

**SANTA ROSA FIRE DEPARTMENT**  
**FIRE PREVENTION BUREAU**  
**PLAN REVIEW CHECKLIST**

July 1, 2010



**REPAIR GARAGE**

<b>Address:</b>		<b>Permit #:</b>
<b>Inspector:</b>	<b>Date Inspected:</b>	<b>Status:</b>
<b>Inspector:</b>	<b>Date Inspected:</b>	<b>Status:</b>
<b>A-Approved; AC-Approved w/comments; I-Incomplete; D-Denied</b>		

This Checklist outlines general requirements. Information contained herein applies to typical instances and may not address all circumstances.

**REFERENCES:**

- 2007 California Building Code (CBC)
- 2007 California Fire Code (CFC) Chapter 22 — Motor Fuel-Dispensing Facilities and Repair Garages
- 2007 California Fire Code (CFC) Chapter 9 — Fire Protection Systems

**FILE REVIEW**

- |    | <b>Y</b>                 | <b>N</b>                 |  |
|----|--------------------------|--------------------------|--|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Permit fees entered in Permits Plus. 3 <sup>rd</sup> or greater checks require an hourly fee for the review. |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Three (3) sets of scaled plans and specifications  |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Contractor shall provide, or have on file, a current Contractor's License.                                   |
| 4. | <input type="checkbox"/> | <input type="checkbox"/> | Worker's Compensation Insurance certificate.   |
| 5. | <input type="checkbox"/> | <input type="checkbox"/> | Current Santa Rosa Business Tax Certificate.   |
| 6. | <input type="checkbox"/> | <input type="checkbox"/> | Name and address of project  |
| 7. | <input type="checkbox"/> | <input type="checkbox"/> | Contractor's name, address, and telephone number.  |

**GENERAL**

- |     |                          |                          |   |
|-----|--------------------------|--------------------------|---|
| 8.  | <input type="checkbox"/> | <input type="checkbox"/> | INDOOR MOTOR FUEL-DISPENSING FACILITIES CFC 2201.4 Motor fuel-dispensing facilities located inside buildings shall comply with the California Building Code and NFPA 30A.   |
| 9.  | <input type="checkbox"/> | <input type="checkbox"/> | PROTECTION OF FLOOR OPENINGS IN INDOOR MOTOR FUEL-DISPENSING FACILITIES. CFC 2201.4.1 Where motor fuel-dispensing facilities are located inside buildings and the dispensers are located above spaces within the building, openings beneath dispensers shall be sealed to prevent the flow of leaked fuel to lower building spaces. |
| 10. | <input type="checkbox"/> | <input type="checkbox"/> | ELECTRICAL. CFC 2201.5 Electrical wiring and equipment shall be suitable for the locations in which they are installed and shall comply with Section 605, NFPA 30A and the California Electrical Code.  |

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|-----|--------------------------|--------------------------|---|
| 11. | <input type="checkbox"/> | <input type="checkbox"/> | HEAT-PRODUCING APPLIANCES. CFC 2201.6 Heat-producing appliances shall be suitable for the locations in which they are installed and shall comply with NFPA 30A and the California Plumbing Code or the California Mechanical Code.  |
| 12. | <input type="checkbox"/> | <input type="checkbox"/> | FIRE SPRINKLERS CFC 903.2.8.1 An automatic sprinkler system shall be provided throughout all buildings used as repair garages in accordance with the California Building Code, as follows:<br><br>A. Buildings two or more stories in height, including basements, with a fire area containing a repair garage exceeding 10,000 square feet (929 m <sup>2</sup> ).<br><br>B. One-story buildings with a fire area containing a repair garage exceeding 12,000 square feet (1115 m <sup>2</sup> ).<br><br>C. Buildings with a repair garage servicing vehicles parked in the basement.<br>Fire Sprinkler design and installation is a separate permit. |
| 13. | <input type="checkbox"/> | <input type="checkbox"/> | GENERAL CFC 2211.1. Repair garages shall comply with this section and the California Building Code. Repair garages for vehicles that use more than one type of fuel shall comply with the applicable provisions of this section for each type of fuel used.<br><br>Where a repair garage also includes a motor fuel-dispensing facility, the fuel-dispensing operation shall comply with the requirements of Chapter 22 for motor fuel-dispensing facilities.   |
| 14. | <input type="checkbox"/> | <input type="checkbox"/> | GENERAL CBC 406.6.1. Repair garages shall be constructed in accordance with the California Fire Code and this section. This occupancy shall not include motor fuel-dispensing facilities, as regulated in Section 406.5.  |
| 15. | <input type="checkbox"/> | <input type="checkbox"/> | MIXED USES. CBC 406.6.2 Mixed uses shall be allowed in the same building as a repair garage subject to the provisions of Section 508.3.   |
| 16. | <input type="checkbox"/> | <input type="checkbox"/> | ALARM CFC 908.5. A flammable-gas detection system shall be provided in repair garages for vehicles fueled by nonodorized gases in accordance with Section 2211.7.2.   |
| 17. | <input type="checkbox"/> | <input type="checkbox"/> | STORAGE AND USE OF FLAMMABLE AND COMBUSTIBLE LIQUIDS. CFC 2211.2 The storage and use of flammable and combustible liquids in repair garages shall comply with Chapter 34 and Sections 2211.2.1 through 2211.2.4.  |
| 18. | <input type="checkbox"/> | <input type="checkbox"/> | CLEANING OF PARTS. CFC 2211.2.1 Cleaning of parts shall be conducted in listed and approved parts-cleaning machines in accordance with Chapter 34.  |
| 19. | <input type="checkbox"/> | <input type="checkbox"/> | WASTE OIL, MOTOR OIL AND OTHER CLASS IIIB LIQUIDS. CFC 2211.2.2 Waste oil, motor oil and other Class IIIB liquids shall be stored in approved tanks or containers, which are allowed to be stored and dispensed from inside repair garages.   |
| 20. | <input type="checkbox"/> | <input type="checkbox"/> | TANK LOCATION. CFC 2211.2.2.1 Tanks storing Class IIIB liquids in repair garages are allowed to be located at, below or above grade, provided that adequate drainage or containment is provided.  |
| 21. | <input type="checkbox"/> | <input type="checkbox"/> | LIQUID CLASSIFICATION. CFC 2211.2.2.2 Crankcase drainings shall be classified as Class IIIB liquids unless otherwise determined by testing.   |
| 22. | <input type="checkbox"/> | <input type="checkbox"/> | DRAINAGE AND DISPOSAL OF LIQUIDS AND OIL-SOAKED WASTE. CFC 2211.2.3 Garage floor drains, where provided, shall drain to approved oil separators or traps discharging to a sewer in accordance with the California Plumbing Code. Contents of oil separators, traps and floor drainage systems shall be collected at sufficiently frequent intervals and removed from the premises to prevent oil from being carried into the sewers.  |

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| 23. | <input type="checkbox"/> | <input type="checkbox"/> | SPRAY FINISHING. CFC 2211.2.4 Spray finishing with flammable or combustible liquids shall comply with Chapter 15.   |
| 24. | <input type="checkbox"/> | <input type="checkbox"/> | SOURCES OF IGNITION. CFC 2211.3. Sources of ignition shall not be located within 18 inches (457 mm) of the floor and shall comply with Chapters 3 and 26.   |
| 25. | <input type="checkbox"/> | <input type="checkbox"/> | EQUIPMENT. CFC 2211.3.1 Appliances and equipment installed in a repair garage shall comply with the provisions of the California Building Code, the California Mechanical Code and the California Electrical Code.  |
| 26. | <input type="checkbox"/> | <input type="checkbox"/> | SMOKING CFC 2211.3.2. Smoking shall not be allowed in repair garages except in approved locations.  |
| 27. | <input type="checkbox"/> | <input type="checkbox"/> | BELOW-GRADE AREAS. CFC 2211.4 Pits and below-grade work areas in repair garages shall comply with Sections 2211.4.1 through 2211.4.3.   |
| 28. | <input type="checkbox"/> | <input type="checkbox"/> | CONSTRUCTION CFC 2211.4.1. Pits and below-grade work areas shall be constructed in accordance with the California Building Code.  |
| 29. | <input type="checkbox"/> | <input type="checkbox"/> | MEANS OF EGRESS. CFC 2211.4.2 Pits and below-grade work areas shall be provided with means of egress in accordance with Chapter 10.   |
| 30. | <input type="checkbox"/> | <input type="checkbox"/> | VENTILATION CFC 2211.4.3. Where Class I liquids or LP-gas are stored or used within a building having a basement or pit wherein flammable vapors could accumulate, the basement or pit shall be provided with mechanical ventilation in accordance with the California Mechanical Code, at a minimum rate of 1.5 cubic feet per minute per square foot (cfm/ft <sup>2</sup> ) [0.008 m <sup>3</sup> /(s · m <sup>2</sup> )] to prevent the accumulation of flammable vapors.  |
| 31. | <input type="checkbox"/> | <input type="checkbox"/> | VENTILATION CBC 406.6.3. Repair garages shall be mechanically ventilated in accordance with the California Mechanical Code. The ventilation system shall be controlled at the entrance to the garage.   |
| 32. | <input type="checkbox"/> | <input type="checkbox"/> | PREPARATION OF VEHICLES FOR REPAIR. CFC 2211.5 For vehicles powered by gaseous fuels, the fuel shutoff valves shall be closed prior to repairing any portion of the vehicle fuel system. Vehicles powered by gaseous fuels in which the fuel system has been damaged shall be inspected and evaluated for fuel system integrity prior to being brought into the repair garage. The inspection shall include testing of the entire fuel delivery system for leakage.   |
| 33. | <input type="checkbox"/> | <input type="checkbox"/> | FIRE EXTINGUISHERS. CFC 2211.6 Fire extinguishers shall be provided in accordance with Section 906.   |
| 34. | <input type="checkbox"/> | <input type="checkbox"/> | REPAIR GARAGES FOR VEHICLES FUELED BY LIGHTER-THAN-AIR FUELS. CFC 2211.7 Repair garages for the conversion and repair of vehicles which use CNG, liquefied natural gas (LNG), hydrogen or other lighter-than-air motor fuels shall be in accordance with Sections 2211.7 through 2211.7.2.3 in addition to the other requirements of Section 2211.<br><br><b>Exception:</b> Repair garages where work is not performed on the fuel system and is limited to exchange of parts and maintenance requiring no open flame or welding. |
| 35. | <input type="checkbox"/> | <input type="checkbox"/> | FLOOR SURFACE CBC 406.6.4. Repair garage floors shall be of concrete or similar noncombustible and nonabsorbent materials.<br><br><b>Exception:</b> Slip-resistant, nonabsorbent, interior floor finishes having a critical radiant flux not more than 0.45 W/cm <sup>2</sup> , as determined by NFPA253, shall be permitted.   |

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- |     | Y                        | N                        |  |
|-----|--------------------------|--------------------------|--|
| 36. | <input type="checkbox"/> | <input type="checkbox"/> | HEATING EQUIPMENT. CBC 406.6.5 Heating equipment shall be installed in accordance with the California Mechanical Code.   |
| 37. | <input type="checkbox"/> | <input type="checkbox"/> | AS DETECTION SYSTEM. CBC [F] 406.6.6 Repair garages used for repair of vehicles fueled by non-odorized gases, such as hydrogen and nonodorized LNG, shall be provided with an approved flammable gas-detection system.   |
| 38. | <input type="checkbox"/> | <input type="checkbox"/> | SYSTEM DESIGN. CBC [F] 406.6.6.1 The flammable gas-detection system shall be calibrated to the types of fuels or gases used by vehicles to be repaired. The gas detection system shall be designed to activate when the level of flammable gas exceeds 25 percent of the lower explosive limit. Gas detection shall also be provided in lubrication or chassis repair pits of garages used for repairing nonodorized LNG-fueled vehicles.  |
| 39. | <input type="checkbox"/> | <input type="checkbox"/> | OPERATION CBC [F] 406.6.6.2. Activation of the gas detection system shall result in all of the following:<br><br>A. Initiation of distinct audible and visual alarm signals in the repair garage.<br><br>B. Deactivation of all heating systems located in the repair garage.<br><br>C. Activation of the mechanical ventilation system, where the system is interlocked with gas detection.   |
| 40. | <input type="checkbox"/> | <input type="checkbox"/> | FAILURE OF THE GAS DETECTION SYSTEM. CBC [F] 406.6.6.3 Failure of the gas detection system shall result in the deactivation of the heating system, activation of the mechanical ventilation system when the system is interlocked with the gas detection system and cause a trouble signal to sound in an approved location.   |
| 41. | <input type="checkbox"/> | <input type="checkbox"/> | ELECTRIC VEHICLE CBC 406.7.1. An automotive-type vehicle for highway use, such as passenger automobiles, buses, trucks, vans and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array or other source of electric current. For the purpose of this chapter, electric motorcycles and similar-type vehicles and off-road self-propelled electric vehicles such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not included.   |
| 42. | <input type="checkbox"/> | <input type="checkbox"/> | CHARGING. CBC 406.7.2 In any building or interior area used for charging electric vehicles, electrical equipment shall be installed in accordance with the California Electrical Code.   |
| 43. | <input type="checkbox"/> | <input type="checkbox"/> | VENTILATION CBC 406.7.3. Mechanical exhaust ventilation, when required by the California Electrical Code, shall be provided at a rate as required by Article 625 or as required by Section 1203 of the California Building Code, whichever is greater. The ventilation system shall include both the supply and exhaust equipment and shall be permanently installed and located to intake supply air from the outdoors, and vent the exhaust directly to, the outdoors without conducting the exhaust air through other spaces within the building.<br><br><b>Exception:</b> Positive pressure ventilation systems shall only be allowed in buildings or areas that have been designed and approved for that application. |
| 44. | <input type="checkbox"/> | <input type="checkbox"/> | ELECTRICAL INTERFACE CBC 406.7.4. The electrical supply circuit to electrically powered mechanical ventilation equipment shall be interlocked with the recharging equipment used to supply the vehicle(s) being charged, and shall remain energized during the entire charging cycle. Electric vehicle recharging equipment shall be marked or labeled in accordance with the California Electrical Code.  |

**Exceptions:**

- A. Exhaust ventilation shall not be required in areas with an approved engineered ventilation system, which maintains a hydrogen gas concentration at less than 25 percent of the lower flammability limit.
- B. Mechanical exhaust ventilation for hydrogen shall not be required where the charging equipment utilized is installed and listed for indoor charging of electric vehicles without ventilation.