



Northwest Equipment Sales
a division of Northwest Equipment Manufacturing, Inc.
122 East Reserve Dr. • Kalispell, MT 59901 USA
• Office: 406-755-0805 • Fax: 406-755-0813
Master Distributor for the "NEW" Bear Product Line



Reach us at: **877-FIX-BEAR (877-349-2327)**

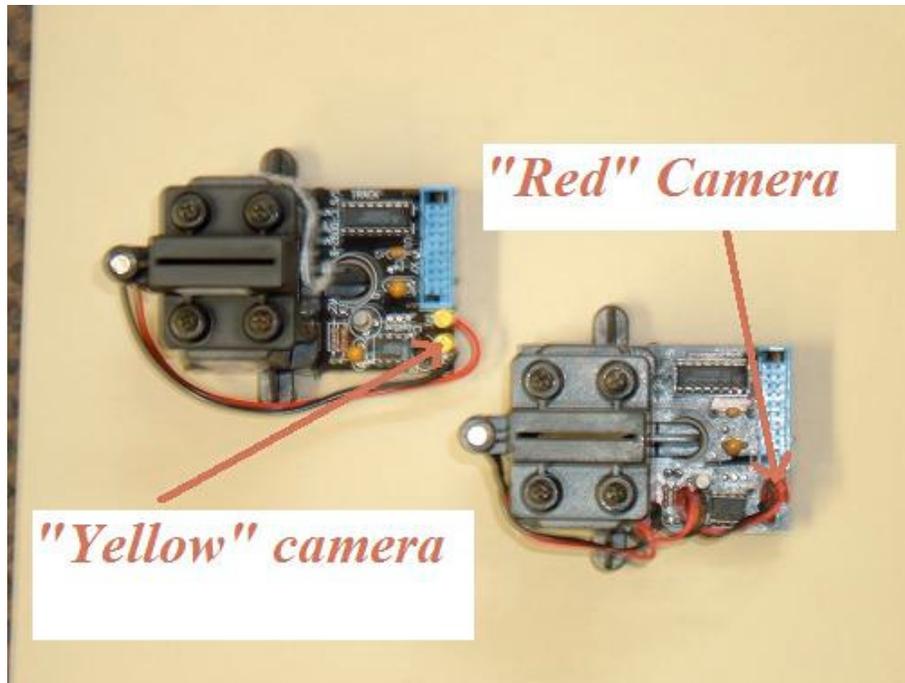
If your shop owns and uses one of the Bear CCD "Legacy" Series wheel aligners NWES would like to provide this helpful information to you. It is designed to give you a basic understanding of some of the components that make up your machine. This will help us help you whenever you require our technical assistance.

These machines came in a variety of styles and configurations such as CCD 1000, CCD 2500, CCD 3000 and the Pace Series machines. All CCD Legacy series machines were PC based, a first for the industry. Six and eight sensor units were available. Customer satisfaction was extremely high given the dependability, accuracy, and ease of use of these machines.

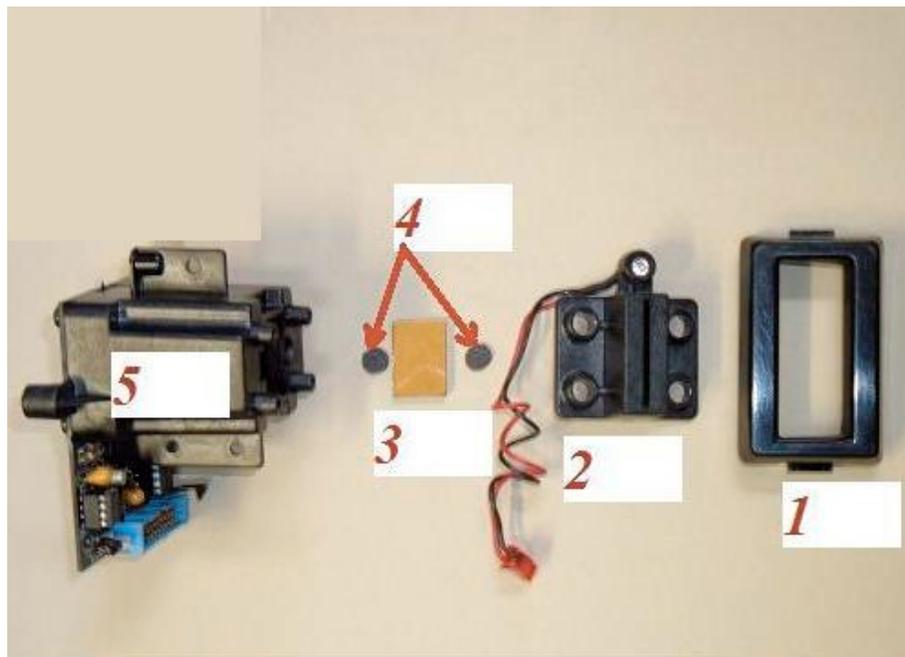
Production started in about 1990 and thousands of units were sold throughout the USA until the late 90's. Replacement parts and updated software are still in production and are available today. With the exception of a few minor changes over the years these machines all operate basically the same way and use similar software features. The SML Series has replaced the Legacy Series for all new USA sales.



Track cameras take a reading along the side of the vehicle. Toe cameras take a reading across the front on six sensor machines. On eight sensor machines toe cameras take a reading across the front and rear of the vehicle.



Camera electronics changed over the years and we may ask you to determine the camera style used in your machine. The ones using yellow connectors to connect the wires from the LED cap are referred to as “yellow” cameras, and the others using red connectors are referred to as “red” cameras. All six or eight cameras in your machine should be of the same type in order for the system to work properly, either all yellow or all red. Track cameras are shown here, toe cameras are similar.



Camera component exploded view:

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1)-Track window; installed into the exterior of the head and protects the camera assembly from contamination. This is a critical component and should be kept clean. To clean, remove and wash with a mild liquid dish soap and water. Rinse with clean water and dry with a soft cotton cloth. When reinstalled the angled lens should tilt away from the vehicle side to avoid reflections from painted vehicle surfaces. Scratches in the lens can cause “beam blocked” warning messages and other irregular reading issues. If scratches are apparent replacement is required. Available separately from NWES in stock and ready to ship.

2)-LED cap assembly; attached to the front of the camera body. This component serves two purposes. The small slit acts as an aperture for the camera. The LED contained within it serves as a target for the opposing camera to provide a point of reference in determining alignment angles.

The LED’s signal strength will weaken over time and can result in symptoms such as “beam blocked” messages on the screen during alignments. Available separately from NWES in stock and ready to ship. For optimum accuracy a calibration is recommended after LED replacement, available through NWES.

3)-Bandpass filter; sandwiched between the LED cap and the optic body. This filter allows only the light emitted by the LED to pass through. Periodically these filters should be carefully removed and cleaned using the same method as described above for the track windows. Look carefully for any signs of “rainbows” around the edges or any other signs of degradation. These filters are built using many layers of very thin film-like material which should not be apparent on a good filter. Any signs of degradation necessitate replacement. When reinstalling, the reflective “Sunny-Side” goes up toward the LED cap. Available separately from NWES in stock and ready to ship.

4)-Foam pads; used to retain bandpass filter against optic body. These fit into recesses molded into the optic body and cover just the edges of the filter to retain it. The filter and pads are held in position by the LED cap when it is installed.

5)-Optic Body/Camera Assembly; available from NWES as a complete assembly with LED cap and bandpass filter installed.

Please Note: Removal of the #2-LED Cap and the #3-Bandpass Filter may be done very carefully without the removal of the entire #5-Optic Body/Camera Assembly. Any movement or repositioning of #5-Optic Body/Camera Assembly will affect calibration. If removal of #5-Optic Body/Camera Assembly is required a calibration service is recommended and is available through NWES.