

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER D-193-98  
Relating to Exemptions under Sections 27156 and 38391  
of the Vehicle Code

Car Sound Exhaust Systems, Inc. (d.b.a. Magnaflow)  
"Series 447100 and 447200 Three-Way Catalytic Converters"

WHEREAS, Vehicle Code Sections 27156 and 38395 and Title 13, California Code of Regulations (hereafter "CCR") Section 2222(h) authorize the California Air Resources Board and its Executive Officer to exempt new aftermarket catalytic converters from the prohibitions of Vehicle Code Sections 27156 and 38391.

WHEREAS, Car Sound Exhaust Systems, Inc. of 22961 Arroyo Vista, Rancho Santa Margarita, California 92688 has applied to the Air Resources Board for exemption from the prohibitions in Vehicle Code Sections 27156 and 38391 to market its new aftermarket series 447100 and 447200 three-way catalytic converters (TWC) on select 1996 through 2005 model-year Ford light-duty trucks 2 (LDT2) and medium-duty vehicles (MDV) equipped with on-board diagnostic II (OBD II) systems as specified in Appendix D-193-98 and incorporated herein. Series 447100 and 447200 TWCs will be used for multiple catalytic converter applications, with series 447100 used as the front catalytic converter and series 447200 used as the rear catalytic converter. Series 447100 and 447200 TWCs use one of the following substrate geometries: (1) oval [3.15x4.75x3]; (2) oval [3.15x4.75x2]; (3) large oval [3.2x5.7x3]; (4) large oval [3.2x5.7x2]; (5) round [3.66x4]; or (6) round [3.66x2 + 3.66x3].

WHEREAS, pursuant to the authority vested in the Executive Officer by Health and Safety Code Section 39515 and in the Chief of the Mobile Source Operations Division by Health and Safety Code Section 39516 and Executive Order G 02 003, the Air Resources Board finds that the above aftermarket catalytic converters comply with the California Vehicle Code Sections 27156 and 38395 and Title 13, California Code of Regulations Section 2222(h). Emission performance of the catalytic converters was based on durability bench-aging by Lotus Engineering, Inc. using the Air Resources Board-modified RAT-A bench-aging cycle for 100 hours as specified in Appendix A to the "California Evaluation Procedures for New Aftermarket Catalytic Converters," adopted on October 25, 2007.

WHEREAS, emissions and OBD II compatibility tests conducted by Car Sound Exhaust Systems, Inc. using a 2001 model-year 5.4 liter Ford F-150 pickup truck (LEV MDV, 1FMXT05.4PF5) and a 2000 model-year 5.0 liter Ford Explorer (LEV LDT2, YFMXT05.02F5) with series 447100 and 447200 TWCs showed that the vehicles met the applicable emission standards and that series 447100 and 447200 TWCs did not falsely cause the malfunction indicator light to illuminate. Federal test procedure emission standards and test results in grams per mile are shown below:

|                                | <u>NMOG</u> | <u>CO</u> | <u>NOx</u> |
|--------------------------------|-------------|-----------|------------|
| MDV 120K LEV standards         | 0.230       | 6.4       | 0.6        |
| 2001 F-150 pickup truck test 1 | 0.138       | 1.7       | 0.18       |
| 2001 F-150 pickup truck test 2 | 0.129       | 1.7       | 0.19       |

|                         | <u>NMOG</u> | <u>CO</u> | <u>NOx</u> |
|-------------------------|-------------|-----------|------------|
| LDT2 100K LEV standards | 0.130       | 5.5       | 0.5        |
| 2000 Explorer test 1    | 0.098       | 1.6       | 0.08       |
| 2000 Explorer test 2    | 0.111       | 2.1       | 0.08       |

WHEREAS, Car Sound Exhaust Systems, Inc. conducted proper malfunction indicator light illumination demonstration with series 447100 and 447200 TWCs on the same 2001 model-year 5.4 liter Ford F-150 pickup truck and 2000 5.0 liter Ford Explorer and demonstrated compliance with the requirements in Section (e)(5)(B) of the "California Evaluation Procedures for New Aftermarket Catalytic Converters," adopted on October 25, 2007.

THEREFORE, IT IS HEREBY RESOLVED that Car Sound Exhaust Systems, Inc.'s series 447100 and 447200 TWCs are exempted from the prohibitions in Vehicle Code Sections 27156 and 38391 for installation on the approved vehicle applications specified in Appendix D-193-98 subject to the following conditions:

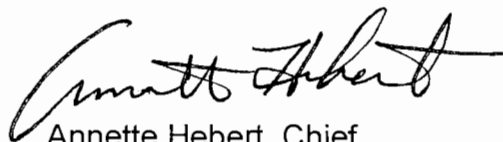
1. No changes are permitted to the catalytic converters as described in the application for exemption. Any changes to the catalytic converters or any of their components and other factors addressed in this Executive Order must be evaluated and approved by the Air Resources Board prior to marketing in 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 applications 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 Car Sound Exhaust Systems, Inc., 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 in Vehicle Code Sections 27156 and 38391.
4. Car Sound Exhaust Systems, Inc.'s installation instructions for the new catalytic converters must conform to requirements in Section (h) of the "California Evaluation Procedures for New Aftermarket Catalytic Converters," adopted on October 25, 2007.
5. Installation of the catalytic converters shall not cause the relocation of any oxygen sensors. Oxygen sensors must be installed in the same location, position and orientation as prescribed in the original equipment manufacturer's configurations.
6. Upon installation, the catalytic converters must carry a manufacturer's warranty for five (5) years or 50,000 miles as prescribed in Section (f)(2) of the "California

Evaluation Procedures for New Aftermarket Catalytic Converters," adopted on October 25, 2007.

7. Car Sound Exhaust Systems, Inc. and its vendors may not advertise the new aftermarket catalytic converters as "high flow" or "easy flow" catalytic converters or use any phrase that could make them appear to perform better than the original equipment manufacturer catalytic converters.
8. Any marketing arrangement of the new aftermarket catalytic converters by a third party, which involves the use of packaging identification different from the ones described in this Executive Order, must be approved by the Air Resources Board prior to shipment.
9. Car Sound Exhaust Systems, Inc., its associates, vendors, other businesses and individuals associated with Car Sound Exhaust Systems, Inc. may not sell or supply new aftermarket catalytic converter substrates to a third party to be assembled in a different facility and marketed under this Executive Order without approval from the Air Resources Board.
10. Car Sound Exhaust Systems, Inc. shall comply with the quality control procedures and reporting requirements in Section (f)(5) of the "California Evaluation Procedures for New Aftermarket Catalytic Converters," adopted on October 25, 2007.
11. Quality control reports must be submitted on a quarterly basis and warranty information reports on a semi-annual basis.
12. Car Sound Exhaust Systems, Inc. must provide a permanent label or stamp as specified under Section (f)(1) of the "California Evaluation Procedures for New Aftermarket Catalytic Converters," adopted on October 25, 2007.
13. Car Sound Exhaust Systems, Inc.'s vehicle application catalog must conform to the requirements specified under Section (f)(4) of the "California Evaluation Procedures for New Aftermarket Catalytic Converters," adopted on October 25, 2007.

Violation of any of the above conditions shall be grounds for revocation of this order. The order may be revoked only after a 30-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 30 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.

Executed at El Monte, California, this 11 day of January 2012.



Annette Hebert, Chief  
Mobile Source Operations Division

| Appendix D-193-98                               |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 1                                               | 1996       | Ford | Explorer             | 5                    | TFM5.028GFEK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 2                                               | 1996       | Ford | Explorer             | 5                    | TFM5.028GFEK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 3                                               | 1996       | Ford | Explorer             | 5                    | TFM5.028GFEK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 4                                               | 1996       | Ford | Explorer             | 5                    | TFM5.028GFEK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 5                                               | 1996       | Ford | Explorer             | 5                    | TFM5.028GFEK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447101          | ALL              |
| 6                                               | 1996       | Ford | Explorer             | 5                    | TFM5.028GFEK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447201          | ALL              |
| 7                                               | 1996       | Ford | Explorer             | 5                    | TFM5.028GFEK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447102          | ALL              |
| 8                                               | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 9                                               | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 10                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 11                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 12                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 13                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 14                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 15                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 16                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 17                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 18                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 19                                              | 1997       | Ford | 50 Econoline Club Wa | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 20                                              | 1997       | Ford | 50 Econoline Club Wa | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 21                                              | 1997       | Ford | 50 Econoline Club Wa | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | DIRECT FIT          | 447110          | ALL              |
| 22                                              | 1997       | Ford | 50 Econoline Club Wa | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 23                                              | 1997       | Ford | 50 Econoline Club Wa | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 24                                              | 1997       | Ford | 50 Econoline Club Wa | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 25                                              | 1997       | Ford | 50 Econoline Club Wa | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447183          | ALL              |
| 26                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 27                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 28                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 29                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 30                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 31                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 32                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 33                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 34                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 35                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 36                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 37                                              | 1997       | Ford | E-150 Econoline      | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 38                                              | 1997       | Ford | E-150 Econoline      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 39                                              | 1997       | Ford | E-150 Econoline      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | DIRECT FIT          | 447110          | ALL              |
| 40                                              | 1997       | Ford | E-150 Econoline      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 41                                              | 1997       | Ford | E-150 Econoline      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |

| Appendix D-193-98                               |            |      |                 |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|-----------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                 |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model           | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 42                                              | 1997       | Ford | E-150 Econoline | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 43                                              | 1997       | Ford | E-150 Econoline | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447183          | ALL              |
| 44                                              | 1997       | Ford | E-250 Econoline | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 45                                              | 1997       | Ford | E-250 Econoline | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 46                                              | 1997       | Ford | E-250 Econoline | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 47                                              | 1997       | Ford | E-250 Econoline | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 48                                              | 1997       | Ford | E-250 Econoline | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 49                                              | 1997       | Ford | E-250 Econoline | 4.2                  | VFM4.2J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 50                                              | 1997       | Ford | Expedition      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 51                                              | 1997       | Ford | Expedition      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 52                                              | 1997       | Ford | Expedition      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 53                                              | 1997       | Ford | Expedition      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 54                                              | 1997       | Ford | Expedition      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447149          | 4WD              |
| 55                                              | 1997       | Ford | Expedition      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447177          | 2WD              |
| 56                                              | 1997       | Ford | Expedition      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447150          | 4WD              |
| 57                                              | 1997       | Ford | Expedition      | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447178          | 2WD              |
| 58                                              | 1997       | Ford | Expedition      | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 59                                              | 1997       | Ford | Expedition      | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 60                                              | 1997       | Ford | Expedition      | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 61                                              | 1997       | Ford | Expedition      | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 62                                              | 1997       | Ford | Expedition      | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447129          | 4WD              |
| 63                                              | 1997       | Ford | Expedition      | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447181          | 2WD              |
| 64                                              | 1997       | Ford | Expedition      | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447130          | 4WD              |
| 65                                              | 1997       | Ford | Expedition      | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447182          | 2WD              |
| 66                                              | 1997       | Ford | Explorer        | 5                    | VFM5.028GFKE    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 67                                              | 1997       | Ford | Explorer        | 5                    | VFM5.028GFKE    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 68                                              | 1997       | Ford | Explorer        | 5                    | VFM5.028GFKE    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 69                                              | 1997       | Ford | Explorer        | 5                    | VFM5.028GFKE    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 70                                              | 1997       | Ford | Explorer        | 5                    | VFM5.028GFKE    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447101          | ALL              |
| 71                                              | 1997       | Ford | Explorer        | 5                    | VFM5.028GFKE    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447201          | ALL              |
| 72                                              | 1997       | Ford | Explorer        | 5                    | VFM5.028GFKE    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447102          | ALL              |
| 73                                              | 1997       | Ford | F-150           | 4.2                  | VFM4.228G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 74                                              | 1997       | Ford | F-150           | 4.2                  | VFM4.228G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 75                                              | 1997       | Ford | F-150           | 4.2                  | VFM4.228G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 76                                              | 1997       | Ford | F-150           | 4.2                  | VFM4.228G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 77                                              | 1997       | Ford | F-150           | 4.2                  | VFM4.228G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447131          | 2WD              |
| 78                                              | 1997       | Ford | F-150           | 4.2                  | VFM4.228G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447139          | 4WD              |
| 79                                              | 1997       | Ford | F-150           | 4.2                  | VFM4.228G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447132          | 2WD              |
| 80                                              | 1997       | Ford | F-150           | 4.2                  | VFM4.228G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447140          | 4WD              |
| 81                                              | 1997       | Ford | F-150           | 4.6                  | VFM4.628G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 82                                              | 1997       | Ford | F-150           | 4.6                  | VFM4.6H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |

| Appendix D-193-98                               |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 83                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.628G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 84                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.6H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 85                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.6H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 86                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.628G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 87                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.628G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 88                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.6H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 89                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.6H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447133          | 4WD              |
| 90                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.628G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447133          | 4WD              |
| 91                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.628G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447177          | 2WD              |
| 92                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.6H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447177          | 2WD              |
| 93                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.628G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447134          | 4WD              |
| 94                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.6H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447134          | 4WD              |
| 95                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.6H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447178          | 2WD              |
| 96                                              | 1997       | Ford | F-150                | 4.6                  | VFM4.628G1EK    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447178          | 2WD              |
| 97                                              | 1997       | Ford | F-150                | 5.4                  | VFM5.4H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 98                                              | 1997       | Ford | F-150                | 5.4                  | VFM5.4H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 99                                              | 1997       | Ford | F-150                | 5.4                  | VFM5.4H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 100                                             | 1997       | Ford | F-150                | 5.4                  | VFM5.4H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 101                                             | 1997       | Ford | F-150                | 5.4                  | VFM5.4H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447127          | 4WD              |
| 102                                             | 1997       | Ford | F-150                | 5.4                  | VFM5.4H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447181          | 2WD              |
| 103                                             | 1997       | Ford | F-150                | 5.4                  | VFM5.4H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447128          | 4WD              |
| 104                                             | 1997       | Ford | F-150                | 5.4                  | VFM5.4H8G1EK    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447182          | 2WD              |
| 105                                             | 1997       | Ford | F-250                | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 106                                             | 1997       | Ford | F-250                | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 107                                             | 1997       | Ford | F-250                | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 108                                             | 1997       | Ford | F-250                | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 109                                             | 1997       | Ford | F-250                | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447133          | 4WD              |
| 110                                             | 1997       | Ford | F-250                | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447177          | 2WD              |
| 111                                             | 1997       | Ford | F-250                | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447134          | 4WD              |
| 112                                             | 1997       | Ford | F-250                | 4.6                  | VFM4.6J8G1EK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447178          | 2WD              |
| 113                                             | 1997       | Ford | F-250                | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 114                                             | 1997       | Ford | F-250                | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 115                                             | 1997       | Ford | F-250                | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 116                                             | 1997       | Ford | F-250                | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 117                                             | 1997       | Ford | F-250                | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447181          | 2WD              |
| 118                                             | 1997       | Ford | F-250                | 5.4                  | VFM5.4J8G1FK    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447182          | 2WD              |
| 119                                             | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 120                                             | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 121                                             | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 122                                             | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 123                                             | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 124 | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 125 | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 126 | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 127 | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 128 | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 129 | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 130 | 1998       | Ford | 50 Econoline Club Wa | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 131 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 132 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 133 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 134 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 135 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 136 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 137 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 138 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 139 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 140 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 141 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 142 | 1998       | Ford | E-150 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 143 | 1998       | Ford | E-250 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 144 | 1998       | Ford | E-250 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 145 | 1998       | Ford | E-250 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 146 | 1998       | Ford | E-250 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 147 | 1998       | Ford | E-250 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 148 | 1998       | Ford | E-250 Econoline      | 4.2                  | WFMXA04.2ABA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 149 | 1998       | Ford | Expedition           | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 150 | 1998       | Ford | Expedition           | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 151 | 1998       | Ford | Expedition           | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 152 | 1998       | Ford | Expedition           | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 153 | 1998       | Ford | Expedition           | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447129          | 4WD              |
| 154 | 1998       | Ford | Expedition           | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447181          | 2WD              |
| 155 | 1998       | Ford | Expedition           | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447130          | 4WD              |
| 156 | 1998       | Ford | Expedition           | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447182          | 2WD              |
| 157 | 1998       | Ford | Explorer             | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 158 | 1998       | Ford | Explorer             | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 159 | 1998       | Ford | Explorer             | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 160 | 1998       | Ford | Explorer             | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 161 | 1998       | Ford | Explorer             | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447201          | ALL              |
| 162 | 1998       | Ford | Explorer             | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447102          | ALL              |
| 163 | 1998       | Ford | F-150                | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 164 | 1998       | Ford | F-150                | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |

| Appendix D-193-98                               |            |      |       |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|-------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |       |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 165                                             | 1998       | Ford | F-150 | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 166                                             | 1998       | Ford | F-150 | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 167                                             | 1998       | Ford | F-150 | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447131          | 2WD              |
| 168                                             | 1998       | Ford | F-150 | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447139          | 4WD              |
| 169                                             | 1998       | Ford | F-150 | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447132          | 2WD              |
| 170                                             | 1998       | Ford | F-150 | 4.2                  | WFMXA04.2AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447140          | 4WD              |
| 171                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 172                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 173                                             | 1998       | Ford | F-150 | 4.6                  | WFMXT04.6AAA    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 174                                             | 1998       | Ford | F-150 | 4.6                  | WFMXT04.6AAA    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 175                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 176                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 177                                             | 1998       | Ford | F-150 | 4.6                  | WFMXT04.6AAA    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 178                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 179                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 180                                             | 1998       | Ford | F-150 | 4.6                  | WFMXT04.6AAA    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 181                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 182                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 183                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447133          | 4WD              |
| 184                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447133          | 4WD              |
| 185                                             | 1998       | Ford | F-150 | 4.6                  | WFMXT04.6AAA    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447133          | 4WD              |
| 186                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447177          | 2WD              |
| 187                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447177          | 2WD              |
| 188                                             | 1998       | Ford | F-150 | 4.6                  | WFMXT04.6AAA    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447177          | 2WD              |
| 189                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447134          | 4WD              |
| 190                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447134          | 4WD              |
| 191                                             | 1998       | Ford | F-150 | 4.6                  | WFMXT04.6AAA    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447134          | 4WD              |
| 192                                             | 1998       | Ford | F-150 | 4.6                  | WFMXT04.6AAA    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447178          | 2WD              |
| 193                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447178          | 2WD              |
| 194                                             | 1998       | Ford | F-150 | 4.6                  | WFMXA04.6AAA    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447178          | 2WD              |
| 195                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4HBC    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 196                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4JBN    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 197                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4HBC    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 198                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4JBN    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 199                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4HBC    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 200                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4JBN    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 201                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4JBN    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 202                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4HBC    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 203                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4HBC    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447129          | 4WD              |
| 204                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4JBN    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447129          | 4WD              |
| 205                                             | 1998       | Ford | F-150 | 5.4                  | WFMXA05.4JBN    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447181          | 2WD              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 206 | 1998       | Ford | F-150                | 5.4                  | WFMXA05.4HBC    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447181          | 2WD              |
| 207 | 1998       | Ford | F-150                | 5.4                  | WFMXA05.4JBN    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447130          | 4WD              |
| 208 | 1998       | Ford | F-150                | 5.4                  | WFMXA05.4HBC    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447130          | 4WD              |
| 209 | 1998       | Ford | F-150                | 5.4                  | WFMXA05.4HBC    | TIER1               | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447182          | 2WD              |
| 210 | 1998       | Ford | F-150                | 5.4                  | WFMXA05.4JBN    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447182          | 2WD              |
| 211 | 1998       | Ford | F-250                | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 212 | 1998       | Ford | F-250                | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 213 | 1998       | Ford | F-250                | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 214 | 1998       | Ford | F-250                | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447133          | 4WD              |
| 215 | 1998       | Ford | F-250                | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447177          | 2WD              |
| 216 | 1998       | Ford | F-250                | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447134          | 4WD              |
| 217 | 1998       | Ford | F-250                | 4.6                  | WFMXA04.6BAA    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447178          | 2WD              |
| 218 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 219 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 220 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 221 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 222 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 223 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 224 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 225 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 226 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 227 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 228 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 229 | 1999       | Ford | 50 Econoline Club Wa | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 230 | 1999       | Ford | 50 Econoline Club Wa | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 231 | 1999       | Ford | 50 Econoline Club Wa | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | DIRECT FIT          | 447110          | ALL              |
| 232 | 1999       | Ford | 50 Econoline Club Wa | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 233 | 1999       | Ford | 50 Econoline Club Wa | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 234 | 1999       | Ford | 50 Econoline Club Wa | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 235 | 1999       | Ford | 50 Econoline Club Wa | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447183          | ALL              |
| 236 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 237 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 238 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 239 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 240 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 241 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 242 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 243 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 244 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 245 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 246 | 1999       | Ford | E-150 Econoline      | 4.2                  | XFMXA04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |

| Appendix D-193-98                               |            |      |                 |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|-----------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                 |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model           | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 247                                             | 1999       | Ford | E-150 Econoline | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 248                                             | 1999       | Ford | E-150 Econoline | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 249                                             | 1999       | Ford | E-150 Econoline | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | DIRECT FIT          | 447110          | ALL              |
| 250                                             | 1999       | Ford | E-150 Econoline | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 251                                             | 1999       | Ford | E-150 Econoline | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 252                                             | 1999       | Ford | E-150 Econoline | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 253                                             | 1999       | Ford | E-150 Econoline | 4.6                  | XFMXA04.6JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447183          | ALL              |
| 254                                             | 1999       | Ford | E-250 Econoline | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 255                                             | 1999       | Ford | E-250 Econoline | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 256                                             | 1999       | Ford | E-250 Econoline | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 257                                             | 1999       | Ford | E-250 Econoline | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 258                                             | 1999       | Ford | E-250 Econoline | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447179          | ALL              |
| 259                                             | 1999       | Ford | E-250 Econoline | 4.2                  | XFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447180          | ALL              |
| 260                                             | 1999       | Ford | Expedition      | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 261                                             | 1999       | Ford | Expedition      | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 262                                             | 1999       | Ford | Expedition      | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 263                                             | 1999       | Ford | Expedition      | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 264                                             | 1999       | Ford | Expedition      | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447111          | 2WD              |
| 265                                             | 1999       | Ford | Expedition      | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447113          | 4WD              |
| 266                                             | 1999       | Ford | Expedition      | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447112          | 2WD              |
| 267                                             | 1999       | Ford | Expedition      | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447114          | 4WD              |
| 268                                             | 1999       | Ford | Expedition      | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 269                                             | 1999       | Ford | Expedition      | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 270                                             | 1999       | Ford | Expedition      | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 271                                             | 1999       | Ford | Expedition      | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 272                                             | 1999       | Ford | Expedition      | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 273                                             | 1999       | Ford | Expedition      | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 274                                             | 1999       | Ford | Expedition      | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 275                                             | 1999       | Ford | Expedition      | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 276                                             | 1999       | Ford | Explorer        | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 277                                             | 1999       | Ford | Explorer        | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 278                                             | 1999       | Ford | Explorer        | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 279                                             | 1999       | Ford | Explorer        | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 280                                             | 1999       | Ford | Explorer        | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447119          | ALL              |
| 281                                             | 1999       | Ford | Explorer        | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447120          | ALL              |
| 282                                             | 1999       | Ford | F-150           | 4.2                  | XFMXT04.22GC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 283                                             | 1999       | Ford | F-150           | 4.2                  | XFMXT04.22GC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 284                                             | 1999       | Ford | F-150           | 4.2                  | XFMXT04.22GC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 285                                             | 1999       | Ford | F-150           | 4.2                  | XFMXT04.22GC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 286                                             | 1999       | Ford | F-150           | 4.2                  | XFMXT04.22GC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447141          | 2WD              |
| 287                                             | 1999       | Ford | F-150           | 4.2                  | XFMXT04.22GC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447143          | 4WD              |

| Appendix D-193-98                               |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 288                                             | 1999       | Ford | F-150                | 4.2                  | XFMXT04.22GC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447142          | 2WD              |
| 289                                             | 1999       | Ford | F-150                | 4.2                  | XFMXT04.22GC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447144          | 4WD              |
| 290                                             | 1999       | Ford | F-150                | 4.6                  | XFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 291                                             | 1999       | Ford | F-150                | 4.6                  | XFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 292                                             | 1999       | Ford | F-150                | 4.6                  | XFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 293                                             | 1999       | Ford | F-150                | 4.6                  | XFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 294                                             | 1999       | Ford | F-150                | 4.6                  | XFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447135          | 2WD              |
| 295                                             | 1999       | Ford | F-150                | 4.6                  | XFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447137          | 4WD              |
| 296                                             | 1999       | Ford | F-150                | 4.6                  | XFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447136          | 2WD              |
| 297                                             | 1999       | Ford | F-150                | 4.6                  | XFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447138          | 4WD              |
| 298                                             | 1999       | Ford | F-150                | 5.4                  | XFMXT05.42BF    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 299                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 300                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 301                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 302                                             | 1999       | Ford | F-150                | 5.4                  | XFMXT05.42BF    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 303                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 304                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 305                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 306                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 307                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 308                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 309                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 310                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 311                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 312                                             | 1999       | Ford | F-150                | 5.4                  | XFMXT05.42BF    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | UNIVERSAL           | 447206          | ALL              |
| 313                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 314                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 315                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 316                                             | 1999       | Ford | F-150                | 5.4                  | XFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 317                                             | 1999       | Ford | F-250                | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 318                                             | 1999       | Ford | F-250                | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 319                                             | 1999       | Ford | F-250                | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 320                                             | 1999       | Ford | F-250                | 4.6                  | XFMXA04.6JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 321                                             | 1999       | Ford | F-250                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 322                                             | 1999       | Ford | F-250                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 323                                             | 1999       | Ford | F-250                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 324                                             | 1999       | Ford | F-250                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 325                                             | 1999       | Ford | F-250                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 326                                             | 1999       | Ford | F-250                | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 327                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 328                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |

| Appendix D-193-98                               |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 329                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 330                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 331                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 332                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 333                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 334                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 335                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 336                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 337                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 338                                             | 2000       | Ford | 50 Econoline Club Wa | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 339                                             | 2000       | Ford | 50 Econoline Club Wa | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 340                                             | 2000       | Ford | 50 Econoline Club Wa | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 341                                             | 2000       | Ford | 50 Econoline Club Wa | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 342                                             | 2000       | Ford | 50 Econoline Club Wa | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 343                                             | 2000       | Ford | 50 Econoline Club Wa | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447156          | ALL              |
| 344                                             | 2000       | Ford | 50 Econoline Club Wa | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447157          | ALL              |
| 345                                             | 2000       | Ford | 50 Econoline Club Wa | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 346                                             | 2000       | Ford | 50 Econoline Club Wa | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 347                                             | 2000       | Ford | 50 Econoline Club Wa | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447256          | ALL              |
| 348                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 349                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 350                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 351                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 352                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 353                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 354                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 355                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 356                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 357                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 358                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXT04.2HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 359                                             | 2000       | Ford | E-150 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 360                                             | 2000       | Ford | E-150 Econoline      | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 361                                             | 2000       | Ford | E-150 Econoline      | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 362                                             | 2000       | Ford | E-150 Econoline      | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 363                                             | 2000       | Ford | E-150 Econoline      | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 364                                             | 2000       | Ford | E-150 Econoline      | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447156          | ALL              |
| 365                                             | 2000       | Ford | E-150 Econoline      | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447157          | ALL              |
| 366                                             | 2000       | Ford | E-150 Econoline      | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 367                                             | 2000       | Ford | E-150 Econoline      | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 368                                             | 2000       | Ford | E-150 Econoline      | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447256          | ALL              |
| 369                                             | 2000       | Ford | E-250 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |

| Appendix D-193-98                               |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 370                                             | 2000       | Ford | E-250 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 371                                             | 2000       | Ford | E-250 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 372                                             | 2000       | Ford | E-250 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 373                                             | 2000       | Ford | E-250 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 374                                             | 2000       | Ford | E-250 Econoline      | 4.2                  | YFMXA04.2JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 375                                             | 2000       | Ford | E-250 Econoline      | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 376                                             | 2000       | Ford | E-250 Econoline      | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 377                                             | 2000       | Ford | E-250 Econoline      | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 378                                             | 2000       | Ford | 50 Econoline Club Wa | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 379                                             | 2000       | Ford | 50 Econoline Club Wa | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 380                                             | 2000       | Ford | 50 Econoline Club Wa | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 381                                             | 2000       | Ford | 50 Econoline Club Wa | 6.8                  | YFMXA06.8JGC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 382                                             | 2000       | Ford | 50 Econoline Club Wa | 6.8                  | YFMXA06.8JGC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 383                                             | 2000       | Ford | 50 Econoline Club Wa | 6.8                  | YFMXA06.8JGC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 384                                             | 2000       | Ford | E-350 Super Duty     | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 385                                             | 2000       | Ford | E-350 Super Duty     | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 386                                             | 2000       | Ford | E-350 Super Duty     | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 387                                             | 2000       | Ford | E-350 Super Duty     | 6.8                  | YFMXA06.8JGC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 388                                             | 2000       | Ford | E-350 Super Duty     | 6.8                  | YFMXA06.8JGC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 389                                             | 2000       | Ford | E-350 Super Duty     | 6.8                  | YFMXA06.8JGC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 390                                             | 2000       | Ford | Expedition           | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 391                                             | 2000       | Ford | Expedition           | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 392                                             | 2000       | Ford | Expedition           | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 393                                             | 2000       | Ford | Expedition           | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 394                                             | 2000       | Ford | Expedition           | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447111          | 2WD              |
| 395                                             | 2000       | Ford | Expedition           | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447113          | 4WD              |
| 396                                             | 2000       | Ford | Expedition           | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447112          | 2WD              |
| 397                                             | 2000       | Ford | Expedition           | 4.6                  | YFMXA04.66FF    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447114          | 4WD              |
| 398                                             | 2000       | Ford | Expedition           | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 399                                             | 2000       | Ford | Expedition           | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 400                                             | 2000       | Ford | Expedition           | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 401                                             | 2000       | Ford | Expedition           | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 402                                             | 2000       | Ford | Expedition           | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 403                                             | 2000       | Ford | Expedition           | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 404                                             | 2000       | Ford | Expedition           | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 405                                             | 2000       | Ford | Expedition           | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 406                                             | 2000       | Ford | Explorer             | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 407                                             | 2000       | Ford | Explorer             | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 408                                             | 2000       | Ford | Explorer             | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 409                                             | 2000       | Ford | Explorer             | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 410                                             | 2000       | Ford | Explorer             | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447119          | ALL              |

| Appendix D-193-98                               |            |      |          |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |          |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model    | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 411                                             | 2000       | Ford | Explorer | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447120          | ALL              |
| 412                                             | 2000       | Ford | F-150    | 4.2                  | YFMXT04.22FC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 413                                             | 2000       | Ford | F-150    | 4.2                  | YFMXT04.22FC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 414                                             | 2000       | Ford | F-150    | 4.2                  | YFMXT04.22FC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 415                                             | 2000       | Ford | F-150    | 4.2                  | YFMXT04.22FC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 416                                             | 2000       | Ford | F-150    | 4.2                  | YFMXT04.22FC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447141          | 2WD              |
| 417                                             | 2000       | Ford | F-150    | 4.2                  | YFMXT04.22FC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447143          | 4WD              |
| 418                                             | 2000       | Ford | F-150    | 4.2                  | YFMXT04.22FC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447142          | 2WD              |
| 419                                             | 2000       | Ford | F-150    | 4.2                  | YFMXT04.22FC    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447144          | 4WD              |
| 420                                             | 2000       | Ford | F-150    | 4.6                  | YFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 421                                             | 2000       | Ford | F-150    | 4.6                  | YFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 422                                             | 2000       | Ford | F-150    | 4.6                  | YFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 423                                             | 2000       | Ford | F-150    | 4.6                  | YFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 424                                             | 2000       | Ford | F-150    | 4.6                  | YFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447135          | 2WD              |
| 425                                             | 2000       | Ford | F-150    | 4.6                  | YFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447137          | 4WD              |
| 426                                             | 2000       | Ford | F-150    | 4.6                  | YFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447136          | 2WD              |
| 427                                             | 2000       | Ford | F-150    | 4.6                  | YFMXA04.6HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447138          | 4WD              |
| 428                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.42BF    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 429                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 430                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 431                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 432                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 433                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.42BF    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 434                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 435                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 436                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 437                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.42BF    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 438                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 439                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 440                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 441                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 442                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.42BF    | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 443                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 444                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 445                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 446                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 447                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 448                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 449                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 450                                             | 2000       | Ford | F-150    | 5.4                  | YFMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 451                                             | 2000       | Ford | F-150    | 5.4                  | YFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 452 | 2000       | Ford | F-150                | 5.4                  | YFMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 453 | 2000       | Ford | F-150                | 5.4                  | YFMXA05.4HGC    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 454 | 2000       | Ford | F-150                | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 455 | 2000       | Ford | F-150                | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 456 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 457 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 458 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 459 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 460 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 461 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 462 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 463 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 464 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 465 | 2001       | Ford | 50 Econoline Club Wa | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 466 | 2001       | Ford | 50 Econoline Club Wa | 4.6                  | 1FMXT04.6JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 467 | 2001       | Ford | 50 Econoline Club Wa | 4.6                  | 1FMXT04.6JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 468 | 2001       | Ford | 50 Econoline Club Wa | 4.6                  | 1FMXT04.6JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447156          | ALL              |
| 469 | 2001       | Ford | 50 Econoline Club Wa | 4.6                  | 1FMXT04.6JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447157          | ALL              |
| 470 | 2001       | Ford | 50 Econoline Club Wa | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 471 | 2001       | Ford | 50 Econoline Club Wa | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 472 | 2001       | Ford | 50 Econoline Club Wa | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447256          | ALL              |
| 473 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 474 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 475 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 476 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 477 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 478 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 479 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 480 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 481 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2HG5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 482 | 2001       | Ford | E-150 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 483 | 2001       | Ford | E-150 Econoline      | 4.6                  | 1FMXT04.6JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 484 | 2001       | Ford | E-150 Econoline      | 4.6                  | 1FMXT04.6JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 485 | 2001       | Ford | E-150 Econoline      | 4.6                  | 1FMXT04.6JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447156          | ALL              |
| 486 | 2001       | Ford | E-150 Econoline      | 4.6                  | 1FMXT04.6JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447157          | ALL              |
| 487 | 2001       | Ford | E-150 Econoline      | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 488 | 2001       | Ford | E-150 Econoline      | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 489 | 2001       | Ford | E-150 Econoline      | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447256          | ALL              |
| 490 | 2001       | Ford | E-250 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 491 | 2001       | Ford | E-250 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 492 | 2001       | Ford | E-250 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |

| Appendix D-193-98                               |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 493                                             | 2001       | Ford | E-250 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 494                                             | 2001       | Ford | E-250 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 495                                             | 2001       | Ford | E-250 Econoline      | 4.2                  | 1FMXT04.2JG5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 496                                             | 2001       | Ford | E-250 Econoline      | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 497                                             | 2001       | Ford | E-250 Econoline      | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 498                                             | 2001       | Ford | E-250 Econoline      | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 499                                             | 2001       | Ford | 50 Econoline Club Wa | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 500                                             | 2001       | Ford | 50 Econoline Club Wa | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 501                                             | 2001       | Ford | 50 Econoline Club Wa | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 502                                             | 2001       | Ford | 50 Econoline Club Wa | 6.8                  | 1FMXA06.8JFC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 503                                             | 2001       | Ford | 50 Econoline Club Wa | 6.8                  | 1FMXA06.8JFC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 504                                             | 2001       | Ford | 50 Econoline Club Wa | 6.8                  | 1FMXA06.8JFC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 505                                             | 2001       | Ford | E-350 Super Duty     | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 506                                             | 2001       | Ford | E-350 Super Duty     | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 507                                             | 2001       | Ford | E-350 Super Duty     | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 508                                             | 2001       | Ford | E-350 Super Duty     | 6.8                  | 1FMXA06.8JFC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 509                                             | 2001       | Ford | E-350 Super Duty     | 6.8                  | 1FMXA06.8JFC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 510                                             | 2001       | Ford | E-350 Super Duty     | 6.8                  | 1FMXA06.8JFC    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 511                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 512                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 513                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 514                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 515                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 516                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 517                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 518                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 519                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447121          | 2WD              |
| 520                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447121          | 2WD              |
| 521                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447123          | 4WD              |
| 522                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447123          | 4WD              |
| 523                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447122          | 2WD              |
| 524                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447122          | 2WD              |
| 525                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447124          | 4WD              |
| 526                                             | 2001       | Ford | Expedition           | 4.6                  | 1FMXT04.66F5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447124          | 4WD              |
| 527                                             | 2001       | Ford | Expedition           | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 528                                             | 2001       | Ford | Expedition           | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 529                                             | 2001       | Ford | Expedition           | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 530                                             | 2001       | Ford | Expedition           | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 531                                             | 2001       | Ford | Expedition           | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 532                                             | 2001       | Ford | Expedition           | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 533                                             | 2001       | Ford | Expedition           | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make | Model      | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|------|------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 534 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 535 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447125          | 4WD              |
| 536 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447125          | 4WD              |
| 537 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447153          | 2WD              |
| 538 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447153          | 2WD              |
| 539 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 540 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 541 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447126          | 4WD              |
| 542 | 2001       | Ford | Expedition | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447126          | 4WD              |
| 543 | 2001       | Ford | Explorer   | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 544 | 2001       | Ford | Explorer   | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 545 | 2001       | Ford | Explorer   | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 546 | 2001       | Ford | Explorer   | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 547 | 2001       | Ford | Explorer   | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447119          | ALL              |
| 548 | 2001       | Ford | Explorer   | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447120          | ALL              |
| 549 | 2001       | Ford | F-150      | 4.2                  | 1FMXT04.22F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 550 | 2001       | Ford | F-150      | 4.2                  | 1FMXT04.22F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 551 | 2001       | Ford | F-150      | 4.2                  | 1FMXT04.22F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 552 | 2001       | Ford | F-150      | 4.2                  | 1FMXT04.22F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 553 | 2001       | Ford | F-150      | 4.2                  | 1FMXT04.22F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447145          | 2WD              |
| 554 | 2001       | Ford | F-150      | 4.2                  | 1FMXT04.22F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447147          | 4WD              |
| 555 | 2001       | Ford | F-150      | 4.2                  | 1FMXT04.22F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447146          | 2WD              |
| 556 | 2001       | Ford | F-150      | 4.2                  | 1FMXT04.22F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447148          | 4WD              |
| 557 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 558 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 559 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 560 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 561 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 562 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | 2WD              |
| 563 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 564 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | 2WD              |
| 565 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447121          | 2WD              |
| 566 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447121          | 2WD              |
| 567 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447123          | 4WD              |
| 568 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447123          | 4WD              |
| 569 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447122          | 2WD              |
| 570 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447122          | 2WD              |
| 571 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447124          | 4WD              |
| 572 | 2001       | Ford | F-150      | 4.6                  | 1FMXT04.6PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447124          | 4WD              |
| 573 | 2001       | Ford | F-150      | 5.4                  | 1FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 574 | 2001       | Ford | F-150      | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 575 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 576 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF4    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 577 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 578 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 579 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 580 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 581 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 582 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF4    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 583 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 584 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 585 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 586 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 587 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 588 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 589 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF4    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 590 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 591 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF4    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 592 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 593 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 594 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 595 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 596 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 597 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447125          | 4WD              |
| 598 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447125          | 4WD              |
| 599 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447125          | 4WD              |
| 600 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF4    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447151          | ALL              |
| 601 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447153          | 2WD              |
| 602 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447153          | 2WD              |
| 603 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447153          | 2WD              |
| 604 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 605 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 606 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 607 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447126          | 4WD              |
| 608 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447126          | 4WD              |
| 609 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447126          | 4WD              |
| 610 | 2001       | Ford | F-150                | 5.4                  | 1FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447152          | ALL              |
| 611 | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 612 | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 613 | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 614 | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 615 | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |

| Appendix D-193-98                               |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 616                                             | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 617                                             | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 618                                             | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 619                                             | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 620                                             | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 621                                             | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 622                                             | 2002       | Ford | 50 Econoline Club Wa | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 623                                             | 2002       | Ford | 50 Econoline Club Wa | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 624                                             | 2002       | Ford | 50 Econoline Club Wa | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 625                                             | 2002       | Ford | 50 Econoline Club Wa | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 626                                             | 2002       | Ford | 50 Econoline Club Wa | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 627                                             | 2002       | Ford | 50 Econoline Club Wa | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447156          | ALL              |
| 628                                             | 2002       | Ford | 50 Econoline Club Wa | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447157          | ALL              |
| 629                                             | 2002       | Ford | 50 Econoline Club Wa | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 630                                             | 2002       | Ford | 50 Econoline Club Wa | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 631                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 632                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 633                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 634                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 635                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 636                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 637                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 638                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 639                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 640                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 641                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 642                                             | 2002       | Ford | E-150 Econoline      | 4.2                  | 2FMXT04.2HF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 643                                             | 2002       | Ford | E-150 Econoline      | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 644                                             | 2002       | Ford | E-150 Econoline      | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 645                                             | 2002       | Ford | E-150 Econoline      | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 646                                             | 2002       | Ford | E-150 Econoline      | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 647                                             | 2002       | Ford | E-150 Econoline      | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447156          | ALL              |
| 648                                             | 2002       | Ford | E-150 Econoline      | 4.6                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447157          | ALL              |
| 649                                             | 2002       | Ford | E-150 Econoline      | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 650                                             | 2002       | Ford | E-150 Econoline      | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 651                                             | 2002       | Ford | E-250 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 652                                             | 2002       | Ford | E-250 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 653                                             | 2002       | Ford | E-250 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 654                                             | 2002       | Ford | E-250 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 655                                             | 2002       | Ford | E-250 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 656                                             | 2002       | Ford | E-250 Econoline      | 4.2                  | 2FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |

| Appendix D-193-98                               |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|------|----------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |      |                      |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make | Model                | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 657                                             | 2002       | Ford | E-250 Econoline      | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 658                                             | 2002       | Ford | E-250 Econoline      | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 659                                             | 2002       | Ford | 50 Econoline Club Wa | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 660                                             | 2002       | Ford | 50 Econoline Club Wa | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 661                                             | 2002       | Ford | 50 Econoline Club Wa | 6.8                  | 2FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 662                                             | 2002       | Ford | 50 Econoline Club Wa | 6.8                  | 2FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 663                                             | 2002       | Ford | 50 Econoline Club Wa | 6.8                  | 2FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 664                                             | 2002       | Ford | E-350 Super Duty     | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 665                                             | 2002       | Ford | E-350 Super Duty     | 5.4                  | 2FMXT05.4RF9    | LEV1 LEV            | MDV3         | D            | 2TWC,TWC       | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 666                                             | 2002       | Ford | E-350 Super Duty     | 6.8                  | 2FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 667                                             | 2002       | Ford | E-350 Super Duty     | 6.8                  | 2FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 668                                             | 2002       | Ford | E-350 Super Duty     | 6.8                  | 2FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 669                                             | 2002       | Ford | Expedition           | 4.6                  | 2FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 670                                             | 2002       | Ford | Expedition           | 4.6                  | 2FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 671                                             | 2002       | Ford | Expedition           | 4.6                  | 2FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 672                                             | 2002       | Ford | Expedition           | 4.6                  | 2FMXT04.66F7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 673                                             | 2002       | Ford | Expedition           | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 674                                             | 2002       | Ford | Expedition           | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 675                                             | 2002       | Ford | Expedition           | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 676                                             | 2002       | Ford | Expedition           | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 677                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4RF6    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 678                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 679                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 680                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 681                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 682                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4RF6    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 683                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 684                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4RF6    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 685                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 686                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 687                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4RF6    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 688                                             | 2002       | Ford | F-150                | 4.6                  | 2FMXT05.4PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 689                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 690                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 691                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.4RF6    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 692                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 693                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.4PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 694                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.4PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 695                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 696                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.4RF6    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 697                                             | 2002       | Ford | F-150                | 5.4                  | 2FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make | Model            | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|------|------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 698 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 699 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 700 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4RF6    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 701 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 702 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 703 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 704 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4RF6    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 705 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 706 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4PF5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 707 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.4PF6    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 708 | 2002       | Ford | F-150            | 5.4                  | 2FMXT05.42F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 709 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 710 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2HF5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 711 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 712 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2HF5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 713 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2HF5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 714 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 715 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 716 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2HF5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 717 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2HF5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 718 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 719 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2HF5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 720 | 2003       | Ford | E-150            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 721 | 2003       | Ford | E-250            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 722 | 2003       | Ford | E-250            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 723 | 2003       | Ford | E-250            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 724 | 2003       | Ford | E-250            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 725 | 2003       | Ford | E-250            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447158          | ALL              |
| 726 | 2003       | Ford | E-250            | 4.2                  | 3FMXT04.2JF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447159          | ALL              |
| 727 | 2003       | Ford | E-350 Club Wagon | 6.8                  | 3FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 728 | 2003       | Ford | E-350 Club Wagon | 6.8                  | 3FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 729 | 2003       | Ford | E-350 Club Wagon | 6.8                  | 3FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 730 | 2003       | Ford | E-350 Super Duty | 6.8                  | 3FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 731 | 2003       | Ford | E-350 Super Duty | 6.8                  | 3FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 732 | 2003       | Ford | E-350 Super Duty | 6.8                  | 3FMXA06.8JFN    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 733 | 2003       | Ford | F-150            | 4.6                  | 3FMXT05.4PFB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 734 | 2003       | Ford | F-150            | 4.6                  | 3FMXT05.4PFB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 735 | 2003       | Ford | F-150            | 4.6                  | 3FMXT05.4PFB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 736 | 2003       | Ford | F-150            | 4.6                  | 3FMXT05.4PFB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 737 | 2003       | Ford | F-150            | 5.4                  | 3FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 738 | 2003       | Ford | F-150            | 5.4                  | 3FMXT05.4PFB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make    | Model            | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|---------|------------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 739 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.42F5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 740 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 741 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.4PFB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 742 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.42F5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 743 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.42F5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 744 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.4PFB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 745 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 746 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.42F5    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 747 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.4PFB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 748 | 2003       | Ford    | F-150            | 5.4                  | 3FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 749 | 2004       | Ford    | F-150            | 4.6                  | 4FMXT04.6PNB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 750 | 2004       | Ford    | F-150            | 4.6                  | 4FMXT04.6PNB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 751 | 2004       | Ford    | F-150            | 4.6                  | 4FMXT04.6PNB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 752 | 2004       | Ford    | F-150            | 4.6                  | 4FMXT04.6PNB    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 753 | 2004       | Ford    | F-150            | 5.4                  | 4FMXT05.4PP7    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 754 | 2004       | Ford    | F-150            | 5.4                  | 4FMXT05.4PP7    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 755 | 2004       | Ford    | F-150            | 5.4                  | 4FMXT05.4PP7    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447256          | ALL              |
| 756 | 2004       | Ford    | F-150            | 5.4                  | 4FMXT05.4PP7    | LEV1 LEV            | MDV2         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447256          | ALL              |
| 757 | 2005       | Ford    | E-350 Club Wagon | 5.4                  | 5FMXK05.4TF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 758 | 2005       | Ford    | E-350 Club Wagon | 5.4                  | 5FMXK05.4TF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 759 | 2005       | Ford    | E-350 Club Wagon | 5.4                  | 5FMXK05.4TF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | ALL              |
| 760 | 2005       | Ford    | E-350 Club Wagon | 5.4                  | 5FMXK05.4TF5    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | ALL              |
| 761 | 2005       | Ford    | F-350 Super Duty | 5.4                  | 5FMXK05.4TF9    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447106          | ALL              |
| 762 | 2005       | Ford    | F-350 Super Duty | 5.4                  | 5FMXK05.4WFD    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447106          | ALL              |
| 763 | 2005       | Ford    | F-350 Super Duty | 5.4                  | 5FMXK05.4TF9    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447106          | ALL              |
| 764 | 2005       | Ford    | F-350 Super Duty | 5.4                  | 5FMXK05.4WFD    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447106          | ALL              |
| 765 | 2005       | Ford    | F-350 Super Duty | 5.4                  | 5FMXK05.4WFD    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 766 | 2005       | Ford    | F-350 Super Duty | 5.4                  | 5FMXK05.4TF9    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447206          | ALL              |
| 767 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 768 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 769 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 770 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 771 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 772 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 773 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 774 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 775 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447129          | 4WD              |
| 776 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447129          | 4WD              |
| 777 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447181          | 2WD              |
| 778 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447181          | 2WD              |
| 779 | 1998       | Lincoln | Navigator        | 5.4                  | WFMXA05.4JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447130          | 4WD              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make    | Model     | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|---------|-----------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 780 | 1998       | Lincoln | Navigator | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447130          | 4WD              |
| 781 | 1998       | Lincoln | Navigator | 5.4                  | WFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447182          | 2WD              |
| 782 | 1998       | Lincoln | Navigator | 5.4                  | WFMXA05.4JBC    | TIER1               | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447182          | 2WD              |
| 783 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 784 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGN    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 785 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGN    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 786 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 787 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 788 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGN    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 789 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGN    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 790 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 791 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGN    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 792 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 793 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGN    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 794 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 795 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 796 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGN    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 797 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGN    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 798 | 1999       | Lincoln | Navigator | 5.4                  | XFMXA05.4JGC    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 799 | 2000       | Lincoln | Navigator | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 800 | 2000       | Lincoln | Navigator | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 801 | 2000       | Lincoln | Navigator | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 802 | 2000       | Lincoln | Navigator | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 803 | 2000       | Lincoln | Navigator | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UL             | DIRECT FIT          | 447115          | 2WD              |
| 804 | 2000       | Lincoln | Navigator | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UL             | DIRECT FIT          | 447117          | 4WD              |
| 805 | 2000       | Lincoln | Navigator | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 806 | 2000       | Lincoln | Navigator | 5.4                  | YFMXA05.4RF7    | LEV1 LEV            | MDV3         | DS           | 2TWC,TWC       | 3               | 2                   | UR             | DIRECT FIT          | 447118          | 4WD              |
| 807 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 808 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 809 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 810 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 811 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 812 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 813 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 814 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 815 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447125          | 4WD              |
| 816 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447125          | 4WD              |
| 817 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447153          | 2WD              |
| 818 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UL             | DIRECT FIT          | 447153          | 2WD              |
| 819 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |
| 820 | 2001       | Lincoln | Navigator | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447116          | 2WD              |

**Appendix D-193-98**  
**Car Sound Exhaust Systems, Inc. 447100 / 447200**

| No. | Model Year | Make    | Model       | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
|-----|------------|---------|-------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| 821 | 2001       | Lincoln | Navigator   | 5.4                  | 1FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447126          | 4WD              |
| 822 | 2001       | Lincoln | Navigator   | 5.4                  | 1FMXT05.4RF7    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | UR             | DIRECT FIT          | 447126          | 4WD              |
| 823 | 2002       | Lincoln | Blackwood   | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 824 | 2002       | Lincoln | Blackwood   | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 825 | 2002       | Lincoln | Blackwood   | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 826 | 2002       | Lincoln | Blackwood   | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 827 | 2002       | Lincoln | Navigator   | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FL             | UNIVERSAL           | 447176          | 2WD              |
| 828 | 2002       | Lincoln | Navigator   | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | FR             | UNIVERSAL           | 447176          | 2WD              |
| 829 | 2002       | Lincoln | Navigator   | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RL             | UNIVERSAL           | 447206          | 2WD              |
| 830 | 2002       | Lincoln | Navigator   | 5.4                  | 2FMXT05.4RF8    | LEV1 LEV            | MDV3         | D            | 2TWC(2)        | 4               | 4                   | RR             | UNIVERSAL           | 447206          | 2WD              |
| 831 | 2003       | Lincoln | Aviator     | 4.6                  | 3FMXT04.62F9    | LEV1 LEV            | MDV2         | DS           | 2TWC,TWC       | 3               | 2                   | FL             | UNIVERSAL           | 447176          | ALL              |
| 832 | 2003       | Lincoln | Aviator     | 4.6                  | 3FMXT04.62F9    | LEV1 LEV            | MDV2         | DS           | 2TWC,TWC       | 3               | 2                   | FR             | UNIVERSAL           | 447176          | ALL              |
| 833 | 2003       | Lincoln | Aviator     | 4.6                  | 3FMXT04.62F9    | LEV1 LEV            | MDV2         | DS           | 2TWC,TWC       | 3               | 2                   | R              | UNIVERSAL           | 447256          | ALL              |
| 834 | 1997       | Mercury | Mountaineer | 5                    | VFM5.028GFKEK   | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 835 | 1997       | Mercury | Mountaineer | 5                    | VFM5.028GFKEK   | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 836 | 1997       | Mercury | Mountaineer | 5                    | VFM5.028GFKEK   | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 837 | 1997       | Mercury | Mountaineer | 5                    | VFM5.028GFKEK   | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 838 | 1997       | Mercury | Mountaineer | 5                    | VFM5.028GFKEK   | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447101          | ALL              |
| 839 | 1997       | Mercury | Mountaineer | 5                    | VFM5.028GFKEK   | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447201          | ALL              |
| 840 | 1997       | Mercury | Mountaineer | 5                    | VFM5.028GFKEK   | TIER1               | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447102          | ALL              |
| 841 | 1998       | Mercury | Mountaineer | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 842 | 1998       | Mercury | Mountaineer | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 843 | 1998       | Mercury | Mountaineer | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 844 | 1998       | Mercury | Mountaineer | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 845 | 1998       | Mercury | Mountaineer | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447101          | ALL              |
| 846 | 1998       | Mercury | Mountaineer | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447201          | ALL              |
| 847 | 1998       | Mercury | Mountaineer | 5                    | WFMXT05.02DC    | TLEV                | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447102          | ALL              |
| 848 | 1999       | Mercury | Mountaineer | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 849 | 1999       | Mercury | Mountaineer | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 850 | 1999       | Mercury | Mountaineer | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 851 | 1999       | Mercury | Mountaineer | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 852 | 1999       | Mercury | Mountaineer | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447119          | ALL              |
| 853 | 1999       | Mercury | Mountaineer | 5                    | XFMXT05.02GF    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447120          | ALL              |
| 854 | 2000       | Mercury | Mountaineer | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 855 | 2000       | Mercury | Mountaineer | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |
| 856 | 2000       | Mercury | Mountaineer | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 857 | 2000       | Mercury | Mountaineer | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 858 | 2000       | Mercury | Mountaineer | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447119          | ALL              |
| 859 | 2000       | Mercury | Mountaineer | 5                    | YFMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447120          | ALL              |
| 860 | 2001       | Mercury | Mountaineer | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FL             | UNIVERSAL           | 447175          | ALL              |
| 861 | 2001       | Mercury | Mountaineer | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | FR             | UNIVERSAL           | 447175          | ALL              |

| Appendix D-193-98                               |            |         |             |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
|-------------------------------------------------|------------|---------|-------------|----------------------|-----------------|---------------------|--------------|--------------|----------------|-----------------|---------------------|----------------|---------------------|-----------------|------------------|
| Car Sound Exhaust Systems, Inc. 447100 / 447200 |            |         |             |                      |                 |                     |              |              |                |                 |                     |                |                     |                 |                  |
| No.                                             | Model Year | Make    | Model       | Engine Size (liters) | Test Group Name | Certification Level | Weight Class | Exhaust Type | Converter Type | Total Converter | Monitored Converter | Conv. Location | Converter Part Type | MFR Part Number | Application Type |
| 862                                             | 2001       | Mercury | Mountaineer | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RL             | UNIVERSAL           | 447205          | ALL              |
| 863                                             | 2001       | Mercury | Mountaineer | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | RR             | UNIVERSAL           | 447205          | ALL              |
| 864                                             | 2001       | Mercury | Mountaineer | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UL             | DIRECT FIT          | 447119          | ALL              |
| 865                                             | 2001       | Mercury | Mountaineer | 5                    | 1FMXT05.02F5    | LEV1 LEV            | LDT2         | D            | 2TWC(2)        | 4               | 2                   | UR             | DIRECT FIT          | 447120          | ALL              |