

EXPLORER RUCKSACK KIT

KIT CONTAINS:

Pre-Cut Pre-Punched Leather
Pre-Sewn Waxed Canvas Bag
D-Rings (4)
Button Studs (3)
Rivets (104)
Grommets (8)
Cord Lock
Paracord
Needles & Thread
Instructions & Pattern



BEFORE YOU BEGIN, YOU WILL NEED:

- Flathead Screwdriver
- Deluxe Rivet & Snap Setter
- 1/4" Grommet Setter
- 3/32" & 1/4" Round Drive Punch or Rotary Punch
- Mallet
- Knife
- Scratch Awl
- Straight Edge

⚠ CAUTION

CUT HAZARD: Functional sharp points. **CHOKING HAZARD:** Small parts.
Keep out of reach of children.

PLEASE READ ALL INSTRUCTIONS BEFORE BEGINNING PROJECT.

NOTE: ALL STAINING, DYEING, CONDITIONING, AND TOOLING SHOULD BE DONE PRIOR TO ASSEMBLY.

IN THIS KIT YOU WILL...

(TECHNIQUES USED)



TRANSFER PATTERNS

Use paper template to transfer pattern and mark punch holes onto leather.



PUNCH HOLES

Punch holes into leather for hardware and other items before constructing project.



STITCH LEATHER

Use a variety of stitching techniques to secure leather together and finish project.



CUT LEATHER

Cut leather to specific size and/ or trim corners for decorations and embellishment.



SET HARDWARE

Set rivets, snaps, and/ or eyelets into leather before final assembly.

CUSTOMIZE YOUR KIT BY...

(OPTIONAL TECHNIQUES)



TOOLING LEATHER

Stamp and carve leather into unique designs and creations.



BURNISHING EDGES

Give your project a clean professional look by burnishing edges with gum tragacanth or other solution.



DYEING LEATHER

Get creative by dyeing, staining or painting projects to add a personal touch.

WHAT'S INCLUDED?

Canvas Pouch (A)
Top Flap (B)
Shoulder Strap Station (C)
Closure Tab (D)
Closure Button Tab (E)
Pocket Molles (F)
Long Molle (G)
Adjustable Straps (H)
Shoulder Straps (I)
Pocket Flap (J)
Pocket (K)
Pocket Closure (L)
Strap Keepers (M)
Pocket Closure Keepers (N)
Strap Ends (O)
Adjustable Strap Anchors (P)

D-Ring Keepers (Q)
D-Ring (S)
Button Studs (T)
Medium Rivets (U)
Large Rivets (V)
Grommets (W)
Paracord (X)
Cord Lock (Y)
Handle Strip (Z)
Needles & Thread

Not Shown:

Adjustable Strap End Template (R)
Top Handle Station Template (A1)
Top Handle Template (A2)
Instructions & Pattern

RECOMMENDED TOOLS:

3-Prong Stitching Chisel to punch stitch holes.
3/4" Oblong Punch to punch handle holes.
Binder Clips or Preferred Adhesive to secure leather pieces.
Stitching Horse to hold leather pieces while stitching.
Scratch Awl to widen stitch holes.
Emery Board to sand edges.
Multi-size Wood Slicker to burnish edges.
Gum Tragacanth to burnish edges.
Cotton Swab to apply Gum Tragacanth.

GLOSSARY:

FLESH SIDE: The underside of an animal's hide. On veg-tanned tooling leather, this is the rough side.

GRAIN SIDE: The hide's surface that had the hair of the animal. Typically used for carving and stamping.



OPTIONAL: BURNISHING HANDLES

1. Before assembling, burnish edges to desired finish. *See Level Up Your Skills starting on page 14 for detailed instructions on How to Burnish Edges.*

ATTACHING D-RING KEEPERS

2. Align punch holes of one of the D-Ring Keepers (Q) over one of the Shoulder Straps (I), grain sides up.
3. Slide two D-Rings (S) onto D-Ring Keepers (Q). (Figure 1)
4. Cut thread 5 times the length of stitch line. Thread both ends with harness needles. *See Level Up Your Skills starting on page 15 for detailed instructions on How to Thread a Needle.*
5. Saddle stitch around rectangle then stitch over the first 2-3 stitches to secure. (Figures 2-3) *See Level Up Your Skills starting on page 15 for detailed instructions on How to Saddle Stitch.*
6. Set two Large Rivets (V) to secure D-Ring Keepers (Q). Cover with Rivet Cap and set. (Figure 4-5) *See Level Up Your Skills starting on page 14 for detailed instructions on How to Set Rivets.*
7. Repeat steps 2-6 on other set of D-Ring Keepers (Q) and Shoulder Straps (I). (Figure 5)

Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



8. Align stitch holes on Closure Button Tab (E) and Closure Tab (D) flesh sides together. (Figure 6)

9. Saddle stitch around rectangle then stitch over 2-3 stitches to secure. (Figures 7-8)

Figure 6



Figure 7

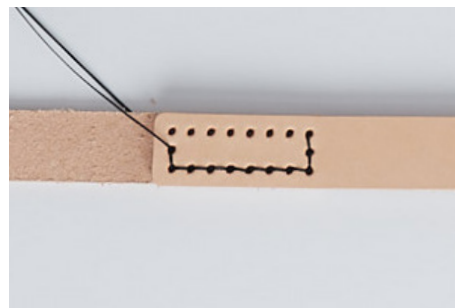


Figure 8



ATTACHING SHOULDER STRAPS

NOTE: There is an optional section starting on page 12 to add a Top Handle. This can be added at the end of step 12 or at the end of assembly.

10. Lay Shoulder Strap Station (C) grain side up. Feed Shoulder Straps (I), flesh side up, through oblong slot on Strap Station. Align punch and stitch holes. (Figure 9)

11. Set four Medium Rivets (U) on Strap Station (C) and Shoulder Straps (I). (Figure 9)

12. Saddle stitch across the short stitch line to secure Shoulder Strap (I) to Strap Station (C). Backstitch 2-3 stitches to secure. Repeat on the opposite side. (Figures 10-11) **See Level Up Your Skills starting on page 14 for detailed instructions on How to Backstitch.**

Figure 9



Figure 10



Figure 11



13. Feed Closure Tab (D), grain side up, through slotted oblong hole on Flap (B). (Figure 12)

14. Align the remaining stitch holes Closure Tab (D) to Top Flap (B), grain sides up. Closure Tab (D) should be facing towards the oblong punch hole.

15. Saddle stitch around rectangle then stitch over 2-3 stitches to secure. (Figures 13-14)

Figure 12



Figure 13



Figure 14



16. Align inner stitch line and punch holes of Strap Station (C) to Flap (B). Flap (B) overlays Strap Station (C). (Figure 14)

17. Set Medium Rivets (U) on both corners of the Strap Station (C) and Flap (B). (Figure 15)

18. Saddle stitch across and backstitch 2-3 stitches to secure. (Figures 16-17)

Figure 15



Figure 16



Figure 17



PREPPING POCKET

19. Align Pocket Closure Keepers (N) over Pocket (K), grain sides up. (Figure 18)

20. Set Medium Rivets (U) in all four punch holes. (Figure 19)

21. Fold sides and tabs in to form a crease. Overlap tabs to align second punch hole from the edge on each side. (Figures 20-23)

22. Set Medium Rivet (U) on the left and right side. (Figures 24-25)

Figure 18

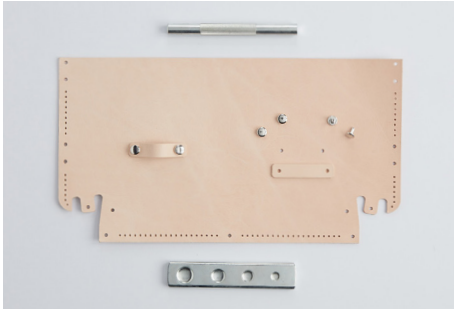


Figure 19

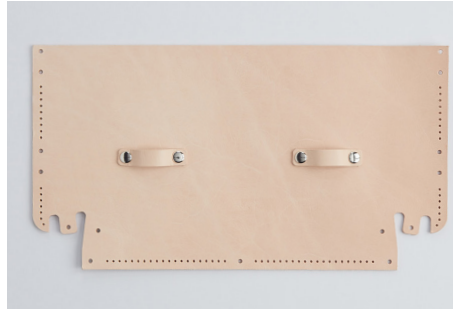


Figure 20

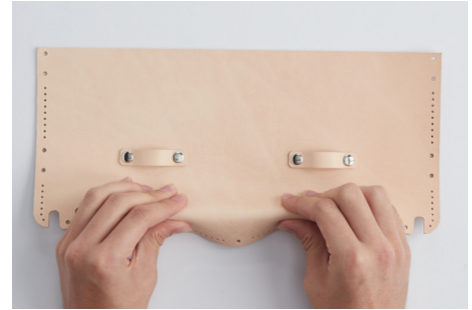


Figure 21



Figure 22



Figure 23



Figure 24



Figure 25



ASSEMBLING BAG BODY

23. On Canvas Pouch (A), punch out holes in the pre-marked locations using a 1/4" Round Drive Punch. (Figure 26)

24. Insert Grommet post (W) and stud into one of the punch holes. Use mallet and Grommet Setter to set. Repeat for each top hole. There should be eight in total. (Figures 27-28)

Figure 26



Figure 27



Figure 28



NOTE: For this next section, place a piece of scrap wood or a hard material into the bag to ensure correct hardware setting.

25. Place Long Molle (G), grain side up, on top of two rows of rivet holes on Canvas Pouch (A). (Figure 29)

26. Start by aligning left punch holes closest to seam. (Figure 30)

27. Set first set of two Medium Rivets (U). Then continue to set the next seven sets of rivets. (Figure 31)

Figure 29



Figure 30



Figure 31



28. Align one of the Pocket Molle (F) pieces below the Long Molle (G) on the left side grain side up.

29. Start by aligning left punch holes closest to seam.

30. Set first set of two Medium Rivets (U). (Figure 32)

31. Align second Pocket Molle (F) below and set the first set of Medium Rivets (U). (Figure 32)

32. Then continue to set the next two sets of Medium Rivets (U) on both pieces. Do not set the last row. (Figure 33)

33. Then repeat steps 28-32 on the right side. (Figure 34)

Figure 32



Figure 33



Figure 34



34. Align Pocket Flap (J) flesh side up between the middle mole, stitch holes towards the bottom. Set a rivet in each corner to attach the Pocket Flap (J). Do not set rivets on the Pocket Molle (F) yet. (Figure 35)

35. Saddle stitch Pocket Flap (J) to Canvas Pouch (A). To keep stitching holes aligned, use awl to pre-punch 4-5 stitch holes ahead of actual stitching. (Figures 36-37)

Figure 35



Figure 36

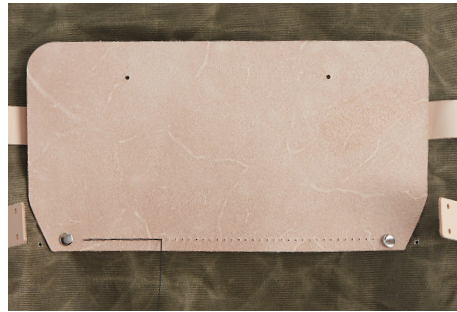
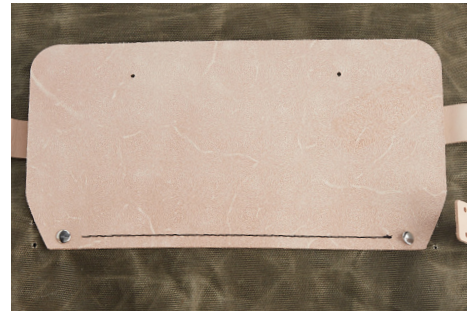


Figure 37



36. Align punch holes of Pocket (K), Pocket Molle (F), and the Canvas Pouch (A).

37. Set Medium Rivet (U) in top right & left corner. You should be setting the rivet through three layers.

38. Align side punch holes to the bottom set of molle and canvas. Set both Medium Rivets (U) on each side. Make sure to go through all three layers. (Figure 39)

39. Align punch holes in bottom corners of Pocket (K) to punch holes in canvas. Set the bottom corner Medium Rivets (U). (Figure 40)

40. Align bottom punch hole in the Pocket (K) to Canvas. Set rivets. (Figure 40)

41. Use the same stitching method as mentioned previously, and saddle stitch all 6 stitch sections on Pocket (K) to canvas. (Figures 41-43)

Figure 38



Figure 39



Figure 40



Figure 41



Figure 42



Figure 43



42. Align the small punch hole on Pocket Closure (L) to one of the open holes on Pocket Flap (J) flesh sides together. (Figure 44)
43. Screw Button Stud (T) through both layers. (Figure 44)
44. Repeat steps 42-43 on the other side.
45. Feed Closures (L) through the Keepers (N) and attach ends to Button Studs (L). (Figures 45-46)

Figure 44



Figure 45



Figure 46



ASSEMBLING BACK

46. Align Strap End Template (R) over Adjustable Straps (H) with the stitch holes facing the edge.
47. Use an awl to mark the three stitch holes and the punch hole closest to stitch holes. (Figure 47)
48. Use rotary punch or round drive punch and mallet to punch rivet hole. Use awl or stitching chisel and mallet to punch stitch holes. (Figure 48)

Figure 47

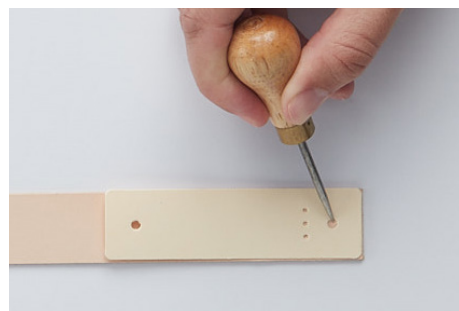


Figure 48



49. Feed Adjustable Strap (H), flesh side up, through the grain side of Adjustable Anchors (P). Align punch and stitch holes. (Figure 49)
50. Saddle stitch Strap (H) and Anchor (P) together. Tie a knot at the back to secure stitch line. (Figures 50)
51. Repeat steps 49-50 on the other Strap (H). (Figure 51)

Figure 49



Figure 50



Figure 51



52. Align lower strap assembly on lower punch hole on the back of Canvas Pouch (A). Feed strap through Long Molle (G) between the first and second sets of rivets. (Figure 52) **Pro Tip: Use Binder Clips to hold straps in place to stitch. Be sure strap placement is symmetrical.**

53. Set Rivet, and saddle stitch around rectangle then stitch over 2-3 stitches to secure on both sides. (Figures 53-54)

Figure 52



Figure 53



Figure 54



54. Align corner punch holes of assembled Strap Station (C) to Canvas Pouch (A) so that flap faces up.

55. Rivet all four corners together to canvas. (Figure 55)

56. Saddle stitch around the entire perimeter to fully secure assembled strap station. (Figures 55-57)

Figure 55



Figure 56



Figure 57



57. Slide a Strap Keeper (M) onto each Adjustable Strap (H).

58. Slide Adjustable Strap (H) through both D-Rings (S) on each side. Then slide it back through the lower D-Ring (S) and Strap Keeper (M). (Figure 58)

Figure 58



FITTING STRAP

NOTE: Stuff your bag to properly size Adjustable Straps (B) to your desired fit.

59. Put backpack on your shoulders and adjust to the loosest desired fit.

OPTIONAL: TRIMMING STRAP

60. Mark at desired length on both strap ends. Align Adjustable Strap End Template (R) on marked line with the single punch hole facing outward. Mark single punch hole with an awl. (Figure 59)

61. Trim at marked line and punch rivet hole. (Figure 60)

62. Fold Strap End (O), flesh sides together, over the end of the Adjustable Strap (H) so that the punch holes align. Rivet together. (Figure 61)

63. Repeat steps 60-62 on the other strap. (Figure 62)

Figure 59

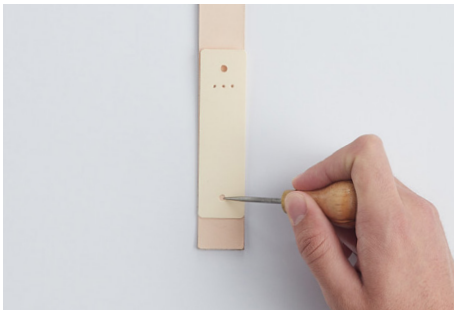


Figure 60



Figure 61



Figure 62



INSTALLING PARACORD

64. Weave Paracord (X) in and out of Grommets (W) starting at the front right side. Pull to even out the lengths. (Figure 63)
65. Add Cordlock (Y) by pulling both ends of paracord through while pushing cordlock button in. (Figure 64)
66. Knot end by looping working end around paracord. Pull working end through loop created. Trim ends. **Pro Tip: Use lighter to seal edges.** (Figures 64-65)

Figure 63

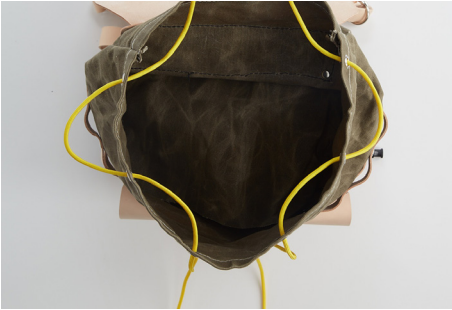


Figure 64



Figure 65



FINISHING ASSEMBLY

67. Install Button Stud (T) on Top Flap (B). (Figure 66)
68. Pull Closure Button Tab (E) down through Long Molle (G) and come back up. Secure strap to Button Stud (T). (Figure 67)

Figure 66



Figure 67



OPTIONAL: ADDING TOP HANDLE

69. Cut Top Handle Station Template (A1) and Top Handle Template (A2) out and punch the oblong & rivet holes.
70. Overlay Top Handle Station Template (A1) onto the grain side Shoulder Strap Station (C). (Figure 68)
71. Mark the two center oblong holes and the holes directly beneath them. Punch all four holes through Shoulder Strap Station (C) and canvas. (Figure 69)
72. Overlay Top Handle Template (A2) onto Handle Strip (Z). (Figure 70)
73. Trace and cut out Top Handle (Z). Punch each hole on either end. (Figure 71)
74. Insert each end of the Top Handle (Z), grain side up, through the oblong holes and align each punch hole. (Figure 72)
75. Set with Medium Rivets (U). (Figure 73)

Figure 68



Figure 69



Figure 70



Figure 71



Figure 72



Figure 73



CONGRATULATIONS, YOU'VE MADE A EXPLORER RUCKSACK!



* Images are for construction purposes only. Colors may vary.

HOW TO BURNISH EDGES

Burnishing consists of sealing edges with product by using hand tools and burnishing agents. The burnishing process gives smooth and clean edges to any veg-tan project.

1. Rub emery board gently across the edges so that the leather is even and smooth. Dust off. (Figure 1)
2. Use a cotton swab to gently seal the edges with gum tragacanth burnishing agent. Let air dry. (Figure 2)
3. Burnish edges with a wood slicker. (Figure 3)
4. Repeat steps 2 and 3 until you reach desired outcome.

Figure 1



Figure 2



Figure 3



HOW TO SET RIVETS

1. Place rivet post into correctly sized anvil divet. (Figure 2)
2. Place pattern piece(s) onto rivet post and cover post with rivet cap. (Figures 3-4)
3. Line up corresponding setter tool. Hit firmly with a mallet a few times to set the rivet. (Figures 5-6)

Figure 1

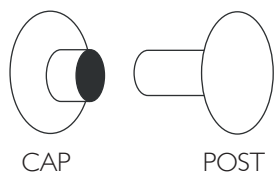


Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



HOW TO BACKSTITCH

The backstitch is a securing stitch that goes over existing stitches to prevent unravelling.

1. At the final hole in the stitch line, reverse the direction of the needles and saddle stitch back through the last 2-3 holes in the line. If the stitch line meets back where the line began, simply saddle stitch over the first 2-3 stitches without reversing the direction of the needles to lock them in. **Pro Tip: If needles are difficult to pull through stitches, use a pair of needle nose pliers to help pull the needles through.**
2. To finish, pull the remaining thread to the less visible side of the work. Snip off the excess, and tuck it into the last hole.

Figure 1



Figure 2



Figure 3



1. Cut your thread to 5 times the length of the stitch line.
2. Feed one end through the eye of one needle. (Figure 1)
3. Take the point of the needle and push it through the longer portion of the thread. Repeat and push needle through again. (Figures 2-3)
4. Pull long side of thread toward the eye of the needle to form a knot. (Figure 4-6)
5. Repeat steps 2-4 on the other side with other needle.

Figure 1

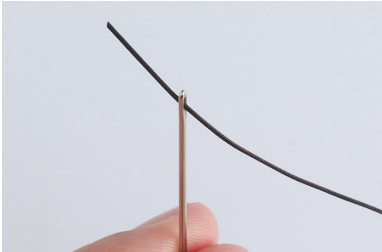


Figure 2

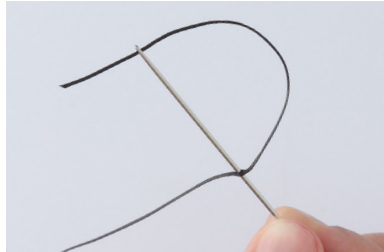


Figure 3

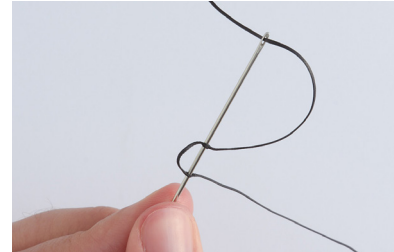


Figure 4



Figure 5

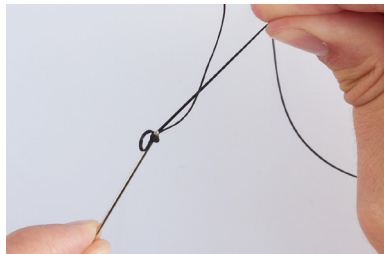


Figure 6



The saddle stitch is a strong stitch that is made up of two independent stitches that lock together. This allows the stitches to hold even if a stitch is broken.

1. Holding one threaded needle in each hand, begin saddle stitching by inserting one needle into the first hole of stitch line. Pull the needle and thread through the hole until there are equal lengths of thread on either side. (Figure 1)

Pro Tip: Use a stitching horse to secure your pieces in place and allow for easier sewing.

2. With one needle in each hand, begin weaving the needles through the next stitch hole, one needle at a time. It is important to be consistent with your motions. Always start each stitch with the same hand. We will start with the left-hand needle for each stitch for these instructions. Push the left needle through next hole in your stitch line.

3. Once the left needle is through the hole, insert your right-hand needle through the same hole, being sure to pull the left thread back to avoid piercing it with the right needle. Pull each side all the way through the hole and give the thread a gentle tug to tighten up the stitches. (Figure 2)

Optional: If your stitch holes are large enough, you can insert your needles in the same hole at the same time. Cross your needles into an "X" as you push them through the hole. Be sure to always place the same side needle on the top and bottom for each stitch, then pull the needles through and tighten up the thread with a gentle tug.

4. Repeat Steps 3-4 until you reach the end of the stitch line, starting with the same side needle for each stitch. Be sure to give the thread a light tug at the end of each stitch to keep even tension.

Figure 1

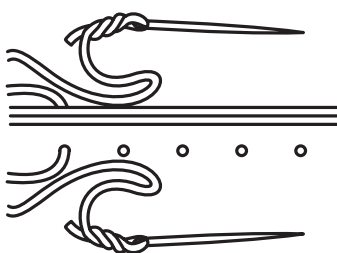
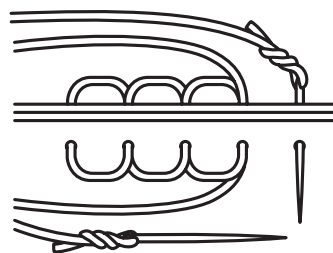


Figure 2



LEVEL UP YOUR SKILLS WITH TANDY

LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4
Includes basic project assembly skills like lacing, braiding, and knot tying.	Focuses on handstitching techniques and other skills.	Introduces more complex & challenging projects that have more components.	Builds advanced skills & do not have pre-punched stitching holes.



FOR MORE PATTERNS, PROJECTS, AND TIPS, VISIT [TANDYLEATHER.COM/BLOG](https://www.tandy.com/blog).

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