



INSTRUCTIONS & TECHNICAL DATA

IMPORTANT: Before balancing these pistons, be sure they are as you ordered. Used or altered parts cannot be returned for refund, credit, or exchange regardless of the circumstances. In the event that your pistons are not as ordered, contact the factory immediately as all credits, exchanges, or repairs must be completed within 45 days of purchase. All parts returned for credit must be in new condition - no scratches, dings, or nicks. **CLEARANCE:** If the recommended clearance of these pistons is .006 or less, set the clearance at the largest diameter on the skirt. If the clearance is .007 or more, set the clearance at the center of the pin hole.

VALVE POCKET DEPTH: Minimum acceptable valve to piston clearance is dependent upon many factors, including cam lobe lift rate, valve spring tension and valve actuation mechanism weight, etc. However, we have found that .090 intake and .110 exhaust clearance are sufficient in most instances. Check valve to piston clearance, using either clay or the light spring method, making sure the camshaft is degreed as it will be operated, as a few degrees of advanced or retard at the camshaft can radically alter the valve to piston clearance.

PISTON TO COUNTERWEIGHT CLEARANCE: A minimum of .060 is acceptable. Check rod pin end to piston pin boss side clearance with the piston in the bore and the rod installed on the crankshaft to insure that the side of the rod is not contacting the side of the piston pin boss.

RING SIDE CLEARANCE: Check ring side clearance with feeler gauges to be sure that it is between .001 and .004.

RING END GAP: Use the ring manufacturer's recommendations.

Make	VOLVO	Model	4 CYL.
Job Card #	157641		
Bore Size	3.8190	Clearance	0.005
CAM	M	Piston Wt.	4192
C.H.	1.559		
Ring Grooves	.0485	.0605	.1195
Groove Depth	.1420	.1610	.1460
Groove Roots	3.495	3.457	3.487
Ring Lands	.330	.150	.090
Pin Dia.	.905	Pin Length	2.500
* Lox Type	WIR		
Net dome cc's	FT		
Dome Height	0.000	Dish Depth	0.000
Int V.P. CTTR:	0.000	Int V.P. Depth	0.000
Exh V.P. CTTR:	0.000	Exh V.P. Depth	0.000

CLEANLINESS: Scrub pistons and cylinder walls in soap and hot water before installing. We recommend brushing a light coat of non-synthetic oil on pistons' skirts and cylinder walls for initial lubrication. Be sure to lubricate pins with lubriplate, or an assembly oil to prevent galling on initial fire-up. Check forced pin oilers for foreign matter. Spirolox installation may be facilitated by grasping each end of the lox and pulling the ends apart a MODERATE (approximately 1/2") amount. This will cause the lock to resemble a small coil spring. The lox can then be "spiraled" into place almost as if you were screwing them into the groove. Be sure that all lox are properly seated and that they exert radial pressure against the lock groove. You should not be able to spin the lox by hand after they are installed. If lox type is double (DBL) you must use four lox per piston. We recommend installing the gap on wire lox at the six o'clock position.

PLEASE KEEP THIS INSTRUCTION SHEET WITH YOUR ENGINE RECORDS. THE JOB CARD NUMBER (IN BLUE) IS ESSENTIAL WHEN ORDERING A REPLACEMENT OR MATCHING PISTONS.

ALL ROSS PISTONS WITH THE OIL RING IN THE PIN HOLE MUST USE EITHER OIL RING SUPPORT RAILS OR PIN BUTTONS.

IF THERE IS ANYTHING THAT YOU DO NOT UNDERSTAND ABOUT THE ABOVE INSTRUCTIONS, PLEASE CALL THE ROSS TECHNICAL ASSISTANCE LINE

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