



The Dynasys APU has been designed for ease of operation and maintenance. Review of this manual and the pre-trip inspections will reduce any over the road operating issues. A regular maintenance program (enclosed) will help to ensure the Dynasys APU provides long-term and maintenance-free superior performance.

Should there be any questions or concerns, please contact Hodyon Technical Services at: 1-800-289-8282 or refer to www.hodyon.com for a list authorized Dynasys dealers, their locations, and their contact information.

APU Serial Number: _____

*Note your serial number for quick and easy reference.
Please have your serial number ready before contacting
Hodyon, Inc.*



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1.0 Overview

The Dynasys APU system is a totally self-contained, stand-alone AC (6kW) generator, air conditioner and heater system (HVAC). The only supply sources that are shared with the truck systems are the fuel and battery supply. The Dynasys unit also recharges the truck batteries while in operation.

Superior design and performance have been incorporated into this product to provide trouble-free and economical APU system operation. We are confident you will be satisfied with your new Dynasys Auxiliary Power Unit. The following pages contain design features, principles of operation and preventative maintenance procedures. Please review it carefully prior to starting and operating your Dynasys Unit. All safety warnings and advisories found within this owner's manual must be observed.

2.0 Dynasys Safety Systems

Prior to performing any service, maintenance or repairs, the Dynasys must be disconnected from its battery source or the interconnect harness must be disconnected from the back of the unit. In the recommended installation configuration, the Dynasys system shares the battery supply with the truck's main battery bank. After disconnecting the battery cables from the battery or disconnecting the interconnect harness, verify the battery posts inside the engine cabinet to confirm there is no voltage present at the APU.

2.1 Safety Cover Switch

It is critical the safety cover switch on the APU main engine is **never** deactivated or bypassed; failure to comply may result in serious injury.

The safety cover switch is designed to prevent the Dynasys APU from starting when the front engine access panel is loose or has been removed. When the switch is open, the panel has been removed or is loose. When the switch is closed, the front access panel is attached. The switch is located at the front of the engine enclosure near the coolant overflow bottle, in the lower right hand corner of the APU cabinet assembly.

2.2 Auto-Start Automatic Start/Stop Feature

A properly functioning Dynasys is capable of starting independently of its operator. With the Auto-Start feature, battery voltage, temperature of the cabin bunk, APU coolant temperature, and time of day will allow the Dynasys engine to start. Review the cabin controller unit (CCU) operating instructions for further information regarding the Auto-Start feature. Further, this feature must be deactivated prior to refueling of the truck diesel fuel tanks.

2.3 Starting Aids

Do not use aerosol starting aids such as ether. Use of any starting aids can result in an explosion, personal injury, and will render the **warranty null and void** due to internal engine damage.

2.4 Warning Label



Please note, for safety reasons, it is best to disconnect the APU interconnect harness at the back of the unit prior to performing maintenance activities.

2.5 Starting with the Cover Off

Some installation or repair/diagnosis procedures may require the APU to be started with the front access panel removed. Never deactivate or bypass the safety cover switch. If operating the unit with the cover off is absolutely necessary, have another individual assist by manually holding the safety cover switch down in the closed position for the duration of the procedure.

2.6 Caution: Hot Surfaces

Exercise caution when performing repair and maintenance activities as the APU's surfaces can reach extremely high surface temperatures.

2.7 Inspection of the Safety Systems

The safety systems on the Dynasys APU should be examined and/or tested whenever maintenance is performed on the APU to ensure that the systems are in good condition and in proper working order.

2.8 Contact Us

Dynasys Technical services can be contacted toll free at (800) 289-8282.

3.0 Pre-Trip Inspection

Prior to performing the start-up procedure, the following steps must be performed:

- Remove the front access panel
- Verify all belts are in good condition and properly tensioned
- Verify all electrical connections are not loose or corroded
- Verify the unit is free of leaks, no loose or broken parts, or any other damage to components

- Verify all engine fluid levels
- Replace and secure the front access panel

4.0 Dynasys Controller (CCU) Description

Refer to the *Dynasys CCU Touch Screen Owner's Manual* for operation of the touch screen controller.

5.0 Operation of the Heater, Air Conditioner, and Generator

5.1 Heater

The Dynasys heating system is fully automatic. A constant comfort zone is maintained with the CCU temperature settings. The bunk heating system has a capacity of 2.5kW. This is a complete stand alone system that is not integrated into the truck's heating system. When heat mode is selected and the Dynasys is in operation, the electric heating elements are energized (installed under the bunk). The blower motor circulates the internal cab air across the heating element, releasing warm air into the bunk area. This system is designed to maximize the bunk heating efficiency.

5.2 Air Conditioner

The Dynasys air conditioner is also fully automatic. A constant comfort zone is maintained with the CCU temperature settings. The Dynasys air conditioner is a 12,000 BTU Hermetic R134a system that is not integrated into the truck's air conditioning system. When cool mode is selected and the Dynasys is in operation, the compressor is activated (installed under the bunk). The blower motor circulates the internal cab air across the evaporator coil, releasing cool air into the bunk area. This system is designed to maximize the bunk cooling efficiency.



WARNING: Only certified R134a air conditioning technicians should service the Dynasys air conditioning system.

5.3 Generator

The 6kW 120vac heavy-duty generator is located at the rear of the Dynasys unit and is belt-driven. The generator supplies a load center with three (3) breakers. First, there is one (1) block heater receptacle on a 15 amp circuit, which allows the truck's block heater to be plugged into the generator. It is recommended that the block heater be plugged in only during the winter. Keep the heater unplugged during the spring, summer, and fall. Next, there is one 120vac dual outlet receptacle for the driver's convenience; this outlet is on a 15 amp circuit. This receptacle can be installed anywhere in the truck's bunk area to provide power for 120vac devices. Finally, the third breaker is a 25 amp circuit for the Dynasys HVAC unit under the bunk.



WARNING: Only a certified electrician should service the generator and 120vac distribution system.

6.0 Technical Information

For technical specifications (dimensions, weight, fluid capacity and type) of the Dynasys components, see the following sections.

6.1 Dimensions and Weight

Main Unit (Figure 1)

Width:	18"
Height:	27"
Depth:	25"
Weight:	390 lbs.

Bunk Heater/AC Unit (Figure 2)

Width:	11.50"
Height:	11.25"
Depth:	22.25"
Air Flow:	400 CFM



Figure 1



Figure 2

6.2 Fluid Capacities and Type

Engine Oil with/filter: 2.5 US qt. (70oz)

Type: API CJ-4

Viscosity: (See Figure 3)

Cooling System: 50/50 mixture of ethylene glycol & water (72 oz capacity)

Fuel Type: Diesel Fuel Only

Air Conditioning (R134a): 1lb, 14 oz. (min) to 2lb. (max) Integrated Condenser

2lb, 12 oz. External Drier Condenser

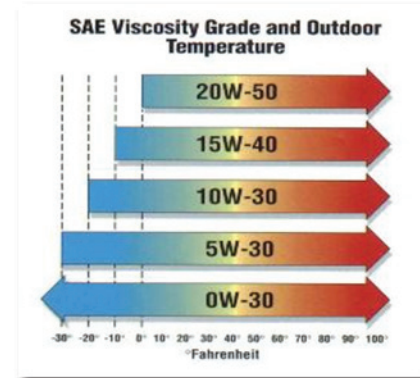


Figure 3

7.0 Maintenance Schedule

Each Trip *	After first 50 Hrs.	At 250 Hr Intervals	At 500 Hr Intervals	At 1,000 Hr Intervals	At 2,000 Hr Intervals	Service Components or Procedures
ENGINE						
•			•			Check engine oil level
•	•		•			Inspect belts, hoses for condition/tension
•	•		•			Check for unusual noise or vibration
			•			Replace air filter element (as needed)
			•			Inspect/clean water separator (as needed)
			•			Change fuel filter (as needed)
				•		Adjust valve clearance
				•		Change engine coolant
				•		Check &/or adjust engine speed (as needed)
ENGINE OIL CHANGE INTERVALS						
	•			•		Oil (CJ-4 oil) and filter
ELECTRICAL						
•			•			Check cover safety switch
			•			Inspect battery terminals
			•			Inspect unit for broken or loose wires
			•			Check for loose connections
MISC						
•	•		•			Visually inspect for fluid leaks
•	•		•			Visually inspect for damaged/loose components
•	•		•			Check mounting bolts and brackets
				•		Check/clean condenser coil and generator air inlet
		•				Check/clean HVAC air inlet filter (as needed)

*A Trip is the period of time before an APU is used

Note: Maintenance schedules listed are for normal road conditions, and the specific hour intervals must also be followed. For severe conditions, perform the scheduled maintenance earlier

8.0 Limited Warranty

The limited warranty applies to the Dynasys Auxiliary Power Unit (APU). This warranty does not extend to items not provided by the manufacturer with the Dynasys APU.

8.1 Warranty Coverage

Hodyon, Inc. warrants that, under normal service and use, the Dynasys APU will be free from defects in material and workmanship until the earlier of twenty-four (24) months from the date of installation or 4,000 hours of use. This warranty is subject to all terms, conditions, limitations, and provisions of this limited warranty and the dealer agreement. This limited warranty is governed by the laws of the State of Texas, and any claims or disputes arising out of this limited warranty shall be governed by the laws of the State of Texas.

The express warranty set forth above is exclusive, and no other warranties of any kind, whether statutory, oral, written, expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose, shall apply. There are no warranties which extend beyond the description on the face hereof. The consumer's exclusive remedies for breach of warranty, and Hodyon, Inc.'s only obligation arising out of or in connection with breach of warranty shall be those stated herein. Hodyon, Inc. expressly disclaims liability for incidental and consequential damages caused by the Dynasys APU sold.

8.2 Warranty Obligation

Hodyon, Inc. will repair or replace, at its option, the Dynasys APU components that are covered under the terms of this warranty. Repair or replacement will be completed at an authorized dealer or company-owned facility, at no charge to the owner of the Dynasys APU, within a reasonable time after presentation of proof of purchase and determination by

Hodyon, Inc. or its authorized dealer that a component is defective or has failed under normal service and use within the 24-month/4000-hour warranty period. Please note that replacement parts could be new or remanufactured.

8.3 Maintenance in Relation to Warranty

The Dynasys APU owner's manual lists all maintenance functions required to validate and continue this limited warranty. Please note that components that failed due to poor or improper maintenance will not be covered by this limited warranty and could cause the entire APU warranty to be void. Where a dispute arises regarding proper maintenance, the manufacturer reserves the right to request proof in the form of receipts for maintenance, and any other records of service, to establish that proper maintenance has been performed, as per the maintenance manual and/or dealer communications from the manufacturer.

8.4 Installation in Relation to Warranty

It is the responsibility of the installer and the owner to ensure that all Dynasys APU components are in proper working order at the time of installation. The manufacturer is not responsible for components that fail as a result of improper installation. In order to validate your Dynasys APU warranty, the unit installation must be 1) performed by an authorized Dynasys dealer or 2) verified by an approved Dynasys dealer. A Dynasys Installation Checklist and Warranty Registration Form must be completed and registered at Hodyon, Inc. to certify the installation.

8.5 Modifications in Relation to Warranty

Any modification to the Dynasys APU without a written authorization from the manufacturer will void this limited warranty. Repair, replacement, or maintenance, using other than approved parts, will be cause to terminate this limited warranty, as will use of starting aids such as ether.

8.6 Exclusions to Warranty

This warranty does not cover the cost of normal maintenance, such as (but not limited to):

- Tune-ups, adjustments, or inspections
- The tightening of clamps, fasteners, or hoses
- The replacement of belts or fuel, air, and oil filters

8.7 Limitations of Remedies

The remedy of repair or replacement as set forth herein is the sole exclusive remedy available to the purchaser or user of the Dynasys APU. Hodyon, Inc. disclaims and shall not be liable or responsible to the owner or user of the Dynasys APU or any other person for incidental, consequential, direct, indirect, special or general damages of any kind arising out of or in any way related to the use of the Dynasys APU, including but not limited to towing charges, accident repairs, road calls, traveling expenses, loss of revenue profits, loss of truck use, or damage to persons or property. No claim of any kind asserted against Dynasys APU, whether asserted under legal theories of negligence, strict liability, warranty, or any other common law or statutory basis, shall be greater in amount than the purchase price of the Dynasys APU, with respect to which damages are claimed.

8.8 Indemnity

The user and owner of the Dynasys APU agree to indemnify and hold Hodyon, Inc. harmless from any and all claims, expenses, suits or liability of any nature whatsoever asserted against Hodyon, Inc. arising out of or in any way related to negligence on the part of the user or owner of the Dynasys APU.

8.9 Warranty Claims

Failed or defective parts must be inspected and their replacement installed by an authorized Dynasys APU dealer. The manufacturer reserves the right to inspect failed or defective parts prior to a decision on any claim under this limited warranty. It is the owner's responsibility to act promptly in submitting any such claim.

8.10 Transfer of Warranty

Where the truck with the Dynasys APU has been sold by the first owner to a second owner and the Dynasys APU has not been removed, this limited warranty is transferable from the original owner to a second owner with whatever portion of the limited warranty that remains from the date of sale to the first owner. Where the Dynasys APU has been removed from the vehicle in which it was originally installed, and sold by the first owner to a second, re-installation is required to be completed or inspected by an authorized dealer in order to validate the remaining portion of this limited warranty. Where the original owner transfers the Dynasys APU to a new vehicle, the installation must be completed or inspected by an authorized dealer to validate the remaining portion of this limited warranty.

9.0 Warranty Claims

To obtain warrantied repairs, you must request the needed repairs within the warranty period from an authorized Dynasys dealer. A reasonable time must be allowed to perform the warranty repair after taking the unit to a dealer location. Repairs will be performed during normal business hours.

To ensure a timely repair process, the following steps must be followed:

- Contact the nearest (most convenient) Dynasys dealer to schedule a warranty service appointment. Prior to contact, have the following information available:
 - Unit serial number
 - Hour meter reading
 - In-service and purchase dates
 - Nature of problem
- Deliver unit to dealer for service. Upon completion of repairs, review and sign the dealer work order (keeping a copy for personal reference).
- If you are still not satisfied, contact the Hodyon Warranty Administration by phone at (800) 289-8282 or e-mail at warranty@hodyon.com.

10.0 California Proposition 65 Warning

Proposition 65 requires businesses to notify Californians about significant amounts of chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment. By providing this information, Proposition 65 enables Californians to make informed decisions about protecting themselves from exposure to these chemicals.

For more information regarding Proposition 65, reference <http://www.oehha.ca.gov/prop65.html>.

CALIFORNIA

PROPOSITION 65 WARNING

**Diesel engine exhaust and
some of its constituents are known
to the State of California
to cause cancer, birth defects,
and other reproductive harm**

11.0 Dynasys APU Service Record

Owner's Name:

APU Serial Number:

Date of Service:					
Location:					
Performed By:					
Signature:					
Service Type					
APU Hours:	50	500	1,000	1,500	2,000
First oil change					
Inspect & clean water separator					
Replace fuel filter					
Replace air filter element					
Change oil					
Coolant replacement					
Adjust valve clearance					
Other service					
Other service					
Other service					

12.0 Owner's Notes



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