

CASE STUDY 63

(A VERSATILE SEMI-SYNTHETIC COOLANT FOR MACHINING OF PRECISION COMPONENTS)



CUSTOMER DETAILS :

A leading company in Karnataka manufacturing components for the automotive & industrial sectors include precision components, machined castings & forgings, fuel filters and sub-assemblies used in engines, transmissions, fuel injection, turbo chargers, steering & chassis for passenger/commercial vehicles.



OBJECTIVES FOR CONDUCTING THE TRIAL

1. Need to achieve required finish. RA- 0.6
2. Need to perform better than existing product
3. No EHS Issues - Operator & Environmental Friendly
4. To reduce the cost of oil
5. Low smoke / mist formation
6. Increase in Tool life



OPERATING / APPLICATION DETAILS:

1. Machine : ACE / AMS
2. Tank Capacity : 200 ltrs
3. Part : Auto Components- Hex Shaft
4. Material : Steel
5. Operation : Multiple
6. Feed Rate : 650 mm/min
7. RPM : Depends on component
8. Filtration: Mesh Filter
9. Coolant flow : Flood Type
10. Concentration : 5%
11. Sump Life : 6 Months
12. Water used : RO Water



COMPONENT VIEW



PRODUCT RECOMMENDED: HICUT 6710

TRIAL RESULTS



Finish was achieved according to their requirement. Ra-< 0.6.



Low Smoke/ mist formation compared to existing product



No EHS issues – Skin / eye irritation



Tool life has increased by 50nos compared to existing product



Trial was validated for 2 month with multiple users/ operators