

# Supplier Technical Review Training

Revision 2.0 September 2016



GPSC Supplier Academy



# Technical Reviews - Introduction

- The Supplier Technical Review is a tool that should be used to complete part of the requirements of the Engineering Advanced Purchasing Process Model (EAPPM) Box 7.



# Technical Reviews – Introduction Continued

## What is a Technical Review?

- A structured discussion between the Supplier and Oshkosh about:
  - Design Requirements
  - Other Oshkosh Requirements (PPAP, packaging, etc.)
  - Drawing Interpretation
  - Manufacturing Processes & Tooling
  - Inspection Processes
  - Recommendations for Changes
  - Special Process Requirements (Welding, Paint, etc.)

This Culminates in Cost Driver Analysis



# Technical Reviews – Introduction Continued

## Who should be involved in Technical Reviews?

### Oshkosh

- Purchasing (*Global Commodity Managers, Segment Commodity Managers, NPD Buyers, PFP Buyers, Tactical Purchasing*) – **Technical Review Process Owner**
- Design Engineering
- Supplier Quality Engineering
- Manufacturing
- Others as Required (*Service/Aftermarket, Supplier Development, Sales, Logistics, Program Management, Cost Management, Marketing, PFEP*)

### Supplier

- Supplier Leadership
- Engineering
- Manufacturing (Manufacturing Engineers, Tooling, Operations, etc.)
- Quality

*Class Discussion*



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# Technical Reviews – Introduction Continued

## Why perform a Technical Review?

1. To gain confidence in the Supplier's ability to manufacture and inspect parts to the engineering requirements.
2. To identify changes to the engineering documents based on the Supplier's processes and capabilities. Engineering changes should result in one of the following:
  - Eliminate a problem that would prevent the Supplier from being able to manufacture or inspect.
  - Increase ease of manufacturing or ease of inspection.
  - Reduce cost.
  - Improve the performance.



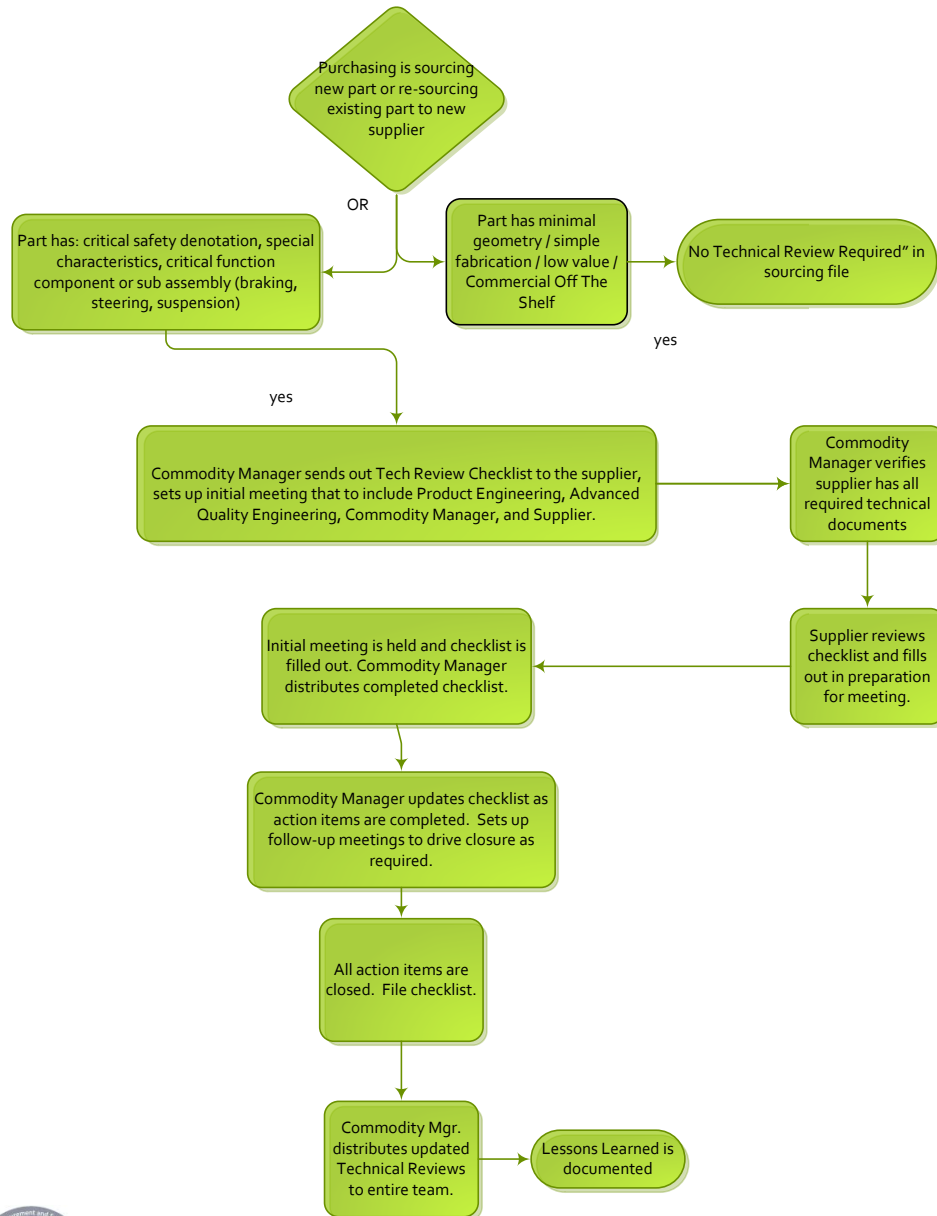
# Technical Reviews – Introduction Continued

## Why perform a Technical Review? (Continued)

3. To allow the Supplier to discuss engineering and quality requirements with Oshkosh in order to verify understanding and compliance.
4. To pass on Lessons Learned from the manufacturing history of the part or similar parts to the Supplier.
5. To create open lines of communication between the Supplier and Oshkosh purchasing, engineering and quality.
6. To help expedite any necessary design changes.
7. To fully understand how a part will be manufactured.
8. To ensure cost quoted is accurate and sustainable



# Technical Review Process



- This is the basic flow for the Technical Review process.
- Refer to procedure: Supplier Technical Review (OSK-P2100)

The image shows a document titled "Supplier Quality General Procedure" with a revision number of 0002. It includes a table with the following information:

Title: Supplier Technical Review	Revision No.: OSK-P2100
Author: Tim Hahn	Effective: 9/27/11
Revised by: Tim Hahn	Original: 9/27/11
Approved by: Supplier Quality Council	Page 1 of 1

The document contains sections for PURPOSE, SCOPE, REFERENCES, DEFINITIONS, and PROCEDURES. The PURPOSE section states that the procedure provides guidance on how the Supplier Technical Review process can be completed. The SCOPE section states that the procedure applies to all Suppliers of Oshkosh Corporation. The REFERENCES section lists the Oshkosh Supplier Quality Manual, the Supplier Technical Review Checklist (OSK-P2100), and the Oshkosh Supplier Network. The DEFINITIONS section defines the terms "Supplier Technical Review" and "Supplier Quality Council". The PROCEDURES section describes the steps for conducting a Supplier Technical Review, including the need for a Supplier Technical Review on a new or re-sourced part, the role of the Commodity Manager, and the requirement for a meeting with the Supplier.

# Technical Review Format

The checklist is an excel spreadsheet containing

- 8 requirement tabs
- Consisting of 39 questions

**Supplier Technical Review Checklist: Supplier Questionnaire** REV: A

Objective: To assess the suppliers understanding of the design requirements, document any supplier concerns or exceptions, and verify the manufacturing feasibility.

Checklist Completion Date: 1/1/2000 Technical Review Meeting Date: 1/15/2000 Part Number: pre-filled Revision Level: pre-filled

Q#	Question	Answer	Evidence, Explanations, Questions, Issues and Clarifications	Status Indicator	Action Tracker #
<b>General Design Requirements</b>					
1)	Does the supplier have all the purchased level, component and sub component level drawings at the revision shown on "Sheet 2 - Part Numbers" tab? If NO: Please list the drawings and revision you are missing.	<input type="checkbox"/> YES <input type="checkbox"/> NO		R G B	
2)	Does the supplier possess the correct revision of industry, military and/or Oshkosh Specification? (i.e., OSK, MIL, ASTM, CQR, QAC, GB, etc.)? <i>Note: The latest Oshkosh specs should be sent along with the Tech Review Checklist. If you don't see them or if the Oshkosh Spec at your possession is an order Rev, please mark NO</i> If NO: Please list the Specs and revision you are missing.	<input type="checkbox"/> YES <input type="checkbox"/> NO		R G B	
3)	Does the supplier require any CAD data? If YES: Please list part number(s) and needed file format (DXF, STEP, etc.)	<input type="checkbox"/> YES <input type="checkbox"/> NO		R G B	
4)	Has the function and the end-use of the part been clearly defined to the supplier?	<input type="checkbox"/> YES <input type="checkbox"/> NO		R G B	
5)	Has the supplier manufactured similar types of parts for Oshkosh Corporation? If YES and if these parts had DMR in the past 6 months: Please list DMR numbers, root cause of DMR and corrective action taken.	<input type="checkbox"/> YES <input type="checkbox"/> NO		R G B	
6)	Are there any SCRs (pending or closed) of this part OR engineering changes if the supplier designs the part? <i>Note: All approved SCRs must be included in the PPAP submission package</i> If YES, please list part number and status of SCRs to the right.	<input type="checkbox"/> YES <input type="checkbox"/> NO		R G B	
If NO: What areas do you need information or have questions on?					
How many PPAPs for Oshkosh Corporation have you submitted in the past 12 months?					
How many PPAPs were rejected during the past 12 months? Please describe reasons for					
Please list the material standard/grade and its lead time					
If YES: Does the supplier recommend alternative materials with equivalent properties? <input type="checkbox"/> YES <input type="checkbox"/> NO					
If YES: Please list the material standard, grade, physical properties and chemistry.					
If YES: Provide reasoning for suggesting alternative material.					

The spreadsheet also includes the following tabs:

- Instructions
- Supplier acknowledgement
- Preparer identification
- Part number
- Action tracker

The Technical Review checklist is available on OSN



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# Technical Review Process

①

“Tech Rev Checklist Prepared By” Tab

②

Checklist Completion Date:	1/1/2000	Technical Review Meeting Date:	1/15/2000	Part Number:	pre-filled ②	Revision Level:	pre-filled												
Technical Review Checklist Is Completed By:																			
<table border="1"> <thead> <tr> <th colspan="2">Supplier Representatives</th> </tr> <tr> <th>Name</th> <th>Position</th> </tr> </thead> <tbody> <tr> <td>Prepared by</td> <td></td> </tr> <tr> <td>Prepared by</td> <td></td> </tr> <tr> <td>Prepared by</td> <td></td> </tr> <tr> <td>Prepared by</td> <td></td> </tr> </tbody> </table>								Supplier Representatives		Name	Position	Prepared by		Prepared by		Prepared by		Prepared by	
Supplier Representatives																			
Name	Position																		
Prepared by																			
Prepared by																			
Prepared by																			
Prepared by																			
Technical Review Meeting Participants																			
Supplier Representatives				Oshkosh Corporation Representatives															
Account Rep		Strategic Purchasing																	
Engineering		Design Engineering																	
Quality		Quality																	
Manufacturing		Commodity Manager																	

1. Enter the checklist completion date and the date will autofill on the remaining tabs
2. Part Number and Revision Level will already be filled out
3. List name and position of Supplier participants involved during the technical review



# Technical Review Process

Supplier Technical Review Checklist: Supplier Questionnaire							REV: A
Objective: To assess the suppliers understanding of the design requirements, document any supplier concerns or exceptions, and verify the manufacturing feasibility.							
Checklist Completion Date:	1/1/2000	Technical Review Meeting Date:	1/15/2000	Part Number:	pre-filled	Revision Level:	pre-filled
Q#	Question	Answer	Evidence, Explanations, Questions, Issues and Clarifications				Status Indicator
							R G B Action Tracker #
	<u>General Design Requirements</u>						
1)	Does the supplier have all the purchased level, component and sub component level drawings at the revision shown on "Sheet 2 - Part Numbers" tab? If NO: Please list the drawings and revision you are missing.	<input type="checkbox"/> YES <input type="checkbox"/> NO					

Each requirement tab contains specific questions

- A. Checkboxes for the reviewer to indicate status, either yes or no
- B. A field for the reviewer to record evidence, explanations, questions, issues and clarifications

Note: If a question is not applicable, please note in this section

- C. Red, Green, and Blue status field automatically populates to indicate risk level

**Red** Indicates a risk exists and/or action is required

**Green** Indicates no risks exist, no actions are needed, OR no significant opportunities for improvement


**Blue** Indicates that a risk may or may not exist. Follow up questions will be required during a technical review meeting



# Technical Review Process

Place any issues noted into the “Action Tracker”

- Only the “Question Number” and “Action Item Description and Action to be Taken” fields need to be filled out
- Enter as much detail as possible in the “Action Item Description and Action to be Taken” field
- Enter the corresponding Action Tracker Number into the Action Tracker # cell on the checklist



## Technical Review Action Tracker

REV: A

#	Question Number	Risk Category	Action Item Description and Action to be Taken	Responsible Person (Lead)	Required Completion Date	Actual Completion Date	Status
1							

**Action Tracker Tab**

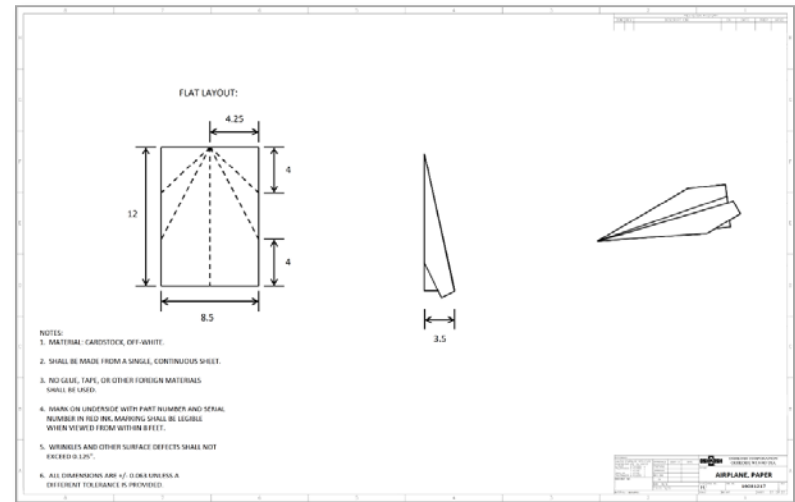
				TRUE	FALSE	Tracker #
<u>Finishing Requirements</u>						
30)	Does the part need to be painted?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		TRUE		
	If YES: Will the supplier do painting in-house or outsource the process?			TRUE		
	If YES: Is the Paint liquid or Powder?			TRUE		
	If YES: Who is the paint supplier? If not PPG, explain why you are using another paint.			TRUE		
	If YES: Is the painter (in-house or outsourced) approved by Oshkosh Corp.?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		TRUE		
	If YES: Please provide last audit/certification date for painter.			TRUE		
	If YES: Does the supplier understand the JLG painting specification?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		TRUE		
	If NO: Please explain issues and/or questions.		Do not understand QAC-079	TRUE		1

**Technical Review Checklist**

# Technical Review Questions

Perform the paper airplane exercise:

1. Split classes into teams. The teams will act as the supplier for the paper airplane and the instructors will be the customers.
1. The teams have ten minutes to familiarize themselves with the drawing and other requirements.
2. After ten minutes, the customer will lead a supplier technical review discussion of the drawing, using the technical review form.



## Additional Information

### Part Monthly Quantity

Model #	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
19031217	50	150	300	400	500	600

### Yearly Forecast After Initial 6 Months

7200
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### Notes:

- 1) Paper airplane shipments will be weekly.
- 2) Airplanes will be individually packaged.
- 3) Shipping containers and Individual packaging will be marked with Model #.

### Team Exercise



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# Technical Review Questions - General Design

<u>General Design Requirements</u>			
1)	Does the supplier have all the purchased level, component and sub component level drawings at the revision shown on "Sheet 2 - Part Numbers" tab?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If NO: Please list the drawings and revision you are missing.		
2)	Does the supplier possess the correct revision of industry, military and/or Oshkosh Specification? (i.e.; OSK, MIL, ASTM, CQR, QAC, GB, etc.)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	<i>Note: The latest Oshkosh specs should be sent along with the Tech Review Checklist. If you don't see them or if the Oshkosh Spec at your possession is an order Rev, please mark NO</i>		
	If NO: Please list the Specs and revision you are missing.		
3)	Does the supplier require any CAD data?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Please list part number(s) and needed file format (DXF, STEP, etc.)		
4)	Has the function and the end-use of the part been clearly defined to the supplier?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
5)	Has the supplier manufactured similar types of parts for Oshkosh Corporation?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES and if these parts had DMR in the past 6 months: Please list DMR numbers, root cause of DMR and corrective action taken.		
6)	Are there any SCRs (pending or closed) of this part OR engineering changes if the supplier designs the part?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	<i>Note: All approved SCRs must be included in the PPAP submission package</i>		
	If YES, please list part number and status of SCRs to the right.		

# Technical Review Questions – PPAP & SCR

<u>PPAP &amp; SCR Requirements</u>				
7)	Which level of PPAP is required on this part?	<input type="checkbox"/> I	<input type="checkbox"/> II	<input type="checkbox"/> III
	If LEVEL 3 is required: Will you be able to provide all required documentations (PFMEA, Control Plan, etc.)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If NO: Please list of documentations you aren't able to provide and reason why			
8)	Does supplier understand the lead time for PPAP of this part?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	<i>Note: The PPAP lead time shall include but not be limited to the lead time of correct raw material, production tooling, manufacturing of the part based on production tooling, all testing called out on the drawing, etc.</i>			
	If YES: What are the lead time for PPAP of this part and its breakdown of lead time component?			
	If NO: Which lead time component(s) you do not have the information?			
9)	Does the supplier understand Oshkosh PPAP requirements outlined in the Supplier Quality Manual (section 9)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If NO: What areas do you need information or have questions on?			
	How many PPAPs for Oshkosh Corporation have you submitted in the past 12 months?			
	How many PPAPs were rejected during the past 12 months? Please describe reasons for rejection.			
10)	Does the supplier understand the Oshkosh Corporation SCR process (when and how to submit)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If NO: Explain what part of the SCR process is not understood.			

# Technical Review Questions - Material

<u>Material Requirements (not applicable if the supplier owns the design AND there is no material specs called out on the drawing)</u>			
11)	Does the supplier understand the required material specifications?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	Please list all material specifications for this part.		
	If NO: Please list material specification(s) and any issues/questions.		
12)	Does the supplier have production experience with similar materials for this type of application?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Please list any issues with the material regarding manufacturability, processing, performance, field failures, etc.		
13)	Are there any concerns regarding the material selection / material availability?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Please list what material and what the issue is.		
	What is the largest minimum order quantity of all the materials required for this part?		
	Please list the material standard/grade and its minimum order quantity.		
	What is the longest lead time for material required for this part when you start to produce?		
	Please list the material standard/grade and its lead time.		
	If YES: Does the supplier recommend alternative materials with equivalent properties?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Please list the material standard, grade, physical properties and chemistry.		
	If YES: Provide reasoning for suggesting alternative material.		
	If YES: Did the supplier request the alternative material on RFQ form when quoting the part?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Does the supplier provide the Prototype part?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Does the supplier understand PPAP requirement for substitution materials?	<input type="checkbox"/> YES	<input type="checkbox"/> NO

# Technical Review Questions – Material (cont.)

14)	Can a mill cert be provided for each material when the supplier submits PPAP?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If No, list material(s) that a certification cannot be provided for and reason why you can't obtain the cert.			
15)	Does the part have any armor/material traceability requirements? -- <b>This question applies to Defense Segment suppliers only</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If YES, does the supplier understand these requirements?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	

# Technical Review Questions – Print Dimensional and Specification

<u>Print Dimensional and Specification Requirements (not applicable if the supplier owns the design AND there is no dimensions called out on the drawing)</u>			
16)	Are all dimensions and tolerances manufacturable and measurable <b><u>consistently?</u></b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If NO: What dimensions are not manufacturable or measurable?		
	If NO: What dimensions can be manufactured /measured but will be difficult to keep consistent?		
17)	Which are the tightest tolerances on this part and what is the current equipment's manufacturing tolerancing and inspection limit on these features?		
18)	Does the supplier have recommended design changes for ease of manufacturing, Inspection and/or cost reduction?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Please explain the change and the benefit (cost, quality, lead-time, etc.).		
19)	Does the supplier have a documented inspection plan for this part?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If NO: What is the timeline for creating an inspection plan?		
	If YES: What is the inspection frequency? (Once a shift, every tenth piece, etc.)		
	If YES: Will all inspections be performed in-house? If NO explain	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: What tools will be used for process and final inspections (e.g. calipers, CMM, etc.). Please explain any attribute gages if applicable.		
	If NO: Please explain where the inspection will be performed and what tools will be used for inspection.		

# Technical Review Questions – Print Dimensional and Specification (cont.)

<b>20)</b>	Will the supplier utilize dedicated tooling / fixtures to manufacture?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If NO: Explain how part will be made (temporary tooling, by hand, etc.).			
	If YES: Does Oshkosh Corporation own the tooling?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: Has the fixture/tooling been quoted?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: Does the supplier have a tooling design, manufacturing and verification plan?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: What is the timeline (schedule) for tool build (Gantt chart, etc).			
	If YES: What is the verification plan for the tool?			
	If YES: What is the capacity, throughput and life of the tool?			
	If YES: Will the tooling be designed and manufactured in-house or out? Explain			
	If NO: What is the timeline for creating a tooling design, manufacturing and verification plan?			
	If YES: Does the supplier have a tooling maintenance and storage plan?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: Explain the plan and how it is documented.			
	If NO: What is the timeline for creating a tooling maintenance and storage plan?			
<b>21)</b>	Are all print notes understood and can the supplier conform to all notes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		YES	NO	N/A
	If NO: Please list note(s) and any questions.			

# Technical Review Questions – Print Dimensional and Specification (cont.)

<b>22)</b>	Are there performance/testing requirements called out on the drawings of this part?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: Does the supplier understand all performance/testing requirements?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: What testing is required per the spec listed on the print?			
	If YES: How will you perform testing (Internal/External) and what are the lead-times?			
	If YES: How will you document test results?			
	If NO: Please list specs and performance/testing requirements that you have questions and explain.			
	If YES: Are there any requirements/tests that cannot be completed or that you take exception to?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: Please list these requirements/tests and reason why.			
<b>23)</b>	Is there any GD&T called out on the drawing?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: Does the supplier have certified and/or trained GD&T personnel on site? If YES, provide names and certification/training received.	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: Is the GD&T on the print understood, manufacturable, and measurable?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If NO: List the specific GD&T and the issues.			
<b>24)</b>	Are there any Special Characteristics (SC) or Critical Characteristics (CC) called out on drawing?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If YES: Are SC and CC understood?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If NO: Explain what characteristic is not understood.			
	If YES: Do you have a PFMEA and Control Plan to monitor and control these SC or CC?	<input type="checkbox"/>	<input type="checkbox"/>	
		YES	NO	
	If NO: What is the timeline for creating a PFMEA and Control Plan?			

# Technical Review Questions - Welding

<u>Welding Requirements (not applicable if NO welding is called out on drawing)</u>			
25)	Are the specified welding standards understood by the supplier?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If NO: Please explain issues or questions.		
26)	Are the welding symbols understood, manufacturable, and verifiable?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If NO: Please explain issue and suggested solution.		
27)	Will the welding be robotic, hand or a combination of both? Please explain		
28)	Are there areas of concern in regards to consistency, weld torch accessibility, etc.?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Please list out your concerns.		
29)	Does supplier have CWI on staff or utilize a CWI contractor?	<input type="checkbox"/> On Staff	<input type="checkbox"/> Contractor
	If ON STAFF: Please specify how many CWI on staff		
	If ON STAFF: For in-house CWI's please list certification date and date recertification due.		
	IF CONTRACTED: How do you determine when they are needed?		
	IF CONTRACTED: What is the lead time of requesting a contracted CWI?		
30)	Does the supplier have Welding Procedure Specification (WPS) and Procedure Qualification Records (PQR) for all of the welds listed on the drawing(s)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES and if you are making Turntable, Frame, Axle Weldment, Outrigger Weldment, Coupling or Cab, please provide WPS and PQR -- <b>This question applies to Access Segment suppliers only</b>		
	If No, please list WPS & PQR's needed and timeline to complete.		

# Technical Review Questions - Finishing

<u>Finishing Requirements</u>				
31)	Does the part need to be painted?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If YES: Will the supplier do painting in-house or outsource the process?			
	If YES: Is the Paint liquid or Powder?			
	If YES: Who is the paint supplier? If not PPG, explain why you are using another paint.			
	If YES: Is the painter (in-house or outsourced) approved by Oshkosh Corp.?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If YES: Please provide last audit/certification date for painter.			
	If YES: Does the supplier understand the JLG painting specification?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If NO: Please explain issues and/or questions.			
32)	Is plating called out on the drawing?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If YES: Will the supplier do plating in-house or outsource the process?			
	If YES: Has the plater (in-house or outsourced) been audited for its plating process?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If YES: Please provide last audit date and score.			
	If YES: Does the supplier have all the required Oshkosh Corporation plating specifications and understand all required testing.	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
	If NO: Please explain issues and/or questions.			
	If YES: What is the salt spray and hardness testing lead time if they are called out on drawing			
33)	Does the supplier understand surface finish class (mill scale) requirements for unfinished parts?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	<input type="checkbox"/> N/A
	If NO: Explain issues/questions.			
	What is the surface class of this part?			

# Technical Review Questions – Outside Processing

<u>Outside Processing</u>			
34)	Will the supplier utilize any outside processing or inspection not previously discussed on this part?	<input type="checkbox"/>	<input type="checkbox"/>
		YES	NO
	If YES: What processes are being outsourced?		
	If YES: What steps are taken to ensure all requirements are being met?		
	If YES: Are the outside suppliers approved by the supplier or OSK and monitored?	<input type="checkbox"/>	<input type="checkbox"/>
		YES	NO

# Technical Review Questions – Packaging

<u>Packaging Requirements</u>			
35)	Does the supplier understand Oshkosh packaging and labeling requirements outlined in the Supplier Standards Guide (Section J)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If NO: Please list your questions or concerns		
36)	Can an actual barcode label of this part be provided when the supplier submits PPAP document?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If NO: Please list your questions or concerns		
37)	What is the supplier packaging protection plan?		
38)	Will the supplier use returnable packaging?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Who will provide (Oshkosh Corporation made, Supplier made, CHEP, etc.)?		
39)	Is there any special packaging required (not covered in Section J)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
	If YES: Please explain		

# Follow Up

Continue with follow-up until:

- All major risks (Red) have been addressed
- All significant opportunities for improvement have been pursued
- Review any potential impact to the part's cost drivers
- Remember to update the action tracker

One of the primary goals of the Technical Review process is to reduce the risks associated with the product launch

- It is not always possible to address every single risk that is present

				R	G	B	Action Tracker #
<u>Finishing Requirements</u>							
31) Does the part need to be painted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>				TRUE	
YES NO							
If YES: Will the supplier do painting in-house or outsource the process?							
If YES: Is the Paint liquid or Powder?							
If YES: Who is the paint supplier? If not PPG, explain why you are using another paint.							
If YES: Is the painter (in-house or outsourced) approved by Oshkosh Corp.?	<input checked="" type="checkbox"/>	<input type="checkbox"/>				TRUE	
YES NO							
If YES: Please provide last audit/certification date for painter.							
If YES: Does the supplier understand the painting specification?	<input type="checkbox"/>	<input checked="" type="checkbox"/>					
YES NO							
If NO: Please explain issues and/or questions.							
Does not understand QAC-079				TRUE			1



# Conclusion

After completing the Supplier Technical Review process, don't forget to document Lessons Learned.

Items that should be included:

- Recommendations to improve the Technical Review form, training, or procedure.
- Important or unexpected outcomes of the Technical Review process.
- Things to watch out for.

