VMS Biomedical Lasers

Engineer-Led Technology | Service | Training

BASIC LASER SERVICING CHECKLIST

Prevent Downtime.
Protect Your Investment.
Understand Your Technology.

The Agoncillo Method™

Physics First. System Thinking Always.

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Basic Laser Servicing Checklist

(For MedSpa Owners & Clinical Providers)
By The Agoncillo Method – Physics First. System Thinking Always.

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1 Daily Visual Inspection (2–5 Minutes)

✓ Handpiece / Output Window

- Inspect lens for:
  - Cracks
  - Carbon buildup
  - Fogging
- Clean with manufacturer-approved wipes only
- Never use alcohol unless approved

⚠ A dirty lens = reduced energy + overheating + misfires

✓ Articulating Arm or Fiber

- Check joints for looseness
- Ensure no dragging or impact damage
- Confirm beam exits centered (no clipping or shadowing)

⚠ Misalignment = uneven fluence delivery

✓ Cooling System

- Confirm:
  - Proper coolant level
  - No bubbles in reservoir
  - No leaks under machine

Air is not your friend.
Air pockets = thermal stress inside laser head.

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2 Before First Treatment of the Day

✓ Energy Test Fire

- Use calibration paper (if available)
- Look for:
    - Even burn pattern
    - No distorted shape
    - Consistent pulse sound

If output “sounds weak” or irregular — stop.

✓ Listen to the Machine

Engineers use their ears.

- Pump sound smooth?
- Fan noise stable?
- Any clicking that wasn’t there before?

Machines whisper before they scream.

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3 Weekly Maintenance

✓ Clean Air Filters

- Dust restricts airflow
- Restricted airflow = heat buildup
- Heat kills laser cavities

✓ External Dust Removal

- Wipe or Vacuum Air Vents
- Keep room dust-free
- Never block airflow vents

✓ Inspect Power Cords

- No kinks
- No exposed wiring
- No extension cord overloads

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4 Monthly or Quarterly (Non-Technical Checks)

✓ Confirm Spot Size Consistency

If your spot size visually changes — that's alignment.

✓ Review Error Logs

Don't ignore recurring warnings.

✓ Check Cooling Performance

If skin cooling feels weaker:

- Check filters
- Check airflow
- Check chiller temperature

🚨 Red Flags You Should NEVER Ignore

- Burning smell
- Sudden drop in efficacy
- Increased pain reports
- Handpiece overheating
- Repeated error codes
- Beam not centered
- Coolant discoloration

When in doubt — **stop treating.**

The Agoncillo Principle

Lasers follow physics.
Physics follows thermodynamics.
Thermodynamics follows heat management.

If heat is not controlled, failure is coming.

What Providers Should NOT Do (Call my company) when you notice any of these:

❌ Open internal panels
❌ Adjust internal optics
❌ Refill coolant without bleeding air
❌ Reset error codes repeatedly without investigation

You can inspect.
You can observe.
You can prevent.

But internal repairs require trained service.

Simple Preventative Habits That Extend Laser Life

• Stable electrical supply
• Proper room temperature (not overheated rooms)
• Regular servicing schedule
• Trained operators
• Clean optics
• No overtreatment / no max settings daily

Abusing parameters stresses components.

🏆 Pro Tip for Owners

Track:

- Total shot count
- Hours used per week
- Room temperature
- Service dates

Data predicts failure before failure happens.