
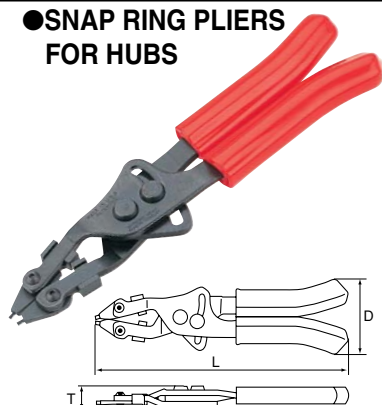



STEERING Axle disassembling/assembling

1	Wheel removal ① Wheel cap removal ② Wheel nut removal	● WHEEL CAP WRENCH P.217	● ALUMINUM WHEEL CENTER CAP WRENCH P.217														
		● IMPACT WRENCH	● WHEEL NUT SOCKET FOR IMPACT WRENCH	● CROSS RIM WRENCH	● OTHER TOOLS												
2	Hub nut removal	● LOCK NUT CHISEL P.205	● SOCKET	● OTHER TOOLS													
3	Disc caliper removal	● SOCKET	● OTHER TOOLS														
4	Tie-rod separation	● TIE-ROD END SEPARATOR P.204	● BALL JOINT SEPARATOR P.204	● OFFSET WRENCH	● SPINNER HANDLE												
5	Removing the axle assy	● PLASTIC HAMMER															
6	Snap ring removal	● SNAP RING PLIERS FOR HUBS	<table border="1"> <thead> <tr> <th>No.</th> <th>D</th> <th>T</th> <th>L</th> <th>▼g</th> <th>☺</th> </tr> </thead> <tbody> <tr> <td>AS307</td> <td>58.5</td> <td>18.2</td> <td>228</td> <td>310</td> <td>5</td> </tr> </tbody> </table>			No.	D	T	L	▼g	☺	AS307	58.5	18.2	228	310	5
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		<p>Usage</p> <ul style="list-style-type: none"> Installing and removing the snap ring used in the hubs of vehicles. <p>Application</p> <ul style="list-style-type: none"> The open range of the mouth of the snap ring pliers is min. 10mm~max. 36mm <p>Characteristics</p> <ul style="list-style-type: none"> Employs a non-stepped, automatic locking device. Can be locked to the desired position. The lock can be released easily from the handle. Only the claw can be easily replaced. All models, except the hole fitted snap ring type, can deal with notched type rings designed for certain models (Toyota). <p>Replacement parts: Pointed claws</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Contents</th> </tr> </thead> <tbody> <tr> <td>AS3072</td> <td>Claw R/L 1, Installation screws 2</td> </tr> </tbody> </table>			No.	Contents	AS3072	Claw R/L 1, Installation screws 2									
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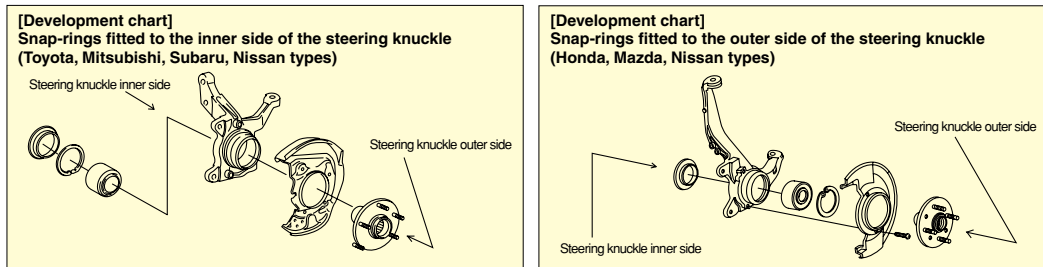
7	Removal/installation of the axle assy.	<p>MULTI PULLER</p> 		<p>●MULTI PULLER</p> <p>All axles can be disassembled and assembled with this set.</p> <p>Usage</p> <ul style="list-style-type: none"> An exclusive tool designed for vehicle axle assembling/disassembling, steering wheel diff-companion flange mission bearing & gear removal, and also a range of bearing & gear removal. <table border="1"> <thead> <tr> <th>Application</th> <th>Usage</th> </tr> </thead> <tbody> <tr> <td>Axle</td> <td>Dismantling and fitting hubs and knuckles Dismantling and fitting the bearing race Dismantling and fitting of wheel bearings</td> </tr> <tr> <td>Steering</td> <td>Removing the steering wheel</td> </tr> <tr> <td>Differential</td> <td>Removing the companion flange</td> </tr> <tr> <td>Transmission</td> <td>Removing bearings and gears</td> </tr> <tr> <td>Others</td> <td>Removing various types of bearings and gears</td> </tr> </tbody> </table> <p>Application</p> <ul style="list-style-type: none"> Mainly used for the axles of light to normal FF vehicles Applicable for steering wheels, diff-companion flanges, transmission bearings and gears in light to normal vehicles. <table border="1"> <thead> <tr> <th>Maximum weight when in use</th> <td>19,600 N (2 t)</td> </tr> </thead> <tbody> <tr> <td>Hub bolts</td> <td>4~5 Holes</td> </tr> <tr> <td>Wheel bearing diameter</td> <td>φ64~ φ84</td> </tr> <tr> <td>Bearing race diameter</td> <td>φ47~ φ63</td> </tr> <tr> <td>Hub holder 1</td> <td>φ68~84 mm</td> </tr> <tr> <td>Hub holder 2</td> <td>φ76~106 mm</td> </tr> </tbody> </table> <p>Characteristics</p> <ul style="list-style-type: none"> The axle can be dismantled and refitted using 1 set. Is applicable for hub bearings that are attached to either the inner or outer sides. A hydraulic press can be used making operations both easy and fast. The removal/installation of the arms is carried out by a one-touch set ball type system. The center bolt is fitted with a bearing, which makes for a light drive torque. Is applicable to FR and 4WD rear vehicles, as well as FF axles. Has a varied use on the steering wheel, differential companion flange, transmission bearing and gearing, as well as the axle. Is possible for use on the removal of other bearings and gearing from other devices because of interchangeable parts. 	Application	Usage	Axle	Dismantling and fitting hubs and knuckles Dismantling and fitting the bearing race Dismantling and fitting of wheel bearings	Steering	Removing the steering wheel	Differential	Removing the companion flange	Transmission	Removing bearings and gears	Others	Removing various types of bearings and gears	Maximum weight when in use	19,600 N (2 t)	Hub bolts	4~5 Holes	Wheel bearing diameter	φ64~ φ84	Bearing race diameter	φ47~ φ63	Hub holder 1	φ68~84 mm	Hub holder 2	φ76~106 mm											
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<p>●Multi puller</p> <table border="1"> <thead> <tr> <th>No. AS301</th> <th>▼kg 17</th> </tr> </thead> <tbody> <tr> <td>Center bolt assy</td> <td>Hexagonal 2 faced 22mm width × length 280mm (M18 × 2.0)</td> </tr> <tr> <td>Hanger</td> <td>270 × 38 × 37 mm</td> </tr> <tr> <td>Slide arm</td> <td>60.5 × 30 × 20 mm</td> </tr> <tr> <td>Arm M</td> <td>φ16 × 105 mm</td> </tr> <tr> <td>Hub plate</td> <td>φ154 × 24 mm (Screw: M18 × 2.0, 1/2"sq. inc.)</td> </tr> <tr> <td>Hub holder 1 assy.</td> <td>φ70 × 34 mm(Wing bolt (M6) inc.)</td> </tr> <tr> <td>Hub holder 2 assy.</td> <td>190/190 mm(Hexagonal adjustment bolt (M10) with hole inc.)</td> </tr> <tr> <td>Race shaft</td> <td>φ55 × 114 mm(Screw: M18 × 2.0)</td> </tr> <tr> <td>Plate (4 types)</td> <td>A(φ79 × 15) B(φ71 × 15) C(φ67 × 15) D(φ60 × 15) 1 each</td> </tr> <tr> <td>Hanger assy. for press</td> <td>150 × 50 × 25 mm(Hexagonal bolt (M10) + washer inc.)</td> </tr> <tr> <td>Press arm</td> <td>φ16 × 75 × 35 mm</td> </tr> <tr> <td>Hanger nut</td> <td>φ45 × 18mm(Screw: M18 × 2.0)</td> </tr> <tr> <td>Race holder assy.</td> <td>90 × 140 mm(Hexagonal adjustment bolt (M10) with hole inc.)</td> </tr> <tr> <td>Plate bolt</td> <td>Hexagonal 2 faced 22mm width × length 34mm (M18 × 2.0)</td> </tr> <tr> <td>Arm L</td> <td>φ16 × 330 mm</td> </tr> <tr> <td>Claw</td> <td>27 × 25 × 12 mm</td> </tr> <tr> <td>M8 Bolt</td> <td>Bolts with hexagonal holes (with washer) × 100 mm</td> </tr> <tr> <td>M10 Bolt</td> <td>M10 hexagonal bolt with hole for M10 (with washer) × 100 mm</td> </tr> </tbody> </table>		No. AS301	▼kg 17	Center bolt assy	Hexagonal 2 faced 22mm width × length 280mm (M18 × 2.0)	Hanger	270 × 38 × 37 mm	Slide arm	60.5 × 30 × 20 mm	Arm M	φ16 × 105 mm	Hub plate	φ154 × 24 mm (Screw: M18 × 2.0, 1/2"sq. inc.)	Hub holder 1 assy.	φ70 × 34 mm(Wing bolt (M6) inc.)	Hub holder 2 assy.	190/190 mm(Hexagonal adjustment bolt (M10) with hole inc.)	Race shaft	φ55 × 114 mm(Screw: M18 × 2.0)	Plate (4 types)	A(φ79 × 15) B(φ71 × 15) C(φ67 × 15) D(φ60 × 15) 1 each	Hanger assy. for press	150 × 50 × 25 mm(Hexagonal bolt (M10) + washer inc.)	Press arm	φ16 × 75 × 35 mm	Hanger nut	φ45 × 18mm(Screw: M18 × 2.0)	Race holder assy.	90 × 140 mm(Hexagonal adjustment bolt (M10) with hole inc.)	Plate bolt	Hexagonal 2 faced 22mm width × length 34mm (M18 × 2.0)	Arm L	φ16 × 330 mm	Claw	27 × 25 × 12 mm	M8 Bolt	Bolts with hexagonal holes (with washer) × 100 mm	M10 Bolt	M10 hexagonal bolt with hole for M10 (with washer) × 100 mm
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* Replacement parts are available. Check with your dealer for details.

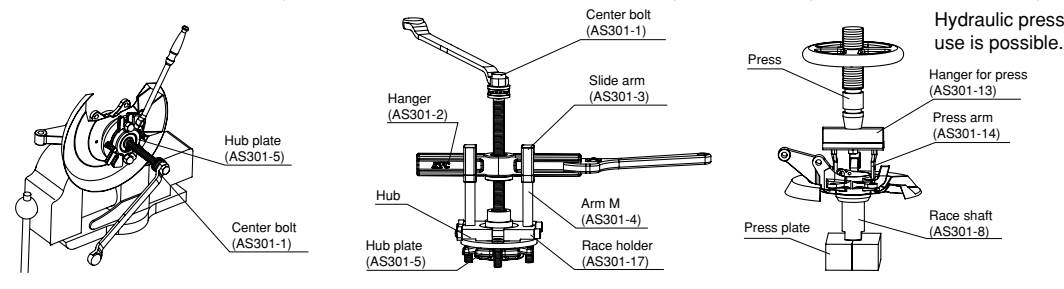
●Ex. Multi puller operation: The following operations are possible by the multi puller.

Removal/installation of the axle assy. **7**

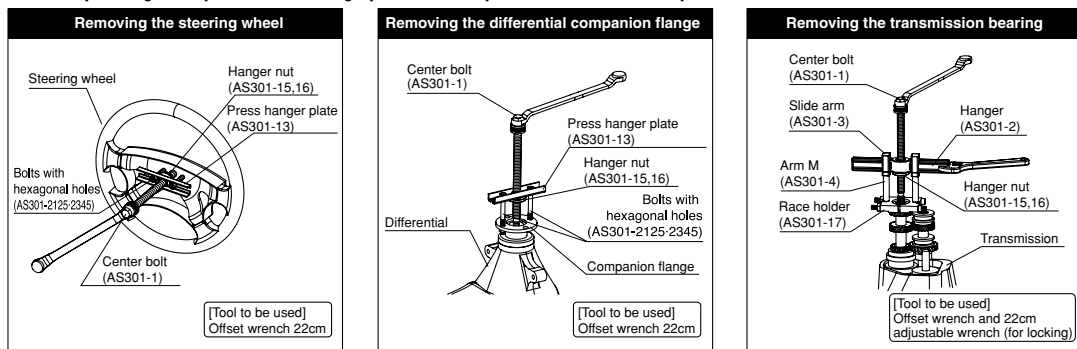
1. Hub removal/installation, Inner race removal/installation, Bearing removal/installation **1 set compatible for multiple makers.**

























① Hub removal/installation example ② Inner race removal/installation example ③ Bearing removal/installation example



2. Other operating example: The following operations are possible with the multi puller.



Replacement parts

Center bolt assy. 	No. AS301-1 Quantity 1 M18 x 2 screws, Full length : 280mm, Hexagonal 2-faced width: 22mm	Race shaft 	No. AS301-8 Quantity 1 M18 x 2 Screw, φ55 x 114mm	Press arm 	No. AS301-14 Quantity 2 16 x 75 x 35mm	Bolt set for M8 	No. AS301-2125 Quantity 2 M8 hex hole bolt full length 100mm
Hanger 	No. AS301-2 Quantity 1 270 x 38 x 37mm	Plate A 	No. AS301-9 Quantity 1 φ79 x 15	Hanger nut 	No. AS301-15 Quantity 1 M18 x 2 Screw, φ45 x 18mm	Bolt set for M10 	No. AS301-2345 Quantity 2 M10 hex hole bolt full length 100mm
Slide arm 	No. AS301-3 Quantity 2 61 x 30 x 20mm	Plate B 	No. AS301-10 Quantity 1 φ71 x 15	Hex hole bolt for the hanger nut 	No. AS301-16 Quantity 2 M5 x 10mm		
Arm M 	No. AS301-4 Quantity 2 φ16 x 105mm	Plate C 	No. AS301-11 Quantity 1 φ67 x 15	Race holder assy. 	No. AS301-17 Quantity 1 90 x 140mm, M10 hex hole bolt (hex nut) included		
Hub plate 	No. AS301-5 Quantity 1 Insertion angle 1/2°sq. M18 x 2Screw, φ154 x 24mm	Plate D 	No. AS301-12 Quantity 1 φ60 x 15mm	Plate bolt 	No. AS301-18 Quantity 1 M18 x 2 screws, Full length: 34mm, Hexagonal 2-faced width: 22mm		
Hub holder 1 assy. 	No. AS301-6 Quantity 1 φ70 x 34mm, Wing bolt M6 included	Hanger assy. for pressing 	No. AS301-13 Quantity 1 150 x 64 x 31mm, M10 hex bolt (washer) included	Arm L 	No. AS301-19 Quantity 2 φ16 x 330mm		
Hub holder 2 assy. 	No. AS301-7 Quantity 1 190 x 190mm, M10 hex hole bolt (hex nut) included			Claw assy. 	No. AS301-20 Quantity 2 27 x 25 x 12mm		

The equipping of the axle assy. to the chassis **8**

●IMPACT WRENCH ●WHEEL NUT SOCKET FOR IMPACT WRENCH ●OTHER TOOLS ●TORQUE WRENCH SET FOR THE WHEEL NUT

Attaching the wheel **9**

- ①Attaching the wheel nut
- ②Checking torque