

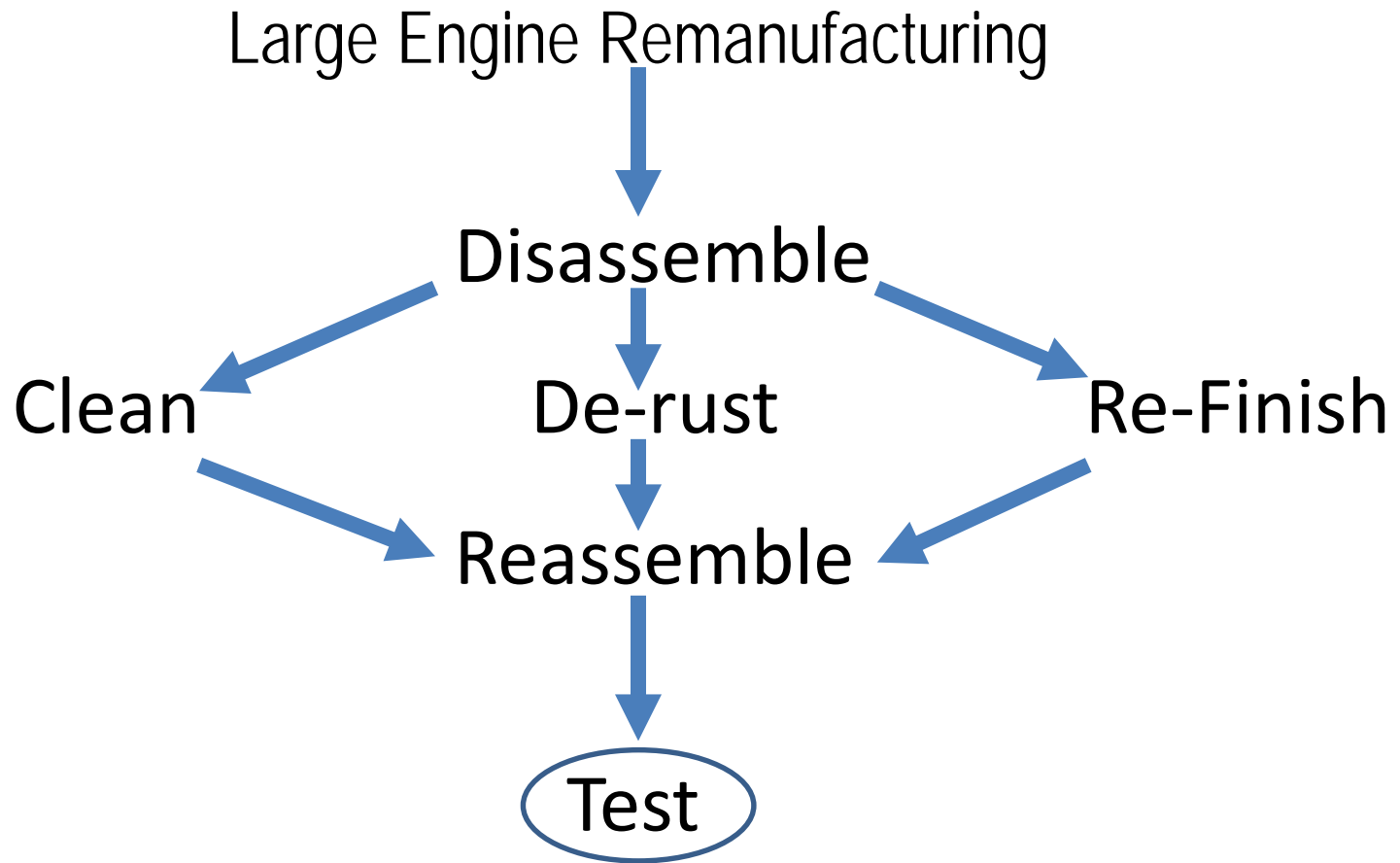
# POWER

*LARGE POWER SYSTEMS DIVISION*

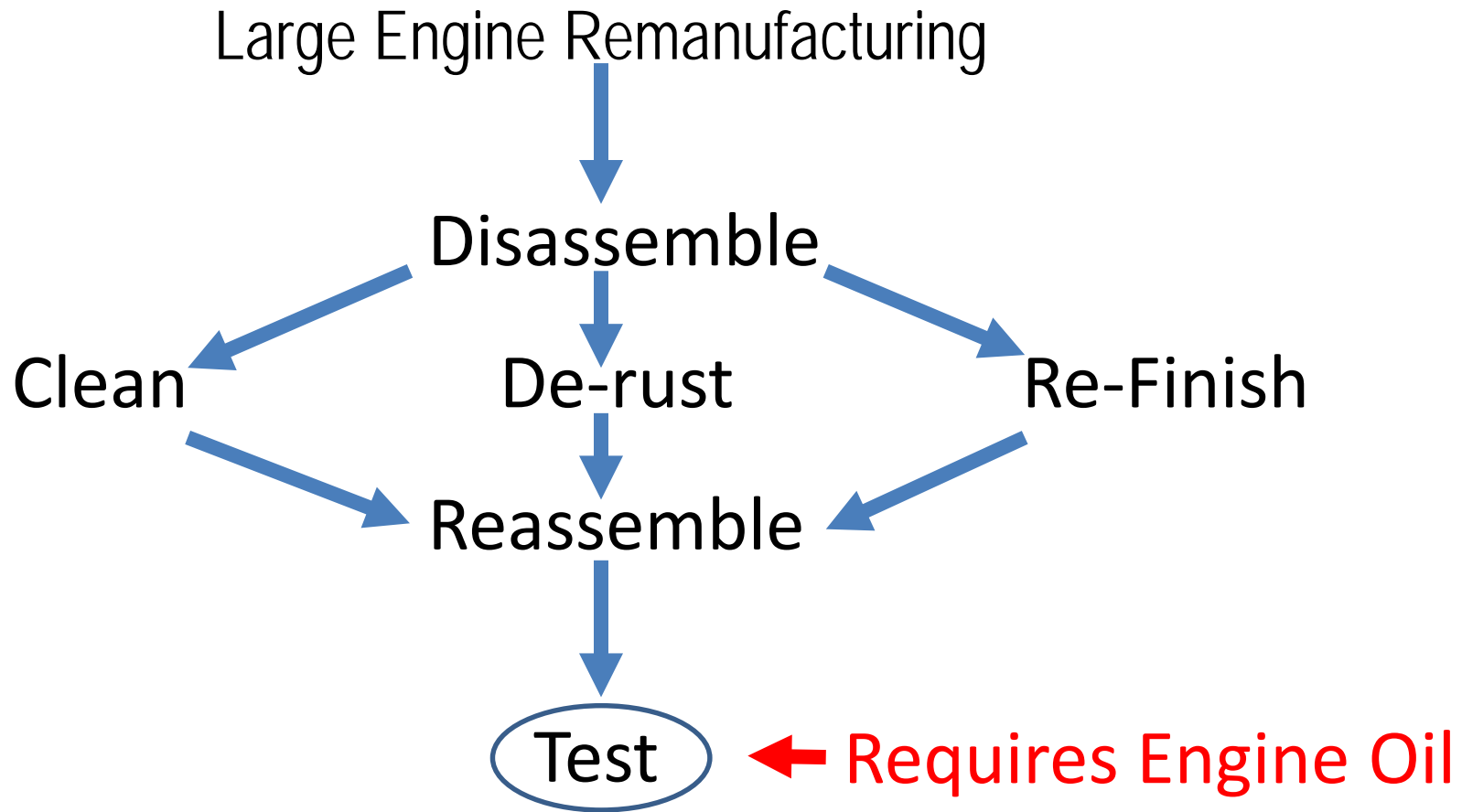
**Revitalizing  
Process Oils Can  
Lead to  
Significant Usage  
Reductions and  
Cost Savings**

**CATERPILLAR®**

# What we do at CAT Reman...

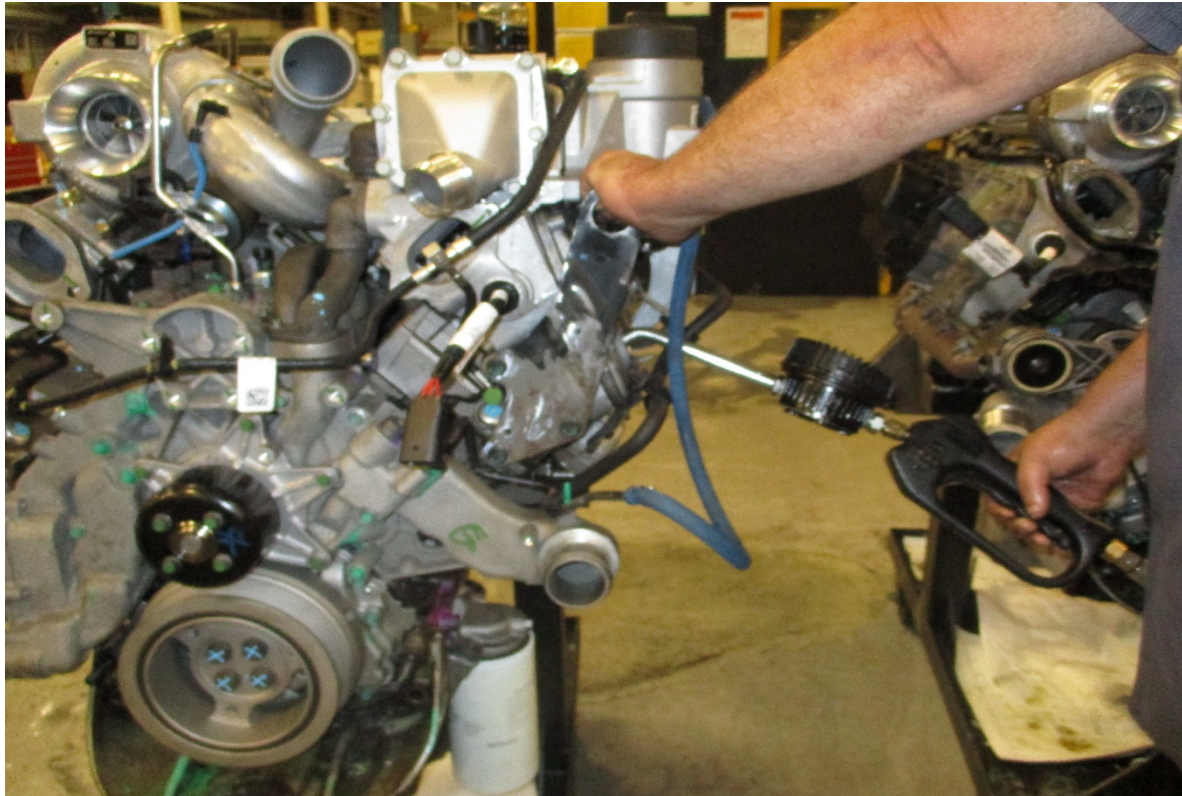


# What we do at CAT Reman...



# Oil Life Cycle...

Engines are filled with oil



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Caterpillar: Confidential Yellow

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# Oil Life Cycle...

Engines are tested in a dynamometer for proper functionality



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# Oil Life Cycle...

Engine is drained of its oil after the test



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# Oil Life Cycle...

Oil is pumped into a 2500 gallon used oil tank





# Previous Process...

- Used oil was picked up by a third party to be recycled
- Recycled oil was topped off with virgin oil and sold back to the facility
- Oil was delivered and put straight back into process
- Weekly pickups and deliveries





# New Process...

## Addition of two filtration elements and a second poly tank



# Two Stage Oil Reclamation...

Oil is filtered through a kidney loop and a dehydrating/particulate filter



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## Stage one...

- Used oil is filtered through a kidney loop
- 10 micron to 5 micron





# Stage two...

HYDAC filter removes water and wear metals and refills process tank at a rate of 1.5 gallons per minute



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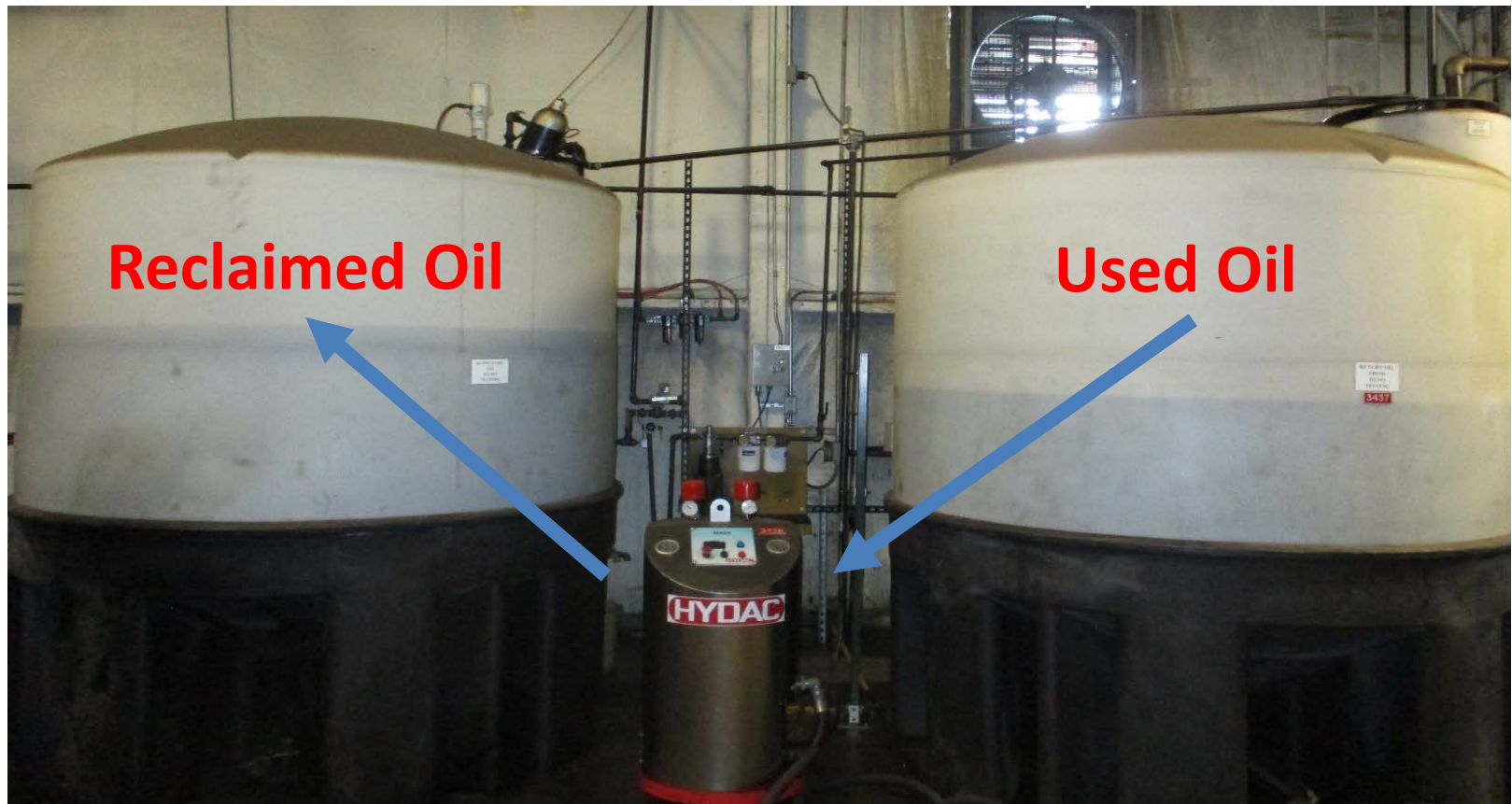
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# Clean Oil Back to Process...

As oil is filtered through the HYDAC, it is pumped into a supply tank to be used in production.



# Environmental and Economical Achievements

	2015	2016	Variance
Oil Volume Purchased	64,000 gal	27,000 gal	↓ 37,000 (58%)
Oil Spend	\$323,542.00	\$155,340.00	↓ \$168,202 (52%)
Oil Usage Cost	\$329,522.00	\$122,141.00	↓ \$207,381 (63%)
CO2 Reductions	295.5 Metric Tons		

# Things to Consider to Minimize Complications

- Thorough validation process
  - Micron Sizes
  - Number of Cycles

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**LEARN AS YOU GO**  
**NO OIL RECLAMATION PROGRAM IS THE SAME**

# Acknowledgements

## **Caterpillar EHS**

- Kevin Poad
- Randy Scott
- David Abrams
- Scott McClurg

## **Chemtool/Lozier**

- Justin Koehler
- Nick Moore