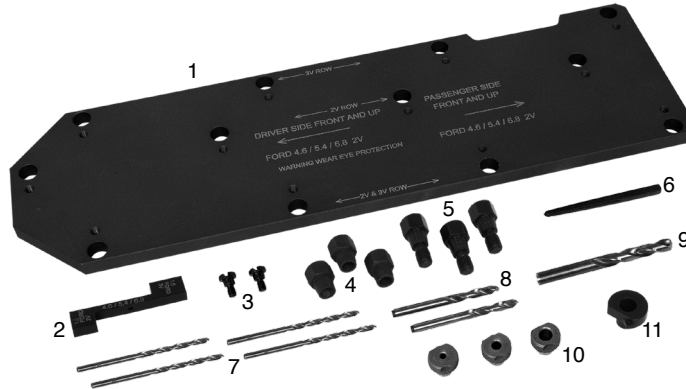


# MANIFOLD DRILL TEMPLATE FOR FORD 4.6L, 5.4L & 6.8L



## Includes:

- 1 - Base Plate
- 2 - Drill Depth Gauge
- 3 - Lock Screw (2)
- 4 - Alignment Nuts (3)
- 5 - Alignment Bolts (3)
- 6 - Extractor
- 7 - 1/8" Drill Bit (4)
- 8 - 3/16" Drill Bit (2)
- 9 - 17/64" Drill Bit
- 10 - Drill Bushing - 1/8", 3/16" & 17/64"
- 11 - Tap Guide



1. Make sure the surface is clean so the plate mounts correctly. Broken bolts need to be flush.
2. Screw the lock screw to the plate for the hole you will be drilling.
3. Mount the plate according to the plate markings using the alignment bolts or alignment nuts, tightening evenly to ensure the plate centers up.
4. Insert the 1/8" drill bushing. Twist clockwise to lock into the locking screw.
5. Install the 1/8" drill bit in a drill. Use the drill depth gauge (Fig A) to ensure the drill bit isn't too long which may result in puncturing a water jacket. The same gauge can be used for all bits used in the process. Run the drill at 500 to 700 RPM (Fig B).
6. Keep the drill bit cool by applying transmission fluid or cutting oil on the bit # or in the hole before and in between drilling. Do not use penetrating oil.
7. Drill for 5 to 10 seconds and pull out. Reapply lubricant to keep bit cool. Repeat until you get all the way through the bolt.
8. Use an air gun to clear the hole of shavings.
9. Switch to 3/16" drill bit & bushing and drill approximately 1" deep. This will ensure good contact with extractor.
10. Remove the drill bushing and tap the extractor with a hammer and remove the broken bolt (Fig C).
11. If you are unable to remove the broken bolt with the extractor, put the 3/16" drill bushing back in and drill all the way through the bolt with the 3/16" drill bit (Fig D). Then repeat the same process using the 17/64" drill bit and bushing.
12. Insert the tap guide and use a M8x1.25 Tap to remove the remaining steel from the threads. Screw the tap in and out again until job is complete (Fig E). Use a tap socket to make the job easier.



Fig A



Fig B



Fig C



Fig D



Fig E