

COLUMBIA APPROVED RESOURCES

CAR AUDIT

rev: 6-27-16



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Quality standards have become extremely important in recent years. The automotive industry is much more aware of the importance of maintaining a high level of quality within the Tiers. Columbia Chemical has developed an audit that incorporates this level of quality for all OEMs and their standards. The audit is completed on a quarterly basis and requires all approved applicators to fulfill the requirements in order to maintain the **CAR** approval. The approved applicators will be put on a list that shall be made available to the OEMs as well as the Tier 1s. **CAR** approved applicators are set apart from other applicators. The designation of a **CAR** approval equates to high quality and constant improvement.

APPLICATOR CHECKLIST

If "no", give an explanation and a date that it will be implemented.

	Yes	No
1. Are all tanks properly labeled? _____ _____	<input type="checkbox"/>	<input type="checkbox"/>
2. Is there an assigned chemical storage area? _____ _____	<input type="checkbox"/>	<input type="checkbox"/>
3. Is there a scale to weigh parts before loading? _____ _____	<input type="checkbox"/>	<input type="checkbox"/>
4. Is the lab equipment compliant with specifications and calibrated regularly? _____ _____	<input type="checkbox"/>	<input type="checkbox"/>
5. Are there automatic feeders on the line? _____ _____	<input type="checkbox"/>	<input type="checkbox"/>
6. Are all buckets of chemicals covered on the line? _____ _____	<input type="checkbox"/>	<input type="checkbox"/>
7. Are the loading, unloading and storage areas organized? _____ _____	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
8. Are clean gloves being worn when handling processed parts? _____	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
9. Are employees wearing proper safety gear? _____	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
10. Are proper work instructions displayed at all lines? _____	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
11. Is there a full time chemist onsite? _____	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
12. Are daily titrations, pH and temperature checks being done before start up? _____	<input type="checkbox"/>	<input type="checkbox"/>
<hr/>		
13. Is there a working salt spray cabinet? _____	<input type="checkbox"/>	<input type="checkbox"/>
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C.A.R QUALITY AUDIT

Question Number	Question	Description of Requirement	Applicator's Evidence	N/A	Satisfactory	Needs Improvement	Needs Immediate Action
1.1	Does the plater continue to update quality regularly?	To ensure quality of products Plater should review all quality methods that are in place at the facility on a quarterly basis. The plater should add any necessary updates when needed.					
1.2	Are platers FMEA, Control Plan and Flow chart a current reflection of their process?	Platers documents should be easy to follow and should be current. The FMEA and Control Plan should be a continuous work in progress. They shall address all steps in the process from receiving the part to the shipping of the part.					
1.3	Does the Control Plan show all plating parameters and frequencies of process evaluation?	Plater should have a detailed description of the current parameters and frequencies that are required by Columbia Chemical. They should list any reasons for running process out of the required ranges. Plater needs to have sufficient evidence proving they can run process out of spec. and it must be signed off by Columbia Chemical.					
1.4	Are all required specifications up to date?	Plater needs to have all specifications current and on file in their facility. Plater needs to have a good understanding of all specification that they are running to.					
1.5	Does the Plater have all process Technical Data Sheets and MSDS documentation?	Plater needs to have on site all process technical data from supplier. They will state all operating parameters given for the process. Plater needs to follow the parameters given by supplier unless otherwise signed off by supplier. The plater will have these parameters listed on all chemistry log sheets.					

Question Number	Question	Description of Requirement	Applicator's Evidence	N/A	Satisfactory	Needs Improvement	Needs Immediate Action
1.6	Does Plater follow chemical supplier's suggestions from chemical analysis?	Plater will have on file at least 6 months of chemical analysis from the chemical supplier. The platers log records should reflect the recommendations given by the supplier. Plater should send weekly samples to Columbia Chemical for analysis.					
1.7	Does the Plater react to his own chemical analysis?	The plater should have a good understanding of how to correct out of parameter readings. The plater should react immediately to out-of-spec readings. If a plating issue occurs and it cannot be solved in house then the chemical supplier needs to be readily available to help.					
1.8	If plater does baking is the oven verified bi-yearly?	Bake ovens need to be verified twice a year by an outside source. The oven needs to have temperature reading on all 4 sides of the oven and it needs to be at 400° within one hour for four hours, empty as well as full (center of the mass of parts).					
1.9	Is there a record log proving parts are in oven an hour after being plated?	Plater should have a record log showing time out of plating line, time in oven and time out of oven. Plater should have a quality manager sign off on the log.					
1.10	Is the plater capable of doing a hydrogen embrittlement test on baked parts?	Plater should have on site equipment to test for hydrogen embrittlement or they need to have a letter from the customer stating that they are doing the testing.					

Question Number	Question	Description of Requirement	Applicator's Evidence	N/A	Satisfactory	Needs Improvement	Needs Immediate Action
1.11	Does the plater perform internal evaluations (CQI-11)?	Plater should do an evaluation of their shop annually. The plater should use the CQI-11 as the audit they use internally.					
1.12	What kind of reprocessing procedure is in place?	Plater should have a qualified quality manager assessing the quality of work done. If there is a plating problem and parts need to be redone the plater needs to make customer aware of rework and a rework document needs to be made. This will include why the parts needed to be reprocessed and how the problem was fixed. A manager must sign off on the reprocessed parts.					
1.13	How often is training done in shop?	Any time a new process is introduced the plating shop must train all employees that will be working with the new process. Safety training and annual workshops should be in place and documented.					
1.14	Does the plater do the CQI-11 audit on an annual basis?	Certain OEMs require the CQI-11 audit to be done annually. For those companies, that audit will be reviewed by Columbia Chemical before obtaining the CAR approval. Action items should be addressed by plater before receiving the Car approval. For the OEM's and other companies that do not require the CQI-11 audit they need to show evidence that they are ISO, TS etc certified as well as other documentation they have proving they are a capable shop.					
1.15	Does the quality manager sign off on quality related tasks?	The quality manager should sign off on the travel ticket as well as keeping in house records of each lot. The thickness should be recorded on the travel ticket and in house.					

C.A.R. INSPECTION AUDIT

Rate the following and give an explanation if "Needs Improvement" or "Needs Immediate Action" is marked.

	Satisfactory	Needs Improvement	Needs Immediate Action
1. Cleanliness of shop. _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Out-of-spec bath readings. _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Overall knowledge of the lineman. _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Reliable part tracking method. _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Consistent chemical analysis done before start up and shift change. _____ _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Satisfactory

**Needs
Improvement**

**Needs Immediate
Action**

6. Log records reflect technical data parameters.

7. Proper lab equipment, thickness tester, pH meter,
thermometer, buffers, reagents, etc.

Applicators are required to submit on a quarterly basis for review:

- ✓ 5 parts for salt spray testing (5 parts for the applicator to test as well)
- ✓ 3 parts for thickness test
- ✓ Sample of the chromate that was used to process the parts
- ✓ Plating bath (if Columbia Chemical's) used to plate parts
- ✓ Copy of the last 3-4 weeks of chemical analysis
- ✓ Copy of at least 3 separate salt spray tests that were performed
- ✓ Oven calibrations and readings (if applicable)
- ✓ Any corrected action items from last visit

Upon completion of this audit, the applicator will receive a designation of *APPROVAL*, *PENDING APPROVAL* or *NO APPROVAL*. After gaining *APPROVAL*, the applicator will receive a certificate and will be placed on the **CAR** approved list. In the case of a *PENDING APPROVAL*, the applicator will be required to correct all action items. If a *NO APPROVAL* is issued, the applicator will have to wait a minimum of 3 months prior to being considered again and will be required to correct all major action items before reapplying.

For questions regarding this approval contact:

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