

Reproducing Wiring Harnesses

by John Ratliff [John (AL)]

This tutorial evolved from my own search for a cloth-covered wiring harness to fit my 1951 8n, 12v conversion. The principal N-series parts suppliers do not carry an OE-style harness for the 12v conversion (on the basis that since the 12v isn't OE, the wiring harness needn't be OE-style either), but modern, vinyl-clad wire is an obvious anachronism and when the cloth-covered wire and supplies are so easily obtained anyone who'd like to have a wiring harness as close to original as possible can do so with relative ease.

This tutorial includes the diagrams and part lists for all 8n wiring harnesses (the harness descriptions for the 9N, 2N, and NAA can be found in the Parts Manual images listed at the end.). To determine appropriate lengths on other models, use string to trace the wire's path on your own tractor, following the parts manual diagrams.

Thanks to everyone who helped develop this tutorial, particularly the participants in these [two threads](#) on the Ntractorclub discussion forum.

Supplies:

WIRE:

8n – all 6v models (lengths may vary depending upon distributor placement and generator style).

- Red – 16 gauge
 - Black w/ Red Tracer – 16 gauge
 - Red w/ Blue Tracer – 18 gauge
 - Black w/ White Tracer – 16 gauge
 - Yellow w/ Black Tracer – 12 gauge
 - Yellow – 12 gauge
 - Yellow – 16 gauge
 - Red w/ Green Tracer – 16 gauge
- Taillight wiring: black – 16 gauge
 - Headlight wiring: Black w/ Green Tracer – 16 gauge

8n – 12v conversion (lengths may vary depending upon alternator location).

- Red – 16 gauge
- Red w/ Blue Tracer – 18 gauge
- Black w/ White Tracer – 16 gauge
- Yellow w/ Black Tracer – 12 gauge
- Yellow – 12 gauge
- Yellow – 16 gauge
- Black – 16 gauge
- Red w/ Green Tracer – 16 gauge

CONNECTORS:

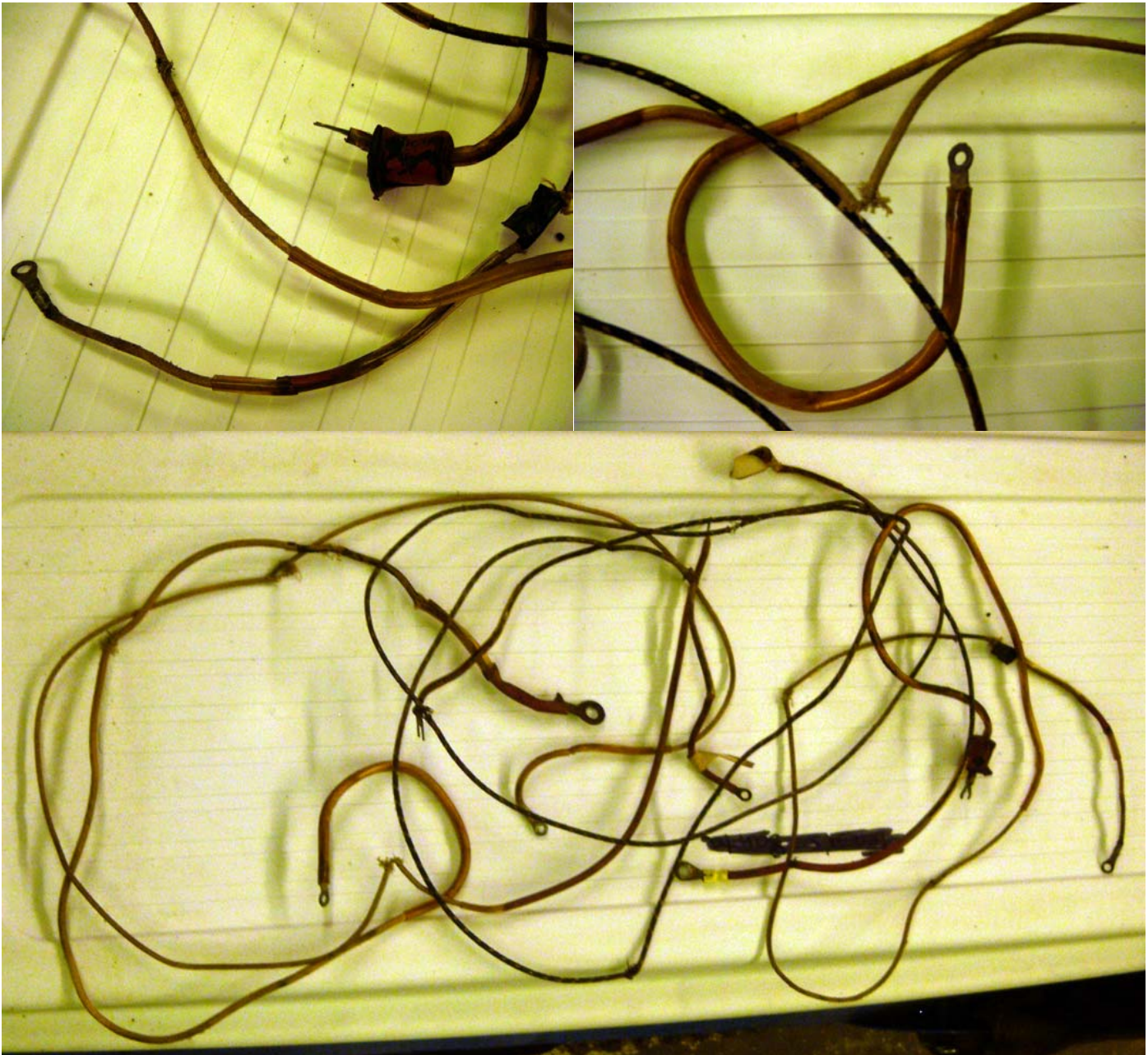
- For wiring harness: Assorted sizes of crimp terminals. These can be purchased at any automotive or discount store. Look for the plated copper connectors. You'll use needle-nose pliers to remove the plastic covers.
 - For 12v conversion harnesses, all you'll need are ring terminals.
 - 6v harnesses require three side crimp spade terminals.
- For headlight wiring: ring terminals, spade terminals, male bullet connectors (part #B-14486-S), and female bullet connectors (part #B-14487).
- For taillight wiring: spade terminals, male bullet connectors (part #B-14486-S), female 2-way bullet connectors (part #B-14487), and female 4-way bullet connectors (part # 59A-14487).

LOOM & INSULATION:

- Black rubber tubing to fit the wire (no more than 1/8" ID, generally speaking). Use this as an insulator/protector for the crimp connections, much the same as modern shrink tubing. In fact, you may wish to use shrink tubing first, then cover over the shrink tubing with the rubber tubing.

- Clear vinyl tubing for the ends of wires outside the loom (such as the lead to the solenoid and generator/alternator). Inside diameters vary depending upon gauge of the wire.
- Tared cloth harness loom – for front-mount distributor tractors.
- Vinyl friction tape – used to create wrapped loom in side-mount distributor models and later. Do not use electrical tape, as the adhesive will deteriorate with heat and leave you with a gooey mess.

Original Harness:



Diagrams:

1. Red - 16 gauge
2. Black w/ Red Tracer - 16 gauge
3. Red w/ Blue Tracer - 18 gauge
4. Black w/ White Tracer - 16 gauge
5. Yellow w/ Black Tracer - 12 gauge
6. Yellow - 12 gauge
7. Yellow - 12 gauge
8. Yellow - 16 gauge
9. Red w/ Green Tracer - 16 gauge

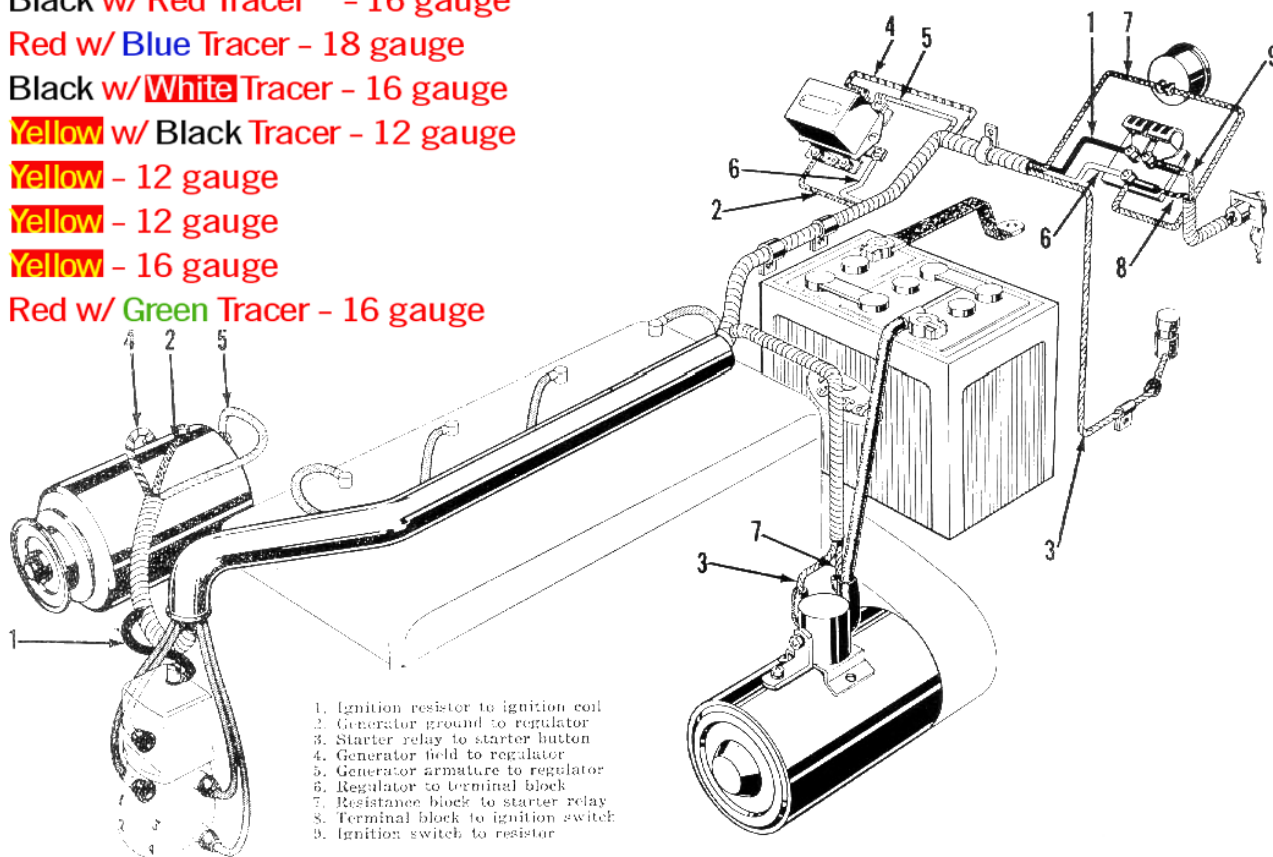


Fig. FO43—Electrical system on model 8N prior to tractor serial 263884.

Early 8N - 6v Front Mount Distributor, prior to serial number 263884

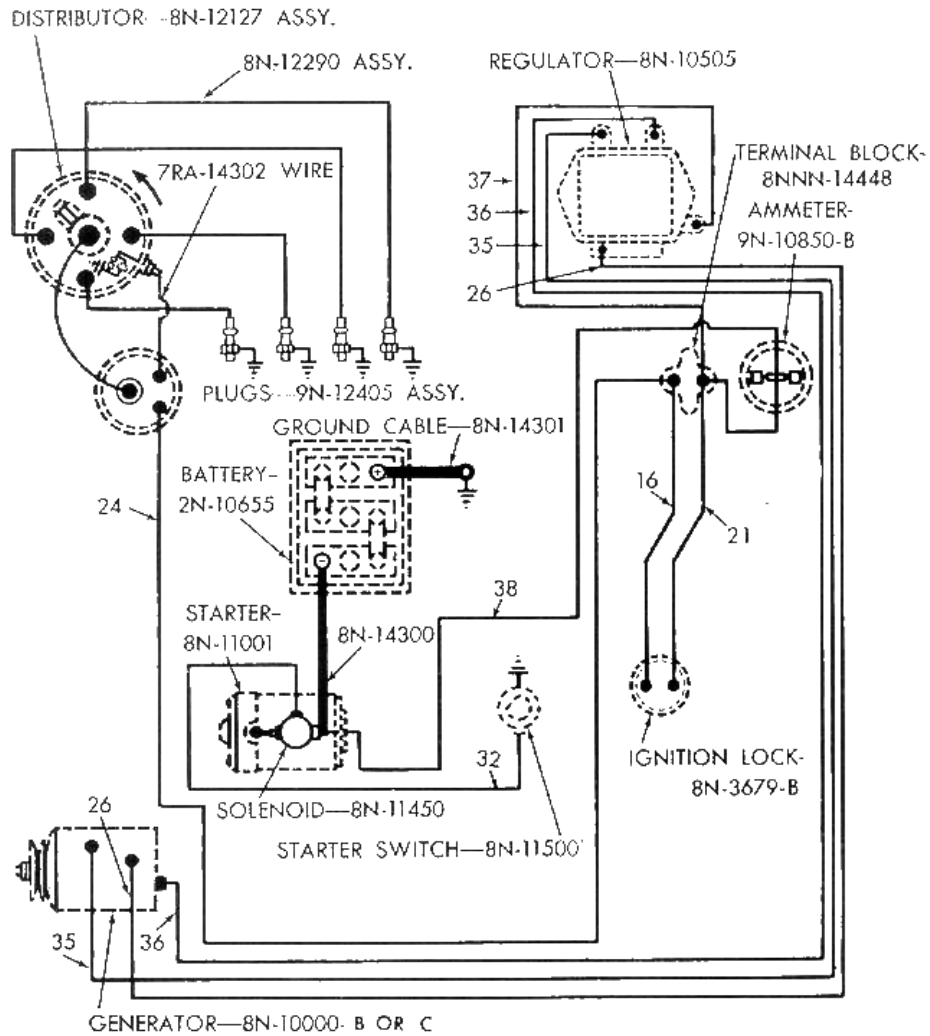
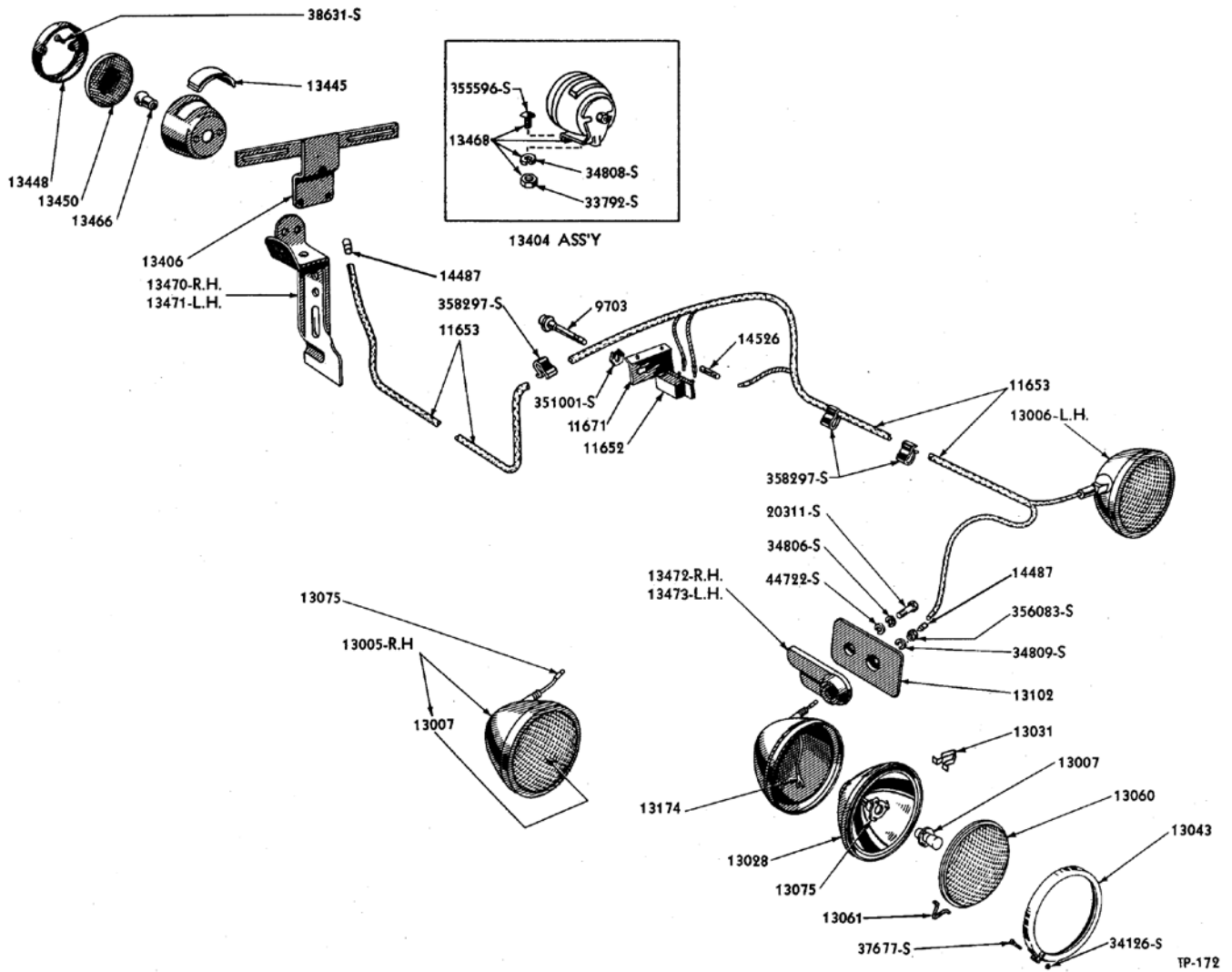


Fig. FO43A—Schematic wiring diagram used on 8N tractors (with 2 brush generators and angle drive distributors) after tractor serial 263844.

- 16. Red w/ Green Tracer - 16 gauge
- 21. Yellow - 16 gauge
- 24. Red - 16 gauge
- 26. Black w/ Red Tracer - 16 gauge
- 32. Red w/ Blue Tracer - 18 gauge
- 35. Black w/ White Tracer - 16 gauge
- 36. Yellow w/ Black Tracer - 12 gauge
- 37. Yellow - 16 gauge
- 38. Yellow - 12 gauge

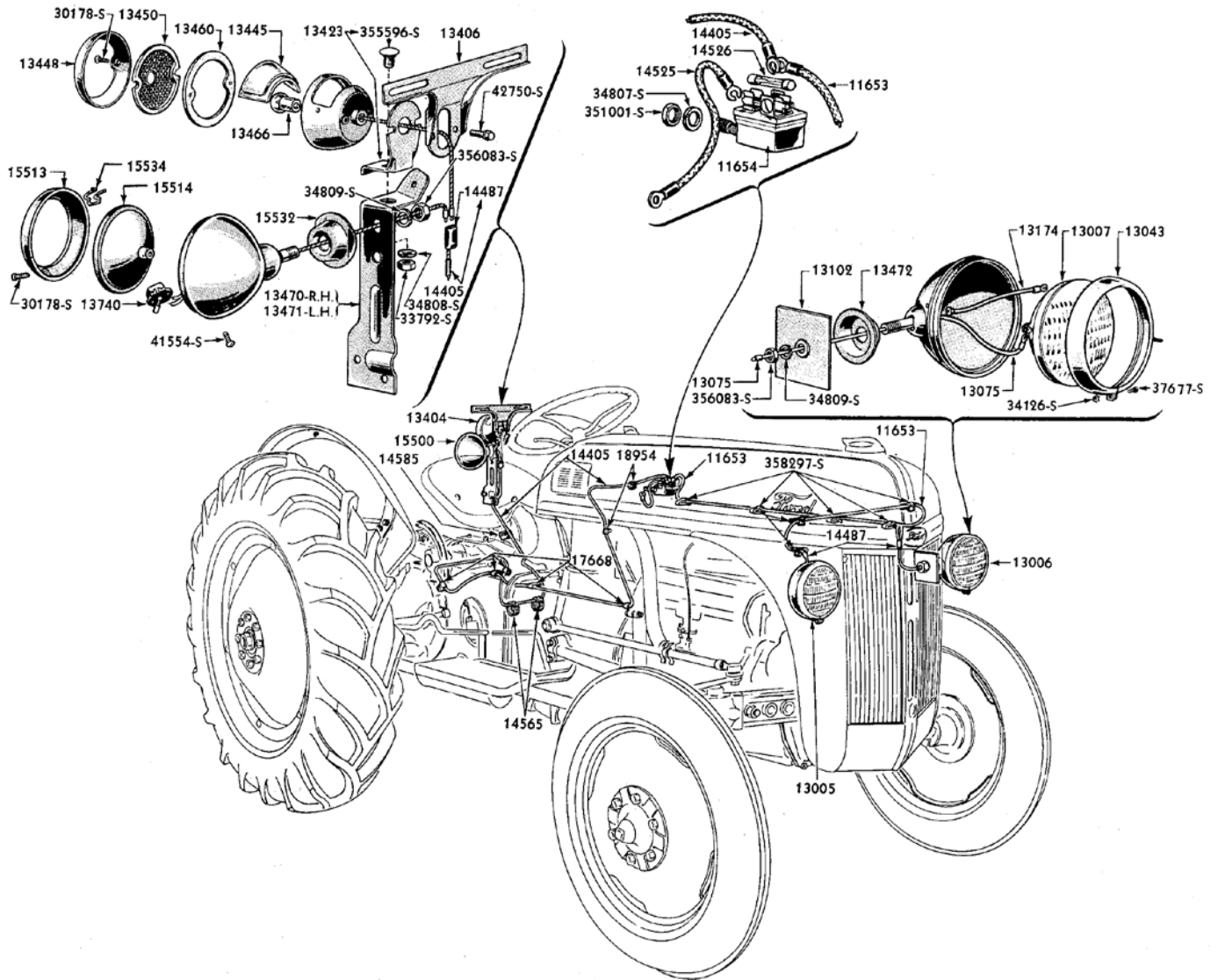
Late 8N - 6v Side Mount Distributor, after serial number 263884



1939-49 LIGHTING KIT AND WIRING ASSEMBLY

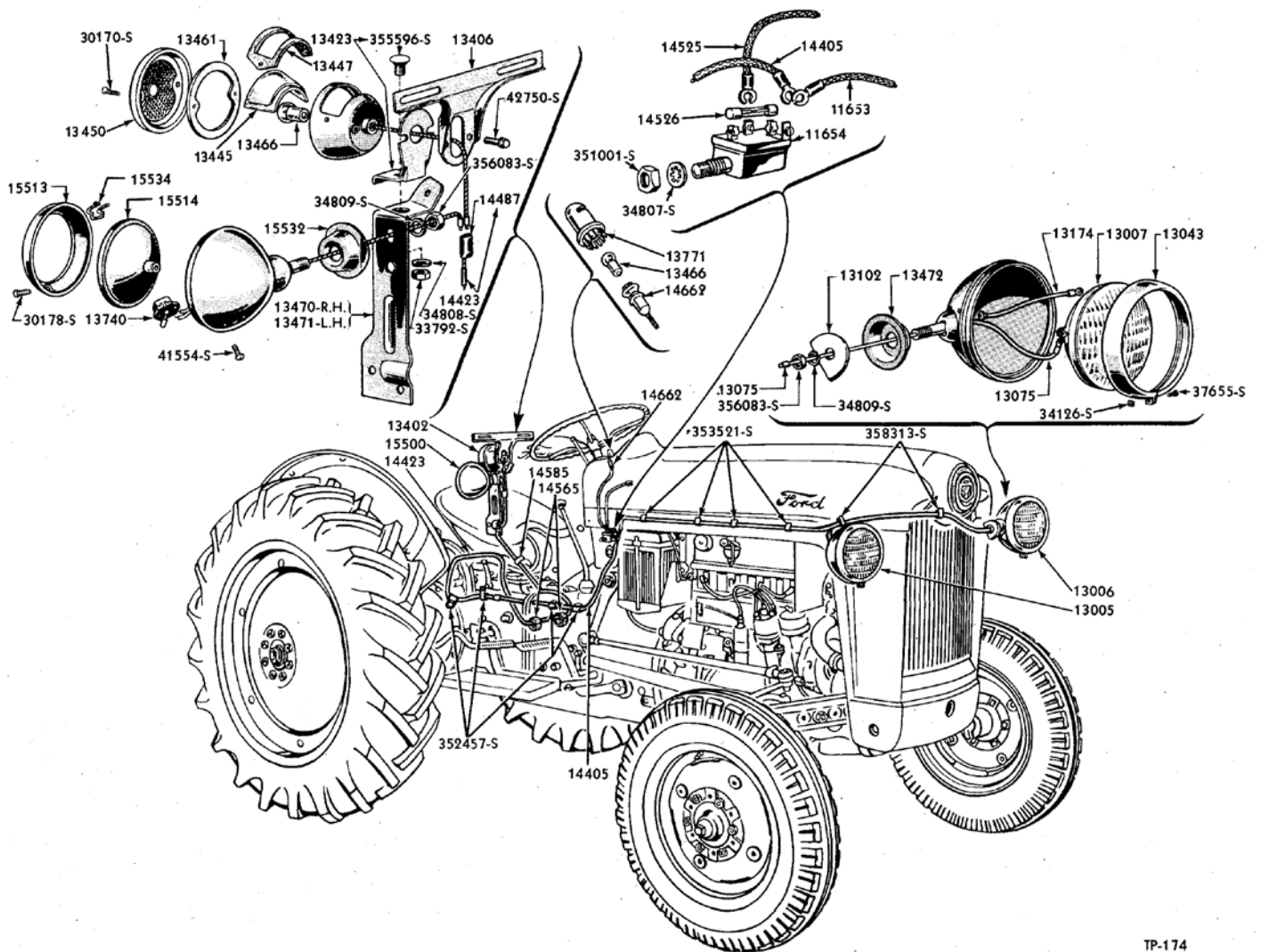
Basic numbers only shown on illustration. Order by Part Numbers shown in list of parts.

TP-172



1949-52 LIGHTING KITS (INCLUDING IMPLEMENT LAMP) AND WIRING ASSEMBLY

Basic numbers only shown on illustration. Order by Part Numbers shown in list of parts.



TP-174

1953 LIGHTING KITS (INCLUDING IMPLEMENT LAMP) & WIRING ASSY.

Basic numbers only shown on illustration. Order by Part Numbers shown in list of parts.