# Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

23a



20701A-B1

**BRUSHLESS** 



For Best Results, Use 3.0 Amp Hour Battery or Greater (Sold Separately)



# 7-1/4" CORDLESS CIRCULAR SAW

Saw blade sold separately.

Visit our website at: http://www.harborfreight.com Email our technical support at: productsupport@harborfreight.com

59281

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

## **AWARNING**

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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WARNING SYMBOLS AND DEFINITIONS		
A	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.	
<b>▲</b> DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.	
<b>▲</b> WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.	
<b>ACAUTION</b>	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.	
NOTICE CAUTION	Addresses practices not related to personal injury.	

# IMPORTANT SAFETY INFORMATION

# **General Power Tool Safety Warnings**

# **AWARNING**

Read all safety warnings and all instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

- 1. Work area safety
  - a. Keep work area clean and well lit.

    Cluttered or dark areas invite accidents.
  - b. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.
- 2. Electrical safety
  - a. Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.

- b. Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- c. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- d. Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- e. When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- f. If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply. Use of a GFCI reduces the risk of electric shock.

#### 3. Personal safety

- a. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- b. Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c. Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- d. Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- f. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.

- g. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.
- h. Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.
- i. Only use safety equipment that has been approved by an appropriate standards agency. Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.
- j. Do not lay the tool down until it has come to a complete stop. Moving parts can grab the surface and pull the tool out of your control.
- When using a handheld power tool, maintain a firm grip on the tool with both hands to resist starting torque.
- I. Do not depress the spindle lock when starting or during operation.
- m. Do not leave the tool unattended when the Battery Pack is connected. Turn off the tool, and remove the Battery Pack before leaving.
- This product is not a toy.
   Keep it out of reach of children.
- People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
- p. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

#### 4. Power tool use and care

- a. Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- b. Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

- c. Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- d. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- e. Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- f. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g. Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.
- h. Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

#### Service

- a. Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.
- Maintain labels and nameplates on the tool.
   These carry important safety information.
   If unreadable or missing, contact
   Harbor Freight Tools for a replacement.

## 6. Cutting procedures

- a. ADANGER: Keep hands away from cutting area and the blade. Keep your second hand on auxiliary handle, or motor housing. If both hands are holding the saw, they cannot be cut by the blade.
- b. **Do not reach underneath the workpiece.**The guard cannot protect you from the blade below the workpiece.

- c. Adjust the cutting depth to the thickness of the workpiece. Less than a full tooth of the blade teeth should be visible below the workpiece.
- d. Never hold the workpiece in your hands or across your leg while cutting. Secure the workpiece to a stable platform. It is important to support the work properly to minimise body exposure. blade binding, or loss of control.
- e. Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a "live" wire will also make exposed metal parts of the power tool "live" and could give the operator an electric shock.
- f. When ripping, always use a rip fence or straight edge guide. This improves the accuracy of cut and reduces the chance of blade binding.
- g. Always use blades with correct size and shape (diamond versus round) of arbor holes. Blades that do not match the mounting hardware of the saw will run off-center, causing loss of control.
- h. Never use damaged or incorrect blade washers or bolt. The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.

#### 7. Kickback causes and related warnings

- Kickback is a sudden reaction to a pinched, jammed or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator:
- When the blade is pinched or jammed tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator;
- If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator.
- Kickback is the result of saw misuse and/ or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.
  - a. Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not In line with the blade. Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator , if proper precautions are taken.

- 9. When blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur. Investigate and take corrective actions to eliminate the cause of blade binding.
  - a. When restarting a saw in the workpiece, centre the saw blade in the kerf so that the saw teeth are not engaged into the material. If a saw blade binds, it may walk up or kickback from the workpiece as the saw is restarted.
- 10. Support large panels to minimise the risk of blade pinching and kickback. Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides, near the line of cut and near the edge of the panel.
  - a. Do not use dull or damaged blades.
     Unsharpened or improperly set blades produce narrow kerf causing excessive friction, blade binding and kickback.
  - b. Blade depth and bevel adjusting locking levers must be tight and secure before making the cut. If blade adjustment shifts while cutting, it may cause binding and kickback.
  - c. Use extra caution when sawing into existing walls or other blind areas. The protruding blade may cut objects that can cause kickback.

#### 11. Lower quard function

- a. Check the lower guard for proper closing before each use. Do not operate the saw if the lower guard does not move freely and close instantly. Never clamp or tie the lower guard into the open position. If the saw is accidentally dropped, the lower guard may be bent. Raise the lower guard with the retracting handle and make sure it moves freely and does not touch the blade or any other part, in all angles and depths of cut.
- b. Check the operation of the lower guard spring. If the guard and the spring are not operating properly, they must be serviced before use. Lower guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.
- c. The lower guard may be retracted manually only for special cuts such as "plunge cuts" and "compound cuts". Raise the lower guard by the retracting handle and as soon as the blade enters the material, the lower guard must be released. For all other sawing, the lower guard should operate automatically.

d. Always observe that the lower guard is covering the blade before placing the saw down on bench or floor. An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after switch is released.

#### 12. Riving knife function

- a. Use the appropriate saw blade for the riving knife. For the riving knife to function, the body of the blade must be thinner than the riving knife and the cutting width of the blade must be wider than the thickness of the riving knife.
- b. Adjust the riving knife as described in this instruction manual. Incorrect spacing, positioning and alignment can make the riving knife ineffective in preventing kickback.
- c. Always use the riving knife except when plunge cutting. The riving knife must be replaced after plunge cutting. The riving knife causes interference during plunge cutting and can create kickback.
- d. For the riving knife to work, it must be engaged in the workpiece. The riving knife is ineffective in preventing kickback during short cuts.
- e. Do not operate the saw if the riving knife is bent. Even a light interference can slow the closing rate of a guard.

#### 13. Battery tool use and care

- a. Prevent unintentional starting. Ensure the switch is in the off-position before connecting to battery pack, picking up or carrying the power tool. Carrying the power tool with your finger on the switch or energizing power tool that have the switch on invites accidents.
- b. Disconnect the battery pack from the power tool before making any adjustments, changing accessories, or storing power tool. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- c. Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- d. Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- e. When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.

- f. Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- g. Do not use a battery pack or power tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- h. Do not expose a battery pack or power tool to fire or excessive temperature.

  Exposure to fire or temperature above 140°F may cause explosion.
- Follow all charging instructions and do not charge the battery pack or power tool outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.
- j. Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
- k. Do not modify or attempt to repair the power tool or the battery pack except as indicated in the instructions for use and care.



The battery Charger gets hot during use. The Charger's heat can build up to unsafe levels and create a fire hazard if it does not receive

adequate ventilation, due to an electrical fault, or if it is used in a hot environment. Do not place the Charger on a flammable surface. Do not obstruct any vents on the Charger.

Especially avoid placing the Charger on carpets and rugs; they are not only flammable, but they also obstruct vents under the Charger. Place the Charger on a stable, solid, nonflammable surface (such as a stable metal workbench or concrete floor) at least 1 foot away from all flammable objects, such as drapes or walls. Keep a fire extinguisher and a smoke detector in the area. Frequently monitor the Charger and Battery Pack while charging.

14. Lithium Battery Safety Warnings





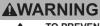
## LITHIUM BATTERIES STORE A LARGE AMOUNT OF ENERGY AND WILL VENT FIRE OR EXPLODE IF MISTREATED:

- a. Keep Battery Pack dry.
- B. DO NOT DO ANY OF THE FOLLOWING TO THE BATTERY PACK:
  - Open.
  - Drop.
  - · Short-circuit,
  - · Puncture,
  - Incinerate, or
  - Expose to temperatures greater than 140°F.
- c. Charge Battery Pack only according to its Charger's instructions.
- d. Inspect Battery Pack before every use; do not use or charge if damaged.

#### 15. Vibration Safety

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

- a. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
- Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
- c. Wear suitable gloves to reduce the vibration effects on the user.
- d. Use tools with the lowest vibration when there is a choice.
- e. Include vibration-free periods each day of work.
- f. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
- g. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.



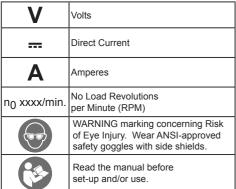
TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING: Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the charger. Do not use the charger if the power cord or plug is damaged. If damaged, have it repaired by a service facility

before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

#### **Extension Cords**

Note: Extension cords must not be used with this item's Charger.

## Symbology







WARNING marking concerning Risk of Fire. Do not cover Charger ventilation ducts. Charge on fireproof surface only.



WARNING marking concerning Risk of Electric Shock. Properly connect Charger's power cord to appropriate outlet.



WARNING marking concerning Risk of Explosion.

Do not puncture, short, or open battery packs and do not charge damaged battery packs.

## **Specifications**

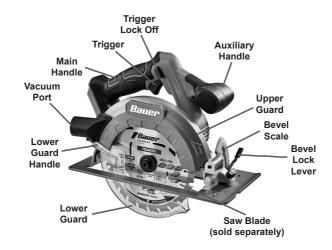
Battery Type	Bauer 20 V Li-ion 57007 (sold separately)	
Charger Type	Bauer 20 V Li-ion 57006 (sold separately)	
No Load Speed	n <sub>0</sub> : 3600/min	
Maximum Blade Diameter	7-1/4" (185mm)	
Arbor	5/8" round	

## Setup - Before Use:



Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

## **Functions**





### **Operating Instructions**



Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

## **Tool Set Up**

# **AWARNING**

#### TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Make sure that the Trigger is in the off-position and remove its Battery Pack before performing any procedure in this section.

#### TO PREVENT SERIOUS INJURY FROM FLYING FRAGMENTS:

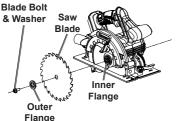
Do not use blades made from high-speed steel, abrasive blades, or metal- or masonry-cutting blades. The guards of this saw are not designed to protect against the failure of such blades.

#### **Battery Charging**

Charge battery before using this tool. Follow instructions included with battery charger. Battery pack and charger sold separately.

#### Mounting and Removing Blade (sold separately)

- 1. Remove Blade Wrench from handle bracket.
- Hold down Spindle Lock Button while removing the Blade Bolt and Outer Flange with Blade Wrench, turning Bolt COUNTERCLOCKWISE.
- 3. Remove Outer Flange; do not remove inner flange.



- Use the Lower Guard Handle to raise the Guard and remove the Blade. Leave the inner flange in place.
- Install the new blade, with the directional arrow on the blade pointing the same as the directional arrow on the Upper Guard.
- 6. Place the Outer Flange on the spindle.
- Hold down Spindle Lock Button and replace Blade Bolt and Outer Flange with Blade Wrench, turning Bolt clockwise. Tighten Bolt securely.
- 8. Replace Blade Wrench to handle bracket.

#### **Adjusting Depth**

- 1. Set the Base flat against the edge of the workpiece.
- 2. Raise the Depth Lever to allow the depth of cut to be adjusted.

3. Use Depth Scale to set depth of cut.

<u>WARNING!</u> To reduce the risk of serious injury, adjust the depth of cut to just barely clear the workpiece and remove shavings.

4. After adjustment, lower Depth Lever.

<u>WARNING!</u> TO PREVENT SERIOUS INJURY: Tighten Depth Lever before use.

#### Adjusting Bevel

- Loosen Bevel Lock Lever to allow the angle of cut to be adjusted.
- 2. Use Bevel Scale to set the desired angle.
- 3. After adjustment, tighten Bevel Lock Lever.

<u>WARNING!</u> TO PREVENT SERIOUS INJURY: Tighten Bevel Lock Knob before use.

## Workpiece and Work Area Set Up

- 1. Workpiece selection:
  - a. Workpiece must be free of foreign objects and loose knots.
  - b. Do not use to cut logs, tree limbs, or uneven lumber.
  - c. Wet lumber, green (unseasoned) lumber, and pressure treated lumber all have an increased potential for kickback and should only be cut with a blade designed for cutting that lumber. Wear a NIOSH-approved respirator and have appropriate ventilation whenever cutting pressure treated lumber.
- Designate a work area that is clean and well lit. The work area must not allow access by children or pets to prevent distraction and injury.
- Secure loose workpieces using a vise or clamps (not included) to prevent movement while working.
- There must not be objects, such as utility lines, nearby that will present a hazard while working. This is especially critical for plunge cuts.

## **General Operating Instructions**

- Make sure that the Trigger is locked, then attach the fullly charged Battery Pack into the Saw making sure it clicks into place securely.
- Make sure that all guards are in place and in proper working order and that all adjustment knobs are tight before operation.
- 3. Hold the Saw with one hand on the Main Handle and the other hand on the Auxiliary Handle.
- Align Saw on cut line with the larger part of the workpiece to the left of the Saw Blade.
- 5. Push in and hold Trigger Lock Off on either side, then press Trigger.

6. Allow the Blade to come up to full speed before contacting the workpiece.

**Note:** When cutting across the grain, wood fibers can lift and tear. Move the Saw slowly to minimize any tearing.

7. After completing the cut, release the Trigger. Make sure that the Lower Guard closes immediately.

WARNING! TO PREVENT SERIOUS INJURY: After use, remove Battery Pack and clean inside Upper Guard. Sawdust accumulation interferes with Lower Guard operation.

 To prevent accidents, turn off the tool and remove its Battery Pack after use. Clean, then store the tool indoors out of children's reach.

Record Product's Serial Number Here:

Note: If product has no serial number, record month and year of purchase instead.

Note: Specify UPC 193175511317 when ordering parts.

#### Maintenance and Servicing



Procedures not specifically explained in this manual must be performed only by a qualified technician.

# **AWARNING**

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Make sure that the Trigger is in the off-position and remove its Battery Pack before performing any procedure in this section.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE: Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

## Cleaning, Maintenance, and Lubrication

- BEFORE EACH USE, inspect the general condition of the tool. Check for:
  - · leaking, swollen, or cracked battery pack,
  - · loose hardware,
  - · misalignment or binding of moving parts,
  - · cracked or broken parts, and
  - any other condition that may affect its safe operation.

- AFTER USE, wipe external surfaces of the tool with clean cloth.
- 3. For blade changing instructions see Tool Set Up on page 9.

#### **Limited 90 Day Warranty**

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

