Herman Grewal

hermangrewal7@gmail.com | 647.447.7172
hermangrewal.github.io | linkedin.com/in/hermangrewal

SUMMARY OF QUALIFICATIONS

- 3+ years of diverse mechanical engineering experience in aerospace industry at Pratt & Whitney Canada
- Established mechanical design knowledge with 60+ industry projects with 300+ production level drawings & models released
- Skillful creative thinker able to lead projects from initial conception to development to final production

SKILLS

CAD
CATIA V5 • SolidWorks
AutoCAD • CADAM • Inventor

FINITE ELEMENT ANALYSIS
ANSYS • SolidWorks Simulation
CATIA V5 Generative Structure Analysis

MANUFACTURING
GD&T • Tolerance Analysis
DFA/DFM • Machining • Tubing
Castings • Welding/Brazing
Additive (SLS) • Injection Molding
Sheet Metal Forming

PRODUCT MANAGEMENT
ENOVIA VPM & PLM
SharePoint • Git • Slack

SOFTWARE
C • C++ • VBA
MATLAB • Simulink

EDUCATION

UNIVERSITY OF WATERLOO
B.A.Sc in Mechatronics Engineering
Waterloo, CAN
Ranked in Top 10% of Class
Dean's Honour List
Autodesk Capstone Design Award
President's Research Award (x2)
President's Scholarship of Distinction
GPA: 3.93 / 4.0

EXPERIENCE

View Full CV

PRATT & WHITNEY CANADA

MECHANICAL DESIGNER | Externals, Controls & Nacelle Design
Jul 2019 - Present, Jan 2018 - Aug 2018, | Toronto, CAN

- Over 3000 hrs drafting 2D detailed drawings & 3D models using CATIA V5
- Proficiency in ENOVIA VPM & PLM for version control, BOM management, change management & approval routes
- Create Design Layouts to communicate assembly instructions & BOM changes
- Manage Digital Mock-Up (DMU) for layout structures & ensure fits
- Approve production drawings validating tolerance stackups and GD&T controls
- Complete design verification with Best Practices (BP) review, Design for Assembly (DFA) studies, tool accessibility studies, trial fits and Request for Test (RT)
- Lead Integrated Product Team (IPT) meetings and track action items to progress project and maintain schedule

Module Owner for New Engine Program for Fuel and Air Systems

- Complete design responsibility for development and production
- Design rigid tubing, custom fittings & sheetmetal support brackets
- Present trade studies for material selection with cost, weight, reliability, manufacturing technique & lead times
- Collaborate with international suppliers to optimize design for reduced tooling costs
- Work with Accessory designers and Global Supply Chain to define accessory requirements with design features, installation procedure and tolerances
- Evaluate supplier bids for Fuel Oil Heat Exchanger, Variable Guide Vane Actuator, Flow Divider Valve, Fuel Metering Unit, Pressure & Temperature Sensors

PW800 Development Vibration Sensor Bracket

- Ch. A & B vibration sensors experiencing mismatch in field causing safety issue
- Rapidly designed 2 alternative brackets to reposition sensors & reduce mismatch
- Experimental brackets machined and tested with positive results for "stacked" design
- Developed Design Verification Plan (DVP) to substantiate parts for field introduction
- Defined GD&T controls, calculated fits and specified coating on drawing

Exhaust Gas Temp. (EGT) Sensor System Design for New Engine Program

- Baseline design measured Turbine temp, but sensor quotes exceeded 10X projected cost due to harsh environment
- Tasked to design alternative EGT system with sensor design & harness routing
- Reviewed existing legacy temp. sensors for reliability and cost
- Collaborated with Accessory Design, Performance Aero & Controls to determine new design requirements & evaluate supplier bids

TECH PUBS ANALYST | Turbofan Engine Product Definition
Apr – Aug 2017 | Toronto, CAN

MECHANICAL DESIGNER | Compressor Design
Sept – Dec 2016 | Toronto, CAN

WEIGHTS ANALYST | Adv. Concepts Architecture & Mass Prop.
Jan - Apr 2016, May - Aug 2015 | Toronto, CAN