



CUSHMAN

MODEL: REFRESHER® FS2

TYPE: GASOLINE POWERED REFRESHMENT VEHICLE

MODEL YEAR: 2016

Option Part No: 634187 & Base Refresher 633911



PRODUCT SPECIFICATION

CONFIGURATION HIGHLIGHTS

Refresher Unit Overview: Refresher unit designed for inventory of unopened, pre-packaged, non-perishable foods for distribution through daily use. This Refresher unit is not meant for long term food storage or storage of opened food and beverage items. Adherence to local food handling regulations.

Each Refresher Unit Consist Of: Windshield with Frame; Struts and Slate Canopy; 2 Insulated Sliding Drawers with Locks; 2 lower storage cabinets with 3 shelves and 3 snack trays; Slide out Trash/recycle storage bin system, 2 plastic removable bins; Lower Rear Corner Storage Sections - both sides of endcap; Locking System for Holding & Changing Modules; Polar White Counter top; Left & Right Side Mirrors.

Modules: 6" Snack module with one dual-sided pullout polycarbon pegboard, hooks (6), baskets (2) and chip strips (2); 6" cup holder module with 5 internal racks; 12" module with adjustable shelves.

Upper Rear Endcap: Reversible insert for airpots and bottles; 3.0 liter airpots (2); shelves for napkins and bottles on back panel (3); shelves on inside of doors (6);

Engine: 13.5 hp (10.1 kW) Exceeds SAE J1940 Standard, 4 cycle, 24.5 ci (401 cc) single cylinder, air-cooled by Kawasaki

- **Valve Train:** Overhead valve
- **Fuel System:** Fixed float bowl with remote pulse fuel pump
- **Lubrication:** Pressurized oil system, spin-on oil filter
- **Ignition:** Electronic spark/magneto
- **Balancer:** Internal counter rotating balance shaft
- **Air Cleaner:** Replaceable dry cartridge

Electrical: Starter/Generator, solid-state regulator, 12 Volt maintenance free battery (425 CCA, 60 minute reserve)

Drive Train: Automatic, continuously variable transmission (CVT)

Brakes: Dual rear wheel mechanical self-adjusting drum brakes. Single point park brake release with self-compensating system

Transaxle: Differential with helical gears, ground speed governor, forward/reverse

Canopy: Slate Canopy

Beverage Unit: 5000 Series Aluminum, Super Durable TGIC Polyester Powder Coating

Beverage Unit Storage Capacity:

- **Drawers:** Two Drawers, total capacity 5.6 cu ft (.15 m3)
- **Trash Bin Volume:** 3.4 cu ft (0.96 m3)
- **Merchandising Capacity:** 14.4 cu ft (.40 m3)
- **Work Space:** 10 ft2 (.92 m2)

PRODUCT OVERVIEW

Dimensions

Overall Length	112.0 in (284.5cm)
Overall Width	50.5 in (128.3 cm)
Overall Height (No Canopy)	48.5 in (123.2 cm) (Top of steering wheel)
Overall Height (With Canopy)	76.5 in (194.3 cm)
Wheel Base	77.0 in (196 cm)
Front Wheel Track	37.0 in (94 cm)
Rear Wheel Track	38.0 in (97 cm)
Gnd Clearance @ Differential	3.5 in (9 cm)

Vehicle Power

Power Source	4 Cycle 24.5 cu in (401 cc)
Valve Train	Single Cylinder OHV
Horsepower (kW)	13.5 hp (10.1 kW) Exceeds SAE J1940 Std.
Electrical System	Starter/Generator. Solid State Regulator
Batteries (Qty, Type)	One, 12 Volt Maintenance Free
Key or Pedal Start	Pedal
Air Cleaner	Industrial Rated Dry Filter
Lubrication	Pressurized Oil System
Oil Filter	Spin-On
Cooling System	Air Cooled
Max Fuel Volume	6.0 Gallon (22.7 L) tank
Drive Train	Continuously variable transmission (CVT)
Transaxle	Differential with helical gears
Gear Selection	Forward - Reverse
Rear Axle Ratio	16.53:1 (Forward) 16.81:1 (Reverse)

Performance

Seating Capacity	2 Persons
Dry Weight	1190 lb (540 kg)
Curb Weight	1230 lb (558 kg)
Vehicle load capacity	775 lb (352 kg)
Outside Clearance Circle	22.0 ft (6.7 m)
Intersecting Aisle Clearance	N/A
Speed (Level Ground)	Fwd - 11.0 mph \pm 0.5 mph (17.7 kph \pm 0.8 kph) Rev - 10 mph \pm 0.5 mph (16 kph \pm 0.8 kph)
Towing Capacity	N/A

Steering & Suspension

Steering	Self-compensating rack and pinion
Front Suspension	Leaf springs with hydraulic shock absorbers
Rear Suspension	Leaf springs with hydraulic shock absorbers
Service Brake	Rear wheel mechanical self-adjusting drum
Parking Brake	Self-compensating, single point engagement
Front Tires	Links 18 x 8.50 - 8 (4 Ply Rated)
Rear Tires	Load Star 18 x 8.50 - 8 (6 Ply Rated)

Body & Chassis

Frame	Welded steel with DuraShield™ powder coat
Front Body & Finish	Injection Molded TPO, painted
Rear Body & Finish	Steel. Base coat/clear coat
Standard Color	Forest Green

Noise & Vibration

Noise	Sound pressure; continued A-weighted equal to or less than 76 db(A).
Vibration, WBV	Highest RMS value of weighted acceleration is less than 2.5 m/s ² .
Vibration, HAV	Highest RMS value of weighted acceleration is less than 2.5 m/s ² .
	The uncertainty of measurement is 1.08 m/s ²

Measurement methods were applied per the ISO 2631 and ISO 5349 standards under conditions of typical vehicle surfaces.

Some items shown may be optional equipment

**CUSHMAN****Refresher Unit Dimensions**

Refresher Unit Length	53.12 in (134.0 cm)
Refresher Unit Width	50.5 in (128.3 cm)
Refresher Unit Height	54.08 in (137.4 cm)
Refresher Unit Weight: All Parts	515 lb (233 kg)
Standard Color	Pebble Platinum
Canopy	Slate Canopy
Standard Module Configuration	24" (61cm) Total Capacity:
	- 6" (15.2 cm) Snack Pull Out
	- 12" (30.5 cm) Module with Adjustable Shelves
	- 6" (15.2 cm) Cup Holder Module with 5 Racks

Refresher Unit Dimensions Cont.

Maximum Merchandising Capacity	14.4 cu ft (.40 m3)
Hot/Cold Storage Drawer Vol. (Total)	5.6 cu ft (0.15 m3)
Cold Storage Drainage	Single Drain Per Drawer
Cold Storage Capacity	12 oz cans: 196 or 20 oz bottles: 130
Trash Bin Volume	3.4 cu ft (0.96 m3)
U Shaped Work Space	10 ft2 (.92 m2)
Beverage Unit	5000 Series Aluminum
	- TGIC Polyester Powder Coating
	- Visible Product Doors w/Locks

OPTIONS & FIELD INSTALLED ACCESSORIES (Installation not included)*

Item	Std	Opt	Fld
Refresher Unit			
Base Unit, for FS2 - Pebble Platinum	X		
Base Unit, for FS2 - Desert Stone		X	
Refresher Countertop - Polar White	X		
Refresher Countertop - Mercury Gray, Sand Shade		X	
Canopy - Slate (standard for Pebble Platinum unit)	X		
Canopy - Walnut Tweed (standard for Desert Stone unit)		X	
Canopy - Additional Color Options		X	
End Cap with Trash & Recycle	X		
Windshield	X		
Side Mirrors	X		

Refresher Accessories

6" Snack Module with Hooks Kit	X		
6" Cup Holder Module - 5 internal Racks	X		
12" Snack Module with Hooks Kit			X
12" Module with 4 Adjustable Shelves	X		
12" Standard Shelves - 2 Pack			X
12" Wedge Shelves - 2 Pack			X
12" Single Airpot Holder - White			X
18" Module with 4 Adjustable Shelves			X
18" Standard Shelves - 2 Pack			X
18" Wedge Shelves - 2 Pack			X
18" Dual Airpot Holder - White			X
Consumable Ice Drawer Insert, SS, 10x10x20			X
3.0 Liter Airpot (2 Standard)	X	X	
Reversible Insert For Airpots/Bottles	X	X	
Napkin & Bottle Holder Shelves - 3 Pack w/Hardware	X	X	
Coffee/Creamer Serving Caddy - 2 Pack	X	X	
Mini Bottle Holder Shelves - 3 Pack w/Hardware	X	X	
Drawer Inserts: Candy & Sandwich Tray - 2 Pack			X
Snack Module Kit (6HKS, 2 Clip Strips, 2 Baskets)			X
Mini Tray Set - 3 Pack			X
Humidor			X

TIRES & WHEELS:**Front:**

Links 18 x 8.50 - 8 (4 Ply Rated)	X		
Turf Saver 18 x 8.50 - 8 (Load Range B)		X	

Rear:

Load Star 18 x 8.50 - 8 (6 Ply Rated)	X		
Turf Saver 20 x 10 - 10 (4 Ply Rated)		X	

Wheel Covers:

Spoke, Silver		X	
Spoke, Gold		X	

Item	Std	Opt	Fld
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COLORS:

Body Color Forest Green	X		
Body Color Ivory		X	
Body Color White		X	
Body Color Yellow		X	
Body Color Orange		X	
Custom Body Color (upon request)		X	

Seating:

Seat Color (Gray)	X		
Seat Color (Tan)		X	
Seat Color (Oyster)		X	
Custom Seat Color (upon request)		X	

Pinstriping

Black		X	
Silver		X	
Pewter		X	

ELECTRICAL:

Headlights	X		
Horn	X		
Low Oil Indicator	X		
Fuel Gauge	X		
Hour Meter		X	
Brake Lights		X	
LED Headlights		X	
Turn Signals with 4-Way Flashers		X	
12 Volt Outlet		X	
Heavy Duty Battery		X	
Unique Group Key Switch		X	
Unique Individual Key Switch		X	

OTHER PERFORMANCE:

Front Bumper & Guard (Black)	X		
Ash Tray		X	
Front Hydraulic Disc Brakes		X	
International Shipping		X	
CE Kit		X	

Rear Axle

High Altitude		X	
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