



# MD105 Ride-On Trowel

## Engine Harness Service Kit Installation

The following instructions are intended to assist the user with the installation of the Engine Harness Service Kit on a Multiquip model MD105 Ride-On Trowel. It is not intended to take the place of the Operation manual shipped with the trowel. Refer to the Operation manual for safety, operation, and maintenance information. Please read all assembly instructions before installing the kit.

### REQUIRED TOOLS

- Wire cutter/stripper/crimper
- Heat shrink gun

### PARTS

Verify that all parts are accounted for.  
See Table 1 and Figure 1.

| Table 1. MD105 Engine Harness Service Kit Components |          |                                                 |      |                    |
|------------------------------------------------------|----------|-------------------------------------------------|------|--------------------|
| Item No.                                             | Part No. | Description                                     | Qty. | Remarks            |
| 1                                                    | 52194    | Service Kit, Engine Harness, MD105              | 1    | Includes items 2–6 |
| 2                                                    | 52298    | Instructions, Engine Harness Service Kit, MD105 | 1    |                    |
| 3                                                    | 52166    | Harness, Engine, MD105                          | 1    |                    |
| 4                                                    | 17267    | Connector, Butt Splice, 16-14 Heatshrink        | 8    |                    |
| 5                                                    | 48668    | Connector, Butt Splice, 22-18 Heatshrink        | 8    |                    |
| 6                                                    | 52174    | Harness, Service, Deutsch, Eng, MD105           | 1    |                    |

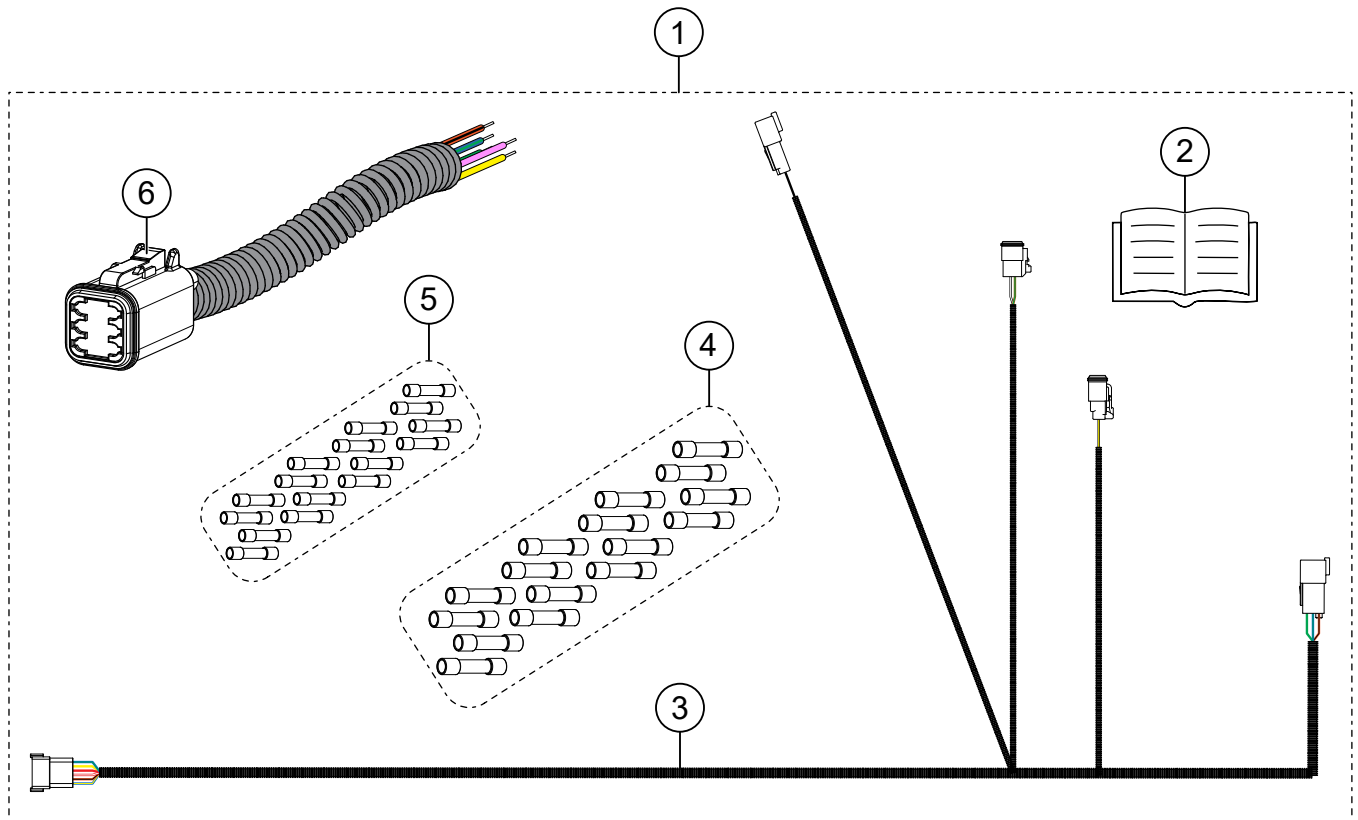


Figure 1. MD105 Engine Harness Service Kit Components

## WORK SAFELY!

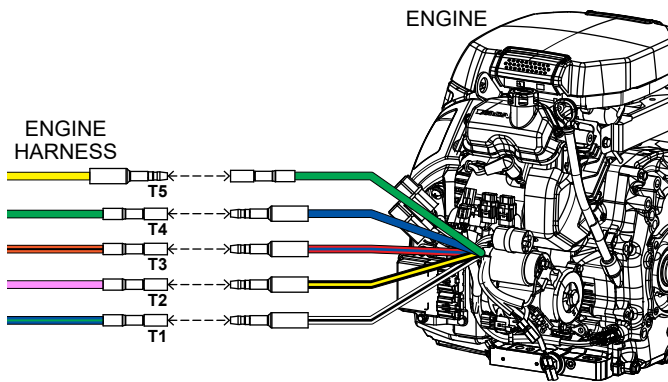
Only a **qualified service technician** with proper training should perform this installation. Follow all shop safety rules when performing this installation.

### PREPARATION

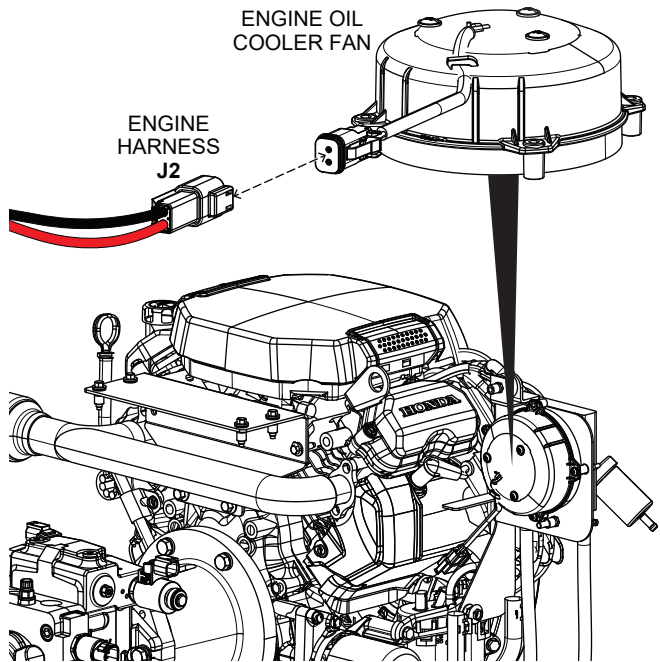
1. Place the trowel on secure, level ground in an area that is free of dirt and debris.
2. Make sure the trowel is turned **OFF** and the engine is cool.
3. Disconnect the negative (**BLACK**) battery cable from the negative (-) battery terminal.

### PROCEDURE

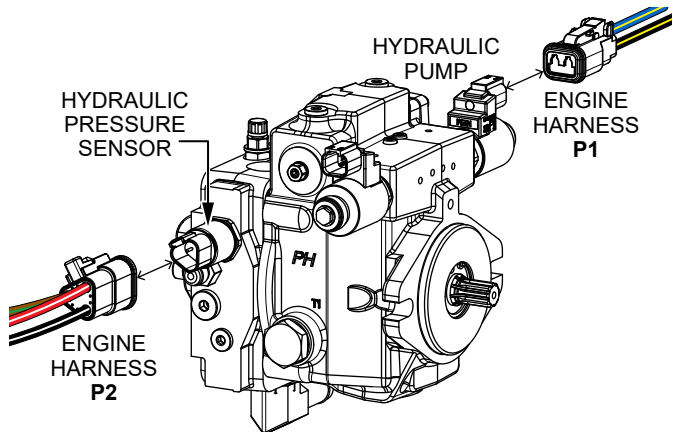
1. Disconnect and remove the **existing engine harness** from the **engine** (Figure 2), **engine oil cooler fan** (Figure 3), **hydraulic pump and pressure sensor** (Figure 4), and **main harness** (Figure 5).



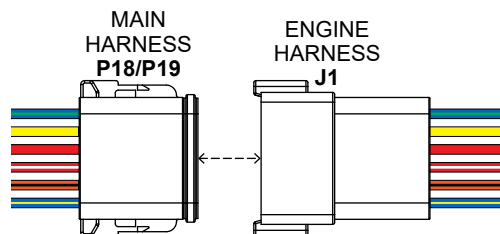
**Figure 2. Disconnect Engine Harness From Engine**



**Figure 3. Disconnect Engine Harness From Engine Oil Cooler Fan**

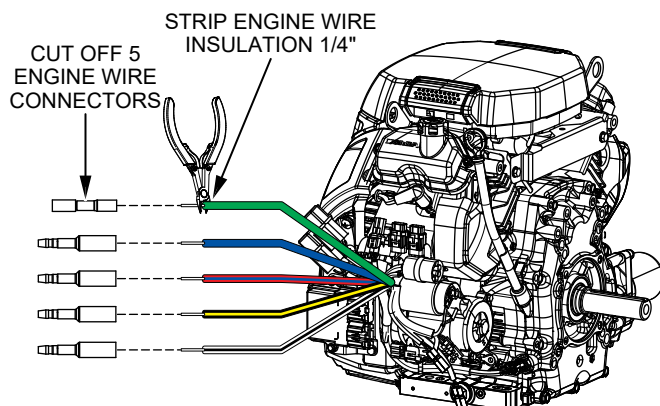


**Figure 4. Disconnect Engine Harness From Hydraulic Pump And Pressure Sensor**



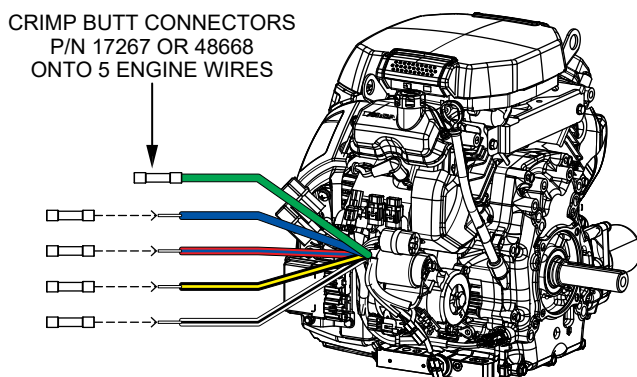
**Figure 5. Disconnect Engine Harness From Main Harness**

2. Cut off the **bullet connectors** (Figure 6) from the ends of the **five engine wires**. Cut the wires as close to the connectors as possible, leaving as much wire extending from the engine as possible. Discard the bullet connectors.



**Figure 6. Cut Bullet Connectors  
And Strip Engine Wires**

3. Strip the insulation back 1/4" from the ends of the five engine wires (Figure 6) to expose the conductors.
4. Crimp one appropriately sized **butt connector** (P/N 17267 or P/N 48668) onto the end of each of the five engine wires. See Figure 7.

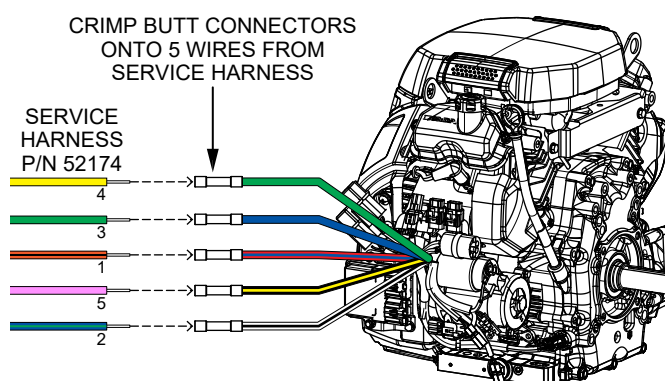


**Figure 7. Crimp Butt Connectors  
Onto Engine Wires**

5. Crimp the open end of each butt connector onto its corresponding wire from the **service harness** (P/N 52174) as shown in Table 2. See Figure 8.

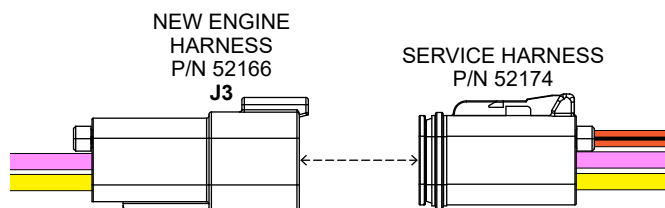
**Table 2. Service Harness (P/N 52174)  
Wire Terminations**

| Connector Terminal | Wire Color   | Honda Engine Wire Color |
|--------------------|--------------|-------------------------|
| 1                  | Orange/Black | Red/Blue                |
| 2                  | Blue/Green   | White/Black             |
| 3                  | Green        | Blue                    |
| 4                  | Yellow       | Green                   |
| 5                  | Pink         | Black/Yellow            |



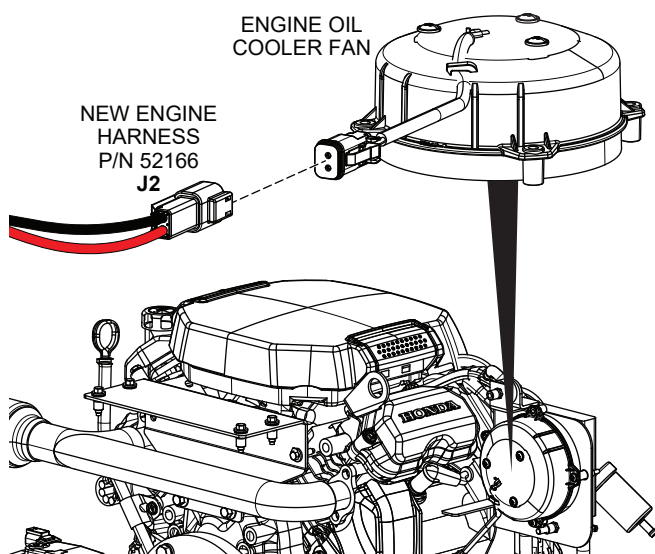
**Figure 8. Crimp Butt Connectors  
Onto Service Harness Wires**

6. Give each wire a firm pull to ensure a good wiring connection. Then, use a heat shrink gun to heat each butt connector until it shrinks around each wire, creating a tight seal.
7. Connect the service harness (P/N 52174) to connector J3 on the **new engine harness** (P/N 52166). See Figure 9.



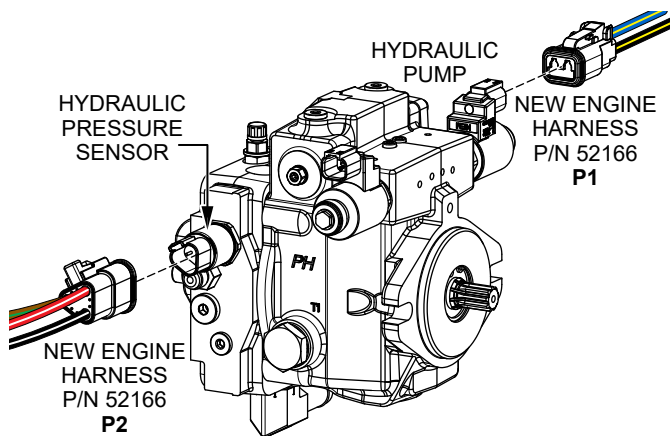
**Figure 9. Connect Service Harness  
To New Engine Harness**

8. Connect connector **J2** on the new engine harness (P/N 52166) to the engine oil cooler fan as shown in Figure 10.



**Figure 10. Connect New Engine Harness To Engine Oil Cooler Fan**

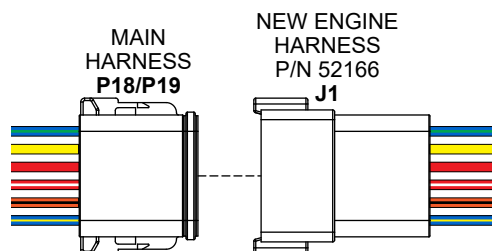
9. Connect connector **P1** on the new engine harness (P/N 52166) to the hydraulic pump as shown in Figure 11.



**Figure 11. Connect New Engine Harness To Hydraulic Pump And Pressure Sensor**

10. Connect connector **P2** on the new engine harness (P/N 52166) to the hydraulic pressure sensor as shown in Figure 11.

11. Connect connector **J1** on the new engine harness (P/N 52166) to the available connector on the trowel main harness. If connecting the **front/right engine**, this connector will be labeled **P18**. If connecting the **rear/left engine**, this connector will be labeled **P19**. See Figure 12.



**Figure 12. Connect New Engine Harness To Main Harness**

## **HERE'S HOW TO GET HELP**

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