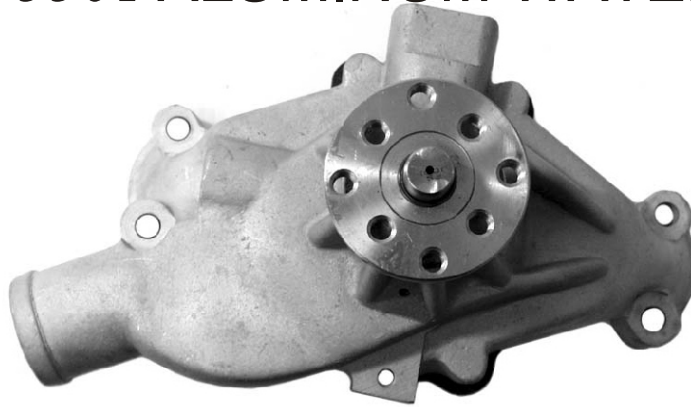




## INSTALLATION INSTRUCTIONS FOR #410-5501 ALUMINUM WATER PUMP



1. CONGRATULATIONS ON YOUR PURCHASE OF A **SOUTHWEST SPEED** ALUMINUM WATER PUMP. THIS PUMP IS EQUIPPED WITH AN IMPELLER THAT DELIVERS IN EXCESS OF 40 GALLONS PER MINUTE OF WATER AT 4,000 RPM. KEEP IN MIND IF YOU USE REDUCTION PULLEYS YOU REDUCE WATER PUMP RPM. IE: WATER PUMP RPM AND ENGINE RPM ARE NOT ALWAYS THE SAME!!!!
2. WE HAVE SEEN NUMEROUS TESTS AND DATA ABOUT HOW WATER FLOWS THROUGH AN ENGINE AND HAVE HEARD NUMEROUS TESTIMONIALS ABOUT THE PERFECT COMBINATION FOR OPTIMUM COOLING. WE HAVE CONCLUDED THERE IS NO PERFECT ONE SIZE FITS ALL FORMULA, IN SPITE OF ALL THE PROFESSIONAL OPINIONS AND MAGAZINE ARTICLES CLAIMING OTHERWISE. SIMPLY STATED IT IS STILL A GAME OF TRIAL AND ERROR TO ACHIEVE MAXIMUM COOLING. WHAT WORKS ON ONE ENGINE COMBINATION MAY NOT WORK ON THE NEXT ENGINE COMBINATION!!!!
3. CLEAN THE ENGINE BLOCK MATING SURFACES AND MAKE SURE THERE ARE NO BURRS. THIS IS ALSO A GOOD TIME TO RUN A 3/8"-16 TAP INTO THE ENGINE BLOCK TO ASSURE THE THREADS ARE CLEAN. MAKE SURE THE WATER PUMP MATING SURFACES HAVE RECEIVED NO BURRS IN TRANSIT AND APPLY A THIN FILM OF SILICON SEALER TO THE WATER PUMP AND APPLY THE WATER PUMP GASKETS.
4. WHEN INSTALLING THE WATER PUMP MAKE SURE THE 4 BOLTS THAT RETAIN IT TO THE ENGINE, ENGAGE AT LEAST 8 FULL TURNS OR 1/2" INTO THE BLOCK.
5. **WHEN INSTALLING THE PULLEY AND FAN COMBINATION MAKE SURE THE 4 BOLTS ENGAGE THE WATER PUMP HUB COMPLETELY, BUT DO NOT STICK OUT THE BACK AND CONTACT THE WATER PUMP HOUSING.**
6. THIS WATER PUMP IS EQUIPPED WITH AN OVERSIZE SHAFT, BUT THE CENTERING DOWEL FOR THE PULLEY AND FAN HAS BEEN TURNED DOWN TO 5/8". IF YOU HAVE A PULLEY OR FAN WITH A 3/4" BORE, YOU WILL NEED A **SOUTHWEST SPEED PART #410-499** HUB ADAPTER TO CHANGE THE DOWEL O.D. TO 3/4" AND INSURE THE PULLEYS AND FAN RUN STRAIGHT.
7. DO NOT TRY TO PRESS THE FAN HUB ON OR OFF THE PUMP FOR PULLEY ALIGNMENT, THIS WILL RESULT IN PREMATURE WATER PUMP FAILURE. **SOUTHWEST SPEED** HAS AVAILABLE A WATER PUMP PULLEY SHIM KIT PART #410-498 AND A LOWER PULLEY SPACER KIT **PART #410-570** FOR THIS PURPOSE. IT IS EXTREMELY IMPORTANT THAT THE PULLEY LINE UP WITH A MAXIMUM TOLERANCE OF .015"
8. **SOUTHWEST SPEED** OFFERS AN ARRAY OF PULLEY COMBINATIONS TO FINE TUNE YOUR PARTICULAR COOLING APPLICATION. WE ALSO HAVE A WATER OUTLET RESTRICTOR KIT **PART #410-375** AND MANY OTHER ITEMS TO AID IN THE COOLING PROCESS.
9. THE PUMP IS EQUIPPED WITH A THREADED BOSS TO ALLOW A BOLT TO BE SNUGGED AGAINST THE TIMING COVER TO PREVENT THE CAMSHAFT FROM MOVING FORWARD IN THE ENGINE, FOR THIS TO BE EFFECTIVE YOUR CAM MUST HAVE A CAM BUTTON INSTALLED TO CONTACT THE TIMING COVER.