The above illustration shows a crowned tappet resting on a camshaft lobe. The stock XPAG tappets are flat and rest centered on their cam lobes. This arrangement is not conducive to tappet rotation and normal wear. Modern engines have crowned offset tappets, allowing the tappet to rotate which distributes wearing. Offsetting the TC tappets is impossible, but the cutting of a one degree crown on the tappet will bring the desired results.

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2002 Update

It is possible to use tappets from other engines. Skip Kelsey, of Shadetree Motors, had done extensive research on this. XPAG engines require “Chilled iron” tappets, due to having steel cams. Some of the Chrysler line tappets are chilled, and some are not. He used to manufacturer and sell a bucket style Chrysler tappet for these engines. He had to fashion an aluminum plug for the top so it would use the stock pushrods. In his own engine, he used the bucket style with custom made pushrods. The source for these tappets dried up and that was the end of that project. If you can find some Studebaker tappets from that era, they were better, and also bucket style.

At least one supplier was using the Dodge bucket tappet, but they are “hardenable Iron”, and should only be used on cast iron cams.