

## Exhibit A - Small Engine

**Y Series** Available in 8 & 12 HP **Horizontal Models** (laydown/low profile) type updated three times. Single cylinder, heavy duty, 2:1 or 3:1 transmission, raw water cooled.

Model	HP	Notes	Year
YSE	8 & 12	E=Early	1974 - 76
YSB	8 & 12	B=Between	1976 - 77
YSM	8 & 12	M=Modem	1977 - 80

**S Series** Available in 8 & 12 HP **Vertical Models** updated two times, single cylinder, heavy duty, 2:1 or 3:1 transmission, raw water cooled.

Model	HP	Notes	Year
SVE	8 & 12	E=Early	1974 - 76
SB	8 & 12		1976-80

**QM Series** The 2QM20/3QM30 is a family (2 cylinder vs 3 cylinder) available raw or fresh water cooled. Very heavy duty and on the large side, 2:1 or 3:1 transmissions available. F=Factory Fresh Water, H=Hurth type Gear

Model	HP	Notes	Year
2QM15	15	2 Cylinder	1977 - 80
2QM20(H)(F)	22	2 Cylinder	1975 - 80
3QM30(H)(F)	33	3 Cylinder	1976 - 80

**GM/HM Series** Introduced 1980-81, completely new generation of engines. Lighter, smaller, smoother, Quieter. F=Factory Fresh Water, 35-amp alternator, Yanmar mounts.

Model	HP	Notes	Year
1GM	7.5	Raw Water	1980 - 83
2GM(F)	15	Raw or Fresh	1980 - 83
3GM(F)	22.5	Raw or Fresh	1980 - 83
3HM(F)	30	Raw or Fresh	1980 - 83

**GM/HM Series** Same models as above except 13-20% more cubic inches and uprated HP. All models except 1GM10 receive 55-amp charging.

Model	HP	Notes	Year
1GM10	9	Raw Water	1983 - 2009
2GM20(F)	18	Raw or Fresh	1983 - December 2005
3GM30(F)	27	Raw or Fresh	1983 - December 2005
3HM35(F)	34	Raw or Fresh	1983 - 1992 **

\*\* Replaced with 3JH2

**YM Series** Completely new cylinder block and new combustion system. Indirect injection, fresh water cooled with heat exchanger. This new engine line complies with EPA Tier 2 and BSO Tier 2. Electric stop solenoid is standard. Smoother, Quieter and More Fuel Efficient

Model	HP	Notes	Year
2YM15	14	2 Cylinder (Mini 2 cylinder)	Fall 2004 - Present
3YM20	21	3 Cylinder (Extra Cylinder)	Summer 2004 - Present
3YM30	29	3 Cylinder	Summer 2004 - Present

**JH Series** New modern 4 cylinder family. Smaller, lighter and extremely smooth. Two transmissions available. Hurth type vs 7 degree down angle (B type). All four models use same block. 80% Interchangability of parts. Yanmar built transmissions.

Model	HP	Notes	Year
4JH-E	44	Naturally Aspirated	1983 - 89
4JH-TE	55	Turbo Charged	1983 - 89
4JH-HTE	66	Turbo Charged, Intercooled	1985 - 89
4JH-DTE	77	Turbo Charged, Intercooled	1985 - 89

**JH2 Series** Same basic models as 4JH except HP uprated and more cubic inches. Quieter and cleaner exhaust. B=Down Angle Transmission.

Model	HP	Notes	Year
3JH2(B)E	38	Naturally Aspirated	1992 - 99
3JH2-T(B)E	47	Turbo Charged	1991 - 99
4JH2(B)E	51	Naturally Aspirated	1989 - 99
4JH2-T(B)E	62	Turbo Charged	1989 - 99
4JH2-HT(B)E	76	Turbo-Intercooled	1989 - 99
4JH2-DT(B)E	88	Turbo-Intercooled	1989 - 99
4JH2-UT(B)E	100	Turbo-Intercooled	1991 - 99

**JH3 Series** New upgraded block, smaller, smoother, quieter. Meets all new EPA starting in 1999. Has replaced JH2 models.

Model	HP	Notes	Year
3JH3	40	Naturally Aspirated	May 1999 - 2004
4JH3E	56	Naturally Aspirated	May 1999 - 2004
4JH3-T(B)E	75	Turbo Charged	Summer 1999 - December 2006
4JH3-HT(B)E	100	Turbo-Intercooled	Summer 1999 - December 2006
4JH3-DTBE	125	Turbo-Intercooled	Summer 1999 - December 2006

**JH4 Series** New cylinder block and new combustion system. Produces 25% more torque with only a 10% increase in displacement. Lower running speed and less vibration reduce noise by five decibels. Complies with EPA Tier 2 emissions.

Model	HP	Notes	Year
3JH4E	40	Naturally Aspirated	Summer 2004 - Present
4JH4E	54	Naturally Aspirated	Summer 2004 - December 2006
4JH4AE	54	New Injection Pump design	January 2007-Present
4JH4-TE	75	Turbo	January 2007-Present
4JH4-HTE	110	Turbo-Intercooled	January 2007-Present

**JH5 Series** New fuel system and new combustion system. Same block and RPM as JH4. Engine speed remains unchanged at 3000 RPM. Complies with latest EPA Tier 2 emissions.

Model	HP	Notes	Year
3JH5E	39	Naturally Aspirated	2010 - Present
4JH5E	53	Naturally Aspirated	2010 - Present

## Exhibit A - Medium Engine

**LH Series** Larger HP Models. Compact, light and powerful. Originally sold with Kanzaki 7 degree down angle. Designed to easily replace GM gas V8 engines. A=Built in USA. Available as both inboard and Mercruiser Sterndrive packages. Z=I/O Spec

Model	HP	Notes	Year
4LH-TE	110	Turbo	1988 - 2000
4LH-HTE	140	Turbo-Intercooled	1988 - 2000
4LHA-HTE	150	Turbo-Intercooled	Spring 2000 - August 2001
4LHA-HTZE	150	Merc I/O Bravo	Spring 2000 - August 2001
4LHA-HTP	160	Higher HP, US Built	August 2001 - December 2006
4LHA-HTZP	160	Merc I/O Package	August 2001 - December 2006
4LH-DTE	170	Replaces 350 GM	1990 - 2000
4LHA-DTE	190	Upgrade from 170	June 2000 - August 2001
4LHA-DTZE	190	Merc I/O Package	Spring 2000 - August 2001
4LHA-DTP	200	Higher HP, US built	August 2001 - December 2006
4LHA-DTZP	200	Merc I/O Package	August 2001 - December 2006

**LH Series (cont.)**

4LH-STE	230	Replaces 454 GM	September 1995 - August 1998
4LHA-STE	230	Waste Gated, US Built	September 1998 - August 2001
4LHA-STZE	230	Merc I/O Bravo	August 1999 - August 2001
4LHA-STP	240	Higher HP	August 2001 - December 2006
4LHA-STZP	240	Merc I/O Package	August 2001 - December 2006

**BY Series** Tier 2 compliant. 4 cylinder and six cylinder. Exceptionally smooth and quiet. Available as inboard and sterndrive. Common rail fuel injection. 4000RPM

Model	HP	Notes	Year
4BY150	150	Super Quiet/Inboard	October 2006-Present
4BY150Z	150	Merc I/O Package	October 2006-Present
4BY180	180	Super Quiet/Inboard	October 2006-Present
4BY180Z	180	Merc I/O Package	October 2006-Present
6BY220	220	Super Quiet/Inboard	October 2006-Present
6BY220Z	220	Merc I/O Package	October 2006-Present
6BY260	260	Super Quiet/Inboard	October 2006-Present
6BY260Z	260	Merc I/O Package	October 2006-Present
BY2	All HP's	Improved BY Engine	January 2009-Present

**LP Series** New "Mini 6 cylinder", quiet as gas engine, lightweight, designed for inboard and Sterndrive packages. Higher speeds (3800 RPM). Fits in same envelope as GM 350/454. Many changes from traditional marine models. 6LPA-ST(Z)P2 Engines meet Tier 2 emissions. Engine features new combustion design and optimized injection pump and injectors.

Model	HP	Notes	Year
6LP-DTE	250	Super Quiet/Inboard	June 1997 - September 2001
6LPA-DTE	250	US Built	March 2001 - July 2001
6LP-DTZE	250	Merc I/O Package	January 1998 - September 2001
6LPA-DTZE	250	US Built	March 2001 - July 2001
6LPA-DTP	260	Higher HP	August 2001 - December 2006
6LPA-DTZP	260	Merc I/O Package	August 2001 - December 2006
6LP-STE	300	Inboard	June 1997 - July 2001
6LPA-STE	300	US Built	March 2001 - June 2001
6LP-STZE	300	Merc I/O Bravo	January 1998 - October 2001
6LPA-STZE	300	US Built	March 2001 - June 2001
6LPA-STP	315	Higher HP	July 2001 - December 2006
6LPA-STZP	315	Merc I/O Package	July 2001 - December 2006
6LPA-STP2	315	Meets Tier 2 Emissions	January 2007 - Present
6LPA-STZP2	315	Meets Tier 2 Emissions	January 2007 - Present

**LY Series** Introduced in 1992, 6 cylinder version of the 4LH series. Lightweight, compact with Excellent Hp/weight ratio. Highest Hp in its class. A=Built in USA.

Model	HP	Notes	Year
6LY-UTE	315	Turbo-Intercooled	1992 - 96
6LYA-UTE	315	US Built	January 1997 - December 2001
6LY-STE	350	Turbo-Intercooled	1994 - 96
6LYA-STE	350	US Built	January 1997 - May 2001
6LYA-STP	370	Higher HP	June 2001 - December 2006
6LY2-STE	420	Best Weight to HP Ratio	September 1998 - March 2001
6LY2A-STE	420	US Built	March 2001 - September 2001
6LY2A-STP	440	Higher HP - US Built	September 2001 - December 2005

**LY3 Series** Introduced in 2005. Meets Tier 2 emissions. Electronic engine featuring 2 stage injectors, 24 valve cylinder head and is Tier II compliant. Smooth and robust engine with very high allowable continuous RPM (3198 RPM) UTC and STC engines are commercial rated for approved applications

6LY3A-ETP	480	Electronic Gov. & Timer	Fall 2005 - Present
6LY3A-STP	440	Electronic Gov. & Timer	Winter 2005 - Present
6LY3A-UTP	380	Electronic Gov. & Timer	January 2006 - Present
Commercial 6LY3-UTC	370	Electronic Gov. & Timer	Summer 2008 - Present
Commercial 6LY3-STC	430	Electronic Gov. & Timer	Summer 2008 - Present

**CX Series** This model is competitive in the 400+ HP range. Heavy duty, smooth and quietest in its class. Originally designed as a commercial model. Four valves per cylinder, premium quality. Only engine in its HP range designed exclusively as a marine engine.

Model	HP	Notes	Year
6CX-ETE	420	Turbo-Intercooled	1992 - December 2001
6CX-GTE	465	Turbo-Intercooled	Fall 1999 - December 2005
6CX-GTE2	500	Turbo-Intercooled	Fall 1999 - December 2005
6CX530	530	Common Rail	January 2009-Present

**SY Series** These models feature electronic unit injection and are Tier II compliant. They are clean, smooth, quiet, compact and are designed for easy service.

Model	HP	Notes	Year
6SY-655	655	Electronic Unit Injector	2006 - Present
6SY-STP	720	Electronic Unit Injector	2005 - Present
8SY-STP	900	Electronic Unit Injector	2005 - Present