

# 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://cleandealer.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.

## TABLE OF CONTENTS

### **PART ONE -- GENERAL GUIDE FOR COMPLIANCE**

COMPLIANCE STEPS ONE AND TWO, FOR ALL STATES .....	5
APPENDIX A: VEHICLE PROCESSING GUIDANCE.....	9
APPENDIX B: COMPLIANCE WITH STATE AND LOCAL AIR PERMITTING REQUIREMENTS .....	11

### **PART TWO -- STATE COMPLIANCE SUPPLEMENT**

COMPLIANCE STEPS FOR YOUR PARTICULAR STATE.....	21
APPENDIX A: SUMMARY OF ADDITIONAL FIRE AND OTHER LOCAL REQUIREMENTS .....	25
APPENDIX B: RECORDKEEPING FORMS AND OTHER DOCUMENTS.....	27
APPENDIX C: SUMMARY OF FEDERAL, STATE AND LOCAL REGULATIONS RELATED TO AIR EMISSIONS .....	61

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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 Jefferson County:</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> <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 call the EH&amp;S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.</li> </ul>
<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> <ul style="list-style-type: none"> <li>⇒ Do not use spray guns in any non-CRC operations to apply VOC-containing materials; and</li> <li>⇒ 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.</li> </ul>	<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.

<b>NEW JERSEY</b>	
<p>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:</p> <ul style="list-style-type: none"> <li>⇒ <b>Processing no more than one vehicle every 2.5 hours</b> (instead of every 2.0 hours);</li> <li>⇒ Applying no more than 3 liters of Noxudol 300 S in any 2-hour period; and</li> <li>⇒ Processing no more than 2,920 vehicles in any one spray space over any 12-month period.</li> </ul> <p>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&amp;S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.</p>	<p><b>Dealerships located in <u>Toms River</u>:</b> Comply with the more stringent local emissions limits for PM by:</p> <ul style="list-style-type: none"> <li>⇒ <b>Processing no more than one vehicle every 3 hours</b> (instead of every 2.5 hours); and</li> <li>⇒ Applying no more than 3 liters of Noxudol 300S in any 3-hour (instead of 2-hour) period.</li> </ul>
<b>NEW YORK</b>	
<p>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:</p> <ul style="list-style-type: none"> <li>⇒ 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</li> <li>⇒ Paying the annual fees required to keep this Registration up-to-date.</li> </ul> <p>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&amp;S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.</p>	<p><b>Dealerships located in <u>Rockland County</u>:</b> Comply with the operating certificate issued by the Rockland County Department of Health to your dealership for the previous CRC campaigns.</p> <ul style="list-style-type: none"> <li>⇒ This certificate authorizes any potential future CRC campaigns 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) BEFORE conducting any CRC campaigns.</li> </ul> <p><b>Dealerships located in <u>Westchester County</u>:</b> Obtain a “waiver” of permitting requirements from Westchester County prior to beginning each CRC campaign. BEFORE beginning any CRC campaign, please call the EH&amp;S Hotline (877-572-4347) so that TMS can work with you to obtain this waiver.</p> <p><b>Dealerships located in <u>New York City</u>:</b> Do not conduct any CRC campaigns, but arrange for your customers’ vehicles to be processed by the contractor approved by TMS.</p>

<b>OHIO</b>	
<p>Do either of the following:</p> <p>(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</p> <ul style="list-style-type: none"> <li>⇒ Conducting all CRC campaigns at the location listed in the PTIO; and</li> <li>⇒ Processing no more than 1,398 vehicles per year for all CRC campaigns combined. <u>OR</u></li> </ul> <p>(2) Follow the instructions in Part Two for revoking this PTIO and staying exempt from air permitting.</p>	<p><b>Dealerships located in <u>Butler, Clark, Clermont, Greene, Hamilton, Miami, Montgomery, or Warren County</u>:</b> 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.</p> <p>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) <b>BEFORE</b> conducting any CRC campaigns.</p>
<b>PENNSYLVANIA</b>	
<p>Remain exempt by</p> <ul style="list-style-type: none"> <li>⇒ Keeping total actual emissions from each CRC campaign under the thresholds established by the relevant air regulatory agency in its permit exemption determination: <ul style="list-style-type: none"> <li>○ <b><u>All Counties Other Than Allegheny and Philadelphia Counties</u>:</b> 0.11 ppv and 2.7 tpy per campaign for VOCs and 0.1 ppv and 0.12 tons per campaign for PM.</li> <li>○ <b><u>Allegheny County</u>:</b> 0.1 tpy per campaign for VOCs and 0.12 tpy per campaign for PM.</li> <li>○ <b><u>Philadelphia County</u>:</b> 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.</li> </ul> </li> <li>⇒ Complying with the following other conditions in the permit exemption determination: <ul style="list-style-type: none"> <li>○ Process no more than seven vehicles per day; and</li> <li>○ 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).</li> </ul> </li> </ul>	<p>No additional requirements.</p>

<b>RHODE ISLAND</b>	
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.	No additional requirements.
<b>TENNESSEE</b>	
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.  ⇒ This Determination exempts any potential future CRC campaign being conducted at the same dealership location.  ⇒ If your dealership never obtained this Determination, or has moved its location since obtaining it, please call the EH&S Hotline (877-572-4347) BEFORE conducting any CRC campaigns.	No additional requirements.
<b>VERMONT</b>	
Remain exempt by:  ⇒ 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.  ⇒ 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.	No additional requirements.
<b>VIRGINIA</b>	
Remain exempt by keeping PTE for all CRC campaigns combined below air permitting thresholds for new “projects” of 10 tons per year (tpy) for VOCs and 15 tpy for PM.	No additional requirements.



<b>WEST VIRGINIA</b>	
<p><b>Remain exempt by:</b></p> <ul style="list-style-type: none"> <li>⇒ <b>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.</b></li> <li>⇒ <b>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.</b></li> <li>⇒ <b>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.)</b></li> </ul>	<p><b>No additional requirements.</b></p>
<b>WISCONSIN</b>	
<p><b>Remain exempt by keeping total actual emissions across your dealership under 10 tpy for VOCs and 10 tpy for PM.</b></p>	<p><b>No additional requirements.</b></p>

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TOYOTA CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

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

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

- (1) federal, state and local regulations governing air emissions of 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 Delaware.

**Step One Before Beginning Any CRC Campaign, Your Dealership Located In Delaware Should Take The Additional Actions Below.**

**6. CONFIRM AIR PERMIT EXEMPTION.**

- a. Keep total actual emissions of VOCs and PM across your entire dealership below Delaware's minor source air permit threshold of 10 lbs/day.
- b. To do so, you should, on any day when you are actively conducting the CRC campaigns, act as follows:
  - i. Limit vehicle processing (see Step Two below);
  - ii. Comply with the processing conditions imposed by the Delaware Department of Natural Resources and Environmental Control (DNREC) in conjunction with the air registration submitted by TMS for the CRC campaigns (see Step Two below); and
  - iii. Limit emissions from your non-CRC campaign operations to no more than 8 lbs/day.<sup>2</sup>

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

**7. CONFIRM LOCAL CODE COMPLIANCE.**

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

**8. CONDUCT TRAINING.**

- a. Provide training prior to beginning each CRC campaign to all relevant employees, even if those employees already have been involved in conducting other CRC campaigns.

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<sup>2</sup> This 8 lbs/day limit for non-CRC campaign operations has been derived by subtracting anticipated actual emissions from the CRC campaigns of 2 lbs/day from the 10 lbs/day permit threshold. The 2 lbs/day anticipated actual emissions is based on an emissions calculation for the CRC campaigns that assumes a dealership is processing 6 vehicles per day; therefore, if on any given day, your dealership processes fewer than 6 vehicles, then emissions from your non-CRC campaign operations on that day could exceed 8 lbs and your dealership's total emissions would still be below the 10 lbs/day permit threshold.

- b. To train, you should review the CRC Campaigns Dealer Information Packet and the Technical Instructions for the particular campaign with the employees.
- c. You also should train any new employee prior to that employee becoming involved in conducting a CRC campaign.
- d. Document all training with the **CRC Campaign Personnel Training Log** in **Appendix B**.

**Step Two**      **Begin Conducting The CRC Campaign, But Do So In Compliance With Obligations That Apply In Delaware.**

1. **LIMIT VEHICLE PROCESSING AND COMPLY WITH CONDITIONS IMPOSED BY DNREC IN CONJUNCTION WITH THE CRC CAMPAIGN AIR REGISTRATION** as follows:
  - a. Process no more than 1 vehicle every two hours.
  - b. Process no more than 6 vehicles per day in a spray space.
  - c. Never apply more than 3 liters of each CRC per vehicle. (Note: You should apply the amounts specified in the Technical Instructions for the particular CRC campaign, which may be less than 3 liters for one or both of the CRCs.)
  - d. Operate the Vaupel HSDR 3300 spray guns being used to apply the CRCs for no more than 12 hours per day.

Document adherence to vehicle processing limits and these other processing conditions using the **CRC Campaign Daily Vehicle Production Log** in **Appendix B**.

2. **FOLLOW STANDARD OPERATING PROCEDURES FOR CRC MATERIALS HANDLING, TRANSFER AND STORAGE.**
  - a. Store the CRCs in nonabsorbent, non-leaking containers, and keep those containers closed at all times except when the container is being filled or emptied; and
  - b. Store absorbent applicators, such as cloth and paper that are moistened with the CRCs, in a closed, nonabsorbent and non-leaking container.
3. **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. Vaupel HSDR 3300 Spray Equipment Manufacturer's Specifications.
- d. CRC Campaigns Air Emissions Calculation Summary.
- e. The CRC campaign registration submitted for your dealership by TMS and the DNREC acknowledgement letter.
- f. The DNREC letter dated January 11, 2012 providing a spray gun equivalency determination for the Vaupel HSDR 3300.

**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 Delaware, please go to the C.L.E.A.N. Dealer website (<http://cleandealer.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.







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

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

**APPENDIX A – SUMMARY OF ADDITIONAL FIRE AND  
OTHER LOCAL REQUIREMENTS FOR DELAWARE**

In Delaware, 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 (which for some locations would be the State Fire Marshal's office). You should confirm that your dealership can conduct the CRC campaign in compliance with this approval.

In some local jurisdictions in Delaware, 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.

Location	Other Potentially Relevant Local Requirements
<b>Dover</b>	Verify that dealership's current zoning and/or use permit allows the CRC campaign.  <b>Contact:</b>  Ann Marie Townshend City Hall – The Plaza P.O. Box 475 Dover, DE 19903-0475 302-736-7010

Location	Other Potentially Relevant Local Requirements
<b>Kent County</b>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><b>Contact:</b></p> <p>Sarah E. Keifer, ACIP  Director  Kent County Planning and Zoning  Department of Planning Services  555 Bay Road  Dover, DE 19901</p>
<b>Newark</b>	<p>Send any future CRC campaign-related communications to both the Newark Fire Marshal and Code Enforcement Officer.</p> <p>Verify whether dealership is located within (1) a wellhead protection area and/or recharge protection area; or (2) a floodplain or floodway, and if so, comply with any additional requirements related to for the use, storage and disposal of CRC campaign materials.</p> <p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><b>Contact:</b></p> <p>Roy H. Lopata  Director of Planning &amp;  Development Department  220 Elton Road  Newark, DE 19711  (302) 366-7030</p>
<b>New Castle County</b>	<p>Verify that dealership's current zoning and/or use permit allows the CRC campaign.</p> <p><b>Contact:</b></p> <p>Dave Culver, General Manager  Department of Land Use  New Castle County  87 Read's Way, NCC Government Center, New Castle Corporate Commons  New Castle, DE 19720  (302) 395-5463</p>





CORROSION-RESISTANT COMPOUND CAMPAIGNS  
DEALER INFORMATION PACKET

PART TWO – STATE COMPLIANCE SUPPLEMENT FOR DELAWARE

APPENDIX B – RECORDKEEPING FORMS AND  
OTHER DOCUMENTS FOR DELAWARE

Your dealership should maintain appropriate compliance records. To assist you, TMS has developed two documents:

- ⇒ **CRC Campaign Daily Vehicle Production Log:** Maintain this log to track the time spent on each vehicle and thereby demonstrate your dealership's adherence to the vehicle processing limits and compliance with the conditions imposed by the CRC campaign "registration" submitted by TMS for your dealership to the Delaware Department of Natural Resources and Environmental Control (DNREC). This log also allows your dealership to determine total VOC and PM emissions from the CRC campaigns on a daily, monthly and annual basis.
- ⇒ **Delaware Personnel Training Log:** Maintain this log to demonstrate that the employees conducting the CRC campaigns have been trained.

In addition to the foregoing, your dealership also should maintain 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 Vaupel HSDR 3300 Spray Equipment Manufacturer's Specifications;
- ⇒ CRC Campaigns Air Emissions Calculation Summary.
- ⇒ The CRC campaign "registration" submitted for your dealership by TMS and the DNREC acknowledgement letter.
- ⇒ The DNREC letter dated January 11, 2012 providing a spray gun equivalency determination for the Vaupel HSDR 3300.

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 VEHICLE PRODUCTION LOG**  
**DELAWARE**

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

- **Option 1 -- Electronic VPL 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 VPL**
  - 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.
  - On any given day, you can choose between two different approaches to completing the hard copy VPL:
    - **Emissions Estimator Table Approach:** Use the Emissions Estimator Table to determine the VOC and PM emissions respectively for each CRC kit type (*i.e.*, part number) based on the number of vehicles processed with the kit type on a particular day and enter the emissions on the VPL; then sum the emissions entered on the VPL for the Daily Total. *The Emissions Estimator Table approach may be best if your dealership is processing a small number of vehicles on a given day.*
    - **Total Emissions Calculator Approach:** Use the Total Emissions Calculator to determine the Daily Total of VOC and PM emissions respectively based on emissions factors provided for each CRC kit type (*i.e.*, part number) and the number of each kit type used during on that day. Enter this total on the VPL. *The Total Emissions Calculator approach may be best if your dealership is processing a larger number of vehicles on a given day.*

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## Instructions for Completing the Delaware CRC Campaign Daily Vehicle Production Log

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

**Step 2:**  
For each day that you process vehicles, enter 1) each vehicle's make and model year and 2) the time processing was completed.

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

**Step 3:**  
For each day that you process vehicles, enter the total number of vehicles processed with each CRC kit (part number).

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

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

Date	Vehicle(s) and Completion Time(s)	Number of Vehicles Processed With Each Kit (Part Number)		Emissions	
				VOC (lbs)	PM (lbs)
7/15/13	Tundra '04 - 8:30	00289- <u>T00</u> KT-DS	3	0.36	0.30
	Sequoia '03 - 10:30	00289- <u>S00</u> KT-DS	2	0.32	0.22
	Tundra '02 - 1:00	00289- <u>T01</u> KT-DS	1	0.05	0.06
	Tundra '05 - 3:00				
	Sequoia '01 - 5:00				
	Tundra '05 - 7:30		<b>Daily Total</b>	0.73	0.58
7/18/13	Tundra '03 - 10:00	00289- <u>T00</u> KT-DS	1	0.12	0.10
	Tundra '00 - 12:00	00289- <u>S00</u> KT-DS	0	0	0
	Tundra '06 - 2:00	00289- <u>T01</u> KT-DS	4	0.20	0.24
	Tundra '02 - 4:30				
	Tundra '01 - 7:00				
			<b>Daily Total</b>	0.32	0.34

**Step 4:**  
Determine emissions using either Step 4-A or Step 4-B.

**Step 4-A (If using Emissions Estimator Approach):**  
Using the Emissions Estimator below, enter the VOC and PM emissions on the VPL for each kit type based on the number of vehicles processed with the kit type that day. Add up the values in the VOC column and enter the "Daily Total". Do the same for the PM column.

### EMISSIONS ESTIMATOR

Locate the VOC and PM emission values in the table below that correspond to the number of vehicles processed with each CRC kit type. Enter those values in the appropriate box on the VPL. Add up the values in each column for the Daily Total of VOC and of PM emissions.

Kit (Part Number):		Number of Vehicles Processed					
		1	2	3	4	5	6
00289- <u>T00</u> KT-DS	VOC	0.12	0.24	0.36	0.48	0.6	0.72
	PM	0.10	0.20	0.30	0.40	0.50	0.60
00289- <u>S00</u> KT-DS	VOC	0.16	0.32	0.48	0.64	0.8	0.96
	PM	0.11	0.22	0.33	0.44	0.55	0.66
00289- <u>T01</u> KT-DS	VOC	0.05	0.10	0.15	0.20	0.25	0.3
	PM	0.06	0.12	0.18	0.24	0.30	0.36

**Step 4-B (If using Total Emissions Calculator Approach):**

Do not use the Emissions Estimator or enter the VOC and PM emissions for each kit type. Instead, at the end of each day, use the Total Emissions Calculator below to calculate VOC emissions and enter the "Daily Total" on the VPL. Do the same for PM.

**TOTAL EMISSIONS CALCULATOR**

Enter in Column A below the number of vehicles processed with each CRC kit type. Then, in Column B (VOCs) and Column C (PM), multiply the number of each kit type entered in Column A by the emission factor provided for that kit type. Finally, add up the values in Column B and in Column C to determine the total VOC and PM emissions for that day.

	<u>A</u>	<u>B</u>	<u>C</u>
Kit (Part Number)	Number of Kits Used	VOC (lbs)	PM (lbs)
00289- <u>T00KT</u> -DS	3	Multiply Col. A x 0.12 = <u>0.36</u>	Multiply Col. A x 0.10 = <u>0.30</u>
00289- <u>S00KT</u> -DS	2	Multiply Col. A x 0.16 = <u>0.32</u>	Multiply Col. A x 0.11 = <u>0.22</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>Total</b>	Sum of column B = <u>0.73</u>	Sum of column C = <u>0.58</u>

**KIT REFERENCE TABLE:**

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

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

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

**Delaware CRC Campaign Daily Vehicle Production Log**

Date	Vehicles & Time(s) of Completion	Kit (Part Number)	# Kits Used	Emissions	
				VOC (lbs)	PM (lbs)
		00289-T00KT-DS			
		00289-S00KT-DS			
		00289-T01KT-DS			
			<b>Daily Total</b>		
		00289-T00KT-DS			
		00289-S00KT-DS			
		00289-T01KT-DS			
			<b>Daily Total</b>		
		00289-T00KT-DS			
		00289-S00KT-DS			
		00289-T01KT-DS			
			<b>Daily Total</b>		
		00289-T00KT-DS			
		00289-S00KT-DS			
		00289-T01KT-DS			
			<b>Daily Total</b>		
		00289-T00KT-DS			
		00289-S00KT-DS			
		00289-T01KT-DS			
			<b>Daily Total</b>		
		00289-T00KT-DS			
		00289-S00KT-DS			
		00289-T01KT-DS			
			<b>Daily Total</b>		
		00289-T00KT-DS			
		00289-S00KT-DS			
		00289-T01KT-DS			
			<b>Daily Total</b>		
		00289-T00KT-DS			
		00289-S00KT-DS			
		00289-T01KT-DS			
			<b>Daily Total</b>		

***Duplicate as Necessary***

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

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

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

**EMISSIONS ESTIMATOR**

Locate the VOC and PM emission values in the table below that correspond to the number of vehicles processed with each CRC Kit type. Enter those values in the appropriate box on the VPL. Add up the values in each column for the Daily Total of VOC and PM emissions.

Kit (Part Number):		Number of Vehicles Processed					
		1	2	3	4	5	6
00289- <u>T00KT</u> -DS	VOC	0.12	0.24	0.36	0.48	0.6	0.72
	PM	0.10	0.20	0.30	0.40	0.50	0.60
00289- <u>S00KT</u> -DS	VOC	0.16	0.32	0.48	0.64	0.8	0.96
	PM	0.11	0.22	0.33	0.44	0.55	0.66
00289- <u>T01KT</u> -DS	VOC	0.05	0.10	0.15	0.20	0.25	0.3
	PM	0.06	0.12	0.18	0.24	0.30	0.36

**TOTAL EMISSIONS CALCULATOR**

Enter in Column A below the number of vehicles processed with each CRC Kit type. Then, in Column B (VOCs) and Column C (PM), multiply the number of each kit type entered in Column A by the emission factor provided for that kit type. Finally, add up the values in Column B and in Column C to determine the total VOC and PM emissions for that day.

	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>Total</b>	Sum of column B = ____	Sum of column C = ____

**Duplicate as Necessary**

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

Delaware – CRC Campaign Personnel Training Log

Dealership name and location: \_\_\_\_\_ CRC Campaign \_\_\_\_\_

**Instructions:** Dealerships should use this log to confirm that the employees conducting each CRC Campaign have been trained as required by 7 Del. Admin Code, Reg. No. 1124 § 11.3.5.1. Maintain this log in your CRC campaign records for five (5) years after your dealership ceases its involvement in CRC campaigns.

**Important Reminder:** Even if an employee has been involved in prior CRC campaigns, they should receive training for each new campaign. The training provided specific to each campaign should be separately documented on that campaign's Training Log. Duplicate this sheet as necessary to create the Training Log for each campaign.

Pursuant to 7 Del. Admin Code, Reg. No. 1124 § 11.3.5.1, the person(s) listed below have reviewed all materials pertinent to the CRC Campaign identified above, including the Dealer Information Packet and the Technical Instructions, and understand the proper use, handling and operation of the CRC Campaign materials and equipment.

Employee Names/Date Trained:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature of Dealer Principal:

\_\_\_\_\_

Date:

\_\_\_\_\_

Address & Contact Information for Dealer Principal:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*This record must be maintained for 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.

# 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
----------	---------	------	------------

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 %
----------	---------	---------------------------

NONE

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  
Verkstadsgatan 3  
S-434 42 Kungsbacka  
Sweden

**US Distributor:** Soken Trade Corporation  
12055 Sherman Way  
North Hollywood, CA  
USA

[www.auson.se](http://www.auson.se)  
**PHONE:** +46 300-562000  
**FAX:** +46 300-562001

[www.noxudolusa.com](http://www.noxudolusa.com)  
(800) 598-3535  
(818) 308-8427

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.



# MATERIAL SAFETY DATA SHEET

**Noxudol 300 S**

Last Updated April 18, 2011

## 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**



# MATERIAL SAFETY DATA SHEET

## Noxudol 300 S

Last Updated April 18, 2011

**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.

CAS NO.	CHEMICAL NAME
64741-88-4	Solvent-refined heavy paraffinic distillate mg/m3
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/M3
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/M3
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/M3
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



# MATERIAL SAFETY DATA SHEET

## Noxudol 300 S

Last Updated April 18, 2011

the state of California under the safe drinking water and toxic reinforcement act of 1986 ("proposition 65") as either a carcinogenic or reproductive hazard:

1317-65-3	CALCIUM CARBONATE (LIMESTONE) MG/M3
OSHA PEL-TWA:	15 FOR TOTAL DUST; 5 FOR RESPIRABLE FRACTION
OSHA PEL STEL:	NONE
OSHA PEL CEILING:	NONE
ACGIH TLV-TWA:	0 FOR TOTAL DUST; 3 FOR RESPIRABLE FRACTION
ACGIH TLV STEL:	NONE
ACGIH TLV CEILING:	NONE
1333-86-4	CARBON BLACK MG/M3
OSHA PEL-TWA:	3.5
OSHA PEL STEL:	NONE
OSHA PEL CEILING:	NONE
ACGIH TLV-TWA:	3.5
ACGIH TLV STEL:	NONE
ACGIH TLV CEILING:	NONE
14808-60-7	CRYSTALLINE SILICA MG/M3
OSHA PEL-TWA:	10/(%SIO2+2) (RESPIRABLE)
OSHA PEL STEL:	NONE
OSHA PEL CEILING:	NONE
ACGIH TLV-TWA:	0.025 (RESPIRABLE)
ACGIH TLV STEL:	NONE
ACGIH TLV CEILING:	NONE

*(Crystalline Silica and carbon black only present hazards as respirable particles of 10 microns or less. Both are bound in the coating and will not be released as respirable particles)*

**VENTILATION SYSTEM:** A system of local and/or general exhaust is recommended to keep employee exposures below the airborne exposure limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**PERSONAL RESPIRATORS (NIOSH APPROVED):** If respirator use is desired, or if exposure limit values are exceeded, use NIOSH approved respirator and type A filters (brown, organic substances).

**SKIN PROTECTION:** Avoid prolonged skin contact. Chemical resistant (nitrile) gloves recommended for operations where skin contact is likely. Wear appropriate protective clothing or boots as needed. Workers should wash exposed skin several times daily with soap and water. Soiled work clothing should be laundered or dry-cleaned.

**EYE PROTECTION:** Safety glasses, chemical type goggles, or face shield recommended to prevent eye contact.

**GENERAL HYGIENIC PRACTICES:** Wash thoroughly with soap and water after handling, before eating, drinking, smoking, or using toilet facilities. Do not smoke during use.



# MATERIAL SAFETY DATA SHEET

## Noxudol 300 S

Last Updated April 18, 2011

### 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



# MATERIAL SAFETY DATA SHEET

## Noxudol 300 S

Last Updated April 18, 2011

**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>	



# MATERIAL SAFETY DATA SHEET

## Noxudol 300 S

Last Updated April 18, 2011

National Fire Protection Association (NFPA):



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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# 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 slits 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.

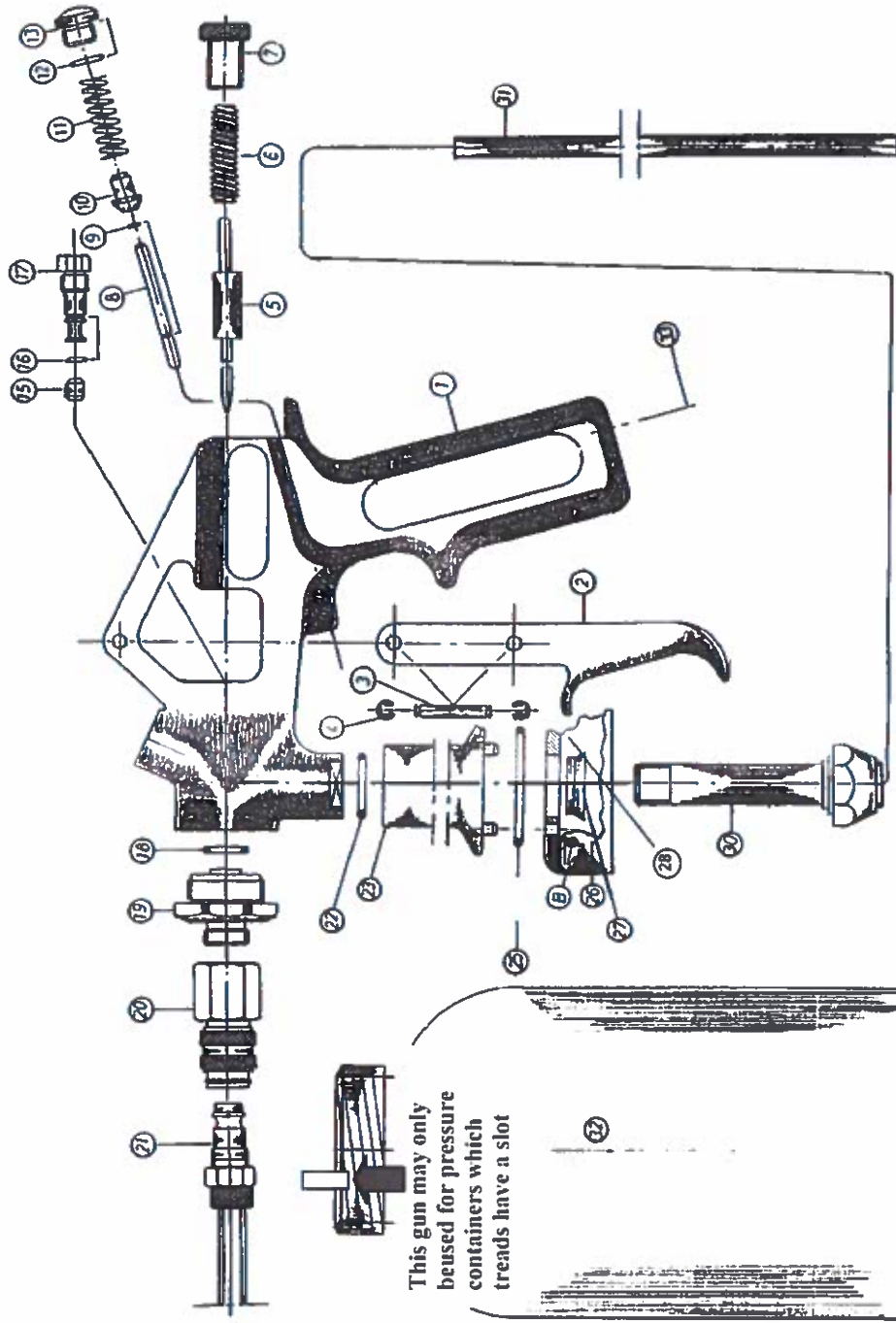
### Environmental Protection

- 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 |             | Capacity 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 | S 83302     | assembly screw                   |
| 30 | 60 3129 014 | ascending tube                   |
| 31 | S 83305     | pressure tank                    |
| 32 | S 83303     | seal-set                         |
|    | S 80151     | flat-nozzle -<br>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)
Noxudol 300 S	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
712AM	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
Combined VOC emissions:	= 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 <i>potentially</i> 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) <b>= 0.94 lbs PM/vehicle</b>	0.792 gal (3 liters)/kit x 7.97 lbs/gal x 98.9% solids by weight x 15% (100% - 85% transfer efficiency) <b>= 0.94 lbs PM/vehicle</b>	0.528 gal (2 liters)/kit x 7.97 lbs/gal x 98.9% solids by weight x 15% (100% - 85% transfer efficiency) <b>= 0.62 lbs PM/vehicle</b>
<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) <b>= 0.03 lbs PM/vehicle</b>	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) <b>= 0.06 lbs PM/vehicle</b>	None
<b>Combined potential PM emissions:</b>	<b>= 0.97 lbs PM/vehicle</b> (solids available for emission to ambient air as PM)	<b>= 1.0 lbs PM/vehicle</b> (solids available for emission to ambient air as PM)	<b>= 0.62 lbs PM/vehicle</b> (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</b> (90% fallout factor)	0.94 lbs PM/vehicle x 10%	0.94 lbs PM/vehicle x 10%	0.62 lbs PM/vehicle x 10%
<b>712AM</b> (75% fallout factor)	+ 0.03 lbs PM/vehicle x 25%	+ 0.06 lbs PM/vehicle x 25%	--
<b>Estimated PM Emissions:</b>	<b>= 0.10 lbs PM/vehicle</b>	<b>= 0.11 lbs PM/vehicle</b>	<b>= 0.06 lbs PM/vehicle</b>

## 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 DELAWARE

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

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

- ⇒ **Major Sources.** Any source with a potential to emit (PTE)<sup>1</sup> at or above 100 tons per year (tpy) of PM and 50 tpy of VOCs.<sup>2</sup>
- ⇒ **Minor Sources.** Any source (or any operation added to an existing source) that (a) does not constitute a major source and (b) has aggregate actual emissions of VOCs and PM at or above one of two thresholds:
  - **Permit.** Aggregate actual emissions equal to or greater than 10 lbs/day (source must obtain a minor source air permit from DNREC prior to construction or operation).<sup>3</sup>
  - **Registration.** Aggregate actual emissions equal to or greater than 0.2 lbs/day but less than 10 lbs/day (source must submit a registration form to DNREC prior to construction or operation).<sup>4</sup>

<sup>1</sup> “Potential to emit” or “PTE” refers to the maximum capacity of a stationary source to emit air pollutants under its physical and operational design. DEL. ADMIN. CODE 1125 §§ 1.9. The PTE calculation generally requires conservative assumptions, and a source’s actual emissions are usually well below its PTE.

<sup>2</sup> 7 DEL.CODE. § 6095(5); 7 DEL. ADMIN. CODE 1125 §§ 1.9, 2.2.1 & 2.2.2.

<sup>3</sup> 7 DEL. ADMIN. CODE. 1102 § 2.1.

**IMPORTANT: 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.**

TMS has calculated the PTE as well as the expected actual emissions for each prior and ongoing CRC campaign,<sup>5</sup> and these calculations indicate the following:

- ⇒ **Major Source Permit.** The PTE for each CRC campaign is just a small fraction of the major source thresholds. It is expected that the PTE for the rest of your dealership's operations likewise would fall far below the major source thresholds.
- ⇒ **Minor Source Permit.** Expected actual emissions for the CRC campaigns are well below the 10 lbs/day construction and operating permit threshold. However, this threshold applies across your entire dealership. On any day when you are actively conducting CRC campaigns, therefore, you must make sure that emissions from the CRC campaigns, combined with emissions from your non-CRC campaign operations, remain less than 10 lbs/day. It is not expected, based on conservative assumptions, that emissions from the CRC campaigns would ever exceed 2 lbs/day as long as you follow the vehicle processing limits (see minor source registration discussion below); therefore, on any day when your dealership is actively engaged in conducting the CRC campaigns, you should take steps to make sure that daily emissions from your non-CRC campaign operations remain below 8 lbs/day<sup>6</sup>. You should not have a problem doing so as long as you satisfy the two criteria below:
  1. Your dealership does not operate a large on-site or an off-site body shop,<sup>7</sup> and
  2. Your dealership does not engage in significant painting, coating or other spraying operations on any day when it is actively conducting the CRC campaigns.

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<sup>4</sup> 7 DEL. ADMIN. CODE. 1102 §§ 2.1.1 *et seq.* & 9.0 *et seq.*

<sup>5</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 Delaware.

<sup>6</sup> This 8 lbs/day limit for non-CRC campaign operations has been derived by subtracting anticipated actual emissions from the CRC campaigns of 2 lbs/day from the 10 lbs/day permit threshold. The 2 lbs/day anticipated actual emissions is based on an emissions calculation for the CRC campaigns that assumes a dealership is processing 6 vehicles per day; therefore, if on any given day, your dealership processes fewer than 6 vehicles, then emissions from your non-CRC campaign operations on that day could exceed 8 lbs and your dealership's total emissions would still be below the 10 lbs/day permit threshold.

<sup>7</sup> A body shop or other operations that involve the use of spraying equipment will have higher potential emissions 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 on-site body shop, then the state will require you to combine the emissions from that onsite body shop with the emissions 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 emissions from an off-site 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.

⇒ **Minor Source Registration.**

- Expected actual emissions for the CRC campaigns exceed the 0.2 lbs/day minor source registration threshold. For this reason, adding the CRC campaigns to your dealership's existing operations triggered a minor source registration requirement. TMS submitted registrations for the previous CRC campaigns,<sup>8</sup> and at the time of the Sequoia COD campaign obtained an acknowledgement from DNREC that the registration for that campaign also would apply to any potential future CRC campaign.
- The registration submitted by TMS that covers any potential future CRC campaign presented a theoretical maximum emissions calculation which assumed a hypothetical dealership operating 2 CRC campaign spraying spaces with 4 spray guns for 12 hours per day and processing 12 vehicles per day. DNREC accepted that theoretical maximum emissions calculation, and based upon it, imposed certain conditions in its letter acknowledging the registration.<sup>9</sup>
- To assure your dealership complies with relevant conditions imposed by DNREC<sup>10</sup> as well as conducts each CRC campaign in accordance with the Technical Instructions and consistent with the 2 lbs/day CRC campaign maximum emissions calculation (discussed above in the context of the 10 lbs/day minor source permit threshold), your dealership must:
  1. **Process no more than 1 vehicle every two hours.**
  2. **Process no more than 6 vehicles per day in a spray space.**
  3. **Never apply more than 3 liters of each CRC per vehicle. (Note: You should apply the amounts specified in the Technical Instructions for the particular CRC campaign, which may be less than 3 liters for one or both of the CRCs.)**
  4. **Operate the Vaupel HSDR 3300 spray guns being used to apply the CRCs for no more than 12 hours per day.**

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<sup>8</sup> The Tacoma LSC 90D, due to the higher emissions associated with the X128T exterior CRC that was replaced by Noxudol 300S in subsequent campaigns, triggered a minor source permit requirement, which TMS assisted your dealership in complying with for that CRC campaign.

<sup>9</sup> Appendix B to Part Two -- State Compliance Supplement for Delaware contains a copy of this acknowledgement letter.

<sup>10</sup> Some of the conditions imposed by DNREC in its acknowledgement letter are based upon the hypothetical operating scenario, and therefore, are not relevant to your dealership's actual CRC campaign operations. For example, DNREC's acknowledgement letter imposes the condition that you should not process more than 24 vehicles per day; however, this condition is based on the hypothetical operating scenario's assumption of 2 spraying spaces, 4 spray guns and the ability to process 1 vehicle per hour in each spray space in a 12 hour period, for a total of 12 vehicles per spray space per day. This 24 vehicles per day condition, therefore, is not relevant to your dealership's actual CRC campaign operations because you are processing vehicles in 1 spraying space, not 2, with 2 spray guns, not 4, and not processing more than one vehicle every 2 hours instead of 1 vehicle per hour.

### III. MOBILE EQUIPMENT REPAIR AND REFINISHING OPERATIONS

Delaware imposes special requirements on "mobile equipment repair and refinishing (MERR) operations" that limit the VOC content of coatings and require the use of high-efficiency coating application systems. The CRC materials meet the VOC content limit in these regulations, and TMS also has obtained DNREC's confirmation that the Vaupel HSDR 3300 spray gun qualifies as a high-efficiency application system for the CRC materials pursuant to these regulations.<sup>11</sup>

The MERR regulations also impose training<sup>12</sup>, materials handling and storage<sup>13</sup> and recordkeeping requirements<sup>14</sup>, but only on sources with actual facility-wide VOC emissions at or above 15 lbs/day.<sup>15</sup> As discussed in Part II. above, your dealership's emissions should be well below this 15 lbs/day level; therefore, you are exempt from these requirements. As a matter of best practices, however, TMS recommends that your dealership follow these MERR requirements when conducting the CRC campaigns. The specifics of these requirements are addressed in the Part Two -- State Compliance Supplement for Delaware (in Steps One & Two and in Appendix B).

**IMPORTANT: Your dealership may engage in other mobile equipment repair and refinishing operations besides the CRC campaigns which are also subject the MERR regulations. This Summary does not address these regulations as applied to non-CRC materials and non-CRC campaign activities.**

### IV. RECORDKEEPING

Your dealership should maintain records to demonstrate your compliance with the training requirements discussed in Part III. above and your adherence to the vehicle processing limits and conditions of the CRC campaign minor source registration discussed in Part II. above. Please refer to Appendix B of the State Compliance Supplement for Delaware for logs that you can use and for copies of the 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 all completed logs and the above documents on file until 5 years after your dealership ceases its involvement in CRC campaigns.*

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<sup>11</sup> 7 DEL. ADMIN. CODE. 1124 §§ 11.3.4.5 & 11.7.3. DNREC has confirmed that the Vaupel HSDR 3300 spray guns as used in the CRC campaigns achieve a transfer efficiency that is equivalent to high volume, low pressure ("HVLP") spray equipment.

<sup>12</sup> 7 DEL. ADMIN. CODE. 1124 § 11.3.6.5.1.

<sup>13</sup> 7 DEL. ADMIN. CODE. 1124 § 11.3.6.2 & 7 DEL. ADMIN. CODE. 1124 § 11.3.6.3.

<sup>14</sup> 7 DEL. ADMIN. CODE. 1124 §§ 11.3.1.1, 11.5.1 & 11.5.2.

<sup>15</sup> 7 DEL. ADMIN. CODE. 1124 § 1.2.1.