

Flow Performance

FA Series Cylinder Bore Adapters

Adapter bores simulate an actual cylinder which is an extension of the cylinder head. The distance from the valve heads to the adjacent bore wall are critical for simulating actual flow characteristics of the head and cylinder. Therefore, accurate and repeatable location of the head on the adapter bore plate is critical.

Heads are usually located on an engine block using two or more dowel pins. However, these dowel pins are usually not a convenient way of locating a head to an adapter bore plate. Another method can employ the head bolt holes. The bolt holes can locate the head on the adapter plate using some dowel pins.

The head bolt holes can be a guide for drilling locating dowel pins into your adapter plate. This is done by locating the adapter bore plate on your head in the proper location and securing it to the head with C clamps or similar clamping devices. A head gasket with the fire ring scribed to the deck surface can help locate the adapter bore to the head. A drill bit of the appropriate size can then be run through the head bolt holes and into the adapter plate. In most cases, you will not want to drill all the way through the adapter plate.

For small block Ford and Chevy heads drilled for $7/16$ " bolts, you will find that a $29/64$ " drill bit will fit snugly through the head holes. Dowel pins can be made from the unthreaded shank of M10 sized metric bolts cut to about $3/4$ " long. Some brands M10 bolts will be a little too big, but by spinning them in a drill while holding a file or some sandpaper against them, they can be quickly trimmed down to just the right size. The bolts sold by Orchard Hardware seem to be the best fitting as-is. Be sure to buy a soft bolt, not grade 8 or hardened bolts. You will have a great deal of difficulty working with the harder bolts. $7/16$ " bolts will not make good dowel pins because they are too small in diameter.

Only two dowel locating dowel holes need to be drilled. For Ford heads, this can be any two holes. However, Chevy and other heads present a problem. This is because the bolt holes are too close to the cylinder to work with the adapter bore plate. With Chevy heads, it is better to drill the two closest holes from the adjacent cylinders on each side of the adapter bore. Both sides will need to be drilled.

