

# ENGINE BUILD SHEET

Ford Y-Block (EDB-6015-E)

## Engine Blueprint Record

Engine Type	1958 Ford Y-block
Build Date	2014
Displacement	306 cubic inches
Special Notes:	292 c.i. bored .090 over, parallel decked .035".

## Piston

Piston Brand/PN	1150 Jahn's 3.840
Compression Height	1.768"
Wrist Pin Brand/PN	
Wrist Pin Dia./Length	0.912 X 3.00
Wrist Pin Clearance	0.002
Wrist Pin Retainer	1.058" circlip

## Block

Material	Stock 1958 Ford cast iron
Manuf./PN	EDB 6015
Bore Size	3.840
Cam Location	Stock
Main Bearing Dia.	2.498
Special Mods:	Center cam journal grooved behind bearing .090"
Lifter oiling holes added to valley.	Extra oiling hole added to #1 cam journal.

## Piston Ring

Ring Brand/PN	Hastings 2M571 .040
Top Ring Type	Moly
Width	5/64"
Side Clearance	
End Gap	.015
2nd Ring Type	Cast
Width	3/32"
Side Clearance	
End Gap	.015
Oil Ring Type	Stainless 3 piece
Side Clearance	
Gap	.015

## Piston Diameter and Bore Clearance

Cylinder #	1	3	5	7
Bore Dia.	3.840	3.840	3.840	3.840
Piston Dia.	3.837	3.837	3.837	3.837
Clearance	.003	.003	.003	.003
Cylinder #	2	4	6	8
Bore Dia.	3.840	3.840	3.840	3.840
Piston Dia.	3.837	3.837	3.837	3.837
Clearance	.003	.003	.003	.003
Width				

## Piston Deck Height

Cylinder #	1	3	5	7
Deck Height	+0.003	+0.003	+0.003	+0.003
Cylinder #	2	4	6	8
Deck Height	+0.003	+0.003	+0.003	+0.003

\*\*\*\*Calculated Compression Ratio is 9.47 - 1 \*\*\*\*

## Notes

Best Gasket #572 used, .046 Thickness minus +.003 deck leaves .043 quench area. Powerbond PB1199M Harmonic Balancer, Rollmaster CS 4060 Double roller timing set with #3dr56-2 Roller chain, ARP 100-2801 Flywheel bolts, ARP 154-7906 oil pump drive, Accel 2020 Points Eliminator and coil, Magnecor competition plug wire set #8500, Autolite AR-33 Spark plugs. Valve guides cut to .531, VTO 93316 Extreme duty P.C. Type valve seals. Fidanza 186751 12.5 lb Aluminum Flywheel. ARP 150-2201 Pressure plate bolts.
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**Rod and Main Bearings**

<b>Main Bearing Brand/PN</b>	Clevite77 MS 178-P .020
<b>Rod Bearing Brand/PN</b>	Michigan (DAB) 7000 Cap
<b>Camshaft Bearing Brand/PN</b>	Federal Mogul 1223M

**Crankshaft**

<b>Crankshaft Brand/PN</b>	Ford 'EC'				
<b>Stroke</b>	3.30"				
<b>End Play</b>	.005				
<b>Main</b>	1	2	3	4	5
<b>Main Bore</b>					
<b>Main Bore w/bearing</b>	2.497	2.497	2.497	2.497	2.497
<b>Crank Main Journal</b>	2.4960	2.4960	2.4960	2.4960	2.4960
<b>Main Bearing Clearance</b>	.001	.001	.001	.001	.001
<b>Conn. Rod</b>	1	3	5	7	
<b>Big End Dia.</b>	2.305	2.305	2.306	2.305	
<b>Big End Dia. w/bearing</b>	2.1875	2.1875	2.1875	2.1875	
<b>Crank Journal Dia.</b>	2.1860	2.1860	2.1860	2.1860	
<b>Rod Bearing Clearance</b>	.0015	.0015	.0015	.0015	
<b>Conn. Rod</b>	2	4	6	8	
<b>Big End Dia.</b>	2.306	2.305	2.306	2.305	
<b>Big End Dia. w/bearing</b>	2.1875	2.1875	2.1875	2.1875	
<b>Crank Journal Dia.</b>	2.1860	2.1860	2.1860	2.1860	
<b>Rod Bearing Clearance</b>	.0015	.0015	.0015	.0015	

**Connecting Rods**

<b>Rod Brand/PN</b>	Ford EBU				
<b>Length (Center to Center)</b>	6.324				
<b>Side Clearance</b>	1-2	3-4	5-6	7-8	
<b>Wrist Pin/Piston Clearance</b>					
<b>Wrist Pin/Rod Clearance</b>					
<b>Rod Bolt Brand/PN</b>	ARP				
<b>Rod Bolt Torque</b>	50lbs				
<b>Rod Bolt Stretch</b>					

**Valvetrain Data**

<b>Rocker Arms:</b>	Stock Ford y-block
<b>Make</b>	Ford
<b>PN</b>	5751066
<b>Material</b>	Cast
<b>Offset</b>	Ø
<b>Rocker Arm Ratio:</b>	1.43:1
<b>Intake</b>	1.43:1
<b>Exhaust</b>	1.43:1
<b>Intake Valve Lift</b>	
<b>Exhaust Valve Lift</b>	
<b>Pushrod:</b>	SBI 190-1221
<b>Length</b>	8.129"
<b>Diameter</b>	5/16"
<b>Wall Thickness</b>	.060
<b>Lifter:</b>	Ford Mushroom
<b>Make/PN</b>	Ford Resurfaced
<b>Diameter</b>	½" shaft, 1" base
<b>Offset</b>	Ø
<b>Rev Kit Make</b>	
<b>PN</b>	

**Camshaft**

<b>Make of Style/Brand</b>	Comp Cams 'Mutha Thumpr'
<b>Cam PN</b>	37-601-5
<b>Material</b>	Cast, Nitrided
<b>Intake Duration @.050"</b>	239
<b>Exhaust Duration @.050"</b>	253
<b>Intake Installed at Centerline</b>	102°
<b>Lobe Separation Angle</b>	107°
<b>Intake Lobe Lift</b>	.326" .466 @ valve
<b>Exhaust Lobe Lift</b>	.326" .466 @ valve
<b>Intake Valve-to-Piston Clearance @ 10° ATDC</b>	
<b>Exhaust Valve-to-Piston Clearance @ 10° BTDC</b>	
<b>Intake Valve Lash</b>	.012"
<b>Exhaust Valve Lash</b>	.014"

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**Cylinder Head**

Brand/PN	Ford ECZ-G
Chamber Volume	66.7 c.c.
Intake Port Volume (cc)	
Intake Valve Type/PN	Stainless 1 piece
Intake Valve Size	1.92"
Exhaust Valve Type/PN	Stainless 1 piece
Exhaust Valve Size	1.510"
Valvespring Brand/PN	Howard's Cams #98411
Valvespring	Single w/damper
Inside Diameter	1.080"
Outside Diameter	1.437"
Installed Height	1.750"
Intake/Exhaust	
Valvespring Seat Pressure	110 @ 1.750"
Valvespring Open Pressure	270 @ 1.100"
Coil Bind Height	1.050"
Retainer Make/PN	Howard's Cams 97118 7 degree
Keeper Make/PN	Howard's Cams 93040 11/32"
Head Gasket Thickness	.046"

**Engine Balancing**

Piston Weight (grams)	603
Wrist Pin	142
Pin Locks	1
Ring Set (1 Piston)	57
Rod, Small End	183
Total Reciprocating Weight	986 Grams
Rod, Big End	497
Rod Bearing (1 Pair)	48
Oil	2
<i>Rotating assy balanced @ Perpetual Balance - Arlington, WA</i>	
Total Rotating Weight	547 Grams
	2080 Bobweight
Balance Percent* 0.50 for V-8 90-degree	
Bob Weight = 2 x (Reciprocating Wt. x .50 + Rotating Weight)	