PROJECT OVERVIEW REPORT

1. UTC Identifying Number
   69A3551847102

2. Center Identifying Number
   CAIT-UTC-REG58

3. Project Title
   Supplemental Study of Filter Technology Efficacy for Transit Vehicles to Combat the Spread of COVID-19 and Other Respiratory Infections

4. Principal Investigator & Contact Information
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7. Project Description
   The COVID-19 pandemic has been a worldwide issue for over a year now, and transit agencies are still struggling to find cost efficient solutions, which will provide improved rider safety and restore rider confidence. Airborne transmission of the virus has been identified as one of the primary modes through which COVID-19 is spread. MERV 13 filters are able to filter 85% of particles from 1 µm to 3 µm in size, which is ideal for capturing the respiratory droplets. MERV 8+Ag filters contain a silver impregnated layer within and on top of the filter material. This silver layer has antiviral properties which can deactivate viruses trapped within the layer, as well as help prevent the growth of other pathogens that may have been trapped on the filter and will sit on the used filter until it is replaced. The primary goal of this study is to determine if the performance on these filters change over time, specifically in the transit environment, and to compare the results to manufacturer ratings.

8. Implementation of Research Outcomes (or why not implemented)

The intended outcome of the project is to provide a series of guidance and recommendations to transit agencies to help them decide whether it is worth the additional financial cost as well as any potential increased maintenance associated with upgrading their filters.

9. Impacts/Benefits of Implementation (actual, not anticipated)

To Be Determined

10. Dates and Budget

Start date: 2/1/2021
End date: 9/30/2021
UTC (CAIT) Dollars: $30,000
Cost Sharing: $0
Total Dollars: $30,000

11. Keywords

Filtration, Airflow, Transit, Train, Trains, Rail, Bus, Buses, Para-transit, MERV Rating, COVID-19, COVID, SARS-CoV-2

12. Web Links (Reports and Project Website)

https://cait.rutgers.edu/research/supplemental-study-of-filter-technology-efficacy-for-transit-vehicles-to-combat-the-spread-of-covid-19-and-other-respiratory-infections/