



American Eagle

Airplane Fuselage Structural Integrity Forum

In-house Maintenance vs. MRO Maintenance

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- Why outsource?
 - Many carriers will outsource maintenance in excess of the carriers available capacity.
 - In some cases the type of airframe is a small percentage of the airlines fleet and by outsourcing the airline avoids major capital investments such as equipment and facilities.
 - Lower overall cost. Maintenance Repair and Overhaul Facilities (MRO) have the ability to spread the cost of facilities and equipment across multiple operators lowering the cost of inspections.
 - Access to specialized repair facilities.
 - Volume is not sufficient to permit consistent staffing.



- Why keep maintenance in house?
 - **In house facilities that were in place prior to the economic downturn for the airlines.**
 - **Greater control of the aircraft and scheduling.**
 - **More accurate documentation, MRO maintenance personnel must switch between paperwork of many carriers.**
 - **Lack of continuity of maintenance personnel at MRO's.**



- What is an MRO?
 - Typically the first thing that comes to mind is a 145 certified repair station but 121 operators are now becoming a significant portion of the MRO population.
 - Under increasing economic pressure air carriers that perform their own in-house maintenance are being driven to seek business from third parties in order to spread costs and increase revenues.



- MRO Oversight
 - FAA standards for both foreign and domestic repair stations is to conduct at least one comprehensive audit annually for renewal of the repair stations certificate.
 - Many air carriers belong to CASE and use CASE audits in addition to their own.
 - On-site representatives from the carrier providing guidance and oversight 24/7.



- Licensed and un-licensed maintenance personnel
 - Opponents of outsourced maintenance maintain that the use of non-licensed personnel by MRO's create an unsafe situation .
 - While the percentages of licensed to non-licensed personnel vary from facility to facility, all non-licensed personnel are under the direct supervision of a licensed individual.
 - The perception that only MRO's use non-licensed personnel is incorrect. Many airlines also utilize the skills of non-licensed personnel.
 - In all cases the work performed must be signed for by a licensed Mechanic.



- Inspection differences
 - There are no differences in the inspection criteria between the airline in-house maintenance and the MRO, the MRO must follow the airlines approved maintenance program.
 - An air carrier may allow the repair station to use its own paperwork for non routine work items but the MRO must use the carriers inspection package and work cards where applicable.



- Regardless of the carrier's choice of in-house or outsourced maintenance, the following is true:
 - The maintenance performed must comply with the carrier's Continued Airworthiness Maintenance Program (CAMP).
 - Inspections and repairs must comply with all federal regulations and the manufacturer's specifications.
 - The carrier is responsible to ensure the overall safety of the aircraft.

