

## ATTACHMENT 7 - Car Wiring Harness

The car wiring harness was completely replaced, in part during the time the engine was being rebuilt.

1. The following major parts were purchased:

The Filling Station

2	LED-31-6L LED Tail Light	FS-5 & 6
1	VT-3 Universal Turn Signal Assembly	FS-9
1	G333 1933-36 Tail Light Reinforcement	FS-6

Other small items were also purchased

Ken & Tom Havanko

1	Rt Rear Fender Tail- Light	Pg 3 of K & T
1	Water Temp. Gauge	Pg 6 & 7

YnZ's Yesterdays Parts

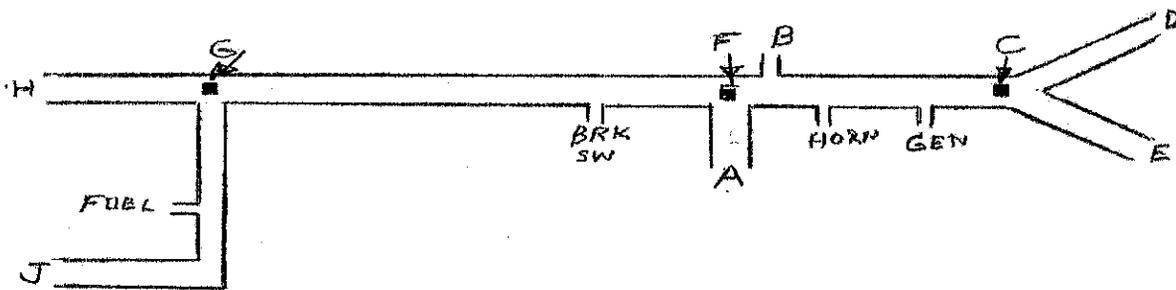
All of the wiring & Parts needed see Invoice

2. Mounting Right Hand Taillight

The Rt Fender Light was mounted in the location fender prepared.

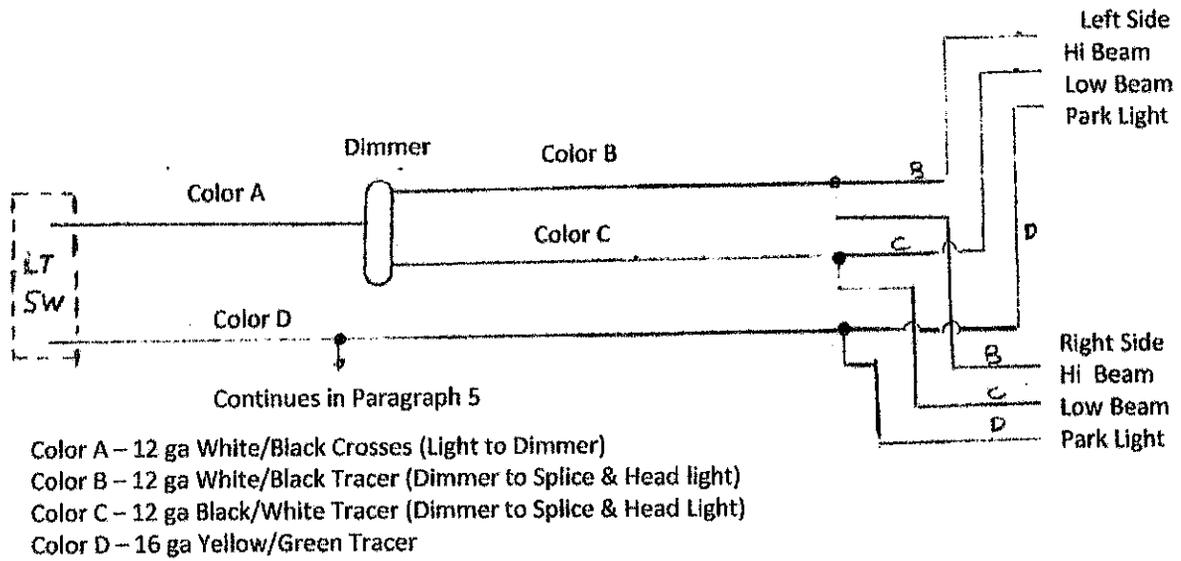
3. Wire Bundle Overview

The new wiring harness followed the following sketch. All sections used a covering of split braided sleeving and black shrink tubing.

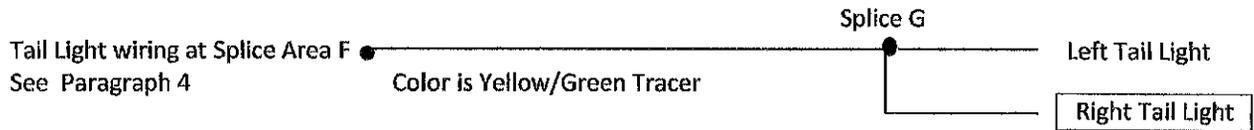


- A – The area under the dash
- B – Goes to the dimmer switch
- C – Wire splicing occurs in this area – about a foot forward from the generator
- D – The Left Headlight
- E – The right Headlight
- F – A splice in this area for the taillight
- G – Splice for right side wiring – in area of right rear fender
- H – left Taillight
- J – Right Taillight

4. Head Light Circuit



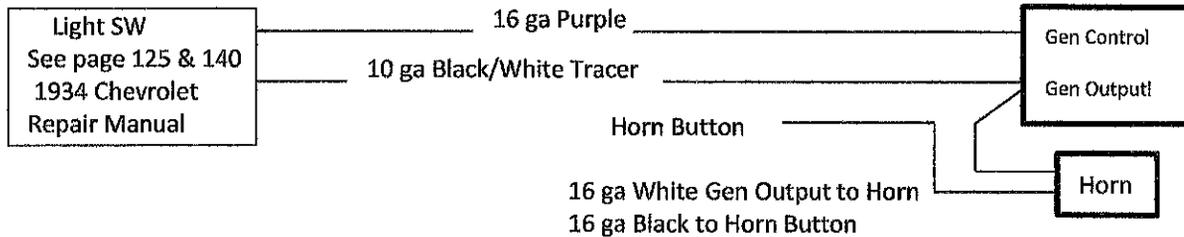
5. Rear Tail Lights



6. Fuel Gauge Wiring

Wire is 16 ga Blue in color and runs from the fuel tank to the fuel gauge in the instrument panel. Page 143 in the 1934 Chevrolet Repair Manual shows this circuit and how it is to be connected. Page 144 gives a complete discussion and trouble shooting.

7. Generator & Horn Wiring



8. Turn Signal Wiring

Circuit	VT-3 Turn Signal	Car wiring
Front Right	Light Blue	Green
Front Left	Green	Yellow
Rear Right	Black	Green
Rear Left	Dark Blue	Yellow
Stop Switch	Orange	White

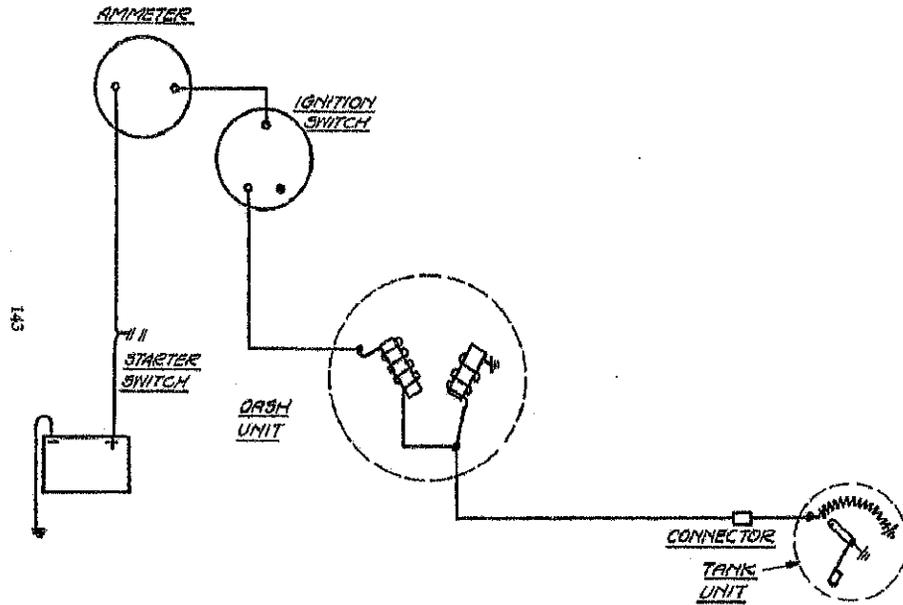


Fig. 297--Gasoline Gauge Circuit

by using a bolt for a fuse. Dirty or corroded battery terminals. Ground strap on frame loose or corroded. High internal resistance in battery, usually caused by sulphation due to low water level.

B--Loose connections at the headlamps, causing crystallization of filament due to the magnetic field flexing the filament.

C--Vibration, any looseness that may cause vibration of the bulb will cause bulb failures.

### THE GASOLINE GAUGE

The gasoline gauge is composed of two units. The indicating unit which is mounted on the instrument panel and the tank unit which is mounted on the gasoline tank. The circuit for this instrument passes through the ignition switch, therefore the gasoline gauge operates only when the ignition switch is "on."

#### Operation

When the gasoline tank is empty, current flows from the battery positive through the ammeter to the ignition switch and then to the dash unit top terminal. The current now passes through the choke or limiting coil to the common connection between the two coils, which is the lower terminal on the dash unit. At this point the current is offered two paths, one through the operating coil of the dash unit and the other over the wire to the tank unit. When the gasoline tank is empty, the contact finger cut out all the resistance in the tank unit. The largest proportion of the current will pass through the tank unit circuit and only a very small portion through the operating coil of the dash unit, with the result that there is not sufficient current being forced through this circuit to move the hand in the dash unit. If the gasoline tank is half full, the cork float of the tank unit rises on the gasoline

and moves the contact finger over the resistance-cutting resistance into the tank unit circuit as indicated by the lines in Fig. 297.

As the tank is filled with gasoline, more current is passed through the operating coil and the reading of course is higher, and as the tank empties, less current is passed through the operating coil and the reading is lower.

If trouble is experienced with either the tank or dash unit, replacement of the unit is the only remedy. The following will help in determining the cause of troubles:

A--Dash unit shows empty all of the time:

1. Check and make sure that wire from ignition switch is tight on terminals.
2. Remove the wire from the lower terminal, turn on the ignition switch. If gauge now shows full the dash unit is OK. If gauge still shows empty, the dash unit is at fault and must be replaced.
3. Replace the wire and open bayonet socket just ahead of gasoline tank. Turn on the ignition switch. If gauge now shows full the wire from the dash unit to the bayonet socket is OK, but the tank unit is shorted and must be replaced. the gauge shows empty the wire from the dash unit to the bayonet socket is shorted and must be replaced.

B--Dash unit shows full all of the time.

1. Check for loose wire on lower terminal of dash unit.
2. Open bayonet socket, just ahead of the gasoline tank and ground end of wire. Turn on ignition switch. If gauge shows full, the wire between the dash unit and the bayonet socket is open circuited and must be replaced. If gauge shows empty, the wire is OK, but the tank unit is open circuited and must be replaced.

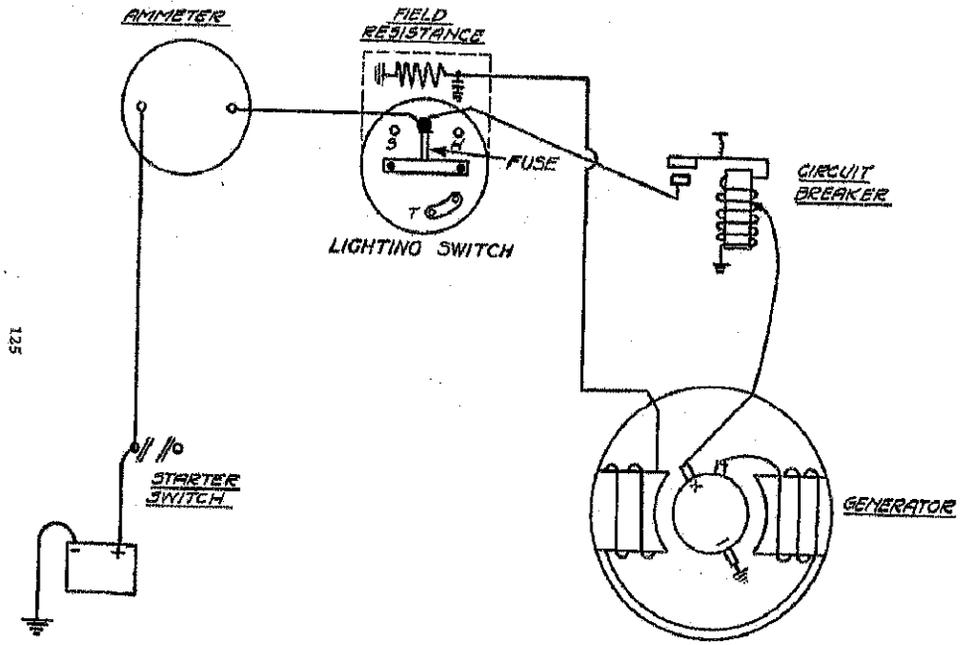


Fig. 258—The Generator Circuit

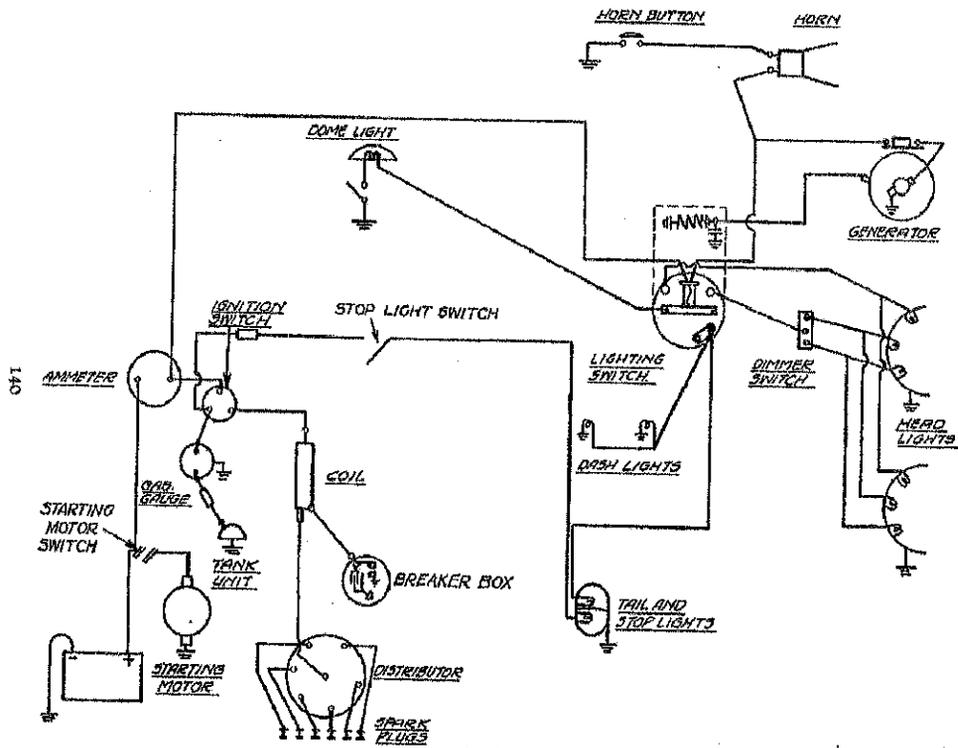
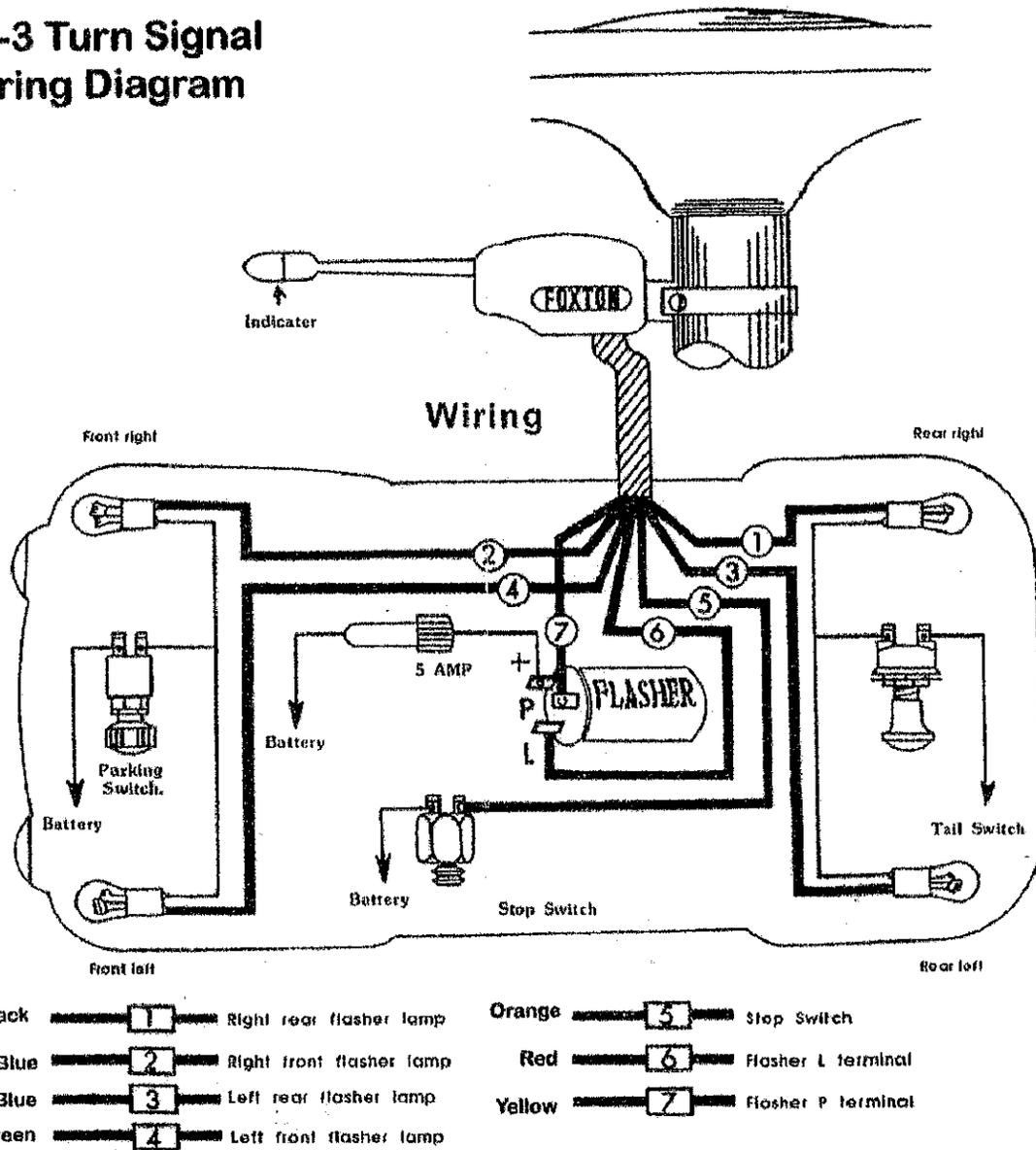
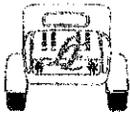


Fig. 294—Complete Car Wiring

# VT-3 Turn Signal Wiring Diagram



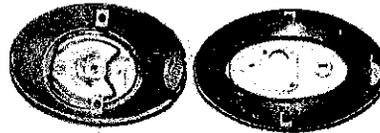


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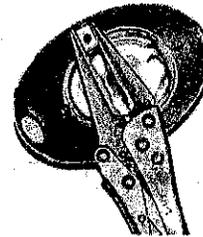
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## INSTALLATION INSTRUCTIONS for LE-31C (31-36 Chevy 6 & 12 volt)

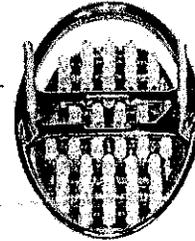
1. Remove all internal bulb sockets and brackets from inside of housing. In the 31 housing the license light bracket may be bent back and forth to break it off since it will no longer be required.



2. Using a 3/16" drill enlarge the lens mounting bracket holes so the LED card may be mounted in a later step. Please see photo so you don't destroy the brackets.



3. Trial fit the supplied round license light lens into your housing. In some cases you may have to file the lens to fit in the hole snugly. After fitting, use clear silicone to affix the lens to the housing from the inside of the housing.
4. Assemble the male-female nylon standoffs by placing two nylon washers and an 8-32 nut on each standoff. Just start the nut, **DO NOT TIGHTEN AT ALL.**
5. Insert one of the 8-32 all thread pieces into each standoff then slide the LED card between the washers. To set the mounting width of the LED card use the bezel (**DO NOT USE THE HOUSING, AS IT USUALLY IS LARGER**) and slide the all thread rods through the bezel lens mounting holes and center the LED card between the all thread rods and tighten the 8-32 hex nut installed in step 4 above to hold the LED card in place. (see photo) Remove the all thread rods, **SAVE THEM**, for later use.



6. Slide the three wires through the back of your housing so they may be connected later.
7. **Locate the LED card that has the two LEDs on the back of the card. These are the license lights & should point through the lens. DO NOT MOVE THEM** or you will have to remove the LED card after installing it into the housing to reposition the LEDs to shine on the license plate..
8. Slide the LED card with the license light LEDs into the housing from the end with the license plate lens in it. Again be careful not to bend the back LEDs

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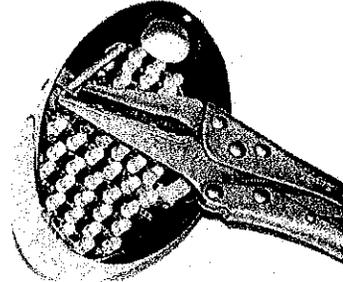
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9. Using a long nose pair of pliers hold the LED card in place by one of the standoffs (do not squeeze too tightly) and position the card so one of the all thread rods can be inserted through the lens mounting bracket in the housing and screwed into the standoff. When the first rod is in place insert the second all thread rod in the other bracket the same way.



10. Install the lens, gasket and bezel onto the all thread rods and slide the bezel down snugly against the housing.



11. This is the fun part.....Have two of the supplied stainless 8-32 lens screws handy and pull the all thread rods up so the LED standoffs are against bottom of the brackets. While holding the LED card in place with one all thread rod remove the other all thread rod and insert one of the stainless screws in its place. Snug the screw and remove the second all thread rod and insert the other stainless screw in the second all thread rods place.



12. That does it for this light, now do the other light the same way skipping step 7 and in step 8 the card may be inserted from either end.

WIRING: BRAKE wire colors:

**GREEN** wire on **12V** cards, **BLUE** wire on **6V** cards.

Connect the DRIVER's side LED card BRAKE wire to the DRIVER's side brake wire

Connect the PASSENGER's side LED card BRAKE wire to the PASSENGER's side  
brake wire

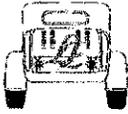
Connect both LED card YELLOW wires to the taillight wire.

Connect both LED card BLACK wires to a GOOD ground.

That's All Folds, ENJOY.....

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### **Start Your Engine**

If after installing the LED conversion units you do not see much of a difference between the taillights and brake lights, start the engine.

The battery voltage is about 12 volts when the engine is not running. After starting the engine the battery voltage will go to 14.2 to 14.8 volts. The LED units are designed to operate at this higher voltage.

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### **Turn Signals Do Not Operate Properly**

**PROBLEM:**

In a few instances the turn signals may not operate correctly after installing the LED conversion units (front, rear, or both). This is because there is not enough load on the turn signal flasher to cause it to operate. This problem is also seen if you are using LED taillights and either no front turn signal bulbs, small bulbs, or LEDs.

**REMEDY:**

This situation can easily be corrected by connecting one of our LE-TSFL (Turn Signal Flasher Loads) into your existing wiring. This will allow your turn signals to operate using your existing turn signal flasher rather than purchasing flashers costing \$30 - \$60 each. The LE-TSFL is \$19.95 plus shipping.

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