Thank you for purchasing our Big Block 2 Piece Timing Cover kit. It solves the long standing problem of cam walk so characteristic of the Chevrolet engine. The cover is a strong, lightweight, 2 piece billet aluminum unit with a built in adjustable thrust button. The cover will fit behind a stock water pump without having to space the pump or pulleys.

A) Be sure the block side of the gear is smooth. Use 600 grit sand paper on a flat surface to polish the crank gear and the front of the block. Many engine builders machine the back of the timing gear and install a wear plate. This step is not mandatory but is a widely accepted practice.

B) Install the block spacer ring using the (2) 1/4-20 socket head bolts and gasket provided. We recommend setting the end play before installing the timing chain. Install the cam gear on the cam with wear plate installed. Install the thrust button in the cam with (1) .010 shim between the cam and button. Install the front cover using all (8) bolts and tighten firmly. Do not use a sealer at this point.

Measure cam end play with a dial indicator through the checking plug in the front cover Using a screw driver through a lifter bore, move the cam back and forth to check end play. Recommended clearance is .001" to .005". Install proper shims between bearing end of camshaft to correct end play. One important thing is, be sure and tighten all 8 bolts on the cover each time you check the end play.

C) Before removing cam gear take a straight edge and check the alignment between the top and bottom gear. Gear alignment should be within .005". If corrections need to be made, make the necessary correction on the crank gear if possible. Install timing chain and thrust button with correct shims. Install stainless steel cam lock plate with Torx bolts provided. Use a small amount of Loctite on bolts. Clean both the block ring and timing cover surface with Brake Clean or lacquer thinner. Lubricate thrust button. Install the (6) countersunk bolts supplied. Apply a thin layer of silicone to the top section both on the mounting surface and the tongue and groove section.

D) Stock timing tab that goes with balancer can be used. The tab will now stick out over the balancer and can be trimmed with snips if so desired.

E) **Water Pump Installation** - The (6) 1/4-20 x 3/8 button head socket cap screw provided will replace the existing bolts on the back of the water pump. The stock bolts contact the cover and could cause damage to the cam gear and block. Install the water pump and check clearance between the timing cover. On some aluminum water pumps it may be necessary to grind material from the back side of the pump. Make sure there is some clearance between the water pump plate and the front cover.