-10X12 only)



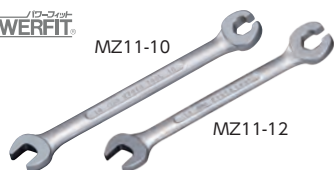
No.	S1(6pt.)×S2(6pt.)	L	Weight(g)	⊠
MZ10-10X12	10×12	145	80	5
MZ10-14X17	14×17	164	100	5

- This wrench is exclusively for removing/attaching brake pipe flare nut and clutch pipe flare nut (hydraulic type only).
- The bore is shaped so that the five points are in contact with each other, allowing the nut to be turned securely.



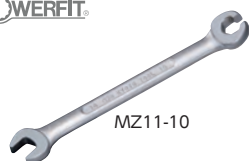
• Overhaul can be done only by the qualified person.

FLARE NUT WRENCH SET [2pcs.]



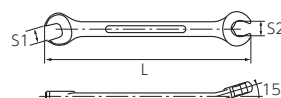
No.	Weight(g)	⊞
● MZ112	135	10
Set contents		
Flare nut wrench	MZ11-10, 12	

FLARE NUT WRENCH

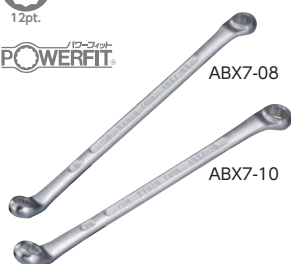


No.	S1×S2(6pt.)	L	Weight(g)	⊞
● MZ11-10	10×10	150	60	10
● MZ11-12	12×12	154	75	10

- The bore is shaped so that the five points are in contact with each other, allowing the nut to be turned securely.
- This wrench is a combination of a flare nut wrench and an open end wrench.
- The open end wrench can be used for quick turning after loosening with the Box end wrench for the brake pipe.



BLEEDER PLUG WRENCH

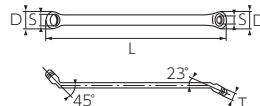


No.	S	D	T	L	Weight(g)	⊞
ABX7-08	8	16.2	7.5	180	60	1
ABX7-10	10	18.7	7.5	181	60	1

- Tightening and loosening of bleeder plugs.
- The stopper prevents the bleeder plug from getting caught and falling out, allowing the operator to concentrate on tightening and loosening operations.
- The rise angles at both ends are different, allowing the user to choose the angle that is most convenient for work.



Cross-section of aperture



BLEEDER PLUG WRENCH

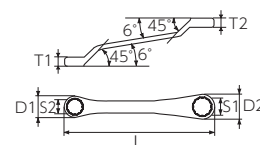


No.	S1×S2	D1	D2	T1	T2	L	Weight(g)	⊞
ABX7-0811	8×11	15.8	18.3	6.3	7.3	127	50	1

- Tightening and loosening of bleeder plugs.
- Toyota Vellfire/Alphard (year 2008/May or later), 8×11mm bleeder plugs for Toyota Estima (year 2006/Jan or later), etc.
- The combination of 8×11mm sizes can be used for both the front and rear with a single unit.
- A stopper is provided at the top of the bore and can be fixed to the hexagonal part of the bleeder plug for working.
- Short type that does not interfere with tires and undercarriage.



Cross-section of aperture



BRAKE SHOE ADJUSTER TOOL SET [3pcs.]



No.	Weight(g)	⊞
ATBX33	110	10

Set contents	
Brake Shoe Adjustment Tool	ABX301, 302, 303

- This tool is used for drum brake adjustment (drum and shoe clearance adjustment).
- Mainly light cars to standard cars.
- The various shapes make it easy to adjust shoe adjusters that were previously unreachable.
- Two types of radiuses can be used with a single unit, which expands the range of applications.

• Function mark is indicated under the product name. For the details, please refer to P.004-005.
 • Products marked with ● should be ordered after checking stock.



Brake disassembly and assembly

5 Shoe clearance adjustment

BRAKE SHOE ADJUSTER TOOL SET [2pcs.]

2 pcs.



No.	Weight(g)		☐	
ATBX32	75	10		
Set contents				
Brake Shoe Adjustment Tool	ABX304, 305			

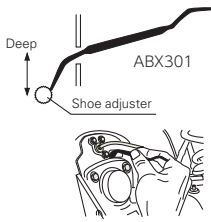
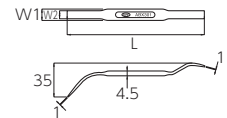
- This tool is used for drum brake adjustment (drum and shoe clearance adjustment).
- Mainly 2 to 4 ton trucks
- The various shapes make it easy to adjust shoe adjusters that were previously unreachable.
- Two types of radiuses can be used with a single unit, which expands the range of applications.

BRAKE SHOE ADJUSTER TOOL



No.	Type	Applicable Vehicles	L	W1	W2	Weight (g)	☐	
ABX301	Standard	Automobile	140	12	8	40	10	

- Suitable for vehicles with shoe adjusters located deep inside the car.

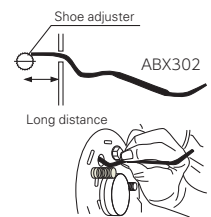
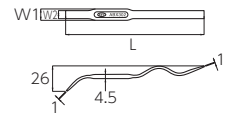


BRAKE SHOE ADJUSTER TOOL (ROUND)



No.	Type	Applicable Vehicles	L	W1	W2	Weight (g)	☐	
ABX302	Rounds	Automobile	140	12	8	33	10	

- Suitable for vehicles with a long distance to the shoe adjuster.

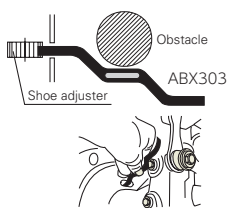
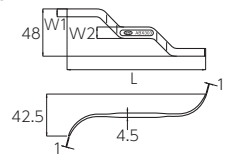


BRAKE SHOE ADJUSTER TOOL (OFFSET)



No.	Type	Applicable Vehicles	L	W1	W2	Weight (g)	☐	
ABX303	Offset	Automobile	140	8	12	39	10	

- Suitable for vehicles with shock absorbers or other obstacles.

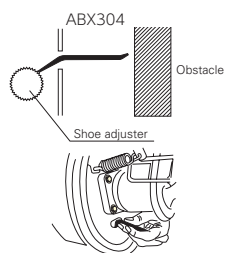
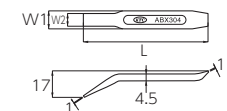


BRAKE SHOE ADJUSTER TOOL (SHORT)



No.	Type	Applicable Vehicles	L	W1	W2	Weight (g)	☐	
ABX304	Short	Medium-sized car	80	12	8	24	10	

- Suitable for vehicles with many obstacles.



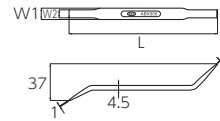
• Overhaul can be done only by the qualified person.

BRAKE SHOE ADJUSTER TOOL (LONG)



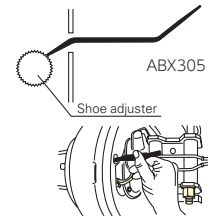
No.	Type	Applicable Vehicles	L	W1	W2	Weight(g)	☞
ABX305	Long	Medium-sized car	150	12	8	51	10

• Suitable for vehicles with high tension springs.



Brake disassembly and assembly

Shoe clearance adjustment 5



BRAKE BLEEDER

Repair

Spare parts

Repairable



Attachment A1 Attachment A2



Attachment B1 Attachment B2



Clamp D1



Clamp E1



ABX70-L1

No.	Weight(kg)
ABX70	8.5

Set contents

Brake bleeder main unit (with dustproof cover) W320×D205×H210·Tank capacity 2L·Pressure feed hose 3.5m Hose outer diameter ϕ 8 Inner diameter ϕ 5

Attachment set	Attachment	Part No.
	Attachment A1	ABX70-A1
	Attachment A2	ABX70-A2
	Attachment B1	ABX70-B1
	Attachment B2	ABX70-B2
	Clamp D1 (claw type)	ABX70-D1
	Clamp E1 (chain type)	ABX70-E1
	Attachment Case	Resin Case

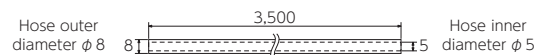
- For brake fluid supply during brake fluid replacement and air bleed operations.
- Reservoir tanks with an inlet/outlet bore diameter of ϕ 18 to ϕ 76, for passenger cars to light trucks (2-ton class).
- Continuous pumping reduces work time.
- Compact design with high performance and simplicity.
- Easy-to-operate air pressure-feeding type.
- To bleed air in the brake bleeder tank, simply push a button.
- Push-fit rubber plate for one-touch attachment (Attachment A1)
- Excellent adhesion due to internal pressure type expansion rubber. (Attachment A2, B1, B2)
- One-touch installation is possible with a dedicated attachment. (Attachments G1, G2, G3, F1, F2, H1)
- Includes a dust-proof cover for convenient storage of the main unit.
- * Repair parts are set. ☞ Refer to "Repairable List" from P.625.



Included dust cover

Spare parts

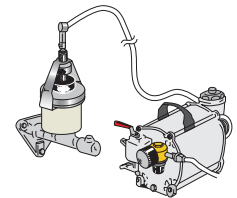
No.	Description	Weight(g)	☞
ABX70-L1	Brake bleeder pressure feed hose	100	1



- This product should be used by qualified person (auto mechanics or those with equivalent qualifications).
- Do not use for any purpose other than pumping brake fluid as specified by the automobile manufacturer.

Brake fluid replacement 6

Continuous pressure feed without breath-hold!
Compatible with ABS vehicles! One person can complete the work quickly!



How to use it



• Function mark is indicated under the product name. For the details, please refer to ☞ P.004-005.
 • Products marked with ☞ should be ordered after checking stock.

6 Brake fluid replacement

ATTACHMENT FOR BRAKE BLEEDER



No.	Description	Applicable size	Applicable Maker (Car Model)
ABX70-A1	Attachment A1	φ 18~31	Toyota, Nissan, Mitsubishi, Daihatsu, Audi, Volkswagen
ABX70-A2	Attachment A2	φ 32~45	Toyota, Nissan, Mitsubishi, Mazda, and Daihatsu, Suzuki, Subaru, and Isuzu, Mercedes-Benz and BMW (except Mini and current), Opel, GM
ABX70-B1	Attachment B1	φ 46~60	Toyota, Honda, Daihatsu, Mitsubishi, Suzuki, Subaru, Isuzu
ABX70-B2	Attachment B2	φ 61~76	Toyota, Nissan, Honda, Mitsubishi, Mazda, Suzuki, Subaru
ABX70-F1	Attachment F1	φ 36	Mazda (mainly Bongo)
ABX70-F2	Attachment F2	φ 60	Daihatsu (mainly van cars)
ABX70-G1	Attachment G1	φ 42.5	Toyota (all passenger car series)
ABX70-G2	Attachment G2	φ 56	Honda (mainly Acty Odyssey)
ABX70-G3	Attachment G3	φ 54	Daihatsu (mainly Mira and Move)
ABX70-H1	Attachment H1	φ 75	Honda (mainly Odyssey)
ABX70-D1	Clamp D1	Clamp for ABX70-B1,B2	
ABX70-E1	Clamp E1	Clamp for ABX70-B1,B2,H1	

* Repair parts are set. Refer to "Repairable List" from P.625.

Attachment example



Attachment A1



Attachment B2 + Clamp D1



Attachment B2 + Clamp E1



Attachment F1



Attachment G1

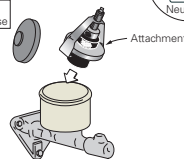


Attachment H1 + Clamp E1

Procedures for using a brake bleeder

1 Attach the attachment to the reservoir tank.

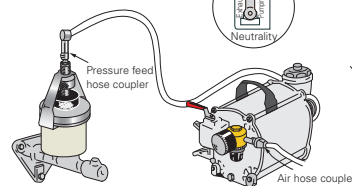
Example of attachment A2 use



Remove the reservoir tank cap and attach the appropriate size attachment to the reservoir tank.

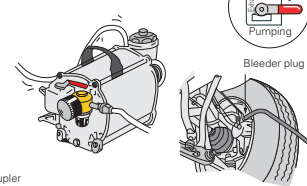


2 Connect hoses.



Connect the coupler of the pressure feed hose to the attachment and the coupler of the air hose to the brake bleeder.

3 Pumping brake fluid.



Switch the control lever to "pressure feed" to pump brake fluid, replace brake fluid, and bleed air.



Brake Bleeder Recommended attachments by car manufacturer

For Toyota vehicles

Description	Item's number
Attachment A1	ABX70-A1
Attachment B2	ABX70-B2
Attachment G1	ABX70-G1
Clamp E1	ABX70-E1



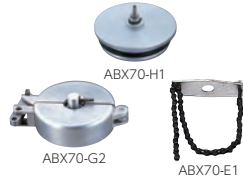
For Nissan vehicles

Description	Item's number
Attachment A1	ABX70-A1
Attachment A2	ABX70-A2
Attachment B2	ABX70-B2
Clamp E1	ABX70-E1



For Honda vehicles

Description	Item's number
Attachment G2	ABX70-G2
Attachment H1	ABX70-H1
Clamp E1	ABX70-E1



For Mitsubishi vehicles

Description	Item's number
Attachment A1	ABX70-A1
Attachment A2	ABX70-A2
Attachment B1	ABX70-B1
Attachment B2	ABX70-B2
Clamp D1	ABX70-D1



For Daihatsu vehicles

Description	Item's number
Attachment A2	ABX70-A2
Attachment B1	ABX70-B1
Attachment F2	ABX70-F2
Clamp E1	ABX70-E1



For Mazda vehicles

Description	Item's number
Attachment A2	ABX70-A2
Attachment B2	ABX70-B2
Attachment F1	ABX70-F1
Clamp E1	ABX70-E1



For Subaru vehicles

Description	Item's number
Attachment A2	ABX70-A2
Attachment B1	ABX70-B1
Attachment B2	ABX70-B2
Clamp E1	ABX70-E1



For Suzuki vehicles

Description	Item's number
Attachment A2	ABX70-A2
Attachment B1	ABX70-B1
Attachment B2	ABX70-B2
Clamp E1	ABX70-E1



BLEEDER WRENCH SET [4pcs.]



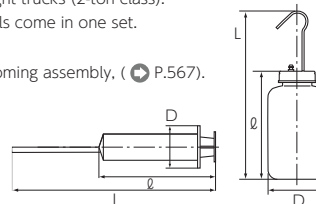
No.	Weight(g)	⊠
ATBX04	320	1

Set contents	
Bleeder plug wrench	ABX7-08, 10
Fluid catch tank (tank capacity 1L, hose length 1.1m)	ABX7-T1
Fluid inhaler (50mL)	ABX7-S1

Spare parts

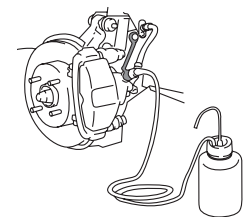
No.	Description	Material properties	L	ℓ	D	Hose Specifications	Capacity	Weight (g)	⊠
ABX7-T1	Fluid catch tank	PE	282	182	100	Soft polyvinyl chloride (PVC) φ5×φ8×1.1 m	1L	170	1
ABX7-S1	Fluid inhaler	PP	240	138	49	Silicone tube φ3×φ6×0.1m	50mL	30	1

- For Automotive brake fluid replacement and air bleed in the piping.
- Bleeder plugs are used in passenger cars to light trucks (2-ton class).
- The large liquid waste tank and necessary tools come in one set. Improves work efficiency.
- For bleeder plug wrenches other than the incoming assembly, (P.567).
- * Repair parts are available. Please contact our distributors for details.



Brake fluid replacement

6

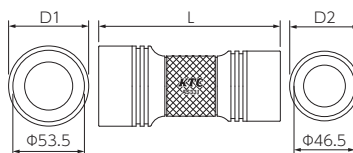


HUB CAP INSERTER



No.	D1	D2	L	Weight(g)	⊠
AS331	60	52.5	136	400	1

- Press fitting of hubcaps.
- Since it is tapped way as to cover the hub cap, it is possible to press-fit the hub cap straight without partially damaging the cap or press-fitting it at an angle.
- The tapping surface is made of steel and the handle is made of aluminum, and weights are placed at both ends of the lightweight yet sturdy body to improve balance and workability when in use.
- Knurled handles prevent slippage when striking.
- Knurled finish to prevent fibers from snagging even when wearing military gloves.
- * Only genuine hubcaps for Japanese passenger cars sold after January 2005. (As of October 2020)



Compatible with all hubcaps installed on Japanese passenger*.



Press fitting of hubcaps

7

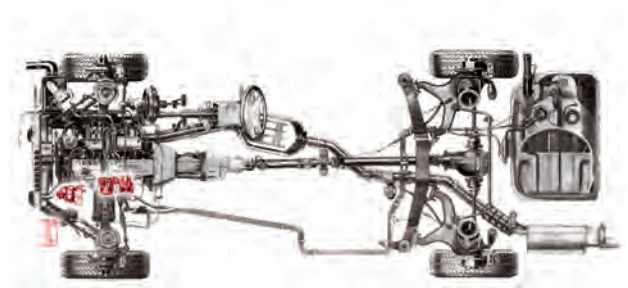


How to use it

• Function mark is indicated under the product name. For the details, please refer to P.004-005.
 • Products marked with should be ordered after checking stock.



- 573 A Spark plug replacement
- 576 B Alternator disassembly
- 577 C Replacement of headlamp lenses
- 577 D Headlight optical axis adjustment
- 580 E Tail light lens replacement
- 580 F Wiring repair
- 581 G Oil pressure switch removal and installation
- 582 H Battery replacement
- 582 I Removal and installation of water temperature sensor and O₂ sensor
- 583 J Relays removal



Major maintenance of the electrical equipment includes replacing spark plugs, disassembling the alternator, adjusting the headlight optical axis, repairing wiring, and removing and installing various sensors.

SPARK PLUG WRENCH SET [16pcs.]

3/8" sq.

1/2" sq.

16 pcs.

6pt.

12pt.



POWERFIT

デジラチェ

No.	Weight(kg)	☐	
ATB34P16	2.6	1	
Set contents			
3/8"sq. Digital ratchet	GEK060-R3		
3/8"sq. plug wrench	B3A-13P,14SP,18P,20.8P		
3/8"sq. plug wrench (12pt.)	B3A-14SPW		
3/8"sq. plug wrench (thin-wall type)	B3A-16SP		
1/2"sq. spark plug wrench	B4A-19P		
3/8"sq. fast-turn conversion adapter	BAE34		
3/8"sq. deep socket (12pt.)	B3L-08W,10W		
3/8"sq. quick spinner	BE3-Q		
3/8"sq. swivel extension bar	BE3-050JW		
3/8"sq. extension bar	BE3-150		
3/8"sq. universal joint	BJ3		
Engine brush (small)	YTBR-311		
Case (W340×D290×H75)	EK-50PH (Active Buddy)		

☛ Cases are shown on P.199.

- We can handle a wide range of vehicles and engines, from automobiles and motorcycles to general industry (generators, compressors, etc.), agricultural equipment, and outboard motors.
- The digital torque tool "Digital ratchet" prevents plug damage due to over-tightening.
- The set also includes a deep socket for incidental work during plug inspection and replacement, and a brush for cleaning.

* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

A Spark plug replacement

Spark plug removal **A1**



* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

3/8"sq. SPARK PLUG WRENCH SET [10pcs.]

3/8" sq.

10 pcs.

6pt.

12pt.



POWERFIT

No.	Weight(kg)	☐	
ATB3P10	1.7	1	
Set contents			
3/8"sq. plug wrench	B3A-14SP,20.8P		
3/8"sq. plug wrench (12 pt.)	B3A-14SPW		
3/8"sq. plug wrench (thin-wall type)	B3A-16SP		
3/8"sq. slide head handle	BHM3		
3/8"sq. quick spinner	BE3-Q		
3/8"sq. swivel extension bar	BE3-050JW		
3/8"sq. extension bar	BE3-150		
3/8"sq. universal joint	BJ3		
Engine brush (small)	YTBR-311		
Case (W340×D290×H75)	EK-50PH (Active Buddy)		

☛ Cases are shown on P.199.

- Compatible with a wide range of vehicles, passenger cars to motorcycles.
- Compatible with 14mm (12pt.) spark plugs (BMW, VW, etc.).

* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

3/8"sq. SPARK PLUG WRENCH SET [5pcs.]

3/8" sq.

5 pcs.

6pt.

12pt.



POWERFIT

No.	Weight(g)	☐	
ATB3P05	430	1	
Set contents			
3/8"sq. plug wrench	B3A-14SP		
3/8"sq. plug wrench (12 pt.)	B3A-14SPW		
3/8"sq. plug wrench (thin-wall type)	B3A-16SP		
3/8"sq. swivel extension bar	BE3-050JW		
3/8"sq. universal joint	BJ3		
Case (W120×D120×H40)	EK-30PH (Active Buddy)		

☛ Cases are shown on P.199.

- Compatible with gasoline vehicles, hybrid vehicles, and vehicles equipped with fuel-efficient systems.
- Compatible with 14mm (12pt.) spark plugs (BMW, VW, etc.).

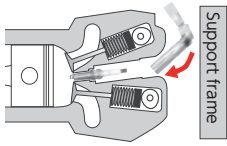
* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

· Function mark is indicated under the product name. For the details, please refer to ☛ P.004-005.
 · Products marked with ⚡ should be ordered after checking stock.



A Spark plug replacement

A1 Spark plug removal



Plug wrench, universal joint, and pivoting extension bar are connected and inserted while bending, allowing access to the plug through the narrow space between the head cover and support frame of horizontally opposed engines such as Toyota 86 and Subaru BRZ. Since they are not connected in the engine compartment, there is no need to worry about dropping the tool.

3/8"sq. SPARK PLUG WRENCH SET [3pcs.]



No.	Weight(g)	⊞
ATPBZR8603	230	1

Set contents	
3/8"sq. plug wrench	B3A-14SP
3/8"sq. swivel extension bar	BE3-050JW
3/8"sq. universal joint	BJ3
Case (W105×D85×H40)	EK-25PH (Active Buddy Mini)

- Cases are shown on P.199.
- Suitable for horizontally opposed engines such as Toyota 86 and Subaru BRZ. The combination of B3A-14SP+BJ3+BE3-050JW greatly reduces work time.
- Can be used for general vehicles that use 6 pt. 14 mm width plugs.
- * For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

3/8"sq. SPARK PLUG WRENCH

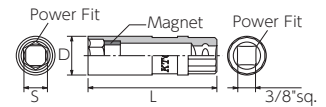


No.	S(6pt.)	D	L	Weight(g)	⊞
B3A-14SP	14	18.5	62	60	5

- For 6 pt. 14mm width spark plug.
- Toyota: Corolla Axio Fielder, Auris
- Nissan: Wingroad, Tida, Tida Latio, Bluebird Sylphy, LaFesta, Serena
- Suzuki : Landy
- The new shape is easy to distinguish from deep sockets.
- Thin-walled outer diameter of ϕ 18.5 mm.
- Spark plugs are equipped with magnets to prevent them from falling out.



• Do not turn the wrench on the outer circumference.



- * For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

3/8"sq. SPARK PLUG WRENCH

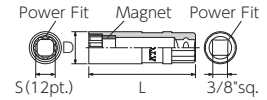


No.	S(12pt.)	D	L	Weight(g)	⊞
B3A-14SPW	14	18.5	62	60	5

- For 6 pt. 14mm width spark plug.
- For 12 pt. type spark plugs used in BMW MINI, BMW 1 series, some 3 series, etc.
- The new shape is easy to distinguish from deep sockets.
- Thin-walled outer diameter of ϕ 18.5 mm.
- Spark plugs are equipped with magnets to prevent them from falling out.



• Do not turn the wrench on the outer circumference.



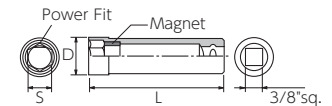
- * For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

3/8"sq. SPARK PLUG WRENCH



No.	S(6pt.)	D	L	Weight(g)	⊞
B3A-16SP	16	20	62	65	5

- The special thin-wall design can be used for Mitsubishi Motors' 4-valve engines for small cars.
- Spark plugs are equipped with magnets to prevent them from falling out.



- * For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

3/8"sq. SPARK PLUG WRENCH

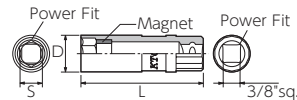


No.	S(6pt.)	D	L	Weight(g)	⊠
B3A-13P	13	18	56	70	5
B3A-16P	16	21.5	62	100	5
B3A-18P	18	23.5	62	130	5
B3A-20.8P	20.8	26.5	62	170	5

- The new shape is easy to distinguish from deep sockets.
- Spark plugs are equipped with magnets to prevent them from falling out.



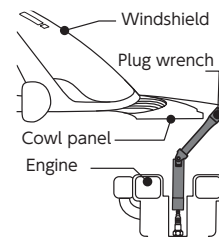
• Do not turn the wrench on the outer circumference.



* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

A Spark plug replacement

Spark plug removal **A1**



3/8"sq. UNIVERSAL SPARK PLUG WRENCH



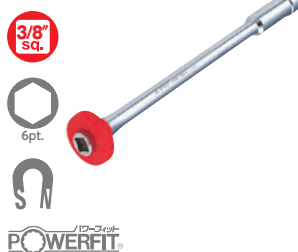
No.	S(6pt.)	D1	D2	∅1	∅2	L	Weight(g)	⊠
B3F-14SP	14	18.5	17	73	111	192	270	1
B3F-16SP	16	20	18	73	148	230	300	1

- Used to remove and install spark plugs.
- Effective for vehicles with a small distance between the engine and cowl panel, such as vans.
- It can also be used for other plug replacement operations.
- The integrated structure of the plug wrench, extension bar, and universal joint eliminates the need to combine tools before work and prevents the connection from coming off during work, thus ensuring efficient and stable work.
- Universal joint in the middle of the wrench allows easy insertion into the plug hole. (Maximum swing angle of about 45°)
- Spark plugs are equipped with magnets to prevent them from falling out.
- B3F-16SP can be used for Mitsubishi Motors' 4-valve engines due to its special thin-wall shape.



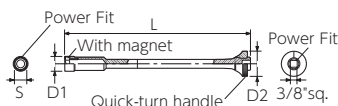
* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

3/8"sq. PLUG WRENCH (SUPER LONG)



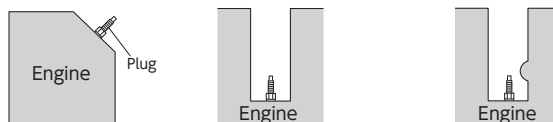
No.	S(6pt.)	D1	D2	L	Weight(g)	⊠
B3P-16LL	16	20	35	250	250	5

- Used to remove and install spark plugs.
- A new type of plug wrench that integrates a plug wrench, extension bar, and quick spinner.
- The quick-spinning handle (quick spinner) is also effective when ratchets are mounted.
- The thin-walled socket part is applicable to a wide range of applications. (Compatible with Mitsubishi Motors' 4-valve engine for kei-cars)
- Spark plugs are equipped with magnets to prevent them from falling out.
- Tightening angle is marked on the quick spinner.



* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

Standard type Deep hole type Deep hole (Mitsubishi) type



1/2"sq. SPARK PLUG WRENCH

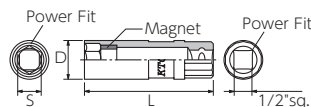


No.	S(6pt.)	D	L	Weight(g)	⊠
B4A-16P	16	22	63.5	110	5
B4A-19P	19	26.5	65	170	5
B4A-20.8P	20.8	26.5	65	160	5

- The new design is easily recognizable as a plug wrench.
- Spark plugs are equipped with magnets to prevent them from falling out.
- B4A-19P is a spark plug replacement for chainsaws, mowers, small generators, etc.



• Do not turn the wrench on the outer circumference.



* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

• Function mark is indicated under the product name. For the details, please refer to P.004-005.
 • Products marked with ⚠ should be ordered after checking stock.



A Spark plug replacement

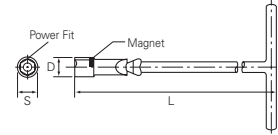
A1 Spark plug removal

T-SHAPED SPARK PLUG WRENCH (FLEX HEAD)



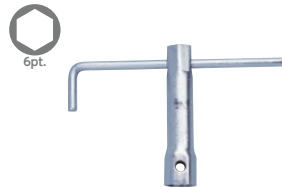
No.	S(6pt.)	D	L	Weight(g)	⊠
PHF-16H	16	φ 22	385	500	10
PHF-20.8H	20.8	φ 26.5	530	600	10

- Plugs can be replaced even in narrow and deep locations.
- T-shaped handle that can be turned quickly.
- The flex mechanism allows the unit to be rotated at an angle.
- Spark plugs are equipped with magnets to prevent them from falling out.



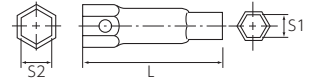
* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

SPARK PLUG WRENCH



No.	S1(6pt.)	S2(6pt.)	L	Weight(g)	⊠
PH-16X21	16	20.8	115	130	5

- One plug can be applied to two types of spark plugs.



* For the application of the plug wrench, please refer to the vehicle inspection certificate, check the year and model, and contact the vehicle manufacturer.

A2 Installation and torque check of spark plugs

Digital ratchet

➔ P.410-422



B Alternator disassembly

B1 Alternator belt removal

Flat type box end wrench (extra long)

➔ P.329



Handy bar

➔ P.497



B2 Alternator disassembly

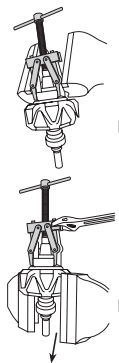
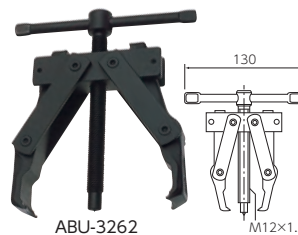
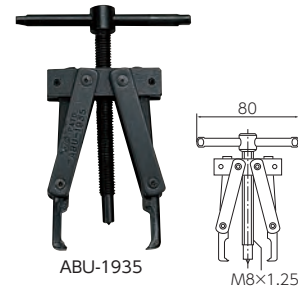


Figure 1.

Figure 2.

ARMATURE BEARING PULLER



No.	Bearing Coverage	Weight(g)	⊠
ABU-1935	Outer diameter φ 19-35 Inner diameter φ 7 or more	210	1

- Pulling of small bearings. (Especially effective for pulling out armature bearings)
- For generators and alternators with built-in cooling fans.
- For removal of armature bearings from reduction-type starter motors, power tools, home appliance cleaners, etc.

* Repair parts are available. Please contact our distributors for details.

No.	Bearing Coverage	Weight(g)	⊠
ABU-3262	Outer diameter φ 32 to 62, inner diameter φ 10 or more (No.6201 to 6305)	890	1

- Applicable to light to heavy duty vehicles.
- The claw tip is thin, allowing for narrow spaces.
- In case of narrow gaps, the back of the claw can be clamped with a vise. (Figure 1)
- If the gap is large, an Adjustable wrench or similar tool can be used on the hanger to stop it from turning around to prevent it from turning together. (Figure 2)

* Repair parts are available. Please contact our distributors for details.

Application table

Inside diameter	Nominal size	Outer diameter	Inside diameter	Nominal size	Outer diameter	Inside diameter	Nominal size	Outer diameter
7	607*	19	10	699	20	15	6002	32
	627	22		6000*	26		6202*	35
	637	26		6200	30		6802	24
8	608*	22	12	6300	35	17	6902	28
	628	24		6800	19		16002	32
	638	28		6900	22		6003*	35
	698	19		B10-46D*	23		6803	26
9	B8-74D*	22	10	6001*	28	17	6903	30
	609	24		6201*	32		16003	35
	629*	26		6801	21			
639	30		6901	24				
			16001	28				

* indicates main bearings used
(Note) For large sizes other than the above, use ABU-3262.

• Overhaul can be done only by the qualified person.

HEADLIGHT LENS REPLACEMENT TOOL SET [4pcs.]

4 pcs. Repair Spare parts



No.	Weight(g)	☐	
ATP6015	850	10	
Set contents			
Headlamp Lens Remover	AP601		
Headlamp Lens Wedge × 2	AP602		
Spatula for head lamp lens gasket	AP603		
Plastic case			

- For replacement of automotive headlamp lenses. (Car models for which replacement is specified by the manufacturer)
 - Shorten and improve the efficiency of headlamp lens replacement.
- [Headlamp Lens Remover]**
- The claw tip opens when gripped, and the unique shape of the claw tip ensures non slip.
- [Headlamp Lens Wedge]**
- Used as a wedge, it prevents re-grooving and secures working space.
- [Spatula for head lamp lens gasket]**
- Silicone material in the tip. Gasket does not stick easily, making it easier to insert into the housing.

Spare parts

No.	Description	Weight(g)	☐	
AP601	Headlamp Lens Remover	191	1	
AP602	Headlamp Lens Wedge	8	1	
AP603	Spatula for head lamp lens gasket	8	1	
AP601-1	Headlamp Lens Remover Claw	14	1	

C Replacement of headlamp lenses

Replacement of headlamp lenses



Disassembly of headlamp lenses



Assembling the gasket to the housing



How to use it

RATCHET SCREWDRIVER FOR HEADLIGHT ADJUSTMENT

10

Repair Spare parts



ADR10



ADR10-010

ADR10-020

No.	d1	d2	D	s	L	e1	e2	e3	Weight(g)	☐	
ADR10	6	5	36	6.3	365	20	230	82	135	1	

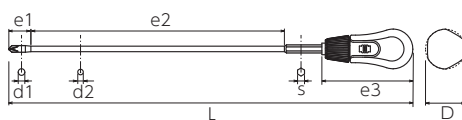
- For Adjustment of optical axis of headlights of automobiles, etc.
- For cars in which the headlight optical axis adjustment aiming screw can be turned with a cross No.2 screwdriver.
- Specially designed tip shape to prevent cam-out and damage to surrounding plastic parts.
- The shaft adopts an original form with a tip diameter of 6 mm → middle diameter of 5 mm. Easy to insert and turn in vehicles with narrow and deep service holes.
- The ratchet mechanism reduces the workload.
- Compact grip design makes it easy to use even on vehicles with small hood opening.
- The grip and wrench (long bit) can be detached. The overall length is shortened for storage.
- * This product is for Japanese cars. (Also compatible with some non-Japanese cars)
- * No magnet on the tip.



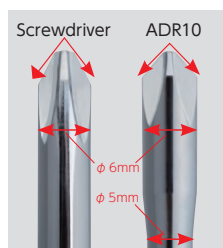
· This product is for headlight optical axis adjustment only. Use of this product as a screwdriver for screws will result in damage to the main unit or the screws.

Spare parts

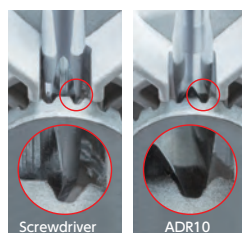
No.	Description	Over-all length	Weight (g)	☐	
ADR10-010	Headlight optical axis adjustment wrench (long bit)	300	50	1	
ADR10-020	Ratchet grip	82	85	1	



Unique form and tip shape with a tip shaft ϕ 6mm → middle shaft ϕ 5mm!



Specially designed for optical axis adjustment



The unique tip shape prevents damage to surrounding parts and prevents rattling and cam out.

D Headlight optical axis adjustment

Optical axis adjustment



For two optical axis adjustment locations, two ADR10s can be used for more efficient work.



The intermediate shaft is 5 mm in diameter, allowing smooth access even in narrow service holes.

· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with should be ordered after checking stock.

D Headlight optical axis adjustment

D Optical Axis Adjustment

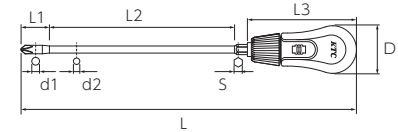


RATCHET SCREWDRIVER FOR HEADLIGHT ADJUSTMENT (SHORT BIT)



No.	d1	d2	D	S	L	L1	L2	L3	Weight(g)	⊞
ADR10-SH	6	5	36	6.3	254	20	144	82	119	1

- Headlight optical axis adjustment for automobiles and motorcycles.
- The special design for the tip prevents damage to the resin guide section.
- The $\phi 6$ tip prevents rattling of the shaft for easy turning.
- The middle $\phi 5$ can be used for cars with narrow service holes.
- Short type for use in narrow spaces.
- For light van vehicle with narrow hood opening.
- For fog lights of ordinary cars.
- For motorcycle headlight.



Spare parts

No.	Description	Over-all length	Weight (g)	⊞
ADR10-040	Headlight optical axis adjustment wrench (short bit)	190	34	1
ADR10-020	Ratchet grip	82	85	1



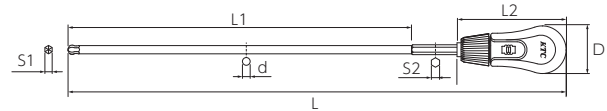
• This product is for headlight optical axis adjustment only. Use of this product as a screwdriver for screws will result in damage to the main unit or the screws.

RATCHET SCREWDRIVER FOR HEADLIGHT ADJUSTMENT (SHORT HEX. BIT)



No.	S1	d	D	S2	L	L1	L2	Weight(g)	⊞
ADR10-06BP	6	6	36	6.3	365	250	82	154	1

- Adjustment of headlight optical axis of automobiles.
- Ball point type that can be approached from an angle.
- Longer shaft lengths and deeper adjustment mechanisms are available.
- Rounded intermediate shaft prevents damage to the vehicle.
- For the 6 mm hexagonal hole adjustment mechanism mainly used in European cars.



Spare parts

No.	Description	Over-all length	Weight (g)	⊞
ADR10-050	Headlight optical axis adjustment wrench (short hex. bit)	300	69	1
ADR10-020	Ratchet grip	82	85	1



• This product is for headlight optical axis adjustment only. Use of this product as a screwdriver for screws will result in damage to the main unit or the screws.



Tip shape

RATCHET SCREWDRIVER FOR HEADLIGHT ADJUSTMENT (LONG BIT)

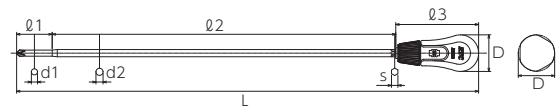


No.	d1	d2	D	s	L	l1	l2	l3	Weight(g)	⊞
ADR10-L	6	7	36	6.3	455	35	338	82	200	1

- Headlight optical axis adjustment work for small, medium, and heavy-duty vehicles.
- Longer shafts are used to accommodate car models with deep aimer mechanisms.
- The 7 mm diameter intermediate shaft reduces rattling of the shaft in the service hole.
- The 6 mm diameter tip shaft can be used for car models with a cover to prevent damage to the arming insertion opening.
- The ratchet mechanism reduces the workload.
- The unique tip shape prevents damage to surrounding parts and prevents rattling and cam out.
- * This product is for Japanese cars. (Also compatible with some non-Japanese cars)
- * No magnet on the tip.



• This product is for headlight optical axis adjustment only. Use of this product as a screwdriver for screws will result in damage to the main unit or the screws.



Spare parts

No.	Description	Over-all length	Weight (g)	⊞
ADR10-030	Headlight optical axis adjustment wrench (extra long bit)	390	115	1
ADR10-020	Ratchet grip	82	85	1

Main Applicable Car Models

Manufacturer	Size	small	Medium	Large
Hino		Dutro	Ranger	Profile
Isuzu		Elf	Forward	Giga
Mitsubishi Fuso		Canter	Fighter	Supergreat
Nissan UD Trucks		Cassette	Condor	Quon

- * Not to be used for passenger cars, and other vehicles with narrow hood openings or service holes of $\phi 7$ mm or less.
- * Use the ADR10 Headlight Optical Axis Adjustment Wrench (ratchet type) for passenger cars, etc.

The shaft length of 373 mm allows easy access to deep locations, even for trucks, buses, and other vehicles.

• Overhaul can be done only by the qualified person.

HEADLIGHT ADJUST WRENCH



No.	Weight(g)	⊠
AMLB0810	290	1

Body, socket 8, 10, 12mm (total length 20mm), grip handle

- For operation of the optical axis adjustment screw of the left and right deformed headlight.
 - Applicable to headlight optical axis adjustment screws with a hexagonal biface width of 8mm to 12mm for passenger cars. However, it cannot be used for vehicles other than those with left/right irregularly shaped headlamps (e.g., shield beam) and van vehicles.
 - The rotation of the grip handle is transmitted to the socket, allowing headlight optical axis adjustment work to be performed remotely.
 - The belt uses a highly durable timing belt.
 - The aluminum body weighs only 160g, making it easy to use and reducing fatigue.
 - The grip handle enables smooth and subtle rotation in both directions, just like a stubby screwdriver.
 - The combination of the main body and socket allows a total of four different lengths (0mm, 10mm, 20mm, and 30mm).
- * Repair parts are available. Please contact our distributors for details.



This product is a wrench for optical axis adjustment only. Do not use this product for any purpose other than optical axis adjustment.

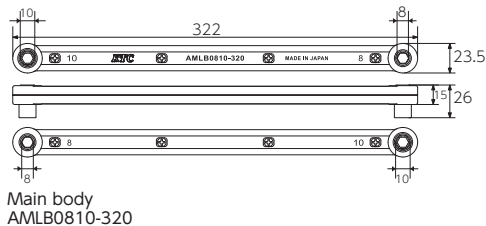
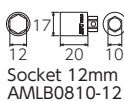
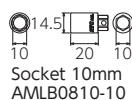
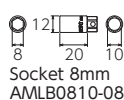
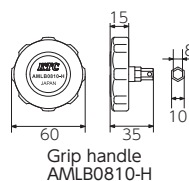
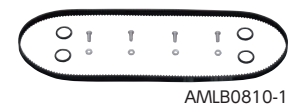
Spare parts

No.	Description	Weight(g)
AMLB0810-320	Main body	160
AMLB0810-08	Extension socket 8mm	20
AMLB0810-10	Extension socket 10mm	25
AMLB0810-12	Extension socket 12mm	30
AMLB0810-H	Grip handle	55



Belt Replacement Set

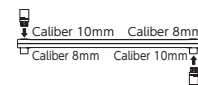
No.	Contents
AMLB0810-1	Flange bushings, timing belts, screws, nuts



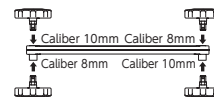
D Headlight optical axis adjustment

Optical Axis Adjustment D

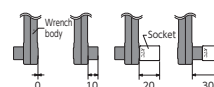
The socket is attached to the 10mm bore of the wrench.



Grip handle (1 with AMLB0810) included) can be attached to all calibers.



The length can be adjusted to four different lengths depending on how the socket and wrench body are combined.



SCREWDRIVER FOR HEADLIGHT ADJUSTMENT

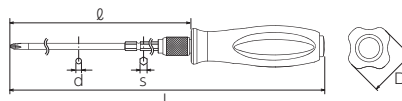


When extended:
Shaft length 290mm

Normal:
Shaft length 230mm

No.	Nominal size	D	d	s	L		ℓ		Weight (g)	⊠
					Normal	Extended	Normal	Extended		
AD701	No.2	39	5	6.3	340	400	230	290	180	1

- For dedicated headlight optical axis adjustment screwdriver (cross No. 2) for automobiles, etc.
- For cars in which the headlight optical axis adjustment aiming screw can be turned with a cross No.2 screwdriver.
- The shaft lengths are 230mm and 290mm telescopic.
- The size (overall length 340mm) is set to fit easily in a tool box.
- The thin shaft with a diameter of 5 mm can be used for vehicles with narrow service holes.



The shaft is non-through type. No magnet is attached to the tip.



Some non-Japanese cars use special screw shapes and cannot be used.

Function mark is indicated under the product name. For the details, please refer to P.004-005.
Products marked with should be ordered after checking stock.



E Taillight lens replacement

E Taillight lens replacement



How to use it

TAILLIGHT REMOVAL TOOL SET

Repair Spare parts



With special resin case (W350×D305×H84)

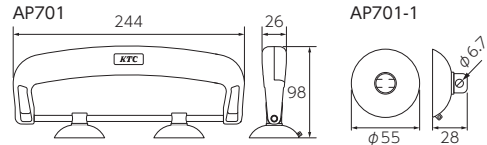
Storage image

AP701

AP701-1

No.	Weight(kg)	⊞	
ATP7014	1.6	5	
Set contents			
Taillight remover × 2	AP701		
Replacement suction cups for tail lamp remover (2pcs.)	AP701-1		

- Remove the taillight unit pinned with a pin, by pulling it using the force of the suction cups.
- Two taillight removers can be used to accommodate tail lamps of various shapes and sizes.
- The resin grip is shaped for easy gripping and prevents slipping during operation.
- Two deep suction cups firmly adhere to curved surfaces. The suction cups can be slid and reoriented.
- Two replacement suction cups are included, can be increased to strengthen the suction force, or can be used as replacements when damaged.
- Includes a special plastic case to prevent deterioration of the suction cup.
- * The special resin case is not sold separately.



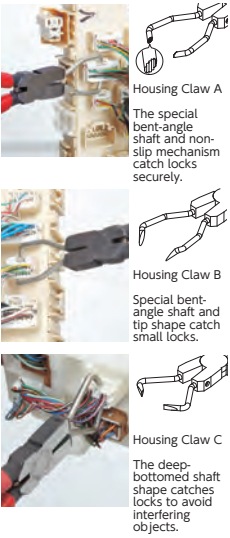
Spare parts

No.	Description	Weight(g)	⊞	
AP701	Taillight remover	188	1	
AP701-1	Replacement suction cups for taillight remover (2pcs.)	13	1	

* The dedicated resin case is not sold separately.

F Wiring repair

F1 Connector removal



Housing Claw A
The special bent-angle shaft and non-slip mechanism catch locks securely.

Housing Claw B
Special bent-angle shaft and tip shape catch small locks.

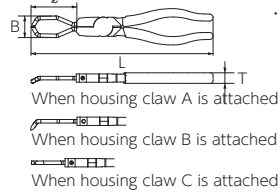
Housing Claw C
The deep-bottomed shaft shape catches locks to avoid interfering objects.

CONNECTOR HOUSING PLIERS

Repair When housing claw A is attached
Claw exchangeable Spare parts



* AD101 is a set of the main unit and three types of housing claws (A, B, and C).



When housing claw A is attached
When housing claw B is attached
When housing claw C is attached

No.	Attached Claw	L	ℓ	B	T	Weight(g)	⊞	
AD101	Housing Claw A	208	53	25	12	177		
	Housing Claw B	209	54	25	12	177	5	
	Housing Claw C	194	39	34	12	176		

- Unlock and pull out the connector housing.
- For smoothly releases small, thin or recessed locks.
- Three types of claws with different bending angles and tip shapes are available for various shapes.
- The long claw is designed to avoid bundled wiring and to make it easier to reach the narrow space.
- * Repair parts are available. Please contact our distributors for details.

CAUTION Do not use for any purpose other than that for which it is applied.

Spare parts

No.	Description	Contents	Weight(g)	⊞	
AD101-123	Housing claw set	1 pair each of housing claw A, B, and C	20	5	

Hexagon hole screws are not included.

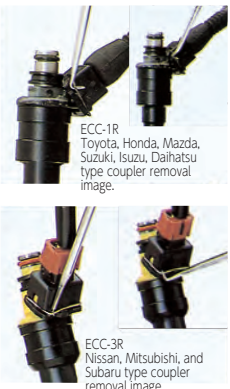
- If you have KTC's straight snap ring pliers for holes (No.SCP-171,1715), you can use them by replacing the claw. (Either set screw can be used.) P.370



CONNECTOR TOOL SET [6pcs.]



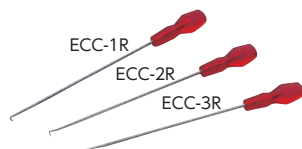
No.	Weight(g)	⊞	
ECC6	300	1	
Set contents			
Connector coupling tools	ECC-1R, 2R, 3R		
Connector Terminal Tool	ECC-1T, 2T, 3T		



ECC-1R
Toyota, Honda, Mazda, Suzuki, Isuzu, Daihatsu type coupler removal image.

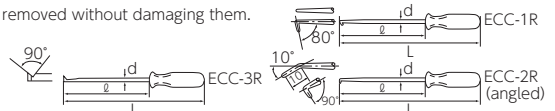
ECC-3R
Nissan, Mitsubishi, and Subaru type coupler removal image.

CONNECTOR COUPLING TOOL



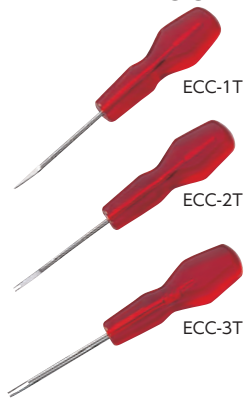
No.	d	L	ℓ	Weight(g)	⊞	
ECC-1R	4	300	215	58	5	
ECC-2R	4	300	215	58	5	
ECC-3R	4	300	215	58	5	

- Remove the connector coupling.
- This is a dedicated tool that is easy to handle and can be easily removed.
- Easy to work in tight places where hands cannot reach.
- The parts can be removed without damaging them.



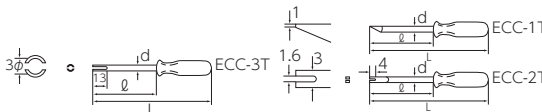
• Overhaul can be done only by the qualified person.

CONNECTOR TERMINAL TOOL



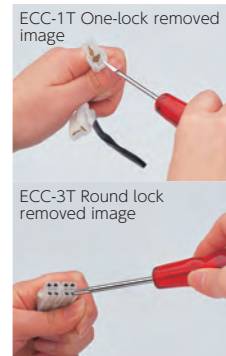
No.	d	L	ℓ	Weight(g)	☐
⑦ ECC-1T	4	150	65	40	5
⑦ ECC-2T	4	150	65	40	5
⑦ ECC-3T	4	150	65	40	5

- For removal the connector terminal.
- This is a dedicated tool that is easy to handle and can be easily removed.
- Easy to work in tight places where hands cannot reach.
- The parts can be removed without damaging them.



F Wiring repair

Connector removal F1



MULTI-PURPOSE CRIMPING PLIERS (FOR AUTOMOTIVE THREAD)



No.	L	B	T	Weight(g)	☐
⑦ AD102A	187	56	22	160	10

- For wire cutting, wire stripping, and terminal crimping.
- Wire strip: 0.3sq, 0.5sq, 0.75(f)sq, 0.85sq, 1.25sq (JASO AVS and AVSS Automotive Low Voltage Wires)
- Open barrel terminals 0.3sq, 0.5sq, 1.25sq
- Electric pliers specialized for automotive wiring work.
- The grips are spring loaded for continuous operation.
- Equipped with a locking mechanism to secure the grip in a closed position for storage.
- * This product is for automotive use, the applicable wiring is described in sq (scale) according to the JASO standard (Japan Society of Automotive Engineers of Japan).

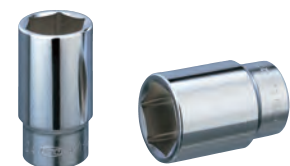


- Do not use in areas where current is flowing.
- This is a simple crimping tool without a molding confirmation mechanism, so it cannot be used for operations where reliability should be assured.

Wire cutting Wire stripping Terminal tightening F2



3/8"sq. OIL PRESSURE SOCKET SET [2pcs.]



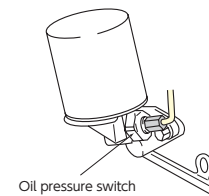
No.	Weight(g)	☐
B202HD	470	1

Set contents

Oil Pressure Socket	B20-24HD, 27HD
---------------------	----------------

- For remove and install oil pressure switch.
- The drive size of the socket is 3/8" sq. for ease of work.

G Oil pressure switch removal and installation Oil pressure switch removal and installation G



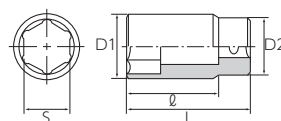
3/8"sq. OIL PRESSURE SOCKET



B20-27HD

No.	S(6pt.)	D1	D2	ℓ	L	Weight(g)	☐
B20-24HD	24	32.5	28.5	46	58	230	1
B20-26HD	26	35	30	46	58	230	1
B20-27HD	27	36.5	31	46	58	240	1

- For remove and install oil pressure switch.
- The drive size of the socket is 3/8" sq. for ease of work.



· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with ⑦ should be ordered after checking stock.



H Battery replacement

H Battery replacement



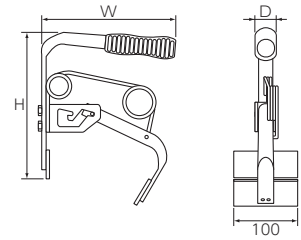
The battery can be easily removed from tight places where hands cannot reach, and the part that holds the battery is rubber-padded to protect the battery.

BATTERY CATCHER



No.	W	D	H	Weight(g)	☐
ADV2	193	33	215	950	1

- For removing and transporting car batteries.
- For batteries of passenger cars and van cars.
- Battery width 120 mm to 180 mm, mass 22 kg or less.
- (Reference battery size JIS26A17RL to 95D31RL)



I Removal and installation of water temperature sensor and O₂ sensor

I Removal and installation of water temperature sensor and O₂ sensor

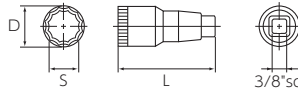


3/8"sq. THERMO SENSOR SOCKET



No.	S	D	L	Weight(g)	☐
B20T-19	19	26	73	55	1

- For detachment of water temperature sensor.
- Can be used for Toyota, Nissan, Mazda, Honda, and Daihatsu vehicles.
- Thin-walled type with a smaller outer diameter, for a narrow engine compartment.



• Do not use except for removing and installing the water temperature sensor.

3/8"sq. O₂ SENSOR SOCKET SET [2pcs.]



AD501-22W

AD501-A

No.	Weight(g)	☐
ATD5012	290	1

Set contents

O ₂ Sensor Socket	AD501-22W
O ₂ sensor socket attachment	AD501-A

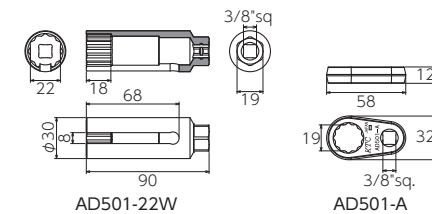
- Shaped to fit O₂ sensors and designed to the optimum length.
- Two types of drive sections (3/8"sq. drive size and 19 mm width) are available to accommodate a wide range of drive tools.
- The use of attachments allows the user to avoid obstacles.

O₂ Sensor Socket

No.	Weight(g)	☐
AD501-22W	200	1

O₂ sensor socket attachment

No.	Weight(g)	☐
AD501-A	90	1



When tightening the O₂ sensor, use a torque wrench to tighten to the torque specified by the manufacturer.

3/8"sq. O₂ SENSOR WRENCH

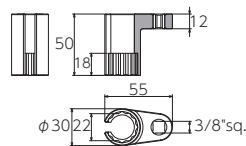


No.	Caliber	Over-all length	Weight(g)	⊥	
AD502-22W	22	55	210	1	

- Short overall length for use in tight spaces.
- The drive is offset to avoid obstacles.
- Drive tools with a 3/8"sq. drive size can be used.



· When tightening the O₂ sensor, use a torque wrench to tighten to the torque specified by the manufacturer.



3/8"sq. O₂ SENSOR WRENCH (LONG)

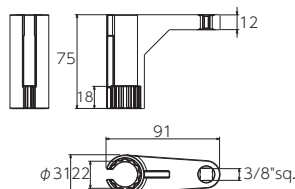


No.	Caliber	Over-all length	Weight(g)	⊥	
AD503-22W	22	91	350	1	

- Unique shape avoids obstacles and enables removal of the O₂ sensor without removing the front bumper.
- The shape of the product can be applied not only to new Daihatsu models but also to a wide range of existing Daihatsu and Suzuki models.



· When tightening the O₂ sensor, use a torque wrench to tighten to the torque specified by the manufacturer.



I Removal and installation of water temperature sensor and O₂ sensor

Removal and installation of water temperature sensor and O₂ sensor



PLUG-IN RELAYS PLIERS



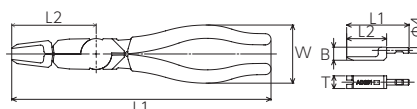
No.	L1	L2	W	Weight(g)	⊥	
AD201	185	60	47	188	1	

- For remove the plug-in relay used in the automobile.
- For vehicles with narrow relay perimeters, etc.
- For plug-in terminal relay with relay size W22.5×D15×H25.5mm.
- Compatible with relays with hooks to prevent falling off. Can be unlocked without breaking the hook.
- Relays can be pulled out while unhooking the relay sockets with a single tool.
- Ideal for places where there are no hooks and bare hands cannot pull out.
- * Repair parts are available. Please contact our distributors for details.

Spare parts

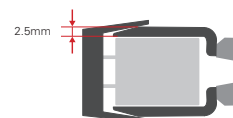
No.	Description	L1	L2	B	T	Weight(g)	⊥	
AD201-1	Relay Claw A	44.5	28.5	9.3	9	17	1	

· Hexagon hole screws are not included.



J Relays removal

Relays removal

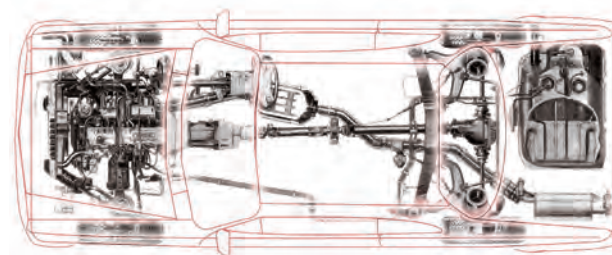


Spreads only as much as needed to unlock, so the hooks are not damaged.



BODY

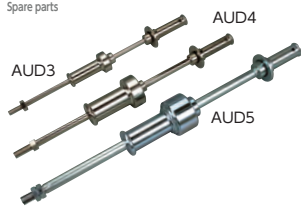
- 585 A Body maintenance
- 588 B Body Modification
- 589 C Welding operations
- 590 D Removal of interior and exterior parts
- 599 E Door adjustment and removal
- 600 F Painting



Major body maintenance includes interior and exterior removal, sheet metal and paint work.

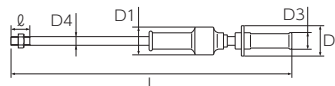
SLIDE HAMMER PULLER

Repair
Spare parts



No.	D1	D2	D3	D4	L	∅	Shocker weight	Screw Size	Weight (kg)	☞
AUD3	60	68	30	14	580	52	1.2kg	W9/16-12	2.7	1
AUD4	85	68	30	18	675	60	3.5kg	M18×2.0	5.5	1
AUD5	96	80	36	25	825	54	5.3kg	M22×2.5	8.4	1

- Shocker (weight) is available in three weights (5.3, 3.5, and 1.2 kg) to meet a wide range of work requirements.
- Applicable to light to standard passenger cars and light trucks (up to 2 ton class).
- The new concept design is safer and less likely to pinch hands.
- Attach the appropriate attachment to the tip of the slide hammer puller.
- Use an Adjustable wrench or similar tool to secure the attachment with the nut provided.
- Slide the shocker (weight) to perform the operation.
- * For attachments (sold separately), ☞ P.585-587.



- Read the instruction manual carefully before use.
- Always pay attention to the working posture and hand position when using a slide hammer.
- Wear protective goggles when working.

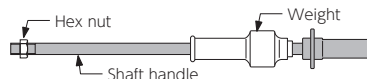
Spare parts



No.	Description	Adoption	☞
AUD3-1	Shaft handle	AUD3	1
AUD3-6	Hex nut	AUD3	1
AUD3-7	Weight	AUD3	1
AUD4-1	Shaft handle	AUD4	1
AUD4-6	Hex nut	AUD4	1
AUD4-7	Weight	AUD4	1
AUD5-6	Hex nut	AUD5	1



- Cannot be used with anything other than a KTC slide hammer puller.



SLIDE HAMMER PULLER ATTACHMENT HOOK SET [4pcs.]

4 pcs.



No.	Weight(kg)	☞
ATUD304	1.35	1

Set contents	
Sheet Metal Hooks	AUD3-B4, C2, D1, E1-8

SLIDE HAMMER PULLER ATTACHMENT HOOK SET [3pcs.]

3 pcs.



No.	Weight(kg)	☞
ATUD303	1.17	1

Set contents	
Sheet Metal Hooks	AUD3-B2, B3, C1

A Body maintenance

Body pulling out

A

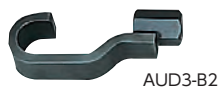
• Function mark is indicated under the product name. For the details, please refer to ☞ P.004-005.
• Products marked with ⚠ should be ordered after checking stock.



A Body maintenance

A Body pulling out

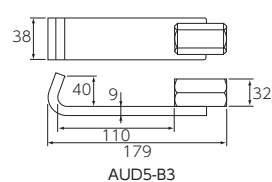
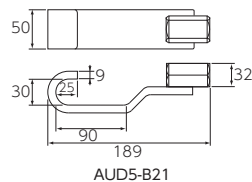
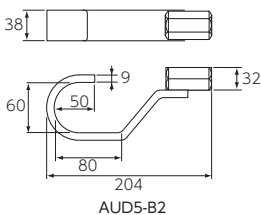
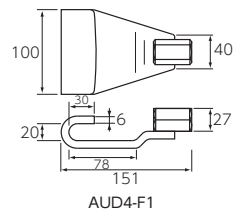
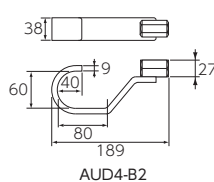
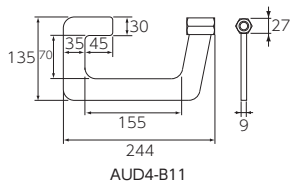
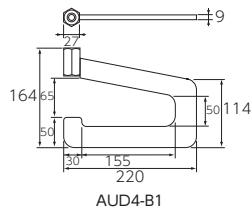
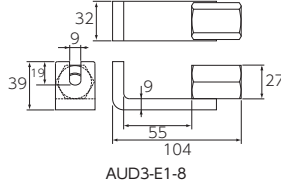
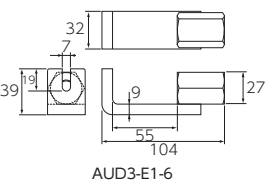
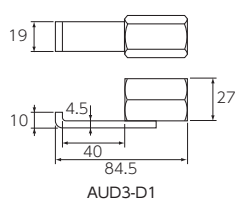
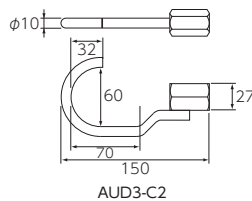
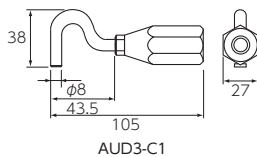
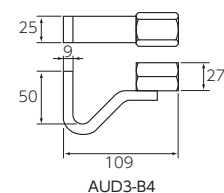
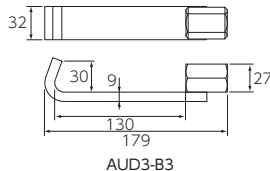
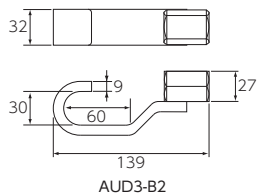
SLIDE HAMMER PULLER ATTACHMENT HOOK



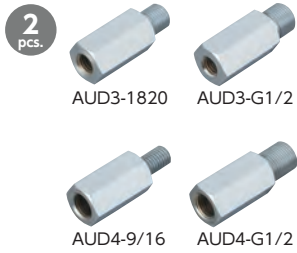
No.	Puller side screw size	Applicable slide hammer puller	Over-all length	Weight (g)	□
⚙️ AUD3-B2	W9/16-12	AUD3	139	530	1
⚙️ AUD3-B3	W9/16-12	AUD3	179	500	1
⚙️ AUD3-B4	W9/16-12	AUD3	109	430	1
⚙️ AUD3-C1	W9/16-12	AUD3	105	140	1
⚙️ AUD3-C2	W9/16-12	AUD3	150	300	1
⚙️ AUD3-D1	W9/16-12	AUD3	84.5	220	1
⚙️ AUD3-E1-6	W9/16-12	AUD3	104	400	1
⚙️ AUD3-E1-8	W9/16-12	AUD3	104	400	1
⚙️ AUD4-B1	M18×2.0	AUD4	220	1350	1
⚙️ AUD4-B11	M18×2.0	AUD4	244	1200	1
⚙️ AUD4-B2	M18×2.0	AUD4	189	840	1
⚙️ AUD4-F1	M18×2.0	AUD4	151	1100	1
⚙️ AUD5-B2	M22×2.5	AUD5	204	1300	1
⚙️ AUD5-B21	M22×2.5	AUD5	189	1100	1
⚙️ AUD5-B3	M22×2.5	AUD5	179	850	1

• Attachment for slide hammer puller (⚙️ P.585).

• The work is applicable to sheet metal work for passenger cars, and small trucks (up to 2 ton class).



SLIDE HAMMER PULLER ADAPTER SET [2pcs.]



No.	Weight(g)	☐	
ATUD302	600	1	
Set contents			
Screw size conversion adapter for slide hammer puller		AUD3-1820, G1/2	

No.	Weight(g)	☐	
ATUD402	600	1	
Set contents			
Screw size conversion adapter for slide hammer puller		AUD4-9/16, G1/2	

A Body maintenance

Body pulling out

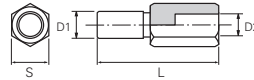
A

SLIDE HAMMER PULLER ADAPTER

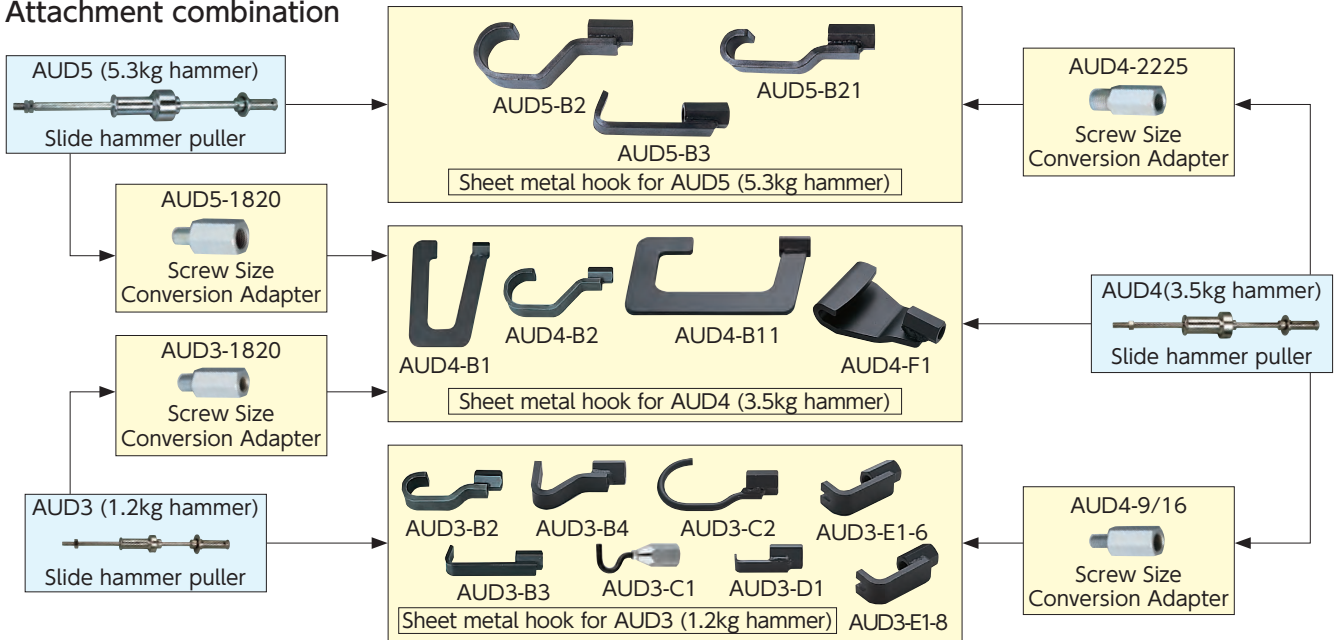


No.	Screw size working side (male side)	D1	Screw size puller side (female side)	D2	L	S	Weight (g)
⚙️ AUD3-1820	M18×2.0	18	W9/16-12	14.3	70	27	300
⚙️ AUD3-G1/2	G1/2	21	W9/16-12	14.3	70	27	300
⚙️ AUD4-9/16	W9/16-12	14.3	M18×2.0	18	75	27	300
⚙️ AUD4-G1/2	G1/2	21	M18×2.0	18	75	27	300
⚙️ AUD4-2225	M22×2.5	22	M18×2.0	18	75	27	300
⚙️ AUD5-1820	M18×2.0	18	M22×2.5	22	75	32	350

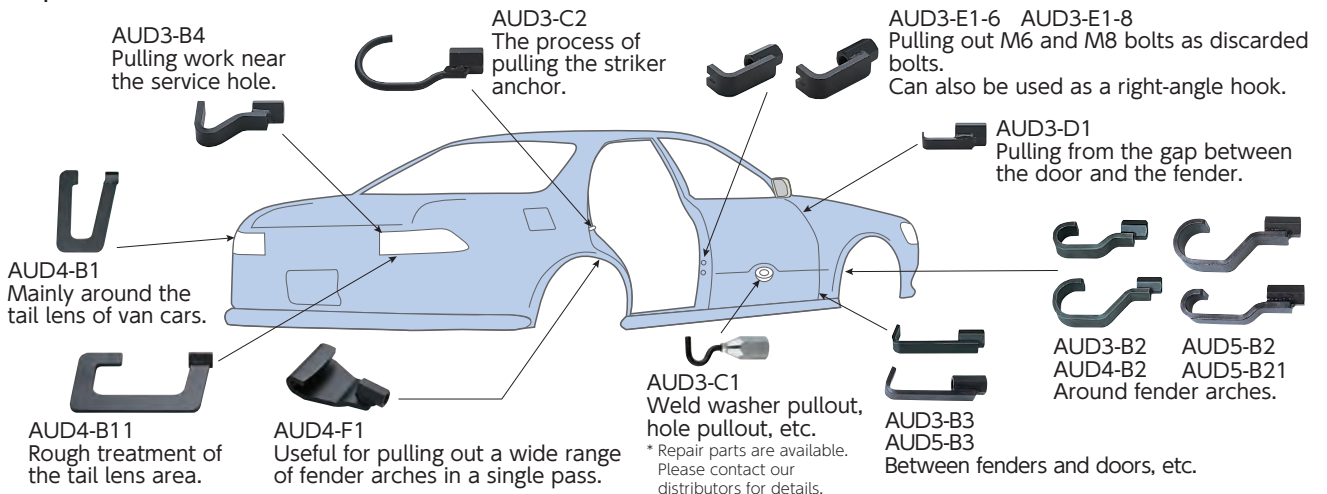
· Can be converted with different screw sizes with adapter for both KTC and other companies' products.
 * Refer to the figure below for the adapter combination.



Attachment combination



Example of automotive sheet metal work

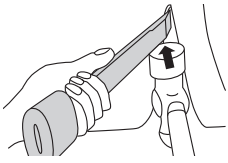


· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with ⚙️ should be ordered after checking stock.

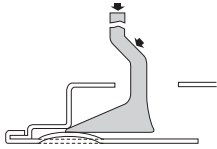


B Body Modification

B Body Modification
Body clipping



Putting on the line



FLAT CHISEL

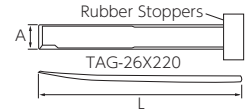


No.	A	L	Weight(g)	⊠
TAG-26X220	26	220	270	10

- Light, flat, easy-to-use curved shape.
 - The blade is also attached to the side to improve workability.
 - Rubber stoppers for ensure safety.
 - * Rubber stopper is set as a repairable.
- For details, please contact our distributors.



· Wear protective goggles when working.



BODY PANEL EDGEWAYS CHISEL

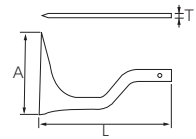


No.	L	A	T	Weight(kg)	⊠
TAGZ-200X320	320	200	9	1	10

- One side of the blade is sharply angled, which is effective for creating a line in the corner of the panel.
- The blade width is 200 mm long, and the striking portion is centered for good transmission of blows and easy line setting.
- Remove the door lining, etc., insert a line hammer through the service hole, and tap the handle with a hammer to produce a line.
- In a corner of a panel or in a narrow space, the cutting edge can be inserted into the damaged part and the line can be made by tapping each part.



· Wear protective goggles when working.



AUTO PUNCH



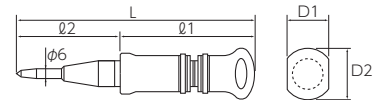
* This product is not subject to repair.

No.	L	⌀1	⌀2	D1	D2	Weight(g)
UDP-4	160	90	70	28	34	160

- For marking when installing optional parts for automobiles and removing panel distortion in sheet metal work.
- Mating marks on mating parts, etc.
- Punch part is made of SK material with excellent abrasion resistance.
- The continuous use of the machine makes it easy to work with.
- Punch marks can be made quickly with one hand.
- The strength of the striking force can be adjusted by simply turning the handle. If you hit hard, rotate right. When hitting weakly, rotate left. (Counterclockwise)
- * Repair parts are available. Please contact our distributors for details.



· Wear protective goggles when working.



Spare parts

No.	Description	⊠
UDP-4-1	Replacement punch	1

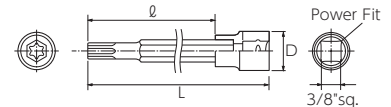


3/8"sq. EXTRA LONG T-TYPE TORX BIT SOCKET FOR DOOR HANDLE



No.	Nominal size	D	L	⌀	Weight(g)
AP205-T20	T20	17	229	200	10
AP205-T25	T25	17	229	200	10

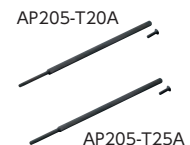
- Attachment and removal of outer handles for non-Japanese vehicles, mainly Mercedes-Benz C-Class and E-Class (AP205-T20) and BMW (AP205-T25).
- The extra-long type does not interfere with door thickness or door moldings, making it ideal for working on outer handles.
- The tip of the bit can be replaced.



Spare parts

No.	Description	Nominal size
AP205-T20A	Replacement Bits	T20
AP205-T25A	Replacement Bits	T25

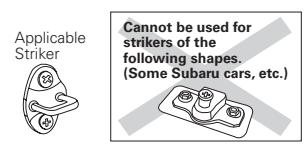
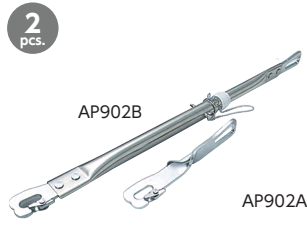
* Set screws are included with replacement bits.



* TORX are registered trademarks of Camcar Innovations.

· Overhaul can be done only by the qualified person.

DOOR·GATE STOPPER SET [2pcs.]



No.	Weight(g)
ATP9022	700

Set contents	
Door stopper	AP902A
Gate Stopper	AP902B

- Special tool to hold doors and rear gates slightly open during sheet metal work and parts replacement.
- Door striker of the following shape. *Striker ϕ 10mm or smaller (except for vehicles with automatic locking function)
- The door lock can be used to secure the door.
- Almost all car models can be used.
- Easy to remove and install.
- The total length of the gate stopper can be adjusted at a pitch of 50 mm.

CAUTION · When removing the striker, be sure to remove it from the striker side. May scratch the body.
· Always read the "Instruction Manual" carefully before use.

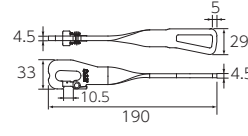
Spare parts			
No.	Description	⊞	
AP902B-1	Telescopic adjustment tweezers for gate stopper	1	

DOOR STOPPER



No.	Over-all length	Weight(g)
AP902A	190	200

- Special tool for holding doors slightly open during sheet metal work or parts replacement.

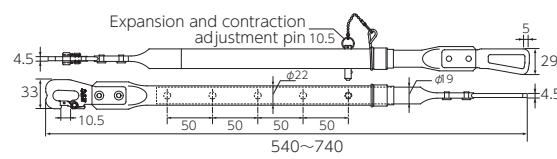


GATE STOPPER



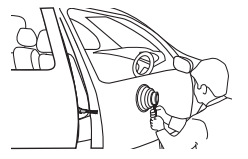
No.	Over-all length	Weight(g)
AP902B	540~740	500

- Special tool to hold the rear gate open during sheet metal work or parts replacement.

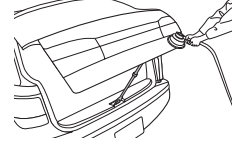


B Body Modification

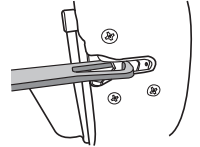
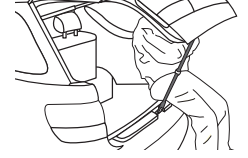
Body Modification **B**
For sheet metal work on doors



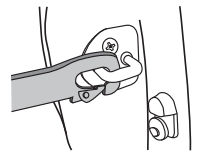
For sheet metal work on the rear gate



For wiper motor and valve replacement work



Door lock section



Striker section

PROTECLOTH



With straps			
No.	Size	Fixing straps	⊞
AYPC-1	1250×1730	930mm×2	1

No.	Size	⊞
AYPC-2	820×1920	1
AYPC-4	1700×1920	1
AYPC-6	1700×2920	1

- For protect windshields, seats, etc. from sparks during welding and fusing operations in sheet metal work.
- AYPC-1 is equipped with hook and loop fastener straps for easy fastening to windshields and seats.
- No use of magnets prevents iron dust and scratches on the body.
- Fabrics are JIS 1323A approved. Continuous operating temperature 1,000°C. Maximum operating temperature: 1,650°C.
- No asbestos is contained, so there is no harm to the human body.

C Welding operations

Windshield Sheet Protection **C**



· Function mark is indicated under the product name. For the details, please refer to P.004-005.
· Products marked with ⚡ should be ordered after checking stock.



D Removal of interior and exterior parts

D Removal of interior and exterior parts

CLIP CLAMP TOOL SET [11pcs.]

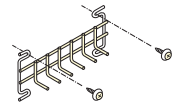
11 pcs.



No.	Weight(kg)
ATP11	2
Set contents	
Angle small	AP20-6
Angle medium	AP20-10
Angle large	AP20-13
Long medium	AP20L-10
Long large	AP20L-13
Straight small	AP20-6B
Straight medium	AP20-10B
Straight large	AP20-13B
Long straight medium	AP20L-10B
Long Straight Large	AP20L-13B
Long movable fulcrum	AP20L-P

- For removal of automobile linings and clips.
- Suitable for interior lining of doors, back doors, quarter panels, floors, etc. of Japanese cars.
- Convenient hangers are included.

For details on each individual item, P.591.



Comes with a convenient hanger

CLIP CLAMP TOOL SET ANGLE SHORT [2pcs.]

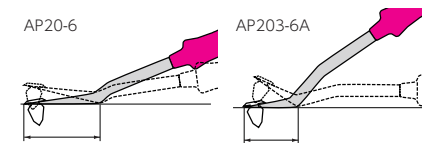
2 pcs.



No.	Weight(g)
ATP2032A	130
Set contents	
Angle Short Small	AP203-6A
Angle Short Medium	AP203-10A

- For removal of automobile linings and clips.
- Suitable for interior lining of doors, back doors, quarter panels, floors, etc. of Japanese cars.
- The tip angle has been enlarged so that even long clips can be pulled up in a single motion.

For details on each individual item, P.591.



The clip can be easily removed by leverage without damaging the interior lining.

CLIP CLAMP TOOL SET ANGLE [3pcs.]

3 pcs.



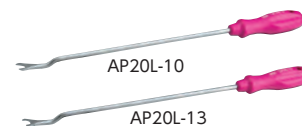
No.	Weight(g)
ATP03A	340
Set contents	
Angle small	AP20-6
Angle medium	AP20-10
Angle large	AP20-13

- For removal of automobile linings and clips.
- Suitable for interior lining of doors, back doors, quarter panels, floors, etc. of Japanese cars.

For details on each individual item, P.591.

CLIP CLAMP TOOL SET LONG ANGLE [2pcs.]

2 pcs.



No.	Weight(g)
ATP02	560
Set contents	
Long medium	AP20L-10
Long large	AP20L-13

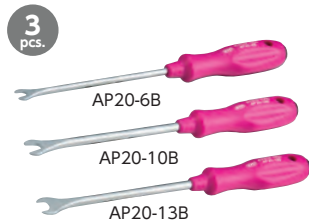
- For removal of automobile linings and clips.
- Suitable for interior lining of doors, back doors, quarter panels, floors, etc. of Japanese cars.

For details on each individual item, P.591.



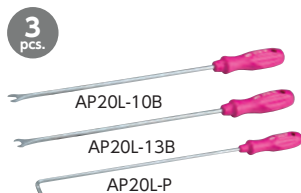
Ideal for removing clips in deep locations.

CLIP CLAMP TOOL SET STRAIGHT [3pcs.]



No.	ATP03B		Weight(g)	370
Set contents				
Straight small	AP20-6B			
Straight medium	AP20-10B			
Straight large	AP20-13B			
<ul style="list-style-type: none"> For removal of automobile linings and clips. Suitable for interior lining of doors, back doors, quarter panels, floors, etc. of Japanese cars. 				
For details on each individual item. ➔ P.591.				

CLIP CLAMP TOOL SET LONG-STRAIGHT [3pcs.]



No.	ATP03C		Weight(g)	720
Set contents				
Long medium straight	AP20L-10B			
Long large straight	AP20L-13B			
Long movable fulcrum	AP20L-P			
<ul style="list-style-type: none"> For removal of automobile linings and clips. Suitable for interior lining of doors, back doors, quarter panels, floors, etc. of Japanese cars. 				
For details on each individual item. ➔ P.591.				

D Removal of interior and exterior parts

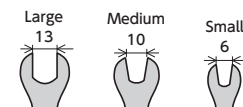
Removal of interior and exterior parts



Ideal for working in tight spaces that are difficult to work in with angle type.



The long movable fulcrum can be combined with the straight type to facilitate clip removal by leverage.



* The edge of the tip includes up to the chamfer.

Clip Clamp Tool Series

Product name/number	Size	Weight (g)	Angle	Angle Short Set	Angle set	Long Angle Set	Straight set	Long Straight Set	Set with Hangers
Angle Short Small AP203-6A	6	60	10	●					
Angle Short Medium AP203-10A	10	70	10	●					
Angle small AP20-6	6	100	10		●			●	
Angle medium AP20-10	10	120	10		●			●	
Angle large AP20-13	13	120	10		●			●	
Long medium AP20L-10	10	280	10			●		●	
Long large AP20L-13	13	280	10			●		●	
Straight small AP20-6B	6	110	10				●		●
Straight medium AP20-10B	10	130	10				●		●
Straight large AP20-13B	13	130	10				●		●
Long medium straight AP20L-10B	10	280	10					●	●
Long large straight AP20L-13B	13	280	10					●	●
Long movable fulcrum AP20L-P	-	160	10					●	●
Set part number				ATP2032A	ATP03A	ATP02	ATP03B	ATP03C	ATP11

• Function mark is indicated under the product name. For the details, please refer to ➔ P.004-005.
 • Products marked with ⚠ should be ordered after checking stock.



D Removal of interior and exterior parts

D Removal of interior and exterior parts



CLIP CLAMP TOOL SET [2pcs.]



No.	Weight(g)	☐	
ATP2012	170	1	
Set contents			
Clip Clamp Pliers	CCP-190		
Handy remover	AP201-10A		

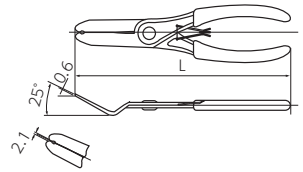
- Clip clamp pliers: Remove various types of clips and clamps, and detach and attach rubbers.
- Handy remover: removal of interior and exterior parts.
- * For details on the AP201-10A handy remover, P.594.

CLIP CRAMP PLIERS

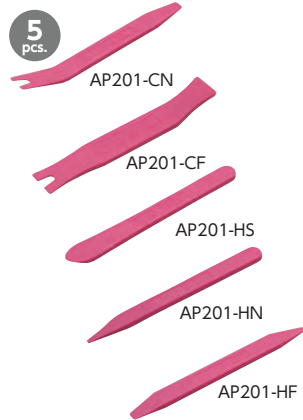


No.	L	Weight(g)	☐	
CCP-190	190	140	1	

- Removing the clip by pinching the shaft of the clip has made it difficult for the clip to be damaged.
- A hole in the tip of the clip allows the shaft of the clip to be held in place.
- * Springs are available as repair parts. Please contact our distributors for details.



HANDY REMOVER SET [5pcs.]

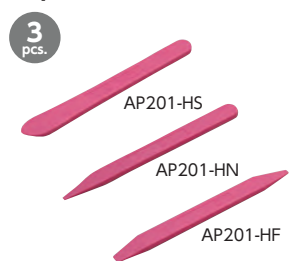


No.	Weight(g)	☐	
ATP2015	125	5	

Set contents	
Narrow Type Remover	AP201-CN
Flat Type Remover	AP201-CF
Spoon Type Spatula	AP201-HS
Narrow-type spatula	AP201-HN
Flat Type Spatula	AP201-HF

- The new shape of the remover enables removal of clips from deep locations.
- The spatula type can be used for audio panel removal and service hole cap removal.
- The use of a fiber-filled resin has resulted in a strong and hard remover.
- The thin tip shape prevents scratching of the soft-surfaced olefin resin used in recent automobiles.

HANDY REMOVER SET [3pcs.]



No.	Weight(g)	☐	
ATP201H3	70	5	

Set contents	
Spoon Type Spatula	AP201-HS
Narrow-type spatula	AP201-HN
Flat Type Spatula	AP201-HF

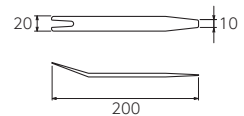
- For audio panel removal and service hole cap removal.
- Remove the panel floated by the narrow or flat type by prying it out with the spoon type.
- The use of a fiber-filled resin has resulted in a strong and hard remover.
- The thin tip shape prevents scratching of the soft-surfaced olefin resin used in recent automobiles.

REMOVER (NARROW TYPE)



No.	Weight(g)	☐	
AP201-CN	21	5	

- The tip shape is designed to be thin, allowing insertion into even the smallest gap.



Lining removal



Example of use:AP201-CN

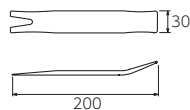
• Overhaul can be done only by the qualified person.

**REMOVER
(FLAT TYPE)**



No.	Weight(g)	⚠	
AP201-CF	31	5	

· The flat shape of the grip is ideal for removing clips from deep locations.



D Removal of interior and exterior parts

Removal of interior and exterior parts

D



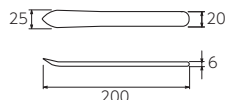
Example of use:AP201-CF

**REMOVER
(SPOON TYPE)**



No.	Weight(g)	⚠	
AP201-HS	26	5	

· The larger tip shape is effective for prying off panels floated by AP201-HN and AP201-HF.



**Lining removal
Audio panel
removal, etc.**



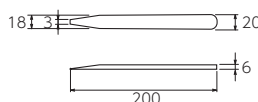
Example of use:AP201-HS + AP201-HN

**REMOVER
(NARROW TYPE)**



No.	Weight(g)	⚠	
AP201-HN	22	5	

· By making the tip thinner, it can be used in places where you should pick with screwdriver.



**Lining and hole plug
switch base cover**



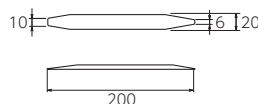
Example of use:AP201-HN

**REMOVER
(FLAT TYPE)**



No.	Weight(g)	⚠	
AP201-HF	22	5	

· The narrower tip can be used in notches in switch base covers, etc.



**Hole Plug Switch
Base Cover**



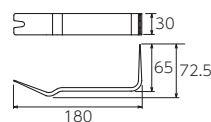
Example of use:AP201-HF

**REMOVER
(REGULAR TYPE)**



No.	Weight(g)	⚠	
AP201-C	31	5	

· The tip shape is designed to be thin, allowing insertion into even the smallest gap.



**Removal of interior
linings (doors, etc.)**



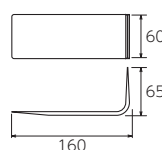
Example of use:AP201-C

**REMOVER
(WIDE TYPE)**



No.	Weight(g)	⚠	
AP201-WA	56	5	

· The tip shape is designed to be thin, allowing insertion into even the smallest gap.



Lining removal



Example of use:AP201-WA

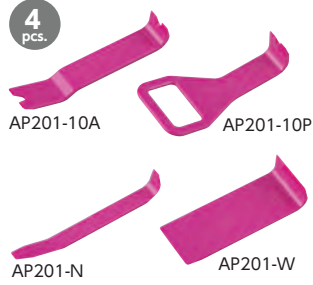
· Function mark is indicated under the product name. For the details, please refer to P.004-005.
· Products marked with should be ordered after checking stock.



D Removal of interior and exterior parts

D Removal of interior and exterior parts

HANDY REMOVER SET [4pcs.]



No.	Weight(g)	⊞	
ATP2014	140	5	
Set contents			
Handy remover	AP201-10A, 10P, N, W		

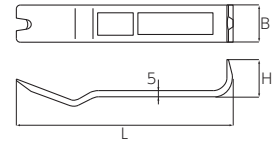
• For removing car linings and clips.

HANDY REMOVER (MEDIUM)

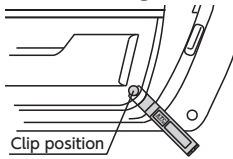


No.	L	B	H	Weight(g)	⊞	
AP201-10A	180	30	31	30	5	

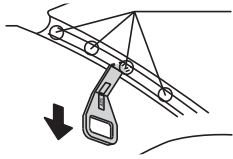
• For removal of all interior linings.
• The L-shape, 30° × 20° on one side and 90° on the other, makes leverage work easy.



For removal of all interior linings



For removal of general lining and interior lining near pillars

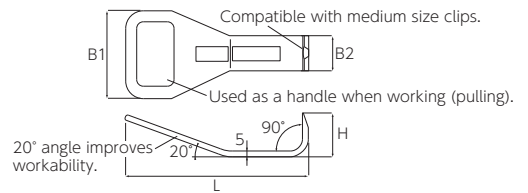


HANDY REMOVER PULL TYPE (MEDIUM)



No.	L	B1	B2	H	Weight(g)	⊞	
AP201-10P	160	75	30	40	40	5	

• Effective for removing the interior lining near the pillars.



Interior removal

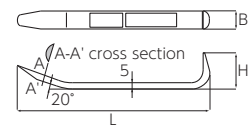


HANDY REMOVER (NARROW TYPE)

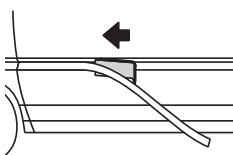


No.	L	B	H	Weight(g)	⊞	
AP201-N	160	15	30	10	10	

• Narrow type with a rounded bottom to prevent interference with the instrument panel.



Side molding removal

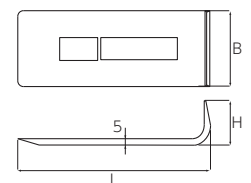


HANDY REMOVER (WIDE TYPE)



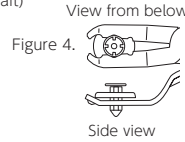
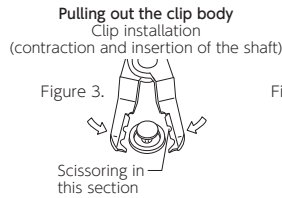
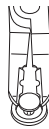
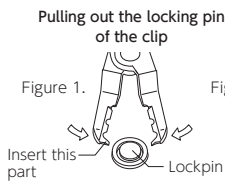
No.	L	B	H	Weight(g)	⊞	
AP201-W	160	60	35	60	5	

• Ideal for removing adhesive parts such as side moldings.



• Overhaul can be done only by the qualified person.

How to use Clip Clamp Pliers (Lock Pin Pulling Type)



CLIP CLAMP PLIERS SET [2pcs.]

2 pcs.



No.	Weight(g)
ATP2022	290

Set contents	
Clip Clamp Pliers	AP202A, AP202B

- Special tool used to remove and install locking pin pull-out type plastic clips used in automobile fender liners, bumpers, etc.
- For two-slot, four-slot, and all-around-slot locking pin pull-out type plastic clips. (Shaft diameter: 5 to 10 mm. when a clip is attached)
- The AP202A has a 35° tip angle for use on flat surfaces, while the AP202B has an 80° tip angle for use in deep locations, making it suitable for a wide variety.
- Easy to pull out (unlock) the locking pin of the clip.
- The clip body can be pulled out after the lock pin is pulled out.
- When attaching a clip, the clip shaft can be easily retracted and the clip inserted.
- The tip shape prevents damage to clips, enabling reuse of clips and cost reduction.
- * Repair parts are available. Please contact our distributors for details.



- Applicable clips
- Two slot
 - Four slot
 - All around slot

CLIP CLAMP PLIERS 35°

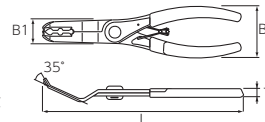


No.	Type	L	B1	B2	T	Weight(g)	⊞
AP202A	35°	196	25	53	9	145	5

- Special tool used to remove and install locking pin pull-out type plastic clips used in automobile fender liners, bumpers, etc.
- For two-slot, four-slot, and all-around-slot locking pin pull-out type plastic clips. (Shaft diameter: 5 to 10 mm. when a clip is attached)
- * Repair parts are available. Please contact our distributors for details.



- Applicable clips
- Two slot
 - Four slot
 - All around slot



CLIP CLAMP PLIERS 80°

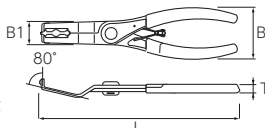


No.	Type	L	B1	B2	T	Weight(g)	⊞
AP202B	80°	196	25	53	9	145	5

- Special tool used to remove and install locking pin pull-out type plastic clips used in automobile fender liners, bumpers, etc.
- For two-slot, four-slot, and all-around-slot locking pin pull-out type plastic clips. (Shaft diameter: 5 to 10 mm. when a clip is attached)
- * Repair parts are available. Please contact our distributors for details.



- Applicable clips
- Two slot
 - Four slot
 - All around slot



D Removal of interior and exterior parts

Removal of interior and exterior parts

D

Lock pin pull-out type clip removal/ attachment



How to use it



35°type (for flat surfaces)



80°type (for deep hole)

D Removal of interior and exterior parts

D Removal of interior and exterior parts

Lock pin pull-out type clip removal/attachment



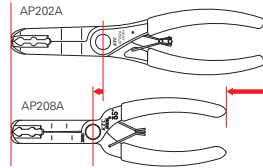
35° short type



80° short type



CLIP CLAMP PLIERS 35° SHORT



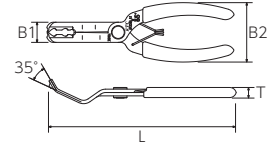
Optimal design for handling in tight spaces, not just a reduction in overall length.

No.	Type	L	B1	B2	T	Weight(g)	⊠
AP208A	35°	167	18	53	9	120	5

- Special tool used to remove and install locking pin pull-out type plastic clips used in automobile fender liners, bumpers, etc.
- For two-slot, four-slot, and all-around-slot locking pin pull-out type plastic clips. (Shaft diameter: 5 to 10 mm. when a clip is attached)
- Shortened for AP202A and AP202B clip clamp pliers, can be performed in narrow tire houses without removing the tire.
- * Repair parts are available. Please contact our distributors for details.



Applicable clips
 • Two slot
 • Four slot
 • All around slot



CLIP CLAMP PLIERS 80° SHORT

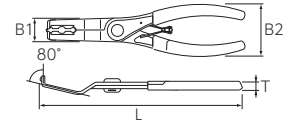


No.	Type	L	B1	B2	T	Weight(g)	⊠
AP208B	80°	162	18	53	9	120	5

- Special tool used to remove and install locking pin pull-out type plastic clips used in automobile fender liners, bumpers, etc.
- For two-slot, four-slot, and all-around-slot locking pin pull-out type plastic clips. (Shaft diameter: 5 to 10 mm. when a clip is attached)
- Shortened for AP202A and AP202B clip clamp pliers, can be performed in narrow tire houses without removing the tire.
- * Repair parts are available. Please contact our distributors for details.



Applicable clips
 • Two slot
 • Four slot
 • All around slot



CLIP CLAMP TOOL ANGLE STABBY SET [2pcs.]

2 pcs.



AP209-7A

AP209-9A

No.	Weight(g)	⊠
ATP2092A	130	5

Set contents

Angle stubby small (AP209-7A), Angle stubby medium (AP209-9A)

- For removal of various clips and clamps from automobiles.
- For three-slot and four-slot locking pin pull-out type plastic clips and trim clips, blush clip.
- The use of a sharp tip makes it compatible with three-slot and four-slot lock pin pullout types.
- The tip size has been revised to reduce the risk of breakage by securely capturing the locking pin.
- Unique intermediate shaft shape improves workability.
- Stubby type allows work in tight spaces.

Adoption

No.	Tip Size	Three slot	Four slot
AP209-7A	7mm	○	◎
AP209-9A	9mm	◎	△



- Do not use on anything that has electricity running through it.
- To remove the four-slot clip
- When AP209-7A is used, it may not fit into the shaft due to clip specifications.
- When AP209-9A is used, the clip is shallow and may be damaged.



Applicable clips
 • Three slot
 • Four slot

CLIP CLAMP TOOL ANGLE STABBY (S)



No.	b	d	s	L1	L2	L3	W	Effective height	Weight (g)	⊠
AP209-7A	13.5	6	7	120	43	60	36	70	60	5

- For removal of various clips and clamps from automobiles.
- For three-slot and four-slot locking pin pull-out type plastic clips and trim clips, blush clip.
- The use of a sharp tip makes it compatible with three-slot and four-slot lock pin pullout types.
- The tip size has been revised to reduce the risk of breakage by securely capturing the locking pin.
- Unique intermediate shaft shape improves workability.
- Stubby type allows work in tight spaces.



Applicable clips
 • Three slot
 • Four slot



* Overhaul can be done only by the qualified person.

CLIP CLAMP TOOL ANGLE STABBY (M)



No.	b	d	s	L1	L2	L3	W	Effective height	Weight (g)	☐
AP209-9A	18	8	9	123	41.5	60	36	72	70	5

- Stubby type allows work in narrow spaces.
- For removal of various clips and clamps from automobiles
- For three-slot and four-slot locking pin pull-out type resin clips, trim clips, and brush clips.
- The use of a sharp tip makes it compatible with three-slot and four-slot lock pin pullout types.
- The tip size has been revised to reduce the risk of breakage by securely capturing the locking pin.
- Unique intermediate shaft shape improves workability.
- Stubby type allows work in tight spaces.



Applicable clips
· Three slot
· Four slot



D Removal of interior and exterior parts

Removal of interior and exterior parts

D

Lock pin pull-out type clip removal/attachment

CRIP CLAMP PLIERS SET [2pcs.]

2 pcs.



AP202C



AP202D

No.	Weight(g)
ATP2022A	300

Set contents

Clip Clamp Pliers | AP202C, AP202D

- Special tool used to remove and install three-slot lock pin pull-out type plastic clips used in automobile tire housings, under covers, front and rear bumpers, etc.
- Three-slot locking pin pull-out type plastic clip (applicable to both wide and narrow slot). (Shaft diameter: 5 to 10 mm. when a clip is attached)
- The AP202C, with a 20° tip angle for use on flat surfaces, and the AP202D, with an 80° tip angle for deep locations, suitable for a variety of situations.
- The lock pin is simultaneously clawed from three directions, which prevents the pin from cracking and ensures smooth release of the lock.
- Easy to pull out (unlock) the locking pin of the clip.
- The clip body can be pulled out after the lock pin is pulled out.
- When attaching a clip, the clip shaft can be easily retracted and the clip inserted.
- The tip shape prevents damage to clips, enabling reuse of clips and cost reduction.



Applicable clips
Suitable for both wide and narrow three-slot types

* Repair parts are set.
For details, please contact our distributors.

CLIP CLAMP PLIERS 20°

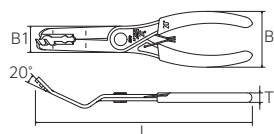


No.	Type	L	B1	B2	T	Weight(g)	☐
AP202C	20°	202	25	53	9	150	5

- Special tool used to remove and install locking pin pull-out type plastic clips used in automobile fender liners, bumpers, etc.
- Three-slot locking pin pull-out type plastic clip (applicable to both wide and narrow slot). (Shaft diameter: 5 to 10 mm. when a clip is attached)
- * Repair parts are available. Please contact our distributors for details.



Applicable clips
Suitable for both wide and narrow three-slot types



20° type
(for flat surfaces)

CLIP CLAMP PLIERS 80°

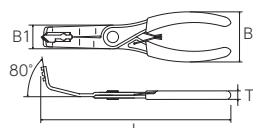


No.	Type	L	B1	B2	T	Weight(g)	☐
AP202D	80°	200	25	53	9	150	5

- Special tool used to remove and install locking pin pull-out type plastic clips used in automobile fender liners, bumpers, etc.
- Three-slot locking pin pull-out type plastic clip (applicable to both wide and narrow slot). (Shaft diameter: 5 to 10 mm. when a clip is attached)
- * Repair parts are available. Please contact our distributors for details.



Applicable clips
Suitable for both wide and narrow three-slot types



80° type
(for narrow space)

· Function mark is indicated under the product name. For the details, please refer to P.004-005.
· Products marked with should be ordered after checking stock.



D Removal of interior and exterior parts

D Removal of interior and exterior parts

Removing trim clips for rear garnish



Can be used in narrow, low-height locations



Can be used even in deep locations

Removal and installation of car navigation and audio systems

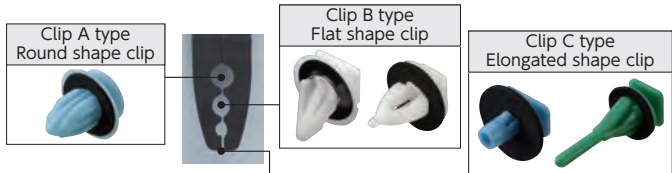


CRIP CLAMP PLIERS FOR REAR GARNISH

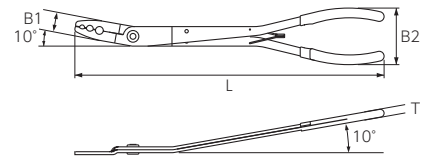


No.	L	B1	B2	T	Weight(g)	⊠
AP207	320	20	58	6	220	1

- For removal of trim clips for automobile rear garnish.
- For trim clips used for rear garnish of Toyota, Nissan, Honda, Mazda, Suzuki, etc.
- By clamping and pressing down on the lock of the trim clip for the rear garnish, the clip can be easily removed from the body.
- The clips will not be cut, thus reducing work time and cost by reusing clips.
- Three types of slot shapes on the head accommodate clips of various shapes. The tip also has a slot so can be clipped even when used from the front.
- The long overall length of the clip allows it to be used on clips located in deep locations.



• Not to be used for any purpose other than trim clips for rear garnish.



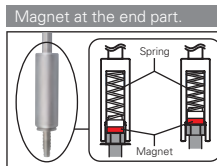
TELESCOPIC SCREWDRIVER SET [3pcs.]



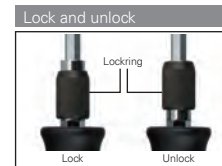
No.	Weight(g)
ATD6013	530

Set contents	
Telescopic screwdriver 8mm (bore: 6pt.)	AD601-08
Telescopic screwdriver 10mm (bore: 6pt.)	AD601-10
Telescopic screwdriver cross No.2	AD601-P2

- Car navigation system and car audio system removal and installation.
- The AD601-P2 is a set of three tools with AD601-08 and AD601-10 tips for hexagonal bolts and nuts (8mm and 10mm) and AD601-P2 tip for cross No. 2 screws.
- The shaft length can be extended and retracted to 100mm and 160mm. Single unit can serve two purposes.
- The bolt is held in place by a magnet at the end part.
- The magnet can be performed to securely hold a bolt with variety of bolt shapes. (AD601-08, AD601-10)



Tip magnet is movable (AD601-08,10)



Lock ring for one-handed operation



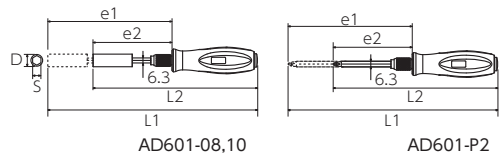
• Car audio and car navigation system installation should be carried out in accordance with the manufacturer's instructions.

TELESCOPIC SCREWDRIVER



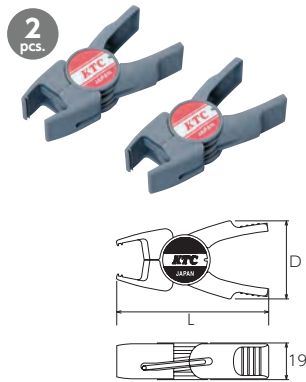
No.	Tip	S	D	L1	L2	e1	e2	Weight (g)	⊠
AD601-08	Hexagon 8mm	8	13	270	210	160	100	180	10
AD601-10	Hexagon 10mm	10	16	270	210	160	100	200	10
AD601-P2	Cross No. 2	—	—	270	210	160	100	150	10

- Car navigation system and car audio system removal and installation.



• Overhaul can be done only by the qualified person.

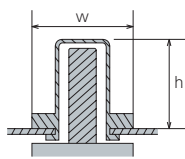
COURTESY LAMP SWITCH STOPPER [2pcs.]



No.	L	D	Contents	Weight(g)	⊞
ATP32	79	40	2	25×2	5

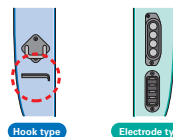
- When a car door is opened, the room lamps are turned off and the door-open warning sound is stopped by pressing the curtailment switch.
- Installation and removal can be done simply by holding the lever.
- The use of fiberglass-filled engineering plastic makes it durable and lightweight.
- The rubber of the switch will not be damaged.

Applicable Curtesy Switch Size



Width (w) 21.5 - 28.5mm
Height (h) with switch OFF 10mm min.

Not Applicable Curtesy Switch Shape



Hook type (Some Honda vehicles)
Electrode type (Sliding door)
Applicable to cars with a curtesy switch in the pillar section of the car body.



Do not close the door while the unit is installed.

E Door adjustment and removal

Stop door open warning sound E1



Using image (front)



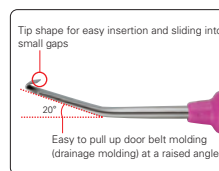
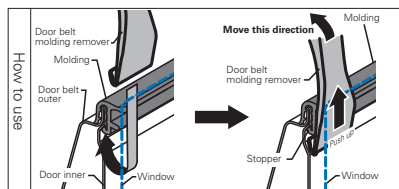
Using image (rear)

DOOR BELT MOLDING REMOVER



No.	B	D	L	∅	Weight(g)	⊞
AP206	22	34	220	100	120	10

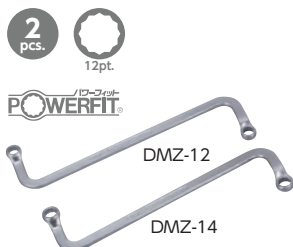
- For removal of door belt moldings (drainage moldings) used on Japanese cars (some models are not supported).
- The tip of the claw is designed to be easily inserted into small gaps and to slide easily.
- The angle designed to prevent shrinkage and make it easy to pull up the door belt molding.
- The resin grip is easy to grip and does not cause hand pain.



Door belt molding removal E2



DOOR HINGE BOLT WRENCH SET [2pcs.]

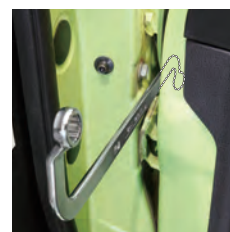


No.	Weight(g)	⊞
DMZ2	450	10

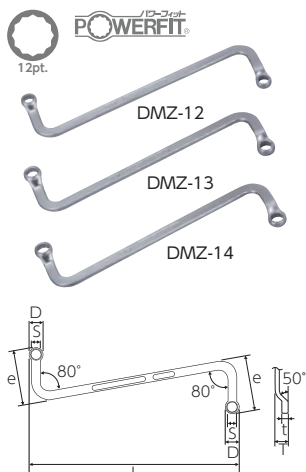
Set contents	
Door hinge wrench	DMZ-12, 14

- For adjustment and removal of door mounting bolts.
- Box end wrenches and open end wrenches can be easily used in places.
- Tightening and loosening of bolts on the body side, can be performed.
- The right and left sides can be used in combination with 12×12 and 14×14.

Door adjustment and removal E3



DOOR HINGE BOLT WRENCH



No.	S	D	T	t	L	e	Weight(g)	⊞
DMZ-12	12	19	14	8	299	75.5	200	10
DMZ-13	13	22	16	8	302	77.5	220	10
DMZ-14	14	22	16	8	302	77.5	220	10

- For adjustment and removal of door mounting bolts.
- Box end wrenches and open end wrenches can be easily used in places.
- Tightening and loosening of bolts on the body side, can be performed.
- The aperture size is the same, and the angle is set to be suitable for the left and right doors.
- The 13mm is applicable to recent Nissan cars.

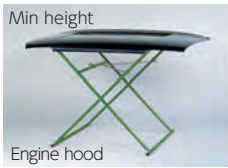
S	Applicable Vehicles
12	Toyota, Nissan, Mitsubishi, Honda, Mazda, Subaru, Daihatsu
13	Nissan (2003 year and later)
14	Toyota, Daihatsu, Mitsubishi

Function mark is indicated under the product name. For the details, please refer to P.004-005.
Products marked with ⚡ should be ordered after checking stock.



F Painting

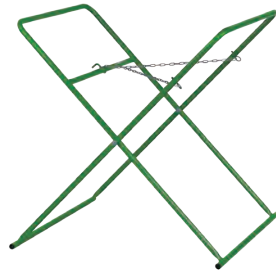
F Painting of bumpers, fenders and doors



Bumpers with a long wrap-around are also acceptable!

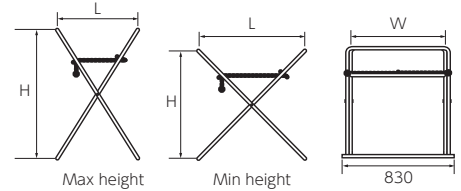
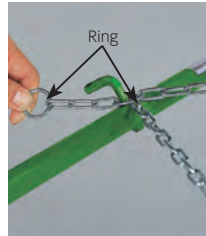


SPRAY STAND

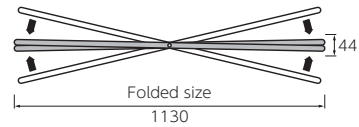


No.	L×W×H min height (max height)	Weight(kg)	⊠
AP502A	600 (760) × 830 × 845 (996)	7.5	1

- For painting and post-painting drying of various body parts such as doors, engine hoods, rear gates, bumpers, etc. for passenger cars on a flat surface.
- For parts reassembly work.
- The height can be adjusted at two levels, 845 mm and 996 mm, using the ring position attached to the chain, to the size of the object and the height of the operator.
- Can be used for bumpers with a long turnaround. (at maximum).
- The foot part is a flat bar type that prevents the foot from falling on the grating.
- The folding design makes it compact when stored.
- Includes 4 pads to prevent parts from being scratched.



The height can be adjusted at two levels (845mm and 996mm) with a ring attached to the chain.

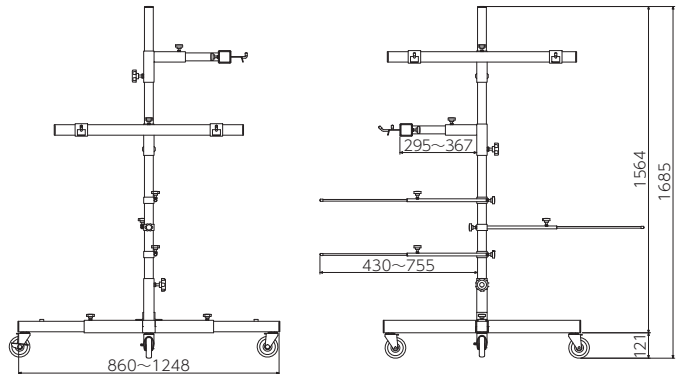


SPRAY STAND



No.	Outer dimension (mm)	Weight(kg)	⊠
TS1500A	H1685×W1248	28	1

- Painting and drying of bumpers, doors, tailgates, and other components.
- The 360-degree rotatable arm allows simultaneous operation of both sides of the workpiece.
- The sturdy structure and extendable and retractable legs allow for working with heavy loads.
- The ø100 casters can be moved even on grating inside the booth.
- Easy removal of mounting parts and smaller storage space.
- Drying can be done at once on the front and back sides.
- Rubber caps are attached to prevent scratching, and rubber mats are attached to the base extension for easy installation.
- * Repair parts are available. Please contact our distributors for details.

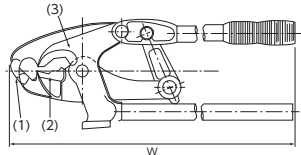
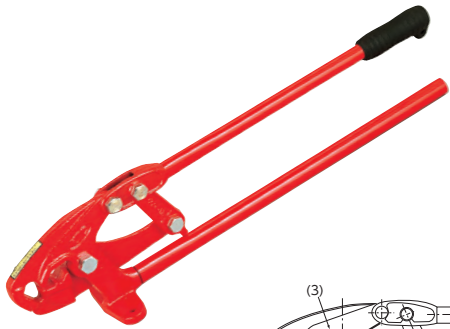


• Overhaul can be done only by the qualified person.

**AUTOMOTIVE
SPECIALTY TOOLS**

OTHERS

CHAIN PLIER



No.	W	Applicable Vehicles	Cutting diameter	Weight (kg)	⊖
TP-850	858	Medium and large vehicles (φ9 or smaller)	φ6 or smaller	7.4	3

- The unique mechanism also enhances ease of use. KTC has developed this stationary chain pliers based on the feedback from operators.
- Adoption of a one-motion mechanism that takes into account force capacity. The 1-motion mechanism has increased the engagement force at the edge (1) by approximately 20 times and the engagement force at the mouse (2) and (3) by approximately 30 times.
- Designed for ease of operation. Edge (1) is designed in a shape suitable for opening and closing cross chain connectors and for cutting and peeling side chains. In addition, the lower mouse (2) is shaped to facilitate connector fixing, and the upper mouse (3) has been strengthened to increase mouse strength.
- * Repair parts are available for the fulcrum bolt and nut. Please contact our distributors for details.
- * This product is not subject to repair.

Caution
 This product is a seasonal product with demand concentrated during the winter months. Please contact the distributor in advance when you need the product.

Side chain disconnect operation

1 Twist chain

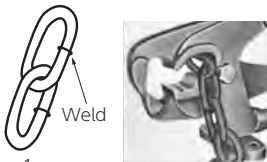


Figure-1. Hold the welded part of the ring of the side chain to be removed as shown in Figure-1, with the welded part of the ring up and at the innermost part of the mouse (from the fulcrum) as shown in the photo.

2 Make tear on chain



Figure-2. As shown in Fig. 2, a wedge-like edge is inserted into the ring of the side chain, and the handle is lowered to create a crease in the weld.

3 Hold tear at the edge

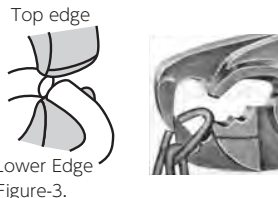


Figure-3. Once the edge is formed, bite it with the edge as shown in Figure-3.

4 Open chain

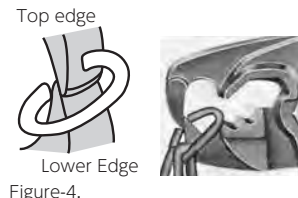
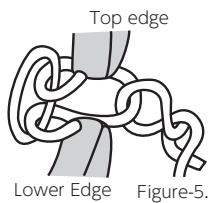


Figure-4. Then, by pressing the handle, the shave can be fully opened and removed as shown in Figure-4.

Opening the connector and removing the cross chain from the side chain

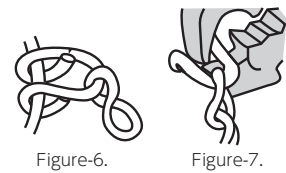
To open a normal connector

When the connector is well closed, nip in the upper and lower edges and press the handle as shown in Figure-5.



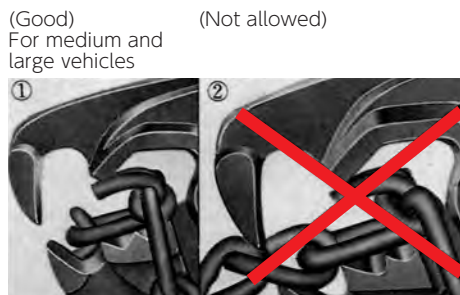
To open a deformed connector

In the case of a deformed connector, as shown in Figure-6, after making the connector into the correct shape as shown in Figure-7, press the handle over the edge as described above.



Work to close connectors and tie cross and side chains

During this operation, the cross chain should never rest on the edge as shown in Photo (2). The cross chain should never rest on the edge as shown in photo (1).



- Always read the "Instruction Manual" carefully before use.
- Do not use on slopes or uneven surfaces.

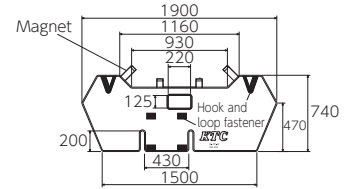
• Overhaul can be done only by the qualified person.

FRONT COVER



No.	Weight(g)	☐	
AYC-3A	1,100	1	

- Cover for vehicle protection during maintenance work
- V-folded fender corners with hook-and-loop fasteners and a width-adjustment mechanism allow for a perfect fit. Fold-down part can be unfolded to fit compact cars and minivans.
- The slit in the license plate section allows work to be performed through the service hole even with the front cover installed.
- An opening in the hood lock section allows the hood to be closed while the front cover is still attached to the vehicle.
- The outer material has excellent oil resistance and is easy to wipe clean with a rag, etc. without soaking up oil, etc. The inner material is scratch-resistant.

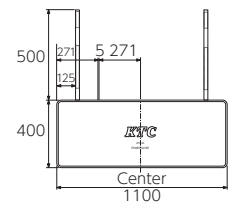


FENDER COVER



No.	Size	Weight(g)	☐	
AYC-2A	400×1100	790	1	

- Cover for vehicle protection during maintenance work
- Four magnets make it easier to attach to fenders.
- The belt can be attached to vehicles with plastic fenders to prevent them from falling off.
- Body-friendly materials are used to reduce shock.



COVERING SET [4pcs.]

4 pcs.



AYC401



AYC402



AYC403



AYC404

No.	Weight(kg)	☐	
ATYC4014	1.1	1	

Set contents

Seat cover	AYC401
Steering wheel cover	AYC402
Floor mat cover	AYC403
Scuff plate cover	AYC404



· Do not drive or operate a vehicle with this product group installed.

· Function mark is indicated under the product name. For the details, please refer to P.004-005.
 · Products marked with should be ordered after checking stock.

SEAT COVER



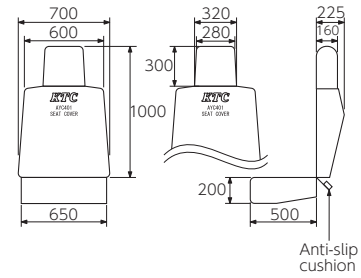
The headrest section is securely fitted to the height of the headrest by means of a strap at the back.



Seat belts can be inspected with seat covers in place.

No.	Weight(g)	☐	
AYC401	450	1	

- Prevention of stains on seats due to maintenance and inspection work.
- From minicars to standard minivans.
- Wide enough to accommodate the bench seat of a minicar.
- The shoulder part is open, and it is compatible with the driver's seat belt (convertible vehicles) and the passenger seat belt (pillar-less vehicles).
- Anti-slip cushions prevent the cover from slipping, ensuring comfortable work.



• Do not drive or operate the product while it is installed in a vehicle.

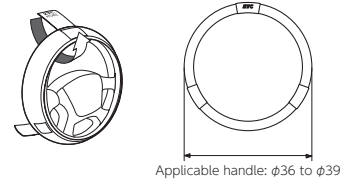
STEERING COVER



Includes a fixing band to prevent slipping.

No.	Weight(g)	☐	
AYC402	70	1	

- Prevention of dirt on handles due to maintenance and inspection work.
- From minicars to standard minivans.
- Compatible with ϕ 36-39 steering wheels.
- * May not be able to be installed depending on the shape of the handle.
- The open shape of the center of the handle facilitates inspection and checking of meters.
- Fixation to prevent slippage or displacement even when the handle is operated to the left or right during rattle inspection.

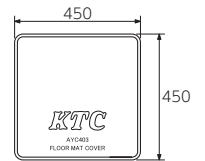


FLOOR MAT COVER



No.	Weight(g)	☐	
AYC403	230	1	

- Prevents floor mats from getting dirty due to maintenance and inspection work.
- From minicars to standard minivans.
- The outer material is made of PVC to prevent slipping even when working in the rain, and the lining is made of SBR (synthetic rubber) to prevent slipping.
- Cost savings compared to disposable type.



SCUFF PLATE COVER



No.	Weight(g)	☐	
AYC404	290	1	

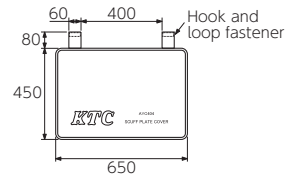
- Prevention of dirt on scuff plates due to maintenance and inspection work.
- Prevention of scratches on scuff plates when diagnosing problems using OBD.
- From minicars to standard minivans.
- The outer material is made of PVC to prevent slipping even when working in the rain, and the lining is made of SBR (synthetic rubber) to prevent slipping.



Adopts a function (hook-and-loop fastener) to prevent dislodging.



Ideal for failure diagnosis, etc. using OBD.



• Overhaul can be done only by the qualified person.

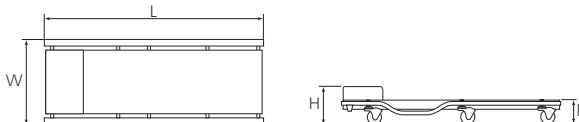
SERVICE CREEPER

Repair
Spare parts



No.	L	W	H	h	Weight(kg)	☐
AYSC-20F	1,010	420	140	105	7.5	1

The framework does not interfere with the shoulder area and comes with high-density cushioning.



- Do not use casters with poor rotation, wear, or deterioration.
- Do not use in areas with poor flooring conditions.
- Do not jump on it or give it a shock. It may break.

Spare parts

No.	Description	Weight(g)	☐
AYSC-20FR-1	Caster	343	1

* 5 mm hexagonal wrench is required for installation.



SERVICE CREEPER

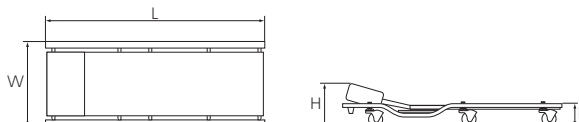
Repair
Spare parts



Headrest folded down

No.	L	W	H	h	Weight(kg)	☐
AYSC-20R	1,010	420	140~260	105	8.5	1

The framework does not interfere with the shoulder area and comes with high-density cushioning.
The headrest angle can be adjusted to three different positions to reduce fatigue even when the user is in an uncontrollable position.



- Do not use casters with poor rotation, wear, or deterioration.
- Do not use in areas with poor flooring conditions.
- Do not jump on it or give it a shock. It may break.

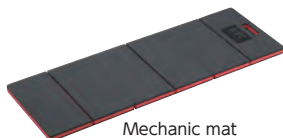
Spare parts

No.	Description	Weight(g)	☐
AYSC-20FR-1	Caster	343	1

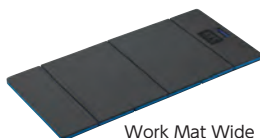
* 5 mm hexagonal wrench is required for installation.



Mechanic mats, work mats wide, and work mats mini are listed under others. P.498



Mechanic mat



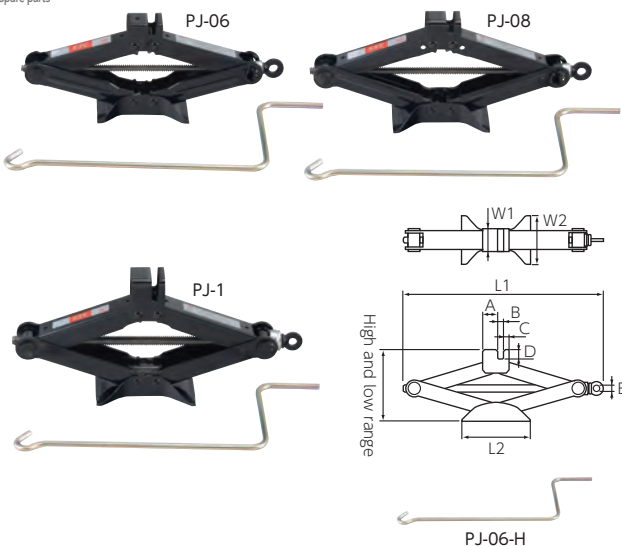
Work Mat Wide



Work Mat Mini

PANTOGRAPH JACK

Repair
Spare parts



No.	Applicable car models	Weight(kg)	☐
PJ-06	Light passenger cars and light trucks	1.8	10
PJ-08	Passenger cars up to 2,000 cc	2.4	5
PJ-1	Passenger cars over 2,000 cc	3.7	5

The threaded part of the pantograph jack, which is subjected to the greatest load, uses a trapezoidal thread made by rolling (roll forming) to enhance accuracy and durability.
It comes with a handle.

* This product is not subject to repair.

No.	Capacity (kg)	High and low range		L1 (Max)	L2	W1	W2	A	B	C	D	E
		Max.	Min.									
PJ-06	600	345	85	380	130	40	90	30	10	10	17	12
PJ-08	800	370	91	410	140	40	100	30	10	10	17	12
PJ-1	1,000	415	115	437	150	53	120	30	10	10	34	12



- This product is for automotive use only. It is not to be used for any other purpose.
- Do not use with a load in excess of the specified capacity.
- Do not put your body or any part of your body under a wheel, etc. lifted by a jack.

Spare parts

No.	Description	Over-all length	φ	Weight(g)	☐
PJ-06-H	Handle	460	9	300	1

Function mark is indicated under the product name. For the details, please refer to P.004-005.
Products marked with a wrench icon should be ordered after checking stock.



Precautions for handling spring compressors

As a result of our investigation of customer inquiries and comments regarding the use of spring compressors SPU-70315 (manufactured between 1987 and 1995) that we sold, the following use has been occurring on a daily basis. Please read the handling precautions and product inspection instructions again before use. If any abnormality is found in the product, please stop using the product and replace it with a spring compressor (part number: AS10) that we are currently selling.

Context

1. Some recent strut-type springs are installed with high spring constant or illegally modified springs, and high loads are applied, resulting in the removal and installation of springs that exceed the safety standards of the former product SPU-70315.
2. Span of upper and lower arm to which spring is applied in spring removal/attachment operation is used in a short state.
The force that compresses the spring changes even when the same amount is contracted due to the

e.g.) Spring constant (load required to shrink 1mm)
Two coils 363N/mm
Three coils 180N/mm
Some double the compression load depending on the condition in which they are hung.

- spring's characteristics.
3. A prohibited power tool (impact wrench) was used to compress the spring instead of a hand tool. When a power tool is used to compress a spring, you may not be able to tell when a sudden change in tightening force occurs, and you may be applying more compression than the product can handle.

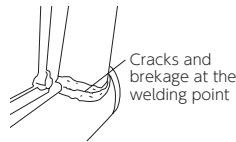
The above is very dangerous work when using tools. Please check the following inspection procedures before use.

Inspection Procedure

Inspection points and method (Do not use the product if any abnormality is found in the following inspection items)

- (1) Welding points of the mounting portion of the fixing arm

- Carefully clean the weld area with brake cleaner, etc. and visually check for cracks or delamination of the weld. (Any cracks or peeling is abnormal.)

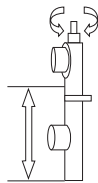


- (2) Center screw bolt inspection

- Visually inspect the center screw bolt for abnormal wear or bending from the slide groove of the arm on the moving side of the main unit.

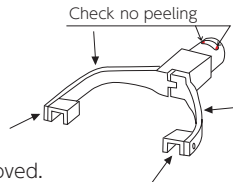
- (3) Sliding inspection of arm on moving side

- Rotate the head drive by hand and check that the arm on the moving side moves smoothly for the entire stroke without any sticking or uneven rotation. (If there is uneven rotation or sticking, the center screw bolt is worn or deformed.)



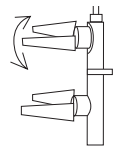
- (4) Inspection of fixed side and moving side arms

- Remove both arms from the main unit and inspect for bends or wear.
- Inspect the holes for the mounting bolts for deformation.
- Make sure that the arm can be easily removed.



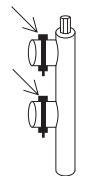
- (5) Pivot inspection of fixed and mobile arms

- Make sure that the fixed and movable arms are properly attached to the main unit and that they swing smoothly without being caught. (If there is a pull, the item (4) is swollen or the mounting area is deformed.)



- (6) Fixed side and moving side arm mounting bolts

- Remove the mounting bolts of the fixed and mobile arms from the main unit and visually check for any bent, worn or damaged threads.



If any abnormality is found during the above inspection, the durability of the product has been exceeded, and continued use of the product may result in damage and dangerous, so do not use it. The information described above can also be used for AS10 inspections. Please carry out maintenance and inspections.

Warning

- Never use an impact wrench as it may cause damage to the spring compressor.

<Pre-use inspection>

- Before starting work, perform the following inspections to confirm that there are no abnormalities. (Do not use if there is any abnormality.)

- (1) The mounting bolts and nuts for Arm 1 and Arm 2 are not loose.
- (2) Arm 1 and Arm 2 must swing freely.
- (3) Turn the center screw bolt by hand and arm 2 should move smoothly within the stroke range.
- (4) The hook should move lightly from side to side.
- (5) No other cracks, deformation, damage, etc.

<Spring Mounting>

- (1) When hanging the hook on the spring, hang it on the diameter of the spring. (Figure 2)
- (2) The span for hanging the hooks on the upper and lower arms should be set at the position where the hooks can be hung the widest. (Figure 3 Distance between A and B)
- (3) The number of spring pitches (number of windings) between the right and left hooks of the upper and lower arms should be the same. (Figure 3)

<In-use>

- During compression work, if the tightening force suddenly feels too large, immediately stop the compression work and loosen the spring.
- Never compress a spring until the wires are in contact with each other.
- Using for short springs, be careful not to be close each other between the bolts for upper and lower arm.
- Since short springs receive high load, must manage tightening torque by torque wrench. (The tightening torque should be 44 Nm or less.)

<Protection>

- The threads of the center screw bolt should be well maintained and lubricated before use.
- When storing the product, keep foreign matter, dust, etc. from entering the slide groove of the main unit.
- Do not disassemble or modify the product.

Figure 1.

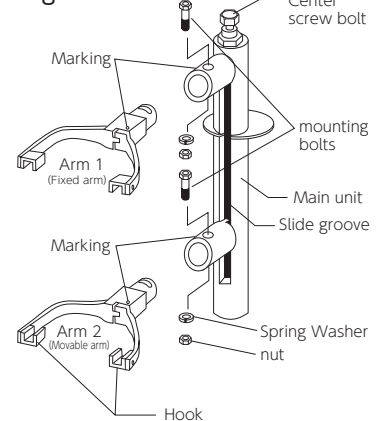


Figure 2.

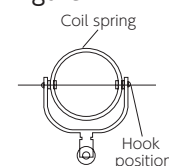


Figure 3.

