

Commonality and Postponed Differentiation
for

Loader/Backhoe Operator's Seat

CASE Corporation
PRODUCT OFFERING GROUP

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by

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Executive Summary

Today the Loader/Backhoe family is offering three different type of operator seats: non-suspension vinyl; suspension vinyl; and suspension cloth.

Burlington today carries a three-day inventory in the referred seats. After reviewing the new features offered by MILSCO (i.e., the removable cushion assemblies for suspension seats), purchasing was able to re-structure the ordering process, basically reducing from three to two the inventory days in stock.

The reduction of suspension seat inventory by one day has an estimated financial impact of \$19,123 savings per year in carrying costs.

This opportunity is being currently implemented by Pam Fett at Burlington.

Future Product Opportunities

There is an enormous saving opportunity in commonalizing the seat cushions. This is recognized at all levels interviewed (i.e., future product development, cab engineers, purchasing, manufacturing.)

This general feeling is well represented in the following extract from an e-mail sent by Pam Fett:

“In the very near future, I would like to see seats get a priority in our strategic sourcing project. I believe Case would benefit greatly by sourcing all seats for all locations through one supplier. Also, there should be one or two basic seats that are used by each plant with various features added or removed as each application warrants. We would still need several different bases, but commonizing the seat itself would be a tremendous benefit.

As we discussed, Milsco is working on a prototype seat for the Burlington plant that adds several new features and incorporates an air suspension along with some of the comfort features of the current Cat seat. I would like to see this design evaluated on a corporate wide basis for the reasons I just mentioned above. I will continue to work on this project, however, I hope there will be a strategic sourcing team developed by the time we are ready to build a prototype.”

Common Replaceable Cushion Assembly

A common cushion assembly across the suspension, and non-suspension seats it is possible and necessary. This feature will have a financial impact associated with a reduction in the number of components in the whole manufacturing/servicing process.

A corporate seat committee should be created ASAP to define the common requirements among CE and AG applications, identify one or two strategic seat suppliers, the migration path from the current situation to the ideal scenario, the methodology to be used, etc.

Financial impact, it is perceived as very high due to less inventories, reduced service cost, and a better alignment with the corporate intent of being more flexible in the whole value chain.

The rest of this document describes briefly the next steps required to organize such a seat-corporate committee and the training required to make more effective this project.

Proposal: The Corporate Seat Committee

GM and other car manufacturers have already demonstrated the enormous benefits of having a reduced set of strategic suppliers for commodity components. Their experience can be extrapolated into CASE operations in regard to the operator seats among other commodities.

An AG/CE meeting was held in Burr Ridge on Friday, August 23, 1996. In that meeting Ron Morishita (AG) and Hernan Moraga (CE) both from Product Management met Wayne Brinkman and Prasenjit Adhikari both from AG cab engineering.

The main conclusion from that meeting is that **CASE has a big opportunity in rationalizing its seat base both for the AG and the CE product lines, working in a cooperative way (i.e., AG and CE).**

Wayne and Adhikari stated that it is necessary to define an “common envelope” per type of application, and that thereafter every seat should be designed--if no current seat can be used-- within the limits of the pre defined envelope. The definition of such envelope should be made cooperatively by the AG and CE key players (i.e., engineering, manufacturing, product management, purchasing, etc.). The effort required to produce a “general accepted envelope” could extend to several full time sessions, considering review meetings.

It was also suggested that in the future CASE should source their seats by components, making every supplier a strategic source for a component of two. Therefore final assembly should be made at CASE facilities--maybe a seat business unit. This approach would avoid the possibility that all the improvements financed by CASE with only one full seat supplier end up being transferred to the whole market (i.e., MILSCO past experience).

Because of the strategic relevance of the objective of defining common “envelopes” for future developments in seats, the following steps may be considered:

- 1) Hire a consulting firm to perform the analysis and develop a seat road map plan
- 2) Evaluate the strategic proposal developed by the consulting firm. If it is convenient, then
- 3) Allocate the budget requested to implement the proposal
- 4) Perform the required structural changes in the organization, nominating a project leader at CASE
- 5) Train team members about brain-storming and project management techniques, as required
- 6) Start the project

Notice that the recommendation of hiring a consulting firm is based mainly on the project complexity in dealing with commodity rationalization within CASE.

The consulting firm chosen should have a strong experience in manufacturing projects, as well as a multinational presence that can assure a global implementation of this project.

More about Common Cushion Assemblies

Seat engineers at Burr Ridge [Brinkman, Adhikari] are working in generalizing the quick replacing feature for seat cushions. This concept is present in the Grammer seats used in the MX30 units (see Appendix for a sub-assembly diagram).

Grammer is characterized for requiring no tooling to replace the seat cushions in less than one minute. This feature has several advantages:

- It will make it possible to reduce inventory for seats at the assembly line: security stock for each type of seat could be drastically reduced by carrying only seat cushions instead of the whole seats. Also Parts and Service operations would be affected positively having less inventories, and shorter reaction times.
- Customers will be better off because they would be able to replace their seats with a lower investment.
- The usage of quick removable cushion seats would be the basis for commonalizing all the cushion seats across AG and CE product lines.
- The usage of the quick removable cushion seats is critical to implement the postponed differentiation “two-piece ROPS” concept (see separate proposal).

Burlington is currently working in redesigning their MILSCO seats to make them more like the CAT seats, and eventually changing supplier [Jack Frost]

It is urgent to gather the CE and AG seat engineers, product managers, manufacturing people, and other key players for coordinating common seat efforts with the AG counterparts.

If CASE opts for not hiring a consulting firm, a good option would be to make all future redesigns with the requirement of using the GRAMMER cushion attachment approach.

Conclusion

This postponed differentiation feature will bring several advantages both for CASE, its dealers, and finally, end-users:

Benefits for CASE:

- Inventory reductions in suspension seats. Economies of scale
- Ability to start using the concept of “commonality” in our seats
- Ability to start using the concept of "postponed differentiation" in our cabs
- Source of Additional Revenue (i.e., customized cushion business)

Benefits for Dealers:

- Ability to respond IMMEDIATELY to a customer preference for the suspension seat type
- Additional source of income (replacement of worn out seat cushions)

Benefits for End-Users:

- Increased customization potential
- Ability to change the seat cushion depending on the weather conditions
- Ability to remove the seat cushion and wash it while using a back-up cushion set
- Ability to protect the current investment on the seat, because the cost to renew it in most cases will be the cost of the additional seat cushion kit.

Appendix