



Tech Note

If you're battling a converter issue on a 2004 S40, V40, S60, C70, V70, XC70, S80 or XC90, pay close attention to the following Volvo TSB.

In 2004, there were several engines manufactured using the wrong valve seat/intake valve pairing. The seats were hard, where the valves were soft. This caused premature intake valve wear.

If you've exhausted your resources, perform a leakdown test to rule out early intake valve failure.

Worn intake valves can cause misfire, incomplete combustion, low engine vacuum, and a myriad of other issues that could cause catalytic converter issues.

NO: 21-21

DATE: 8-15-2005

MODEL/CHASSIS: See Table Below

M.YEAR: 2004

SUBJECT:

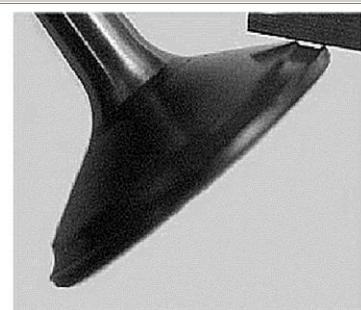
Engine may have a rough idle, DTC ECM misfire codes, rough running or lack of power.

REFERENCE:

VADIS/VIDA

This tech note supersedes the previous 21-21 dated 7-29-05. Please update your files.
Update to LABOR OPS - correction is shown with bold text.

Type	Chassis Range
S40 / V40	080000 - 125313
S40 (04-)	004506 - 025161
S60	386580 - 411538
C70	048000 - 050951
V70	416073 - 442589
XC70	151672 - 166901
S80	367089 - 379386
XC90	088045 - 119869



Worn valve face

Affected Vehicles Table

DESCRIPTION:

The Customer may have a complaint of a rough idle, rough running, lack of power or the MIL on.

SERVICE:

^ Read out DTC's

^ Check compression and do a leak down test with the engine cold.

- ^ Check valve clearance on the cylinders with low compression.
- ^ Remove the cylinder head and check the condition of the valve face.
- ^ If the valve face is worn, replace ALL the intake valves, even if some look okay.
- ^ Use ONLY intake valves with P/N 30637059.

Material B4204Tx	Quantity	Part No.
Intake valve	8	30637059
Valve seals, Service kit	1	274344
Gasket	1	9404725
Screw	10	6842347
Gasket	1	11996
Cover	1	1397381
Seal ring	1	9440651
Seal ring	1	9458309
Seal ring	1	9443310
Seal ring	4	1397525
Flange screw	3	975207
Flange screw	1	968163
Gasket	1	1236119
O-ring	1	976045
Gasket	1	1366787
Hose clamp	1	978177
Hose clamp	1	976561
Gasket	2	947282
Gasket kit	1	272461
Sems nut	8	982297
Lock nut	4	977209
Gasket	1	8642277
Gasket	6	947282
Gasket	1	3514546

Material B5244Sx (New S40)	Quantity	Part No.
Intake valve	10	30637059
Valve seals, Service kit	1	274344
Gasket	1	8642629
Screw	12	6842347
Gasket	1	11996
Seal ring	5	1397525
Seal ring	2	30612805
Seal ring	2	1275365
Cover	2	1397381
Flange screw	4	968881
Flange screw	2	30683684
Flange screw	2	965227
Gasket	1	8699467
Flange nut	12	948645
Gasket	1	1270505
Flange nut	4	945408
Gasket	1	30677525
Gasket	5	30637438
Hose clamp	1	978172

Material B5254Tx (New S40)	Quantity	Part No.
Intake valve	10	30637059
Valve seals, Service kit	1	274344
Gasket	1	30637067
Screw	12	6842347
Gasket	1	11996
Valve lifter	1	274150
Seal ring	5	1397525
Seal ring	2	30612805
Seal ring	2	1275365
Cover	2	1397381
Plug	2	8699496
Flange screw	4	968881
Flange screw	2	30683684
Flange screw	2	965227
Gasket	1	8699467
Flange nut	12	948645
Gasket	4	947621
Hose clamp	1	978173
Washer	12	419401
Gasket	1	30677190
Flange screw	3	30614458
Gasket	2	947621
Gasket	1	30637800
Gasket	1	30650074
Gasket	5	30637438
Gasket	2	11994
Hose clamp	1	976561

Material B52x4Tx	Quantity	Part No.
Intake valve	10	30637059
Gasket	1	9458534
Gasket	2	30731212
Gasket	1	11996
Gasket B5254T2 s/n -2979610	1	30637336
Gasket B5254T2 s/n 2979611-	1	30637066
Gasket B5244T3	1	9404726
Gasket B5204T5, B5234T3/T7, B5244T4/T5	1	9443896
Screw	12	6842347
Valve lifter kit	1	274150
Valve seals, Service kit	1	274344
Seal ring	5	1397525
Cover	1	1397381
Seal	1	9443310
Seal	1	9458309
Seal	1	9440651
Hose clamp	2	989879
Hose clamp	2	978171
O-ring	1	976045

Gasket, All turbochargers except B5254T4, B5244T4/T5	4	947282
Gasket B5254T4, B5244T4/T5	2	947282
Gasket B5254T4, B5244T4/T5	2	947621
Gasket	1	1236119
Clamp	1	976561
Screw	2	946934
Gasket	4	947282
Cable tie	2	983750
Flange nut	2	945408
Flange nut	10	948645
Gasket	1	9179056
Gasket	1	8642449
Gasket kit	1	271802
Gasket	1	8642450
Lock nut	7	977209
Seal ring	1	30637866
Gasket, All turbochargers except B5254T4, B5244T4/T5	1	3514546
Gasket B5254T4, B5244T4/T5	1	30650296
Gasket	2	947282
Gasket	2	18671
Clamp	1	989879

Material B52x4S	Quantity	Part No.
Intake valves	10	30637059
Valve seal kit	1	274344
Gasket	1	11996
Screw	12	6842347
Valve lifter kit	1	274150
Gasket	1	9404726
Gasket	1	9463274
Gasket kit	1	271802
Flange nut	10	948645
Gasket	1	8627203
Flange nut	4	945408
Seal ring	5	1397525
Gasket	1	30731212
Hose clamp	1	978180
Hose clamp	1	978173
Seal ring	1	9443310
Seal ring	1	9440651
Seal ring	1	9458309
Cover	1	1397381
Hose clamp	1	978165
Gasket	2	947282
Gasket	1	9458534
Flange screw	2	946934
Band clamp	2	983750

Material B6294T	Quantity	Part No.
Intake valves	12	30637059
Valve seal kit	1	274344
Gasket	1	11996
Screw	14	6842347
Valve lifter kit	1	274150
Gasket	1	8675251
O-ring	5	1397525
Gasket	2	30731212
Seal ring	1	9440651
Seal ring	1	9458309
Cover	1	1397381
Seal ring	1	9443310
Gasket	1	9142697
Gasket	4	947282
Gasket	1	9458535
Gasket	1	8675251
Clamp	1	1346542
Flange screw	2	946934
Gasket	1	1236119
Gasket kit	1	272395
Flange nut	12	948645
Gasket	1	9179056
Gasket	2	30677358
Flange nut	2	945408
Flange nut	8	946470
Lock nut	6	977209
Gasket	2	3514546
Gasket	3	947621
Gasket	4	947281
Gasket	8	947282
Sems screw	1	981771
Cable tie	2	983750

Material B6294S	Quantity	Part No.
Intake valves	12	30637059
Valve seal kit	1	274344
Gasket	1	11996
Screw	14	6842347
Valve lifter kit	1	274150
Gasket	1	9404727
Gasket	1	9458535
Gasket	1	9497519
Seal ring	6	1397525
Gasket	1	30731212
Gasket	1	1236119
Nut	12	948645
Gasket kit	1	271734
Flange screw	1	979780
Gasket	1	9497519
Seal ring	1	9440651

Seal ring	1	9458309
Seal ring	1	9443310
Cover	1	1397381
Gasket	1	9142697
Gasket	2	8627203
Flange screw	8	946470
Hose clamp	1	989879
Hose clamp	1	978165
Band clamp	2	983750

See list shown for all materials needed.

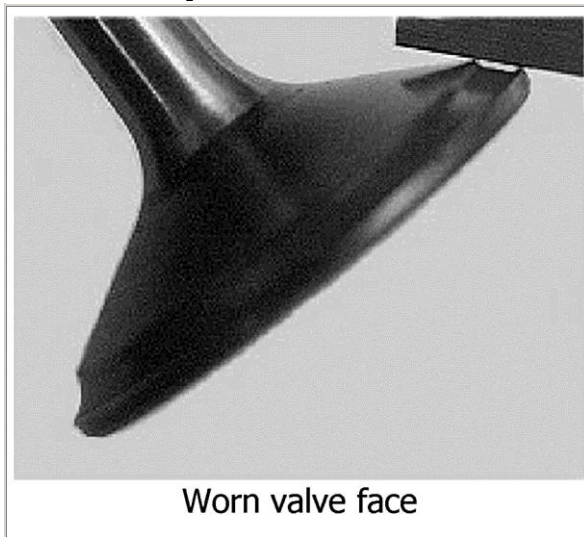
NOTE: Machining, grinding or lapping of valve seats or valve sealing surface must not be done.

Do not forget to check and adjust valve clearances for the new valves.

Note: Valve Lifter Kit contains numerous lifters; Claim submitted should only have individual lifters used for the repair.

Intake valve replacement

1



Note! Replace all intake valves.

For cylinder head removal and installation, see:

Removal, replacement, installation

Engine

Cylinder head

Cylinder head/gasket, replacing

For valve replacement, see:

Overhaul

Engine

Cylinder head

Cylinder head, assessment/overhaul

Adjust valve play as described in the link:

Valve play, setting/adjusting

Important! Machining, grinding or lapping of the valve seat or the valve sealing surface must not be performed.

WARRANTY CLAIM INFORMATION			
LABOR OP	LABOR DESCRIPTION		LABOR TIME
99284-3	Inlet valve replacement	X40 B4204T MY04	1.1 hr
		S40, V50 B52X4X MY04	1.1 hr
		C70 MY04	1.1 hr
		S60 MY04	1.1 hr
		V70 MY04	1.1 hr
		S80 B52X4T MY04	1.1 hr
		S80 B6294T MY04	1.3 hr
		XC90 B5254T MY04	1.1 hr
XC90 B6294T MY04	1.3 hr		
36001-2	DTC read and reset		0.2 hr
21003-2	Cylinder leakage test	See VSTG (Volvo Service Time Guide)	
21433-3	Valve clearance check	See VSTG (Volvo Service Time Guide)	
21102-2	Cylinder head gasket replace	See VSTG (Volvo Service Time Guide)	

Claims may be submitted under the new car warranty when there is a documented customer complaint using claim type: 01

WARRANTY INFORMATION