SUGARKUBE PI CARRIER FIELD GUIDE
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The essentials to go from download to a healthy k3s cluster. Print on US Letter
or A4 and keep near the build bench.

FAST PATH (â 10 MINUTES)
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 1. Download: just download-pi-image (or make download-pi-image). Expect a .img.xz plus .sha256 in ~/sugarkube/images/.
 2. Flash: sudo just flash-pi FLASH_DEVICE=/dev/sdX and watch for Sync complete with zero write errors.
 3. Boot: Insert media, power the Pi, and wait for the green ACT LED to settle into a steady heartbeat (~1 Hz) after the first minute.
 4. Verify: ssh pi@pi.local sudo /usr/local/bin/pi_node_verifier.sh --json. The status field should be ok and include k3s_ready=true.
 5. Snapshot: Run just clone-ssd CLONE_TARGET=/dev/sdX --resume once an SSD is attached. Expect a final Clone complete message.

COMMAND OUTPUTS

- â¢ curl http://pi.local:12345/metrics â HTTP 200 with Prometheus metrics lines such as up 1 and sugarkube_first_boot_status 1.
- â¢ kubectl --kubeconfig /boot/sugarkube-kubeconfig get nodes â all nodes in Ready state within 3 retries.
- â¢ journalctl -u ssd-clone --since -10m â shows ssd-clone.service completed after a successful SSD migration.

LED + STATUS QUICK REFERENCE

- â¢ Power steady, ACT blinking rapidly â booting; wait for ACT heartbeat before interacting.
- â¢ Power steady, ACT solid on >30s â check HDMI/serial; likely kernel panic.
- â¢ Power steady, ACT off â re-seat storage or reflash; Pi is not reading media.
- â¢ Ethernet steady + ACT heartbeat but no SSH â run sugarkube-teams or check /boot/first-boot-report/ for verifier output.

IF SOMETHING FAILS

- â¢ Re-run just flash-pi-report FLASH_DEVICE=/dev/sdX to capture Markdown/HTML logs under ~/sugarkube/reports/.
- â¢ Review /boot/first-boot-report/self-heal/ on the Pi for automated recovery attempts and escalations.
- â¢ Pull a support bundle: just support-bundle SUPPORT_BUNDLE_HOST=pi.local and attach the resulting archive to issues.
- â¢ More guidance: Pi Image Quickstart (./pi_image_quickstart.md) and Pi Boot Troubleshooting (./pi_boot_troubleshooting.md).