

MANLEY VALVE LOCKS... SIMPLY THE BEST!

CONVENTIONAL vs BEAD LOC® VALVE STEM GROOVES

The groove in a valve stem, seemingly unimportant, in reality is vital to the success of a valve's performance. Imperfectly formed grooves, inferior or mismatched locks, and improper retainers can lead to catastrophic failure.

The so called "conventional" or square groove design has enjoyed enormous success. But the success of a "conventional" groove is dependent upon precise machining. First, the surface finish of the groove must be outstanding to guarantee against failure due to residual machining marks.

Next, the groove must have a precise .013" radius in the upper corner. Too small a radius leaves the groove subject to the dangers of a sharp fillet. Too large a radius leaves open the possibility of the groove being abraded in this area by the upper inside edge of the tang of the lock. Also, an oversized radius leaves a reduced horizontal shelf in the groove which is, or should be, the only contact point with the tang of the lock. Contact by the lock in the root of the groove is a disaster waiting to happen.

Perfectly formed "conventional" grooves with proper locks and retainers will deliver good service. However, there are sub-standard components on the market that can conspire to destroy a correctly machined groove.

The essence of the Bead Loc® groove is its simplicity and forgiveness. The groove itself is a straightforward .110" full radius. The contact points with a Bead Loc® radius lock are approximately 2:00 and 10:00 o'clock, not at the root of the groove. This system affords minimal vertical movement, especially when valve float is present, which means reduced erosion of the valve for enhanced service life.

Manley Performance supports both the "conventional" groove system and the Bead Loc® system with the most extensive line-up of the highest quality locks in the industry.

7° STAMPED VALVE LOCKS

✓ Stamped locks are recommended *ONLY* for mild performance engines

Part No.	Quantity	Valve Stem	Groove Type
13238-16	16 pr.	5/16"	Conventional
13127-16	16 pr.	11/32"	Conventional



7° MACHINED VALVE LOCKS

✓ Highest quality steel alloy

✓ Heat treated and black oxide finished

Part No.	Quantity	Valve Stem	Groove Type
13088-24	24 pr.	.2345-.2355	Bead Loc® Ford Modular 3 Valve
13089-16	16 pr.	.2740-.2750	Bead Loc® Ford Modular 2 Valve
13089-32	32 pr.	.2740-.2750	Bead Loc® Ford Modular 4 Valve
13093-16	16 pr.	5/16" (.3125)	Bead Loc® 5.7L/6.1L Chrysler Hemi
13098-16	16 pr.	5/16" (.3130)	Single Radius Chevy LS-1
13090-16	16 pr.	5/16" (.3100)	Conventional
13091-16	16 pr.	11/32"	Conventional
13092-16	16 pr.	3/8"	Conventional



Note: New part numbers are *ITALICIZED*.

VALVE LOCKS

CYL HEAD COMPONENTS

SUPER 7° VALVE LOCKS STEEL MATERIAL

- ✓ Heat treated and black oxide finished
- ✓ Highest quality steel alloy
- ✓ Thicker for greater strength

Part No.	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13050-8	8 pr.	.3110"	.050" less	Bead Loc®	8.2 gms
13051-8	8 pr.	.3110"	Standard	Bead Loc®	8.2 gms
13052-8	8 pr.	.3110"	.050" more	Bead Loc®	8.2 gms
13080-16*	16 pr.	.3110"	Standard	Conventional	8.3 gms
13085-16*	16 pr.	.3110"	.050" more	Conventional	8.2 gms
13060-8	8 pr.	.3415"	.050" less	Bead Loc®	7.4 gms
13061-8	8 pr.	.3415"	Standard	Bead Loc®	7.4 gms
13062-8	8 pr.	.3415"	.050" more	Bead Loc®	7.4 gms
13081-16*	16 pr.	.3415"	.050" less	Conventional	9.9 gms
13083-16*	16 pr.	.3415"	Standard	Conventional	7.5 gms
13084-16*	16 pr.	.3415"	.050" more	Conventional	7.6 gms

* Also available in quantities of 8 pairs. To order as a set of 8 pairs change the part number from a (-16) to a (-8).



SUPER 7° VALVE LOCKS TITANIUM MATERIAL

- ✓ Lightweight titanium material

Part No.	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13030T-8	8 pr.	7 mm / .2740"	.050" less	Bead Loc®	5.6 gms
13037T-8	8 pr.	7 mm / .2740"	Standard	Bead Loc®	4.9 gms
13038T-8	8 pr.	7 mm / .2740"	.050" more	Bead Loc®	4.6 gms
13051T-8	8 pr.	.3110"	Standard	Bead Loc®	4.5 gms
13052T-8	8 pr.	.3110"	.050" more	Bead Loc®	4.5 gms
13061T-8	8 pr.	.3415"	Standard	Bead Loc®	4.1 gms
13062T-8	8 pr.	.3415"	.050" more	Bead Loc®	4.1 gms
13081T-16*	16 pr.	.3415"	.050" less	Conventional	5.5 gms
13083T-16*	16 pr.	.3415"	Standard	Conventional	4.2 gms
13084T-16*	16 pr.	.3415"	.050" more	Conventional	4.1 gms

* Also available in quantities of 8 pairs. To order as a set of 8 pairs change the part number from a (-16) to a (-8).



SUPER 7° "CAPTIV-LOC" VALVE LOCKS

- ✓ Developed by Keith Dorton
- ✓ Encapsulates hard tip in titanium valve if it comes loose
- ✓ Use with valves with .290" to .330" tip lengths
- ✓ Available in steel and titanium material

Part No.	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.	
---	13039T-8	8 pr.	.3110"	.050" less	Bead Loc®	5.7 gms
13033-8	13033T-8	8 pr.	.3110"	Standard	Bead Loc®	9.5 / 5.6 gms
13034-8	13034T-8	8 pr.	.3110"	.050" more	Bead Loc®	9.4 / 5.3 gms
---	13040T-8	8 pr.	.3415"	.050" less	Bead Loc®	5.0 gms
13035-8	13035T-8	8 pr.	.3415"	Standard	Bead Loc®	8.6 / 4.9 gms
13036-8	13036T-8	8 pr.	.3415"	.050" more	Bead Loc®	8.5 / 4.7 gms
13031-16*	13031T-16*	16 pr.	.3415"	Standard	Conventional	9.2 / 5.3 gms
13032-16*	13032T-16*	16 pr.	.3415"	.050" more	Conventional	9.3 / 5.0 gms

* Also available in quantities of 8 pairs. To order as a set of 8 pairs change the part number from a (-16) to a (-8).



SPORT COMPACT VALVE LOCKS

- ✓ Manufactured from premium quality heat treated steel
- ✓ Machined to exacting tolerances

Part No.	Quantity	Description	Valve Stem	Groove Type	Angle	Wgt. / Pr.
13010-8	8 pr.	Honda / Acura	5.5 mm / .2165"	OEM Radius	7°	1.5 gms
13012-8	8 pr.	Nissan	6.0 mm / .2362"	OEM Radius	6°	1.4 gms
13014-8	8 pr.	Toyota	6.0 mm / .2362"	OEM Radius	6°	1.3 gms
13016-8	8 pr.	Mitsubishi	6.56 mm / .2581"	OEM Radius	6°	1.3 gms

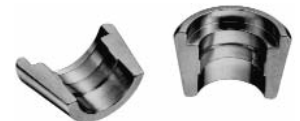


CYL HEAD COMPONENTS

PRECISION CRAFTED 10° MACHINED VALVE LOCKS STEEL MATERIAL

- ✓ Highest quality steel alloy
- ✓ Heat treated and black oxide finished

Part No.	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13171-8	8 pr.	7 mm / .2740"	.050" less	Bead Loc®	7.4 gms
13170-8	8 pr.	7 mm / .2740"	Standard	Bead Loc®	7.4 gms
13172-8	8 pr.	7 mm / .2740"	.050" more	Bead Loc®	7.4 gms
13190-8	8 pr.	.3075"	Standard	Bead Loc®	6.7 gms
13191-8	8 pr.	.3085"	Standard	Bead Loc®	6.7 gms
13193-16*	16 pr.	.3085"	Standard	Conventional	6.7 gms
13151-8	8 pr.	.3110"	Standard	Bead Loc®	7.0 gms
13152-8	8 pr.	.3110"	.050" more	Bead Loc®	6.4 gms
13096-16*	16 pr.	.3110"	Standard	Conventional	6.7 gms
13196-16*	16 pr.	.3110"	.050" more	Conventional	6.0 gms
13160-8	8 pr.	.3415"	.050" less	Bead Loc®	6.8 gms
13161-8	8 pr.	.3415"	Standard	Bead Loc®	6.3 gms
13162-8	8 pr.	.3415"	.050" more	Bead Loc®	6.3 gms
13097-16*	16 pr.	.3415"	Standard	Conventional	6.8 gms
13194-16*	16 pr.	.3415"	Standard	Conventional	6.1 gms
13198-16*	16 pr.	.3415"	.050" more	Conventional	5.6 gms
13192-8	8 pr.	.3715"	Standard	Bead Loc®	5.0 gms
13195-16*	16 pr.	.3715"	Standard	Conventional	5.0 gms



* Also available in quantities of 8 pairs. To order as a set of 8 pairs change the part number from a (-16) to a (-8).

Lock 13097 is NOT recessed to accept a wear cap.

PRECISION CRAFTED 10° MACHINED VALVE LOCKS TITANIUM MATERIAL

- ✓ Durable and lightweight

Part No.	Quantity	Valve Stem	Installed Height	Groove Type	Wgt. / Pr.
13171T-8	8 pr.	7 mm / .2740"	.050" less	Bead Loc®	4.3 gms
13151T-8	8 pr.	.3110"	Standard	Bead Loc®	3.9 gms
13152T-8	8 pr.	.3110"	.050" more	Bead Loc®	3.6 gms
13096T-16*	16 pr.	.3110"	Standard	Conventional	3.8 gms
13161T-8	8 pr.	.3415"	Standard	Bead Loc®	3.6 gms
13162T-8	8 pr.	.3415"	.050" more	Bead Loc®	3.6 gms
13094T-16*	16 pr.	.3415"	Standard	Conventional	3.5 gms
13198T-16*	16 pr.	.3415"	.050" more	Conventional	3.5 gms



* Also available in quantities of 8 pairs. To order as a set of 8 pairs change the part number from a (-16) to a (-8).

Note: New part numbers are **ITALICIZED**.

LOCAP SYSTEM

MANLEY PERFORMANCE LOCAP SYSTEM

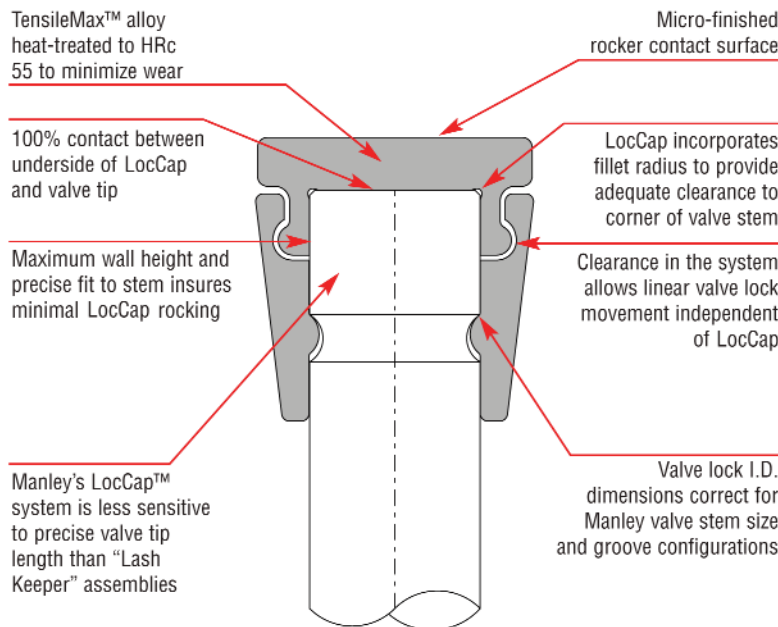
- ✓ The *ULTIMATE* valve lock/wear cap assembly
- ✓ Designed specifically for Fuel, Alcohol and Pro Mod Racers

First developed by our engineering team in the late 1990s for NASCAR applications, Manley's LocCap system is designed to retain the wear cap on the tip of the valve by employing an external bead on the wear cap that —when the system is assembled— resides within an internal "retention channel" located on the I.D. of the valve locks. Manley's valve train components group, headed by Manley GM Michael Tokarchik, refined the original designs combining a state-of-the-art steel alloy and ultra precise manufacturing techniques to achieve the goal of delivering a no compromises valve lock/wear cap assembly for the supercharged classes.

Manley's LocCap systems are available in true 7-degree as well as 10-degree assemblies for 11/32" and 3/8" stem valves in both Manley Bead Loc® and conventional square groove configurations. In addition, Manley's LocCap system retrofits to competitors' "Lash Keeper" assemblies, maintaining original valve spring installed height, valve overall length, valve tip length (0.250") and retainer designs.

Both the LocCap valve locks and wear caps are precision machined using Manley's TensileMax UHSS (ultra high strength steel). The wear caps are thru-hardened to HRC 55 (harder than typical tool steel) to minimize wear due to aggressive rocker contact. Manley's proprietary heat treatment processes minimize distortion, thereby improving the fit of the wear cap and valve locks to the valve stem.

For high RPM alcohol and Pro Mod racers desiring the lightest possible valve train mass, Manley also manufactures LocCap valve locks from high strength titanium alloy.



VALVE LOCKS

Valve Stem Size	7° Bead Loc	7° Square Groove	10° Bead Loc	10° Square Groove
5/16" (.3100")	-----	-----	13441-8	-----
11/32" (.3415")	13361-8	13394-8	13461-8	13494-8
3/8" (.3715")	13392-8	13395-8	13492-8	13495-8

LOCAPS

Valve Stem Size	Part No.
5/16" (.3100")	42441-8
11/32" (.3415")	42404-8
3/8" (.3715")	42408-8

Note: -8 indicates one set of 8 pairs. Valve Locks are available in high strength titanium alloy. Add "T" suffix when ordering.

TITANIUM RETAINERS

Valve Spring Type		7° +.100" Part No.	10° Std. Part No.	10° +.100" Part No.	10° +.170" Part No.
Steel Double Spring	221455, 221456, 221457, 221460	23675-8 23677-8*	23684-8	23676-8 23679-8*	23683-8*
Steel Triple Spring	221447, 221448, 221449, 221450, 22451	23673-8	-----	23653-8 23753-8*	-----
Titanium Double Spring		23678-8*	-----	23668-8*	-----

Note: -8 indicates 8 pieces.

* Lightweight design high strength Ti-17 titanium material

INSERTED TIPS

- ✓ Wear resistant steel alloy
- ✓ Ideal titanium valve tip protection



Part No.	Quantity	Description	Knurl Diameter	Post Length
42311-8	8 pcs.	Fits 5/16" valves	.173"	.120"
42105-8	8 pcs.	Fits 11/32" valves	.193"	.120"
42340-8	8 pcs.	Fits 3/8" valves	.193"	.120"

WEAR CAPS

- ✓ 4140 alloy steel
- ✓ Special heat treatment
- ✓ Non rotating caps afford less valve tip erosion



Part No.	Quantity	Description	Minimum Tip	Type	Thickness
42263-8	8 pcs.	.2165" stem valves (5.5 mm)	.095"	Standard	.040"
42254-8	8 pcs.	.2360" stem valves (6 mm)	.275"	Non Rotating	.060"
42264-8	8 pcs.	.2360" stem valves (6 mm)	.095"	Standard	.040"
42100-8	8 pcs.	.2740" stem valves (7 mm)	.250"	Standard	.085"
42118-8	8 pcs.	.2740" stem valves (7 mm)	.290"	Non Rotating	.080"
42101-16	16 pcs.	.3085" stem valves (5/16")	.250"	Standard	.080"
42139-8	8 pcs.	.3110" stem valves (5/16")	.250"	Standard	.080"
42300-8	8 pcs.	.3110" stem valves (5/16")	.250"	Non Rotating	.080"
42125-8	8 pcs.	.3130" stem valves (8 mm)	.130"	Standard	.080"
42104-16	16 pcs.	.3415" stem valves (11/32")	.250"	Standard	.080"
42301-8	8 pcs.	.3415" stem valves (11/32")	.250"	Non Rotating	.080"
42108-16	16 pcs.	.3715" stem valves (3/8")	.220"	Standard	.080"

TENSILEMAX WEAR CAPS

- ✓ Precision machined from TensileMax UHSS (Ultra High Strength Steel)
- ✓ Thru-hardened to HRC55 to minimize wear due to aggressive rocker contact
- ✓ Proprietary heat treatment processes minimize distortion

Part No.	Quantity	Description	Minimum Tip	Type	Thickness
42100TM-8	8 pcs.	.2740" stem valves (7mm)	.250"	Standard	.085"
42139TM-8	8 pcs.	.3110" stem valves (5/16")	.250"	Standard	.080"
42104TM-16	16 pcs.	.3415" stem valves (11/32")	.250"	Standard	.080"

VALVE STEM SEALS, GUIDES & CUTTERS

VITON MATERIAL VALVE STEM SEALS

- ✓ A necessity when using NexTek® triple valve springs.
- ✓ Special design allows clearance inside small I.D. springs.

Part No.	Quantity	Description	Guide O.D.	Installed Seal O.D.	Use Cutter No.
24041-8	8 pcs.	.274" valves	.431"	.566"	41410
24040-8	8 pcs.	5/16" valves	.420"	.566"	41510
24042-8	8 pcs.	5/16" valves	.500"	.608"	41610
24047-8	8 pcs.	5/16" valves	.530"	.677"	41710
24043-8	8 pcs.	11/32" valves	.500"	.620"	41611
24045-8	8 pcs.	11/32" valves	.530"	.674"	41711
24044-8	8 pcs.	3/8" valves	.500"	.623"	41612
24046-8	8 pcs.	3/8" valves	.530"	.677"	41712



ALL TEFLON VALVE STEM SEALS

- ✓ Spring loaded wiper to remove excess oil

Part No.	Quantity	Description	Guide O.D.	Use Cutter No.
24029-16	16 pcs.	5/16" valves	.500"	41610
24034-16	16 pcs.	5/16" valves	.530"	41710
24037-16	16 pcs.	11/32" valves	.500"	41611
24035-16	16 pcs.	11/32" valves	.530"	41711
24039-16	16 pcs.	3/8" valves	.500"	41612
24036-16	16 pcs.	3/8" valves	.530"	41712
41709	1	Seal Installation Tool		



VALVE GUIDE SEAL CUTTERS

- ✓ Carbide tipped cutters
- ✓ Due to the severe use to which these cutters are subjected, we are not able to warranty damaged goods

Part No.	Quantity	Pilot Size	Seal No.	Guide O.D.
41410	1	7 mm (.274")	24041	.431"
41510	1	5/16"	24040	.420"
41610	1	5/16"	24029 / 24042	.500"
41710	1	5/16"	24034 / 24047	.530"
41611	1	11/32"	24037 / 24043	.500"
41711	1	11/32"	24035 / 24045	.530"
41612	1	3/8"	24039 / 24044	.500"
41712	1	3/8"	24036 / 24046	.530"



VALVE GUIDE SEAL CUTTER PILOT

- ✓ For use with any spring seat or seal cutter

Part No.	Quantity	Description
41274	1	7 mm cutter pilot
41516	1	5/16" cutter pilot
41132	1	11/32" cutter pilot
41138	1	3/8" cutter pilot



BRONZE VALVE GUIDES

- ✓ .502" O.D.
- ✓ 1.625" length under flange
- ✓ Threaded seal area above flange

Part No.	Quantity	Description
12081-8	8 pcs.	Bronze insert guide - .274" I.D.
12084-8	8 pcs.	Bronze insert guide - .311" I.D.



BRONZE VALVE GUIDE SLEEVES

- ✓ Repair worn guides quickly and easily

Part No.	Quantity	Description
42157-32	32 pcs.	Repairs 5/16" valve guides. For 11/32" bore size (.3410" - .3425").
42158-32	32 pcs.	Repairs 11/32" valve guides. For 3/8" bore size (.3720" - .3735").
42159-32	32 pcs.	Repairs 3/8" valve guides. For .4040" - .4055" bore size.
42161-16	16 pcs.	.018" wall to convert 11/32" guides to accept 5/16" valves. For .3440" bored hole maximum I.D.
42162-16	16 pcs.	.030" wall to convert 3/8" guides to accept 5/16" valves. For .3735" bored hole maximum I.D.

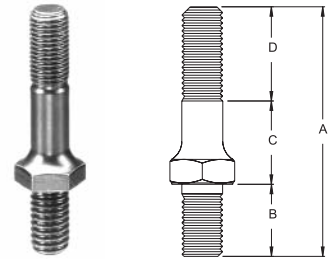


CYL HEAD COMPONENTS

ROCKER STUDS

PROFESSIONAL ROCKER ARM SCREW-IN STUDS

- ✓ 8740 material with 190,000 psi tensile strength
- ✓ Rolled threads
- ✓ Large radii
- ✓ Flat poly lock surface



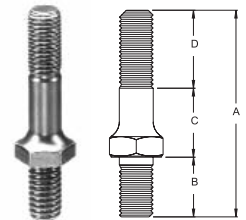
Part No.	Quantity	Application	Roller Rockers	Stud Girdles	Upper Threads	Dimensions			
						A	B	C	D
42276-16	16 pcs.	SB Chevy & Ford	Yes	No	3/8"	2.425"	.670"	.945"	.810"
42277-16	16 pcs.	SB Chevy & Ford	Yes	No	7/16"	2.440"	.660"	.890"	.890"
42287-16	16 pcs.	SB Chevy w/ 18° head	Yes	Yes	7/16"	2.850"	.750"	1.300"	.800"
42288-16	16 pcs.	SB & BB Chevy	Yes	Yes	7/16"	2.810"	.740"	1.020"	1.050"
42290-8	8 pcs.	SB & BB Chevy	Yes	Yes	7/16"	2.810"	.740"	1.020"	1.050"
42287-16	16 pcs.	BB Chevy	Yes	Yes	7/16"	2.850"	.750"	1.300"	.800"
42278-16	16 pcs.	BB Chevy	No	No	7/16"	2.580"	.820"	.900"	.860"
42255-8	8 pcs.	BB Chevy w/ alum. head, exhaust stud only	Yes	Yes	7/16"	3.700"	1.700"	1.000"	1.000"
42256-16	16 pcs.	BB Chevy w/ tall springs	Yes	Yes	7/16"	3.200"	.850"	1.550"	.800"
42266-16	16 pcs.	BB Chevy Mark V w/ 3/8" lower threads converting to Mark IV heads	Yes	No	7/16"	2.600"	.775"	.885"	1.000"
42293-8	8 pcs.	BB Chevy w/ Dart aluminum	Yes	Yes	7/16"	3.300"	1.300"	1.000"	1.000"

STREET MASTER ROCKER ARM SCREW-IN STUDS

- ✓ Special maxalloy steel
- ✓ Rolled threads



Part No.	Quantity	Description	Upper Threads	Dimensions			
				A	B	C	D
42106-16	16 pcs.	SB Chevy & Ford	3/8"	2.560"	.690"	.840"	1.030"
42147-16	16 pcs.	SB Chevy & Ford with poly locks	3/8"	2.420"	.690"	.920"	.810"
42103-16	16 pcs.	SB Chevy, BB Chevy & Ford	7/16"	2.550"	.790"	.890"	.870"



PROFESSIONAL ROCKER ARM ADJUSTING NUTS

- ✓ Special chrome moly hex material
- ✓ Heat treated and black oxide
- ✓ Set screws and allen wrench included

Part No.	Quantity	Description
42107-16	16 pcs.	All 3/8" stud Chevys, Fords, Pontiacs
42112-16	16 pcs.	All 7/16" stud Chevys and Fords (.580" Body Diameter)



ROCKER ARM KITS

CHEVROLET STAMPED STEEL ROCKER ARM KITS

- ✓ Highest quality steel
- ✓ Heat treated
- ✓ Long slots to avoid stud interference
- ✓ Kits include oil grooved rocker balls and nuts

Part No.	Quantity	Description	Stud Diameter
43140	1 set for 1 head	Small Block - Long Slot 1.5 Ratio	3/8"
43150	1 set for 1 head	Small Block - Long Slot 1.6 Ratio	3/8"
43170	1 set for 1 head	Big Block - Long Slot 1.7 Ratio	7/16"

ROCKER ARM KIT COMPONENTS

Note that individual rockers only are sold as -8, and rocker balls and rocker nuts are sold as -16. Kits include only 8 pieces of each part.

Kit	Rocker	Ball	Nut
43140	43141-8	43142-16	43143-16
43150	43151-8	43142-16	43143-16
43170	43171-8	43172-16	43173-16

The Manley Small Block Chevy rockers are the original non "self-aligning" type used from 1955 to 1989.

The Chevy L-19 Big Block 1991/up is equipped with "non-adjustable" rocker arms. To install the above adjustable rockers, the stock stud bosses must be drilled and tapped for 7/16"-14 screw - in studs.



CYL HEAD COMPONENTS

STEEL GUIDE PLATES

STEEL GUIDE PLATES

- ✓ Meticulously crafted stamping
- ✓ Heat treated and black oxide finished



SMALL BLOCK CHEVROLET RAISED GUIDE PLATE

Part No.	Quantity	Description	Slots	Pushrods
42151-8	8 pcs.	Small Block Chevy	On-Center	5/16"
42150-8	8 pcs.	Small Block Chevy	On-Center	3/8"



SMALL BLOCK CHEVROLET FLAT GUIDE PLATE

Part No.	Quantity	Description	Slots	Pushrods
42355-8	8 pcs.	Small Block Chevy	On-Center	5/16"
42356-8	8 pcs.	Small Block Chevy	On-Center	3/8"



BIG BLOCK CHEVROLET

Part No.	Quantity	Description	Pushrods
42164-8	8 pcs.	Big Block Chevy	3/8"
42165-8	8 pcs.	Big Block Chevy Adjustable	3/8"
42149-8	8 pcs.	Big Block Chevy	7/16"



ADJUSTABLE

FORD 289 - 302 - 351 W PRE 1977 HEADS

Part No.	Quantity	Description	Pushrods
42152-8	8 pcs.	289, 302 W, 351 W Ford	5/16"



FORD 302 BOSS - 351 C (WITH MODIFIED HEADS)

Part No.	Quantity	Description	Pushrods
42163-8	8 pcs.	302 Boss, 351 C Modified	5/16"
42156-8	8 pcs.	302 Boss, 351 C Modified	3/8"



To convert Ford 351C engines to adjustable rocker arms and pushrod guide plates, machine the old rocker stanchions down to a height of .550" as measured from the adjacent head bolt spot face with cutter 41860. Drill and tap the old screw hole to accept stud 42277.

FORD 429 - 460

Part No.	Quantity	Description	Pushrods
42166-8	8 pcs.	429, 460 Ford	5/16"
42160-8	8 pcs.	429, 460 Ford	3/8"



FASTENERS

SUPERIOR HEAD BOLTS

- ✓ 180,000 psi material
- ✓ Longer than stock for use with washers
- ✓ Improved wrenchability with 1/2" hex head

Part No.	Quantity	Description
42193	1 set for 1 head	Chevrolet V-6
42171	1 set for 1 head	SB Chevy V-8
42312	1 set for 1 head	SB Chevy, Brodix - 12 and Pontiac 10093328 castings
42313	1 set for 1 head	SB Chevy, Brodix aluminum and Pontiac 10033867
42170	1 set for 1 head	BB Chevy
42180	1 set for 1 head	BB Chevy with Dart Pro 1 heads
42192	1 set for 1 head	BB Chevy with Brodix heads, Merlin II Aluminum
42322	1 set for 1 head	BB Chevy with Chevy Bow Tie, Dart Aluminum and Merlin heads
42178	1 set for 1 head	Chrysler 383-440
42198	1 set for 1 head	Indy Cylinder Head 440-1 BB Chrysler head



HARDENED HEAD BOLT WASHERS

- ✓ Special heat treatment to prevent galling

Part No.	Quantity	Description
42102	34 pcs.	All Chevys, 289-351 Fords, .760" O.D., 7/16" I.D., .125" thick
42127	20 pcs.	All Chryslers, Pontiacs, 390-427 Fords, .875" O.D., 1/2" I.D., .105" thick
42136	34 pcs.	Ideal washers for aluminum heads. 7/16" I.D. but larger .935" O.D. for better fit in aftermarket aluminum heads, .125" thick



CYLINDER HEAD STUD KITS

- ✓ Chrome moly steel
- ✓ 190,000 psi tensile strength
- ✓ Kit includes studs, washers and nuts

Part No.	Quantity	Description
42190	1 set for 1 head	SB Chevy OEM cast iron and aluminum Brodix -8, -10, -11, Track 1, Dart Sportsman and Dart II
42283	1 set for 1 head	BB Chevy with Dart and Chevy Bow Tie heads flat milled
42284	1 set for 1 head	BB Chevy with Brodix heads flat milled
42191	1 set for 1 head	BB Chevy with non Bow Tie heads flat milled
42197	1 set for 1 head	Ford 4.6L 2 valve and 4 valve heads
42030	1 set for 1 head	Nissan 2.6L RB26
42031	1 set for 1 head	Subaru WRX EJ Series



SUBARU MAIN BOLT KIT

- ✓ Forged 8740 chrome moly
- ✓ 200,000 psi tensile strength
- ✓ Kit includes bolts and hardened washers



Part No.	Quantity	Description
42020	1 set for 1 engine	Subaru 2.0L, 2.2L, 2.5L SOHC/DOHC EJ Series Crankcase thru bolt kit



Note: New part numbers are *ITALICIZED*.

CYL HEAD COMPONENTS

7/16" CYLINDER HEAD STUD NUTS

Part No.	Quantity	Description
42279-4	4 pcs.	Hex head stud nut for all Chevrolets and 4.6L Fords
42289-4	4 pcs.	12 point stud nut for all Chevrolets and 4.6L Fords



HEX HEAD INTAKE MANIFOLD BOLTS

- ✓ P/N 42175 and 42176 have gold irridite finished bolts and hardened washers
- ✓ P/N 42177 has black oxide finished bolts and hardened washers



Part No.	Quantity	Description	Underhead Length
42176	1 set	Small Block Chevrolet	1.125"
42177	1 set	Small Block Chevrolet using thin casting hi-rise manifolds	1.000"
42175	1 set	Big Block Chevrolet	1.125"
42294-16	16 pcs.	Hardened washers for 42175 & 42176 bolts. .100" thick. Gold Irridite	
42299-16	16 pcs.	Hardened washers for 42177 bolts. .125" thick. Black oxide	

1 2 POINT HEAD INTAKE MANIFOLD BOLTS

- ✓ Bolts and washers gold irridite finish
- ✓ Shipped with hardened washers



Part No.	Quantity	Description	Underhead Length
42292	1 set	Small Block Chevrolet, Chrysler "A" and "B" engines	1.125"
42291	1 set	Big Block Chevrolet using thin casting hi-rise manifolds	1.125"
42294-16	16 pcs.	Hardened washers for above bolts. .100" thick. Gold Irridite	

HARD TO FIND "AN" WASHERS

- ✓ .060" thick

Part No.	Quantity	I.D.	O.D.
42194	12 pcs.	5/16"	9/16"
42195	12 pcs.	3/8"	5/8"
42196	12 pcs.	7/16"	3/4"



CYL HEAD COMPONENTS

STUD KITS, BOLTS & GEARS

CYL HEAD COMPONENTS

FRONT TIMING COVER BOLTS

- ✓ Special flange for greater "wrenchability"
- ✓ Integral lock washer

Part No.	Quantity	Description
42174	1 set	Small and Big Block Chevys-black oxide
42179	1 set	Small and Big Block Chevys-gold irridite



FRONT TIMING COVER STUD KITS

- ✓ Nut starter radius to prevent cross-threading
- ✓ Flanged, serrated, self-locking nuts included

Part No.	Quantity	Description
42134	1 set	Small and Big Block Chevys



OIL PAN BOLTS

- ✓ Special flange for greater "wrenchability"
- ✓ Integral lock washer

Part No.	Quantity	Description
42173	1 set	Small Block Chevrolet - black oxide
42189	1 set	Small Block Chevrolet - gold irridite
42172	1 set	Big Block Chevrolet - black oxide
42188	1 set	Big Block Chevrolet - gold irridite



OIL PAN STUD KITS

- ✓ Nut starter radius to prevent cross-threading
- ✓ Flanged, serrated, self-locking nuts included

Part No.	Quantity	Description
42148	1 set	Small Block Chevrolet
42155	1 set	Big Block Chevrolet



BALANCER BOLTS

- ✓ Parallel ground washer included
- ✓ Rolled threads

Part No.	Quantity	Description
42223	1	SB Chevy 2.470" length. Use 13/16" 12-point socket.
42224	1	BB Chevy 1.560" length. Use 13/16" 12-point socket.



12 Point

BRONZE DISTRIBUTOR GEARS

- ✓ Precision aluminum / silicon bronze
- ✓ Required with 8620 billet roller camshafts

Part No.	Quantity	Description
42240	1	SB and BB Chevrolet - for .490" diameter shaft
42246	1	SB and BB Chevrolet - for .500" diameter aftermarket shaft





BETTER
by **DESIGN**

Manley proudly offers an outstanding array of valve springs for drag racers, oval / endurance competitors and niche markets like the Chevy LS, Ford Modular and Chrysler / Dodge Hemi.



Manufactured from
"super clean" Hi-Tensile
Chrome Silicon steel

Shot-peened to MIL Specs
for maximum fatigue life

**Many part numbers
available fully polished
or Super Finished**

Proprietary multi-step
heat treating minimizes
load loss

Tightly controlled open
end flatness reduces
valve stem side loading



Many offerings are a damperless
design which eliminates
unnecessary damper weight
and reduces retainer wear

Optimized "Select Size Fitting"
between outer and inner
springs to maximize harmonic
dampening and reduce heat
generated during operation

Computer-aided modeling of
designs minimizes valve bounce
and valve gear separation

Tip thickness designed to
eliminate overload breakage

LIGHTWEIGHT DUAL DRAG RACE VALVE SPRINGS

- ✓ Smaller diameter, lightweight dual design allows engine to rev higher with improved valve train control
- ✓ Accepts smaller, lighter retainers which also promotes higher revs
- ✓ Ultra clean, high tensile strength material
- ✓ Super Finished multi-step surface enhancement significantly improves fatigue strength
- ✓ Ideal loads for multiple applications with minimal load loss



Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind
221455-16	Competition Eliminator	1.000	1.500	.719	438 @ 2.175 1235 @ 1.175	797	1.130
221457-16	Super Stock Competition Eliminator	.950	1.500	.719	395 @ 2.150 1155 @ 1.200	800	1.130
221456-16	Super Stock Competition Eliminator	.900	1.500	.719	316 @ 2.100 1036 @ 1.200	800	1.130
221460-16	Alcohol Classes	.950	1.522	.719	400 @ 2.250 1300 @ 1.300	948	1.255

Retainer Part No.	Description
23675-16	7° Titanium Retainer + .100" Installed (for 7° LocCap App)
23677-16	7° Titanium Retainer + .100" Installed (for 7° LocCap App) Ti-17 Alloy
23684-16	10° Titanium Retainer Std. Installed
23676-16	10° Titanium Retainer +.100" Installed
23679-16	10° Titanium Retainer +.100" Installed Ti-17 Alloy
23683-16	10° Titanium Retainer +.170" Installed Ti-17 Alloy

Spring Cup Part No.	Description	Cup I.D.	Cup O.D.
42347-16	ID Spring Locator	.570	1.535
42318-16	ID Spring Locator	.570	1.610
42335-16	ID Spring Locator	.635	1.535
42120-16	ID Spring Locator	.635	1.610

VALVE SPRINGS

NEXTEK® SERIES DRAG RACE VALVE SPRINGS

- ✓ Unequalled performance
- ✓ All springs are triple except 221424 & 221425 double w/o damper
- ✓ Manley eclipses the 1200 lb. barrier
- ✓ Better valve train stability and component life
- ✓ Ideally suited for Fuel and Alcohol classes, Pro Stock, Competition, Super Stock, Super Gas and Mountain Motor applications



All Manley NexTek® valve springs listed below are available in Super Finished versions to reduce friction, improve fatigue life and minimize load loss. For example 221449P-16.

Part No.	Super Finished Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Component Code
221424-16	221424P-16	Super Gas, Super Comp., Big Block Bracket	.880	1.640	.860	250 @ 2.000 800 @ 1.150	647	1.070	A
221425-16	221425P-16	Super Gas, Super Comp., Big Block Bracket	.900	1.640	.860	280 @ 2.100 794 @ 1.250	604	1.150	A
221447-16*	221447P-16*	Super Stock, Pro Mod., Competition Eliminator	.800	1.677	.635	350 @ 2.000 895 @ 1.270	746	1.160	B
221448-16*	221448P-16*	Super Stock, Pro Mod., Competition Eliminator	.900	1.677	.635	350 @ 2.100 1010 @ 1.200	733	1.142	B
221449-16*	221449P-16*	Pro Stock, Fuel & Alcohol	1.000	1.677	.632	350 @ 2.200 1070 @ 1.200	720	1.142	B
221450-16*	221450P-16*	Pro Stock, Fuel & Alcohol	1.000	1.677	.632	370 @ 2.200 1140 @ 1.200	770	1.142	B
221451-16*	221451P-16*	Pro Stock, Fuel & Alcohol	1.050	1.677	.635	410 @ 2.300 1210 @ 1.250	761	1.180	B

* Advertised pressures are achieved after springs have been pressed solid three times.

Component Code	10° Titanium Retainers	Type	Installed Height	Spring Cup	Type	Cup O.D.	Cup I.D.	Seat Cutter	
A	23649-16	Standard	Std.	42121-16	OD	1.740	.635	41851	
	23640-16	Standard	+.100	42128-16*	OD	1.740	.635	41851	
	23540-16	Lightweight	+.100	42379-16*	OD	1.740	.570	41859	
					* 42128 & 42379 have a wall height of .250 instead of .150				
					42337-16	ID	1.570	.570	41857
					42437-16*	ID	1.570	.567	41857
				* 42437 is Pro Series					
B	23663-16	Standard	Std.	42371-16	OD	1.740	.635	41851	
	23653-16	Standard	+.100	42372-16	OD	1.740	.570	41859	
	23553-16	Lightweight	+.100	42364-16	ID	1.660	.570	41858	
	23553 I-16	Life & Impinged	+.100						
	23673-16	7° Valve Locks Required	+.100						
	23753-16	Lite & Ti-17 Material	+.100						
23708L-16	Super 7° Valve Locks Required								

VALVE SPRING & TITANIUM RETAINER KITS

- ✓ Large savings over purchasing items separately

Kit No.	Quantity	Application	NexTek® Spring No.	10° Titanium Retainer No.
261424	1 kit	Super Gas, Super Comp., Big Block Bracket Engines	221424-16	23640-16
261424L	1 kit	Same, except lightweight titanium retainers	221424-16	23540-16
261425	1 kit	Super Gas, Super Comp., Big Block Bracket Engines	221425-16	23640-16
261425L	1 kit	Same, except lightweight titanium retainers	221425-16	23540-16

VALVE SPRINGS



NEXTEK® SERIES

OVAL TRACK & ENDURANCE VALVE SPRINGS

- ✓ No degradation of spring pressure in the later stages of a race
- ✓ Specially processed premium-grade chrome silicon that is virtually free of impurities or surface irregularities
- ✓ NexTek® Series valve springs have been tested by leading engine builders and are confirmed to be the best performing valve springs on the market today

Part No.	Polished Part No.	Super Finished Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Component Code
221432-16	-----	-----	Late Model Stock w/ Flat Tappet	.630	1.530	.750	150 @ 1.900 423 @ 1.270	435	1.170	A
-----	221440P-16	-----	Circle Track Roller	.700	1.570	.760	255 @ 2.000 629 @ 1.300	534	1.190	B
-----	221441P-16	-----	Circle Track Roller	.730	1.570	.750	280 @ 2.030 700 @ 1.300	575	1.215	C
-----	221442-16	-----	Circle Track Roller	.750	1.560	.812	260 @ 2.000 660 @ 1.250	533	1.200	D
221443-16	-----	221443P-16	Circle Track Roller	.730	1.580	.832	235 @ 1.950 610 @ 1.250	535	1.170	E
221444-16	-----	221444P-16	Circle Track Roller	.750	1.610	.842	235 @ 2.050 645 @ 1.300	546	1.220	F
-----	221445P-16	-----	Circle Track Roller	.800	1.620	.852	280 @ 2.050 680 @ 1.250	500	1.200	G
-----	-----	221446SF-16	Circle Track Roller	.800	1.400	.700	240 @ 2.050 700 @ 1.250	575	1.150	H

ANCILLARY COMPONENTS

Component Code	Super 7° Retainers	Super 7° Lightweight	Super 7° +.050	TensileMax Super 7°	H-13 Tool Steel	Spring Cup	Type	Cup O.D.	Cup I.D.	Cup Thickness	Seat Cutter
A	23707 -16 23672 ICD-16 23707 SCD-16 23644-16 23650-16	(10° Ti Std.) (10° Ti +.100)		23707TM-16		42330-16 42326-16 42426-16* 42466-16*	ID	1.535 1.535 1.535 1.535	.635 .570 .567 .567	.062 .062 .062 .045	41835 41856 41856 41856
B	23705 ICD-16 23644-16 23650-16	23705 L-16 23705 LI-16 (10° Ti Std.) (10° Ti +.100)	23706 L-16 23706 LI-16	23705TM-16 23705LTM-16 (Lightweight)		42331-16	ID	1.530	.570	.062	41856
C	23672-16 23672 I-16 23672 ICD-16 23647-16	23672 L-16 (10° Ti +.100)		23672TM-16	23647TS-16 (10° +.100)	42330-16 42326-16 42426-16* 42466-16*	ID	1.535 1.535 1.535 1.535	.635 .570 .567 .567	.062 .062 .062 .045	41835 41856 41856 41856
D	23682-16 23682 I-16 23682 ICD-16 23643-16	23682 L-16 23682 LI-16 (10° Ti +.100)		23682TM-16	23643TS-16 (10° +.100)	42343-16 42443-16*	ID	1.550 1.550	.570 .567	.062 .062	41856 41856
E	23681-16 23681 I-16 23681 ICD-16 23648-16	23681 L-16 23681 LI-16 (10° Ti +.100)	23691-16 23691 ICD-16		23648TS-16 (10° +.100)	42370-16 42369-16 42373-16 42573-16* 42438-16*	OD ID ID ID ID	1.687 1.570 1.570 1.570 1.570	.570 .635 .570 .567 .567	.062 .062 .062 .062 .045	41858 41856 41856 41856 41856
F	23681-16 23681 I-16 23681 ICD-16 23648-16	23681 L-16 23681 LI-16 (10° Ti +.100)	23691-16 23691 ICD-16		23648TS-16 (10° +.100)	42365-16 42367-16 42368-16	OD ID ID	1.740 1.610 1.610	.570 .570 .635	.062 .062 .062	41859 41857 41855
G	23685-16 23685 I-16	23685 L-16 23685 LI-16		23685TM-16 23685DCTM-16		42342-16	ID	1.610	.570	.062	41857
H		23746 L-16		23746TM-16 23746TS-16 (Super 7°) 23747TS-16 (10° +.100)		42446-16*	ID	1.410	.567	.062	41850

SUFFIX CODE: I : Impinged ICD : Impinged, Convoluted and Drilled SCD : Steel, Convoluted and Drilled L : Lightweight LI : Lightweight and Impinged

* Pro Series Spring Locators

Note: New part numbers are **ITALICIZED**.

VALVE SPRINGS

NEXTEK® SERIES

HIGH PERFORMANCE STREET/STRIP VALVE SPRINGS
FOR SB CHEVY LS, SB CHRYSLER HEMI & FORD MODULAR APPLICATIONS.



✓ Specially processed premium-grade chrome silicon that is virtually free of impurities or surface irregularities

CYL HEAD COMPONENTS

Part No.	Description	Maximum Valve Lift	O.D.	I.D.	Installed / Open Pressure	Rate (lbs. / in.)	Coil Bind	Component Code
221423-16	SBC LS-1, LT-1 / LT-4 / L-98 Stock Diameter Street/Strip	.575	1.255	.830	115 @ 1.750 350 @ 1.175	409	1.100	A
			Single Without Damper Ovate Wire					
221428-16	SBC LS-Series, LT-1 / LT-4 / L-98 High Performance Street/Strip	.600	1.076 Top 1.311 Bottom	.650 Top .885 Bottom	150 @ 1.800 355 @ 1.200	341	1.085	B
			Single Conical Ovate Wire					
221438-16	SBC LS-Series, LT-1 / LT-4 / L-98 High Performance Street/Strip	.650	1.076 Top 1.311 Bottom	.650 Top .885 Bottom	150 @ 1.800 375 @ 1.150	353	1.100	B
			Super Finished Single Conical Ovate Wire					
221436-16	SBC LS-Series, High Performance Street/Strip	.660	1.295	.676	155 @ 1.810 405 @ 1.150	379	1.100	C
			Fully Polished Double Without Damper					
221435-16	SBC LS-Series, High Performance Street/Strip	.700	1.340	.726	170 @ 1.810 446 @ 1.110	394	1.050	D
			Fully Polished Double Without Damper					
221430-16*	Chrysler Hemi 5.7L(Thru 2008), 6.1L Stock Diameter High Performance Street/Strip	.600	1.056 Top 1.206 Bottom	.630 Top .780 Bottom	130 @ 1.811 370 @ 1.211	400	1.170	E
			Super Finished Single Conical Ovate Wire					
221431-16*	Chrysler Hemi 5.7L, 6.1L High Performance Street/Strip	.650	1.076 Top 1.311 Bottom	.650 Top .885 Bottom	146 @ 1.811 371 @ 1.161	353	1.100	F
			Super Finished Single Conical Ovate Wire					
221427-16	Ford 4.6L, 5.4L SOHC 2 Valves per Cylinder Stock Diameter Street/Strip	.580	1.020 Top 1.125 Bottom	.642 Top .748 Bottom	95 @ 1.680 240 @ 1.130	264	1.080	G
			Single Conical Ovate Wire					
221437-16	Ford 4.6L, 5.4L SOHC 2 Valves per Cylinder Stock Diameter Ideal for Boosted Applications	.580	1.030 Top 1.175 Bottom	.642 Top .787 Bottom	125 @ 1.680 265 @ 1.130	255	1.080	G
			Single Conical Ovate Wire					
221429-24	Ford 4.6L, 5.4L 3 Valve 3 Valves per Cylinder Stock Diameter Street/Strip	.500	.880 Top 1.025 Bottom	.565 Top .710 Bottom	95 @ 1.670 230 @ 1.170	270	1.100	H
			Fully Polished Single Conical					
221433-24	Ford 4.6L, 5.4L 3 Valve 3 Valves per Cylinder High Performance Street/Strip	.580	1.013 Top 1.101 Bottom	.650 Top .738 Bottom	110 @ 1.670 260 @ 1.090	258	1.020	I
			Single Conical Ovate Wire					
221434-32	Ford 4.6L, 5.4L DOHC 4 Valves per Cylinder Stock Diameter High Performance Street/Strip	.525	1.016 Top 1.126 Bottom	.640 Top .750 Bottom	95 @ 1.420 260 @ .920	330	.880	J
			Single Conical Ovate Wire					

* These Chrysler Hemi springs come with shims which are ONLY needed for 6.1L applications on the intake side in order to achieve the correct installed height. P/N 221431 also includes a set of piloting rings that install over the factory "Top Hat" integral valve seal to properly locate the ID of the spring on early 5.7L (thru 2008) and 6.1L applications.

Please refer to opposite page 69 for the appropriate fitting retainers and spring cups. Match the component codes listed to find the correct parts.

Note: New part numbers are *ITALICIZED*.

ANCILLARY COMPONENTS

Component Code	Retainer Part No.	Description	Spring Cup Part No.	Type	Cup O.D.	Cup I.D.	Cup Thickness	Seat Cutter
A	<i>23631-16</i>	7° Steel for Manley 13098 or factory LS-1 valve lock and factory spring seat	<i>42341-16</i>	ID	1.170	.505	.035	None
	<i>23664-16</i>	7° Steel +.050 for LT-1 and standard type valve lock						
	<i>23632-16</i>	7° Titanium for Manley 13098 or factory LS-1 valve lock and factory spring seat						
	<i>23633-16</i>	7° Titanium +.050 for Manley 13098 or factory LS-1 valve lock and factory spring seat						
	<i>23634-16</i>	7° Titanium +.050 for LT-1 and standard type valve lock						
B	<i>23620-16</i>	7° Steel for Manley 13098 or factory LS-1 valve lock and factory spring seat	<i>42338-16</i>	ID	1.290	.505	.035	None
	<i>23622-16</i>	7° Titanium for Manley 13098 or factory LS-1 valve lock and factory spring seat	<i>42336-16</i>	ID	1.290	.505	.062	None
	<i>23625-16</i>	7° Titanium +.050 for Manley 13098 or factory LS-1 valve lock and factory spring seat						
	<i>23626-16</i>	7° Titanium +.050 for LT-1 and standard type valve lock						
C	<i>23621-16</i>	7° Steel +.050 for Manley 13098 or factory LS-1 valve lock	<i>42334-16</i>	ID	1.270	.505	.035	None
	<i>23623-16</i>	7° Titanium +.050 for Manley 13098 or factory LS-1 valve lock						
	<i>23624-16</i>	7° Titanium +.050 for LT-1 and standard type valve lock						
D	<i>23610-16</i>	7° Steel +.050 for Manley 13098 or factory LS-1 valve lock	<i>42348-16</i>	ID	1.320	.505	.035	None
	<i>23611-16</i>	7° Titanium +.050 for Manley 13098 or factory LS-1 valve lock						
E	<i>23629-16</i>	7° Titanium for Manley 13093 or factory valve lock						
F	<i>23612-16</i>	7° Steel for Manley 13093 or factory valve lock	<i>42324-16</i>	ID	1.300	.812	.205	None
	<i>23613-16</i>	7° Titanium for Manley 13093 or factory valve lock						
		Must use ID locator P/N 42324-16 for the 2009 and up Hemi 5.7L.						
G	<i>23627-16</i>	7° Titanium for Manley 13089 or factory valve lock						
	<i>23667-16</i>	7° Titanium + .060 for Manley 13089 or factory valve lock						
H	<i>23628-24</i>	7° Titanium for Manley 13088 or factory valve lock						
I	<i>23614-24</i>	7° Titanium for Manley 13088 or factory valve lock						
J	<i>23627-32</i>	7° Titanium for Manley 13089 or factory valve lock						
	<i>23667-32</i>	7° Titanium + .060 for Manley 13089 or factory valve lock						

JDM Engineering
relies on Manley components



Note: New part numbers are *ITALICIZED*.

VALVE SPRINGS

STREET MASTER VALVE SPRINGS

- ✓ Chrome silicon material
- ✓ Designed for low stress and long service life



Part No.	Type	Application	Size OD/ID	Pressures	Rate (lbs. / in.)	7° Steel Retainer	10° Steel Retainer	Titanium Retainer
22409-16	Outer w/ damper	SB Chevy Street Use	1.250" .865"	110 @ 1.700" 285 @ 1.210" Coil Bind: 1.180"	357	23651 (std.) 23652 (+.050")		23642 (7° x 11/32" +.050")
22408-16	Double w/ damper	SB Chevy, LS-1 Chevy, Ford, Chrysler	1.437" .720"	115 @ 1.800" 310 @ 1.250" 350 @ 1.200" Coil Bind: 1.100"	354	23645 (11/32") 23646 (11/32" +.100") 23666 (3/8")	23635	23630 (10 Degree) 23638 (7° x 5/16" LS-1) 23639 (7° x 5/16" +.050" LS-1)
22407-16	Double w/ damper	SB & BB Chevy	1.437" .720"	135 @ 1.800" 350 @ 1.250" Coil Bind: 1.085"	391	23645 (11/32") 23646 (11/32" +.100") 23666 (3/8")	23635	23630 (10 Degree)
22406-16	Outer w/ damper	BB Chevy, Chrysler	1.550" 1.080"	125 @ 1.875" 355 @ 1.375" Coil Bind: 1.190"	460	23645 (11/32") 23646 (11/32" +.100") 23666 (3/8")	23635	23630 (10 Degree)

PROFESSIONAL VALVE SPRINGS

- ✓ Chrome silicon material for oval track racing
- ✓ H-11 tool steel for drag racing



Part No.	Type	Application	Size OD/ID	Pressures	Coil Bind	Rate (lbs. / in.)	Super 7° Ti. Retainer	10° Steel Retainer	10° Titanium Retainer
22410-16	Outer w/ damper	Oval track Stock Class Chrome Silicon	1.250" .865"	130 @ 1.750" 320 @ 1.200"	1.150"	345	23651 (7°x11/32" Steel) 23652 (7°x11/32" +.050" Steel) 23642 (7°x11/32" +.050" Titanium)		
22411-16	Outer w/ damper	SB Chevy Stock Diameter Tool Steel	1.255" .870"	115 @ 1.750" 390 @ 1.175"	1.100"	470	23651 (7°x11/32" Steel) 23652 (7°x11/32" +.050" Steel) 23642 (7°x11/32" +.050" Titanium)		
22441-16	Double w/ damper	Oval Track Chrome Silicon	1.550" .740"	170 @ 1.900" 500 @ 1.200"	1.100"	471	23670	23659 (+.100")	23658 (std.) 23660 (+.100")
22429-16	Double w/ damper	Oval Track Chrome Silicon	1.550" .740"	150 @ 1.880" 425 @ 1.280"	1.180"	458	23672	23656 (+.100")	23657 (std.) 23661 (+.100")
22430-16	Double w/ damper	Oval Track Chrome Silicon	1.550" .735"	210 @ 1.900" 525 @ 1.250"	1.200"	484	23672	23656 (+.100")	23657 (std.) 23661 (+.100")
22431-16	Double w/ damper	Oval / Drag Chrome Silicon	1.550" .725"	240 @ 1.850" 624 @ 1.150"	1.090"	548	23670	23659 (+.100")	23658 (std.) 23660 (+.100")
22440-16	Double w/ damper	Drag Race Chrome Silicon	1.550" .720"	250 @ 1.850" 680 @ 1.150"	1.090"	614	23670	23659 (+.100")	23658 (std.) 23660 (+.100")
22438-16*	Double w/ damper	Drag Race Tool Steel	1.625" .775"	328 @ 1.900" 806 @ 1.200"	1.090"	682	23669		23654 (std.) 23655 (+.100")
22448-16*	Double w/ damper	Drag Race Tool Steel	1.625" .775"	240 @ 1.900" 760 @ 1.150"	1.090"	693	23669		23654 (std.) 23655 (+.100")
22458-16*	Double w/ damper	Drag Race Tool Steel	1.625" .775"	260 @ 2.000" 840 @ 1.150"	1.090"	682	23669		23654 (std.) 23655 (+.100")

* Advertised pressures are achieved after springs have been pressed solid three times.

Note: New part numbers are **ITALICIZED**.

VALVE SPRINGS

SPORT COMPACT VALVE SPRINGS

HONDA/ACURA, MITSUBISHI, NISSAN, TOYOTA, SUBARU & DODGE APPLICATIONS

✓ Wound from super clean alloy

✓ Designed to handle aftermarket camshafts

✓ Revs up to 10,000 RPM with Manley titanium retainers



Part No.	Quantity	Application	O.D. / I.D. Outer Inner	Pressures	Stock / Maximum Net Lift	Coil Bind	Rate (lbs. / in.)	Titanium Retainer
22105-16	16 pcs.	Acura B Series V-Tec High Performance Race	1.180"/.870" .865"/.660"	82 @ 1.350" 206 @ .950" 248 @ .815"	.400" .535"	.765"	310	23100-16
22110-16	16 pcs.	Honda H22 V-Tec	1.160"/.870" .865"/.660"	88 @ 1.400" 200 @ .950" 232 @ .840"	.450" .560"	.790"	227	23100-16
22120-16	16 pcs.	Honda B Series Non V-Tec <small>Stock installed height on B Series Non V-Tec spring is: Intake - 1.320" / Exhaust - 1.425".</small>	1.105"/.820" .800"/.630"	54 @ 1.375" 143 @ .990" 195 @ .760"	.385" .615"	.710"	230	23120-16
22140-16	16 pcs.	Honda K20A/K20Z	1.160"/.870" .865"/.660"	80 @ 1.590" 249 @ 1.140" 283 @ 1.050"	.450" .540"	1.000"	375	23140-16
22145-16	16 pcs.	Honda K20A3/K24A	1.106"/.787"	79 @ 1.565" 182 @ 1.185" 226 @ 1.025"	.380" .545"	.975"	274	23145-16
22150-16	16 pcs.	Honda F20C/F22C	1.160"/.870" .865"/.660"	84 @ 1.580" 264 @ 1.100" 283 @ 1.050"	.480" .530"	1.000"	375	23150-16
22190-16	16 pcs.	Dodge SRT-4	1.100"/.775"	92 @ 1.500" 188 @ 1.175" 237 @ 1.000"	.325" .500"	.950"	294	23190-16
22115-16	16 pcs.	Mitsubishi 4G63-4G63T DOHC 16 Valve (1990-1999) DSM	1.160"/.870" .865"/.660"	104 @ 1.580" 237 @ 1.210" 269 @ 1.120"	.370" .460"	1.070"	359	23115-16
22125-16	16 pcs.	Mitsubishi 4G63-4G63T DOHC 16 Valve (1990-2006) DSM / EVO	1.100"/.775"	66 @ 1.580" 175 @ 1.210" 237 @ 1.000"	.370" .580"	.950"	294	23125-16
22195-16	16 pcs.	Mitsubishi EVO X 4B11T DOHC 16 Valve (2008-Up)	.990"/.710"	86 @ 1.400" 180 @ 1.030" 198 @ .970"	.370" .430"	.920"	253	23195-16
22155-24	24 pcs.	Nissan Patrol TB48	1.100"/.775"	75 @ 1.550" 191 @ 1.165" 237 @ 1.100"	.385" .550"	.950"	294	23155-24
22160-16	16 pcs.	Nissan KA24DE	1.180"/.880" .870"/.670"	73 @ 1.400" 191 @ 1.050" 228 @ .900"	.350" .500"	.850"	310	23160-16
22165-16	16 pcs.	Nissan SR20DE/SR20DET	1.160"/.835"	90 @ 1.550" 185 @ 1.170" 225 @ 1.010"	.380" .540"	.960"	248	23165-16
22170-24	24 pcs.	Nissan VQ35DET	.990"/.710"	80 @ 1.425" 175 @ 1.050" 195 @ .970"	.375" .455"	.920"	253	23170-24
22175-24	24 pcs.	Nissan RB26DET	1.100"/.775"	80 @ 1.535" 197 @ 1.140" 237 @ 1.000"	.395" .535"	.950"	294	23175-24
22180-16	16 pcs.	Subaru WRX/Sti	1.050"/.755"	60 @ 1.420" 151 @ 1.050" 187 @ .895"	.370" .525"	.845"	245	23180-16
22130-24	24 pcs.	Toyota Supra 2JZGT/2JZGTE 6 cyl.	1.050"/.755"	82 @ 1.325" 165 @ .985" 187 @ .895"	.340" .430"	.845"	245	23130-24

Note: New part numbers are *ITALICIZED*.

SPRING RETAINERS

MANLEY RETAINERS

.....SIMPLY THE BEST!

- ✓ Engineered using finite element analysis
- ✓ Specially heat treated titanium material
- ✓ Exclusive "impingement" finishing process
- ✓ TensileMax steel alloy
- ✓ CNC machined to exacting tolerances
and jewel-like surface finishes



Lightweight Titanium



TensileMax Steel



ICD Titanium



7° & 10° Titanium

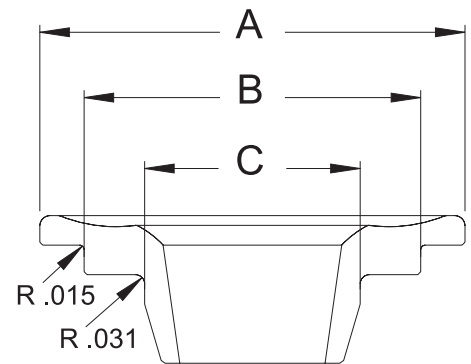


H-13 Tool Steel

ICD SUPER 7° TITANIUM RETAINERS PAT. 5,322,039

Designed by our own Michael Tokarchik, the Manley ICD retainer represents the pinnacle of titanium retainer technology.

- ✓ Using Finite Element Analysis, the convoluted O.D. is engineered to provide the optimum balance of fatigue strength, weight and stress distribution.
- ✓ Holes precisely located through the retainers' cross section introduce oil to the valve spring at the critical inner to outer spring interface, greatly extending valve spring life.
- ✓ Finally, the heat-treated aerospace grade titanium alloy is surface enhanced with Manley's exclusive impingement process. This process eliminates all machining marks, improves fatigue strength and elevates surface hardness, thus reducing wear on both the ID and the spring shelves.
- ✓ Due to the larger .031" radius on the corner of the inner step, the I.D. of each valve spring, specifically the inner spring, must be chamfered prior to installation. It is highly recommended to use Manley's valve spring chamfering tool, P/N 40174.
- ✓ As light as 14 grams depending on part number.



Super 7° ICD retainers require use of Super 7° valve locks.

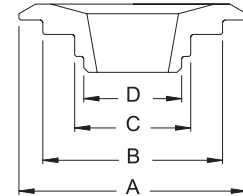
ICD SUPER 7° TITANIUM RETAINERS

Part No.	Quantity	Spring Type	Spring	Spring O.D.	Dimensions			Wgt/ Grams
					A	B	C	
23669 ICD-16	16 pcs.	Double	Manley 22438, 22448, 22458, Comp 26099	1.550" - 1.625"	1.440"	1.175"	.765"	18
23672 ICD-16	16 pcs.	Double	Manley 221441P, 22429, 22430	1.550" - 1.625"	1.440"	1.125"	.730"	14
23674 ICD-16	16 pcs.	Double	Comp 927, Isky 9315, 9365	1.550" - 1.625"	1.440"	1.140"	.730"	16
23681 ICD-16	16 pcs.	Double	Manley 221443, 221444	1.580" - 1.610"	1.440"	1.150"	.825"	18
23691 ICD-16	16 pcs.	Double	Same as 23681 except +.050"	1.580" - 1.610"	1.440"	1.150"	.825"	18
23682 ICD-16	16 pcs.	Double	Manley 221442	1.560"	1.440"	1.120"	.805"	17
23705 ICD-16	16 pcs.	Double	Manley 221440P	1.560"	1.440"	1.140"	.745"	16

SPRING RETAINERS

SUPER 7° TITANIUM RETAINERS

- ✓ Super 7° angle is actually 8°
- ✓ Heat treated titanium material for maximum strength
- ✓ Available with or without our exclusive impingement surface enhancement process
- ✓ Impingement results in a 20% improvement in resistance to abrasion, a 30% improvement in fatigue strength, and an overall improvement in surface finish
- ✓ "L" Suffix indicates Lightweight version which is 3-4 grams lighter than standard part number



CYL HEAD COMPONENTS

Part No.	Part No. w/ Impinge	Quantity	Spring Type	Spring	Spring O.D.	Keeper Degree	Dimensions				Wgt/ Grams
							A	B	C	D	
23746 L-16	-----	16 pcs.	Double	Manley 221446SF	1.400"	Super 7°	1.260"	.980"	.690"	---	12
23700 L-16	23700 LI-16	16 pcs.	Double	PSI CT1040	1.500"	Super 7°	1.450"	1.080"	.785"	---	16
23707-16	-----	16 pcs.	Double	Manley 221432	1.530" / 1.575"	Super 7°	1.500"	1.125"	.740"	---	20
23670-16	23670 I-16	16 pcs.	Double	Manley 22431, 22440, 22441	1.550"	Super 7°	1.500"	1.105"	.710"	---	19
23671-16	-----	16 pcs.	Double	K Motion K-1600	1.550"	Super 7°	1.500"	1.150"	.755"	---	21
23672-16	23672 I-16	16 pcs.	Double	Manley 221441P, 22429, 22430	1.550"	Super 7°	1.500"	1.125"	.730"	---	18
23672 L-16	-----	16 pcs.	Double	20% lighter than 23672	1.550"	Super 7°	1.500"	1.125"	.730"	---	14
23674-16	23674 I-16	16 pcs.	Double	Comp. 927	1.550"	Super 7°	1.500"	1.140"	.730"	---	20
23669-16	-----	16 pcs.	Double	Manley 22438, 22448, 22458 Comp 26099	1.550" / 1.625"	Super 7°	1.500"	1.175"	.765"	---	21
23705 L-16	23705 LI-16	16 pcs.	Double	Manley 221440P	1.560"	Super 7°	1.450"	1.140"	.745"	---	16
23706 L-16	23706 LI-16	16 pcs.	Double	.050" more installed than 23705 L	1.560"	Super 7°	1.450"	1.140"	.745"	---	16
23682-16	23682 I-16	16 pcs.	Double	Manley 221442	1.560"	Super 7°	1.500"	1.120"	.805"	---	21
23682 L-16	23682 LI-16	16 pcs.	Double	16% lighter than 23682	1.560"	Super 7°	1.500"	1.120"	.805"	---	17
23681-16	23681 I-16	16 pcs.	Double	Manley 221443, 221444	1.580" / 1.610"	Super 7°	1.500"	1.150"	.825"	---	21
23681 L-16	23681 LI-16	16 pcs.	Double	17% lighter than 23681	1.580" / 1.610"	Super 7°	1.450"	1.150"	.825"	---	18
23691-16	-----	16 pcs.	Double	.050" more installed than 23681	1.580" / 1.610"	Super 7°	1.500"	1.150"	.825"	---	20
23685-16	23685 I-16	16 pcs.	Double	Manley 221445P	1.620"	Super 7°	1.500"	1.175"	.840"	---	20
23685 L-16	23685 LI-16	16 pcs.	Double	16% lighter than 23685	1.620"	Super 7°	1.460"	1.175"	.840"	---	17
23680-16	23680 I-16	16 pcs.	Double	Isky 9685	1.625"	Super 7°	1.500"	1.185"	.760"	---	21
23708 L-16	-----	16 pcs.	Triple	Manley 221447, 221448 221449, 221450, 221451	1.660"	Super 7°	1.450"	1.185"	.870"	.635"	17

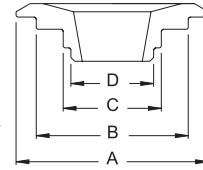
Please call with your custom retainer requirements.

Note: New part numbers are **ITALICIZED**.

SPRING RETAINERS

10° TITANIUM RETAINERS

- ✓ Special 6AL 4V titanium for maximum strength
- ✓ Excellent value for all forms of racing



Part No.	Quantity	Spring Type	Spring	Height	Spring O.D.	Keeper Degree	Dimensions				Wgt/ Grams
							A	B	C	D	
23630-16	16 pcs.	Outer-Inner	22406, 22407, 22408	Std.	1.437"/ 1.550"	10°	1.440"	1.050"	.700"	---	15
23684-16	16 pcs.	Double	Manley 221455, 221456, 221457, 221460	Std.	1.500"	10°	1.325"	1.035"	.705"	---	14
23644-16	16 pcs.	Double	Manley 221432, Manley 221440P, Comp. 927	Std.	1.550"	10°	1.500"	1.140"	.740"	---	17
23658-16	16 pcs.	Double	Manley 22431, 22440, 22441	Std.	1.550"	10°	1.500"	1.105"	.710"	---	16
23657-16	16 pcs.	Double	Manley 22429, 22430	Std.	1.550"	10°	1.500"	1.120"	.705"	---	18
23649-16	16 pcs.	Double	Manley 221424, 221425	Std.	1.625"	10°	1.500"	1.175"	.850"	---	19
23654-16	16 pcs.	Double	Manley 22458	Std.	1.625"	10°	1.500"	1.175"	.765"	---	17
23663-16	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450, 221451	Std.	1.660"	10°	1.500"	1.185"	.860"	.620"	21
23676-16	16 pcs.	Double	Manley 221455 221456, 221457, 221460	+ .100"	1.500"	10°	1.325"	1.035"	.705"	---	13
23641-16	16 pcs.	Triple	Crane 99882	+ .100"	1.550"	10°	1.500"	1.130"	.735"	.640"	17
23650-16	16 pcs.	Double	Manley 221432, Manley 221440P, Comp. 927	+ .100"	1.550"	10°	1.500"	1.140"	.740"	---	18
23660-16	16 pcs.	Double	Manley 22431, 22440, 22441	+ .100"	1.550"	10°	1.500"	1.105"	.710"	---	17
23661-16	16 pcs.	Double	Manley 22429, 22430	+ .100"	1.550"	10°	1.500"	1.120"	.705"	---	17
23647-16	16 pcs.	Double	Comp. 938, K-950	+ .100"	1.550"	10°	1.500"	1.120"	.730"	---	18
23643-16	16 pcs.	Double	Manley 221442	+ .100"	1.560"	10°	1.500"	1.120"	.805"	---	19
23648-16	16 pcs.	Double	Manley 221443, Manley 221444, Comp. 951	+ .100"	1.580"/ 1.610"	10°	1.500"	1.150"	.825"	---	20
23655-16	16 pcs.	Double	Manley 22458 K-1000, K-1000H	+ .100"	1.625"	10°	1.500"	1.175"	.765"	---	17
23640-16	16 pcs.	Double	Manley 221424, 221425	+ .100"	1.625"	10°	1.500"	1.175"	.850"	---	20
23662-16	16 pcs.	Triple	Comp. 948	+ .100"	1.625"	10°	1.500"	1.190"	.875"	.640"	19
23665-16	16 pcs.	Triple	K-1400	+ .100"	1.625"	10°	1.500"	1.185"	.765"	.645"	18
23653-16	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450, 221451	+ .100"	1.660"	10°	1.500"	1.185"	.860"	.620"	19

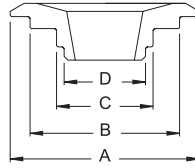
Please call with your custom retainer requirements.

Note: New part numbers are *ITALICIZED*.

SPRING RETAINERS

LIGHTWEIGHT 10° TITANIUM RETAINERS

- ✓ Squeeze more RPM's out of your engine
- ✓ Avoid valve float
- ✓ Lightweight retainer does not sacrifice reliability
- ✓ 16 grams - compared to normal 19 to 21 grams
- ✓ Special heat treated titanium for maximum strength
- ✓ Must use 10° valve locks



Part No.	Quantity	Spring Type	Spring	Height	Spring O.D.	Dimensions A	Dimensions B	Dimensions C	Dimensions D	Wgt/ Grams
23540-16	16 pcs.	Double	Manley 221424, 221425	+ .100"	1.625"	1.430"	1.175"	.850"	---	17
23562-16	16 pcs.	Triple	Pacaloy Comp 946, 947, 948	+ .100"	1.625" / 1.650"	1.430"	1.190"	.875"	.640"	16
23553-16	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450, 221451	+ .100"	1.660"	1.430"	1.185"	.860"	.620"	16
23553 I-16	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450, 221451	+ .100"	1.660"	1.430"	1.185"	.860"	.620"	16
23553 I retainer is impinged.										
23679-16*	16 pcs.	Double	Manley 221455, 221456, 221457, 221460	+ .100"	1.500"	1.325"	1.035"	.705"	---	14
23683-16*	16 pcs.	Double	Manley 221455, 221456, 221457, 221460	+ .170"	1.500"	1.325"	1.035"	.705"	---	14
23753-16*	16 pcs.	Triple	Manley 221447, 221448, 221449, 221450, 221451	+ .100"	1.660"	1.430"	1.185"	.860"	.620"	17

* Made from our high strength Super 7 Titanium Material

7° TITANIUM RETAINERS

- ✓ CAD designed for ultimate reduction in mass without sacrificing strength



Part No.	Quantity	Manley Spring	Installed Height	Retainer O.D.	Spring O.D.	Spring I.D.	Keeper Valve Degree X Stem	Wgt/ Grams
23628-24	24 pcs.	221429	Std.	.775"	.880"	.565"	7° x 6mm	4
23614-24	24 pcs.	221433	Std.	.875"	1.013"	.650"	7° x 6mm	5
23627-16	16 pcs.	221427/221437	Std.	.875"	1.020"/1.030"	.642"	7° x 7mm	5
23667-16	16 pcs.	221427/221437	+ .060"	.875"	1.020"/1.030"	.642"	7° x 7mm	5
23629-16	16 pcs.	221430	Std.	.915"	1.056"	.630"	7° x 5/16"	5
23613-16	16 pcs.	221431	Std.	.935"	1.076"	.650"	7° x 5/16"	6
23622-16	16 pcs.	221428/221438	Std.	.935"	1.076"	.650"	7° x 8mm	5
23625-16	16 pcs.	221428/221438	+ .050"	.935"	1.076"	.650"	7° x 8mm	5
23626-16	16 pcs.	221428/221438	+ .050"	.935"	1.076"	.650"	7° x 11/32"	6
23642-16	16 pcs.	22409, 22410	+ .050"	1.150"	1.250"	.865"	7° x 11/32"	9
23632-16	16 pcs.	221423	Std.	1.155"	1.255"	.830"	7° x 8mm	9
23633-16	16 pcs.	221423	+ .050"	1.155"	1.255"	.830"	7° x 8mm	8
23634-16	16 pcs.	221423	+ .050"	1.150"	1.255"	.830"	7° x 11/32"	9
23623-16	16 pcs.	221436	+ .050"	1.155"	1.290"/1.295"	.674"/.676"	7° x 8mm	10
23624-16	16 pcs.	221436	+ .050"	1.155"	1.290"/1.295"	.674"/.676"	7° x 11/32"	10
23611-16	16 pcs.	221435	+ .050"	1.200"	1.340"	.726"	7° x 8mm	11
23638-16	16 pcs.	22408	Std.	1.340"	1.437"	.720"	7° x 8mm	14
23639-16	16 pcs.	22408	+ .050"	1.340"	1.437"	.720"	7° x 8mm	14
23675-16	16 pcs.	221455, 221456, 221457, 221460	+ .100"	1.325"	1.500"	.719"	7° x 11/32", 3/8"	14
23677-16*	16 pcs.	221455, 221456, 221457, 221460	+ .100"	1.325"	1.500"	.719"	7° x 11/32", 3/8"	15
23673-16	16 pcs.	221447, 221448, 221449, 221450, 221451	+ .100"	1.500"	1.660"	.635"	7° x 11/32", 3/8"	20

P/N's 23611, 23623, 23632, 23633, 23638, 23639, 23622, & 23625 must use Manley 13098 or factory Chevrolet LS-1 valve locks.

P/N's 23624, 23634, 23626, & 23642 are for the following engine models: LT-1 / LT-4 / L-98. Must use Manley 13091.

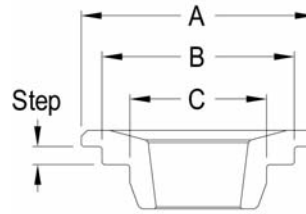
* Made from our high strength Super 7 Titanium Material

Note: New part numbers are **ITALICIZED**.

SPRING RETAINERS

SPORT COMPACT TITANIUM RETAINERS

- ✓ Heat treated aerospace grade titanium
- ✓ CNC machined to exacting tolerances
- ✓ Lightweight and extremely durable
- ✓ A must for your high revving sport compact engine



Part No.	Application	Spring	Valve Stem Diameter	Valve Lock Degree	Dimensions			Step	Wgt/ Grams
					A	B	C		
23000-16	Acura B18C / B16A / H22	Stock Spring	5.5 mm	7°	1.100"	.830"	.600"	.080"	6
23100-16	Acura B16A / B18C / B17A Honda H22 V-Tec	Manley 22105, 22110	5.5 mm	7°	1.150"	.850"	.650"	.080"	7
23120-16	Honda B18A / B (Non V-Tec)	Manley 22120	6.5 mm	7°	1.100"	.805"	.610"	.080"	6
23140-16	Honda K20A/K20Z	Manley 22140	5.5 mm	7°	1.050"	.850"	.610"	.080"	7
23145-16	Honda K20A3/K24A	Manley 22145	5.5 mm	7°	1.050"	.775"	.610"	.045"	8
23150-16	Honda F20C/F22C	Manley 22150	5.5 mm	7°	1.050"	.850"	.610"	.080"	7
23190-16	Dodge SRT-4	Manley 22190	6.0 mm	7°	1.050"	.760"	-----	.100"	6
23115-16	Mitsubishi 4G63-4G63T DOHC 16 Valve (1990-1999)	Manley 22115	6.6 mm	6°	1.050"	.850"	.610"	.040"	8
23125-16	Mitsubishi 4G63-4G63T DOHC 16 Valve (1990-2006)	Manley 22125	6.6 mm	6°	1.050"	.760"	-----	.140"	9
23195-16	Mitsubishi EVO X 4B11T	Manley 22195	5.5 mm	7.5°	.960"	.690"	-----	.100"	7
23155-24	Nissan Patrol TB48	Manley 22155	6.0 mm	6°	1.050"	.760"	-----	.080"	7
23160-16	Nissan KA24DE	Manley 22160	7.0 mm	7°	1.150"	.850"	.650"	.080"	9
23165-16	Nissan SR20DE/SR20DET	Manley 22165	6.0 mm	6°	1.150"	.825"	-----	.080"	10
23170-24	Nissan VQ35DET	Manley 22170	5.5 mm	6°	.960"	.690"	-----	.140"	8
23175-24	Nissan RB26DETT	Manley 22175	6.0 mm	6°	1.050"	.760"	-----	.080"	8
23180-16	Subaru WRX/Sti	Manley 22180	6.0 mm	6°	1.050"	.745"	.515"	.100"	6
23130-24	Toyota Supra 2JZGT/2JZGTE 6 cyl.	Manley 22130	6.0 mm	6°	1.050"	.745"	.515"	.100"	6

SPORT COMPACT VALVE SPRING & RETAINER KITS

- ✓ Wound from super clean alloy
- ✓ Designed to handle aftermarket camshafts



Part No. Without Valve Locks	Part No. With Valve Locks	Application	Max Net Lift	Spring No.	Titanium Retainer No.	Valve Locks
26105	26105K	Acura B Series, V-Tec	.535"	22105-16	23100-16	13010-8
26110	26110K	Honda H22, V-Tec	.560"	22110-16	23100-16	13010-8
26120	-----	Honda B Series, Non V-Tec	.615"	22120-16	23120-16	-----
26140	26140K	Honda K20A/K20Z	.540"	22140-16	23140-16	13010-8
26145	26145K	Honda K20A3/K24A	.545"	22145-16	23145-16	13010-8
26150	26150K	Honda F20C/F22C	.530"	22150-16	23150-16	13010-8
26190	-----	Dodge SRT-4	.500"	22190-16	23190-16	-----
26115	26115K	Mitsubishi 4G63-4G63T DSM DOHC 16 Valve (1990-1999)	.460"	22115-16	23115-16	13016-8
26125	26125K	Mitsubishi 4G63-4G63T DSM / EVO DOHC 16 Valve (1990-2006)	.580"	22125-16	23125-16	13016-8
26195	-----	Mitsubishi EVO X 4B11T	.430"	22195-16	23195-16	-----
26155	-----	Nissan Patrol TB48	.550"	22155-24	23155-24	-----
26160	-----	Nissan KA24DE	.500"	22160-16	23160-16	-----
26165	26165K	Nissan SR20DE/SR20DET	.540"	22165-16	23165-16	13012-8
26170	-----	Nissan VQ35DET	.455"	22170-24	23170-24	-----
26175	26175K	Nissan RB26DETT	.535"	22175-24	23175-24	13012-8
26180	-----	Subaru WRX/Sti	.525"	22180-16	23180-16	-----
26130	26130K	Toyota Supra, 2JZGT/2JZGTE 6 cyl.	.430"	22130-24	23130-24	13014-8

Note: New part numbers are *ITALICIZED*.

SPRING RETAINERS

TENSILEMAX STEEL RETAINERS

- ✓ Manufactured from our incredibly tough TensileMax alloy
- ✓ Designed to be as light as standard titanium retainers and very close in weight to lightweight titanium versions (within 2-4 grams)
- ✓ Specially heat treated to provide a hardness of Rc 52-54 and prevent retainer wear
- ✓ Exclusive process yields a part that provides the optimum balance between ultimate strength, fatigue strength, hardness and ductility
- ✓ Unique impingement process developed specifically for our TensileMax alloy and hardness range to improve fatigue strength and promote better oiling between the spring and retainer



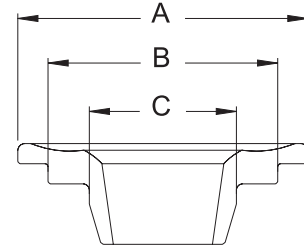
Standard TensileMax



Convuluted TensileMax



Double Convuluted TensileMax



These are serious retainers for serious engine builders who DEMAND THE VERY BEST...

Part No.	Quantity	Spring Type	Spring	Spring O.D.	Keeper Degree	Dimensions			Profile	Wgt/ Grams
						A	B	C		
23746TM-16	16 pcs.	Double	Manley 221446SF	1.400"	Super 7°	1.260"	.980"	.690"	Standard	16
23707TM-16	16 pcs.	Double	Manley 221432	1.530"	Super 7°	1.420"	1.125"	.740"	Convuluted	21
23670TM-16	16 pcs.	Double	Manley 22431, 22440, 22441	1.550"	Super 7°	1.420"	1.105"	.710"	Convuluted	20
23672TM-16	16 pcs.	Double	Manley 221441P, 22429, 22430	1.570"	Super 7°	1.440"	1.125"	.730"	Standard	20
23674TM-16	16 pcs.	Double	Comp. 927	1.550"	Super 7°	1.440"	1.140"	.730"	Standard	22
23705TM-16	16 pcs.	Double	Manley 221440P	1.570"	Super 7°	1.440"	1.140"	.745"	Standard	22
23705LTM-16	16 pcs.	Double	14% lighter than 23705TM	1.570"	Super 7°	1.440"	1.140"	.745"	Standard	19
23682TM-16	16 pcs.	Double	Manley 221442	1.560"	Super 7°	1.440"	1.120"	.805"	Standard	23
23685TM-16	16 pcs.	Double	Manley 221445P	1.620"	Super 7°	1.460"	1.175"	.840"	Standard	23
23685DCTM-16	16 pcs.	Double	Manley 221445P	1.620"	Super 7°	1.460"	1.175"	.840"	Double Convuluted	22

LIGHTWEIGHT H-13 TOOL STEEL RETAINERS

For those searching for a slightly more economical alternative to titanium retainers, either to help solve a "wear problem" or because of "class rules," Manley lightweight H-13 Tool Steel retainers are your solution! H-13 tool steel allows for better processing than "other" tool steels typically utilized; thus yielding a stronger, more durable product.

- ✓ 33% lighter than standard 10° steel retainers
- ✓ Only 2-4 grams heavier than titanium versions
- ✓ Heat treated to provide hardness of Rc 56



Part No.	Quantity	Spring Type	Spring	Height	Spring O.D.	Keeper Degree	Dimensions			Wgt/ Grams
							A	B	C	
23746TS-16	16 pcs.	Double	Manley 221446SF	+.100"	1.400"	Super 7°	1.260"	.980"	.690"	17
23747TS-16	16 pcs.	Double	Manley 221446SF	+.100"	1.400"	10°	1.260"	.980"	.690"	18
23660TS-16	16 pcs.	Double	Manley 22440, 22441	+.100"	1.550"	10°	1.420"	1.105"	.710"	21
23643TS-16	16 pcs.	Double	Manley 221442	+.100"	1.560"	10°	1.440"	1.120"	.805"	23
23647TS-16	16 pcs.	Double	Manley 221441P	+.100"	1.570"	10°	1.440"	1.120"	.730"	22
23648TS-16	16 pcs.	Double	Manley 221443, 221444	+.100"	1.580"/1.610"	10°	1.440"	1.150"	.825"	24

Call your Manley salesman to inquire about custom H-13 tool steel retainers. We can manufacture for Super 7° applications as well.

Note: New part numbers are **ITALICIZED**.

SPRING RETAINERS

SUPER 7° "SCD" STEEL RETAINERS

PATENT No. 5,322,039

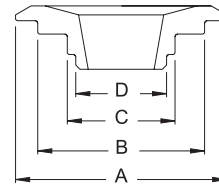
- ✓ Convoluted and drilled
- ✓ All the "trickest" features of our ICD titanium retainers
- ✓ Thru-hardened 4140 chrome moly steel
- ✓ 20% lighter than a steel 10° retainer
- ✓ Strategic holes to oil and cool springs



Part No.	Material	Quantity	Manley Spring	Spring O.D.	Keeper Degree	Dimensions			Wgt/ Grams
						A	B	C	
23707 SCD-16	Steel	16 pcs.	221432	1.530"/1.575"	Super 7°	1.440"	1.125"	.740"	25
23670 SCD-16	Steel	16 pcs.	22440	1.550"	Super 7°	1.440"	1.105"	.710"	24

STREET MASTER STEEL VALVE SPRING RETAINERS

- ✓ CNC machined to exacting tolerances
- ✓ Thru-hardened 4140 chrome moly



Part No.	Material	Quantity	Spring	Spring Height	Spring O.D.	Keeper Degree ^x	Valve Stem	Dimensions				Wgt/ Grams
								A	B	C	D	
23612-16	Steel	16 pcs.	221431	Std.	1.076"	7° x 5/16"	.935"	.640"	---	---	---	10
23620-16	Steel	16 pcs.	221428, 221438	Std.	1.076"	7° x 8mm	.935"	.640"	---	---	---	10
23651-16	Steel	16 pcs.	22409, 22410	Std.	1.250"	7° x 11/32"	1.245"	.865"	.680"	---	---	21
23652-16	Steel	16 pcs.	22409, 22410	+ .050"	1.250"	7° x 11/32"	1.245"	.865"	.680"	---	---	21
23631-16	Steel	16 pcs.	221423	Std.	1.255"	7° x 8mm	1.155"	.825"	---	---	---	17
23664-16	Steel	16 pcs.	221423	+ .050"	1.255"	7° x 11/32"	1.150"	.825"	---	---	---	16
23621-16	Steel	16 pcs.	221436	+ .050"	1.290"	7° x 8mm	1.155"	.950"	.675"	---	---	17
23610-16	Steel	16 pcs.	221435	+ .050"	1.340"	7° x 8mm	1.200"	.985"	.715"	---	---	19
23645-16	Steel	16 pcs.	22406, 22407, 22408	Std.	1.437"/1.550"	7° x 11/32"	1.440"	1.050"	.700"	---	---	28
23635-16	Steel	16 pcs.	22406, 22407, 22408	+ .060"	1.437"/1.550"	10° x All	1.440"	1.050"	.700"	---	---	31
23666-16	Steel	16 pcs.	22406, 22407, 22408	Std.	1.437"/1.550"	7° x 3/8"	1.440"	1.050"	.700"	---	---	31
23646-16	Steel	16 pcs.	22406, 22407, 22408	+ .100"	1.437"/1.550"	7° x 11/32"	1.440"	1.050"	.700"	---	---	30
23636-16	Steel	16 pcs.	Crane 99882	Std.	1.550"	10° x All	1.500"	1.130"	.735"	.640"	---	29
23659-16	Steel	16 pcs.	Manley 22431, 22440, 22441	+ .100"	1.550"	10° x All	1.500"	1.105"	.710"	---	---	31
23656-16	Steel	16 pcs.	Manley 22429, 22430	+ .100"	1.550"	10° x All	1.500"	1.120"	.705"	---	---	31

P/N 23610, 23620, 23621, & 23631 must use Manley 13098 or factory Chevrolet LS-1 valve locks.

VALVE SPRING SHIMS

- ✓ Available in .060", .030" and .015" thickness
- ✓ Heat treated to resist wear



Part Numbers		Quantity	O.D.	I.D.	Type	Description
.060"	.015"					
02236-50	02233-50	50 pcs.	1.250"	.812"	Hard	SB Chevy-stock size springs
03236-50	03233-50	50 pcs.	1.480"	.703"	Hard	BB Chevrolet
03256-50	03253-50	50 pcs.	1.437"	.785"	Hard	SB Chevrolet w/ larger springs
03266-50	03263-50	50 pcs.	1.500"	.645"	Hard	Chevrolet - Chrysler
03276-50	03273-50	50 pcs.	1.625"	.645"	Hard	Chevrolet - Chrysler -Ford

Note: New part numbers are *ITALICIZED*.

SPRING CUPS & I.D. LOCATORS

O.D. VALVE SPRING CUPS

- ✓ CNC machined
- ✓ Accurate and durable .062" thick
- ✓ Heat treated and black oxide finished



Part No.	Quantity	Fits Spring O.D.	Cup O.D.	Cup I.D.	Wall Shoulder Height	Manley Spring	Use Cutter Number
42142-16	16 pcs.	1.250"	1.390"	.570"	.150"	22409, 22410	41850
42126-16	16 pcs.	1.437"	1.550"	.687"	.150"	22407, 22408	41835
42122-16	16 pcs.	1.550"	1.680"	.635"	.150"	22429, 22430, 22431, 22440, 22441	41852
42377-16	16 pcs.	1.550"	1.680"	.577"	.150"	22429, 22430, 22431, 22440, 22441	41858
42370-16	16 pcs.	1.580"	1.687"	.570"	.140"	221443	41858
42365-16	16 pcs.	1.610"	1.740"	.570"	.140"	221444	41859
42121-16	16 pcs.	1.625"	1.740"	.635"	.150"	22438, 221424, 221425	41851
42128-16	16 pcs.	1.625"	1.740"	.635"	.250"	22438, 221424, 221425	41851
42379-16	16 pcs.	1.650"	1.740"	.570"	.250"	221424, 221425	41859
42371-16	16 pcs.	1.660"	1.740"	.635"	.140"	221447, 221448, 221449 221450, 221451	41851
42372-16	16 pcs.	1.660"	1.740"	.570"	.140"	221447, 221448, 221449 221450, 221451	41859

PRO SERIES I.D. VALVE SPRING LOCATORS

- ✓ CNC machined to tolerances $\pm .002$ "
- ✓ Excellent surface finish
- ✓ 8620 material heat treated and black oxide finished



Part No.	Quantity	Fits Spring O.D.	Locator O.D.	Locator I.D.	Cup Thickness	Wall Shoulder Height	Shoulder Diameter	Manley Spring	Use Cutter Number
42446-16	16 pcs.	1.400"	1.410"	.567"	.062"	.163"	.690"	221446SF	41850
42426-16	16 pcs.	1.550"	1.535"	.567"	.062"	.163"	.740"	221432 221441P	41856
42466-16	16 pcs.	1.550"	1.535"	.567"	.045"	.163"	.740"	221432 221441P	41856
42443-16	16 pcs.	1.560"	1.550"	.567"	.062"	.163"	.802"	221442	41856
42573-16	16 pcs.	1.580"	1.570"	.567"	.062"	.163"	.828"	221443	41856
42438-16	16 pcs.	1.580"	1.570"	.567"	.045"	.163"	.828"	221443	41856
42437-16	16 pcs.	1.625"	1.570"	.567"	.062"	.163"	.850"	221424 221425	41857

Please call with your custom spring locator requirements.

Note: New part numbers are *ITALICIZED*.

SPRING LOCATORS

I.D. VALVE SPRING LOCATORS

- ✓ CNC machined
- ✓ Accurate and durable
- ✓ Heat treated and black oxide finished



CYL HEAD COMPONENTS

Part No.	Quantity	Fits Spring O.D.	Locator O.D.	Locator I.D.	Cup Thickness	Wall Shoulder Height	Shoulder Diameter	Spring	Use Cutter Number
42460-16	16 pcs.	.870"	.845"	.555"	.057"	.100"	.600"	Manley 22160 Inner Spring	None
42115-16	16 pcs.	1.160"	1.100"	.500"	.095"	.200"	.610"	Manley 22115	None
42123-16	16 pcs.	1.255"	1.250"	.780"	.180"	.090"	.880"	Manley 22411	None
42341-16	16 pcs.	1.255"	1.170"	.505"	.035"	.145"	.825"	Manley 221423	None
42334-16	16 pcs.	1.290"	1.270"	.505"	.035"	.145"	.675"	Manley 221436	None
42338-16	16 pcs.	1.311"	1.290"	.505"	.035"	.145"	.875"	Manley 221428, 221438	None
42336-16	16 pcs.	1.311"	1.290"	.505"	.062"	.145"	.875"	Manley 221428, 221438	None
42324-16	16 pcs.	1.311"	1.300"	.812"	.205"	.145"	.875"	Manley 221431	None
42348-16	16 pcs.	1.340"	1.320"	.505"	.035"	.145"	.715"	Manley 221435	None
42335-16	16 pcs.	1.550"	1.535"	.635"	.062"	.140"	.710"	Manley 221455, 221456, 221457, 221460	41835
42347-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.710"	Manley 221455, 221456, 221457, 221460	41836
42119-16	16 pcs.	1.550"	1.535"	.635"	.062"	.140"	.720"	Manley 22430, 22431, 22440, Isky 9385	41835
42317-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.720"	Manley 22430, 22431, 22440	41856
42330-16	16 pcs.	1.550"	1.535"	.635"	.062"	.140"	.740"	Manley 221432, 221441P	41835
42326-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.740"	Manley 221432, 221441P	41856
42378-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.765"	Isky 9685	41856
42331-16	16 pcs.	1.550"	1.530"	.570"	.062"	.140"	.750"	Manley 221440P	41856
42332-16	16 pcs.	1.550"	1.535"	.570"	.062"	.140"	.810"	Comp 943	41856
42333-16	16 pcs.	1.550"	1.535"	.635"	.062"	.140"	.810"	Comp 943	41835
42343-16	16 pcs.	1.560"	1.550"	.567"	.062"	.163"	.802"	Manley 221442	41856
42373-16	16 pcs.	1.580"	1.570"	.570"	.062"	.140"	.825"	Manley 221443	41856
42369-16	16 pcs.	1.580"	1.570"	.635"	.062"	.140"	.825"	Manley 221443	41856
42367-16	16 pcs.	1.610"	1.610"	.570"	.062"	.140"	.825"	Manley 221444	41857
42368-16	16 pcs.	1.610"	1.610"	.635"	.062"	.140"	.825"	Manley 221444	41855
42342-16	16 pcs.	1.620"	1.610"	.570"	.062"	.140"	.840"	Manley 221445P	41857
42337-16	16 pcs.	1.625"	1.570"	.570"	.062"	.140"	.850"	Manley 221424, 221425	41857
42120-16	16 pcs.	1.625"	1.610"	.635"	.062"	.140"	.710"	Manley 221455, 56, 57, 60 K Motion K1000, K1000H	41855
42318-16	16 pcs.	1.625"	1.610"	.570"	.062"	.140"	.710"	Manley 221455, 56, 57, 60 K Motion K1000, K1000H	41857
42374-16	16 pcs.	1.625"	1.610"	.570"	.062"	.140"	.765"	Manley 22458	41857
42376-16	16 pcs.	1.625"	1.615"	.570"	.062"	.140"	.675"	Crane 99877	41857
42375-16	16 pcs.	1.625"	1.625"	.635"	.062"	.140"	.760"	Isky 9685	41855
42364-16	16 pcs.	1.660"	1.660"	.570"	.062"	.140"	.630"	Manley 221447, 221448, 221449, 221450, 221451	41858

Please call with your custom spring locator requirements.

Note: New part numbers are *ITALICIZED*.

TOOLS / CUTTERS

ROCKER STUD BOSS CUTTERS

- ✓ Extra large diameter cutter to completely clean stud bosses while reducing height
- ✓ Due to the severe use to which these cutters are subjected, we are not able to warranty damaged goods

Part No.	Quantity	Description
41860	1	Use for Fords and Small Block Chevys



CYLINDER HEAD SPRING SEAT CUTTERS

- ✓ Extra strength carbide cutters
- ✓ Due to the severe use to which these cutters are subjected, we are not able to warranty damaged goods

Replacement pilots: 7 mm/.274" - 41274, 5/16" - 41516, 11/32" - 41132, 3/8" - 41138

Part No.	Quantity	Description
41824	1	Cuts 1.250" O.D., .750" I.D. with 11/32" pilot
41850	1	Cuts 1.445" O.D., .570" I.D. with 11/32" pilot
41835	1	Cuts 1.565" O.D., .625" I.D. with 11/32" pilot
41856	1	Cuts 1.580" O.D., .570" I.D. with 11/32" pilot
41857	1	Cuts 1.635" O.D., .570" I.D. with 11/32" pilot
41855	1	Cuts 1.635" O.D., .625" I.D. with 11/32" pilot
41858	1	Cuts 1.690" O.D., .570" I.D. with 11/32" pilot
41852	1	Cuts 1.690" O.D., .625" I.D. with 11/32" pilot
41859	1	Cuts 1.755" O.D., .570" I.D. with 11/32" pilot
41851	1	Cuts 1.755" O.D., .625" I.D. with 11/32" pilot



VALVE GUIDE SEAL CUTTERS

- ✓ Extra strength carbide cutters
- ✓ Due to the severe use to which these cutters are subjected, we are not able to warranty damaged goods

Part No.	Quantity	Pilot Size	Seal No.	Guide O.D.
41410	1	7 mm (.274")	24041	.431"
41510	1	5/16"	24040	.420"
41610	1	5/16"	24029	.500"
41710	1	5/16"	24034	.530"
41611	1	11/32"	24037	.500"
41711	1	11/32"	24035	.530"
41612	1	3/8"	24039	.500"
41712	1	3/8"	24036	.530"



VALVE GUIDE SEAL CUTTER PILOT

- ✓ For use with any spring seat or seal cutter

Part No.	Quantity	Description
41274	1	7 mm cutter pilot
41516	1	5/16" cutter pilot
41132	1	11/32" cutter pilot
41138	1	3/8" cutter pilot



CYL HEAD COMPONENTS