**LSR-PCA 2022+ Autocross Classing Rules**

**(Based on PCA Parade and National Rules and Classing Framework)**

1.0 **Classification** Entrants are responsible for properly classifying their automobiles.

1.1 **Categories** There are five categories of classes – Showroom Stock, Production, Improved, Modified and Novice. Categories are related to automobile configuration and experience level.

**Showroom Stock** (S) Category classes are available for a limited number of recently manufactured automobiles. This category contains automobiles exactly as factory delivered and specified for use in the United States and Canada.

The **Production** (P) Category contains automobiles (as normally delivered to the United States and Canadian public through authorized sales outlets of the manufacturer) with limited common performance affecting changes from stock.

The **Improved** (I) Category contains automobiles with more substantial performance-affecting changes. These modifications have defined limits. These automobiles are classed according to their number of cylinders and actual displacement.

The **Modified** (M) Category contains automobiles that have performance-affecting modifications outside of the limits of the Improved category and for race automobiles (factory-built or otherwise). Factory and non-factory race cars are considered modified.

**Novice class** is intended for drivers that have never autocrossed or do not compete on a regular basis. The car must meet criteria for S or P classes. Participants can have competed in no more than three autocrosses in the last twelve months and can never have won their class. Safety and instruction are to be emphasized with an assigned instructor coaching. An instructor will go over the course before the first run and will go over the course after each run is completed.

1.1.2 For the purpose of **Automobile Classification**, Factory options as normally delivered for a specific automobile and/or model year are permitted. Certain factory and/or dealer installed equipment/options will move the automobile out of the Showroom Stock or Production Categories. However, those dealer and factory options that are not considered to improve performance are allowed in the Showroom Stock and Production classes (i.e., trim packages, air- conditioning, etc.).

1.2 Certain Update and Backdate modifications are allowed within the **Production** and **Improved** classifications within specified Update/Backdate Modifications Groups. Those groups are defined in the table below:

**Production and Improved Modification Groups:**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 911 Turbo (930) | 1986-89 |  | 944 | All |  | 9PA: Cayenne | 2004 - On |  | 986: Boxster S | 2000-04 |
| 911 Turbo (964) | 1990-94 |  | 944S | All |  | Cayenne S/GTS | 2003 - On |  | 987: Boxster/S | 2005-2012 |
| 911 Turbo (993) | 1996-98 |  | 944S2 | All |  | Cayenne Diesel | 2012 - On |  | 987: Cayman/S | 2006-2012 |
| 911 Turbo (996) | 2001-05 |  | 968 | All |  | 9SB: Macon S /GTS | 2014 - On |  | 981: Boxster/S/GTS | 2013-2016 |
| 911 Turbo (997) | 2006-13 |  | 924 | All |  | Macon Turbo | 2014 - On |  | 981: Cayman/S/GTS/GT4 | 2013-2016 |
| 911 Turbo (991) | 2014-On |  | 928 | All |  | 944 Turbo (951) | All |  | 718: Boxster/Boxster S/GTS | 2017 - On |
|  |  |  |  |  |  | 986: Boxster | 1997-04 |  | 718: Cayman/Cayman S/GTS | 2017 - On |

1.2.1 Changes outside the Model Range

The degree of updating or backdating will, in most cases, affect the degree of class/category progression. Selective substitution, as opposed to complete substitution, may result in a category change. For instance, if only one or two major components (such as an engine and/or transmission) are substituted from outside the model range without completely updating or backdating the automobile, then the automobile may change categories. However, if an automobile should be completely updated or backdated, it would then be classed according to its new (substituted) model range. An example would be a 1972 911 engine installed in a 1967 chassis. Then to achieve a complete update, a1972/1973 transmission and associated ring and pinion gear must also be installed plus the wheel base must be lengthened and the new weight must be in the1972/1973 range. Items that do not affect performance need not be changed.

1.2.2 Allowances

IF THE RULES DO NOT SPECIFICALLY PERMIT A MODIFICATION, IT IS NOT ALLOWED, EXCEPT IN MODIFIED CLASS.

Allowances are divided up into five categories: Free, Showroom Stock, Production, Improved and Modified. Some modifications are “free,” that is, allowed without effect on classification. Other modifications from Stock are considered to affect performance and therefore may move the automobile into any of the Production, Improved or Modified Class depending on the performance effect of the modification. If certain modifications specified in the text are performed on your automobile, you will be moved to the Production, Improved or Modified class where that modification is permitted. In Modified, the rules specify the minimum requirements necessary to compete.

1.2.3 “Free” Modifications

Safety equipment is free in all classes **except Showroom Stock**, provided limits of any class category are met. Items considered free include harness bars, fire extinguishers, non-factory seat belts, race seats, window nets, head rests, cut-off switches, tow hooks, seat back braces and required mounts for any of the above. In Showroom Stock, attachments points or mounts for any of these items may be left in the automobile, but the actual device will not be allowed to remain or be used if it could be considered to provide the driver or the automobile any performance advantage.

**2.0** **Category Progression**

**Showroom Stock or Production** classes are the starting point in the determination of final classification of the automobiles that have been changed from stock. If an automobile is not a United States- specification automobile, the entrant must be able to prove that the automobile is equivalent to the respective Production automobile (as delivered to the United States public through authorized sales outlets of the manufacturer) to qualify for Production classification or equivalent to the respective Improved automobile to qualify for Improved classification; otherwise the automobile will be classified in the Modified category. DOT and/or EPA Certification alone do not make an automobile equivalent to a U.S. specification automobile.

**2.2** **Showroom Stock Modifications:** Unless otherwise specified in these rules, no alterations or modifications are allowed to these automobiles.

2.2.1 Only original equipment manufacturer (OEM) wheels as originally specified and OEM N-Spec tire sizes as originally provided and/or specified for each specific model year are permitted. All Showroom Stock class tires must have a tread wear rating of 180 or greater.

2.2.1.1 Showroom Stock automobiles, delivered from the factory with tires having tread wear ratings as little as 100, may run in P5 class with their original tires (as allowed in 2.3.5) or in S5 with same size N-spec tires of at least 180 tread wear rating.

2.2.2 Wear and tear items, excluding tires, must be comparable in construction and specifications to the originally supplied factory components. Adjustments are permitted provided no modifications and/or alterations are necessary to achieve the desired adjustment.

2.2.3 Automobiles must run with their spare tire, jack, lug wrench, owner’s manual(s), tools, etc. Owner’s manual(s) will be used to help verify questionable equipment options and designated wheel/tire sizes.

2.2.4 No aftermarket equipment that might be reasonably perceived as performance affecting is permitted in these classes. Items included in this restriction include, but may not be limited to, aftermarket air filters, aftermarket exhaust systems, aerodynamic aids, computer chips, five/six point seatbelts, race seats, harness bars, roll bars, roll cages, etc.

**2.3 Production category automobiles:**

2.3.1 Production Modifications: The Production category is for street automobiles altered beyond the Showroom Stock limits and older Porsches. The following adjustments, alterations or modifications are allowed in the Production class automobiles plus what was allowed in Showroom Stock. Automobiles may be updated to another model provided the entire automobile is brought up to that models specification.

2.3.2 Engine

(a) Air Cleaner: The air cleaner may be removed, modified or replaced with another type. Any modification may not conflict with other rules.

(b) Ignition: Any modification is permitted, provided an original type distributor isused.

(c) Carburetors: Any automobile originally carbureted may have any carburetor, provided the throttle bore and venturi dimensions are not changed from original specifications. Jet sizes may be changed. 911 models with mechanical fuel injection or Solex carburetors may change to replacement carburetors that have throttle bores no larger than 40mm. 914/912E models may be converted to carburetors with throttle bores no larger than 40mm.

(d) Fuel Injection: No substitution of performance affecting components for fuel injected automobiles is permitted. Any DME EPROM chip may be used except for those chips programmed to alter turbo boost. No modifications to the intake manifold are allowed.

(e) Wet Sump Modifications: If an automobile has a wet sump lubrication system, the sump may be modified to ensure a constant source of engine lubrication at the oil pickup tube. If an automobile has a dry sump lubrication system, no modifications are permitted.

(f) Oil Cooler/Filter: The addition of any oil cooler and/or filter is permitted.

(g) Roller Bearing Cranks: For 356-based or Carrera 4-based engines, any roller bearing crank may be used. Plain bearing cranks may be substituted for roller bearing cranks. Counter balanced cranks are permitted.

(h) Balanced Engine: Balancing of internal engine parts is permitted.

(i) Camshafts: The stock camshaft must be used.

(j) Exhaust Modifications: Alternate exhaust systems are permitted after the head(s) for automobiles with or without catalytic converters. Headers are permitted. A muffler is required. Air pumps may be removed.

(k) Air Conditioning: Removal is permitted provided original automobile may have been delivered without it.

(l) Overbore: Overbore is allowed up to 1.2MM (0.047”).

(m) Gasoline: Any grade of automotive gasoline available to the general public through normal retail service stations is permitted.

(n) Clutch: Any model clutch is allowed. Rubber center clutch discs may be replaced with spring discs. The flywheel and pressure plate may be lightened.

(o) Velocity Stack: Velocity stacks ma y be added or modified.

(p) Compression Ratio: Engine compression ratio may be increased up to .5 points from U.S. production specifications.

(q) Fuel Pump: Fitting of an electric fuel pump is permitted.

(r) Chain Tensioners/Guards: Any chain tensioner or guards are permitted.

(s) Battery: Any battery may be used. Those automobiles delivered with two batteries may remove one.

2.3.4 Suspension

(a) Suspension Adjustments: Any adjustment of the standard suspension components is permitted, provided no machining is required for the adjustment. Factory components must be used for mounting of struts and shock absorbers to the body.

(b) Alignment: Any adjustment may be made provided no other change is necessary to make the adjustment.

(c) Coil Springs/Torsion Bars: Any coil spring may be replaced by any other coil spring. Any torsion bar may be replaced by any other torsion bar as long as they are of the same type and mount in the same manner without modification to the chassis or suspension components.

(d) Shock Absorbers: Any shock absorber may be used provided it is not remotely adjustable.

(e) Adjustable spring perches are allowed.

(f) Sway Bars: Any anti-sway bar may be installed. Sway bar may not be adjustable from the cockpit.

(g) Rear Camber Compensation (356 Only): Any rear camber compensating device may be used.

(h) Bushings: Non-standard (non-elastic) suspension bushings may be used.

(i) Shock Tower Brace: A front and/or rear shock tower brace may be used in any automobile provided that:

(1) It must be a bolt-in component that can be quickly and easily removed. Any number of attachment points may be used;

(2) All attachment points are within three inches of a vertical plane passing through the top center of the shock absorber.

(j) Spring Plates: Adjustable spring plates are permitted on any automobile not so equipped from the factory.

(k) Tie-Rod Ends: The use of 911 Turbo tie-rod assemblies is permitted.

(l) Hydro-pneumatic Suspension: Removal of this suspension is allowed.

(m) A-Arms: 924/944/968 series may use aftermarket A- Arms provided suspension geometry is not altered.

(n) Water-cooled cars (1996-On) can use GT3 style lower control arms, and caster control arms and any rear toe links may be used.

2.3.5 Brake/Wheel/Tire

(a) Tires: All tires must be Department of Transportation (DOT) approved. Any DOT tire may be used providing they have a visible tread, have DOT wear indicators and have visible tread across the entire tread surface. Tires must have a minimum tread wear of 180 unless it is a Showroom Stock automobile running in the correct Production Category class. Tire aspect ratio and width is free but must fit under the stock fender wells. Tires must be marketed nationally and generally available to all competitors. The cord may not be visible before, during, or after runs. Recapped tires or re-grooved tires are not allowed. Competitors are responsible for policing the “rubbing tire” rule and protests must be made before timed runs.

(b) Track Width: Modifications to track width by the use of wheel spacers and/or wheel offset are permitted provided no modifications to the automobile, other than increasing the stud/bolt length, are performed. Increase may not be more than 1.0” over stock. Only 356 models with drum and very early disc brakes may use individual spacers for each wheel stud.

(c) Brakes: Pads, linings, and brake lines of any manufacture may be used. Any type of brake cooling may be used. Rotors may be drilled or slotted. Brake bias valve may be changed but cockpit adjustable valves are not permitted. Cars with ceramic rotors may change them to stock dimension alternate material rotors.

(d) Increased Rim Width: Rim width may be increased up to 1.0” over the widest rim available from the factory (front and rear respectively) for that model range so long as the width does not extend beyond the stock fender width as measured from the top of the tire and fits the stock fender wells.

(e) Wheels: All wheels shall be the same diameter as available from the factory for the model range of the automobile or within an increase or decrease of 1.0” from the factory specifications.

(f) Spare Tire: The supplied spare tire may be removed.

(g) Wheel Bolts: Cars using wheel bolts may change to studs, as long as factory thread engagement is maintained

2.3.6 Chassis/Body/Interior

(a) Limited Fender Modifications: Fenders (including wheel openings) may be modified provided the tire - wheel -spacer combination and ride-height setting used could be used without the fender modification (i.e., could be used on an unmodified automobile of the same model and year.)

(b) Interior Modifications: Any accessory, gauge, or indicator may be fitted if its purpose is to improve driver or passenger comfort or convenience and provided such items have no effect whatsoever on mechanical performance. Alternate seats may be used and floor mats may be removed. Any steering wheel is allowed.

(c) Roll Bars: Roll bars are permitted. Full interior roll cages are not permitted.

(d) Spoilers: Any rear spoiler, unless as delivered as a factory option, is permitted provided the leading edge of the spoiler is attached to the automobile, the spoiler is no wider than the stock body width and the spoiler doesn’t exceed 5” in height from the leading edge. Any rear wing may be used as long as it is not wider than the door handles; does not extend past the rear of the car; no part is higher than the roof; and has less than six (6) square feet of area for all wing element. (measured from directly above the car).

(e) Air Dams: Any front air dam or splitter, unless as delivered as a factory option, is permitted provided it does not extend to less than 2.5 inches above the ground and not more than 4 inches forward of the front bumper. Splitters cannot be wider than the bumper.

(f) Seam Reinforcement (914 only): Seam reinforcement kits are permitted “free” on 914s, provided each reinforcement is limited to a single seam and that all reinforcements combined do not substantially increase the rigidity and stiffness of the chassis. It is recommended to 914 model owners to have the chassis inspected for rust on a periodic basis.

(g) Bumpers: Bumpers may be removed on any 356 series automobile.

(h) Bolt-on windshields: Bolt -on windshields may be removed.

(i) Jack/Tools/Manuals: Removal of jack, tools and owner’s manual(s) is allowed.

2.3.7 Transmission

(a) Limited Slip: Any type of differential is permitted in all automobile. Spools or welded differentials are not permitted.

b) Gear Shift Linkages: Gear shift linkages may be modified or exchanged. This permits the use of a short shift kit in any automobile or the use of side –shifter transmission in any 914.

**2.4 Improved Modifications**

The Improved category is for street vehicles with modifications beyond those allowed in the Production. The modifications are limited but much more liberal than those in the Showroom Stock or Production Categories. The following adjustments, alterations, or modifications are allowed in the Improved category automobiles plus what was allowed in the Showroom Stock and Production classes.

2.4.1. Engine

(a) Mufflers: Mufflers may be removed provided this is permitted by the event organizer and the local authorities/jurisdiction.

(b) Ignition: Any ignition system is allowed.

(c) Gasoline: Any gasoline is permitted.

(d) Engine Substitution: Any Porsche engine is permitted in any Porsche automobile.

(e) Fuel Management: Automobiles may use any fuel management/induction system including chips or other means that alter turbo boost. Turbochargers or superchargers are permitted.

(f) Compression Ratio: Engine compression ratio’s maybe increased up to 1.0 points.

(g) Battery Location: The battery may be located anywhere within the automobile.

(h) Intake System: Any intake system may be used.

(i) Wet/Dry Sumps: Any change or addition is permitted.

(j) Cam shafts: Any camshaft may be used.

2.4.2 Suspension

(a) Shocks Absorbers: Multi-adjustable or remotely adjustable shock absorbers are permitted.

(b) Camber Plates: Camber plates are permitted. Machining of factory mounting points is permitted to allow greater suspension adjustment.

(c) Raised Spindle: Raised spindles are permitted on strut type suspensions.

(d) Suspension Mounts: Any suspension mount may be used provided the number of mounting points and mounting locations remain as factory.

(e) Suspension Arms: Any suspension arm may be used provided use requires no other automobile modifications. For example, this includes the use of any lower control arm, tie rod assembly and/or bump steer kit.

2.4.3 Wheel/Brake/Tire

(a) Brakes: Any brake modifications are permitted. Any brake biasing valve is permitted.

(b) Tires: Any DOT tire is permitted. The cord may not be visible before, during or after official timed runs.

(c) Track Width: Modifications to track width are permitted up to 2.0” over stock. Only 356 models with drum and very early disc brakes may use individual spacer for each wheel stud.

(d) Increase Rim Width: Rim width is free so long as the width does not extend beyond the fender.

(e) Wheels: Wheels may be any diameter.

2.4.4 Chassis/Body/Interior

(a) Roll Bars/Roll Cages: Roll bars or full interior cages are permitted. For Cabriolet or Convertible Cars, any car delivered with factory installed roll over protection meets the minimum standards. See **Appendix** for additional information, specifications and requirements for non-factory roll over protection.

(b) Spoilers: Any rear spoiler, delivered as a factory option, is permitted. All others are permitted provided the leading edge of the spoiler is attached to the automobile. The spoiler can be no wider than the stock body width and the spoiler does not exceed 10 inches in height, from the leading edge. Any rear wing can be used as long as it is not wider than the door handles; does not extend past the rear of the car; no part is higher than the roof; and has less than 8 square feet of area for all wing elements (measured from directly above the car)

(c) Air Dams: Any front air dam or splitter delivered as a factory option is permitted. All others are permitted provided it does not extend to less than 2 inches above the ground and not more than 5 inches forward of the bumper. Splitters cannot be wider than the front bumper.

(d) Interior: Automobile, at minimum, must have dashboard, windows (glass or Plexiglas), visors (if originally equipped), headliner, and door panels. The original number of seats and passenger restraints must be present. Removal of mats and loose carpeting is allowed (i.e., what isn’t originally screwed and/or glued down). Headlights, taillights, brake lights and turn signal lights must be operational.)

(e) Bodywork: The use of fiberglass or other material body components is permitted for the following components: hoods (front and rear), rear deck lids, bumpers and rocker panels.

(f) Fenders: Fenders may be altered to allow fitting of alternative wheels and tires. All four tires shall not extend beyond the fender opening at the highest point of the tire.

(g) Fuel Tanks: Fuel tanks may be changed and/or relocated.

2.4.5 Transmission

(a) Transmission: Any Porsche-based transmission is permitted.

(b) Transaxle gear ratios. Any ratio set may be used outside of the specified gear set. Ring and pinion may be altered.

(c) Limited Slip: Any differential may be used.

2.5 **Modified Modifications**

The modified category includes all automobiles modified beyond the allowable limits specified in the Showroom Stock, Production and Improved categories as well as some Limited Production and “tuner” automobiles. These rules provide the minimum that is required for the automobile to compete in this category. Some items are specified that are not allowed in this category. Unless defined as a production vehicle with complete documentation proving so, all racing, rally and special non–production Porsche models shall be included in this category.

2.5.1 Engine

(a) Engine: A Porsche-based engine is required.

(b) Displacement: The displacement may be increased to that of the maximum in the class.

(c) Fuel Management: Modifications to the fuel injection or carburetor systems are free. The use of turbochargers or superchargers other than those used in production is permitted by class allowance. Modified boost pressure is permitted.

(d) Ignition: Any ignition system is permitted.

(e) Nitrous Oxide Systems: These systems are not permitted.

2.5.2 Suspension

(a) Machined Suspension: Any adjustment maybe made and machining is allowed (such as machining to attain negative front camber on 356-series cars). Suspension points may be relocated.

(b) Multi-linked Suspension: This suspension type is permitted and is free.

2.5.3 Wheels/Brake/Tire

(a) Wheel and Tire: Any wheel and tire combination is permitted. Non-DOT tires are permitted. The cord may not be visible before, during or after official timed runs.

2.5.4 Chassis/Body/Interior

(a) Chassis: Original Porsche-based chassis, unibody or tube frame chassis is permitted.

(b) Roll Bars/Roll Cages: Roll bars or full interior cages are permitted. For Cabriolet or Convertible Cars, any car delivered with factory installed roll over protection meets the minimum standards. See **Appendix** for additional information, specifications and requirements for non-factory roll over protection.

(c) Bodywork: Automobile bodywork must maintain recognizable external features of the Porsche model. Tires may extend beyond the fender opening. Automobile bodywork must include a front and rear trunk or deck lid and doors.

2.5.5 Transmission

(a) Transmission: Any transmission is allowed.

**Class Chart:**



**Appendix: Roll Bars / Roll Cages**

Roll bars are required in open vehicles driving in Improved and Modified classes, Cages are optional. For purposes of these rules, if you chop the top off of your automobile, it is considered a convertible.

**Automobiles with original factory rollover protection, unaltered, will be considered as adequately meeting this requirement.**

Cabriolet/Convertible Cars: Any make of car delivered with factory installed roll over protection meets the minimum standards. If an open car does not have factory installed roll over protection, a roll bar or roll cage must be installed, which meets the following requirements. The windshield alone is not considered to be factory roll over protection.

**ROLL BAR/CAGE SPECIFICATIONS**

**Roll Bars:** All provisions under section “Roll Cage and Bars” apply. Note that roll bars without terminal mounting plates braced on the frame are not acceptable. In open cars, the top of the main hoop must be at least 2” above the driver’s helmet when the driver is seated in the normal driving position. Any portion of the assembly which may come in contact with the driver’s helmet must be covered with high density foam at least 3/4” thick held securely in place with zip ties, electrical tape or duct tape. Foam must be equivalent to SFI 45.1 or FIA 8857 standards for hardness.

**Roll Cages and Bars:** The roll cage/roll bar must be securely mounted with the mounting plates at the bottom of the hoops mounted directly to the floor and/or longitudinal members of the unibody and make metal to metal contact. Any padding, carpet, upholstery, etc. must be removed to satisfy this requirement. The mounting area of bolt-in roll cage/roll bar must be backed by a plate of a size equal to that of the upper mounting plate with a minimum thickness of 3/16”. Bolts must be grade 5 or higher. The roll cage/ roll bar must be full cockpit width, except as originally supplied by the factory for open racecars, and have two fore/aft tubing braces. The braces must be mounted as near to the top of the main hoop as possible at an included angle of at least 30 degrees. Also, the assembly must contain a diagonal (left to right side) tubing brace from one upper side of the main hoop to a floor or unibody lower frame mounting point of a bar member on the other side to obtain the strength benefits of triangulation.

Roll cage/roll bar tubing Production Classes must remain within the passenger compartment. The removal of the door glass to facilitate side impact protection is allowed. Carbon fiber roll cages or bars are not allowed. The top of the main hoop must be at least 2” above the driver’s helmet. The plane formed by the top of the main hoop and the top of the windshield frame for a roll bar, or front hoop of a roll cage must be above the driver’s head in both closed and open top cars.

**Roll Cages:** The roll cage must have a full width main hoop and a full-width front hoop or two side halo hoops around the door opening connected by tubing across the top of the entire windshield. The tops of the hoops must be as close to the roof as closely as possible in closed-top cars. In open-top cars, the top of the main hoop must be at least 2” above the driver’s helmet, and the plane formed by the top of the main hoop and the top of the front hoop must be above the driver’s head in both closed and open top cars. The front (or side halo) and main hoops must go to the floor pan and be connected with each other with tubing as close to the roof line as possible. The cage must have at least one additional bar across the door opening below the window level on each side connecting the front and main hoops for side impact protection. Additional side impact protection (two bars or “NASCAR” style bars protruding into the door) is strongly recommended.

**Factory Roll Cages** as delivered in factory race cars are allowed. Roll cages sold or installed by Porsche in street cars are allowed in stock class cars if certified to meet FIA regulations. If the car exceeds the stock class rules, then a cage meeting the specifications above must be installed.

**Minimum Roll Bar Tubing Sizes** - Car Weight without Driver

All required tubing must have the following minimum diameters and wall thicknesses:

|  |  |  |
| --- | --- | --- |
|  | Under 1500 lbs. | Over 1500 lbs. |
| Mild Steel | 1.5” x .120” | 1.75” x .120” |
| Alloy Steel | 1.375” x .090  | 1.625” x .095” |

**Minimum Roll Cage Tubing Sizes** - Car Weight without Driver

All required tubing must have the following minimum diameters and wall thicknesses:

|  |  |  |
| --- | --- | --- |
|  | Under 2500 lbs. | Over 2500 lbs. |
| Mild Steel | 1.50” x .095” | 1.75” x .095” or 1.50” x .120” |
| Alloy Steel | 1.375 x .095”  | 1.50” x .095” |