

ILLUSTRATED STEPS / SAVE IT. FIND IT. BUILD IT.

FORGE A KNIFE

Turn a truck leaf spring into a working blade: bucket forge, magnet test, oil quench, colour temper and a paracord grip.



SAFETY FIRST / BEFORE YOU LIGHT IT:

Full Rules / Page 03

Outdoors only: charcoal makes carbon monoxide. Glasses, leather gloves, long tongs.
Metal lid ready for the oil pot. Never pour water on burning oil.

START HERE

01

GET READY

Tools + clickable build map

02

FOLLOW THE STEPS

One clearly numbered stage at a time

03

FIND IT AGAIN

Quick reference + PDF bookmarks

For adults working outdoors with spring steel they own or salvaged with permission. Expect a rough, useful blade, not a showpiece, on the first try.

NUKE ON TIKTOK

MORE FREE BUILD GUIDES

SOURCES / Wikipedia: Leaf spring · Wikipedia: SAE steel grades (5160 spring steel)

BUILD MAP

NEXT

YOUR BUILD MAP

Tap a step to jump there. The printed page numbers work offline too.

HAVE THESE READY

- Leaf spring or old mower blade
- Bi-metal hacksaw or a file
- Steel bucket, steel pipe, bricks
- Charcoal and a leaf blower
- Magnet and long tongs
- Hammer; rail chunk or anvil
- Metal pot of oil with a lid
- Paracord and a ceramic mug
- Safety glasses, leather gloves

READ IN ORDER

PREP	Set up a safe forge site	03
01	Get spring steel	04
02	Build and light the forge	05
03	Shape, grind and harden	06
04	Temper and wrap	07
NOTE	Test it and look after it	08
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QUICK REFERENCE / PAGE 10

BEFORE YOU START

Outdoors only: charcoal makes CO. Glasses, leather gloves, tongs. Lid for the oil pot; never water on burning oil. Temper right after the quench.

KEEP THIS COPY

Save the PDF with its guide ID. Use the build map, bookmarks, or your PDF reader's search to find a step later. Video and source links need internet; the instructions do not.

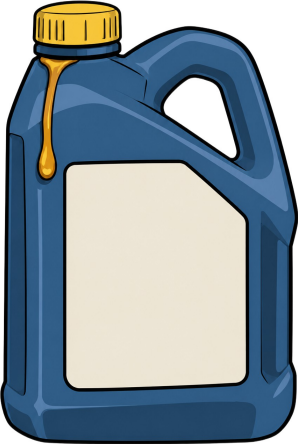
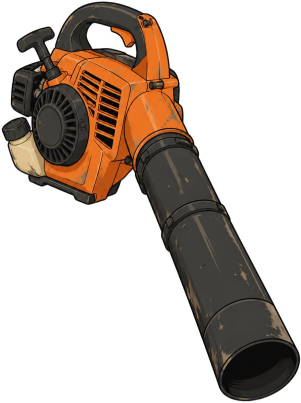
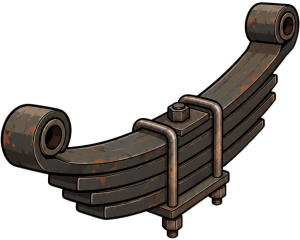
SETUP

Set up a safe forge site

READ BEFORE STEP 01

PREP

Hot steel looks cold long before it is safe to touch. Plan the space first.



LEAF SPRINGCHARCOALLEAF BLOWERQUENCH OILOIL CAN FLARE UP

- STOP / FIRE, FUMES AND EYES
- Charcoal gives off carbon monoxide: forge and quench outdoors only, never in a garage, tent or shelter.
 - Wear safety glasses, leather gloves, cotton or wool clothes and closed shoes.
 - Keep a bucket of sand and a metal lid for the oil pot.
 - Never pour water on burning oil.
- LAY OUT THE SITE
- Stand the forge on bricks or bare dirt, clear of dry grass.
 - Put the anvil, tongs, magnet and oil pot within one step of the fire.
 - Treat every piece of steel as hot until it has sat for a long while.

SOURCES / CDC: carbon monoxide poisoning basics (never burn charcoal indoors) · NHS: burns and scalds (first aid)

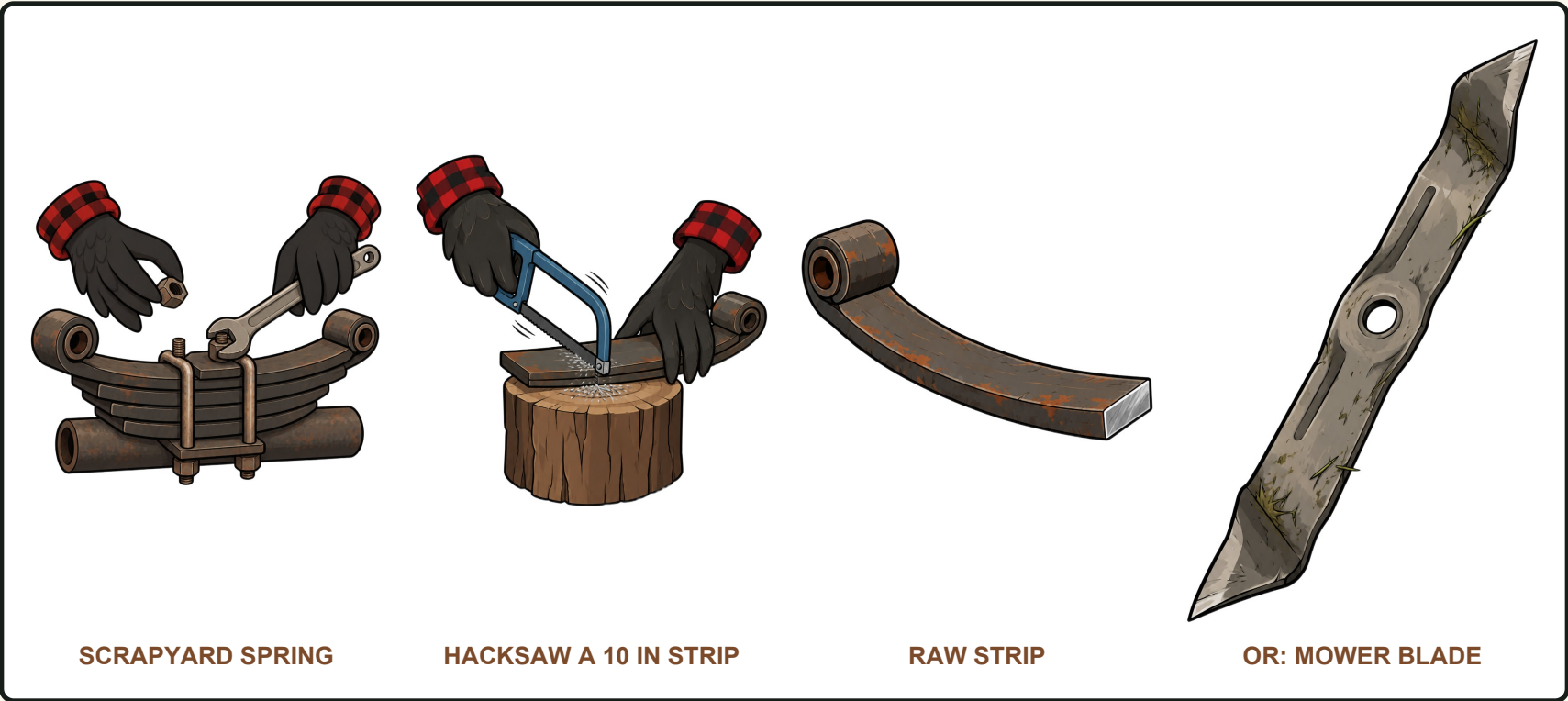
STEP

Get spring steel

1 OF 4 / READ IN ORDER

01

A truck leaf spring is high-carbon spring steel that hardens well.



SOURCE AND CUT

- **Get a leaf spring from a scrapyard, or salvage one with the owner's permission.**
- Never get under a vehicle held up only by a jack.
- Cut a strip about 10 inches long with a bi-metal hacksaw, slowly.
- No spring?
- An old lawnmower blade is also hardenable steel.

WHY IT WORKS

- **Truck springs are usually 5160-type steel, about 0.6% carbon with chromium.**
- That is enough carbon to harden in oil and hold an edge.

SOURCES / Wikipedia: Leaf spring · Wikipedia: SAE steel grades (5160 spring steel)

STEP

Build and light the forge

2 OF 4 / READ IN ORDER

02

Charcoal in a steel bucket, with air blown in at the bottom.



BUCKET FORGE

- **Cut a hole near the bottom of a steel bucket and push in a steel pipe.**
- Fill the bucket with charcoal and light it.
- Point the leaf blower into the pipe on its lowest setting.
- Bury the strip in the hottest coals and heat it until it glows cherry red and a magnet no longer sticks.

WHY IT WORKS

- **Forced air makes charcoal burn hot enough for forging.**
- Steel stops being magnetic at about 1,414°F (768°C), right at the heat where it can be hardened, so the magnet is your thermometer.

SOURCES / Wikipedia: Curie temperature (iron loses magnetism) · CDC: carbon monoxide poisoning basics (never burn charcoal indoors)

STEP

Shape, grind and harden

3 OF 4 / READ IN ORDER

03

Flatten and shape it hot, grind the edge, then quench it in warm oil.



HAMMER IT FLAT



GRIND THE BEVEL



WARM OIL QUENCH



GLASS-HARD

SHAPE AND QUENCH

- **Hammer the hot strip flat on a block of rail or steel; reheat whenever the glow fades.**
- Grind the edge bevel on a wet curb or with a file, leaving the edge about as thick as a dime.
- Reheat until non-magnetic, then plunge it straight down, edge first, into a metal pot of warm cooking oil or fryer grease.
- Move it gently up and down until it stops sizzling.

STOP / OIL FLARE-UPS

- **The oil can catch fire: quench outdoors, and smother flames with the metal lid.**
- Never use water on burning oil.
- Used motor oil works but smokes heavily and its fumes are toxic.

WHY IT WORKS

- **The fast cool locks the steel glass-hard.**
- Oil cools gently enough that spring steel is less likely to crack than in water.

SOURCES / Wikipedia: Quenching · Wikipedia: SAE steel grades (5160 spring steel)

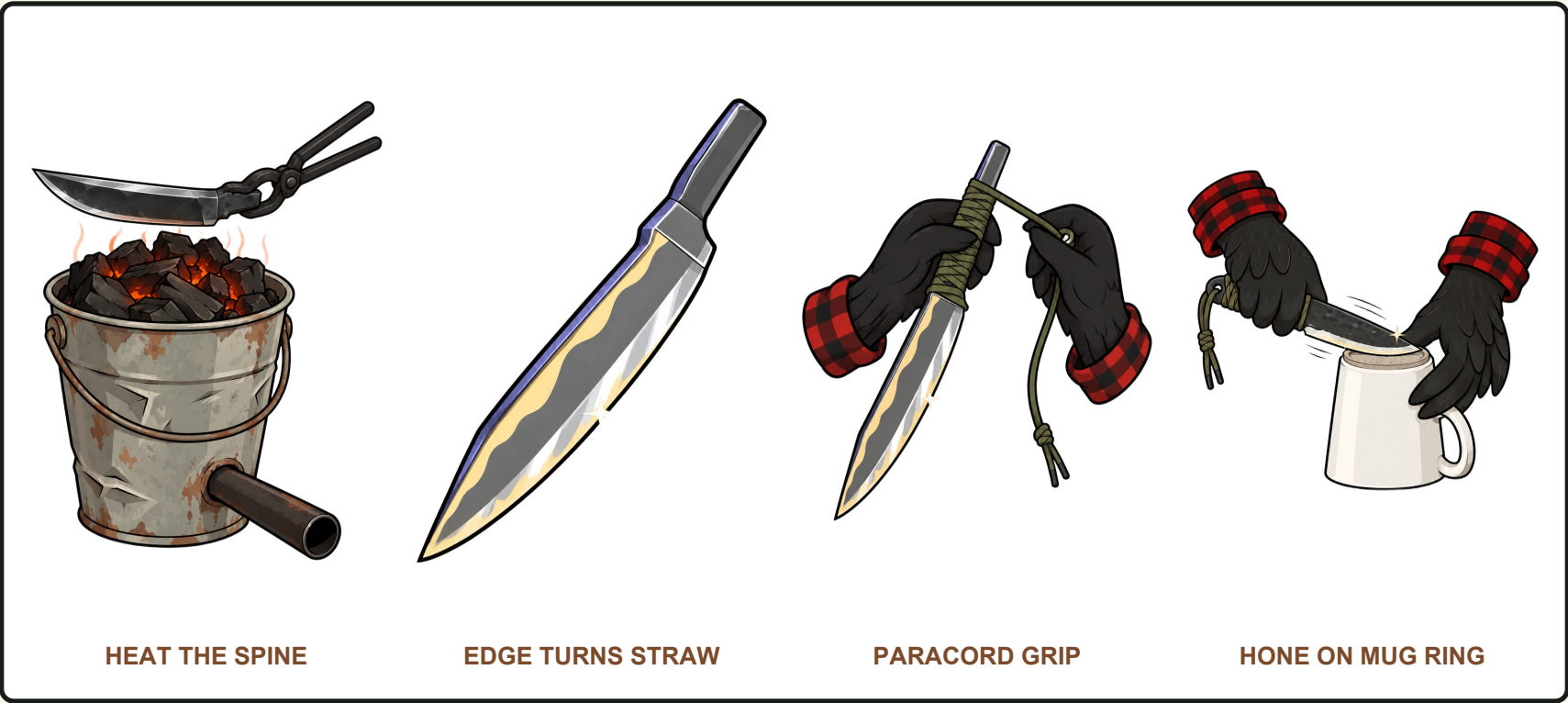
STEP

Temper and wrap

4 OF 4 / READ IN ORDER

04

Glass-hard steel snaps. Tempering trades a little hardness for toughness.



DRAW THE TEMPER

- Sand a bright strip along the blade so you can see colours.
- Heat the spine over the coals and watch the colours creep toward the edge.
- Pull it out when the edge turns straw gold; the spine may turn blue.
- Oven instead: about 400°F (205°C) for an hour, twice.
- Wrap the handle end tight with paracord and hone on the unglazed ring under a mug.

STOP / TEMPER RIGHT AWAY

- An untempered blade can crack or snap.
- Temper it soon after the quench, before you test or use it.

SOURCES / Wikipedia: Tempering (metallurgy) and temper colours · Wikipedia: Quenching

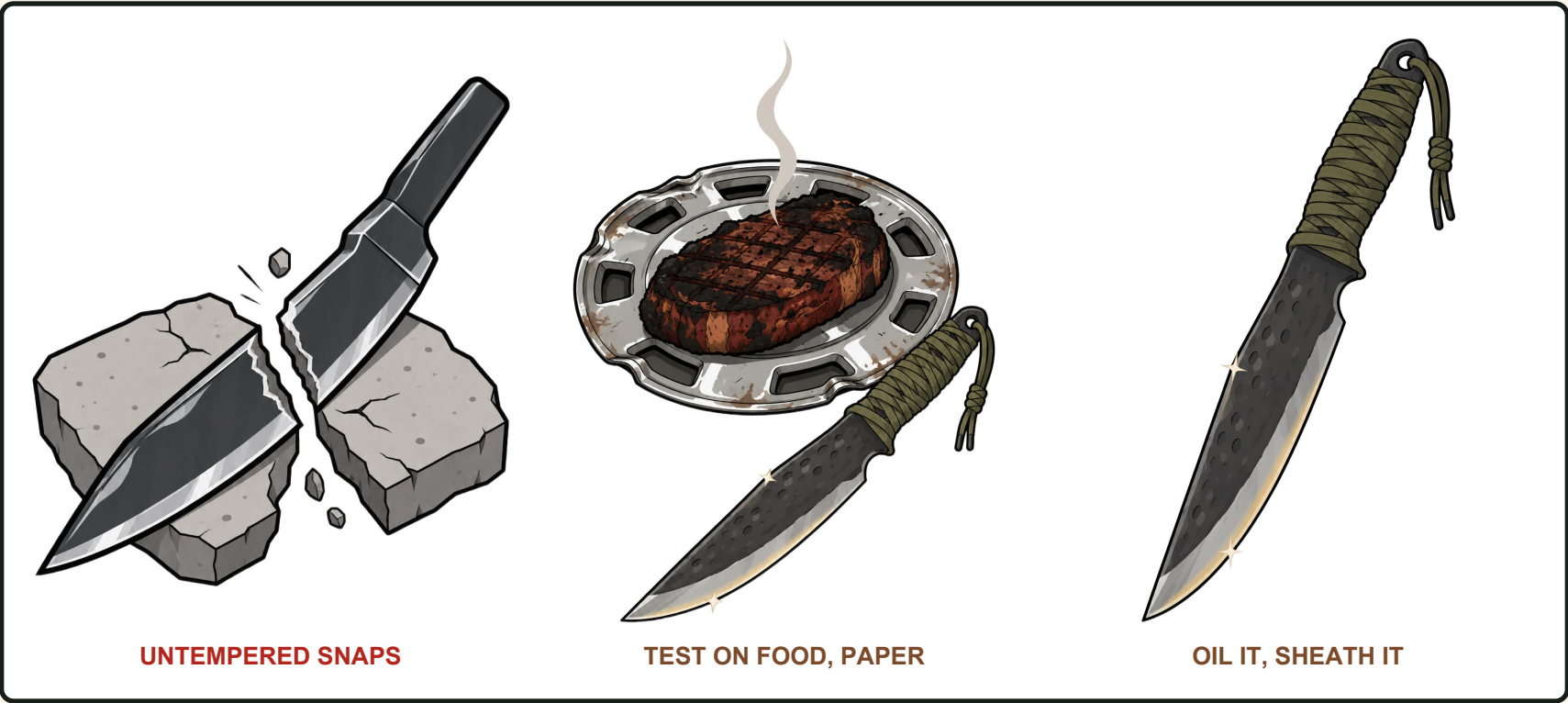
NOTE

Test it and look after it

KEEP THESE LIMITS WITH THE STEPS

REF

Check the hardness, then keep it dry and oiled.



SIMPLE TESTS

- **Right after quenching, a file should skate over the edge instead of biting.**
- After tempering, the blade should slice paper and should not chip on wood.

CARE

- **Spring steel rusts: wipe it dry and give it a thin coat of oil.**
- Keep it in a sheath or wrapped in cloth, and touch up the edge on the mug ring.

SOURCES / Wikipedia: Tempering (metallurgy) and temper colours · Wikipedia: Quenching

BUILD MAP

PREVIOUS

NEXT

NOTE

Sources and limits

KEEP THESE LIMITS WITH THE STEPS

REF

Checked October 3, 2026. Tap a source in the box to open it.

SOURCES / TAP A TITLE TO OPEN IT

- Wikipedia: Leaf spring**
https://en.wikipedia.org/wiki/Leaf_spring
- Wikipedia: SAE steel grades (5160 spring steel)**
https://en.wikipedia.org/wiki/SAE_steel_grades
- Wikipedia: Curie temperature (iron loses magnetism)**
https://en.wikipedia.org/wiki/Curie_temperature
- Wikipedia: Quenching**
<https://en.wikipedia.org/wiki/Quenching>
- Wikipedia: Tempering (metallurgy) and temper colours**
[https://en.wikipedia.org/wiki/Tempering_\(metallurgy\)](https://en.wikipedia.org/wiki/Tempering_(metallurgy))
- CDC: carbon monoxide poisoning basics (never burn charcoal indoors)**
<https://www.cdc.gov/carbon-monoxide/about/index.html>
- NHS: burns and scalds (first aid)**
<https://www.nhs.uk/conditions/burns-and-scalds/>

ABOUT THIS GUIDE

- **This is an editorial source review, not a tested forging plan; unknown scrap steel can behave differently.**
- Numbers stay approximate: non-magnetic at about 1,414°F, straw at about 400 to 440°F.

STOP / WHERE THIS GUIDE ENDS

- **Adults only, outdoors only.**
- Follow local rules on open fires and on carrying knives.
- Burns: cool under running water for 20 minutes and get help for anything large or deep.

SOURCES / Wikipedia: Leaf spring · Wikipedia: SAE steel grades (5160 spring steel) · Wikipedia: Curie temperature (iron loses magnetism) · Wikipedia: Quenching · Wikipedia: Tempering (metallurgy) and temper colours · CDC: carbon monoxide poisoning basics (never burn charcoal indoors) · NHS: burns and scalds (first aid)

BUILD MAP

PREVIOUS

NEXT

QUICK REFERENCE

Read the full steps first. Tap any row to return to its instructions.

BEFORE STEP 01

Outdoors only: charcoal makes CO. Glasses, leather gloves, tongs. Lid for the oil pot; never water on burning oil. Temper right after the quench.

01	Get spring steel Leaf spring from a scrapyard (never under a jacked-up truck) or a mower blade. Hacksaw a 10 in strip.	P04
02	Build and light the forge Charcoal in a steel bucket, pipe at the bottom, blower on low. Heat to cherry red: magnet won't stick.	P05
03	Shape, grind and harden Hammer flat, grind the bevel, reheat to non-magnetic, quench edge-first in warm oil. Lid ready.	P06
04	Temper and wrap Heat the spine until the edge turns straw gold (or oven 400°F, 1 h, twice). Paracord grip, hone on a mug.	P07

NUKE SAYS

A dead truck, a bucket of coals, and you. That is a blacksmith shop now.

STOP / FORGE AND QUENCH SAFETY

FULL RULES / PAGE 03

- Outdoors only (CO)
 - Safety glasses on
 - Leather gloves, long tongs
 - Cotton or wool clothes
- Metal lid on the oil pot
 - No water on burning oil
 - Steel stays hot a long time
 - Temper before any use

Never get under a vehicle held up only by a jack. Burns: cool under running water for 20 minutes and get help for anything large or deep.

SOURCES / Wikipedia: Leaf spring · Wikipedia: SAE steel grades (5160 spring steel) · Wikipedia: Curie temperature (iron loses magnetism) · Wikipedia: Quenching · Wikipedia: Tempering (metallurgy) and temper colours · CDC: carbon monoxide poisoning basics (never burn charcoal indoors) · NHS: burns and scalds (first aid)