

# **Cylinder, Piston, Piston Ring And Gasket Set Application List**

**SFN-880-3**

**March 2000**

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\*NOTE: INSURE THE THAT LATEST REVISION TO THE REFERENCED PUBLICATION IS UTILIZED.

## EXHAUST VALVES AND CORRESPONDING EXHAUST VALVE GUIDES

Exhaust Valve Part Number	Dia. Stem	Type	Cyl. Application	Guide – Exhaust Valve
* 66531 Serv. With °17B19712 66531	13/32” 13/32”	Solid Stem, °Chrome Plated Stem Solid Stem	Parallel Head Parallel Head	16R19730 (O-235) 66529 (O-290-D, -D2 Series)
**17B19712 Serv. With LW-19034	7/16”	Sodium Cooled, Nimonic, Chrome Plated Stem	Parallel Head	LW-11626 (O-235)
**LW-11634 Serv. With LW-19034	7/16”	Sodium Cooled, Nimonic, Chrome Plated Stem	Parallel Head	LW-11626
71595 (See Note for VO-360)	7/16”	Sodium Cooled	Parallel Head	72115
* 73111 (Serv. With LW-16740)	1/2”	Sodium Cooled, Nimonic, Chrome Plated Stem	Angle Head	75838
**76081, 74541, 75068 Serv. With LW-19001	1/2”	Sodium Cooled, Nimonic, Chrome Plated Stem	Parallel Head	74230
**76076, LW-11082 Serv. With LW-18498	1/2”	Sodium Cooled, Nimonic, Chrome Plated Stem	Angle Head	79046
**LW-15732 Serv. With LW-18497	1/2”	Sodium Cooled, Nimonic, Chrome Plated Stem	Angle Head	16R21705 (TIO-360-C1A6D, TO-360- C1A6D, -F1A6D)
**LW-15732 Serv. With LW-18497	1/2”	Sodium Cooled, Nimonic, Chrome Plated Stem	Angle Head	16R21710 (TIO-540-V2AD, -W2A, LTIO-540-V2AD, -W2A)
74802, LW-18102, LW-11167 Serv. With LW-16740	1/2”	Sodium Cooled, Nimonic, Chrome Plated Stem	Angle Head	75838

\*\*LW-19034 Replaces 17B19712 Valve (Use LW-11626 Valve Guide With LW-19034 Valve).

\*\*LW-18498 Replaces 76076 or LW-11082 Valves (Valve Guide Remains Unchanged).

\*\*LW-19001 Replaces Applicable 74541, 75068 or 76081 Valves (Valve Guide Remains Unchanged).

\*\*LW-19034 Replaces LW-11634 Valve (Valve Guide Remains Unchanged).

\*\*LW-18497 Replaces LW-15732 Valve (Valve Guide Remains Unchanged).

\* Cylinder Assembly Part Number is Changed When Replacing 73111 Valve Requiring Bronze Guide with LW-16740 Requiring Ni-Resist Guide. Ref. Supersedure Notice 254, 254A.

° Chrome Plated Stem.

Reference the Latest Revision to Service Instruction No. 1246 for Information Concerning LW-11634 or LW-19034 Valve and LW-11626 Guide.

Reference the Latest Revision to Service Instruction No. 1256 for Information Concerning Flangeless Valve Guides.

VO, IVO-360 Series Engines Using 71595 Exhaust Valve Employ 72115 Valve Guide. Also, Ref. The Latest Revision to Service Instruction No. 1136 Convert to 1/2” Valve.

VO, IVO-360 Series Engines Using LW-19001 Exhaust Valve Employ LW-15680 Exhaust Valve Guide (Ni-Resist).

\*Cylinder Assembly Part Number is Changed When Replacing 66531 Valve Requiring Bronze Guide With 17B19712 Valve Requiring Ni-Resist Guide.

Ref.: Supersedure Notice 268.

## SEAL AND GASKET SET SECTION

<u>Seal and Gasket Set</u>	<u>Model Application</u>
61499-1	O-235-C, -E, -F, -G, -H, -J, -K, -L, -M, -N, -P
69371-1	O-290 Series
69371-1 LW-16850 LW-12636	O-320, IO-320 Conventional, O, IO, LIO, AEIO-320 Wide Deck O-320-D2J Wide Deck AIO-320 Wide Deck
LW-14815	O-320-H Series
69371-1	O-340 Series
75439-1	O-360-A, -B, -C, -D; HO-360-A1A, -B1A, -B1B; IO, HIO-360-B Conventional O-360-A, -B, -C, -D, -F, -G, -J; IO, HO, HIO-360-B; IO-360-F1A, -L2A, -M1A LO-360-A1H6, -A1N6 Wide Deck; AEIO-360-B, -H1A, -H1B Wide Deck
75441-1	IO, HIO-360 Conventional IO-360-A, -C, -D, -K; HIO-360-A, -C; LIO, LHIO-360-C Wide Deck AEIO-360-A, -C Wide Deck
LW-12937	HIO-360-D1A Wide Deck
LW-10964	AIO-360-A1A, -A1B, -B1B
LW-12945 LW-12944	O, LO-360 Wide Deck (Dual Magneto) IO-360 Wide Deck (Dual Magneto)
LW-14845	HIO-360-E, -F Wide Deck (Dual Magneto) LHIO-360-F Wide Deck (Dual Magneto)
LW-14976	TO-360-C, -F Wide Deck (Dual Magneto)
78913-1	TIO-360-A Wide Deck
LW-14815 LW-16765	O, LO-360-E1A6D ('76 Series) TO, LTO-360-E1A6D ('76 Series)
71187-1	VO-360-A1A, -A1B, -B1B; IVO-360-A1A Conventional; IVO-360-A1A Wide Deck

## SEAL AND GASKET SET SECTION (CONTINUED)

<u>Seal and Gasket Set</u>	<u>Model Application</u>
68378-1	O-435-A
69448-1	GO-435-C2, -C2B, -C2B1, -C2B2, -C2B2-6, -C2E
70378-1	GO-435-C2A, -C2A2
71900-1	VO-435-A Series
76911-1	VO-435-B1A
77203-1	TVO-435-A, -B, -D, -G
LW-13494	TVO-435-F
69448-1	GO-480-B, -F6 Series; GO-480-C2, -G2 Series
69949-1	GO-480-D1A, -D1B; GO-480-C1B6, -G1B6, -G1E6
71197-1	GO-480-C1D6, -G1A6, -G1D6, -G1F6, -G1G6, -G1J6; IGO-480-A1B6
71181-1	GSO, IGSO-480 Series
71569-1	O-540-A, -B, -E, -F, -G, -H, -J and IO-540-C, -D, -J, -N, -R, -V, -W, -AB1A5 Conventional and Wide Deck (Parallel Valve Head)
73185-1	IO-540-A, -B, -E, -G, -H, -K, -L, -M, -P, -S Conventional and Wide Deck (Angle Valve Head)
LW-13378	O-540-B, -E, -G, -H Wide Deck (Dual Magneto)
LW-18072	IO-540-AA1A5 Wide Deck
05K22679	IO-540-AC1A5 Wide Deck
LW-13367	IO-540-K, -L, -M, -U Wide Deck (Dual Magneto); AEIO-540-L1B5D Wide Deck (Dual Magneto)
LW-13377	IO-540-C, -N, -T, -V, -W and O-540-J, -L Wide Deck (Dual Magneto)
LW-14476	AEIO-540-D4A5, -D4B5, -D4D5 Wide Deck
77175-1	TIO-540-A Series Conventional; TIO-540-A2C Wide Deck
LW-10683	TIO-540-C1A, -E1A, -H1A Conventional; TIO-540-C1A, -C1AD Wide Deck

## SEAL AND GASKET SET SECTION (CONTINUED)

### Seal and Gasket Set

### Model Application

LW-12971	TIO-540-G1A Conventional
LW-15381	TIO, LTIO-540-R2AD Wide Deck (Dual Magneto)
LW-15903	TIO-540-S1AD Wide Deck
LW-12956	TIO, LTIO-540-F, -J, -N (Dual Magneto)
LW-18072	TIO, LTIO-540-U2A Wide Deck
LW-19180	TIO-540-K1AD, -AA1AD Wide Deck
LW-18656	TIO, LTIO-540-J2B Wide Deck
LW-18786	TIO, LTIO-540-V2AD Wide Deck
LW-19259	TIO, LTIO-540-W2A Wide Deck
05K19387	TIO-540-AB1AD, -AB1BD Wide Deck
05K21002	TIO-540-AE2A Wide Deck
05K21173	TIO-540-AF1A, -AF1B, -AG1A Wide Deck
05K22781	TIO-540-AJ1A Wide Deck
05K22599	TIO-540-AH1A Wide Deck
73203-1	IGO-540-A Series
73345-1	IGO-540-B Series
73203-1	IGSO-540-A, -B Series
71900-1	VO-540-A, -B, -C; IVO-540-A1A
74445-1	TIVO-540-A2A, -A2B
77816-1	TIO-541-E Series
LW-11365	TIGO-541-E
LW-15583	TIGO-541-D1B
75181-1	IO-720-A, -B, -C, -D Series Conventional
LW-15423	IO-720-A1B, -B1B, -B1BD, -D1B, -D1C, -D1CD Wide Deck

## PISTON SUPERSEDURE AND INTERCHANGEABILITY DATA

- A. 75089 Piston interchangeable with 72967 or 74530 piston when proper oil regulating ring is used. (See Kits.)
- B. 75413 Piston interchangeable singly or in sets with 74059 piston with proper ring combination – (Change from full wedge to half wedge rings).
- C. LW-10207-S Piston interchangeable with 73264 piston in engine sets only.
- D. 75984 Piston interchangeable with 67266 piston in engine sets only.
- E. 75984 Piston interchangeable with 73628 piston in engine sets only.
- F. 75984 Piston interchangeable with 73620 piston in engine sets only.
- G. 75984 Piston interchangeable with 73932 piston in engine sets only.
- H. 75984 Piston interchangeable with 71553 piston in engine sets only.
- I. 73947-S Piston interchangeable with 71608 piston in engine sets only.
- J. 73947-S Piston interchangeable with 72249 piston singly or in engine sets when proper oil regulating ring is used. (See Kits.)
- K. LW-10207-S Piston interchangeable with 76258 piston in engine sets or in pairs installed in opposite cylinders. (Weight difference.)
- L. LW-10208-S Piston interchangeable with 73976-S piston in engine sets only.
- M. LW-10207-S Piston interchangeable with 73947-S piston in engine sets only.
- N. 75089 Piston interchangeable with 71594 piston in engine sets only. (Full wedge to half wedge rings.)
- P. LW-10545-S Piston interchangeable with 75961 piston singly or in engine sets.
- Q. LW-10545-S Piston interchangeable with 76966-S piston singly or in engine sets.
- R. LW-13358-S Piston interchangeable with LW-14610-S piston in engine sets only.
- S.\* LW-18729 Piston interchangeable with LW-13623, LW-13623-1 pistons in engine sets only.
- T.\*\* LW-18725 Piston interchangeable with LW-11621 piston in engine sets only.
- U.\*\*\* LW-10545-S Piston interchangeable with LW-19176-S piston in engine sets only.
- V. LW-19176-S Pistons are completely interchangeable with 14D21953-S piston.

NOTE: 75617, 78203-S (No longer listed) and LW-10207-S pistons are completely interchangeable.  
74242-S, 78672-S (No longer listed) and LW-10208-S pistons are completely interchangeable.

- \* Ref. Supersedure Notice No. 265 and the latest revision to Service Letter No. L213.
- \*\* Ref. Supersedure Notice No. 266.
- \*\*\* Ref. Supersedure Notice No. 294 Sup. A, also the latest revision to Service Instruction No. 1471

## CYLINDER AND KIT SUPERSEDURE AND INTERCHANGEABILITY DATA

The cylinder assemblies and kits which use 73111 STD 1/2" exhaust valve requiring bronze guides have been deleted from this publication. However, for customer convenience the following is a list of these parts with the corresponding cylinder assemblies and kits which use LW-16740 nimonic, chrome stem exhaust valve (requiring Ni-Resist guides).

<u>Cyl. With Bronze Guide to Receive 73111 Valve</u>	<u>Kit</u>	<u>Cyl. With Ni-Resist Guide to Receive LW-16740 Valve</u>	<u>Kit</u>	<u>Model Application</u>
73881	77483	74558	*77487 N.L.A.	VO-540
73881	74029	74558	*75036 N.L.A.	VO-540
73881	77490	74558	*77493 N.L.A.	VO-540
73948	77319	LW-19046	05K21224	360 Conv.
73948	75070	LW-19046	05K21225 N.L.A.	360 Conv.
74974	77320	LW-19047	05K21281	360 W.D.
74974	75442	LW-19047	05K21280 N.L.A.	360 W.D.
74974	LW-11747	LW-19047	05K21124	360 W.D.
75171	75232	75137	05K21227 N.L.A.	VO-540
75171	77482	75137	05K21228	VO-540
75171	75229	75137	05K21222	VO-540
75171	77489	75137	05K21223	VO-540
75929	76209	LW-19037	05K21273	GO-480
76040	77809	75215	05K21272	GO-480
76040	77303	75215	05K21272	GO-480
76645	76492	LW-19036	05K21214	VO-435
76645	76492-A	LW-19036	05K21215-A	VO-435
76646	76959	LW-19035	05K21229	GO-435
76662	76900	74218	05K21216	VO-435
76662	76900-A	74218	05K21217-A	VO-435

\* - See Note on Pages 48, 49.

**CYLINDER AND KIT SUPERSEDURE AND INTERCHANGEABILITY DATA (CONTINUED)**

<u>Cyl. With Bronze Guide to Receive 73111 Valve</u>	<u>Kit</u>	<u>Cyl. With Ni-Resist Guide to Receive LW-16740 Vale</u>	<u>Kit</u>	<u>Model Application</u>
LW-11865	LW-13614	LW-19038	05K21271 N.L.A.	GO-480
LW-12987	LW-13115	LW-12993	05K21120	360, 540 W.D.
LW-12987	LW-13116	LW-12993	05K21282 N.L.A.	360 W.D.
LW-12997	LW-14510	LW-19048	05K21263	540 Conv.
LW-12997	LW-15425	LW-19048	05K21263	720 Conv.
LW-13528	LW-13606	LW-13530	05K21113 N.L.A.	360, 720 Conv.
LW-13528	LW-13607	LW-13530	05K21112	360, 720 Conv.
LW-13528	LW-13583	LW-13530	05K21112	540 Conv.
LW-13528	LW-13584	LW-13530	05K21113 N.L.A.	540 Conv.
LW-13537	LW-13576	LW-13532	05K21110	540 Conv.
LW-13537	LW-13577	LW-13532	05K21111 N.L.A.	540 Conv.
LW-13537	LW-13390	LW-13532	05K21110	720 Conv.
LW-15438	LW-15464	LW-12988	05K21118	720 W.D.

NOTE: Ref. Change Notice No. 279 for Old Cyl. Kit/New Cyl. Kit Conversion Chart.

**O-235-C1, -C1B, -C1C, -C2A, -C2B, -C2C, -E2A, -H2C**

	<u>PLAIN CYL.</u>	(LOW COMPRESSION)	<u>PLAIN CYL.</u>	<u>SERVICE RINGS FOR CHROME CYL'S.</u>
Cylinder	16A19731* N.L.A.		LW-16704	
Piston	73851		73851	
Top Ring	68196 CH		68196 CH	LW-14233 PL
2 <sup>nd</sup> Ring	68196 CH		68196 CH	LW-14233 PL
Oil Reg.	LW-16867 CH		LW-16867 CH	LW-18352 PL
Scraper	60072 PL		60072 PL	60072 PL
Exhaust Valve	17B19712		LW-19034	
Intake Valve	66429		LW-11901	
Cylinder, Piston & Ring Assy. Kit	NOTE		05K21232**	
<p>Reference the Latest Revision to Service Instruction No. 1246 for Conversion to LW-11634 or LW-19034 Exhaust Valve.            * Reference the Latest Revision to Supersedure Notice No. 268 for Conversion to 17B19712 Exhaust Valve.            ** Reference NOTE, Page 2.</p>				(3/8" Cyl. Base Thru Studs) (32 Ea. 383-B Nuts)
NOTE: Cylinder Assy. No Longer Available.				

**O-235-F1B, -F2A, -F2B, -G1A, -G2A, -J2A**

	<u>NITRIDED STEEL HALF WEDGE RINGS</u>	(HIGH COMPRESSION)	<u>SERVICE RINGS FOR CHROME CYL'S.</u>	
Cylinder	LW-16703			
Piston	LW-18725*			
Top Ring	78862 CH°		LW-14234 PL	
2 <sup>nd</sup> Ring	78862 CH°		LW-14234 PL	
Oil Reg.	78864 CH°		LW-14235 PL	
Exhaust Valve	LW-19034			
Intake Valve	LW-11901			
Cylinder, Piston & Ring Assy. Kit	05K21233**			
<p>NOTE: Use LW-11625 Piston Pin Plugs with LW-13445 Pins.            Cylinder Assy's. 16A19731, LW-16703 and LW-16704 Employ Allison Type Seats.            * Reference NOTE, Page 6. Reference Supersedure Notice No. 266.            **Reference NOTE, Page 2.            ° Piston Ring Kit for Nitrided Cyl's. is 05K22034 (1 Cyl.). See Page 58.</p>				(3/8" and 7/16" Cyl. Base Thru Studs) (16 Ea. 383-B Nuts) (16 Ea. STD-2106 Nuts)

**O-235-K2A, -K2B, -K2C, -L2A, -L2C, -M1, -M2**

	<b><u>NITRIDED STEEL HALF WEDGE RINGS</u></b> (HIGH COMPRESSION)	<b><u>SERVICE RINGS FOR CHROME CYL'S.</u></b>
Cylinder	LW-16703	
Piston	LW-18729*	
Top Ring	78862 CH°	LW-14234 PL
2 <sup>nd</sup> Ring	78862 CH°	LW-14234 PL
Oil Reg.	78864 CH°	LW-14235 PL
Exhaust Valve	LW-19034	
Intake Valve	LW-11901	
Cylinder, Piston & Ring Assy. Kit	05K21114**	

\*\*Reference NOTE, Page 2.

Use LW-11625 Piston Pin Plugs with LW-13445 Pins.

Cylinder Assembly LW-16703 Employs Allison Type Seats.

Conversion Kits:

LW-13933-S Kit – Conversion O-235-F2A to –K2A; -J2A to –L2A (20-21 Series Mags.)

LW-13934-S Kit – Conversion O-235-F2B to –K2B (1200 Series Mags.)

LW-13935-S Kit – Carburetor Conversion O-235-K2A, -K2B, -L2A.

NOTE: LW-18935 or LW-18935-85 is Service Cylinder to Convert O-235-L2C to O-235-N2C.

\*Reference NOTE on Page 6, also Supersedure Notice No. 265 and the Latest Revision to Service Letter No.L213.

°Piston Ring Kit for Nitrided Cyl's. is 05K22034 (1 Cyl.). See Page 58.

(3/8" and 7/16" Cyl.  
Base Thru Studs)  
(16 Ea. 383-B Nuts)  
(16 Ea. STD-2106 Nuts)

**O-235-N2A, -N2C, -P1, -P2A, -P2C, -P3C**

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve  
Intake Valve

Cylinder, Piston & Ring Assy. Kit

**NITRIDED CYLS.**  
**HALF WEDGE RINGS**  
**(HIGH COMPRESSION)**

LW-18290  
LW-18729\*  
78862 CH°  
78862 CH°  
78864 CH°  
LW-19034  
LW-11901

05K21123\*\*

\* Reference NOTE, Page 6. Reference Supersedure Notice No. 265 and the Latest Revision to Service Letter No. L213.

\*\*Reference NOTE, Page 2.

° Piston Ring Kit for Nitrided Cyl's. is 05K22034 (1 Cyl.). See Page 58.

(3/8" and 7/16" Cyl.  
Base Thru Studs)  
(16 Ea. 383-B Nuts)  
(16 Ea. STD-2106 Nuts)

## O-290-D

**PLAIN CYL.**  
(LOW COMPRESSION)

Cylinder	71831
Piston	69958
Top Ring	62916 CH
2 <sup>nd</sup> Ring	62916 CH
Oil Reg.	69401 CH
Exhaust Valve	66531
Intake Valve	66429

Cylinder, Piston & Ring Assy. NOTE

Reference the Latest Revision to Service Instruction No. 1246 for Conversion to LW-11634 or LW-19034 Exhaust Valve.

NOTE: O-290-D Cylinder Assemblies No Longer Available.

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## O-290-D2

**PLAIN CYL.**  
(HIGH COMPRESSION)

Cylinder	71837
Piston	69841
Top Ring	62916 CH
2 <sup>nd</sup> Ring	62916 CH
Oil Reg.	69401 CH
Exhaust Valve	66531
Intake Valve	73938

Cylinder, Piston & Ring Assy. NOTE

Reference the Latest Revision to Service Instruction No. 1246 for Conversion to LW-11634 or LW-19034 Exhaust Valve.

NOTE: O-290-D2 Cylinder Assemblies No Longer Available.

NOTE: Plain Steel Cylinder Assemblies Not Recommended for High Compression Engines.

**O-290-D2B, -D2C**

**PLAIN CYL.**  
**(LOW COMPRESSION)**

Cylinder	71837
Piston	70396
Top Ring	62916 CH
2 <sup>nd</sup> Ring	62916 CH
Oil Reg.	68338 PL
Exhaust Valve	66531
Intake Valve	73938

Cylinder, Piston & Ring Assy. Kit

NOTE

Reference the Latest Revision to Service Instruction No. 1246 for Conversion to LW-11634 or LW-19034 Exhaust Valve.

NOTE: O-290-D2B, -D2C Cylinder Assemblies No Longer Available.

**O-320-H  
“76” Series**

**O-320-H2AD, -H3AD**

	<b><u>NITRIDED CYLS. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (PARALLEL HEAD VALVES)	<b><u>APPROVED RINGS FOR CHROME CYL'S.</u></b>
Cylinder	LW-15318	
Piston	LW-15357	
Top Ring	74241 CH°	74673 PL
2 <sup>nd</sup> Ring	74241 CH°	74673 PL
Oil Reg.	14H21950 CH°	73998 PL
Exhaust Valve	LW-19001	
Intake Valve	LW-15314	
Cylinder, Piston & Ring Assy. Kit	05K21119**	

\*\*Reference NOTE, Page 2.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

## WIDE DECK

**O-320-A1B, -A2B, -A2C, -A2D, -A3A, -A3B, -E1A, -E1C, -E1F, -E1J, -E2A, -E2B, -E2C, -E2D, -E2E, -E2F, -E2G, -E3D, -E3H**

	<b>PLAIN CYL. <u>HALF WEDGE RINGS</u></b>	<b>NITRIDED CYL. <u>HALF WEDGE RINGS</u></b>
	(LOW COMPRESSION) (PARALLEL HEAD VALVES)	
Cylinder	LW-12417 N.L.A.	LW-12416
Piston	75413	75413
Top Ring	74989 CH $\alpha$	74241 CH $^{\circ}$
2 <sup>nd</sup> Ring	74989 CH $\alpha$	74241 CH $^{\circ}$
Oil Reg.	14H21950 CH $\alpha$	14H21950 CH $^{\circ}$
Exhaust Valve	LW-19001	LW-19001
Intake Valve	73938	73938
Cylinder, Piston & Ring Assy. Kit	NOTE**	05K21237-A

$\alpha$  Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.

$^{\circ}$  Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

NOTE: Suffix "A" at Part Number to Designate Heavy Piston Pin (LW-13445). Plugs Unchanged. Ref.Supersedure Notice No. 222.

NOTE: Plain Steel Cylinder No Longer Available.

**O-320-B2B, -B2C, -B2D, -B3B, -B3C, -D1A, -D1AD, -D1C, -D1D, -D1F, -D2A, -D2B, -D2C, -D2G, -D2J, -D3G**

**IO-320-B1A, -B1C, -B1D, -B1E, -B2A, -D1A, -D1AD, -D1B, -D1C; LIO-320-B1A**

**AIO-320-A1B, -B1B, -C1B; AEIO-320-D1B, -D2B**

	<b>NITRIDED CYL. <u>HALF WEDGE RINGS</u></b>
	(HIGH COMPRESSION) (PARALLEL HEAD VALVES)
Cylinder	LW-12416
Piston	75089
Top Ring	74241 CH $^{\circ}$
2 <sup>nd</sup> Ring	74241 CH $^{\circ}$
Oil Reg.	14H21950 CH $^{\circ}$
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21100**

$^{\circ}$  Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

## WIDE DECK

**O-320-E2A, -E2C; IO-320-E1A, -E1B, -E2A, -E2B; AEIO-320-E1A, -E1B, -E2A, -E2B**

**NITRIDED CYL.  
HALF WEDGE RINGS  
(LOW COMPRESSION) (PARALLEL HEAD VALVES)**

Cylinder	LW-12416
Piston	75413
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21237-A**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

NOTE: Suffix "A" at Part Number to Designate Heavy Piston Pin (LW-13445). Plugs Unchanged. Ref. Supersedure Notice No. 222.

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**IO-320-C1A, -C1B, -C1F; LIO-320-C1A**

**NITRIDED CYL.  
HALF WEDGE RINGS  
(HIGH COMPRESSION) (PARALLELHEAD VALVES)**

Cylinder	LW-12418*
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21242**

\* Cylinder Assembly Requires Long Reach Spark Plugs.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\* Reference NOTE, Page 2.

**O-320 – NO SUFFIX; O-320-A1A, -A2A, -A2B, -A2C, -A3A, -A3B, -A3C, -E1A, -E2A**

	<b>PLAIN CYL. <u>HALF WEDGE RINGS</u></b>	<b>NITRIDED CYL. <u>HALF WEDGE RINGS</u></b>
	(LOW COMPRESSION) (PARALLEL HEAD VALVES)	
Cylinder	LW-12409 N.L.A.	16B21508
Piston	75413	75413
Top Ring	74989 CH⌘	74241 CH°
2 <sup>nd</sup> Ring	74989 CH⌘	74241 CH°
Oil Reg.	14H21950 CH⌘	14H21950 CH°
Exhaust Valve	LW-19001	LW-19001
Intake Valve	73938	73938
Cylinder, Piston & Ring Assy. Kit	NOTE**	05K21423-A

⌘ Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

NOTE: Suffix "A" at Part Number to Designate Heavy Piston Pin (LW-13445). Plugs Unchanged. Reference Supersedure Notice No. 222.

NOTE: Plain Steel Cylinder No Longer Available.

**IO-320-B1A; LIO-320-B1A**

	<b>NITRIDED CYL. <u>HALF WEDGE RINGS</u></b>
	(HIGH COMPRESSION) (PARALLEL HEAD VALVES)
Cylinder	LW-12413
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21101**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

**O-320-B1A, -B1B, -B2A, -B2B, -B3B, -B3C, -D1A, -D2A, -D2B**

	<b>PLAIN CYL. HALF WEDGE RINGS</b>	<b>PLAIN CYL. FULL WEDGE RINGS</b>	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(HIGH COMPRESSION) (PARALLEL HEAD VALVES)		
Cylinder	LW-13393 N.L.A.	LW-13393 N.L.A.	LW-12413
Piston	75089	71549	75089
Top Ring	74989 CH $\alpha$	68513 CH	74241 CH $^{\circ}$
2 <sup>nd</sup> Ring	74989 CH $\alpha$	68513 CH	74241 CH $^{\circ}$
Oil Reg.	14H21950 CH $\alpha$	69457 CH	14H21950 CH $^{\circ}$
Exhaust Valve	LW-19001	LW-19001	LW-19001
Intake Valve	73938	73938	73938
Cylinder, Piston & Ring Assy. Kit	NOTE**	NOTE**	05K21101*

$\alpha$  Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.

$^{\circ}$  Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

NOTE: Plain Steel Cylinder Assemblies Not Recommended for High Compression Engines.

NOTE: Plain Steel Cylinder Assemblies No Longer Available.

**O-340-A Series**

	<b>PLAIN CYL. HALF WEDGE RINGS</b>	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(HIGH COMPRESSION) (PARALLEL HEAD VALVES)	
Cylinder	77603 N.L.A.	LW-12420 N.L.A.
Piston	75089	75089
Top Ring & 2 <sup>nd</sup> Ring	74989 CH $\alpha$	74241 CH $^{\circ}$
Oil Reg.	14H21950 CH $\alpha$	14H21950 CH $^{\circ}$
Exhaust Valve	LW-19001	LW-19001
Intake Valve	73938	73938
Cylinder, Piston & Ring Assy. Kit	NOTE**	NOTE**

$\alpha$  Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.

$^{\circ}$  Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

NOTE: Plain Steel Cylinder Assemblies Not Recommended for High Compression Engines.

NOTE: O-340-A Series Cylinder Assemblies No Longer Available.

**O-360-A1A, -A1C, -A1D, -A2A, -A2E, -A3A, -C1A, -C1C, -C2A, -C2C, -C2D**

	<b>PLAIN CYL. HALF WEDGE RINGS</b>	<b>PLAIN CYL. FULL WEDGE RINGS</b>	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(HIGH COMPRESSION) (PARALLEL HEAD VALVES)		
Cylinder	LW-12424 N.L.A.	LW-12424 N.L.A.	LW-12425
Piston	75089	71594	75089
Top Ring	74989 CH⌘	68513 CH	74241 CH°
2 <sup>nd</sup> Ring	74989 CH⌘	68513 CH	74241 CH°
Oil Reg.	14H21950 CH⌘	69457 CH	14H21950 CH°
Exhaust Valve	LW-19001	LW-19001	LW-19001
Intake Valve	73938	73938	73938
Cylinder, Piston & Ring Assy. Kit	NOTE**	NOTE**	05K21102**

⌘ Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

NOTE: Plain Steel Cylinder Assemblies Not Recommended for High Compression Engines.

NOTE: Plain Cylinder Assemblies No Longer Available.

**O-360-B2A, -D2A, -D2B**

	<b>PLAIN CYL. HALF WEDGE RINGS</b>	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(LOW COMPRESSION) (PARALLEL HEAD VALVES)	
Cylinder	LW-12424 N.L.A.	LW-12425
Piston	75413	75413
Top Ring	74989 CH⌘	74241 CH°
2 <sup>nd</sup> Ring	74989 CH⌘	74241 CH°
Oil Reg.	14H21950 CH⌘	14H21950 CH°
Exhaust Valve	LW-19001	LW-19001
Intake Valve	73938	73938
Cylinder, Piston & Ring Assy. Kit	NOTE**	05K21103**

⌘ Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

NOTE: Plain Steel Cylinders No Longer Available.

## HO-360-A1A, -B1A, -B1B

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-12425
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21102**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

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## HIO-360-A1A

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (ANGLE HEAD VALVES)

	<b>NITRIDED CYL.</b> <b><u>HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)	<b>NITRIDED CYL.</b> <b><u>HALF WEDGE RINGS</u></b>
Cylinder	LW-19046	LW-19046
Piston	LW-10207-S	73264 N.L.A.
Top Ring	74241 CH°	74241 CH
2 <sup>nd</sup> Ring	74241 CH°	74241 CH
3 <sup>rd</sup> Ring	-----	74241 CH
Oil Reg.	14H21950 CH°	69457 CH
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-12949	LW-12949
Cylinder, Piston & Ring Assy. Kit	05K21224‡	05K21225◇

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

Superseded Kits: ◇Kit 05K21225 is Superseded by 05K21224 in Complete Engine Sets Only.

**IO-360-B1A, -B1B; HIO-360-B1A**

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-12425
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21102**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

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**IO-360-A1A**

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (ANGLE HEAD VALVES)

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (ANGLE HEAD VALVES)

Cylinder	LW-13530	LW-13530
Piston	LW-10207-S	73264 N.L.A.
Top Ring	74241 CH°	74241 CH
2 <sup>nd</sup> Ring	74241 CH°	74241 CH
3 <sup>rd</sup> Ring	-----	74241 CH
Oil Reg.	14H21950 CH°	69457 CH
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-13622	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21112‡	05K21113◇

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

Superseded Kits: ◇Kit 05K21113 is Superseded by 05K21112 in Complete Engine Sets Only.

Reference the Latest Revision to Service Instructions No. 1262 and No. 1302 for Small Rotator Intake Valve Information.

## WIDE DECK

### O-360-B2C

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (LOW COMPRESSION) (PARALLEL HEAD VALVES)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (PARALLEL HEAD VALVES)
Cylinder	LW-12427	LW-12427
Piston	75413	75413
Top Ring	74241 CH°	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°	74241 CH°
Oil Reg.	14H21950 CH°	14H21950 CH°
Exhaust Valve	LW-19001	LW-19001
Intake Valve	73938	73938
 Cylinder, Piston & Ring Assy. Kit	 05K21192	 05K21915◇

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

Superseded Kits: ◇Kit 05K21915 is Superseded by 05K21192 in Complete Engine Sets Only.

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### O-360-J2A

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (PARALLEL HEAD VALVES)
Cylinder	LW-13870
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
 Cylinder, Piston & Ring Assy. Kit	 05K21745

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

## WIDE DECK

**O-360-A1A, -A1AD, -A1D, -A1F, -A1F6, -A1F6D, -A1G, -A1G6, -A1G6D, -A1H, -A1H6, -A1J, -A1LD, -A1P, -A2A, -A2D, -A2F, -A2G, -A3A, -A3AD, -A4A, -A4AD, -A4D, -A4G, -A4J, -A4JD, -A4K, -A4M, -A4N, -A4P, -A5AD, -C1A, -C1C, -C1E, -C1F, -C1G, -C2A, -C2C, -C2E, -C4F, -C4P, -F1A6, -G1A6; LO-360-A1G6D, -A1H6; IO-360-B1B, -B1BD, -B1D, -B1E, -B1F, -B1G6, -B2E, -B2F, -B2F6, -B4A, -L2A, -M1A; AEIO-360-B1B, -B1F, -B1G6, -B2F, -H1A, -H1B; HIO-360-B1A; HO-360-C1A**

### NITRIDED CYL.

#### HALF WEDGE RINGS

(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-12427
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21104**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

**IO-360-A1A, -A1B, -A1B6, -A1B6D, -A1C, -A1C6, -A1D, -A1D6, -A1D6D, -A2A, -A2B, -A2C, -A3B6, -A3B6D, -A3D6D, -C1A, -C1B, -C1C, -C1C6, -C1D6, -C1E6, -C1E6D, -C1G6, -D1A, -J1A6D, -K2A; AIO-360-A1A, -A1B, -B1B; AEIO-360-A1A, -A1B, -A1B6, -A1D, -A1E, -A1E6, -A2B; LIO-360-C1E, -C1E6, -C1E6D**

### NITRIDED CYL.

#### HALF WEDGE RINGS

(HIGH COMPRESSION) (ANGLE HEAD VALVES)

Cylinder	LW-12993
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
3 <sup>rd</sup> Ring	-----
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21120‡

### NITRIDED CYL.

#### HALF WEDGE RINGS

LW-12993
73264 N.L.A.
74241 CH
74241 CH
74241 CH
69457 CH
LW-16740
LW-13622
05K21282◇

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

Reference the Latest Revision to Service Instructions No. 1262 and No. 1302 for Small Rotator Intake Valve Information

## WIDE DECK

### HIO-360-A1A, -A1B, -C1A, -C1B; LHIO-360-C1A

	<u>NITRIDED CYL.</u> <u>HALF-WEDGE RINGS</u> (HIGH COMPRESSION) (ANGLE HEAD VALVES)	<u>NITRIDED CYL.</u> <u>HALF WEDGE RINGS</u> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	LW-19047	LW-19047
Piston	LW-10207-S	73264 N.L.A.
Top Ring	74241 CH°	74241 CH
2 <sup>nd</sup> Ring	74241 CH°	74241 CH
3 <sup>rd</sup> Ring	-----	74241 CH
Oil Reg.	14H21950 CH°	69457 CH
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-12949	LW-12949
 Cylinder, Piston & Ring Assy. Kit	 05K21281‡	 05K21280◇

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

Superseded Kits: ◇Kit 05K21280 is Superseded by 05K21281 in Complete Engine Sets Only.

NOTE: Kits Employ Large Rotator Type Intake Valve.

### HIO-360-D1A

	<u>NITRIDED CYL.</u> <u>HALF WEDGE RINGS</u> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	LW-19047
Piston	LW-11487-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	73117
 Cylinder, Piston & Ring Assy. Kit	 05K21124‡

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

## WIDE DECK

### IO-360-A3B6D (For Turbocharging) IO-360-C1F

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (ANGLE HEAD VALVES)

Cylinder	LW-12988*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
 Cylinder, Piston & Ring Assy. Kit	 05K21279

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

Reference the Latest Revision to Service Instructions No. 1262 and 1302 for Small Rotator Intake Valve Information.

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### IO-360-F1A

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	16A22130*
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
 Cylinder, Piston & Ring Assy. Kit	 05K22926**

\* Cylinder Assembly Requires Long Reach Spark Plugs.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

## WIDE DECK

### IO-360-C1F (For Turbocharging)

	<b>NITRIDED CYL.</b> <b><u>HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	77544*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-12949
Cylinder, Piston & Ring Assy. Kit	05K21278

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

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### TIO-360-A1B, -A3B6

	<b>NITRIDED CYL.</b> <b><u>HALF WEDGE RINGS</u></b> (LOW COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	77544*
Piston	LW-10545-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-12949
Cylinder, Piston & Ring Assy. Kit	05K21277

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Kit Employs Large Rotator Type Intake Valve.

## WIDE DECK

### TO-360-C1A6D, -F1A6D; TIO-360-C1A6D

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve (Serv. Guide LW-14045) (Ni-Resist)  
Intake Valve

Cylinder, Piston & Ring Assy. Kit

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Kit Contains Small Rotator Type Intake Valve.

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(LOW COMPRESSION) (ANGLE HEAD VALVES)

LW-13964\*  
LW-10545-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-18497  
LW-13262

05K21276

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### HIO-360-E1AD, -E1BD, -F1AD

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve  
Intake Valve

Cylinder, Piston & Ring Assy. Kit

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (ANGLE HEAD VALVES)

LW-12988\*  
LW-13358-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-16740  
LW-13622

05K21275

**NITRIDED CYL.**  
**HALF WEDGE RINGS**

LW-12988\*  
LW-14610-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-16740  
LW-13622

05K21274

**TWO KITS NECESSARY DUE TO PISTON WEIGHT DIFFERENCE. PISTONS INTERCHANGEABLE IN ENGINE SETS ONLY.**

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

Reference the Latest Revision to Service Instructions No. 1262 and No. 1302 for Small Rotator Intake Valve Information.

**“360”  
“76” Series**

**O, LO-360-E1A6D**

**NITRIDED CYL.  
HALF WEDGE RINGS**  
(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-15322
Piston	LW-15357
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	LW-15314
Cylinder, Piston & Ring Assy. Kit	05K21121**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

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**TO, LTO-360-E1A6D**

**NITRIDED CYL.  
HALF WEDGE RINGS**  
(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-16290*
Piston	LW-12733
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	LW-15314
Cylinder, Piston & Ring Assy. Kit	05K21122**

\* Cylinder Assembly Requires Long Reach Spark Plugs.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

**IVO-360-A1A****NITRIDED CYL.  
HALF WEDGE RINGS**

(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

	<u>1/2" Exhaust Valve</u>	<u>7/16" Exhaust Valve</u>
Cylinder	16A21901	74498 or LW-12432 N.L.A.
Piston	75089	75989
Top Ring	74241 CH°	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°	74241 CH°
Oil Reg.	14H21950 CH°	14H21950 CH°
Exhaust Valve	LW-19001	71595 N.L.A.
Intake Valve	73938	73938
Cylinder, Piston & Ring Assy. Kit	05K21284	NOTE

**VO-360-A1A, -A1B, -B1A****NITRIDED CYL.  
HALF WEDGE RINGS**

(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

	<u>1/2" Exhaust Valve</u>	<u>7/16" Exhaust Valve</u>
Cylinder	16A21901	LW-12431 N.L.A.
Piston	75089	75089
Top Ring	74241 CH°	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°	74241 CH°
Oil Reg.	14H21950 CH°	14H21950 CH°
Exhaust Valve	LW-19001	71595 N.L.A.
Intake Valve	73938	73938
Cylinder, Piston & Ring Assy. Kit	05K21284	NOTE

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Cylinder Assembly Employing 71595 (7/16") Exhaust Valve N.L.A. Reference the Latest Revision to Service Instruction No. 1136 to Convert to 1/2" Exhaust Valve.

**WIDE DECK****IVO-360-A1A****NITRIDED CYL.  
HALF WEDGE RINGS**

(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-15682*
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve (1/2" Dia. Stem) (Serv. Guide LW-15680) (Ni-Resist)	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K22294

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

**O-435-A**

**PLAIN CYL.**  
(LOW COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	71854 N.L.A.
Piston	69948
Top Ring	62916 CH
2 <sup>nd</sup> Ring	62916 CH
Oil Reg.	69401 CH
Exhaust Valve	66531
Intake Valve	66429
Cylinder, Piston & Ring Assy. Kit	-----

O-435-A Plain Cylinder Assembly No Longer Available.

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**GO-435-C2 Series**

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(LOW COMPRESSION) (ANGLE HEAD VALVES)

Cylinder	LW-19035
Piston	75984
Top Ring	73933 CH
2 <sup>nd</sup> Ring	73933 CH
Oil Reg.	73934 CH
Exhaust Valve	LW-16740
Intake Valve	73129
Cylinder, Piston & Ring Assy. Kit	05K21229‡

‡Reference Chart Pages 7, 8.

**VO-435-A1B, -A1C, -A1D, -A1E, -A1F**

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>
	(LOW COMPRESSION) (ANGLE HEAD VALVES)	
Cylinder	LW-19036	LW-19036
Piston	75984	75984
Top Ring	73933 CH	73933 CH
2 <sup>nd</sup> Ring	73933 CH	73933 CH
Oil Reg.	73934 CH	73934 CH
Exhaust Valve	LW-16740	LW-16740
Intake Valve	73129	73129
 Cylinder, Piston & Ring Assy. Kit	 05K21214‡	 05K21215-A‡

‡Reference Chart Pages 7, 8.

NOTE: Kit with P/N Having Suffix “A” Employs Heavy Piston Pin LW-13445 (1) and Plugs 77856 (2). Pins and Plugs are Interchangeable in Engine Sets Only.

**VO-435-A1D, -A1E, -A1F; TVO-435-A1A, -B1A, -B1B, -D1A, -D1B, -F1A, -G1A, -G1B**

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>
	(LOW COMPRESSION) (ANGLE HEAD VALVES)	
Cylinder	74218*	74218*
Piston	75984	75984
Top Ring	73933 CH	73933 CH
2 <sup>nd</sup> Ring	73933 CH	73933 CH
Oil Reg.	73934 CH	73934 CH
Exhaust Valve	LW-16740	LW-16740
Intake Valve	73129	73129
 Cylinder, Piston & Ring Assy. Kit	 05K21212	 05K21213-A

\*Cylinder Assembly Requires Long Reach Spark Plugs.

NOTE: Kit with P/N Having Suffix “A” Employs Heavy Piston Pin LW-13445 (1) and Plugs 77856 (2). Pins and Plugs and Interchangeable in Engine Sets Only.

## VO-435-A1F; TVO-435-A1A

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (LOW COMPRESSION) (ANGLE HEAD VALVES)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	LW-19036	LW-19036
Piston	75984	75984
Top Ring	73933 CH	73933 CH
2 <sup>nd</sup> Ring	73933 CH	73933 CH
Oil Reg.	73934 CH	73934 CH
Exhaust Valve	LW-16740	LW-16740
Intake Valve	73129	73129
Cylinder, Piston & Ring Assy. Kit	05K21214‡	05K21215-A‡

‡Reference Chart Pages 7, 8.

NOTE: Kit with P/N Having Suffix "A" Employs Heavy Piston Pin LW-13445 (1) and Plugs 77856 (2). Pins and Plugs are Interchangeable in Engine Sets Only.

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## VO-435-B1A

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	74218*	74218*
Piston	76172	76172
Top Ring	73933 CH	73933 CH
2 <sup>nd</sup> Ring	73933 CH	73933 CH
Oil Reg.	73934 CH	73934 CH
Exhaust Valve	LW-16740	LW-16740
Intake Valve	73129	73129
Cylinder, Piston & Ring Assy. Kit	05K21216‡	05K21217-A‡

\*Cylinder Assembly Requires Long Reach Spark Plugs.

‡Reference Chart Pages 7, 8.

NOTE: Kit with P/N Having Suffix "A" Employs Heavy Piston Pin LW-13445 (1) and Plugs 77856 (2). Pins and Plugs are Interchangeable in Engine Sets Only.

**GO-480-B, -B1, -B1A6, -B1B, -B1C, -B1D, -D1A, -D1B, -F6, -F1A6, -F2A6, -F4A6**

	<b><u>NITRIDED CYL.</u></b> <b><u>HALF WEDGE RINGS</u></b> (LOW COMPRESSION) (ANGLE HEAD VALVES)	<b><u>PLAIN CYL.</u></b>
Cylinder	LW-19037	16A21005
Piston	LW-10208-S	69236
Top Ring	74241 CH°	68513 CH
2 <sup>nd</sup> Ring	74241 CH°	68513 CH
Oil Reg.	14H21950 CH°	69457 CH
Scraper	-----	69330 CH N.L.A.
Exhaust Valve	LW-16740	LW-16740
Intake Valve	73129	73129
Cylinder, Piston & Ring Assy. Kit	05K21273‡	05K21283‡ N.L.A.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

**GO-480-C1B6, -C1D6, -C2 Series, -G1A6, -G1B6, -G1D6, -G1E6, -G1F6, -G1G6, -G1J6, -G2D6, -G2F6**

	<b><u>NITRIDED CYL.</u></b> <b><u>HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	75215*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	73129
Cylinder, Piston & Ring Assy. Kit	05K21272‡

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: Due to the Use of 71265 and 71266 High Lift Valve Rocker Assemblies on GO-480-G1D6 Engines (For Helio) as Noted on the Following Page, Other "Applicable Kits" Which Use 67112 and 67113 Rocker Assemblies Should Be Used Only on New -G1D6 Engines with Serial Numbers Below 427-37 and on Remanufactured Engines Built Before 12-15-66.

## **GO-480-G1D6 (Helio)**

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve  
Intake Valve

Cylinder, Piston & Ring Assy. Kit

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (ANGLE HEAD VALVES)

75215\*  
LW-10207-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-16740  
73129

05K21272‡

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: This Kit is for Use With 71265 and 71266 High Lift Rocker Assemblies to be Used With 77124 Camshaft Assembly.

NOTE: Engine Effectivity -       New Engines – Serial No. 425-37 and Up.  
  Remanufactured Engines – Built After 12-14-66.

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## **IGO-480-A1B6 (Helio); GO-480-G1A6 (Helio) (For IGO-480 With Top Fuel Injection and GO-480 With Top Primers.)**

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve  
Intake Valve

Cylinder, Piston & Ring Assy. Kit

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (ANGLE HEAD VALVES)

LW-19038\* NOTE  
LW-10207-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-16740  
73129

05K21271‡

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: Tapped Hole for Injector Nozzle or Primer Nipple.

**GSO-480-A1A, -A1A6, -A2A6, -A1C6, -B1A6, -B1B3, -B1B6, -B1C6, -B1E6, -B1J6, -B2D6; IGSO-480-A1A6, -A1B6, -A1C6, -A1E6, -A1F6**

**NITRIDED CYL.  
HALF WEDGE RINGS  
(LOW COMPRESSION) (ANGLE HEAD VALVES)**

Cylinder	75215*
Piston	LW-10208-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	73129
Cylinder, Piston & Ring Assy. Kit	05K21270

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

**O-540-B1A5, -B1B5, -B2A5, -B2B5, -B2C5, -B4B5**

	<b>PLAIN CYL. HALF WEDGE RINGS</b>	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(LOW COMPRESSION) (PARALLEL HEAD VALVES)	
Cylinder	LW-12424 N.L.A.	LW-12425
Piston	75413	75413
Top Ring	74989 CH⌘	74241 CH°
2 <sup>nd</sup> Ring	74989 CH⌘	74241 CH°
Oil Reg.	14H21950 CH⌘	14H21950 CH°
Exhaust Valve	LW-19001	LW-19001
Intake Valve	73938	73938
 Cylinder, Piston & Ring Assy. Kit	 05K21106** N.L.A.	 05K21103**

⌘ Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

**O-540-A1A, -A1A5, -A1B5, -A1C5, -A1D, -A1D5, -A2B, -A3D5, -A4A5, -A4B5, -A4D5, -F1A5, -F1B5**

	<b>PLAIN CYL. HALF WEDGE RINGS</b>	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(HIGH COMPRESSION) (PARALLEL HEAD VALVES)	
Cylinder	LW-12424 N.L.A.	LW-12425
Piston	75089	75089
Top Ring	74989 CH⌘	74241 CH°
2 <sup>nd</sup> Ring	74989 CH⌘	74241 CH°
Oil Reg.	14H21950 CH⌘	14H21950 CH°
Exhaust Valve	LW-19001	LW-19001
Intake Valve	73938	73938
 Cylinder, Piston & Ring Assy. Kit	 05K21238** N.L.A.	 05K21102**

⌘ Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

NOTE: Plain Steel Cylinder Assemblies Not Recommended for High Compression Engines.

**O-540-E1A, -E4A5, -E4B5, -E4C5, -G1A5, -G2A5; IO-540-C1B5, -C1C5, -C2C, -C4B5, -C4C5, -D4A5, -D4B5, -N1A5**

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-12425
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21102**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

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**IO-540-M1A5**  
**IO-540-E1B5 (For Turbocharger)**

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(HIGH COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)

Cylinder	LW-13533*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21226

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Intake Valve (Small Rotator Type). Reference the Latest Revision to Service Instruction No. 1302.

**IO-540-A1A5, -G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -K1A5, -K1B5, -K1D5, -K1F5, -L1A5; HIO-540-A1A**

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (ANGLE HEAD VALVES)
Cylinder	LW-13530	LW-13530
Piston	73264 N.L. A.	LW-10207-S
Top Ring	74241 CH	74241 CH°
2 <sup>nd</sup> Ring	74241 CH	74241 CH°
3 <sup>rd</sup> Ring	74241 CH	-----
Oil Reg.	69457 CH	14H21950 CH°
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-13622	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21113◊	05K21112‡

◊Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

Superseded Kit: ◊Kit 05K21113 is Superseded by 05K21112 in Complete Engine Sets Only.

NOTE: Intake Valve (Small Rotator Type). Reference the Latest Revision to Service Instruction No. 1302.

**IO-540-B1A5, -B1C5, -E1A5, -E1B5**

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (UP EXHAUST)
		(ANGLE HEAD VALVES)
Cylinder	LW-13532	LW-13532
Piston	73264 N.L.A.	LW-10207-S
Top Ring	74241 CH	74241 CH°
2 <sup>nd</sup> Ring	74241 CH	74241 CH°
3 <sup>rd</sup> Ring	74241 CH	-----
Oil Reg.	69457 CH	14H21950 CH°
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-13622	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21111◊	05K21110‡

◊Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

Superseded Kit: ◊Kit 05K21111 is Superseded by 05K21110 in Complete Engine Sets Only.

NOTE: Intake Valve (Small Rotator Type). Reference the Latest Revision to Service Instruction No. 1302.

**IO-540-G1A5, -G1B5, -G1C5, -G1D5, -G1E5, -G1F5, -K1B5, -K1C5, -K1E5, -P1A5, -S1A5**

**NITRIDED CYL.  
HALF WEDGE RINGS**  
(HIGH COMPRESSION) (ANGLE HEAD VALVES)

Cylinder	LW-13534*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21204

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Intake Valve (Small Rotator Type). Reference the Latest Revision to Service Instruction No. 1302.

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**IO-540-J4A5, -R1A5; TIO-540-G1A**

**NITRIDED CYL.  
HALF WEDGE RINGS**  
(HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-12433*
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy.Kit	05K21241**

\* Cylinder Assembly Requires Long Reach Spark Plugs.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

## **TIO-540-A1A, -A1B, -A2A, -A2B, -A2C**

	<b><u>NITRIDED CYL.</u></b> <b><u>HALF WEDGE RINGS</u></b> (LOW COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)
Cylinder	LW-13447*
Piston	LW-10545-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy Kit	05K21109

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Intake Valve (Small Rotator Type). Reference the Latest Revision to Service Instruction No. 1302.

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## **TIO-540-C1A, -E1A, -H1A**

	<b><u>NITRIDED CYL.</u></b> <b><u>HALF WEDGE RINGS</u></b> (LOW COMPRESSION) (PARALLEL HEAD VALVES)
Cylinder	LW-12433*
Piston	75413
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21234**

\* Cylinder Assembly Requires Long Reach Spark Plugs.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

## WIDE DECK

**O-540-A4D5, -E4A5, -E4B5, -E4B5D, -E4C5, -G1A5, -G1A5D, -G2A5, -H1A5, -H1B5D, -H2A5, -H2B5D; IO-540-C4B5, -C4B5D, -C4D5, -C4D5D, -D4A5, -D4B5, -D4C5, -N1A5, -N1A5D, -T4A5D, -T4B5, -T4B5D, -T4C5D, -V4A5, -V4A5D; AEIO-540-D4A5, -D4B5, -D4D5**

	<b>NITRIDED CYL.</b> <b><u>HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (PARALLEL HEAD VALVES)
Cylinder	LW-12427
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K21104**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

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**IO-540-K1A5, -K1A5D, -K1B5\*, -K1D5, -K1F5, -K1F5D, -K1G5, -K1G5D, -K1H5, -K1J5, -K1J5D, -K1K5, -K2A5, -L1A5D, -L1B5D, -L1C5; AEIO-540-L1B5, -L1B5D**

	<b>NITRIDED CYL.</b> <b><u>HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	LW-12993
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21120‡

\*IO-540-K1B5 Also Built with Long Reach Spark Plugs. Reference Page 44.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: Kits Employ Small Rotator Type Intake Valve.

## WIDE DECK

### O-540-B2B5, -B2C5, -B2C5D, -B4B5, -B4B5D

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>	<b><u>PLAIN CYL. HALF WEDGE RINGS</u></b>
	(LOW COMPRESSION) (PARALLEL HEAD VALVES)	
Cylinder	LW-12427	LW-12768 N.L.A.
Piston	75413	75413
Top Ring	74241 CH°	74989 CH⌘
2 <sup>nd</sup> Ring	74241 CH°	74989 CH⌘
Oil Reg.	14H21950 CH°	14H21950 CH⌘
Exhaust Valve	LW-19001	LW-19001
Intake Valve	73938	73938
 Cylinder, Piston & Ring Assy. Kit	 05K21192**	 NONE

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.  
 ⌘ Piston Ring Kit for Plain Cyl's. is 05K22036 (1 Cyl.). See Page 58.  
 \*\*Reference NOTE, Page 2.

### O-540-L3C5D

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>
	(HIGH COMPRESSION) (PARALLEL HEAD VALVES)
Cylinder	LW-15605*
Piston	75089
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve (Inconel)	LW-19001
Intake Valve	73938
 Cylinder, Piston & Ring Assy. Kit	 05K21231**

### IO-540-AC1A5

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>
	(HIGH COMPRESSION) (TOP EXHAUST) (ANGLE HEAD VALVES)
	16A22541*
	LW-10207-S
	74241 CH°
	74241 CH°
	14H21950 CH°
	LW-18497
	LW-13262
 Cylinder, Piston & Ring Assy. Kit	 05K22672

\* Cylinder Assembly Requires Long Reach Spark Plugs.  
 ° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.  
 \*\*Reference NOTE, Page 2.

## WIDE DECK

### IO-540-M1A5, -M1A5D, -M1B5, -M1B5D, -M1C5, -U1A5D, -U1B5D

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
 (HIGH COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)

Cylinder	LW-19048*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
 Cylinder, Piston & Ring Assy. Kit	 05K21263‡

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: Intake Valve (Small Rotator Type). Reference the Latest Revision to Service Instruction No. 1302.

### O-540-J1A5D, -J1C5D, -J2A5D, -J3A5, -J3A5D, -J3C5D; IO-540-W1A5, -W1A5D, -W3A5D, -AB1A5

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
 (HIGH COMPRESSION) (PARALLEL HEAD VALVES)

Cylinder	LW-13870
Piston	LW-13396
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
 Cylinder, Piston & Ring Assy. Kit	 05K21117**

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

### O-540-F1B5

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
 (HIGH COMPRESSION) (PARALLEL HEAD VALVES)

LW-13870
75089
74241 CH°
74241 CH°
14H21950 CH°
LW-19001
73938
 05K21745

## WIDE DECK

### IO-540-G1D5, -K1B5\*, -K1C5, -K1E5, -K1E5D, -S1A5

	<b>NITRIDED CYL. HALF WEDGE RINGS</b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	LW-12988*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21118

\*Cylinder Assembly Requires Long Reach Spark Plugs. (IO-540-K1B5 Also Built with Short Reach Spark Plugs, Reference Page 41.)

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Kit Employs Small Rotator Type Intake Valve.

### IO-540-AA1A5, -AA1B5; TIO-540-U2A; LTIO-540-U2A

	<b>NITRIDED CYL. HALF WEDGE RINGS</b> (LOW COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	LW-12988*
Piston	LW-10545-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21966

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

†Piston Ring Kit for Nitrided Cyl's. is 05K22037 (1 Cyl.). TIO-540-AE2A, -AH1A Only. See Page 58.

NOTE: Kit Employs Small Rotator Type Intake Valve.

### TIO-540-AE2A, -AH1A

	<b>NITRIDED CYL. HALF WEDGE RINGS</b> (LOW COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	LW-12988*
Piston	LW-10545-S
Top Ring	74241 CH†
2 <sup>nd</sup> Ring	74241 CH†
Oil Reg.	14H21990 CH†
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21262

## WIDE DECK

### TIO, LTIO-540-V2AD

	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(LOW COMPRESSION) (DOWN EXHAUST) (ANGLE HEAD VALVES)
Cylinder	16A19516*
Piston	LW-10545-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve (Serv. Guide 16R21710) (Ni-Resist) NOTE	LW-18497
Intake Valve (Serv. Guide 16P21709)	LW-13262
Cylinder, Piston & Ring Assy. Kit	05K21260

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

†See NOTE "V", Page 6.

NOTE: Reference the Latest Revision to Service Bulletin No. 490.

### TIO-540-W2A

	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(LOW COMPRESSION) (DOWN EXHAUST) (ANGLE HEAD VALVES)
	16A19516*
	14D21953-S/LW-19176-S†
	74241 CH°
	74241 CH°
	14H21950 CH°
	LW-18497
	LW-13262
	05K21261

### TIO-540-K1AD, -AA1AD, -AB1AD, -AB1BD, -AF1A, -AG1A

	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(LOW COMPRESSION) (PARALLEL HEAD VALVES)
Cylinder	16A22130*
Piston	LW-12733
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
Cylinder, Piston & Ring Assy. Kit	05K22129**

\* Cylinder Assembly Requires Long Reach Spark Plugs.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

◆ Piston Ring Kit for Nitrided Cyl's. is 05K22037 (1 Cyl.). TIO-540-AF1B Only. See Page 58.

\*\*Reference NOTE, Page 2.

TIO-540-AF1A Becomes TIO-540-AF1B When Oil Cooled Valve Guides are Installed. Reference the Latest Revision to Service Instruction No. 1479.

### TIO-540-AF1B (Oil Cooled Valve Guides)

	<b>NITRIDED CYL. HALF WEDGE RINGS</b>
	(LOW COMPRESSION) (PARALLEL HEAD VALVES)
	16A22023*
	LW-12733
	74241 CH◆
	74241 CH◆
	14H21950 CH◆
	LW-19001
	73938
	05K22177**

## WIDE DECK

### TIO-540-C1A, -C1AD

<b>NITRIDED CYL.</b>	
<b><u>HALF WEDGE RINGS</u></b>	
(LOW COMPRESSION) (PARALLEL HEAD VALVES)	
Cylinder	16A22130
Piston	75413
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-19001
Intake Valve	73938
 Cylinder, Piston & Ring Assy. Kit	 05K22128**

### TIO-540-AJ1A

<b>NITRIDED CYL.</b>	
<b><u>HALF WEDGE RINGS</u></b>	
(LOW COMPRESSION) (TOP INTAKE) (ANGLE HEAD VALVES)	
	16A22541*
	LW-10545-S
	74241 CH°
	74241 CH°
	14H21950 CH°
	LW-18497
	LW-13262
 Cylinder, Piston & Ring Assy. Kit	 05K22680

\* Cylinder Assembly Requires Long Reach Spark Plugs.

° Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

\*\*Reference NOTE, Page 2.

### TIO-540-A2C, -S1AD; TIO, LTIO-540-F2BD, -J2B, -J2BD, -N2BD, -R2AD

<b>NITRIDED CYL.</b>	
<b><u>HALF WEDGE RINGS</u></b>	
(LOW COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)	
Cylinder	LW-12966*
Piston	LW-10545-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
 Cylinder, Piston & Ring Assy. Kit	 05K21108

\*Cylinder Assembly Requires Long Reach Spark Plugs.

†See NOTE "V", Page 6.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Intake Valve Change (Small Rotator Type). Reference the Latest Revision to Service Instructions No. 1262 and No. 1302.

### TIO, LTIO-540-F2BD, -J2B, -J2BD, -N2BD

<b>NITRIDED CYL.</b>	
<b><u>HALF WEDGE RINGS</u></b>	
(LOW COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)	
	LW-12966*
	14D21953-S/LW-19176-S†
	74241 CH°
	74241 CH°
	14H21950 CH°
	LW-16740
	LW-13622
 Cylinder, Piston & Ring Assy. Kit	 Reference NOTES "U" & "V" on Page 6. Also the Latest Revision to Service Instruction No. 1471, Change Notice 294A.

## IGO-540-A1A, -A1C

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	76261*	76261*
Piston	76258 (NOTE)	LW-10207-S
Top Ring	74241 CH°	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°	74241 CH°
Oil Reg.	14H21950 CH°	14H21950 CH°
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-12949	LW-12949
Cylinder, Piston & Ring Assy. Kit	NOTE	05K21265

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Kits Employing 76258 Piston No Longer Available. Reference NOTE "K", Page 6.

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## IGO-540-B1A, -B1C

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)
Cylinder	76187*	76187*
Piston	LW-10207-S	76258 (NOTE)
Top Ring	74241 CH°	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°	74241 CH°
Oil Reg.	14H21950 CH°	14J21950 CH°
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-12949	LW-12949
Cylinder, Piston and Ring Assy. Kit	05K21267	NOTE

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Kits Employing 76258 Piston No Longer Available. Reference NOTE "K", Page 6.

NOTE: Kits Employ Large Rotator Type Intake Valve.

## IGSO-540-A1A, -A1C, -A1D, -A1E, -A1H

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(LOW COMPRESSION) (ANGLE HEAD VALVES)

Cylinder	LW-12714*
Piston	LW-10208-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21264

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Intake Valve Change (Small Rotator Valve). Reference the Latest Revision to Service Instructions No. 1262 and No. 1302.

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## IGSO-540-B1A, -B1C

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(LOW COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)

Cylinder	LW-13447*
Piston	LWS-10208-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21269

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: Intake Valve Change (Small Rotator Valve). Reference the Latest Revision to Service Instructions No. 1262 and No. 1302.

**VO-540-A1A, -B1A, -B1B, -B1B3, -B1C, -B1D, -B1F, -B1G, -B2D; TVO-540-A1A**

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (LOW COMPRESSION) (ANGLE HEAD VALVES)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>
Cylinder	75137*	75137*	74558	74558
Piston	73976-S N.L.A.	LW-10208-S	73976-S N.L.A.	LW-10208-S
Top Ring	74241 CH	74241 CH°	74241 CH	74241 CH°
2 <sup>nd</sup> Ring	74241 CH	74242 CH°	74241 CH	74241 CH°
3 <sup>rd</sup> Ring	74241 CH	-----	74241 CH	-----
Oil Reg.	14H21950 CH	14H21950 CH°	14H21950 CH	14H21950 CH°
Scraper	69330 CH N.L.A.	-----	69330 CH N.L.A.	-----
Exhaust Valve	LW-16740	LW-16740	LW-16740	LW-16740
Intake Valve	LW-12949	LW-12949	LW-12949	LW-12949
Cylinder, Piston & Ring Assy. Kit	05K21227◊‡ (NOTE)	05K21228‡	75034 (NOTE)	77487 (NOTE)

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58

Superseded Kits: ◊Kit 05K21227 is Superseded by 05K21228 in Complete Engine Sets Only.

‡Reference Chart Pages 7, 8.

NOTE: Kits Employ Large Rotator Type Intake Valve.

NOTE: Kits (05K21227, 75034) Employing 73976-S Piston Are No Longer Available.

NOTE: Kits (75034, 77487) Employing Short Reach Cylinders Are No Longer Available.

**VO-540-C1A, -C1B, -C1C3, -C2A, -C2C**

	<u>NITRIDED CYL. HALF WEDGE RINGS</u>	<u>NITRIDED CYL. HALF WEDGE RINGS</u> (HIGH COMPRESSION) (ANGLE HEAD VALVES)	<u>NITRIDED CYL. HALF WEDGE RINGS</u>	<u>NITRIDED CYL. HALF WEDGE RINGS</u>
Cylinder	75137*	75137*	74558 N.L.A.	74558 N.L.A.
Piston	73947-S N.L.A.	LW-10207-S	73947-S N.L.A.	LW-10207-S
Top Ring	74241 CH	74241 CH°	74241 CH	74241 CH°
2 <sup>nd</sup> Ring	74241 CH	74241 CH°	74241 CH	74241 CH°
3 <sup>rd</sup> Ring	74241 CH	-----	74241 CH	-----
Oil Reg.	14H21950 CH	14H21950 CH°	14H21950 CH	14H21950 CH°
Scraper	69330 CH N.L.A.	-----	69330 CH N.L.A.	-----
Exhaust Valve	LW-16740	LW-16740	LW-16740	LW-16740
Intake Valve	LW-12949	LW-12949	LW-12949	LW-12949
Cylinder, Piston & Ring Assy. Kit	05K21222◊‡ (NOTE)	05K21223‡	75036 (NOTE)	77493 (NOTE)

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

Superseded Kits: ◊Kit 05K21222 is Superseded by 05K21223 in Complete Engine Sets Only.

‡Reference Chart Pages 7, 8.

NOTE: Kits Employ Large Rotator Type Intake Valve.

NOTE: Kits (05K21222, 75036) Employing 73947-S Piston Are No Longer Available.

NOTE: Kits (75036, 77493) Employing Short Reach Cylinders Are No Longer Available.

## IVO-540-A1A

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (ANGLE HEAD VALVES)
Cylinder	74236*	74236*
Piston	LW-10207-S	73947-S N.L.A.
Top Ring	74241 CH°	74241 CH
2 <sup>nd</sup> Ring	74241 CH°	74241 CH
3 <sup>rd</sup> Ring	-----	74241 CH
Oil Reg.	14H21950 CH°	14H21950 CH
Scraper	-----	69330 CH N.L.A.
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-12949	LW-12949
Cylinder, Piston & Ring Assy. Kit	05K21220	05K21221◇ (NOTE)

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

Superseded Kits: ◇Kit 05K21221 is Superseded by 05K21220 in Complete Engine Sets Only.

NOTE: Kits Employ Large Rotator Type Intake Valve.

NOTE: Kits (05K21221) Employing 73947-S Piston Are No Longer Available.

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## TIVO-540-A2A, -A2B

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (LOW COMPRESSION) (ANGLE HEAD VALVES)	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b> (ANGLE HEAD VALVES)
Cylinder	74236*	74236*
Piston	73976-S N.L.A.	LW-10208-S
Top Ring	74241 CH	74241 CH°
2 <sup>nd</sup> Ring	74241 CH	74241 CH°
3 <sup>rd</sup> Ring	74241 CH	-----
Oil Reg.	14H21950 CH	14H21950 CH°
Scraper	69330 N.L.A.	-----
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-12949	LW-12949
Cylinder, Piston & Ring Assy. Kit	05K21218◇ (NOTE)	05K21219

\*Cylinder Assembly Requires Long Reach Spark Plugs

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

Superseded Kits: ◇Kit 05K21218 is Superseded by 05K21219 in Complete Engine Sets Only.

NOTE: Kits Employ Large Rotator Type Intake Valve.

NOTE: Kits (05K21218) Employing 73976- S Piston Are No Longer Available.

## TIO-541-A1A

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve  
Intake Valve

Cylinder, Piston & Ring Assy. Kit

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE: TIO-541-A1A Cylinder Assemblies Are No Longer Available.

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(LOW COMPRESSION) (ANGLE HEAD VALVES)

74781\*  
LW-105450S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-16740  
73117

NOTE

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## TIO-541-E1A4, -E1B5, -E1C4, -E1D4; TIGO-541-E1A

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve  
Intake Valve

Cylinder, Piston & Ring Kit Assy.

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

NOTE A: LW-13907 Kit (Detail of LW-13987 Kit) Contains LW-14116 Cylinder Assembly With Compatible Shroud Tubes Required When Servicing Superseded Cylinder Assemblies and Their Shroud Tubes.

NOTE B: For Information Related to Service of Cylinder and Valve Changes, Refer to the Latest Revision to Service Bulletin No. 334, Service Instructions No. 1262 and No. 1302 and Supersedure Notice 217.

**NITRIDED CYL.**  
**HALF WEDGE RINGS**

(LOW COMPRESSION) (ANGLE HEAD VALVES)

LW-13907\* Kit N.L.A.  
LW-10545-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-18498  
LW-13262

LW-13987 (NOTE A, B) N.L.A.

**NITRIDED CYL.**  
**HALF WEDGE RINGS**

LW-14116\*  
LW-10545-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-18498  
LW-13262

05K21116 (NOTE B)

## TIGO-541-D1B

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve  
Intake Valve

Cylinder, Piston & Ring Assy. Kit

**NITRIDED CYL.**  
**HALF WEDGE RINGS**  
(LOW COMPRESSION) (ANGLE HEAD VALVES)

LW-13121\*  
LW-10545-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-18498  
LW-13262

05K21259

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See page 58.

**IO-720-A1A, -D1B**

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>
	(HIGH COMPRESSION)	(ANGLE HEAD VALVES)
Cylinder	LW-13530	LW-13530
Piston	73264 N.L.A.	LW-10207-S
Top Ring	74241 CH	74241 CH°
2 <sup>nd</sup> Ring	74241 CH	74241 CH°
3 <sup>rd</sup> Ring	74241 CH	-----
Oil Reg.	69457 CH	14H21950 CH°
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-13622	LW-13622
 Cylinder, Piston & Ring Assy. Kit	 05K21113◊‡ (NOTE)	 05K21112‡

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

Superseded Kits: ◊Kit 05K21113 is Superseded by 05K21112 in Complete Engine Sets Only.

‡Reference Chart Pages 7, 8.

NOTE: Kits Employ Small Rotator Type Intake Valve.

NOTE: Kits (05K21113) Employing 73264 Pistons Are No Longer Available.

**IO-720-A1B**

	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>	<b><u>NITRIDED CYL. HALF WEDGE RINGS</u></b>
	(HIGH COMPRESSION)	(ANGLE HEAD VALVES)
Cylinder	LW-13530	LW-13534*
Piston	LW-10207-S	LW-10207-S
Top Ring	74241 CH°	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°	74241 CH°
Oil Reg.	14H21950 CH°	14H21950 CH°
Exhaust Valve	LW-16740	LW-16740
Intake Valve	LW-13622	LW-13622
 Cylinder, Piston & Ring Assy. Kit	 05K21112‡	 05K21204

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: Kits Employ Small Rotator Type Intake Valve.

## IO-720-B1B, -C1B

Cylinder  
Piston  
Top Ring  
2<sup>nd</sup> Ring  
Oil Reg.  
Exhaust Valve  
Intake Valve

Cylinder, Piston & Ring Assy. Kit

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: Kits Employ Small Rotator Type Intake Valve.

### NITRIDED CYL. HALF WEDGE RINGS

(HIGH COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)

LW-13532  
LW-10207-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-16740  
LW-13622

05K21110‡

### NITRIDED CYL. HALF WEDGE RINGS

LW-13533\*  
LW-10207-S  
74241 CH°  
74241 CH°  
14H21950 CH°  
LW-16740  
LW-13622

05K21226

## WIDE DECK

### IO-720-A1B, -D1B, -D1C, -D1CD

	<b>NITRIDED CYL.</b> <b><u>HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (ANGLE HEAD VALVES)
Cylinder	LW-12988*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21118‡

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: Kits Employ Small Rotator Type Intake Valve.

### IO-720-B1B, -B1BD

	<b>NITRIDED CYL.</b> <b><u>HALF WEDGE RINGS</u></b> (HIGH COMPRESSION) (UP EXHAUST) (ANGLE HEAD VALVES)
Cylinder	LW-19048*
Piston	LW-10207-S
Top Ring	74241 CH°
2 <sup>nd</sup> Ring	74241 CH°
Oil Reg.	14H21950 CH°
Exhaust Valve	LW-16740
Intake Valve	LW-13622
Cylinder, Piston & Ring Assy. Kit	05K21263‡

\*Cylinder Assembly Requires Long Reach Spark Plugs.

°Piston Ring Kit for Nitrided Cyl's. is 05K22035 (1 Cyl.). See Page 58.

‡Reference Chart Pages 7, 8.

NOTE: Kit Employs Small Rotator Type Intake Valve.

## TOP OVERHAUL GASKET KITS

### ALL CYLINDERS

### SINGLE CYLINDERS

LW-12040	05K22948	Four Cylinder Parallel Valve Head Engines – O-235 Series
LW-12038	05K22946	Four Cylinder Parallel Valve Head Engines – O-290; O, IO, LIO-320; AIO, AEIO-320; O-340; O-360-A, -B, -C, -D, -F, -J; IO-360-B, -E, -F, -L; LO-360-A; AEIO-360-B, -H; HO-360-A, -B; HIO-360-B; VO, IVO-360
05K22949	05K22950	Four Cylinder Parallel Valve Head Engine – IO-360-M1A
LW-12039	05K22947	Four Cylinder Angle Valve Head Engines – IO-360-A, -C, -D, -J, -K; AIO-360-A, -B; AEIO-360-A; HIO-360-A, -C, -D, -E, -F; LIO- 360-C; LHIO-360-C, -F; TO, LTO-360-A; TIO-360-A
LW-15838	05K22967	Four Cylinder Angle Valve Head Engines – TO, TIO-360-C1A6D, -F1A6D
LW-16916	05K22968	Four Cylinder “76” Series Engines – O-320-H; O, LO, TO, LTO-360-E
LW-12032	05K22940	Six Cylinder Parallel Valve Head Engines – O-540-A, -B, -E, -F, -G, -H, -J, -L, -V; AEIO-540-D; IO-540-C, -D, -J, -N, -R, -T, -W, -V, -AB; TIO-540-C, -E, -G, -H, -K, -AA, -AB, -AF, -AG; LTIO-540-K
LW-12036	05K22944	Six Cylinder Parallel Valve Head Engine – O-435-A
LW-12033	05K22941	Six Cylinder Angle Valve Head Top Exhaust Engines – IO-540-B, -E, -M, -U; TIO-540-A, -S, -T; TIO, LTIO-540-F, -J, -N, -R; TIO-541-A; IGO, IGSO-540-B
LW-12034	05K22942	Six Cylinder Angle Valve Head Down Exhaust Engines – GO, VO, TVO-435; GO, GSO, IGSO-480; IO-540-A, -G, -K, -L, -P, -S, -AA; AEIO- 540-L; TIO-540-W, -AE, -AH; TIO, LTIO-540-U, -V, -W; VO, IVO, TVO, TIVO-540; IGO, IGSO-540-A
LW-12035	05K22943	Six Cylinder Angle Valve Head Engines – IO-540-AC1A5; TIO-540-AJ1A; TIO, TIGO- 541-D, -E
LW-12037	05K22942	Eight Cylinder Angle Valve Head Down Exhaust Engines – IO-720-A, -D
LW-18758	05K22941	Eight Cylinder Angle Valve Head Top Exhaust Engines – IO-720-B, -C

05K22034 Kit – Piston Ring (Does 1 Cylinder)

For Nitrided Cylinders Using the Following Pistons: LW-18725, LW-18729.

Contains:	<u>Part No.</u>	<u>Part Name</u>	<u>Qty.</u>
	78862	Compression Ring	2
	78864	Oil Control Ring	1

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05K22035 Kit – Piston Ring (Does 1 Cylinder)

For Nitrided Cylinders Using the Following Pistons: 75089, 75413, LW-10207, LW-10208, LW-10545, LW-11487, LW-12733, LW-13358, LW-13396, LW-14610, LW-15357.

Contains:	<u>Part No.</u>	<u>Part Name</u>	<u>Qty.</u>
	74241	Compression Ring	2
	14H21950	Oil Control Ring	1

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05K22036 Kit – Piston Ring (Does 1 Cylinder)

For Plain Steel Cylinders Using the Following Pistons: 75089, 75413.

Contains:	<u>Part No.</u>	<u>Part Name</u>	<u>Qty.</u>
	74989	Compression Ring	2
	14H21950	Oil Control Ring	1

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05K22037 Kit – Piston Ring (Does 1 Cylinder)

For Nitrided Cylinders on the TIO-540-AE2A, -AF1B, -AH1A Engines Only.

Contains:	<u>Part No.</u>	<u>Part Name</u>	<u>Qty.</u>
	74241	Compression Ring	2
	14H21990	Oil Control Ring	1