

_____	PRIORITY	
_____	Mandatory	<u> x </u> As Required
_____	Next Visit	_____ At Installation
_____	Information	

FIELD SERVICE BULLETIN

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Preparing a Chameleon for shipment, or long-term storage

PRODUCT: All Chameleon series lasers

PURPOSE: To provide a basic procedure for uninstalling and packaging a Chameleon laser for storage, shipping and handling in unconditioned space. Of particular importance is the draining of the Chameleon head before packaging and transporting the system.

DESCRIPTION: This outline should be followed if a Chameleon laser system is to be exposed to environmental conditions exceeding the following limits.

1. Humidity >95%
2. Temperatures below 5°C or above 40°C
3. Atmospheric pressures below 60kPa
4. Any situation where excessive dirt, solvents or dust may come into contact with the Chameleon laser or any of its components
5. Any transportation of the system that requires crating.

UNINSTALLING: Evaluation:

Check and record system performance and verify recovery/initialize operation before switching the system to standby and ultimately cooling down the LBO. It is important that a thorough evaluation be completed along with attempting to complete the repair at the customer site. Refer to the complete troubleshooting section in the Service Manual.

Power down:

After system performance has been recorded, you may need to include specific service details or information for the depot repair facility. At this point the system can be turned to standby and the LBO cool down started. Older Chameleons (90Mhz) will utilize the “LBO settings” menu; Chameleon Ultras (80Mhz) will use the “System Shutdown” selection in the main menu. Please allow the LBO temperature to cool down to within 5°C (or to ~100%) of the baseplate temperature before switching the rear panel switch to the off position.

Accessories:

While the LBO temperature is cycling down, Turn the MRU off, and unplug the AC cord from the wall and the rear of the unit. Wrap the cord and place it in a small plastic bag. Remove the hoses, p/n 1040787 from the Chameleon head side first, and place the two plastic caps, p/n 1052091 into the quick disconnects on the back of the Chameleon (see *Fig 1*). Once that end is sealed, remove the hoses from the MRU end and cover the quick disconnects on the ends of the hoses with the plastic caps, p/n 1052221 and 1052092. All of these caps are included in the packaging kit, p/n 1111831. Place the two air hoses in a clean plastic bag. Package the MRU in its shipping box, p/n 1037438 along with all the attachments. If this is a depot repair, place the RMA# clearly on the outside of the box.



Fig 1

Turn off the chiller and loosen the Chameleon head so that it can be positioned for easy draining. Remove the return side hose from

the Chameleon head. Place a bucket or container under the side of the bench where the fitting is, and connect one of the accessory hoses from the Chameleon draining kit p/n 1055004 (this is included in both the accessory kit, p/n 1042970 and in the storage accessories p/n 1111832) onto the output side (see *Fig 2*). Turn the chiller on and let the pump force the remaining water through the system, do this until the low flow alarm is triggered on the chiller, at this point the pump will shut down automatically, and no more water should come out of the accessory hose. The chiller reservoir should be nearly drained of water. Remove the water outlet hose from the chiller side and the 'cooling in' side on the Chameleon, also disconnect the return hose from the chiller and place these both in a plastic bag. Please note that newer Thermotech chillers, p/n 1095745 will not have the quick disconnects on the chiller side, this means that some water will drain from the chiller unit, use a paper towel to dry up any remaining water. If the cap is not removed, remove it now and dump the remaining water out of the chiller, then replace the cap. Place the two caps p/n 1052220 in the intake and output ports on the chiller. At this point the chiller can be placed in the foam brackets and box p/n 1037874; this will then be placed inside the larger box, p/n 1001468 with the hose and AC cord. If this is to be shipped out for depot repair or replacement, place the RMA# clearly on the outside of the box.

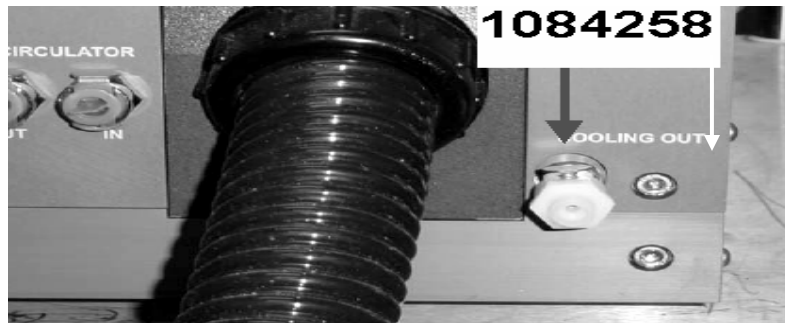


Fig 2

Head:

The Chameleon head needs to be completely drained of water. To do this, the accessory hoses from the Chameleon draining kit p/n 1055004 need to be placed in both the 'cooling out' and 'cooling in' sides of the Chameleon head. Holding the accessory hose on the 'cooling in' side higher than the Chameleon head will promote draining. Again, a bucket under the hose from the 'cooling out' fitting will contain the water as it drains from the Chameleon head. If air is available, you can force out the remaining water through the system, make sure the air pressure doesn't exceed 250kPa.

Place the cap, p/n 1052092 over the ‘cooling in’ quick-disconnect on the back of the Chameleon head. Place the female quick-disconnect p/n 1084258 (see *Fig 2*) on the ‘cooling out’ side of the Chameleon to allow the remaining water to gradually leak out.

Prepare the crate for the laser by placing the ESD protective plastic along the bottom (see *Fig 3*). If this is a Chameleon Ultra, disconnect the Harness between the head and power supply, older systems require additional care so the umbilical will not be subjected to unnecessary stress. A minimum of two people are recommended to complete this process. Place the laser head in the appropriate foam section first and then power supply. Tape a copy of the performance record, and any specific instructions for depot repair (if applicable) on top of the head. Bring the ESD sheet over the top of the head and power supply and tuck any loose ends along side. Place the correct foam on top of the system, and lay the accessories kit in the cut-out provided. See *Table 1* for the correct part numbers regarding the crate and foam inserts. Place the crate cover onto the crate and secure with the brackets provided. Make a clean label that will include the serial number, date and the name of the engineer de-installing the system. If this is being shipped to Coherent for depot repair or return, place the RMA# on this label as well along with using a permanent marker to write the RMA# on the crate. Affix the label securely to the crate using shipping tape or an insert.



Fig 3

Part numbers:

The following parts are kits that contain the appropriate plugs, caps, foam and containers to protect the Chameleon system from potential damage, these kits should be ordered ahead of time if the customer has not kept the original crates and/or accessories kit.

Only order the necessary kits required for storage and/or shipment, ordering the entire Chameleon accessories kit is not necessary if only the storage accessories are needed.

<u>Part Number</u>	<u>Description</u>	<u>Notes</u>
1001468	CARTON, OUTER, CHILLER	Not orderable
1036320	CHAMELEON SHIPPING CRATE AND FOAM	210/XR series Chameleons
1037438	SHIPPING BOX, MRU 1000	Not orderable
1037874	BOX, SHIPPING, THERMOTEK T251P CHILLER	Not orderable
1040787	HOSE ASSY, AIR RECIRCULATOR, CHAMELEON	Used for the MRU
1042970	CHAMELEON ACCESSORIES KIT	Includes 1055004 and 1084258
1052091	FITTING DUST PLUG MC SERIES	Not orderable
1052092	FITTING DUST CAP MC SERIES	Not orderable
1052220	FITTING DUST PLUG PLC SERIES PLUG BODY	Not orderable
1052221	FITTING DUST CAP PLC SERIES INSERT CAP	Not orderable
1055004	HOSE ASSY, DRAINING, CHAMELEON	Not orderable
1084258	COUPLING, PMC SERIES, 1/8" FLOW, 1/8" BSPT	Not orderable
1111827	CHILLER STORAGE ACCESSORIES AND BOX	Includes 1037874
1111831	MRU STORAGE ACCESSORIES AND BOX	Includes 1037438
1111832	CHAMELEON STORAGE ACCESSORIES NO CRATE	Includes 1055004 and 1084258
1111847	CHAMELEON SHIPPING CRATE AND FOAM	Ultra series Chameleons

Note: All parts that are not orderable are included in the relevant upper level assembly in the list above.

Table 1

PSE: MV