

► The Allstar Series | Safety. Performance. Durability.

STARCRAFT BUS
a division of Forest River, Inc.



► **Safety** is our primary focus at Starcraft Bus, from the 3,000 lbs. seat-pull test to the rigorous 7-year/200,000 mile Altoona testing, passengers can be assured that the Allstar surpasses the most stringent testing. Bus operators can relax knowing that the fully welded steel cage construction offers the best passenger protection.

Performance is not measured by how fast the bus will go, but rather by passenger comfort. The Allstar features straight side wall construction that maximizes passenger shoulder space and the widest aisle in the industry.

Durability does not come easily or quickly. The Allstar has been time tested for close to a decade. The 33,000-plus Starcraft buses on North America's roads offer a billion reasons why the Allstar has become a favorite, and those reasons are called miles. The Allstar is engineered to accommodate a variety of seating arrangements including wheelchair accessibility and various storage options for luggage.

Starcraft Bus, a division of Forest River, Inc. is owned by Berkshire Hathaway, one of the most respected and secure companies in the industry.



Allstar can also be equipped with optional rear wheelchair accessibility.

► Allstar Features | Features to Meet Your Specific Needs



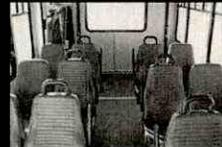
Optional high-back seats, upholstery, padded cloth walls and ceiling, and overhead luggage racks.



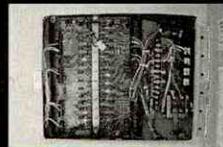
Driver's switch panel conveniently located within view of the road and not on the engine cover.



Optional double wheelchair door with top-mounted gas shocks to hold door open in windy conditions.



Optional mid-back seats, padded vinyl walls and ceiling, and wheelchair accessible.



Printed electrical circuit board with LED trouble-shooting lights.



Stylish fiberglass rear cap with standard rear window.

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► Standard Exterior Feature Highlights

- Fully welded steel cage construction meeting all applicable FMVSS requirements
- "Starview" drivers visibility window in front of entry door
- Electric actuated passenger entry door with full length glass
- 36" wide x 36" high upper double T-Slider tempered safety glass windows with climate control tint
- Black powder coated steel rear bumper
- Rear mud flaps
- Pre-painted white aluminum side skirts
- Fiberglass front and rear caps
- One-piece seamless FRP (fiberglass reinforced plastic) roof
- Breakaway rearview mirrors with built-in convex
- Sealed LED stop, tail, and turn signal lights with incandescent reverse lights
- Exterior graphics package available in three colors (blue, green or burgundy)

► Standard Interior Feature Highlights

- 93" interior width
- 80" interior floor to ceiling height with standard floor (raised floor is 75")
- Floor and wall seat track for flexible seating
- Black slip resistant floor covering
- 5/8" exterior grade plywood flooring
- Ceiling and rear wall fabric for sound abatement
- FRP (fiberglass reinforced plastic) sidewalls for ease of cleaning
- White step nosing
- 1.25" left hand vertical passenger assist rail at entry door
- Printed circuit board with automotive type fuses and LED trouble shooting lights
- Entry door step well lights
- Incandescent driver and passenger area lighting
- Non-retractable seat belts

► Popular Option Highlights

- Stainless steel wheel inserts
- Interior and exterior LED lighting
- Luggage Storage areas (overhead luggage racks with reading lights, interior luggage racks, rear storage area)
- Rear emergency door with window(s)
- Passenger area rear heat and air conditioning
- Complete rubber flooring
- Passenger grab rails
- Padded vinyl or cloth walls and ceiling
- Audio and video systems
- Mid back or high back seating
- ADA and FMVSS compliant wheel chair lifts and securement systems
- Fiberglass side walls and skirts



12 Passenger 2 Wheelchair
4 Passenger Foldaway Seats Plus Driver



16 Passenger 2 Wheelchair
4 Passenger Foldaway Seats Plus Driver



20 Passenger with Interior Luggage Plus Driver



21 Passenger with Rear Luggage Plus Driver



25 Passenger Plus Driver



Due to our commitment to product quality, specifications and options are subject to change without notice in the interest of product improvement and market changes.

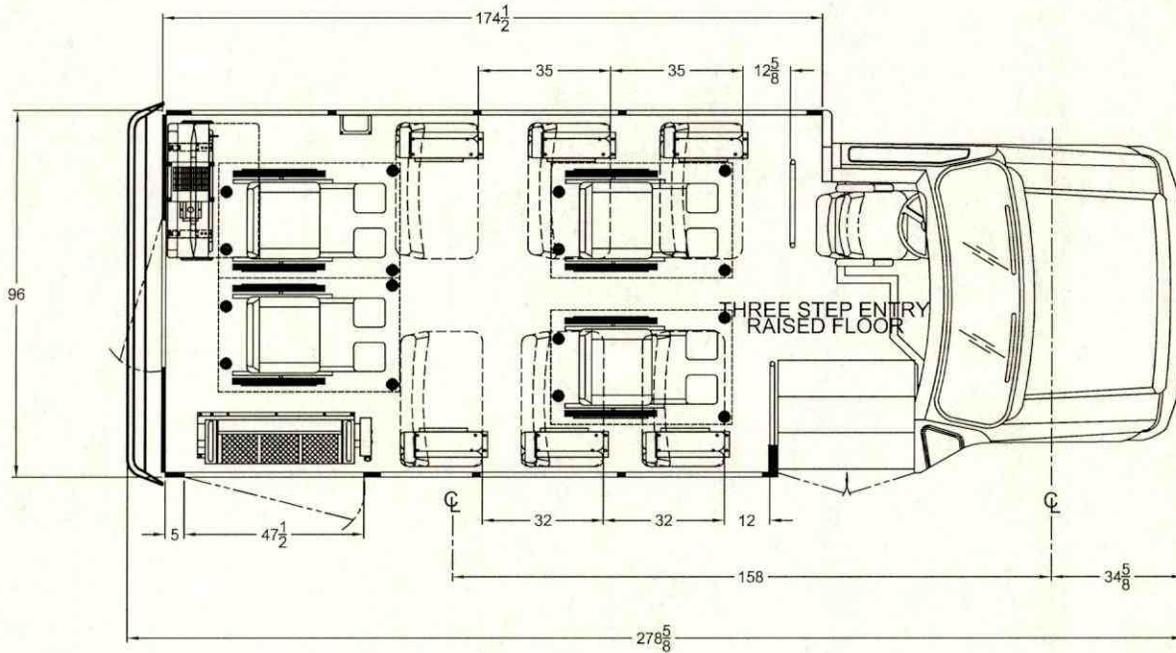
Scan this barcode using a QR Reader on your smart phone to learn more about Forest River.



STARCRAFT BUS
a division of Forest River, Inc.

2367 Century Drive • Goshen, IN 46528 • Lit. No. SCB-09/101513
1.800.348.7440 • Fax: 574.642.3301 • www.starcraftbus.com

► Safety. Performance. Durability.



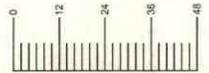
NOTE: SHOWN WITH MID HI FREEDMAN SEATS
 ALLSTAR E-350 12,500 GVWR
 THIS FLOOR PLAN IS FOR ILLUSTRATION PURPOSES ONLY.
 A WEIGHT ANALYSIS HAS NOT YET BEEN PERFORMED.
 FINAL APPROVAL WITH A WEIGHT ANALYSIS IS REQUIRED UPON RECEIPT OF A
 COMPLETED ORDER WITH ALL OPTIONS SHOWN.
 OPTIONAL EQUIPMENT MAY BE SHOWN.
 THE SALES ORDER PLACED DICTATES ACTUAL OPTION CONTENT.

DEALER APPROVAL

APPROVED

CUSTOMER SIGNATURE

SCALE
 IN INCHES

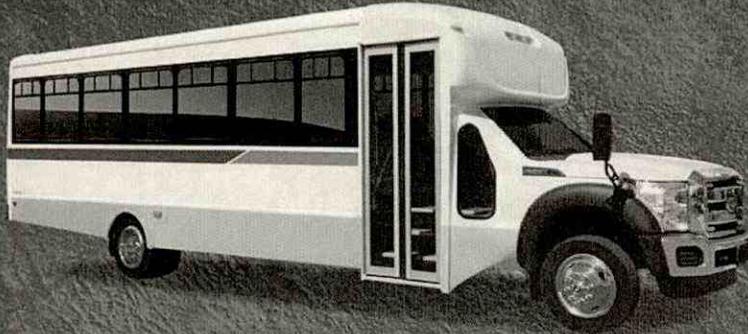
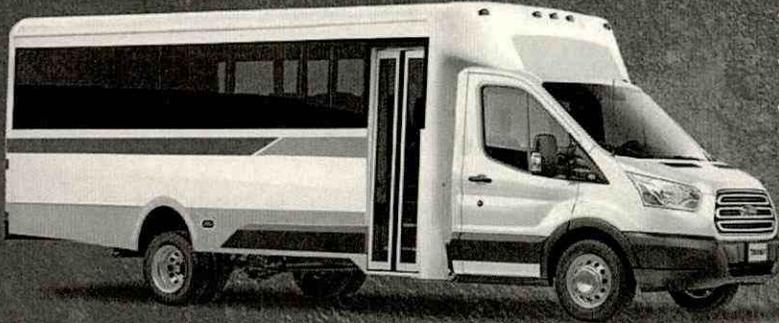


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REV.	LET.	DESCRIPTION OF CHANGE	BY	CHK	DATE	ECN No.

TOLERANCE UNLESS OTHERWISE SPECIFIED		STARCRRAFT BUS a division of Forest River, Inc.	
WOOD	OTHER	DATE: 02/08/15	TITLE: 4 W/C PASS, 158" WB 22 ALLSTAR
± 1/8"	± 1/16"	NAME: JPC	DWG. No. 4 WC 6 DB FOLDS 1 DB FLIP 158 163-2
± 1"	± 1/2"		

2015 FORD CHASSIS FOR SHUTTLE BUS APPLICATIONS



- E-350/450 Super Duty Cutaway Chassis
- F-450/550 Super Duty Chassis Cab
- Transit 350 HD Wagon
- Transit 350 HD Cutaway
- F-650 Chassis Cab

COMMERCIAL
VEHICLES



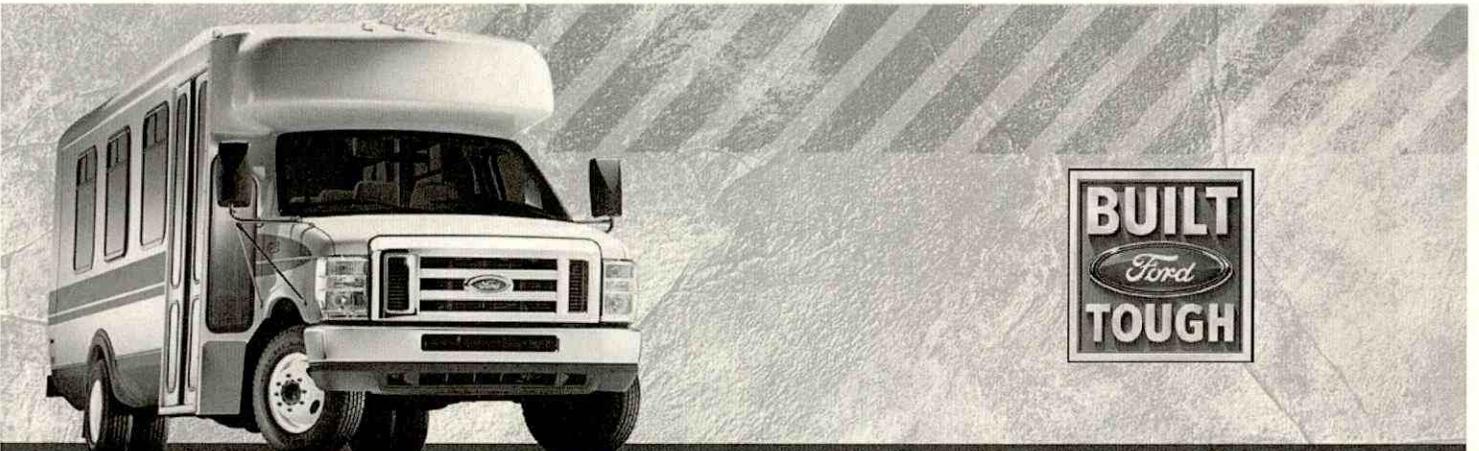
FORD HAS THE RIGHT CHASSIS TO FIT YOUR TRANSPORTATION NEEDS



E-350/E-450 SUPER DUTY CUTAWAY CHASSIS

PEP Code	Body Code	2014 Model			Engine Code	Transmission Code*	SRW/DRW	GVWR Code	GVWR (lbs.)
		Model	WB	Engine					
780A	E3F	E-350	138" WB	5.4L Gas	99L	44T	SRW	20X	10,050
780A	E3F	E-350	138" WB	6.8L Gas	99S	44T	SRW	20X	10,050
780A	E3F	E-350	158" WB	5.4L Gas	99L	44T	SRW	20X	10,050
780A	E3F	E-350	158" WB	6.8L Gas	99S	44T	SRW	20X	10,050
780A	E3F	E-350	138" WB	5.4L Gas	99L	44T	DRW	20Y	11,500
780A	E3F	E-350	138" WB	6.8L Gas	99S	44T	DRW	20Y	11,500
780A	E3F	E-350	158" WB	5.4L Gas	99L	44T	DRW	20Y	11,500
780A	E3F	E-350	158" WB	6.8L Gas	99S	44T	DRW	20Y	11,500
780A	E3F	E-350	158" WB	5.4L Gas	99L	44T	DRW	20C	12,500
780A	E3F	E-350	158" WB	6.8L Gas	99S	44T	DRW	20C	12,500
780A	E3F	E-350	176" WB	5.4L Gas	99L	44T	DRW	20C	12,500
780A	E3F	E-350	176" WB	6.8L Gas	99S	44T	DRW	20C	12,500
782A	E4F	E-450	158" WB	5.4L Gas	99L	44T	DRW	205	14,000
782A	E4F	E-450	176" WB	5.4L Gas	99L	44T	DRW	205	14,000
782A	E4F	E-450	158" WB	6.8L Gas	99S	44T	DRW	20F	14,500
782A	E4F	E-450	176" WB	6.8L Gas	99S	44T	DRW	20F	14,500

* 44T = 5-speed Automatic Overdrive TorqShift® Transmission with Tow/Haul Mode



E-SERIES SUPER DUTY CUTAWAY

Wide Range of Available Gross Vehicle Weight Ratings (GVWR).

2015 E-350/E-450 SUPER DUTY CUTAWAY FOR SHUTTLE BUS BUILDERS

Shuttle Bus Prep Package (47B)

This package, available on E-350 and E-450 Cutaways, is designed for shuttle bus manufacturers and includes the following:

- High Series Exterior Upgrade Package (18A) which includes Front Chrome Bumper, Chrome Grille, Dual Sealed Beam w/fixed lens Headlamps
- Manual Pedestals, seats not included (21W)
- Power Door-locks and Windows Group (903) N/A with RH door delete (60X)
- Frame pucks (isolators - included when spacers not ordered)
- Front Max. GAWR on E-450 with 14,000 lbs. GVWR
- Engine block heater
- Front license plate bracket (153)
- Exterior Mirror Delete (54F)
- Heavy Duty 155-Amp Alternator (63M).

Deletes:

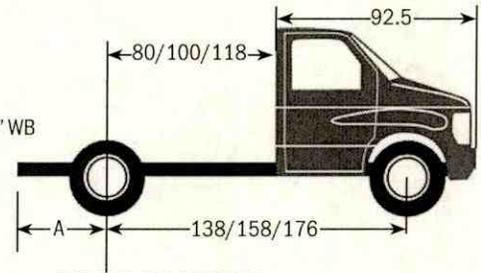
- Front headliner
- Front dome lamp
- Front vinyl floor covering (162)

Note 1 - May add 162 front vinyl floor covering.

Note 2 - May upgrade to optional Extra-Heavy Duty 225-Amp Alternator (63N).

Note 3 - May add optional Power Seat Prep Package (21Z).

Dimension 'A'=
68.5" w/138" or 158" WB
50.5" w/176" WB



E-350/E-450 CUTAWAY



CNG/LPG Fuel Capability - Gaseous Engine Prep Package (91G) required for conversion to CNG or Propane (LPG) operation. See Dealer for details.

ITEM	E-350 SUPER DUTY CUTAWAY CHASSIS w/47B			E-450 SUPER DUTY CUTAWAY CHASSIS w/47B	
	138	158	176	158	176
WHEELBASE (in.)	138	158	176	158	176
MAX. GVW RATINGS (lbs.)	10,050 (SRW) 11,500 (DRW)	10,050 (SRW) 12,500 (DRW)	12,500 (DRW)	14,000 (DRW w/5.4L Gas) 14,500 (DRW w/6.8L Gas)	14,500 (DRW w/6.8L Gas)
MAX. FRONT GAWR (lbs.)	5,000			5,000	
AXLE, FRONT (lbs.)	5,000 Twin-I-Beam IFS			5,000 Twin-I-Beam IFS	
AXLE, REAR (lbs.)	7,800 (SRW); 8,500 (DRW), Dana Full Floating			9,600, Dana Full Floating	
AXLE RATIO	4.10 (Std.); 4.10 LS (Opt.)			4.56 (Std.); 4.56 LS (Opt.)	
BRAKES, SERVICE	Power, Self Adjusting Hydro-Boost Assist (DRW), Vacuum Boost (SRW) Four Wheel Disc with Four Wheel Anti-Lock			Power, Self Adjusting, Hydro-Boost Assist Four Wheel Disc with Four Wheel Anti-Lock	
BRAKE, PARKING	Rear Axle Mounted Drum-In-Hat Type, Foot Operated			Rear Axle Mounted Drum-In-Hat Type, Foot Operated	
ELECTRICAL- ALTERNATOR (GAS ENGINE)	155-Amp Heavy Duty (Std.) 225-Amp (Opt.)			155-Amp Heavy Duty (Std.) 225-Amp (Opt.)	
- BATTERY (GAS ENGINE)	12-Volt, 650-CCA/72-Amp Hr (Std.) Dual 78-Amp Hr HD (Opt.)			12-Volt, 650-CCA/72-Amp Hr (Std.) Dual 78-Amp Hr HD (Opt.)	
ENGINE/HORSEPOWER/TORQUE	5.4L Triton® V8 - Flex Fuel Capable (Std.) 255 HP @ 4,500 RPM/350 lb.-ft. Torque @ 2,500 RPM 6.8L Triton® V10 (Opt.) 305 HP @ 4,250 RPM/420 lb.-ft. Torque @ 3,250 RPM			5.4L Triton® V8 - Flex Fuel Capable (Std.) 255 HP @ 4,500 RPM/350 lb.-ft. Torque @ 2,500 RPM 6.8L Triton™ V10 (Opt.) 305 HP @ 4,250 RPM/420 lb.-ft. Torque @ 3,250 RPM	
FRAME	Single Channel 36,000 PSI 5.73 Cu. In. Section Modulus			Single Channel 36,000 PSI 6.4 Cu. In. Section Modulus	
FUEL TANK	40.0 Gallon (140L) Aft-of-Axle (Std.) 55.0 Gallon (208L) Aft-of-Axle (Opt. w/158" DRW only)			55.0 Gallon (208L) Aft-of-Axle (Std.) 40.0 Gallon (140L) Aft-of-Axle (Opt.)	
SHOCK ABSORBERS	1.38" HD Gas-Type, Front and Rear			1.38" HD Gas-Type, Front and Rear	
SPRINGS, FRONT COIL TYPE (lbs.)	4,200 Max. (SRW) 4,600 Max. (DRW)	5,000 Max.	5,000 Max.	5,000 Max.	
SPRINGS, REAR (lbs.)	7,310 (SRW); 8,500 (DRW) Multi-Leaf/Single Stage			9,600 Multi-Leaf/Single Stage	
STABILIZER BAR, FRONT (in.)	1.0 (SRW); 0.91 (DRW) diameter			0.91 diameter	
STABILIZER BAR, REAR (in.)	1.125 (DRW) diameter			1.125 diameter	
STEERING	HD Power			HD Power	
TIRES	(4) LT245/75R16E (SRW); (6) LT225/75R16E (DRW)			(6) LT225/75R16E (Std.)	
WHEELS, 8-HOLE DISC	(4) 16.0x7, Gray (Std.), White (Opt.) (SRW) (6) 16.0x6, White 4 Hand Hole (DRW) (4) 16.0x7 Forged Aluminum (Opt.) (SRW)			(6) 16.0x6, White 4 Hand Hole	
TRANSMISSION	5-Speed, TorqShift® Automatic Overdrive (Std.) Tow/Haul Mode (Std.) Auxiliary Transmission Oil Cooler (Std.)			5-Speed, TorqShift® Automatic Overdrive (Std.) Tow/Haul Mode (Std.) Auxiliary Transmission Oil Cooler (Std.)	

SRW - Single Rear Wheel

DRW - Dual Rear Wheel

11/17/10

Good / Final
Signed 2011

s/c
Comm. Bus
DLR. Agreement

DEALER AGREEMENT

Starcraft Commercial Buses

This agreement effective the 1st of January, 2011, is entered into between Forest River Inc., an Indiana Corporation, located at 2367 Century Drive, Goshen, Indiana, 46528 (hereinafter known as "FR"), and Palmetto Bus Sales, Inc. hereinafter known as "DEALERSHIP"). This agreement shall remain in effect annually between FR and Dealership unless terminated under section III of this agreement.

Whereas DEALERSHIP is desirous of selling products produced by Starcraft Bus & Mobility, a Division of Forest River, Inc., (hereinafter known as "SBM") and whereas FR Hereby appoints DEALERSHIP as an authorized dealer of said SBM bus products, the following covenants shall govern this Dealer Agreement:

Dealer Operating Requirements Addendum
(DORA)

(Effective January 1 – December 31)
YEAR 2011

Dealership Name: Palmetto Bus Sales, Inc.

Address: 90 Access Road, Gaston, South Carolina 29053

Product Line:

Commercial Xpress

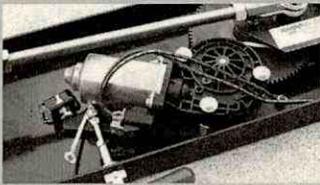
I. Area of Responsibility (AOR):

Dealer's Area of Responsibility (AOR) shall be:

North Carolina
South Carolina

Quality in Design

Looking past the simplicity in design, you'll see a quality product—from powdercoated base plates to plated rods, from zinc plating to tempered glass. Indeed, "reliability" is a descriptor that applies to the entire product. With confidence, we offer a comprehensive one-year warranty. Beyond the warranty period however, you can expect years of trouble-free operation. In the unlikely event that service is ever required, the design also facilitates unparalleled ease of access.



Custom Design

While we do offer specific product families to address the needs of most manufacturers, A&M Systems specializes in designing to your specifications. Pin to pin lengths can vary between 26 and 46 inches. Header width can range from 7 to 11.5 inches. Our ability to manufacture to specification has lead top manufacturers to abandon their own production and design efforts and to choose the A&M Systems product.

In addition, those operating in the after-market have found that our actuators can be used as drop-in, direct replacement for older, less reliable door headers.

About A&M Systems

For years we've specialized in designing and manufacturing problem-free door actuators. In more recent times, we took our expertise to the door leaves as well.

We are a service-oriented company with keen insight into the industry. We offer agile manufacturing, short lead times, and just-in-time production. Our cost-conscious approach pleases the purchasing agent. Ease-of-installation pleases production personnel. Ease-of-operation pleases the end user. And the quality and reliability of our products pleases everyone.

We are committed to quality in design, quality in production, and quality in service.

Contact Information

A&M Systems, Inc.
1845 Fieldhouse
Elkhart, IN 46517
Phone: 574.522.5000
Fax: 574.522.9099

Email: sales@anmsystems.com

www.anmsystems.com



Transit Bus Doors & Actuators

Simple is Better

One look at our product line reveals our design approach: simple is better. We carefully engineer bus doors and actuators (headers) to operate smoothly and reliably while eliminating the problem-prone and complex design elements that plague our competitors' products. The result is a product line which has become the number one choice for manufacturers of small and medium-size buses.

Simplicity in design leads to simplicity in installation and simplicity in operation. It also means that we can offer a superior product at the best possible pricing to you.

Simplicity in design does not mean short-cuts in our production, however. We've put years of engineering effort into perfecting the design of our manual and electric door actuators and door leaves. Operational testing is conducted 24/7. Life-cycle testing has produced in excess of a quarter million trouble-free cycles.

Innovation is not lost in our efforts to maintain simplicity. For example, the variable ratio closing on our manual actuator is a patent-pending design. Consider also the re-engagement of our electric actuator following emergency opening. This scenario resulted in extremely complex approaches in competitive products. Our actuator easily and automatically recycles when the motor is reengaged.

In operation, our products are unsurpassed, achieving perpendicular door openings with either electric and manual models as well as secure closings—even at highway speeds.

Product Line Overview

The A&M product line consists of door leaves (often called "flops") and manual and electric door actuators (often referred to as "headers"). In working together, these products create an attractive, functional, efficient, and robust entry system for small and medium-size buses in the transit industry.

In this system you will find a harmony of movement that speaks to design and manufacturing excellence. Every A&M door system produces completely perpendicular door openings—every time. In the A&M system, the forward door opens first and closes last—always. In the A&M system there is not a reliance on troublesome components (such as spring-loaded push-pull rods)—ever.

You can rely on A&M Systems to provide a distinctive entry system that opens smoothly and closes securely. Likewise, we will provide a business relationship guaranteed to help you succeed.



Manual Actuators Features

- ◆ Low-profile design
- ◆ Powder-coated base plate
- ◆ Plated push rods
- ◆ Permanently lubricated pivot points
- ◆ 1-year warranty

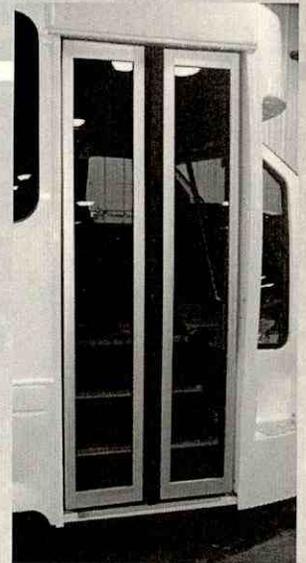
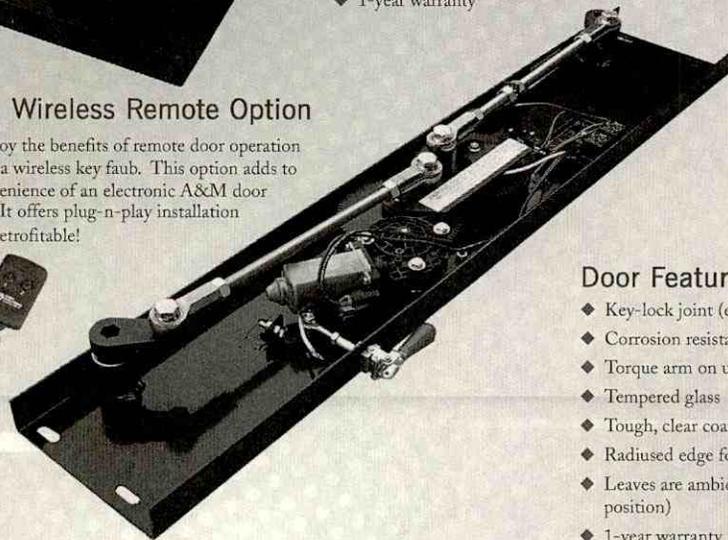


Electric Actuators Features

- ◆ Low-profile design
- ◆ Powder-coated base plate
- ◆ Plated push rods
- ◆ Permanently lubricated pivot points
- ◆ Motor control PC board
- ◆ Proprietary, heavy-duty motor
- ◆ Available wireless remote
- ◆ 1-year warranty

New! Wireless Remote Option

Now enjoy the benefits of remote door operation through a wireless key fob. This option adds to the convenience of an electronic A&M door system. It offers plug-n-play installation and it's retrofitable!



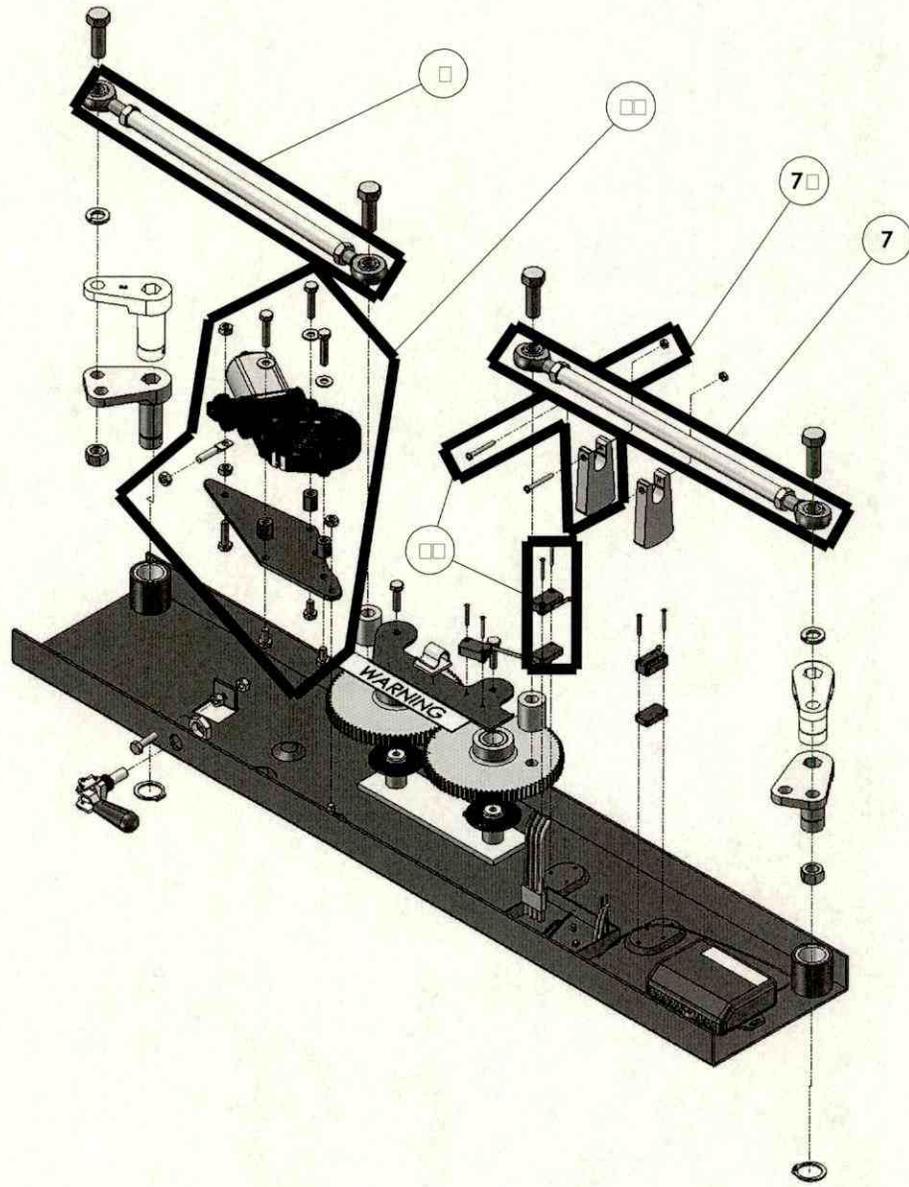
Door Features

- ◆ Key-lock joint (extremely rigid, no-weld design)
- ◆ Corrosion resistance aluminum and stainless steel
- ◆ Torque arm on upper hinge (unique and zinc plated)
- ◆ Tempered glass
- ◆ Tough, clear coat, anodized finish (204 R1 rated)
- ◆ Radius edge for clean mating to seal
- ◆ Leaves are ambidextrous! (Use in either forward or aft position)
- ◆ 1-year warranty

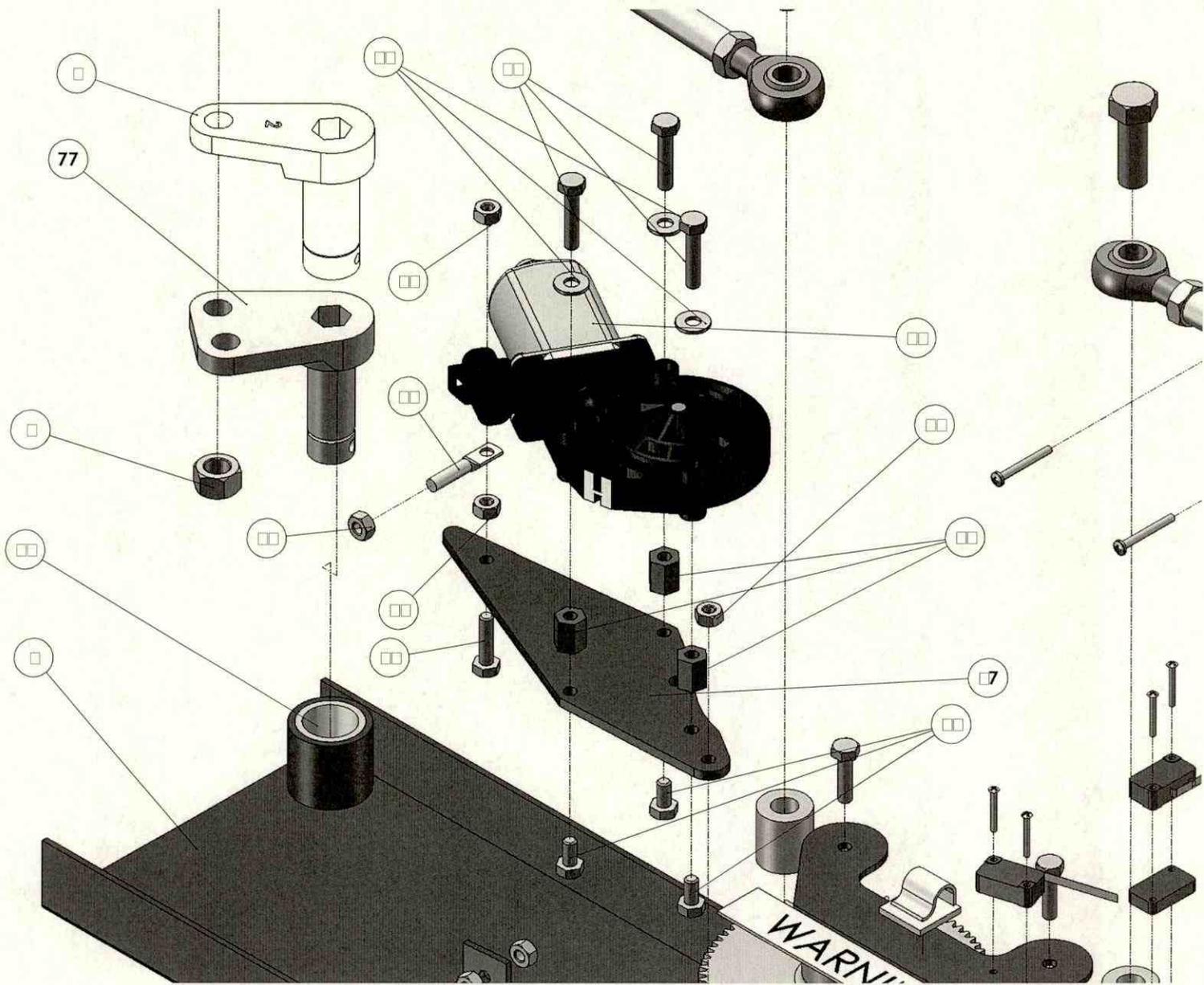
Model: 2129, 2133, 2133.1, 2133.2, 2133.3, 2139, 2145

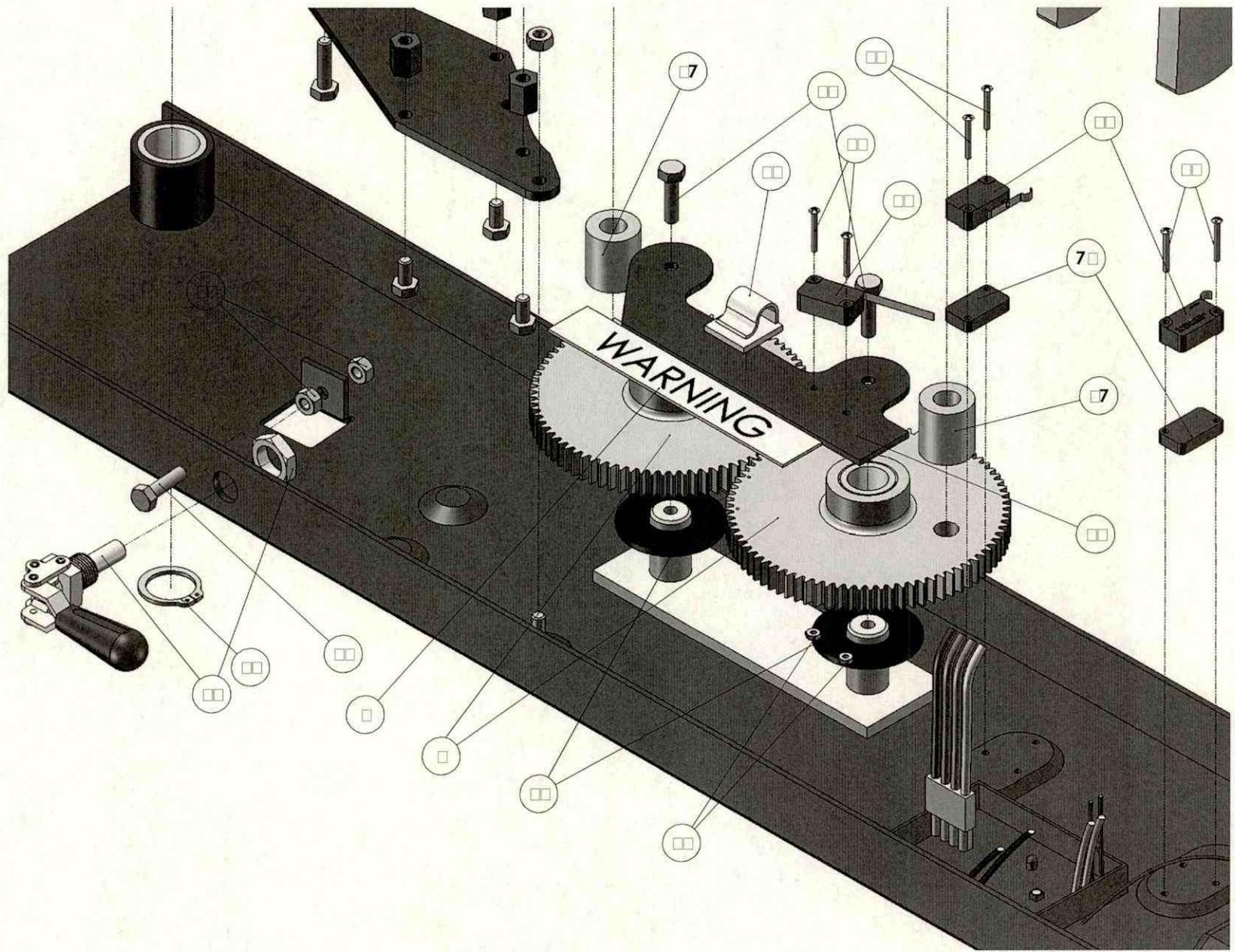
Index No.	Part No.	Description	No Req'd
1	M1614-24	2129 Base plate weldment, with bushings	1
1	M1524-24	2133 Base plate weldment, with bushings	1
1	M1532-24	2133.1 Base plate weldment, with bushings	1
1	M1535-24	2133.2 Base plate weldment, with bushings	1
1	M1550-24	2133.3 Base plate weldment, with bushings	1
1	M1601-24	2139 Base plate weldment, with bushings	1
1	M1533-24	2145 Base plate weldment, with bushings	1
2	P100044	Actuator arm, forward	1
3	P100061	Rod end, female	4
4	P100318	2129 Push-pull rod assembly, forward	1
4	P100321	2133 Push-pull rod assembly, forward	1
4	P100321	2133.1 Push-pull rod assembly, forward	1
4	P100321	2133.2 Push-pull rod assembly, forward	1
4	P100319	2133.3 Push-pull rod assembly, forward	1
4	P100325	2139 Push-pull rod assembly, forward	1
4		2145 Push-pull rod assembly, forward	1
5	P100022	Nut, 1/2-20 zinc plated	2
6	P100071	Gear, with bushing	2
7	P100318	2129 Push-pull rod assembly, aft	1
7	P100321	2133 Push-pull rod assembly, aft	1
7	P100321	2133.1 Push-pull rod assembly, aft	1
7	P100321	2133.2 Push-pull rod assembly, aft	1
7	P100319	2133.3 Push-pull rod assembly, aft	1
7	P100325	2139 Push-pull rod assembly, aft	1
7		2145 Push-pull rod assembly, aft	1
8	P100043	Actuator arm, aft	1
9	P100340	Placard, warning	1
10	P100217	Motor assembly	1
11	P100049	Emergency release lever	1
12	P100198	Bolt, hanger, 1/4 flattened end x 2"	1
13	P100073	PC board, Solid State	1
13	P100074	PC board, Solid State, Auto Re-open	1
14	1493	Gear stabilizer (2129, 2133, 2133.1, 2133.2, 2133.3 only)	1
14	1879	Gear stabilizer, Heavy duty (2139, 2145 only)	1
15	P100058	Switch, limit	As Req'd
18	P100027	Snap ring, (1" shaft)	2
19	P100005	Bolt, 1/2-20 x 1-3/4" zinc plate grade 5	2
20	P100019	Lock washer, spring type, 1/2"	4
23	1655	Fiber washer	2
24	P100086	Motor spacer	3
25	P100001	Bolt, 1/4-20 x 1/2"	5
26	P100004	Bolt, 1/4-20 x 1-3/8"	3
27	1517	Motor mount	1
28	P100003	Bolt, 1/4-20 x 1"	2
29	P100026	Nut, plain, 1/4-20	4
30	P100024	Nut, nylock, 1/4-20	2
34		Screw, 4-40 Round Phillips Head	As Req'd
35	P100006	Bolt, 1/2-20 x 2-1/4"	2

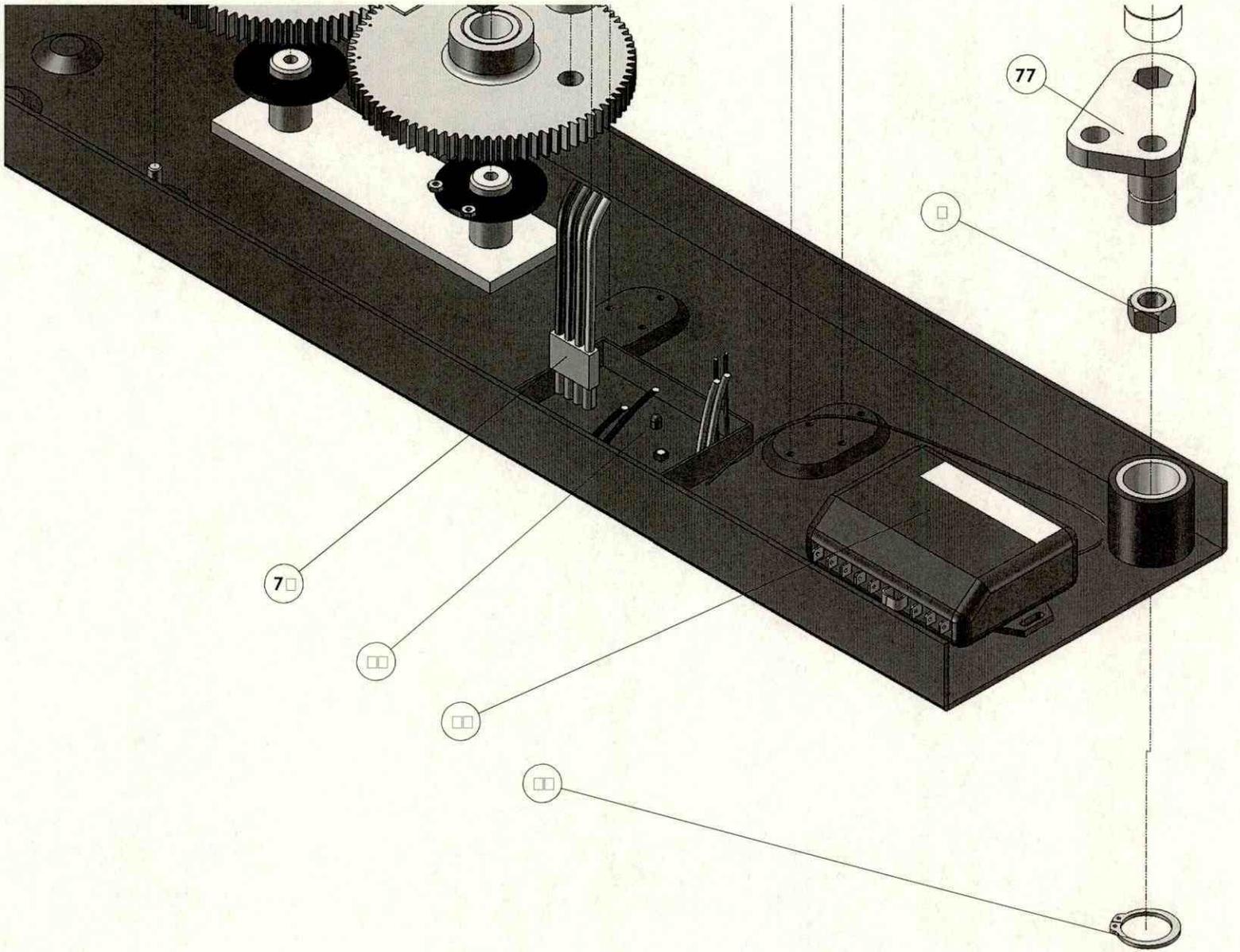
36	P100047	Motor	1
37	1010	Spacer, Rod End	2
38	P100018	Washer, 1/4 SAE Flat Zinc	3
39	P100041	Bushing, bronze	2
40	P100056	Wire Clip	1
41	P100060	Switch, limit, Auto Reverse Only	1
42	P100011	Screw, 4-40 x 5/8" Round Phillips Head	2
43	P100331	Nut, Nylock, 4-40	2
50	1654	Switch tab, ABS	1
51	P100007	Bolt, 1/4-20x1/2 Serrated Head	2
53	P100203	Nut, Nyloc, 6-32	2
54	P100200	Screw, Phillips, Round, 6-32 x 1-1/4"	1
61	P100062	Set Screw, 1/4"-20	2
73	W3131	Pigtail (optional)	1
77	1714	Actuator Arm, 2 in 1	2
78	1560	Switch Spacer	As Req'd
79	K9038	Switch Tab Kit	
80	K9037	Switch Tab and Switch Kit	
81	K9039	3rd Switch Kit	
82A	K9065	Remote - 1 Key FOB (optional)	
	K9068	Duramold PC Board and Motor Replacement	

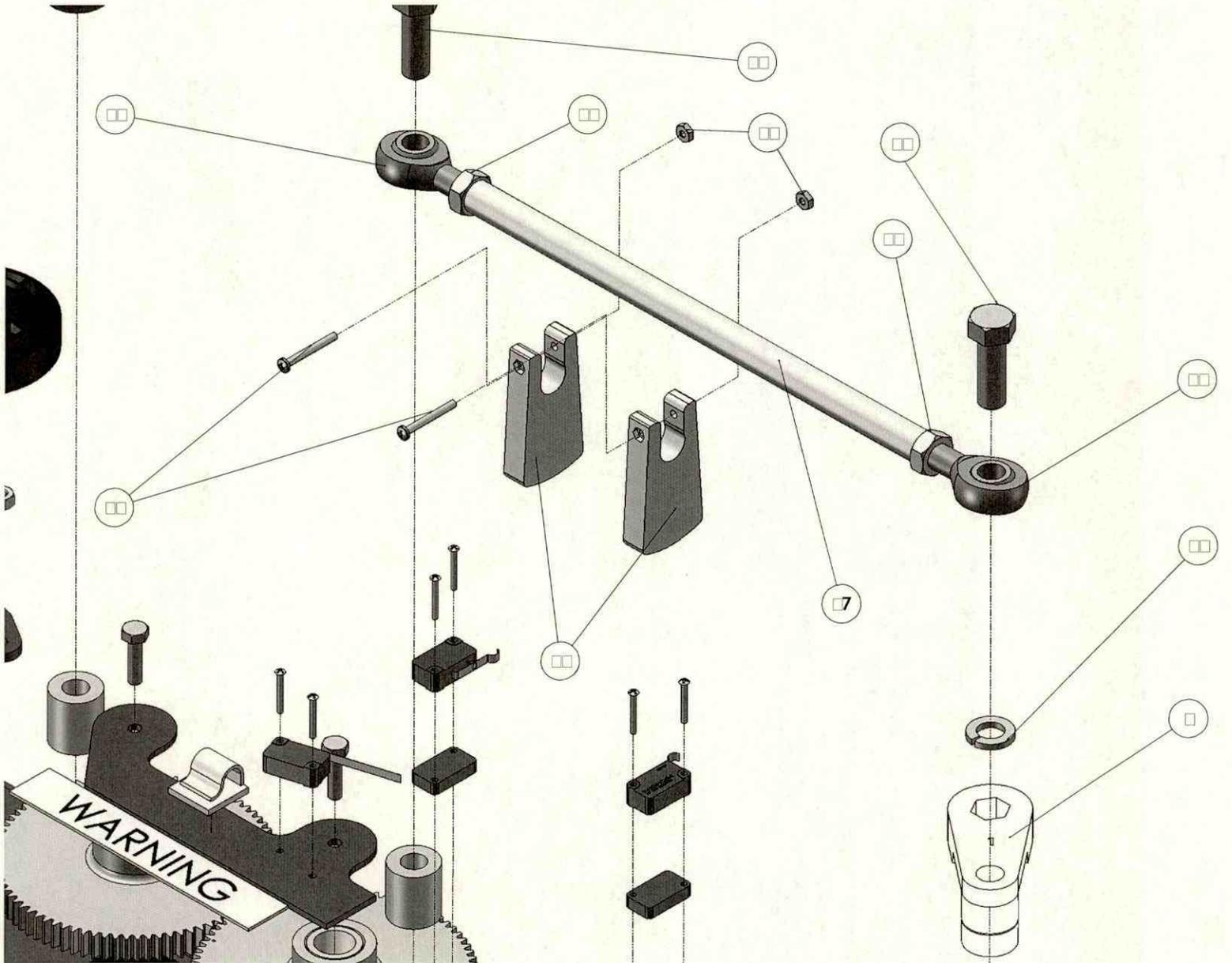


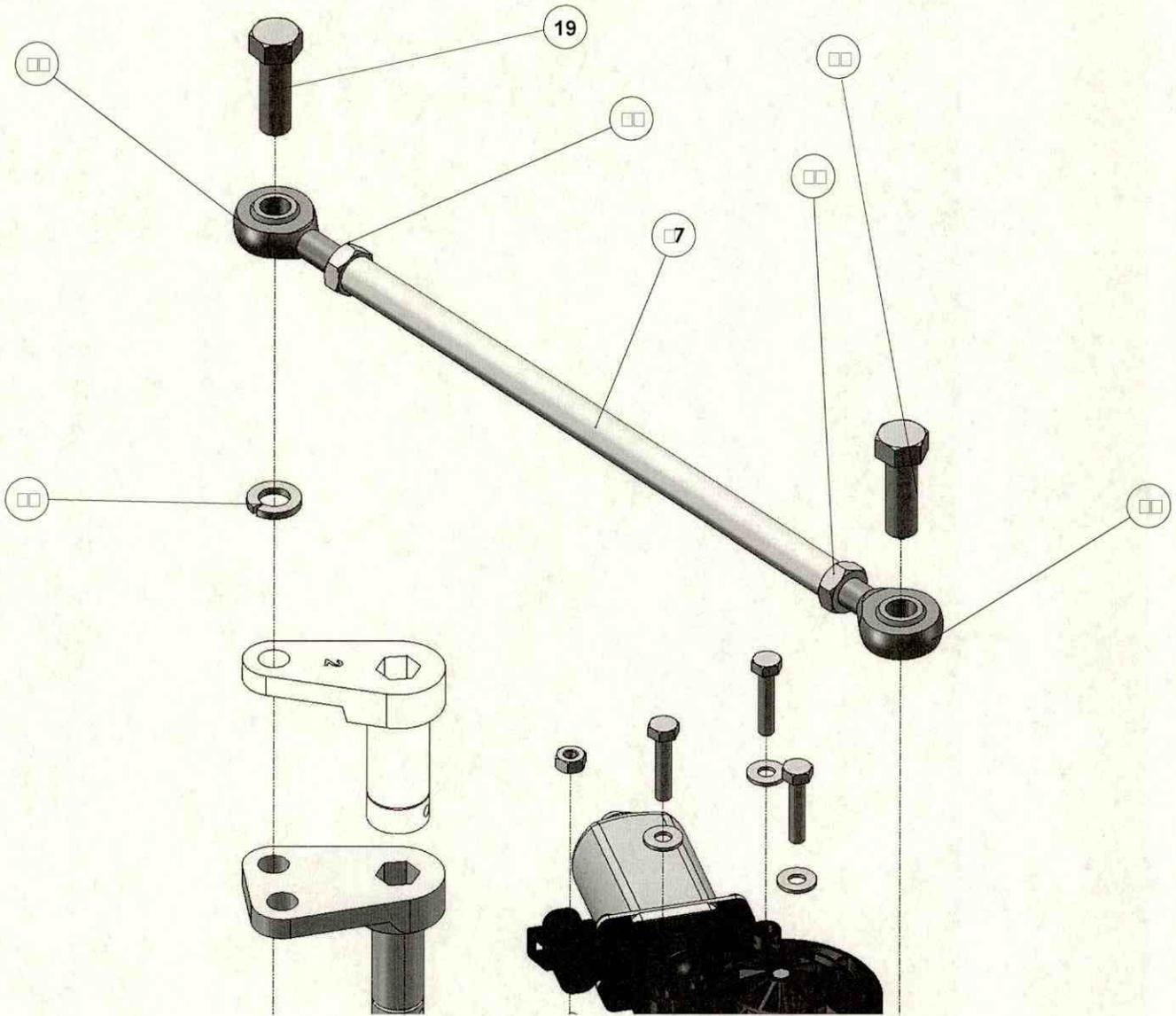
updated 7/28/2008











ACC CLIMATE CONTROL



SPHEROS

Products

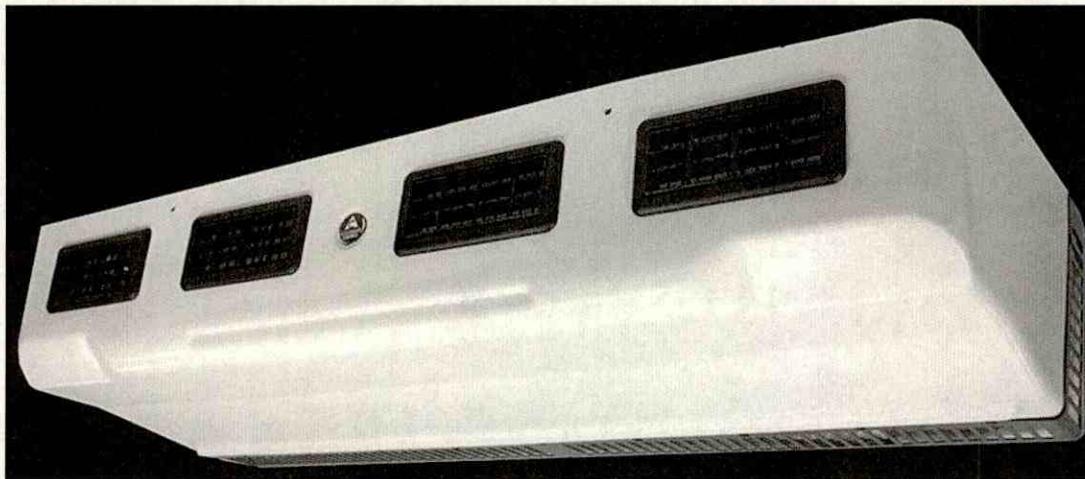
Combo Unit: Up to 75K BTU Evaporator/Condenser

Features:

Two 16- diameter fans made easily accessible without having to remove the cover
All-In-One, all aluminum ,low profile, roof mounted design
Unique design offers reduction in blower motor noise
Standard relay board with electrical diagnostics LEDs are accessible from interior plenum
Cover is made from a high impact UV resistant plastic
High performance micro-channel condenser coil
A filter on the condenser inlet protects the coil from contaminants
Available in free blow or ducted configurations
Unique 360◊ air discharge plus isle discharge

Specifications

Up to 75,000 BTU/HR/Cool
Dual A/C Compressors
Amp Draw:
60 Amps
12 or 24 Volts
Dimensions:
42- W x 8 3/4- H x 64- L
Weight: 146lbs





Thinking Beyond Safety

SLIDE 'N' CLICK

by Q'Straint

Introducing ... The new SLIDE 'N' CLICK

Our newest floor anchorage addition is an added compliment to Q'Straint's product line. With the 360 degree swivel action and one-hand operation, the new anchorage is another alternative design to help you find solutions for those challenging floor plan requirements. This solution modernizes your pocket system!

Why/when the SLIDE 'N' CLICK hardware is worth considering:

Easy to Use - one hand operation

Easy to Install - standard single socket head cap screw

Easy to maintain

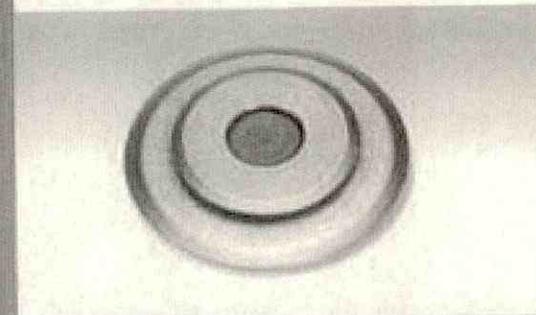
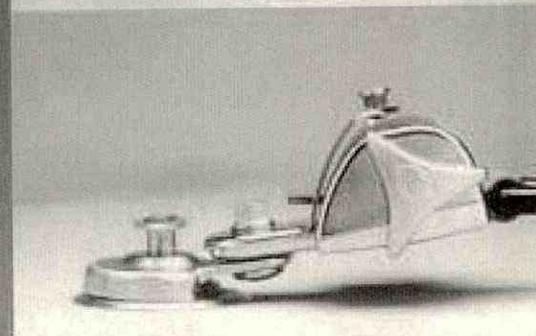
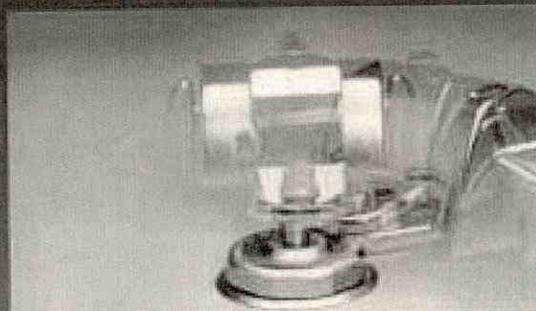
360 degree swivel for all directional usage

Low Profile

Compact size (great for small wheelchair spacing application)

Positive lock

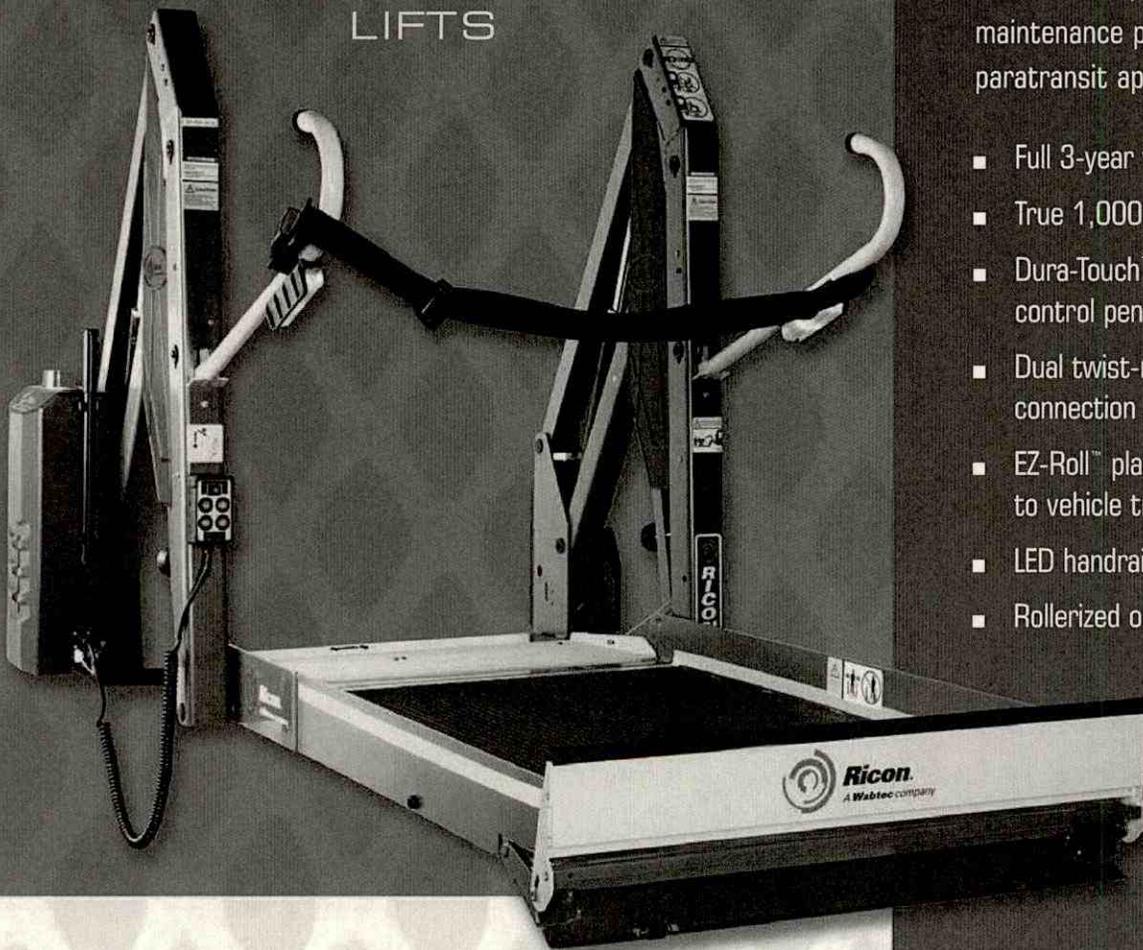
Superior strength Meets SAE J-2249, ISO 10542



patent pending

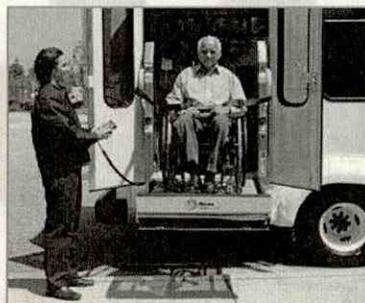
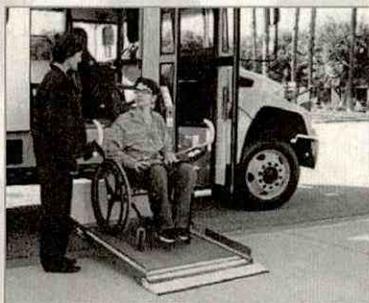
THE RICON® TITANIUM™ LINE

THE TITANIUM™ LINE S-SERIES® AND K-SERIES® WHEELCHAIR LIFTS



The heavy-duty Titanium Line of S-Series and K-Series wheelchair lifts feature the industry-leading Ricon Safety Zone and advanced engineering that delivers the most reliable, high capacity, low-maintenance performance for all paratransit applications.

- Full 3-year warranty
- True 1,000lb capacity
- Dura-Touch™ hand control pendant
- Dual twist-n-lock pendant connection points
- EZ-Roll™ platform to vehicle transition
- LED handrail lights
- Rollerized outboard rollstop



 **Ricon**
A Wabtec company

NEW TITANIUM™ LINE S-SERIES® AND K-SERIES® LIFTS DELIVER BEST-IN-CLASS PERFORMANCE AND VALUE

Innovation and Leadership Since 1971

Millions of people in over 30 countries worldwide rely on Ricon wheelchair lifts every day. Since 1971 we have dedicated our business to the design and manufacture of innovative commercial access products to meet the growing demands of the global passenger transportation industry.

Today, as a Wabtec company and operating from our modern facility in the Los Angeles area, Ricon Corporation is the largest manufacturer of its kind in the world.



Ricon was the first North American wheelchair lift manufacturer to achieve ISO 9001:2000 certification and all Ricon paratransit product designs are tested to meet or exceed the most rigorous elements of FMVSS 403/404, 49 CFR, part 38 (ADA), CSA D409, and the California Vehicle Code (CA Title 13).

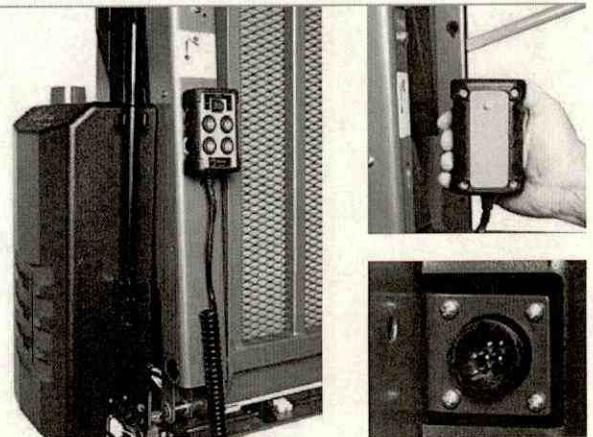
ADVANCED RICON TITANIUM DESIGN FEATURES BENEFIT THE OEM INSTALLER, THE GROWING COMMUNITY OF MOBILITY-CHALLENGED PASSENGERS, DRIVER OPERATORS AND AGENCIES.

The new Titanium Line of S-Series and K-Series wheelchair lifts provide unparalleled performance and lasting value. Ricon lifts set the industry standard for secure access, reliability and ease of use, whether you are transporting passengers across town or children to school. Heavy-duty Titanium Line designs comply with all applicable ADA and FMVSS regulations and include many exclusive best-in-class features.

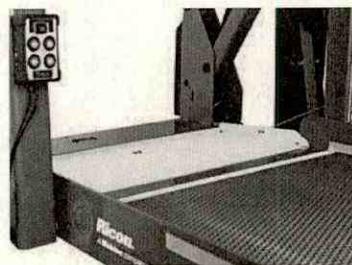
- FMVSS and ADA compliant
- Full 3-year warranty
- True 1,000lb capacity
- Dura-Touch™ hand control pendant
- Dual twist-n-lock pendant connection points
- EZ-Roll™ platform to vehicle transition
- LED handrail lights
- Rollerized outboard rollstop
- Lubrication-free bearings and pins
- Patented Sto-Loc™ technology

MADE IN THE U.S.A.

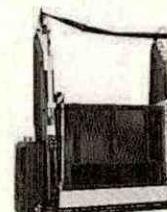
EXCLUSIVE DURA-TOUCH CONTROL PENDANT – Tough and versatile new pendant features shock-resistant polypropylene case with bumper edges, water-resistant buttons and heavy-duty coiled cord. Dual pendant interfaces enable mounting, without modification, on either side of the lift.



QUICK-RELEASE PUMP COVER – Provides easy access to internal components without the need for tools. Adjustments and manual operation may be performed with the pump cover in place.



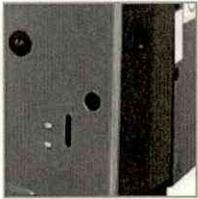
EZ-ROLL™ INBOARD ROLLSTOP – New EZ-Roll™ inner barrier lays completely flat for smooth platform to vehicle and vehicle to platform transitions.



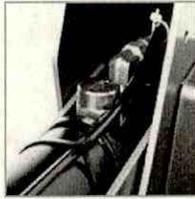
K-Series Lift

The Ricon K-Series®, KlearVue™ heavy-duty reinforced platform automatically folds to provide an unobstructed view by the passenger and driver.

FEATURING THE INDUSTRY-LEADING RICON SAFETY ZONE,
SPACE-SAVING FOOTPRINT AND USER-FRIENDLY DESIGN



LOW PROFILE THRESHOLD WARNING BEACON – Provides 360° visibility of threshold warning signal.



HYDRAULIC CYLINDERS WITH ENGINEERED POLYMER SEALING TECHNOLOGY – And integral, easy-to-reach flow control valves eliminate the need to remove hose or fitting providing years of worry-free operation. Melonite® coated pins with Teflon® coated bearings require no lubrication.

CYCLE COUNTER – Tracks usage for service and maintenance reference.



S-Series Lift



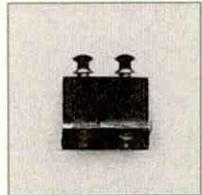
THE RICON SAFETY ZONE



Surrounds passenger with safety features for optimal security during lift operation.

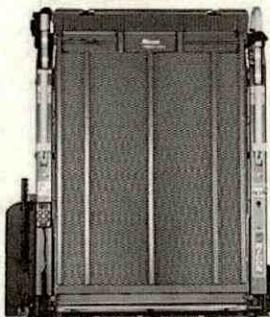


EASY-GRIP CONTOURED HANDRAILS

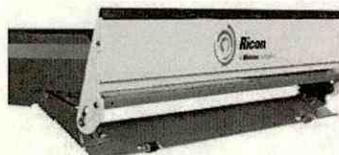


OCCUPANT RESTRAINT BELT SYSTEM – Patented fully interlocked Ricon occupant restraint belt system. Combines with dual handrails, inner and outer rollstop barriers and side rails for industry-leading passenger security.

AUTOMATIC INBOARD ROLLSTOP – In addition to EZ-Roll™ inner barrier, features patented Sto-Loc™ technology to provide quieter ride and prevent lift drift (located on reverse side of the inboard rollstop).



HEAVY-DUTY 1,000-POUND LIFT PLATFORM* – High strength steel alloy construction enables a true, 1,000lb lifting capacity. Durable, titanium gray polyester powder coat finish complements most vehicle interiors.



ROLLERIZED OUTBOARD ROLLSTOP – Advanced design features one-piece extruded aluminum barrier with quiet-touch rubber tip and solid mechanical actuator assisted by rollers for smooth operation on widest range of surfaces.

* Requires vehicle specific application engineering – not intended for retrofit.

FOR MORE INFORMATION, CALL 800-322-2884 OR VISIT US ONLINE AT RICONCORP.COM

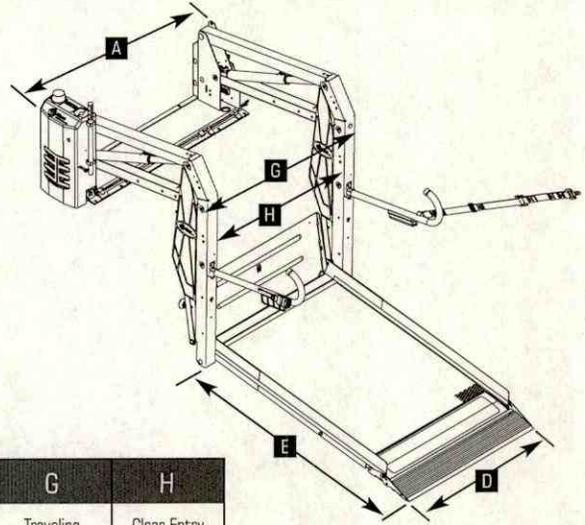


THE TITANIUM™ LINE OF S-SERIES® AND K-SERIES® WHEELCHAIR LIFTS

S-SERIES® LIFT: Models: S2005-S5510

Rated Load CapacityUp to 1,000 lbs / 454 kg*
 Lift WeightApprox. 400 - 425 lbs / 181 -193 kg
 PowerElectro-Hydraulic
 Hydraulic Cylinders(2) each, 1.5" Power-Up / Gravity Down
 Motor Rating @ 12V DC65 amp avg. / cycle 1750 psi
 Manual Backup (up)Hand Pump
 Manual Backup (down).....Pressure Release Valve

* Requires vehicle specific application engineering – not intended for retrofit.



Dimensions Inches/Millimeters

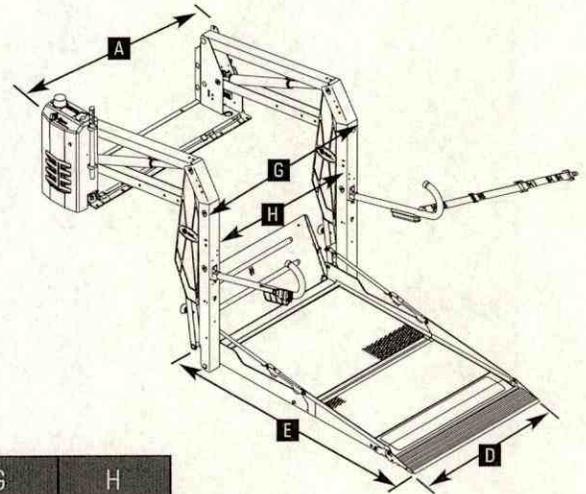
MODEL	A	B	C	D	E	F	G	H
	Stationary Frame Width	Height (folded)	Installation Depth (folded)	Usable Platform Width	Usable Platform Length	Floor-to-Ground Travel	Traveling Frame Width	Clear Entry Width
S2005	47/1194	54/1372	14/356	32/813	51/1295	42/1067	40.5/1029	32/813
S2010	49/1245	57/1448	14/356	34/864	54/1372	42/1067	42.5/1080	34/864
S5505	47/1194	57.5/1461	15/381	32/813	51/1295	51/1295	41/1041	32/813
S5510	49/1245	57.5/1461	15/381	34/864	54/1372	51/1295	43/1092	34/864

- Audible/Visual Threshold Warning Display
- Optical Threshold Warning Sensors
- Inboard Rollstop Interlock
- Automatic Inner Barrier Rollstop
- Two-Tiered Outer Barrier
- Onboard LED Platform Lighting
- Cycle Counter

K-SERIES® LIFT: Models: K2005-K5510

Rated Load CapacityUp to 1,000 lbs / 454 kg*
 Lift WeightApprox. 400-425 lbs / 181 -193 kg
 PowerElectro-Hydraulic
 Hydraulic Cylinders(2) each, 1.5" Power-Up / Gravity Down
 Motor Rating @ 12V DC65 amp avg. / cycle 1750 psi
 Manual Backup (up)Hand Pump
 Manual Backup (down).....Pressure Release Valve

* Requires vehicle specific application engineering – not intended for retrofit.



Dimensions Inches/Millimeters

MODEL	A	B	C	D	E	F	G	H
	Stationary Frame Width	Height (folded)	Installation Depth (folded)	Usable Platform Width	Usable Platform Length	Floor-to-Ground Travel	Traveling Frame Width	Clear Entry Width
K2005	47/1194	54/1372	16.5/419	31/787	51/1295	37/940	40.5/1029	31.25/794
K2010	49/1245	54/1372	16.5/419	33/838	54/1372	37/940	42.5/1080	33.75/857
K5505	47/1194	57.5/1461	17.5/445	31/787	51/1295	48/1219	41/1041	31.25/794
K5510	49/1245	57.5/1461	17.5/445	33/838	54/1372	48/1219	43/1092	33.75/857

- Audible/Visual Threshold Warning Display
- Optical Threshold Warning Sensor
- Inboard Rollstop Interlock
- Automatic Inboard Rollstop
- Two-Tiered Outer Barrier
- Onboard LED Platform Lighting
- Cycle Counter

CALL TOLL-FREE: 1-800-322-2884

RICONCORP.COM

RICON CORPORATION 7900 Nelson Road Panorama City, CA 91402

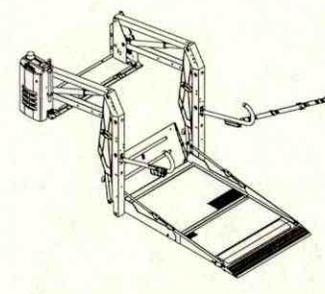
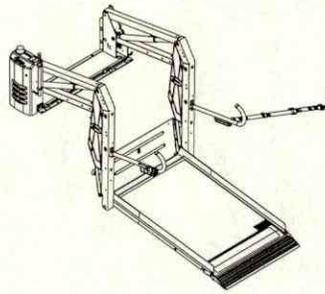
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PN 32SL629 (05 12 1M)



I. TITANIUM™ LINE S-SERIES® AND K-SERIES® PUBLIC USE LIFTS

The Ricon Titanium™ Line S-Series® and K-Series® Public Use wheelchair lifts provide wheelchair access to public use vehicles including buses, school buses and large multi-purpose vehicles, and are DOT compliant.



The Ricon S-Series® has a solid, one-piece platform that is raised and folded into the vehicle when stowed. The platform on the Ricon K-Series® splits horizontally to reduce overall lift height when stowed. This results in a less obstructed view, either into or out of the vehicle. The mechanical linkages provide smooth movement to both non-skid platforms where the wheelchair and occupant are situated during the "Up" and "Down" lift motions. Ricon

The Ricon Titanium™ Line S-Series® and K-Series® Public Use wheelchair lifts have a rated load capacity of 1,000 pounds, (454) kilograms.

All S-Series and K-Series Public Use wheelchair lifts contain electro-hydraulic pumps with built-in manual backup pumps. If a wheelchair lift loses power, it can be raised or lowered manually.

Trained personnel operate the wheelchair lift by using a durable and water resistant control pendant. The control pendant is used to unfold the platform out from the vehicle (deploy). The operator securely fastens the occupant restraint belt by inserting the belt tongue into the belt buckle and listens for a "click" then "tug" on the belt to ensure the occupant restraint belt is securely fas-

tened. The passenger boards the center of the non-skid platform, facing outward then locks the wheelchair brakes. The operator lowers the platform to the ground then unfastens the occupant restraint belt. After the passenger departs, the platform is stowed back into the vehicle.

This manual contains warranty information, safety precautions, operating and maintenance instructions that apply to the Ricon Titanium Line S-Series and K-Series Public Use wheelchair lifts. It is important to user safety that the lift operator be completely familiar with the operating instructions. Once the lift is installed, it is very important that the lift be properly maintained by following the Ricon recommended maintenance and inspection instructions provided in Chapter III.

A. PRODUCT SUPPORT

If there are questions about this manual, or you need copies, please contact Ricon Product Support at the following location:

- Ricon Corporation
- 7900 Nelson Road
- Panorama City, CA 91402 (818) 267-3000
- Outside (818) Area Code (800) 322-2884
- Website www.riconcorp.com
- Vapor Ricon Europe Ltd.
- Meadow Lane
- Loughborough, Leicestershire.....0044 (0) 1509 635 920
- LE 1HS United Kingdom
- Website www.riconuk.com

C. SHIPMENT INFORMATION

- When the product is received, unpack the product and check for freight damage. Claims for damage should be made to the freight carrier immediately.
- Be sure the installation kit contains all items listed on the kit packing list. Please report any missing items immediately to Ricon Product Support.
- The warranty and owner registration cards must be completed and returned to Ricon within 20 days to validate the warranty.

The sales or service personnel must review the Warranty and Operator Manual with the user to be certain that they understand how to safely operate the product and instruct the user to follow the operating instructions without exception.

D. GENERAL SAFETY PRECAUTIONS

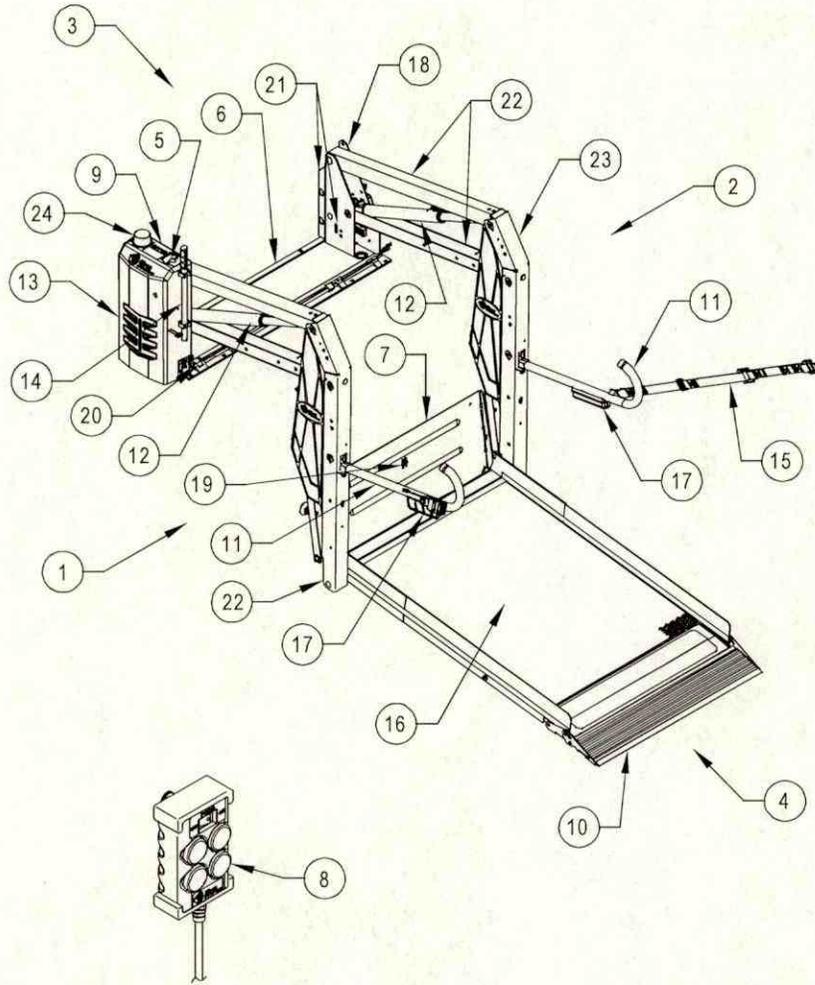
The following general safety precautions apply to the Titanium Line S-Series and K-Series Public Use wheelchair lifts and must be followed during operation and maintenance:

- Read and thoroughly understand the operating instructions before attempting to operate the wheelchair lift.
- Inspect product before each use. If unsafe conditions, unusual noises or movements, do not operate lift until the problem is corrected.
- Exercise caution when operating wheelchair lift to avoid injury, and be certain that hands, feet, legs or clothing are not in the path of product movement.
- Stand clear of doors and platform and keep others clear during operation.
- The wheelchair lift requires regular periodic maintenance. A thorough inspection is recommended at least once every six months. The product should be maintained at the highest level of performance.

E. MAJOR LIFT COMPONENTS

1. TITANIUM LINE S-SERIES PUBLIC USE LIFT MAJOR COMPONENTS

The major components of the Titanium Line S-Series Public Use wheelchair lift are in **Figure 1-1**. A description of each of the components is in **Table 1-1**.



RSM0046500

FIGURE 1-1: TITANIUM LINE S-SERIES MAJOR COMPONENTS

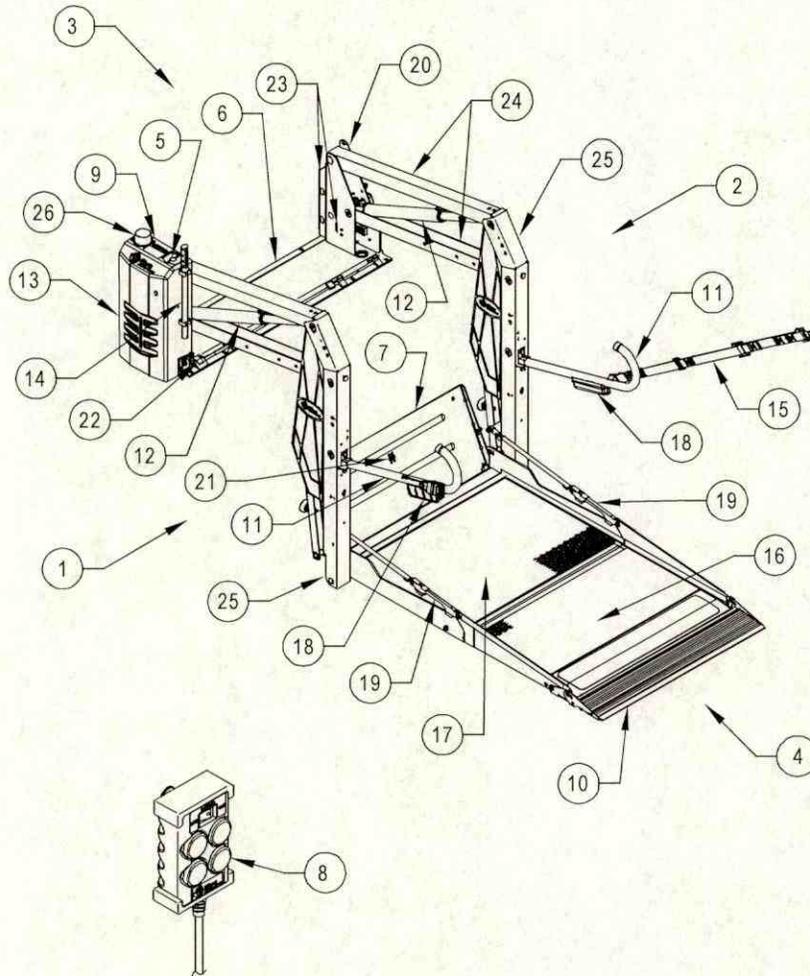
Table 1-1: Titanium Line S-Series Major Component Terms	
TERM	DESCRIPTION
1, 2, 3, 4	Position references when installed lift is viewed from outside of vehicle.
5	Audible Alarm - (inside housing of hydraulic unit) Announces when something passes through the threshold area while the lift platform is below floor level. The alarm is activated by threshold beams.
6	Baseplate - Bolts to vehicle floor; provides secure foundation for lift structure.
7	Bridgeplate - Plate that bridges gap between platform and baseplate when platform is at floor level. Also acts as a rear in-board rollstop when platform is in motion.
8	Control Pendant – Heavy duty and water-resistant hand-held device used to control platform motions.
9	Cycle Counter - Visible at top rear of housing, it records number of times platform has moved from floor to ground and back to floor.
10	Front Rollstop – Front, rollerized outboard rollstop prevents wheelchair from inadvertently rolling off of platform during platform movement.
11	Handrail - (left and right) Provides handhold for standing passenger.
12	Hydraulic Cylinder - (left and right) Telescoping single-acting cylinders convert hydraulic pressure into platform lifting and folding force.
13	Hydraulic Power Unit - Contains hydraulic pump driven by electric motor that produces pressure to raise and fold platform, and a pressure release valve to unfold and lower it.
14	Manual Back-up Pump Handle - (located outside housing of hydraulic unit) Used to operate manual back-up pump.
15	Occupant Restraint Belt - Electrically interlocked safety belt that is intended to prevent acceleration of wheelchair while on the platform. Lift will not operate unless belt is securely fastened.
16	Platform - Component of lift where the wheelchair and occupant are situated during "UP" and "DOWN" lift motions.
17	Platform LED Light - (left and right) Directs light onto platform surface.
CONTINUED	

Table 1-1: Titanium Line S-Series Major Component Terms	
TERM	DESCRIPTION
18	Serial Number - Location of lift serial number decal.
19	Sto-Loc Catch - Engages latch located on bottom of bridgeplate when platform is fully stowed.
20	Switch (Bridgeplate Load Sensor) – Senses if weight is present on the lowered bridgeplate.
21	Threshold Warning System (TWS) - Light-beams detect something passing through the threshold area while platform is below floor level.
22	Top and Bottom Arms (left and right) - Upper and lower links that connect vertical arms to baseplate.
23	Vertical Arm (left and right) - Connects platform to top and bottom arms.
24	Visual Alarm - Flashing light makes it known when something passes through threshold area. Activated by threshold beams.
END OF TABLE	

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2. TITANIUM LINE K-SERIES PUBLIC USE LIFT MAJOR COMPONENTS

The major components of the Titanium Line K-Series Public Use wheelchair lift are in Figure 1-2. A description of each of the components is in Table 1-2.



RSM004600

FIGURE 1-2: TITANIUM LINE K-SERIES MAJOR COMPONENTS

Table 1-2: Titanium Line K-Series Major Component Terms	
TERM	DESCRIPTION
1, 2, 3, 4	Position references when installed lift is viewed from outside of vehicle.
5	Audible Alarm - (inside housing of hydraulic unit) Announces when something passes through the threshold area while the lift platform is below floor level. The alarm is activated by threshold beams.
6	Baseplate - Bolts to vehicle floor; provides secure foundation for lift structure.
7	Bridgeplate - Plate that bridges gap between platform and baseplate when platform is at floor level. Also acts as a rear in-board rollstop when platform is in motion.
8	Control Pendant – Heavy duty and water-resistant hand-held device used to control platform motions.
9	Cycle Counter - Visible at top rear of housing, it records number of times platform has moved from floor to ground and back to floor.
10	Front Rollstop – Front, rollerized outboard rollstop prevents wheelchair from inadvertently rolling off of platform during platform movement.
11	Handrail - (left and right) Provides handhold for standing passenger.
12	Hydraulic Cylinder - (left and right) Telescoping single-acting cylinders convert hydraulic pressure into platform lifting and folding force.
13	Hydraulic Power Unit - Contains hydraulic pump driven by electric motor that produces pressure to raise and fold platform, and a pressure release valve to unfold and lower it.
14	Manual Back-up Pump Handle - (located outside housing of hydraulic unit) Used to operate manual back-up pump.
15	Occupant Restraint Belt - Electrically interlocked safety belt that is intended to prevent acceleration of wheelchair while on the platform. Lift will not operate unless belt is securely fastened.
16	Platform (Front) - Front portion of platform that unfolds during deploy and folds during stow. See "Platform folding linkage".
17	Platform (Rear) - Rear portion of platform that is folded by linkage located within the vertical arms.
CONTINUED	

Table 1-2: Titanium Line K-Series Major Component Terms	
TERM	DESCRIPTION
18	Platform LED Light - (left and right) Directs light onto platform surface.
19	Platform Folding Linkage - (left and right) Links that cause front platform section to unfold as it deploys or fold as it stows.
20	Serial Number - Location of lift serial number decal.
21	Sto-Loc Catch - Engages latch located on bottom of bridgeplate when platform is fully stowed.
22	Switch (Bridgeplate Load Sensor) - Senses if weight is present on the lowered bridgeplate.
23	Threshold Warning System (TWS) - Light-beams detect something passing through the threshold area while platform is below floor level.
24	Top and Bottom Arms (left and right) - Upper and lower links that connect vertical arms to baseplate.
25	Vertical Arm (left and right) - Connects platform to top and bottom arms.
26	Visual Alarm - Flashing light makes it known when something passes through threshold area. Activated by threshold beams.
END OF TABLE	

STURAA TEST

7 YEAR

200,000 MILE BUS

from

**STARCRAFT BUS,
A DIVISION of FOREST RIVER INC.**

MODEL ALLSTAR -25

FEBRUARY 2006

PTI-BT-R0518

PENNSTATE



The Pennsylvania Transportation Institute

201 Research Office Building (814) 865-1891
The Pennsylvania State University
University Park, PA 16802

Bus Testing and Research Center

2237 Old Route 220 N. (814) 695-3404
Duncansville, PA 16635

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EXECUTIVE SUMMARY

Starcraft Bus, a Division of Forest River Inc. submitted a model Allstar-25, gasoline-powered 17 seat (including the driver) 25-foot bus, for a 7 yr/200,000 mile STURAA test. The odometer reading at the time of delivery was 529.0 miles. Testing started on December 6, 2005 and was completed on February 14, 2006. The Check-In section of the report provides a description of the bus and specifies its major components.

The primary part of the test program is the Structural Durability Test, which also provides the information for the Maintainability and Reliability results. The Structural Durability Test was started on December 14, 2005 and was completed on February 1, 2006.

The interior of the bus is configured with seating for 17 passengers including the driver + 1 wheelchair position. Free floor space will accommodate 10 standing passengers resulting in a potential capacity of 27 persons + 1 wheelchair position. At 150 lbs per person 600 lbs per wheelchair position, this load results in a measured gross vehicle weight of 13,950 lbs. The first segment of the Structural Durability Test was performed with the bus loaded to a GVW of 13,950 lbs. The middle segment was performed at a seated load weight of 12,500 lbs and the final segment was performed at a curb weight of 9,510 lbs. Durability driving resulted in no unscheduled maintenance and failures.

Accessibility, in general, was adequate, components covered in Section 1.3 (Repair and/or Replacement of Selected Subsystems) along with all other components encountered during testing, were found to be readily accessible and no restrictions were noted.

The Reliability section compiles failures that occurred during Structural Durability Testing. Breakdowns are classified according to subsystems. The data in this section are arranged so that those subsystems with more frequent problems are apparent. The problems are also listed by class as defined in Section 2. The test bus encountered no failures during the Structural Durability Test.

The Safety Test, (a double-lane change, obstacle avoidance test) was safely performed in both right-hand and left-hand directions up to a maximum test speed of 45 mph. The performance of the bus is illustrated by a speed vs. time plot. Acceleration and gradeability test data are provided in Section 4, Performance. The average time to obtain 50 mph was 13.75 seconds.

The Shakedown Test produced a maximum final loaded deflection of 0.224 inches with a permanent set ranging between -0.003 to 0.005 inches under a distributed static load of 10,725 lbs. The Distortion Test was completed with all subsystems, doors and escape mechanisms operating properly. Water leakage observed during the test at the top of the rear door between the door and the door frame.

The test bus was not equipped with any type of tow eyes or tow hooks, therefore, the Static Towing Test was not performed. The Dynamic Towing Test was performed by means of a front-lift tow. The towing interface was accomplished using a hydraulic under-lift wrecker. The bus was towed without incident and no damage resulted from the test. The manufacturer does not recommend towing the bus from the rear; therefore, a rear test was not performed. The Jacking and Hoisting Tests were also performed without incident. The bus was found to be stable on the jack stands, and the minimum jacking clearance observed with a tire deflated was 8.8 inches.

A Fuel Economy Test was run on simulated central business district, arterial, and commuter courses. The results were 6.39 mpg, 6.90 mpg, and 10.17 mpg respectively; with an overall average of 7.32 mpg.

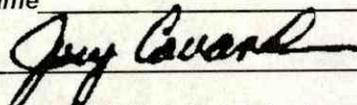
A series of Interior and Exterior Noise Tests was performed. These data are listed in Section 7.1 and 7.2 respectively.

ITEM 25

Certification of Compliance with FMVSS 220

This document certifies that the described vehicle meets Federal Motor Vehicle Safety Standard No. 220 (rollover protection) found in Code of Federal Regulations, title 49, section 571.220.

- I. This certification applies to the following vehicle:
 - A. Vehicle Identification number: 1FDWE45FX2HA01296
 - B. Vehicle make and model: Starcraft Allstar 25
 - C. Year of manufacture: 2001
- II. The manufacturer or other person who manufactured, constructed, or reconstructed the vehicle's roof is:
 - A. Name of manufacturer: Starcraft Bus
 - B. Address: 2307 Century Drive, Goshen, IN 46528
 - C. Telephone number: 574-642-3112
- III. The above-described vehicle was supplied to the following provider of special transportation service.
 - A. Name of manufacturer:
 - B. Address:
 - C. Telephone number:
- IV. The above described vehicle was constructed according to standards that have been tested and found to meet the performance requirements for rollover protection established by FMVSS 220. The laboratory or testing facility that conducted the tests on the manufacture's or other person's test specimen and certified that a vehicle built to the design and construction standards used in the test specimen meets the performance requirements of the FMVSS 220.
 - A. Name of laboratory or testing facility: Pyramid1, Inc.
 - B. Address: 19590 County Road 40, Goshen, IN 46526
 - C. Telephone number: 574-537-8033
- V. The above described test was conducted on Nov / 6 / 2001

Company Name Startrans Bus
 Signature 
 Title Government Bid Administrator
 Date 11/4/2014

220-001

**VEHICLE TEST REPORT
FMVSS/CMVSS 220
SCHOOL BUS ROLLOVER PROTECTION TEST**

TEST VEHICLE
STARCRAFT TRANSIT BUS
FORD ECONOLINE E-450 CUTAWAY

TEST DATE
NOVEMBER 6, 2001

TEST PERFORMED FOR:
STARCRAFT BUS
A DIVISION OF FOREST RIVER INC.
2703 COLLEGE AVENUE
GOSHEN, IN 46528
(219) 533-1105

TEST CONDUCTED BY
STARCRAFT BUS ENGINEERING
AND R & D STAFF INCONJUNCTION WITH PYRAMID1, INC.

PYRAMID1, INC.
19590 C.R. 40
GOSHEN, INDIANA 46526
(574) 537-8033

COMPLIANCE STATEMENT

This vehicle has been tested in accordance with the requirements of the following regulations: Federal Vehicle Safety Standard number 220, as published in the Code of Federal Regulations (CFR) 49, part 571, section 220, revised as of October 1, 1999. Canada Motor Vehicle Safety Standard number 220, as published in the Consolidation of the Motor Vehicle Safety Regulations, revised as of May 27, 1998.

SUMMARY OF RESULTS

ROOF AND BODY STRUCTURE: The roof and body structure of this vehicle meet the requirements of the aforementioned standards.

EXIT OPERATION: All doors, windows, and emergency exits were verified functional, prior to roof load application, under full load, and after test load was removed as required by the aforementioned standards.

APPROVALS

APPROVED BY: _____
MR. JEFF DENNEY
DIRECTOR OF PRODUCT DEVELOPMENT
AND MANUFACTURING ENGINEERING

APPROVED BY: *Jon M. Smith*
MR. JON SMITH P.E.
CONSULTING ENGINEER
2/11/02



STARCRAFT BUS

a division of Forest River, Inc.

FMVSS/CMVSS Compliance Summary 2014-2015

Commercial Only

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

C/FMVSS No.	Standard Description	Compliance Action
101	Control Location, Identification and Illumination	Starcraft does not alter the OEM controls or displays. Any aftermarket seats and/or controls or displays subject to the standard meet this standard. Test data on file.
102	Transmission Shift Lever Sequence, Starter Interlock & Transmission Braking Effect	Compliance is deferred to the chassis manufacturer.
103	Windshield Defrosting & Defogging Systems	Compliance is deferred to the chassis manufacturer.
104	Windshield Wiping & Washing Systems	Compliance is deferred to the chassis manufacturer.
105	Hydraulic Brake Systems	Test data kept on file for vehicles that have had the frame stretched, or have had other system modifications. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
106	Brake Hoses	Vehicles with stretched frames have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
108	Lamps, Reflective Devices & Associated Equipment	Starcraft does not alter OEM lighting. Additional lighting to include brake, turn, clearance and reverse lamps meet standard. Data on file.
108.1	Alternative Requirements for Headlamps	Starcraft does not alter OEM lighting. Compliance is deferred to the chassis manufacturer.
110	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less.
111	Rear View Mirrors	All aftermarket mirrors installed by Starcraft meet this standard and DOT regulations. Data on file.
112	Headlamp Concealment Devices	Starcraft does not manufacture vehicles with headlamp concealment devices.
113	Hood latch systems	Compliance is deferred to the chassis manufacturer.
114	Theft Protection	Compliance is deferred to the chassis manufacturer.
115	Vehicle Identification Number	Compliance is deferred to the chassis manufacturer.
116	Hydraulic Brake Fluids	Starcraft does not alter brake systems. Vehicles with stretched frames have additional fluid added by chassis modifiers using OEM instruction and materials. All other system modifications utilize only OEM-approved fluid. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
118	Power Operated Window, Partition, and Roof Panel Systems	Compliance is deferred to the chassis manufacturer.
120	Tire Selection and Rim for Motor Vehicles with a GVWR of 4,536kg (10,000 lbs.) or More	Compliance is deferred to the chassis manufacturer.
121	Air Brake Systems	Vehicles with stretched frames have additional lines installed by chassis modifiers using OEM components. Other vehicles that have had system modifications use OEM or OEM-approved components and are tested for compliance. For Non-stretched vehicles compliance is deferred to the chassis manufacturer.
124	Accelerator Control Systems	Starcraft does not alter the OEM accelerator system, with the exception of the addition of aftermarket fast idle systems on some vehicles. These systems meet this standard when installed in accordance with instructions.
125	Warning Devices	All vehicles manufactured by Starcraft that are equipped with aftermarket (3) triangle kit meet this standard.
131	School Bus Pedestrian Safety Devices	All vehicles manufactured by Starcraft are not completed to be used as school buses.
135	Light Vehicle Brake System with a GVWR of 3,500kg (7,716lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 3,500kg (7,716 lbs.) or Less.
201	Occupant Protection in Interior Impact	All vehicles applicable to the standard (under 10,000 lbs.) do not have alterations made that affect the compliance to this standard. Compliance is deferred to the chassis manufacturer.
202	Head Restraints	All vehicles applicable to the standard (under 10,000 lbs.) have seating installed that meets this standard. Compliance is deferred to the chassis manufacturer.

STARCRAFT BUS

a division of Forest River, Inc.

FMVSS/CMVSS Compliance Summary 2014-2015

Commercial Only

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

203	Impact Protection for the Driver from the Steering Control System	Compliance is deferred to the chassis manufacturer.
204	Steering Control Rearward Displacement	Compliance is deferred to the chassis manufacturer.
205	Glazing Materials	No modifications are made to the OEM Glazing materials. Additional glazing materials meet the standard. Data on file.
206	Door Locks and Door Retention Devices	All vehicles manufactured by Starcraft (non-buses) that are subject to this standard have no modifications made which affect compliance to the standard. Compliance is deferred to the chassis manufacturer.
207	Seating System	All seating installed by Starcraft meets this standard. Test data on file.
208	Occupant Crash Protection	No alterations are made to the OEM seat belts, air bag systems or associated hardware. Any seat belt systems added meet the standard. Test data on file.
209	Seat Belt Assemblies	No alterations are made to the OEM seat belts or associated hardware. Any seat belt systems added meet the standard. Test data on file.
210	Seat Belt Assembly Anchorage	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Test data on file.
210.1	User-ready Tether Anchorages for Restraint System	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
210.2	Lower Universal Anchorage Systems for Restraint Systems and Booster Cushions	No alterations are made to the OEM seat belts or associated hardware. Seat belt systems and their installation meet the standard. Data on file.
212	Windshield Mounting	Compliance is deferred to the chassis manufacturer.
213	Child Restraint Systems	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard. Test data on file.
213.4	Built-in Child Restraint Systems and Built-in Booster Cushions	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard. Test data on file.
214	Side Impact Protection with a GVWR of 4,536kg (10,000 lbs.) or Less	Starcraft does not manufacture vehicles with a GVWR of 4,536kg (10,000 lbs.) or Less
216	Roof Crush Resistance	Starcraft does not manufacture vehicles that are subject to this standard.
217	Bus Window Retention and Release	No modifications are made to the OEM windows. Additional windows meet the standard. Test data on file.
219	Windshield Zone Intrusion	Compliance is deferred to the chassis manufacturer.
220	School Bus Rollover Testing	All vehicles manufactured by Starcraft are not completed to be used as school buses, however, Starcraft does test vehicles to meet standard.
221	School Bus Body Joint Strength	All vehicles manufactured by Starcraft are not completed to be used as school buses, however, Starcraft does test vehicles to meet standard.
222	School Bus Passenger Seating and Crash Protection	All vehicles manufactured by Starcraft are not completed to be used as school buses.
225	Child Restraint Anchorage Systems	Vehicles manufactured by Starcraft that are subject to this standard (under 10,000 lbs.) have seating installed that meets this standard.
301	Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.1	LPG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.
301.2	CNG Fuel System Integrity	Compliance is deferred to the chassis manufacturer.

STARCRAFT BUS

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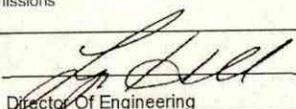
FMVSS/CMVSS Compliance Summary 2014-2015

Commercial Only

The following information describes briefly the C/FMVSS standards and the Compliance Action that has been taken by either Starcraft Bus Commercial Division, the chassis manufacturer.

302	Flammability of Interior Materials	Materials installed in the interior of Starcraft products meet the standard. Test data on file.
303	Fuel System Integrity of Compressed Natural Gas Systems	Starcraft does not typically produce vehicles with CNG systems. All vehicles equipped with CNG systems exceed the applicability (10,000 lbs. or less) of this standard.
304	Compressed Natural Gas Fuel Container Integrity	Starcraft does not typically produce vehicles with CNG systems. All vehicles equipped with CNG systems exceed the applicability (10,000 lbs. or less) of this standard.
305	Electrolyte Spillage and Electrical Shock Protection	Starcraft does not produce vehicles that use electricity as propulsion power.
403	Platform Lift System for Motor Vehicles	Starcraft does not alter the platform lift system. Starcraft install lift system in strict compliance with the manufacturers installation instructions. Starcraft meets strength requirements. Test data on file.
404	Platform Lift Installation on Motor Vehicles	Compliance is deferred to the lift manufacturer.
1106	Noise Emissions	Starcraft does not alter the OEM Chassis in the area which is stated in the incomplete vehicle documents. Data on file.

Signed: _____


Date: 8/1/2014Title: Director Of Engineering