



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	2	
4	17267	Connector, Butt Splice, 16-14 Heatshrink	16	
5	48668	Connector, Butt Splice, 22-18 Heatshrink	16	
6	52174	Harness, Service, Deutsch, Eng, MD105	2	

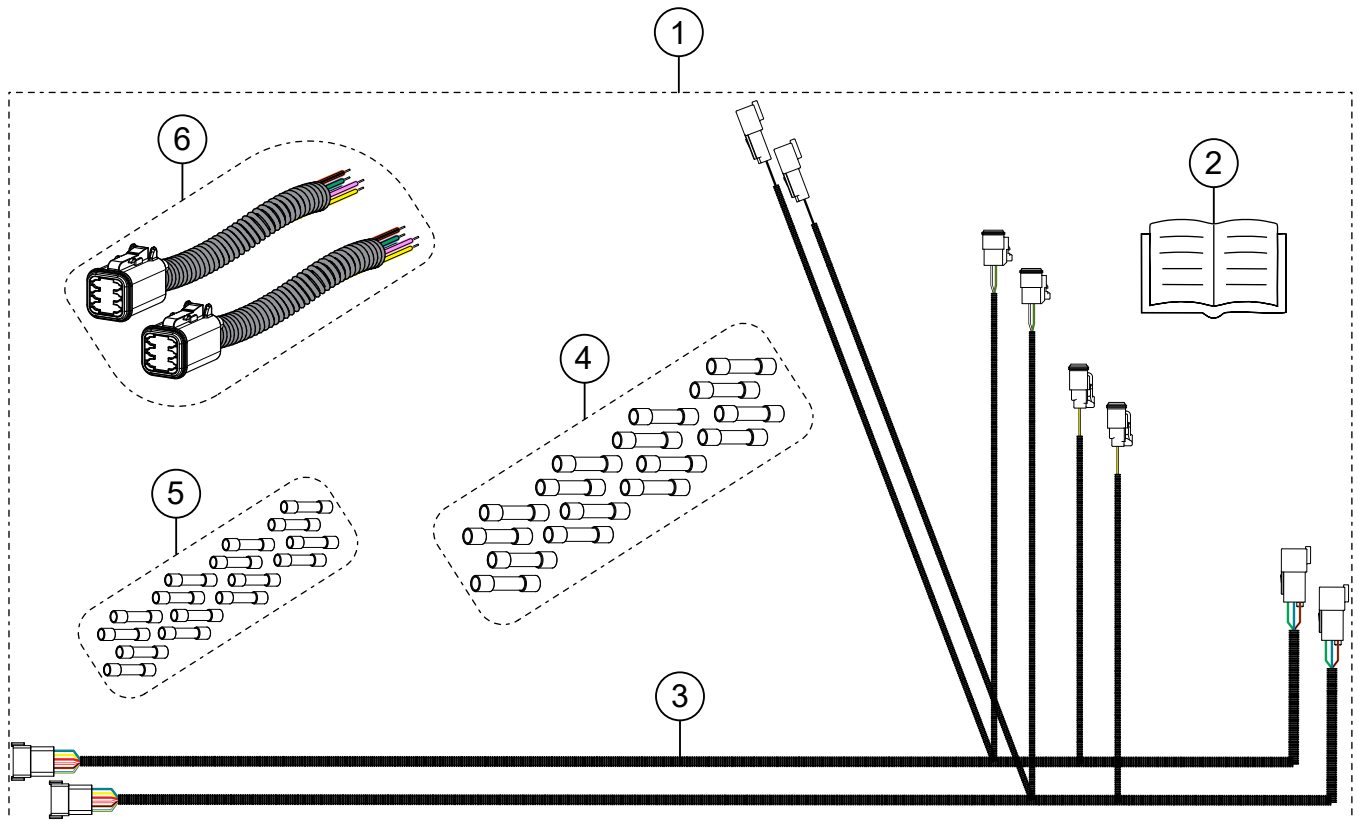


Figure 1. MD105 Engine Harness Service Kit Components

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).

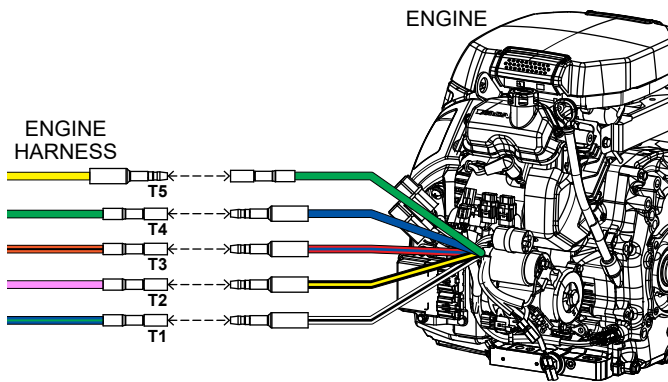


Figure 2. Disconnect Engine Harness From Engine

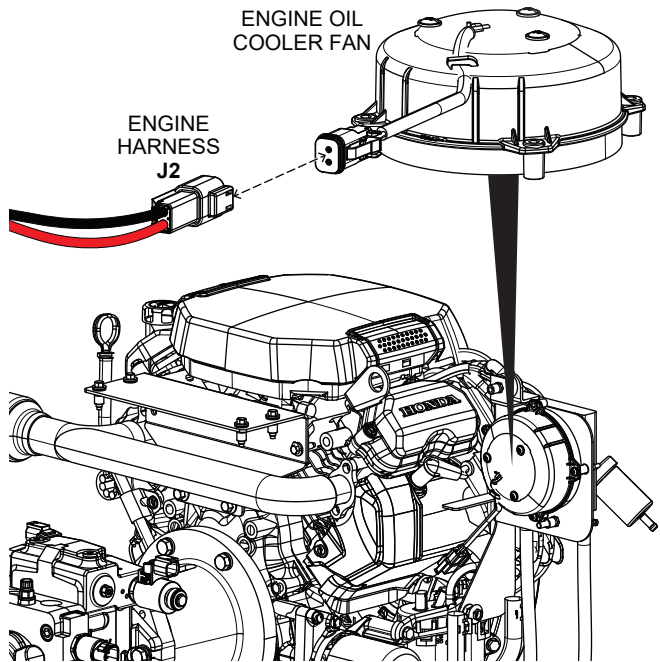


Figure 3. Disconnect Engine Harness From Engine Oil Cooler Fan

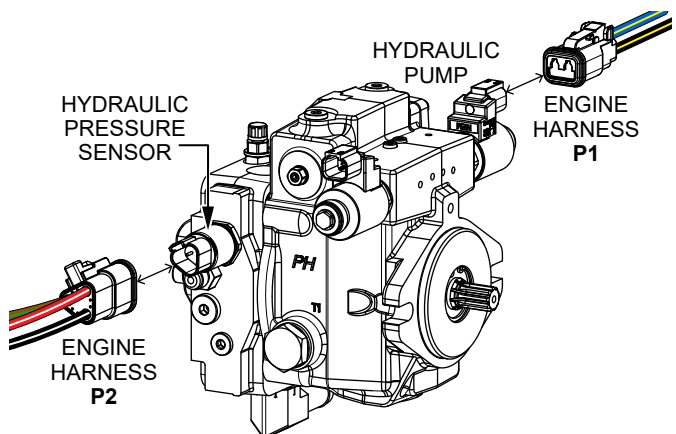


Figure 4. Disconnect Engine Harness From Hydraulic Pump And Pressure Sensor

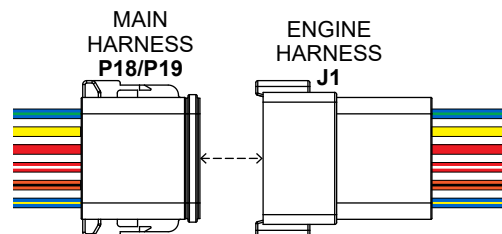
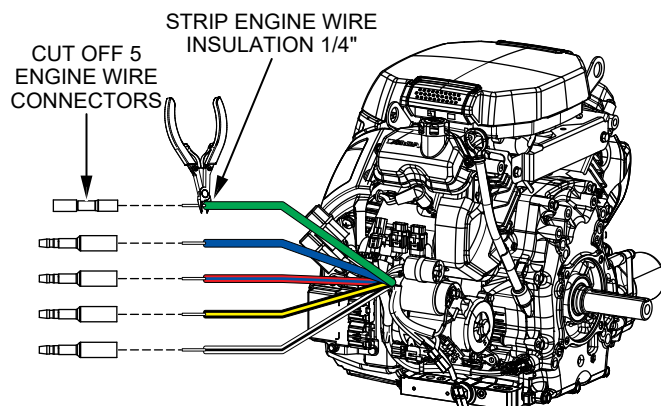


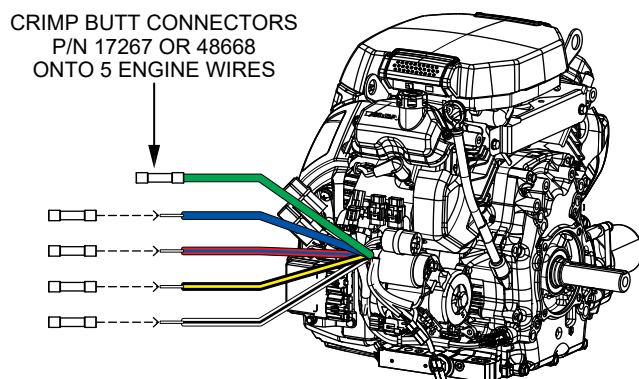
Figure 5. Disconnect Engine Harness From Main Harness

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.

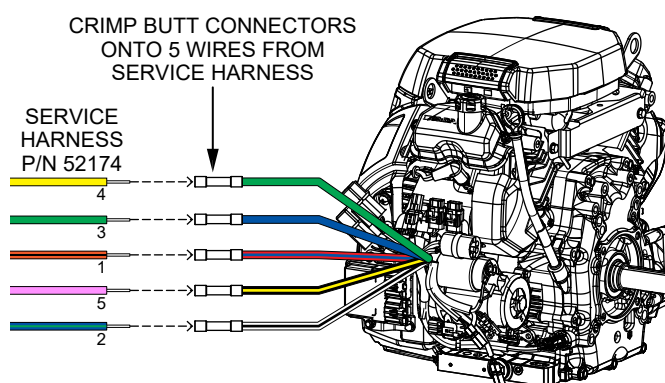


**Figure 7. Crimp Butt Connectors
Onto Engine Wires**

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.

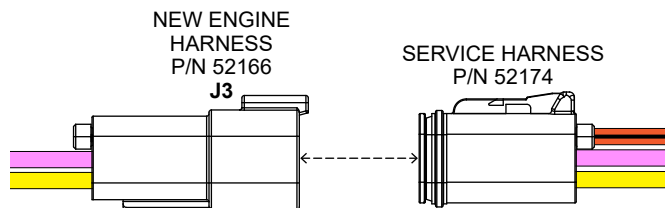
**Table 2. Service Harness (P/N 52174)
Wire Terminations**

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.

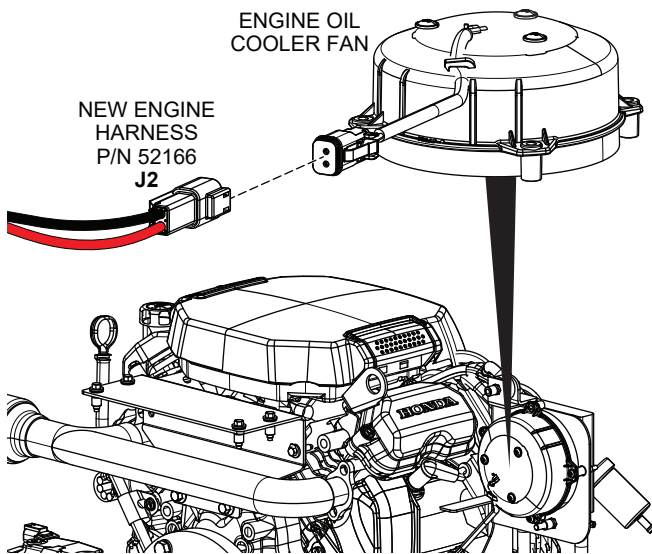


Figure 10. Connect New Engine Harness To Engine Oil Cooler Fan

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

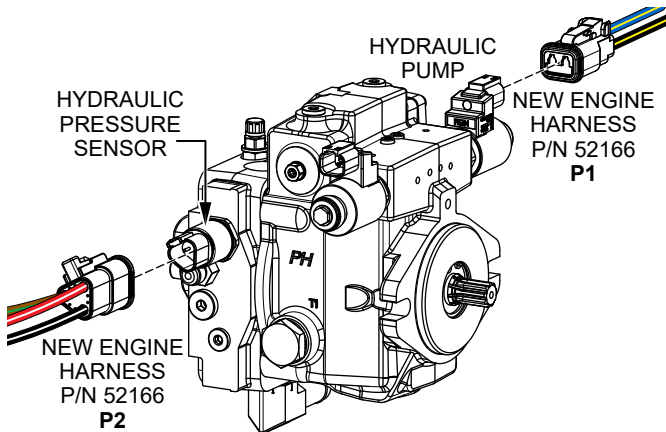


Figure 11. Connect New Engine Harness To Hydraulic Pump And Pressure Sensor

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.

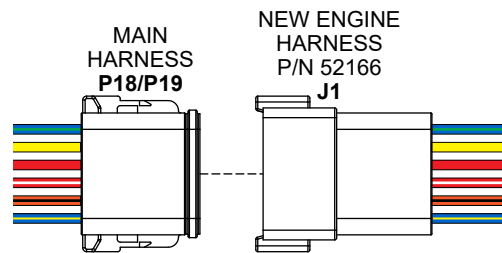


Figure 12. Connect New Engine Harness To Main Harness

12. If necessary, repeat steps 1–11 on the other engine.

HERE'S HOW TO GET HELP

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