

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-353-9
Relating to Exemptions under Section 27156
of the Vehicle Code

Miller Catalyzer Corporation
"Series 11000 and 12000 OBD II Compliant Three-way Catalytic Converters"

WHEREAS, Vehicle Code Sections 27156 and Section 2222(h), Title 13, California Code of Regulations, authorize the California Air Resources Board and its Executive Officer to exempt new aftermarket catalytic converters from the prohibitions of Vehicle Code Section 27156.

WHEREAS, Miller Catalyzer Corporation (Miller) of 3295 Depot Road, Hayward, California 94545, has applied to the Air Resources Board for exemption from the prohibitions in Vehicle Code Section 27156 to market its new aftermarket Series 11000 and 12000 three-way catalytic converters (TWCs) for installation on 2001 and older model year Mercedes-Benz, BMW, GM, Toyota, VW, and Audi passenger cars (PC), and GM and Toyota light-duty trucks 1 (LDT1) equipped with on-board diagnostic II (OBD-II) systems as specified in Appendix D-353-9 and incorporated herein. The Series 12000 TWC as front catalytic converters (2 units) and Series 11000 as rear catalytic converters (2 units) will be used in multiple catalytic converter systems (4 units total) for Mercedes-Benz vehicles. Series 11000 will also be used for dual (2 units in parallel) or single (2 units in series) exhaust system applications for Mercedes-Benz vehicles. Furthermore, Series 11000 will be used for dual (2 units in parallel) and single (1 unit) exhaust applications for BMW, GM, Toyota, VW, and Audi vehicles. Catalytic converters for Mercedes-Benz vehicles will be sold as a complete system only, and not as individual units.

The TWCs may also be installed on non-OBD II vehicles (1995 and older) similar in engine and exhaust configuration to those listed in Appendix D-353-9.

WHEREAS, pursuant to the authority vested in the Executive Officer by Health and Safety Code Section 39515 and in the Chief, Mobile Source Operations Division by Health and Safety Code Section 39516 and Executive Order G-02-003, Air Resources Board finds that the above aftermarket catalytic converters comply with the California Vehicle Code Section 27156 and Title 13, California Code of Regulations, Section 2222(h). The emissions performance of the catalytic converters was based on durability bench-aging by Delphi Energy and Chassis Systems using ARB-modified RAT-A bench-aging cycle for 75 hours, as specified in the "Optional Evaluation Procedures for New Aftermarket Non-original Equipment Catalytic Converters Equipped With On-Board Diagnostic II (OBD II) Systems."

WHEREAS, emissions tests conducted at the Automotive Testing Development Services, Inc. (ATDS), Ontario, California, using vehicles listed below showed that the vehicles met the applicable emission standards with Series 11000 and 12000 TWCs installed in place of the original equipment manufacturer (OEM) catalytic converters.

Vehicle Make	Model year	Engine Displacement	Certification Level	Weight Category	Installed Unit	Unit Location
MBZ	1998	4.3L	LEV	PC	12000 (2)	Front
					11000 (2)	Rear
BMW	1998	2.8L	TLEV	PC	11000 (1)	Underbody
GM	1999	3.1L	LEV	PC	11000 (1)	Underbody

OBD II compatibility tests performed on the same test vehicles showed that Series 11000 and 12000 TWCs do not affect the vehicle's ability to perform OBD II system monitoring. Emission test results in grams per mile are shown below.

ATDS, Ontario, California				
4.3L Mercedes-Benz Test				
	NMOG	CO	NOx	Remarks
100K Standard	0.090	4.2	0.3	
Test 1	0.025	0.3	0.1	
Test 2	0.026	0.3	0.1	
Average of Tests 1 & 2	0.025	0.3	0.1	Pass
2.8L BMW Test				
50K Standard	0.125	3.4	0.4	
Test 1	0.097	1.2	0.3	
Test 2	0.081	1.0	0.4	
Average of Tests 1 & 2	0.089	1.1	0.3	Pass
3.1L GM Test				
100K Standard	0.090	4.2	0.3	
Test 1	0.076	1.1	0.1	
Test 2	0.089	1.2	0.2	
Average of Tests 1 & 2	0.082	1.1	0.1	Pass

IT IS HEREBY RESOLVED that the above catalytic converters are exempt from the prohibitions in Vehicle Code Section 27156 for installation on the approved vehicle applications specified in Appendix D-353-9 subject to the following conditions:

1. No changes are permitted to the catalytic converters as described in the application for exemption. Any changes to the catalytic converters or any of their components, and other factors addressed in this order must be evaluated and approved by the Air Resources Board prior to marketing in California.
2. Marketing of the catalytic converters using identifications other than those shown in the exemption application, and in this Executive Order, or marketing of the catalytic converters for application other than the ones shown in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of these products shall not be construed as an exemption to sell, offer for sale, or advertise any components of the catalytic converters as individual devices.

3. Any oral or written references to this Executive Order or its content by Miller Catalyzer Corporation, its principals, agents, employees, distributors, dealers, or other representatives must include the disclaimer that the Executive Order or the exemption it provides is not an endorsement or approval of any emission reduction claims for the catalytic converters and is only a finding that the catalytic converters are exempt from the prohibitions of Vehicle Code Section 27156.
4. Miller Catalyzer Corporation's installation instructions for the new catalytic converters must conform to requirements in Paragraphs I and X of the "Optional Evaluation Procedures for New Aftermarket Non-original Equipment Catalytic Converters Equipped With On-Board Diagnostic II (OBD II) Systems."
5. Upon installation, the catalytic converters must carry a manufacturer's warranty for 50,000 miles on the substrates and 50,000 miles or five years on the shell and end pipes.
6. Miller Catalyzer Corporation and its vendors may not advertise the new aftermarket catalytic converters as "high or easy flow" catalytic converters or use any phrase that could make them appear to perform better than an OEM catalytic converter.

Violation of any of the above conditions shall be grounds for revocation of this order. The order may be revoked only after a ten day written notice of intention to revoke it, during which period the holder of the order may request in writing a hearing to contest the proposed revocation. If a hearing is requested, it shall be held within ten days of receipt of the request, and the order may not be revoked until a determination is made, after the hearing, that grounds for revocation exist.

Executive Order D-353-7 dated May 10, 2005, is hereby superseded and is of no further force and effect.

Executed at El Monte, California, this 20th day of July 2005.



Allen Lyons, Chief

Mobile Source Operations Division

Miller Catalyzer Corporation's BMW OBDII Applications Catalog • Cars

Year	Make	Model	Cyl	Eng	Level	Miller Replacement Catalyst	Type	No. of		Engine Family #	Miller Direct Fit part #
								Cats	on Car		
1996	BMW	318i, 318ti, 318is & Z3	4	1.9L	TIER 1	11000	Single-Exh, Single Conv	1	Monitored	TBM1.9VJGKEK	11770
1996	BMW	328i, 328is, 328ic	6	2.8L	TLEV	11000	Single-Exh, Single Conv	1	Monitored	TBM2.8VJGKEK	11750
1996	BMW	740iL & 840Ci	8	4.4L	TIER 1	11000 Left, 11000 Right	Dual Exh, Dual Convs	2	Both Convs Monitored	TBM4.4VJGFEK	11610 & 11620
1996	BMW	750iL & 850Ci	12	5.4L	TIER 1	11000 Left, 11000 Right	Dual Exh, Dual Convs	2	Both Convs Monitored	TBM5.4V8GFEK	11700 & 11710
1997	BMW	318i, 318ti, 318is	4	1.9L	TLEV	11000	Single-Exh, Single Conv	1	Monitored	VBM1.9VJGKEK	11770
1997	BMW	Z3	4	1.9L	TIER 1	11000	Single-Exh, Single Conv	1	Monitored	VBM1.9VJGFEK	11770
1997	BMW	Z3 2.8L	6	2.8L	TLEV	11000	Single-Exh, Single Conv	1	Monitored	VBM2.8VJGKEK	11760
1997	BMW	328i, 328is, 328ic	6	2.8L	TLEV	11000	Dual Exh, Dual Convs	2	Both Convs Monitored	VBM2.8VJGKEK	11750
1997	BMW	540i, 740i, 740iL, & 840Ci	8	4.4L	TIER 1	11000 Left, 11000 Right	Dual Exh, Dual Convs	2	Both Convs Monitored	VBM4.4VJGKEK	11610 & 11620
1997	BMW	750iL & 850Ci	12	5.4L	TIER 1	11000 Left, 11000 Right	Dual Exh, Dual Convs	2	Both Convs Monitored	VBM5.4V8GFEK	11700 & 11710
1998	BMW	318i, 318ti, 318is & Z3	4	1.9L	TLEV	11000	Single-Exh, Single Conv	1	Monitored	WBMXXV01.9M44	11770
1998	BMW	328i, 328is, 328ic	6	2.8L	TLEV	11000 Left, 11000 Right	Dual Exh, Dual Convs	2	Both Convs Monitored	WBMXXV02.8M52	11750
1998	BMW	Z3, 323is & 323iC	6	2.8L	TLEV	11000	Single-Exh, Single Conv	1	Monitored	WBMXXV02.8Z35	11760
1998	BMW	M3 & 528i	6	2.8L	TLEV	11000 Left, 11000 Right	Dual Exh, Dual Convs	2	Both Convs Monitored	WBMXXV02.8M52	11750
1998	BMW	540i, 740i & 740iL	8	4.4L	TIER 1	11000 Left, 11000 Right	Dual Exh, Dual Convs	2	Both Convs Monitored	WBMXXV04.4M62	11610 & 11620
1998	BMW	750iL	12	5.4L	TIER 1	11000 Left, 11000 Right	Dual Exh, Dual Convs	2	Both Convs Monitored	WBMXXV05.4M73	11700 & 11710

The Series 12000 TWC as front catalytic converter (2 units) and Series 11000 as rear catalytic converters (2 units) will be used in multiple catalytic converter systems (4 units total) for Mercedes-Benz vehicles. Series 11000 will also be used for dual (2 units in parallel) or single (2 units in series) exhaust system applications for Mercedes-Benz vehicles. Furthermore, Series 11000 will be used for dual (2 units in parallel) and single (1 unit) exhaust applications for BMW and GM vehicles. Catalytic converters for Mercedes-Benz vehicles will be sold as a complete system only, and not as individual units.

Miller Catalyzer Corporation's General Motors OBDII Applications Catalog • Cars

Year	Make	Model	Cyl	Eng	Level	Miller		No. of		Moni-	Engine	Aftermarket
						Replacement	Catalyst	Type	Cats			
1996	GM	Corsica	4	2.2L	TLEV	11000	11000	Single	1	1	TGM2.22V8G2EK	11002
1996	GM	Beretta	4	2.2L	TLEV	11000	11000	Single	1	1	TGM2.22V8G2EK	11078
1996	GM	Cavalier, Sunfire	4	2.2L	TLEV	11000	11000	Single	1	1	TGM2.22V8G2EK	11300 or 11078
1996	GM	Grand Am, Sunfire	4	2.4L	TLEV	11000	11000	Single	1	1	TGM2.4VJG2EK	11078
1996	GM	Achiva	4	2.4L	TLEV	11000	11000	Single	1	1	TGM2.4VJG2EK	11084
1996	GM	Cavalier, Skylark	4	2.4L	TLEV	11000	11000	Single	1	1	TGM2.4VJG2EK	11300 or 11078
1996	GM	Grand Prix, Regal	6	3.8L	TLEV	11000	11000	Single	1	1	TGM3.8V8G2EK	11078
1996	GM	Century	6	3.8L	TLEV	11000	11000	Single	1	1	TGM3.8V8G2EK	11085
1996	GM	Bonneville, Le Sabre, Park Ave., Regency, Riviera	6	3.8L	TLEV	11000	11000	Single	1	1	TGM3.8V8G2EK	11300
1997	GM	Cavalier, Sunfire	4	2.2L	TLEV	11000	11000	Single	1	1	VCR122VJG2EK	11300
1997	GM	Corsica	4	2.2L	TLEV	11000	11000	Single	1	1	VCR122VJG2EK	11002
1997	GM	Beretta	4	2.2L	TLEV	11000	11000	Single	1	1	VCR122VJG2EK	11078
1997	GM	Achieva, Cavalier, Sunfire	4	2.4L	Tier 1	11000	11000	Single	1	1	VGM2.4JG1EK	11078
1997	GM	Regal	6	3.8L	TLEV	11000	11000	Single	1	1	VGM3.8V8G2EK	11078
1997	GM	Century	6	3.8L	TLEV	11000	11000	Single	1	1	VGM3.8V8G2EK	11300 or 11078
1997	GM	Grand Prix	6	3.8L	TLEV	11000	11000	Single	1	1	VGM3.8V8G2EK	11078
1997	GM	Bonneville, Le Sabre, Park Avenue, Riviera	6	3.8L	TLEV	11000	11000	Single	1	1	VGM3.8V8G2EK	11368

Miller Catalyzer Corporation's General Motors OBDII Applications Catalog • Cars

Year	Make	Model	Miller			Type	No. of		Engine	Aftermarket
			Cyl	Eng	Level	Catalyst	Cats	on Car	Family No.	Part No.
1998	GM	Saturn SL Sedan	4	1.9L	TLEV	11000	1	1	WGMXV01.9002	11300
1998	GM	Saturn SL Sedan	4	1.9L	TLEV	11000	1	1	WGMXV01.9004	11000
1998	GM	Sunfire, Chevrolet Cavalier	4	2.2L	TLEV	11000	1	1	WGMXV02.2023	11300
1998	GM	Olds Cutlass, Grand AM	4	2.4L	TLEV	11000	1	1	WGMXV02.4026	11078
1998	GM	Chevrolet Malibu	4	2.4L	TLEV	11000	1	1	WGMXV02.4026	11079
1998	GM	Buick Skylark, Olds Achieva	4	2.4L	TLEV	11000	1	1	WGMXV02.4026	11084
1998	GM	Sunfire, Chevrolet Cavalier	4	2.4L	TLEV	11000	1	1	WGMXV02.4026	11300
1998	GM	Buick Century	6	3.1L	TLEV	11000	1	1	WGMXV03.1044	11013
1998	GM	Chevrolet Lumina, Olds Cutlass, Grand Prix	6	3.1L	TLEV	11000	1	1	WGMXV03.1044	11078
1998	GM	Chevrolet Malibu	6	3.1L	TLEV	11000	1	1	WGMXV03.1044	11079
1998	GM	Chevrolet Monte Carlo	6	3.1L	TLEV	11000	1	1	WGMXV03.1044	11088
1998	GM	Olds Intrigue	6	3.8L	TLEV	11000	1	1	WGMXV03.8048	11013
1998	GM	Buick Regal, Chevrolet Lumina, Grand Prix	6	3.8L	TLEV	11000	1	1	WGMXV03.8048	11078
1998	GM	Chevrolet Monte Carlo	6	3.8L	TLEV	11000	1	1	WGMXV03.8048	11079
1998	GM	Buick Lesabre, Olds 88 Regency	6	3.8L	TLEV	11000	1	1	WGMXV03.8048	11340
1998	GM	Bonneville, Buick Park Avenue	6	3.8L	TLEV	11000	1	1	WGMXV03.8048	11368

Miller Catalyzer Corporation's General Motors OBDII Applications Catalog • Cars

Year	Make	Model	Cyl	Eng	Miller Replacement		Type	No. of Cats on Car	Monitored	Engine Family No.	Miller Aftermarket	
					Level	Catalyst					Part No.	Part No.
1998	GM	Saturn SW Wagon	4	1.9L	TLEV	11000	Single	1	1	WGMXV01.9002	11300	11300
1998	GM	Saturn SC Coupe	4	1.9L	TLEV	11000	Single	1	1	WGMXV01.9002	11300	11300
1999	GM	Buick Lesabre	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11078	11078
1999	GM	Buick Park Avenue	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8053	11078	11078
1999	GM	Buick Riviera	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8053	11078	11078
1999	GM	Buick Regal	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8053	11078	11078
1999	GM	Buick Regal	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11078	11078
1999	GM	Cadillac Catera	6	3.0L	LEV	11000	Single	2	2	XGMXV03.0061	11078	11078
1999	GM	Chevrolet Cavalier	4	2.2L	LEV	11000	Single	1	1	XGMXV02.2023	11300	11300
1999	GM	Chevrolet Cavalier	4	2.4L	LEV	11000	Single	1	1	XGMXV02.4027	11300	11300
1999	GM	Chevrolet Malibu	6	3.1L	LEV	11000	Single	1	1	XGMXV03.1043	11078	11078
1999	GM	Chevrolet Malibu	4	2.4L	LEV	11000	Single	1	1	XGMXV02.4027	11078	11078
1999	GM	Chevrolet Lumina	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11078	11078
1999	GM	Chevrolet Monte Carlo	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11078	11078
1999	GM	Chevrolet Camaro	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11340	11340
1999	GM	Olds Cutlass	6	3.1L	LEV	11000	Single	1	1	XGMXV03.1043	11078	11078
1999	GM	Olds Alero	4	2.4L	LEV	11000	Single	1	1	XGMXV02.4027	11078	11078
1999	GM	Olds Cutlass	4	2.4L	LEV	11000	Single	1	1	XGMXV02.4027	11078	11078
1999	GM	Olds Eighty-Eight	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11078	11078
1999	GM	Olds Regency	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11078	11078
1999	GM	Olds Intrigue	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11078	11078
1999	GM	Pontiac Sunfire	4	2.2L	LEV	11000	Single	1	1	XGMXV02.2023	11078	11078
1999	GM	Pontiac Grand Am	4	2.4L	LEV	11000	Single	1	1	XGMXV02.4027	11310	11310
1999	GM	Pontiac Sunfire	4	2.4L	LEV	11000	Single	1	1	XGMXV02.4027	11300	11300
1999	GM	Pontiac Bonneville	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11368	11368
1999	GM	Pontiac Bonneville	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8053	11368	11368
1999	GM	Pontiac Firebird	6	3.8L	LEV	11000	Single	1	1	XGMXV03.8049	11340	11340

Miller Catalyzer Corporation's General Motors OBDII Applications Catalog • Cars

Year	Make	Model	Cyl	Eng	Miller Replacement			No. of Moni-		Engine Family No.	Miller Aftermarket	
					Level	Catalyst	Type	Cats on Car	tored Cats		Part No.	
1999	GM	Saturn SL Sedan	4	1.9L	LEV	11000	Single	1	1	XGMXV01.0004	11300	
1999	GM	Saturn SW Wagon	4	1.9L	LEV	11000	Single	1	1	XGMXV01.0004	11300	
1999	GM	Buick Century	6	3.4L	TLEV	11000	Single	1	1	XGMXV03.4042	11078	
1999	GM	Buick Park Avenue	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Buick Regal	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Buick Lesabre	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Buick Riviera	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8051	11078	
1999	GM	Buick Park Avenue	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8051	11078	
1999	GM	Buick Regal	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8051	11078	
1999	GM	Chevrolet Monte Carlo6	6	3.4L	TLEV	11000	Single	1	1	XGMXV03.4042	11078	
1999	GM	Chevrolet Camaro	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11344	
1999	GM	Chevrolet Lumina	6	3.4L	TLEV	11000	Single	1	1	XGMXV03.4042	11078	
1999	GM	Chevrolet Lumina	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Chevrolet Monte Carlo6	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Olds Alero	4	2.4L	TLEV	11000	Single	1	1	XGMXV02.4025	11078	
1999	GM	Olds Cutlass	4	2.4L	TLEV	11000	Single	1	1	XGMXV02.4025	11078	
1999	GM	Olds Alero	6	3.4L	TLEV	11000	Single	1	1	XGMXV03.4042	11078	
1999	GM	Olds Intrigue	6	3.5L	TLEV	11000	Single	1	1	XGMXV03.5064	11078	
1999	GM	Olds Intrigue	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Olds Eighty Eight	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Olds Regency	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Pontiac Grand AM	4	2.4L	TLEV	11000	Single	1	1	XGMXV02.4025	11078	
1999	GM	Pontiac Grand AM	6	3.4L	TLEV	11000	Single	1	1	XGMXV03.4042	11078	
1999	GM	Pontiac Grand Prix	6	3.4L	TLEV	11000	Single	1	1	XGMXV03.4042	11078	
1999	GM	Pontiac Firebird	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11340	
1999	GM	Pontiac Grand Prix	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11034	
1999	GM	Pontiac Bonneville	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8048	11078	
1999	GM	Pontiac Grand Prix	6	3.8L	TLEV	11000	Single	1	1	XGMXV03.8051	11078	
1999	GM	Pontiac Sunfire	4	2.2L	TLEV	11000	Single	1	1	XGMXV02.2022	11300	

Miller Catalyzer Corporation's Mercedes-Benz OBDII Applications Catalog • Cars

Year	Make	Model	Cyl	Eng	Level	Type	Miller		No. of Cats on Car	Monitored Cats	Engine Family #	Miller Direct Fit part #
							Replacement Catalyst					
1996	MBZ	C220	4	2.2L	TLEV	11000 Left, 11000 Right	Single Exh., Dual Convs	2	Both Convs Monitored	TMB2.2VJGKEK	12580	
1996	MBZ	C36	6	3.6L	TIER 1	11000 Left, 11000 Right	Single Exh., Dual Convs	2	Both Convs Monitored	TMB3.6VJGKEK	12780	
1996	MBZ	E320, S320, SL320	6	3.2L	TIER 1	11000 Left, 11000 Right	Single Exh., Dual Convs	2	Right Conv Monitored Only	TMB3.2VJGFEK	12640	
1996	MBZ	S500, SL500, S420	8	5.0L	TIER 1	12000 Front, 11000 Rear	Dual Exh., Multiple Conv	4	Front Monitored, Rear Unmonitored	TMB5.0VJGFEK	12690, 12700 & 12710	
1996	MBZ	S600, SL600	12	6.0L	TIER 1	11000 Left, 11000 right	Dual Exh., Dual Convs	2	Both Convs Monitored	TMB6.0VJGFEK	12480 & 12490	
1997	MBZ	C230	4	2.3L	TLEV	11000 Left, 11000 Right	Single Exh., Dual Convs	2	Both Convs Monitored	VMB2.3VJGKEK	12810	
1997	MBZ	C36	6	3.6L	TIER 1	11000 Left, 11000 Right	Single Exh., Dual Convs	2	Both Convs Monitored	VMB3.6VJGKEK	12780	
1997	MBZ	E320, S320, SL320	6	3.2L	TIER 1	11000 Left, 11000 Right	Single Exh., Dual Convs	2	Right Conv Monitored Only	VMB3.2VJGKEK	12640	
1997	MBZ	S500, SL500, S420, & E420	8	5.0L	TLEV	12000 Front, 11000 Rear	Dual Exh., Multiple Conv	4	Front Monitored, Rear Unmonitored	VMB5.0VJGKEK	12690, 12700 & 12710	
1997	MBZ	S600, SL600	12	6.0L	TIER 1	11000 Left, 11000 Right	Dual Exh., Dual Convs	2	Both Convs monitored	VMB6.0VJGFEK	12480 & 12490	
1998	MBZ	SLK230	4	2.3L	TIER 1	11000 Left, 11000 Right	Single Exh., Dual Convs	2	Both Convs Monitored	WMBXV02.3GSU	12580	
1998	MBZ	C230	4	2.3L	TLEV	11000 Left, 11000 Right	Single Exh., Dual Convs	2	Both Convs Monitored	WMBXV02.3GNU	12580	
1998	MBZ	E320, CLK320	6	3.2L	LEV	11000 Left, 11000 Right	Dual Exh., Dual Convs	2	Both Convs Monitored	WMBXV03.2GNU	12840 & 12850	
1998	MBZ	S320	6	3.2L	TIER 1	11000 Left, 11000 Right	Dual Exh., Dual Convs	2	Both Convs Monitored	WMBXV03.2GNU	12840 & 12850	
1998	MBZ	SL320	6	3.2L	TIER 1	11000 Left, 11000 Right	Dual Exh., Dual Convs	2	Both Convs Monitored	WMBXV03.2GNT	12840 & 12850	
1998	MBZ	E430, C43	8	4.3L	LEV	12000 Front, 11000 Rear	Dual Exh., Multiple Conv	4	Front Monitored, Rear Unmonitored	WMBXV04.3GNB	12780 & 12790	
1998	MBZ	S420, S500, CL500, & SL500	8	5.0L	TLEV	12000 Front, 11000 Rear	Dual Exh., Multiple Conv	4	Front Monitored, Rear Unmonitored	WMBXV05.0GNB	12690, 12700 & 12710	
1998	MBZ	S600, SL600, CL600	12	6.0L	TIER1	11000 Left, 11000 Right	Dual Exh., Dual Convs	2	Both Convs Monitored	WMBXV06.0GNU	12480 & 12490	

The Series 12000 TWC as front catalytic converter (2 units) and Series 11000 as rear catalytic converters (2 units) will be used in multiple catalytic converter systems (4 units total) for Mercedes-Benz vehicles. Series 11000 will also be used for dual (2 units in parallel) or single (2 units in series) exhaust system applications for Mercedes-Benz vehicles. Furthermore, Series 11000 will be used for dual (2 units in parallel) and single (1 unit) exhaust applications for BMW and GM vehicles. Catalytic converters for Mercedes-Benz vehicles will be sold as a complete system only, and not as individual units.

Miller Catalyzer Corporation's Toyota OBDII Applications Catalog • Cars

Year	Make	Model	Cyl	Eng	Level	Cats	Eng	Moni-	Miller	Miller
						Type	on Car	Engine	Replacement	Direct Fit
								Cats	Family #	Catalyst #
										Part #
1996	Toyota	Tercel, Paseo	4	1.5L	Tier 1	SEM 1	1	TTY1.5VHGFEK	11000	11989
1996	Toyota	Corolla	4	1.8L	Tier 1	SEM 1	1	TTY1.8VJG1GK	11000	11989
1996	Toyota	Camry	6	3.0L	Tier 1	SEM 1	1	TTY3.0VJG1GK	11000	11954
1996	Toyota	Celica	4	1.8L	Tier 1	SEM 1	1	TTY1.5VHGFEK	11000	11989
1996	Toyota	Avalon	6	3.0L	Tier 1	SEM 1	1	TTY3.0VJG1GK	11000	11975
1997	Toyota	Tercel, Paseo	4	1.5L	Tier 1	SEM 1	1	VTY1.5VJGKEK	11000	11989
1997	Toyota	Camry	6	3.0L	Tier 1	SEM 1	1	VTY3.0VJGKEK	11000	11975
1997	Toyota	Avalon	6	3.0L	Tier 1	SEM 1	1	VTY3.0VJGKEK	11000	11975
1997	Toyota	Celica, Corolla	4	1.6/1.8L	Tier 1	SEM 1	1	VTY1.8VJGFEK	11000	11989

Miller Catalyzer Corporation's Toyota OBDII Applications Catalog • Cars

Year	Make	Model	Cyl	Eng	Level	Cats	Moni-	Engine Replacement	Miller	Miller
						Type	on Car	Family #	Direct Fit	Part #
1998	Toyota	Tercel	4	1.5L	Tier 1	SEM 1	1	WTYXV01.5BBA	11000	11989
1998	Toyota	Corolla	4	1.8L	TLEV	SEM 1	1	WTYXV01.8DXB	11000	11939
1999	Toyota	Tercel, Paseo	4	1.5	Tier 1	SEM 1	1	XTYXV01.5BBA	11000	
1999	Toyota	Corolla	4	1.8L	TLEV	SEM 1	1	XTYXV01.8DXB	11000	11939
1999	Toyota	Solara, Avalon	6	3.0L	Tier 1	SEM 1	1	XTYXV03.0BBA	11000	11954 or 11975
1999	Toyota	Celica	4	2.2L	TLEV	SEM 1	1	XTYXV02.2DXD	11000	11939
2000	Toyota	Echo	4	1.5L	LEV	SEM 1	1	YTYXV01.5FFA	11000	11939
2000	Toyota	Corolla	4	1.8L	LEV	SEM 1	1	YTYXV01.8FFA	11000	11939
2000	Toyota	Camry, Solara	6	3.0L	Tier 1	SEM 1	1	YTYXV03.0BBA	11000	11975 or 11989
2000	Toyota	Celica	4	1.8L	TLEV	SEM 1	1	YTYXV01.8DDC	11000	11939
2000	Toyota	Celica	4	1.8L	TLEV	SEM 1	1	YTYXV01.8DDB	11000	11939

Miller Catalyzer Corporation's Toyota OBDII Applications Catalog • Cars

Year	Make	Model	Cyl	Eng	Level	Type	Cats	Moni- tored	Engine	Replacement	Miller Direct Fit	Miller Catalyst #	Part #
2001	Toyota	Echo, Corolla	4	1.5/1.8L	LLEV	SEM	1	1	1TYXV01.5FFA	11000	11939		
2001	Toyota	Solara, Camry	6	3.0L	Tier 1	SEM	1	1	1TYXV03.0BBA	11000	11989		
2001	Toyota	Celica	4	1.8L	TLEV	SEM	1	1	1TYXV01.8DDC	11000	11939		
2001	Toyota	Celica	4	1.8L	TLEV	SEM	1	1	1TYXV01.8DDB	11000	11939		

Additional Application List

Miller Catalyzer Corporation, Catalytic Converter Series 11000, Volkswagen Cars, Up to 3,750 lbs. LVW										
Model Year	Vehicle Model	Engine Size	No. of Cylinders	Engine Family	Certification Level	Total Converters	Monitored	Unmonitored	Universal	Direct Fit
1996	Golf Cabriolet	2.0L	4	TVW2.0V8GFEM	Tier 1	1	1	0	11000	11374
	Passat GL	2.0L	4				1	0	11000	11375
	Golf GL	2.0L	4				1	0	11000	11374
	Golf GTI	2.0L	4				1	0	11000	11374
	Jetta GL	2.0L	4				1	0	11000	11338
	Jetta GSL	2.0L	4				1	0	11000	11338
1996	Golf GTI VR6	2.8L	6	TVW2.8V8GFGM	Tier 1	1	1	0	11000	11375
	Jetta GLX VR6	2.8L	6				1	0	11000	11374
1997	Golf Cabriolet	2.0L	4	VWV2.0V8GKEM1	Tier 1	1	1	0	11000	11374
	Golf GL	2.0L	4				1	0	11000	11374
	Golf GTI	2.0L	4				1	0	11000	11374
	Jetta GL	2.0L	4				1	0	11000	11374
	Jetta GSL	2.0L	4				1	0	11000	11338
	Passat GL Cabrio	2.0L	4				1	0	11000	11374
1997	Golf GTI VR6	2.8L	6	VWV2.828GFGM1	Tier 1	1	1	0	11000	11375
	Jetta GLX VR6	2.8L	6				1	0	11000	11375
1998	Golf Cabriolet	2.0L	4	WVWVXV02.0223	TLEV	1	1	0	11000	11374
	Golf GL	2.0L	4				1	0	11000	11374
	Golf GTI	2.0L	4				1	0	11000	11374
	Jetta GL	2.0L	4				1	0	11000	11374
	Jetta GSL	2.0L	4				1	0	11000	11338
	Beetle	2.0L	4				1	0	11000	11370

APPENDIX D-353-9

Miller Catalyzer Corporation, Catalytic Converter Series 11000, Volkswagen Cars, Up to 3,750 lbs. LVW										
Model Year	Vehicle Model	Engine Size	No. of Cylinders	Engine Family	Certification Level	Total Converters	Monitored	Unmonitored	Universal	Direct Fit
1998	Golf GTI VR6	2.8L	6	WVWXXV02.8224	Tier 1	1	1	0	11000	11375
	Jetta GLX VR6	2.8L	6			1	1	0	11000	11375
1998	Passat	1.8L	4	WVWXXV01.8322	TLEV	1	1	0	11000	11377
	Passat Wagon	1.8L	4			1	1	0	11000	11377
1998	Passat	2.8L	6	WVWXXV02.8324	TLEV	1	1	0	11000	11377

1999	Beetle Turbo	1.8L	4	XVWXXV01.8228	TLEV	1	1	0	11000	11372
1999	Cabrio	2.0L	4	XVWXXV02.0223	TLEV	1	1	0	11000	11374
	Golf III Cabriolet	2.0L	4			1	1	0	11000	11374
	Golf III GL	2.0L	4			1	1	0	11000	11374
	Golf III GTI	2.0L	4			1	1	0	11000	11338
	Jetta III GL	2.0L	4			1	1	0	11000	11374
	Jetta III GLS	2.0L	4			1	1	0	11000	11338
	Beetle	2.0L	4			1	1	0	11000	11338
1999	Golf IV	2.0L	4	XVWXXV02.0227	LEV	1	1	0	11000	11371
	Golf IV GL	2.0L	4			1	1	0	11000	11371
	Golf IV GLS	2.0L	4			1	1	0	11000	11371
	Jetta IV GL	2.0L	4			1	1	0	11000	11371
	Jetta IV GLS	2.0L	4			1	1	0	11000	11371
	Golf III GTI VR6	2.8L	6			1	1	0	11000	11375
1999	Jetta III GLX VR6	2.8L	6	XVWXXV02.8221	Tier 1	1	1	0	11000	11375
1999	Golf IV VR6	2.8L	6	XVWXXV02.8224	TLEV	1	1	0	11000	11370
	Golf IV GTI VR6	2.8L	6			1	1	0	11000	11370
	Jetta IV GLS VR6	2.8L	6			1	1	0	11000	11375
	Jetta IV GLX VR6	2.8L	6			1	1	0	11000	11371
	Jetta IV GLS VR6	2.8L	6			1	1	0	11000	11371

2000	Beetle Turbo	1.8L	4	YVWXXV01.8228	TLEV	1	1	0	11000	11372
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APPENDIX D-353-9

Miller Catalyst Corporation, Catalytic Converter Series 11000, Volkswagen Cars, Up to 3,750 lbs. LVW

Model Year	Vehicle Model	Engine Size	No. of Cylinders	Engine Family	Certification Level	Total Converters	Monitored	Unmonitored	Universal	Direct Fit
2000	Golf III Cabriolet	2.0L	4	YVWXXV02.0223	LEV	1	1	0	11000	11374
	Beetle	2.0L	4			1	1	0	11000	11338
	Golf IV	2.0L	4			1	1	0	11000	11371
	Golf IV GL	2.0L	4			1	1	0	11000	11371
2000	Golf IV GLS	2.0L	4	YVWXXV02.0227	LEV	1	1	0	11000	11371
	Jetta IV GL	2.0L	4			1	1	0	11000	11371
	Jetta IV GLS	2.0L	4			1	1	0	11000	11371
	Golf IV VR6	2.8L	6			1	1	0	11000	11370
2000	Golf IV GTI VR6	2.8L	6	YVWXXV02.8224	LEV	1	1	0	11000	11370
	Jetta IV GLS VR6	2.8L	6			1	1	0	11000	11370
	Jetta IV GLX VR6	2.8L	6			1	1	0	11000	11370
	Jetta IV GLX VR6	2.8L	6			1	1	0	11000	11370

2001	Beetle Turbo	1.8L	4	1VWXXV01.8229	TLLEV	1	1	0	11000	11372
	Beetle	2.0L	4			1	1	0	11000	11338
	Golf IV	2.0L	4			1	1	0	11000	11371
	Golf III Cabriolet	2.0L	4			1	1	0	11000	11374
2001	Golf IV GL	2.0L	4	1VWXXV02.0227	LEV	1	1	0	11000	11371
	Golf IV GLS	2.0L	4			1	1	0	11000	11371
	Jetta IV GL	2.0L	4			1	1	0	11000	11371
	Jetta IV GLS	2.0L	4			1	1	0	11000	11371
2001	Golf IV VR6	2.8L	6	1VWXXV02.8224	LEV	1	1	0	11000	11372
	Golf IV GTI VR6	2.8L	6			1	1	0	11000	11370
	Jetta IV GLS VR6	2.8L	6			1	1	0	11000	11370
	Jetta IV GLX VR6	2.8L	6			1	1	0	11000	11370

APPENDIX D-353-9

Miller Catalyzer Corporation, Catalytic Converter Series 11000, Toyota Light Trucks, Up to 3,750 lbs. LVW										
Model Year	Vehicle Model	Engine Size	No. of Cylinders	Engine Family	Certification Level	Total Converters	Monitored	Unmonitored	Universal	Direct Fit
1996	RAV4 4WD	2.0L	4	TTY2.0JG2GK	TL5V	2	2	0	11000	11134
1996	Tacoma	2.4L	4	TTY2.4IHGKEK	Tier 1	1	1	0	11000	11939
1996	Tacoma	2.7L	4	TTY2.7IHGKEK	Tier 1	1	1	0	11000	11939
1996	T100 PU	2.7L	4	TTY2.7IHGKEK	Tier 1	1	1	0	11000	11939
1996	T100 PU	3.4L	6	TTY3.4IJG1GK	Tier 1	1	1	0	11000	11969
1996	Tacoma 4WD	3.4L	6	TTY3.4IJGF EK	Tier 1	1	1	0	11000	11969
1997	RAV4 4WD	2.0L	4	VTY2.0IJGKFK	TL5V	2	2	0	11000	11134
1997	Tacoma 2WD	2.4L	4	VTY2.4IHGKEK	Tier 1	1	1	0	11000	11939
1997	T100 PU	2.7L	4	VTY2.7IHGKEK	Tier 1	1	1	0	11000	11976
1997	Tacoma 4WD	2.7L	4	VTY2.7IJGKEK	Tier 1	1	1	0	11000	11939
1997	Tacoma 2WD/4WD	3.4L	6	VTY3.4IJGKEK	Tier 1	1	1	0	11000	11973
1998	4Runner 4WD	2.7L	4	WTYXT02.7BBH	Tier 1	1	1	0	11000	11939
1998	Tacoma	2.7L	4	WTYXT02.7BBH	Tier 1	1	1	0	11000	11939
1999	Tacoma	2.7L	4	XTYXT02.7BBH	Tier 1	1	1	0	11000	11939

APPENDIX D-353-9

Miller Catalyzer Corporation, Catalytic Converter Series 11000, GM Light Trucks, Up to 3,750 lbs. LVW										
Model Year	Vehicle Model	Engine Size	No. of Cylinders	Engine Family	Certification Level	Total Converters	Monitored	Unmonitored	Universal	Direct Fit
1996	Chevrolet S10 Pickup 2WD	2.2L	4	TGM2.218GFKEK	Tier1	1	1	0	11000	11341
	GMC Sonoma Pickup 2WD	2.2L	4				1	0	11000	11341
	Isuzu Hombre Pickup 2WD	2.2L	4				1	0	11000	11341
1996	Chevrolet S10 Pickup 2WD	4.3L	6	TGM4.31PGFEK	Tier1	1	1	0	11000	11341
	GMC Sonoma Pickup 2WD	4.3L	6				1	0	11000	11341
1997	Chevrolet S10 Pickup 2WD	2.2L	4	VGM2.218GFKEK	Tier1	1	1	0	11000	11341
	GMC Sonoma Pickup 2WD	2.2L	4				1	0	11000	11341
	Isuzu Hombre Pickup 2WD	2.2L	4				1	0	11000	11341
1997	Chevrolet S10 Pickup 2WD	4.3L	6	VGM4.31PG1EK1	Tier1	1	1	0	11000	11341
	GMC Sonoma Pickup 2WD	4.3L	6				1	0	11000	11341
	Isuzu Hombre Pickup 2WD	4.3L	6				1	0	11000	11341
1998	Chevrolet S10 Pickup 2WD	2.2L	4	WGMXTO2.2122	Tier1	1	1	0	11000	11341
	GMC Sonoma Pickup 2WD	2.2L	4				1	0	11000	11341
	Isuzu Hombre Pickup 2WD	2.2L	4				1	0	11000	11341
1998	Chevrolet S10 Pickup 2WD	4.3L	6	WGMXTO4.3182	Tier1	1	1	0	11000	11341
	GMC Sonoma Pickup 2WD	4.3L	6				1	0	11000	11341
	Isuzu Hombre Pickup 2WD	4.3L	6				1	0	11000	11341
1999	Chevrolet S10 Pickup	2.2L	4	XGMXTO2.2122	TLEV	1	1	0	11000	11341
	GMC Sonoma Pickup	2.2L	4				1	0	11000	11341
	Isuzu Hombre Pickup 2WD	2.2L	4				1	0	11000	11341

APPENDIX D-353-9

APPENDIX D-353-9 Miller Catalyzer Corporation, Catalytic Converter Series 11000, Audi Cars, Up to 3,750 lbs. LVW										
Model Year	Vehicle Model	Engine Size	No. of Cylinders	Engine Family	Certification Level	Total Converters	Monitored	Unmonitored	Universal	Direct Fit
1997	A4 Quattro	2.8L	6	VAD2.8V8GKFM	Tier 1	2	2	0	11000	11377
1998	A4 - 20V Turbo	1.8L	4	WADXXV01.8322	TLEV	1	1	0	11000	11357
	A4 QUATTRO - 20V Turbo	1.8L	4			1	1	0	11000	11357
	CABRIOLET - 12V	2.8L	6	WADXXV02.8324	TLEV	2	2	0	11000	11377
	A4, <i>Passat</i>	2.8L	6			2	2	0	11000	11377
	A4 Avant	2.8L	6			2	2	0	11000	11377
	A4 Quattro	2.8L	6			2	2	0	11000	11377
	A6	2.8L	6			2	2	0	11000	11377
	A6 Avant	2.8L	6			2	2	0	11000	11377
2000	TT Coupe- 20v Turbo	1.8L	4	YADXXV01.8336	TLEV	1	1	0	11000	11372
	TT Roadster - 20v Turbo	1.8L	4			1	1	0	11000	11379