



## Tube & Weld

## Case Study # 52

**Problem:** A leading manufacturer of high performance stump cutters, forestry and site preparation equipment for the tree care industry designed a new prototype unit but was concerned that three separate hose assemblies connecting the hydraulic attachment(s) to the cab body had too much slack and could become dislodged while the unit was in operation.



Figure 1. Solution

**Solution:** After exchanging engineering data including drawings and specifications, it was decided that the best option to streamline the unit would be to design and install a kit assembly that utilized SAE hydraulic tubing for stability and a shortened hose assembly to maintain flexibility.

**Result:** Although the build cost increased, the aftermarket serviceability was greatly improved. In fact, estimates show that a one-time replacement of the hose assembly under the old design would have cost more than the kit assembly under the new design. Therefore, our tube assemblies improved the prototype in three key aspects: lower repair costs, increased safety and better serviceability.

- Beading
- Bending
- Brazing
- Double Flaring
- Flaring
- Machining
- Welding (TIG)

### Engineering support

#### Hydraulic tube assemblies provide:

- ✓ Higher working pressures
- ✓ Simplified assembly
- ✓ Lower labor costs
- ✓ Reduced leak points