

Product: **Heim Joint Press Tool (HJPT)**
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Tool Description

- 1) The Heim Joint Press Tool (HJPT) is used to remove and press in new bearings to KTM off-road motorcycles swingarms fitted with PDS rear shock absorbers. The advantage of using the HJPT over a method such as hammering is that the HJPT presses the bearing in to the swingarm straight, in a controlled manner minimizing the chance of damage to the swingarm and bearing. The press tool is specially shaped so that it only contacts the bearing outer cage and features a machined press stop which positions the new bearing precisely in the center of the swingarm.
- 2) Each HJPT kit (HJPT16 and HJPT17) includes a press tool, bearing collar, bearing cup, press bolt, bolt head spacer, washer and nut, as shown in Fig.1. The HJPT16/17 includes two press tools to cover all year models.



Fig.1- HJPT Parts

Tool Compatibility

The HJPT will work on KTM off-road models with PDS rear shock absorbers, including 2-stroke and 4-stroke EXC, and XC-W. Three different versions are available:

- 1) HJPT16- Compatible with PDS motorcycles up to model year 2016
- 2) HJPT17- Compatible with 2017 and 2018 year models
- 3) HJPT1617- Compatible with all model year PDS motorcycles. Includes two different press tools.

Note: The heim joint dimensions changed from 2017+ model year. As such the HJPT16 can not be used on 2017+ model year bikes and HJPT17 can not be used on 2016, or older model year bikes.

Assembly Instructions

- 1) The HJPT16 is delivered assembled as shown in Fig.2
- 2) Disassemble the tool and note all parts as shown in Fig.1



Fig.2- Assembled HJPT

Heim Joint Bearing Removal

- 1) Put the motorcycle on a workstand
- 2) Pull the rear brake hose out of the swing arm guide and remove the guide from the swingarm (6mm socket wrench required).
- 3) Remove the PDS rear shock absorber lower bolt.
- 4) Remove the heim joint bushes (one on each side of the heim joint bearing). They can be pushed out easily using a flat bladed screwdriver. Note- Year models 2017+ use a bush which has the dust seal integrated.
- 5) Models up to 2016- Remove the heim joint dust seals. A seal removal tool, or flat bladed screwdriver can be used.
- 6) Clean the swingarm heim joint area, particularly the area which the heim joint bearing will be pressed out from (left side).
- 7) Assemble the HJPT as shown in Fig.3 and insert tool in to the the heim joint from the right side of the motorcycle. Note that the bearing collar should be installed inside the bearing so that it centers the press bolt.
- 8) Assemble the press cup on to the HJPT and fasten using the washer and nut.
- 9) Press the heim joint bearing out of the swingarm by tightening the HJPT. Use of a ratchet socket wrench (19mm) on the bolt head (right side) and a ring spanner (19mm) on the left side is recommended.
- 10) Once the heim joint bearing has been fully pressed out undo the nut and remove tool from the swingarm..



Fig.3- Heim Joint Press Tool installed and ready to press out old bearing

New Heim Joint Bearing Installation

Note 1- New heim joint bearing preparation: It is recommended to cool the new bearing in a freezer before installation to minimize the force require to install. Cooling the bearing will reduce the external diameter of the bearing slightly and allow it to be installed in the swing arm more easily. A minimum on 1 hour cooling is recommended.

Note 2- **OEM heim joint bearings have an internal Teflon coating. It is recommended that grease is NOT applied to the bearing internal surfaces.** A small amount of grease may be applied to the external surface of the bearing cage to ease installation during pressing in to the swing arm.

Note 3- The heim joint bearing cage has slightly different tapers (left and right). Identify the side of the cage with the most taper and orient it so that it is pressed in to the swing arm from this side.

- 1) Clean the swingarm thoroughly, particularly the machined area where the heim joint bearing will be pressed in.
- 2) Assemble the HJPT as shown in Fig.4 and insert the tool through the new heim joint bearing. A small amount of grease may be applied to the external surface of the bearing cage to ease pressing in to the swingarm. Do not apply grease to the inside of the bearing (see Note 2 above). Be sure to insert the bearing collar into the heim joint so that the bolt is centered.
- 3) Insert the tool through the swingarm from the right side
- 4) Assemble the press cup on to the HJPT and fasten using the washer and nut.
- 5) Press the new heim joint bearing in to the swing arm by tightening the HJPT bolt. Use of a ratchet socket wrench (19mm) on the right side and a ring spanner (19mm) on the left side is recommended.
- 6) A press stop is machined in to the press tool. This will position the bearing in the center of the swingarm, with no measurements, or adjustments necessary. When pressing in the bearing stop as soon as the press tool stop is bottomed against the swing arm.
- 7) Once the new heim joint has been fully pressed in undo the nut and remove the tool from the swingarm.
- 8) Model year up to 2016 only- Install new dust seals. Apply a small amount of waterproof grease to the dust seal rubber lip. The HJPT16 can be used to press in the seals, but be careful to stop pressing the seals as soon as they touch the heim joint. The seals may be damaged if excessive force is applied while pressing them in.
- 9) Install new bushes. This can be pushed in by hand. Model year 2017 use bushes with an integrated dust seal. Lightly grease the rubber with silicone grease before installation.
- 10) Reinstall the PDS rear shock absorber lower bolt. Be certain to apply Loctite 243 to the shock bolt and torque to spec (80Nm).

11) Mount the rear brake hose guide to the swingarm and torque bolts to spec (5Nm). Push rear brake hose into guide.



Fig.4- Heim Joint Press Tool installed and ready to press in new bearing