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**55-17 Lares 557 Turbo High-Speed Handpiece (Project 96-54) (10/98)**

The Lares 557 Turbo fiberoptic high-speed handpiece is a lightweight compact handpiece. It has one of the smallest heads on the market and has the smallest head of any handpiece evaluated by DIS. The handpiece can be heat sterilized in either an autoclave or chemiclave.



The free running speed is reported to be 450,000 RPM @ 32 psi. DIS testing found the handpiece to operate at 423,000 RPM @ 32 psi. Both the push-button chuck and turbine are field replaceable and easily accomplished. The handpiece is connected to the dental unit handpiece hose by either the Lares Euro-Style (ISO-C) Apollo Coupler or the Lares Integral Swivel Fiberoptic Coupler. Both couplers provide easy handpiece interchangeability and 360-degree swivel. The handpiece (coupler included) measures 14.4 cm and weighs 1.5 ounces. The handpiece head diameter and length measure 10.2 mm and 10.88 mm respectively. The distance from the back of the handpiece to the tip of a standard 19 mm bur (interocclusal clearance) is 21.5 mm. The handpiece is warranted against defects in materials and workmanship for one year excluding the chuck, which is warranted for 90 days.

**Manufacturer:**

Lares Research  
295 Lockheed Avenue  
Chico, CA 95926  
(800) 347-3289  
(916) 345--1767  
(916) 345-1870 FAX

**Suggested Retail Prices:**

557+ Turbo Fiberoptic Handpiece \$419.00  
Integral Fiberoptic Swivel Coupler \$124.00  
557+ Turbo Handpiece w/ Swivel Coupler \$469.00  
Replacement Turbine Cartridge \$174.00

**Government Prices:**

557+ Turbo Fiberoptic Handpiece \$303.20  
Integral Fiberoptic Swivel Coupler \$86.40  
557+ Turbo Handpiece w/ Swivel Coupler \$343.20  
Replacement Turbine Cartridge \$127.20

**ADVANTAGES:**

- + Less expensive.
- + Better than average power (13.1 watts).
- + Turbine cartridge is field replaceable.
- + Chuck is field replaceable independent of turbine.
- + 360-degree swivel coupler.
- + Best visibility and interocclusal clearance of all models evaluated.
- + Push-button bur release.
- + Turbine warranted for one year.

**DISADVANTAGES:**

- 100% of test handpieces failed between 500 and 750 simulated clinical use/sterilizations.
- Fiberoptics degraded 58% after 1,000 simulated clinical use/sterilizations.
- Push-button chuck proved difficult to use.

- Requires lubrication before and after sterilization.
- Chuck warranted for only 90 days.

**SUMMARY AND CONCLUSIONS:**

The Lares 557 fiberoptic high-speed handpiece is the least expensive handpiece of the models evaluated. Its power (13.1 watts) was in the middle third of all models evaluated. The Lares 557 compact head increased operator visibility and interocclusal access, the best of all models evaluated. The Lares 557 maintained only 42% of its fiberoptic intensity after 1,000 simulated clinical use/sterilization cycles. Polishing the fiberoptic lenses improved the transmission slightly to 49%. The noise level of the Lares 557 was measured at 72 decibels. The noise level of all handpieces evaluated ranged from 69 decibels to 77 decibels. One hundred percent of the Lares 557 test handpieces functioned over 500 uses but none survived to 750 uses. The push-button chuck was judged to be difficult to use and frequently required the use of hemostats to extract the bur from the handpiece. The **Lares 557 Turbo** is rated **Marginal** for use by the federal dental services.