

# TOYOTA

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**TO:** DEALER PRINCIPALS, SERVICE MANAGERS AND PARTS MANAGERS  
**DATE:** 2013  
**RE:** Information Packet for Corrosion-Resistant Compound ("CRC") Campaigns

## TOYOTA CORROSION-RESISTANT COMPOUND CAMPAIGNS

### DEALER INFORMATION PACKET

Toyota has been offering Corrosion-Resistant Compound ("CRC") campaigns for different model year ("MY") Toyota vehicles registered in certain cold climate states with high road salt use. Toyota Motor Sales, U.S.A., Inc. ("TMS") has developed this Dealer Information Packet to apply across all current and any potential future CRC campaigns.

#### **IMPORTANT**

*For **Tacoma LSC 90D, Tundra B0D, Sequoia C0D and Tundra BXD** -- which are collectively referred to in this Packet as "**the previous CRC campaigns**" -- TMS provided your dealership with a separate packet for each campaign.*

*This Packet supersedes those separate packets and should be used for:*

- Any of the previous CRC campaigns that are still ongoing and*
- Any potential future CRC campaign.*

*You will still receive separate Technical Instructions for any potential future CRC campaign before launch.*

For the CRC campaigns, you are applying two CRCs –

- 712 AM (interior frame surfaces)
- Noxudol 300 S (exterior frame surfaces)

– using the two Vaupel HSDR 3300 spray guns issued to your dealership for the previous CRC campaigns.

Applying the CRC materials and using the Vaupel HSDR 3300 spray gun raises legal compliance obligations pertaining to *air emissions, fire safety approval and recordkeeping*. This Packet explains these obligations and recommends steps to assure your dealership's continued compliance with them.<sup>1</sup> This Packet consists of two parts:

- **Part One – General Guide for Compliance**: Part One identifies the general compliance steps all dealerships should take irrespective of location.
- **Part Two: State Compliance Supplement**: This Supplement identifies additional compliance steps for your dealership's particular state and also includes recordkeeping forms and documents.

Please review this CRC Campaigns Dealer Information Packet carefully. If, after reviewing this Packet, you have any questions or concerns, please go to the C.L.E.A.N. Dealer website (<http://cleanddealer.com>) or call the EH&S Hotline (877-572-4347).

**ASSISTANCE BY KPA:** Due to the complexity of the CRC campaigns, TMS engaged KPA to provide additional assistance directly to dealerships conducting CRC campaigns. We plan to continue this engagement for KPA's assistance as your dealership makes the transition to using this updated CRC Campaigns Dealer Information Packet. After a reasonable transition period, KPA's assistance will be available to your dealership only on an as needed basis as approved by your regional representative; additional information will be provided to you at that time.

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<sup>1</sup> This Packet is not intended to cover other air, waste management, hazardous material, water, or other environmental laws and regulations that might apply to non-CRC campaign operations at your dealership. We assume that you already comply with other environmental, health and safety requirements.

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TOYOTA CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

PART ONE – GENERAL GUIDE FOR COMPLIANCE

Applying the CRC materials with a Vaupel HSDR 3300 spray gun produces Volatile Organic Compounds (“VOCs”) and Particulate Matter (“PM”) air emissions subject to federal and state regulations. Generally, these regulations allow emissions up to a certain level and require an air permit to exceed that level. The CRC campaigns do not require a federal air permit. However, air emissions regulations differ in each state; as a result, the CRC campaigns require an air permit in some states. A few local jurisdictions also require an air permit for the CRC campaigns.

Additionally, the CRC materials are Class III combustible liquids subject to state and/or local fire codes. These codes require approval to conduct the CRC campaigns from each dealership’s state and/or local fire code enforcement official.

For the previous CRC campaigns, TMS worked with participating dealerships to obtain:

- An air permit and/or any other approvals, if necessary, to assure compliance with the air emissions regulations; and
- Approval from the appropriate fire code enforcement official.

If your dealership conducted the previous CRC campaigns, then you should be able to conduct any potential future CRC campaign as long as you continue to comply with the legal requirements explained in this Packet.

**IMPORTANT:**

**If your dealership did not conduct the previous CRC campaigns or now plans to change its location for conducting CRC campaigns, then:**

- **This Compliance Guide is not applicable; and**
- **Your dealership may not conduct any CRC campaigns until you contact the EH&S Hotline (877-572-4347) to discuss your particular situation and obtain the necessary air regulatory and fire code approvals.**

***If your dealership has been conducting previous CRC campaigns, but has decided to discontinue its participation, you must contact your regional representative before doing so and also inform Headquarters.***



## Step One

### **Before You Begin Any CRC Campaign, Confirm That Your Dealership Will Satisfy All Criteria Below.**

1. **CONDUCT IN SAME SPRAY SPACE AS THE PREVIOUS CRC CAMPAIGNS.**
  - a. The spray space used for the previous CRC campaigns already should have been approved by your state and/or local fire code enforcement official.
  - b. You must conduct any CRC Campaign in this same approved spray space.
  - c. If your dealership is not able to do so, then you will need a new approval **before** you begin a CRC campaign.
  
2. **FOLLOW TECHNICAL INSTRUCTIONS.**
  - a. Each CRC campaign has its own Technical Instructions.
  - b. You must review the Technical Instructions for the CRC campaign with all employees involved in the campaign.
  
3. **COMPLY WITH AIR PERMITTING REQUIREMENTS.**
  - a. Your dealership currently should:
    - i. Not hold an air permit for operations other than the CRC campaigns (if so, then that permit might need to be amended before conducting the CRC campaigns.);
    - ii. Not operate a very large onsite or offsite body shop and/or otherwise engage in significant painting, coating or other spraying operations (if so, then your dealership might trigger air permitting due to its non-CRC campaign activities.); **and**
    - iii. For the CRC campaigns either:
      - (1) Hold the necessary state and/or local air permit, where required, or
      - (2) Continue to satisfy air permit exemption requirements.

Refer to Part One, Appendix B and Part Two for details.
  
4. **COMPLY WITH OTHER AIR EMISSIONS OBLIGATIONS.**
  - a. Continue to **process no more than 1 vehicle every 2 hours, except New Jersey dealerships are subject to a more stringent vehicle processing limit.** Refer to Part One, Appendix A & B and Part Two for details.



- b. Continue to comply with air recordkeeping and other special air regulatory obligations, such as training and housekeeping, where applicable. Refer to Part Two for details.

***Note on Recordkeeping Forms: Use the recordkeeping forms provided in Part Two for all CRC campaigns. No longer use the forms provided in the packets for the previous CRC campaigns, but keep previously completed forms on file until 5 years after your dealership ceases its involvement in CRC campaigns.***

5. **COMPLY WITH FIRE AND OTHER LOCAL CODES.**

- a. Continue to comply with the approval issued by your state and/or local fire code enforcement official for the previous CRC campaigns. If this approval established any special restrictions,
  - i. Make sure that these restrictions will not prevent you from conducting the CRC campaign, and
  - ii. Continue to comply with them, including any renewal requirements.
- b. Continue to do all of the following when applying CRCs:
  - i. Maintain adequate ventilation in the spray space and surrounding area;
  - ii. Have no open flames, spark-producing equipment, or drying, curing, or fusion apparatuses within 20 feet of the spray space;
  - iii. Make fire extinguishers rated "B," "AB," or "ABC" available within 30 feet of the spray space; and
  - iv. Follow best management practices for handling and storage of the CRC materials including:
    - (1) Do not store more than 25 gallons of the CRC materials and any other regulated flammable or combustible materials in any one fire area; or
    - (2) If you store more than 25 gallons of regulated flammable or combustible liquid in any one fire area, then you must use a fire cabinet.
      - (a) A single fire cabinet may hold up to 120 gallons. Your dealership may only have up to three such fire cabinets in each fire area.
      - (b) If you store regulated flammable or combustible liquids at these levels (3 x 120 gals. = 360 gals.), you should confirm with your appropriate fire code

enforcement official that such storage does not require an operational permit in your locality.

- c. Continue to comply with any additional requirements imposed under fire, building, environmental, safety or zoning codes for your particular locality. Refer to Part Two for details.

## **Step Two**

### **Begin Conducting The CRC Campaign In Compliance With The Vehicle Processing Limit And The Other Requirements Discussed Above and in Part Two.**

***Note on CRC Campaign Wastes: When conducted in accordance with the Technical Instructions, the CRC campaigns do not generate hazardous wastes. In conducting any CRC campaign, your dealership should adhere to its own best practices for general, non-hazardous waste handling.***

Thank you for participating in the CRC campaigns.

TOYOTA MOTOR SALES, U.S.A., INC.





CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

PART ONE – GENERAL GUIDE FOR COMPLIANCE  
APPENDIX A VEHICLE PROCESSING GUIDANCE

**VEHICLE PROCESSING LIMIT FOR CRC CAMPAIGNS: No more than 1 vehicle every 2 hours.**

**New Jersey Exception: New Jersey dealerships are subject to a more stringent vehicle processing limit. (Refer to New Jersey Part Two for details.)**

For certain CRC campaigns, your dealership may be able to process a vehicle more quickly, but nevertheless, to assure compliance, you should adhere to this processing limit for all CRC campaigns and all vehicles.







- “Processing” means applying the CRCs to the vehicle with the Vaupel HSDR 3300 spray gun; it does not include vehicle preparation activities.
- The vehicle processing limit means that once you begin processing a vehicle, you may not begin processing another vehicle until the 2 hours have passed.

**Example #1**

- You begin applying the CRCs to Vehicle A at 10:00 a.m. in the spray space.
- In another service bay, you begin preparing Vehicle B for processing.
- You complete processing the Vehicle A at 11:30 a.m., and by that time, you also have completed your preparation of Vehicle B for processing.
- You may move Vehicle B to the spray space at 11:30 a.m., but you may NOT begin processing it until 2 hours after you began processing Vehicle A at 10 a.m., or in other words, not until 12:00 p.m.

**Example #2:**

- You begin applying the CRCs to Vehicle A at 10:00 a.m. in the spray space.
- In another service bay, you begin preparing Vehicle B for processing.
- You complete processing Vehicle A at 12:05 p.m., and by that time, you also have completed your preparation of Vehicle B for processing.
- You may move Vehicle B to the spray space and begin processing it immediately, given that more than 2 hours has passed since you began processing Vehicle A.

Sample Stall Schedule						
	8:00 to 10:00 AM	10:00 AM to 12:00 PM	12:00 to 2:00 PM	2:00 to 4:00 PM	4:00 to 6:00 PM	6:00 to 8:00 PM
Vehicle 1		Cannot start processing another vehicle until 10:00 AM				
Vehicle 2	Cannot start processing another vehicle until 10:00 AM		Cannot start processing another vehicle until 12:00 PM			
Vehicle 3		Cannot start processing another vehicle until 12:00 PM		Cannot start processing another vehicle until 2:00 PM		
Vehicle 4			Cannot start processing another vehicle until 2:00 PM		Cannot start processing another vehicle until 4:00 PM	
Vehicle 5				Cannot start processing another vehicle until 4:00 PM		Cannot start processing another vehicle until 6:00 PM
Vehicle 6					Cannot start processing another vehicle until 6:00 PM	

Note: This sample schedule is only an example and the order of models sprayed will vary by customer appointment.









CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

**PART ONE – GENERAL GUIDE FOR COMPLIANCE  
APPENDIX B -- COMPLIANCE WITH  
STATE AND LOCAL AIR PERMITTING REQUIREMENTS**

The table below summarizes the steps necessary for Toyota dealerships conducting CRC campaigns to comply with state and local laws related to air permitting. When using this table, please keep in mind the following:

- The “State Air Permitting” column indicates whether a dealership needs an air permit to conduct CRC campaigns, and if no air permit is required, identifies permit exemption requirements.
- The “Local Air Permitting” column indicates any local jurisdiction within a particular state that requires an air permit or other special approval to conduct the CRC campaigns.

**IMPORTANT: Follow all criteria described in Part One of this Dealer Information Packet and any additional steps set forth below for your particular state. See Part Two for further details.**

**Glossary of Common Abbreviations Used In This Table**

**CRCs: Corrosion Resistant Compounds**  
**gal/hr: Gallons per hour**  
**gal/day: Gallons per day**  
**gal/yr: Gallons per year**  
**lbs/hr: Pounds per hour**  
**lbs/day: Pounds per day**  
**lbs/mo: Pounds per month**  
**PM: Particulate Matter**  
**PTE: Potential to Emit**  
**tpy: Tons per year**  
**vpd: Vehicles per day**  
**VOCs: Volatile Organic Compounds**

<b>STATE AIR PERMITTING</b>	<b>LOCAL AIR PERMITTING</b>
<b>CONNECTICUT</b>	
<p>Remain exempt by not using more than 2,000 gallons of paints, solvents, coatings, sealants (including the CRCs) and other VOC-containing materials across your entire dealership in any rolling 12-month period. (See Part Two for a materials usage tracking and compliance log.)</p>	<p>No additional requirements.</p>
<b>DELAWARE</b>	
<p>Comply with the Self-Registration submitted by TMS for your dealership and approved by the Delaware Department of Natural Resources and Environmental Conservation on April 20, 2012 by not processing more than 12 vpd.</p> <p>If your dealership never worked with TMS to submit this Self-Registration, or has moved its location since April 20, 2012, please call the EH&amp;S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.</p>	<p>No additional requirements.</p>

<b>ILLINOIS</b>	
<p>Remain exempt by keeping coating usage across your entire dealership (including CRC materials) at not more than 5,000 gal/yr. (See Part Two for a materials usage tracking and compliance log.)</p>	<p><b>Dealerships located in the <u>City of Chicago</u> and in <u>Cook County</u>:</b> Comply with the air permit issued to your dealership by either, depending upon your location, the City of Chicago Department of Environment or the Cook County Department of Environmental Control for the previous CRC campaigns.</p> <ul style="list-style-type: none"> <li>⇒ This permit authorizes any potential future CRC campaign being conducted at the same dealership location.</li> <li>⇒ If your dealership never obtained this permit, or has moved its location since obtaining it, please contact your please call the EH&amp;S Hotline (877-572-4347) <b>BEFORE</b> conducting any CRC campaigns.</li> </ul>
<b>INDIANA</b>	
<p>Remain exempt by keeping total actual emissions across your entire dealership under the “permit by rule” exemption levels of 20 tpy for VOCs and 20 tpy for PM.</p>	<p><b>Dealerships located in <u>Evansville</u>:</b> Comply with the Certificate of Operation already issued by the Evansville Environmental Protection Agency to your dealership for the previous CRC campaigns.</p> <ul style="list-style-type: none"> <li>⇒ This Certificate authorizes any potential future CRC campaign being conducted at the same dealership location.</li> <li>⇒ If your dealership never obtained this Certificate, or has moved its location since obtaining it, please call the EH&amp;S Hotline (877-572-4347) <b>BEFORE</b> conducting any CRC campaigns.</li> </ul>

<b>KENTUCKY</b>	
<p>Remain exempt by keeping PTE across your entire dealership below the state permitting thresholds of 10 tpy for VOCs and 10 tpy for PM.</p>	<p><b>Dealerships located in <u>Jefferson County</u>:</b> Comply with the air permit already issued by the Louisville Metropolitan Air Pollution Control District to your dealership for the previous CRC campaigns by (i) Processing no more than 12 vehicles per day for any CRC campaign; and (ii) Performing monthly inspections of the exterior to the building in which you conduct the CRC operations to ensure no visible emissions are visible.</p> <p>⇒ This permit authorizes any potential future CRC campaign being conducted at the same dealership location.</p> <p>⇒ If your dealership never obtained this permit, or has moved its location since obtaining it, please call the EH&amp;S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.</p>
<b>MAINE</b>	
<p>Remain exempt by keeping total actual emissions across your entire dealership under the “total facility general process source” thresholds of 100 lbs/day and 10 lbs/hr for VOCs and PM. You can do so by limiting your operations as follows: On any particular day when you are actively engaged in applying CRCs:</p> <p>⇒ Do not use spray guns in any non-CRC operations to apply VOC-containing materials; and</p> <p>⇒ Do not use more than 12 gal/day or 1 gal/hr of VOC-containing materials (including coatings, paints and solvents) in your non-CRC operations.</p>	<p>No additional requirements.</p>
<b>MASSACHUSETTS</b>	
<p>Remain exempt by keeping records pursuant to the 310 CMR 7.20(2)(d) “Motor Vehicle Maintenance and Repair” exemption. (See Part Two for the necessary recordkeeping forms and other documents.)</p>	<p>No additional requirements.</p>

<b>MARYLAND</b>	
Remain exempt by keeping PTE of all CRC campaigns combined below the “ <i>de minimis</i> ” permitting thresholds of 1 tpy for VOCs and 1 tpy for PM – which you can do by adhering to the vehicle processing limit of no more than 1 vehicle every 2 hours.	No additional requirements.
<b>MICHIGAN</b>	
Remain exempt by keeping total actual emissions of air contaminants from all CRC campaigns combined under the “Limited Emissions Exemption” level of 1,000 lbs/mo – which you can do by adhering to the vehicle processing limit of no more than 1 vehicle every 2 hours.	No additional requirements.
<b>MINNESOTA</b>	
Remain exempt by keeping PTE across your entire dealership below the permitting thresholds of 100 tpy for VOCs and 25 tpy for PM.	No additional requirements.
<b>NEW HAMPSHIRE</b>	
<p>Remain exempt by keeping total actual emissions across your entire dealership below the VOCs permitting threshold of 10 tpy, which you can do by limiting your operations as follows:</p> <ul style="list-style-type: none"> <li>⇒ <b>If Your Dealership Does NOT Have Onsite Refueling Operations:</b> Limit total usage across your entire dealership of all paints, solvents, coatings (including the CRC materials) and any other VOC-containing materials to below 2,500 gal/yr.</li> <li>⇒ <b>If Your Dealership Has Onsite Refueling Operations:</b> Limit total usage across your entire dealership of (1) all paints, solvents, coatings (including the CRC materials) and any other VOC-containing materials to below 2,200 gal/yr, and (2) gasoline to below 100,000 gal/yr.</li> </ul> <p>(See Part Two for a materials usage tracking and compliance log.)</p>	No additional requirements.



**NEW JERSEY**

Comply with the Air Pollution Control Preconstruction Permit and Certificate to Operate issued by the New Jersey Department of Environmental Protection on September 2, 2011 by:

- ⇒ **Processing no more than one vehicle every 2.5 hours** (instead of every 2.0 hours);
- ⇒ Applying no more than 3 liters of Noxudol 300 S in any 2-hour period; and
- ⇒ Processing no more than 2,920 vehicles in any one spray space over any 12-month period.

This permit authorizes any potential future CRC campaign being conducted at the same dealership location. If your dealership never obtained this permit, or has moved its location since obtaining it, please call the EH&S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.

**Dealerships located in Toms River:** Comply with the more stringent local emissions limits for PM by:

- ⇒ **Processing no more than one vehicle every 3 hours** (instead of every 2.5 hours); and
- ⇒ Applying no more than 3 liters of Noxudol 300S in any 3-hour (instead of 2-hour) period.

**NEW YORK**

Comply with the Air Facility Registration Certificate issued by the New York State Department of Environmental Conservation to your dealership at the time of the Tacoma LSC 90D by:

- ⇒ Keeping actual emissions across your entire dealership below the thresholds that trigger more extensive permitting: 50 tpy of PM and either 12.5 tpy (New York City Metropolitan Area) or 25 tpy (all other areas) of VOCs; and
- ⇒ Paying the annual fees required to keep this Registration up-to-date.

This Registration authorizes any potential future CRC campaign being conducted at the same dealership location. If your dealership never obtained this Registration, or has moved its location since obtaining it, please call the EH&S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.

**Dealerships located in Rockland County:** Comply with the operating certificate issued by the Rockland County Department of Health to your dealership for the previous CRC campaigns.

- ⇒ This certificate authorizes any potential future CRC campaigns being conducted at the same dealership location.
- ⇒ If your dealership never obtained this certificate, or has moved its location since obtaining it, please call the EH&S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.

**Dealerships located in Westchester County:** Obtain a "waiver" of permitting requirements from Westchester County prior to beginning each CRC campaign. BEFORE beginning any CRC campaign, please call the EH&S Hotline (877-572-4347) so that TMS can work with you to obtain this waiver.

**Dealerships located in New York City:** Do not conduct any CRC campaigns, but arrange for your customers' vehicles to be processed by the contractor approved by TMS.



<b>OHIO</b>	
<p><b>Do either of the following:</b></p> <p><b>(1) Comply with the Permit to Install and Operate (PTIO) issued by Ohio EPA to your dealership at the time of the Tacoma LSC 90D by</b></p> <ul style="list-style-type: none"> <li>⇒ <b>Conducting all CRC campaigns at the location listed in the PTIO; and</b></li> <li>⇒ <b>Processing no more than 1,398 vehicles per year for all CRC campaigns combined. <u>OR</u></b></li> </ul> <p><b>(2) Follow the instructions in Part Two for revoking this PTIO and staying exempt from air permitting.</b></p>	<p><b>Dealerships located in <u>Butler, Clark, Clermont, Greene, Hamilton, Miami, Montgomery, or Warren County</u>: Confirm that you submitted an Automobile Refinishing Operations Notification to the local Ohio EPA District Office or Local Air Agency responsible for your county prior to beginning the Sequoia C0D; if so, then you may rely on this Notification for any potential future CRC campaign being conducted at the same location.</b></p> <p><b>If your dealership never submitted this Notification, or has moved its location since doing so, please call the EH&amp;S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.</b></p>
<b>PENNSYLVANIA</b>	
<p><b>Remain exempt by</b></p> <ul style="list-style-type: none"> <li>⇒ <b>Keeping total actual emissions from each CRC campaign under the thresholds established by the relevant air regulatory agency in its permit exemption determination:</b> <ul style="list-style-type: none"> <li>○ <b><u>All Counties Other Than Allegheny and Philadelphia Counties</u>: 0.11 ppv and 2.7 tpy per campaign for VOCs and 0.1 ppv and 0.12 tons per campaign for PM.</b></li> <li>○ <b><u>Allegheny County</u>: 0.1 tpy per campaign for VOCs and 0.12 tpy per campaign for PM.</b></li> <li>○ <b><u>Philadelphia County</u>: 0.11 lbs./vehicle and 1.0 tpy from all campaigns combined for VOCs and 0.1 ppv and 0.12 tpy per campaign for PM.</b></li> </ul> </li> <li>⇒ <b>Complying with the following other conditions in the permit exemption determination:</b> <ul style="list-style-type: none"> <li>○ <b>Process no more than seven vehicles per day; and</b></li> <li>○ <b>Use the Vaupel HSDR 3300 spray guns in a manner consistent with the written notification provided to your dealership by TMS with the guns. (See Part Two for details).</b></li> </ul> </li> </ul>	<p><b>No additional requirements.</b></p>

<b>RHODE ISLAND</b>	
<p>Remain below permitting thresholds by keeping PTE for the CRC campaigns below the 100 lbs/day and 10 lbs/hr permitting thresholds for any single air contaminant and any combination of air contaminants – which you can do by adhering to the vehicle processing limit of no more than 1 vehicle every 2 hours.</p>	No additional requirements.
<b>TENNESSEE</b>	
<p>Remain exempt by relying on the “insignificant activity” Determination of Agreement issued by the Tennessee Air Pollution Control Board to your dealership for the Sequoia COD.</p> <ul style="list-style-type: none"> <li>⇒ This Determination exempts any potential future CRC campaign being conducted at the same dealership location.</li> <li>⇒ If your dealership never obtained this Determination, or has moved its location since obtaining it, please call the EH&amp;S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.</li> </ul>	No additional requirements.
<b>VERMONT</b>	
<p>Remain exempt by:</p> <ul style="list-style-type: none"> <li>⇒ Keeping actual emissions across your entire dealership below the 5 tpy for VOCs and 5 tpy for PM thresholds that would trigger an annual registration.</li> <li>⇒ Maintaining on file the separate determination that no air permit is required, which TMS will obtain from the Vermont Department of Environmental Conservation for each CRC campaign and provide to your dealership.</li> </ul>	No additional requirements.
<b>VIRGINIA</b>	
<p>Remain exempt by keeping PTE across your entire dealership below the minor source permitting thresholds of 25 tpy for VOCs and 25 tpy for PM.</p>	No additional requirements.

**WEST VIRGINIA**

**Remain exempt by:**

- ⇒ **Keeping PTE and actual emissions of VOCs and PM for all CRC campaigns below the hourly, daily and yearly thresholds that would trigger air permitting – 6 lbs/hr, 144 lbs/day and 10 tpy.**
- ⇒ **Maintaining on file the separate determination that no air permit is required, which TMS will obtain from the West Virginia Department of Air Quality (DAQ) for each CRC campaign and provide to your dealership.**
- ⇒ **Maintaining records required by DAQ's determination for each CRC campaign that describe the campaign and the CRCs and document the PTE and actual emissions. (See Part Two for an emissions tracking log and copies of the appropriate documents.)**

**No additional requirements.**

**WISCONSIN**

**Remain exempt by keeping total actual emissions across your dealership under 10 tpy for VOCs and 10 tpy for PM.**

**No additional requirements.**

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TOYOTA CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

**PART TWO – STATE COMPLIANCE SUPPLEMENT FOR MICHIGAN**

This **Part Two – State Compliance Supplement for Michigan** provides further details on the two types of obligations that apply to CRC campaigns being conducted in Michigan:

- (1) federal, state and local regulations governing Volatile Organic Compounds (“VOCs”) and Particulate Matter (“PM”) air emissions and
- (2) state and local fire, building, environmental, safety and zoning codes.

Your dealership should review this Part Two carefully and use it together with the **Part One -- General Guide for Compliance**.

**SUGGESTIONS FOR USING THIS PART TWO:**

- Carefully review and follow **Step One** and **Step Two** on the following pages.
- Identify and review the information for your dealership location in the table at **Appendix A**.
- Maintain records as provided for in **Appendix B**.
- Refer to **Appendix C** if additional information is needed for compliance with the federal, state and local requirements related to air emissions in Michigan.



## Step One

### **Before Beginning Any CRC Campaign, Your Dealership Located In Michigan Should Take The Additional Actions Below.**

6. **CONFIRM AIR PERMIT EXEMPTION.**
  - a. Confirm that you will keep total emissions of VOCs and PM combined from the CRC campaigns below Michigan's "Limited Emissions Exemption" of 1000 pounds per month.
  - b. Document total emissions from the CRC campaigns on a monthly basis to demonstrate that your dealership qualifies for this Exemption using the **CRC Campaign Daily Production and Total Monthly Emissions Log** in **Appendix B**.
  - c. Bear in mind that non-CRC campaigns operations at your dealership could trigger Michigan air permitting unless they qualify for a separate exemption; it is your dealership's responsibility to address its compliance obligations for these non-CRC campaigns operations.

Refer to **Summary of Federal, State and Local Regulations Related to Air Emissions for Michigan** in **Appendix C** for details.

7. **CONFIRM LOCAL CODE COMPLIANCE.**
  - a. Confirm compliance with the approval issued by your local fire code enforcement official.
  - b. Review **Summary Of Additional Fire And Other Local Requirements For Michigan** in **Appendix A** to determine whether your dealership is subject to any additional requirements, and if so, confirm your compliance.

## Step Two

### **Begin Conducting The CRC Campaign, But Do So In Compliance With Obligations That Apply In Michigan.**

1. **COMPLY WITH HOURLY ALLOWABLE EMISSIONS RATE.** Keep PM emissions below the hourly allowable emissions rate by processing no more than 1 vehicle every 2 hours. Document adherence to this limit using the **CRC Campaign Daily Production and Monthly Emissions Log** in **Appendix B**.
2. **COMPLY WITH AIR RECORDKEEPING.** Retain completed logs as well as the following documents provided in **Appendix B** on file:
  - a. Process Overview for Toyota Motor Sales, U.S.A., Inc. CRC Campaigns;
  - b. The material safety data sheets for the two CRCs – Noxudol 300S and 712AM – being used for the CRC campaigns;

- c. The manufacturer's letter dated October 22, 2010 which certifies that the Vaupel HSDR 3300, when used to apply the CRCs, achieves a transfer efficiency of at least 65%;
- d. Approval by the California South Coast Air Quality Management District (SCAQMD) certifying that the Vaupel HSDR 3300 spray gun achieves High Volume Low Pressure (HVLV) equivalency when applying the CRCs;
- e. Vaupel HSDR 3300 Spray Equipment Manufacturer's Specifications; and
- f. CRC Campaigns Air Emissions Calculation Summary.

**IMPORTANT:** Your dealership should no longer use the logs, procedures and documents provided in the dealer information packets for the previous CRC campaigns, but should maintain previously completed logs for an appropriate period of time. While your dealership can make its own compliance decisions, it is recommended that you retain the above documents and all completed logs until 5 years after your dealership ceases its involvement in CRC campaigns.

If you have any questions after reviewing this Part Two – State Compliance Supplement for Michigan, please go to the C.L.E.A.N. Dealer website (<http://cleanddealer.com>) or call the EH&S Hotline (877-572-4347). Thank you for participating in the CRC campaigns.

TOYOTA MOTOR SALES, U.S.A., INC.

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CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

PART TWO – STATE COMPLIANCE SUPPLEMENT FOR MICHIGAN

APPENDIX A -- SUMMARY OF ADDITIONAL FIRE AND OTHER  
LOCAL REQUIREMENTS FOR MICHIGAN

In Michigan, no fire code approval was required at the state level, and therefore, your dealership should have obtained an approval to conduct the CRC campaigns from your local fire code enforcement official. You should confirm that your dealership can conduct the CRC campaign in compliance with this approval.

In some jurisdictions in Michigan, additional requirements may apply to any potential new CRC campaign pursuant to local fire, building, environmental, safety and/or zoning codes. You should use this Summary as a guide to identify additional fire and other local code requirements potentially relevant to the CRC campaigns. For any such requirement identified, you should then determine whether the requirement applies to your dealership when conducting any potential new CRC campaign and, if so, confirm your compliance.

**IMPORTANT:** This Summary contains information (including local official contact information) gathered by TMS in 2010 at the time of the Tundra B0D and is being provided as part of this CRC Campaigns Dealer Information Packet to support your dealership's continued compliance with additional fire and other local code requirements. **Subsequent to 2010**, however, it is possible that your local jurisdiction has enacted new codes or revised existing codes in a manner that would add, modify or eliminate the potentially relevant requirements identified in this Summary. It is your dealership's responsibility to keep informed of any changes in local codes that may impact the CRC campaigns and to adjust your compliance actions as necessary.

**Table 1: Code Summary for Michigan Locations**

Location	Other Potentially Relevant Local Requirements
Ann Arbor	Follow Scio Township requirements
Bangor Township	<p>Confirm that your dealership updated its Pollution Incident Protection Plan prior to conducting the previous CRC campaigns; if you have not done so, or have any questions regarding this requirement, please call the EH&amp;S Hotline (877-572-4347).</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Building Inspection &amp; Zoning Office 180 State Park Drive Bay City, MI 48706-1763 (989) 684-5427</p>
Battle Creek MI	<p>Verify whether dealership is located within a Special Flood Hazard Area, and if so, comply with any applicable requirements for the use, storage and disposal of CRC materials.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Planning and Community Development Commerce Pointe 77 East Michigan Ave. Battle Creek, MI 49017 (269) 966-3320</p>
Bay City	Follow Bangor Township requirements
Benton Charter Township MI	<p>Verify whether dealership is located within a floodway overlay district, and if so, comply with any applicable requirements for the use, storage and disposal of CRC program materials.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Thomas E. Baldwin, CBCO Building Official 1725 Territorial Rd, Benton Harbor, MI 49022 (269) 925-7284</p>



<b>Benton Harbor</b>	Follow Benton Charter Township requirements
<b>Cadillac</b>	Follow Haring Township requirements
<b>Canton (Charter Township)</b>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>John Weyer Building Official 1150 Canton Center S. Canton, MI (734) 394-5200</p>
<b>Center Line (Township)</b>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Roger A. Pinch, Building Inspector 7070 E. Ten Mile Rd. Center Line, MI 48015 (586) 757-6800</p>
<b>Cheybogan</b>	Follow Inverness Township requirements
<b>City of Holland</b>	Follow Holland Township requirements
<b>City of Monroe</b>	Follow Monroe Township requirements
<b>Clinton Township</b>	<p>Do not dispose of any CRC campaign materials in any container containing refuse.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Carlo Santia, Director Planning and Community Development Dept. of Planning &amp; Comm. Dev. 40700 Romeo Plank Road Clinton Township, MI 48038 (586) 286-9325</p>

<p><b>Dearborn</b></p>	<p>Verify whether dealership is located within a Floodplain Zoning District, and if so, comply with any applicable requirements for the use, storage and disposal of CRC materials.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact</u></p> <p>John Nagy, Planner  City Planning  13615 Michigan Ave. 2nd Floor  Dearborn, MI 48126  (313) 943-2170</p>
<p><b>Escanaba</b></p>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact</u></p> <p>Blaine Degrave, Code Enforcement Officer  Community Development/Planning Office  Escanaba City Hall/Library Complex  410 Ludington Street  Escanaba, MI 49829  (906) 786-9402</p>
<p><b>Farmington Hills</b></p>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Darryl Derocher  Zoning Division - Enforcement  City of Farmington Hills  31555 W. Eleven Mile Road  Farmington Hills, MI 48336  (248) 871-2523</p>
<p><b>Fruitport Township</b></p>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Fruitport Charter Township  6543 Airline Rd  Fruitport, MI 49415  (231) 865-3151</p>

<p><b>Grand Blanc</b></p>	<p>Verify whether dealership is located within a Floodplain Zoning District, and if so, comply with any applicable requirements for the use, storage and disposal of CRC materials.</p> <p>Verify whether dealership is located within a GC zone (General Commercial), and if so,</p> <p>II. Determine whether you must obtain a Special Land Use Permit (call the EH&amp;S Hotline (877-572-4347) for assistance) and</p> <p>III. Comply with any applicable requirements for the use, storage and disposal of CRC materials, including any requirements for the use of hazardous materials (defined to include combustible materials such as the CRC materials).</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Michael Deem, Township Planner          Planning and Zoning          P. O. Box 1833          Grand Blanc, MI 48480-0057          (810) 424-2600</p>
<p><b>Grand Rapids</b></p>	<p>Do not store any CRC campaign materials outside within 10 feet of a property line and within 20 feet of any structure.</p> <p>Verify whether dealership is located within a floodway area zone, and if so, comply with any applicable requirements for the use, storage and disposal of CRC materials.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Development Center          1120 Monroe Ave. NW          Grand Rapids, MI 49503          (616) 456-4100</p>
<p><b>Grand Rapids (See Plainfield Township)</b></p>	

<p><b>Haring Township</b></p>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact</u></p> <p>Michael Green, Zoning Administrator Township of Haring 515 Bell Avenue Cadillac, MI 49601 (231) 779-9501</p>
<p><b>Holland Township</b></p>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Jon Mersman, Planner and Zoning Administrator Holland Charter Township 353 North 120th Avenue Holland, MI 49424 (616) 395-0196</p>
<p><b>Inverness Township</b></p>	<p>Verify whether dealership is located within ½ mile of the ordinary high water mark of any river, stream, pond or lake, and if so, comply with any applicable requirements for the use, storage and disposal of CRC materials.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Debbie Tomlinson Cheboygan County Building Planning and Zoning 870 South Main Street, Cheboygan, MI 49721</p>
<p><b>Iron Mountain</b></p>	<p>Verify that dealership's current zoning and/or use permit and any other applicable local ordinances allow the CRC campaign.</p> <p><u>Contact:</u></p> <p>Planning and Community Development 501 S. Stephenson Ave. Iron Mountain, MI 49801 Phone: 906-774-8530 Fax: 906-774-3774</p>
<p><b>Kalamazoo</b></p>	<p>Follow Oshtemo Township requirements</p>

<p><b>Lansing</b></p>	<p>Conduct the CRC campaign within the confines of an enclosed structure (e.g., in your dealership's service garage).</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Chris Segerlind  Manage of Building Safety/Code Compliance  City of Lansing  Planning Office  316 North Capitol Ave., Suite C-1  Lansing, MI 48933  (517) 483-4375</p>
<p><b>Marquette</b></p>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Community Development  Planning / Zoning  300 W. Baraga Marquette,  Marquette, MI 49855  (906) 228-0425</p>
<p><b>Monroe Township</b></p>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Monroe Charter Township  4925 West Dunbar Road  Monroe, Mi 48161  (734) 241-5501</p>
<p><b>Mt. Clemens (See Clinton Township)</b></p>	
<p><b>Muskegon</b></p>	<p>Follow Fruitport Township requirements</p>

<p><b>Oshtemo Twp</b></p>	<p>Verify that conducting any potential new CRC campaign does not constitute a "change of use" under your zoning permit. (If it does, then a site plan would be required.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Oshtemo Township  Jodi Stefforia  Planning Director  7275 W. Main Street,  Kalamazoo, MI 49009  (269) 216-5223</p>
<p><b>Plainfield Township</b></p>	<p>Verify whether dealership is located within a 100-year flood zone, and if so, comply with any applicable requirements for the use, storage and disposal of CRC materials.</p> <p>Conduct all CRC campaigns within a completely enclosed building (e.g., your dealership's service garage).</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Bill Fischer  Community Development Director  Plainfield Charter Township  6161 Belmont Ave, NE  Belmont, MI 49306-9609  (616) 726-8899</p>
<p><b>Rochester Hills</b></p>	<p>Verify whether dealership is located within a wetland protection area, and if so, comply with any applicable requirements for the use, storage and disposal of CRC materials.</p> <p><u>Contact:</u></p> <p>Ed Anzek, Director  Department of Planning and Development  The City of Rochester Hills, Michigan  1000 Rochester Hills Drive  Rochester Hills, MI 48309  (248) 656-4660</p>

<p><b>Saginaw</b></p>	<p>Conduct all CRC campaigns within a wholly enclosed building constructed in accordance with an approved site plan (e.g., your dealership's service garage).</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>John Stemple  City Hall, Second Floor  1315 S Washington Ave  Saginaw, MI 48601</p>
<p><b>Scio</b></p>	<p>Store all CRC campaign materials and supplies in an enclosed building.</p> <p>Confirm that your dealership has a spill response plan in place.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Doug Lewan  Planning and Zoning  Scio Township  827 N. Zeeb Road  Ann Arbor, MI 48103-1599  (734) 665-2123</p>
<p><b>Southfield</b></p>	<p>Verify whether dealership is located within a 100-year flood zone, and if so, comply with any applicable requirements for the use, storage and disposal of CRC materials.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p><u>Nicholas G. Banda</u>, Director  City of Southfield Planning Department  City of Southfield  26000 Evergreen Road  Southfield, MI 48076  (248) 796-5000</p>



<p><b>Traverse City</b></p>	<p>Do not dispose of any CRC materials in trash receptacles or bundles.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Russell Soyring, Planning Director:  City of Traverse City  Governmental Center, 2nd Floor  400 Boardman Avenue  Traverse City, MI 49684  (231) 922-4460</p>
<p><b>Troy</b></p>	<p>Conduct all CRC campaigns within a completely enclosed building (e.g., your dealership's service garage).</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>R. Brent Savidant, Planning Director  City of Troy  Planning Department  (248) 524-3364</p>
<p><b>Warren</b></p>	<p>Verify that dealership's current zoning and/or use permit allows a new CRC campaign.</p> <p><u>Contact:</u></p> <p>Ronald F. Wuerth, Planning Director  One City Square, Ste. 315  Warren, MI 48093-5283  (586) 574-4687</p>
<p><b>Waterford Township</b></p>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><u>Contact:</u></p> <p>Robert W. Vallina, AICP  Director Waterford Township Community Planning and Development  5200 Civic Center Drive  Waterford, Michigan 48329-3773  (248) 674-6255</p>







CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

PART TWO – STATE COMPLIANCE SUPPLEMENT FOR MICHIGAN

APPENDIX B – RECORDKEEPING FORMS AND  
OTHER DOCUMENTS FOR MICHIGAN

Your dealership should maintain appropriate compliance records. To assist you, TMS has developed the **CRC Campaign Daily Vehicle Production and Monthly Emissions Log**. Maintain this log for two purposes: (1) to track the time spent on each vehicle, and thereby, demonstrate your dealership's adherence to the vehicle processing limit and its compliance with the allowable PM emissions rate and (2) to track total monthly emissions of VOCs and PM combined from the CRC campaigns, and thereby, document that emissions are below the 1,000 pounds per month "Limited Emissions Exemption" from air permitting.

In addition to the foregoing document, your dealership should also maintain copies of the following documents on file:

- ⇒ Process Overview for Toyota Motor Sales, U.S.A., Inc. CRC Campaigns;
- ⇒ The material safety data sheets for the two CRCs – Noxudol 300S and 712AM – being used for the CRC campaigns;
- ⇒ The manufacturer's letter dated October 22, 2010 which certifies that the Vaupel HSDR 3300, when used to apply the CRCs, achieves a transfer efficiency of at least 65%;
- ⇒ The March 22, 2011 California South Coast Air Quality Management District's (SCAQMD) determination that the Vaupel HSDR 3300 spray guns used in the CRC campaigns is equivalent to High Volume Low Pressure (HVLP) application equipment;
- ⇒ Vaupel HSDR 3300 Spray Equipment Manufacturer's Specifications; and
- ⇒ CRC Campaigns Air Emissions Calculation Summary.

It is important that your dealership maintain the foregoing records for an appropriate period of time. While your dealership can make its own compliance decisions, *it is recommended that you retain the above documents and all completed logs until 5 years after your dealership ceases its involvement in CRC campaigns.*

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CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

CRC CAMPAIGN DAILY VEHICLE PRODUCTION AND  
MONTHLY EMISSIONS LOG  
MICHIGAN

You have two options for completing the CRC Campaign Daily Vehicle Production Log and Monthly Emissions Log (VPL). Choose the option that fits best with your dealership's operations.

- **Option 1 -- Electronic Spreadsheet.** (Microsoft Excel version -- available on the C.L.E.A.N. Dealer website (<http://cleandealer.com>)):
  - TMS has developed a VPL spreadsheet that will automatically calculate total VOCs and PM emissions from the CRC campaigns on a daily and monthly basis.
  - *If your dealership has the ability to create and maintain electronic records, then Option 1 will be the easiest for you.*
  - REMEMBER: It is important to follow the instructions on the spreadsheet carefully to ensure accuracy of the automatic VOC and PM emissions calculations.
  
- **Option 2 -- Hard-Copy Log**
  - For dealerships not able to utilize Option 1, TMS has developed a hard copy VPL that you will fill out manually to create appropriate records.
  - Use the "Emissions Estimator" Table on the VPL to determine the VOC and PM emissions for each vehicle processed based on the type of CRC kit (*i.e.*, part number) used for that vehicle.
  - To determine total VOC and PM emissions for each month, you can either:
    - add up the VOC emissions recorded for each vehicle processed during the month, then do the same for PM; or
    - use the "Total Emissions Calculator" to determine total VOC or PM emissions based on the emissions factors provided for each type of CRC kit (*i.e.*, part number) and the number of each kit type used during the month. *This approach may be best if your dealership has processed a large number of vehicles during the month.*
  - Each month, add together the total VOC and PM emissions to calculate your dealership's total emissions from CRC operations.

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## Instructions for Completing the Michigan CRC Campaign Daily Vehicle Production and Monthly Emissions Log

Follow these 4 steps to complete the Michigan CRC Campaign Vehicle Production and Monthly Emissions Log.

Keep the completed logs in your dealership's records for a period of five (5) years after your dealership ceases its involvement in CRC Campaigns.

**Step 1:**  
Enter your dealership's name and recording period at the top of each page of the VPL.

**Step 2:**  
Enter the date on which you process the vehicle and its make and model year.

**Step 3:**  
Enter the time you finish processing the vehicle and the type of CRC Kit (part number) used.

**REMEMBER:** To comply with air emissions limits, you should not process more than one vehicle every two hours.

Dealership Name: \_\_\_\_\_

Recording Period: \_\_\_\_\_  
[Month/Year]

Date	Vehicle Make and Model Year	Time of Completion	Kit Type	Emissions	
				VOC (lbs)	PM (lbs)
3-1-12	2004 Tundra	2:15 PM	00289-T00KT-DS	0.12	0.10
3-1-12	2003 Sequoia	4:30 PM	00289-S00KT-DS	0.16	0.11
3-3-12	2007 Tundra	10:00 AM	00289-T00KT-DS	0.12	0.10
3-10-12	2003 Tundra	4:30 PM	00289-T01KT-DS	0.05	0.06
			<b>Total</b>	<b>0.45</b>	<b>0.37</b>
			<b>Total Emissions (VOC + PM)</b>	<b>0.82</b>	

**Step 4:**  
On a monthly basis, use either the Emissions Estimator (Step 4-A) or the Total Emissions Calculator (Step 4-B) to determine your total VOC and PM emissions.

**Step 4-A (Emissions Estimator Option):**  
Using the Emissions Estimator below, enter the VOC and PM emissions on the VPL for each vehicle. At the end of the month, add up the values in each column to determine the monthly total emissions.

### EMISSIONS ESTIMATOR

Locate the row in the table below that corresponds to the type of CRC Kit used to process each vehicle. Enter the VOC and PM emission values from the table below in the corresponding box of the VPL. At the end of the month, add up the values in the VOC column to get the total VOC emissions, then do the same for PM. Add the total VOC and total PM emissions together to get the total emissions for that month.

Kit Type (Part Number):	VOC (lbs)	PM (lbs)
00289-T00KT-DS	0.12	0.10
00289-S00KT-DS	0.16	0.11
00289-T01KT-DS	0.05	0.06

**Step 4-B (Total Emissions Calculator Option):**  
Do not use the Emissions Estimator. Instead, use the Total Emissions Calculator below to calculate your VOC and PM emissions during the month.

**TOTAL EMISSIONS CALCULATOR**

From the VPL above, enter in Column A the number of vehicles processed with each type of CRC Kit during the month. In Columns B and C, multiply the number in Column A by the listed VOC or PM emission factor. Finally, add up the values in each of Columns B and C to get the total VOCs and total PM emitted, then add the total VOC and total PM emissions together. Enter these amounts in "Total" and "Total Emissions" lines on the VPL.

	<b>A</b>	<b>B</b>	<b>C</b>
<b>Kit (Part Number)</b>	<b>Number of Vehicles Processed</b>	<b>VOC (lbs)</b>	<b>PM (lbs)</b>
00289- <u>T00KT</u> -DS	2	Multiply Col. A x 0.12 = <u>0.24</u>	Multiply Col. A x 0.10 = <u>0.20</u>
00289- <u>S00KT</u> -DS	1	Multiply Col. A x 0.16 = <u>0.16</u>	Multiply Col. A x 0.11 = <u>0.11</u>
00289- <u>T01KT</u> -DS	1	Multiply Col. A x 0.05 = <u>0.05</u>	Multiply Col. A x 0.06 = <u>0.06</u>
	<b><u>Total</u></b>	Sum of column B = <u>0.45</u>	Sum of column C = <u>0.37</u>
	<b><u>Total Emissions (VOC + PM)</u></b>	<u>0.82</u>	

**KIT REFERENCE TABLE:**

<b>Kit (Part Number)</b>	<b>Liters of Noxudol 300 S (VOC content = 0.09 lbs/gal)</b>	<b>Liters of 712 AM (VOC content = 0.165 lbs/gal)</b>
00289- <u>T00KT</u> -DS	3	1
00289- <u>S00KT</u> -DS	3	2
00289- <u>T01KT</u> -DS	2	0

**Note: Start a new VPL each month.**

**Note:** If your total aggregate emissions in any month exceed 1,000 pounds, please go to the C.L.E.A.N. Dealer website (<http://cleandealer.com>) or call the EH&S Hotline (877-572-4347).







Dealership: \_\_\_\_\_

Recording Period: \_\_\_\_\_  
 [Month/Year]

**TOTAL EMISSIONS CALCULATOR**

From the VPL above, enter in Column A the number of vehicles processed with each type of CRC Kit during the month. In Columns B and C, multiply the number in Column A by the listed VOC or PM emission factor. Finally, add up the values in each of Columns B and C to get the total VOCs and total PM emitted, then add the total VOC and total PM emissions together. Enter these amounts in "Total" and "Total Emissions" lines on the VPL.

	A	B	C
Kit (Part Number)	Number of Vehicles Processed	VOC (lbs)	PM (lbs)
00289- <u>T00KT</u> -DS		Multiply Col. A x 0.12 = _____	Multiply Col. A x 0.10 = _____
00289- <u>S00KT</u> -DS		Multiply Col. A x 0.16 = _____	Multiply Col. A x 0.11 = _____
00289- <u>T01KT</u> -DS		Multiply Col. A x 0.05 = _____	Multiply Col. A x 0.06 = _____
	<b><u>Total</u></b>	Sum of column B = _____	Sum of column C = _____
	<b><u>Total Emissions (VOC + PM)</u></b>	_____	

**Note: Start a new VPL for the next month.**

**Note:** If your total aggregate emissions in any month exceed 1,000 pounds, please go to the C.L.E.A.N. Dealer website (<http://cleanddealer.com>) or call the EH&S Hotline (877-572-4347).

Maintain these documents in your dealership's records for a period of five (5) years after your dealership ceases its involvement in CRC Campaigns.

**Duplicate as Necessary**

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## CORROSION-RESISTANT COMPOUND CAMPAIGNS DEALER INFORMATION PACKET

### CRC CAMPAIGN PROCESS OVERVIEW

Toyota has launched Corrosion-Resistant Compound (“CRC”) campaigns for particular vehicles registered in certain cold climate states with high road salt use (“Cold Climate States”) to address the potential for greater than expected levels of vehicle frame corrosion. This “CRC Campaign Process Overview” provides a general description of the process being used by Toyota dealers to apply CRCs to vehicle frame surfaces.

The CRC Campaigns entail the application of two Class IIIB combustible liquids (“CRCs”) to an eligible vehicle’s frame – one to the exterior and the other to interior frame surfaces – using a Vaupel HSDR 3300 spray gun. Toyota has issued dealers 2 of these spray guns, with instructions to dedicate one to the interior and the other to the exterior CRC and to use these guns only for the CRC campaigns. The CRC campaigns are occurring indoors in an existing dealership service area. Dealers have been instructed to comply with fire, zoning, air and building codes when conducting the CRC campaigns, including to comply with all recordkeeping and material handling requirements.

The CRC campaigns process consists of three primary steps:

1. **Work Area Setup**
2. **Vehicle Inspection and Preparation**
3. **CRC Application**

**Step 1: Work Area Setup.** Dealers are conducting the CRC campaigns in a dedicated work space in the dealership’s service area that has a vehicle lift, is well ventilated, is located away from other vehicles, is at least 20 feet away from open flames, spark-producing equipment and drying, curing or fusion apparatuses, has appropriately-rated fire extinguishers in the immediate vicinity and can be sectioned off with temporary partitions. No physical alteration of the workspace or installation of new equipment is required for the CRC campaigns.

**Step 2: Vehicle Inspection and Preparation.** Dealers should employ the following procedures to prepare their service areas and vehicles for spraying.

- Visually Inspect for Frame Perforation Based On Toyota Inspection Criteria. If the vehicle frame has perforation in excess of Toyota’s inspection criteria, then it will be replaced and CRCs will not be applied.
- Clean Frame. It may be necessary to clean the frame with mechanical methods, including pressure washing. No chemicals or solvents will be used to clean the frame.
- Place Vehicle on Lift. Raise the vehicle using the vehicle lift; remove certain vehicle components as necessary to apply the CRCs to the vehicle frame (e.g., tires and wheels, spare tire, engine under cover, bumper cover, etc.).
- Work Area Setup. Place tarp beneath vehicle and set up temporary partitions around vehicle. Tarps are intended to capture limited overspray and to facilitate clean-up.

- **Prepare Frame.** Manually remove rust from frame using scraper, chisel, and/or compressed air (e.g., air scalers).
- **Clean Frame (Secondary Cleaning).** Manually remove any remaining rust or dirt using wire brush and air nozzle.
- **Secondary Visual Inspection.** Visually inspect the frame to ensure no perforation meeting Toyota's criteria was uncovered during the manual rust removal and cleaning process.
- **Temperature Measurement.** Use an infrared thermometer to ensure the vehicle exhaust system has sufficiently cooled prior to any spraying.
- **Mask Parts.** Mask areas not to be sprayed (e.g., drive shaft, brake/hub assemblies, exhaust, other electrical components, etc.).
- **Attach Plastic Sheet.** Attach plastic sheet to frame capture any internal CRC that may drip through small holes in the frame; use magnets to suspend a plastic sheet underneath the frame.

**Step 3: CRC Application.** Dealers should apply the CRCs to vehicle frame surfaces as follows:

- **Setup Spray Gun for Internal Frame CRC Application.** Prepare the Vaupel HSDR 3300 spray gun dedicated to the interior CRC.
- **Apply CRC to Interior of Frame.** Insert select spray nozzle a specified distance into holes in the frame identified in the Technical Instructions for the particular CRC campaign. Press spray gun trigger and pull out nozzle at fixed speed while spraying interior surface of frame with the CRC. Complete the number of laps indicated in the Technical Instructions for each hole. When finished, wipe away any residual CRC on the frame's exterior with cloths or paper towels.
- **Remove Plastic Sheet Suspended From Frame.**
- **Install Foam Blocks and Body Plugs.** After spraying the CRC to the frame interior, insert foam blocks and body plugs to keep CRC in the frame's interior and to limit water and road spray from entering the frame or cross-members.
- **Setup Spray Gun for External Frame CRC Application.** Prepare the Vaupel HSDR 3300 spray gun dedicated to the exterior CRC.
- **Apply CRC to Frame Exterior.** Following spray gun set up, hold the unidirectional handheld spray nozzle a distances from the frame surface specified in the Technical Instructions for the particular CRC campaign. Press spray gun trigger and spray the CRC on the top of portion of the frame by moving spray nozzle at fixed speed across frame surface.
- **Apply External Frame CRC to Lift Contact Points.** Lower the vehicle halfway, reinstall wheels, lower vehicle and apply CRC to the areas where the lift arms touched.
- **Raise Vehicle to Facilitate Post Spray Vehicle Restoration.** Raise the vehicle and remove protective tape and all fire retardant sheeting and plastic coverings.
- **Take Final Steps Necessary to Return Vehicle Customer.** Reinstall components (such as the engine undercover); lower vehicle from lift; complete reinstallation of other components

(such as the rear bumper cover); and place vehicle in a location where CRCs can cure for 24 hours before returning vehicle to customer.

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# MATERIAL SAFETY DATA SHEET

## PARKER INDUSTRIES

16-8, NIHONBASHI 2-CHOME,  
CHUO-KU, TOKYO 103-0027, JAPAN  
TELEPHONE: (03) 5205-1973  
FAX: (03) 5205-1981

EMERGENCY CONTACT:  
CHEMTREC (800) 424-9300

## HMIS HAZARD RATING

HEALTH	1
FIRE	1
REACTIVITY	0
PERSONAL PROTECTION	B

Date of Review:  
Date of Preparation: November 14, 2007

Revised: March 17, 2011  
By: Y.Yamada

## SECTION 1: PRODUCT IDENTIFICATION

Product Name: 712AM  
Chemical Family: Petroleum oil/additive blend  
Material Usage: Corrosion Preventive Compound

EMERGENCY OVERVIEW: Petroleum oil-based product. When product burns it releases typical hydrocarbon products of combustion. Refer to Section 3 for health effects and to Section 5 for fire hazard data.

## SECTION 2: HAZARDOUS INGREDIENTS

Component	Wt%	Recommended Exposure Limits (TWA)
Microcrystalline wax CAS #64742-42-3	5-10	ACGIH TLV: 2 mg/m <sup>3</sup> OSHA PEL: 2 mg/m <sup>3</sup>
Petroleum distillates, solvent dewaxed heavy paraffinic CAS #64742-65-0	5-15	ACGIH TLV: 5 mg/m <sup>3</sup> OSHA PEL: 5 mg/m <sup>3</sup>
Sulfonic acids, petroleum, Calcium salts, overbased CAS #68783-96-0	5-15	ACGIH TLV: 5 mg/m <sup>3</sup> (oil mist) OSHA PEL: 5 mg/m <sup>3</sup> (oil mist)
White mineral oil, petroleum CAS #8042-47-5	50-60	ACGIH TLV: 5 mg/m <sup>3</sup> (oil mist) OSHA PEL: 5 mg/m <sup>3</sup> (oil mist)
Bentonite, quaternary ammonium compound modified CAS# 68953-58-2	0.3-1.0	Not established

Soybean oil polymer with isophthalic acid and pentaerythritol CAS# 66071-86-1	0.4-4	Not established
Castor oil, dehydrated, polymerized CAS# 68038-02-8	5-15	Not established
Calcium Carbonate CAS #471-34-1	5-10	OSHA PEL: 5 mg/m <sup>3</sup> (respirable fraction) OSHA PEL: 15 mg/m <sup>3</sup> (total dust) ACGIH TLV: 10 mg/m <sup>3</sup> ( <sup>[2]</sup> nuisance dust)

<sup>[2]</sup> This component poses a hazard only if a dust is formed, i.e., by sawing, sanding, drilling, etc.

### SECTION 3: HEALTH HAZARD INFORMATION

**Primary Routes of Entry:** Skin absorption, eyes (splashing).

**Acute Effects:** May cause eye irritation and reversible skin irritation. Prolonged skin exposure may cause dermatitis or oil acne. Breathing mists may cause dizziness or pulmonary irritation.

**Chronic Overexposure:**

**Carcinogenicity:** None of the components of this product are listed as carcinogens by NTP, IARC, or OSHA 1910(Z).

**Pre-Existing Medical Conditions Aggravated by Exposure:** Exposure may aggravate pre-existing respiratory or skin problems.

### SECTION 4: FIRST AID PROCEDURES

**Inhalation (mist):** Move victim to fresh air and call emergency medical care. If not breathing, give artificial respiration; if breathing is difficult, give oxygen.

**Eyes:** In case of contact with material, immediately flush eyes with running water for at least 15 minutes. Seek immediate medical attention.

**Skin:** Wash skin with soap and water. Remove and isolate contaminated clothing and shoes at the site.

**Ingestion:** DO NOT INDUCE VOMITING. Consult a physician. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

### SECTION 5: FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** >200°C (TCC)

**Explosive Limits:** LEL: N/A UEL: N/A

**EXTINGUISHING MEDIA:** Small Fires: Dry chemical, CO<sub>2</sub>, water spray, or regular foam. Large Fires: Water spray, fog, or regular foam. Move container from fire area if you can do it without risk. Apply cooling water to sides of containers that are exposed to flames until well after fire is out. Stay away from ends of tanks. For massive fire in cargo area, use unmanned hose holder or monitor nozzles. If this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.

**Special Firefighting Protection/Emergency Action:** Fire may produce irritating or poisonous gases. Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide limited protection. Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Isolate for 1/2 mile in all directions if tank, rail car or tank truck is involved in fire. If runoff from fire control occurs, notify the appropriate authorities.

**Unusual Fire/Explosion Hazards:** Combustible material; may be ignited by flames. Container may explode in heat of fire.

**Products of Combustion:** Carbon monoxide, carbon dioxide, oxides of sulfur, miscellaneous hydrocarbons.

## SECTION 6: SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

**Steps to be taken in case Material is Released or Spilled:** Shut off ignition sources; no flares, smoking or flames in hazard area. Stop leak if you can do it without risk.

**Small Spills:** Take up with sand or other noncombustible absorbent material and place into containers for later disposal.

**Large Spills:** Dike far ahead of liquid spill for later disposal.

## SECTION 7: SAFE HANDLING INFORMATION

**Precautions To Be Taken In Handling/Storage:** Store in cool, well-ventilated area. Keep away from flames. Never use a torch to cut or weld on or near container.

**Other Precautions:** Never wear contaminated clothing. Launder or dry clean before wearing. Discard oil-soaked shoes. Wash thoroughly with soap and water (waterless hand cleaner may be helpful in removing residues) after use and before smoking or eating. Avoid excessive skin contact.

## SECTION 8: EXPOSURE CONTROLS

**Respiratory Protection:** NIOSH-approved respirator for organic vapor and mist to control exposure where ventilation is inadequate.

**Ventilation:** General and local exhaust.

**Personal Protective Equipment:** Protective Gloves: Impervious gloves (Viton, PVOH, etc.) Eye Protection: Safety glasses with sideshields or chemical goggles. Other Protective Clothing or Equipment: If splashing is anticipated, wear rubber apron and boots or other protective equipment to minimize contact.

## SECTION 9: REACTIVITY HAZARD DATA

**Stability:** Stable

**Incompatibility:** Strong acids, oxidizing agents.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide, oxides of sulfur, miscellaneous hydrocarbons.

**Hazardous Polymerization:** Will not occur.

## SECTION 10: PHYSICAL AND CHEMICAL PROPERTIES

Color:	Tan
Appearance:	Viscous Liquid
Odor:	Oil
Boiling Point (initial):	NA
Evaporation Rate (n-Butyl Acetate=1):	<<1
Vapor Pressure (mmHg @ 20°C):	3.4
Vapor Density (air=1):	NA
Solubility in Water:	Not Determined
Specific Gravity:	.9-1.0
pH:	Not Applicable
Percent Volatile by Volume:	0

## SECTION 11: DISPOSAL CONSIDERATIONS

**Waste Disposal Methods:** Dispose of in accordance with state, local and federal regulations. Materials may become a hazardous waste through use. If permitted, incineration may be practiced. Consider recycling solvent.

**SECTION 12: REGULATORY INFORMATION**

**Volatile Organic Content: (EPA Method 24)**

VOC per gallon:

0.165 lbs/gal

**EPA Hazardous Waste Number(s) (40CFR Part 261):**

D001

**EPA Hazard Category (40CFR Part 370):**

DELAYED (CHRONIC)

**SARA TITLE III**

This product contains the following **TOXIC CHEMICALS** subject to the *Reporting Requirements of Sec. 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and of 40CFR Part 372:*

CHEMICAL	CAS NO.	WT %
----------	---------	------

NONE

This product contains the following **EXTREMELY HAZARDOUS SUBSTANCE(S)** subject to the *Emergency Planning Requirements under Sec. 301-303 (40CFR Parts 300 and 355) and Emergency Release Notification Requirements under Sec. 304:*

CHEMICAL	CAS NO.	WT %	RQ/TPQ Lbs
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NONE

(CERCLA LIST) This product contains the following **HAZARDOUS SUBSTANCE(S)** subject to *Emergency Release Notification Requirements under Sec. 304 (40 CFR Part 302):*

CHEMICAL	CAS NO.	WT %	Final RQ Lbs
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NONE

**CALIFORNIA PROPOSITION 65**

This product may contain trace quantities of the following chemicals that are identified by the State of California under the Safe Drinking Water and Toxic Reinforcement Act of 1986 ("Proposition 65") as either a carcinogenic or reproductive hazard:

CHEMICAL	CAS NO.	Estimated Concentration %
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NONE

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Although the information contained herein is believed to be reliable, it is furnished without warranty of any kind. This information is not intended to be all-inclusive as to the manner and conditions of use, handling, and storage.



# MATERIAL SAFETY DATA SHEET

## Noxudol 300 S

Last Updated April 18, 2011

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Noxudol 300 S  
**Product Codes:** None  
**Product Use:** Vehicle Underbody Coating

**Synonyms:** None  
**Chemical Name:** Anti Rust Compound

**Manufacturer:** Auson AB  
Verkstadsgratan 3  
S-434 42 Kungsbacka  
Sweden  
[www.auson.se](http://www.auson.se)

**US Distributor:** Soken Trade Corporation  
12055 Sherman Way  
North Hollywood, CA  
USA  
[www.noxudolusa.com](http://www.noxudolusa.com)  
(800) 598-3535  
(818) 308-8427

**PHONE:** +46 300-562000  
**FAX:** +46 300-562001

For Chemical Emergency (Spill, Leak, Fire, Exposure, or Accident) Call CHEMTREC Day or Night  
USA or Canada: 1-800-424-9300 Outside USA or Canada: +1 703-527-3887 (collect calls ok)

**PREPARED BY:** MSDS Authoring Services  
**VERSION:** 1

**ISSUE DATE:** March 1, 2011  
**SUPERSEDES DATE:** None

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

#### CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

<u>Chemical Name</u>	<u>Amount % by Wt.</u>	<u>CAS Number</u>	<u>OSHA PEL (ppm)</u>	<u>ACGIH STEL (ppm)</u>
Solvent-refined heavy paraffinic distillate	30-60%	64741-88-4	5	None
Petroleum sulfonate, calcium salt, calcium hydroxide and calcium carbonate dispersion	20-30%	68783-96-0	None	None
Fatty acids, tall-oil, polymers with isophthalic acid, pentaerythritol and tall oil	10-20%	68410-37-7	None	None
Paraffin and hydrocarbon waxes	10-20%	8002-74-2	None	2 (fume)
Calcium carbonate (limestone) used as filler/pigment	<2%	1317-65-3	15 for total dust; 5 for respirable fraction	10 for total dust; 3 for respirable fraction
Carbon black	1%	1333-86-4	3.5	3.5
Crystalline silica	<0.1%	14808-60-87	10/(%SiO <sub>2</sub> +2) (respirable)	2.5

**California Prop 65:** This product may contain trace quantities of chemicals that are identified by the State of California under the Safe Drinking Water and Toxic Reinforcement Act of 1986 ("Proposition 65") as either a carcinogenic or reproductive hazard.

**HAZARDS DISCLOSURE:** This product contains known hazardous materials in reportable levels as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200 except as listed above. As defined under Sara 311 and 312, this product contains known hazardous materials.



**3. HAZARDS IDENTIFICATION****EMERGENCY OVERVIEW:  
CAUTION! COMBUSTIBLE LIQUID.**

HMIS/NFPA Rating: See Section 16

**POTENTIAL HEALTH EFFECTS**

**ROUTES OF ENTRY:** Skin contact, eye contact, inhalation and ingestion.

**INHALATION:** High vapor concentrations may cause headache, dizziness, fatigue, nausea, and vomiting.

**INGESTION:** May cause abdominal pain, nausea, and vomiting.

**SKIN CONTACT:** Contact may be irritating to skin. May defat skin.

**EYE CONTACT:** Contact may be irritating to eyes. May cause stinging.

**CHRONIC EXPOSURE:** There are currently no known adverse health effects associated with chronic exposure to this product.

**ACUTE HEALTH HAZARDS:** Moderate irritating to the skin. Slightly irritating to the eyes. May be harmful if inhaled.

**AGGRAVATION OF PRE-EXISTING CONDITIONS:** Persons with pre-existing skin disorders, eye problems, or respiratory function may be more susceptible to the effects of this substance.

**TARGET ORGANS:** Eyes, skin, and respiratory system.

**CARCINOGENICITY:**

OSHA: Not listed

ACGIH: Not listed

NTP: Not listed

IARC: Not listed

**POTENTIAL ENVIRONMENTAL EFFECTS:** Not considered to be harmful to aquatic life.

**4. EMERGENCY AND FIRST AID PROCEDURES**

**INHALATION FIRST AID:** If inhalation is experienced or suspected, move exposed person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms persist.

**SKIN CONTACT FIRST AID:** In case of contact, immediately flush skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops.

**EYE CONTACT FIRST AID:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately if symptoms persist.

**INGESTION FIRST AID:** If swallowed, give a few tablespoons of cooking oil, sour cream, cream, or other liquid fat. Contact the poison control center. DO NOT INDUCE VOMITING unless directed to by a poison control center or physician. Never give anything by mouth to an unconscious person.

**STATEMENT OF PRACTICAL TREATMENT:** Always have plenty of water available for first aid. Get medical attention if any symptoms develop or persist.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** This product has low oral, dermal, and inhalation toxicity. Aspiration during swallowing or vomiting may severely damage the lungs.

**5. FIRE AND EXPLOSION HAZARD DATA**

**FLAMMABLE PROPERTIES:** Not flammable. Combustible.

**AUTO IGNITION TEMPERATURE (ASTM E659):**  
**HOT-FLAME AUTOIGNITION TEMPERATURE (AIT):**  
MINIMUM IGNITION TEMPERATURE: 750°F  
IGNITION DELAY: 12 Seconds  
BAROMETRIC PRESSURE, TORR: 766

**COOL-FLAME AUTOIGNITION TEMPERATURE (CFT):**  
MINIMUM IGNITION TEMPERATURE: 745°F  
IGNITION DELAY: 120 Seconds  
BAROMETRIC PRESSURE, TORR: 766

**REACTION THRESHOLD TEMPERATURE FOR PRE-FLAME (RTT):**  
MINIMUM REACTION TEMPERATURE: 740°F

**LIMITS OF FLAMMABILITY IN GENERAL ACCORDANCE WITH ASTM E-681 AT 200°C**

LOWER FLAMMABLE LIMIT (LFL): 1.81 %  
UPPER FLAMMABLE LIMIT (UFL): See Note

*Note: Due to the nature of the sample and its addition into the test apparatus, it is difficult to determine the upper flammable limit.*

**FLASH POINT:** 140°C      285°F      Method Used: ASTM D93

**EXTINGUISHING MEDIA:** Dry chemical, foam or carbon dioxide.

**UNSUITABLE EXTINGUISHING MEDIA:** Water spray may be unsuitable.

**FIRE & EXPLOSION HAZARDS:** Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Containers may explode when involved in a fire.

**PRECAUTIONS FOR FIREFIGHTERS:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Toxic gases and vapors may be released if involved in a fire.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Not applicable

**HAZARDOUS DECOMPOSITION OR COMBUSTION PRODUCTS:** Not available.

**6. ACCIDENTAL RELEASE MEASURES**

**ACCIDENTAL RELEASE MEASURES:** Remove all sources of ignition.

**PERSONAL PRECAUTIONS:** Wear appropriate protective clothing (see SECTION 8). Isolate release area and deny entry to unnecessary and unprotected personnel.

**ENVIRONMENTAL PRECAUTIONS:** Do not allow spill to enter sewers or waterways. Do not flush to sewer.

**METHODS FOR CONTAINMENT:** Contain spill with sand or earth. Do not use combustible materials, such as sawdust.

**METHODS FOR CLEAN-UP:** Collect spilled material and non-combustible absorbent and place in a container for disposal. Clean spill area thoroughly.

**OTHER INFORMATION:** Report spills to authorities as required.

**7. HANDLING AND STORAGE**

**RECOMMENDED STORAGE CONDITIONS:** Keep in a tightly closed original container, at temperatures less than 105°F (40°C). Keep containers closed when not in use.

**SHELF LIFE:** See label on packaging.

**HANDLING (PERSONNEL):** Wear appropriate personal protective equipment (see SECTION 8). Avoid contact with eyes. Avoid contact with skin or clothing. Avoid breathing vapors. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep away from heat, flames, and sparks.

## **8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**AIRBORNE EXPOSURE LIMITS:** See Section 2 above.

<b>CAS NO.</b>	<b>CHEMICAL NAME</b>
64741-88-4	Solvent-refined heavy paraffinic distillate mg/m <sup>3</sup>
OSHA PEL-TWA:	5
OSHA PEL STEL:	none
OSHA PEL CEILING:	none
ACGIH TLV-TWA:	5
ACGIH TLV STEL:	none
ACGIH TLV CEILING:	none

68783-96-0	PETROLEUM SULFONATE, CALCIUM SALT, CALCIUM HYDROXIDE AND CALCIUM CARBONATE DISPERSION MG/M <sup>3</sup>
OSHA PEL-TWA:	NONE
OSHA PEL STEL:	NONE
OSHA PEL CEILING:	NONE
ACGIH TLV-TWA:	NONE
ACGIH TLV STEL:	NONE
ACGIH TLV CEILING:	NONE

68410-37-7	FATTY ACIDS, TALL-OIL, POLYMERS WITH ISOPHTHALIC ACID, PENTAERYTHRITOL AND TALL OIL MG/M <sup>3</sup>
OSHA PEL-TWA:	NONE
OSHA PEL STEL:	NONE
OSHA PEL CEILING:	NONE
ACGIH TLV-TWA:	NONE
ACGIH TLV STEL:	NONE
ACGIH TLV CEILING:	NONE

8002-74-2	PARAFFIN AND HYDROCARBON WAXES MG/M <sup>3</sup>
OSHA PEL-TWA:	NONE
OSHA PEL STEL:	NONE
OSHA PEL CEILING:	NONE
ACGIH TLV-TWA:	2 (FUME)
ACGIH TLV STEL:	NONE
ACGIH TLV CEILING:	NONE

**CALIFORNIA PROPOSITION 65:** This product may contain trace quantities of chemicals that are identified by





**9. PHYSICAL/CHEMICAL CHARACTERISTICS****FORM:** Highly viscous liquid**COLOR:** Black**ODOR:** Slight mineral oil like odor**BOILING POINT:** >390°F (>200°C)**SOLUBILITY IN WATER:** Not soluble in water**SPECIFIC GRAVITY:** .96 at 20°C (68°F) (Water =1)**EVAPORATION RATE:** (BuAc=1): Not applicable**POUR POINT (ASTM) D97):** +30**AUTOIGNITION TEMPERATURE:** >750°F 399°C)**FLASH POINT:** 285°F (140°C) ASTM D93**pH:** Not available**PERCENT SOLIDS BY WEIGHT:** 98.9%**VISCOSITY:** 500-650 Mpas - 73.4°F (23°C)**VOLATILE ORGANIC COMPOUNDS (VOC):** 10.7 g/L using EPA Method 24**COLD FREEZE POINT (ASTM D97):** +25**FREEZING POINT (ASTM D1177):** This sample was too viscous to permit determination of its freeze point by ASTM 1177.**VAPOR PRESSURE By Isoteniscope (ASTM D2879), torr:**

32°F.....0.28

68°F.....1.0

100°F.....2.7

150°F.....11

200°F.....34

250°F.....90

300°F.....160

350°F.....270

400°F.....426

450°F.....600

485°F.....760

**10. STABILITY AND REACTIVITY****STABILITY:** Stable under ordinary conditions (70°F (21°C) and 14.7 psig (760 mmHg)), of use and storage.**CONDITIONS TO AVOID:** Combustible atmospheres. Heat, flames, ignition sources, water (absorbs readily) and incompatibles.**POLYMERIZATION:** Not available.**INCOMPATIBILITY WITH OTHER MATERIALS:** Do not store near other combustible materials.**DECOMPOSITION:** Not available.**11. TOXICOLOGICAL INFORMATION****EFFECTS OF EXPOSURE****ACUTE INHALATION:** LC50 not available**EYES:** Irritant**SKIN:** Irritant**ACUTE INGESTION:** LD50 not available

**CHRONIC EFFECTS/CARCINOGENICITY:** Calcium carbonate, the product itself, is not listed by NTP, IARC, or OSHA as a carcinogen. There is no reported health effects associated with prolonged exposure to pure calcium carbonate. This product contains variable quantities of crystalline silica (quartz), which is considered a hazard by inhalation. IARC has classified crystalline silica as probably carcinogenic for humans (2A). This classification is based on the findings of laboratory animal studies that were considered to provide sufficient evidence and data from human epidemiological studies that were considered to provide limited evidence for carcinogenicity.

Crystalline silica is also a known cause of silicosis, a noncancerous lung disease. NTP and OSHA have not classified crystalline silica as a carcinogen.

Carbon black has been classified by IRAC as a Category 2B (known animal carcinogen, possible human carcinogen) material. This was based on the results of rat inhalation studies of carbon black, despite the lack of parallel evidence on humans or other animal species

**MUTAGENIC OR REPRODUCTIVE/DEVELOPMENTAL EFFECTS:** None expected.

## **12. ECOLOGICAL INFORMATION**

**ECOTOXICITY:** This product is not toxic or harmful to the environment.

**PERSISTENCE AND DEGRADABILITY:** This product is not readily degradable.

**MOBILITY:** Highly viscous liquid is not water soluble and is not expected to be mobile.

**BIOACCUMULATION:** This product is not expected to bioaccumulate.

## **13. DISPOSAL DATA**

**WASTE DISPOSAL METHOD:** It is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Disposal should be in accordance with applicable federal, state, and local regulations. Local regulations may be more stringent than regional or national requirements.

**RCRA INFORMATION:** If this material as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

**CONTAMINATED MATERIALS:** Wash contaminated clothing before reuse.

## **14. TRANSPORTATION DATA**

Domestic (Land, D.O.T.), International (Water, I.M.O.), International (Air, I.C.A.O.)

CLASS:	None
PRODUCT LABEL:	Noxudol 300 S
UN NUMBER:	None
PACKING GROUP:	None
D.O.T. SHIPPING NAME:	Consumer Commodity, ORM-D
PRODUCT RQ (LBS):	None
ERG Guide Number:	None
SUPPLEMENTAL HAZARD:	None
VESSEL STOWAGE LOCATION:	None
SHIPPING RESTRICTIONS:	None

**15. REGULATORY INFORMATION**

**U.S. FEDERAL REGULATORY STATUS**

**TSCA (TOXIC SUBSTANCE CONTROL ACT):** All of the components of this product are listed on the TSCA inventory.

**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):** This product is NOT subject to CERCLA reporting requirements; however, many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):** This product does not contain any chemicals subject to SARA Title III. **311/312 HAZARD CATEGORIES:** Slight Health Hazard, Slight Flammability Hazard

**CAA (CLEAN AIR ACT):** This product conforms to the VOC limits listed under Subpart B: National Volatile Organic Compound Emission Standards for Automobile Refinish Coatings under Section 183(e)(3)(C).

**OTC (OZONE TRANSPORT COMMISSION):** This product conforms to the VOC limits listed in Model Rule 2009 – Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations.

**STATE REGULATIONS:**

**California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):** This product is known to contain chemicals currently listed as carcinogens or reproductive toxins as regulated under California Proposition 65.

**California Air Resource Board (CARB) Suggested Control Measure for Automotive Coatings:** This product conforms to the VOC limit for the automotive undercoating.

**LOCAL REGULATIONS**

**SCAQMD (SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT) RULE 1151:** This product conforms to the VOC limits listed under Rule 1151—Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations, Appendix A.

**BAAQMD (BAY AREA AIR QUALITY MANAGEMENT DISTRICT) RULE 8-45:** This product conforms to the VOC limits listed under Rule 8-45—Motor Vehicle and Mobile Equipment Coating Operations.

**INTERNATIONAL REGULATIONS:**

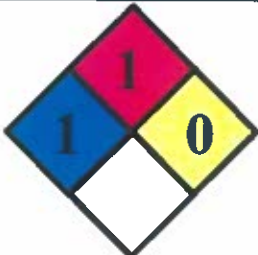
Europe: All ingredients conform to the EU requirements.  
 Regulation (EC) nr. 1907/2006  
 EEC-directive 2006/121/2006  
 No label required

**16. OTHER INFORMATION**

Label Requirements: **WARNING! COMBUSTABLE!**

Hazardous Material Information System (HMIS):	<b>Health</b>	<b>1</b>
	<b>Flammability</b>	<b>1</b>
	<b>Reactivity</b>	<b>0</b>
	<b>Personal Protection</b>	



<b>National Fire Protection Association (NFPA):</b>	
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**NFPA Ratings:** Health: 1, Flammability: 1, Reactivity: 0

**NFPA/HMIS Definitions:** 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

**Protective Equipment:** Goggles & shield; lab coat & apron; vent hood; proper gloves; class b extinguisher.

**Prepared By:** Donato Polignone (MSDS Authoring Services)

**Part Number:** --

**Approved By:** Soken Trade Corporation

**Approval Date:** April 18, 2011

**Supersedes Date:** March 1, 2011

**ADDITIONAL INFORMATION:**

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Material Safety Data Sheet (MSDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-2004)

This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of Soken Trade Corporation. The data on this sheet are related only to the specific material designated herein. Soken Trade Corporation assumes no legal responsibility for use or reliance upon these data.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

END OF MSDS

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October 22, 2010

Toyota Motor Company  
1 Toyota-Cho  
Toyota City, Aichi Prefecture 471-8571, Japan

This letter is to inform you that Auson AB and Vaupel GmbH will certify that the 3300 HSDR pressure pot gun meets or even exceeds the transfer efficiency of HVPL equipment.

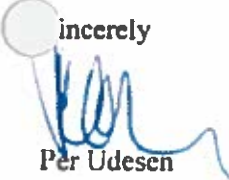
The transfer efficiency of the 3300 HSDR spray gun and 90° hooked wand was evaluated using Auson's Noxudol 300 rust preventive under-body material. Testing was performed at Auson AB's laboratory at "Verkstadsгатan 3, 43442 Kungsbacka Sweden.

The South Coast AQMD Spray Equipment Transfer Efficiency Testing Procedure for Equipment Users dated May 24, 1989 was the test protocol employed under the application conditions indicated

The 3300HSDR spray equipment that we have provided you for the application of Noxudol300 exceed the minimum transfer efficiency of 65% when operated between 50 and 90 PSI. Attached find actual data and files associated with our testing.

Please don't hesitate to contact us with eventual questions.

Sincerely



Per Udesen  
Gen. Manager  
Auson AB



Peter Riek  
President  
Vaupel GmbH

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# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

March 22, 2011

Mr. Daniel E. Monette  
National Manager  
Environmental, Health and Safety  
Toyota Motor Sales, U.S.A., Inc.  
19001 South Western Avenue  
Torrance, CA 90501

Dear Mr. Monette:

**Subject: Rule 1151 Transfer Efficiency Approval of the Vaupel HSDR 3300 Spray Gun**

Reference is made to your application number 518629 which you submitted to request that the Vaupel HSDR 3300 spray gun be considered equivalent to high-volume, low-pressure (HVLP) spray equipment under Rule 1151(d)(7)A(iii) for the application of internal (Parker 712 AM) and external (Auson AB Noxudol 300S) protective coatings on the frame rails of Toyota Tacoma trucks (model years 1995 through 2004) and Toyota Tundra trucks (model years 2000 through 2006). In support of your request, you submitted the following information.

1. A report entitled, "Supplemental Spray Equipment Transfer Efficiency Test of the Vaupel HSDR 3000 using Noxudol 300" dated January 19, 2011
2. MSDS for the Parker 712 AM and Auson AB Noxudol 300 S coatings
3. Photographs of spray patterns for typical HVLP spray guns and the Vaupel HSDR 3300 spray gun
4. Photographs of the Tundra undercarriage showing the frame rails
5. Drawings of the Tacoma and Tundra frames
6. An e-mail dated February 3, 2011 containing supplemental information

The results of the transfer efficiency testing performed on December 28, 2010 indicate that the Vaupel HSDR 3300 spray gun is capable of achieving a transfer efficiency of 69.04% when applying the Auson AB Noxudol 300 S exterior protective coating. Toyota Motor Sales did not submit transfer efficiency test results for an HVLP spray gun applying the Auson AB Noxudol 300 S exterior protective coating for comparison purposes since HVLP spray technology is not capable of reaching all of the exterior surfaces of the frame rails due to the configuration of the frame rails and other vehicle parts that are in close proximity to the frame rails. The lack of sufficient accessibility to the frame rails prevents the successful use of HVLP spray technology for applying the exterior protective coating.

While actual transfer efficiency testing was not conducted to simulate the proposed application of the Parker 712 AM interior protective coating, Toyota Motor Sales did submit information on February 26, 2009 and January 21, 2011 regarding the configuration of the frame rails and the viscosity of the coating. Both the interior configuration of the frame rails and the high viscosity of the Parker 712 AM coating make the use of HVLP spray equipment infeasible. A review of the design of the tubular frame rails of the Tacoma and Tundra trucks indicates that the transfer efficiency for coating the interior of the frame rails should approach 99%.

Based on the transfer efficiency test data for the Auson AB Noxudol 300 S exterior protective coating, an evaluation of the configuration of the Tacoma and Tundra frame rails, the tubular configuration of portions of the Tacoma and Tundra frame rails, the calculated transfer efficiency for coating the interior of the tubular frame rails, and the viscosity of the Parker 712 AM interior coating, the Vaupel HSDR 3300 spray gun is approved for limited operations subject to Rule 1151, Motor Vehicle and Mobile Equipment Non-Assembly Line Coating Operations, under Rule 1151(d)(7)(A)(iii) provided the following conditions are met.

1. The Vaupel HSDR 3300 spray gun shall only be used to apply Auson AB Noxudol 300S and Parker 712AM corrosion preventive coatings to the frame rails of Toyota Tacoma trucks model years 1995-2004 and Tundra trucks model years 2000-2006 at the Toyota Motor Sales, U.S.A., Inc. facility located at 2015 W. 190<sup>th</sup> Street, Torrance, CA 90501 and identified by District facility ID 80904.
2. This approval is only valid if the air pressure supplied to the Vaupel HSDR 3300 spray gun is equal to or less than 52 psig when applying the Auson AB Noxudol 300 S coating and equal to or less than 75 psig when applying the Parker 712 AM coating.
3. This approval is only valid if during actual operation the Vaupel HSDR spray gun is equipped with a 160 psig (full scale) mechanical pressure gauge with markings every 2 psig and the pressure gauge is operating properly.
4. The Vaupel HSDR 3300 spray gun shall be equipped with a Vaupel Cavity Spray Tube 3900/3901-WH spray wand when applying the corrosion preventive coatings. The Auson AB Noxudol 300 S protective coating shall only be applied to the exterior of the frame rails. The Parker 712 AM protective coating shall only be applied to the interior of the frame rails. During operation, the maximum distance of the spray wand tip to the substrate to be coated shall not exceed 8 inches.
5. Pursuant to District Rule 219, unless a permit to construct and operate is obtained from the District for the Vaupel HSDR 3300 spray gun, the maximum quantity of coatings and associated VOC containing solvents (including clean-up) used in the Vaupel HSDR 3300 spray gun shall not exceed 1 gallon per day or 22 gallons per calendar month. Toyota Motor Sales shall maintain records of

the coating usage. The last two years of records shall be retained at the facility and be made available to District representatives upon request.

6. This approval is only valid for the Vaupel HSDR 3300 spray gun model tested. Any modification of the spray gun or pressure gauge design shall invalidate this approval unless the modification is approved by the South Coast Air Quality Management District.

If you have any questions regarding this approval, please call Emmanuel Quizon, AQ Engineer, at (909) 396-2523 or send him an e-mail at [equizon@aqmd.gov](mailto:equizon@aqmd.gov).

Sincerely,



Fred Lettice  
Senior Manager  
Coating, Printing, Plating, Military  
& Entertainment Operations

FEL:EVQ

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# OPERATING INSTRUCTIONS

## CAVITY PRESSURE CONTAINER GUN 3300 HSDR

This gun may only be used for pressure containers which threads have a slot

### Use as intended

- The CAVITY PRESSURE CONTAINER GUN is used for applying cavity spray products in conjunction with cavity spray tubes 3900 / 3901.

### For your safety

- Hazard-free work with the device is only possible if you read the operating instructions and safety instructions through in full and strictly follow the instructions contained therein.
- Arrange to have practical instruction before your first use.
- Check the device before each use.
- Allow only a specialist to make repairs.
- Alteration or modification of the device is forbidden. Use only original accessories.
- Use the device only with the prescribed pressure.
- Do not spray into flames or onto glowing bodies. Working areas must be brightly lit, well ventilated and must conform to applicable health and work safety regulations.
- Do not inhale spray mist.
- Store the device and its accessories out of reach of children.

### Device Characteristics

Max. Press. 8 bar Working Press. 2-6 bar  
Capacity 1 liter

### Safety Instructions

- Check the gun for correct operation before use.
- The nozzle head (19) and ascending tube (31) must allow free flow.
- Check the gun for visible damage.
- When dealing with chemical materials, observe the appropriate guidelines and safety rules.

### Start up

- Check line pressure in the compressed-air distribution system and adjust if necessary.
- For optimal operation of the compressed-air tool, clean, dry air is absolutely necessary.
- This can be provided by a water and oil separator integrated into the compressed-air system, which also considerably improves the spray behaviour.

### Working Instructions / Application

- Fill the pressure container (32) with spray product.
- Immerse the pistol body with ascending tube into the spray product and screw the container to the underside of the gun.
- Insert cavity spray tube with round spray nozzle or cavity spray tube with angle nozzle and nipple into the quick coupling (20).
- Connect the gun to the compressed-air supply.
- Depress the trigger to the first step and check whether spray air issues from the nozzle opening.
- Material flow rate is adjusted using the stop screw (7).
- An optimal spray pattern for each material can be obtained with this adjustment.
- Insert the spray tube with round nozzle into the cavity and slowly withdraw it, while at the same time depressing the trigger. Release the trigger before the round nozzle leaves the cavity (this will interrupt material flow).
- When the spray tube with angle nozzle is inserted, surfaces can be sprayed.
- Make absolutely certain that the spray tubes are not bent.

### When finished working

- Blow the cavity spray tube clear with air; for this, depress the trigger to the first step.
- Remove cavity spray tube; disconnect the device from the air supply.

- Release pressure from the gun; for this purpose, turn the pressure container to the left until air escapes. Store the device and its accessories out of reach of children.
- Store the gun only upright if material remains in the pressure tank.

### Cleaning

- Clean the gun after each use with cleaning agent. (If the gun is to remain unused for an extended period of about 4 weeks).
- Attention
- Store the spray tubes only when they are clean; otherwise the spray silt may become clogged due to drying of the material.

### Faults

- Valve bolt (8) is stuck or does not close:  
Put oil on the valve bolt or into the air intake port of the gun. Depress the trigger (2) several times.
- Gun does not spray properly:  
Spray nozzle (19), ascending tube (31), cavity spray tube round spray or angle nozzle or gun (1) partly clogged.  
Remove deposits with cleaning agent!

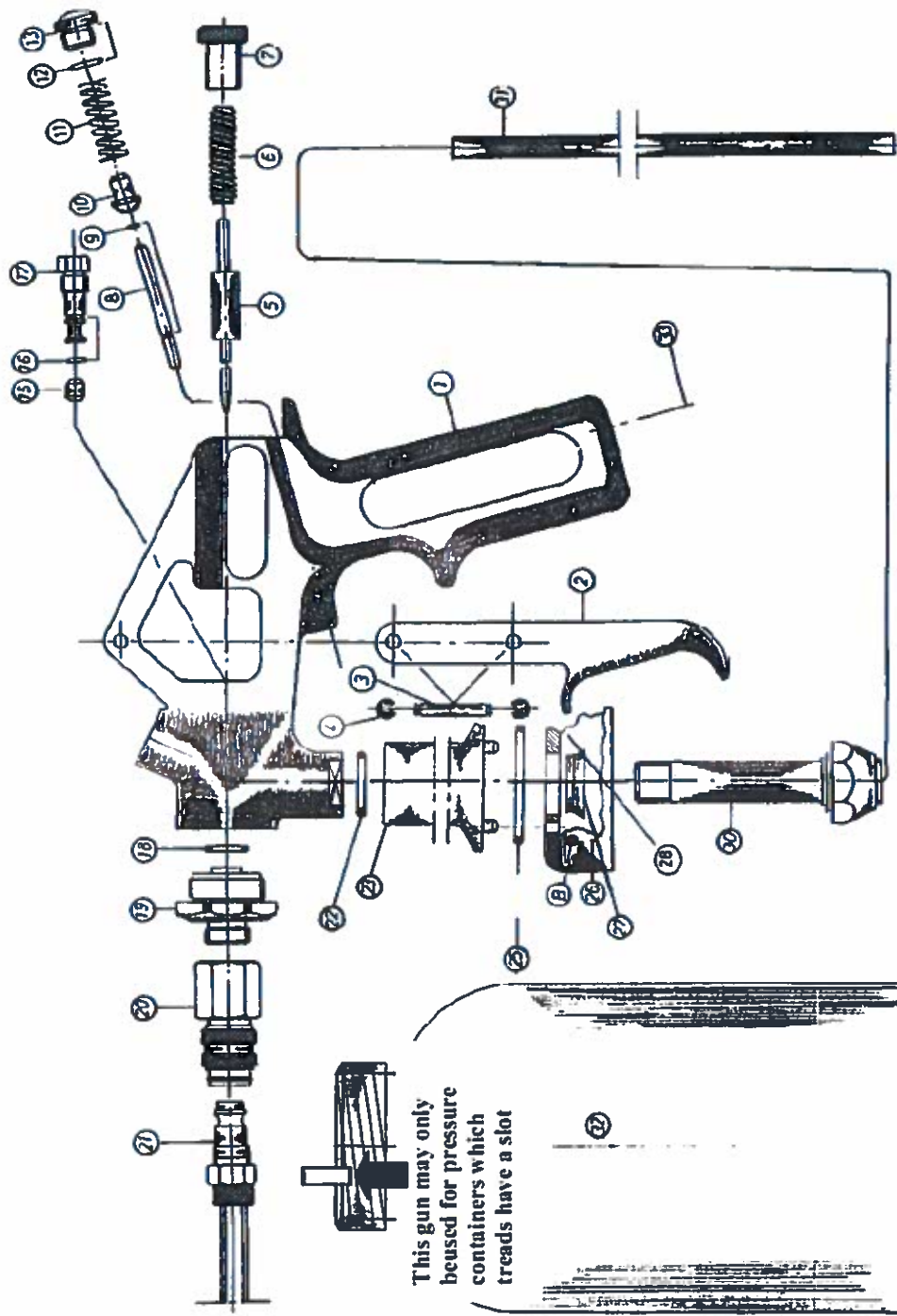
### Environmental Protection

- The device, its accessories and packing material should be recycled in an environmentally correct manner.

# Druckbehälterpistole pressure container gun

# 3300 HSDR

- 1 10 2919 001 gun body
- 2 50 3909 005 trigger
- 3 30 1102 006 trigger axle
- 4 60 3100 029 clamping ring
- 5 S 83010 nozzle needle, cpl.
- 6 60 3104 007 spring f. nozzle needle
- 7 30 1122 005 stop screw
- 8 30 1104 008 valve bolt
- 9 60 4100 027 o-ring 1.5x0.75
- 10 40 4101 011 valve seal
- 11 60 3103 003 spring f. valve
- 12 60 4100 062 o-ring 8x1
- 13 30 1120 002 locking screw
- 14
- 15 40 4100 003 needle seal, teflon
- 16 60 4100 064 o-ring 5x1
- 17 30 1422 016 needle stuffing box
- 18 60 4100 066 o-ring 8x2.5
- 19 30 2122 005 spray nozzle
- 20 20 1413 001 quick coupling
- 21 Capity hose spray-set
- 22 60 4100 071 o-ring 15x2
- 23 40 4104 014 adaptor 3000
- 24 60 4100 072 o-ring 33x2
- 25 10 2111 014 pressure tank filler cap
- 26 60 4100 044 V-packing
- 27 60 4100 087 o-ring 35x4
- 28
- 29
- 30 S 83302 assembly screw
- 31 60 3129 014 ascending tube
- 32 S 83305 pressure tank seal-set
- S 83303 seal-set
- S 80151 flat-nozzle - plug connection



**CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET**

**CRC CAMPAIGN AIR EMISSION CALCULATION SUMMARY**

Toyota Motor Sales, U.S.A., Inc. (TMS) has prepared this Summary to support its dealers conducting the Corrosion-Resistant Compound ("CRC") campaigns. This Summary explains the calculation of volatile organic compounds (VOCs) and particulate matter (PM) emissions from the CRC campaigns.

**I. EXPLANATION OF VOC & PM EMISSION FACTORS**

For CRC campaigns, Toyota dealers will use a Vaupel HSDR 3300 spray gun to apply two different CRC materials to the vehicle frame surfaces: (1) Noxudol 300 S (exterior frame surfaces) and (2) 712 AM (interior frame surfaces). Toyota dealers will be supplied with a pre-packaged "kit" that contains exactly the amount of each CRC needed for the vehicle.

The amount of each CRC needed depends upon the vehicle's frame dimensions and openings; due to slight variations among the different makes and model years of vehicles covered by the CRC campaigns, the amount of each CRC applied will not be the same for all vehicles. For the CRC campaigns, Toyota dealers will select among 3 different pre-packaged "kits" (each with different amounts of the CRCs) depending upon the particular make and model year of the vehicle being processed:

- 00289-T00KT-DS -- 0.792 gallons (3 liters) of Noxudol 300 S and 0.264 gallons (1 liter) of 712AM
- 00289-S00KT-DS -- 0.792 gallons (3 liters) of Noxudol 300 S and 0.528 gallons (2 liters) of 712AM
- 00289-T01KT-DS -- 0.528 gallons (2 liters) of Noxudol 300 S and no 712AM

TMS has developed a CRC Campaign Vehicle Production Log (VPL) that dealers can use to document compliance with air permitting requirements by tracking vehicle processing and calculating VOC and PM emissions from the CRC campaigns. As explained below, the VPL incorporates an emissions calculation for each of the three kits that relies on conservative assumptions. Thus, this calculation likely overstates emissions.



## A. VOC Emissions

The VPL emissions calculation for VOCs assumes that all of the VOCs contained in Noxudol 300 S (0.9 pounds per gallon) and 712AM (0.165 pounds per gallon)<sup>1</sup> will be emitted to the ambient air during the CRC application process and/or post-application curing. Accordingly, the emission factors used in the VPL calculations account for the total quantity of VOCs in each kit type.

The following table summarizes the VOC emissions calculations for each CRC kit type.

	Kit (Part) #00289-T00KT-DS (3 liters Noxudol, 1 liter 712AM)	Kit (Part) #00289-S00KT-DS (3 liters Noxudol, 2 liters 712AM)	Kit (Part) #00289-T01KT-DS (2 liters Noxudol, No 712AM)
<b>Noxudol 300 S</b>	0.792 gal (3 liters)/kit x 0.09 lbs VOC/gal = 0.071 lbs VOC/vehicle	0.792 gal (3 liters)/kit x 0.09 lbs VOC/gal = 0.071 lbs VOC/vehicle	0.528 gal (2 liters)/kit x 0.09 lbs VOC/gal = 0.048 lbs VOC/vehicle
<b>712AM</b>	0.264 gal (1 liter)/kit x 0.165 lbs VOC/gal = 0.044 lbs VOC/vehicle	0.528 gal (2 liters)/kit x 0.165 lbs VOC/gal = 0.087 lbs VOC/vehicle	None
<b>Combined VOC emissions:</b>	= 0.12 lbs VOC/vehicle	= 0.16 lbs VOC/vehicle	= 0.05 lbs VOC/vehicle

## B. PM Emissions

The VPL emissions calculation for PM differs from that for VOCs. In particular, both of the CRCs contain solids; however, not all of the solids in the CRCs will be emitted to the ambient air as PM. Instead, two factors will reduce the amount of the solids emitted as PM:

- Some amount of the solids in the CRCs will adhere to the vehicle frame surfaces, and therefore, not be emitted to the ambient air. To determine this amount requires an assessment of the *transfer efficiency* of the Vaupel HSDR 3300 spray gun when being used to apply the CRCs.
- Some amount of the solids in the CRCs that do not adhere to the vehicle frame surfaces (*i.e.*, the “overspray”) will adhere to other surfaces (*e.g.*, the tarp underneath the vehicle), and therefore, not be emitted to the ambient air. To determine this amount requires an assessment of the percentage of the overspray that will *fallout* (and adhere to other surfaces) and not be emitted to the ambient air.

The analysis of these factors for each of the CRCs is summarized below.

- **Noxudol 300 S:** TMS retained Concurrent Technologies Corporation (CTC) to perform two types of testing: (1) Testing to determine the Vaupel HSDR 3300 spray gun’s transfer efficiency when being used to apply Noxudol 300 S to the external frame surfaces and (2) Testing to produce data relevant to the amount of the overspray that will fallout, which data were used by another TMS consultant, Environ Corporation (Environ), to determine a

<sup>1</sup> The VOC content is provided in the manufacturer’s Material Safety Data Sheets for Noxudol 300 S and 712AM.



"fallout factor". The CTC testing demonstrate that the Vaupel HSDR 3300 spray gun achieves a transfer efficiency of at least 85% when being used to apply Noxudol 300 S to the external frame surfaces. Additionally, after analyzing the results of the CTC testing, Environ calculated a fallout factor of at least 90%, *i.e.*, of the 15% of the Noxudol 300 S that does not adhere to the vehicle frame surfaces (the "overspray"), 90% of that overspray will "fallout" and adhere to other surfaces and not be emitted to the ambient air.

- **712AM:** CTC could not perform similar testing for 712AM due to its application to interior frame surfaces and the closed frame configuration. However, Environ calculated the transfer efficiency based on the dimensions of the limited openings in the otherwise closed portions of the frame. This calculation indicates that the Vaupel HSDR 3300 spray gun achieves at least a 98.5% transfer efficiency when being used to apply 712AM to the interior frame surfaces.<sup>2</sup> Environ also has conservatively assumed a 75% fallout factor.

The PM emissions calculation has 2 steps:

- **Step One:** Use the transfer efficiency to determine the amount of solids that would not adhere to the vehicle frame surfaces, and therefore, would be potentially available for emission to the ambient air as PM; and
- **Step Two:** Use the fallout factor to reduce that amount of solids potentially available for emission, and thereby, determine the estimated actual PM emissions.

The following table summarizes the PM emissions calculations for each CRC kit type based on these 2 steps.

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<sup>2</sup> The 98.5% value is the lowest transfer efficiency calculated for all of vehicles subject to CRC campaigns to date. TMS does not anticipate that the transfer efficiency will vary substantially for vehicle models that may be subject to a subsequent CRC campaign or that the impact on the PM emission factors will be significant. More specific information on the transfer efficiency value applicable to any future CRC campaigns will be available at that time.

	<b>Kit (Part) #00289-T00KT-DS</b> (3 liters Noxudol, 1 liter 712AM)	<b>Kit (Part) #00289-S00KT-DS</b> (3 liters Noxudol, 2 liters 712AM)	<b>Kit (Part) #00289-T01KT-DS</b> (2 liters Noxudol, No 712AM)
<b>STEP ONE – Determine amount of solids potentially available as PM emissions to ambient air</b> (using transfer efficiency to determine the amount of solids that would not adhere to the vehicle frame surfaces)			
<b>Noxudol</b>	0.792 gal (3 liters)/kit x 7.97 lbs/gal x 98.9% solids by weight x 15% (100% - 85% transfer efficiency) = 0.94 lbs PM/vehicle	0.792 gal (3 liters)/kit x 7.97 lbs/gal x 98.9% solids by weight x 15% (100% - 85% transfer efficiency) = 0.94 lbs PM/vehicle	0.528 gal (2 liters)/kit x 7.97 lbs/gal x 98.9% solids by weight x 15% (100% - 85% transfer efficiency) = 0.62 lbs PM/vehicle
<b>712AM</b>	0.264 gal (1 liter)/kit x 7.885 lbs/gal x 97.9% solids by weight x 1.5% (100% - 98.5% transfer efficiency) = 0.03 lbs PM/vehicle	0.528 gal (2 liters)/kit x 7.885 lbs/gal x 97.9% solids by weight x 1.5% (100% - 98.5% transfer efficiency) = 0.06 lbs PM/vehicle	None
<b>Combined potential PM emissions:</b>	= 0.97 lbs PM/vehicle (solids available for emission to ambient air as PM)	= 1.0 lbs PM/vehicle (solids available for emission to ambient air as PM)	= 0.62 lbs PM/vehicle (solids available for emission to ambient air as PM)
<b>STEP TWO – Determine Estimated Actual PM Emissions</b> (using fallout factor to adjust (reduce) the amount of solids potentially available for emission)			
<b>Noxudol (90% fallout factor)</b>	0.94 lbs PM/vehicle x 10%	0.94 lbs PM/vehicle x 10%	0.62 lbs PM/vehicle x 10%
<b>712AM (75% fallout factor)</b>	+ 0.03 lbs PM/vehicle x 25%	+ 0.06 lbs PM/vehicle x 25%	--
<b>Estimated PM Emissions:</b>	= 0.10 lbs PM/vehicle	= 0.11 lbs PM/vehicle	= 0.06 lbs PM/vehicle

## II. MAXIMUM POTENTIAL EMISSIONS

TMS also has calculated maximum potential emissions resulting from the CRC campaigns based on a conservative, worst-case operating scenario. This scenario reflects the following assumptions:

- A hypothetical “4<sup>th</sup> type” of vehicle kit that contains more of each CRC than the kits actually being used for the CRC campaigns: 0.792 gallons (3 liters) of Noxudol 300 S and 0.792 gallons (3 liters) of 712AM.
- A one hour vehicle processing time instead of the 2 hour vehicle processing time that TMS has advised its dealers to adhere to for all vehicles across the CRC campaigns.
- A continuous operation in a CRC campaign spray space, 24 hours per day, seven days per week.

Under these assumptions, a dealer could process 8,760 vehicles in any one year using a single spray space.

Actual emissions at any dealership will not come anywhere close to this worst-case operating scenario because dealers are using less CRCs, taking longer to process vehicles and do not engage in 24/7 CRC campaign processing. Nor does this scenario account for state and/or local regulatory limits or permit conditions that prevent dealerships from operating at the maximum scenario. Thus, the emissions calculations summarized below based on this scenario are truly "worst-case".

### 1. Maximum Operating Scenario – VOC Emissions

The processing of vehicles with this kit (assuming all VOCs contained in the CRCs are emitted to the ambient air) will result in VOC emissions of 0.2 pounds per vehicle ( $0.792 \text{ gals/Noxudol 300 S per kit} \times 0.09 \text{ lbs/VOCs per gal} + 0.792 \text{ gals/712AM per kit} \times 0.165 \text{ lbs VOCs/gal} = 0.2 \text{ lbs VOCs/vehicle}$ ).

The maximum CRC processing rate, under which one vehicle would be treated per hour over a 24-hour day, would yield no more than 4.8 lbs VOCs per day ( $0.2 \text{ lbs VOCs/vehicle} \times 24 \text{ vehicles/day} = 4.8 \text{ lbs VOCs/day}$ ) or, in the unlikely event a second spray space is used, 9.6 lbs VOCs/day.

Over an annual period, under the maximum annual CRC scenario, a dealer would emit no more than 0.88 tons of VOCs in any one year ( $8,760 \text{ vehicles/year} \times 0.2 \text{ lbs VOCs/vehicle}$ , divided by  $2,000 \text{ lbs/ton} = 0.88 \text{ tons VOCs/year}$ ) or, if a second spray space is used, 1.76 tons VOCs/year.

### 2. Maximum Operating Scenario – PM Emissions

**Step One:** Noxudol has 0.94 pounds of solids per kit potentially available for emission to the ambient air as PM ( $0.792 \text{ gals/kit} \times 7.97 \text{ lbs/gal} \times 98.9\% \text{ solids by weight} \times (100\% - 85\% \text{ transfer efficiency}) = 0.94 \text{ lbs PM/vehicle}$ ); 712AM has 0.09 pounds per kit potentially available ( $0.792 \text{ gals/kit} \times 7.885 \text{ lbs/gallon} \times 97.9\% \text{ solids by weight} \times (100\% - 98.5\% \text{ transfer efficiency}) = 0.09 \text{ lbs PM/vehicle}$ ).

**Step Two:** Therefore, the hypothetical "4<sup>th</sup>" kit has 1.03 pounds of solids potentially available for emission to the ambient air as PM. Applying the 90% fallout factor for Noxudol 300 S and the 75% fallout factor for 712AM indicates that actual PM emissions would be no more than 0.12 pounds per vehicle ( $0.94 \times 10\% + 0.09 \times 25\% = 0.12 \text{ lbs PM/vehicle}$ ).

The maximum CRC processing rate, under which one vehicle would be treated per hour over a 24-hour day, would yield no more than 2.88 lbs PM per day ( $0.12 \text{ lbs/vehicle} \times 24 \text{ vehicles/day} = 2.88 \text{ lbs PM/day}$ ) or, if a second spray space is used, 5.76 lbs PM/day.

Over an annual period, under the maximum annual CRC operating scenario, a dealer would emit no more than 0.53 tons of PM in one year ( $8,760 \text{ vehicles/year} \times 0.12 \text{ lbs/vehicle}$ , divided by  $2,000 \text{ lbs/ton} = 0.53 \text{ tons PM/year}$ ) or, if two spray spaces are used, 1.06 tons PM/year.

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CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

PART TWO – STATE COMPLIANCE SUPPLEMENT FOR MICHIGAN

APPENDIX C SUMMARY OF FEDERAL, STATE AND LOCAL  
REGULATIONS RELATED TO AIR EMISSIONS FOR MICHIGAN

I. INTRODUCTION

The Corrosion Resistant Compound (CRC) campaigns for various models and model years of Toyota vehicles result in emissions of Volatile Organic Compounds (VOCs) and Particulate Matter (PM). Although Toyota Motor Sales, U.S.A., Inc. (TMS) has designed the CRC campaigns to minimize such emissions, the campaigns nevertheless are subject to various federal, state and local regulations related to air emissions. To assist you in making compliance decisions for your dealership, TMS has prepared this summary of federal, state and local regulations related to air emissions in Michigan as of March 2013.

**IMPORTANT:** You may wish to review this summary before beginning each CRC campaign and in particular whenever you have a need for details, such as, for example, when you are training a new employee who will be involved in the CRC campaigns.

II. AIR PERMITTING

Both federal and Michigan regulations require an air permit for “major” and “minor” sources of VOC and PM emissions as described below:

1. Major Source

A major source is any source with a potential to emit (PTE)<sup>2</sup> at or above 100 tons per year (tpy) for PM and 100 tpy for VOCs.<sup>3</sup> TMS has calculated the PTE for each prior and ongoing CRC campaign. The PTE is just a small fraction of these major source thresholds.<sup>4</sup> Thus, the CRC campaigns will not, standing alone, cause your dealership to trigger air permitting as a major source.

However, the major source air permitting thresholds must be applied across your entire dealership and not just to the CRC campaigns. For example, if your dealership’s physical plant is distributed across multiple buildings, land parcels or physical locations, then the PTE from your activities at each of those buildings and locations would have to be combined to determine

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<sup>2</sup> “Potential to emit” or “PTE” refers to the maximum capacity of a stationary source to emit air pollutants. The PTE calculation generally requires conservative assumptions, and a source’s actual emissions are usually well below its PTE.

<sup>3</sup> MICH. ADMIN CODE r. 336.1211.

<sup>4</sup> For details on this calculation, see the CRC Campaigns Air Emissions Calculation Summary in Appendix B of the Part Two – State Compliance Supplement for Michigan.



whether your dealership's total PTE falls below the thresholds. In some cases, even PTE from offsite locations that are not physically adjacent to a dealership (such as an offsite body shop) must be combined with the dealership's emissions to make this air permitting determination.

Therefore, operations besides the CRC campaigns could cause your dealership to trigger air permitting as a major source. It is not expected, however, that your dealership would do so as long as you satisfy the two criteria below:

- a. Your dealership does not operate a very large on-site or an off-site body shop;<sup>5</sup> and
- b. Your dealership does not otherwise engage in significant painting, coating or other spraying operations.

## 2. Minor Source

A minor source is any "emissions unit"<sup>6</sup> or collection of "emissions units" that (a) does not constitute a major source and (b) does not qualify for an air permitting exemption.<sup>7</sup> TMS has communicated with the Michigan Department of Environmental Quality, and based on these communications believes that the CRC campaigns constitute a separate "emissions unit" and will be exempt from air permitting under Michigan's "Limited Emissions Exemption"<sup>8</sup> for any emission unit that (a) does not emit hazardous air pollutants and (b) emits less than 1,000 pounds of air contaminants per month.

TMS calculates expected actual emissions for each CRC campaign. These calculations confirm that your dealership should have emissions of VOCs and PM well below "Limited Emissions Exemption" 1,000 pounds per month threshold as long as you adhere to the vehicle processing limits (see Section III. below) and other requirements set forth in this CRC Campaigns Dealer Information Packet.

### **IMPORTANT:**

**Both major and minor source permitting also can apply to sources that emit substances other than VOCs and PM, such as, for example, sources that emit Hazardous Air Pollutants (HAPs). The CRC campaigns do not emit substances other than VOCs and PM; therefore, this summary does not address permitting or other obligations that may apply based on your dealership's emissions of other substances.**

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<sup>5</sup> A body shop or other operations that involve the use of spraying equipment will have a higher PTE than a regular vehicle service area. Thus, you cannot be certain – without further analysis – that your dealership will remain exempt from air permitting if it conducts such operations in addition to the CRC campaigns. In particular, if your dealership has an onsite body shop, then the state will require you to combine the PTE from that onsite body shop with the PTE from all other activities at the dealership. In doing so, it may not be possible for your dealership to conduct the CRC campaigns (which would add to the air emissions already coming from your body shop) and remain exempt from air permitting. Moreover, the state might require you to combine the PTE from an offsite body shop – even if the body shop is not where you will conduct the CRC campaigns – if that body shop has a sufficient interconnection to the rest of the activities at your dealership.

<sup>6</sup> An "emission unit" is defined as "any part of a stationary source that emits or has the potential to emit an air contaminant". Mich. Admin Code r. 336.1105(b).

<sup>7</sup> MICH. ADMIN CODE R. 336.2901(1).

<sup>8</sup> MICH. ADMIN CODE R. 336.1290(a).



Minor source permitting will apply to all other “emissions units” besides the CRC campaigns at your dealership that do not separately qualify for an exemption. The Michigan regulations contain a number of exemptions that likely apply to non-CRC campaigns “emissions units” at your dealership, but it is your responsibility to confirm eligibility for such exemptions and to maintain appropriate documentation.

### III. PARTICULATE MATTER EMISSIONS LIMITS

Michigan regulations require sources to limit hourly emissions of PM.<sup>9</sup> Under the regulations, an allowable PM emissions rate must be developed for each type of process using a “process weight rate” formula.<sup>10</sup>

For the CRC campaigns, the process weight rate is a function of the amount of CRCs sprayed and the time it takes to spray them during processing of a vehicle. Due to the variation in amounts and application times as between CRC campaigns, the process weight rate – and therefore the applicable allowable PM emissions rate – will vary for each CRC campaign.

For each CRC campaign, TMS calculates both (1) the allowable PM emissions rate (using the process weight rate formula) and (2) the hourly PM emissions expected if the campaign is conducted in accordance with the Technical Instructions. TMS then compares (1) and (2) to make sure that each CRC campaign will fall below the allowable PM emissions rate applicable to it. The calculation of hourly PM emissions for each CRC campaign incorporates assumptions regarding how long it will take you to process a vehicle. If you were to process a vehicle in a shorter amount of time, then your actual hourly PM emissions could be higher and might not fall below the allowable PM emissions rate.

***To assure compliance with the allowable PM emissions rate, your dealership should not process more than one Toyota vehicle every 2 hours.*** The Part One – General Guide for Compliance discusses the vehicle processing limit and provides guidance in its Appendix A on how to follow the limit. Appendix B of the Part Two – State Compliance Supplement for Michigan includes a “CRC Campaign Vehicle Production Log” that your dealership should use to document its adherence to this limit.

### IV. RECORDKEEPING

Your dealership should maintain records to demonstrate your compliance with air permitting requirements and your adherence to the vehicle processing limit discussed in Part III above. Please refer to Appendix B to the Part Two – State Compliance Supplement for Michigan for logs that you can use and for copies of documents to retain on file.

It is important that your dealership maintain records for an appropriate period of time. While your dealership can make its own compliance decisions, ***it is recommended that you retain the above documents and all completed logs until 5 years after your dealership ceases its involvement in CRC campaigns.***

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<sup>9</sup> MICH. ADMIN CODE R. 336.1331.

<sup>10</sup> MICH. ADMIN CODE R. 336.1331.

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