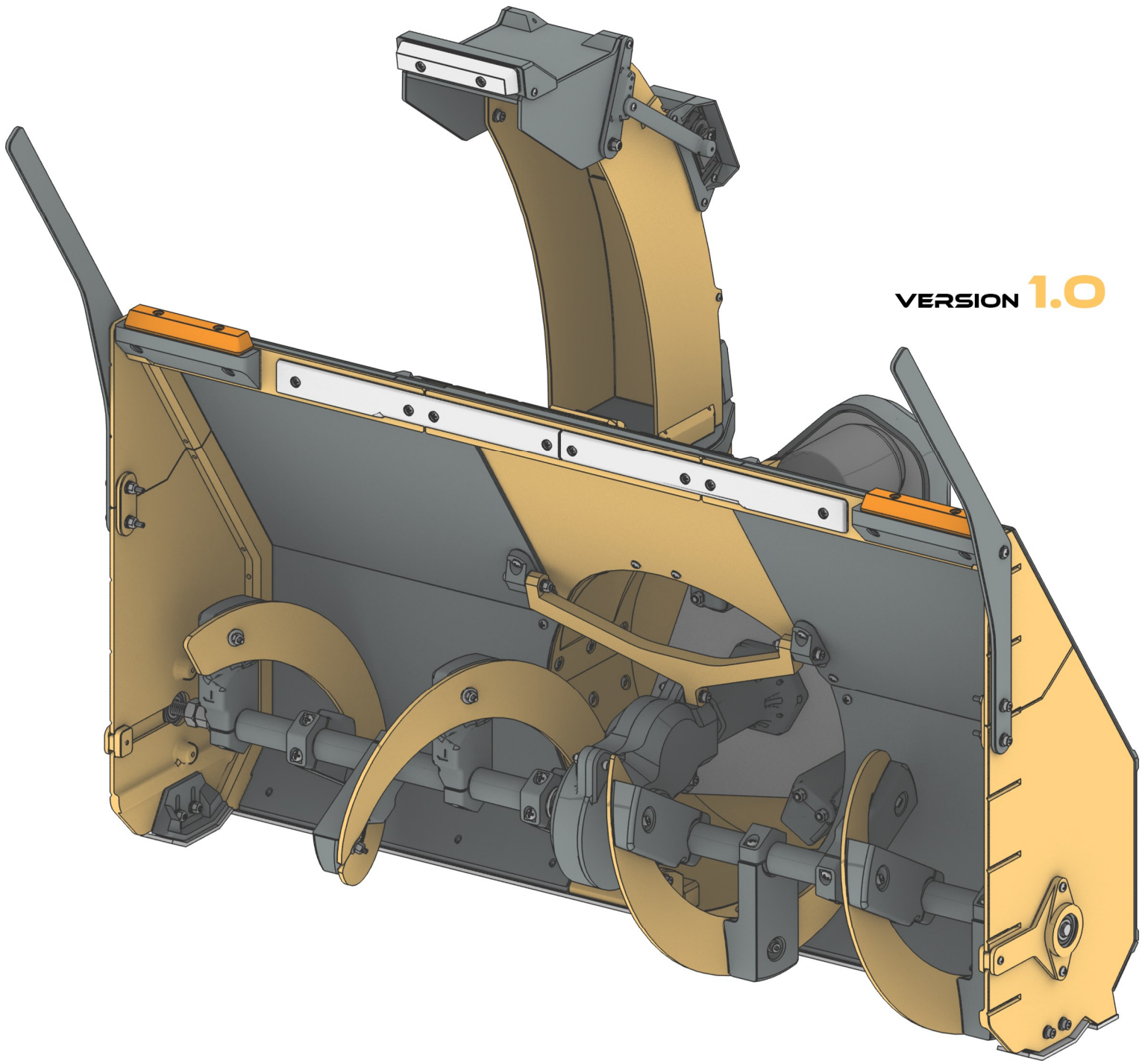


SPYKER WORKSHOP



VERSION 1.0

2X2 SNOW BLOWER

Designed by Moo Spyker (Ryan Butler)

INTRODUCTION

Thank you for your purchase of your very own 3d printed snow blower!
 This machine can be a lot of fun but always keep in mind how dangerous it is.

- ! NEVER stick your hands inside the machine while it is still plugged in. UNPLUG IT!
- DO NOT aim the shoot towards anyone while in operation.

Please use common sense when operating this machine, treat it like you would a full sized snow blower!
 Spyker Workshop is not responsible for any harm caused from the use of this machine.

You can follow along with this instruction manual on our YouTube video build series.
 Find the video here: www.youtube.com/user/thegreatestmoo

See **OPERATION** and **ELECTRONICS** on the next page for setup and blower use.

SOME OF THE ITEMS REQUIRED

See the **HARDWARE** page at the back of this manual to see all the hardware you need to complete the assembly of this kit.

You also need the following:

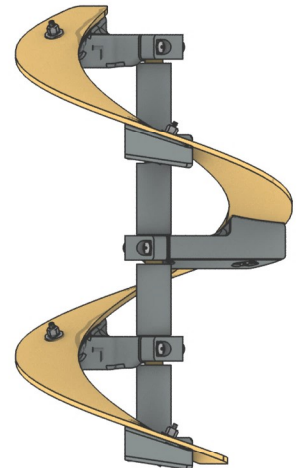
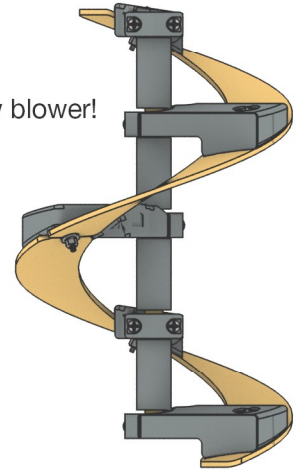
- Dremel + Disk (To grind/cut some parts)
- Metal Saw (To cut some parts)
- Grease (For worm gear drive)
- Threadlock (For set screws, removeable type)
- Common household tools (Philips screw driver, pliers, wrench, etc.)
- Sandpaper / File (Some parts may require additional work to fit together properly)

ELECTRONICS

- 6 channel radio or more
- Servo modified for continuous rotation (You must modify the servo)
- Servo for lifting blower up and down
- Ampflow E30-400-24 Sized brushed motor / 6384 Brushless Motor (or similar size)
- Speed controller

MOUNT

- Spyker 2X KAT to power this
- Design your own mounting system to connect to other RC vehicles



MANUAL WORKFLOW

This instruction manual has an easy to follow format on each page.

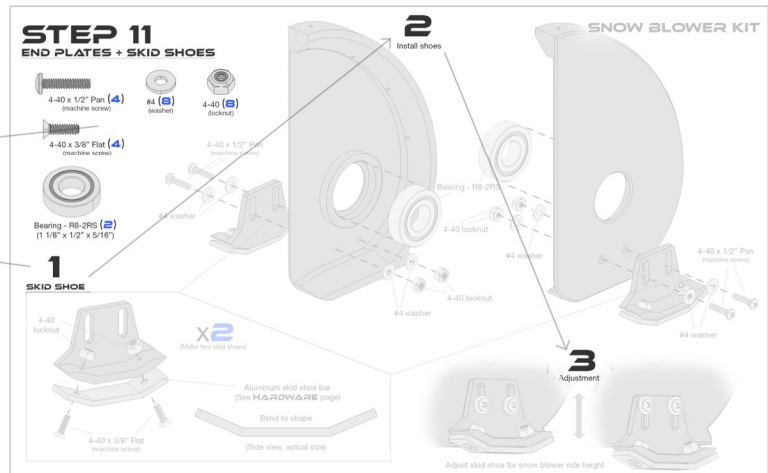
Under each step lists all the hardware needed for the current step.

Most steps have an order to follow **1, 2, 3**, etc.

Make sure you read all the text on each step so you don't miss anything!

- ! Start off by drilling out all your parts using the **DRILL GUIDE** on the back.

If you get stuck on any part during the build you can email me at spyker.sales@hotmail.com for assistance, have fun!



OPERATION

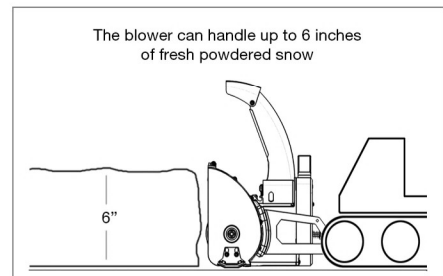
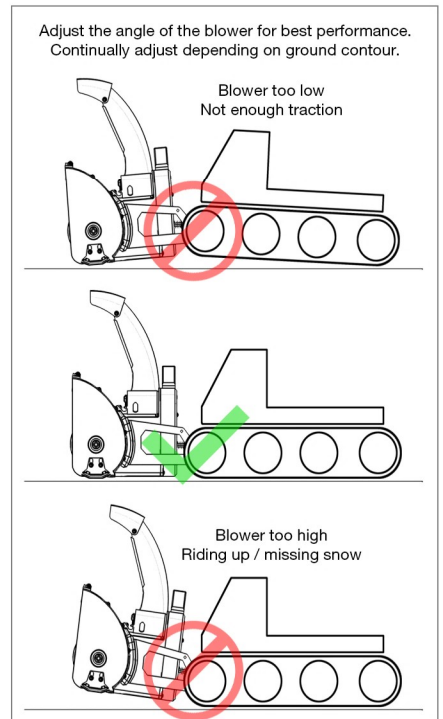
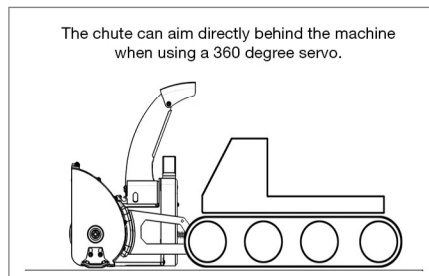
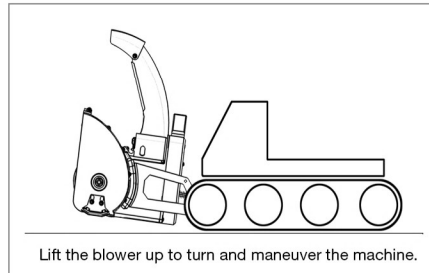
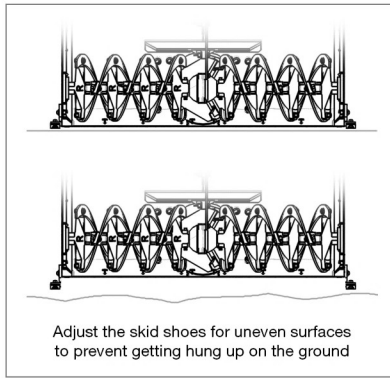
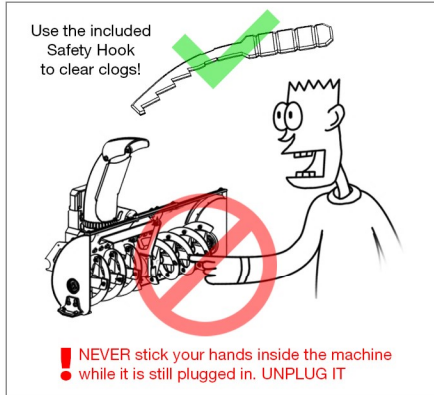
HOW TO USE YOUR BLOWER

2X2 SNOW BLOWER KIT

Best used in cold temperatures below 30F (20F is ideal).
High humidity will effect the blowers performance (Wet snow).

You should place your snow blower outside in the cold several minutes before using it to let it adjust to the temperature.
This will help prevent snow from sticking to the machine!

If your machine clogs up, power the machine off and clear the blockage carefully.



ELECTRONICS

(SEE SEPARATE ELECTRONICS MANUAL)

STEP 1 Start by drilling out all printed parts using the **DRILL GUIDE** page.
Next use the **CUTTING / DRILLING GUIDE** page.

2X2 SNOW BLOWER KIT

STEP 2 BODY / SCRAPER BAR

#6 x 1" Flat (3) #6 x 5/8" Flat (10)

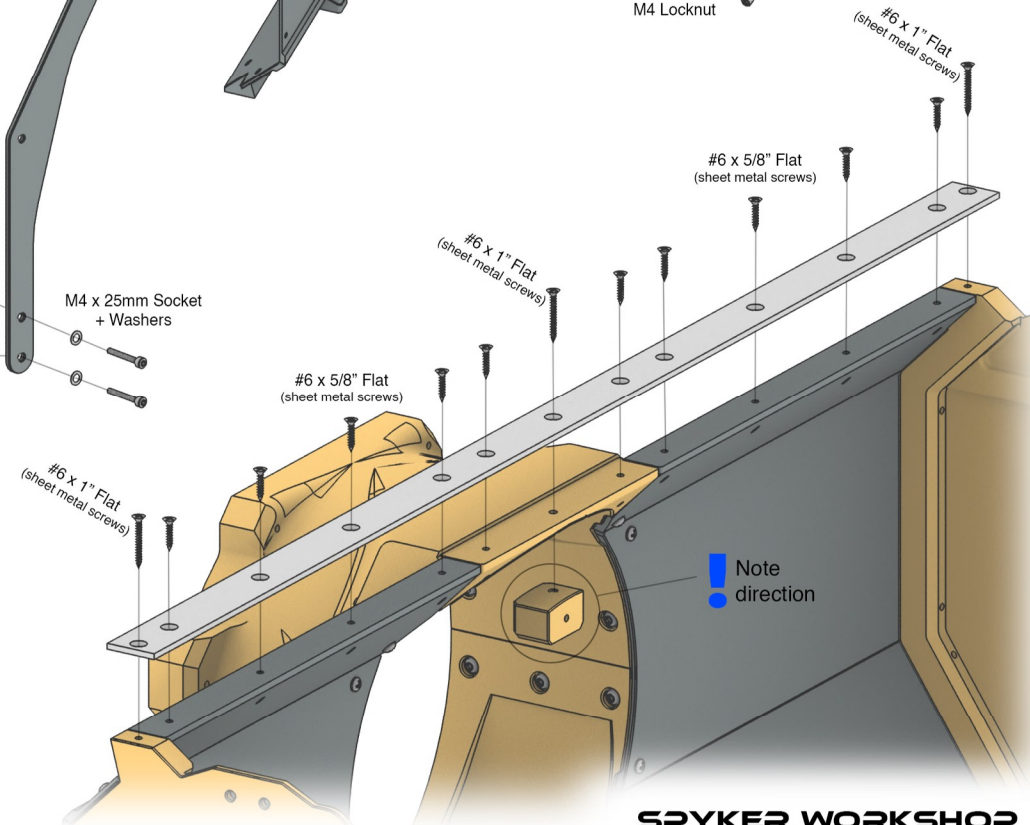
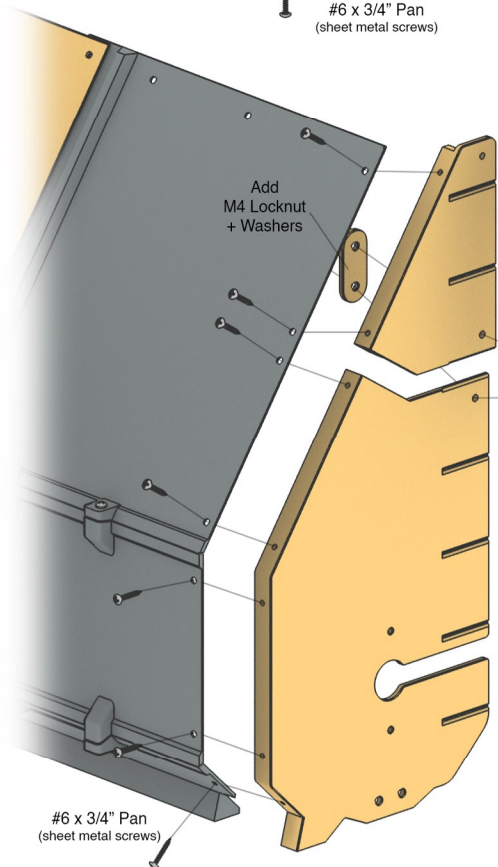
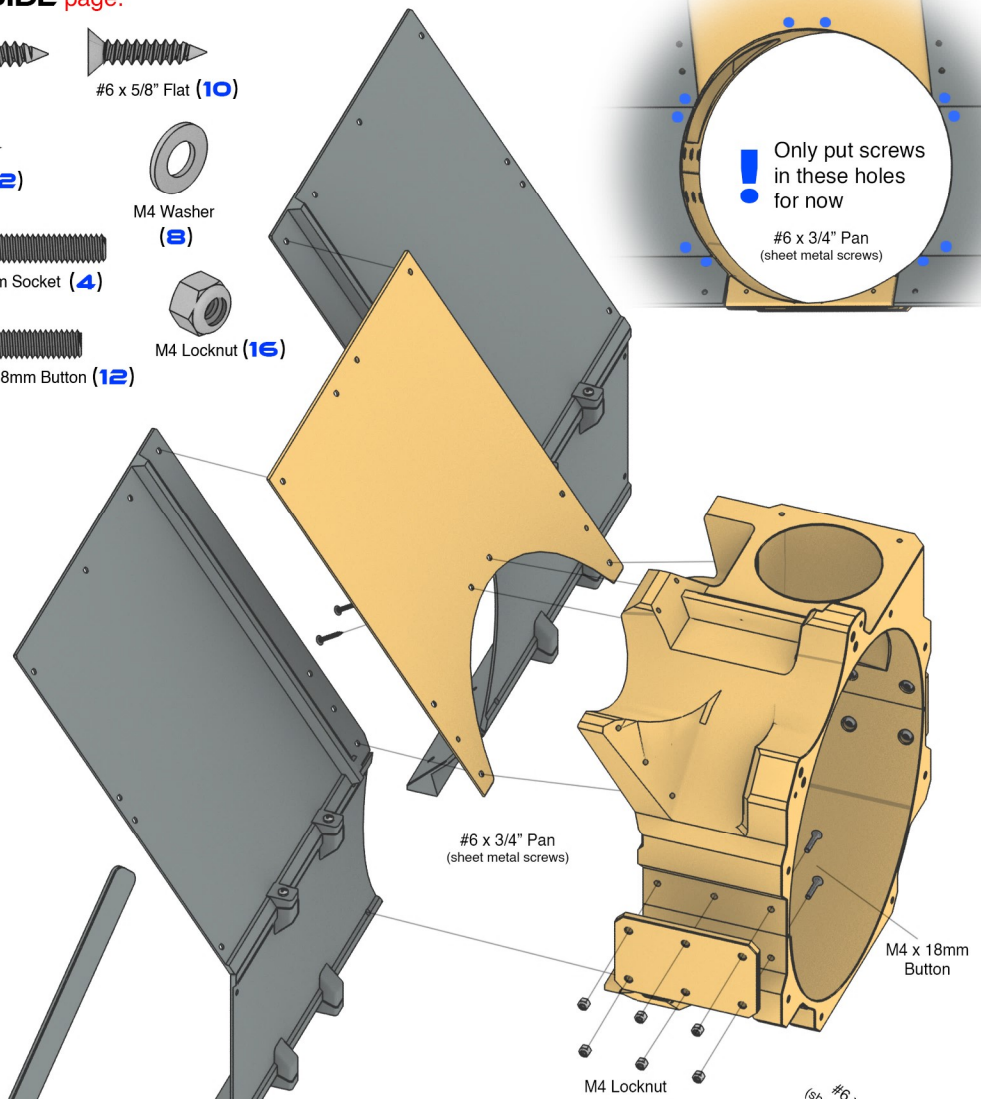
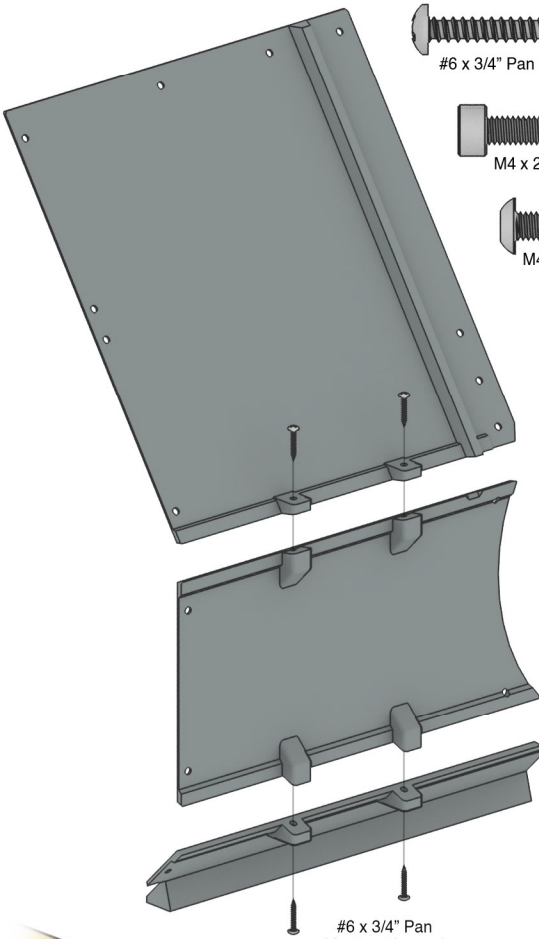
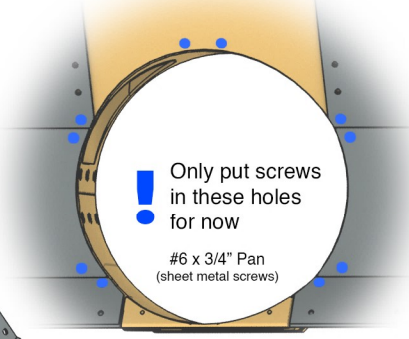
#6 x 3/4" Pan (32)

M4 Washer (8)

M4 x 25mm Socket (4)

M4 Locknut (16)

M4 x 18mm Button (12)



STEP 3

LIGHT BAR OR NO LIGHT BAR

(Sold separate)



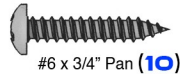
#4 x 3/4" Pan (8)



M4 Washer (2)

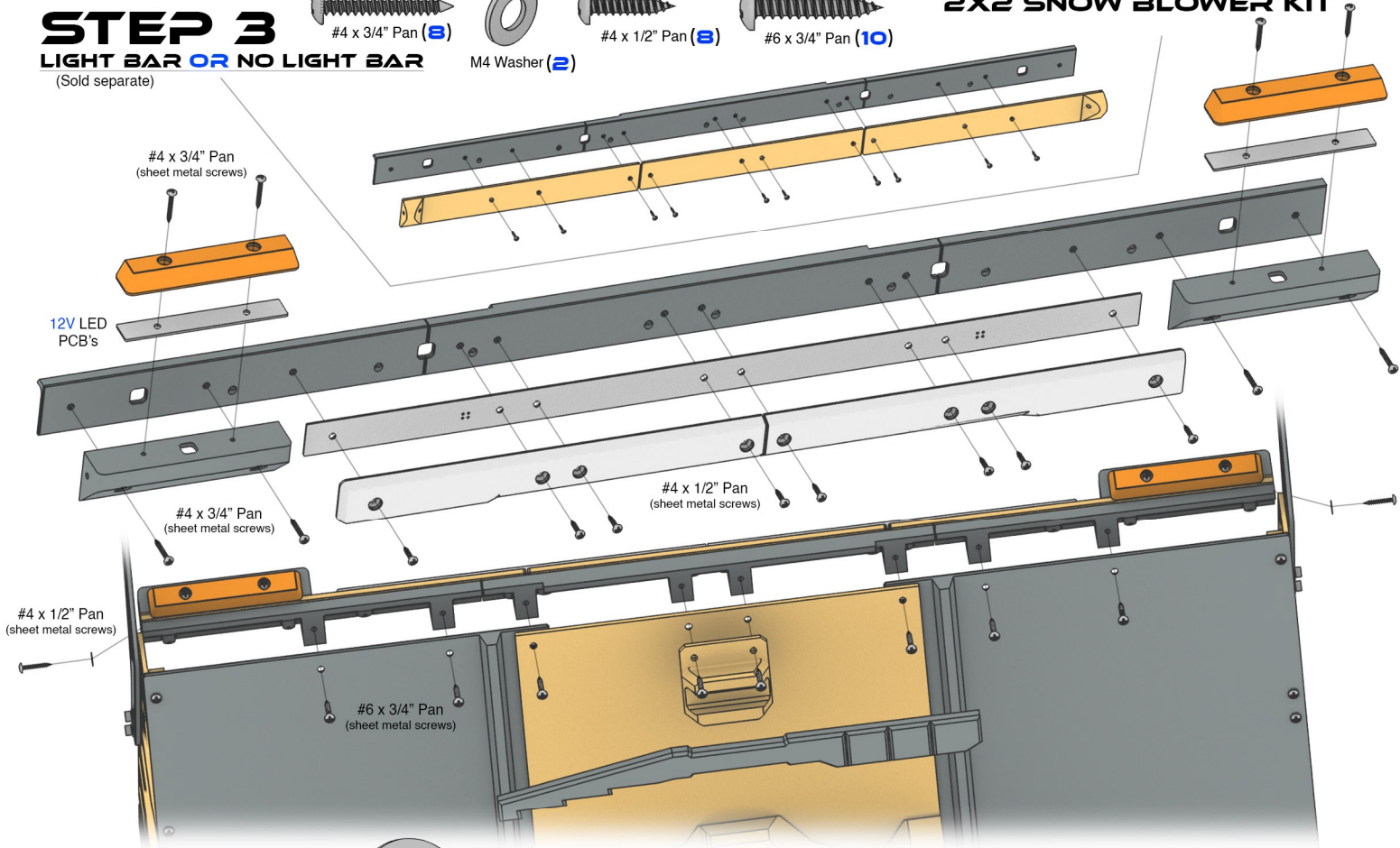


#4 x 1/2" Pan (8)



#6 x 3/4" Pan (10)

2X2 SNOW BLOWER KIT



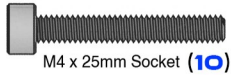
STEP 4

AUGER LEFT / RIGHT

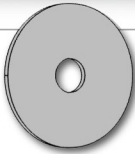
(Right side shown)



#8 x 1 1/2" Pan (20)



M4 x 25mm Socket (10)



#8 Fender Washer (2)



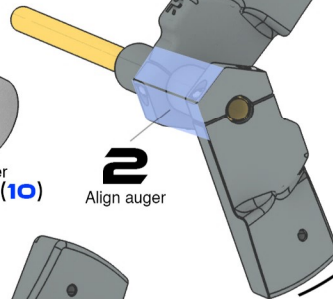
M4 Fender Washer (10)



M4 Fender Washer (10)

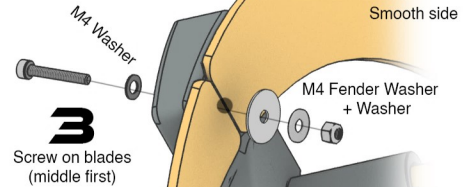


M4 Locknut (10)

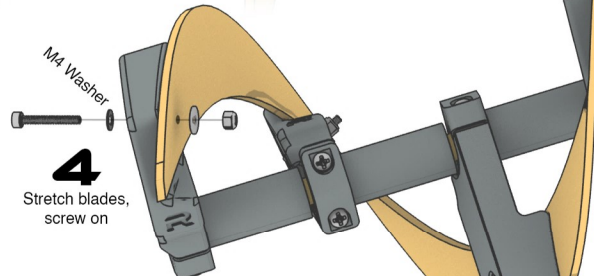


2
Align auger

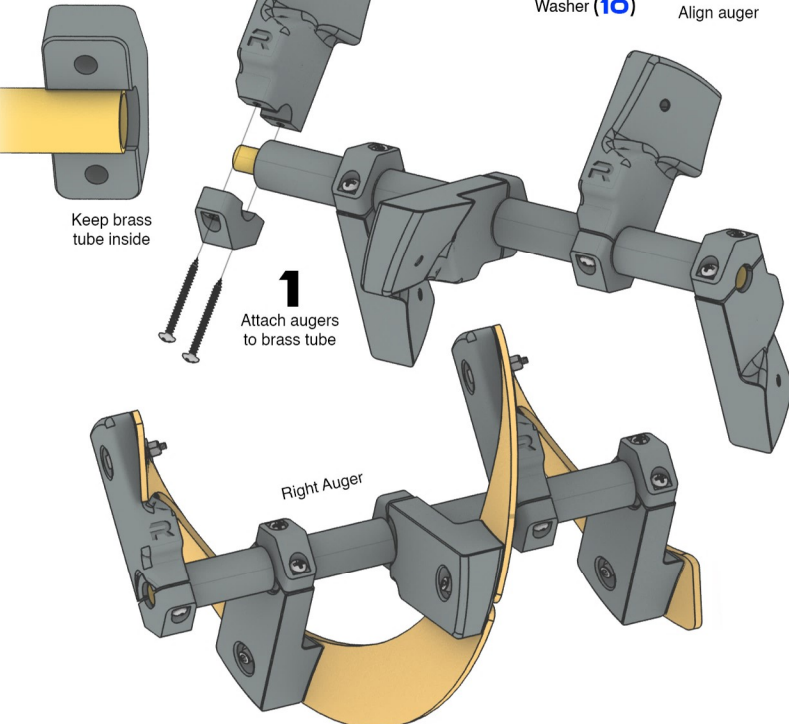
Rotate 2 hex each auger



3
Screw on blades (middle first)

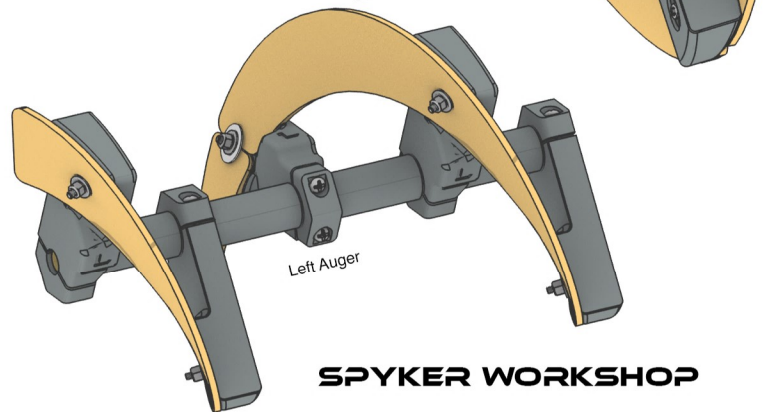


4
Stretch blades, screw on



1
Attach augers to brass tube

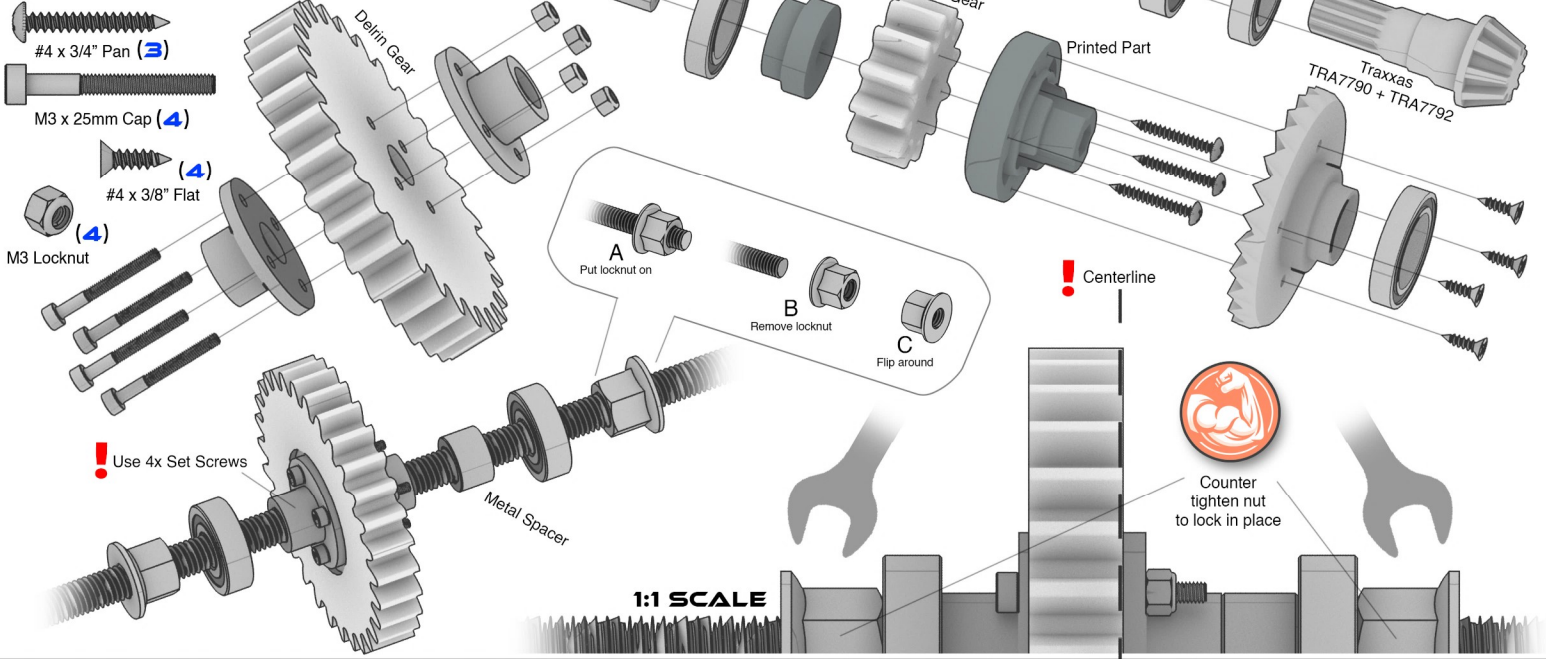
Right Auger



Left Auger

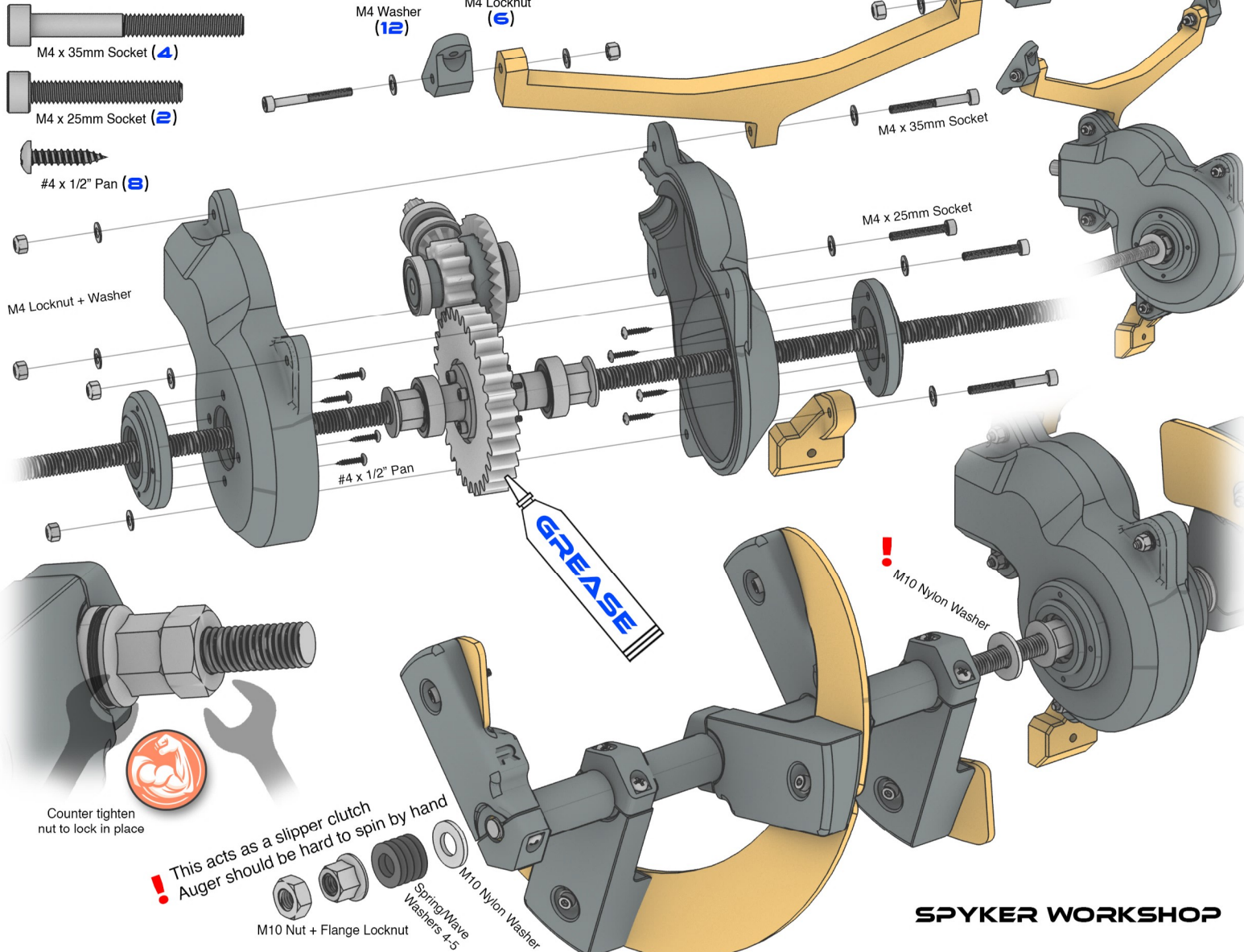
STEP 5

PREPARE DRIVE PARTS



STEP 6

TRANSMISSION / AUGERS



STEP 7

INSTALL AUGER

- #6 x 5/8" Flat (4)
- #4 x 1/2" Pan (2)
- M4 x 16mm Socket (4)

- #6 x 3/4" Pan (4)

2X2 SNOW BLOWER KIT

- M4 Washer (8)
- M4 Locknut (4)
- #4 x 1/2" Pan
- #6 x 3/4" Pan
- #6 x 5/8" Flat

STEP 8

IMPELLER DRIVE

- M5 x 80-100mm Button (3-6)
- #6 x 3/4" Pan (6)
- #4 x 1/2" Pan (6)

- M5 Locknut (6)

M5 Locknut behind

File down washer to match hex

Counter tighten nuts REALLY tight to lock in place

OPTION: Printed Impeller OR CNC Impeller

- M5 x 80mm Button
- M5 x 100mm Button
- M10 Coupler Nut
- M10 x 100 Hex Fully Threaded
- M10 Washer
- M10 Washers x2
- Bearing
- #6 x 3/4" Pan
- 2x set screws on flat spots
- 36T Sprocket
- M10 Nut
- M10 Flange Nut
- #6 x 3/4" Pan
- Bearing
- M10 Nut
- #6 x 3/4" Pan

Printed Spine Hex

Counter tighten nuts

STEP 9

MOTOR MOUNT PLATE

2X2 SNOW BLOWER KIT

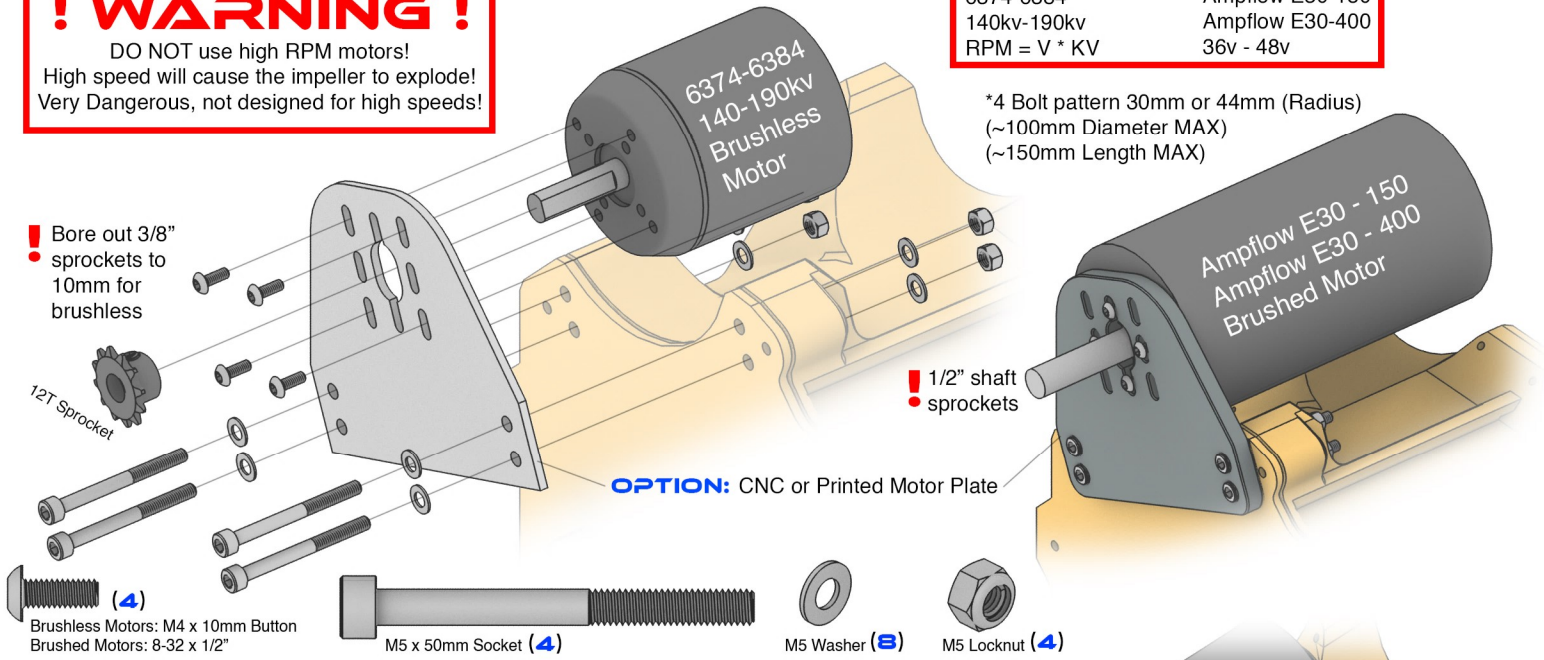
Recommended Motors:

Brushless 24v-50v	Brushed 24v-36v
6374-6384	Ampflow E30-150
140kv-190kv	Ampflow E30-400
RPM = V * KV	36v - 48v

*4 Bolt pattern 30mm or 44mm (Radius)
 (~100mm Diameter MAX)
 (~150mm Length MAX)

! WARNING !

DO NOT use high RPM motors!
 High speed will cause the impeller to explode!
 Very Dangerous, not designed for high speeds!

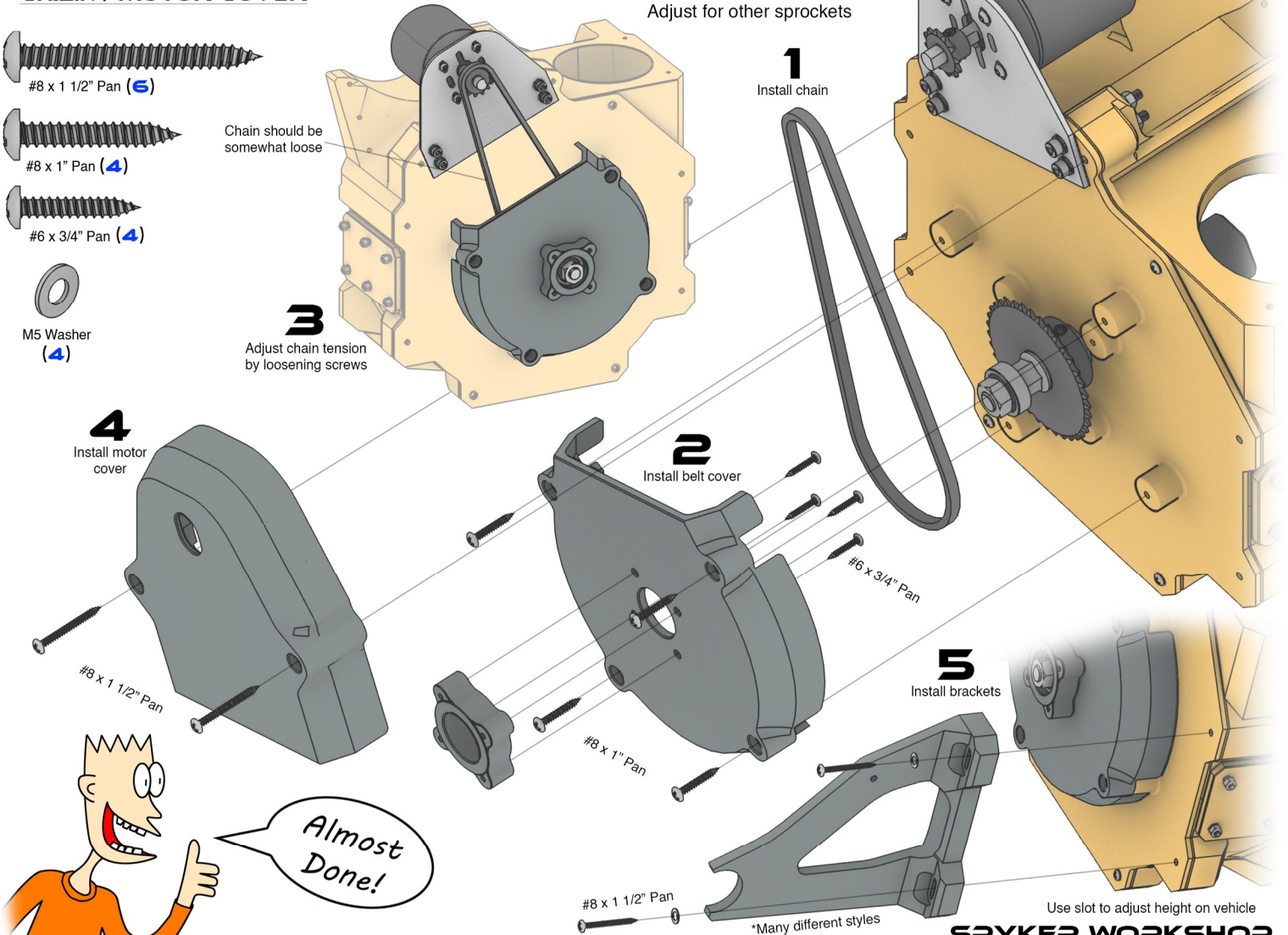


STEP 10

CHAIN / MOTOR COVER

! Only adjust chain tension after Belt Cover is on

#25 Chain size:
 12/36 Sprockets = 20.5" 41 links
 Adjust for other sprockets

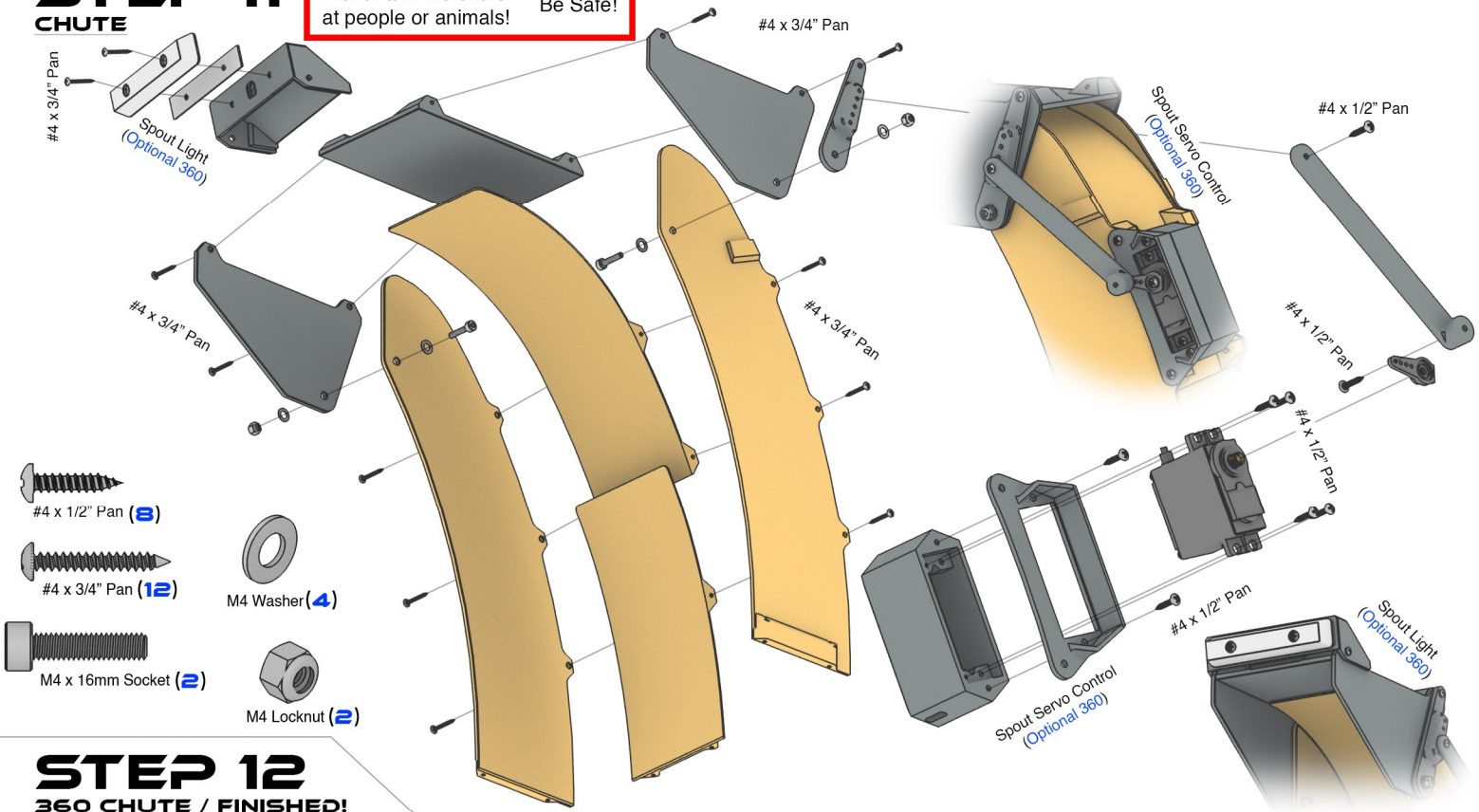


STEP 11

CHUTE

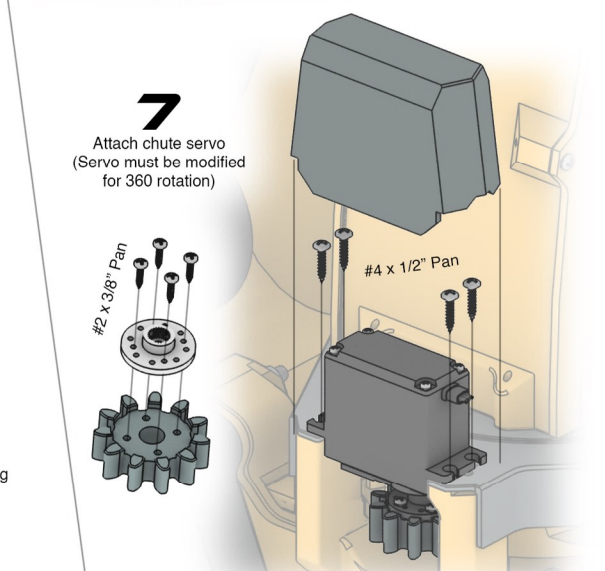
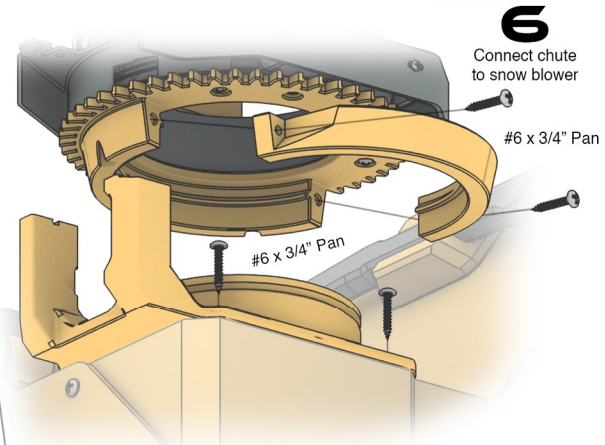
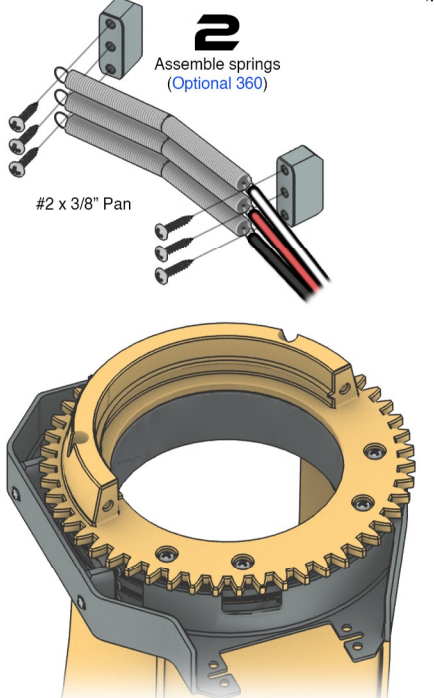
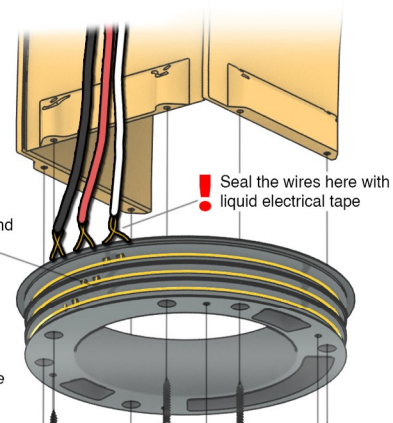
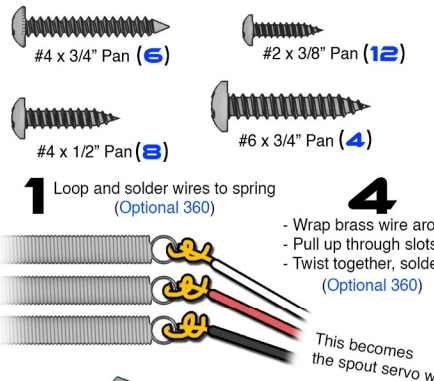
WARNING
 Never aim the chute at people or animals!
 Be Safe!

2X2 SNOW BLOWER KIT



STEP 12

360 CHUTE / FINISHED!



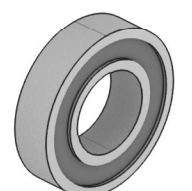
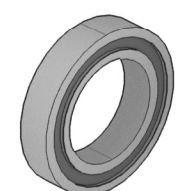
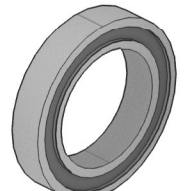
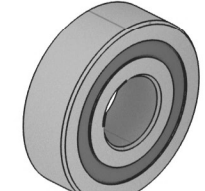
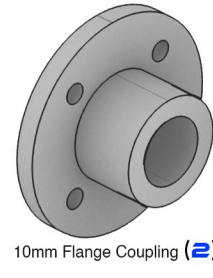
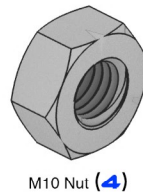
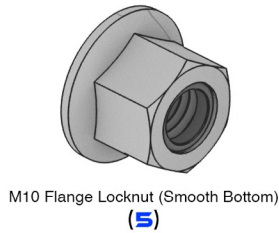
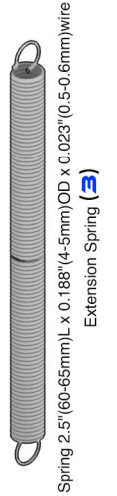
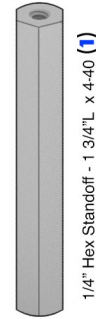
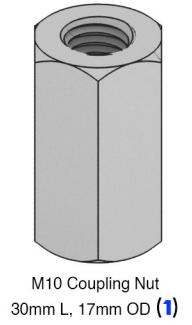
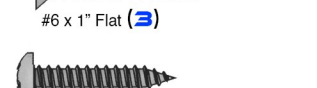
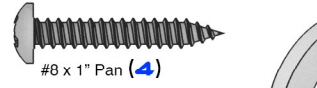
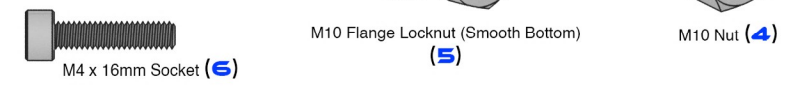
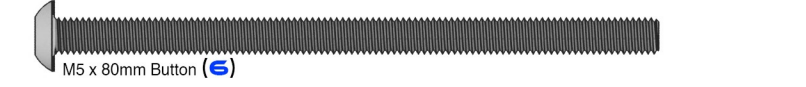
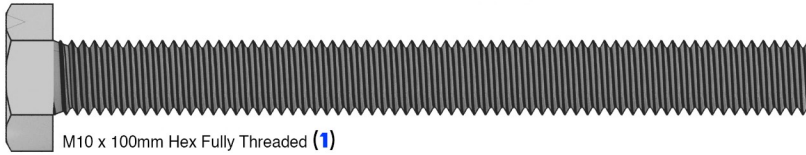
HARDWARE

2X2 SNOW BLOWER KIT

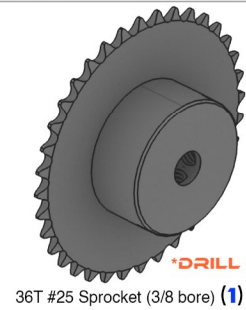
This list contains all the hardware needed to build your snow blower.

Hardware kits for sale at: WWW.SPYKERWORKSHOP.COM

Scale 1:1

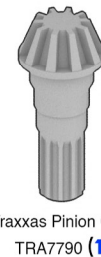
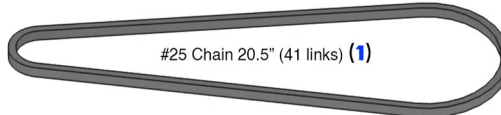


Not to scale (See 'Cutting/Drilling Guide' page)



*DRILL BORES OUT TO 10MM

Solid Brass Wire 0.032"(0.8mm)(~20AWG) x 6ft (1)



M10 x 720mm Threaded Rod (1)



CUTTING/DRILLING GUIDE

2X2 SNOW BLOWER

1:1 SCALE

Centerline

360mm [14 $\frac{3}{16}$ in]

M10 Threaded Rod

Measure From Centerline

4x Dremel flat spots (both sides)

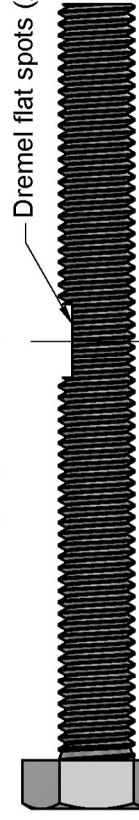
18.5mm [$\frac{3}{4}$ in]

8.5mm [$\frac{5}{16}$ in]

Total Cut Length

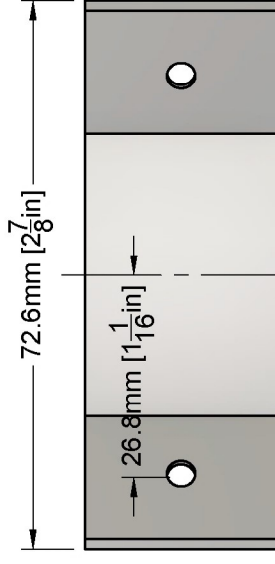
720mm [28 $\frac{3}{8}$ in]

M10 x 100mm Hex Bolt (Fully Threaded)



Dremel flat spots (2 if needed)

55.4mm [2 $\frac{3}{16}$ in]



72.6mm [2 $\frac{7}{8}$ in]

26.8mm [1 $\frac{1}{16}$ in]

1" x 1/8" Aluminum Bar (bend ends)

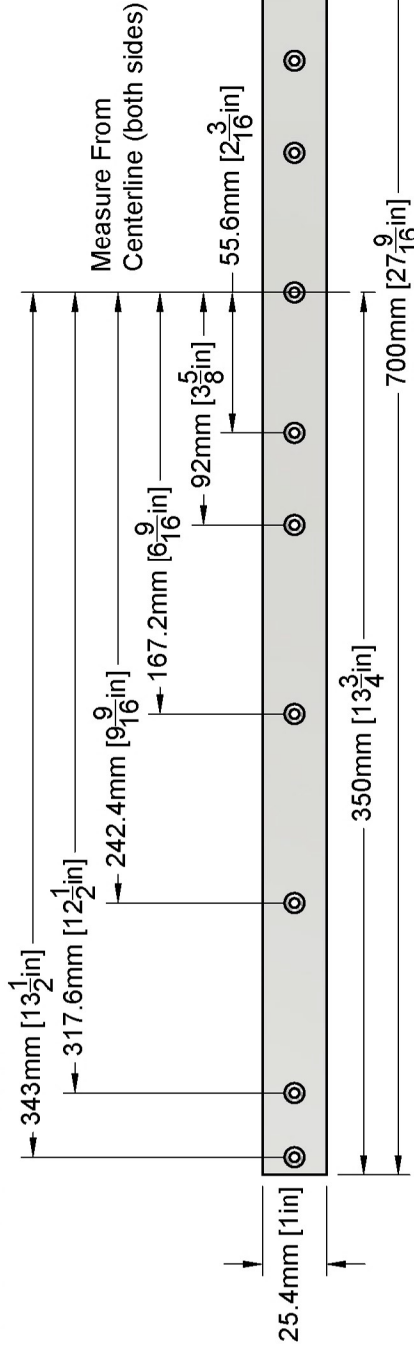
X2

12mm OD 10mm ID Brass Tube X2

260mm [10 $\frac{1}{4}$ in]



NOT TO SCALE



SPYKER WORKSHOP

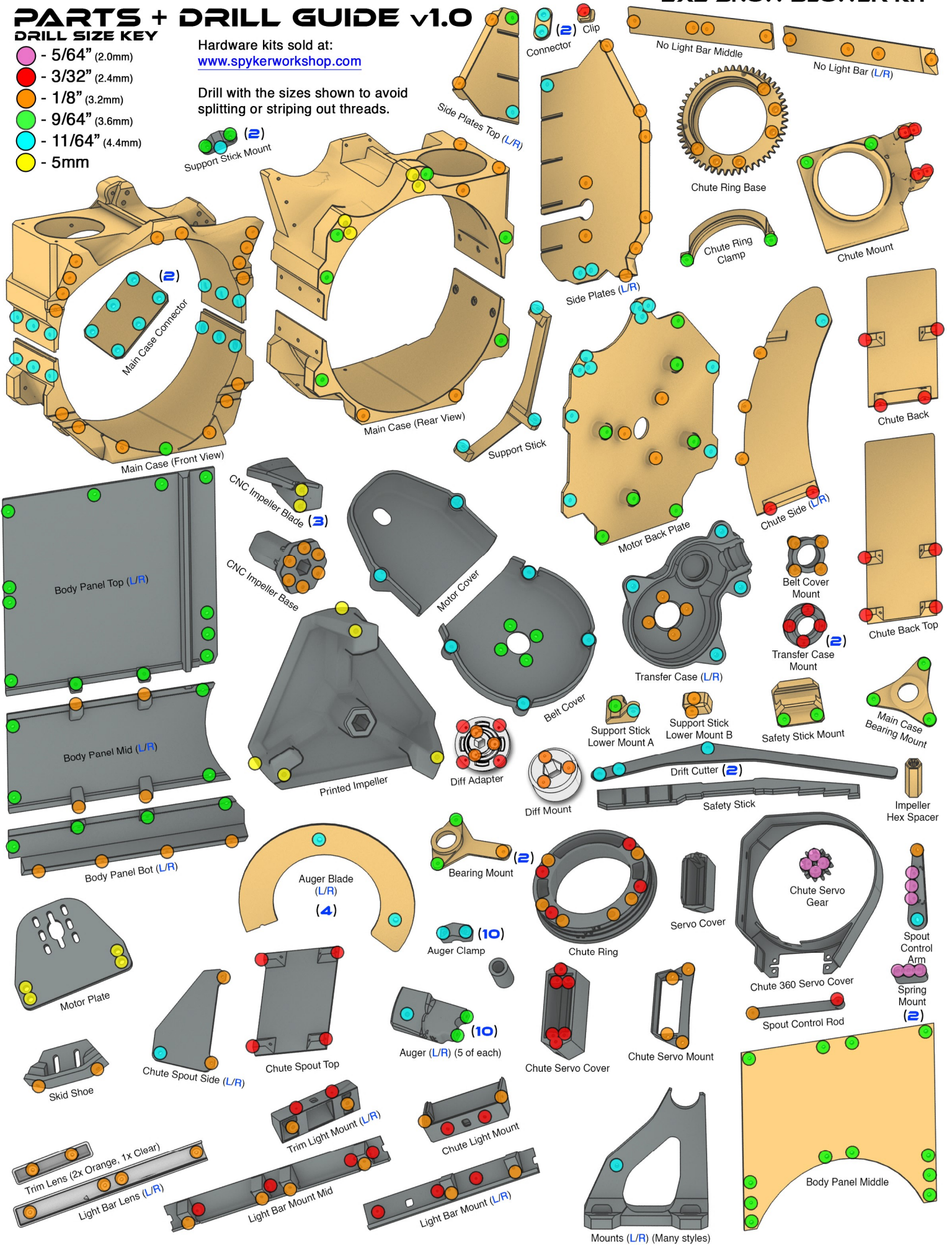
PARTS + DRILL GUIDE v1.0

DRILL SIZE KEY

- - 5/64" (2.0mm)
- - 3/32" (2.4mm)
- - 1/8" (3.2mm)
- - 9/64" (3.6mm)
- - 11/64" (4.4mm)
- - 5mm

Hardware kits sold at:
www.spykerworkshop.com

Drill with the sizes shown to avoid splitting or stripping out threads.



(2) Support Stick Mount

(2) Clip Connector

(2) Main Case Connector

Main Case (Front View)

Main Case (Rear View)

Support Stick

Side Plates (L/R)

Side Plates Top (L/R)

No Light Bar Middle

No Light Bar (L/R)

Chute Ring Base

Chute Ring Clamp

Chute Mount

Chute Back

Chute Back Top

Chute Side (L/R)

Motor Back Plate

Transfer Case (L/R)

Transfer Case Mount (2)

Main Case Bearing Mount

Safety Stick Mount

Support Stick Lower Mount A

Support Stick Lower Mount B

Diff Mount

Drift Cutter (2)

Safety Stick

Impeller Hex Spacer

Body Panel Top (L/R)

Body Panel Mid (L/R)

Body Panel Bot (L/R)

CNC Impeller Blade (3)

CNC Impeller Base

Motor Cover

Belt Cover

Printed Impeller

Diff Adapter

Support Stick Lower Mount A

Support Stick Lower Mount B

Safety Stick Mount

Main Case Bearing Mount

Bearing Mount (2)

Chute Ring

Servo Cover

Chute Servo Gear

Chute 360 Servo Cover

Spout Control Rod

Spout Control Arm

Spring Mount (2)

Motor Plate

Chute Spout Side (L/R)

Chute Spout Top

Auger Clamp (10)

Auger (L/R) (5 of each)

Chute Servo Cover

Chute Servo Mount

Skid Shoe

Trim Lens (2x Orange, 1x Clear)

Light Bar Lens (L/R)

Trim Light Mount (L/R)

Chute Light Mount

Light Bar Mount Mid

Light Bar Mount (L/R)

Mounts (L/R) (Many styles)

Body Panel Middle