



MARINE CATALOG

OUTBOARD • INBOARD • WATERCRAFT

VOL. 12



This photo: L.A. Sleeve Co. continues the day to day operations at their 35,000 square foot headquarters in Santa Fe Springs, CA.

Photos Below, Top left: Early factory building circa 1945. Bottom left: October 1953.

Bottom middle: Outside the new 5135 building in 1980.

Far right: Founder Nicholas W. Metchkoff with son Gary.

Historical

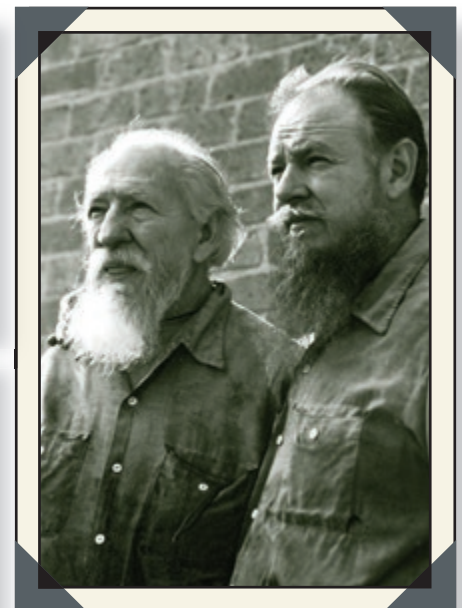
LOS ANGELES SLEEVE CO. was founded in 1945 by family patriarch Nicholas W. Metchkoff. A family owned business for a lasting four generations, L.A. SLEEVE originated in a small Los Angeles factory. L.A. Sleeve began by producing cylinder sleeves for the automotive and tractor industries.

In 1950, Nicholas' son, Gary entered into the business as L.A. SLEEVE rapidly expanded into the world of automotive racing, and the heavy duty truck industry.

During the 1960's, L.A. SLEEVE exported cylinder sleeves worldwide and primarily to South America, thus establishing ourselves into the global economy. Beginning in 1968, L.A. SLEEVE entered the genesis of the motorcycle market, which

has grown to become the renowned power sports industry we know presently.

Today, we manufacture centrifugally spun-cast cylinder sleeves for an assortment of industries. Automotive, heavy duty, industrial, motorcycle, ATV, snowmobile, and marine are the most prominent, but L.A. SLEEVE is not limited to these. We provide cylinder liners for original equipment manufacturers to a single custom sleeve. L.A. SLEEVE continues to be owned and operated by the third and fourth generation of the Metchkoff family. We are dedicated to uphold the family tradition of quality manufacturing, excellent service, and modern technology.



TERMS, CONDITIONS & POLICIES

BUSINESS HOURS: 8:00 a.m. to 5:00 p.m. Monday through Thursday, 8:00 a.m. to 4:30 p.m. Friday. Closed weekends and holidays.

MINIMUM ORDERS: A \$15.00 minimum applies to all orders.

PAYMENT: C.O.D., Credit/Debit on first order. Company check accepted after first order and receiving LASCO customer code number. No personal checks accepted. Dealers whose checks are returned for non-sufficient funds will be placed on a CASH-ONLY basis. Mastercard, VISA, Discover, American Express and PayPal.

PRICE CHANGES: Prices are subject to change without notice. Your invoice will show the current net price and should be reviewed upon receipt.

RETURNS: L.A. SLEEVE will not accept any returned goods without prior authorization. No returns accepted after 30 days. Returned merchandise must be accompanied by the following:

- A return authorization number (call for number). Display number on outside of carton.
- A copy of original invoice.
- A letter of explanation.

Merchandise must be returned freight prepaid. Shortages and discrepancies must be reported within ten days of invoice date. Refused orders and/or unwarranted returns shall be subject to a 25% restock handling charge, in addition to any incurred shipping charges. Credit will not be given on merchandise returned without a written explanation. Credit will be issued for returns that are accepted. No returns are allowed on gaskets, carburetors, jets and carb parts. No credit is given for returns that are not in original condition, or if any parts of a kit are missing.

FOREIGN COUNTRIES: Foreign orders are shipped on a prepaid basis unless prior arrangement is made with L.A. SLEEVE CO. Payment must be sent in U.S. funds, Foreign checks and currency are not accepted. Contact L.A. SLEEVE CO. by telephone or e-mail before sending payment to confirm current prices and shipping charges.

CYLINDER SLEEVING, BIG BORE KITS: Please allow two (2) weeks plus shipping time. All modifications are done to your cylinder unless otherwise specified. When sending your cylinder and parts, please remove all manifolds, studs, bolts, power valves, etc. We are not responsible for any lost parts. Package your cylinder and head upright in a sturdy box with plenty of paper and cardboard. Include your piston if we are not supplying one. Always include instructions inside the package, stating cylinder make, model and year, what work you want done, and if you want L.A. SLEEVE to provide the piston and a new gasket. Include your return address and phone number on the instruction sheet. Dealers, include a business card.

WE WILL NOT BEGIN ANY WORK WITHOUT WRITTEN INSTRUCTIONS.

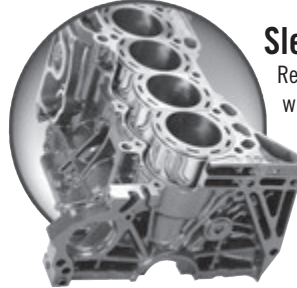
SHIPPING: We ship all orders U.P.S. whenever possible. Second day air (Blue Label), next day air (Red Label), and 3-Day Select (Orange) services are available in addition to regular ground service. Parcel post and priority mail shipping is available also.

CHANGE OF ADDRESS: Please inform us of changes to your shipping or mailing address, telephone and e-mail address. This will ensure that you continue to receive good service from L.A. SLEEVE Co., and that we can provide you with updated information and catalogs.

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ENGINE & SHOP SERVICES



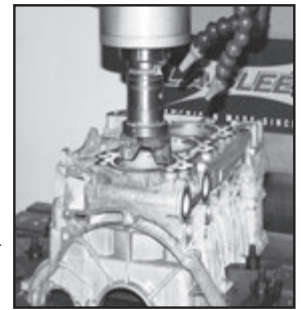
Sleeving... Still The Solution!

Re-sleeving worn or seized cylinders and cylinder blocks with cylinder sleeve liners manufactured by L.A. Sleeve Co. continues to be the solution for riders, racer, and engine builders everywhere. Our top quality cylinder sleeves, four-stroke and two-stroke, have proven to be durable and economical with the added advantage of being boreable. Re-sleeved cylinders will never flake or peel.

CYLINDER REPAIR

Why would you spend several hundred dollars to buy a new cylinder when we can repair it for a fraction of the cost?

L.A. Sleeve offers re-sleeving services for automotive, small engine, motorcycle, ATV, snowmobile, marine and watercraft. Four-stroke cylinders receive a newly installed cylinder sleeve, are bored, honed to fit the piston and the top is surfaced when required.



Two-stroke cylinders receive a newly installed sleeve. All of the ports are matched, blended and chamfered. The sleeved cylinder is bored and honed to fit the piston. The top deck is surfaced to be as new. A properly installed two-stroke sleeve renews the cylinder and retains the original performance of the engine.

Send us your cylinder or cylinder block along with instructions. Our sleeving department will install a new sleeve or multiple sleeves into your cylinder and return it ready to install and run.

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Sleeves: Los Angeles Sleeve Co. manufactures centrifugal cast iron cylinder sleeves for all popular makes and models of outboards. Engine rebuilders find they can rely on the quality and workmanship of **LASCO** outboard cylinder sleeves, and their use saves them time and money. The centrifugal castings used in the manufacture of these sleeves are made from an alloy of carbon chrome and molybdenum of 200 "Brinell" hardness, which insures ease in installation, trouble free boring and a dependable long life engine.

Centerless grinding of outside diameters of **LASCO** sleeves provides for perfect roundness and exact size which is controlled by rigid inspection of one-half thousandth of an inch. We invite comparison of our sleeves with other leading makes for size, roundness and finish.

Each cylinder sleeve is designed to best suit its designated cylinder. Three concepts are integrated in the designing and manufacturing of a sleeve:

- 1) The retained strength of a cylinder after the sleeve is installed.
- 2) Ease of installation for the rebuilder.
- 3) The ability to bore to the maximum amount of oversize pistons available.

The ★ column, next to the sleeve part number, will help the rebuilder identify the cylinder that is to be sleeved. The ★ column designation will also help the rebuilder to determine the proper installation procedure.

★ Column Code Explanations:

- AC** - Original cylinder bore is alloy-chrome plated, Nikasil, or electrofused. The cylinder must be bored to accept the new cylinder sleeve.
- CS** - Original block has a cast-in sleeve liner in the cylinder. The cylinder must be bored out to accept the new cylinder sleeve. The cast-in liner will be bored completely out of the cylinder. Do not try to push out the cast-in liner, cylinder damage may be the result.
- CI** - Original block has a cast-in liner in the cylinder. The cylinder must be bored to accept the new cylinder sleeve. When using a CI style sleeve the cast-in liner will not be completely removed. The sleeve is designed to insert into the iron lined cylinder.
- RS** - Original block has a replacement sleeve. Heat the cylinder to remove the sleeve. Reheat the cylinder to install the new cylinder sleeve.
- CC** - Original barrel is cast-iron. The cylinder must be bored to accept the new cylinder sleeve.

General Rules for Sleeve Installation:

These tips are intended to be a guide for installing sleeves into cylinders. There are always exceptions to the rule and care must be taken on special applications.

ALWAYS WAIT UNTIL THE SLEEVE ARRIVES BEFORE BEGINNING ANY MACHINE WORK. NEVER ASSUME THAT THE STATED MODEL AND YEAR OF THE CYLINDER IS CORRECT. ALWAYS CHECK TO SEE IF THE SLEEVE PORTS MATCH THE CYLINDER PORTS.

1. Interference fit for cylinder sleeve to aluminum bore is .004.
2. Interference fit for cylinder sleeve to a cast iron bore is .002 to .003.
3. Installation of flanged type sleeves follow the same rules, but the top of the cylinder must have a countersink to the correct depth to accept the flanged sleeve. .000 to .001 interference fit on the flange diameter is recommended.
4. Heating the cylinder for 45 minutes to one hour at 350 degrees to 450 degrees is preferable.
5. The sleeve should slide in very easily when the cylinder is properly heated. Freeze shrinking the sleeve is optional. (Some machinists believe this assists installation of the sleeve.)
6. **REMEMBER:** Rap or press the sleeve down while the cylinder is cooling down. Use a hydraulic press for this procedure.
7. Milling the top deck of the cylinder always adds a quality touch. A caution here, some cylinders may not be able to have the top surface decked.
8. For 2-stroke cylinders, blending or matching the ports is recommended for proper fuel flow.



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
CHRYSLER - FORCE							
50 H.P. 2 Cylinder Cross-Flow	Straight sleeve, no ports cut in.	3-3/16"	CI	T-603-OB O.D. 3-5/16"	LA-603-OB O.D. 3-3/8"	L-603-OB O.D. 3-7/16"	5-1/2"
55 H.P. 2 Cylinder Model 559H9L	Flanged sleeve, with ports cut in.	3-3/8"	CI	FL-042-OB O.D. 3-1/2"			5.230"
70 H.P. 3 Cylinder 90 H.P. 3 Cylinder 100 H.P. 4 Cylinder 125 H.P. 4 Cylinder 150 H.P. 4 Cylinder	Straight sleeve, no ports cut in.	3-5/16"	CI	T-607-OB O.D. 3-7/16"	LA-607-OB O.D. 3-1/2"	L-607-OB O.D. 3-9/16"	5-9/16"
70 H.P. 3 Cylinder 90 H.P. 3 Cylinder 100 H.P. 4 Cylinder 125 H.P. 4 Cylinder 150 H.P. 4 Cylinder	Special flanged sleeve to repair damaged or corroded upper cylinder wall, no ports.	3-5/16"	CI	FL-039-OB O.D. 3-7/16"			5-1/2"
115 H.P. 4 Cylinder 140 H.P. 4 Cylinder	Straight sleeve, no ports cut in.	3-3/8"	CI	T-70-OB O.D. 3-1/2"	LA-70-OB O.D. 3-9/16"	L-70-OB O.D. 3-5/8"	5.550"
115 H.P. 4 Cylinder 140 H.P. 4 Cylinder	Flanged sleeve, no ports cut in.	3-3/8"	CI	FL-094-OB O.D. 3-1/2"			5-1/2"
HONDA							
BF-9.9 2 Cylinder 4-Stroke BF-15 2 Cylinder 4-Stroke	Straight sleeve, no ports cut in.	2.283" 58mm	CI			L-163-OB O.D. 2.535"	3.560"
BF-75 2 Cylinder 4-Stroke BF-100 2 Cylinder 4-Stroke	Flanged sleeve, no ports cut in.	2.204" 56mm	CI	FL-031-OB			
MARINER							
18 H.P. 2 Cylinder 1984-95 20 H.P. 2 Cylinder 1984-on 25 H.P. 2 Cylinder 1984-on 400cc (24.4 C.I.)	Straight sleeve, with ports cut in.	2.559" 65mm	AC		LA-018-OB O.D. 2-3/4"		4-11/16"
25 H.P. 2 Cylinder Cross Flow 1980-83	Straight sleeve, no ports cut in.	2.638" 67mm	CI	T-210-OB O.D. 2-3/4"	LA-210-OB O.D. 2-13/16"	L-210-OB O.D. 2-7/8"	5"
30 H.P. 2 Cylinder 1980-84	Straight sleeve, with ports cut in.	2.835" 72mm	RS		YA-5025 O.D. 3.077"		4.925"
40 H.P. 2 Cylinder 1980-89 50 H.P. 2 Cylinder 1990-91	Straight sleeve, with ports cut in.	2.953" 75mm	RS		LA-044-OB O.D. 3.156"	L-044-OB O.D. 3.190"	5-5/16"
60 H.P. 2 Cylinder (No. 6E9) 1980-83	Straight sleeve, with ports cut in.	3.228" 82mm	RS		LA-071-OB O.D. 3.433"		5.556"
60 H.P. 2 Cylinder (No. 6F0)	Straight sleeve, with ports cut in.	3.307" 84mm	RS		LA-049-OB O.D. 3.511"		5.556"
70 H.P. 3 Cylinder 80 H.P. 4 Cylinder 90 H.P. 6 Cylinder 115 H.P. 6 Cylinder	Straight sleeve, no ports cut in. (Shorter length) (Longer length)	2-7/8"	CI	T-214-OB O.D. 3" T-216-OB O.D. 3"		L-214-OB O.D. 3-1/8" L-216-OB O.D. 3-1/8"	4-7/8" 5"
70 H.P. 3 Cylinder	Straight sleeve, with ports cut in, with power port.	2.875" 73mm	CI	T-017-OB O.D. 3"		L-017-OB O.D. 3-1/8"	4-7/8"
80 H.P. 4 Cylinder	Straight sleeve, with ports cut in.	2.875" 73mm	CI	T-019-OB O.D. 3"		L-019-OB O.D. 3-1/8"	4-7/8"
90 H.P. 6 Cylinder 1980-85	Straight sleeve, with ports cut in, no power port.	2.875" 73mm	CI	T-016-OB O.D. 3"		L-016-OB O.D. 3-1/8"	4-7/8"
115 H.P. 6 Cylinder 1980-85	Straight sleeve, with ports cut in.	2.875" 73mm	CI	T-017-OB O.D. 3"		L-017-OB O.D. 3-1/8"	4-7/8"
135 H.P. V-6 1988-00 150 H.P. V-6 1988-98 175 H.P. V-6 1980-82 1998cc (122 C.I.)	Straight sleeve, with ports cut in.	3-1/8"	CI		LA-04-OB O.D. 3-5/16"	L-04-OB O.D. 3-3/8"	5.550"
200 H.P. V-6 1980-81 225 H.P. V-6	Straight sleeve, with ports cut in.	3-3/8"	AC		LA-05-OB ¹ O.D. 3-9/16"		5.550"
175 H.P. V-6 1982-92 200 H.P. V-6 EFI 1984-91	Straight sleeve, with ports cut in, with finger ports cut in.	3-3/8"	AC		LA-014-OB ¹ O.D. 3-9/16"		5.550"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length	
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.		
MERCURY / MARINER								
10 H.P. 2 Cylinder 18 H.P. 2 Cylinder	1984-85 1984-95	Straight sleeve, with ports cut in.	2.559" 65mm	AC		LA-018-OB O.D. 2-3/4"	4-11/16"	
20/25 H.P. 2 Cylinder 25XD (24.4 C.I.)	1984-on	Straight sleeve, with ports cut in.	2.559" 65mm	AC		LA-018-OB O.D. 2-3/4"	4-11/16"	
30 H.P. 2 Cylinder (39.3 C.I.)	1995-05	Straight sleeve, with ports cut in, exhaust has compression relief notch. Top of sleeve to top of notch 1.375"	2.992" 76mm	RS		L-129-OB ² O.D. 3.202"	5.580"	
35 H.P. 2 Cylinder (33.3 C.I.) Cross-Flow		Straight sleeve, no ports cut in.	2-7/8"	CI	T-214-OB O.D. 3"	L-214-OB ² O.D. 3-1/8"	4-7/8"	
40 H.P. 2 Cylinder (39.3 C.I.)	1996-14	Straight sleeve, with ports cut in exhaust has compression relief notch. Top of sleeve to top of notch 1.415"	2.992" 76mm	RS		L-160-OB ² O.D. 3.200	5.575"	
40 H.P. 3 Cylinder (59 C.I.)	1998-14	Straight sleeve, with ports cut in, exhaust has compression relief notch. Top of sleeve to top of notch 1.350"	2.992" 76mm	RS		L-150-OB O.D. 3.200"	5.585"	
50 H.P. 3 Cylinder	1986-88	Straight sleeve, with ports cut in, power port and 3 port exhaust.	2-7/8" 73mm	CI	T-017-OB O.D. 3"	L-017-OB O.D. 3-1/8"	4-7/8"	
50 H.P. 3 Cylinder 60 H.P. 3 Cylinder 849cc (51.8 C.I.)	1991-97 1991-97	Straight sleeve, with ports cut in exhaust has compression relief notch. Top of sleeve to top of notch 1.260"	2.953" 75mm	RS		L-085-OB O.D. 3.200"	5.283"	
50 H.P. 3 Cylinder 60 H.P. 3 Cylinder (59 C.I.)	1998-14 1998-14	Straight sleeve, with ports cut in, exhaust has compression relief notch. Top of sleeve to notch of notch 1.350"	2.992" 76mm	RS		L-150-OB ² O.D. 3.200"	5.585"	
60 H.P. 3 Cylinder 65 H.P. 3 Cylinder 70 H.P. 3 Cylinder 75 H.P. 4 Cylinder 80 H.P. 4 Cylinder Cross-Flow		Straight sleeve, no ports cut in. (Shorter length) (Longer length)	2-7/8" 73mm	CI	T-214-OB O.D. 3" T-216-OB O.D. 3"	LA-214-OB O.D. 3-1/16" LA-216-OB O.D. 3-1/16"	L-214-OB O.D. 3-1/8" L-216-OB O.D. 3-1/8"	4-7/8" 5"
60 H.P. 3 Cylinder 65 H.P. 3 Cylinder 70 H.P. 3 Cylinder	1984-89 1972-76 1977-83	Straight sleeve, with ports cut in, power port and 3 port exhaust.	2-7/8" 73mm	CI	T-017-OB O.D. 3"	L-017-OB O.D. 3-1/8"	4-7/8"	
75 H.P. 4 Cylinder Cross-Flow	1984-85	Straight sleeve, with ports cut in, power port and 4 port exhaust.	2-7/8" 73mm	CI	T-019-OB O.D. 3"	L-019-OB O.D. 3-1/8"	4-7/8"	
70 H.P. 3 Cylinder (71 C.I.) 75 H.P. 3 Cylinder	1987-88 1989-93	Straight sleeve, with ports cut in, exhaust has compression relief notch.	3.375" 86mm	RS CS		LA-050-OB ² O.D. 3.642" (RS Sleeve)	L-050-OB O.D. 3.670" (CS Sleeve)	5.490"
75 H.P. 3 Cylinder 1386cc (84.6 C.I.) Short exhaust port notch	1994-14	Straight sleeve, with ports cut in, Top sleeve to top of exhaust 1.880", Exhaust has offset compression relief notch. Top of sleeve to top of notch 1.395"	3.500" 89mm	RS		L-130-OB ¹ O.D. 3.766"	5.770"	
75 H.P. 3 Cylinder 1386cc (84.6 C.I.) Long exhaust port notch	1998-14	Straight sleeve, with ports cut in, Top sleeve to top of exhaust 1.880", Exhaust has offset compression relief notch. Top of sleeve to top of notch 1.025"	3.500" 89mm	RS		L-167-OB ² O.D. 3.766"	5.770"	
75 H.P. 3 Cylinder DFI Optimax 1.5L 1526cc	2005-14	Straight sleeve, with ports cut in, Top of sleeve to top of exhaust 1.xxx", bottom 2.xxx", width 2.xxx", No exhaust port relief notch	3.622" 92mm	RS		L-229-OB O.D. 3.886"	5.975"	
80 H.P. 4 Cylinder Cross-Flow	1968-74	Straight sleeve, with ports cut in, 4 port exhaust.	2-7/8" 73mm	CI	T-021-OB O.D. 3"	L-021-OB O.D. 3-1/8"	4-7/8"	
80 H.P. 4 Cylinder Cross-Flow	1978-84	Straight sleeve, with ports cut in, power port and 4 port exhaust.	2-7/8" 73mm	CI	T-019-OB O.D. 3"	L-019-OB O.D. 3-1/8"	4-7/8"	
85 H.P. 3 Cylinder 90 H.P. 3 Cylinder (71 C.I.)	1987-88 1989-93	Straight sleeve, with ports cut in, exhaust has compression relief notch.	3.375" 86mm	RS CS		LA-052-OB O.D. 3.642" (RS Sleeve)	L-052-OB O.D. 3.670" (CS Sleeve)	5.490"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
MERCURY							
90 H.P. 3 Cylinder 1994-14 1386cc (84.6 C.I.) Short exhaust port notch	Straight sleeve, with ports cut in, Top sleeve to to of exhaust 1.880", Exhaust has offset compression relief notch. Top of sleeve to top of notch 1.395"	3.500" 89mm	RS			L-130-OB ¹ O.D. 3.766"	5.770"
90 H.P. 3 Cylinder 1998-14 1386cc (84.6 C.I.) Long exhaust port notch	Straight sleeve, with ports cut in, Top sleeve to of exhaust 1.880" Exhaust has offset compression relief notch. Top of sleeve to top of notch 1.025"	3.500" 89mm	RS			L-167-OB ² O.D. 3.766"	5.770"
90 H.P. 3 Cylinder DFI 2004-14 Optimax 1.5L 1526cc (93 C.I.)	Straight sleeve, with ports cut in, Top of sleeve to top of exhaust 1.615", bottom 2.845", width 2.300" No exhaust port relief notch	3.622" 92mm	RS			L-193-OB ² O.D. 3.886"	5.975"
85 H.P. 4 Cylinder 90 H.P. 6 Cylinder 100 H.P. 6 Cylinder 115 H.P. 6 Cylinder 150 H.P. 6 Cylinder Cross-Flow	Straight sleeve, no ports cut in. (Shorter length) (Longer length)	2-7/8" 73mm	CI	T-214-OB O.D. 3"	LA-214-OB O.D. 3-1/16"	L-214-OB O.D. 3-1/8"	4-7/8" 5"
85 H.P. 4 Cylinder 1975-77	Straight sleeve, with ports cut in, power port and 4 port exhaust.	2-7/8" 73mm	CI	T-019-OB O.D. 3"		L-019-OB O.D. 3-1/8"	4-7/8"
90 H.P. 6 Cylinder 1978-83	Straight sleeve, with ports cut in, 3 port exhaust, no power port .	2-7/8" 73mm	CI	T-045-OB O.D. 3"		L-045-OB O.D. 3-1/8"	4-7/8"
90 H.P. 6 Cylinder 1984-85	Straight sleeve, 3 port exhaust .600 diameter, no power port.	2.875" 73mm	CI	T-095-OB O.D. 3"		L-095-OB O.D. 3-1/8"	4-7/8"
100 H.P. 4 Cylinder 1987-93 (105 C.I.) 115 H.P. 4 Cylinder 1991-93	Straight sleeve, with ports cut in. No exhaust port notch.	3.375" 86mm	RS CS		LA-053-OB O.D. 3.644" (RS Sleeve)	L-053-OB ¹ O.D. 3.670" (CS Sleeve)	5.775"
100 H.P. 4 Cylinder 1994-96 1848cc (113 C.I.)	Straight sleeve, with ports cut in, Top of sleeve to top of exhaust 1.855", bottom 2.760", width 2.350". No exhaust port relief notch	3.500" 89mm	RS			L-131-OB ¹ O.D. 3.766"	5.770"
115 H.P. 6 Cylinder	Straight sleeve, with ports cut in, 3 port exhaust, no power port. (Narrow intake .400 wide)	2-7/8"	CI	T-048-OB O.D. 3"		L-048-OB O.D. 3-1/8"	4-7/8"
115 H.P. 6 Cylinder 1970-81	Straight sleeve, with ports cut in, 3 port exhaust, no power port.	2-7/8"	CI	T-016-OB O.D. 3"		L-016-OB O.D. 3-1/8"	4-7/8"
115 H.P. 6 Cylinder 1982-88	Straight sleeve, with ports cut in, power port and 3 port exhaust.	2-7/8"	CI	T-017-OB O.D. 3"		L-017-OB O.D. 3-1/8"	4-7/8"
115 H.P. 60° V-6 1999-00 2507cc (153 C.I.)	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.685", Bottom exhaust 2.625", Width 2.210"	3.500" 89mm	RS		LA-172-OB ² O.D. 3.693"		5.275"
115 H.P. 3 Cylinder DFI 2004-14 Optimax Pro XS 1.5L 1526cc	Straight sleeve, with ports cut in, Top of sleeve to top of exhaust 1.615", bottom 2.845", width 2.300" No exhaust port relief notch	3.622" 92mm	RS			L-193-OB ² O.D. 3.886"	5.975"
115 H.P. (Carb) 4 Cyl. 1994-14 125 H.P. (Carb) 4 Cyl. 1994-14 1848cc (113 C.I.)	Straight sleeve, with ports cut in, Top of sleeve to top of exhaust 1.855", bottom 2.760", width 2.350", No exhaust port relief notch	3.500" 89mm	RS			L-131-OB ² O.D. 3.766"	5.770"
125 H.P. 3 Cyl. DFI 2004-14 Optimax Pro XS 1.5L 1526cc	Straight sleeve, with ports cut in, Top of sleeve to top of exhaust 1.615", bottom 2.845", width 2.300", No exhaust port relief notch	3.622" 92mm	RS			L-193-OB ² O.D. 3.886"	5.975"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
MERCURY (Continued)							
135 H.P. V-6 2.0L (122 C.I.) 1986-00	Straight sleeve, with ports cut in.	3-1/8"	CI		LA-04-OB ² O.D. 3-5/16"	L-04-OB ² O.D. 3-3/8"	5.550"
135 H.P. V-6 2.5L CARB (153 C.I.) 2507cc 1998-05	Straight sleeve, with ports cut in. No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.650", Bottom exhaust 2.620", Width 2.210"	3.500" 89mm	RS		LA-177-OB O.D. 3.693"		5.275"
135 H.P. V-6 OPTIMAX 2.5 Litre (153 C.I.) 1999-00	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.685", Bottom exhaust 2.625", Width 2.210"	3.500" 89mm	RS		LA-172-OB O.D. 3.693"		5.275"
135 H.P. OPTIMAX DFI 2001-14 2.5 Litre V-6 (153 C.I.)	Straight sleeve, with ports cut in, Intake boost ports have small oil return holes below on each side. No exhaust compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.770", Bottom exhaust 2.675", Width 2.220"	3.500" 89mm	RS		LA-217-OB O.D. 3.693"		5.315"
140 H.P. 6 Cylinder 1979-81 150 H.P. 6 Cylinder 1973-78	Straight sleeve, with ports cut in, power port and 3 port exhaust.	2-7/8"	CI	T-017-OB O.D. 3"		L-017-OB O.D. 3-1/8"	4-7/8"
150 H.P. V-1500 (122 C.I.) V-6 thru 1998 175 H.P. V-1750 (122 C.I.) V-6 thru 1981	Straight sleeve, with ports cut in.	3-1/8"	CI		LA-04-OB O.D. 3-5/16"	L-04-OB O.D. 3-3/8"	5.550"
150 H.P. V-1500 V-6 thru 1998 175 H.P. V-1750 V-6 thru 1981 (122 C.I.)	Flanged sleeve, with ports cut in.	3-1/8"	CI		FL-04-OB O.D. 3.315"		5.550"
2.0 Litre (122 C.I.) 1986-90	Straight sleeve, with ports cut in, with finger ports.	3-1/8"	AC		LA-047-OB O.D. 3-5/16"	L-047-OB O.D. 3-3/8"	5.520"
2.0 Litre V-6 Champ Racing Engine (122 C.I.) 1991-92	Straight sleeve, with ports cut in, bridged exhaust.	3-1/8"	AC			L-080-OB O.D. 3.435"	5.265"
2.0 Litre V-6 Champ Racing Engine (122 C.I.) 1991-92	Long length sleeve, must bore cylinder to the bottom. Same ports as L-080-OB.	3-1/8"	AC			L-098-OB O.D. 3.435"	5.550"
150 H.P. XR4 V-6 (142 C.I.) 1990-92	Straight sleeve, with ports cut in.	3-3/8"	RS		LA-054-OB ¹ O.D. 3.557"		5.344"
150 H.P. XRi V-6 2.5 Litre 1993	Straight sleeve, with ports cut in, Exhaust has offset compression relief notch, top 1.320". Exhaust Port Dimensions: Top sleeve to top exhaust 1.745", Bottom exhaust 2.645", Width 2.220"	3.500" 89mm	RS		LA-146-OB O.D. 3.693"		5.275"
150 H.P. Optimax 60° V-6 2.5 Litre 2507cc (153 C.I.) 1999-04	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.685" Bottom exhaust 2.625" Width 2.210"	3.500" 89mm	RS		LA-172-OB ² O.D. 3.693"		5.275"
150 H.P. XR6 60° V-6 2.5 Litre (153 C.I.) 2507cc 1992-06	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.620" Bottom exhaust 2.650", Width 2.300"	3.500" 89mm	RS		LA-079-OB ¹ O.D. 3.693"		5.275"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
MERCURY (Continued)							
150 H.P. 60° V-6 1997-04 2.5 Litre (153 C.I.) 2507cc	Straight sleeve, with ports cut in, Exhaust has offset compression relief notch, top 1.330". Exhaust Port Dimensions: Top sleeve to top exhaust 1.780" Bottom exhaust 2.670", Width 2.230"	3.500" 89mm	RS		LA-151-OB ² O.D. 3.693"		5.310"
150 H.P. OPTIMAX DFI 2001-14 2.5 Litre V-6 (153 C.I.)	Straight sleeve, with ports cut in, Intake boost ports have small oil return holes below on each side. No exhaust compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.770" Bottom exhaust 2.675", Width 2.220"	3.500" 89mm	RS		LA-217-OB O.D. 3.693"		5.315"
175 H.P. V-6 1983-92 (142 C.I.)	Straight sleeve, with ports cut in, with finger ports.	3-3/8"	AC		LA-014-OB ¹ O.D. 3-9/16"	L-014-OB O.D. 3-5/8"	5.550"
175 H.P. XR4 V-6 1991-92	Straight sleeve, with ports cut in, sleeve length + .030.	3-3/8"	RS		LA-103-OB ¹ O.D. 3.557"		5.384"
175 H.P. XRi V-6 1993 2.5 Litre (153 C.I.)	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.620" Bottom exhaust 2.650", Width 2.300"	3.500" 89mm	RS		LA-079-OB ¹ O.D. 3.693"		5.275"
175 H.P. V-6, XR2 1996-04 2.5 Litre (153 C.I.)	Straight sleeve, with ports cut in, Exhaust has offset compression relief notch, top 1.330". Exhaust Port Dimensions: Top sleeve to top exhaust 1.780" Bottom exhaust 2.670", Width 2.230"	3.500" 89mm	RS		LA-151-OB ² O.D. 3.693"		5.310"
175 H.P. Optimax 60° V-6 1999-04 2.5 Litre 2507cc (153 C.I.)	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.685" Bottom exhaust 2.625" Width 2.210"	3.500" 89mm	RS		LA-172-OB ² O.D. 3.693"		5.275"
V-2000 200 H.P. V-6 (142 C.I.) V-2250 225 H.P. V-6 thru 1981	Straight sleeve, with ports cut in.	3-3/8"	AC		LA-05-OB ¹ O.D. 3-9/16"	L-05-OB O.D. 3-5/8"	5.550"
V-2000 200 H.P. V-6 V-2250 225 H.P. V-6 thru 1981	Flanged sleeve, with ports cut in, same as LA-05-OB.	3-3/8"	AC		FL-06-OB ² O.D. 3-9/16"		5.500"
V-2000 200 H.P. V-6 1982-83 (142 C.I.)	Straight sleeve, with ports cut in, with finger ports.	3-3/8"	AC		LA-014-OB ¹ O.D. 3-9/16"		5.550"
200 H.P. V-6 EFI 1983-90 (142 C.I.)	Straight sleeve, with ports cut in, with finger ports.	3-3/8"	AC		LA-014-OB ¹ O.D. 3-9/16"	L-014-OB O.D. 3-5/8"	5.550"
200 H.P. V-6 EFI 1983-90 (142 C.I.)	Straight sleeve, with ports cut in, with finger ports, shorter length.	3-3/8"	AC		LA-073-OB ¹ O.D. 3-9/16"	L-073-OB O.D. 3-5/8"	5.410"
200 H.P. V-6 EFI 1982-90 175 H.P. 1982-92 (142 C.I.)	Flanged sleeve, with ports cut in, same as LA-014-OB.	3-3/8"	AC		FL-043-OB ¹ O.D. 3-9/16"		5.500"
220 H.P. LASER XRi V-6 1989-91 (142 C.I.)	Straight sleeve, with ports cut in, with finger ports.	3-3/8"	AC		LA-072-OB ¹ O.D. 3-9/16"	L-072-OB O.D. 3-5/8"	5.550"
220 H.P. LASER XRi V-6 1989-91 (142 C.I.)	Flanged sleeve, with ports cut in, with finger ports.	3-3/8"	AC		FL-077-OB ¹ O.D. 3-9/16"		5.500"
2.4 Litre Bridged Exhaust 1987-91 (142 C.I.)	Straight sleeve, with ports cut in.	3-3/8"	AC		LA-055-OB ¹ O.D. 3-9/16"		5.550"
2.4 Litre Bridged Exhaust 1987-91 (142 C.I.)	Flanged sleeve, with ports cut in, same as LA-055-OB.	3-3/8"	AC		FL-056-OB ¹ O.D. 3-9/16"		5.500"
2.5 Litre 200 H.P. V-6, XRi, EFI 1992-04 (153 C.I.)	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.620", Bottom exhaust 2.650", Width 2.300"	3.500" 89mm	RS		LA-079-OB ¹ O.D. 3.693"		5.275"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
MERCURY (Continued)							
2.5 Litre 200 H.P. XRi, V-6, EFI (153 C.I.) 1992-04	Flanged sleeve, O.D. + .020, with ports cut, same as LA-079-OB.	3.500" 89mm	RS		FL-081-OB ¹ O.D. 3.710"		5.270"
2.5 Litre 200 H.P. V-6 (153 C.I.) 1996-04	Straight sleeve, with ports cut in, Original sleeve is aluminum. Exhaust Port Dimensions: Top sleeve to top exhaust 1.620", Bottom exhaust 2.675", Width 2.325"	3.500" 89mm	RS AC			L-153-OB ² O.D. 3.825"	4.925"
200 H.P. 2.5 Litre V-6, EFI (153 C.I.) 2000-09	Straight sleeve, with ports cut in, No compression notch. Exhaust Port Dimensions: Top sleeve to top exhaust 1.645", Bottom exhaust 2.675", Width 2.330"	3.500" 89mm	RS		LA-181-OB ² O.D. 3.693"		5.310"
2.5 Litre EFI V-6 1991-92 2.5 Litre MOD VP V-6 1991-92	Straight sleeve, with ports cut in, for Nikasil block.	3.500" 89mm	AC			L-096-OB ¹ O.D. 3.850"	4.896"
2.5 Litre V-6 1993-94	Flanged sleeve, with ports cut in, for Nikasil block. Same ports as L-096-OB.	3.500" 89mm	AC			FL-099-OB O.D. 3.850"	4-7/8"
200 H.P. 3.0 Litre DFI V-6 Optimax (185 C.I.) 3032cc 1998-08	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.330". Exhaust Port Dimensions: Top sleeve to top exhaust 1.780" Bottom exhaust 3.070", Width 2.340"	3.625" 92mm	RS			L-154-OB ² O.D. 3.888"	6.197"
200 H.P. 3.0 Litre EFI Optimax V-6 (185 C.I.) 3032cc 1998-05	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.860", Bottom exhaust 3.060", Width 2.135"	3.625" 92mm	RS			L-184-OB ² O.D. 3.886"	6.197"
200 H.P. OPTIMAX DFI 2006-14 200 H.P. Pro XS DFI 3.0 Litre V-6 (185 C.I.)	Straight sleeve, with ports cut in, No exhaust compression notch, Oiler return holes not cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.755", Bottom exhaust 3.050", Width 2.340"	3.622" 92mm	RS			L-227-OB O.D. 3.887"	6.175"
225 H.P. 3.0 Litre V-6 (185 C.I.) 1994-04	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.330". Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 3.070", Width 2.340"	3.625" 92mm	RS			L-132-OB ² O.D. 3.886"	6.197"
225 H.P. Optimax EFI 2001-04 3.0 Litre V-6 (185 C.I.)	Straight sleeve, with ports cut in, Intake boost port has small oiler No exhaust compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.820", Bottom exhaust 3.070", Width 2.150"	3.625" 92mm	RS		Port (L) Starboard (R)	L-182-OB ² L-183-OB ² O.D. 3.886"	6.197"
225 H.P. OPTIMAX DFI 2006-14 225 H.P. Pro XS DFI 3.0 Litre V-6 (185 C.I.)	Straight sleeve, with ports cut in, No exhaust compression notch, Oiler return holes not cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.755", Bottom exhaust 3.050", Width 2.340"	3.622" 92mm	RS			L-227-OB ² O.D. 3.887"	6.175"
225 H.P. Promax V-6 (153 C.I.) 1998-04	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.615", Bottom exhaust 2.635", Width 2.335"	3.500" 89mm	RS		LA-165-OB ² O.D. 3.693"		5.275"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



L.A. Sleeve Co., Inc. 562-945-7578



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
MERCURY (Continued)							
240 H.P. EFI Sport Jet 2000-04 2.5 Litre V-6 (153 C.I.)	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.650", Bottom exhaust 2.670", Width 2.330"	3.500" 89mm	RS		LA-198-OB O.D. 3.693"		5.310"
240 H.P. EFI Sport Jet 2000-04 2.5 Litre V-6 (153 C.I.) Sleeve length +.030" longer	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.680" Bottom exhaust 2.710", Width 2.330"	3.500" 89mm	RS		LA-175-OB ² O.D. 3.694"		5.335"
245 H.P. 2.5 Liter V-6 1996-00 (153 C.I.)	Straight sleeve, with ports cut in, Original sleeve is aluminum. Exhaust Port Dimensions: Top sleeve to top exhaust 1.620", Bottom exhaust 2.675", Width 2.325"	3.500" 89mm	RS AC			L-153-OB ² O.D. 3.825"	4.925"
250 H.P. 3.0 Litre V-6, EFI (185 C.I.) 1994-04	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.330". Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 3.070", Width 2.340"	3.625" 92mm	RS			L-132-OB ² O.D. 3.886"	6.197"
250 H.P. Optimax 2001-05 3.0 Litre V-6 (185 C.I.) 3032cc	Straight sleeve, with ports cut in, Intake boost port has small oiler No exhaust compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.820", Bottom exhaust 3.070", Width 2.150"	3.625" 92mm	RS		Port (L) Starboard (R)	L-182-OB ² L-183-OB ² O.D. 3.886"	6.197"
250 H.P. OPTIMAX DFI 2006-14 250 H.P. Pro XS DFI 3.0 Litre V-6 (185 C.I.)	Straight sleeve, with ports cut in, No exhaust compression notch, oiler return holes not cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.755", Bottom exhaust 3.050", Width 2.340"	3.622" 92mm	RS			L-227-OB ² O.D. 3.887"	6.175"
260 H.P. 2.5 Liter V-6 1996-00 280 H.P. (153 C.I.)	Straight sleeve, with ports cut in, Original sleeve is aluminum Exhaust Port Dimensions: Top sleeve to top exhaust 1.620", Bottom exhaust 2.675", Width 2.325"	3.500" 89mm	RS AC			L-153-OB ² O.D. 3.825"	4.925"
3.4 Litre 275 H.P. V-6 1983-85, 1988-89	Straight sleeve, with ports cut in.	3.740" 95mm	AC		LA-015-OB O.D. 3-15/16"	L-015-OB O.D. 4"	6.700"
3.4 Litre 250, 275 H.P. V-6 (207 C.I.) 1990-93	Straight sleeve, with ports cut in.	3.740" 95mm	AC		LA-097-OB O.D. 3-15/16"		6.700"
300 H.P. S3000 RACE V-6 (153 C.I.) 1996-04	Straight sleeve, with ports cut in, No compression notch Exhaust Port Dimensions: Top sleeve to top exhaust 1.590" Bottom exhaust 2.725", Width 2.380"	3.500" 89mm	RS AC			L-164-OB ² O.D. 3.850"	4.950"
300 H.P. Promax V-6 1998-04 (185 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.385". Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 3.070" Width 2.325"	3.625" 92mm	RS			L-166-OB ² O.D. 3.886"	6.197"
300 H.P. OPTIMAX DFI 2006-14 300 H.P. Pro XS DFI 3.0 Litre V-6 (185 C.I.)	Straight sleeve, with ports cut in, No exhaust compression notch, Exhaust Port Dimensions: Top sleeve to top exhaust 1.730" Bottom exhaust 3.020", Width 2.340"	3.622" 92mm	RS		Port (L) Starboard (R)	L-233-OB L-234-OB O.D. 3.887"	6.195"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available





Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
MERCURY FOUR STROKE OUTBOARD							
40 H.P. EFI Inline 3 Cyl. '00-18 40 H.P. EFI Inline 4 Cyl. 50 H.P. EFI Inline 4 Cyl. 60 H.P. EFI Inline 4 Cyl.	Straight sleeve	2.559" 65mm	CI	T-209-OB O.D. 2.690"	LA-209-OB O.D. 2.752"		4-3/8"
2.1 Litre Inline 4 Cyl. 2000-18 75 H.P. EFI 90 H.P. EFI 100 H.P. EFI 115 H.P. EFI	Straight sleeve	3.543" 90mm			LA-20-OB O.D. 3.690"		5-1/2"
3.0 Litre Inline 4 Cyl. 2006-18 150 H.P. EFI PRO XS	Straight sleeve	4.016" 102mm	CI		LA-40 O.D. 4.190"		6.000"
2.6 Litre Inline 6 Cyl. 2000-18 Verado, PRO XS 225 H.P. EFI 250 H.P. EFI 300 H.P. EFI 350 H.P. EFI	Straight sleeve	3.228" 82mm	RS CS			L-225-OB O.D. 3.543"	5.000"
3.4 Litre V-6 209 C.I. thru-2018 Verado, PRO XS 175 H.P. V-6 EFI 200 H.P. V-6 EFI 225 H.P. V-6 EFI	Straight sleeve	3.622" 92mm	CI	T-24-OB O.D. 3.752"	LA-24-OB O.D. 3.815"		5-1/2"
4.6 Litre V-8 279 C.I. thru-2018 Verado, PRO XS 200 H.P. V-8 EFI 225 H.P. V-8 EFI 250 H.P. V-8 EFI 300 H.P. V-8 EFI	Straight sleeve	3.622" 92mm	CI	T-24-OB O.D. 3.752"	LA-24-OB O.D. 3.815"		5-1/2"
JOHNSON-EVINRUDE							
9.9/15 H.P. 2 Cylinder 1980-92 Cross-Flow (13.2 C.I.)	Straight sleeve, no ports cut in.	2-3/16"	CI	T-203-OB O.D. 2-5/16"	LA-203-OB O.D. 2-3/8"	L-203-OB O.D. 2-7/16"	4"
9.9/15 H.P. 2 Cylinder 1993-04 Cross-Flow 255cc (15.6 C.I.)	Straight sleeve, no ports cut in.	2-3/8"	CI	T-206-OB O.D. 2-1/2"	LA-206-OB O.D. 2-9/16"	L-206-OB O.D. 2-5/8"	4-3/8"
20 H.P. 2 Cylinder 1968-73 25 H.P. 2 Cylinder 1970-76 Cross-Flow	Straight sleeve, no ports cut in.	2-1/2"	CI	T-208-OB O.D. 2-5/8"	LA-208-OB O.D. 2-11/16"	L-208-OB O.D. 2-3/4"	5"
25 H.P. 3 Cylinder 1998-00 500cc (30.5 C.I.)	Straight sleeve, with ports cut in.	2.350"	RS			L-185-OB ² O.D. 2.700"	4.680"
20 H.P. 2 Cylinder 1985-00 25 H.P. 2 Cylinder 1976-04 30 H.P. 2 Cylinder 1985-04 Cross-Flow 521cc (32.1 C.I.)	Straight sleeve, no ports cut in.	3"	CI	T-30-OB O.D. 3-1/8"	LA-30-OB O.D. 3-3/16"	L-30-OB O.D. 3-1/4"	5-1/2"
33 H.P. 2 Cylinder 1968-70 Cross-Flow	Straight sleeve, no ports cut in.	3-1/16"	CI	T-602-OB O.D. 3-3/16"	LA-602-OB O.D. 3-1/4"	L-602-OB O.D. 3-5/16"	5-1/2"
EVINRUDE 2009-18 25 H.P. E-TEC D.I. 2 Cylinder 30 H.P. E-TEC D.I. 2 Cylinder 577cc (35 C.I.)	Straight sleeve, with ports cut in, Oiler hole above the exhaust port and under intake. Exhaust Port Dimensions: Top sleeve to top exhaust 1.680", Bottom exhaust 2.485", Width 1.780"	2.992" 76mm	RS		LA-226-OB O.D. 3.193"		4.855"
35 H.P. 2 Cylinder 1976-85 Cross-Flow	Straight sleeve, no ports cut in.	3"	CI	T-30-OB O.D. 3-1/8"	LA-30-OB O.D. 3-3/16"	L-30-OB O.D. 3-1/4"	5-1/2"
35 H.P. 3 Cylinder 1996-00 565cc (34.5 C.I.)	Straight sleeve, with ports cut in, Compression relief hole above the exhaust port. Exhaust Port Dimensions: Top sleeve to top exhaust 1.550", Bottom exhaust 2.340", Width 1.715"	2-1/2"	RS		LA-176-OB ² O.D. 2.703"		4.687"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
JOHNSON-EVINRUDE (Continued)							
40 H.P. 2 Cylinder Cross-Flow 1968-76	Straight sleeve, no ports cut in.	3-3/16"	CI	T-603-OB O.D. 3-5/16"	LA-603-OB O.D. 3-3/8"	L-603-OB O.D. 3-7/16"	5-1/2"
40 H.P. 2 Cylinder 737cc (45 C.I.) 1985-01	Straight sleeve, with ports cut in, No compression notch, Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 2.855", Width 1.880"	3-3/16"	RS			L-012-OB ² O.D. 3.453"	5.585"
40 H.P. E-TEC 2 Cyl. 863cc (53 C.I.) 2004-08	Straight sleeve, with ports cut in, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.475", Width 2.160"	3.600"	RS		LA-194-OB O.D. 3.800"		5.060"
EVINRUDE 40 H.P. E-TEC 2 Cylinder 863cc (53 C.I.) 2009-12	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.475", Width 2.160"	3.600"	RS		FL-3409-OB O.D. 3.800"		5.060"
EVINRUDE 40 H.P. E-TEC D.I. 2 Cylinder 863cc (53 C.I.) 2013-18		3.600"	RS		TBD O.D. 3.800"		5.060"
50 H.P. 2 Cylinder 1971-75	Flanged sleeve, with ports cut in, 3 port exhaust.	3-1/16"	CI	FL-03-OB O.D. 3-3/16"			5-7/16"
50 H.P. 2 Cylinder 1980	Flanged sleeve, with ports cut in, 2 port exhaust.	3-3/16"	CI	FL-09-OB O.D. 3-5/16"			5-7/16"
50 H.P. 2 Cylinder Commercial 1980	Flanged sleeve, with ports cut in, 2 port exhaust.	3-3/16"	CI	FL-09-OB O.D. 3-5/16"			5-7/16"
50 H.P. 2 Cylinder 737cc (45 C.I.) 1981-94	Straight sleeve, with ports cut in, No compression notch, Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 2.855", Width 1.880"	3-3/16"	RS			L-012-OB ² O.D. 3.453"	5.585"
40 H.P. 3 Cylinder 1999-00 50 H.P. 3 Cylinder 1995-98 920cc (56 C.I.)	Straight sleeve, with ports cut in, No exhaust port bridge, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.530", Bottom exhaust 2.400", Width 1.990"	3-3/16"	RS			L-125-OB ² O.D. 3.465"	4.540"
50 H.P. E-TEC 2 Cyl. 863cc (53 C.I.) 2004-08	Straight sleeve, with ports cut in, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.475", Width 2.160"	3.600"	RS		LA-194-OB O.D. 3.800"		5.060"
EVINRUDE 50 H.P. E-TEC 2 Cylinder 863cc (53 C.I.) 2009-12	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.475", Width 2.160"	3.600"	RS		FL-3409-OB O.D. 3.800"		5.060"
EVINRUDE 50 H.P. E-TEC D.I. 2 Cylinder 863cc (53 C.I.) 2013-18		3.600"	RS		TBD O.D. 3.800"		5.060"
55 H.P. 2 Cylinder 1976-78	Flanged sleeve, with ports cut in, 3 port exhaust.	3-3/16"	CI	FL-01-OB ¹ O.D. 3-5/16"			5-7/16"
55 H.P. 2 Cylinder 1979-80	Flanged sleeve, with ports cut in, 2 port exhaust.	3-3/16"	CI	FL-010-OB O.D. 3-5/16"			5-7/16"
55 H.P. 2 Cylinder 737cc (45 C.I.) 1981-01	Straight sleeve, with ports cut in, No compression notch, Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 2.855", Width 1.880"	3-3/16"	RS			L-012-OB ² O.D. 3.453"	5.585"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length	
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.		
JOHNSON-EVINRUDE (Continued)								
60 H.P. 2 Cylinder 737cc (45 C.I.)	1980-85	Straight sleeve, with ports cut in, No compression notch, Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 2.855", Width 1.880"	3-3/16"	RS			L-012-OB ² O.D. 3.453"	5.585"
60 H.P. 3 Cylinder	1986-89	Flanged sleeve, with ports cut in, 3 port exhaust.	3"	CS		FL-025-OB ¹ O.D. 3-3/16"		4-3/4"
60 H.P. 3 Cylinder 65 H.P. 3 Cylinder 920cc (56 C.I.)	1993-00	Straight sleeve, with ports cut in, No exhaust port bridge, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.530", Bottom exhaust 2.400", Width 1.990"	3-3/16"	RS			L-125-OB ² O.D. 3.465"	4.540"
60 H.P. E-TEC 2 Cyl. 863cc (53 C.I.)	2005-08	Straight sleeve, with ports cut in, Compression relief hole above the the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.475", Width 2.160"	3.600"	RS		LA-194-OB O.D. 3.800"		5.060"
EVINRUDE 60 H.P. E-TEC 2 Cylinder 863cc (53 C.I.)	2009-12	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.475", Width 2.160"	3.600"	RS		FL-3409-OB O.D. 3.800"		5.060"
EVINRUDE 60 H.P. E-TEC D.I. 2 Cylinder 863cc (53 C.I.)	2013-18	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve, Exhaust Port Dimensions: Top sleeve to top exhaust XXX", Bottom exhaust XXX", Width XXX"	3.600"	RS		TBD O.D. 3.800"		5.060"
EVINRUDE 60 H.O. E-TEC D.I. 3 Cylinder 1295cc 1.3L (79 C.I.)	2013-18	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve, Exhaust Port Dimensions: Top sleeve to top exhaust XXX", Bottom exhaust XXX", Width XXX"	3.600"	RS		TBD O.D. 3.800"		5.060"
65 H.P. 3 Cylinder	1972-73	Flanged sleeve, with ports cut in, 3 port exhaust.	3"	CS		FL-02-OB ¹ O.D. 3-3/16"		4-9/16"
70 H.P. 3 Cylinder	1974-79	Flanged sleeve, with ports cut in, 3 port exhaust.	3"	CS		FL-02-OB ¹ O.D. 3-3/16"		4-9/16"
70 H.P. 3 Cylinder	1980-85	Flanged sleeve, with ports cut in, 3 port exhaust.	3"	CS		FL-025-OB ¹ O.D. 3-3/16"		4-3/4"
60 H.P. 3 Cylinder 70 H.P. 3 Cylinder 920cc (56 C.I.)	1987-93 1986-92	Straight sleeve, with ports cut in, bridged exhaust port.	3-3/16"	RS			L-057-OB ¹ O.D. 3.444"	4.545"
70 H.P. 3 Cylinder 920cc (56 C.I.)	1993-00	Straight sleeve, with ports cut in, No exhaust port bridge, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.530" Bottom exhaust 2.400", Width 1.990"	3-3/16"	RS			L-125-OB ² O.D. 3.465"	4.540"
75 H.P. 3 Cylinder	1975-79	Flanged sleeve, with ports cut in.	3"	CS		FL-02-OB ¹ O.D. 3-3/16"		4-9/16"
75 H.P. 3 Cylinder	1980-89	Flanged sleeve, with ports cut in, 3 port exhaust.	3"	CS		FL-025-OB ¹ O.D. 3-3/16"		4-3/4"
70 H.P. E-TEC 3 Cyl. 90 H.P. E-TEC 3 Cyl. 1295cc (79 C.I.)	2004-06	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585" Bottom exhaust 2.465", Width 2.150" No compression notch	3.600"	RS		LA-196-OB ² O.D. 3.800"		5.060"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
JOHNSON-EVINRUDE (Continued)							
EVINRUDE 2007-08 75 H.P. E-TEC 3 Cylinder 90 H.P. E-TEC 3 Cylinder 1295cc 1.3L (79 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.465", Width 2.150" No compression notch	3.600"	RS		LA-197-OB O.D. 3.800"		5.060"
EVINRUDE 2009-12 75 H.P. E-TEC 3 Cylinder 90 H.P. E-TEC 3 Cylinder 1295cc 1.3L (79 C.I.)	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.465", Width 2.150"	3.600"	RS		FL-218-OB O.D. 3.800"		5.040"
EVINRUDE 2013-18 75 H.P. E-TEC D.I. 3 Cylinder 90 H.P. E-TEC D.I. 3 Cylinder 1295cc 1.3L (79 C.I.)	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve, Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.465", Width 2.150"	3.600"	RS		FL-218-OB O.D. 3.800"		5.040"
85 H.P. V-4 1969-76 100 H.P. V-4 1971-72	Straight sleeve, no ports cut in.	3-3/8"	CI	T-70-OB O.D. 3-1/2"	LA-70-OB O.D. 3-9/16"	L-70-OB O.D. 3-5/8"	5.550"
85 H.P. V-4 100 H.P. V-4 Cross-Flow	Special flanged sleeve, to repair damaged or corroded upper cylinder wall, no ports cut in.	3-3/8"	CI	FL-034-OB O.D. 3-1/2"			5"
88 H.P. V-4 1988-93 90 H.P. V-4 1980-98 115 H.P. V-4 1980-98 GT-100 V-4 1993 Cross-Flow 1632cc (100 C.I.)	Straight sleeve, no ports cut in.	3-1/2"	CI	T-20-OB O.D. 3-5/8"	LA-20-OB O.D. 3-11/16"	L-20-OB² O.D. 3-3/4"	5-1/2"
90 H.P. V-4 1995-04 100 H.P. V-4 1995-00 115 H.P. V-4 1995-04 1726cc (105 C.I.) Carb Injection	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.620", Bottom exhaust 2.455", Width 2.235" No exhaust compression notch	3.600"	RS	Port (L) Starboard (R)	LA-133-OB² LA-134-OB² O.D. 3.800"		5.060"
90 H.P. Ficht 60° V-4 115 H.P. Ficht 60° V-4 (105 C.I.) 1726cc	Straight sleeve with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.600", Bottom exhaust 2.475", Width 2.350" No exhaust compression notch	3.600"	RS	Port (L) Starboard (R)	LA-179-OB² LA-180-OB² O.D. 3.800"		5.060"
EVINRUDE 2013-18 90 H.O. E-TEC D.I. 60° V-4 115 H.O. E-TEC D.I. 60° V-4 1726cc 1.7L (105 C.I.)		3.600"	RS	Port (L) Starboard (R)	TBD		
EVINRUDE 2008-12 115 H.P. E-TEC 60° V-4 1726cc 1.7L (105 C.I.)	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve, Exhaust Port Dimensions: Top sleeve to top exhaust 1.525", Bottom exhaust 2.415", Width 2.270" No exhaust compression notch	3.600"	RS	Port (L) Starboard (R)	FL-3402-OB FL-3403-OB O.D. 3.800"		4.645"
EVINRUDE 2013-18 115 H.P. E-TEC D.I. 60° V-4 1726cc 1.7L (105 C.I.)		3.600"	RS	Port (L) Starboard (R)	TBD O.D. 3.800"		
120 H.P. Ficht V-4	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.760" Bottom exhaust 2.420", Width 2.260" No exhaust compression notch	3.600"	RS	Port (L) Starboard (R)	LA-189-OB² LA-190-OB² O.D. 3.800"		5.060"
115 H.P. V-4 1969-70 Cross-Flow	Straight sleeve, no ports cut in.	3-7/16"	CI	T-38-OB O.D. 3-9/16"	LA-38-OB O.D. 3-5/8"	L-38-OB² O.D. 3-11/16"	5-1/2"
125 H.P. V-4 1971-72 135 H.P. V-4 1973 - on 140 H.P. V-4 1976-84 Cross-Flow	Straight sleeve, no ports cut in.	3-1/2"	CI	T-20-OB O.D. 3-5/8"	LA-20-OB O.D. 3-11/16"	L-20-OB² O.D. 3-3/4"	5-1/2"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
JOHNSON-EVINRUDE (Continued)							
115 H.P. V-4 (100 C.I.) 125 H.P. V-4 135 H.P. V-4 140 H.P. V-4 Cross-Flow	Special flanged sleeve, to repair damaged or corroded upper cylinder wall, no ports cut in.	3-1/2"	CI	FL-035-OB O.D. 3-5/8"			5-3/8"
120 H.P. V-4 1985-89 140 H.P. V-4 1985-91	Straight sleeve, with ports cut in, bridged exhaust port, 1.770" height from top.	3-1/2"	RS			L-026-OB ² O.D. 3.875"	5.992"
120 H.P. V-4 1988-94 140 H.P. V-4 1988-94 (122 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 2.860", Width 2.360" Bridged exhaust port	3.685"	RS			L-058-OB ¹ O.D. 3.875" (.095" wall)	5.230"
120 H.P. V-4 1988-94 140 H.P. V-4 1988-94	Flanged sleeve, O.D. + .020 with ports cut in, same as L-058-OB, bridged exhaust port.	3.685"				FL-082-OB O.D. 3.905"	5.225"
130 H.P. V-4 1995-00 2000cc (122 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.440". Exhaust Port Dimensions: Top sleeve to top exhaust 1.800", Bottom exhaust 2.880", Width 2.350", Bridged exhaust port	3.685"	RS		LA-135-OB ² O.D. 3.876"		5-1/4"
135 H.P. Ficht 60° V-6 150 H.P. Ficht 60° V-6 (158 C.I.) 2589cc	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.700", Bottom exhaust 2.510", Width 2.235" No exhaust compression notch	3.600"	RS	Port (L) Starboard (R)	LA-173-OB ² LA-174-OB ² O.D. 3.800"		5.060"
EVINRUDE 2013-18 135 H.O. E-TEC D.I. 60° V-6 2592cc 2.6L (158 C.I.)		3.600"	RS	Port (L) Starboard (R)	TBD O.D. 3.800"		
150 H.P. V-6 1992-04 2589cc (158 C.I.) Carb-Injection	Straight sleeve, with ports cut in, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.710" Bottom exhaust 2.500", Width 2.275"	3.600"	RS	Port (L) Starboard (R)	LA-117-OB ² LA-118-OB ² O.D. 3.800"		5.060"
150 H.P. V-6 1980-81 XP-150 V-6 1988-91 GT-150 V-6 1988-89 175 H.P. V-6 1976 - on 185 H.P. V-6 1984 - on Cross-Flow	Straight sleeve, no ports cut in.	3-1/2"	CI	T-20-OB O.D. 3-5/8"	LA-20-OB O.D. 3-11/16"	L-20-OB ² O.D. 3-3/4"	5-1/2"
175 H.P. V-6 1987-91 Cross-Flow	Straight sleeve, no ports cut in.	3-5/8"	CI	T-24-OB O.D. 3-3/4"	LA-24-OB O.D. 3-13/16"	L-24-OB O.D. 3-7/8"	5-1/2"
150 H.P. Eagle Series 175 H.P. V-6 1991-04 2589cc (158 C.I.) Carb-Injection	Straight sleeve, with ports cut in, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.610", Bottom exhaust 2.275", Width 2.500"	3.600"	RS	Port (L) Starboard (R)	LA-084-OB ² LA-116-OB ² O.D. 3.800"		5.060"
EVINRUDE 2008-12 150 H.P. E-TEC 60° V-6 2592cc 2.6L (158 C.I.)	Flanged sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.590", Bottom exhaust 2.430", Width 2.350" No exhaust compression notch	3.600"	RS	Port (L) Starboard (R)	FL-3405-OB FL-3404-OB O.D. 3.800"		4.645"
EVINRUDE 2013-18 150 H.P. E-TEC D.I. 60° V-6 2592cc 2.6L (158 C.I.)		3.600"	RS	Port (L) Starboard (R)	TBD O.D. 3.800"		
EVINRUDE E-TEC G2 2016-18 150 H.P. E-TEC D.I. 66° V-6 150 H.O. E-TEC D.I. 2744cc 2.7L (167 C.I.)		3.386" 86mm	RS	Port (L) Starboard (R)	TBD		

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
JOHNSON-EVINRUDE (Continued)							
175 H.P. Ficht 60° V-6 (158 C.I.) 2589cc	Straight sleeve, with ports cut in, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.625", Bottom exhaust 2.500", Width 2.240"	3.600"	RS	Port (L) Starboard (R)	LA-170-OB ² LA-171-OB ² O.D. 3.800"		5.060"
EVINRUDE 2005-08 175 H.P. D.I. 60° V-6 2589cc (158 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.600", Bottom exhaust 2.475", Width 2.280" Two oiler holes below the intake port.	3.600"	RS	Port (L) Starboard (R)	LA-222-OB LA-223-OB O.D. 3.800"		5.060"
EVINRUDE 2008-12 175 H.P. E-TEC 60° V-6 2592cc 2.6L (158 C.I.)	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve Exhaust Port Dimensions: Top sleeve to top exhaust 1.595", Bottom exhaust 2.435", Width 2.340" No exhaust compression notch	3.600"	RS	Port (L) Starboard (R)	FL-3400-OB FL-3401-OB O.D. 3.800"		5.060"
EVINRUDE E-TEC G2 2016-18 175 H.P. E-TEC D.I. 66° V-6 2744cc 2.7L (167 C.I.)		3.386" 86mm	RS	Port (L) Starboard (R)	TBD O.D. 3.800"		
200 H.P. V-6 Cross-Flow 1976-84	Straight sleeve, no ports cut in.	3-1/2"	CI	T-20-OB O.D. 3-5/8"	LA-20-OB O.D. 3-11/16"	L-20-OB ² O.D. 3-3/4"	5-1/2"
150 H.P. V-6 175 H.P. V-6 200 H.P. V-6 Cross-Flow	Special flanged sleeve to repair damaged or corroded upper cylinder wall, no ports cut in.	3-1/2"	CI	FL-035-OB ¹ O.D. 3-5/8"			5-1/4"
200 H.P. V-6 1985-87	Straight sleeve, with ports cut in, bridged exhaust port 1.770" height from top.	3-1/2"	RS			L-026-OB ² O.D. 3.875"	5.992"
XP, GT-200 V-6 1988-93 200 H.P. V-6 1988-93 225 H.P. V-6 1988-93	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.710" Bottom exhaust 2.850", Width 2.180" No exhaust port bridge.	3.685"	RS			L-059-OB ¹ O.D. 3.875" (.095" wall)	5.230"
GT-200, GT-300 V-6, V-8 1988-93	Flanged sleeve, O.D. + .020 with ports cut in, same as L-059-OB, no exhaust port bridge.	3.685"				FL-083-OB O.D. 3.905"	5.225"
200 H.P. V-6 1993-00 225 H.P. V-6 1993-00 3000cc (183 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.810", Bottom exhaust 2.850", Width 2.160" No exhaust port bridge. Intake has 2 finger ports per side.	3.685"	RS		LA-119-OB ¹ O.D. 3.875"	L-119-OB ¹ O.D. 3.940"	5.230"
EVINRUDE 200 H.P. Ficht D.I. 90° V-6 '01-05 200 H.P. E-TEC 90° V-6 '05-08 3279cc 3.3L (200 C.I.)	Flanged sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.760", Bottom exhaust 2.810", Width 2.370" No exhaust compression notch	3.858" 98mm	RS			FL-3408-OB O.D. 4.055"	5.440"
EVINRUDE 2008-12 200 H.P. E-TEC 60° V-6 2592cc 2.6L (158 C.I.)	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve Exhaust Port Dimensions: Top sleeve to top exhaust 1.595", Bottom exhaust 2.435", Width 2.340" No exhaust compression notch	3.600"	RS	Port (L) Starboard (R)	FL-3400-OB FL-3401-OB O.D. 3.800"		4.645"
EVINRUDE E-TEC G2 2014-18 200 H.P. E-TEC D.I. 66° V-6 2744cc 2.7L (167 C.I.)		3.386" 86mm	RS	Port (L) Starboard (R)	TBD		
EVINRUDE E-TEC G2 2014-18 200 H.P. E-TEC D.I. 74° V-6 3441cc 3.4L (210 C.I.)		3.854" 98mm	RS	Port (L) Starboard (R)	TBD		

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹O.D. Oversizes + .010, .020, .030, (.040) also available ²O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
JOHNSON-EVINRUDE (Continued)							
EVINRUDE E-TEC G2 2014-18 200 H.O. E-TEC D.I. 74° V-6 225 H.O. E-TEC D.I. 74° V-6 3441cc 3.4L (210 C.I.)		3.854" 98mm	RS	Port (L) Starboard (R)	TBD		
200 H.P. Ficht 60° V-6 225 H.P. Ficht 60° V-6 250 H.P. Ficht 60° V-6	Flanged sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.750" Bottom exhaust 2.850", Width 2.230" No exhaust compression notch	3.685"	RS			FL-169-OB ² O.D. 3.977"	5.225"
EVINRUDE 2000-08 225 H.P. Ficht D.I. & E-TEC 90° V-6 250 H.P. Ficht D.I. & E-TEC 90° V-6 3279cc 3.3L (200 C.I.)	Flanged sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.680" Bottom exhaust 2.810", Width 2.370" No exhaust compression notch	3.858" 98mm	RS		FL-187-OB ² O.D. 4.055"		5.440"
EVINRUDE 2008-12 225 H.P. E-TEC 90° V-6 250 H.P. E-TEC 90° V-6 3282cc 3.4L (210 C.I.)	Flanged sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.680" Bottom exhaust 2.810", Width 2.370" No exhaust compression notch, Oil groove over the intake side	3.854" 98mm	RS	Port (L) Starboard (R)	FL-3406-OB FL-3407-OB O.D. 4.055"		5.440"
235 H.P. V-6 Cross-Flow 1979-86	Straight sleeve, no ports cut in.	3-5/8"	CI	T-24-OB O.D. 3-3/4"	LA-24-OB O.D. 3-13/16"	L-24-OB O.D. 3-7/8"	5-1/2"
235 H.P. V-6 Cross-Flow 1979-86	Special flanged sleeve to repair damaged or corroded upper cylinder wall, no ports cut in.	3-5/8"	CI	FL-036-OB ¹ O.D. 3-3/4"			5-3/8"
2.6 XP V-6 Cross-Flow 1985-86	Straight sleeve, no ports cut in.	3-5/8"	CI	T-24-OB O.D. 3-3/4"	LA-24-OB O.D. 3-13/16"	L-24-OB O.D. 3-7/8"	5-1/2"
250 H.P. V-8 (244 C.I.) 1988-90	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.710" Bottom exhaust 2.850", Width 2.180" No exhaust port bridge.	3.685"	RS			L-059-OB ¹ O.D. 3.875"	5.230"
250 H.P. V-8 4000cc (244 C.I.) 1991-92	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 2.860", Width 2.360" Bridged exhaust port	3.685"	RS			L-058-OB ¹ O.D. 3.875"	5.230"
250 H.P. V-8 4000cc (244 C.I.) 1993-95	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.810", Bottom exhaust 2.850", Width 2.160" No exhaust port bridge. Intake has 2 finger ports per side.	3.685"	RS		LA-119-OB ¹ O.D. 3.875"	L-119-OB ¹ O.D. 3.940"	5.230"
250 H.P. HO 3.0 Litre 1999-00	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.710", Bottom exhaust 2.850", Width 2.160" No exhaust port bridge. Intake has 2 finger ports per side.	3.685"	RS		LA-168-OB O.D. 3.872"		5.230"
EVINRUDE E-TEC G2 2014-18 250 H.P. E-TEC D.I. 74° V-6 3441cc 3.4L (210 C.I.)		3.854" 98mm	RS	Port (L) Starboard (R)	TBD		
EVINRUDE E-TEC G2 2014-18 250 H.O. E-TEC D.I. 74° V-6 300 H.P. E-TEC D.I. 74° V-6 3441cc 3.4L (210 C.I.)		3.854" 98mm	RS	Port (L) Starboard (R)	TBD		
275 H.P. V-8 1985-88	Straight sleeve, with ports cut in, bridged exhaust port, 1.670" height from top.	3-1/2"	RS			L-027-OB ² O.D. 3.875"	5.992"
3.6 XP V-8 1985-87	Straight sleeve, with ports cut in, bridged exhaust port, 1.670" height from top.	3-1/2"	RS			L-027-OB ² O.D. 3.875"	5.992"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length	
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.		
JOHNSON-EVINRUDE (Continued)								
XP, GT-300 V-8 (244 C.I.)	1988-93	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.710", Bottom exhaust 2.850", Width 2.180" No exhaust port bridge.	3.685"	RS			L-059-OB ² O.D. 3.875"	5.230"
300 H.P. V-8 4000cc (244 C.I.)	1993-95	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.810", Bottom exhaust 2.850", Width 2.160" No exhaust port bridge. Intake has 2 finger ports per side.	3.685"	RS		LA-119-OB ¹ O.D. 3.875"	L-119-OB ¹ O.D. 3.940"	5.230"
EVINRUDE 300 H.P. E-TEC D.I. 90° V-6 3282cc 3.4L (210 C.I.)	2009-12	Flanged sleeve, with ports cut in, O.D. oil groove in sleeve.	3.854" 98mm	RS	Port (L) Starboard (R)	FL-3410-OB FL-3411-OB O.D. 4.055"		5.440"
EVINRUDE E-TEC G2 2014-18 250 H.O. E-TEC D.I. 74° V-6 300 H.P. E-TEC D.I. 74° V-6 3441cc 3.4L (210 C.I.)			3.854" 98mm	RS	Port (L) Starboard (R)	TBD		
SUZUKI								
8 H.P. 2 Cylinder	1992	Straight sleeve, with ports cut in.	2.125" 54mm	RS		LA-178-OB O.D. 2.330"		3.680"
DT-9.9 2 Cylinder	1985-87	Flanged sleeve, with ports cut in.	2.322" 59mm	RS		FL-063-OB O.D. 2.566"		4.170"
DT-9.9 2 Cylinder	1986-91	Straight sleeve, with ports cut in.	2.322" 59mm	RS		LA-075-OB O.D. 2.527"		3.936"
DT-15 2 Cylinder DT-16 2 Cylinder	1981-95 1981-87	Flanged sleeve, with ports cut in.	2.322" 59mm	RS		FL-063-OB O.D. 2.566"		4.170"
DT-25 2 Cylinder		Flanged sleeve, with ports cut in.	2.716" 71mm	RS		FL-078-OB O.D. 3.039"		4.905"
DT-25 3 Cylinder DT-30 3 Cylinder 543cc (33 C.I.)	1988-00 1988-97	Straight sleeve, with ports cut in.	2.440" 62mm	RS		LA-093-OB O.D. 2.644"		4.727"
DT-40 2 Cylinder 696cc (42.5 C.I.)	1984-98	Straight sleeve, with ports cut in.	3.110" 79mm	RS			L-060-OB O.D. 3.394"	5.433"
DT-50 2 Cylinder	1980-83	Flanged sleeve, with ports cut in.	3.149" 80mm	RS		FL-719-OB O.D. 3.469"		5.705"
DT-55 3 Cylinder DT-65 3 Cylinder	1985-97 1985-97	Straight sleeve, with ports cut in.	2.874" 73mm	RS			L-061-OB O.D. 3.156"	5.447"
DT-60 2 Cylinder	1984-86	Straight sleeve with ports cut in.	3.307" 84mm	RS			L-188-OB O.D. 3.670"	5.710"
DT-75 3 Cylinder DT-85 3 Cylinder 1.2 Litre 1197cc (73 C.I.)	1980-97 1980-00	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.660", Bottom exhaust 2.985", Width 1.975" No exhaust compression notch	3.307" 84mm	RS			L-028-OB O.D. 3.672"	5.713"
DT-90 V-4 DT-100 V-4 1.4 Litre 1419cc (87 C.I.)	1993-97 1993-00	Flanged sleeve, with ports cut in, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.460", Bottom exhaust 2.585", Width 1.950" No exhaust compression notch	3.307" 84mm	RS			FL-137-OB O.D. 3.590"	5.225"
DT-115 4 Cylinder	1981-85	Straight sleeve, with ports cut in, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.770", Bottom exhaust 3.150", Width 1.990"	3.307" 84mm	RS			L-029-OB O.D. 3.668"	6-1/2"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve, CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
SUZUKI (Continued)							
DT-115 EFI 4 Cylinder 1986-01 1.8 Litre 1773cc (108 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.260". Exhaust Port Dimensions: Top sleeve to top exhaust 1.730", Bottom exhaust 3.120", Width 1.965"	3.307" 84mm	RS			L-076-OB O.D. 3.667"	6.260"
DT-140 4 Cylinder 1981-91	Straight sleeve, with ports cut in. Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.770", Bottom exhaust 3.150", Width 1.990"	3.307" 84mm	RS			L-029-OB O.D. 3.668"	6-1/2"
DT-140 EFI 4 Cylinder 1995-01 1773cc (108 C.I.)	Straight sleeve, with ports cut in, Compression relief hole above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.755", Bottom exhaust 3.110", Width 1.980"	3.307" 84mm	RS			L-148-OB O.D. 3.667"	6.260"
DT-150 EFI 1981-00 V-6 2.7 Litre 2693cc (164 C.I.)	Flanged sleeve, with ports cut in, Compression relief hole above the exhaust port to be cut in after installation. Exhaust Port Dimensions: Top sleeve to top exhaust 1.950", Bottom exhaust 3.200", Width 1.980"	3.307" 84mm	RS			FL-121-OB O.D. 3.592"	6.525"
DT-150 Super Six 6 Cylinder 1981-89	Flanged sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.840", Bottom exhaust 3.235", Width 1.965" No exhaust compression notch	3.307" 84mm	RS			FL-062-OB O.D. 3.592"	6.525"
DT-150 Super Six 6 Cylinder 1981-91	Flanged sleeve, with ports cut in, Two compression relief holes above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.965", Bottom exhaust 3.225", Width 1.960" Original bore is boron carbide coated aluminum.	3.307" 84mm	AC/ RS			FL-104-OB O.D. 3.734"	6.537"
DT-150 EFI 6 Cylinder 1993-03 V-6 2.7 Litre 2693cc (164 C.I.)	Flanged sleeve, with ports cut in, Two compression relief holes above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.965", Bottom exhaust 3.225", Width 1.960" Original bore is boron carbide coated aluminum.	3.307" 84mm	AC/ RS			FL-104-OB O.D. 3.734"	6.537"
DT-150 6 Cylinder 1999 2.7 Litre 2693cc (164 C.I.)	Flanged sleeve, with ports cut in, Compression relief hole above the exhaust port to be cut in after installation. Exhaust Port Dimensions: Top sleeve to top exhaust 1.975", Bottom exhaust 3.235", Width 1.630"	3.307" 84mm	RS			FL-191-OB O.D. 3.590"	6.525"
DT-175 6 Cylinder 1981-93 DT-200 6 Cylinder 1981-92	Flanged sleeve, with ports cut in, Compression relief hole above the exhaust port to be cut in after installation. Exhaust Port Dimensions: Top sleeve to top exhaust 1.950", Bottom exhaust 3.200", Width 1.980"	3.307" 84mm	RS			FL-121-OB O.D. 3.592"	6.525"
DT-200 EFI 6 Cylinder 1993-00 V-6 2.7 Litre 2693cc (164 C.I.)	Flanged sleeve, with ports cut in, Two compression relief holes above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.965", Bottom exhaust 3.225", Width 1.960" Original bore is boron carbide coated aluminum.	3.307" 84mm	AC/ RS			FL-104-OB O.D. 3.734"	6.537"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
SUZUKI (Continued)							
DT-225 EFI 6 Cylinder 1993-03 V-6 2.7 Litre 2693cc (164 C.I.)	Flanged sleeve, with ports cut in, No compression relief holes above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.965", Bottom exhaust 3.225" Width 1.960" Original bore is boron carbide coated aluminum. Bottom transfer ports open to end of sleeve.	3.307" 84mm	AC/ RS			FL-128-OB O.D. 3.742"	6.537"
DT-225 EFI V-6 1993-00 2.7 Litre 2693cc (164 C.I.)	Flanged sleeve, with ports cut in. No compression relief holes above the exhaust port, Exhaust Port Dimensions: Top sleeve to top exhaust 1.965", Bottom exhaust 3.225", Width 1.960"	3.307" 84mm	RS			FL-186-OB O.D. 3.742"	6.537"
SUZUKI FOUR STROKE OUTBOARD							
DF40A In-line 3 Cyl. 1999-18 DF50A In-line 3 Cyl. 2010-18 DF60A In-line 3 Cyl. 941cc 57.4 C.I.	Straight sleeve	2.854" 72.5mm	CI		LA-481 O.D. 3.025"		5-1/2"
DF70A In-line 4 Cyl. 2009-17 DF80A In-line 4 Cyl. DF90A In-line 4 Cyl. 1502cc 91.7 C.I.	Straight sleeve	2.952" 75mm	CI	T-175 O.D. 3.077"	LA-175 O.D. 3.143"		5-1/2"
DF70A In-line 4 Cyl. 2018-ON DF90A In-line 4 Cyl. DF100B In-line 4 Cyl. 1502cc 91.7 C.I.	Straight sleeve	2.952" 75mm	CI	T-175 O.D. 3.077"	LA-175 O.D. 3.143"		5-1/2"
DF100A In-line 4 Cyl. 2013-ON DF115A In-line 4 Cyl. DF140A In-line 4 Cyl. 2044cc 124.7 C.I.	Straight sleeve	3.386" 86mm	CI	T-70-OB O.D. 3.565"	LA-70-OB O.D. 3.628"		5-1/2"
DF150 H.P. In-line 4 Cylinder DF150 2006-ON DF150G 2014-16 DF150AP 2017-ON 2867cc 174.9 C.I.	Straight sleeve	3.819" 97mm	CI		LA-43 O.D. 4.003"		6-1/2"
DF175 H.P. In-line 4 Cylinder DF175 2006 - ON DF175G 2014-16 DF175AP 2017-ON 175 H.P. 2867cc 174.9 C.I.	Straight sleeve	3.819" 97mm	CI		LA-43 O.D. 4.003"		6-1/2"
200 H.P. In-line 4 Cyl. 2015-ON DF200A DF200AP 175 H.P. 2867cc 174.9 C.I.	Straight sleeve	3.819" 97mm	CI		LA-43 O.D. 4.003"		6-1/2"
DF250AP 55° V-6 250 H.P. EFI DF300 55° V-6 EFI DF300AP 55° V-6 EFI 300 H.P. 4028cc 245.6 C.I.	Straight sleeve	3.858" 98mm	CI		LA-43 O.D. 4.003"		6-1/2"
DF350AP 55° V-6 EFI 2018 350 H.P. 4390cc 267.9 C.I.	Straight sleeve	3.858" 98mm	CI		LA-43 O.D. 4.003"		6-1/2"
SEVEN MARINE FOUR STROKE OUTBOARD							
6.2 Litre V-8 2013-19 Models: 527, 557, 577S, 627SV 6162cc 376 C.I. Aluminum Block	Flanged sleeve	4.065" 103.25mm	CI			FL-3344 O.D. 4.300"	5.680"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"
1 O.D. Oversizes + .010, .020, .030, (.040) also available 2 O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
TOHATSU / NISSAN							
25 H.P. 2 Cylinder 30 H.P. 2 Cylinder 430cc	1990-00 Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.440", Bottom exhaust 2.320", Width 1.560", Compression relief hole above the exhaust port	2.677" 68mm	RS			L-126-OB O.D. 2.960"	4-7/8"
40 H.P. 2 Cylinder 493cc	1985-95 Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.450", Bottom exhaust 2.520", Width 1.690", No exhaust compression notch	2.755" 70mm	RS			L-064-OB O.D. 3.017"	5.155"
40 H.P. 3 Cylinder 50 H.P. 3 Cylinder 697cc 42.5 C.I.	1994-18 1992-18 Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.160". Exhaust Port Dimensions: Top sleeve to top exhaust 1.585", Bottom exhaust 2.500", Width 1.550", Overall length +.015" to allow decking after installation	2.677" 68mm	RS			L-123-OB O.D. 2.940"	5.115"
50 H.P. 2 Cylinder 55 H.P. 2 Cylinder 749cc	1986-91 1986-91 Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.800", Bottom exhaust 2.790", Width 1.940" No exhaust compression notch	3.189" 81mm	RS			L-065-OB O.D. 3.534"	5.910"
60 H.P. 3 Cylinder 70 H.P. 3 Cylinder 938cc	1991-95 1994-00 Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.375" Exhaust Port Dimensions: Top sleeve to top exhaust 1.800", Bottom exhaust 2.880", Width 1.715", Overall length +.020" to allow decking after installation	2.914" 74mm	RS			L-124-OB O.D. 3.195"	5.840"
70 H.P. 2 Cylinder	1986-90 Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.640", Bottom exhaust 2.860", Width 2.070" No exhaust compression notch	3.385" 86mm	RS			L-066-OB O.D. 3.745"	5.905"
70 H.P. 3 Cylinder 75 H.P. 3 Cylinder 90 H.P. 3 Cylinder 1267cc 77 C.I.	1993-2010 2011-2018 1993-2018 Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.765", Bottom exhaust 2.865", Width 2.060", Compression relief hole above the exhaust port. Overall length +.020" to allow decking after installation.	3.385" 86mm	RS			L-122-OB O.D. 3.746"	5.895"
115 H.P. 4 Cylinder 1768cc 108 C.I.	1995-2018 Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.565", Bottom exhaust 2.835", Width 2.060", Compression relief hole above the exhaust port. Overall length +.020" to allow decking after installation.	3.464" 88mm	RS			L-138-OB O.D. 3.787"	5.905"
120 H.P. 4 Cylinder 140 H.P. 4 Cylinder 1768cc	1993-04 1993-04 Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.565", Bottom exhaust 2.835", Width 2.060", Compression relief hole above the exhaust port. Overall length +.020" to allow decking after installation.	3.464" 88mm	RS			L-138-OB O.D. 3.787"	5.905"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
YAMAHA							
25 H.P. 2 Cylinder 1986-2010 395cc	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.460", Bottom exhaust 2.160", Width 1.600" No exhaust compression notch	2.637" 67mm	RS		LA-067-OB O.D. 2.880"		4.260"
25 H.P. 3 Cylinder 1986-00 30 H.P. 3 Cylinder 496cc	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.560", Bottom exhaust 2.370" Width 1.320" No exhaust compression notch	2.342" 59.5mm	RS		LA-068-OB ² O.D. 2.543"		4.725"
40 H.P. 2 Cylinder Enduro Series South American models	Straight sleeve, with ports cut in.	3.070" 78mm	RS		LA-101-OB O.D. 3.311"		5.592"
C 40 H.P. 2 Cylinder 1995-97 592cc	Straight sleeve, with ports cut in.	3.070" 78mm	RS		LA-101-OB O.D. 3.311"		5.592"
40 H.P. 3 Cylinder 1983-06 50 H.P. 3 Cylinder 1983-10 698cc (42.6 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.675", Bottom exhaust 2.665", Width 1.570" No exhaust compression notch	2.637" 67mm	RS		LA-069-OB ² O.D. 2.838"	L-069-OB ² O.D. 2.910"	5.240"
48 H.P. Twin thru 2000 Enduro Series 760cc South American models	Straight sleeve, with ports cut in.	3.228" 82mm	RS		LA-102-OB ² O.D. 3.433"		5.556"
C 55 H.P. 2 Cylinder 1994-95 760cc	Straight sleeve, with ports cut in.	3.228" 82mm	RS		LA-102-OB ² O.D. 3.433"		5.556"
60 H.P. 3 Cylinder 1992-06 70 H.P. 3 Cylinder 1983-10 849cc (51.8 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch. Exhaust Port Dimensions: Top sleeve to top exhaust 1.755" Bottom exhaust 2.760" Width 1.840"	2.834" 72mm	RS			L-051-OB ² O.D. 3.078"	5.556"
75 H.P. 3 Cylinder 1994-00 85 H.P. 3 Cylinder 1994-96 1140cc (69.6 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.820", Bottom exhaust 2.880", Width 2.000" No exhaust compression notch	3.228" 82mm	RS		LA-071-OB ² O.D. 3.433"		5.556"
90 H.P. 3 Cylinder 1983-10 1140cc (69.6 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.820", Bottom exhaust 2.880", Width 2.000" No exhaust compression notch	3.228" 82mm	RS		LA-071-OB ² O.D. 3.433"		5.556"
115 H.P. V-4 1983-88 130 H.P. V-4 1983-88 1730cc (105.5 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.790", Bottom exhaust 2.730", Width 2.090" No exhaust compression notch	3.543" 90mm	RS		LA-032-OB ² O.D. 3.748"		5.163"
115 H.P. V-4 (#6E5) 1989-09 1730cc (105.5 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch. Exhaust Port Dimensions: Top sleeve to top exhaust 1.490" Bottom exhaust 2.710", Width 2.200"	3.543" 90mm	RS		LA-086-OB ² O.D. 3.748"		5.163"
130 H.P. V-4 (#6L1) 1989-04 1730cc (105.5 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch. Exhaust Port Dimensions: Top sleeve to top exhaust 1.700", Bottom exhaust 2.725", Width 2.350"	3.543" 90mm	RS		LA-087-OB ² O.D. 3.748"		5.163"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,

CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
YAMAHA (Continued)							
150 H.P. V-6 1983-88 175 H.P. V-6 1983-87 200 H.P. V-6 1983-87 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.650", Bottom exhaust 2.730", Width 2.375" No exhaust compression notch	3.543" 90mm	RS		LA-033-OB ² O.D. 3.748"		5.163"
150 H.P. 90° V-6 (#6R3)1993-04 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.515". Exhaust Port Dimensions: Top sleeve to top exhaust 1.780", Bottom exhaust 2.725", Width 2.100"	3.543" 90mm	RS		LA-147-OB ² O.D. 3.787"		5.163"
PRO-V 150 V-6 1990-97 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch. Exhaust Port Dimensions: Top sleeve to top exhaust 1.275", Bottom exhaust 2.720", Width 2.200"	3.543" 90mm	RS		LA-090-OB ² O.D. 3.748"		5.163"
150 H.P. 76° V-6 V-Max 1998-10 175 H.P. 76° V-6 V-Max 1998-06 200 H.P. 76° V-6 V-Max 1998-06 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.555". Exhaust Port Dimensions: Top sleeve to top exhaust 1.820", Bottom exhaust 2.720", Width 2.200"	3.543" 90mm	RS		LA-158-OB ² O.D. 3.787"		5.163"
175 H.P. V-6 (#665) 1988-89 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.500". Exhaust Port Dimensions: Top sleeve to top exhaust 1.770", Bottom exhaust 2.655", Width 2.210"	3.543" 90mm	RS		LA-127-OB O.D. 3.748"		5.163"
PRO-V 175 V-6 1994-97 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.690", Bottom exhaust 2.720", Width 2.200" No exhaust compression notch	3.543" 90mm	RS		LA-140-OB O.D. 3.787"		5.163"
200 H.P. V-6 (#6G5) 1988-89 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.690", Bottom exhaust 2.710", Width 2.200" No exhaust compression notch	3.543" 90mm	RS		LA-088-OB ² O.D. 3.748"		5.163"
175 H.P. 90° V-6 (#6R3) 1990-00 200 H.P. 90° V-6 (#6R3)1990-04 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.690", Bottom exhaust 2.710", Width 2.225" No exhaust compression notch	3.543" 90mm	RS		LA-089-OB ² O.D. 3.787"		5.163"
PRO-V 200 V-6 1993-97 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.690", Bottom exhaust 2.720", Width 2.225" No exhaust compression notch	3.543" 90mm	RS		LA-141-OB O.D. 3.787"		5.163"
V-MAX 200 H.P. 1998-06 2.6 Litre 76° V-6 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.555". Exhaust Port Dimensions: Top sleeve to top exhaust 1.820", Bottom exhaust 2.720", Width 2.200"	3.543" 90mm	RS		LA-158-OB O.D. 3.787"		5.163"
Z200, LZ200 2006-13 200 H.P. HDPI 2.6 Litre 76° V-6 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.515". Exhaust Port Dimensions: Top sleeve to top exhaust 1.700", Bottom exhaust 2.710", Width 2.350"	3.543" 90mm	RS		LA-199-OB O.D. 3.787"		5.163"

★ AC: Alloy-Chrome Cylinder Bore, CC: Original Barrel is Cast-Iron, CS: Cast-In Sleeve,
CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
YAMAHA (Continued)							
V-MAX 200 H.P. 1998-06 VX-200C 3.1 Litre 76° V-6 3130cc (191 C.I.)	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.735". Exhaust Port Dimensions: Top sleeve to top exhaust 2.050", Bottom exhaust 3.260", Width 2.140"	3.543" 90mm	RS			L-159-OB ² O.D. 3.903"	6.340"
225 H.P. V-6 (#6K7) 1989-97 2596cc (158.4 C.I.)	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.605", Bottom exhaust 2.710", Width 2.345" No exhaust compression notch	3.543" 90mm	RS		LA-091-OB ² O.D. 3.748"		5.163"
225 H.P. V76° V-6 1996	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.750". Exhaust Port Dimensions: Top sleeve to top exhaust 2.075", Bottom exhaust 3.270", Width 2.130" Two oiler holes next to intake port	3.543" 90mm	RS			L-161-OB ² O.D. 3.903"	6.340"
225 H.P. V76X, VX225 1994-04 250 H.P. V76X, VX250 1994-04 3.1 Litre 76° V-6 3130cc	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.910" Bottom exhaust 3.270", Width 2.300" No exhaust compression notch Two .090" oiler holes next to intake port	3.543" 90mm	RS			L-092-OB ² O.D. 3.900"	6.340"
VZ225 V-MAX 2004-08 225 H.P. HPDI 3.3 Litre 76° V-6 3342cc	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.685". Exhaust Port Dimensions: Top sleeve to top exhaust 2.050", Bottom exhaust 3.250", Width 2.315"	3.661" 93mm	RS			L-219-OB O.D. 3.980"	6.355"
250 H.P. V-6 1992	Straight sleeve, with ports cut in, Exhaust Port Dimensions: Top sleeve to top exhaust 1.910", Bottom exhaust 3.270", Width 2.300" No exhaust compression notch Two .187" oiler holes next to intake port	3.543" 90mm	RS			L-145-OB ² O.D. 3.900"	6.340"
250 H.P. V-6 1990-91, 1993	Straight sleeve, with ports cut in, Oval Exhaust Port Shape Exhaust Port Dimensions: Top sleeve to top exhaust 1.910", Bottom exhaust 3.270", Width 2.310" No exhaust compression notch Two .090" oiler holes next to intake port	3.543" 90mm	RS			L-149-OB ² O.D. 3.900"	6.340"
VZ250 V-MAX 2003-08 250 H.P. HPDI 3.3 Litre 76° V-6 3342cc	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.685". Exhaust Port Dimensions: Top sleeve to top exhaust 1.890", Bottom exhaust 3.250", Width 2.310"	3.661" 93mm	RS			L-192-OB ² O.D. 3.980"	6.355"
VZ300 V-MAX 2004-09 300 H.P. HPDI 3.3 Litre 76° V-6 3342cc	Straight sleeve, with ports cut in, Exhaust has compression relief notch, top to deck 1.685". Exhaust Port Dimensions: Top sleeve to top exhaust 2.050", Bottom exhaust 3.250", Width 2.315"	3.661" 93mm	RS			L-221-OB ² O.D. 3.980"	6.355"

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¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Outboard Cylinder Sleeves

Model	Sleeve Description	Cylinder I.D.	★	Sleeve Part No.			Sleeve Length
				1/16" Wall O.D.	3/32" Wall O.D.	1/8" Wall O.D.	
YAMAHA FOUR STROKE OUTBOARD							
30 H.P. In-line 3 Cyl. 2006-18 40 H.P. In-line 3 Cyl. 747cc SOHC	Straight sleeve	2.559" 65mm	CI	T-209-OB O.D. 2.690"	LA-209-OB O.D. 2.752"		4-3/8"
1.0 L In-line 4 Cyl. 2006-18 50 H.P. 60 H.P. 70 H.P. 996cc 60.8 C.I. SOHC	Straight sleeve	2.559" 65mm	CI	T-209-OB O.D. 2.690"	LA-209-OB O.D. 2.752"		4-3/8"
75 H.P. In-line 4 Cyl. 2006-17 90 H.P. In-line 4 Cyl. 2006-17 1596cc 97.4 C.I. DOHC	Straight sleeve	3.110" 79mm	CI	T-253 O.D. 3.235"	LA-253 O.D. 3.298"		6.000"
75 H.P. In-line 4 Cyl. 2018 90 H.P. In-line 4 Cyl. 2018 1830cc 111.7 C.I. SOHC	Straight sleeve	3.189" 81mm	CI	T-603-A O.D. 3.315"	LA-603-A O.D. 3.378"		6.000"
115 H.P. In-line 4 Cyl. 2006-14 Model F115JA 1741cc 106.2 C.I. DOHC	Straight sleeve	3.110" 79mm	CI	T-253 O.D. 3.235"	LA-253 O.D. 3.298"		6.000"
115 H.P. In-line 4 Cyl. 2014-18 Model F115JB 1.8 Litre 1832cc 111.8 C.I. DOHC	Straight sleeve	3.189" 81mm	CI	T-603-A O.D. 3.315"	LA-603-A O.D. 3.378"		6.000"
150 H.P. In-line 4 Cyl. 2007-18 Model F150 2.7 Litre 2670cc 162.9 C.I.	Straight sleeve	3.700" 94mm	CI		LA-37 O.D. 3.878"		6.000"
175 H.P. In-line 4 Cyl. 2014-18 Model F175 2.8 Litre 2875cc 169.9 C.I. DOHC	Straight sleeve	3.780" 96mm	CI	T-28A O.D. 3.906"	LA-28A O.D. 3.968"		6.000"
200 H.P. In-line 4 Cyl. 2014-17 Model 2.8 Litre 2875cc 169.9 C.I. DOHC	Straight sleeve	3.780" 96mm	CI	T-28A O.D. 3.906"	LA-28A O.D. 3.968"		6.000"
3.3 Litre V-6 204.5 C.I. 2006-18 Model F200, F225, F250 3352cc 200 H.P. V-6 225 H.P. V-6 250 H.P. V-6	Straight sleeve	3.700" 94mm	CI		LA-37A O.D. 3.878"		5-1/8"
4.2 Litre V-6 254.5 C.I. 2012-16 Model VF200, VF225, VF250 4169cc 200 H.P. V-6 225 H.P. V-6 250 H.P. V-6	Straight sleeve	3.780" 96mm	CI	T-28A O.D. 3.906"	LA-28A O.D. 3.968"		6.000"
4.2 Litre V-6 254.5 C.I. 2017-18 Model F225, F250 4169cc 225 H.P. V-6 250 H.P. V-6	Straight sleeve	3.780" 96mm	CI	T-28A O.D. 3.906"	LA-28A O.D. 3.968"		6.000"
4.2 Litre 300 H.P. V-6 2014-18 Model F300 4169cc 254.5 C.I.	Straight sleeve	3.780" 96mm	CI AC	T-28A O.D. 3.906"	LA-28A O.D. 3.968"		6.000"
5.3 Litre V-8 2008-18 Model F300, F350 5330cc 300 H.P. V-8 2008-11 350 H.P. V-8 2008-18	Straight sleeve	3.700" 94mm	CI		LA-37A O.D. 3.878"		5-1/8"
5.6 Litre 425 H.P. V-8 Model XTO Offshore	Straight sleeve	3.780" 96mm	CI AC	T-28A O.D. 3.906"	LA-28A O.D. 3.968"		6.000"

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CI: Cast-In Sleeve Liner, RS: Replacement Sleeve • Metric conversion: 1mm = .03937"

¹ O.D. Oversizes + .010, .020, .030, (.040) also available ² O.D. Oversize + .020 also available



Inboard/Stern Drive Cylinder Sleeves

Engine Model and Description	Cylinder Bore	Sleeve Part No.				Sleeve Length
		1/16" Wall	O.D.	3/32" Wall	O.D.	
MERCURY MERCURISER						
3.0 Litre (181 C.I.) 4 In-Line	4"	T-40	4-1/8"	LA-40	4-3/16"	6"
4.3 Litre (262 C.I.) V-6 4.3 LH, 4.3L EFI	4"	T-40	4-1/8"	LA-40	4-3/16"	6"
4.5 Litre V-6 2014-ON (275 C.I.) MPI	4"	T-40	4-1/8"	LA-40	4-3/16"	6"
5.0 Litre (305 C.I.) V-8 5.0 L EFI	3.736"	T-87	3-55/64"	LA-87	3-59/64"	6-7/16"
5.7 Litre (350 C.I.) V-8 5.7 L EFI, 350 MAG MPI	4"	T-40	4-1/8"	LA-40	4-3/16"	6"
6.2 Litre (377 C.I.) V-8	4"	T-40	4-1/8"	LA-40	4-3/16"	6"
7.4 Litre (454 C.I.) V-8 7.4 L MPI, 454 MAG MPI	4-1/4"	T-53A	4-3/8"	LA-53A	4-7/16"	6-1/4"
8.1 Litre (496 C.I.) V-8	4-1/4"	T-53A	4-3/8"	LA-53A	4-7/16"	6-1/4"
8.2 Litre (502 C.I.) V-8 502 MAG MPI	4.470"					
O.M.C.						
5.7 Litre (350 C.I.) V-8	4"	T-40	4-1/8"	LA-40	4-3/16"	6"
7.4 Litre (454 C.I.) V-8	4-1/4"	T-53A	4-3/8"	LA-53A	4-7/16"	6-1/4"
7.5 Litre (460 C.I.) V-8	4.36"	T-73	4-31/64"	LA-73	4-35/64"	6-7/8"
VOLVO - PENTA						
D1-13 Twin	2.637" 67mm			LA-210	2-13/16"	6-1/2"
D1-20 3-Cylinder	2.637" 67mm			LA-210	2-13/16"	6-1/2"
D1-30 3-Cylinder	3.031" 77mm	T-860	3.156"	LA-860	3.218"	6-1/2"
D2-40 4-Cylinder	3.031" 77mm	T-860	3.156"	LA-860	3.218"	6-1/2"
D2-50 4-Cylinder	3.307" 84mm	T-607	3-7/16"	LA-607	3-1/2"	7-1/2"
D2-75 4-Cylinder	3.307" 84mm	T-607	3-7/16"	LA-607	3-1/2"	7-1/2"
4.3 Litre V-6 Models: V6 -200, 240, 280 262 C.I. Aluminum Block Flanged Top Sleeve	3.920" 99.6mm			FL-3235	4.185"	5.585"
5.3 Litre V-8 Models: V8 -300-C, 350-C 323 C.I. Aluminum Block Flanged Top Sleeve	3.780" 96mm			TBD	TBD	TBD
6.2 Litre V-8 Models: V8 -380-CE, 430-CE 376 C.I. Aluminum Block Flanged Top Sleeve	4.055" 103mm			FL-3344	4.300"	5.680"
YAMAHA						
1.8 Litre TR-1 High Output 1812cc Inline 4-Cylinder Flanged Top sleeve	86mm			YA-5688	3.550"	5.100"
TR-1 High Output 1049cc Inline 3-Cylinder	82mm			YA-5802	3.400"	4.285"
3.0 Litre (181 C.I.) 4 In-Line	4"	T-40	4-1/8"	LA-40	4-3/16"	6"
4.3 Litre (262 C.I.) V-6	4"	T-40	4-1/8"	LA-40	4-3/16"	6"
5.0 Litre (305 C.I.) V-8	3.736"	T-87	3-55/64"	LA-87	3-59/64"	6-7/16"
5.7 Litre (350 C.I.) V-8	4"	T-40	4-1/8"	LA-40	4-3/16"	6"



All Purpose Sleeves

ALL PURPOSE SLEEVES—NO FLANGE

Cylinder I.D. *	3/32" Wall		1/8" Wall		Overall Length	Cylinder I.D. *	3/32" Wall		1/8" Wall		Overall Length
	Part No.	O.D.	Part No.	O.D.			Part No.	O.D.	Part No.	O.D.	
1-3/8"	LA-106	1-9/16"	L-106	1-5/8"	4-1/2"	2-3/4"	LA-212	2-15/16"	L-212	3"	8-1/4"
1-7/16"	LA-107	1-5/8"	L-107	1-11/16"	4-1/2"	2-13/16"	LA-213	3"	L-213	3-1/16"	8-1/4"
1-1/2"	LA-108	1-11/16"	L-108	1-3/4"	4-1/2"	2-7/8"	LA-214	3-1/16"	L-214	3-1/8"	8-1/4"
1-9/16"	LA-109	1-3/4"	L-109	1-13/16"	4-1/2"	2-15/16"	LA-215	3-1/8"	L-215	3-3/16"	8-1/4"
1-5/8"	LA-110	1-13/16"	L-110	1-7/8"	6-1/2"	3"	LA-300	3-3/16"	L-300	3-1/4"	8-1/4"
1-11/16"	LA-111	1-7/8"	L-111	1-15/16"	6-1/2"	3-1/16"	LA-301	3-1/4"	L-301	3-5/16"	8-1/4"
1-3/4"	LA-112	1-15/16"	L-112	2"	6-1/2"	3-1/8"	LA-302	3-5/16"	L-302	3-3/8"	9-1/4"
1-13/16"	LA-113	2"	L-113	2-1/16"	6-1/2"	3-3/16"	LA-303	3-3/8"	L-303	3-7/16"	9-1/4"
1-7/8"	LA-114	2-1/16"	L-114	2-1/8"	6-1/2"	3-1/4"	LA-304	3-7/16"	L-304	3-1/2"	9-1/4"
1-15/16"	LA-115	2-1/8"	L-115	2-3/16"	6-1/2"	3-5/16"	LA-305	3-1/2"	L-305	3-9/16"	9-1/4"
2"	LA-200	2-3/16"	L-200	2-1/4"	6-1/4"	3-3/8"	LA-306	3-9/16"	L-306	3-5/8"	9-1/4"
2-1/16"	LA-201	2-1/4"	L-201	2-5/16"	6-1/4"	3-7/16"	LA-307	3-5/8"	L-307	3-11/16"	9-1/4"
2-1/8"	LA-202	2-5/16"	L-202	2-3/8"	6-1/4"	3-1/2"	LA-308	3-11/16"	L-308	3-3/4"	9-1/4"
2-3/16"	LA-203	2-3/8"	L-203	2-7/16"	6-1/4"	3-9/16"	LA-309	3-3/4"	L-309	3-13/16"	9-1/4"
2-1/4"	LA-204	2-7/16"	L-204	2-1/2"	6-1/4"	3-5/8"	LA-310	3-13/16"	L-310	3-7/8"	9-1/4"
2-5/16"	LA-205	2-1/2"	L-205	2-9/16"	6-1/4"	3-11/16"	LA-311	3-7/8"	L-311	3-15/16"	9-1/4"
2-3/8"	LA-206	2-9/16"	L-206	2-5/8"	6-1/4"	3-3/4"	LA-312	3-15/16"	L-312	4.00"	10-1/4"
2-7/16"	LA-207	2-5/8"	L-207	2-11/16"	6-1/4"	3-13/16"	LA-313	4.00"	L-313	4-1/16"	10-1/4"
2-1/2"	LA-208	2-11/16"	L-208	2-3/4"	6-1/4"	3-7/8"	LA-314	4-1/16"	L-314	4-1/8"	10-1/4"
2-9/16"	LA-209	2-3/4"	L-209	2-13/16"	6-1/4"	3-15/16"	LA-315	4-1/8"	L-315	4-3/16"	10-1/4"
2-5/8"	LA-210	2-13/16"	L-210	2-7/8"	6-1/4"	4.00"	LA-400	4-3/16"	L-400	4-1/4"	10-1/4"
2-11/16"	LA-211	2-7/8"	L-211	2-15/16"	8-1/4"	4-1/16"	LA-401	4-1/4"	L-401	4-5/16"	10-1/4"

*Sleeve has bore stock to allow boring to cylinder I.D. listed

ALL PURPOSE FLANGED SLEEVES

Cylinder I.D. *	O.D.	Flange O.D.	Flange Thickness	Overall Length	Part No.	
47mm	1.850"	2.100"	2.225"	.200"	5.250"	FL-47
48mm	1.890"	2.140"	2.265"	.200"	5.250"	FL-48
49mm	1.930"	2.180"	2.305"	.200"	5.250"	FL-49
50mm	1.968"	2.220"	2.345"	.200"	5.250"	FL-50
52mm	2.047"	2.297"	2.422"	.200"	5.250"	FL-52
54mm	2.125"	2.375"	2.500"	.200"	5.250"	FL-54
56mm	2.205"	2.455"	2.580"	.200"	5.250"	FL-56
58mm	2.283"	2.530"	2.655"	.200"	6"	FL-58
60mm	2.362"	2.625"	2.750"	.200"	6"	FL-60
62mm	2.441"	2.690"	2.815"	.200"	6"	FL-62
64mm	2.520"	2.770"	2.895"	.200"	6"	FL-64
65mm	2.559"	2.810"	2.935"	.200"	6"	FL-65
66mm	2.598"	2.850"	2.975"	.200"	6"	FL-66
67mm	2.637"	2.890"	3.015"	.200"	6"	FL-67
68mm	2.677"	2.930"	3.055"	.200"	6"	FL-68
70mm	2.755"	3.005"	3.130"	.200"	6"	FL-70
72mm	2.835"	3.085"	3.210"	.200"	6"	FL-72
73mm	2.874"	3.125"	3.250"	.200"	6"	FL-73
74mm	2.913"	3.165"	3.290"	.200"	6"	FL-74
75mm	2.952"	3.200"	3.325"	.200"	6.500"	FL-75
76mm	2.992"	3.250"	3.375"	.200"	6.500"	FL-76
78mm	3.070"	3.320"	3.445"	.200"	6.500"	FL-78
80mm	3.150"	3.400"	3.525"	.200"	6.500"	FL-80
82mm	3.228"	3.480"	3.605"	.200"	6.500"	FL-82
83mm	3.267"	3.520"	3.645"	.200"	6.500"	FL-83
84mm	3.307"	3.560"	3.685"	.200"	6.500"	FL-84
86mm	3.386"	3.635"	3.760"	.200"	6.500"	FL-86
88mm	3.464"	3.715"	3.840"	.200"	6.500"	FL-88
89mm	3.503"	3.755"	3.880"	.200"	6.500"	FL-89

*Sleeve has bore stock to allow boring to cylinder I.D. listed

Special flanged sleeves without ports and blank sleeves made to customer's specifications also available. Allow 6 weeks for delivery.



Personal Watercraft Sleeves

Model	Cyl. I.D.	★	Part No.
KAWASAKI JET SKI 2-STROKE			
JS-440 TWIN	1976-80	68mm	RS KA-630
JS-440 TWIN	1981-90	68mm	CC KA-835
JS-550 TWIN	1982-85	75mm	CS KA-836
JS-550 TWIN	1986-90	75mm	CC KA-5033
JS-550SX REED TWIN	1991-95	75mm	CI KA-5135
JS-650, JL, JF TWIN	1986-96	76mm	CS KA-999
JS-750SX A1, A2, A3, A4 TWIN	1992-95	80mm	CI KA-5166
JS-750SS A1, A2	1992-93	80mm	CS KA-5166H
SPECIAL HEAVY SLEEVE 3.600" O.D.			
JH-750 SSxi B1, B2, B3 TWIN	1993-95	80mm	CI KA-5567
JH-750 SS A3, A4	1994-95		
JH-750 XiR DI	1994		
JT-750 ST, A1, A1A, A2	1994-95		
Cylinder No. 22, 30			
SPECIAL HEAVY SLEEVE O.D. 3.600"		80mm	CS KA-5567H
JH-750 Zxi C1, C2, C3 TWIN	1995-97		
JH-750 SSxi F1, F2, SS E1, E2	1996-97		
JH-750 Xi Sport G1, G2	1998-99		
JS-750 SXi B1, B2	1995-96		
JS-750 SXi C1, C2, C3, C4, C5	1998-02		
JT-750 STS B1, B2, B3, STX C1	1995-98		
Cylinder No. 24, 31 and 49		80mm	CS KA-5580H
Cylinder No. 29		80mm	CS KA-5685H
800 SX-R TWIN	2003-11	82mm	CI KA-5496
Special Heavy O.D. Sleeve Repairs		82mm	CS KA-5496H
Broken Cylinder Skirts			
JH-900, JS-900, JT-900 TRIPLE	1995-06	73mm	CI KA-5283
Special Heavy O.D. Sleeve Repairs		73mm	CS KA-5283H
Broken Cylinder Skirts			
JH-1100, JT-1100 TRIPLE	1996-03	80mm	C1 KA-5303
ULTRA 130 D.I.	2001-04		
Special Heavy O.D. Sleeve Repairs			
Broken Cylinder Skirts		80mm	CS KA-5303H
JH-1200, ULTRA 150 TRIPLE	1999-05	80mm	AC KA-5415
STX-R 1200	2002-05		
KAWASAKI JET SKI 4-STROKE			
STX-12F 1200cc INLINE 4 CYL.	2003-07	83mm	AC KA-5433
STX-15F INLINE 4-CYL. 1498cc	2004-19	83mm	AC KA-5565
ULTRA X	2007-19		
SX-R JS1500	2017-19		
ULTRA 250X, LX	2007-08	83mm	AC KA-5576
ULTRA 260X, LX	2009-10		
ULTRA 300X, LX	2010-13		
ULTRA 310X	2014-19		
INLINE 4-CYL. 1498cc			

Model	Cyl. I.D.	★	Part No.
SEA DOO 2-STROKE			
SEA DOO 580 TWIN	1988	76mm	RS FL-5102
SEA DOO 580 TWIN	1989-96	76mm	RS FL-5125
SEA DOO 650 TWIN	1993-95	78mm	RS FL-5244
SEA DOO 750 TWIN	1995-05	82mm	RS FL-5268
GS, GSI, HX, GTI, GTS, XP			
SEA DOO 800 (785) TWIN	1995-05	82mm	RS FL-5290
GTI, GTX, GSX, SPX, XP			
SEA DOO 800 (785) TWIN	1998-05	82mm	RS FL-5583
GTI, GTX, GSX, SPX, XP RFI			
DIRECT INJECT MOTOR			
SEA DOO 951 TWIN	2000-07	88mm	RS FL-5578
GTX, LRV, RX, XP, 3D, DIRECT INJECT			
SEA DOO 4-STROKE			
900 HO ACE 899cc TRIPLE	2014-19	74mm	AC FL-5809
1503, 1500 HO ACE 1494cc TRIPLE	2002-19	100mm	CI FL-5500
4-TEC, GTI 130, GTX LTD 230, RXT, WAKE			
YAMAHA 2-STROKE			
650 SUPER JET TWIN	1990-93	77mm	RS YA-5139
650 WAVE RUNNER VXR	1992-95		
650 WAVE RUNNER III	1996		
650 WAVE RUNNER ,LX TWIN	1991-93	77mm	RS YA-5176
650 WAVE RUNNER III	1990-95		
650 WAVERUNNER VXR	1991-92		
700 SUPER JET, WAVE RUNNER		81mm	RS YA-5187
701cc TWIN	1993-2019		
700 WAVE RAIDER DX TWIN	1995-05	81mm	RS YA-5284
WAVE VENTURE XL700			
GP760 TWIN	1996-00	84mm	RS YA-5304
WAVE BLASTER, WAVE RUNNER			
WAVE VENTURE, XL760			
800 GP, XL, XLT TWIN	1998-05	80mm	AC YA-5356
1100 WAVE RAIDER TRIPLE	1995-97	81mm	RS YA-5282
1100 WAVE VENTURE			
GP1200, XL1200		84mm	RS YA-5349
WAVE RUNNER TRIPLE	1997-99		
SUV1200	1999-04		
GP1200R TRIPLE	2000-02	80mm	AC YA-5469
XL 1200 LTD	1998-01		
XLT 1200	2001-05		
GP 1300R TRIPLE	2003-08	84mm	AC YA-5502
YAMAHA WAVE RUNNER 4-STROKE			
FX HIGH OUTPUT	2003-08	76mm	AC YA-5566
VX110	2008-09		
1052cc INLINE 4-CYL.			
FX 1800 CRUISER	2008-19	86mm	AC YA-5688
FX, FZR, HO, SHO, SVHO, VXR			
1812cc INLINE 4-CYL.			
GP-1800R INLINE 4-CYL.	2017-19	86mm	AC YA-5688
TR-1 HIGH OUTPUT, VX1050	2016-19	82mm	CI YA-5802
VX CRUISER, DELUXE, HO, LTD			
EX, EXR, DELUXE, SPORT,			
1049cc INLINE 3-CYL.			



Conversion Chart/Warranty

MILLIMETER/INCH CONVERSION CHART

mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches	mm	Inches
1	0.0394	26	1.0236	51	2.0079	76	2.9921	101	3.9764	126	4.9606	151	5.9449	176	6.9291		
2	0.0787	27	1.0630	52	2.0472	77	3.0315	102	4.0157	127	5.0000	152	5.9843	177	6.9685		
3	0.1181	28	1.1024	53	2.0866	78	3.0709	103	4.0551	128	5.0394	153	6.0236	178	7.0079		
4	0.1575	29	1.1417	54	2.1260	79	3.1102	104	4.0945	129	5.0787	154	6.0630	179	7.0472		
5	0.1969	30	1.1811	55	2.1654	80	3.1496	105	4.1339	130	5.1181	155	6.1024	180	7.0866		
6	0.2362	31	1.2205	56	2.2047	81	3.1890	106	4.1732	131	5.1575	156	6.1417	181	7.1260		
7	0.2756	32	1.2598	57	2.2441	82	3.2283	107	4.2126	132	5.1969	157	6.1811	182	7.1654		
8	0.3150	33	1.2992	58	2.2835	83	3.2677	108	4.2520	133	5.2362	158	6.2205	183	7.2047		
9	0.3543	34	1.3386	59	2.3228	84	3.3071	109	4.2913	134	5.2756	159	6.2598	184	7.2441		
10	0.3937	35	1.3780	60	2.3622	85	3.3465	110	4.3307	135	5.3150	160	6.2992	185	7.2835		
11	0.4331	36	1.4173	61	2.4016	86	3.3858	111	4.3701	136	5.3543	161	6.3386	186	7.3228		
12	0.4724	37	1.4567	62	2.4409	87	3.4252	112	4.4094	137	5.3937	162	6.3780	187	7.3622		
13	0.5118	38	1.4961	63	2.4803	88	3.4646	113	4.4488	138	5.4331	163	6.4173	188	7.4016		
14	0.5512	39	1.5354	64	2.5197	89	3.5039	114	4.4882	139	5.4724	164	6.4567	189	7.4409		
15	0.5906	40	1.5748	65	2.5591	90	3.5433	115	4.5276	140	5.5118	165	6.4961	190	7.4803		
16	0.6299	41	1.6142	66	2.5984	91	3.5827	116	4.5669	141	5.5512	166	6.5354	191	7.5197		
17	0.6693	42	1.6535	67	2.6378	92	3.6220	117	4.6063	142	5.5906	167	6.5748	192	7.5591		
18	0.7087	43	1.6929	68	2.6772	93	3.6614	118	4.6457	143	5.6299	168	6.6142	193	7.5984		
19	0.7480	44	1.7323	69	2.7165	94	3.7008	119	4.6850	144	5.6693	169	6.6535	194	7.6378		
20	0.7874	45	1.7717	70	2.7559	95	3.7402	120	4.7244	145	5.7087	170	6.6929	195	7.6772		
21	0.8268	46	1.8110	71	2.7953	96	3.7795	121	4.7638	146	5.7480	171	6.7323	196	7.7165		
22	0.8661	47	1.8504	72	2.8346	97	3.8189	122	4.8031	147	5.7874	172	6.7717	197	7.7559		
23	0.9055	48	1.8898	73	2.8740	98	3.8583	123	4.8425	148	5.8268	173	6.8110	198	7.7953		
24	0.9449	49	1.9291	74	2.9134	99	3.8976	124	4.8819	149	5.8661	174	6.8504	199	7.8346		
25	0.9843	50	1.9685	75	2.9528	100	3.9370	125	4.9213	150	5.9055	175	6.8898	200	7.8740		

LOS ANGELES SLEEVE CO., INC. LIMITED WARRANTY

Los Angeles Sleeve Co. warrants this product will be free from defects in material and workmanship for thirty (30) days following date of original purchase. If the product is found by LOS ANGELES SLEEVE CO. to be defective, such products will, at LOS ANGELES SLEEVE CO.'s option, be replaced or repaired at cost to LOS ANGELES SLEEVE CO. All products alleged by Purchaser to be defective must be returned to LOS ANGELES SLEEVE CO., postage prepaid, within the thirty (30) days warranty period.

THIS LIMITED WARRANTY DOES NOT COVER LABOR OR OTHER COSTS OR EXPENSES INCIDENTAL TO THE REPAIR AND/OR REPLACEMENT OF PRODUCTS OR PARTS.

This limited warranty does not apply to any product which has been subject to misuse, mishandling, misapplication, neglect (including but not limited to improper maintenance), accident, improper installation, modification (including but not limited to use of unauthorized parts or attachments), or adjustment or repair performed by anyone other than LOS ANGELES SLEEVE CO.

The parties hereto expressly agree that the Purchaser's sole and exclusive remedy against LOS ANGELES SLEEVE CO. shall be for the repair or replacement of the defective product as provided in this limited warranty. This exclusive remedy shall not be deemed to have failed of its essential purpose so long as LOS ANGELES SLEEVE CO. is willing and able to repair or replace defective goods.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOT EXPRESSLY SET FORTH HEREIN. ANY PRODUCT WHICH MAY BE SOLD BY LOS ANGELES SLEEVE CO. BUT WHICH IS NOT MANUFACTURED BY LOS ANGELES SLEEVE CO. IS NOT WARRANTED BY LOS ANGELES SLEEVE CO. BUT IS SOLD ONLY WITH THE WARRANTIES, IF ANY, OF THE MANUFACTURERS THEREOF.

LOS ANGELES SLEEVE CO.'S LIABILITY (WHETHER UNDER THE THEORIES OF BREACH OF CONTRACT OR WARRANTY, NEGLIGENCE OR STRICT LIABILITY) FOR ITS PRODUCTS SHALL BE LIMITED TO REPAIRING OR REPLACING PARTS FOUND BY LOS ANGELES SLEEVE CO. TO BE DEFECTIVE, OR AT LOS ANGELES SLEEVE CO.'S OPTION, TO REFUND THE PURCHASE PRICE OF SUCH PRODUCT. IN NO EVENT SHALL LOS ANGELES SLEEVE CO. BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE PRODUCT. CONSEQUENTIAL DAMAGES SHALL INCLUDE, WITHOUT LIMITATION, LOSS OF USE, INCOME OR PROFIT, OR LOSSES SUSTAINED AS THE RESULT OF INJURY (INCLUDING DEATH) TO ANY PERSON, OR LOSS OF OR DAMAGE TO PROPERTY.

Any claim by Purchaser regarding this product shall be deemed waived by the Purchaser unless submitted to LOS ANGELES SLEEVE CO. within the earlier of (i) fifteen (15) days following the date Purchaser discovered, or by reasonable inspection should have discovered, any claimed breach of this limited warranty, or (ii) thirty (30) days following the date of original purchase. Any cause of action for breach of this limited warranty shall be brought within six months from the date the alleged breach was discovered or should have been discovered, whichever occurs first.

Some states do not allow limitations on how long an implicit warranty lasts or the exclusion of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



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