INSTRUCTIONS FOR THE KBD-31000 SMALL-BLOCK CHEVY BELT DRIVE KIT

OTHER KITS AVAILABLE FOR THE SMALL-BLOCK CHEVY ARE THE KBD-31100

JESEL'S SMALL-BLOCK CHEVY BELT DRIVE IS THE MOST ACCURATE AND DURABLE CAMSHAFT DRIVE SYSTEM AVAILABLE AND IS USED BY THE COUNTRY'S TOP RACE TEAMS. A PATENTED HIGH TORQUE BELT OPERATES WITHOUT LUBRICATION AND SPINS WITH LESS FRICTION THAN CHAINS OR GEAR DRIVE SYSTEMS. THE RUBBER BELT ABSORBS DESTRUCTIVE HARMONICS, WHICH CAN CAUSE SERIOUS PROBLEMS ON RACING ENGINES. SOME FEATURES INCLUDE A BILLET ALUMINUM UPPER PULLEY WITH A HIGH TORQUE DRIVE TOOTH CONFIGURATION AND AN ALLOY STEEL CRANK PULLEY WITH GRADE 8 HARDWARE.

BEFORE FINAL INSTALLATION, THERE ARE A FEW KEY PRE-INSTALLATION CHECKS TO PERFORM. YOU MUST FIRST CHECK FOR COVER-TO-BLOCK INTERFERENCE AND CORRECT IF PRESENT BY MODIFYING THE BLOCK ONLY. CHECK FOR WATER PUMP AND/OR BALANCER CLEARANCE AS WELL. IN CASE OF SEAL-TO-SHAFT MISALIGNMENT, REMOVE DOWEL PINS FROM BLOCK (CIRCLES) OR ENLARGE HOLES IN COVER. LEAVE COVER BOLTS LOOSE WHILE INSTALLING CAM ADAPTER TO ALLOW THE SEALS TO CENTER THEMSELVES. THEN TIGHTEN BOLTS.

WITH THE PRE-INSTALLATION CHECKS COMPLETED, YOU CAN PERMANENTLY INSTALL THE FRONT COVER ASSEMBLY USING A FACTORY TIMING COVER GASKET WITH THE 3.0 ALLEN-HEAD COVER BOLTS SUPPLIED IN THE KIT. WITH THE COVER IN POSITION, LIGHTLY APPLY A THIN FILM OF OIL AROUND THE END OF THE CAMSHAFT AND INSTALL THE BRASS THRUST WASHER ONTO THE CAMSHAFT.

APPLY A LIGHT FILM OF RTV SEALER TO THE FACE OF THE CAMSHAFT ADAPTER AND MOUNT IT ONTO THE FRONT OF THE CAMSHAFT. RTV SEALER WILL PREVENT POSSIBLE OIL LEAKS FROM OCCURRING.

JESEL ALSO OFFERS TWO ROLLER CAM ADAPTERS. THE (P.N. KCA-39250) ADAPTER HAS A ROLLER PLATE ON THE OUTSIDE ONLY AND THE (P.N. KCA-39260) ADAPTER IS MACHINED FOR ROLLER WASHERS ON BOTH THE INSIDE AND THE OUTSIDE OF THE ADAPTER.
APPLY RTV SEALER TO THE THREADS ON THE THREE BOLTS FOR THE CAMSHAFT ADAPTER AND THREAD THEM INTO THE CAMSHAFT BY HAND. USING THE SUPPLIED JESEL SPANNER WRENCH TO HOLD THE CAMSHAFT ADAPTER IN PLACE, TORQUE THE THREE TORX BOLTS TO 28-30 LBS-FT.

NEXT, OIL THE OUTER BRASS THRUST WASHER AND INSTALL IT OVER THE FRONT OF THE CAMSHAFT ADAPTER MAKING SURE THE SEAL SURFACE STAYS DRY. INSTALL ALL THREE OF THE CAMSHAFT SEAL RETAINING PLATE SHIMS INCLUDED IN THE BELT DRIVE KIT AND TIGHTEN THE SIX BOLTS BUT DO NOT TORQUE THEM AT THIS TIME. JESEL INCLUDES A P.N. SHM-38280 .010” SHIM, A P.N. SHM-38290 .015” SHIM AND A P.N. SHM-38300 .020” SHIM WITH THE KIT. MAKE SURE ALL OF THE SEAL SURFACES STAY DRY. DO NOT APPLY OIL TO THEM.

YOU MUST CHECK THE CAMSHAFT ENDPLAY. TO DO THIS, INSTALL ALL OF THE SHIMS (MENTIONED IN THE PREVIOUS STEP) AND SET UP A DIAL INDICATOR ON THE FRONT OF THE CAMSHAFT ADAPTER. THE CAMSHAFT ENDPLAY SHOULD BE BETWEEN .010” AND .015”. AFTER THE DESIRED LASH HAS BEEN ACHIEVED (BY EITHER REMOVING OR ADDING SHIMS), REMOVE THE SEAL RETAINING PLATE AND SHIMS AND APPLY RTV SEALER TO THEM BEFORE REINSTALLING THEM AND TORQUING THE SIX BOLTS TO 12 LBS-FT.

NOW YOU CAN INSTALL THE LOWER CRANKSHAFT PULLEY. USING THE SUPPLIED JESEL PULLEY DRIVER TOOL (P.N. TOL-39310), TAP THE PULLEY ONTO THE CRANKSHAFT EASILY UNTIL THE BACK SIDE OF THE PULLEY IS FLUSH WITH THE INSIDE OF THE CRANKSHAFT SNOUT. UNDER NO CIRCUMSTANCES SHOULD YOU USE EXCESSIVE FORCE TO INSTALL THE PULLEY ON THE FRONT OF THE CRANKSHAFT SNOUT.
**KIT CONTENTS:**

- **A)** CVR-32500 ASSEMBLED COVER
- **B)** SPD-38650 SPIDER GEAR
- **C)** PLY-35500 UPPER PULLEY WITH STUDS
- **D)** PLY-35510 LOWER PULLEY
- **E)** BEL-30990 SMALL-BLOCK BELT
- **F)** PLT-35260 THRUST PLATE WITH SEAL
- **G)** ADP-30050 SMALL-BLOCK CAM ADAPTER
- **H)** WSH-39750 CAM ADAPTER WASHER
- **I)** TOL-39310 LOWER PULLEY DRIVER
- **J)** TOL-39260 CHEVY SPANNER WRENCH
- **K)** TOL-19210 T45 TORX SOCKET
- **L)** DCL-12830 JESEL BELT DRIVE DECALS
- **M)** .010", .015" AND .020" THRUST PLATE SHIMS

And HARDWARE KIT ALSO INCLUDED IN KIT.

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**TILT THE TOP OF THE UPPER PULLEY DOWN TOWARDS THE CRANKSHAFT AND SLIDE THE BELT OVER THE TWO PULLEYS. WITH THE UPPER PULLEY ENGAGED FIRMLY INTO THE CAMSHAFT ADAPTER KEY, TORQUE THE LH BOLT TO 70 LBS-FT. THE CAMSHAFT TIMING CAN EASILY BE RETARDED OR ADVANCED BY LOOSENING THE FOUR BOLTS ON THE SPIDER GEAR AND SETTING THE MARKS TO THE DESIRED LOCATION. EACH MARK ON THE SPIDER GEAR EQUALS TWO DEGREES OF CRANKSHAFT REVOLUTION.**

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**ON CERTAIN SMALL-BLOCK CHEVY BLOCKS, THERE MAY BE A SMALL CLEARANCE PROBLEM ON THE FRONT PORTION OF THE BLOCK, WHERE THE ORIGINAL TIMING CHAIN RESIDES DEPENDING ON THE BLOCK BEING USED YOU MAY HAVE TO CLEARANCE IT SOME (SEE ARROW) ON THE RIGHT SIDE OF THE CAMSHAFT JOURNAL. MOST AFTERMARKET BLOCKS HAVE ENOUGH CLEARANCE BUT SOME FACTORY BLOCKS MAY COME IN CONTACT WITH THE JESEL BELT DRIVE COVER IN THIS AREA. ALSO, IT IS IMPORTANT TO USE COUNTERSUNK OIL PLUGS (ABOVE THE CAM JOURNAL). FACTORY OR PIPE PLUGS HAVE LARGE HEADS, WHICH MAY ALSO CREATE A CLEARANCE PROBLEM WITH THE REAR PORTION OF THE COVER.**
IN ADDITION TO THE BELT DRIVE SYSTEM, JESEL ALSO OFFERS A DISTRIBUTOR DRIVE KIT FOR THE SMALL-BLOCK CHEVY (P.N. KDD-41000), AS WELL AS THE BIG-BLOCK CHEVY (P.N. KDD-42000), RAISED CAM BIG-BLOCK CHEVYS, OLDSMOBILES, FORDS AND EVEN HEMIS. IT WILL ELIMINATE INACCURATE IGNITION TIMING SETTINGS DUE TO CAMSHAFT TORSIONAL TWISTING ON HIGH RPM ENGINES WITH EXCESSIVE SPRING PRESSURES AND WILL

TORQUE SPECS:
CAM ADAPTER BOLTS: 28-30 LBS-FT.
CAM SEAL RETAINER PLATE: 12 LBS-FT.
LH CAM WASHER BOLT: 70 LBS-FT.

CAM TIMING ADJUSTMENTS:
LOOSEN FOUR NUTS ON THE SPIDER. TURN THE CRANKSHAFT CLOCKWISE TO RETARD THE CAMSHAFT TIMING AND COUNTERCLOCKWISE TO ADVANCE THE CAMSHAFT TIMING. EACH MARK ON THE SPIDER GEAR EQUALS TWO DEGREES AT THE CRANKSHAFT.

RECOMMENDED JESEL BELT DRIVE MAINTENANCE:
1) REPLACE BELT ANNUALLY OR AFTER INADVERTENT ENGINE EXPLOSIONS. REPLACEMENT BELT (P.N. BEL-30990)

2) REPLACE BOTH CAMSHAFT AND CRANKSHAFT SEALS ANNUALLY. CAM SEAL (P.N. SEL-38000) CRANK SEAL (P.N. SEL-37200)
THRUSS PLATE KIT (P.N. KTB-38010) THRUST WASHERS (P.N. WSH-39660)

3) COVER BELT DRIVE SYSTEM IF OPERATED ON ABRASIVE TRACK SURFACES SUCH AS DIRT OR SAND.

4) KEEP OIL OFF OF ALL SEALING SURFACES PRIOR TO INITIAL START UP.

5) ALWAYS DEGREE AND RE-DEGREE CAMSHAFT AFTER TIMING BELT REPLACEMENT OR REMOVAL.

6) DO NOT CLEAN TIMING BELT WITH PARTS CLEANERS OR ENGINE DEGREASERS.

7) IF TIMING BELT BECOMES CONTAMINATED WITH ENGINE OIL, REPLACE IMMEDIATELY.

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