We are working on optimization of Intertek’s chain wear test build for the 4-cylinder Ford Eco-Boost engine.

- Currently the process is not fully optimized
- Focused on reducing build time, part rework, and maintaining build quality
- Current fixes include: ball hone method fix, oil filter housing jig, valve spring compressor attachment, engine timing tool, and valvetrain organizer

Proposed Solution

- Valvetrain assembly organizer
  - Organizes the valvetrain assembly to reduce messes
- Valve Spring Compressor attachment
  - Compresses two valves instead of the single valve currently
- Ball Hone method fix
  - Create a method to standardize the ball hone process with a metronome
- Oil filter housing jig
  - Jig to align the oil filter to allow a hole to be drilled to insert a thermocouple to test oil temperature
- Engine Timing Tool
  - Times the engine without removing the oil pump while on test stand

Conceptualization

Customer needs:
- Reduce build time
- Maintain test accuracy
- Reduce part rework
- Reduce overall cost, if applicable

Initial Ideas:
- Oil Filter Housing Jig
- Valve Spring Compressor Attachment
- Workspace Organization
- Ball Hone Method Fix
- Engine Timing Tool
- Application of RTV Fix
- Main Bearing installation jig

Current Work

- Prototyping our designs
- Improving the design prototypes to verify functionality
- Re-prototyping until design satisfies its requirements

- Manufacture and assemble our fixes
- Test fixes inside the process
- Continually improve them until they are exceptional