

Classification: A
Billable to Telco: Yes X No

APPARATUS AFFECTED: 4BDATASPEED Tape Receiver (TP308502 DATASPEED Driver Module).

PART AFFECTED: TP303672 Driver Circuit Card Assembly (EC672).

REASON FOR REISSUE: To add to and to correct publication affected.

REASON: To provide an improved magnet driver circuit which is nonadjustable, has double sided gold plated fingers for low resistance connections, and provides more heat sink area for the power components.

CHANGE: The TP303672 driver circuit card assembly (EC672) (part of the TP308502 driver module) is replaced by TP303730 driver circuit card assembly (EC730). Nine circuit cards are required for each driver module.

The circuit card stamping (EC672) located on the TP308486 circuit card location chart is changed to (EC730) 9 places. See SUPPLEMENTAL INFORMATION.

Associated wiring diagrams 7412WD and 7413WD will be changed to reflect this change.

The following is a detailed description of the TP303730 driver circuit card assembly (EC730) and may be used as temporary information to Section 592-812-100, Issue 1, for TP308502 driver module equipped with EC730 driver circuit card assembly.

Magnet Driver (Diagram 303730)

This card controls the magnet coil of the punch. Transistor Q8 turns the coil on and off. Transistor Q9 turns on -55 volts to rapidly energize the coil.

To punch a hole, 0 volts is applied to a prime input 15 being followed by a 5 volt (punch sample) on input 22. This puts a positive pulse on the base of Q3, turning it off. The collector of Q3 goes negative, turning Q2 on, and 0 volts appears on the collector of Q2. This holds Q3 off and turns off Q10, putting 0 volts on the emitter of Q10, which turns off Q8 and the magnet is de-energized.

1.9MS + 0.05MS after the time pin 24 goes negative, a positive pulse is generated in the punch control card and is applied to pin 30 to reset the flip-flop and turn Q8 back on. This positive pulse is coupled through C2 to turn Q5 off, which turns Q1 on. Applying positive bias to the base of Q7. Q7 turns off and emitter follower Q6 applies negative bias to the base of Q9. Q9 turns on applying -55 volts to the magnet coil.

When the current in the magnet coil has reached the correct level, the voltage between terminals 35 (36) and 31 (32, 33) reaches 13 volts. This is the zener point for CR11 so that it starts to conduct, allowing a forward bias on Q11 to be developed across R13. Q11 turns on, putting negative bias on the base of Q4, turning Q4 on. The collector of Q4 goes to 0 volts which is applied through CR6 on the collector of Q5, turning Q5 on. This turns Q1 off, putting negative bias to the base of Q7, turning it on. This puts 0 volts on the base of Q9, turning it off to remove the -55 volts from the magnet coil.

Inputs 3 and 13 allow the punching cycle to be started by a positive pulse turning Q2 on at the collector. No prime is necessary when this input is used.

CHANGE: (Continued)

The following test information may be used as temporary information to Section 592-812-700, Issue 1, Pages 17 and 18 for TP308502 driver module equipped with EC730 driver circuit card assembly.

Preparation for testing with EC730 magnet driver circuit cards.

The TP303730 magnet driver circuit card (EC730) does not have an adjustment. To test if each level is functioning properly, check as follows:

Turn the module power off. Place an oscilloscope trigger lead on pin 13 of the EC675 card connector. Place the ground lead of the scope on pin 1 of one of the EC730 magnet driver circuit card connectors. Set the Volts/Div. control on the scope so that 5 volts/div. is displayed on the scope screen. Set the Time/Div. control to 200 microseconds/div. Set the triggering slope control to external and adjust to trigger on a positive pulse. Place the scope probe on pin 32 of the feed lever driver circuit connector.

Turn the module power on. Taking each level individually and beginning with the feed level, check for a maximum voltage peak of 14 volts + 10% when operating with "Letters Feed-Out" or at the operating speed of the equipment. This peak shall fall between 1.0 and 1.4 milliseconds from the start of the pulse. (See Attachment Sheet 1.) The wave form shall fall within limits shown on the graph. If the wave form does not fall within the limits, check the perforator armature (reed) gap and the bumper adjustments. Refer to the appropriate adjustment section for the tape punch unit.

Apply sample pulse at pin 3 of the EC675 circuit card connector. Approximately 1200 wpm.

Check and adjust for -6 to 0 volts pulse of 4.1 ± 0.1 milliseconds pulse of pin 29.

PUBLICATION AFFECTED: Section 592-812-100, Issue 1.
Section 592-812-400, Issue 1, Page 2, 7412WD.
Section 592-812-401, Issue 1, Page 2, 7413WD.
Section 592-812-700, Issue 1, Page 17, 2. 15 and Page 18, 2. 16.
Section 592-812-800, Issue 1, Page 18.

IDENTIFICATION: See CHANGE.

INTERCHANGEABILITY: The TP303672 and TP303730 magnet driver circuit card assemblies are interchangeable.

PARTS AVAILABILITY: The TP303730 driver circuit card assembly is available in limited quantities.

SUPPLEMENTAL INFORMATION: The TP308486 circuit card location chart is not illustrated in Section 592-812-800, Issue 1.

REFERENCES: None

TCN INDEX CLASSIFICATION: 91 AL 33

Attached Sheet 1

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Page 2
2 Pages and Attachment

OSCILLOSCOPE GRID

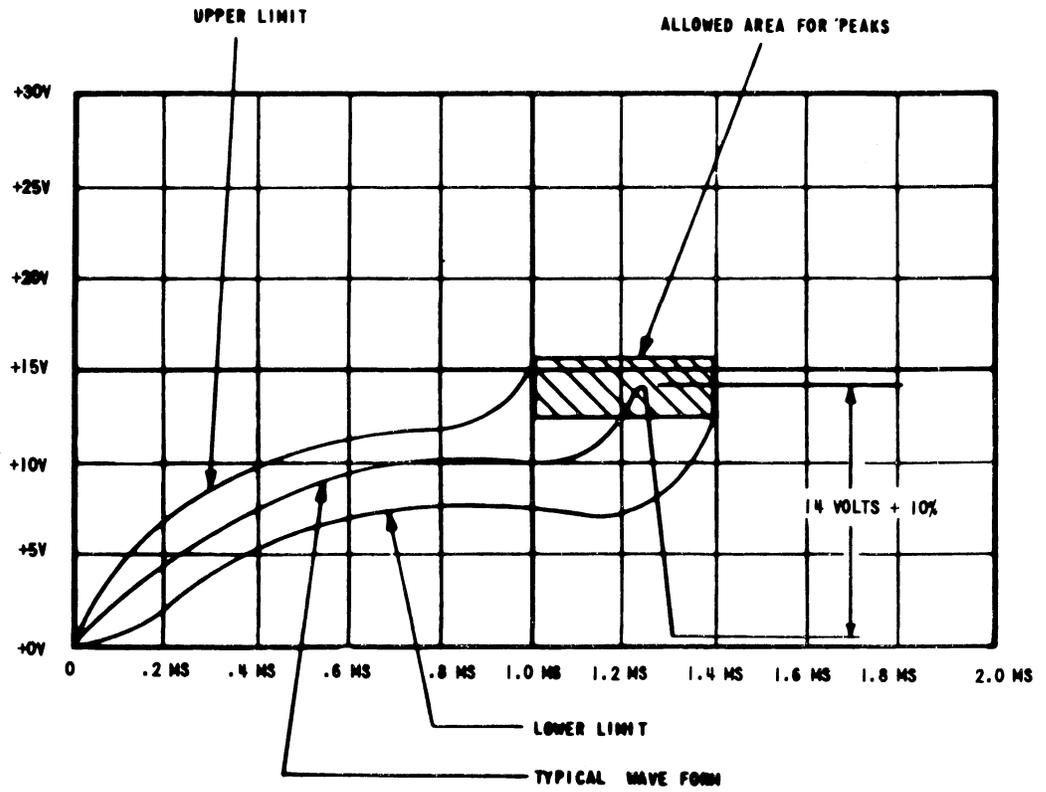


FIGURE 1