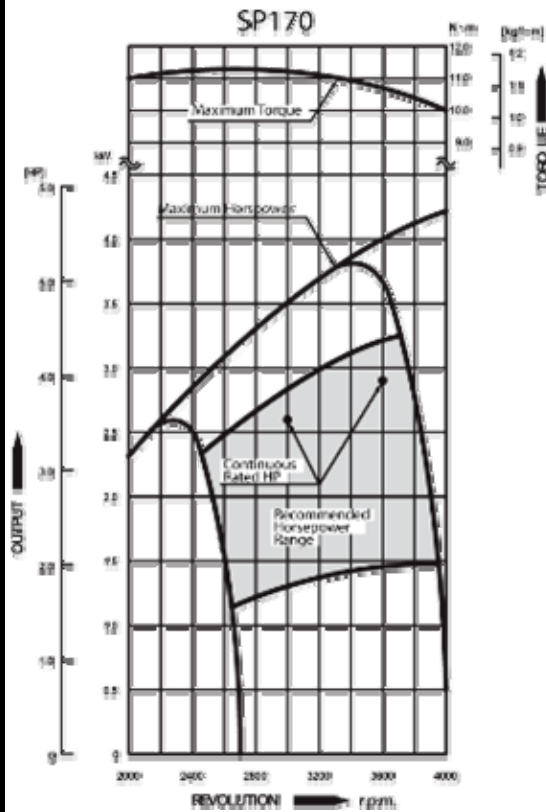


5.7HP / SP170

Performance Curve:



Engine Overview:

Engine Family Overview:

The Subaru SP Series Overhead Cam Industrial Engines lead the industry in technology offering more power, less noise and easy, one-pull starting every time. Introduced as the first air-cooled engine series to use advanced chain-driven Overhead Cam technology, the Subaru SP Series provides maximum efficiency, performance and power with minimal noise and emissions. The engine design is extremely compatible and easy to install, and simply exchanges with most existing slant cylinder engines.

Specifications:

Class	Air Cooled, 4-Stroke Overhead Cam, Chain Drive, Gasoline Engine
Shaft	Horizontal
Cylinders	1
Displacement	169cc
Cycles	4
Fuel	Unleaded Gasoline
Max HP/RPM (Gross HP)	5.7/4000
Compression Ratio	9:1
Starter	Recoil
Fuel Capacity US Gallons (ltrs)	0.95
Fuel Capacity Fl oz (ltrs)	3.6

Lube Type	SAE 10W-30, 20W, 30W
Oil Capacity Fl oz (ltrs)	20.28
Air Cleaner	Dual Element Paper
Muffler (type)	Rigid Type-Low Noise
Ignition System	Solid State Transistorized Magneto
Lube System	Splash
Emission Rating	Tier III EPA/CARB
Color	Black
Governor System	Mechanical Flyweight
Fuel System	Carbureted Float

Key Features & Benefits:

3 Year Residential 1 Year Commercial	This engine comes with a 3 year Residential and 1 year Commercial Use Warranty
Optimized Capacity-Rigid Type Muffler	Optimized-capacity rigid muffler and 33 percent fewer moving valve train parts than OHV designs reduce mechanical noise levels a full 2 decibels below competitive models.
Dual Ball Bearing Support	Dual ball bearing crankshaft support offers maximum stability under demanding loads.
Cast-Iron Cylinder Liner	Cast-iron cylinder liners enhance reliability and extend engine life. The cast-iron cylinder liner has much better wear characteristics than the softer aluminum that surrounds it, making engine life much longer than if the piston is in contact with the aluminum cylinder wall.
Forged High-Carbon Steel Crankshaft	Forged high-carbon steel crankshaft provides maximum reliability under demanding loads, thus providing longer engine life. The drop forging process increases the strength and durability of the crankshaft by re-aligning the molecules in the steel. This process hardens the complete crankshaft. Most engines use cast-iron steel crankshafts.
High Power Pent-Roof Design	Overhead Cam (OHC) technology and the Pent-Roof combustion chamber allow the Subaru SP engines to use a higher compression ratio of 9:1. The higher compression ratio increases the power produced for a given size engine. It also improves efficiency and overall performance.
Component Location Cutaway	The cutaway shows some common parts on the Overhead Cam SP engine series.
High Efficiency Intake Port	The illustration shows the straight intake port on the right side of the picture. The lower resistance to the flow of the air/fuel mixture improves the power, efficiency and lowers emissions. Overhead Cam (OHC) technology allows the intake and exhaust valves to be positioned for optimum performance.
Camshaft with Automatic Decompression Release	The camshaft and the sprocket are made of special sintered alloy and constructed as a single piece. The camshaft is provided with intake and exhaust cam in one cam lobe. The decompression release lever is mounted on the sprocket end side.
Hardened Steel Rocker Arms	Hardened steel rocker arms with precision tappet adjusters are used for greater durability and reduce service requirements.
Patented Pending Main Bearing Cover Design	An internally structured main bearing cover offers patent-pending technology by creating a highly rigid engine system.

Automotive Collets & Forged Steel Valve Retainers

Subaru SP Series engines use automotive quality collet valve retainers for longer life.

Intake Valve Seal

Special machining on cylinder head allows the oil seal to be placed around the valve guide. This seal reduces oil consumption and is replaceable for service.

Patent-Pending Connecting Rod Dipper

The SP Series lubrication system begins with a patent-pending oil scoop to project the oil to the chain.

Aluminum Alloy Die-Cast Connecting Rod

The connecting rod is a specially heat-treated aluminum alloy die-casting, its large and small ends function as bearings. A splasher built into the connecting rod lubricates by splashing engine oil. The piston is an aluminum alloy casting with grooves for mounting compression and oil rings.

Mounting Base Cooling Fins

The unique Subaru cooling system extends to the underside of the mounting base. Air is forced over special cooling fins at the bottom of the engine for maximum cooling.

Cylinder Head 360 Degree Cooling

Head cooling is critically important to long engine life. The Overhead Cam design allows for 360-degree air flow around both the exhaust and intake valve stem areas.

Special Cooling Fins

Cooling fins are cast into both the inside and the outside of the crankcase to utilize every possible cooling area.

Patent-Pending Cylinder Cooling Fins

Air is forced over the large slanted cooling fins on the cylinder for improved cooling performance. This design is patent-pending.

Patent-Pending Valve Cover Design

A patent-pending valve cover design constantly supplies an optimum amount of oil to the cam shaft and rocker arm even if the engine is inclined.

Patent Pending Breather System

A patent pending breather system with a pre-separation passage prevents oil from spouting, even if the engine is inclined.

Hot Spark Ignition System

The ignition system is a transistor controlled magneto with the ignition timing set at 23 degrees before top dead center. The magneto consists of a flywheel and ignition coil. To ensure the easy startability of the engine, the step advancing ignition timing system is incorporated in the ignition coil. This system enables the engine to have basically two different ignition timings according to the engine speed.

NO Special Tools Needed

Even though the SP series engines bring the latest technology, performance, and durability to the industrial air cooled engine market, there are no special tools required to work on them. Most shop tools that small engine mechanics currently own, will also work on these engines for service or complete tear down. Subaru engineers have achieved their commitment to 'keep it simple', while utilizing the latest technology.