NATIONAL GUARD ASSOCIATION
OF
ARIZONA

STATE DRAFT RESOLUTIONS

76th ANNUAL CONFERENCE

26 April 2025

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SUMMARY

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Each Draft Resolution may have a Fact Sheet (White Paper) attached for a description of the item, benefit or service to be considered. All approved Draft Resolutions will be forwarded for consideration at the 147th General Conference of the NGAUS.

** **NOTE – Only current members of NGAAZ/NGAUS may vote on Draft Resolutions.** **

National Guard Association of Arizona
CW5 (R) John Vitt, Resolutions Chair/Joint Resolutions Chair
MAJ Jeremiah Engelman, Army Resolutions Chair
VACANT, Air Resolutions
Col. (R) Paul Aguirre, Executive Director

For additional information on the NGAAZ/NGAUS Resolutions/Legislative Process visit:
https://www.ngaus.org/legislation/resolutions

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Date (MM/DD/YY):	4/1/25	Submitter First Name	John
State	Arizona	Submitter Last Name	Vitt, CW5 (R)
Input Number	1	Submitter Email	vittjc@aol.com
*Input Number is the sequential number of drafts submitted by your state		Submitter Phone	602-769-4999
Type of Draft Resolution	Add Item	Category	ARNG

Relating To: Army National Guard Aviation-Towbarless Tractor for Rotary Wing Aircraft

Examples: Retirement Pay, Combat Vehicles, C-130 Modernization, etc.

Standing Resolution to be Amended
For new resolution or item, select "New"

Resolution Number: 1

Item Number: New

Proposal Statement: In one sentence, please describe the specific item, program or legislation being proposed.
ONE RECOMMENDATION PER FORM-SPELL OUT ALL ACRONYMS-USE ONLY THE SPACE PROVIDED

Fully fund new one person operated, zero emissions, fully electric powered towbarless rotary wing aircraft tow tractor.

Recommendation Information: Use this box to further explain the changes being proposed above. This can identify policy, modernization program, equipment, status, states or personnel impacted.
SPELL OUT ALL ACRONYMS-USE ONLY THE SPACE PROVIDED-THE SAME JUSTIFICATION MAY BE USED FOR MULTIPLE DRAFT RESOLUTIONS, IF APPLICABLE

CRITICAL NEED FOR SUPPORT- In line with Army Climate Strategy (ACS) Green House Gas (GHG) reduction innovation ARNG aircraft maintainers require towing equipment capable of both maneuvering aircraft in confined areas and towing over extended distances. Currently aircraft positioning is accomplished by utilizing a full-size diesel-powered rigid towbar tractor or diesel-powered utility support vehicle.
Tow barless operation ensures one man operation reducing manpower support levels required and provides significantly improved maneuverability within operational areas reducing risk of aircraft damage.

STATES IMPACTED – All ARNG states operating rotary wing aircraft/helicopters.

MISSION CRITICAL NEED – To reduce logistics support required for current equipment used to effect helicopter towing and maneuvering and to reduce GHG to zero emissions when carrying out operational tasks.

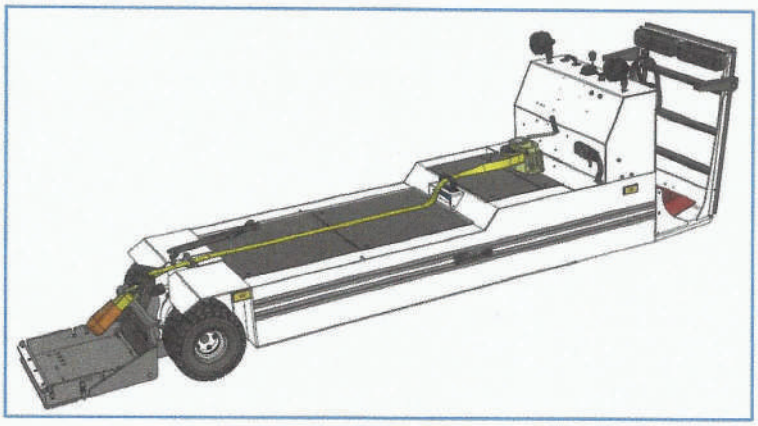
DEPLOYMENTJUSTIFICATION - New equipment utilizing modern electric power train technology will dramatically improve aircraft ground maneuverability utilizing towbarless technology within confined areas and significantly support ACS policy.

FUNDING JUSTIFICATION – Dramatically reduced fuel consumption within ARNG at base and group level, lower maintenance costs of new equipment will lead to significant annual operating cost savings.

ARMY FUNDING TO DATE – None

New Electric Towbarless Tow Tractor White Paper

Introduction: IAW Army Climate Strategy (ACS) Green House Gas (GHG) reduction innovation requirements, the new electric towbarless tow tractor is capable of safely towing and maneuvering helicopters, small aircraft, and unmanned aircraft systems in confined area such as helicopter maintenance hangars and/or hardened aircraft structures. The electric towbarless tow tractor is capable of towing over extended distances and with an integrated on-board charging system that can be easily charged at any standard power outlet, providing the ideal balance between in-hangar maneuverability and operator comfort for extended towing with Zero-Emissions.



Background: Currently, helicopter and aircraft positioning is accomplished using a full-sized, diesel-powered tractor or diesel-powered utility support vehicle. The full-size tractor uses a long, rigid towbar, that greatly increases effective turn radius and vastly limits the utilization of hangar and equipment space when sheltering helicopters and aircraft. The number of people and procedural time required to position the helicopter, connect the towbar to the aircraft, position and connect the tow tractor to the tow bar/helicopter is extensive. Such intensive and time-consuming support during helicopter maneuvering reduces manpower effectiveness. Maintaining and fueling such large vehicles and towbars is becoming increasingly cost prohibitive in providing timely and agile support of helicopters while attempting to maximize hangar space utilization. Current equipment limitations do not allow for maximum hangar utilization when sheltering aircraft during severe weather events.

Solution: The new electric towbarless tow tractor ensures one-man operation to connect to a helicopter, reducing manpower support required, provides minimal turn radius, and improved safety and operational maneuverability in confined areas. The electric tractor can quickly and safely connect a helicopter/aircraft, reducing the risk of aircraft damage, reduced logistics support, reduced fuel consumption, which leads to significantly reduced annual operating costs. With the towbar elimination, helicopter/aircraft positioning can effortlessly be accomplished to maximize hangar and/or hard shelter space utilization. With tight turn radius capability and size of the electric towbarless tow tractor reduced, the tractor can easily be maneuvered and 'stowed away' into very tight spaces within the hangar and charged overnight to standard wall outlets for next use.

Various models of the electric towbarless tow tractor are designed and manufactured that can accommodate a variety of towing weights (MTOW). A unit can be tailor-selected to operate specific helicopter/aircraft/unmanned aircraft mix at specified locations. The all-electric models also have on-board charging systems.

Advantages: The new electric towbarless tow tractor offers many advantages over current tow tractors/towbar equipment. The primary advantages:

- Fuel Savings – The towbarless tow tractor is all-electric and can be charged easily with common power
- All Electric Drive – No emissions and quiet operation
- Reduced Noise – Significantly quieter operation than diesel-driven equipment
- Reduced Footprint – smaller operational and storage footprint than a large tow tractor/towbar combination

- Reduced Turn Radius – Single pivot point turning allows for maximizing hangar/structure space of helicopters, small aircraft, and unmanned aircraft systems
- Easy, soft capture system – Strap winch System with no hard mechanical clasping of nose/wheel gear
- Aircraft Weight Sensing System – braking & acceleration moderated ensuring reduced stress on nose/wheel gear
- Torque Sensing Cradle – Warns operator to prevent over torquing or rotating nose gear
- Automatic winch cut-off switch plate – secures aircraft without overloading winch system
- Reduced Equipment Inventory – Avoids issues with locating or handling towbars
- Shear pin failure risks eliminated

Summary: When considering the impact to manpower effectiveness, zero-emission goals, sheer size of equipment and towbars and escalating maintenance costs to support helicopter mobility; the modernized all-electric towbarless tow tractor will greatly improve fuel savings, maximize hangar space utilization and overall maintenance costs. The new electric towbarless will satisfy ACS and GHG requirements from the Army to achieve reduced emissions.

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Date (MM/DD/YY):	3/27/25	Submitter First Name	John
State	Arizona	Submitter Last Name	Vitt
Input Number	2	Submitter Email	vittjc@aol.com
*Input Number is the sequential number of drafts submitted by your state		Submitter Phone	602-769-4999
Type of Draft Resolution	Change Item	Category	ARNG
Relating To	Modernization of the Army National Guard Sustainment - Tactical Trailers		
Examples: Retirement Pay, Combat Vehicles, C-130 Modernization, etc.			

Standing Resolution to be Amended
For new resolution or item, select "New"

Resolution Number: 5

Item Number: C

Proposal Statement: In one sentence, please describe the specific item, program or legislation being proposed.
ONE RECOMMENDATION PER FORM-SPELL OUT ALL ACRONYMS-USE ONLY THE SPACE PROVIDED

Change Item: M872 series tactical semi-trailer and M172 series 25 ton tactical low-boy fielding and modernization initiatives

Recommendation Information: Use this box to further explain the changes being proposed above. This can identify policy, modernization program, equipment, status, states or personnel impacted.
SPELL OUT ALL ACRONYMS-USE ONLY THE SPACE PROVIDED-THE SAME JUSTIFICATION MAY BE USED FOR MULTIPLE DRAFT RESOLUTIONS, IF APPLICABLE

Current modernization and fielding plans for the Army Tactical Trailer Fleets are increasingly behind. Many Line-Haul and Engineer Transportation Battalions are using antiquated equipment to transport cargo and equipment that has led to increased maintenance needs and equipment down time to the detriment of mission success.

Emphasis needs to be placed on fielding plans and modernization of the M872 series tactical semi-trailer fleet and the M172 series 25 ton low-boy fleet for safe, reliable, and complete mission success for the Army National Guard Transportation and Engineer units.

White Paper: M872 & M172 Trailer Shortages – A Critical Logistical Challenge – April 23, 2025

Bottom Line Up Front (BLUF): The US Military faces significant shortages of both the M872 Flatbed and M172 Cargo trailers, impacting unit readiness and logistical capabilities. The M872 shortage (25-30% FMC rate, ~1500-1800 trailers unavailable) is more acute due to a limited manufacturing base. Both shortages stem from manufacturing constraints, supply chain disruptions, increased operational tempo, and maintenance backlogs. Addressing these requires a multi-faceted approach including increased production incentives, supply chain diversification, enhanced maintenance programs, and strategic component stockpiling. Failure to address these shortages will significantly hinder future military operations and increase logistical costs.

1. Introduction: Critical Trailer Assets

The M172 (10-ton cargo) and M872 (60-ton flatbed) trailers are essential components of US Military logistics. The M172 provides general cargo transport, while the M872 handles oversized/out-of-gauge equipment. Both are vital for deployment, sustainment, and training.

2. Current Shortage Status (April 2025)

Trailer Type	FMC Rate	Shortage Estimate	Backlog (Awaiting Repair)
M172 Cargo	68-72%	8,000-10,000 trailers	12,000+
M872 Flatbed	65-70%	1,500-1,800 trailers	800+ (longer repair times)

- **Geographic Disparities:** National Guard units and those in high-training areas experience the most significant shortages.
- **Repair Times:** M872 repairs take significantly longer due to specialized skills required.

3. Root Causes – Shared & Distinct Challenges

Both trailers share common contributing factors:

- **Supply Chain Disruptions:** Global events, component shortages (axles, tires, electronics), and transportation bottlenecks impact both.

- **Increased Operational Tempo:** Exercises, deployments, disaster relief, and support to Ukraine increase demand.
- **Deferred Maintenance:** Budget constraints have led to maintenance backlogs.

Distinct Challenges:

- **M172:** Primarily driven by manufacturing constraints at Peerless Limited (labor, raw materials, capacity).
- **M872:** Critically impacted by a *single-source* manufacturer (Talbert Manufacturing) and reliance on highly specialized components. Maintenance is also more complex, requiring specialized welding and hydraulic expertise.

4. Impacts of the Shortages

- **Reduced Unit Readiness:** Hindered training and deployment capabilities.
- **Increased Costs:** Reliance on expensive commercial transport.
- **Logistical Bottlenecks:** Delays in delivering critical supplies and equipment.
- **Project Delays:**(Especially M872) Impacts construction and infrastructure projects.
- **Compromised Rapid Response:** Reduced ability to quickly deploy and sustain forces in a crisis.

5. Mitigation Strategies – A Combined Approach

Strategy	**M172**	**M872**
Increase Production	Incentivize Peerless, explore alternative manufacturers.	Incentivize Talbert, aggressively pursue second-source qualification.
Strengthen Supply Chain	Diversify sourcing, long-term contracts, strategic stockpiling.	Prioritize strategic stockpiling of axles, tires, and steel alloys.
Improve Maintenance	Increase funding, streamline processes, mobile teams.	Specialized training for welders & hydraulic techs, predictive maintenance.
Fleet Modernization	Accelerated replacement program.	Explore modular designs for simplified maintenance.

6. Conclusion

The M172 and M872 trailer shortages represent a significant threat to US Military logistical capabilities. A coordinated, sustained effort to address manufacturing constraints, strengthen the supply chain, and improve maintenance practices is crucial. Prioritizing these issues is essential to ensure military readiness and operational effectiveness. The M872, due to its single-source dependency, requires particularly urgent attention.

Disclaimer: This white paper is based on publicly available information and estimates as of April 23, 2025. The situation is subject to change, and actual conditions may vary.

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Date (MM/DD/YY): 1/23/25

Submitter First Name: John

State: Arizona

Submitter Last Name: Vitt, CW5 (R)

Input Number: 3

*Input Number is the sequential number of drafts submitted by your state

Submitter Email: vittjc@aol.com

Submitter Phone: 602-769-4999

Type of Draft Resolution: Change Item

Category: ARNG

Relating To: Army Sustainment - Blast Tolerant Fuel Containment Systems

Examples: Retirement Pay, Combat Vehicles, C-130 Modernization, etc.

Standing Resolution to be Amended
For new resolution or item, select "New"

Resolution Number: 5

Item Number: H

Proposal Statement: In one sentence, please describe the specific item, program or legislation being proposed.
ONE RECOMMENDATION PER FORM-SPELL OUT ALL ACRONYMS-USE ONLY THE SPACE PROVIDED

Change Item: Blast Tolerant, self-sealing fuel containment fuel systems on all ground combat and tactical vehicles. (2025)

Recommendation Information: Use this box to further explain the changes being proposed above. This can identify policy, modernization program, equipment, status, states or personnel impacted.
SPELL OUT ALL ACRONYMS-USE ONLY THE SPACE PROVIDED-THE SAME JUSTIFICATION MAY BE USED FOR MULTIPLE DRAFT RESOLUTIONS, IF APPLICABLE

Continue expanding the fielding of fuel containment solutions on ground vehicles that has been steadily increasing over the last fifteen years. Notable fielded products include the Bradley Fighting Vehicle, Mine-Resistant Ambush Protected All-Terrain Vehicle (M-ATV), Joint Light Tactical Vehicle (JLTV) and the Payload Transport Replacement Vehicle (PTR). Application of this technology to ground platforms will continue to enhance crew and vehicle survivability.

WHITE PAPER EXPLANATION TO CHANGE RESOLUTION - ARNG #5H

For

BLAST TOLERANT, SELF-SEALING FUEL CONTAINMENT FUEL SYSTEMS ON ALL GROUND COMBAT AND TACTICAL VEHICLES.

Fuel containment in ground vehicles prevents the leakage of fuel during a blast, fragmentation or ballistic event. By containing the fuel within a controlled environment, it prevents the atomization of fuel with oxygen and the potential for fire given an ignition source. Fuel-fed fires can lead to serious casualties and fatalities, along with destruction of equipment in otherwise survivable events.

Usage of fuel containment solutions on ground vehicles has continued to increase over the last fifteen years with notable fielded applications including the Bradley Fighting Vehicle, M-ATV, JLTV and more recently, the Payload Transport Replacement Vehicle. Systems are tailored to vehicle and mission objectives and allow for the following advantages:

- Self-sealing against ballistic threats up to and including 14.5mm (.57 inches/caliber)
- Multi-hit capability for ballistic and fragmentation events
- Blast tolerant against IED and anti-tank mines
- Completely passive systems
- Minimal training and logistics tail impact
- Proven durability with military operational environments

Application of this technology to ground platforms will continue to enhance crew and vehicle survivability.

Recommendation:
The National Guard Association of the United States supports:

Funding to procure and install fuel containment fuel systems on armored reconnaissance vehicles and other ground platforms to enhance ground combat power through improved survivability and egress time for crews.

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Date (MM/DD/YY): 4/1/25

Submitter First Name: John

State: Arizona

Submitter Last Name: Vitt, CW5 (R)

Input Number: 4

*Input Number is the sequential number of drafts submitted by your state

Submitter Email: vittjc@aol.com

Submitter Phone: 602-769-4999

Type of Draft Resolution: Change Item

Category: ANG

Relating To: Air National Guard Maintenance Core Competencies-Aircraft Power/Air Cycle Cart

Examples: Retirement Pay, Combat Vehicles, C-130 Modernization, etc.

Standing Resolution to be Amended
For new resolution or item, select "New"

Resolution Number: 13

Item Number: L

Proposal Statement: In one sentence, please describe the specific item, program or legislation being proposed.
ONE RECOMMENDATION PER FORM-SPELL OUT ALL ACRONYMS-USE ONLY THE SPACE PROVIDED

Change item: Fully fund new mobile combined aircraft power cart and air cycle machine used for ground maintenance and servicing of legacy (F-15EX, F-16, F-35, fighter, cargo, and tanker) aircraft.

Recommendation Information: Use this box to further explain the changes being proposed above. This can identify policy, modernization program, equipment, status, states or personnel impacted.
SPELL OUT ALL ACRONYMS-USE ONLY THE SPACE PROVIDED-THE SAME JUSTIFICATION MAY BE USED FOR MULTIPLE DRAFT RESOLUTIONS, IF APPLICABLE

CRITICAL NEED FOR SUPPORT- The USAF currently uses the A/M32A-60A Gas Turbine Compressor and A/M32C-10 Air Cycle Machine for ground maintenance and servicing of all legacy fighter aircraft and has been in service for 50 years. This capability requires significant modernization. Escalating Depot level refurbishment costs have skyrocketed in recent years and parts obsolescence concerns continue to impact mission capable status.

STATES IMPACTED – All ANG legacy fighter and cargo aircraft at CONUS and OCONUS sites

MISSION CRITICAL NEED – Equipment mission capable rates will continue to plummet eventually affecting sortie generation capability and warfighting ability. Additionally, combination carts with capability to service multiple aircraft beyond the A/M32A-60A and A/M32C-10 will further improve warfighting ability.

DEPLOYMENTJUSTIFICATION- New equipment utilizing modern technology will dramatically improve fuel savings, reduce mobility footprint and drive down overall maintenance costs and troubleshooting time of technicians.

FUNDING JUSTIFICATION – Dramatically reduced fuel consumption, reduction in deployment airlift requirements and lower maintenance costs of new equipment will lead to significant annual operating cost savings.

USAF FUNDING TO DATE – None

AZ - 04

New Mobile Combination Cart White Paper

Introduction: IAW Air Force Ground Power Unit requirements, The New Mobile Combination Cart is a modern, multifunctional, air transportable, combination ground support cart capable of servicing 4th, 5th, and 6th generation aircraft (fighter, bomber, cargo, and drone).

Background: Legacy equipment requires the use of two different pieces of equipment, A/M32A-60 Gas Turbine Compressor and A/M32C-10 Air Cycle Machine for ground maintenance and servicing of all legacy fighter aircraft. Parts obsolescence and Depot level refurbishment have become cost prohibitive in recent years and growing concerns impacting mission capable status. This antiquated equipment has been in service for over 50 years and requires significant modernization to support existing and next generation fighter, bomber, cargo, and drone aircraft.

Solution: The new mobile combination unit is a multifunctional, air transportable, combination cart in a single mobile package, providing functional capabilities support services including bleed air, high-pressure conditioned air, 400hz, and 270VDC power. In a single mobile package, the combination unit is equipped with a diesel engine and incorporates eDrive technology to enable single-person operation. Additional options include four-corner LED floodlights for enhanced convenience, 120VAC convenience power, CMBRE outlet/ground reel, C-130 air adapter, and jump start receptacle.

The new mobile combination cart is compatible with various airframes that necessitate cooling air, bleed air, 400Hz power, or 270VDC power (28V Optional). The combination unit can be pre-programmed with multiple setpoints tailored for various aircraft and maintenance profiles. This capability supports Agile Combat Engagement (ACE) during deployment and enables the end-user to effortlessly select specific aircraft profiles for the maintenance activities required. It demonstrates a substantial decrease in equipment maintenance and operational costs compared to legacy systems servicing aircraft.

Key dimensions, weight, drivetrain, and performance details:

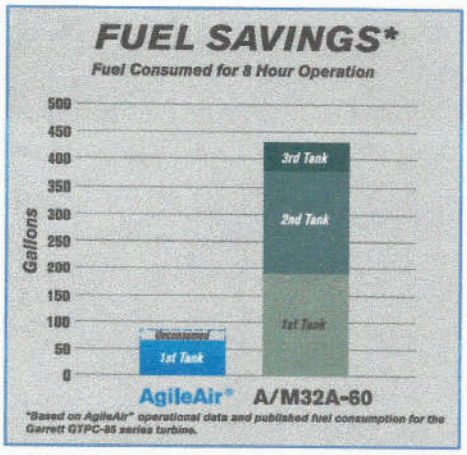
Characteristic	Value
Length	141in / 358cm
Width	72in / 183cm
Height	70in / 178cm
Weight	8,400lbs / 3810kg Dry
Engine	Cummins QSB6.7, Tier 3 Diesel, 260 HP
Fuel	Diesel, JP-5, JP-8, Jet-A

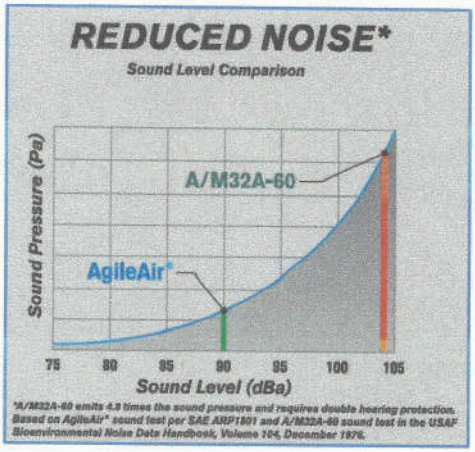
Conditioned Air	
Design Airflow	100PPM | 750 g/s
Discharge Temperature	+40°F to 60°F | 4°C to 16°C
Max Static Pressure	6psig | 41kPa
Outlet	8in | 203mm w/AS38386 Male Connector
Bleed/ECS Air	
Airflow	100 PPM | 750 g/s
Pressure	50psig | 65psia // 345kPag | 448kPaa
Outlet	4in | 102mm

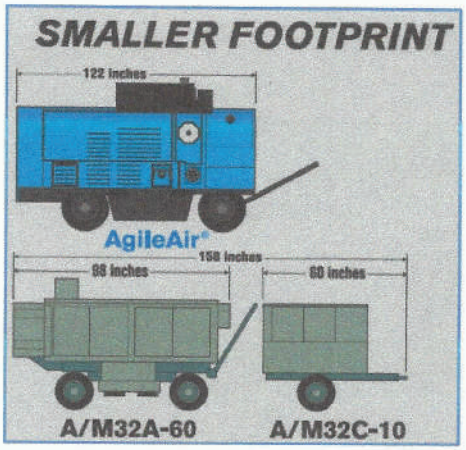
Output Power	
400 Hz	90kVA, 3-phase, 115VAC
270 VDC	72kW
28VDC	@500 Amps (Optional)
Power Standard	Mil Std 704F
Operational Environment	
Ambient	-40°F to 125°F/-40°C to 52°C, 0-
Elevation	0 – 6000 ft

AZ - 04 - A

Advantages: The new mobile combination cart offers many advantages over legacy ground support carts. The primary advantages when compared to the A/M32A-60 and A/M32C-10 carts include:







Key dimensions, weight, drivetrain, and performance details:

- Key Features included with combination unit
  - Digitally controlled, large color HMI screen
  - Electric drive system for single person mobility
  - Rear mounted hose storage bin
  - Corner mounted LED work lights
  - 120VAC convenience power
  - CMBRE outlet/ground reel
  - Jump Start Receptacle
  - Powder coated steel frame, aluminum doors
  - Battery disconnects (for long term storage)
- Standard Accessories included with combination unit
  - 400hz cable w/aircraft connector, 40ft
  - 270VDC cable w/aircraft connector, 40ft
  - 2X 8in diameter air ducts with AS38386 male/female ends, 15ft length
  - 1X 8in to 4 in diameter reducer, 3ft length
  - 1x MS16051F air connector, 4in
  - Bleed air hose IAW MIL-DTL-2253, 40ft
  - C-130 air adapter

Summary: When considering the impact to mission capable rates, Agile Combat Engagement, escalating Depot level maintenance costs, and parts obsolescence costs; modernized equipment utilizing new technologies will greatly improve fuel savings, mobility footprint, and overall maintenance costs. The new mobile combination cart provides numerous key advantages when evaluated against the A/M32A-60 and A/M32C-10 models, including:

- Multiple Aircraft Settings - The system can be pre-programmed with multiple setpoints, tailored for various aircraft and maintenance profiles.
- Fuel Savings - AgileAir can function continuously up to 8 hours on a 60-gallon tank without refueling.
- Fuel Variety - Can use Diesel, JP-5, JP-8, or Jet-A fuel, which is more readily available and less costly.
- Reduced Noise - Significantly quieter operation than APU-driven A/M32A-60, even at full power/load.
- Hearing Protection - Double hearing protection NOT required.
- Reduced Footprint – smaller deployed footprint than combined A/M32A-60 and A/M32C-10 carts.
- Mobility - Very mobile and air transportable, leading to space savings for equipment deployment.
- With innovative air-cycle machine technology, the combination unit does not require any GWP (Global Warming Potential) refrigerant of any kind, therefore supporting DOD "enhancing combat capability mitigating climate risk" policy.

The modernized mobile combination cart is currently operational, providing support for 115 units across six USAF installations and in 16 partner countries.

AZ - 04 - B