Types of Head kits: Standard Headkits parts, each tool and headkit may have varying demsions of the tension parts.

Ratchet Operation: Ratchets are designed in a tooth gear in ring style driving mechanism (pawl and Yoke). A ratchet that continues to run and the drive load stays still is considered "slipping". This is due to the ratchets headkit tension. Tension of the headkit is created by 1 of 2 styles spring and Ball/Pin or a series of spacers and waver washers. There are some headkits that utilize both designs. The goal of fixing this issue is to increase headkit tension, increasing drive torque and reducing slipping. There can be too much tension. Too much tension causes friction and heat. Headkit parts will wear out more quickly with increased friction (in many cases the user cannot even hold the ratchet in their hand). And the mechanism that holds the headkit together may fail and the headkit falls apart during use (most times losing some of the smaller necessary Parts).

Testing slipping by holding a socket/extension in your hand is not an accurate test. The engineering of ratchets does not account for soft joint test and most if not all ratchets (new and old) will slip easier in your hand compared to putting on a socket. We feel that in most cases there is a happy medium that can be met by increasing the tension by small amounts. We have created a ratchet replacement parts repair parts explanation below to provide you with the small parts we use to gain torque back into you ratchet without causing undue wear, tear and premature failure.

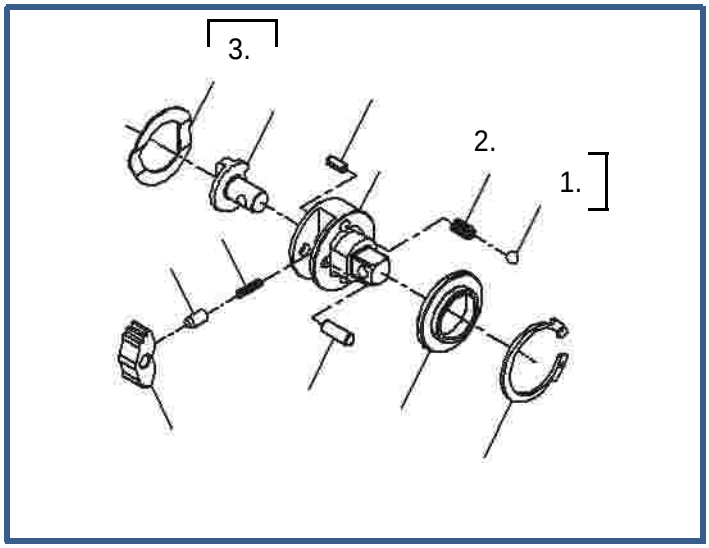
Spring and ball/pin

There is sometimes little that can be done to spring and ball style headkits. Replacing obviously fatigued/worn parts makes a big difference. However, you may find a headkit that is in new condition and Slips badly. In this case: you can stretch the tension spring using some ty led slipping tool (side cutters, needle nose plier cutter combos). Squeeze the tools cutting surface into one of the rings of the spring and lightly compress to spread out the spri ing distorts to become out of line simply rotate the spring 180 degrees and repeat. Do not due this to every ring of the spring. Only 2 to 3 times (max). In some cases you have enough room to add a second rear washer.

¼"HEADKIT - Figure 1.1

Index	Part Number	Description	Quantity	Dimensions
1	AP1111-39	Balls	2	
2	AP1111-38	Springs	2	

Figure 1.1



3/8”HEADKIT Figure 1.1

Index	Part Number	Description	Quantity	Dimensions
1	AP124-35	Balls	2	
2	AP124-34	Springs	2	
3	AP124-29	Rear Washer	1	

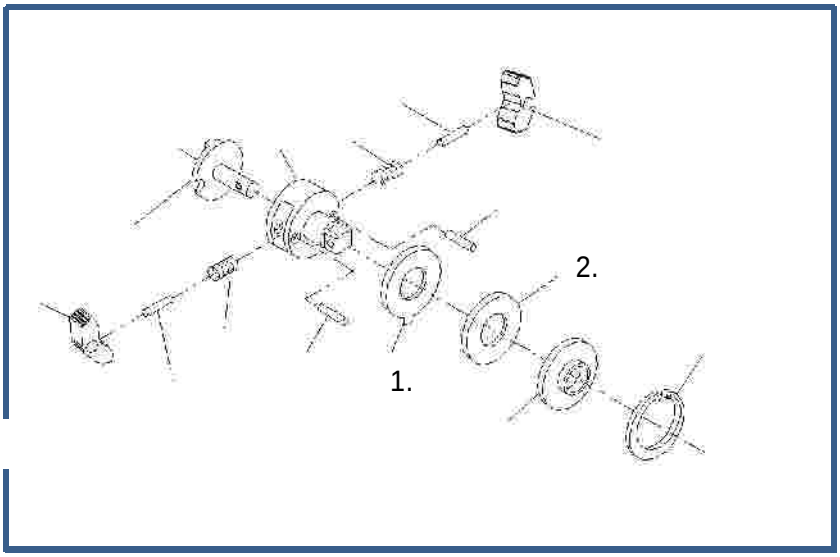
Wave Washer Tension Style Headkit

Waver washer headkits possess another set of problems. They are usually comprised of a series of flat washers and wave washers. In the simplest fix add another of the exact same wave washer right on top of the other. However if the existing w-washer is very thick and holds a lot of tension a second one may be too much friction. So you would need to find a similar w-washer, but with a thinner thickness and less tension. Also, if you had a very thin flat washer that fits the ID and OD restrictions to add at the base of the headkit a way to add tension and minimize friction.

¼” Headkit

Index	Part Number	Description	Quantity	Dimensions
1	¼” Wave Washer	Wave Washer	1	ID. .575, OD. .782, Thick .0135
2	AP760-35	Flat Washer	1	ID. .3715, OD. .7390, Thick .0065

Figure 1.2



3/8” Wave Washer Headkit

Index	Part Number	Description	Quantity	Dimensions
1	3/8”Wave Washer	Flat Washer	1	