

SAFEair for Caterpillar D10T & D11T

The world's leading filtration
and pressurisation system



Greater return
on investment



Safer working
environment



Future proofing
your mine site



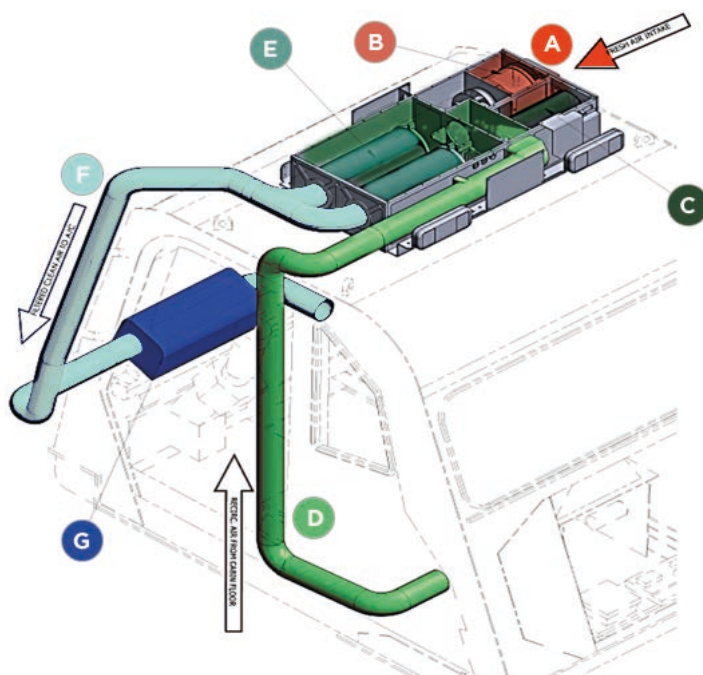
FREUDENBERG
FILTRATION TECHNOLOGIES



We deliver a SAFER mine site

How SAFEair works:

- A PRE FILTER ASSEMBLY (FILTER HEAVY CONTAMINANTS)**
The Fresh air enters into the Pre-Filter assembly, and filters out the heavy contaminant dust particles through the cyclonic dust ejection system.
- B FIRST STAGE FILTER (FILTER COARSE DUST PARTICLES)**
The air moves through to the first stage Pre-Filter and filters out coarse dust particles.
- C 2ND STAGE HEPA FILTER (FILTER SUB MICRON PARTICLES)**
The second stage HEPA filters then remove finer sub micron particles from the air.
- D SNORKEL (RECIRCULATION LINE)**
The fan draws the air from the bottom rear of the cabin, pulling any contaminants dislodged from occupant clothing/shoes away from their breathing zone. This air is recirculated back to the 3rd stage HEPA filters via the snorkel where it is combined with fresh air from stage 2.
- E 3RD STAGE HEPA FILTER (FILTER SUB MICRON PARTICLES)**
The fresh air in conjunction with the recirculated air is then filtered through the 3rd stage HEPA filters to eliminate sub micron particles.
- F MANIFOLD CONNECTION TO A/C (CLEAN AIR TO CABIN)**
The clean HEPA filtered air then enters the manifold connection to A/C Unit and enters the cabin via the air vents, into the breathing zone of the occupant(s).
- G AIR CONDITIONER SYSTEM**



See the difference:



Without
SAFEair
After 3 months



With
SAFEair
After 5 years

Benefits:



QUICK REMOVAL OF RESIDUAL IN CABIN

Occupants entering into the cabin expose the cabin to the outside dust. Once the cabin door is shut the SAFEair unit quickly removes the contaminated air via the suction pipe through to the HEPA filters to deliver clean air back into the cabin.



INCREASED AIR CONDITIONING PERFORMANCE

There is increased air conditioning system reliability due to the integrated A/C evaporator and higher airflow is achieved (200l/s) OEM and aftermarket units currently advertises 100l/s so the air flow is doubled.



HOSPITAL GRADE AIR

The HEPA filters provide hospital grade air into the cabin.



LEAK PROOF SYSTEM

The suction line remains under positive pressure at all times. In the unlikely event of a hole occurring in the suction line, the air will still flow out the suction pipe and not back into the cabin due to the positive pressure.



EXTENDED LIFETIME OF ELECTRONIC COMPONENTS IN CABIN

All of the cabin's electronic components such as switches and connectors last longer because they are not exposed to dust. In addition, the end of shift cleaning time is greatly reduced.



CONSISTENT MINIMUM PRESSURE

The SAFEair system delivers a constant minimum required pressure to adequately pressurize the cab. To exceed the mine site standards.



REDUCED CO₂ LEVEL IN CABIN

When a new SAFEair unit is fitted to a mine vehicle, the cab is deliberately not entirely sealed. Purged air is exchanged for HEPA clean, fresh air resulting in lower levels of CO₂ in the cabin.



CLEAN EVAPORATIVE COIL

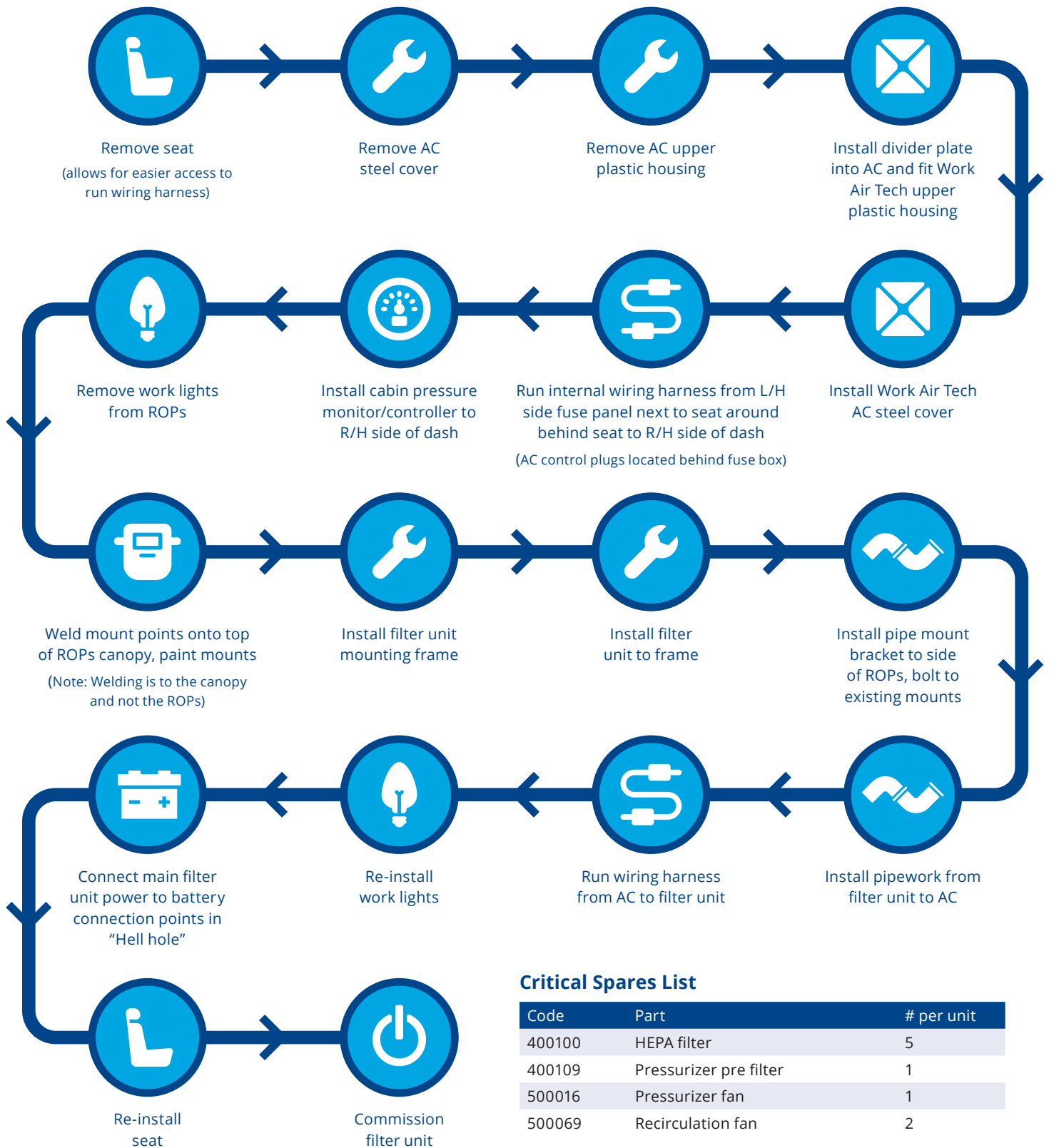
The evaporative coil of the vehicle's air conditioner remains clean, as it is not exposed to dust due to integration with the SAFEair unit.



INTERACTIVE TOUCH SCREEN PANEL

An interactive touch screen panel mounted inside the cab with password protected settings and alarm set to minimum 50Pa to alert the driver to take corrective action.

Workflow for dozer SAFEair installation



Critical Spares List

Code	Part	# per unit
400100	HEPA filter	5
400109	Pressurizer pre filter	1
500016	Pressurizer fan	1
500069	Recirculation fan	2

Notes:

- Roof mounted condenser will conflict with filter unit mounting. Under bonnet and R/H ROPs mount condensers are OK.
- Depending on walkway fitted, some walkways may need modification. This can be organised prior to installation.