

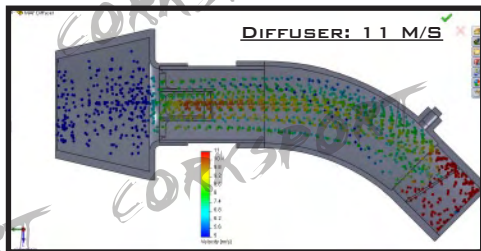
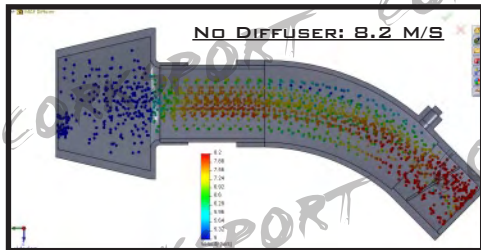
AIR SPLITTER: CORKSPORT POWER SERIES INTAKE SYSTEM 1ST GENERATION MZR 2.3 DISI ENGINES

AS A NUMBER OF PEOPLE HAVE BEEN CONCERNED ABOUT UTILIZING OUR INTAKES ON THE FIRST GENERATION MZR DISI ENGINES WITHOUT USING AN AIR SPLITTER/DIFFUSER, WE ARE NOW INCLUDING THESE AS A DROP IN ADDITION TO THE INTAKE. THROUGH A SUBSTANTIAL AMOUNT OF TESTING AND ALL OF OUR CURRENT CUSTOMER FEEDBACK, WE ARE CERTAIN THAT ON THESE VEHICLES, OUR INTAKES DO NOT REQUIRE THIS SPLITTER TO AVOID A CHECK ENGINE LIGHT. OUR INTAKES WITHOUT A SPLITTER PRODUCE LOW LONG TERM FUEL TRIMS IN THE 6-8 PERCENT RANGE, SIMILAR TO MOST INTAKES THAT ARE EQUIPPED WITH A SPLITTER. ON THE SECOND GENERATION CARS, WE DO, HOWEVER, RECOMMEND A DIFFUSER AS THE FUEL TRIM TOLERANCES ON THE NEWER ECU IS MORE STRINGENT.

ON THE EARLIER CARS, WE HAVE FOUND THAT THE SPLITTER DROPS HORSEPOWER SLIGHTLY, SO WE RECOMMEND LEAVING IT OUT UNLESS YOU EXPERIENCE WHAT YOU FEEL TO BE A NEED FOR IT. WE DON'T RUN THEM IN ANY OF OUR FIRST GENERATION VEHICLES.

PRINCIPLE

THE BELOW ILLUSTRATIONS SHOW TWO FLOW DYNAMICS MODELS FOR THE INTAKE AT LOW THROTTLE ANGLE AT ~1300 RPM OF INTAKE VACUUM/CFM. THE FIRST IS WITHOUT THE SPLITTER/AIR DIFFUSER, DISPLAYING A ~8 METER/SECOND VELOCITY IN RED. BELOW THAT IS A DIAGRAM OF THE INTAKE WITH THE DIFFUSER INDICATING ~11 METER/SECOND IN RED. AS YOU CAN SEE, THE DIFFUSER PICKS UP VELOCITY BY 3 METERS PER SECOND IN THE AREA OF THE MAF SENSOR AT LOW LOADS WHICH ALLOWS THE MAF SENSOR TO BETTER SENSE THE AIR GOING INTO THE ENGINE AT LOW LOAD CONDITIONS. IT DOES THIS BY RESTRICTING FLOW AND DIRECTING MORE OF IT PAST THE MAF SENSOR ELEMENT.



INSTALLATION

YOU CAN INSTALL THE DIFFUSER BY REMOVING YOUR AIR FILTER AND MAF HOUSING AND ALIGNING THE SPLITTER VANES PARALLEL TO THE TOP FLAT OF THE CORKSPORT MAF SENSOR

HOUSING. NOTICE THAT THE CUTOUT OF THE SPLITTER IS ASYMMETRIC TO ACCOMMODATE THE MAF SENSOR, THE CUTOUT SHOULD BE ON THE AIRFLOW SIDE OF THE MAF HOUSING.

THE DIFFUSER SHOULD SNAP INTO PLACE IN THE RING MACHINED IN THE FILTER END OF THE MAF HOUSING WITH A FEW LIGHT DABS OF HIGH TEMP SILICONE SEALANT (RTV, PERMATAX, ETC) ON THE UNDERSIDE OF THE LIP OF THE DIFFUSER. PRESS THE DIFFUSER INTO THE BORE OF THE MAF HOUSING ALIGNED AS PREVIOUSLY DESCRIBED AND BE SURE TO WIPE ANY EXCESS SEALANT OFF OF THE MAF HOUSING SO THAT IT DOES NOT FOUL THE MAF SENSOR ELEMENT.

