

STOCKAR 2 OUTPOST ADVENTURE

Achievement Sampler



Use this sampler to complete some CSB Achievement at home. Your parent, another relative or a family friend can help you with the memory verses and the individual Achievements. When you are done, show your completed work to your Stockade Ranger. He can help you get the entire Outpost Adventure and earn the Patch and Honor Star.

Print this pdf as a “Booklet” or “Multiple” using Adobe Reader.

You can obtain StockKar 2 from:
CSB US - store.csbministries.org
CSB Canada - store.christianservicebrigade.ca



Builder Memory Verse: Proverbs 4:11

“I have taught you the way of wisdom;
I have led you in the paths of uprightness.”

Sentinel Memory Verse: Philippians 2:16

“Holding fast to the word of life, so that in the
day of Christ I may be proud that I did not run
in vain or labor in vain.”

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THE RIGHT TOOL



Building a winning car is a lot like building a winning life, you need the right tools. In life, you need people starting with the Lord Jesus, parents and leaders. You need the Bible, learning from its truth. And you need a strong relationship with God.

In the puzzle below are 24 hidden tools that are useful for building a Stockar. **Find them and show them to your Ranger.**



Body Tool

S T O C K A R D E R B Y V B P A I N T W
 T O W E B S A N D P A P E R C U P S I A
 X Z J H A C K S A W A S L L O R C S K S
 T S C I S S O R S C R E W D R I V E R G
 O H A M M E R E D N A S T L E B C R A N
 W H E E L M A N D R E L I C N E P P K I
 E J U R O T A R Y T O O L L I R D E C P
 L M L P W A S D N A B O D Y T O O L O O
 D I G I T A L S C A L E R A U Q S X T C
 K N I F E L I F N Y G A M R I F R A S W

AXLE PRESS

BAND SAW

BELT SANDER

BODY TOOL

COPING SAW

DIGITAL SCALE

DRILL

FILE

GLUE

HACKSAW

HAMMER

KNIFE

PAINT

PAPER CUPS

PENCIL

ROTARY TOOL

SANDPAPER

SCISSORS

SCREW DRIVER

SCROLL SAW

SQUARE

STOCKAR KIT

TOWEL

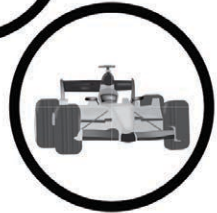
WHEEL MANDREL

TO THE RACES



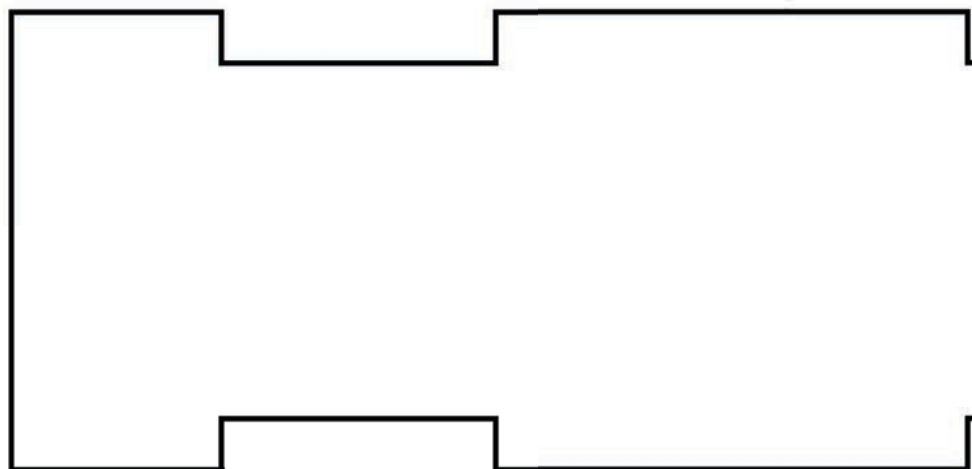
There are many ways to compete in a race, but it's always best to show up with the right equipment. No one wins a BMX bike race by showing up with a Formula 1 race car. You have to read the rule book and build according to its instructions. The same is true in life - to win, you have to live according to the rules, and these are found in the Designer's Handbook, the Bible.

Connect the vehicles below to their competition types. Then show your Ranger, telling him what you are doing with God's Handbook.



FREESTYLE BMX
DRAG RACE
MONSTER TRUCK MEET
MOTOCROSS FREESTYLE
FORMULA 1
MINIBIKE RACE
TRACTOR PULL
CAR RALLY

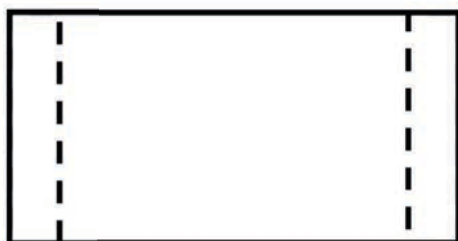
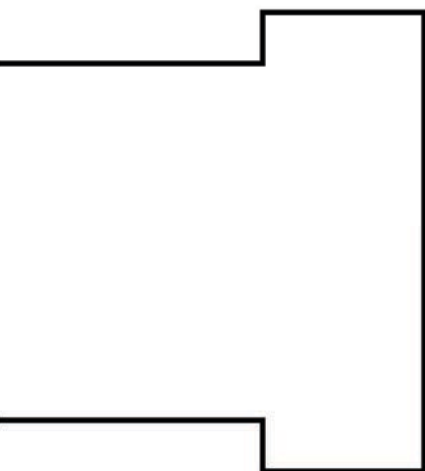
STOCKAR DESIGN PAGE



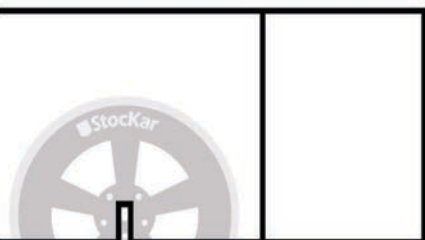
TOP VIEW



SIDE VIEW



REAR VIEW



FRONT VIEW

StocKar Rules:

Unlike life, the rules for StocKars tend to change from unit to unit and event to event. However, adhering to the following rules should ensure that your racer is legal.

GENERAL RULES:

1. Every derby race has its own set of rules.
2. Every derby race judge may interpret those rules differently.
1. The car must have been made during the current Brigade season. (Your derby may have a "Classics Division" where older vehicles can race again.)
2. The car must use the official StocKar Kit, with the wheels and axles used as intended. (Many units relax this rule, but different wheels and axles do make a big difference in speed.)
3. The width of the car shall not exceed 2-1/4 inches.
4. The length of the car shall not exceed 7 inches. (For Tractor-Trailer races, the length is extended.)
5. The height may not be specified, but the car must fit under the Finishing Gate - 4" is a good maximum height.
6. The weight of the car shall not exceed 5 ounces (142 gm).
7. Lubrication is permitted. Dry lubricants are recommended as many races prohibit wet lubricants.
8. Wheel bearings, washers, and bushings are prohibited.
9. The car shall not ride on any kind of springs.
10. Any details added must be within length, width, height and weight limits.
11. The car must be freewheeling, with no starting devices, motors, rubber bands, springs, etc.
12. No loose materials of any kind are allowed in the car.
13. The car's official number must be clearly visible on the top front of the car.
14. Once a car is registered, it goes into "Impound" and cannot be touched - not even to relubricate the wheels - until the derby is complete.
15. If a car does not meet the rules, it may be permitted to run in the "Demonstration Division" race.

SECRETS TO WINNING WHEELS & AXLES

Ugly cars win races by being perfectly weighted and having their wheels and axles properly prepared and aligned.

Check the axle slots by using a square to ensure they are square to the body. If they aren't, drill new axle holes using a drill press or a body tool.

Polish the axles by locking them one at a time in a drill chuck. Use a strip of 180, then 320 grit emery cloth against the spinning axle, being careful not to touch the drill chuck or axle. Also pay attention to the backside of the axle head - make sure that it is flat and smooth. Finish the axle with a fine metal polish, then store the axles away, individually wrapped in tissue paper.

Prepare the wheels by checking and removing any sprue or flashing. Deburr the axle hole ends, and insure that the wheelhub is flat and smooth where it contacts the body of the car. Carefully slide a bit (held in your finger tips) through the axle hole to hone the inside surface. A wheel mandrel can help with this but care must be taken to prevent damaging the axle hole.

Prepare the car for the wheels by sanding and painting the area around the axle slot. The wheel will rub against this surface during the race, so it must be smooth and unaffected by the lubricant.

Lubricate the wheels and axles before affixing them to the car. Dry lubricant is preferred - graphite powder is considered the best, but talcum powder can be used. Wet lubricants include penetrating oil, WD-40, high-tech Teflon, silicone, and molybdenum sulfide. **NEVER mix dry and wet lubricants.** Be aware that wet lubricants tend to evaporate during the races and may not be effective in the final heats.

Install the wheels and axles so that the car balances on only two wheels - the more wheels that touch the track, the more friction there is and the slower the car goes. Insure that the wheel cannot contact any part of the car except at the hub. Test spin each wheel. It should spin freely for several seconds.

Test the car by rolling it slowly on a hard floor. It should turn slightly to one side.

NEVER play bumper cars with your racer until after the Derby.

RUNNING TRUE



One of the tests for a brand new StockKer is to roll it on a hard floor. If it curves sharply into a tight circle, the wheels are out of alignment and need to be fixed. But, if it gently and consistently, pulls to one side, it is said to be perfect. You would think that going dead straight would be the best, but the problem with this is that the track has imperfections that cause the car to bounce from side to side. Instead of the car running dead straight, its nose ends up chattering from side to side, slowing the car down every time the front wheels contact the center rail.

By giving the car a slight curve in one direction, the car becomes a "rail-rider", the bouncing is minimized and it goes a little bit faster.

Tune your car to have that slight curve. **Demonstrate its action to your Ranger.**

Good, better, best. Never let it rest.
Till the good is better, and the better, best.

GOOD

BETTER

BEST

BAD

STOCKKAR-LIFE'S RACE 13