



*NCAA Softball Bat COMPLIANCE and
Testing INFORMATION*

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SECTION 1

NCAA SOFTBALL BAT COMPLIANCE AND TESTING DETAILS

GENERAL INFORMATION

The NCAA Softball Rules Committee created and oversees a comprehensive program to ensure bats used in NCAA competition support its core values of safeguarding the integrity of the game, ensuring fair and equitable competition between teams, supporting the delicate balance of offense and defense within the game, and maintaining vigilance regarding both student-athlete safety and risk minimization. To that end, there are five distinct components to the program, although the three involving “bat testing” are often mistakenly interchanged. They are: 1) initial certification of bat models; 2) inclusion on the [NCAA Approved Softball Bat List](#); 3) pre-competition barrel compression testing (BCT); 4) on-field bat inspection; and 5) post-competition compliance testing. At the time of this writing, certification, BCT exception and post-competition compliance testing are conducted at the Sport Science Lab at Washington State University which is referred to as “the lab” throughout this document.

COMPONENT 1: BAT MODEL CERTIFICATION

Prior to consideration of a bat model being used in NCAA competition, the manufacturer must submit every new model to the lab for certification testing. The process began under the oversight of ASA Softball (2000) which was later known as ASA/USA Softball and now rebranded as USA Softball (2017). While the NCAA does not participate in that process or its contracts, it does require that models placed on the [NCAA Approved Softball Bat List](#) bear the ASA 2004 or USA Softball certification mark, which verify the batted ball exit speed (BBS), as tested in the lab, does not exceed the 98.0 mph maximum.

COMPONENT 2: NCAA APPROVED SOFTBALL BAT LIST

In addition to the appropriate certification mark, models must meet the specifications as listed in the current NCAA Softball Playing Rules Book and be deemed by the manufacturer to be appropriate to the rigors of collegiate fastpitch (extensive use in multiple environments including a wide variety of climates) to be included on the [NCAA Approved Softball Bat List](#).

The top section of the first page of the [NCAA Approved Softball Bat List](#) (see next page for example) details information useful to coaches, umpires, and bat testing managers. The purple box is for verification whenever BCT occurs and immediately above it is a summary of “backstop style” bat models with their respective lower BCT minimums for easy reference (see Appendixes B and C in this document for more information). Below those sections are details on use of the document.

The list contains detailed model information including the number of strikes assessed. It is scheduled to be published the second Monday of July, December and April but additional dates may be added whenever a model must be removed. In those cases, email notifications of a new list will be sent to head coaches, senior woman administrators and conference commissioners.

Coaches are responsible for monitoring the [NCAA Approved Softball Bat List](#) for changes and providing, at a minimum, the first and all appropriate pages for the pregame bat inspection

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and, when applicable, at testing sites whenever BCT occurs. The list must have bat models highlighted and annotated with the number of each model presented for competition.

It should be noted that under NCAA softball playing rules, coaches are responsible for properly equipping their team. Therefore, coaches are expected to continuously monitor, and/or teach their student-athletes how to monitor, the condition and performance of all equipment, particularly bats used in competitions. Further, it should be noted that the use of the [NCAA Approved Softball Bat List](#) only applies to game competition and coaches are responsible for making their own decisions on what products, including bats, are appropriate for use during warm-ups, practices, or scrimmages.

Example of an NCAA Approved Softball Bat List First Page:

Planned postings of the NCAA Approved Bat List are the 2nd Monday in July, December and April; additional lists will post when model(s) must be removed.			
Information new to the list is noted in blue font.			
Bat models listed herein are placed on the list by the manufacturer because the manufacturer believes them to be appropriate to the collegiate fastpitch game and in compliance with the NCAA Softball Playing Rules and batted ball exit speed standard of less than 98 mph. Placement of bats on the NCAA Approved Softball Bat List does not guarantee, or otherwise mean, compliance with USA Softball/NCAA standards. Such placement is based on manufacturers' representations that they do so comply, and institutions take on the risk that bats may not so comply. Manufacturers are responsible for, and liable for, any damages resulting from, any misrepresentations associated with the same.			
ALL BATS WHICH ARE BARREL COMPRESSION TESTED MUST MEET A MINIMUM OF 1550PSI EXCEPT THE FOLLOWING WHICH ARE NOTED ON THE APPROPRIATE LINES AND PAGES OF THE CURRENT NCAA APPROVED SOFTBALL BAT LIST:			
*Demarini Models	*Prism (PZF-20 & 21, PZ1-21, PZP-19 & PZP-20) -1200psi minimum		
***Easton Models	***Ghost FP18GH, FP20GH series & FP21GHADGLD -1000psi minimum; FP22GH series & FP21GHADG4TG -900psi minimum		
**Louisville Slugger	**All Xeno, LXT AND RXT Models -1400psi minimum; META Models -950psi minimum		
****Mizuno Models	****PWR CRBN (340471, 340472, 340498, 340527, 340528, 340529, 350551, 340552 & 340553) -1400psi minimum		
***Rawlings Models	***Mantra (FP1M9 AND FP1M10) -1100psi minimum		
WHENEVER BCT OCCURS, THE FOLLOWING INFORMATION IS NEEDED:			
Bat Testing Manager Printed Name	Sticker Color	#Passed Bats	# Failed Bats
Day Two Manager Name	Sticker Color	# Passed Bats	# Failed Bats
Day Three Manager Name	Sticker Color	# Passed Bats	# Failed Bats
Failed bat summaries: Manufacturer	Model #	# units	Date
Manufacturer	Model #	# units	Date
Manufacturer	Model #	# units	Date
Failed bats MUST be reported via the Noncompliant/Inappropriate Bat Report found under the Forms tab of the sup.Arbitersports.com website.			
FOR ALL COMPETITION:			
Model numbers on the bat must exactly match the approved model numbers on this list; color descriptions are for user convenience only.			
Bat models available for use must be highlighted and the appropriate number available must be placed in the relevant game column.			
This first page and whichever pages are relevant MUST be provided for bat testing and on-field inspection by umpires.			

COMPONENT 3: PRE-COMPETITION BARREL COMPRESSION TESTING (BCT)

Although not a perfect predictor of bat performance, BCT is intended to be an incentive for manufacturers to provide product that will remain performance compliant for the life of the bat and a disincentive for users attempting to improve the performance of a bat from its manufactured state (e.g. shaving, removing performance limiters, acid flush...). It is a

relatively reliable, fast, inexpensive on-site predictor of the result of performance testing should it be performed in the lab.

Barrel compression testing is conducted prior to competition in order to filter out bats with shells that have softened below their allowable minimums. Typically, as a bat breaks in, the shell softens and when that is excessive, batted ball speed often exceeds the standard set through the certification process. BCT is designed to demonstrate the softening of an individual bat's shell (by any means including normal use, alteration, and manufacturing anomaly) and to identify bats that require further examination to ensure they perform within the allowable performance standards.

In general, the stiffness of the barrel must register a minimum of 1550 pounds per square inch (psi) when BCT occurs, however, "backstop style" bat models may be granted specific lower minimums. The explanation of the science behind the granting of lower minimums for "backstop style" bats and the process for a manufacturer to request a lower BCT minimum are detailed in this document in Appendixes B and C respectively.

The NCAA requires BCT daily in each tier of the postseason and conducts testing at selected regular season tournaments. Beginning January 1, 2022, BCT will be required prior to all tournament and NCAA single-team competitions. Whenever it occurs, all bats which will be in the team's dugout or used in the competition must be barrel compression tested and have an event-specific, distinctive sticker affixed indicating compliance with the appropriate minimum compression standard.

RESPONSIBILITIES

- The event host shall equip an appropriately secluded testing location and communicate its location to the bat testing manager and participating head coaches no less than 48 hours prior to the team's first competition.
- Testing must take place prior to the team's first competition. The time and the frequency of testing (whether prior to each game or just prior to the start of the first game of a tournament, series, doubleheader or single game) shall be determined by tournament/conference policy or by agreement between the host and participating coaches, whichever applies.
- Testing must be conducted by the host bat testing manager with the team representative present.
- The team representatives must bring the first and all appropriate pages of the current highlighted and annotated [NCAA Approved Softball Bat List](#) and all bats to be used in the tournament/event to the testing location at the agreed upon time. For postseason testing, the team representative must also provide the bat testing manager with the completed NCAA championship log sheet of presented bats (see Appendix A). The

bat testing manager will retain the NCAA championship log sheet, update it daily as appropriate, and provide it to the NCAA Softball Rules Committee designee for processing at the conclusion of the tier.

- The following softball barrel compression testing equipment is required to conduct barrel compression testing in both regular season and postseason competition:
 - The SSL or G4 SSL Softball Bat Compression Testing unit for NCAA and USA Softball testing is available through a sole-vendor, Bat Testing Solutions, LLC (www.barrelcompression.com).
 - A table at least four feet long, at least one chair, athletic/masking tape and a pen.
 - A sufficient number of destructible bat stickers distinct for each event. The stickers must be designed to not transfer to another bat without being destroyed.
 - For tournaments when they are provided by the host, they shall be unique to the event. For each tier of NCAA postseason play, the daily, distinct stickers will be provided to the bat testing manager by the NCAA.
 - For competition with a single opponent, they may be provided by each team to be placed on the opposing team's bats, provided by the conference distinctive by color or design for each conference date or opponent or be a single sticker design which allows for a testing date and initials of the bat testing manager.
 - In any case, the stickers must be distinct for each cycle of testing so a bat previously stickered indicating passing BCT cannot be mixed in with bats being tested for a subsequent event.
- The bat testing manager is responsible for assembling, positioning and calibrating the BCT fixture, (available at www.barrelcompression.com, or via a BCT tutorial, which is available at www.sup.arbitersports.com in the NCAA Bats column), securing the stickers, conducting the testing and filing the follow-up paperwork as needed.
- The team representative is responsible for presenting all bats and the first and all appropriate pages of the current [NCAA Approved Softball Bat List](#) with the models highlighted and indicate the total count of each model to be tested. In addition he/she shall line up the bats in the order in which they appear on the [NCAA Approved Softball Bat List](#) for ease in testing. In the postseason, the team representative is also required to present the bat testing manager with the team's completed NCAA championship log sheet.

BCT PROCEDURES

BCT consists of three parts.

1. First, the bat testing manager must verify the presented bats are on the [NCAA Approved Softball Bat List](#) and count the amount of each model. The model number on the bat must be legible and exactly match the highlighted model number and the number of bats presented must match the number noted by the team representative. Return any bat disqualified from the preceding step or any with obvious damage to the team representative at this time.

2. The second part is the barrel compression test to verify the compression level is above the prescribed barrel stiffness minimum. In general, bat pressure must be greater than 1550 psi, however, many manufacturers produce models with a “backstop style” internal design that allows the outer shell to be softer. Those models with exceptions to the minimum (see Appendixes B and C in this document for more information) are summarized on the first page of the [NCAA Approved Softball Bat List](#) and are individually noted throughout the list for each model with asterisk(s).
 - Testing Tip: position the front page of the provided [NCAA Approved Softball Bat List](#) at the fixture for easy reference of the unique minimum pressures or use the individual bat list pages which list minimum pressure for every model.
 - To test, insert the bat until the end cap rests against the stop stick; place the cylinder under the handle so that the bat remains level; make sure the lever is pointed down, twist the pressure gauge until it reads exactly 500 psi (called preload); lift the handle and make note whether the bat exceeds the minimum psi (i.e., passes) before lowering the lever and releasing the preload on the pressure gauge; rotate the bat 90 degrees (one quarter turn) and retest. Bats will be tested a maximum of three times, until they receive two passes or two fails, whichever happens first.
3. The third part is the final disposition of the bats – stickering those that pass, disqualifying those that are unsuitable and filing the necessary paperwork. The bat testing manager stickers each bat that passes BCT with a destructible sticker appropriate for the event. That sticker is valid for the length of the event or as determined by tournament/conference policy. Stickers should be securely placed as close as possible to the barrel end of the grip and on top of older stickers whenever possible. Stickers should be securely placed to prevent them from falling off during use. Older stickers may first be removed if they create a noticeably raised area.
 - Note: when stickers are provided by the competing teams, the bat testing manager applies the sticker from the opposing team on each bat.

Bats that fail BCT are tagged using the athletic/masking tape with the institution’s name, removed from use, and secured by the bat testing manager. During regular season competitions, teams may request return of the disqualified bats following the completion of their last competition at that site if there is no contradictory conference policy. For regular season NCAA-tested events and postseason competition, bats that fail BCT will not returned to the team while on-site but instead sent to the NCAA Softball Rules Committee designee for additional evaluation. This designee will perform BCT using at least two different BCT machines and provide the results to the NCAA. If the bat passes the additional BCT or has visual damage, it will be returned to the institution. If the bat fails the additional BCT testing, it may be sent to the lab for compliance testing.

Once BCT is completed, the bat testing manager shall complete the information box on the front page of the provided [NCAA Softball Approved Bat List](#), then return the list to the team representative for use by the umpire crew during the pregame inspection at the dugout. In addition, the bat testing manager is responsible for filing the [Noncompliant/Inappropriate Bat Form](#) for any bat failing regular season BCT (postseason failures need only be noted on the appropriate NCAA championship log sheets).

- Note: Bats presented in multi-day events need not be identical day-to-day as coaches may delete from or add to their inventory at every testing opportunity.

COMPONENT 4: ON-FIELD INSPECTION

The umpire crew shall reconcile the provided pages of the [NCAA Softball Approved Bat List](#) with the bats lined up, in appropriate order, outside the dugout and inspect the bats for suitability for play. Unsuitable bats shall be removed from the team's possession, the team's bat list appropriately amended, and the bat secured by the on-site administrator. Umpires share responsibility with opposing coaches/players to confirm bats used in the game are only those listed on the current [NCAA Approved Softball Bat List](#) and that the appropriate stickers are visible. Should a non-approved bat be detected in the pregame inspection or make its way into a game, the consequences are detailed within the playing rules based on the time the violation is reported to the umpire.

After BCT has occurred and a bat is determined not to have the correct sticker during the pregame bat inspection by the umpire crew, the bat shall be removed, the team's bat list appropriately amended, and the bat secured by the on-site administrator. In the unlikely event that a bat without the appropriate sticker is discovered in the possession of a batter who enters the batter's box or has completed her turn at bat, the appropriate consequences are applied based on the time of the report (as detailed in the NCAA Softball Rule Book). In either case, the bat shall be returned to the team at the end of competition and the plate umpire shall file a [Noncompliant/Inappropriate Bat Form](#).

COMPONENT 5: POST-COMPETITION COMPLIANCE TESTING

Post-competition compliance testing refers to the testing done at the lab to verify that the batted ball speeds for broken-in bats are no faster than the accepted maximum performance standard of 98.0 mph. Each bat that meets the standard will be deemed compliant and those that exceed the maximum will be considered noncompliant and assessed a strike.

To ensure models on the [NCAA Approved Softball Bat List](#) are appropriate and that individual bat performances are within the standards, two pools of bats are subject to this lab testing.

In the first, bats that fail BCT at an NCAA-tested event are sent to the NCAA Softball Rules Committee's designee for further evaluation as noted previously. If the bat fails the additional BCT, it may be sent to the lab for further testing. In the unlikely event the bat passes cannon

testing at the lab, BCT inappropriately filtered it out and the bat will be returned to the institution. If the bat fails the cannon test and a strike is assessed to the bat model, the bat remains surrendered and a notification letter is sent to the institution and manufacturer. Strikes are noted on the [NCAA Softball Approved Bat List](#) until the model has three strikes, in which case, it is removed from NCAA competition.

The second pool of bats consists of a sample of bats collected in the postseason. No more than two bats will be specifically identified and secured from any one team at any one site (excluding bats removed through BCT failure) once the season has ended for that particular team. At a minimum, two bats secured from each of the final two teams at the NCAA DII and DIII Championships and from each team qualifying for the Women's College World Series will be in the pool. Unlike the bats in pool one that were filtered out by BCT and expected to fail in lab testing, bats in pool two are expected to pass because they have passed, at a minimum, daily BCT at each tier of the championship. A sample of bats in pool two will be sent to the lab and their disposition is identical to the bats in pool one based on their lab results. That is, bats that passed are returned to their institutions and those assessed a strike are not and a notification letter is sent to the institution and manufacturer.

APPEALS/VERIFICATIONS

Institutions and manufacturers of any bat, regardless of its pool of origin, that fails in the lab are issued a letter of noncompliance, which includes testing results, the strike assessed to the model and information regarding an opportunity to challenge the results.

- An appeal opportunity is available to manufacturers of a bat considered noncompliant. In the event a manufacturer believes there are unique circumstances or wishes to provide additional data for the NCAA Softball Rules Committee to consider, a request must be made, in writing to the NCAA Softball Rules Committee designee within seven (7) business days of notice of the model failure. Arrangements to receive and distribute the appeal materials to the NCAA Softball Rules Committee will be made in a timely manner to facilitate the committee's consideration to deem the bat compliant and remove the strike assessed to the model.
- A compliance verification opportunity is available for the institution or manufacturer to challenge the test result. To initiate the process, the request must be made, in writing, to the NCAA Softball Rules Committee designee within seven (7) business days of notice of model failure and arrangements made with the NCAA Softball Rules Committee liaison at the NCAA for payment (at the time of this update, approximately \$1,000). The bat then will be retested using the compliance protocol (certification without accelerated break-in procedure [ABI]) and if the lab results indicate the BBS is compliant, the bat will be returned to the institution and the strike removed from the model. If the bat fails BBS again, it will remain surrendered to the NCAA, and the model failure remains a strike.

- A failure verification (autopsy) opportunity is also available for the institution or manufacturer to challenge the reason for the failed test result. It too must be made, in writing, to the NCAA Softball Rules Committee designee within seven (7) business days of notice of model failure. To arrange for the failure verification autopsy opportunity, payment must be arranged with the NCAA Softball Rules Committee liaison at the NCAA and the NCAA Softball Rules Committee designee will notify the lab of the request so, if desired, arrangements can be made to have the requestor present (physically or virtually) when the failure verification autopsy is performed. Expenses (at the time of this writing, approximately \$100) will be paid by the requestor even though there is a chance the lab staff will have no explanation for the excessive BBS or the reason for the results might be inconclusive. The results of the failure verification autopsy will be made known to the requestor and the NCAA Softball Rules Committee which will notify the appropriate NCAA Softball Championship Committee (if the conclusion is user alteration), and appropriate NCAA staff. The NCAA Softball Rules Committee shall determine, in its discretion, whether further investigation or action is warranted in response thereto, including, without limitation, the removal of a strike.

BAT DISQUALIFICATION

When a model is assessed three strikes, the NCAA will send an email or other such communication to the manufacturer as notice that the model has been deleted from the [NCAA Softball Approved Bat List](#). At the same time, a new [NCAA Softball Approved Bat List](#) will be posted without the disqualified model. If the disqualification occurs at any time other than immediately preceding the regularly scheduled posting of the [NCAA Softball Approved Bat List](#), notification will be sent to the email addresses for head coaches, senior woman administrators and conference commissioners, on file with, or otherwise held by, the NCAA Directory or through ArbiterSports. Coaches are responsible for checking their respective email accounts referenced herein on game days, for reviewing and complying with any such notification received thereat, and for informing the NCAA in writing of any requested changes to the recipient email address or for providing one to the extent one is not on file with, or otherwise held by, the NCAA.

SECTION 2
NCAA SOFTBALL REGULAR-SEASON
BARREL COMPRESSION TESTING (BCT) PROTOCOL GUIDELINES
EFFECTIVE JANUARY 1, 2022

GENERAL PRINCIPLES

Beginning January 1, 2022, barrel compression testing (BCT) will be required to be conducted at a minimum, prior to the start of each tournament, series, doubleheader, or single game during the regular season. Based on the best practices learned from testing for more than 10 years, the NCAA Softball Rules Committee is providing the following guidance for conferences and institutions to create their exact protocols for testing. Because protocols will vary, hosts for tournaments and non-conference games are responsible for sharing the details of their protocols with competing teams at least one week before the competition.

Protocol detail checklist:

Notice given to opponent (date): _____

Testing prior to (check one): Tournament _____ Series _____ Doubleheader _____ Daily _____

Testing location: _____ Date _____ Time _____

Stickers provided by (check one): Host _____ Participating teams _____

Testing manager and cell number: _____

Disposition of failed bats in conference games: _____

REQUIRED BARREL COMPRESSION TESTING EQUIPMENT

The following softball barrel compression testing equipment is required to conduct barrel compression testing.

- The SSL or G4 SSL Softball Bat Compression Testing unit, which at the time of this writing, is approximately \$925. Orders for the USA /NCAA tester can be placed with the sole vendor, Bat Testing Solutions, LLC via www.barrelcompression.com.
- A table at least four feet long, at least one chair, athletic/masking tape and a pen.
- A sufficient number of destructible bat stickers distinct for each event. The stickers must be designed to not transfer to another bat without being destroyed.
 - For tournaments when they are provided by the host, they shall be unique to the event.
 - For competition with a single opponent, stickers may be provided by each team to be placed on the opposing team's bats, provided by the conference distinctive by color or design for each conference date or opponent or be a single sticker design which allows for a testing date and initials of the bat testing manager.
 - In any case, the stickers must be distinct for each cycle of testing so a bat previously stickered indicating passing BCT cannot be mixed in with bats being tested for a subsequent event.
 - While there are numerous vendors for destructible stickers, at the time of this writing, the NCAA uses [JB Graphics](#) for postseason stickers.

LOCATION AND TIME OF BARREL COMPRESSION TESTING

1. Tournament or multi-team event.

- a. The event host shall equip an appropriately secluded testing location and communicate its location to the bat testing manager and participating head coaches no less than 48 hours prior to the team's first competition.
- b. Testing must take place prior to the team's first competition. The time and frequency of testing (whether prior to each game or just prior to the start of the first game of a tournament) shall be determined by tournament/conference policy or by agreement between the host and participating coaches, whichever applies.
- c. Testing must be conducted by the host bat testing manager with the team representative present.
- d. The team representatives must bring the first and all appropriate pages of the current highlighted and annotated [NCAA Approved Softball Bat List](#) and all bats to be used in the tournament/event to the testing location at the agreed upon time.

2. Single opponent series, doubleheader, or single game.

- a. The host institution shall equip an appropriately secluded testing location and communicate its location to the opposing head coach no less than 48 hours prior to competition.
- b. The frequency of testing (whether prior to each game or just prior to the start of the first game of a series or doubleheader) shall be determined by conference policy or as specified on the game contract.
- c. Testing shall occur at a time mutually agreed upon by the participating coaches and the host bat testing manager or as predetermined by conference policy.
- d. Testing must be conducted by the bat testing manager with representatives from both teams present.
- e. Team representatives must bring the first and all appropriate pages of the current highlighted and annotated [NCAA Approved Softball Bat List](#) and all bats to be used in the competition to the testing location at the agreed upon time.

PREP BY BAT TESTING MANAGER

- 1. Review “how to” information** on assembling, positioning and calibrating the BCT fixture, which is available at www.barrelcompression.com, and a BCT tutorial, which is available at www.sup.arbitersports.com under NCAA Bats.
- 2. Locate all the testing materials** including destructible stickers unique to the event, case with fixture, cylinder, and stop stick plus athletic/masking tape and pen to identify failures.
- 3. Stop stick** should be inserted from the preferred side until it is flush with the far side then tighten the set screw to secure it.
- 4. Position the fixture** on the level table.
- 5. Conduct a calibration trial** every time the fixture is setup by inserting, preloading and compressing the provided cylinder to confirm the reading matches, or is within the tolerance of, the load printed on the cylinder. Additional details on the testing process can be found in Item 2 of the Barrel Compression Testing Procedure on the following page.

PREP BY COACHES

- 1. Ensure the team is properly equipped** by monitoring or teaching the student-athletes to monitor the suitability of their bats. Specific details are found in the current edition of the NCAA Softball Rules Book, Rule 3.3.
- 2. Present the first and all appropriate pages of the current [NCAA Approved Softball Bat List](#)** with the models highlighted and indicate the total count of each model to be tested. Note: Scheduled publishing dates are the second Monday of July, December and April plus additional dates added by necessity in which case email notifications of a new list will be sent to head coaches, commissioners, and directors of athletics.
- 3. Present every bat** which will be used in a team area or used in competition between testing and the next testing opportunity. Bats without the appropriate sticker will not be allowed.
- 4. Line up the bats** in the order in which they appear on the [NCAA Approved Softball Bat List](#) for ease in testing.

BARREL COMPRESSION TESTING PROCEDURE

Bat testing consists of three parts. The first part is verifying the presented bats are on the [NCAA Approved Softball Bat List](#) and counting the amount of each model. The second part is a barrel compression test to verify the compression level is above the prescribed barrel stiffness minimum. In general, bat pressure must be greater than 1550 pounds per square inch (psi), however, many manufacturers produce models with a “backstop style” internal design that allows the outer shell to be softer. Those models with exceptions are summarized on the front page of the [NCAA Approved Softball Bat List](#) and are indicated on the line of each individual model. The third part is the final disposition of the bats – stickering those that pass, disqualifying those that are unsuitable and completing the necessary paperwork.

- 1. Bat Verification**
 - a. Verify that the model number on the bat is legible and exactly matches the model number highlighted on the provided pages of the [NCAA Approved Softball Bat List](#).
 - b. Return any bat disqualified from the preceding step or any with obvious damage to the coach at this time.
 - c. Verify the number of bats of each model are correctly recorded on the provided bat list.
- 2. Barrel Compression Test Procedure**
 - a. Position the front page of the provided [NCAA Approved Softball Bat List](#) at the fixture for easy reference of the unique minimum pressures or use the individual bat list pages which list minimum pressure for each model.
 - b. Insert the bat into chamber until the end cap rests against the stop stick.
 - c. Place the cylinder under the handle so that the bat remains level. Tip – place something under or around the cylinder to prevent it from rolling away between the bats.
 - d. Make sure the lever is pointed down, twist the pressure gauge until it reads exactly 500 psi (called preload).
 - e. Lift the handle and make note whether the bat exceeds the minimum psi (i.e., passes) before lowering the lever and releasing the preload on the pressure gauge.

- f. Rotate the bat 90 degrees (one quarter turn) and retest. Bats will be tested a maximum of three times, until they receive two passes or two fails, whichever happens first.

3. Bat Disposition/Documentation

- a. Bats that pass BCT are stickered with a destructible sticker appropriate for the event. That sticker is valid for the length of the event or as determined by tournament/conference policy. Stickers should be securely placed as close as possible to the barrel end of the grip and on top of older stickers whenever possible. They should be securely placed to prevent a sticker falling off during bat use; older stickers may first be removed if they create a noticeably raised area.
Note – when stickers are provided by the competing teams, the bat testing manager applies the sticker from the opposing team on each bat.
- b. Bats that fail BCT are tagged using the athletic/masking tape with the institution's name, removed from use, and secured by the testing manager. In non-conference competitions and tournaments, teams may request return of the disqualified bats following the completion of their last competition at that site. For conference play and championships, policies should be established for the disposition of bats that fail BCT.
- c. Once testing is completed, the bat testing manager shall complete the top information box on the front page of the provided [NCAA Softball Approved Bat List](#), then return the list to the team representative for use by the umpire crew during the pregame inspection at the dugout.

FINAL DETAILS

- Bats presented in multi-day events need not be identical day-to-day as coaches may delete from or add to their inventory at every testing opportunity.
- **Because BCT has occurred, the pregame inspection** of bats by umpires is shortened to confirming the total number of bats annotated on the provided [NCAA Approved Softball Bat List](#) with the number of stickered bats. If the numbers do not match, a traditional reconciliation of the individual models on the [NCAA Approved Softball Bat List](#) with actual bats is required. Note- if a bat without the appropriate sticker is presented, it is surrendered to the on-site administrator who will return it to the team, upon request, at the end of competition. In addition, umpires will continue to perform the required bat checks for suitability (cracks, rattle, wobble, etc.).
- **NCAA Noncompliant/Inappropriate Bat Forms** are required during the regular season for all bats disqualified for failing barrel compression testing (submitted by the bat testing manager) or disqualified at each pregame inspection (submitted by an umpire). The NCAA Noncompliant/Inappropriate Bat Form is an electronic form located on the [NCAA Softball Rules of the Game website](#). In the postseason, bats failing BCT need only be noted on the NCAA championship log sheet (the Noncompliant/Inappropriate Bat Form is unnecessary).

SECTION 3 RESOURCES

2022 and 2023 NCAA Softball Rules Book (available Nov. 2021):

<http://www.ncaapublications.com/c-62-softball.aspx>

Noncompliant/Inappropriate Bat Form, NCAA Approved Softball Bat List, Summary of Bat List Changes, NCAA Softball Bat Compliance and Testing Information:

<http://www.ncaa.org/playing-rules/softball-rules-game>

BCT Tutorial:

www.sup.arbitersports.com

For questions regarding playing rule consequences for inappropriate bats, contact NCAA Softball Secretary-Rules Editor, Vickie Van Kleeck, at ncaasbsre@gmail.com.

For questions regarding NCAA Softball Bat Testing, contact NCAA Softball Equipment Consultant, Dee Abrahamson, at Abrahamson@niu.edu or 815-751-2648.

For questions regarding the BCT fixture, visit www.barrelcompression.com or email G4battesters@gmail.com.

APPENDIX B
EXPLANATION OF THE EXCEPTIONS TO THE
1550 POUNDS PER SQUARE INCH (PSI) BARREL COMPRESSION TESTING
STANDARD

Here's a simple explanation of the science: Recall from your physics class that in a collision, the harder object deforms the softer one and either crashes through or rebounds off. In the case of a hollow implement (softball bat) with a solid object (the ball), the bat deforms and trampolines the ball off. Since the ball is the same for both teams, bat manufacturers design bat models to get high batted ball speeds (BBS) to create a product that is market competitive but not so high performing that they are out of compliance with our BBS maximum standard of 98.0 mph. Compliance with that standard is measured at the lab (at the time of this writing, the Sport Science Lab at Washington State University) in the ASA 2004 and USA Softball bat certification processes and in NCAA compliance testing.

As a predictor of compliance testing in the lab, tournament hosts, conferences and NCAA institutions use barrel compression testing (BCT). In general, bat models with a barrel stiffness of at least 1550 psi produce acceptable BBS. Therefore, bats stiffer than that are considered to have passed BCT when tested. In these cases, if you were to graph the stiffness of the bat shell and BBS you would see them rise in a reasonably linear relationship (the softer the shell, the higher the BBS).

However, there is a group of models that, although they have soft outer shells, have unique designs of having an internal “backstop limiter” which prevents the soft outer shell from too much flex. These models do not show the same correlation of outer shell barrel stiffness to BBS and are therefore referred to as “non-linear” or “backstop style” bats. Because the BCT fixture only compresses/measures the shell’s stiffness and not the internal performance limiter, the test result is not as accurate a predictor of these model’s lab or field performance. Therefore, they may be granted specific exceptions to the minimum 1550 psi when barrel compression tested.

Regarding the current NCAA Softball BCT exceptions: Every major manufacturer has at least one “backstop style” bat model with an exception to the 1550 psi minimum. The specific models and their approved lower psi minimums are summarized on the front page and listed on the specific pages of the current [NCAA Approved Softball Bat List](#).

- Note: The exception is not an exception to have the bat barrel compression tested; it is an exception to the minimum psi that separates passed bats from failed ones.

As to the exception protocol: The NCAA Softball Rules Committee created a protocol in 2012 to allow manufacturers to submit requests for exceptions to the 1550 psi. The process was initially circulated to manufacturers, later posted in the NCAA Bats column of the Central Hub of www.sup.arbitersports.com website titled “Exception for Compliance with Existing Barrel Compression Testing Standard”, and now included in Appendix C of this document.

BCT as a predictor but not the defining test: What BCT does is identify specific bats that are likely too high performing by using a fixture that is a convenient, portable and an

inexpensive predictor of the lab result. The NCAA will continue to use this tool during selected regular season tournaments and in all postseason play to filter out bats that are predicted to fail in the lab, send those bats to the lab for actual testing and amend the [NCAA Approved Softball Bat List](#) as appropriate using those results. Tournament hosts and NCAA institutions will use BCT as a filter to prevent bats with testing results below the minimum psi from use in competition. Remember, batted ball speed, not BCT minimums, is still the bat performance standard required for inclusion of models on the [NCAA Approved Softball Bat List](#).

APPENDIX C
NCAA SOFTBALL PROCESS FOR EXCEPTION TO THE EXISTING
NCAA BARREL COMPRESSION TESTING STANDARD

In order for a manufacturer to request an exception to the existing minimum barrel stiffness (as measured in pounds per square inch – psi) for NCAA Barrel Compression Testing (BCT), the following protocol shall be used. Manufacturers must collaborate with the NCAA Softball Rules Committee designee for bat issues who will create the timelines, make the necessary arrangements for conditioning the sample bats including their shipment to the lab, (at the time of this writing, the Sport Science Lab at Washington State University), and collect the relevant data as listed below.

1. The manufacturer must show that the bat model's structure deviates significantly from the traditional single wall, multi wall and/or layered composite designs that traditionally meet the 1550 psi minimum during BCT;
2. The manufacturer must submit a reasonable explanation in writing to the NCAA Softball Rules Committee, which is acceptable to the committee detailing how the bat model's design will consistently and repeatedly produce BCT results softer than the existing minimum then in effect;
3. The manufacturer must provide lab data from the USA Softball certification testing process and the batted ball speeds (BBS) from the sample provided clearly demonstrating the correlation between the requested lower BCT minimum and compliance with the maximum BBS then in effect (which, at the time of this writing is 98.0 mph);
4. No more than 10% of the provided sample may exceed the maximum BBS then in effect;
5. The lab results reflected in the above-referenced data must be obtained from a sample of bats as noted below:
 - a. Sample size provided by the manufacturer: 12 to 24 bats representing ALL length and weight combinations to be listed on the [NCAA Approved Softball Bat List](#); and
 - b. Conditioning arranged by the NCAA Softball Rules Committee designee: at least 75% must be broken in through play or practice activities.

A new bat model which is presented for inclusion on the [NCAA Approved Softball Bat List](#) through the affidavit option of USA Softball certification may be granted the same BCT minimum exception as the model to which it is connected. Similarly, a new bat model may be granted the same BCT minimum exemption as a different bat model if the barrel construction is documented to be identical to the original bat model. In both cases, the exception may be granted without following the exception protocol listed above and upon forwarding the appropriate documentation to the NCAA Softball Rules Committee designee.

Except as may be otherwise expressly provided for by the NCAA Softball Rules Committee, all costs and expenses associated with all testing contemplated herein shall be borne by the manufacturer requesting the exception. The final decision regarding any requested exception and the appropriate BCT tipping point between pass and fail for a bat model shall rest with the NCAA Softball Rules Committee or designee. Unless and until an exception is granted,

the bat model shall be subject to BCT testing and standards then in effect. The NCAA Softball Rules Committee shall have the right to periodically review and revise the criteria for this exception, in its sole discretion. All other terms and conditions of the NCAA softball bat protocol and related procedures shall continue to apply, whether an exception is granted.