

Read this manual in full before using this product and retain it for future use. Always use the latest version of the manual. Please visit drapertools.com/manuals for the latest version.

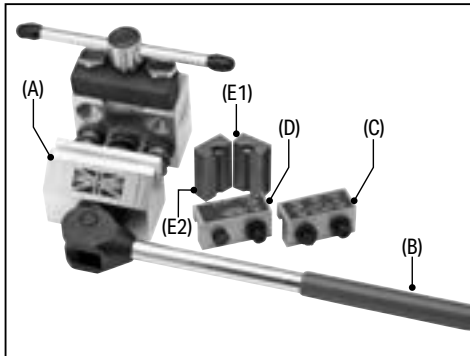
1. Intended Use

This product is designed to flare brake pipes of 3/16" and 4.75mm according to SAE Convex, DIN Convex and SAE Double standards. Any other application beyond the conditions established for use will be considered misuse. Draper Tools accepts no responsibility for improper use of this product.

Important: Ensure that you are familiar with the various types of flares and their applications before using this product. **ALWAYS** consult the vehicle manufacturer's instructions before use.

WARNING! Keep your hands clear of moving parts, clamps and punches while using this product and keep long hair and jewellery tied back.

2. What's in the Box?



- A. 1 × Flaring tool assembly
- B. 1 × Press lever
- C. 1 × 3/16" (4.75mm) SAE punch slider
- D. 1 × 4.75mm DIN punch slider
- E. 1 × 3/16" combi die
 - E1. 3/16" (4.75mm) SAE die
 - E2. 4.75mm DIN die

3. Operating Instructions

1. Clamp the base of the tool into a suitable bench-mounted vice and screw the press lever (B) into the lever socket (1).
2. Fully loosen the die clamp lever (2) and swing the die clamp (3) open.

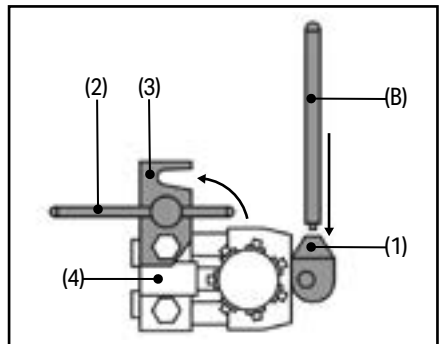


Fig. 1

3. Use **6. Flaring Reference Chart** to determine the correct die and punches for the required flare.
4. Clean the die of grease and place the two parts horizontally into the die socket (4) with the required mould directed towards the slider mount (5).

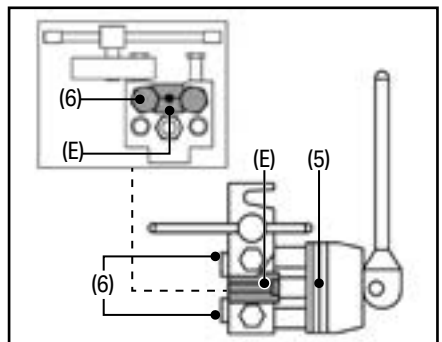


Fig. 2

Important: Ensure that both parts of the die are in contact with the die stops (6).

5. Prepare the brake pipe; see **4. Preparing the Brake Pipe**.
6. Ensure that the tube nut (7) (not supplied) is installed onto the brake pipe (8), then lightly lubricate the end of the brake pipe using brake fluid or an appropriate oil and insert it through the rear of the die.

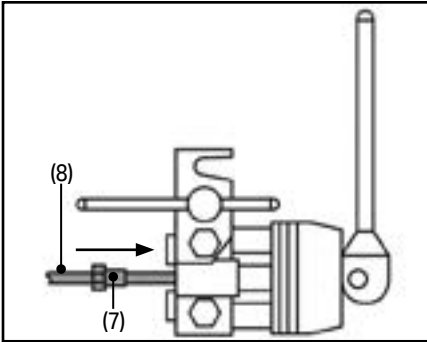


Fig. 3

Important: Ensure that the end of the pipe is flush with the face of the die.

7. Close the die clamp (3) and tighten the die clamp lever (2) to secure the die in position.
Important: The die clamp must be very tight to prevent the die and pipe from moving during the operation. After tightening, ensure that the die and pipe are correctly positioned.
8. Insert the appropriate punch slider (C) (D) into the slider mount (5) with the required **OP. 1** punch facing towards and directly in line with the pipe.

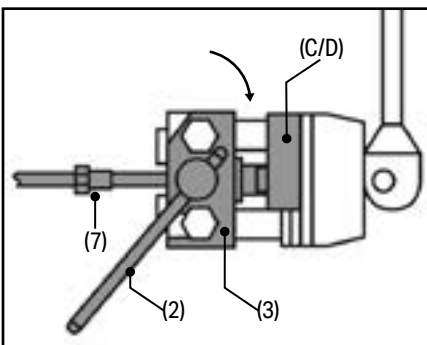


Fig. 4

Important: The punch number identified in the chart (see **6. Flaring Reference Chart**) corresponds with the number at the top of the punch slider label.

9. Pull the press lever (9) to engage the punch with the end of the pipe until firm resistance is felt, then return the lever to its original position.

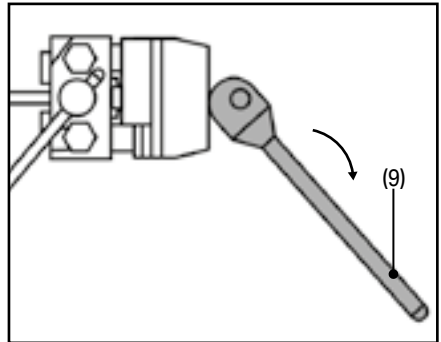


Fig. 5

10. If the chart identifies a second operation required for the flare (SAE Double flares only), move the slider so that the **OP. 2** punch is aligned with the pipe and pull the press lever to apply the flare.
11. Return the press lever (9) to its original position, then loosen the die clamp lever (2) and open the die clamp (3).

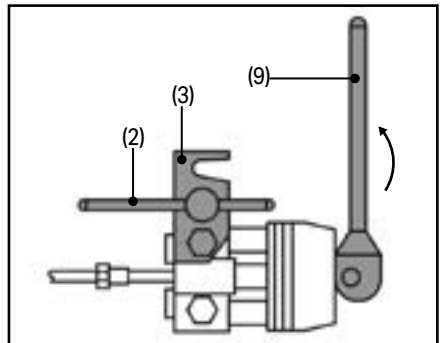


Fig. 6

12. Remove the die from the die socket and extract the pipe from the die. If necessary, tap the die gently on a suitable surface to release the pipe from the die.
13. Check the quality of the flare to ensure that the pipe did not move during the operation and blow any residual debris from the pipe.

4. Preparing the Brake Pipe

Important: ALWAYS ensure that the brake pipe is correctly prepared before flaring.

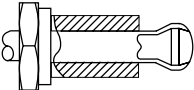
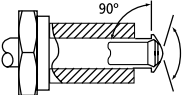
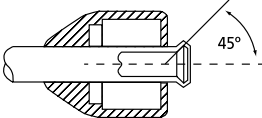
- The end of the pipe **MUST** be cut square.
- The outside edge of the pipe must be chamfered by approximately 0.25mm at 45°.
- The bore of the pipe must be deburred.
- If the pipe is plastic-coated, remove at least 3mm from the end of the pipe to be flared, ensuring that the pipe is not scored and that no metal is removed while doing so.

Important: DO NOT use an abrasive cloth on the end of the brake pipe to be flared.

5. Product Care and Disposal

- Clean the product of any dust or debris before and after each use.
- Replace any punch that shows signs of damage or excessive wear.
- Keep the inner faces of the die lubricated when not in use to avoid corrosion.
 - Wipe the die clean of any oil before use to prevent the die from slipping while it is in the clamp.
- Remove all dies from the die clamp and loosen all joints before storing the product.
- Before storing the product, wipe it thoroughly with a lightly oiled cloth to prevent corrosion of the exposed metal parts.
- Store the product in a clean and dry environment, out of reach of children.
- At the end of its working life, dispose of the product responsibly and in line with local regulations; recycle where possible.

6. Flaring Reference Chart

Flare type	Pipe diameter	OP.1 punch	OP.2 punch	Die	Die part reference
SAE Convex 	3/16"	1	N/A	3/16" SAE	(E1)
113°-117° DIN Convex 	4.75mm	6	N/A	4.75mm DIN	(E2)
SAE Double 	3/16"	1	7	3/16" SAE	(E1)
	4.75mm	1	7	3/16" SAE	(E1)

7. Explanation of Symbols



Suitable for DIN Convex flares



Suitable for SAE Double flares



Suitable for SAE Convex flares



Read the instruction manual