FORGED PISTONS

Installation Instruction

CALCULATING TOP RING END GAP

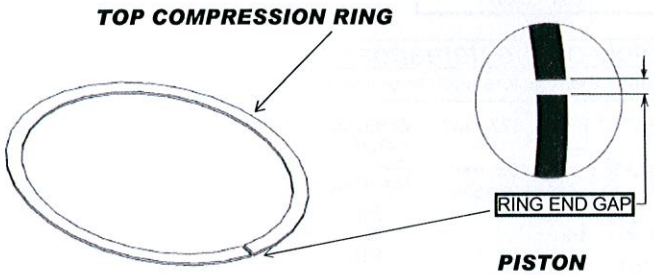
Top Ring Example - Street Normally Aspirated 4.000" bore x .004" gap factor = .016" total top ring end gap.

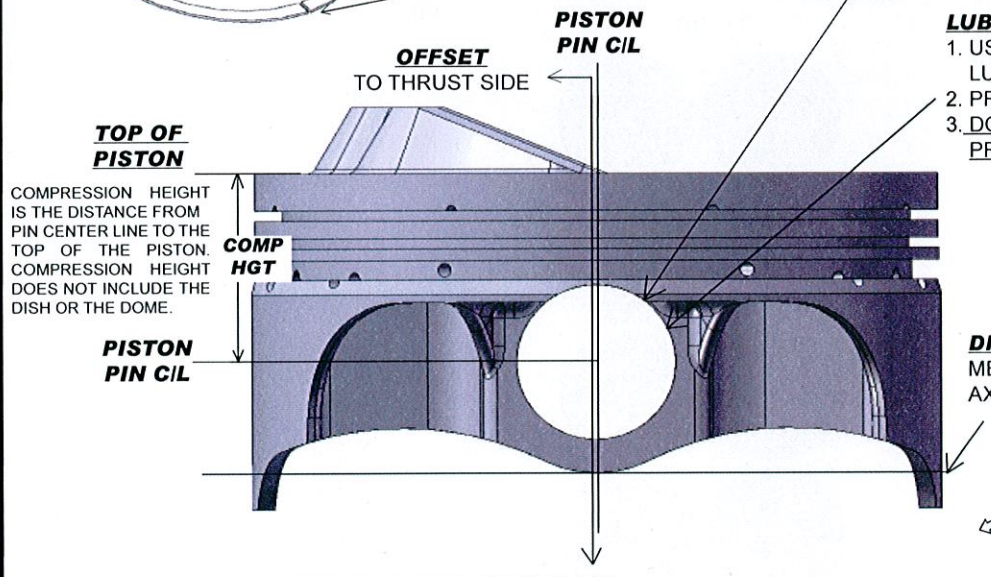
Second Ring: Set second ring end gap at .004 per inch of bore minimum.

TOP RING END GAP FACTORS FOR ALL APPLICATIONS LOCATED ON PAGE 2.

SPIRAL LOCKRING INSTALLATION

RETAINER COMES UNSPRUNG. WE SUGGEST SPRINGING THE RETAINER ABOUT 1/2" TO 3/4" TO MAKE INSTALLATION EASIER. DO NOT OVER SPRING RETAINER. DO NOT USE LOCKS WHEN PRESS FITTING THE PIN.



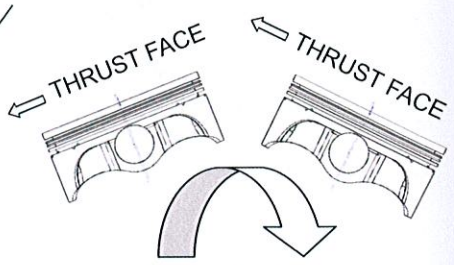


LUBE PIN HOLE

1. USE HIGH QUALITY OIL OR SUPPLIED LUBE. NEVER USE GREASE
2. PRESS FIT, USE ROD HEATER.
3. DO NOT USE LOCKS WHEN PRESS FITTING THE PIN.

DIAL POINT

MEASURE PISTON MAJOR AXIS (DIAMETER) HERE



PISTONS WITH OFFSET PIN

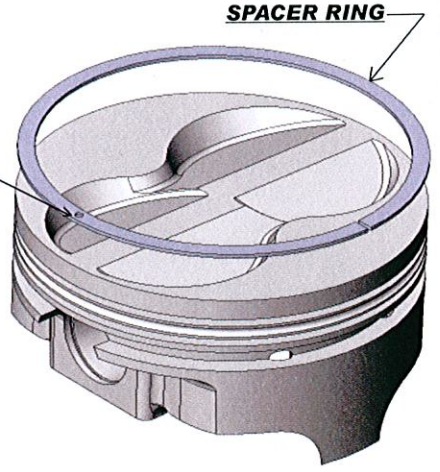
SOME ICON PISTONS ARE MANUFACTURED WITH OFFSET PIN BORES. OFFSET PIN BORES ARE DESIGNED TO QUIET YOUR ENGINE. THE OFFSET MUST ALWAYS BE TOWARDS THE THRUST FACE SIDE OF THE ENGINE. PISTONS WITH OFFSET PIN BORES WILL HAVE A MARK ON THE TOP WHICH SHOULD POINT TO THE FRONT OF THE ENGINE.

SPACER RING

THE SPACER RING SUPPORTS THE OIL RAIL ON LONG ROD APPLICATIONS WHEN THE WRIST PIN IS INTERSECTING THE OIL GROOVE. THE SPACER RING SHOULD BE LOCATED IN THE BOTTOM OF THE OIL GROOVE. TO INSTALL, SPIRAL THE RING INTO THE OIL GROOVE. TAKE CARE NOT TO DISTORT OR BEND THE SPACER RING.

DIMPLE

DIMPLE SHOULD BE PLACED OVER THE OPENING FORMED BY THE PIN INTERSECTING THE OIL GROOVE. THE RAISED SECTION SHOULD BE PLACED FACING DOWN.



United Engine & Machine Co. Inc.
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WEB SITE-www.uempistons.com

General Clearance Guidelines

APPLICATION	RING END GAP FACTOR	2618 Alloy PISTON TO WALL CLEARANCE 3.5"TO 4.1"	4.1"AND UP
STREET NORMALLY ASPIRATED	0.0040	.0035-.0045	.0045-.0055
STREET TOWING	0.0045	.0040-.0050	.0050-.0060
STREET NITROUS OR SUPER CHARGED	0.0050	.0045-.0055	.0055-.0065
CIRCLE TRACK 2 BBL / RESTRICTOR	0.0040	.0040-.0050	.0055-.0065
CIRCLE TRACK UNRESTRICTIED	0.0040	.0045-.0065	.0055-.0075
CIRCLE TRACK ALCOHOL INJECTION	0.0040	.0045-.0065	.0055-.0075
CIRCLE TRACK ALCOHOL CARB	0.0045	.0050-.0070	.0060-.0080
DRAG GASOLINE	0.0040	.0050-.0070	.0060-.0080
DRAG ALCOHOL	0.0040	.0040-0070	.0050-.0080
DRAG SUPERCHARGED OR NITROS	0.0050	.0060-.0090	.0070-.0100
DRAG SUPERCHARGED ALCOHOL	0.0050	.0050-.0070	.0060-.0080
MARINE NORMALLY ASPIRATED	0.0040	.0045-.0060	.0055-.0070
MARINE SUPERCHARGED	0.0045	.0055-.0070	.0065-.0080

Warranty Disclaimer

Due to the nature of performance applications, the parts sold by United Engine & Machine Co. Inc. are sold without any express warranty or any implied warranty of merchantability or fitness for a particular purpose. UEM shall not, under any circumstances, be liable for any special, incidental or consequential damages, including, but not limited to damage, or loss of profits or revenue, cost of purchased or replacement goods, or claims of customers of the purchaser, which may arise and/or result from sale, installation or use of these parts.

UEM reserves the right to make product improvements or changes without notice and without incurring liability with respect to similar products previously manufactured.

The information contained in this instruction should not be considered absolute. Final decisions concerning the installation and use of these products are ultimately the responsibility of the customer. UEM makes no guarantee of warranty on emissions.

Final piston clearance should be based solely on the demands of your application.

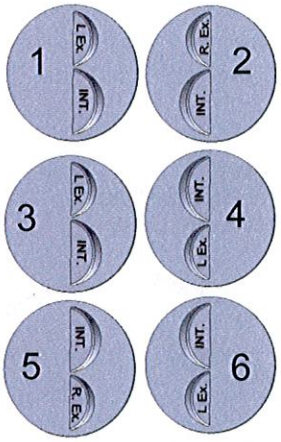
Factors such as fuel type, altitude, outside temp., humdity, tune up, and many others factors need to be taken into account for your final clearance.

PISTON ORIENTATION

QUENCH AREA(YELLOW): Quench is the area behind the valves. This area should match the flat area on your cylinder head. Proper quench promotes cooling of the piston and can be effective in reducing detonation.

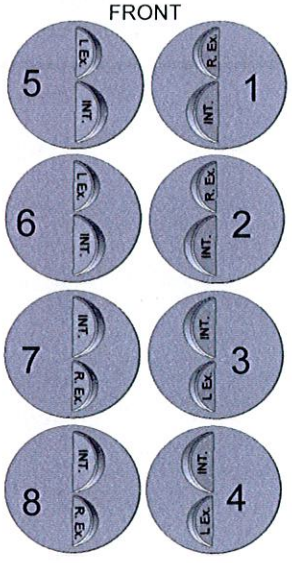
CHEVY V-6 262 4 LEFTS AND 2 RIGHTS

FRONT



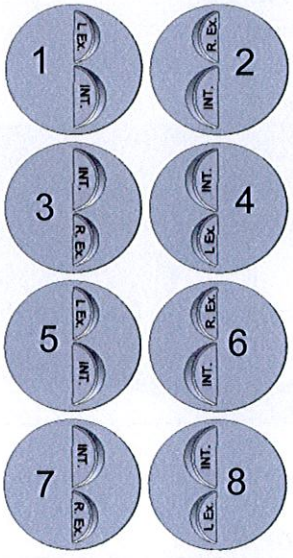
FORD 390FE, 406FE, 410FE, 427FE 428FE, 438FE, 452FE, 455FE 482FE

FRONT



CHEVY 302, 305, 327,334, 350, 377, 383, 400, 434
CHRY 318, 340, 360, 383, 400, 408, 440, 450, 463, 468, 493, 498, 505, 520
OLDS 403, 455 ***BUICK*** 455
PONTIAC 389, 400, 428, 455

FRONT



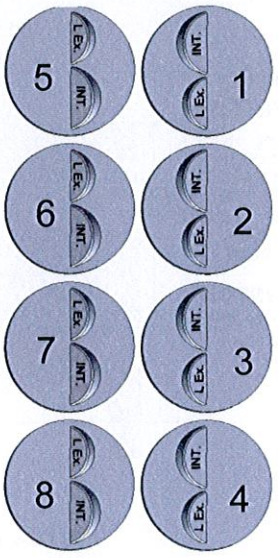
FORD CLEV 351C&W/C,377C,387C,402C
FORD BB 429, 460, 502, 520, 545
CHEVY BB 396/402, 427, 454, 489, 502, 540

FRONT

CHECKING CYLINDER HEADS: WE THE MANUFACTURER SUGGEST CHECKING CYLINDER HEADS WITH CLAY OR SOME OTHER METHOD BEFORE FINAL ASSEMBLY TO ASSURE PROPER PISTON TO HEAD CLEARANCE.

FORD 289, 302, 331, 347, 351W, 372W, 383W, 393W, 408W, 416W, 418W
CHEVY LS SERIES

FRONT



TOYOTA 22R YRS 1985 AND NEWER

FRONT