



WORKSHEET 4-3

Current Flow in the Starting System

Worksheet Objectives

When you have completed this worksheet, you will be able to show how current flows in the starting system.

Tools and Equipment

For this exercise you will need the following:

- Technician's Handbook
- Repair Manual/EWD
- Pens or highlighters (red/pink and green).

Exercise 1: Ignition Switch to START

Refer to Figure 4W3-1. The conditions in the circuit are as follows:

- Ignition switch turned to the START position
- Park neutral switch closed
- Start relay coil energized
- Start relay contact closed
- Pull-in and hold-in coils energized
- Magnetic switch contact closed

Use a highlighter (red or pink for power, green for ground) to trace current flow in these paths. Show each path from voltage source to ground:

1. Through the Start relay coil
2. Through the Start relay contact
3. Through the magnetic switch contact

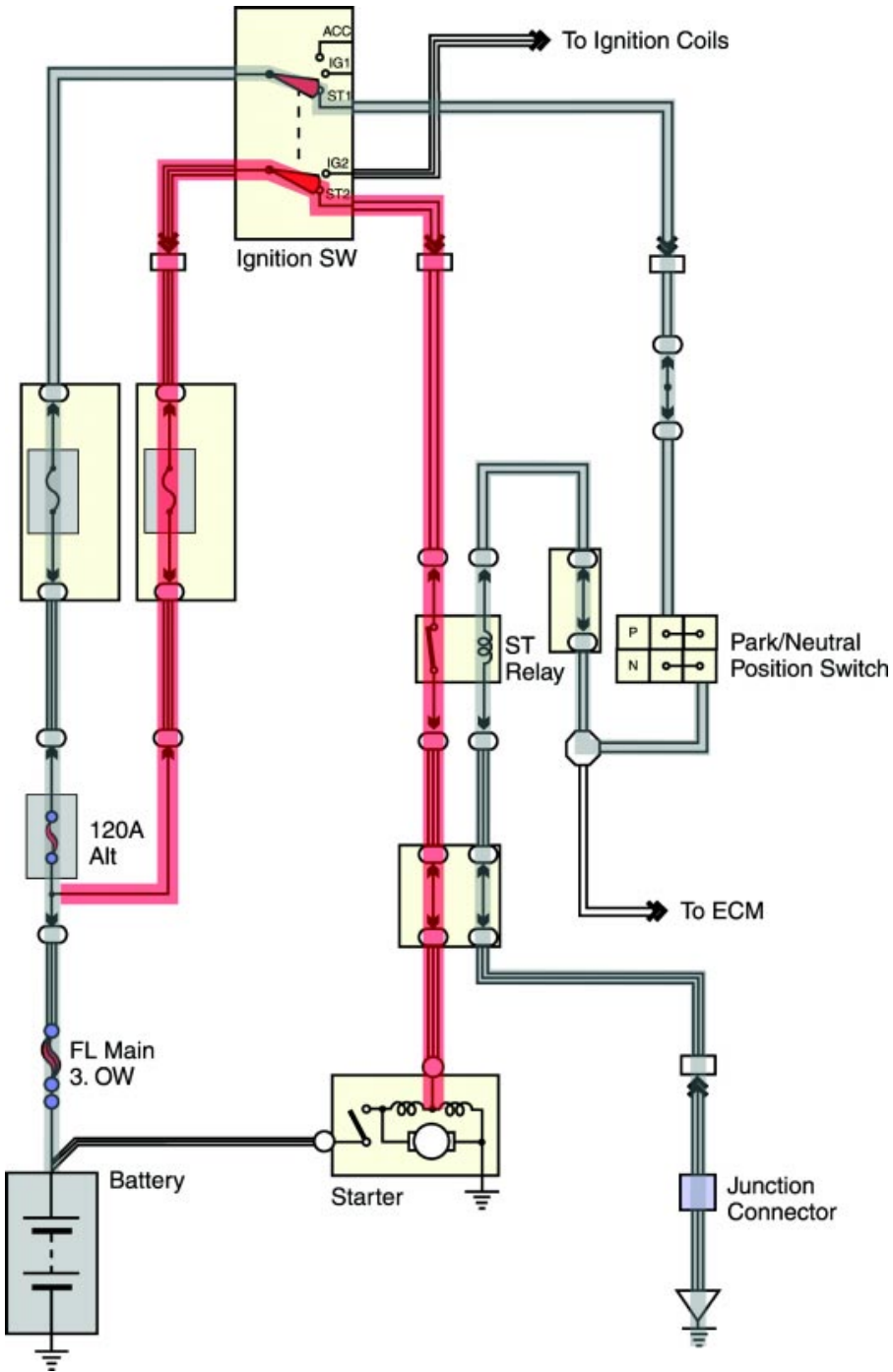


Fig. 4W3-1
TL623f001c-4W3

Exercise 2: Ignition Switch to ON

Refer to the Figure 4W3-2. The ignition switch has just returned to the ON position immediately after engine start.

State the conditions in the circuit; answer by checking the appropriate condition for each statement:

- | | |
|---------------------|--|
| Park neutral switch | <input type="checkbox"/> Open |
| | <input type="checkbox"/> Closed |
| ST Relay coil | <input type="checkbox"/> Energized |
| | <input type="checkbox"/> Not energized |
| ST relay contact | <input type="checkbox"/> Open |
| | <input type="checkbox"/> Closed |
| Pull-in coil | <input type="checkbox"/> Energized |
| | <input type="checkbox"/> Energized, reverse current flow |
| | <input type="checkbox"/> Not energized |
| Hold-in coil | <input type="checkbox"/> Energized |
| | <input type="checkbox"/> Not energized |
| Magnetic switch | <input type="checkbox"/> Open |
| | <input type="checkbox"/> Closed |

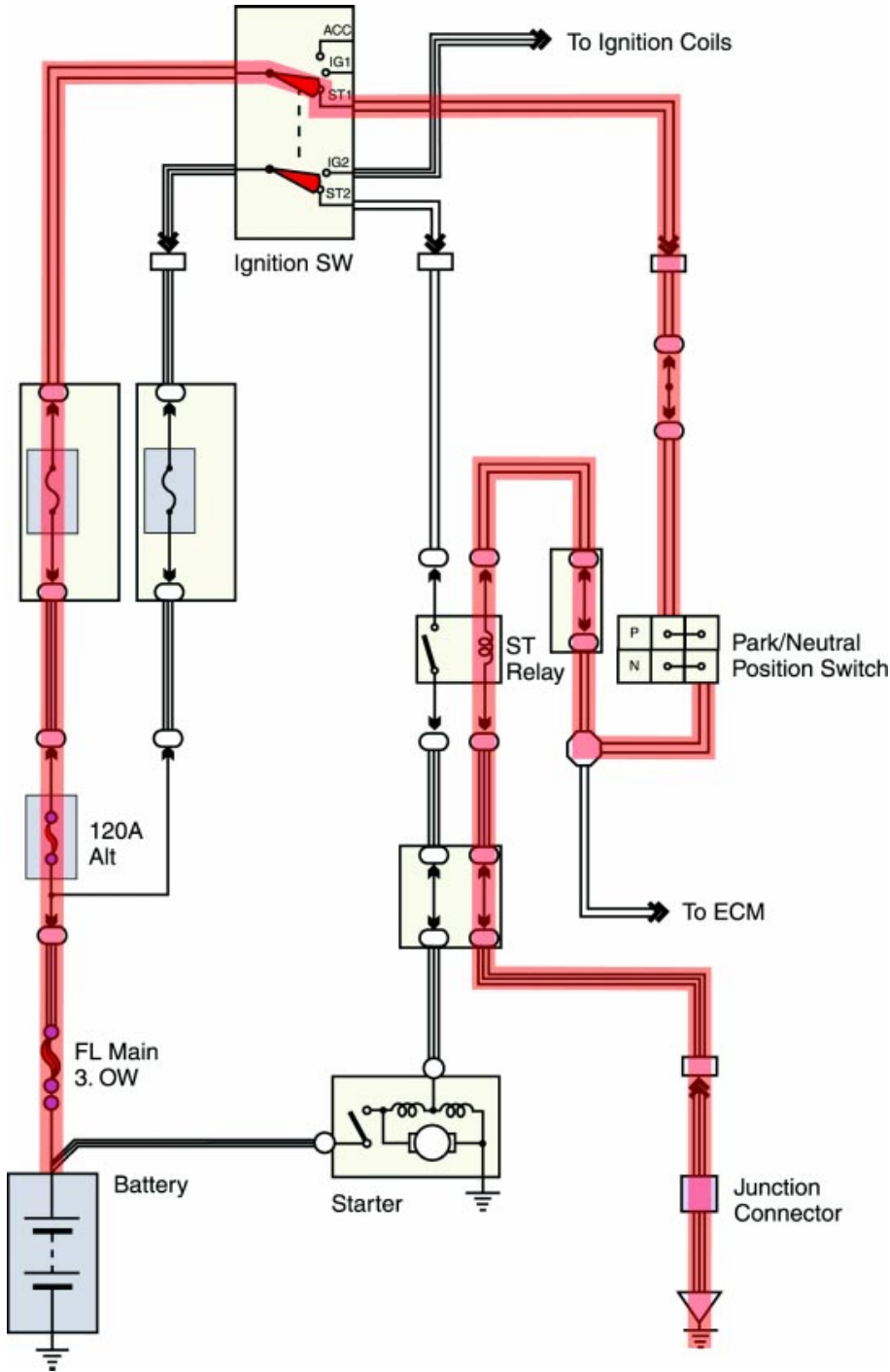


Fig. 4W3-2
TL623f002c-4W3

Current Flow in the Starting System

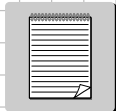
Name: _____ Date: _____

Review this sheet as you are doing the Current Flow in the Starting System worksheet. Check each category after viewing the instructor's presentation and completing the worksheet. Ask the instructor if you have questions regarding the topics provided below. Additional space is provided under topic for you to list any other concerns that you would like your instructor to address. The comments section is provided for your personal comments, information, questions, etc.

I have questions

I know I can

Topic	Comment		
Trace Current Flow			



Notes