

ENGINE REASSEMBLY CHECK LIST

ENGINE NUMBER:

DATE:

PISTONS/RINGS	SPEC	1	2	3	4
PISTON CLEARANCE TOP	.0021 – .0029				
BOTTOM	.0021 – .0029				
RING END GAP 1 TOP	.006 – .010				
1 BOTTOM	.006 – .010				
2 TOP	.006 – .010				
2 BOTTOM	.006 – .010				
RING SIDE CLEARANCE 1	.001 – .002				
2	.001 – .002				

RODS	SPEC	1	2	3	4
GUDGEON PIN CLAMP BOLT	NEW				
GUDGEON PIN CLAMP BOLT WASHER	NEW				
GUDGEON CLAMP BOLT TORQUE	25 – 27 LB FT				
ROD BEARING DIAMETRICAL CLEARANCE	.0005 – .002				
ROD BOLT SIDE CLEARANCE	.004 – .006				
ROD BOLT TORQUE	27 LB FT				

MAIN BEARINGS	SPEC	FRONT	CENTER	REAR
MAIN BEARING DIAMETRICAL CLEARANCE	.0008 – .003			
CENTER MAIN BEARING SIDE CLEARANCE	.0014 – .0037			
MAIN BEARING NUT TORQUE	63 LB FT			
MAIN BEARING NUT SAFETY WIRED	COMPLETE			

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BOLT TORQUE/LOCKED	SPEC	ACTUAL
FLYWHEEL TO CRANK TORQUE	50 LB FT (X4)	
FLYWHEEL TO CRANK SAFETY WIRED	YES	
CLUTCH PRESSURE PLATE	19 LB FT (X6)	
OIL PICKUP PIPE BOLTS TORQUE	6 LB FT (X2)	
OIL PICKUP PIPE BOLTS SAFETY WIRED	YES	
CAM LOCATING PLATE BOLTS TORQUE	6 LB FT (X2)	
CAM SPROCKET BOLT TORQUE	50 LB FT	
CAM SPROCKET BOLT TAB LOCKED	YES	
TIMING CHAIN TENSIONER BOLTS TORQUE	6 LB FT (X2)	
TIMING CHAIN TENSIONER BOLTS SAFETY WIRED	YES	
SUMP BOLTS TORQUE	19 LB FT (X14)	
TIMING CHAIN COVER BOLTS TORQUE	19 LB FT (X6)	
CRANKSHAFT PULLEY BOLT TORQUE	50 LB FT	
CYLINDER HEAD NUTS TORQUE	50 LB FT (X10)	
ROCKER TOWER 8mm BOLTS TORQUE	16 LB FT (X4)	
ROCKER TOWER 10mm BOLTS TORQUE	30 LB FT (X4)	
ROCKER TOWER BOLTS LOCK TAB LOCKED	YES	
OIL PUMP BOLTS TORQUE	6 LB FT (X8)	
OIL PUMP BOLTS SAFETY WIRE	YES	
CAM BEARING KEEPER BOLTS SAFETY WIRED	YES	

TORQUE VALUES AT A GLANCE (FOR XPAG/XPEG ENGINES)

ENGINE	
GUDGEON PIN CLAMP BOLT	25 – 27 LB FT **
ROD BIG END BOLTS	27 LB FT **
MAIN BEARING CAP NUTS	63 LB FT
FLYWHEEL TO CRANKSHAFT BOLTS	50 LB FT
CLUTCH PRESSURE PLATE BOLTS	19 LB FT
OIL PICKUP PIPE TO SUMP BOLTS	6 LB FT
CAMSHAFT LOCATING PLATE BOLTS	6 LB FT
CAMSHAFT SPROCKET BOLT	50 LB FT
TIMING CHAIN TENSIONER BOLTS	6 LB FT
SUMP TO BLOCK BOLTS	19 LB FT
TIMING CHAIN COVER BOLTS	19 LB FT
CRANKSHAFT PULLEY BOLT	50 LB FT
CYLINDER HEAD NUTS	50 LB FT
ROCKER TOWER BOLTS (8 MM)	16 LB FT
ROCKER TOWER BOLTS (10 MM)	30 LB FT
OIL PUMP TO BLOCK BOLTS	6 LB FT
OTHER	
WATER PUMP PULLEY NUT	10 LB FT
GENERATOR PULLEY NUT	35 LB FT
TRANSMISSION OUTPUT FLANGE NUT	65 LB FT
REAR AXEL HUB NUT	85 LB FT *
FRONT AXEL HUB NUT	40 – 70 LB FT
WHEEL LUG NUTS	50 LB FT

*Then to next closest cotter pin slot in nut.

**This is a critical torque. Over tightening this bolt can result in breakage when the engine is running, causing major damage to the engine. Use a calibrated torque wrench and error slightly on the low side if in doubt when tightening these bolts.