

IMPORTANT UPDATE

COLD CLIMATE STATES ONLY

CT, DE, IL, IN, KY, MA, MD, ME, MI, MN, NH, NJ, NY, OH, PA, RI, VA, VT, WI & WV and District of Columbia

TECHNICAL INSTRUCTIONS

FOR

CORROSION-RESISTANT COMPOUND CAMPAIGN H0F

CERTAIN 2005 THROUGH 2010 MODEL YEAR TACOMA

CORROSION-RESISTANT COMPOUND APPLICATION

COLD CLIMATE STATES ONLY

CT, DE, IL, IN, KY, MA, MD, ME, MI, MN, NH, NJ, NY, OH, PA, RI, VA, VT, WI & WV
UPDATED 12.8.17

12.8.17 Update:

- **Update to Technician Certification Requirements**

The repair quality of covered vehicles is extremely important to Toyota. All dealership technicians performing this repair are required to successfully complete the most current version of the E-Learning course "Safety Recall and Service Campaign Essentials". The Technician must also be fitted for a NIOSH approved respirator. To ensure that all vehicles have the repair performed correctly, technicians performing this repair are required to currently hold at least one of the following certification levels:

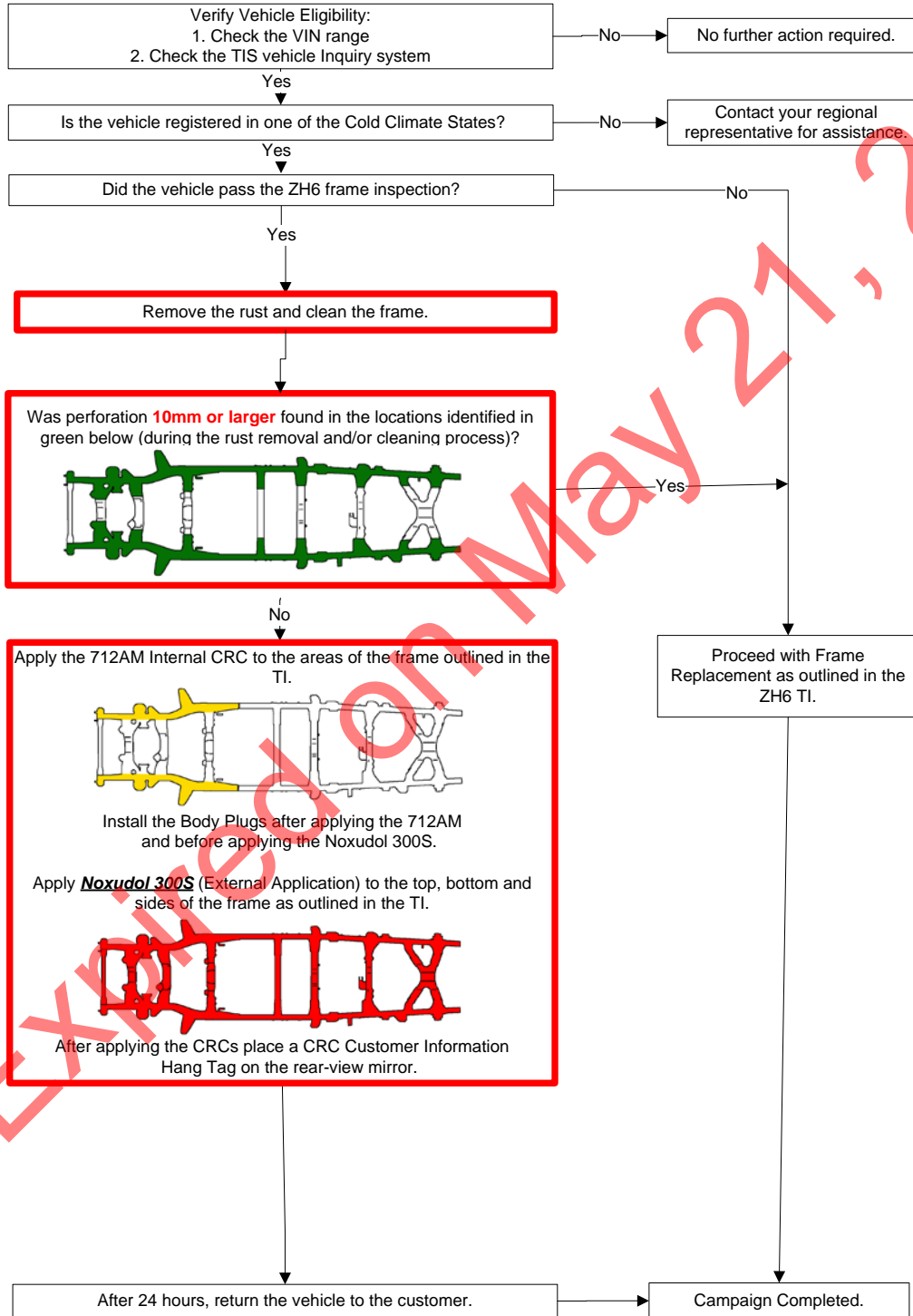
- Maintenance Certified Technician and above

Always check which technicians can perform the recall remedy by logging on to <https://www.uotdealerreports.com>. It is the dealership's responsibility to select technicians with the above certification level or greater to perform this repair. Carefully review your resources, the technician skill level, and ability before assigning technicians to this repair. It is important to consider technician days off and vacation schedules to ensure there are properly trained technicians available to perform this repair at all times.



- For a complete list of Site Selection Guidelines and, Fire, Building, and Zoning Codes information for your state, please refer to the Dealer Information Packet. Please ensure your dealership complies with all regulations set forth in this packet.
- Keep records to comply with Federal/State/Local regulations and requirements. See the Federal, State & Local Requirements Guide and any Supplements to that Guide.

I. OPERATION FLOW CHART



Note: Ensure to follow the entire procedure and perform all steps completely (e.g. cleaning/rust removal, CRC application, one kit per vehicle, etc.) any deviation will be subject to warranty claim debit.

II. IDENTIFICATION OF COVERED VEHICLES

A. COVERED VIN RANGE

Notes:

- Vehicles currently registered in the Cold Climate States* or the District of Columbia (D.C.) that do not have significant corrosion found are eligible for Corrosion-Resistant Compound (CRC) application to the frame if it did NOT previously have the frame sprayed and/or had the frame previously replaced.
- Check TIS to confirm the VIN is covered in H0F. This will verify the vehicle is covered and has not already been completed prior to dealer shipment or by another dealer.
- TMS warranty will not reimburse dealers for repairs conducted on vehicles that are not covered or were completed by another dealer.


* CT, DE, IL, IN, KY, MA, MD, ME, MI, MN, NH, NJ, NY, OH, PA, RI, VA, VT, WI, & WV

III. PREPARATION

A. PARTS

Please be aware that only dealers in Cold Climate States will be allowed to order the following CRC kit.

The necessary CRC kits can be ordered through the chemical program provided by Dealer Tire (Complete Maintenance Care). The CRC kits will be shipped directly from AMREP. Your dealership should not order kits until you have confirmed an appointment. However, please keep in mind it will take at least 5 business days for CRC kit delivery. Deliveries are only scheduled on business days. Saturday deliveries are not available.

Model	Part No.	Part Description	Qty/Unit
Tacoma	00289-T00KT-DS	T00-Corros Res Kit (CRC Kit)	1
The kit above includes the following parts: Noxudol 300S – 3 Liters Parker 712AM – 1 Liter			

1. When Ordering CRC Kits Please Note:

- Each kit will contain the exact amount of CRC for one vehicle.
- The CRC kits listed will be drop-shipped from AMREP, not your local PDC. Do not order more than your immediate needs, as these materials are not returnable or refundable.
- Orders for these parts should be placed separately from orders of other drop ship chemicals.
- Refer to the Appendix for the Safety Data Sheet (SDS).

2. When Storing the CRC Kits Please Note:

- Follow local, state and federal regulations for hazardous materials storage and disposal that are explained in the Hazardous Waste Management Section of the Federal, State and Local Requirements Guide of the Dealer Information Packet.
- Store the CRC kits at room temperature (refer to the SDS for detailed instructions).

B. SUPPORT MATERIALS

- The following support materials can be ordered through the dealer's facing **PDC**:

Part Number	Part Name	Qty/Veh
5114A-04010	Seal, Frame Side Rail, RH	1
5114B-04010	Seal, Frame Side Rail, LH	1
90178-A0024	Nut, Flange	2
90119-A0170	Bolt, W/Washer	2
94151-80801	Nut, Flange	2
94183-00831	Nut, Lock	2
94611-10800	Washer, Plate	4
90105-08500	Bolt, Flange	2
04007-18335	Plug Hole Kit CRC Application	1
The kit listed above includes the following parts:		
Part Number	Part Description	Qty
90950-01A24	PLUG,HOLE	2
90950-01984	PLUG,HOLE	2
90950-01987	PLUG,HOLE	8
90950-01631	PLUG,HOLE	4
90950-01983	PLUG,HOLE	4
90950-01989	PLUG,HOLE	4
90950-01990	PLUG,HOLE	4
90950-01992	PLUG,HOLE	2
90950-01991	PLUG,HOLE	4
90950-01A09	PLUG,HOLE	2
90950-01931	PLUG,HOLE	1
90950-01A11	PLUG,HOLE	2
90389-05012	PLUG,HOLE	2
04007-23104	Plug Hole Kit CRC Application	1
The kit listed above includes the following parts:		
Part Number	Part Description	Qty
90950-A1008	PLUG,HOLE	2
90950-A1009	PLUG,HOLE	2
90080-46327	CLIP	2
90119-A0169	BOLT w/WASHER	4

- The following support materials can be ordered through the **MDC**:

Part Number	Part Description	Qty
00411-11004	Corrosion-Resistant Compound Customer Information Hang Tag*	1 per vehicle

* Additional CRC Customer Information Hang Tags can be ordered in packages of 25 through the MDC.

C. STANDARD TOOLS & EQUIPMENT

- Standard hand tools
- Flat chisel
- Scraper
- Wire brush
- Air nozzle
- Infrared thermometer
- Air coupler (quantity 2)

SPECIAL EQUIPMENT

The following equipment was shipped to your dealership prior to the launch of LSC H0F.

Note: Due to federal, state and local regulations, each dealer is only allowed to have one set of spray guns. Any old previous spray guns from previous campaigns should be disposed of in accordance with local regulations.

As a result, each participating dealer will have 2 total spray guns in their possession:

Equipment	Purpose	Application Area
Spray Gun	Noxudol 300S	Exterior Frame CRC Application
Spray Gun	712AM	Interior Frame CRC Application
90° Drill Adapter	Drill Holes	These tools will be used to attach the frame side rail seal.
Drill Bits	Drill Holes	

The items below were previously shipped to your dealership for previous CRC campaigns.

Magnet Kit

- 30 Rare Earth Magnets – See section VI.C.1 “Attach Plastic Sheet” for details.

*Follow the CRC Support link located in the left bottom corner of the C.L.E.A.N DEALER webpage.

D. MATERIALS & SUPPLIES (Locally Procured by Dealer)

- Protective eyewear
- Dust mask
- Appropriate NIOSH approved respirator** (Follow all Federal, State, Local Environmental, Health and Safety Requirements such as OSHA Regulations. Please refer to the SDS for details on the appropriate mask for each CRC.)



Example of a NIOSH-approved respirator

**Notes:

- Refer to the SDS located in the Appendix for additional information on respirator use.
- It is up to the individual dealership to ensure compliance with OSHA regulations.
- If you require further assistance in regards to NIOSH approved respirators, we have found 3M® to be a useful reference/source.

3M® Technical Assistance: 1-800-243-4630

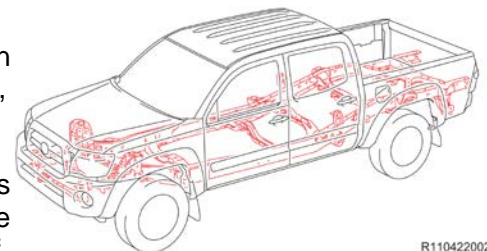
3M® Customer Service: 1-800-328-1667

3M® Web Site: www.3m.com/occsafety

- Protective gloves
- Chemical Resistant Gloves (refer to SDS for specific type)
- Masking tape
- Duct tape
- Fire-retardant poly sheeting (tarp) or covering (if you cannot purchase the tarp from a local supplier, please refer to **CRC Tips and Examples** located on the C.L.E.A.N. DEALER website (<http://cleandealer.com>) for a list of possible suppliers)
- Plastic (Saran Wrap) sheet (for spray gun storage)
- Partitions (The type, size, and number of partitions used will depend on each dealer's facility.)
- Shop cloth/paper towels
- Funnel (quantity = 2)
- Plastic sheet to contain the dripping 712AM during frame application, 3m x 3m (118in x 118in)
- Garbage Bags

IV. BACKGROUND AND COMPONENTS

Toyota has received a number of reports regarding Frame Corrosion on 2005 – 2010 model year Tacoma vehicles, 2007-2008 Tundra vehicles, and 2005-2008 Sequoia vehicles. In these reports, customers have indicated that vehicles operated in specific cold climate areas with high road salt usage may exhibit more-than-normal corrosion to the vehicle's frame. This condition is unrelated to and separate from normal surface rust which is commonly found on metallic surfaces after some years of usage and/or exposure to the environment.



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- Because of variations in State and local laws, dealerships conducting HOF in certain states may require government approvals prior to starting the campaign. Depending upon the state, dealerships also may be subject to restrictions on the number of vehicles to which the CRC can be applied in any single day, week, or month. Please refer to the Dealer Information Packet and any Supplements for important information about any such approvals or restrictions that may apply to your dealership. Your dealership must adhere strictly to these requirements.
- For a complete list of Site Selection Guidelines, Fire, Building, and Zoning Codes information for your state, please refer to the Dealer Information Packet as well as any Supplements. Please ensure your dealership complies with all regulations and all issued packets/instructions.

V. VEHICLE INSPECTION WORK PROCEDURE

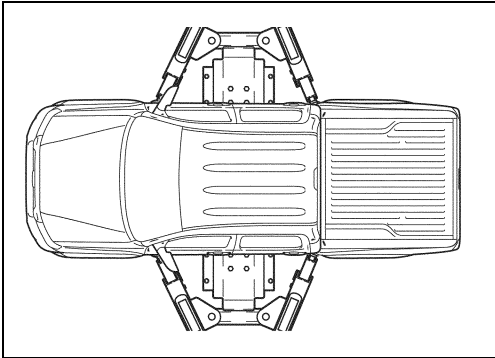
Note: Vehicle frame inspection is performed under WEP ZH6, for inspection instructions go to WEP ZH6 Technical Instructions.

VI. FRAME APPLICATION WORK PROCEDURE



Allow sufficient time for the vehicle and exhaust to cool down before beginning the application process. By following the FRAME APPLICATION WORK PROCEDURE in these Technical Instructions, the vehicle will have additional time to cool before the CRC's are applied. Please refer to the SDS (In the Appendix) for flash point temp.

A. VEHICLE PREPARATION AND REMOVAL OF FRAME RUST



1. PREPARE THE VEHICLE

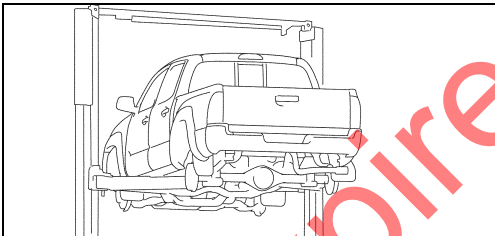
- It may be necessary to pressure wash the vehicle's frame, depending on its cleanliness.

Note: Time has been allotted to pressure wash the frame in the flat rate time.

- Place the vehicle on the lift.



Strap the vehicle to the lift with safety straps. Once the vehicle is raised to the desired height, install screw jacks to the front and back of the vehicle.



- Raise up the vehicle and remove the wheels.
- Remove the engine under cover.
- Cover any identifying label (i.e., VIN label, etc.) on the frame with tape.
- Cover all exposed electrical connectors with tape to protect from over spray.

2. REMOVE RUST FROM THE FRAME AND CROSS-MEMBERS.

- Using a scraper or chisel remove all loose rust and rust scales from the frame and cross-members.

Note: The use of power tools is permissible during the cleaning process. Toyota found air scalers to work well.

- If rust perforation of 10mm or larger and/or component corrosion damage is found during the rust removal process proceed with frame replacement as outlined in the separate ZH6 TI.

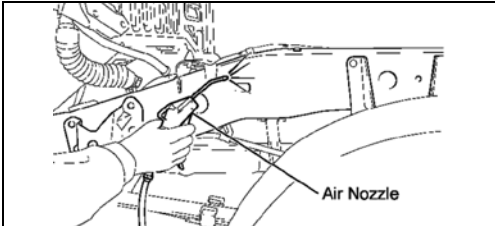
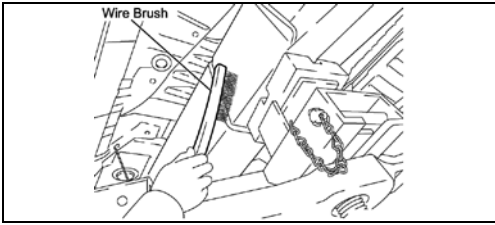
Notes:

- Make sure to wear protective eyewear, gloves, and a dust mask when removing rust and cleaning frame.
- Be careful not to damage the wire harness or brake lines when removing rust.
- Be extremely cautious not to injure your hands.
- DO NOT scratch or remove the identifying labels

Power Tools are Permissible



ex.) Air Needle Scaler



3. CLEAN THE FRAME

- a) Use a wire brush and remove any remaining rust or dirt from the frame.

Ensure to follow the procedure and perform all steps completely (e.g. inspection, cleaning/rust removal, CRC application, one kit per vehicle, etc.) any deviation will be subject to warranty claim debit.

- b) Use an air nozzle and remove any loose rust.

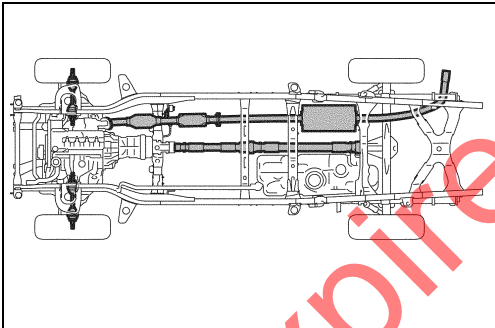
Notes:

- Make sure to wear protective eyewear, gloves, and a dust mask when performing this step.
- A slightly wet frame surface (no water droplets) is acceptable when applying the frame CRC.

Sample of Sufficient Frame Cleaning



B. VEHICLE PROTECTION



1. ATTACH MASKING MATERIALS

- a) Using an infrared thermometer ensure the exhaust has cooled.
- b) Cover the driveshaft(s) and exhaust, with fire-retardant poly sheeting (tarp) and secure with masking tape.
- c) Cover the front and rear brake/hub assemblies with garbage bags and secure with masking tape.

Notes:

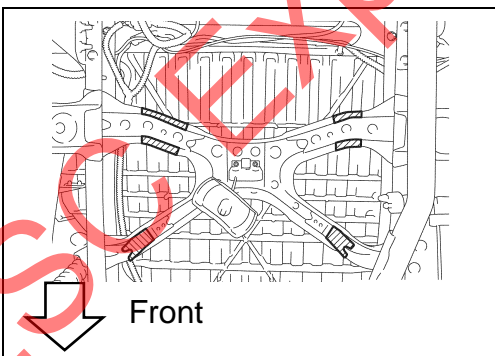
- If necessary, cover shock absorbers with masking sheets.
- Overspray onto the driveshaft may cause vehicle vibration.

2. COVER SPARE TIRE CONTACT SURFACES ON REAR CROSS-MEMBER

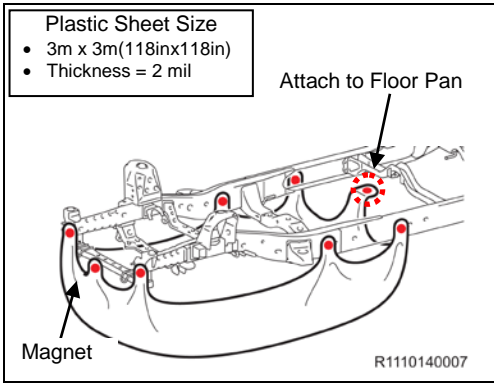
- a) Cover the underside of the rear cross-member with duct tape where the spare tire contacts the rear cross-member.

Notes:

- Tape size/location may vary if the customer has changed spare tire size, adjust as necessary.
- Tape will not be centered on cross-member because spare tire carrier is off center.
- Tape will prevent Noxudol 300S from sticking to the tire.



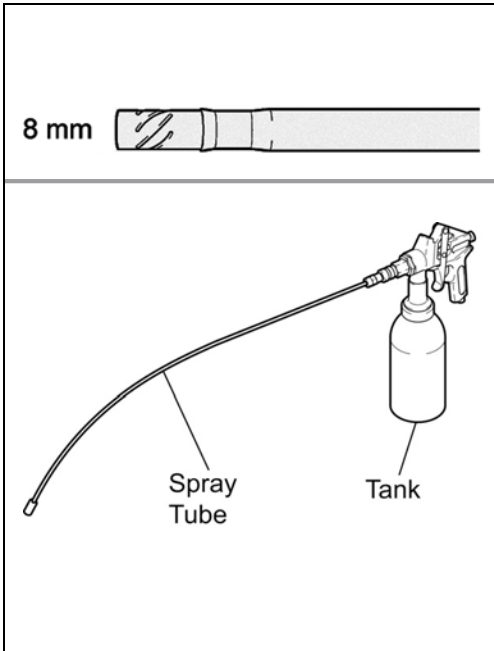
C. PREPARE FOR APPLICATION OF CORROSION-RESISTANT COMPOUND (CRC)



Note: Always utilize the correct CRC kit for Tacoma CRC Application, Part Number 00289-T00KT-DS.

1. ATTACH PLASTIC SHEET

- Before spraying 712AM to the internal frame, fit the plastic sheet on the frame utilizing the previously supplied magnet kit.

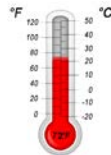


2. SET UP THE SPRAY GUN FOR 712AM INTERNAL CRC APPLICATION

Notes:

- Use a dedicated spray gun for the 712AM internal CRC.
- Make sure to wear protective eyewear, impervious gloves (Viton, PVOH, etc.) appropriate Niosh approved respirator, and refer to the SDS located in the Appendix when handling and spraying CRC.

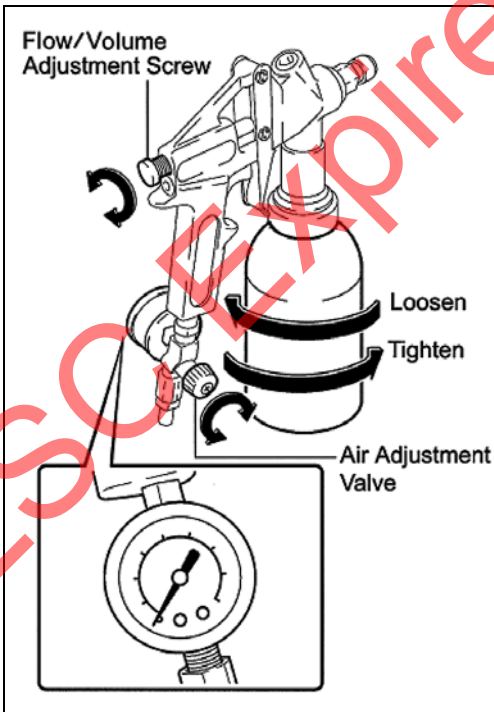
- Check the temperature of the 712AM.



If the 712AM is below 72° F, place the 712AM container in a bucket of hot water (<104° F) for 15 minutes and allow it to warm so the proper viscosity is achieved.

- Shake the 712AM container well so that the contents are mixed thoroughly. Settling may occur as it sits over time.
- Fill the dedicated tank with 712AM and attach it to the spray gun.
- Connect the 8mm spray tube, as shown in the illustration.
- Adjust the spray gun nozzle flow/volume.
 - Turn the adjustment screw to the fully closed position (clockwise).
 - Then loosen the adjustment screw **4** complete turns.

STOP The air regulator is extremely sensitive; always follow instruction to avoid damage to the gun!

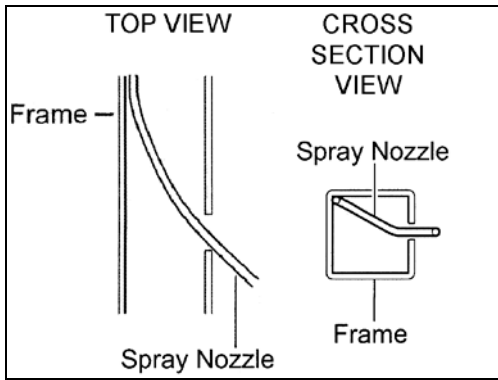


- Adjust the air pressure regulator.
 - Place the nozzle in a clean empty box or pail.
 - Adjust the air regulator completely closed (No Air Flow)
 - Attach the air hose to gun.
 - Fully press the spray gun trigger, and slowly adjust the air pressure to 72.5 psi.

Note: The air regulator has a slight delay and may take up to 10 seconds before the air pressure stabilizes. Move the adjustment knob in very small increments (1/8 turn).

- Recycle the amount sprayed out and use it during the application process.

D. 712AM INTERNAL FRAME CRC APPLICATION



1. 712AM INTERNAL FRAME APPLICATION

- Insert the spray nozzle into the selected holes located throughout the frame. Reference the next page for the location, depth, and application rate.
- Note: DO NOT bend (i.e., kink) the spray nozzle.**
- Once the location, depth, and application rate is confirmed, begin applying CRC to the internal frame.
 - When inserting the nozzle, insert so the nozzle touches the opposite side of the frame as illustrated on the left. See Diagram 1 & 2 for applying CRC.

Note: Make sure the quick coupler on the spray tube does not come into contact with the frame when applying the 712AM. Contacting the frame with the quick coupler may lead to a hose disconnection.

- After the 712 AM has been applied, wipe away any wax on the frame's exterior with cloths or paper towels.

Notes:

- Follow all SDS guidelines for the 712AM which can be found in the Appendix.
- Follow the given application speeds when applying the 712AM to the inner surface of the frame.
- The exact insertion point locations may vary depending on the cab configuration.

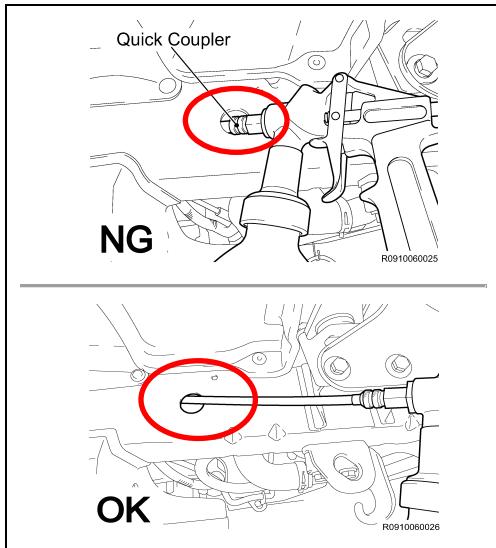
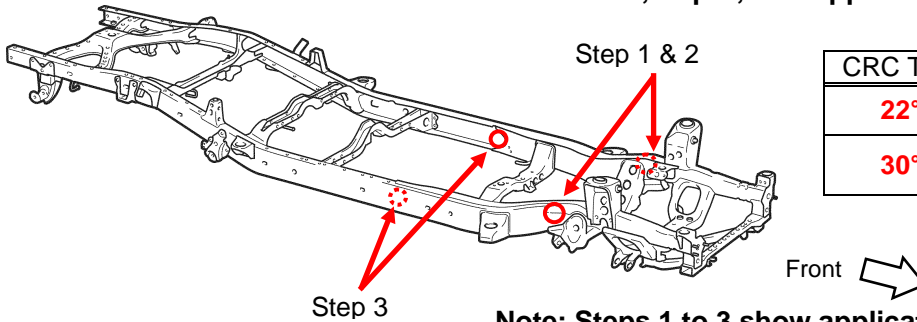


Diagram 1: Internal CRC Application



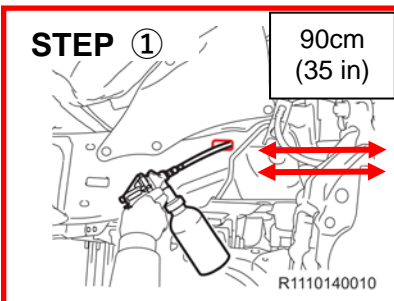
712AM Internal CRC Application Tube Insert Locations, Depth, and Application Speed



CRC Temperature	Application Speed
22°C (72°F)	0.2 m/sec (8 in/sec)
30°C (86°F)	0.3 m/sec (12 in/sec)

Note: m/sec = meters/second

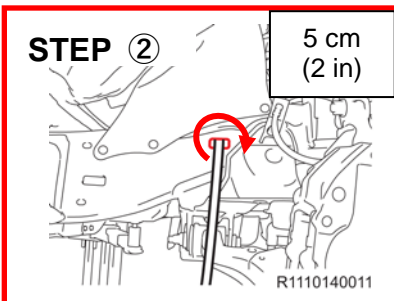
Note: Steps 1 to 3 show application procedure only for the right side of the vehicle. Perform application for the left side of the vehicle in a similar manner.



Step 1 (refer to the table above for application rate):

- While applying the 712AM, insert the nozzle 90cm (35 in) into the side-rail.
- Continue applying the 712AM while removing the nozzle.

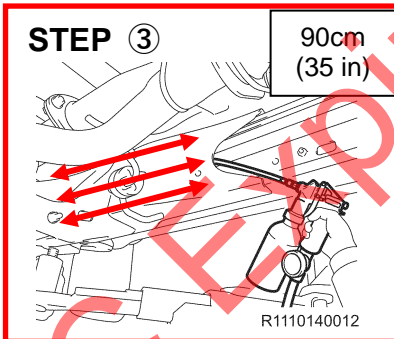
Repeat Step 1 for a total of 2 laps



Step 2 (refer to the table above for application rate):

- Insert the nozzle 5 cm (2 in.) towards the front of the frame.
- Move the nozzle in a circular motion while applying the 712AM.

Note: Make sure to only insert the nozzle 5cm (2 in) to avoid over spraying onto the engine.



Step 3 (refer to the table above for application rate):

- While applying the 712AM, insert the nozzle 90cm (35 in) into the side-rail. (contact the top center of the frame while inserting nozzle).
- Continue applying the 712AM while removing the nozzle.

Repeat Step 3 for a total of 3 laps

STOP THE ENTIRE LITER OF 712AM MUST BE APPLIED TO THE FRAME OF THE VEHICLE! STOP

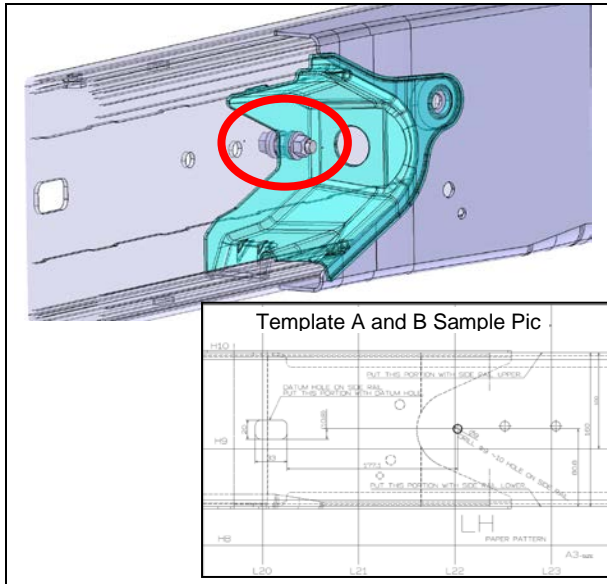
Notes:

- Follow all SDS guidelines for the 712AM which can be found in the Appendix.
- Only one side is given. Tube insert locations are the same for both sides.
- Follow the given application speeds when applying the 712AM to the inner surface of the frame. The exact insertion point locations may vary depending on the cab configuration.

2. REMOVE THE PLASTIC SHEET

- Let the 712AM complete dripping.
- With a cloth wipe off any drips of 712AM dripping from the frame.
- Before installing the body plugs, confirm that the excess 712AM has stopped dripping from the frame.

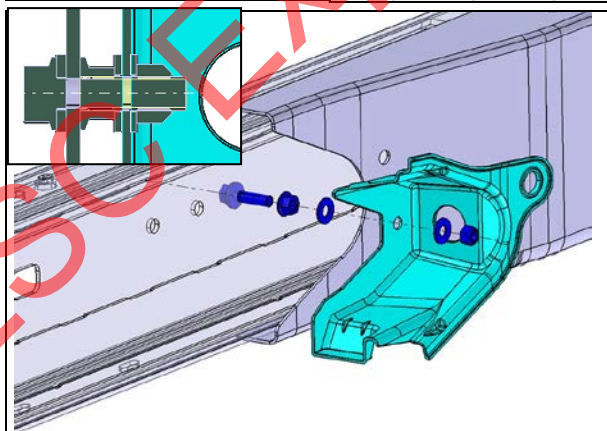
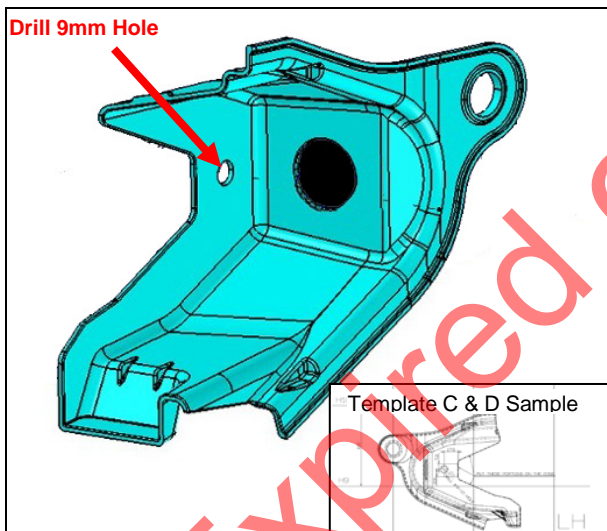
E. INSTALLATION OF BODY PLUGS AND FRAME SEAL



1. INSTALL FRAME RAIL SEAL

Note: Due to the interference of key vehicle components, the frame seal will need to be modified to be installed onto the outer frame rail.

- Using Template A & B in the appendix, locate the location on both outer frame side rails.
 - Print Template on 8.5" x 11" paper
 - Cut the template out
 - Align the template with the datum hole
 - Mark location of hole on outer frame side rail
- Use a center pin punch to create a dimple for the drill bit so it will not wander during drilling.
- Using the 90° drill adapter provided and the stepper bit, drill a 9mm (3/8") hole in the outer frame side rail as shown.
- Repeat procedure for opposite side frame rail.
- Using Template C and D, modify both the left and right side frame seal by drilling a (3/8") hole in the location shown.



- Install the bolt through the frame and torque the flange nut.

Torque Spec: 18.5 N·m (13.5 ft·lbf)

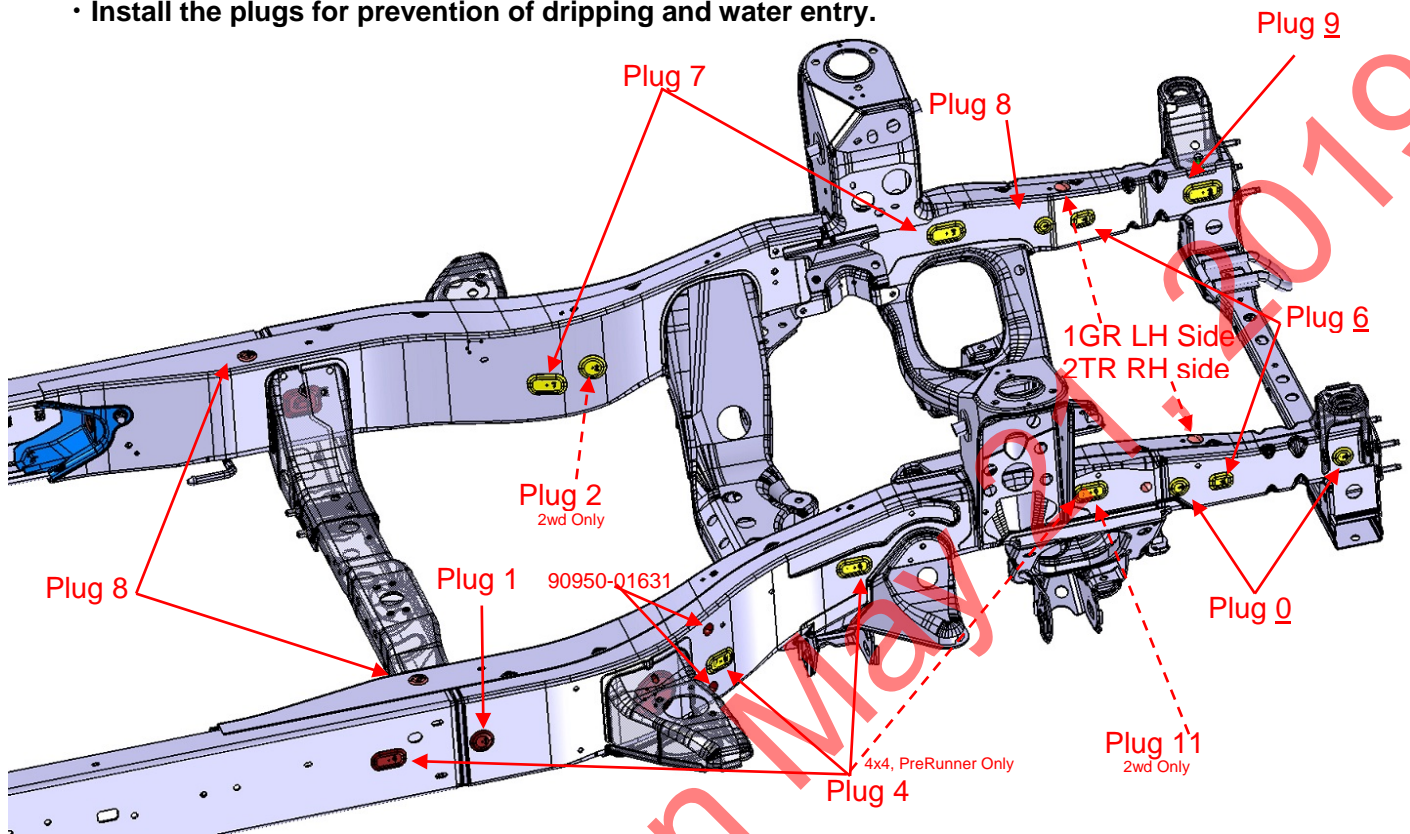
- Install the washer onto the bolt.
- Install the frame seal second washer and locking nut onto the frame and torque to spec.

Torque Spec: 6 N·m (52 in·lbf)

Part #	Part Name	Qty
90105-08500	Bolt, Flange	2
94611-10800	Washer	4
94151-80801	Nut w/Flange	2
94183-00831	Lock Nut	2

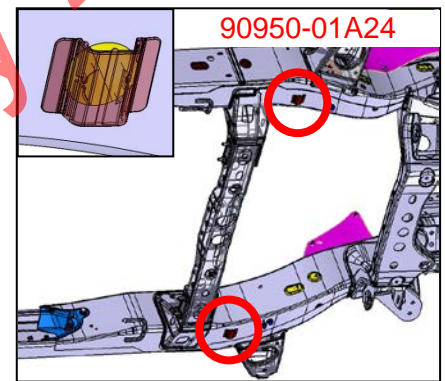
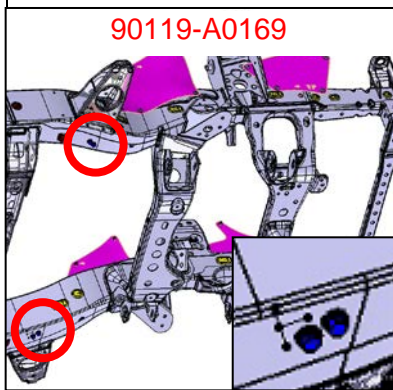
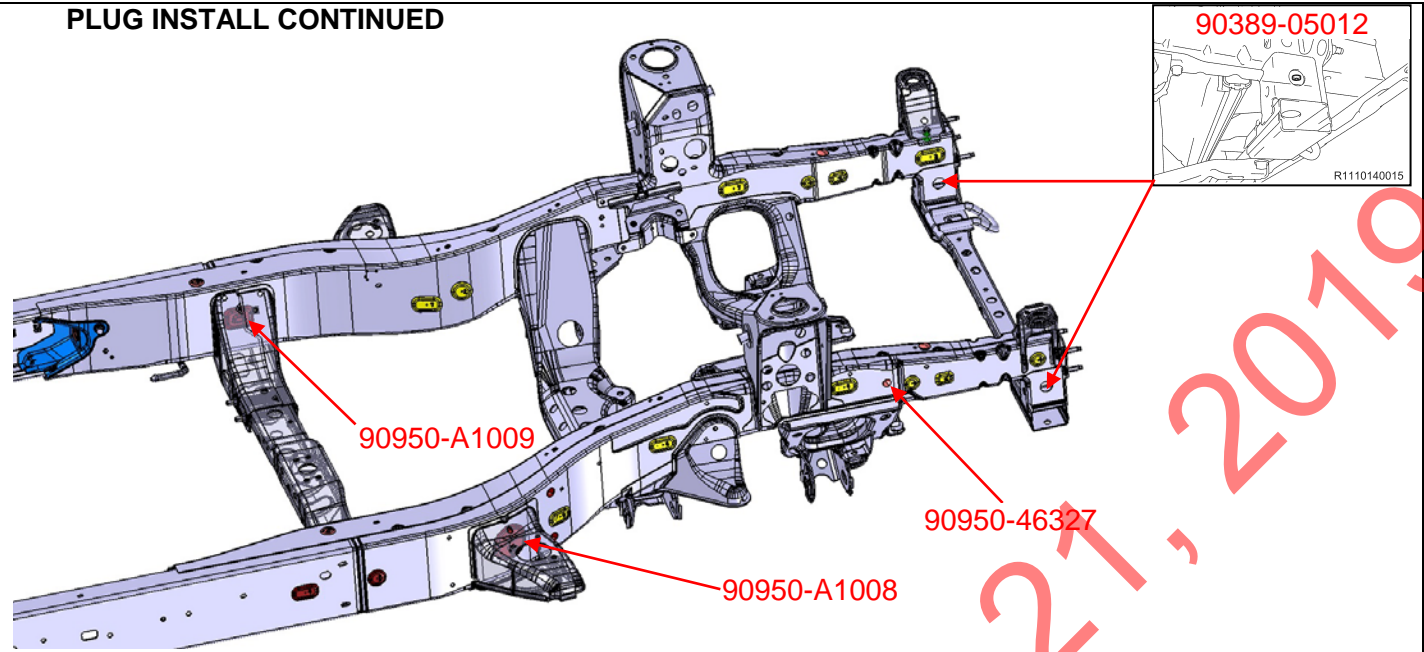
1. INSTALL THE BODY PLUGS




- Body plug locations are symmetrical unless noted. The instructions only show one side, ensure you install in both locations.
- Install the plugs for prevention of dripping and water entry.



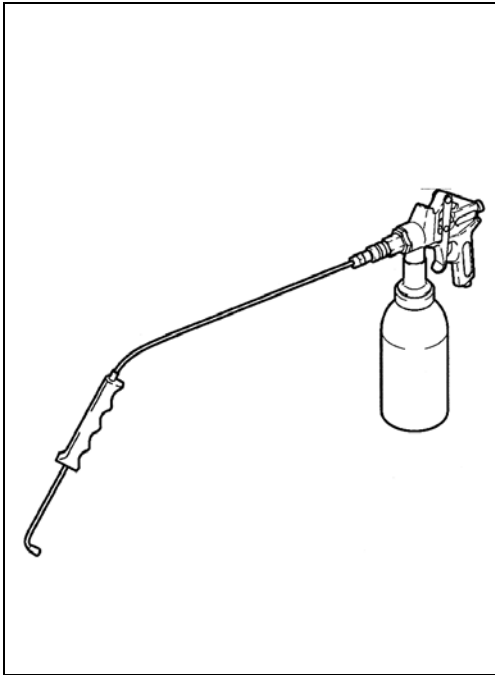
PLUG DIAGRAM/ID	P/N	INSTALLATION INSTRUCTIONS	TOTAL QTY
	90950-01992	Push to seat installation Note: This is a one time install plug, it will break if you try to remove.	2
	90950-01983		4
	90950-01990	Push to seat install. There are two callout locations for this plug.	4
	90950-01984	Push to seat installation.	2
	90950-01989		4
	90950-01931	Engine variation determines which rail to install plug on.	1
	90950-01991	Push to seat installation Note: This is a one time install plug, it will break if you try to remove.	4
	90950-01987	Dashed line indicates part vary by vehicle type or configuration.	8 FOR 4WD 6 FOR 2WD
	90950-01A09	2wd Only Order separately	1
	90950-01A11	2WD ONLY	2
	90950-01631	Push to seat installation.	4

PLUG INSTALL CONTINUED



PLUG DIAGRAM/ID	P/N	INSTALLATION INSTRUCTIONS	TOTAL QTY
	90389-05012	This plug is installed by reaching through the 0 crossmember.	2
LARGE CIRCLE PLUG	90950-A1008	Reach through cab mount and install body plug.	2
RECTANGLE PLUG WITH SLOT FOR SCREWDRIVER	90950-A1009	Using a flap tip screw driver install the plug into the side rail through the crossmember.	2
Bolts	90119-A0169	Install bolts into threaded holes in the bottom of the frame rail as shown.	4
	90080-46327	Push to seat installation	
	90950-01A24	Install this plug into the bottom of the frame rail as shown. It must be installed with the channel opening facing the outer portion of the frame to ensure road spray does not enter the frame.	2

F. APPLICATION OF NOXUDOL 300S EXTERNAL CRC APPLICATION

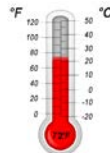


1. LOWER THE VEHICLE
2. SETTING UP THE SPRAY GUN FOR NOXUDOL 300S EXTERNAL FRAME CRC APPLICATION

Notes:

- Use a dedicated spray gun for the NOXUDOL 300S.
- Make sure to wear protective eyewear, chemical resistant gloves, appropriate NIOSH approved respirator, and refer to the SDS located in the Appendix when handling and spraying CRC.

- a) Check the temperature of the Noxudol 300S.



If the Noxudol 300S is below 72° F, place the Noxudol 300S container in a bucket of hot water (<104° F) for 15 minutes and allow it to warm so the proper viscosity is achieved.

- b) Shake the Noxudol 300S container well so that the contents are mixed thoroughly. Settling may occur over time.
- c) Fill the dedicated tank with Noxudol 300S and attach it to the spray gun.
- d) Connect the external spray tube, as shown in the illustration.
- e) Adjust the spray gun nozzle flow/volume.
 1. Turn the adjustment screw to the fully closed position (clockwise).
 2. Then loosen the adjustment screw 3.5 turns.



Caution: Air regulator is extremely sensitive; always follow instruction to avoid damage to the gun!

- f) Adjust the air pressure regulator.
 1. Place the nozzle in a clean empty box or pail.
 2. Completely close the air regulator (No Air Flow).
 3. Attach the air hose to the gun
 4. Fully press the spray gun trigger, and slowly adjust the air pressure to 50 psi.

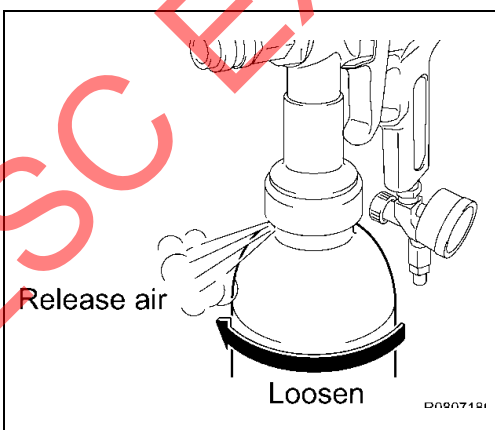
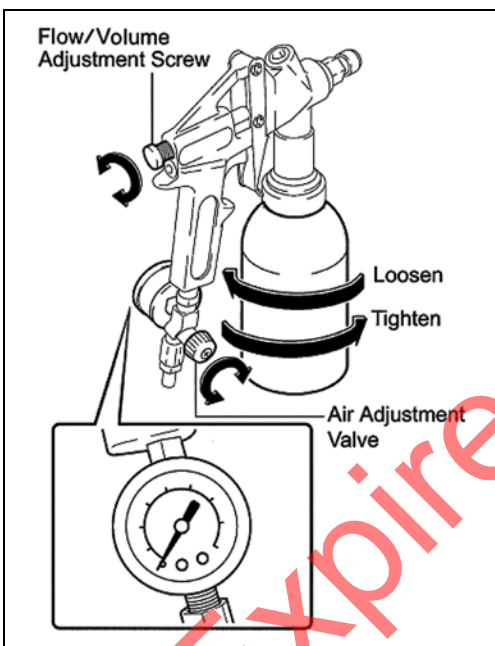
Note: The air regulator has a slight delay and may take up to 10 seconds before the air pressure stabilizes; Move the adjustment knob in very small increments (1/8 turn).

5. Recycle the amount sprayed out and use it during the application process.

- g) For Noxudol 300S, it will be necessary to refill the spray gun.
 1. Disconnect the air hose
 2. Loosen the bottle to slowly discharge the pressure through the threads of the bottle.
 3. After all the pressure is discharged, detach the bottle.

Notes:

- DO NOT remove the bottle until the pressure is released.
- DO NOT pull the spray gun trigger when the air hose is disconnected, this causes CRC to backflow into the air inlet.
- Thoroughly shake the Noxudol 300S liter before use.
- Apply all three liters of Noxudol 300S to the left and right frames and the cross-members. (No product is allowed to remain.)

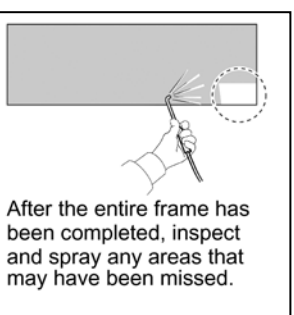
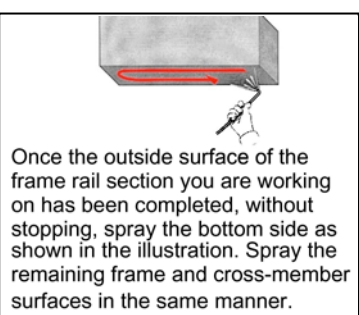
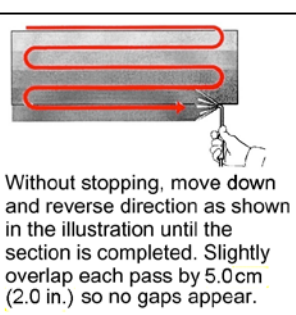
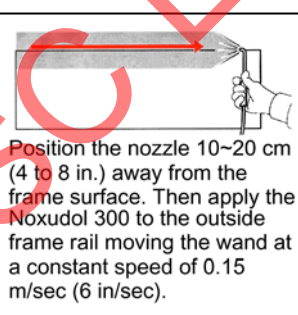
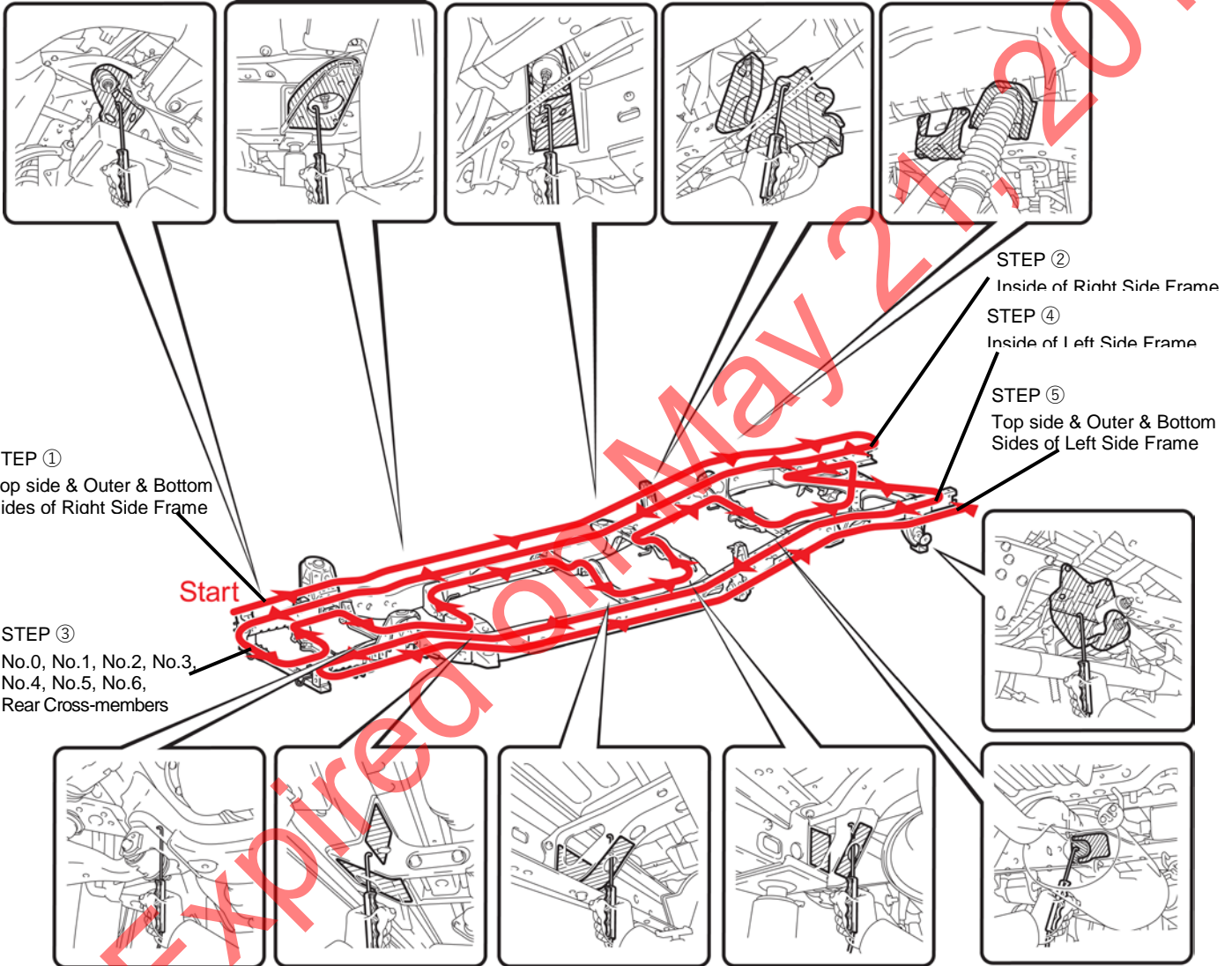


G. UNDER VEHICLE NOXUDOL 300S CRC APPLICATION

1. AFTER REVIEWING THE APPLICATION PROCESS OUTLINED BELOW, BEGIN APPLYING NOXUDOL 300S TO THE EXTERNAL SURFACES OF THE FRAME

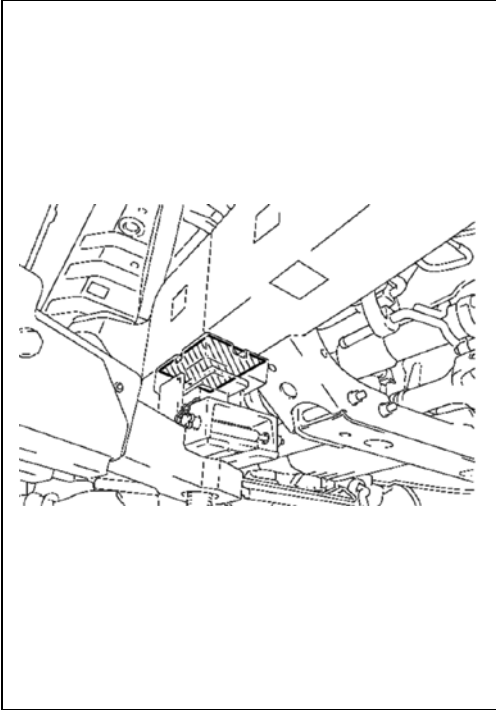


- Step① Coat outer and bottom surfaces of right side frame. (Start from front of the vehicle)
- Step② Coat inside surfaces of right side frame. (Start from rear of vehicle)
- Step③ Coat No.0, No.1, No.2, No.3, No.4, No.5, No.6, and rear cross-members from front to back. (Start from front of vehicle)
- Step④ Coat inside surfaces of left side frame. (Start from rear of vehicle)



Discharge rate varies depending on CRC temperature. Make adjustments to spray rate as needed, but do not change air pressure (air pressure must be 50 psi).

H. RESTORE THE VEHICLE



1. RESTORE THE VEHICLE

- a) Re-install the engine undercover.
- b) Re-install wheels and torque to spec.

Steel Wheel / Aluminum Wheel

Torque Spec: 113 N m (1152 kgf cm, 83 ft lbf)

- c) Lower the vehicle.
- d) For areas where the lift arms touched, remove any rust present and apply Noxudol 300S.



CONFIRM ALL 3 LITERS OF NOXUDOL 300S HAVE BEEN APPLIED TO THE EXTERNAL PORTION OF THE FRAME!



Ensure to follow the procedure and perform all steps completely (e.g. inspection, cleaning/rust removal, CRC application, one kit per vehicle, etc.) any deviation will be subject to warranty claim debit.

- e) Raise the vehicle.
- f) Remove all masking tape, fire retardant sheeting, and plastic coverings.
- g) Lower the vehicle.
- h) Install the spare tire.
- i) Remove protective tape from the identifying labels (VIN label, etc.) on the frame.
- j) Place a Corrosion-Resistant Compound information Hang Tag on the rear-view mirror.
- k) Let CRC cure approximately 24 hours before returning vehicle to customer.

RECORD-KEEPING AND OTHER REQUIREMENTS

To make sure that your dealership can satisfy specific state and local requirements, please refer to your specific state Dealer Information Packet.

APPENDIX

A. 712AM & NOXUDOL 300S DISPOSAL

712AM & Noxudol 300S used in the application of the frame CRC as well as any materials, such as tarps with residue, must be disposed of in the same manner as other hazardous waste at your dealership and in accordance with all applicable local, state, and federal regulations. Please refer to the Dealer Information Packet for additional information.

B. TEMPLATES FOR FRAME SEAL INSTALL

H10

H9

H8

L20

L21

L22

L23

100

100

160

80.8

DATUM HOLE ON SIDE RAIL
PUT THIS PORTION WITH DATUM HOLE.

PUT THIS PORTION WITH SIDE RAIL UPPER.

PUT THIS PORTION WITH SIDE RAIL LOWER.

DRILL $\phi 9$
 $\phi 9$
~10 HOLE ON SIDE RAIL

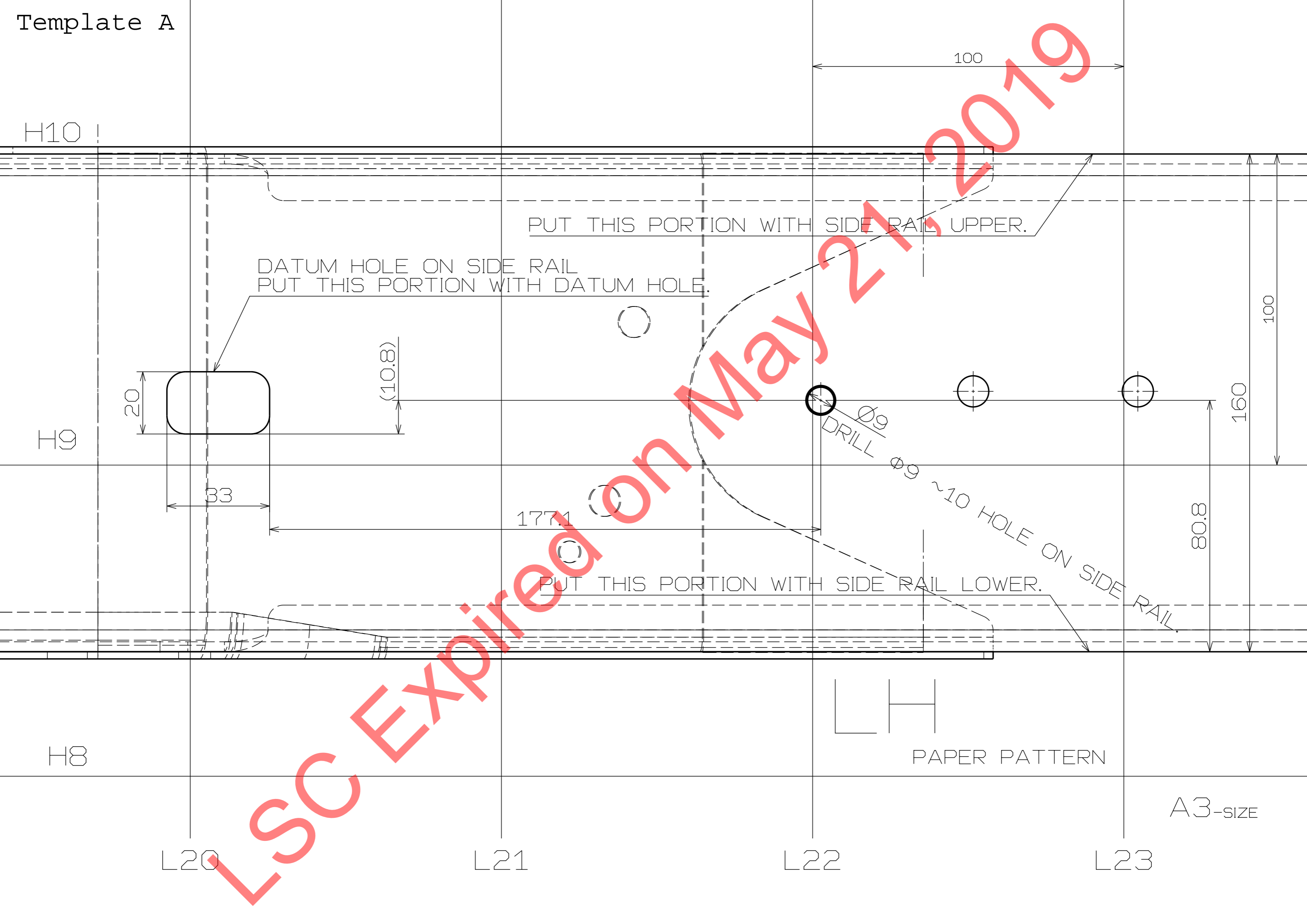
1771

LH

PAPER PATTERN

A3-SIZE

LSC Expired on May 21, 2019



Template B

100

H10

PUT THIS PORTION WITH SIDE RAIL UPPER.

DATUM HOLE ON SIDE RAIL
PUT THIS PORTION WITH DATUM HOLE.

100

160

(10.8)

20

H9

80.8

DRILL $\phi 9$ ~10 HOLE ON SIDE RAIL.

$\phi 9$

177.1

33

PUT THIS PORTION WITH SIDE RAIL LOWER.

RH

PAPER PATTERN

H8

A3-SIZE

L23

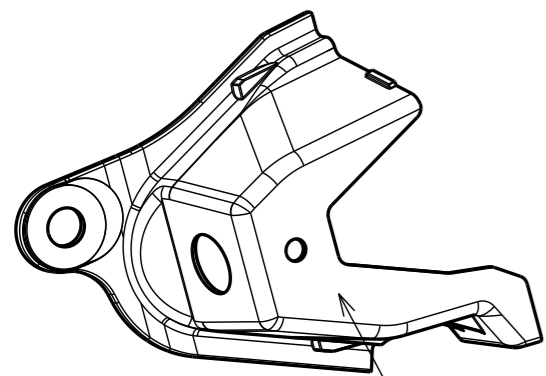
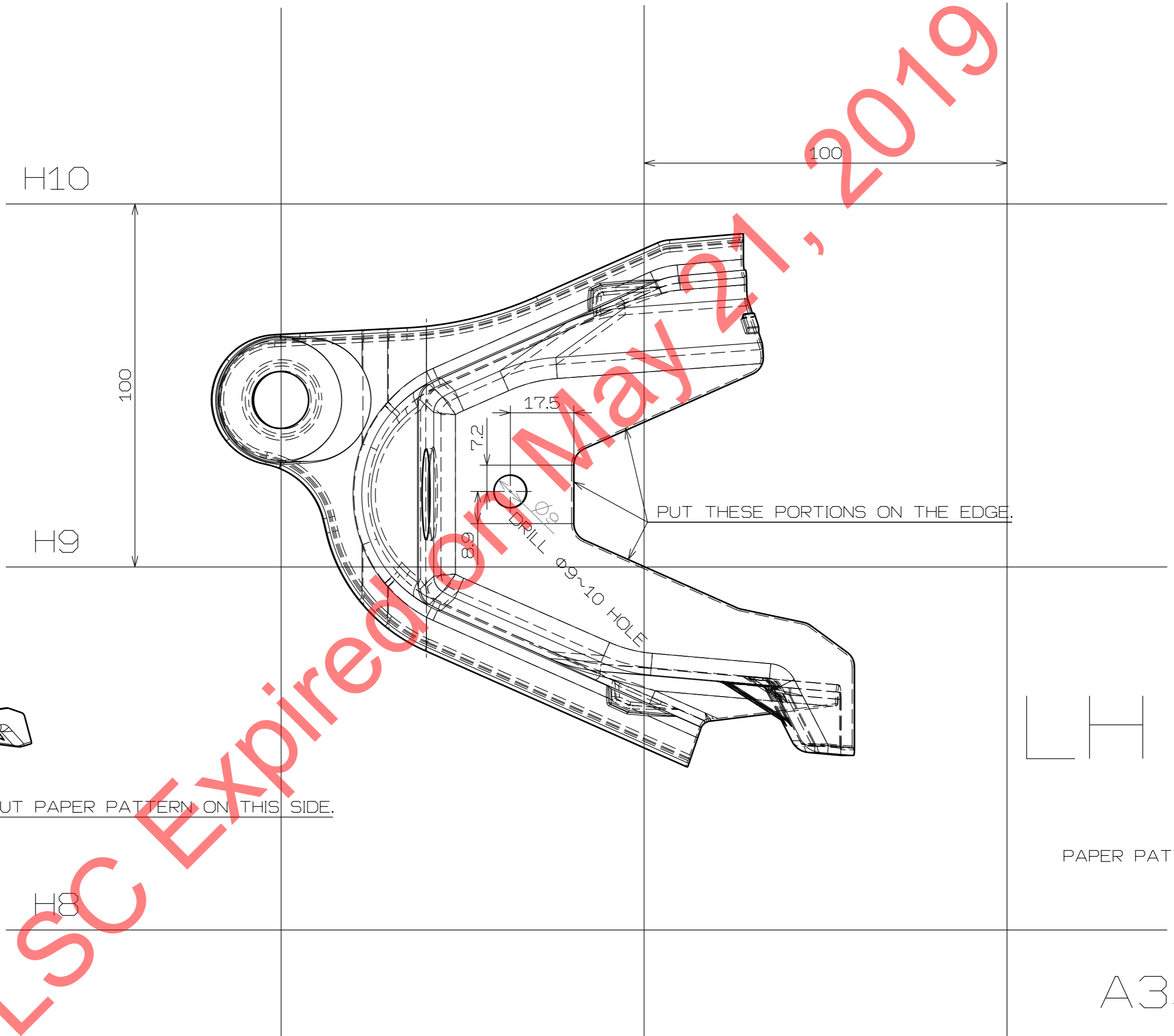
L22

L21

L20

LSC Expired on May 21, 2019

Template C



PUT PAPER PATTERN ON THIS SIDE.

PUT THESE PORTIONS ON THE EDGE.

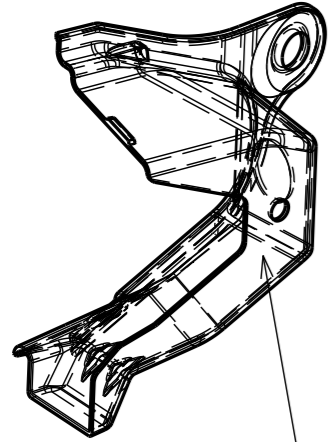
LH

PAPER PATTERN

H8

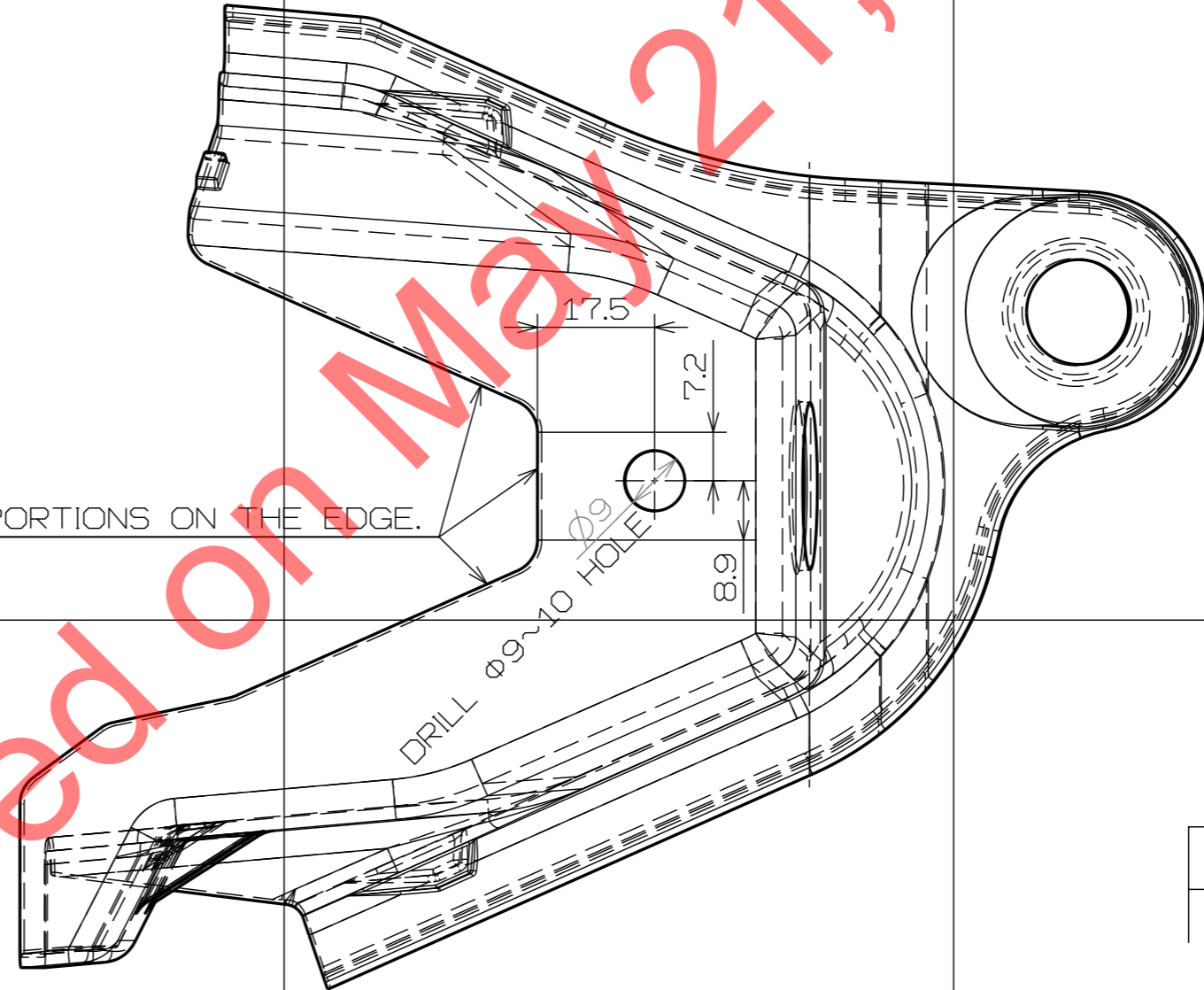
A3-size

Template D



PUT PAPER PATTERN ON THIS SIDE.

PUT THESE PORTIONS ON THE EDGE.



H10

100

H9

RH

PAPER PATTERN

H8

A3-size

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 03/06/2014

Reviewed on 03/06/2014

*** 1 Identification****· Product identifier****· Trade name: Noxudol 300 S****· Product number:** 37300**· Product description** Anti Rust Compound, Vehicle Underbody Coating**· Details of the supplier of the safety data sheet****· Manufacturer/Supplier:**

Manufacturer: Auson AB

Verkstadsgatan 3

S-434 42 Kungsbacka Sweden

www.auson.se

Phone: +46 300-562000

Fax: +46 300-562001

US Distributor: Soken Trade Corporation

12055 Sherman Way

North Hollywood, CA USA

www.noxudolusa.com

Phone: (818) 308-8430

Fax: (818) 308-8428

· Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incident. Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 CCN701762 or +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification**· Classification of the substance or mixture**

Health hazard

Suspected of causing cancer.

· Label elements**· GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms

GHS08

· Signal word Warning**· Hazard-determining components of labeling:**

Carbon black

· Hazard statements

Suspected of causing cancer.

· Precautionary statements

Use personal protective equipment as required.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF exposed or concerned: Get medical advice/attention.

(Contd. on page 2)

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 03/06/2014

Reviewed on 03/06/2014

Trade name: Noxudol 300 S

(Contd. of page 1)

Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMS-ratings (scale 0 - 4)**

HEALTH	0	Health = *0
FIRE	1	Fire = 1
REACTIVITY	0	Reactivity = 0

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

64741-88-4	Distillates (petroleum), solvent-refined heavy paraffinic ☠ Carc. 1B, H350	25-50%
8002-74-2	Paraffin waxes and Hydrocarbon waxes	15-35%
1333-86-4	Carbon black ☠ Carc. 2, H351; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	≤ 2.5%

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Give large amounts of water. If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.

(Contd. on page 3)

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 03/06/2014

Reviewed on 03/06/2014

Trade name: Noxudol 300 S

(Contd. of page 2)

- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Do not spray on a naked flame or any incandescent material.
Keep protective respiratory device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

8002-74-2 Paraffin waxes and Hydrocarbon waxes

REL	Long-term value: 2 mg/m ³
TLV	Long-term value: 2 mg/m ³

1333-86-4 Carbon black

REL	Long-term value: 3.5 mg/m ³
REL	Long-term value: 3.5* mg/m ³ *0.1 in presence of PAHs; See Pocket Guide Apps.A+C
TLV	Long-term value: 3* mg/m ³ *inhalable fraction

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

(Contd. on page 4)

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 03/06/2014

Reviewed on 03/06/2014

Trade name: Noxudol 300 S

(Contd. of page 3)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Select glove material based on penetration times, rates of diffusion and degradation.

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

- **Eye protection:** Tightly sealed goggles

* 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

- **Form:**

Highly viscous

- **Color:**

Black

- **Odor:**

Mineral-oil-like

- **Odor threshold:**

Not determined.

- **pH-value:**

Not determined.

- **Change in condition**

- **Melting point/Melting range:**

Not determined.

- **Boiling point/Boiling range:**

316 °C (601 °F)

- **Flash point:**

140 °C (284 °F)

- **Flammability (solid, gaseous):**

Not applicable.

- **Ignition temperature:**

300 °C (572 °F)

- **Decomposition temperature:**

Not determined.

- **Auto igniting:**

Product is not selfigniting.

- **Danger of explosion:**

Product does not present an explosion hazard.

- **Explosion limits:**

- **Lower:**

Not determined.

- **Upper:**

Not determined.

- **Vapor pressure:**

Not determined.

- **Density @ 20 °C (68 °F):**

0.96 g/cm³ (8.011 lbs/gal)

- **Relative density**

Not determined.

- **Vapour density**

Not determined.

- **Evaporation rate**

Not determined.

- **Solubility in / Miscibility with**

- **Water:**

Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

- **Dynamic @ 20 °C (68 °F):**

500650 mPas

(Contd. on page 5)

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 03/06/2014

Reviewed on 03/06/2014

Trade name: Noxudol 300 S

(Contd. of page 4)

- Kinematic:** Not determined.
- **Solvent content:**
- Organic solvents:** 0.0 %
- VOC content:** 10.7 g/l / 0.09 lb/gl
- Solids content:** 98.0 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

1333-86-4 Carbon black

Oral LD50 10000 mg/kg (rat)

- **Primary irritant effect:**
- on the skin:** No irritant effect.
- on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Carcinogenic.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

1333-86-4	Carbon black	2B
14808-60-7	Quartz (SiO2)	1

· **NTP (National Toxicology Program)**

14808-60-7	Quartz (SiO2)	K
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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.

(Contd. on page 6)

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 03/06/2014

Reviewed on 03/06/2014

Trade name: Noxudol 300 S

(Contd. of page 5)

Danger to drinking water if even extremely small quantities leak into the ground.

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

*** 14 Transport information**

- **UN-Number** Non-Regulated Material
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **UN proper shipping name** Non-Regulated Material
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Transport hazard class(es)**
- **DOT, ADR, ADN, IMDG, IATA** Non-Regulated Material
- **Class** -
- **Packing group** Non-Regulated Material
- **DOT, ADR, IMDG, IATA** Non-Regulated Material
- **Environmental hazards:**
- **Marine pollutant:** No
- **Special precautions for user** Not applicable.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.
- **UN "Model Regulation":** -

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

1333-86-4 Carbon black

14808-60-7 Quartz (SiO₂)

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 03/06/2014

Reviewed on 03/06/2014

Trade name: Noxudol 300 S

(Contd. of page 6)

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients is listed.

· **Carcinogenic categories**
· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

1333-86-4	Carbon black	A4
14808-60-7	Quartz (SiO ₂)	A2

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

1333-86-4	Carbon black
14808-60-7	Quartz (SiO ₂)

· **OSHA-Ca (Occupational Safety & Health Administration)**
Corrosive to eyes

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS08

· **Signal word** Warning


· **Hazard-determining components of labeling:**
Carbon black

· **Hazard statements**
Suspected of causing cancer.

· **Precautionary statements**
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**
The product is subject to be labeled according with the prevailing version of the regulations on hazardous substances.

· **State Right to Know**

64741-88-4	Distillates (petroleum), solvent-refined heavy paraffinic	25-50%
	 Carc. 1B, H350	
8002-74-2	Paraffin waxes and Hydrocarbon waxes	15-35%

(Contd. on page 8)

Safety Data Sheet (SDS)

OSHA Haz Com Standard 29 CFR 1910.1200. Prepared to GHS Rev03.

Printing date 03/06/2014

Reviewed on 03/06/2014

Trade name: Noxudol 300 S

(Contd. of page 7)

1333-86-4	Carbon black ⚠ Carc. 2, H351; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	≤ 2.5%
14808-60-7	Quartz (SiO ₂) ⚠ Carc. 1A, H350; STOT RE 1, H372; ⚠ Acute Tox. 4, H332; STOT SE 3, H335; Eye Irrit. 2B, H320	≤ 2.5%
All ingredients are listed.		

- **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** 03/06/2014 / 5

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMSI: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Carc. 1B: Carcinogenicity, Hazard Category 1B

Carc. 2: Carcinogenicity, Hazard Category 2

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

- *** Data compared to the previous version altered.**

SDS / MSDS Created by MSDS Authoring Services (www.MSDSAuthoring.com)

SAFETY DATA SHEET

1. Identification

Product identifier NOX-RUST 712AM

Other means of identification
SDS number 140017

Recommended use Rust preventing oil.

Recommended restrictions None known.

Manufacturer / Importer / Supplier / Distributor information
Supplier Parker Industries, Inc.
Address 15-1, Nihonbashi 1-chome, Chuo-ku, Tokyo 103-0027 JAPAN
Telephone +81 (3) 5205-1971
Contact person Noriharu Tanaka
e-mail ntanaka@parkerind.co.jp
Emergency phone number +81-47-431-3598

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements
Hazard symbol None.
Signal word Not available.
Hazard statement Not available.
Precautionary statement
Prevention Observe good industrial hygiene practices.
Response Wash skin with soap and water.
Storage Store in a closed container.
Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Mineral oil	Proprietary	<60
Rust preventive additive	Proprietary	<10

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move to fresh air. Get medical attention if any discomfort continues.

Skin contact Rinse with water. Get medical attention if irritation persists after washing.

Eye contact Rinse the eye with water immediately. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth thoroughly. Get medical attention if any discomfort continues.

Most important symptoms/effects, acute and delayed Prolonged contact may cause dryness of the skin.

Indication of immediate medical attention and special treatment needed Treat symptomatically.

General information First aid personnel must be aware of own risk during rescue.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	By heating and fire, toxic vapors/gases may be formed.
Special protective equipment and precautions for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	Use standard firefighting procedures and consider the hazards of other involved materials. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.
General fire hazards	Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Wear suitable protective clothing, gloves and eye/face protection. Avoid prolonged and repeated contact.
Methods and materials for containment and cleaning up	Absorb spillage with suitable absorbent material.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged and repeated contact. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in a well-ventilated place. Keep container tightly closed. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Mineral oil (CAS Proprietary)	PEL	5 mg/m ³	Mist.
Rust preventive additive (CAS Proprietary)	PEL	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Mineral oil (CAS Proprietary)	TWA	5 mg/m ³	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Mineral oil (CAS Proprietary)	STEL	10 mg/m ³	Mist.
	TWA	5 mg/m ³	Mist.
Rust preventive additive (CAS Proprietary)	TWA	5 mg/m ³	Respirable.
		10 mg/m ³	Total

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Risk of splashes: Wear approved safety goggles.
Skin protection	
Hand protection	For prolonged or repeated skin contact use suitable protective gloves.
Other	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Respiratory protection	In case of inadequate ventilation or risk of inhalation of oil mist, suitable respiratory equipment with particulate filter and organic vapor cartridges can be used.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Viscous liquid.
Physical state	Liquid.
Form	Viscous liquid.
Color	Yellowish brown.
Odor	Fatty. Oily.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	> 482 °F (> 250 °C)
Flash point	> 410.0 °F (> 210.0 °C)
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	0.9 - 1
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	1000 mPa·s (20 °C)

10. Stability and reactivity

Reactivity	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable under normal temperature conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Sulfur dioxide. Nitrogen oxides. Calcium oxides.

11. Toxicological information**Information on likely routes of exposure**

Ingestion	May cause discomfort if swallowed.
Inhalation	Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation. May cause redness and pain.
Symptoms related to the physical, chemical and toxicological characteristics	Prolonged contact may cause dryness of the skin.

Information on toxicological effects

Acute toxicity	May cause discomfort if swallowed.
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Components	Species	Test Results
Rust preventive additive (CAS Proprietary)		
Acute		
<i>Oral</i>		
LD50	Mouse	6450 mg/kg
	Rat	6450 mg/kg
Skin corrosion/irritation	Prolonged contact may cause dryness of the skin.	
Serious eye damage/eye irritation	May cause temporary eye irritation. May cause redness and pain.	
Respiratory or skin sensitization		
Respiratory sensitization	No data available.	
Skin sensitization	No data available.	
Germ cell mutagenicity	No data available.	
Carcinogenicity	No data available.	
Reproductive toxicity	No data available.	
Specific target organ toxicity - single exposure	No data available.	
Specific target organ toxicity - repeated exposure	No data available.	
Aspiration hazard	No data available.	
Chronic effects	No data available.	
12. Ecological information		
Ecotoxicity	The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
Persistence and degradability	No data available.	
Bioaccumulative potential	No data available.	
Mobility in soil	No data available.	
Mobility in general	No data available.	
Other adverse effects	No data available.	
13. Disposal considerations		
Disposal instructions	Dispose of in accordance with local regulations.	
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.	
Waste from residues / unused products	Dispose in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground.	
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.	
14. Transport information		
DOT		
Not regulated as dangerous goods.		
IATA		
Not regulated as dangerous goods.		
IMDG		
Not regulated as dangerous goods.		
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.	
15. Regulatory information		
US federal regulations	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.	
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)		
Not regulated.		
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No
 Delayed Hazard - No
 Fire Hazard - No
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
 Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

Mineral oil (CAS Proprietary)
 Rust preventive additive (CAS Proprietary)

US. New Jersey Worker and Community Right-to-Know Act

Mineral oil (CAS Proprietary)
 Rust preventive additive (CAS Proprietary)

US. Pennsylvania Worker and Community Right-to-Know Law

Rust preventive additive (CAS Proprietary)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

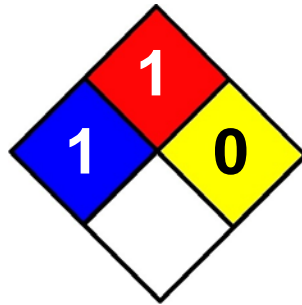
*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 06-March-2014
Revision date -
Version # 01

NFPA Ratings



Disclaimer

This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.

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