

Apex Family



Apex 3 Bike Rack



Apex 2 Bike Rack



Apex Pivot Plate



Apex Ten-Second Bracket (TSB)

Summary of Design Improvements

The Apex family sets the highest standard for safety and performance in 2 and 3-bike transit racks. The racks and pivot plates have been completely redesigned to reduce bounce, minimize the racks footprint for better vehicle turn radius and headlight / turn signal visibility, and improve safety. In addition, the Apex 3 rack is the first 3-position rack recommended for use on cutaways and other small vehicles measuring 96" or greater in width excluding mirrors, and is fully compatible with existing Sportworks bumper brackets. *Note: Apex family bike racks require Apex-specific Ten-Second Brackets.*

Apex advantages over conventional 2 and 3-bike racks

Rack Improvements:

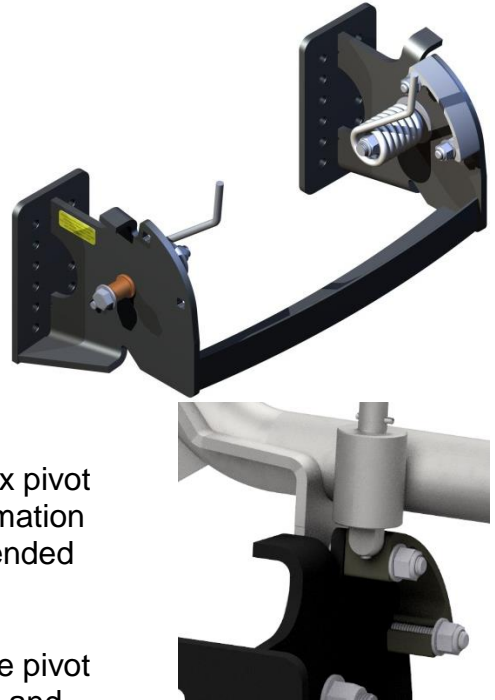
- [Pivot plate](#)
- [Support Arm](#)
- [Wheel Tray](#)
- [Frame](#)

Vehicle Improvements:

- Mounting
- Safety
- Headlight Clearance
- Turning Radius

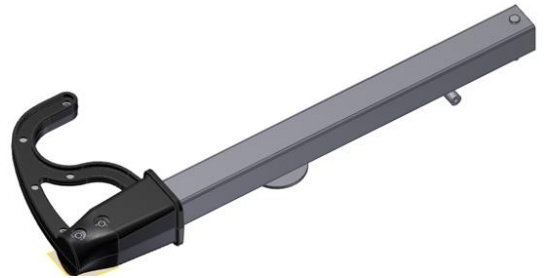
Pivot Plate

- **Improved Bushings & Hardware** – The bushings and mounting bolts used in the Apex pivot plate are 1/2" in diameter (as compared to the standard 3/8" hardware used in other 3-position racks) to improve strength. Also, the machined pivot location on the frame is now 1/2" thick, providing excellent long-term bushing life.
- **Improved Quadrant to Latch Pin Interface** – The pivot plate latch pin now has flat surfaces on two sides to decrease wear, increase quadrant lifespan, and improve usability.
- **Strengthened Wash Guard** – The front edge of the Apex pivot plate has been strengthened to resist bending and deformation caused by multiple trips through the bus wash and unintended vehicle-to-vehicle contact.
- **Improved Stowed/Deployed Fit** – The new design of the pivot plate better controls the critical dimensions of the stowed and deployed rack position, thereby reducing the amount of "bounce" and other unnecessary movement when the rack is in use. This reduces wear on critical components, and provides a more stable and secure platform for carrying bikes.



Support Arm

- **Improved Handle** – The Apex support arm has been completely redesigned and includes a new Santoprene® handle injection molded over a steel insert. The result is a more ergonomic, durable, low profile handle that fits better under baskets and is less likely to scratch bike fenders.
- **Improved Housing & Spar Strength** – Various material sizes used in the support arm have been increased to improve strength, making the arm less likely to bend and cause binding. The exterior housing of the arm has been increased to 1.5" square tubing as compared to the 1" tubing used on other support arms. Similarly, the inner spar tube diameter has been increased to 1.25" from the standard .875".
- **Improved Pivot Strength** – The new machined pivot hinge will not become loose like the leaf hinge used in other designs. This reduces fore and aft movement of bikes in the carrier.



- **Improved Bushings** – New larger bushings support the spar at both ends to reduce binding when the handle is pulled out and simultaneously twisted during extension.
- **Stronger Retention Magnets** – The Apex support arm is held more securely in the stowed position by more powerful magnet. This prevents the chances of the arm breaking free and damaging the front of the vehicle when the rack is in the stowed position.

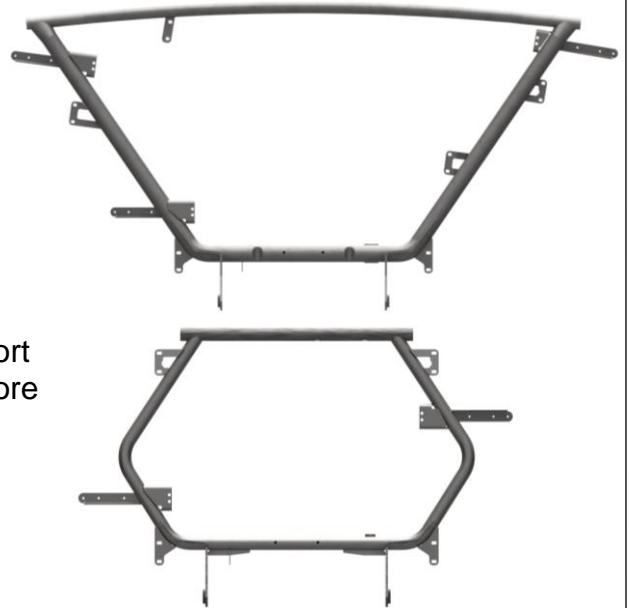
Wheel Tray

- **Replaceable Modular Wheel Trays** – The Apex includes new modular stainless steel wheel trays that can be easily replaced when damaged. The tray is universal to all three positions, and is interchangeable across all Apex series racks.
- **Improved Strength** – New heavier walled tubing and bracing enable the tray to withstand larger, heavier loads.
- **Accommodates more Bicycles** – The Apex utilizes a highly-modified wheel tray that accommodates the largest array of bicycles. This includes small children's bikes with 16" wheels, and adult bikes with up to 29" diameter wheels, 3" wide tires and a 48" wheelbase. In addition, the depth of the wheel tray has been increased to improve rear wheel retention.



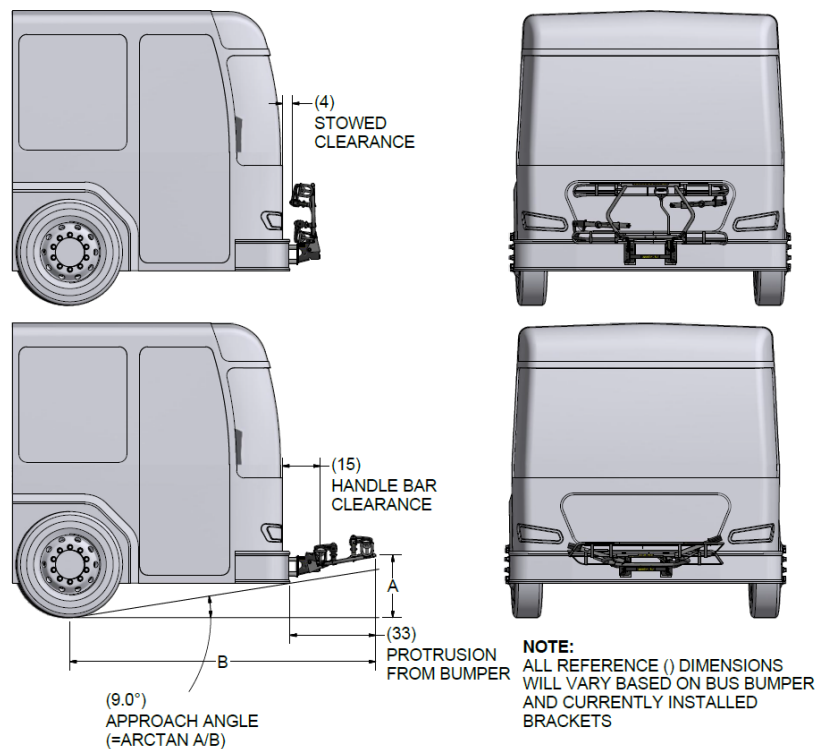
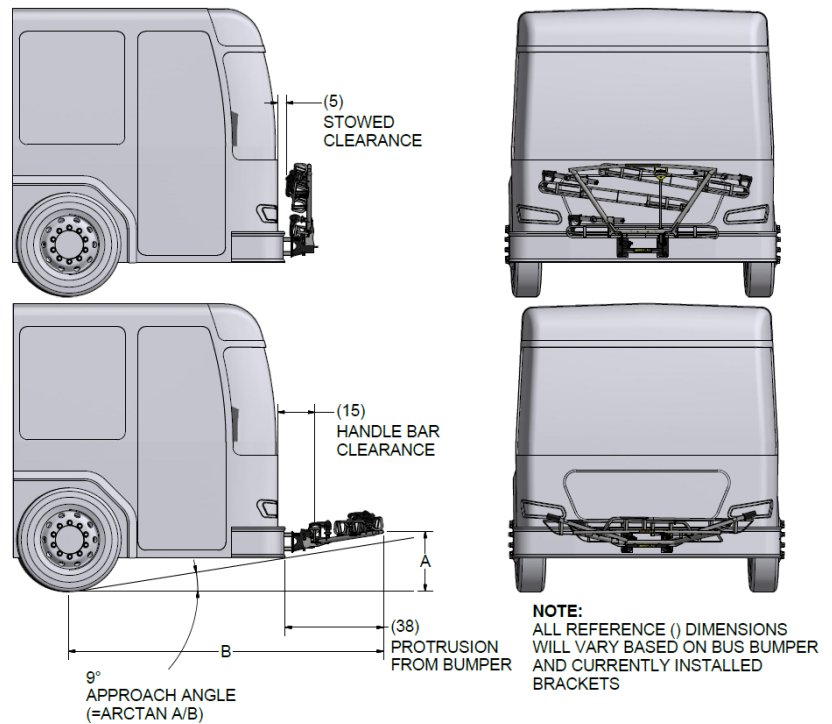
Frame

- **Improved Frame** – New large diameter stainless steel tubing provides maximum corrosion resistance and strength. This stronger tubing reduces "bounce" and other vertical movement generated when the vehicle is moving, resulting in a more safe and secure carrying platform.
- **Reduced Bike Sway** – A new, redesigned Support Arm Pivot Joint has been added that eliminates fore and aft bike sway, and allows the entire Support Arm to be quickly replaced if damaged.



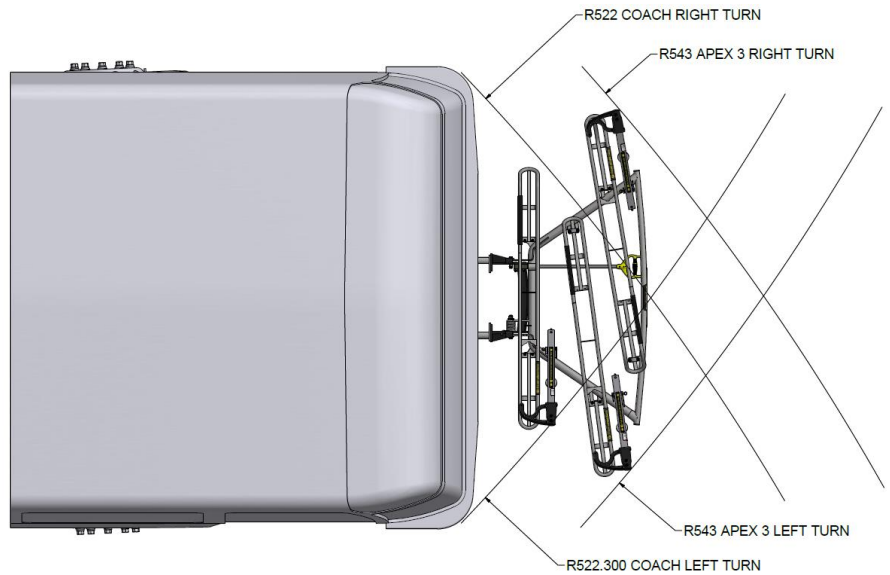
Vehicle Benefits

- Improved Approach Angle –** A new inclined (from back to front) frame extends the required 9.0° approach angle beyond the front bumper of the vehicle. This unique design provides additional ground clearance, and ensures the proper rack height when the vehicle transitions to and from inclined driving surfaces.
- Improved Headlight Clearance –** Careful positioning and configuration of each wheel tray on the frame ensures minimal headlight and turn signal interference on most transit vehicles.
- No Bumper Interference –** The Apex stows in front of the bumper plane, rather than up to and behind the plane like in prior designs. This means the rack will not interfere with the bumper, and has increased distance between the rack and vehicle when stowed.
- Backwards Compatible –** The Apex pivot plate was designed to fit pre-existing Sportworks bumper brackets mounted at the 14" or 18" spacing, making upgrading fast and easy.

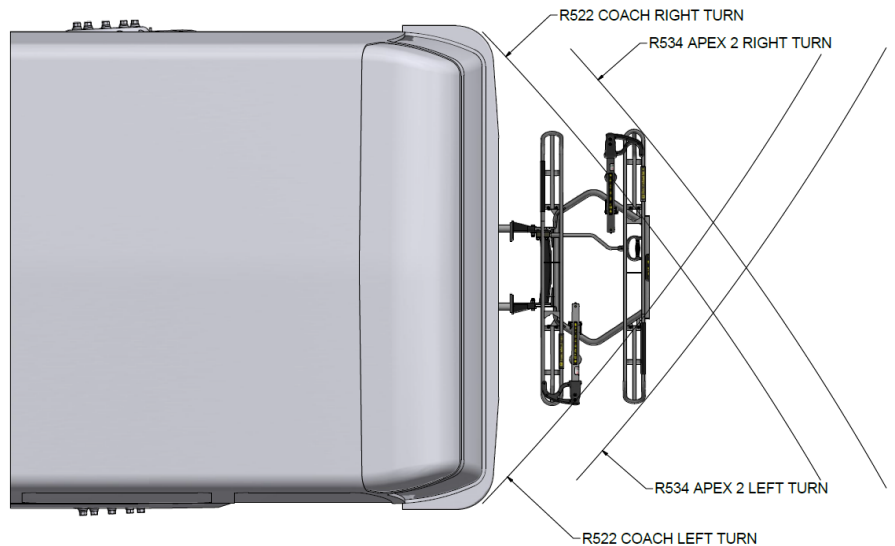


- **Improved Turning Radius**

– A carefully angled bike layout and narrow profile design minimize the racks footprint for better vehicle turn radius and headlight / turn signal visibility, and improved vehicle safety. In addition, the Apex 3™ is the first 3-position rack recommended for use on cutaways and other small vehicles measuring 96" or greater in width excluding mirrors



- **Improved Safety** – With the inner two bike wheel trays facing curb-side, the outer position can be safely loaded and unloaded while standing in front of the bus away from street-side traffic.



Apex Part Numbers

	Part Description	Part Number
Apex Bike Racks	Apex 3 Bike Rack, SS, Anti-Glare Finish	100945
	Apex 3 Bike Rack, SS, Anti-Glare Finish, Bike Counter and Deployment Kit	100945-CNTR
	Apex 3 Bike Rack, SS, Anti-Glare Finish, Deployment Kit	100945-DPLY
	Apex 3 Bike Rack, SS, Anti-Glare Finish, English-Spanish Decals	100945-SPAN
	Apex 3 Bike Rack, SS, Anti-Glare Finish, English-Spanish Decals, Deployment Kit	100945-SPAN-DPLY
	Apex 2 Bike Rack, SS, Anti-Glare Finish	101082
	Apex 2 Bike Rack, SS, Anti-Glare Finish, Bike Counter and Deployment Kit	101082-CNTR
	Apex 2 Bike Rack, SS, Anti-Glare Finish, Deployment Kit	101082-DPLY
	Apex 2 Bike Rack, SS, Anti-Glare Finish, English-Spanish Decals	101082-SPAN
Apex Pivot Plates	Pivot Plate Assembly, Apex 3, 14, 18 mounting	100947
	Pivot Plate Assembly, Apex 3, 14, 18 mounting, Deployment Kit	100947-DPLY
	Pivot Plate Assembly, Apex 3, 14, 18 mounting, Deployment Kit, Quick Release	100947-DPLY-QR
	Pivot Plate Assembly, Apex 3, 14, 18 mounting, Quick Release Kit	100947-QR
	Pivot Plate Assembly, Apex 2, 14, 18 mounting	101175
	Pivot Plate Assembly, Apex 2, 14, 18 mounting, Deployment Kit	101175-DPLY
	Pivot Plate Assembly, Apex 2, 14, 18 mounting, Deployment Kit, Quick Release	101175-DPLY-QR
	Pivot Plate Assembly, Apex 2, 14, 18 mounting, Quick Release Kit	101175-QR
	Ten Second Bracket, Apex	Contact Sales for P/N
Spares	SPARES - Apex Support Arm, Curb Side	101014
	SPARES - Apex Support Arm, Driver's Side	101015
	SPARES - Apex Wheel Tray	101012