MODEL A FORD WIRING

Keeping the Current Flowing
ATTACH YELLOW WIRE TO AMMETER CHARGE TERMINAL

Windshield Wiper (Optional)

Dome Light

Battery

Battery Cable

Starter

Cut Out

Generator

Dash Light

Armored Cable (Pop-Out-Switch)

Yellow/Black

Red

Yellow/Black

Black/Blue

Black/Blue

Junction Box

Passenger Side

Driver Side

Coil

Distributor
TYPICAL WIRING DIAGRAM (NO COWL LAMPS) 1928 TO MARCH 1929
TYPICAL WIRING DIAGRAM (WITHOUT COWL LAMPS)
beginning in February 1929
About Ford Wiring

• Wires were cloth covered, rubber insulated
• Ford used 16 gauge wire on lamp wiring
• Wire gauges in 1930’s not the same as today
• Wires were bigger around, yet not as good
  – Modern materials
  – Better copper stands
• 6 Volt systems need a larger gauge than 12 volt to ensure good current flow
Stranded Wire vs Solid Wire

Stranded wire is much more flexible than solid wire of equal size. For this reason, stranded wire is used when the wire needs to move around frequently, in automotive applications or in appliances for example. Conversely, solid wire is used when little or no movement is needed, such as home wiring. When working with your Model A used stranded wire for the best results. Ford used only stranded wire.
The Battery – Where it All Starts
Battery

- Correct polarity – 6V ground is **Positive**
- Keep electrolyte levels correct – distilled water
- Caps in place
- Keep connections clean and tight
- Keep fully charged – trickle charges a good idea
- Do not over charge – 10 amps for average driving
- Keep securely mounted
- Connect ground strap last
Battery Ground Cable

Fig. 862

Service Bulletin - March 1930
Ground Cable Attached
Modern Cable #2 wire

Model A Cable #1 wire

Service Bulletin – November 1929
Battery Cable Routing

Fig. 797
Dotted Lines Show Location of Old Cable

Service Bulletin – November 1929
Battery Mounted

Use care to ensure no contact with battery hold down
Safety Fuse

Black Enamel Paint
Starter Switch
Cut Out to Terminal Box Wiring Harness

To Terminal Box – Yellow wire to passenger side

To Generator Cutout

To Starter Switch Post
1928-1929 Models Used a Steel Conduit

- Painted Black Enamel
- Firewall Clip for Conduit
- Hole for Wire to Starter Switch
Connections

Terminal Box

Generator Cut Out
Cut Out Variations

From *The Ford Model A — As Henry Built It*, by DeAngelis, Francis, and Henry — used with permission.
Alternator
Dash Wiring to Terminal Box Harness

- Amp Meter Discharge Side
- Ignition Switch
- Amp Meter Charge Side
- Terminal Box
- Driver’s Side
- Passenger’s Side
- Coil Positive Post
Dash Connections

Discharge Side
Ammeter
Pop Out Switch Internal
Dash with Replacement Switch

Discharge Side
Clearance is Minimal – Protect Connections

Service Bulletin
June 1930
For trucks, but dash and gas tank are the same
Instrument Light Connection
Slack in Instrument Light

LEAVE A LITTLE SLACK IN THIS WIRE

SEE THAT WIRE PASSES THROUGH THIS NOTCH IN INSTRUMENT PANEL

Fig. 919

Service Bulletin
June 1930
Terminal Box Connection

New Hook-up
Service Bulletin – November 1929
Terminal Box
Reproduction vs Original

Backside of Reproduction

Backside of Original
Ignition Wiring

Lower plate wire to upper plate connection
Distributor
Coil

Fig. 920

IGNITION WIRE

Service Bulletin – June 1930
Main Wiring Harness
Light Switch Housings

First Design
Open Bail

After Feb. 1928
W/ Twolight to April 1930
After Feb. 1930
Reproduction Light Switch Cover
Light Switch Connections – Used After February 1928 with Ford “H” Headlights (Fluted Lens)
Light Switch Connections Used with Twolight headlamps
Wiring Harness w/ Cowl Lights

Bauer Electronics – Used with Permission
Light Connection
Switch Attachment
Wiring Clip Under Hood Latch

Service Bulletin – April 1929
Horn Connection
Horn Rod

Plastic Insulator

Pressing Button Completes Circuit to Ground
Headlight Connection
**HEADLIGHT WIRE ASSEMBLY**

- **Red (Dim)**
- **Yellow (Parking)**
- **Green (Bright)**

- Headlight socket assembly (18140-18180)
- Socket Locking Blade
- 'J' slot for headlight conduit ferrule to attach
- Socket holder (18250/18260) blade locking groove

1. Align socket locking blade with headlight socket holder blade locking groove.
2. Insert headlight socket into socket holder. Push firmly until blade locks in groove.
3. To remove socket, depress socket locking blade with a small screwdriver – Hold in and pull out socket.

- Plastic plug part (20810) with coded letters R, Y, G are facing headlight bucket.
- RED WIRE (Dim)
- GREEN WIRE (Bright)
- YELLOW WIRE (Parking)

**Socket Indention - Plastic plug part (20810), small groove must align with this indention.**

**Small Groove**

**Conduit Ferrule with Indention**

**Courtesy of Bratton’s Antique Auto Parts**
Headlight Wire Plug Connection

Fig. 909

Fig. 910

Service Bulletin – May 1930
Headlight Socket Connections
Headlight

Courtesy of Bratton’s Antique Auto Parts
Inside Headlight
Main Wiring Harness – Going to Rear
Wiring to Stop Light Switch
Stop Light Switch
Tail Light Connection
Tail Light (s)
Wire Clips

1 - A-14585 Rear harness to frame clip. 5 req.
2 - A-14565 Rear harness to fender bracket or skirt. Used with teacup style rear lamp. 1 req.
3 - A-14595-A Rear harness to lamp bracket. Used with drum style rear lamp. 2 req.
4 - A14592 Rear lamp harness to body. used on most Fordor bodies and many commercial bodies.
Tail Light Loom
Cross Over Wire – Dual Tail lights
Cowl and Dome Lights

Service Bulletin
June 1930
Cowl lamp harness connector (1929-31) and frame clip. “C” shaped connector clip was used in 1929. The “S” shaped frame clip was used on 1930-31 models.
Cowl Light
These connections must be kept clean and tight.

Service Bulletin
October 1930
Turn Signals

Bauer Electronics – Used with Permission
Trouble Shooting Tools
Where To Find Voltage

From *Model A Ford Mechanics Handbook* by Les Andrews
– Available from MAFCA
<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lights Bulbs Burn Out Often</td>
<td>Poor Ground Between Battery &amp; Generator</td>
</tr>
<tr>
<td>Horn Inoperative</td>
<td>Dirty Armature</td>
</tr>
<tr>
<td></td>
<td>Poor Connection at Light Switch</td>
</tr>
<tr>
<td>Ammeter Shows Discharge</td>
<td>Defective Horn Rod</td>
</tr>
<tr>
<td></td>
<td>Defective Generator</td>
</tr>
<tr>
<td></td>
<td>Defective CutOut</td>
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## Typical Problems (Cont.)

<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ammeter Shows High Charge</td>
<td>• Generator Out of Adjustment</td>
</tr>
<tr>
<td>• Tail Light Does Not Work – Good Bulb</td>
<td>• Poor Ground or Wire Connection</td>
</tr>
</tbody>
</table>
Ignition Trouble Shooting

From Model A Ford Mechanics Handbook by Les Andrews – Available from MAFCA
Preliminary Test

- Test for 6V at Starter
- Test for 6V at both Terminal Box Nuts
- Test for 6V at both Coil Terminals
- Open Point – Insert Piece of Paper – Then turn on Ignition (Key On) – Test for 6V on Arm

If any test failed, trace the fault to a disconnected or broken wire in the circuit