

Phone: (651) 263-4305

7600 River Rd Inver Grove Heights, MN 55076

Invoice #: 158

FAX:

Engine Spec #: 31

Email:

Sampsonracingengines@gmail.com

Web:

Customer: JAY OLSEN**Static & Dynamic Compression Ratio**

Bore (in.): 3.577	Stroke (in.): 3.543	# of Cylinders: 8	Chamber (CC): --	Piston Dome/Inv (CC): --
Gasket Thickness (in.): --	Gasket Bore Dia. (in.): --	Deck Height Clear. (in.): --	Piston Ring Depth (in.): --	
Piston Top OD @ Ringland (in.): --	Rod Length: 5.9330	Boost/Pressure: 35.0000	Target Altitude: --	
Intake Closing Point ABDC @ .050 Lift (deg): --		Additional Intake Closing Point ABDC (deg): --		
Notes: --				

Compression Calculation Results	
Static Compression Ratio	Infinity
Dynamic Compression Ratio	--
Most DCR's are 7.5:1 - 8.5:1 for Street and 8.5:1 - 9.0:1 for Race Performance.	
Cylinder Displacement (Cu.In.)	35.604
Total Displacement (Cu.In.)	284.832
Bore/Stroke Ratio	1.010
Quench	--
Ideal quench is .035 to .045.	

Engine Block

Engine Type: MODULAR FORD 4.6	Block Part #: --	Block Material: ALUMINUM
Base Cubic Inches: 285	Main Bearing Bore Dia. --	Bore (in.): 3.577
Bore Finish (Grit): 280		
Main Bolt/Stud Part #: 256-5701	Main Cap Torque (Inside): 60 FT/LBS WITH CMD 3	Main Cap Torque (Outside): 25 FT/LBS WITH CMD 3
Main Cap Torque (Side): 45 FT/LBS WITH CMD 3 AND SEALER ON HEADS		
<p>Notes: TAP MAIN CAPS DOWN GENTLY WITH RUBBER/PLASTIC Mallet. TORQUE MAINS IN 3 STEPS. BEFORE TORQUING MAINS BE SURE TO "SET THE THRUST". WITH THE CAPS BARELY HAND TIGHT HIT THE CRANK FLANGE HARD WITH A PLASTIC Mallet ABOUT 8 TIMES FROM THE REAR. THIS WILL SET THE MAINS FORWARD BEFORE TORQUING THE CAPS DOWN. CHECK THRUST CLEARANCE AFTER TIGHTENING. .008 THRUST END PLAY IS IDEAL ON AN ALUMINUM BLOCK</p>		

Cylinder #	1	2	3	4
Bore Dia.	3.5570	--	--	--
Piston Dia.	3.5535	--	--	--
Clearance	0.0035	--	--	--
Cylinder #	5	6	7	8
Bore Dia.	--	--	--	--
Piston Dia.	--	--	--	--
Clearance	--	--	--	--
Cylinder #	1-2	3-4	5-6	7-8
Width	--	--	--	--

Pistons, Rings and Deck Height

Piston Part #: JOB # 420696 CUSTOM CP	Compression Height: 1.2200	Wrist Pin Dia./Length: 0.8670
Wrist Pin Clearance: 0.0010	Wrist Pin Retainer: ROUND WIRE	Piston Dome/Inv (CC): -- Action Deck Height: 8.9245
Ring Part #: CP BULLET	Top Ring Type: CP BULLET	Top Ring Width: 1.5000 Top Ring Side Clearance: 0.0009
Top Ring End Gap: 0.0300	2nd Ring Type: --	2nd Ring Width: 1.5000 2nd Ring Side Clearance: 0.0009
2nd Ring End Gap: 0.0320	Oil Ring Type: 3MM STD TENSION	Oil Ring Side Clearance: 0.0009 Oil Gap: 0.0150

Cylinder #	1	2	3	4	5	6	7	8
Leak Down	--	--	--	--	--	--	--	--

Notes: **TOP OIL RAIL GAP IS .032 TO ALLOW COMPRESSION GASSES TO RETURN THROUGH PIN OILER HOLES. ALSO HELPS FORCE FEED WRIST PIN. ON THE BOTTOM OIL RAIL IF IT HAS .015 OR MORE GAP WE LEAVE IT. THE TIGHTER GAP ON THE BOTTOM SCRAPER RAIL WILL HELP FORCE MORE OIL TO THE FORCED WRIST PIN OILERS ON THE PISTONS.**

Cylinder #	1	2	3	4
Block Deck Height	8.9245	--	--	--
Cylinder #	5	6	7	8
Block Deck Height	--	--	--	--

Crankshaft & Bearings

Crankshaft Part #: --	Stroke (in.): 3.543	Crankshaft End Play: --
Main Bearing Part #: 5M5647H-.25	Rod Bearing Part #: 8B1442H-.25	Camshaft Bearing Part #: --

Notes: **ALL ROD/MAIN POSTITIONS HAVE THE SAME CLEARANCE. CRANK GROUND PERFECTLY THE SAME SIZE DOWN TO THE .0001"**

Main	1	2	3	4	5	6	7
Main Bore	--	--	--	--	--	--	--
Main Bore w/ Bearing	2.6498	2.6499	2.6501	2.6498	2.6501	--	--
Crank Main Journal	2.6481	--	--	--	--	--	--
Main Bearing Clearance	0.0017	--	--	--	--	--	--

Conn. Rod	1	2	3	4
Big End Dia.	--	--	--	--
Big End Dia. w/ Bearing	2.0780	--	--	--
Crank Journal Dia.	2.0756	--	--	--
Rod Bearing Clearance	0.0024	--	--	--
Conn. Rod	5	6	7	8
Big End Dia.	--	--	--	--
Big End Dia. w/ Bearing	--	--	--	--
Crank Journal Dia.	--	--	--	--
Rod Bearing Clearance	--	--	--	--

Connecting Rods

Connecting Rod Part #: **FH5933RFB-T8-A MOLNAR POWER ADDER** Rod Length: **5.9330** Rod Ratio: **1.6746**

Notes: **USE CMD #3 FOR LUBE! DO NOT USE ARP LUBE. FOLLOW THE BASE TORQUE/ANGLE METHOD INCLUDED WITH THE RODS.**

	1-2	3-4	5-6	7-8
Side Clearance	--	--	--	--

Wrist Pin/Piston Clearance: --

Wrist Pin/Rod Clearance: --

Rod Bolt Part #: **MOLNAR SPEC ARP 2000** Rod Bolt Torque: **30 FT/LBS + 60 DEG** Rod Bolt Stretch: **0.0062**