Harland Sharp Roller Rocker Arm
Assembly and Installation Instructions for Dodge Vipers

We recommend fully reading the installation instructions before beginning.

1. Begin by installing the pushrod adjuster into the rocker arm. The cupped side faces down and is where the pushrod makes contact. Screw the adjuster in until only the first thread is shown on the bottom side of the rocker arm.
2. Install the pushrod adjuster jam nut on the topside of the rocker arm, but do not tighen.
3. Assemble an exhaust and intake rocker set by using the intermediate shaft, which goes into each rocker shaft. The two bores for the shaft will be facing each other, making an intake and exhaust pair for each cylinder.
4. Install the stepped stand on the bottom side of each rocker arm and insert the socket (Allen) head bolts through the assembly from the top.
5. Remove the spark plugs and valve covers from the engine.
6. Bring a piston to top dead center on its firing stroke (both valves will be closed as the piston rises on the compression stroke) using a starter button or socket on the crankshaft hub.
7. Remove the stock rocker arms and pushrods from the cylinder. Wipe any oil from the top of the valve tips and color with a dark felt marker or Dykem.
8. Place an assembled Harland Sharp Rocker set on the cylinder head and snug the bolts down.
9. By hand, pivot the rocker arm, striking the roller tip against the valve. Inspect the line formed form the point of contact, where the marker or Dykem wore off. The roller tip should be contacting the valve tip slightly inboard of the centerline of the valve (a line should be visible just to the intake side of center, by about 0.020” –0.030”). If the line is not inboard enough, a shim may be used to raise the height of the rocker arm. Adjust as necessary.
10. Once the height of the rocker arm is set, install an adjustable pushrod at the cylinder being test fitted. If an adjustable pushrod is not available, a stock one could be used for checking the pushrod length.
11. To check pushrod length, adjust the rocker adjuster to zero lash (turn the screw down until it contacts the pushrod and seats fully in the cups at the lifter and rocker, but there is no pressure on it). From this point, turn the adjuster 1&1/2 turns more. There should be about 2&1/2 threads visible below the rocker arm. This is the ideal adjustment as there is an oil passage that allows the oil to come up through the pushrod and out onto the rocker through a relief in the rocker assembly. The typical pushrod length for these rockers is 7.500” and we recommend using a high quality pushrod as the stock ones bend under pressure, reducing valve lift.
12. Once the correct pushrod lengths and rocker mounting heights have been determined, proceed with installing the new rockers and pushrods at each cylinder.
    The procedure will be to:

    - Set the piston to TDC on the firing stroke.
    - Remove the factory rockers and pushrods.
    - Install the new pushrods and rocker pair.
    - Tighten the rocker arm bolts to 35 ft/lbs.
    - Set the adjusters to zero lash, plus 1&1/2 turns.
    - Tighten the adjuster jam nuts to 18 ft/lbs.
    - Reinstall spark plugs and valve covers.

13. Start the engine and let it run for approximately 5 to 10 seconds, then shut off. Let it sit for a moment. The purpose of this is to let the oil pressure build and get the oil to begin flowing through the pushrods and onto the rockers / valve springs. The engine will be very noisy at this time.
14. Start the engine again and let it idle for a minute or two, check for oil leaks at the valve covers. As the engine runs more, the valve train will get quieter. Do not be alarmed as it will be very noisy at first.

    Your installation is complete and you can begin driving the car in a normal manner. There is no adjustment maintenance required with the original type hydraulic lifters in place.