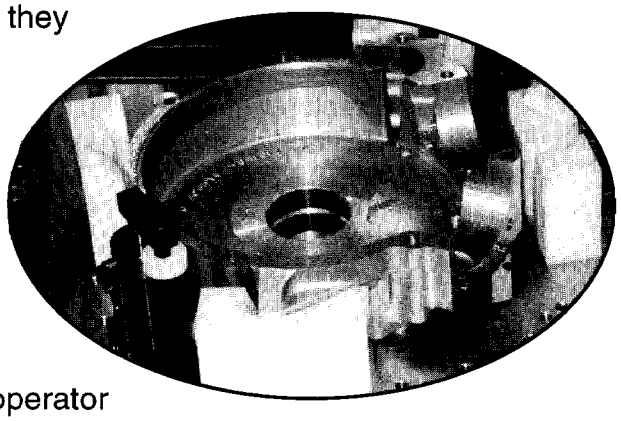
TELESIS
TECHNOLOGIES, INC.

Industrial Identification/ Traceability Equipment

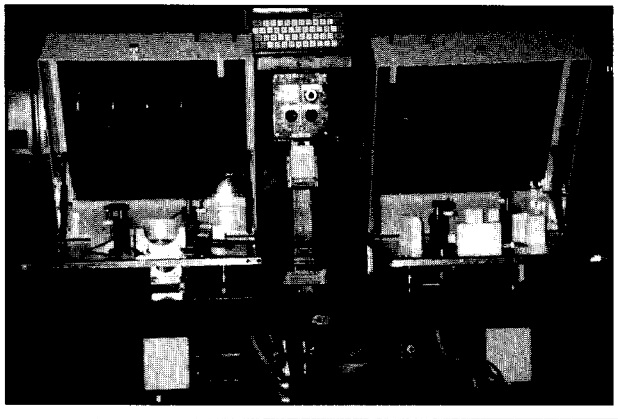
TELESIS MARKERS GO "HOG" WILD

Harley-Davidson, the world-renowned manufacturer of motorcycles, needed a way to make motorcycle crankcases permanently traceable. Two models of cast aluminum crankcases, the XL and the FL, are used at Harley-Davidson's engine plant in Wauwatosa, Wisconsin. Serial numbers are marked on each half of the crankcase while the two halves are still separated. Some are also marked with vehicle identification numbers (VINs) on one half. The VIN mark serves Harley-Davidson's growing after-market engine business.

Harley-Davidson has already experienced success with several **TELESIS TECHNOLOGIES** PINSTAMP® markers. They are using two SB100R markers at their Wauwatosa facility to mark engine casings, and a TMP6000 Single-Pin Marking System to inscribe timing mark settings on cam shafts. At their assembly plant in York, Pennsylvania, Harley-Davidson is using a TMM5000 multi-pin unit to mark external VINs on engines. They were pleased with the consistently high quality marks provided by their PINSTAMP® markers, so naturally, they turned to TELESIS when they needed additional markers.



TELESIS Engineers worked with Harley-Davidson-Wauwatosa to design a system to fit their unique needs. They built customized fixtures, each with two "nests" where the crankcase halves can be easily loaded into the correct position for marking. The nests are housed in sound-deadening enclosures constructed of aluminum and polycarbonate plastic. Positioning pins make it impossible for the operator to improperly load the crankcases into the fixture. The nesting was designed and fabricated to position the case to the serial number marking location, but can also be adjusted to a VIN marking location. Both serial numbers and VINs are entered via a fixed bar code scanner, thus reducing the potential for incorrect marking of components. This gives Harley-Davidson the flexibility to perform two identification processes at one station.



Two TMM5000 Multi-Pin markers are located below the fixture and mark upward on the undersides of the crankcases. The unusual marker orientation poses no problem for TELESIS' patented pneumatically driven and returned pins. Tungsten carbide pins with 30° cone angles were selected for long life and quality marking.

Top: Crankcase half, sitting in a nest. Left: Control panel allows operator to manually edit scanned bar code, located between the crankcase nests.

From the bar code, custom software determines whether the message to be marked is a VIN or a serial number and loads the appropriate marking pattern. The software also compares the message prefix to an internal table of valid prefixes entered by the engineers at Harley-Davidson. This ensures that only correct messages are accepted for marking.

A marking cycle is automatically initiated by a proximity switch, which senses that the sound-deadening enclosure is closed. Another proximity switch in the tooling, signals the software that the part is oriented correctly for VIN or serial number marking. This feature prevents marking in the wrong location.

After marking, the numbers are reset, so a number is not inadvertently marked twice. A local data entry terminal allows the operator to manually edit scanned messages or enter the entire message.

Each marking system is run by two 486DX computers, sharing a single SVGA monitor and keyboard. A switch allows the operator to select which of the computers is accessed by the keyboard and monitor. All computer controls are enclosed in NEMA-rated, air conditioned cabinets to ensure reliability in even the harshest industrial environment.

TELESIS' TMM5000 has reduced manual operations, shortened marking times, and increased operator efficiency at America's favorite motorcycle manufacturer.

Sound-deadening enclosures house "positioning nests" for Harley-Davidson crankcases. Air conditioned cabinets protect computer controls.

TELESIS TECHNOLOGIES, INC.
P.O. BOX 1000 CIRCLEVILLE, OH 43113

Contact: Applications Engineering Dept.
1-800-654-5696