

## **A: INTRODUCTION**

## The Gen 2 Late Model Body

The Five Star Gen 2 Late Model Body was designed to give Late Model Racing the updated look it needed after 15 years of the current body style.

Designed according to ABC Program guidelines and with the intention of full ABC approval, this body was developed to be aerodynamically equal to the current ABC body. Because of this, the body will utilize the same "Referee" for tech purposes. The Gen 2 LMB has been embraced by many Late Model racing associations across the USA and Canada.

The new body features common body panels with three different brand front noses: Chevrolet Camaro, Ford Mustang, and Toyota Camry. These front noses have significantly more brand identity than the current ABC front noses. Among some of the other benefits of the new body are a wider greenhouse with fire-retardant resin, more fender clearance, and two inches of yaw built into the quarter panels and bumper covers.

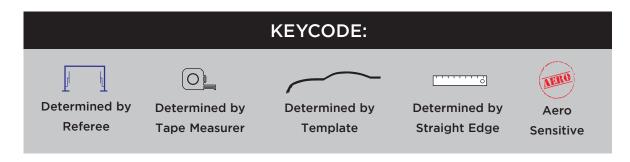
Five Star aimed to design the body in a way that would eliminate as many gray areas as possible in the mounting process. Not only has this made for an easier install, but it also promotes installation standards. These improvements will facilitate the technical inspection process significantly, resulting in competitive balance for all cars.





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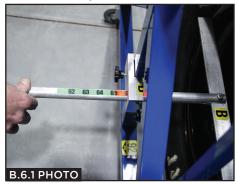


## **B: GENERAL BODY REQUIREMENTS**

It is the responsibility of all competitors to present a car that fits the templates within allowable tolerances and meets all dimensions as inspected by the "Referee."

- The following Gen 2 body styles produced by approved manufacturers are eligible for competition: Chevrolet Camaro, Ford Mustang, and Toyota Camry. All Gen 2 body panels must be produced by approved manufacturers.
- 2. The entire body must be from one manufacturer. Mixing of panels from different manufacturers will not be allowed.
- 3. All body panels must be mounted as produced by the manufacturer.

  Modification or alteration of panels will not be allowed.
- 4. All body panels and windows must be mounted and properly braced on the chassis to prevent deflection under racing conditions.
- 5. Only approved body panels produced by approved manufacturers will be allowed for competition. Composite and aluminum panels, plastic fenders, and plastic quarter panels must have manufacturer's identification labels that are visible in designated location and not painted over. All molded plastic parts must have molded-in part numbers and manufacturer's identification with the exception of the rocker panels.





6. This body is designed for a maximum tread width of 66 inches.



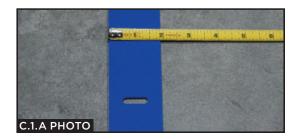
- 7. This body is designed for a wheelbase range of 101-106 inches.
- 8. The body must be mounted parallel to the centerline of the car.
- 9. All body panels are designed to fit the templates within the tolerances as indicated on the template with a colored line. The blue colored line equals 1/4 inch. All other areas will equal 1/2 inch.
- 10. All cars competing in a race event must have a complete, well-appearing body. Headlight and taillight decals are recommended for brand identity.
- 11. Approved aluminum body panels will be a minimum of .040 inch thick.
- 12. All dimensions and template inspections will be done with the driver out of the car.
- 13. An aero stamp used within this rule book indicates that the dimension or tolerance mentioned is aero sensitive. Maintaining the dimensions and tolerances in these areas is important to maintain aero equality.



14. The template package consists of the following templates: **Body Centerline, Nose Centerline, Left**& Right Fender, Hood Pin Bar, Roof Front Side-to-Side, Roof Rear Side-to-Side, and Nose Side-to-Side. The Rear Body Side-to-Side is optional. Refer to the template guide on page 20.

## 1: FRONT NOSE

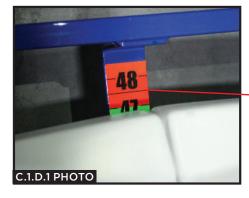
A: In the event that the lower part of the nose has been worn off, a replacement wear strip may be installed on the nose. This part will be made from plastic only, and must measure a maximum of 1-7/8 inches tall. The valance piece must be mounted in the same plane as the original air dam and will be subject to tech approval.

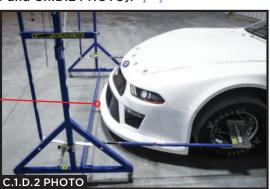


B: The nose is manufactured with a finished wheel opening and must not be altered in any way (C.1.B PHOTO).



- C: The nose piece must be supported by a tubular support to the chassis. These support tubes must remain on the inside of the nose piece, and may not extend through or past the bumper.
- D: The maximum front overhang from the centerline of the spindle to the leading edge of the lower air dam at the centerline is 47 inches (C.1.D.1 PHOTO and C.1.D.2 PHOTO).





## 1: FRONT NOSE, cont.

E: The maximum distance from the bumper line to the leading edge of the air dam is 4-1/2 inches including the wear strip. This dimension will be regulated by the **Nose Centerline template** (C.1.E PHOTO).



F: The nose must fit the **Nose Centerline template** within the allowable tolerances (C.1.F PHOTO).





G: The maximum width of the nose at the wheel opening will be 79-1/2 inches. This dimension can be checked with the **Nose Side-to-Side template**.





H: The shape between the **Nose Centerline** and **Fender templates** at nose/hood intersection will be controlled with the **Hood Pin Bar template** (C.1.H PHOTO).





I. The grill area above the bumper line cannot be cut out for any reason. All radiator cooling air must be obtained from the grill area below the bumper line.

## 2: HOOD

- A: The only alterations allowed to the hood will be trimming the outer edge to fit the nose, fenders, and cowl.
- B: All hoods must be adequately braced so they do not deform under racing conditions.
- C. The hood must fit tight to the fenders and cowl at all times.
- D: The only open holes allowed to be drilled in the hood are for the hood pins, and only one hole is allowed per pin.
- E: All hoods shall have a minimum of four positive locating pins across the leading edge of the hood. Each hood pin is allowed only one hole for the fastening clip (C.2.E PHOTO).



F: The hood must fit the **Nose Centerline** (C.2.F.1 PHOTO) and **Body Centerline template** (C.2.F.2 PHOTO) within the allowable tolerances with the hood pins installed.





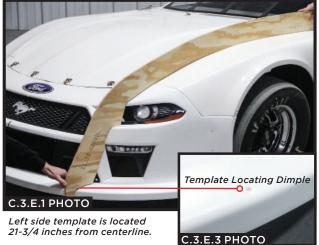


## **3: FENDERS**

- A: Only approved fiberglass or molded plastic fenders produced by approved manufacturers containing visible labels will be allowed for competition.
- B: The only alterations allowed to be made will be trimming excess material from the trailing edge of the fender at the fender/door intersection to allow for wheelbase variations.
- C: All fenders must be flange fitted to the nose.
- D: Wheel openings may not be larger than 7 inches from the edge of the wheel (not the tire) on the front and rear of the wheel opening (C.3.D PHOTO). Altering the wheel openings is prohibited.  $\bigcirc$



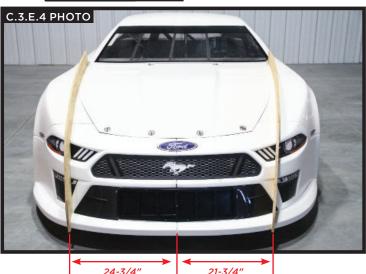
E: The left fender must fit the **Left Fender/Nose template** (C.3.E.1 PHOTO) and the right fender must fit the **Right Fender/Nose template** (C.3.E.2 PHOTO) within the allowable tolerances. There are dimples on the top of the air dam to indicate the proper position for the fender template at the front as shown in photo (C.3.E.3 PHOTO).





Right side template is located 24-3/4 inches from centerline.





Both fender templates are located at the intersection of the fender and hood at the rear of the template.

## 4: ROOF PANELS

- A. A common roof will be used for all body styles. The roof is manufactured in two sections front and rear. The cowl is integrated into the front section of the roof. The "B" and "C" pillars as well as the deck lid filler are integrated into the rear-roof section.
- B. The roof is designed to be 2-1/2 inches left of the centerline of the body.
- C. Roof rails will not be permitted.
- D. The roof height is measured 10 inches back from the windshield/roof intersection on the centerline. The height will be 47 inches minimum. This dimension coincides with the minimum rear door height of 33 inches and the minimum deck lid height of 34-1/4 inches. If these dimensions are higher, the roof height must increase by the same amount. This height will be checked using the "Referee" (C.4.D PHOTO).



E. The air intake opening must be 2-1/2 inches x 20 inches plus or minus 1/16 inch (C.4.E.1 PHOTO) (C.4.E.2 PHOTO). This will be regulated by the **Air Intake template** (C.4.E.3 PHOTO).







F. Quarter panel window areas must be cut out to scribe line and have polycarbonate windows in both the left and right sides.

## 4: ROOF PANELS, cont.

G. The height of the roof is regulated with the **Body Centerline template** (C.4.G.1 PHOTO), the **Roof Rear** 

**Side-to-Side template** (C.4.G.2 PHOTO), and the **Roof Front Side-to-Side template** (C.4.G.3 PHOTO).



The correct location for the **Body Centerline template** (C.4.G.1 PHOTO) is 2-3/4 inches to the right of the hashmarks at the front and rear of the roof. From the roof, the template extends down to the hood at the front and between the spoiler halves at the rear. The hashmarks are located above the windshield and above the rear window.



The **Roof Rear Side-to-Side template** (C.4.G.2 PHOTO) is located at the top corners of the rear window at a  $90^{\circ}$  angle to the roof (C.4.G.4 PHOTO). It extends down the quarter panel across the quarter window, over the top of the quarter panel, and down to the wheel opening.

The **Roof Front Side-to-Side template** (C.4.G.3 PHOTO) is located at the top corners of the windshield and extends down to the top of the doors and part way down the side of the door. The proper placement of this template is at a 90° angle to the roof (C.4.G.4 PHOTO) and 20 inches back from the trailing edge of the "A" post where it meets the door.

See Template Reference Guide on page 20





It is important to hold the template at a 90° angle to the roof

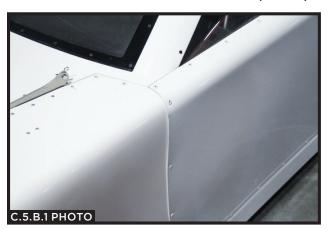
## 5: DOORS

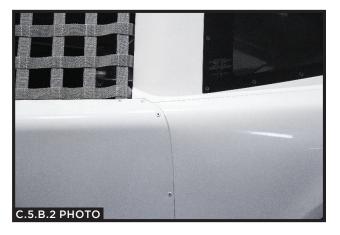
A. The width of the top of the doors will be controlled by both the **Roof Front Side-to-Side** (C.5.A.1 PHOTO & C.5.A.2 PHOTO) and the **Roof Rear Side-to-Side** (C.4.G.2 PHOTO, page 10) templates.



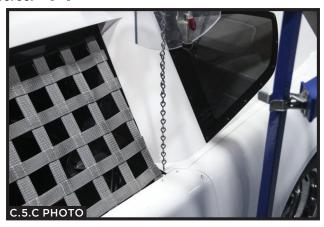


B. The front of the door must fit in the recess in the base of the "A" pillar (C.5.B.1 PHOTO) and the rear of the door must fit in the recess on the quarter panel (C.5.B.2 PHOTO).





C. The height at the rear of the door will be **33 inches minimum**. This dimension coincides with the minimum roof height of 47 inches and the minimum deck lid height of 34-1/4 inches. If these dimensions are higher, the door height must increase by the same amount. This height will be checked with a chain on the "Referee."



## 6: QUARTER PANELS

A. Wheel openings may not be larger than 7 inches from the edge of the wheel (not the tire) on the front and rear of the wheel opening (C.6.A PHOTO). Altering the wheel openings is prohibited.



- B. All quarter panels now are manufactured with a finished rear edge that fits into the recess of the bumper cover.
- C. The quarter panels must fit the **Roof Rear Side-to-Side template** within the allowable tolerances (C.6.C PHOTO).



D. The height at the quarter panel/deck lid/bumper cover intersection will be 34-1/2 inches (34-1/4 inches minimum) on both the left and right sides (C.6.D PHOTO).



## 6: QUARTER PANELS, cont.

E. The quarter panels must be mounted at the same plane as the deck lid and the top of the bumper cover as shown (C.6.F PHOTO).





F. The **Rear Body template** works with the **Body Centerline template** (C.4.G.1 PHOTO on page 10) to maintain the proper shape of the decklid and the shape of the top of the quarter panels (C.6.G.1 PHOTO). It is centered between the window and decklid hold-down recess (C.6.G.2 PHOTO).





## 7: FENDER/DOOR/QUARTER

A. The fender (behind wheel), the door, and quarter panel (in front of wheel) must be perpendicular to the ground for the first 15 inches. The maximum gap is 3/8 inch for the first 15 inches up from ground (C.7.A.1 and C.7.A.2 PHOTO). The measurement will be taken from the leg of the quarter panel to the framing square as indicated with the arrow.



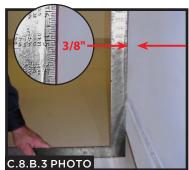


## 8: ROCKER PANELS

- A. Only aluminum or molded plastic approved rocker panels produced by approved manufacturers will be allowed for competition.
- B. Rocker panels must be mounted in a single plane from the front to rear and top to bottom as shown (C.8.B.1 PHOTO, C.8.B.2, and C.8.B.3 PHOTO).







- C. The only alterations allowed to be made to the rocker panels will be notching for the jack posts and trimming to length.
- D The offset in the rocker panel for rigidity must be a maximum of 1/4 inch and must run parallel to the bottom edge of the rocker panel. ⊙\_
- E. The minimum height of the rocker panel will be 4 inches from the racing surface.

## 9: DECK LID

- A. Only approved aluminum deck lids produced by approved manufacturers containing visible labels will be allowed for competition.
- B. The deck lid must be able to be opened for inspection purposes.
- C. The deck lid must fit to the **Body Centerline template** within the allowable tolerance of 1/4 inch (as indicated by blue line on template) (C.9.C PHOTO).





## 10: REAR BUMPER COVER

- A. The bumper cover is designed in a manner that, when the spoiler is mounted, the dimension from the centerline of the rear axle to the base of the spoiler at the centerline will not exceed 47 inches (see C.11.K.1 PHOTO and C.11.K.2 PHOTO on page 16).
- B. The bumper cover must be supported and securely fastened to prevent it from deforming under race conditions.
- C. The bumper cover must be mounted to fit the **Body Centerline template** (C.9.C PHOTO above) for the correct rear overhang dimension.
- D. The bumper cover must be mounted at the same plane as the deck lid and the top of the quarter panel as shown (C.10.D PHOTO).



## 11: SPOILER

- A. Only approved spoilers produced by approved manufacturers will be allowed for competition.
- B. An approved rear spoiler must be a non-adjustable (from the driver's compartment) part of the body that controls the flow over one surface only.
- C. There will be two options for the size of the polycarbonate spoiler blade to be determined by the sanctioning body. Both size options will use the same base:
  - C.1 Option #1 RECOMMENDED 6 1/2 inches tall by 60 inches wide. 🔍
  - C.2 Option #2 5 inches tall by 60 inches wide.



- D. The maximum width of the spoiler will be measured across the rear of the spoiler (C.11.D PHOTO).
- E. The maximum height of the top corners of the spoiler left and right will be 41 inches for a 6-1/2-inch spoiler and 39-1/2 inches for a 5-inch spoiler with the deck lid at the correct height.
- F. The polycarbonate blades must be mounted on the **front side** of the spoiler base (C.11.F PHOTO).



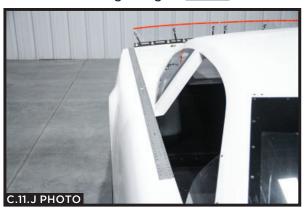
- G. The spoiler must maintain the same contour as the bumper cover.
- H. The spoiler must be centered on the bumper cover seam.

## 11: SPOILER, cont.

I. The spoiler must have a minimum 1/2 inch to maximum 5/8 inch split in the center to accommodate the **Body Centerline template** (C.11.I PHOTO). The ends of the left and right spoiler halves that create the gap for the Centerline template **must be an equal distance from the bumper cover seam.** 

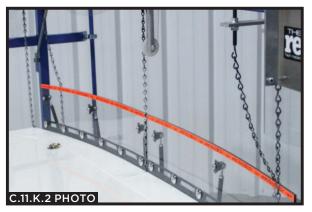


J. The method of checking the location of the spoiler is pictured below (C.11.J PHOTO). Align an eight-foot straight edge with the top inside edge of the right door and the hashmark at the top of the quarter panel (which is approximately 1-1/2 inches from the rear edge of the quarter panel). The right edge of the spoiler must be within 1/4 inch from the straight edge.



K. The base of the spoiler at the centerline may not exceed 47 inches from the centerline of the rear axle (C.11.K.1 PHOTO and C.11.K.2 PHOTO).





- L. Rudders or forward mounted brackets will not be permitted.
- M. Spoiler supports mounted from the rear side of the spoiler to the bumper cover will be permitted.
- N. A minimum of the top 3-1/2 inches of the rear spoilers of all cars must be made of clear, unformed polycarbonate with a minimum thickness of 3/16 inch. It is recommended that the majority of this area remains free of visual obstructions.

## **D: WINDOW SPECIFICATIONS**

#### GENERAL DISCLAIMER

All polycarbonate windows must not be installed using rivets as it is likely to shorten the lifespan of the window. The pressure exerted on the surface of the window during rivet installation will eventually cause fracturing and/or stress cracking. Instead, machine screws with nylon lock nuts should be used.

#### 1: WINDSHIELD

- A. A clear, molded polycarbonate windshield with a minimum thickness of 1/8 inch must be used in all cars. The same shape windshield will be used for all body styles. Flat, unmolded windshields are not allowed.
- B. All windshields must be supported by a minimum of three internal windshield braces to prevent deflection under racing conditions.
- C. The windshield braces must be mounted in the recesses provided in the window bed.

#### 2: REAR WINDOW

- A. A clear, molded polycarbonate rear window with a minimum thickness of .093 inch must be used in all cars. The same shape rear window will be used for all body styles. Flat, unmolded rear windows are not allowed.
- B. All rear windows must be supported by a minimum of three internal rear window braces to prevent deflection under racing conditions.
- C. The rear window braces must be mounted in the recesses provided in the window bed.
- D. A maximum of three holes will be allowed in the rear window. The holes must lead directly to an adjuster (screw jacks and/or track bar). The maximum diameter of the holes allowed will be 1 inch.

## **3: QUARTER PANEL WINDOWS**

- A. Clear polycarbonate quarter panel windows with a minimum thickness of .093 inch must be used in all cars.
- B. Flat or molded quarter panel windows are allowed for competition.

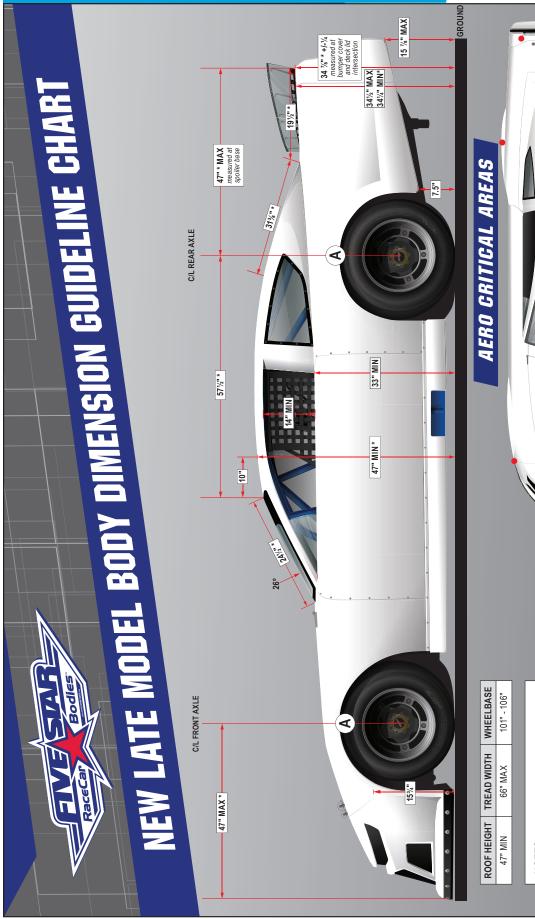
#### 4: DOOR VENT WINDOWS

A: The maximum dimension for the vent window along the top of the door will be 12 inches (D.4.A.1 PHOTO) and must go 90° from the top of the door up to the "A" post (D.4.A.2 PHOTO).





# **E: DIMENSION GUIDELINE**



Quarter Panel, or Bumper Cover Height dimensions are higher than the stated minimum dimensions, all four must 1. If the Roof Height (10" back from windshield), Door Height (rear),

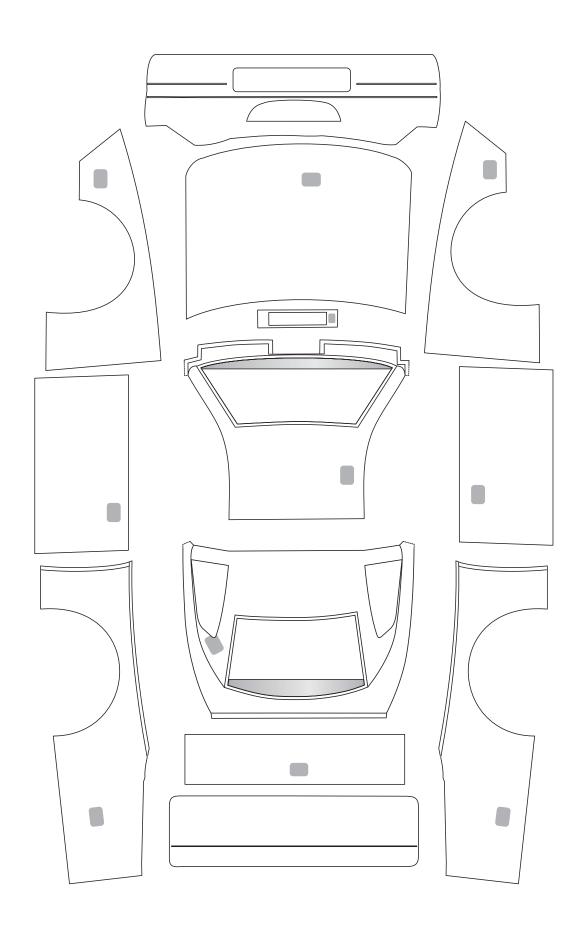
4

Must fit centerline template within increase by the same amount. allowable tolerance.

Measured at wheel wells 791/2" MAX BODY WIDTH:

Measured at the centerline.

# F: BODY PANEL LABEL LOCATIONS



## **G: TEMPLATE REFERENCE GUIDE**

#### **Nose Centerline**

Camaro (PN 11132-82333)
Camry (PN 11712-82333)
Mustang (PN 11322-82391)
Controls the shape of the nose and hood

#### **Nose Side-to-Side**

Common (PN 11002-82491)
Checks the maximum width of the nose at the wheel opening (79 - 1/2 inches). Also checks the nose offset from left to right.

#### **Body Centerline**

Common (PN 11002-82191)
Controls the following:

- >The front-to-rear shape of the roof.
- >The correct height of the windshield and rear window.
- >The correct shape of the deck lid area from the base of the rear window to the spoiler.
- >The correct shape of the cowl area and the rear of the hood.

#### **Nose and Body Centerline Combination**

See Individual Template PNs

The Nose Centerline aligns with the pins on the Body Centerline and is slotted to adjust for different wheel bases.

R

#### **Roof Front Side-to-Side**

Common (PN 11002-82591)

Controls the following:

- >The side-to-side shape of the front of the roof.
- >The correct front roof-to-door opening.
- >The correct front width of the doors.
- >The shape of the top of the doors.

#### **Roof Rear Side-to-Side**

Common (PN 11002-82691) Controls the following:

- >The side-to-side shape of the rear roof.
- ➤The correct rear roof-to-door opening.
- ➤The correct rear width of the doors.
- >The shape of the top of the quarter panels

#### Fender (Left)

Camaro (PN 11132-82991L)
Camry (PN 11712-82991L)
Mustang (PN 11322-82991L)
Controls the shape of the left fender

#### Fender (Right)

Camaro (PN 11132-82991R)
Camry (PN 11712-82991R)
Mustang (PN 11322-82991R)
Controls the shape of the right fender

#### **Rear Body Side-to-Side**

Common (PN 11002-82291)

Works with the Centerline template to maintain the proper shape of the decklid and the shape of the top of the quarter panels.

#### Air Intake

Common (PN 11002-83333)
Checks maximum dimensions of air intake (2-1/2 x 20 inches).



Common (PN 11002-83131)
Controls the shape at the nose/hood intersection.

#### LATE MODEL BODY INSPECTION FORM **Driver Name** Tech Inspector (signed) Team Representative (signed) Penalty 1 8 1 (Circle One) Fix 1- NOSE Nose Screen- Mounted flush on lower air dam in the recess provided pass / fail Minimum height from ground: 4" pass / fail No holes allowed above the bumper line pass / fail 2- ROOF Air intake Opening, Maximum: 2.5" x 20" pass / fail Windshield Braces- Minimum 3 required pass / fail Rear Window Braces- Minimum 3 required pass / fail 12" Maximum length along top of door pass / fail 3- DOOR VENT WINDOWS 90 Degrees from top of door to A Pillar pass / fail Minimum from ground to bottom of rocker: 4' pass / fail 4- ROCKER PANEL HEIGHT 5- WHEEL OPENING 7" Max from edge of rim to front & rear of all wheel openings pass / fail 6- SPOILER Max Width 60" (Measured across back of spoiler) pass / fail Height: 5" Blade -or- 6.5" Blade (Per individual rule) pass / fail Spoiler centered on bumper cover seam pass / fail Spoiler blade mounted on front side of spoiler base pass / fail 7- MANUFACTURER TAGS Visible on inside of body panels pass / fail (Circle One) Fix Penalty **8- CENTERLINE TEMPLATES** Nose Centerline Template (Nose/Hood) pass / fail Centerline Template (Roof/Deck Area) pass / fail Left Template: located 21 3/4" from nose centerline 9- FENDER TEMPLATES pass / fail Right Template: located 24 3/4" from nose centerline pass / fail Roof Rear Side to Side Template (placed 90 degrees to roof) pass / fail 10- SIDE TO SIDE TEMPLATES Roof Front Side to Side Template (placed 90 degrees to roof) pass / fail Nose Width Template (placed on top of lower air dam) pass / fail (Placed along front edge of hood) pass / fail 11- HOOD PIN BAR (Circle One) Fix Penalty 12- FRONT OVERHANG pass / fail 47" maximum from center of nose to center of front spindles 13- FRONT TREAD WIDTH 66" Maximum pass / fail 14- ROOF HEIGHT Height range: 47" minimum (measured 10" back from windshield) 15- REAR-OF-DOOR HEIGHT Minimum height: 33' pass / fail pass / fail 16- WHEEL BASE Stated range: 101" - 106' 66" Maximum pass / fail 17- REAR TREAD WIDTH **18- QUARTER PANEL HEIGHT** Minimum height: 34 1/4" Maximum height: 34 1/2" pass / fail (Measured at Quarter Panel, Bumper Cover and Deck Lid intersection)

Maximum height 34 7/8" at base of spoiler, on centerline

47" maximum from center of rear axle to base of spoiler at center

19- BUMPER COVER HEIGHT

20- REAR OVERHANG

pass / fail

pass / fail

NOTES	